**Supplementary Figure 1. Network interactions amongst 75 genes that are differentially expressed between the proximal and distal ends of the E6.5 chicken cochlea provide evidence of a complex set of regulatory interactions**.

Red nodes depict 23 of the 112 differentially expressed transcription factors. Interactions were extracted from g:Profiler and were visualized in Cytoscape. Literature supported interactions are shown by lines with the red lines linking pairs of differentially expressed TF genes, which are known to interact.
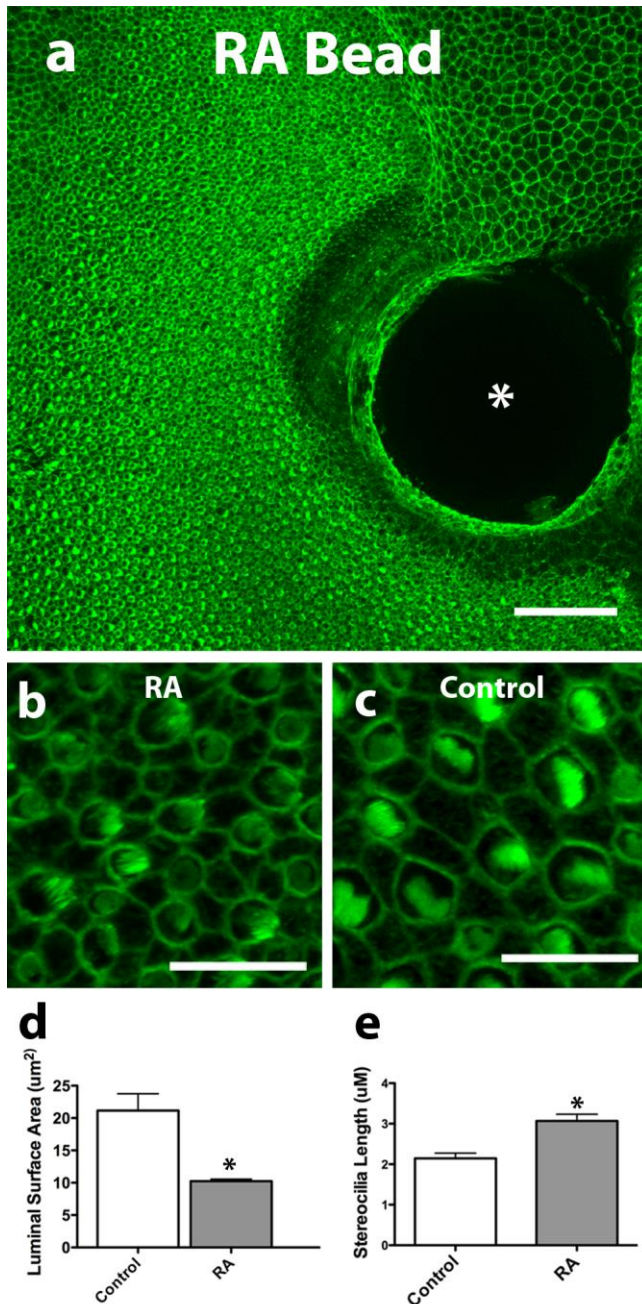
Supplementary Figure 2. Local application of RA is sufficient to induce HCs in the proximal region of developing cochleae to develop distal-like phenotypes.

(a) E6.5 BPs were implanted proximally with beads soaked in RA or vehicle-control then maintained in culture for 6 days. Shown is a low magnification micrograph of the proximal region of a cochlea implanted with an RA-soaked bead. The bead is marked with an (*). BP is labeled with Alexa Fluor 488-phalloidin. (b,c) Representative high magnification micrographs of hair cells that formed in the proximal region of BPs implanted with RA-soaked (b) or vehicle-

control beads (c). (d) Quantification of the HC luminal surface area that formed within 100 μm of the bead. Proximal HCs from BPs implanted with RA-soaked beads developed smaller luminal surface areas compared to BPs implanted with vehicle-control beads. ($p = 0.0013$; Student's t-test; $n_{BPs} = 6$). (e) Quantification of the stereocilia lengths that formed within 100 μm of the bead. Proximal HCs from BPs implanted with RA-soaked beads developed longer stereocilia compared to BPs implanted with vehicle-control beads. ($p = 0.0015$; Student's t-test; $n_{BPs} = 6$). Scale bars in a: 50 μm; b,c: 10 μm.
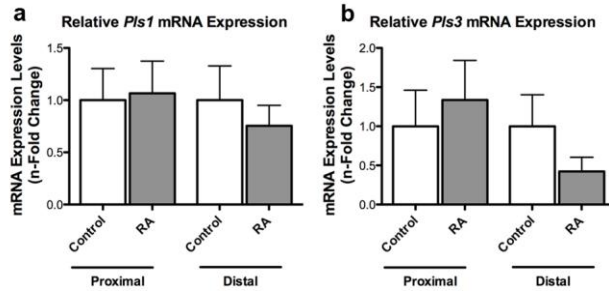
Supplementary Figure 3. *Pls1* and *Pls3* mRNA expression levels after RA treatments.

(a) Relative mRNA expression levels for *Pls1* in proximal and distal regions of E6.5 BPs cultured 3 days in control media or media supplemented with RA. Expression levels were normalized relative to the average mRNA expression in vehicle controls. We detected no differences in *Pls1* expression with RA treatments compared to controls in the proximal region (p = 0.885; Student's *t*-test; n = 6) or in the distal region (p = 0.5205, Student's *t*-test; n = 6). (b) Relative mRNA expression levels for *Pls3* in proximal and distal regions of E6.5 BPs cultured 3 days in control media or media supplemented with RA. Expression levels were normalized relative to the average mRNA expression in vehicle controls. We detected no differences in *Pls3* expression with RA treatments compared to controls in the proximal region (p = 0.6497, Student's *t*-test; n = 3) or in the distal region (p = 0.1812; Student's *t*-test; n = 5). Graphs show mean mRNA expression levels (n-Fold change) ± S.E.M.
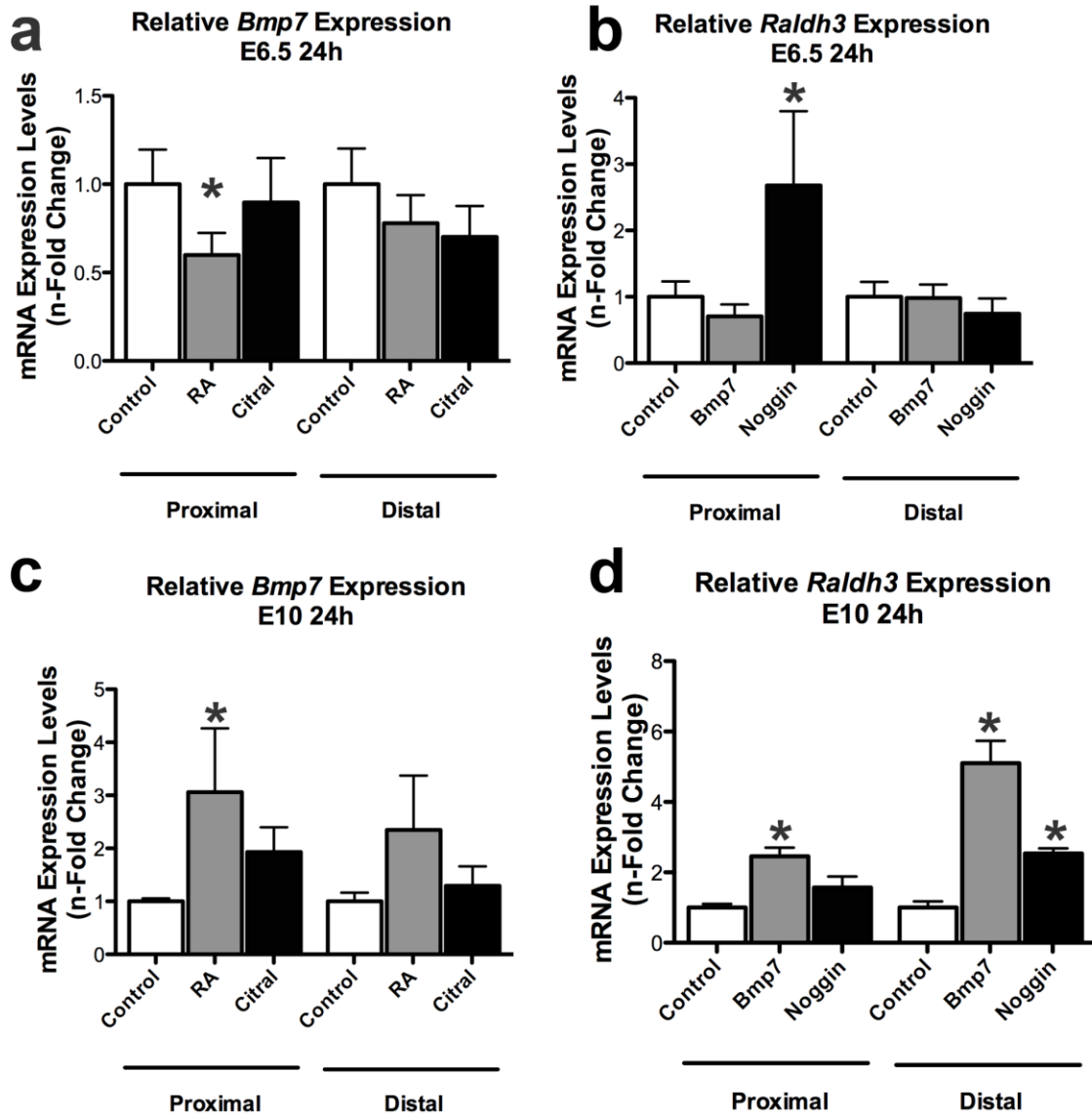
Supplementary Figure 4. Reciprocal inhibitory feedback loops between Bmp7 and Retinoic Acid signaling.

(a) Relative *Bmp7* expression levels in proximal and distal regions of E6.5 BPs treated with RA or citral for 24 h. Expression levels were normalized relative to the average mRNA expression levels in vehicle controls. *Bmp7* was significantly downregulated in the distal region of BPs after 24 h RA-treatments ($p < 05$; ANOVA with Newman-Keuls Post-test, $n = 10$). (b) Relative *Raldh3* expression levels in proximal and distal regions of E6.5 BPs treated with Bmp7 or noggin for 24h. Expression levels were normalized relative to the average mRNA expression levels in controls. *Raldh3* expression was significantly elevated in the proximal region after 24 h noggin treatments ($p < 05$; ANOVA with Newman-Keuls Post-test, $n = 4$). (c) Relative *Bmp7* expression levels in E10 BPs treated with RA or citral for 24 h. Expression levels were normalized to controls. *Bmp7*

expression was elevated in the proximal region of BPs treated with RA (p < 05; ANOVA with Newman-Keuls Post-test, *n* = 5). While *Bmp7* mRNA expression levels appeared to be more elevated in the distal region of RA-treated BPs compared to controls, we did not detect any statistical differences (p > 05; ANOVA with Newman-Keuls Post-test, *n* = 5). (d) Relative *Raldh3* expression levels in E10 BPs treated with Bmp7 or noggin for 24 h. Expression levels were normalized to controls. *Raldh3* expression was elevated in both the proximal and distal regions of BPs treated with Bmp7 (p < 05; ANOVA with Newman-Keuls Post-test, *n* = 7) and its expression was elevated in the distal region of BPs treated with noggin (p < 05; ANOVA with Newman-Keuls Post-test, *n* = 7).

Supplementary Table 1. Top 10 upstream regulators derived from IPA analysis comparing the differentially expressed genes between the E6.5 proximal and distal ends of the BP, arranged by absolute activation z-score.

Upstream Regulator	Molecule Type	Predicted Activation	Absolute Activation z-score	p-value of overlap
tretinoin	chemical - endogenous mammalian	Activated	5.546	9.40E-08
trichostatin A	chemical drug	Activated	4.490	1.96E-05
hydrogen peroxide	chemical - endogenous mammalian	Activated	4.405	2.57E-02
TP53	transcription regulator	Activated	4.355	5.28E-02
decitabine	chemical drug	Activated	4.202	1.45E-04
LY294002	chemical - kinase inhibitor	Inhibited	4.149	3.19E-06
Vegf	group	Activated	4.107	4.64E-07
MITF	transcription regulator	Activated	4.022	7.30E-04
U0126	chemical - kinase inhibitor	Inhibited	3.971	4.31E-03
F2	peptidase	Activated	3.832	1.55E-04

Transcript_id	Gene description	Gene symbol	p-value(Attribu	Distal
ENSGALT0000	5.8S ribosomal RNA	5_8S_rRNA	0.492539	1018.26
ENSGALT0000	5S ribosomal RNA	5S_rRNA	0.509348	876.001
ENSGALT0000	7SK RNA	7SK	0.52526	293.5
ENSGALT0000	Uncharacterized protein	A0FK60_CHICK	0.638544	171
ENSGALT0000	KaisoUncharacterized protein	A0MPA7_CHICK	0.975479	1178
ENSGALT0000	APOBEC1 complementation factor	A1CF	?	0
ENSGALT0000	AIG2-like domain 1	A2LD1	0.902984	124
ENSGALT0000	alpha-2-macroglobulin	A2M	0.897458	523.5
ENSGALT0000	alpha-2-macroglobulin-like 1	A2ML1	0.991941	430
ENSGALT0000	alpha 1,4-galactosyltransferase	A4GALT	0.762574	17.5
ENSGALT0000	alpha-1,4-N-acetylglucosaminyltrar	A4GNT	0.828826	2.5
ENSGALT0000	Uncharacterized protein	A4PET4_CHICK	0.998796	73.5
ENSGALT0000	Uncharacterized protein	A4VAR9_CHICK	0.951602	400
ENSGALT0000	Uncharacterized protein	A7UH64_CHICK	0.176563	249
ENSGALT0000	achalasia, adrenocortical insufficier	AAAS	0.859217	3208.5
ENSGALT0000	acetoacetyl-CoA synthetase	AACS	0.741346	888.999
ENSGALT0000	arylacetamide deacetylase-like 2	AADACL2	0.913675	39
ENSGALT0000	arylacetamide deacetylase-like 4-lil	AADACL3	0.978396	24.5
ENSGALT0000	arylacetamide deacetylase-like 4	AADACL4	0.78451	38.6742
ENSGALT0000	aminoadipate aminotransferase	AADAT	0.93671	312.5
ENSGALT0000	alpha- and gamma-adaptin binding	AAGAB	0.929654	2015.5
ENSGALT0000	AP2 associated kinase 1	AAK1	0.962105	1297.5
ENSGALT0000	angio-associated, migratory cell pro	AAMP	0.763469	2126.28
ENSGALT0000	aralkylamine N-acetyltransferase	AANAT	0.708776	99.5
ENSGALT0000	alanyl-tRNA synthetase	AARS	0.829741	7330.5
ENSGALT0000	alanyl-tRNA synthetase 2, mitochor	AARS2	0.907976	1284
ENSGALT0000	alanyl-tRNA synthetase domain cor	AARSD1	0.790904	1583.5
ENSGALT0000	aminoadipate-semialdehyde dehyd	AASDH	0.99803	555
ENSGALT0000	aminoadipate-semialdehyde dehyd	AASDHPPT	0.904122	162
ENSGALT0000	aminoadipate-semialdehyde syntha	AASS	0.982014	867.5
ENSGALT0000	apoptosis antagonizing transcriptio	AATF	0.922317	920.496
ENSGALT0000	apoptosis-associated tyrosine kinas	AATK	0.918929	342
ENSGALT0000	4-aminobutyrate aminotransferase	ABAT	0.923433	523
ENSGALT0000	ATP-binding cassette, sub-family A	ABCA1	0.934437	684.506
ENSGALT0000	ATP-binding cassette, sub-family A	ABCA12	0.510672	62.5
ENSGALT0000	ATP-binding cassette, sub-family A	ABCA3	0.919224	6767
ENSGALT0000	ATP-binding cassette, sub-family A	ABCA4	0.971111	251
ENSGALT0000	ATP-binding cassette, sub-family A	ABCA5	0.959238	1802
ENSGALT0000	ATP-binding cassette, sub-family A	ABCA7	0.938999	411.5
ENSGALT0000	ATP-binding cassette, sub-family A	ABCA8	0.680696	40
ENSGALT0000	ATP-binding cassette, sub-family B	ABCB1	0.758549	40.5
ENSGALT0000	ATP-binding cassette, sub-family B	ABCB10	0.994197	570
ENSGALT0000	ATP-binding cassette, sub-family B	ABCB6	0.911869	346
ENSGALT0000	ATP-binding cassette, sub-family B	ABCB7	0.9706	611
ENSGALT0000	ATP-binding cassette, sub-family B	ABCB9	0.812168	157.5
ENSGALT0000	ATP-binding cassette, sub-family C	ABCC10	0.998891	1716
ENSGALT0000	ATP-binding cassette, sub-family C	ABCC2	0.964731	49.5
ENSGALT0000	ATP-binding cassette, sub-family C	ABCC3	0.969937	598.5
ENSGALT0000	ATP-binding cassette, sub-family C	ABCC4	0.981273	116.5
ENSGALT0000	ATP-binding cassette, sub-family C	ABCC5	0.988304	2587.49
ENSGALT0000	ATP-binding cassette, sub-family C	ABCC6	0.996486	282.499
ENSGALT0000	ATP-binding cassette, sub-family C	ABCC8	0.97315	1755.5
ENSGALT0000	ATP-binding cassette, sub-family D	ABCD2	0.947855	451.999
ENSGALT0000	ATP-binding cassette, sub-family D	ABCD3	0.956681	2236
ENSGALT0000	ATP-binding cassette, sub-family D	ABCD4	0.960742	609

ENSGALT0000	ATP-binding cassette, sub-family E	ABCE1	0.957195	3471.51
ENSGALT0000	ATP-binding cassette, sub-family F	ABCF2	0.914471	2820
ENSGALT0000	ATP-binding cassette, sub-family F	ABCF3	0.832964	3314.5
ENSGALT0000	ATP-binding cassette, sub-family G	ABCG1	0.972999	167
ENSGALT0000	ATP-binding cassette, sub-family G	ABCG2	0.787	162.5
ENSGALT0000	ATP-binding cassette, sub-family G	ABCG4	0.798657	345.5
ENSGALT0000	ATP-binding cassette, sub-family G	ABCG5	0.938289	23.5
ENSGALT0000	ATP-binding cassette, sub-family G	ABCG8	0.649519	1
ENSGALT0000	abhydrolase domain containing 10	ABHD10	0.913968	209.5
ENSGALT0000	abhydrolase domain containing 11	ABHD11	0.816181	190
ENSGALT0000	abhydrolase domain containing 12	ABHD12	0.96405	3075.5
ENSGALT0000	abhydrolase domain containing 12B	ABHD12B	0.387322	1243.5
ENSGALT0000	abhydrolase domain containing 13	ABHD13	0.993204	692
ENSGALT0000	abhydrolase domain containing 2	ABHD2	0.938267	431
ENSGALT0000	abhydrolase domain containing 3	ABHD3	0.587473	242.5
ENSGALT0000	abhydrolase domain containing 5	ABHD5	0.989868	245.5
ENSGALT0000	abhydrolase domain containing 6	ABHD6	0.90073	375
ENSGALT0000	abl-interactor 1	ABI1	0.943556	2200.47
ENSGALT0000	abl-interactor 2	ABI2	0.937837	1387
ENSGALT0000	ABI family, member 3	ABI3	0.999448	47
ENSGALT0000	ABI family, member 3 (NESH) bindi	ABI3BP	0.434648	563
ENSGALT0000	c-abl oncogene 1, non-receptor tyr	ABL1	0.972206	9129.46
ENSGALT0000	v-abl Abelson murine leukemia vira	ABL2	0.970149	1059.5
ENSGALT0000	actin binding LIM protein 1	ABLIM1	0.853428	803
ENSGALT0000	actin binding LIM protein family, me	ABLIM2	0.987125	466.5
ENSGALT0000	actin binding LIM protein family, me	ABLIM3	0.598426	86
ENSGALT0000	active BCR-related gene	ABR	0.889829	1081.01
ENSGALT0000	actin-binding Rho activating protein	ABRA	0.898356	0.5
ENSGALT0000	ankyrin repeat and BTB (POZ) dom	ABTB1	0.979559	1694
ENSGALT0000	Small nucleolar RNA ACA64	ACA64	0.977187	11
ENSGALT0000	acetyl-CoA acyltransferase 1	ACAA1	0.8397	882
ENSGALT0000	acetyl-CoA acyltransferase 2	ACAA2	0.906209	2260.5
ENSGALT0000	acetyl-CoA carboxylase alpha	ACACA	0.957148	4627.01
ENSGALT0000	acyl-CoA dehydrogenase family, m	ACAD11	0.928863	749.5
ENSGALT0000	acyl-CoA dehydrogenase family, m	ACAD8	0.760904	1003
ENSGALT0000	acyl-CoA dehydrogenase family, m	ACAD9	0.881046	2527.5
ENSGALT0000	acyl-CoA dehydrogenase, long cha	ACADL	0.850661	4026.55
ENSGALT0000	acyl-CoA dehydrogenase, C-2 to C	ACADS	0.965629	1911.5
ENSGALT0000	acyl-CoA dehydrogenase, short/bra	ACADSB	0.984351	1100.13
ENSGALT0000	aggrecan	ACAN	0.779204	557.999
ENSGALT0000	ArfGAP with coiled-coil, ankyrin rep	ACAP2	0.971947	1648.5
ENSGALT0000	ArfGAP with coiled-coil, ankyrin rep	ACAP3	0.703351	1848
ENSGALT0000	acetyl-CoA acetyltransferase 1	ACAT1	0.763922	2633.5
ENSGALT0000	acetyl-CoA acetyltransferase 2	ACAT2	0.545935	2081.18
ENSGALT0000	acyl-CoA binding domain containing	ACBD3	0.908938	1688
ENSGALT0000	acyl-CoA binding domain containing	ACBD5	0.928089	749.502
ENSGALT0000	acyl-CoA binding domain containing	ACBD6	0.491165	1109.47
ENSGALT0000	acyl-CoA binding domain containing	ACBD7	0.82715	162.5
ENSGALT0000	amiloride-sensitive cation channel	ACCN1	0.658124	209.5
ENSGALT0000	amiloride-sensitive cation channel	ACCN2	0.73754	1211.52
ENSGALT0000	amiloride-sensitive cation channel	ACCN5	0.818488	3
ENSGALT0000	1-aminocyclopropane-1-carboxylat	ACCS	0.977314	393
ENSGALT0000	adrenocortical dysplasia homolog (	ACD	0.957403	712.686
ENSGALT0000	angiotensin I converting enzyme (p	ACE	0.99768	297.972
ENSGALT0000	angiotensin I converting enzyme (p	ACE2	0.625832	6
ENSGALT0000	alkaline ceramidase 1	ACER1	0.917835	8.5

ENSGALT0000	alkaline ceramidase 2	ACER2	0.749607	88
ENSGALT0000	alkaline ceramidase 3	ACER3	0.988787	391.5
ENSGALT0000	ATP citrate lyase	ACLY	0.883068	10024.6
ENSGALT0000	aminocarboxymuconate semialdeh	ACMSD	0.430207	8.5
ENSGALT0000	ACN9 homolog (S. cerevisiae)	ACN9	0.69555	267
ENSGALT0000	aconitase 1, soluble	ACO1	0.914397	1484.01
ENSGALT0000	aconitase 2, mitochondrial	ACO2	0.85102	8073
ENSGALT0000	acyl-CoA thioesterase 11	ACOT11	0.424778	208
ENSGALT0000	acyl-CoA thioesterase 12	ACOT12	0.832568	110
ENSGALT0000	acyl-CoA thioesterase 13	ACOT13	0.314144	293.5
ENSGALT0000	acyl-CoA thioesterase 7	ACOT7	0.574594	1902.5
ENSGALT0000	acyl-CoA thioesterase 8	ACOT8	0.618094	668
ENSGALT0000	acyl-CoA thioesterase 9	ACOT9	0.936847	688.499
ENSGALT0000	acyl-CoA oxidase 1, palmitoyl	ACOX1	0.982675	1745.5
ENSGALT0000	acyl-CoA oxidase 2, branched chai	ACOX2	0.994358	430.5
ENSGALT0000	acyl-CoA oxidase 3, pristanoyl	ACOX3	0.931741	188.5
ENSGALT0000	acid phosphatase 1, soluble	ACP1	0.794053	889.5
ENSGALT0000	acid phosphatase 2, lysosomal	ACP2	0.99425	1024
ENSGALT0000	acid phosphatase 6, lysophosphati	ACP6	0.913381	662.5
ENSGALT0000	acid phosphatase-like 2	ACPL2	0.88441	642
ENSGALT0000	acid phosphatase, prostate	ACPP	0.924803	6.5
ENSGALT0000	acrosin binding protein	ACRBP	0.464758	0
ENSGALT0000	acidic repeat containing	ACRC	0.865249	231
ENSGALT0000	acyl-CoA synthetase bubblegum fa	ACSBG1	0.961766	109
ENSGALT0000	acyl-CoA synthetase bubblegum fa	ACSBG2	0.673284	654
ENSGALT0000	acyl-CoA synthetase family membe	ACSF2	0.960569	1090.5
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ENSGALT0000	acyl-CoA synthetase long-chain fal	ACSL3	0.844811	1137.5
ENSGALT0000	acyl-CoA synthetase long-chain fal	ACSL4	0.948991	3341.5
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ENSGALT0000	acyl-CoA synthetase medium-chair	ACSM4	0.866543	7.5
ENSGALT0000	acyl-CoA synthetase medium-chair	ACSM5	0.929713	14.5
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ENSGALT0000	acyl-CoA synthetase short-chain fa	ACSS2	0.839587	1245.5
ENSGALT0000	acyl-CoA synthetase short-chain fa	ACSS3	0.938856	184.5
ENSGALT0000	actin, alpha 1, skeletal muscle	ACTA1	0.764102	4271.33
ENSGALT0000	actin, alpha 2, smooth muscle, aort	ACTA2	0.248302	165.014
ENSGALT0000	actin, beta-like 2	ACTBL2	0.868245	1.5
ENSGALT0000	actin, alpha, cardiac muscle 1	ACTC1	0.432754	61.2788
ENSGALT0000	actin, gamma 1	ACTG1	0.651272	29647.4
ENSGALT0000	\N	ACTG2	0.404938	5777.77
ENSGALT0000	actin-like 9	ACTL9	?	0
ENSGALT0000	actinin, alpha 1	ACTN1	0.953719	2663.44
ENSGALT0000	actinin, alpha 2	ACTN2	0.982438	65
ENSGALT0000	actinin, alpha 4	ACTN4	0.911395	3286.5
ENSGALT0000	actin-related protein 10 homolog (S	ACTR10	0.849835	2638.03
ENSGALT0000	ARP1 actin-related protein 1 homol	ACTR1A	0.85779	6264.5
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ENSGALT0000	ARP6 actin-related protein 6 homol	ACTR6	0.640326	1909.01
ENSGALT0000	ARP8 actin-related protein 8 homol	ACTR8	0.840608	1270.5

ENSGALT0000	actin-related protein T2	ACTRT2	0.464758	0
ENSGALT0000	activin A receptor, type I	ACVR1	0.931687	1277
ENSGALT0000	activin A receptor, type IB	ACVR1B	0.928254	2257.96
ENSGALT0000	activin A receptor, type IC	ACVR1C	0.975706	19.5
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ENSGALT0000	activin A receptor, type IIB	ACVR2B	0.988995	1211.47
ENSGALT0000	acylphosphatase 1, erythrocyte (co	ACYP1	0.149324	454.5
ENSGALT0000	adenosine deaminase	ADA	0.963593	149.5
ENSGALT0000	adenosine deaminase domain cont	ADAD1	0.771667	3.5
ENSGALT0000	adenosine deaminase-like	ADAL	0.979158	430.996
ENSGALT0000	ADAM metallopeptidase domain 10	ADAM10	0.996873	4836.2
ENSGALT0000	ADAM metallopeptidase domain 11	ADAM11	0.901516	77
ENSGALT0000	ADAM metallopeptidase domain 12	ADAM12	0.692099	203.5
ENSGALT0000	ADAM metallopeptidase domain 15	ADAM15	0.936964	19
ENSGALT0000	ADAM metallopeptidase domain 17	ADAM17	0.99084	3927.11
ENSGALT0000	ADAM metallopeptidase domain 19	ADAM19	0.560637	148.5
ENSGALT0000	ADAM metallopeptidase domain 22	ADAM22	0.913829	308
ENSGALT0000	ADAM metallopeptidase domain 23	ADAM23	0.964539	1468
ENSGALT0000	ADAM metallopeptidase domain 28	ADAM28	0.71103	18.5
ENSGALT0000	ADAM metallopeptidase domain 33	ADAM33	0.927817	263.5
ENSGALT0000	ADAM metallopeptidase domain 8	ADAM8	0.831639	9.5
ENSGALT0000	ADAM metallopeptidase domain 9	ADAM9	0.986831	2343.06
ENSGALT0000	ADAM metallopeptidase with throm	ADAMTS1	0.661014	12126.8
ENSGALT0000	ADAM metallopeptidase with throm	ADAMTS10	0.676291	303
ENSGALT0000	ADAM metallopeptidase with throm	ADAMTS12	0.980237	1057
ENSGALT0000	ADAM metallopeptidase with throm	ADAMTS14	0.983773	906.5
ENSGALT0000	ADAM metallopeptidase with throm	ADAMTS15	0.789098	358.5
ENSGALT0000	ADAM metallopeptidase with throm	ADAMTS17	0.903512	5237.5
ENSGALT0000	ADAM metallopeptidase with throm	ADAMTS18	0.932776	3677
ENSGALT0000	ADAM metallopeptidase with throm	ADAMTS19	0.957273	188.5
ENSGALT0000	ADAM metallopeptidase with throm	ADAMTS2	0.811827	84.5
ENSGALT0000	ADAM metallopeptidase with throm	ADAMTS20	0.938174	5058
ENSGALT0000	ADAM metallopeptidase with throm	ADAMTS3	0.969801	1978
ENSGALT0000	ADAM metallopeptidase with throm	ADAMTS5	0.962638	1412
ENSGALT0000	ADAM metallopeptidase with throm	ADAMTS6	0.98339	160.5
ENSGALT0000	ADAM metallopeptidase with throm	ADAMTS7	0.837336	1629.87
ENSGALT0000	ADAM metallopeptidase with throm	ADAMTS8	0.981861	249
ENSGALT0000	ADAM metallopeptidase with throm	ADAMTS9	0.764847	1432
ENSGALT0000	ADAMTS-like 1	ADAMTSL1	0.978608	405.5
ENSGALT0000	ADAMTS-like 3	ADAMTSL3	0.55964	851
ENSGALT0000	ADAMTS-like 5	ADAMTSL5	0.467175	200
ENSGALT0000	ArfGAP with dual PH domains 1	ADAP1	0.877018	921.5
ENSGALT0000	ArfGAP with dual PH domains 2	ADAP2	0.637522	16.5
ENSGALT0000	adenosine deaminase, RNA-specif	ADAR	0.962294	2646
ENSGALT0000	adenosine deaminase, RNA-specif	ADARB1	0.952815	672.999
ENSGALT0000	adenosine deaminase, RNA-specif	ADARB2	0.932579	108.5
ENSGALT0000	adenosine deaminase, tRNA-speci	ADAT1	0.997473	690.5
ENSGALT0000	adenosine deaminase, tRNA-speci	ADAT2	0.161804	320.5
ENSGALT0000	arginine decarboxylase	ADC	0.819369	351
ENSGALT0000	aarF domain containing kinase 1	ADCK1	0.957732	236.5
ENSGALT0000	aarF domain containing kinase 2	ADCK2	0.975817	768.5
ENSGALT0000	aarF domain containing kinase 3	ADCK3	0.980216	3553
ENSGALT0000	adenylate cyclase 1 (brain)	ADCY1	0.762003	10.5
ENSGALT0000	adenylate cyclase 2 (brain)	ADCY2	0.67623	71
ENSGALT0000	adenylate cyclase 5	ADCY5	0.986783	843.995
ENSGALT0000	adenylate cyclase 7	ADCY7	0.768367	479

ENSGALT0000	adenylate cyclase 8 (brain)	ADCY8	0.905241	91
ENSGALT0000	adenylate cyclase 9	ADCY9	0.976241	1929.79
ENSGALT0000	adenylate cyclase activating polype	ADCYAP1	0.144086	45.5
ENSGALT0000	adenylate cyclase activating polype	ADCYAP1R1	0.806053	56.5
ENSGALT0000	adducin 1 (alpha)	ADD1	0.944806	7021.5
ENSGALT0000	adducin 3 (gamma)	ADD3	0.980191	3454.47
ENSGALT0000	alcohol dehydrogenase 1B (class I)	ADH1B	0.581107	18.7088
ENSGALT0000	alcohol dehydrogenase 5 (class III)	ADH5	0.761884	8370.24
ENSGALT0000	alcohol dehydrogenase, iron contai	ADHFE1	0.999932	161
ENSGALT0000	acireductone dioxygenase 1	ADI1	0.646729	293.501
ENSGALT0000	adiponectin, C1Q and collagen don	ADIPOQ	0.798073	4.5
ENSGALT0000	adiponectin receptor 1	ADIPOR1	0.797088	2502
ENSGALT0000	adiponectin receptor 2	ADIPOR2	0.995784	1539.02
ENSGALT0000	adenosine kinase	ADK	0.754375	1035
ENSGALT0000	adrenomedullin	ADM	0.579629	21.5
ENSGALT0000	activity-dependent neuroprotector	ADNP	0.976714	4739.5
ENSGALT0000	ADNP homeobox 2	ADNP2	0.991779	844.5
ENSGALT0000	adenosine A1 receptor	ADORA1	0.797989	20.5
ENSGALT0000	adenosine A2a receptor	ADORA2A	0.887212	63
ENSGALT0000	adenosine receptor 2b	ADORA2B	0.859602	94
ENSGALT0000	adenosine A3 receptor	ADORA3	0.908452	17.5
ENSGALT0000	ADP-dependent glucokinase	ADPGK	0.959885	1265.5
ENSGALT0000	ADP-ribosylarginine hydrolase	ADPRH	0.953375	955.999
ENSGALT0000	ADP-ribosylhydrolase like 1	ADPRHL1	0.349364	58.5
ENSGALT0000	ADP-ribosylhydrolase like 2	ADPRHL2	0.955146	2052
ENSGALT0000	adrenergic, alpha-1B-, receptor	ADRA1B	0.43418	0
ENSGALT0000	adrenergic, alpha-2A-, receptor	ADRA2A	0.869674	197
ENSGALT0000	adrenergic, alpha-2B-, receptor	ADRA2B	0.651631	6.5
ENSGALT0000	adrenergic, beta-2-, receptor, surfa	ADRB2	0.963686	18.5
ENSGALT0000	hypothetical protein LOC426000	ADRBK1	0.913621	774.5
ENSGALT0000	adrenergic, beta, receptor kinase 2	ADRBK2	0.980481	1148.5
ENSGALT0000	adhesion regulating molecule 1	ADRM1	0.840592	2799.97
ENSGALT0000	adenylosuccinate lyase	ADSL	0.731988	2460.41
ENSGALT0000	adenylosuccinate synthase	ADSS	0.948855	1712
ENSGALT0000	adenylosuccinate synthase like 1	ADSSL1	0.941325	118
ENSGALT0000	AE binding protein 2	AEBP2	0.992851	331
ENSGALT0000	apoptosis enhancing nuclease	AEN	0.826449	222.5
ENSGALT0000	actin filament associated protein 1	AFAP1	0.794182	2732.51
ENSGALT0000	actin filament associated protein 1-	AFAP1L1	0.944853	921.51
ENSGALT0000	actin filament associated protein 1-	AFAP1L2	0.67784	346
ENSGALT0000	AF4/FMR2 family, member 1	AFF1	0.974938	1624
ENSGALT0000	AF4/FMR2 family, member 4	AFF4	0.981864	1165.5
ENSGALT0000	AFG3 ATPase family gene 3-like 2	AFG3L2	0.957406	1538.96
ENSGALT0000	arylformamidase	AFMID	0.948193	678
ENSGALT0000	aftiphilin	AFTPH	0.991237	984.003
ENSGALT0000	aspartylglucosaminidase	AGA	0.92457	1387.5
ENSGALT0000	ArfGAP with GTPase domain, anky	AGAP1	0.949648	996
ENSGALT0000	ArfGAP with GTPase domain, anky	AGAP3	0.85451	1860.5
ENSGALT0000	ATP/GTP binding protein-like 1	AGBL1	0.735681	112
ENSGALT0000	ATP/GTP binding protein-like 2	AGBL2	0.9761	28.5
ENSGALT0000	ATP/GTP binding protein-like 3	AGBL3	0.457758	1.5
ENSGALT0000	ATP/GTP binding protein-like 4	AGBL4	0.816619	44.5
ENSGALT0000	ATP/GTP binding protein-like 5	AGBL5	0.863902	822
ENSGALT0000	ArfGAP with FG repeats 1	AGFG1	0.903861	1668.5
ENSGALT0000	angiogenic factor with G patch and	AGGF1	0.990934	473
ENSGALT0000	acylglycerol kinase	AGK	0.84654	805.5

ENSGALT0000	amylo-alpha-1, 6-glucosidase, 4-al	AGL	0.980394	1018.5
ENSGALT0000	agmatine ureohydrolase (agmatina	AGMAT	0.961876	38.4863
ENSGALT0000	alkylglycerol monooxygenase	AGMO	0.564513	0.5
ENSGALT0000	1-acylglycerol-3-phosphate O-acylt	AGPAT2	0.884216	143.5
ENSGALT0000	1-acylglycerol-3-phosphate O-acylt	AGPAT3	0.991923	1201.37
ENSGALT0000	1-acylglycerol-3-phosphate O-acylt	AGPAT4	0.937909	366.5
ENSGALT0000	1-acylglycerol-3-phosphate O-acylt	AGPAT5	0.956835	540
ENSGALT0000	1-acylglycerol-3-phosphate O-acylt	AGPAT6	0.959711	1621.5
ENSGALT0000	1-acylglycerol-3-phosphate O-acylt	AGPAT9	0.944382	717.5
ENSGALT0000	aminoglycoside phosphotransferas	AGPHD1	0.625072	232.5
ENSGALT0000	alkylglycerone phosphate synthase	AGPS	0.946604	987.5
ENSGALT0000	anterior gradient homolog 2 (Xenof	AGR2	0.839789	214.5
ENSGALT0000	anterior gradient homolog 3 (Xenof	AGR3	0.935093	11366
ENSGALT0000	agrin	AGRN	0.968049	33436.9
ENSGALT0000	agouti related protein homolog (mo	AGRP	0.820095	6
ENSGALT0000	angiotensinogen (serpin peptidase	AGT	0.58244	2.5
ENSGALT0000	ATP/GTP binding protein 1	AGTPBP1	0.910265	267.5
ENSGALT0000	Type-1 angiotensin II receptor	AGTR1	0.659153	5
ENSGALT0000	angiotensin II receptor, type 2	AGTR2	0.746496	60
ENSGALT0000	angiotensin II receptor-associated	AGTRAP	0.905641	448.5
ENSGALT0000	alanine--glyoxylate aminotransferas	AGXT2	0.940168	47.5
ENSGALT0000	alanine-glyoxylate aminotransferas	AGXT2L1	0.979918	37.8375
ENSGALT0000	alanine-glyoxylate aminotransferas	AGXT2L2	0.991578	118.409
ENSGALT0000	AT hook containing transcription fa	AHCTF1	0.992356	1991.03
ENSGALT0000	adenosylhomocysteinase	AHCY	0.722397	4744
ENSGALT0000	adenosylhomocysteinase-like 1	AHCYL1	0.837443	3582.5
ENSGALT0000	adenosylhomocysteinase-like 2	AHCYL2	0.910968	1877
ENSGALT0000	Abelson helper integration site 1	AHI1	0.962511	219
ENSGALT0000	aryl hydrocarbon receptor	AHR	0.931548	1275.5
ENSGALT0000	aryl-hydrocarbon receptor represso	AHRR	0.796313	5.5
ENSGALT0000	AHA1, activator of heat shock 90kL	AHSA1	0.61575	2704.22
ENSGALT0000	AHA1, activator of heat shock 90kL	AHSA2	0.755057	818.279
ENSGALT0000	alpha-2-HS-glycoprotein	AHSG	0.846939	2
ENSGALT0000	activation-induced cytidine deamina	AICDA	0.828826	1
ENSGALT0000	axin interactor, dorsalization associ	AIDA	0.914143	854.003
ENSGALT0000	allograft inflammatory factor 1-like	AIF1L	0.971088	2615.93
ENSGALT0000	apoptosis-inducing factor, mitochor	AIFM1	0.873346	2116
ENSGALT0000	apoptosis-inducing factor, mitochor	AIFM2	0.758692	114
ENSGALT0000	apoptosis-inducing factor, mitochor	AIFM3	0.985376	68.5
ENSGALT0000	androgen-induced 1	AIG1	0.962217	553.5
ENSGALT0000	absent in melanoma 1	AIM1	0.986737	67.5
ENSGALT0000	absent in melanoma 1-like	AIM1L	0.939383	1360.5
ENSGALT0000	aminoacyl tRNA synthetase comple	AIMP1	0.712279	1354
ENSGALT0000	aminoacyl tRNA synthetase comple	AIMP2	0.824496	1010.5
ENSGALT0000	aryl hydrocarbon receptor interactir	AIP	0.723369	571
ENSGALT0000	aryl hydrocarbon receptor interactir	AIPL1	0.893575	40
ENSGALT0000	autoimmune regulator	AIRE	0.899909	37.5
ENSGALT0000	adenylate kinase 2	AK2	0.846799	3418.72
ENSGALT0000	adenylate kinase 3	AK3	0.93351	219
ENSGALT0000	adenylate kinase 4	AK4	0.945325	732
ENSGALT0000	adenylate kinase 5	AK5	0.803649	83
ENSGALT0000	adenylate kinase 7	AK7	0.975388	39.5
ENSGALT0000	adenylate kinase 8	AK8	0.958331	104.5
ENSGALT0000	A kinase (PRKA) anchor protein 1	AKAP1	0.944056	2149
ENSGALT0000	A kinase (PRKA) anchor protein 10	AKAP10	0.93447	809.5
ENSGALT0000	A kinase (PRKA) anchor protein 12	AKAP12	0.803524	1784

ENSGALT0000	A kinase (PRKA) anchor protein 13	AKAP13	0.998355	3031
ENSGALT0000	A kinase (PRKA) anchor protein 14	AKAP14	0.5499	14
ENSGALT0000	A kinase (PRKA) anchor protein 17	AKAP17A	0.976665	426.5
ENSGALT0000	A kinase (PRKA) anchor protein 5	AKAP5	0.92773	110
ENSGALT0000	A kinase (PRKA) anchor protein 6	AKAP6	0.726467	459.5
ENSGALT0000	A kinase (PRKA) anchor protein 7	AKAP7	0.89334	112.5
ENSGALT0000	A kinase (PRKA) anchor protein 8	AKAP8	0.832984	707.5
ENSGALT0000	A kinase (PRKA) anchor protein 8-I	AKAP8L	0.883636	2028
ENSGALT0000	A kinase (PRKA) anchor protein (y	AKAP9	0.997909	3335.09
ENSGALT0000	adenylate kinase domain containin	AKD1	0.984085	9.5
ENSGALT0000	A kinase (PRKA) interacting protei	AKIP1	0.759593	165
ENSGALT0000	akirin 2	AKIRIN2	0.854295	1397.5
ENSGALT0000	aldo-keto reductase family 1, mem	AKR1A1	0.921295	2479.46
ENSGALT0000	aldo-keto reductase family 1, mem	AKR1B10	0.996052	3838.71
ENSGALT0000	aldo-keto reductase family 1, mem	AKR1B1L	0.971104	1366.75
ENSGALT0000	aldo-keto reductase family 1, mem	AKR1D1	0.387012	1243.5
ENSGALT0000	aldo-keto reductase family 7, mem	AKR7A2	0.769983	2083
ENSGALT0000	v-akt murine thymoma viral oncoge	AKT1	0.972155	1445.78
ENSGALT0000	v-akt murine thymoma viral oncoge	AKT3	0.945178	405.206
ENSGALT0000	AKT interacting protein	AKTIP	0.972464	825.005
ENSGALT0000	Delta-aminolevulinic acid dehydrata	ALAD	0.669381	905.5
ENSGALT0000	aminolevulinate, delta-, synthase 1	ALAS1	0.693428	1606.49
ENSGALT0000	albumin	ALB	0.943377	31.5
ENSGALT0000	ALC protein	ALC	0.942516	736
ENSGALT0000	activated leukocyte cell adhesion m	ALCAM	0.952513	2328
ENSGALT0000	aldehyde dehydrogenase 18 family	ALDH18A1	0.988287	1463.5
ENSGALT0000	aldehyde dehydrogenase 1 family,	ALDH1A1	0.818488	1
ENSGALT0000	aldehyde dehydrogenase 1 family,	ALDH1A2	0.748642	447
ENSGALT0000	aldehyde dehydrogenase 1 family,	ALDH1A3	0.389884	725
ENSGALT0000	aldehyde dehydrogenase 1 family,	ALDH1L2	0.885626	950.254
ENSGALT0000	aldehyde dehydrogenase 2 family (	ALDH2	0.811782	4033
ENSGALT0000	aldehyde dehydrogenase 3 family,	ALDH3A2	0.910135	2821.5
ENSGALT0000	aldehyde dehydrogenase 3 family,	ALDH3B1	0.748983	117
ENSGALT0000	aldehyde dehydrogenase 5 family,	ALDH5A1	0.92071	648
ENSGALT0000	aldehyde dehydrogenase 6 family,	ALDH6A1	0.981887	1488.5
ENSGALT0000	aldehyde dehydrogenase 7 family,	ALDH7A1	0.904051	6658.5
ENSGALT0000	aldehyde dehydrogenase 8 family,	ALDH8A1	0.603682	1
ENSGALT0000	aldehyde dehydrogenase 9 family,	ALDH9A1	0.859026	6171
ENSGALT0000	aldolase B, fructose-bisphosphate	ALDOB	0.147193	41
ENSGALT0000	asparagine-linked glycosylation 1,	ALG1	0.942797	474
ENSGALT0000	asparagine-linked glycosylation 10,	ALG10	0.937919	453.5
ENSGALT0000	asparagine-linked glycosylation 11,	ALG11	0.915921	370
ENSGALT0000	asparagine-linked glycosylation 12	ALG12	0.967232	1724.46
ENSGALT0000	asparagine-linked glycosylation 13	ALG13	0.911946	711.5
ENSGALT0000	asparagine-linked glycosylation 14	ALG14	0.960001	193.5
ENSGALT0000	asparagine-linked glycosylation 2,	ALG2	0.977128	642.5
ENSGALT0000	asparagine-linked glycosylation 3,	ALG3	0.948829	857
ENSGALT0000	asparagine-linked glycosylation 5,	ALG5	0.972418	347.999
ENSGALT0000	asparagine-linked glycosylation 6,	ALG6	0.965373	588
ENSGALT0000	asparagine-linked glycosylation 8,	ALG8	0.967034	891.5
ENSGALT0000	asparagine-linked glycosylation 9,	ALG9	0.960322	1092.5
ENSGALT0000	anaplastic lymphoma receptor tyros	ALK	0.929795	299.499
ENSGALT0000	alkB, alkylation repair homolog 1 (E	ALKBH1	0.913639	841
ENSGALT0000	alkB, alkylation repair homolog 2 (E	ALKBH2	0.879334	244.701
ENSGALT0000	alkB, alkylation repair homolog 3 (E	ALKBH3	0.987228	703
ENSGALT0000	alkB, alkylation repair homolog 4 (E	ALKBH4	0.855352	54

ENSGALT0000	alkB, alkylation repair homolog 5 (E	ALKBH5	0.963869	907.5
ENSGALT0000	alkB, alkylation repair homolog 8 (E	ALKBH8	0.977592	465.5
ENSGALT0000	Alstrom syndrome 1	ALMS1	0.966361	299.5
ENSGALT0000	arachidonate 5-lipoxygenase	ALOX5	0.908957	31.5
ENSGALT0000	arachidonate 5-lipoxygenase-activa	ALOX5AP	0.967437	119
ENSGALT0000	alpha-kinase 1	ALPK1	0.994006	5.5
ENSGALT0000	alpha-kinase 2	ALPK2	0.913242	34.5
ENSGALT0000	alpha-kinase 3	ALPK3	0.975735	837.102
ENSGALT0000	alkaline phosphatase, liver/bone/ki	ALPL	0.952617	1194
ENSGALT0000	amyotrophic lateral sclerosis 2 (juv	ALS2	0.998229	2397
ENSGALT0000	ALS2 C-terminal like	ALS2CL	0.900952	105
ENSGALT0000	amyotrophic lateral sclerosis 2 (juv	ALS2CR8	0.996013	420.5
ENSGALT0000	ALX homeobox 1	ALX1	0.562993	1.5
ENSGALT0000	ALX homeobox 4	ALX4	0.577129	10.5
ENSGALT0000	alpha-methylacyl-CoA racemase	AMACR	0.930548	277.5
ENSGALT0000	alpha-1-microglobulin/bikunin prect	AMBP	0.853815	2.5
ENSGALT0000	autophagy/beclin-1 regulator 1	AMBRA1	0.973635	2856.08
ENSGALT0000	adenosylmethionine decarboxylase	AMD1	0.828653	1017.5
ENSGALT0000	amidohydrolase domain containing	AMDHD1	0.937862	43.5
ENSGALT0000	amidohydrolase domain containing	AMDHD2	0.926909	919
ENSGALT0000	autocrine motility factor receptor	AMFR	0.953613	2722.5
ENSGALT0000	anti-Mullerian hormone	AMH	0.93587	1066.51
ENSGALT0000	adhesion molecule, interacts with C	AMICA1	0.954432	74
ENSGALT0000	adhesion molecule with Ig-like dom	AMIGO2	0.525199	96.5
ENSGALT0000	Alport syndrome, mental retardatio	AMMECR1	0.973823	274.5
ENSGALT0000	AMME chromosomal region gene 1	AMMECR1L	0.975941	784.5
ENSGALT0000	amnionless homolog (mouse)	AMN	0.0252674	46.5
ENSGALT0000	antagonist of mitotic exit network 1	AMN1	0.911492	76
ENSGALT0000	angiomotin	AMOT	0.970154	2304
ENSGALT0000	angiomotin like 1	AMOTL1	0.836766	390.5
ENSGALT0000	angiomotin like 2	AMOTL2	0.834715	1154.5
ENSGALT0000	Antimicrobial peptide CHP1	AMP1_CHICK	0.576264	4.5
ENSGALT0000	AMP deaminase 1	AMPD1	0.931818	35
ENSGALT0000	adenosine monophosphate deamin	AMPD3	0.956847	294.5
ENSGALT0000	amphiphysin	AMPH	0.751285	281
ENSGALT0000	amylase, alpha 1A; salivary	AMY1A	0.946568	608.439
ENSGALT0000	amylase, alpha 2A; pancreatic	AMY2A	0.574457	23.5609
ENSGALT0000	archaelysin family metallopeptidase	AMZ1	0.655887	17
ENSGALT0000	anaphase promoting complex subu	ANAPC1	0.943847	2441.5
ENSGALT0000	anaphase promoting complex subu	ANAPC10	0.962189	166.5
ENSGALT0000	anaphase promoting complex subu	ANAPC16	0.626276	2026.5
ENSGALT0000	anaphase promoting complex subu	ANAPC2	0.760379	3103
ENSGALT0000	anaphase promoting complex subu	ANAPC4	0.925103	921
ENSGALT0000	anaphase promoting complex subu	ANAPC5	0.920882	855.725
ENSGALT0000	anaphase promoting complex subu	ANAPC7	0.926075	1138.5
ENSGALT0000	angiogenin, ribonuclease, RNase A	ANG	0.0657538	0.00114
ENSGALT0000	angel homolog 1 (Drosophila)	ANGEL1	0.980263	2325.48
ENSGALT0000	angel homolog 2 (Drosophila)	ANGEL2	0.980531	716.5
ENSGALT0000	angiopoietin 1	ANGPT1	0.98565	128.5
ENSGALT0000	angiopoietin 2	ANGPT2	0.725465	551.501
ENSGALT0000	angiopoietin-like 1	ANGPTL1	0.995375	639
ENSGALT0000	angiopoietin-like 2	ANGPTL2	0.999228	461
ENSGALT0000	angiopoietin-like 3	ANGPTL3	0.722096	0.5
ENSGALT0000	angiopoietin-like 4	ANGPTL4	0.939699	471.5
ENSGALT0000	angiopoietin-like 5	ANGPTL5	?	0
ENSGALT0000	angiopoietin-like 6	ANGPTL6	0.745679	7.49221

ENSGALT0000	angiopoietin-like 7	ANGPTL7	1	1.5
ENSGALT0000	ankyrin 1, erythrocytic	ANK1	0.782171	82.5
ENSGALT0000	ankyrin 2, neuronal	ANK2	0.871878	7287.5
ENSGALT0000	ankyrin 3, node of Ranvier (ankyrin	ANK3	0.954295	5236.58
ENSGALT0000	ankyrin repeat and death domain c	ANKDD1A	0.923527	165.5
ENSGALT0000	ankyrin repeat and death domain c	ANKDD1B	0.946402	8.5
ENSGALT0000	ankyrin-repeat and fibronectin type	ANKFN1	0.569341	5
ENSGALT0000	ankyrin repeat and FYVE domain c	ANKFY1	0.950137	2751.5
ENSGALT0000	ankylosis, progressive homolog	ANKH	0.893553	1429
ENSGALT0000	ankyrin repeat and KH domain con	ANKHD1	0.986119	4801
ENSGALT0000	ankyrin repeat and IBR domain cor	ANKIB1	0.977884	1804.5
ENSGALT0000	ankyrin repeat and kinase domain (	ANKK1	0.638664	3.5
ENSGALT0000	ankyrin repeat and LEM domain co	ANKLE2	0.981168	1507
ENSGALT0000	ankyrin repeat and MYND domain (	ANKMY2	0.965007	984
ENSGALT0000	ankyrin repeat, family A (RFXANK-I	ANKRA2	0.893527	1348.49
ENSGALT0000	ankyrin repeat domain 1 (cardiac m	ANKRD1	0.995037	8.5
ENSGALT0000	ankyrin repeat domain 10	ANKRD10	0.955207	1392.51
ENSGALT0000	ankyrin repeat domain 13A	ANKRD13A	0.951737	1671
ENSGALT0000	ankyrin repeat domain 13C	ANKRD13C	0.960288	860.5
ENSGALT0000	ankyrin repeat domain 16	ANKRD16	0.950054	456
ENSGALT0000	ankyrin repeat domain 17	ANKRD17	0.958195	2855.5
ENSGALT0000	ankyrin repeat domain 2 (stretch re	ANKRD2	0.721986	7.5
ENSGALT0000	ankyrin repeat domain 22	ANKRD22	0.874595	7.5
ENSGALT0000	ankyrin repeat domain 24	ANKRD24	0.740612	286.5
ENSGALT0000	ankyrin repeat domain 27 (VPS9 dc	ANKRD27	0.981956	268.5
ENSGALT0000	ankyrin repeat domain 28	ANKRD28	0.980377	1546
ENSGALT0000	ankyrin repeat domain 29	ANKRD29	0.922478	6.5
ENSGALT0000	ankyrin repeat domain 31	ANKRD31	0.994079	583
ENSGALT0000	ankyrin repeat domain 33	ANKRD33	0.911269	9
ENSGALT0000	ankyrin repeat domain 33B	ANKRD33B	0.634769	2.5
ENSGALT0000	ankyrin repeat domain 34B	ANKRD34B	0.890503	16.5
ENSGALT0000	ankyrin repeat domain 34C	ANKRD34C	0.711618	28
ENSGALT0000	ankyrin repeat domain 40	ANKRD40	0.903115	487.5
ENSGALT0000	ankyrin repeat domain 42	ANKRD42	0.986412	76
ENSGALT0000	ankyrin repeat domain 44	ANKRD44	0.851442	1384.99
ENSGALT0000	ankyrin repeat domain 46	ANKRD46	0.959205	906.5
ENSGALT0000	ankyrin repeat domain 49	ANKRD49	0.83287	319.5
ENSGALT0000	ankyrin repeat domain 5	ANKRD5	0.955046	98.5
ENSGALT0000	ankyrin repeat domain 50	ANKRD50	0.977246	3820
ENSGALT0000	hypothetical protein LOC426469	ANKRD52	0.955483	1745.5
ENSGALT0000	ankyrin repeat domain 54	ANKRD54	0.936753	1175
ENSGALT0000	ankyrin repeat domain 55	ANKRD55	0.862425	2
ENSGALT0000	ankyrin repeat domain 56	ANKRD56	0.623451	17.5
ENSGALT0000	ankyrin repeat domain 6	ANKRD6	0.799948	455.229
ENSGALT0000	ankyrin repeat domain 60	ANKRD60	0.715119	4.5
ENSGALT0000	ankyrin repeat domain 61	ANKRD61	0.976945	11
ENSGALT0000	ankyrin repeat domain 9	ANKRD9	0.824619	13
ENSGALT0000	ankyrin repeat and sterile alpha mc	ANKS1A	0.978262	1702.5
ENSGALT0000	ankyrin repeat and sterile alpha mc	ANKS1B	0.931962	133
ENSGALT0000	ankyrin repeat and sterile alpha mc	ANKS3	0.989477	520.5
ENSGALT0000	ankyrin repeat and sterile alpha mc	ANKS4B	0.936174	33.7874
ENSGALT0000	ankyrin repeat and sterile alpha mc	ANKS6	0.982147	384
ENSGALT0000	ankyrin repeat and zinc finger dom	ANKZF1	0.939111	1209.49
ENSGALT0000	anillin, actin binding protein	ANLN	0.886658	857.499
ENSGALT0000	anoctamin 1, calcium activated chlc	ANO1	0.88168	48
ENSGALT0000	anoctamin 10	ANO10	0.976132	326.5

ENSGALT0000	anoctamin 2	ANO2	0.956791	5.5
ENSGALT0000	anoctamin 3	ANO3	0.977712	220.5
ENSGALT0000	anoctamin 4	ANO4	0.623907	47
ENSGALT0000	anoctamin 5	ANO5	0.904391	1943.5
ENSGALT0000	anoctamin 6	ANO6	0.666535	108
ENSGALT0000	anoctamin 9	ANO9	0.657742	12
ENSGALT0000	acidic (leucine-rich) nuclear phospr	ANP32A	0.929233	2501
ENSGALT0000	acidic (leucine-rich) nuclear phospr	ANP32B	0.979261	14895.2
ENSGALT0000	acidic (leucine-rich) nuclear phospr	ANP32E	0.910741	8442.29
ENSGALT0000	alanyl (membrane) aminopeptidase	ANPEP	0.825845	118.5
ENSGALT0000	anthrax toxin receptor 1	ANTXR1	0.772117	78
ENSGALT0000	anthrax toxin receptor 2	ANTXR2	0.963414	803.5
ENSGALT0000	anthrax toxin receptor-like	ANTXRL	0.990911	800
ENSGALT0000	annexin A1	ANXA1	0.980523	23.5
ENSGALT0000	annexin A10	ANXA10	0.464758	0
ENSGALT0000	annexin A11	ANXA11	0.954001	770.999
ENSGALT0000	annexin A13	ANXA13	0.772997	5
ENSGALT0000	annexin A2	ANXA2	0.762266	2558
ENSGALT0000	annexin A5	ANXA5	0.773014	2944.01
ENSGALT0000	annexin A6	ANXA6	0.772994	6186.03
ENSGALT0000	annexin A7	ANXA7	0.960057	570.5
ENSGALT0000	annexin A8	ANXA8	0.633543	360.5
ENSGALT0000	acyloxyacyl hydrolase (neutrophil)	AOAH	0.781177	42
ENSGALT0000	aldehyde oxidase 1	AOX1	0.982779	176.5
ENSGALT0000	aldehyde oxidase 2 pseudogene	AOX2P	0.973813	125
ENSGALT0000	adaptor-related protein complex 1 a	AP1AR	0.999817	532
ENSGALT0000	adaptor-related protein complex 1,	AP1B1	0.890003	4085.81
ENSGALT0000	adaptor-related protein complex 1,	AP1G1	0.970266	5600.5
ENSGALT0000	adaptor-related protein complex 1,	AP1M1	0.835598	2218.5
ENSGALT0000	adaptor-related protein complex 1,	AP1S2	0.801648	1235.01
ENSGALT0000	adaptor-related protein complex 1,	AP1S3	0.99443	644.5
ENSGALT0000	adaptor-related protein complex 2,	AP2A2	0.921945	6244.56
ENSGALT0000	adaptor-related protein complex 2,	AP2B1	0.937293	5389.78
ENSGALT0000	adaptor-related protein complex 2,	AP2M1	0.84504	12992.5
ENSGALT0000	adaptor-related protein complex 2,	AP2S1	0.817165	943
ENSGALT0000	adaptor-related protein complex 3,	AP3B1	0.991754	1620.5
ENSGALT0000	adaptor-related protein complex 3,	AP3B2	0.718811	2447
ENSGALT0000	adaptor-related protein complex 3,	AP3D1	0.953755	4638.36
ENSGALT0000	adaptor-related protein complex 3,	AP3M1	0.931693	3687
ENSGALT0000	adaptor-related protein complex 3,	AP3M2	0.930424	1343
ENSGALT0000	adaptor-related protein complex 3,	AP3S1	0.969048	1226.49
ENSGALT0000	adaptor-related protein complex 3,	AP3S2	0.648802	2174
ENSGALT0000	adaptor-related protein complex 4,	AP4B1	0.958927	1592.99
ENSGALT0000	adaptor-related protein complex 4,	AP4E1	0.97879	845.999
ENSGALT0000	adaptor-related protein complex 4,	AP4S1	0.873576	92
ENSGALT0000	apoptotic peptidase activating facto	APAF1	0.990284	592.498
ENSGALT0000	amyloid beta (A4) precursor proteir	APBA1	0.930412	642
ENSGALT0000	amyloid beta (A4) precursor proteir	APBA2	0.757994	1408
ENSGALT0000	amyloid beta (A4) precursor proteir	APBA3	0.956805	1200.5
ENSGALT0000	amyloid beta (A4) precursor proteir	APBB1IP	0.699139	434.5
ENSGALT0000	amyloid beta (A4) precursor proteir	APBB2	0.961358	1671.94
ENSGALT0000	amyloid beta (A4) precursor proteir	APBB3	0.556363	201
ENSGALT0000	adenomatous polyposis coli	APC	0.937004	2250.51
ENSGALT0000	adenomatosis polyposis coli down-	APCDD1	0.739537	1843
ENSGALT0000	adenomatosis polyposis coli down-	APCDD1L	0.634342	65.5
ENSGALT0000	N-acylaminoacyl-peptide hydrolase	APEH	0.857055	1151

ENSGALT0000	anterior pharynx defective 1 homol	APH1A	0.875432	519
ENSGALT0000	apoptosis inhibitor 5	API5	0.913041	2144.13
ENSGALT0000	APAF1 interacting protein	APIP	0.980522	805.5
ENSGALT0000	apoptosis-inducing, TAF9-like dom	APITD1	0.953441	415
ENSGALT0000	aprataxin and PNKP like factor	APLF	0.940957	312.499
ENSGALT0000	apelin receptor	APLNR	0.668593	213
ENSGALT0000	amyloid beta (A4) precursor-like pr	APLP2	0.946427	11756.5
ENSGALT0000	apolipoprotein A-I	APOA1	0.207307	2350.46
ENSGALT0000	apolipoprotein A-I binding protein	APOA1BP	0.75486	1497.5
ENSGALT0000	apolipoprotein A-IV	APOA4	0.742393	0.5
ENSGALT0000	apolipoprotein A-V	APOA5	0.769911	58.5
ENSGALT0000	apolipoprotein B (including Ag(x) a	APOB	0.19245	0
ENSGALT0000	apolipoprotein B mRNA editing enz	APOBEC2	0.986266	41.5
ENSGALT0000	apolipoprotein B mRNA editing enz	APOBEC4	0.464758	0
ENSGALT0000	apolipoprotein D	APOD	0.916039	28.5
ENSGALT0000	apolipoprotein H (beta-2-glycoprote	APOH	0.740073	0.5
ENSGALT0000	apolipoprotein L domain containing	APOLD1	0.663833	10.5
ENSGALT0000	apolipoprotein O	APOO	0.898787	704.5
ENSGALT0000	apolipoprotein O-like	APOOL	0.993749	353
ENSGALT0000	apoptogenic 1	APOPT1	0.956826	496
ENSGALT0000	lipoprotein	APOVLDLII	0.464758	0.5
ENSGALT0000	amyloid beta (A4) precursor protei	APP	0.995498	38481.9
ENSGALT0000	amyloid beta precursor protein (cyt	APPBP2	0.949791	1370
ENSGALT0000	adaptor protein, phosphotyrosine ir	APPL1	0.968973	388
ENSGALT0000	adaptor protein, phosphotyrosine ir	APPL2	0.958466	840.5
ENSGALT0000	aprataxin	APTX	0.9519	531.002
ENSGALT0000	aquaporin 1 (Colton blood group)	AQP1	0.774215	20.5
ENSGALT0000	aquaporin 11	AQP11	0.994651	71.5
ENSGALT0000	aquaporin 12	AQP12	0.866057	8.5
ENSGALT0000	aquaporin 2 (collecting duct)	AQP2	0.464758	0
ENSGALT0000	aquaporin 3 (Gill blood group)	AQP3	0.603682	0.5
ENSGALT0000	aquaporin 4	AQP4	0.605494	44
ENSGALT0000	aquaporin 5	AQP5	0.67369	10
ENSGALT0000	aquaporin 7	AQP7	0.649519	0
ENSGALT0000	aquaporin 8	AQP8	0.962735	3
ENSGALT0000	aquaporin 9	AQP9	0.877641	4.5
ENSGALT0000	aquarius homolog (mouse)	AQR	0.948421	1969.5
ENSGALT0000	androgen receptor	AR	0.783315	1171.5
ENSGALT0000	ArfGAP with RhoGAP domain, ank	ARAP2	0.889607	468
ENSGALT0000	ArfGAP with RhoGAP domain, ank	ARAP3	0.858045	727.5
ENSGALT0000	activity-regulated cytoskeleton-ass	ARC	?	0
ENSGALT0000	archain 1	ARCN1	0.927187	7567
ENSGALT0000	amphiregulin B	AREGB	0.724198	34.5
ENSGALT0000	ADP-ribosylation factor 1	ARF1	0.8426	16437.4
ENSGALT0000	ADP-ribosylation factor 4	ARF4	0.742227	6532
ENSGALT0000	ADP-ribosylation factor GTPase ac	ARFGAP1	0.946275	2243
ENSGALT0000	ADP-ribosylation factor GTPase ac	ARFGAP2	0.881786	1806.5
ENSGALT0000	ADP-ribosylation factor GTPase ac	ARFGAP3	0.996654	1757.03
ENSGALT0000	ADP-ribosylation factor guanine nu	ARFGEF1	0.934122	2646
ENSGALT0000	ADP-ribosylation factor guanine nu	ARFGEF2	0.971358	967
ENSGALT0000	ADP-ribosylation factor interacting	ARFIP1	0.954311	845.502
ENSGALT0000	ADP-ribosylation factor interacting	ARFIP2	0.921265	930.991
ENSGALT0000	ADP-ribosylation factor related pro	ARFRP1	0.925432	685.5
ENSGALT0000	arginine and glutamate rich 1	ARGLU1	0.980284	5253.5
ENSGALT0000	Rho GTPase activating protein 1	ARHGAP1	0.97607	2198
ENSGALT0000	Rho GTPase activating protein 10	ARHGAP10	0.985667	516.5

ENSGALT0000	Rho GTPase activating protein 11A	ARHGAP11A	0.853853	178
ENSGALT0000	Rho GTPase activating protein 12	ARHGAP12	0.969621	891
ENSGALT0000	Rho GTPase activating protein 15	ARHGAP15	0.558427	14
ENSGALT0000	Rho GTPase activating protein 17	ARHGAP17	0.979429	6093.45
ENSGALT0000	Rho GTPase activating protein 18	ARHGAP18	0.864292	1061.82
ENSGALT0000	Rho GTPase activating protein 19	ARHGAP19	0.826687	1823.5
ENSGALT0000	Rho GTPase activating protein 20	ARHGAP20	0.833841	23.5
ENSGALT0000	Rho GTPase activating protein 21	ARHGAP21	0.978153	3022.5
ENSGALT0000	Rho GTPase activating protein 22	ARHGAP22	0.961511	118.5
ENSGALT0000	Rho GTPase activating protein 24	ARHGAP24	0.988847	513.5
ENSGALT0000	Rho GTPase activating protein 25	ARHGAP25	0.797275	26.5
ENSGALT0000	Rho GTPase activating protein 26	ARHGAP26	0.978879	1282.51
ENSGALT0000	Rho GTPase activating protein 28	ARHGAP28	0.768137	345.5
ENSGALT0000	Rho GTPase activating protein 29	ARHGAP29	0.974521	653.5
ENSGALT0000	Rho GTPase activating protein 31	ARHGAP31	0.754907	531.5
ENSGALT0000	Rho GTPase activating protein 32	ARHGAP32	0.954858	2764.23
ENSGALT0000	Rho GTPase activating protein 35	ARHGAP35	0.962355	11886
ENSGALT0000	Rho GTPase activating protein 36	ARHGAP36	1	4.5
ENSGALT0000	Rho GTPase activating protein 39	ARHGAP39	0.949689	1235
ENSGALT0000	Rho GTPase activating protein 40	ARHGAP40	0.824994	99.5001
ENSGALT0000	Rho GTPase activating protein 42	ARHGAP42	0.997499	492
ENSGALT0000	Rho GTPase activating protein 44	ARHGAP44	0.975891	603
ENSGALT0000	Rho GTPase activating protein 5	ARHGAP5	0.975847	2084
ENSGALT0000	Rho GTPase activating protein 6	ARHGAP6	0.969484	282.499
ENSGALT0000	Rho GTPase activating protein 8	ARHGAP8	0.980266	220
ENSGALT0000	Rho GDP dissociation inhibitor (GD	ARHGDIA	0.764291	5449
ENSGALT0000	Rho GDP dissociation inhibitor (GD	ARHGDIB	0.685938	4297.5
ENSGALT0000	Rho guanine nucleotide exchange	ARHGEF10	0.847926	845.782
ENSGALT0000	Rho guanine nucleotide exchange	ARHGEF10L	0.957717	2452.93
ENSGALT0000	Rho guanine nucleotide exchange	ARHGEF11	0.956294	3512.5
ENSGALT0000	Rho guanine nucleotide exchange	ARHGEF12	0.967632	3494.5
ENSGALT0000	Rho guanine nucleotide exchange	ARHGEF16	0.85698	1135.5
ENSGALT0000	Rho guanine nucleotide exchange	ARHGEF17	0.879153	1569
ENSGALT0000	rho/rac guanine nucleotide exchan	ARHGEF18	0.986318	1067.5
ENSGALT0000	Rho guanine nucleotide exchange	ARHGEF19	0.946816	587
ENSGALT0000	Rho guanine nucleotide exchange	ARHGEF26	0.98727	248
ENSGALT0000	Rho guanine nucleotide exchange	ARHGEF3	0.907887	401.5
ENSGALT0000	Rho guanine nucleotide exchange	ARHGEF37	0.906099	137
ENSGALT0000	Rho guanine nucleotide exchange	ARHGEF4	0.992794	432
ENSGALT0000	Rac/Cdc42 guanine nucleotide exc	ARHGEF6	0.860528	1479
ENSGALT0000	Rho guanine nucleotide exchange	ARHGEF7	0.889032	1060
ENSGALT0000	Cdc42 guanine nucleotide exchang	ARHGEF9	0.792651	112
ENSGALT0000	AT rich interactive domain 1A (SWI	ARID1A	0.993322	1962.32
ENSGALT0000	AT rich interactive domain 1B (SWI	ARID1B	0.972109	6147.19
ENSGALT0000	AT rich interactive domain 2 (ARID,	ARID2	0.977193	1928.5
ENSGALT0000	AT rich interactive domain 3B (BRI	ARID3B	0.947667	1514.5
ENSGALT0000	AT rich interactive domain 3C (BRI	ARID3C	0.739984	31
ENSGALT0000	AT rich interactive domain 4A (RBP	ARID4A	0.974283	982.497
ENSGALT0000	AT rich interactive domain 4B (RBF	ARID4B	0.997752	844.492
ENSGALT0000	AT rich interactive domain 5A (MRF	ARID5A	0.869866	128.5
ENSGALT0000	AT rich interactive domain 5B (MRF	ARID5B	0.937694	2292.5
ENSGALT0000	ariadne homolog, ubiquitin-conjuga	ARIH1	0.935669	3087.45
ENSGALT0000	ariadne homolog 2 (Drosophila)	ARIH2	0.96149	1104
ENSGALT0000	ADP-ribosylation factor-like 1	ARL1	0.705365	2380
ENSGALT0000	ADP-ribosylation factor-like 10	ARL10	0.782406	107.5
ENSGALT0000	ADP-ribosylation factor-like 11	ARL11	0.984952	57.5

ENSGALT0000	ADP-ribosylation factor-like 13A	ARL13A	0.464758	0
ENSGALT0000	ADP-ribosylation factor-like 13B	ARL13B	0.986988	403.5
ENSGALT0000	ADP-ribosylation factor-like 15	ARL15	0.933457	191.5
ENSGALT0000	ADP-ribosylation factor-like 16	ARL16	0.97415	219
ENSGALT0000	ADP-ribosylation factor-like 2 bindi	ARL2BP	0.988111	375.5
ENSGALT0000	ADP-ribosylation factor-like 3	ARL3	0.946676	886
ENSGALT0000	ADP-ribosylation factor-like 4A	ARL4A	0.978905	910
ENSGALT0000	ADP-ribosylation factor-like 5B	ARL5B	0.984232	703
ENSGALT0000	ADP-ribosylation factor-like 6 intera	ARL6IP1	0.640893	5202.5
ENSGALT0000	ADP-ribosylation-like factor 6 intera	ARL6IP4	0.873119	999.5
ENSGALT0000	PRA1 family protein 3	ARL6IP5	0.871636	3072.5
ENSGALT0000	ADP-ribosylation factor-like 8A	ARL8A	0.806816	1517
ENSGALT0000	ADP-ribosylation factor-like 8B	ARL8B	0.84906	748.358
ENSGALT0000	ADP-ribosylation factor-like 9	ARL9	0.924396	220.5
ENSGALT0000	armadillo repeat containing 1	ARMC1	0.94819	1007
ENSGALT0000	armadillo repeat containing 10	ARMC10	0.938711	57
ENSGALT0000	armadillo repeat containing 2	ARMC2	0.984481	235.5
ENSGALT0000	armadillo repeat containing 3	ARMC3	0.966118	67
ENSGALT0000	armadillo repeat containing 4	ARMC4	0.899036	39.5
ENSGALT0000	armadillo repeat containing 6	ARMC6	0.873378	2518
ENSGALT0000	armadillo repeat containing 7	ARMC7	0.953818	807.5
ENSGALT0000	armadillo repeat containing 8	ARMC8	0.971393	769
ENSGALT0000	armadillo repeat containing 9	ARMC9	0.998715	589.5
ENSGALT0000	aryl hydrocarbon receptor nuclear t	ARNT	0.927604	5987
ENSGALT0000	aryl-hydrocarbon receptor nuclear t	ARNT2	0.979174	1705.95
ENSGALT0000	aryl hydrocarbon receptor nuclear t	ARNTL	0.981971	888.995
ENSGALT0000	aryl hydrocarbon receptor nuclear t	ARNTL2	0.991081	1101.01
ENSGALT0000	actin related protein 2/3 complex, s	ARPC1A	0.837472	3387.11
ENSGALT0000	actin related protein 2/3 complex su	ARPC1B	0.540076	332
ENSGALT0000	actin related protein 2/3 complex, s	ARPC2	0.797853	4746.72
ENSGALT0000	actin related protein 2/3 complex, s	ARPC3	0.580074	2526.5
ENSGALT0000	actin related protein 2/3 complex, s	ARPC4	0.425881	3009
ENSGALT0000	actin related protein 2/3 complex, s	ARPC5	0.801566	3698.48
ENSGALT0000	cAMP-regulated phosphoprotein, 1	ARPP19	0.98498	2202.48
ENSGALT0000	cAMP-regulated phosphoprotein, 2	ARPP21	0.805768	506
ENSGALT0000	arrestin 3, retinal	ARR3	0.960907	5.64893
ENSGALT0000	arrestin domain containing 1	ARRDC1	0.961033	2609
ENSGALT0000	arrestin domain containing 2	ARRDC2	0.966424	457
ENSGALT0000	arrestin domain containing 3	ARRDC3	0.970851	745.5
ENSGALT0000	arrestin domain containing 4	ARRDC4	0.898715	166.5
ENSGALT0000	arylsulfatase A	ARSA	0.930528	905.5
ENSGALT0000	arylsulfatase B	ARSB	0.983688	264.5
ENSGALT0000	arylsulfatase D	ARSD	0.98458	22.6182
ENSGALT0000	arylsulfatase G	ARSG	0.990743	237
ENSGALT0000	arylsulfatase family, member H	ARSH	0.948285	348.686
ENSGALT0000	arylsulfatase family, member I	ARSI	0.98862	3131
ENSGALT0000	arylsulfatase family, member J	ARSJ	0.977834	124.5
ENSGALT0000	arylsulfatase family, member K	ARSK	0.99579	279
ENSGALT0000	ADP-ribosyltransferase 1	ART1	0.464758	0
ENSGALT0000	ADP-ribosyltransferase 3	ART3	0.22129	0.5
ENSGALT0000	ADP-ribosyltransferase 4 (Dombro	ART4	0.649519	0
ENSGALT0000	ARV1 homolog (S. cerevisiae)	ARV1	0.930395	82.5
ENSGALT0000	armadillo repeat gene deleted in ve	ARVCF	0.995831	5796.45
ENSGALT0000	arsenic (+3 oxidation state) methylt	AS3MT	0.766233	165.5
ENSGALT0000	N-acylsphingosine amidohydrolase	ASAH1	0.995845	1788
ENSGALT0000	N-acylsphingosine amidohydrolase	ASAH2	0.934491	4.5

ENSGALT0000	ArfGAP with SH3 domain, ankyrin	ASAP1	0.95681	696.5
ENSGALT0000	ArfGAP with SH3 domain, ankyrin	ASAP2	0.992482	1369
ENSGALT0000	ankyrin repeat and SOCS box cont	ASB1	0.839453	636.5
ENSGALT0000	ankyrin repeat and SOCS box cont	ASB10	0.631223	1.5
ENSGALT0000	ankyrin repeat and SOCS box cont	ASB11	0.603682	0
ENSGALT0000	ankyrin repeat and SOCS box cont	ASB12	0.986063	10.5
ENSGALT0000	ankyrin repeat and SOCS box cont	ASB13	0.965592	151
ENSGALT0000	ankyrin repeat and SOCS box cont	ASB14	0.984636	107.5
ENSGALT0000	ankyrin repeat and SOCS box cont	ASB15	0.94691	1.5
ENSGALT0000	ankyrin repeat and SOCS box cont	ASB18	0.464758	0
ENSGALT0000	ankyrin repeat and SOCS box cont	ASB2	0.3318	1
ENSGALT0000	ankyrin repeat and SOCS box-cont	ASB3	0.986825	766.668
ENSGALT0000	ankyrin repeat and SOCS box cont	ASB4	0.0539949	0
ENSGALT0000	ankyrin repeat and SOCS box cont	ASB5	0.898649	256.5
ENSGALT0000	ankyrin repeat and SOCS box cont	ASB6	0.972855	1714.5
ENSGALT0000	ankyrin repeat and SOCS box cont	ASB7	0.919458	332
ENSGALT0000	ankyrin repeat and SOCS box-cont	ASB8	0.880033	1264.5
ENSGALT0000	ankyrin repeat and SOCS box cont	ASB9	0.778717	600.5
ENSGALT0000	activating signal cointegrator 1 com	ASCC1	0.754927	1141
ENSGALT0000	activating signal cointegrator 1 com	ASCC2	0.984243	1402.5
ENSGALT0000	activating signal cointegrator 1 com	ASCC3	0.950647	1048
ENSGALT0000	achaete-scute complex homolog 2	ASCL2	0.860985	47
ENSGALT0000	achaete-scute complex homolog 3	ASCL3	0.972735	8
ENSGALT0000	achaete-scute complex homolog 4	ASCL4	0.649519	0.5
ENSGALT0000	anti-silencing function 1	ASF1A	0.932722	693.5
ENSGALT0000	ash1 (absent, small, or homeotic)-li	ASH1L	0.968725	4628
ENSGALT0000	ash2 (absent, small, or homeotic)-li	ASH2L	0.899334	2046
ENSGALT0000	Agouti signaling proteinUncharacte	ASIP	0.604874	6
ENSGALT0000	argininosuccinate lyase	ASL1	0.971942	75.7413
ENSGALT0000	argininosuccinate lyase	ASL2	0.898101	210.259
ENSGALT0000	acetylserotonin O-methyltransferas	ASMT	0.853815	0.5
ENSGALT0000	acetylserotonin O-methyltransferas	ASMTL	0.887683	537.5
ENSGALT0000	asparagine synthetase (glutamine-I	ASNS	0.800804	831
ENSGALT0000	asparagine synthetase domain con	ASNSD1	0.952782	678
ENSGALT0000	aspartoacylase	ASPA	0.649519	5
ENSGALT0000	asparaginase homolog (S. cerevisi	ASPG	0.567615	200
ENSGALT0000	aspartate beta-hydroxylase	ASPH	0.989118	993.999
ENSGALT0000	aspartate beta-hydroxylase domain	ASPHD2	0.676127	37.5
ENSGALT0000	asp (abnormal spindle) homolog, m	ASPM	0.922312	1421
ENSGALT0000	asporin	ASPN	0.745562	6
ENSGALT0000	alveolar soft part sarcoma chromos	ASPSCR1	0.98398	1905.5
ENSGALT0000	asparaginase like 1	ASRGL1	0.833793	404.5
ENSGALT0000	argininosuccinate synthase 1	ASS1	0.228145	38
ENSGALT0000	asteroid homolog 1 (Drosophila)	ASTE1	0.994445	276.5
ENSGALT0000	astacin-like metallo-endopeptidase	ASTL	0.643623	4
ENSGALT0000	astrotactin 1	ASTN1	0.807557	1436.48
ENSGALT0000	astrotactin 2	ASTN2	0.732806	1796
ENSGALT0000	additional sex combs like 1 (Drosop	ASXL1	0.976259	1625.5
ENSGALT0000	additional sex combs like 2 (Drosop	ASXL2	0.967808	661.006
ENSGALT0000	additional sex combs like 3 (Drosop	ASXL3	0.952733	709
ENSGALT0000	ankyrin repeat, SAM and basic leu	ASZ1	1	0.5
ENSGALT0000	ATPase family, AAA domain contain	ATAD1	0.903831	1361.5
ENSGALT0000	ATPase family, AAA domain contain	ATAD2	0.982701	764
ENSGALT0000	ATPase family, AAA domain contain	ATAD3A	0.858414	1909.5
ENSGALT0000	ATPase family, AAA domain contain	ATAD5	0.961887	423.999
ENSGALT0000	ataxia, cerebellar, Cayman type	ATCAY	0.786768	585.5

ENSGALT0000	arginyltransferase 1	ATE1	0.9642	984.996
ENSGALT0000	activating transcription factor 1	ATF1	0.950569	2216
ENSGALT0000	activating transcription factor 2	ATF2	0.924183	1301.5
ENSGALT0000	activating transcription factor 3	ATF3	0.710612	15
ENSGALT0000	activating transcription factor 4 (tax	ATF4	0.937319	8280.67
ENSGALT0000	activating transcription factor 6	ATF6	0.955685	914.495
ENSGALT0000	activating transcription factor 7	ATF7	0.920159	524.5
ENSGALT0000	activating transcription factor 7 inte	ATF7IP	0.984405	2309.5
ENSGALT0000	ATG10 autophagy related 10 homo	ATG10	0.871555	125.5
ENSGALT0000	ATG12 autophagy related 12 homo	ATG12	0.559975	876.5
ENSGALT0000	ATG13 autophagy related 13 homo	ATG13	0.993882	1977
ENSGALT0000	ATG14 autophagy related 14 homo	ATG14	0.887468	281.5
ENSGALT0000	ATG16 autophagy related 16-like 1	ATG16L1	0.925258	1112.5
ENSGALT0000	ATG2 autophagy related 2 homolog	ATG2B	0.975202	1279
ENSGALT0000	ATG3 autophagy related 3 homolog	ATG3	0.840021	1059
ENSGALT0000	ATG4 autophagy related 4 homolog	ATG4A	0.980203	601
ENSGALT0000	ATG4 autophagy related 4 homolog	ATG4B	0.943533	1791
ENSGALT0000	ATG4 autophagy related 4 homolog	ATG4C	0.983166	465.5
ENSGALT0000	ATG5 autophagy related 5 homolog	ATG5	0.990821	720.5
ENSGALT0000	ATG7 autophagy related 7 homolog	ATG7	0.900637	299.501
ENSGALT0000	ATG9 autophagy related 9 homolog	ATG9A	0.940423	1732.47
ENSGALT0000	ATH1, acid trehalase-like 1 (yeast)	ATHL1	0.985156	554.5
ENSGALT0000	5-aminoimidazole-4-carboxamide r	ATIC	0.976383	7089
ENSGALT0000	atlastin GTPase 1	ATL1	0.850147	1229
ENSGALT0000	atlastin GTPase 2	ATL2	0.939894	1069
ENSGALT0000	ataxia telangiectasia mutated	ATM	0.982967	1217
ENSGALT0000	ATM interactor	ATMIN	0.994492	377.5
ENSGALT0000	atrophin 1	ATN1	0.969697	9632
ENSGALT0000	atonal homolog 1 (Drosophila)	ATOH1	0.5451	511.497
ENSGALT0000	atonal homolog 7 (Drosophila)	ATOH7	0.871074	1.5
ENSGALT0000	atonal homolog 8 (Drosophila)	ATOH8	0.956307	197
ENSGALT0000	ATX1 antioxidant protein 1 homolog	ATOX1	0.783268	2055
ENSGALT0000	ATPase, class V, type 10A	ATP10A	0.856802	662
ENSGALT0000	ATPase, class V, type 10B	ATP10B	0.674028	1.5
ENSGALT0000	ATPase, class V, type 10D	ATP10D	0.905355	632.003
ENSGALT0000	ATPase, class VI, type 11A	ATP11A	0.985769	1099.99
ENSGALT0000	ATPase, class VI, type 11B	ATP11B	0.977352	2393.98
ENSGALT0000	ATPase, class VI, type 11C	ATP11C	0.954212	2921.05
ENSGALT0000	ATPase, H+/K+ transporting, nonga	ATP12A	0.940973	6.5
ENSGALT0000	ATPase type 13A1	ATP13A1	0.973782	3689.22
ENSGALT0000	ATPase type 13A2	ATP13A2	0.996808	1517.05
ENSGALT0000	ATPase type 13A3	ATP13A3	0.982089	2629.5
ENSGALT0000	ATPase type 13A4	ATP13A4	0.918731	73.2095
ENSGALT0000	ATPase type 13A5	ATP13A5	0.839184	15.2905
ENSGALT0000	ATPase, Na+/K+ transporting, alph	ATP1A1	0.815897	9513.46
ENSGALT0000	ATPase, Na+/K+ transporting, beta	ATP1B1	0.556823	1755.49
ENSGALT0000	ATPase, Na+/K+ transporting, beta	ATP1B3	0.91735	2594.5
ENSGALT0000	ATPase, Na+/K+ transporting, beta	ATP1B4	0.863154	12.5
ENSGALT0000	ATPase, Ca++ transporting, cardia	ATP2A2	0.949802	5279.27
ENSGALT0000	ATPase, Ca++ transporting, ubiquit	ATP2A3	0.801933	141.5
ENSGALT0000	ATPase, Ca++ transporting, plasma	ATP2B1	0.998767	2356.54
ENSGALT0000	ATPase, Ca++ transporting, plasma	ATP2B2	0.85904	447
ENSGALT0000	ATPase, Ca++ transporting, plasma	ATP2B4	0.973299	5444.18
ENSGALT0000	ATPase, Ca++ transporting, type 2	ATP2C1	0.99909	4003.5
ENSGALT0000	ATPase, H+/K+ exchanging, beta p	ATP4B	0.649519	0.5
ENSGALT0000	ATP synthase, H+ transporting, mit	ATP5A1	0.361547	15402.3

ENSGALT0000	ATP synthase, H+ transporting, mit	ATP5C1	0.843614	4389.89
ENSGALT0000	ATP synthase, H+ transporting, mit	ATP5E	0.0977609	2857.5
ENSGALT0000	ATP synthase, H+ transporting, mit	ATP5F1	0.71696	6111.5
ENSGALT0000	ATP synthase, H+ transporting, mit	ATP5G1	0.252466	4296
ENSGALT0000	ATP synthase, H+ transporting, mit	ATP5G3	0.289884	5929
ENSGALT0000	ATP synthase, H+ transporting, mit	ATP5H	0.246258	4693.5
ENSGALT0000	ATP synthase, H+ transporting, mit	ATP5I	0.356308	4406.5
ENSGALT0000	ATP synthase, H+ transporting, mit	ATP5J	0.812728	3485.5
ENSGALT0000	ATP synthase, H+ transporting, mit	ATP5J2	0.0568487	3272.5
ENSGALT0000	ATP synthase, H+ transporting, mit	ATP5O	0.449229	5368
ENSGALT0000	ATP synthase, H+ transporting, mit	ATP5S	0.659042	340.5
ENSGALT0000	ATP synthase subunit a	ATP6_CHICK	0.916603	106043
ENSGALT0000	ATPase, H+ transporting, lysosoma	ATP6AP1L	0.516854	14
ENSGALT0000	ATPase, H+ transporting, lysosoma	ATP6AP2	0.861939	2378
ENSGALT0000	ATPase, H+ transporting, lysosoma	ATP6V0A1	0.892114	2252.49
ENSGALT0000	ATPase, H+ transporting, lysosoma	ATP6V0A2	0.987397	1611.5
ENSGALT0000	ATPase, H+ transporting, lysosoma	ATP6V0A4	0.632878	75.5
ENSGALT0000	ATPase, H+ transporting, lysosoma	ATP6V0C	0.806032	4431.5
ENSGALT0000	ATPase, H+ transporting, lysosoma	ATP6V0D1	0.69101	3664.5
ENSGALT0000	ATPase, H+ transporting, lysosoma	ATP6V0D2	0.649519	0.5
ENSGALT0000	ATPase, H+ transporting, lysosoma	ATP6V0E1	0.868602	1039
ENSGALT0000	ATPase, H+ transporting V0 subun	ATP6V0E2	0.119185	982.5
ENSGALT0000	ATPase, H+ transporting, lysosoma	ATP6V1A	0.937487	2062.53
ENSGALT0000	ATPase, H+ transporting, lysosoma	ATP6V1B2	0.82773	3543
ENSGALT0000	ATPase, H+ transporting, lysosoma	ATP6V1C1	0.916778	682.17
ENSGALT0000	ATPase, H+ transporting, lysosoma	ATP6V1C2	0.61487	28
ENSGALT0000	ATPase, H+ transporting, lysosoma	ATP6V1D	0.695686	1456
ENSGALT0000	ATPase, H+ transporting, lysosoma	ATP6V1E1	0.721387	1571
ENSGALT0000	ATPase, H+ transporting, lysosoma	ATP6V1G1	0.617576	3293
ENSGALT0000	ATPase, H+ transporting, lysosoma	ATP6V1G3	0.464758	0
ENSGALT0000	ATPase, Cu++ transporting, alpha	ATP7A	0.996548	1642.53
ENSGALT0000	ATPase, Cu++ transporting, beta p	ATP7B	0.748846	34
ENSGALT0000	ATP synthase protein 8	ATP8	0.97482	11203
ENSGALT0000	ATPase, aminophospholipid transp	ATP8A1	0.869212	538.5
ENSGALT0000	ATPase, aminophospholipid transp	ATP8A2	0.712408	806.5
ENSGALT0000	ATPase, aminophospholipid transp	ATP8B1	0.994395	1204.5
ENSGALT0000	ATPase, class I, type 8B, member	ATP8B2	0.951796	1482.5
ENSGALT0000	ATPase, aminophospholipid transp	ATP8B3	0.997696	53
ENSGALT0000	ATPase, class II, type 9A	ATP9A	0.944869	1036
ENSGALT0000	ATPase, class II, type 9B	ATP9B	0.978107	1643.5
ENSGALT0000	ATP synthase mitochondrial F1 cor	ATPAF1	0.859206	714.5
ENSGALT0000	ATP synthase mitochondrial F1 cor	ATPAF2	0.729558	625
ENSGALT0000	ATP synthase subunit beta, mitoch	ATPB_CHICK	0.625505	11203
ENSGALT0000	ATP binding domain 4	ATPBD4	0.966009	155
ENSGALT0000	ATPase inhibitory factor 1	ATPIF1	0.535102	378.5
ENSGALT0000	ataxia telangiectasia and Rad3 rela	ATR	0.981827	1259.5
ENSGALT0000	ATR interacting protein	ATRIP	0.971181	967.5
ENSGALT0000	attractin	ATRN	0.991342	2860.5
ENSGALT0000	attractin-like 1	ATRNL1	0.879029	1043.5
ENSGALT0000	alpha thalassemia/mental retardatic	ATRX	0.959945	3628
ENSGALT0000	ataxin 1	ATXN1	0.854206	279.5
ENSGALT0000	ataxin 10	ATXN10	0.959525	467
ENSGALT0000	ataxin 2	ATXN2	0.953149	3420.5
ENSGALT0000	ataxin 3	ATXN3	0.863441	2855.02
ENSGALT0000	ataxin 7	ATXN7	0.97444	365.999
ENSGALT0000	ataxin 7-like 1	ATXN7L1	0.969974	374

ENSGALT0000	AU RNA binding protein/enoyl-CoA	AUH	0.769457	394.5
ENSGALT0000	ancient ubiquitous protein 1	AUP1	0.911353	2264
ENSGALT0000	aurora kinase A	AURKA	0.866184	641.5
ENSGALT0000	aurora kinase A interacting protein	AURKAIP1	0.803347	709
ENSGALT0000	autism susceptibility candidate 2	AUTS2	0.988586	9659
ENSGALT0000	apoptosis, caspase activation inhib	AVEN	0.80994	718.5
ENSGALT0000	AVL9 homolog (S. cerevisiase)	AVL9	0.967503	883.5
ENSGALT0000	arginine vasopressin (neurophysin	AVP	0.562993	1.5
ENSGALT0000	arginine vasopressin receptor 1B	AVPR1B	0.164317	1
ENSGALT0000	arginine vasopressin receptor 2	AVPR2	0.562993	1.5
ENSGALT0000	axonemal dynein light chain domai	AXDND1	0.19245	0.5
ENSGALT0000	axin 1	AXIN1	0.994546	1376.99
ENSGALT0000	axin 2	AXIN2	0.980289	1537
ENSGALT0000	5-azacytidine induced 1	AZI1	0.863427	2865
ENSGALT0000	5-azacytidine induced 2	AZI2	0.939559	788
ENSGALT0000	antizyme inhibitor 1	AZIN1	0.894613	3700.92
ENSGALT0000	beta-2-microglobulin	B2M	0.961316	1113.5
ENSGALT0000	beta-1,3-N-acetylgalactosaminyltra	B3GALNT1	0.99409	91
ENSGALT0000	UDP-Gal:betaGlcNAc beta 1,3-gala	B3GALT1	0.916308	144.5
ENSGALT0000	UDP-Gal:betaGlcNAc beta 1,3-gala	B3GALT2	0.711483	59
ENSGALT0000	UDP-Gal:betaGlcNAc beta 1,3-gala	B3GALT4	0.650635	16
ENSGALT0000	UDP-Gal:betaGlcNAc beta 1,3-gala	B3GALT5	0.980128	23.5
ENSGALT0000	UDP-Gal:betaGal beta 1,3-galactos	B3GALT6	0.925499	387
ENSGALT0000	beta 1,3-galactosyltransferase-like	B3GALTL	0.990117	920
ENSGALT0000	beta-1,3-glucuronyltransferase 1 (g	B3GAT1	0.81948	477
ENSGALT0000	beta-1,3-glucuronyltransferase 2 (g	B3GAT2	0.737455	8021.26
ENSGALT0000	UDP-GlcNAc:betaGal beta-1,3-N-a	B3GNT2	0.991325	430.5
ENSGALT0000	UDP-GlcNAc:betaGal beta-1,3-N-a	B3GNT5	0.947505	293.5
ENSGALT0000	UDP-GlcNAc:betaGal beta-1,3-N-a	B3GNT7	0.945476	390
ENSGALT0000	UDP-GlcNAc:betaGal beta-1,3-N-a	B3GNT9	0.864242	185
ENSGALT0000	UDP-GlcNAc:betaGal beta-1,3-N-a	B3GNTL1	0.897533	108.987
ENSGALT0000	Uncharacterized protein	B3VE14_CHICK	0.864572	22
ENSGALT0000	beta-1,4-N-acetyl-galactosaminyl tr	B4GALNT3	0.903561	342.5
ENSGALT0000	beta-1,4-N-acetyl-galactosaminyl tr	B4GALNT4	0.942542	9350.5
ENSGALT0000	UDP-Gal:betaGlcNAc beta 1,4- gal	B4GALT1	0.889124	232.5
ENSGALT0000	UDP-Gal:betaGlcNAc beta 1,4- gal	B4GALT2	0.944104	7186.71
ENSGALT0000	UDP-Gal:betaGlcNAc beta 1,4- gal	B4GALT3	0.977876	649
ENSGALT0000	UDP-Gal:betaGlcNAc beta 1,4- gal	B4GALT4	0.980087	1957
ENSGALT0000	UDP-Gal:betaGlcNAc beta 1,4- gal	B4GALT5	0.92358	813
ENSGALT0000	UDP-Gal:betaGlcNAc beta 1,4- gal	B4GALT6	0.998777	692.496
ENSGALT0000	xylosylprotein beta 1,4-galactosyltr	B4GALT7	0.827732	1270.51
ENSGALT0000	B9 protein domain 1	B9D1	0.945413	348.5
ENSGALT0000	Uncharacterized protein	B9VGZ4_CHICK	0.924356	51
ENSGALT0000	brain and acute leukemia, cytoplas	BAALC	0.859064	11
ENSGALT0000	beta-site APP-cleaving enzyme 1	BACE1	0.950626	1626
ENSGALT0000	beta-site APP-cleaving enzyme 2	BACE2	0.979467	809.51
ENSGALT0000	BTB and CNC homology 1, basic le	BACH1	0.981396	1233
ENSGALT0000	BCL2-associated athanogene	BAG1	0.970241	187.5
ENSGALT0000	BCL2-associated athanogene 2	BAG2	0.815871	640.5
ENSGALT0000	BCL2-associated athanogene 4	BAG4	0.854972	640.285
ENSGALT0000	BCL2-associated athanogene 5	BAG5	0.997111	874.5
ENSGALT0000	BAH domain and coiled-coil contair	BAHCC1	0.955614	771
ENSGALT0000	bromo adjacent homology domain	BAHD1	0.997961	1367
ENSGALT0000	brain-specific angiogenesis inhibito	BAI1	0.760941	713
ENSGALT0000	brain-specific angiogenesis inhibito	BAI2	0.756923	34.5
ENSGALT0000	brain-specific angiogenesis inhibito	BAI3	0.949496	400

ENSGALT0000	BAI1-associated protein 2	BAIAP2	0.943447	983.5
ENSGALT0000	BAI1-associated protein 2-like 1	BAIAP2L1	0.996599	560.5
ENSGALT0000	BAI1-associated protein 2-like 2	BAIAP2L2	0.425891	91.5
ENSGALT0000	BCL2-antagonist/killer 1	BAK1	0.883717	1994.46
ENSGALT0000	BMP and activin membrane-bound	BAMBI	0.613465	4160
ENSGALT0000	barrier to autointegration factor 1	BANF1	0.354617	1185.5
ENSGALT0000	BTG3 associated nuclear protein	BANP	0.927258	491
ENSGALT0000	BRCA1 associated protein-1 (ubiqu	BAP1	0.943471	4585.5
ENSGALT0000	BRCA1 associated RING domain 1	BARD1	0.948007	471.5
ENSGALT0000	BARX homeobox 1	BARX1	0.889097	8.5
ENSGALT0000	BARX homeobox 2	BARX2	0.643314	87.5
ENSGALT0000	brain abundant, membrane attache	BASP1	0.607916	6410.38
ENSGALT0000	basic leucine zipper transcription fa	BATF	0.816237	41.5
ENSGALT0000	bromodomain adjacent to zinc finge	BAZ1A	0.964276	1255
ENSGALT0000	bromodomain adjacent to zinc finge	BAZ1B	0.954308	5371.39
ENSGALT0000	bromodomain adjacent to zinc finge	BAZ2B	0.986323	2430.99
ENSGALT0000	butyrobetaine (gamma), 2-oxogluta	BBOX1	0.965174	824.5
ENSGALT0000	Bardet-Biedl syndrome 10	BBS10	0.970669	574
ENSGALT0000	Bardet-Biedl syndrome 12	BBS12	0.998827	170.5
ENSGALT0000	Bardet-Biedl syndrome 2	BBS2	0.910686	942.49
ENSGALT0000	Bardet-Biedl syndrome 4	BBS4	0.989172	1683
ENSGALT0000	Bardet-Biedl syndrome 7	BBS7	0.995957	925.5
ENSGALT0000	Bardet-Biedl syndrome 9	BBS9	0.991706	349.5
ENSGALT0000	bobby sox homolog (Drosophila)	BBX	0.996553	702.5
ENSGALT0000	brevican	BCAN	0.999115	83.5
ENSGALT0000	B-cell receptor-associated protein 2	BCAP29	0.909253	1507
ENSGALT0000	breast cancer anti-estrogen resista	BCAR1	0.741033	715
ENSGALT0000	breast cancer anti-estrogen resista	BCAR3	0.853672	202.5
ENSGALT0000	breast carcinoma amplified sequen	BCAS1	0.713196	99.9999
ENSGALT0000	breast carcinoma amplified sequen	BCAS2	0.161959	1843.5
ENSGALT0000	breast carcinoma amplified sequen	BCAS3	0.895197	1531.99
ENSGALT0000	branched chain amino-acid transan	BCAT1	0.80592	256
ENSGALT0000	BRCA2 and CDKN1A interacting pr	BCCIP	0.911148	888
ENSGALT0000	BCDIN3 domain containing	BCDIN3D	0.791525	107.5
ENSGALT0000	butyrylcholinesterase	BCHE	0.962334	593.499
ENSGALT0000	branched chain keto acid dehydrog	BCKDHB	0.863187	781.496
ENSGALT0000	B-cell CLL/lymphoma 10	BCL10	0.993818	197
ENSGALT0000	B-cell CLL/lymphoma 11A (zinc fing	BCL11A	0.99779	2765
ENSGALT0000	B-cell CLL/lymphoma 11B (zinc fing	BCL11B	0.94144	303.5
ENSGALT0000	B-cell CLL/lymphoma 2	BCL2	0.99517	652.007
ENSGALT0000	BCL2-related protein A1	BCL2A1	0.709213	1
ENSGALT0000	BCL2-like 1	BCL2L1	0.874267	2650.52
ENSGALT0000	BCL2-like 13 (apoptosis facilitator)	BCL2L13	0.97777	997.5
ENSGALT0000	BCL2-like 14 (apoptosis facilitator)	BCL2L14	0.517843	1
ENSGALT0000	BCL2-like 15	BCL2L15	0.640686	48
ENSGALT0000	B-cell CLL/lymphoma 6	BCL6	0.950833	426
ENSGALT0000	B-cell CLL/lymphoma 7A	BCL7A	0.917699	953.5
ENSGALT0000	B-cell CLL/lymphoma 9	BCL9	0.993937	4506.5
ENSGALT0000	B-cell CLL/lymphoma 9-like	BCL9L	0.959232	2194.5
ENSGALT0000	BCL2-associated transcription facto	BCLAF1	0.96251	4279
ENSGALT0000	beta-carotene 15,15'-monooxygena	BCMO1	0.563624	116.5
ENSGALT0000	beta-carotene oxygenase 2	BCO2	0.72277	168
ENSGALT0000	BCL6 corepressor	BCOR	0.991409	2910.52
ENSGALT0000	BCL6 corepressor-like 1	BCORL1	0.952259	717
ENSGALT0000	breakpoint cluster region	BCR	0.961521	2447.03
ENSGALT0000	BCS1-like (S. cerevisiae)	BCS1L	0.844921	917.999

ENSGALT0000	3-hydroxybutyrate dehydrogenase,	BDH1	0.664873	3059
ENSGALT0000	3-hydroxybutyrate dehydrogenase,	BDH2	0.925686	676
ENSGALT0000	bradykinin receptor B1	BDKRB1	0.107035	1
ENSGALT0000	bradykinin receptor B2	BDKRB2	0.657607	3.5
ENSGALT0000	brain-derived neurotrophic factor	BDNF	0.930127	212
ENSGALT0000	B double prime 1, subunit of RNA p	BDP1	0.949119	172.5
ENSGALT0000	brain expressed, associated with N	BEAN1	0.662932	760
ENSGALT0000	beclin 1, autophagy related	BECN1	0.910005	1091.48
ENSGALT0000	brain-enriched guanylate kinase-as	BEGAIN	0.919477	158.5
ENSGALT0000	BEN domain containing 2	BEND2	0.987106	185.5
ENSGALT0000	BEN domain containing 3	BEND3	0.959042	686
ENSGALT0000	BEN domain containing 4	BEND4	0.973951	300.5
ENSGALT0000	BEN domain containing 5	BEND5	0.745625	821
ENSGALT0000	BEN domain containing 6	BEND6	0.935507	68
ENSGALT0000	BEN domain containing 7	BEND7	0.982427	370
ENSGALT0000	bestrophin 1	BEST1	0.984195	39.5
ENSGALT0000	bestrophin 3	BEST3	0.872443	2
ENSGALT0000	bestrophin 4	BEST4	0.766606	15.5
ENSGALT0000	blocked early in transport 1 homolo	BET1	0.717153	369
ENSGALT0000	blocked early in transport 1 homolo	BET1L	0.95294	1740.5
ENSGALT0000	BET3 like (S. cerevisiae)	BET3L	0.40159	75.5
ENSGALT0000	MHC BF2 class I	BF2	0.447679	309.029
ENSGALT0000	bifunctional apoptosis regulator	BFAR	0.9822	377.5
ENSGALT0000	beaded filament structural protein 1	BFSP1	0.987743	5.5
ENSGALT0000	beaded filament structural protein 2	BFSP2	0.807892	11
ENSGALT0000	MHC B-G antigen	B-G	0.999853	493.628
ENSGALT0000	intestinal zipper protein	BG2	0.999916	71.4683
ENSGALT0000	basic helix-loop-helix family, memb	BHLHA15	0.740073	2
ENSGALT0000	basic helix-loop-helix family, memb	BHLHE23	0.711819	31.5
ENSGALT0000	basic helix-loop-helix family, memb	BHLHE40	0.981663	324.5
ENSGALT0000	betaine--homocysteine S-methyltra	BHMT	0.931919	107
ENSGALT0000	bicaudal C homolog 1 (Drosophila)	BICC1	0.975595	438
ENSGALT0000	bicaudal D homolog 1 (Drosophila)	BICD1	0.84683	474.5
ENSGALT0000	bicaudal D homolog 2 (Drosophila)	BICD2	0.892452	2731
ENSGALT0000	BH3 interacting domain death agor	BID	0.620896	2266
ENSGALT0000	BCL2-interacting killer (apoptosis-ir	BIK	0.87835	106.5
ENSGALT0000	bridging integrator 1	BIN1	0.877462	1394.51
ENSGALT0000	baculoviral IAP repeat containing 2	BIRC2	0.993988	2352.51
ENSGALT0000	baculoviral IAP repeat containing 5	BIRC5	0.289791	1093
ENSGALT0000	baculoviral IAP repeat containing 6	BIRC6	0.967544	5212.5
ENSGALT0000	baculoviral IAP repeat containing 7	BIRC7	0.848698	15.5
ENSGALT0000	basic, immunoglobulin-like variable	BIVM	0.992694	1450.01
ENSGALT0000	Beta-keratin-related protein	BKJ	0.995932	7
ENSGALT0000	MHC class II beta chain	BLB2	0.295473	443.442
ENSGALT0000	bladder cancer associated protein	BLCAP	0.985591	845.5
ENSGALT0000	B lymphoid tyrosine kinase	BLK	0.01363	11.5
ENSGALT0000	Bloom syndrome, RecQ helicase-lil	BLM	0.927936	953.5
ENSGALT0000	bleomycin hydrolase	BLMH	0.806712	3793.5
ENSGALT0000	B-cell linker	BLNK	0.712076	71
ENSGALT0000	biogenesis of lysosomal organelles	BLOC1S2	0.835721	422.999
ENSGALT0000	biogenesis of lysosomal organelles	BLOC1S3	0.739498	1151.5
ENSGALT0000	biliverdin reductase A	BLVRA	0.925981	96
ENSGALT0000	basic leucine zipper nuclear factor	BLZF1	0.943997	599.5
ENSGALT0000	B locus M alpha chain 1	BMA1	0.835088	526.5
ENSGALT0000	B locus M beta chain 2	B-MA2	0.91222	661.5
ENSGALT0000	Bcl2 modifying factor	BMF	0.999449	1010

ENSGALT0000	bone morphogenetic protein 10	BMP10	?	0
ENSGALT0000	bone morphogenetic protein 15	BMP15	0.689337	1
ENSGALT0000	bone morphogenetic protein 2	BMP2	0.877559	101
ENSGALT0000	BMP2 inducible kinase	BMP2K	0.940426	337
ENSGALT0000	bone morphogenetic protein 3	BMP3	0.517371	5
ENSGALT0000	bone morphogenetic protein 4	BMP4	0.915074	1657.97
ENSGALT0000	bone morphogenetic protein 5	BMP5	0.771807	340.5
ENSGALT0000	bone morphogenetic protein 7	BMP7	0.902811	3114.63
ENSGALT0000	BMP binding endothelial regulator	BMPER	0.689177	1010.5
ENSGALT0000	bone morphogenetic protein recept	BMPR1A	0.990244	1291
ENSGALT0000	bone morphogenetic protein recept	BMPR1B	0.641306	203.5
ENSGALT0000	bone morphogenetic protein recept	BMPR2	0.955346	1781.5
ENSGALT0000	BMS1 homolog, ribosome assembl	BMS1	0.937312	1695.5
ENSGALT0000	BMX non-receptor tyrosine kinase	BMX	0.522413	0
ENSGALT0000	basonuclin 1	BNC1	0.780657	0.5
ENSGALT0000	basonuclin 2	BNC2	0.721448	48.5
ENSGALT0000	BCL2/adenovirus E1B 19kDa intera	BNIP1	0.931008	392.494
ENSGALT0000	BCL2/adenovirus E1B 19kDa intera	BNIP2	0.959803	446
ENSGALT0000	BCL2/adenovirus E1B 19kDa intera	BNIP3	0.984375	1107
ENSGALT0000	BCL2/adenovirus E1B 19kDa intera	BNIP3L	0.997405	6755.5
ENSGALT0000	NK receptor-like	B-NK	0.829595	5.00304
ENSGALT0000	Boc homolog (mouse)	BOC	0.857163	2022.5
ENSGALT0000	biorientation of chromosomes in ce	BOD1	0.901803	1239
ENSGALT0000	BCL2-related ovarian killer	BOK	0.841408	688.5
ENSGALT0000	bol, boule-like (Drosophila)	BOLL	0.994695	15
ENSGALT0000	bora, aurora kinase A activator	BORA	0.938597	387.5
ENSGALT0000	2,3-bisphosphoglycerate mutase	BPGM	0.923136	1653.5
ENSGALT0000	biphenyl hydrolase-like (serine hyd	BPHL	0.930441	230
ENSGALT0000	bactericidal/permeability-increasing	BPI	0.707045	90.5
ENSGALT0000	BPI fold containing family B, memb	BPIFB3	0.391803	10
ENSGALT0000	BPI fold containing family B, memb	BPIFB4	0.639948	40
ENSGALT0000	Ovocalyxin-36	BPIFB8	0.581157	8
ENSGALT0000	bactericidal/permeability-increasing	BPIL3	0.476124	1
ENSGALT0000	3'(2'), 5'-bisphosphate nucleotidase	BPNT1	0.94246	668
ENSGALT0000	bromodomain PHD finger transcrip	BPTF	0.97591	2791.04
ENSGALT0000	v-raf murine sarcoma viral oncoger	BRAF	0.979129	470
ENSGALT0000	BRCA1 associated protein	BRAP	0.909889	954.502
ENSGALT0000	BRCA1-associated ATM activator 1	BRAT1	0.973974	723.5
ENSGALT0000	breast cancer 1, early onset	BRCA1	0.9528	1250
ENSGALT0000	breast cancer 2, early onset	BRCA2	0.972484	617.999
ENSGALT0000	BRCA1/BRCA2-containing comple	BRCC3	0.84827	890.5
ENSGALT0000	bromodomain containing 1	BRD1	0.993698	2077
ENSGALT0000	bromodomain containing 2	BRD2	0.942263	7056
ENSGALT0000	bromodomain containing 3	BRD3	0.981679	2539.46
ENSGALT0000	bromodomain containing 4	BRD4	0.981974	6004.84
ENSGALT0000	bromodomain containing 7	BRD7	0.918217	1890.97
ENSGALT0000	bromodomain containing 8	BRD8	0.949168	2336.55
ENSGALT0000	bromodomain containing 9	BRD9	0.929167	394.5
ENSGALT0000	bromodomain, testis-specific	BRDT	0.464758	0
ENSGALT0000	brain and reproductive organ-expre	BRE	0.975651	2700.5
ENSGALT0000	BRF1 homolog, subunit of RNA pol	BRF1	0.931567	522.5
ENSGALT0000	BRF2, subunit of RNA polymerase	BRF2	0.776665	326.5
ENSGALT0000	brain protein I3	BRI3	0.746873	1063.5
ENSGALT0000	BRI3 binding protein	BRI3BP	0.922461	904
ENSGALT0000	BRCA1 interacting protein C-termir	BRIP1	0.806044	450.998
ENSGALT0000	BRX1, biogenesis of ribosomes, hc	BRIX1	0.945638	879.5

ENSGALT0000	breast cancer metastasis-suppress	BRMS1L	0.932121	749.5
ENSGALT0000	BRO1 domain and CAAX motif con	BROX	0.97321	553.5
ENSGALT0000	brain protein 44	BRP44	0.647303	391.999
ENSGALT0000	brain protein 44-like	BRP44L	0.565823	1411.5
ENSGALT0000	bromodomain and PHD finger cont	BRPF1	0.908934	1641.5
ENSGALT0000	bromodomain and PHD finger cont	BRPF3	0.993275	1588.5
ENSGALT0000	bombesin-like receptor 3	BRS3	0.649519	0
ENSGALT0000	BR serine/threonine kinase 2	BRSK2	0.831663	356
ENSGALT0000	bruno-like 6, RNA binding protein (I	BRUNOL6	0.739873	753.993
ENSGALT0000	bromodomain and WD repeat dom	BRWD1	0.992069	1559.5
ENSGALT0000	bromodomain and WD repeat dom	BRWD3	0.990499	915.5
ENSGALT0000	BSD domain containing 1	BSDC1	0.929399	2192.5
ENSGALT0000	basigin (Ok blood group)	BSG	0.973675	14559.3
ENSGALT0000	bassoon (presynaptic cytomatrix pr	BSN	0.847675	1081
ENSGALT0000	B-box and SPRY domain containin	BSPRY	0.91028	231.5
ENSGALT0000	bone marrow stromal cell antigen 1	BST1	0.870738	44.5
ENSGALT0000	brain-specific homeobox	BSX	0.649519	1
ENSGALT0000	BTAF1 RNA polymerase II, B-TFIIC	BTAF1	0.988982	1943
ENSGALT0000	BTB (POZ) domain containing 1	BTBD1	0.90246	1492.88
ENSGALT0000	BTB (POZ) domain containing 10	BTBD10	0.690034	744
ENSGALT0000	BTB (POZ) domain containing 11	BTBD11	0.934046	390
ENSGALT0000	BTB (POZ) domain containing 17	BTBD17	0.661726	694
ENSGALT0000	BTB (POZ) domain containing 2	BTBD2	0.877688	1188.5
ENSGALT0000	BTB (POZ) domain containing 3	BTBD3	0.911234	649
ENSGALT0000	BTB (POZ) domain containing 6	BTBD6	0.869551	4123
ENSGALT0000	BTB (POZ) domain containing 7	BTBD7	0.986736	1676.5
ENSGALT0000	BTB (POZ) domain containing 8	BTBD8	0.915984	45.5
ENSGALT0000	BTB (POZ) domain containing 9	BTBD9	0.930572	1000.5
ENSGALT0000	betacellulin	BTC	0.963321	5
ENSGALT0000	biotinidase	BTD	0.939416	162
ENSGALT0000	basic transcription factor 3-like 4	BTF3L4	0.972179	5629
ENSGALT0000	B-cell translocation gene 1, anti-pro	BTG1	0.940635	6998.5
ENSGALT0000	BTG family, member 2	BTG2	0.961889	564.5
ENSGALT0000	B-cell translocation gene 4	BTG4	0.464758	0
ENSGALT0000	Bruton agammaglobulinemia tyrosi	BTK	0.897846	100.5
ENSGALT0000	B and T lymphocyte associated	BTLA	0.704629	1.5
ENSGALT0000	butyrophilin, subfamily 1, member /	BTN1A1	0.895574	28.5
ENSGALT0000	beta-transducin repeat containing	BTRC	0.960768	1224.5
ENSGALT0000	budding uninhibited by benzimidaz	BUB1	0.903653	1568
ENSGALT0000	budding uninhibited by benzimidaz	BUB1B	0.916688	1644.49
ENSGALT0000	BUB3 budding uninhibited by benzi	BUB3	0.876154	3751.37
ENSGALT0000	BUD13 homolog (S. cerevisiae)	BUD13	0.937101	1217.6
ENSGALT0000	BUD31 homolog (S. cerevisiae)	BUD31	0.781506	2502
ENSGALT0000	bystin-like	BYSL	0.675166	2106.02
ENSGALT0000	basic leucine zipper and W2 domai	BZW1	0.9066	10320.9
ENSGALT0000	basic leucine zipper and W2 domai	BZW2	0.848995	5278.5
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ENSGALT0000	chromosome 10 open reading fram	C10H15orf42	0.957627	1098.48
ENSGALT0000	chromosome 10 open reading fram	C10H15orf44	0.896503	1508.5
ENSGALT0000	chromosome 10 open reading fram	C10H15orf59	0.526675	47
ENSGALT0000	chromosome 10 open reading fram	C10H15orf60	0.895664	182.499
ENSGALT0000	chromosome 10 open reading fram	C10orf107	0.962956	19.5
ENSGALT0000	chromosome 10 open reading fram	C10orf112	0.603682	0
ENSGALT0000	chromosome 10 open reading fram	C10orf12	0.979737	1119
ENSGALT0000	chromosome 10 open reading fram	C10orf122	0.562993	1.5

ENSGALT0000 chromosome 10 open reading fram C10orf140	0.909416	437
ENSGALT0000 chromosome 10 open reading fram C10orf47	0.993447	413.5
ENSGALT0000 chromosome 10 open reading fram C10orf54	0.961331	128.5
ENSGALT0000 chromosome 10 open reading fram C10orf67	0.464758	0
ENSGALT0000 chromosome 10 open reading fram C10orf81	0.589588	1
ENSGALT0000 chromosome 10 open reading fram C10orf90	0.828153	21
ENSGALT0000 chromosome 11 open reading fram C11H16orf57	0.796579	1144
ENSGALT0000 chromosome 11 open reading fram C11H16orf7	0.950655	371
ENSGALT0000 chromosome 11 open reading fram C11H16orf70	0.980757	1121.5
ENSGALT0000 chromosome 11 open reading fram C11H16orf80	0.739963	2648
ENSGALT0000 chromosome 11 open reading fram C11H16orf87	0.888985	271.5
ENSGALT0000 chromosome 11 open reading fram C11H19orf40	0.86688	63.5
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ENSGALT0000 chromosome 11 open reading fram C11orf2	0.822816	2163.52
ENSGALT0000 chromosome 11 open reading fram C11orf51	0.621103	649
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ENSGALT0000 chromosome 11 open reading fram C11orf74	0.876714	123
ENSGALT0000 chromosome 11 open reading fram C11orf75	0.216244	64.5
ENSGALT0000 chromosome 11 open reading fram C11orf82	0.982494	155
ENSGALT0000 chromosome 11 open reading fram C11orf87	0.52653	22.5
ENSGALT0000 chromosome 11 open reading fram C11orf89	0.363607	2.5
ENSGALT0000 chromosome 11 open reading fram C11orf9	0.995156	837.006
ENSGALT0000 chromosome 11 open reading fram C11orf96	0.395778	104.5
ENSGALT0000 chromosome 12 open reading fram C12H3orf14	0.969554	48.5
ENSGALT0000 chromosome 12 open reading fram C12H3orf18	0.948721	383.5
ENSGALT0000 chromosome 12 open reading fram C12H3orf19	0.938986	477.258
ENSGALT0000 chromosome 12 open reading fram C12H3orf37	0.656645	1989.98
ENSGALT0000 chromosome 12 open reading fram C12H9orf89	0.967384	55
ENSGALT0000 chromosome 12 open reading fram C12orf10	0.695509	1588
ENSGALT0000 chromosome 12 open reading fram C12orf28	0.804174	3
ENSGALT0000 chromosome 12 open reading fram C12orf34	0.92873	659
ENSGALT0000 chromosome 12 open reading fram C12orf39	0.649519	0.5
ENSGALT0000 chromosome 12 open reading fram C12orf5	0.860944	82.5
ENSGALT0000 chromosome 12 open reading fram C12orf53	0.834696	253.5
ENSGALT0000 chromosome 12 open reading fram C12orf57	0.171636	4703
ENSGALT0000 chromosome 12 open reading fram C12orf59	0.464758	0
ENSGALT0000 chromosome 12 open reading fram C12orf62	0.030584	682
ENSGALT0000 chromosome 12 open reading fram C12orf63	0.872396	395.5
ENSGALT0000 chromosome 12 open reading fram C12orf65	0.755072	245.5
ENSGALT0000 chromosome 12 open reading fram C12orf69	0.464758	0
ENSGALT0000 chromosome 13 open reading fram C13H5orf15	0.968022	3694.5
ENSGALT0000 chromosome 13 open reading fram C13H5orf25	0.992036	465.5
ENSGALT0000 chromosome 13 open reading fram C13H5orf4	0.983163	36.5
ENSGALT0000 chromosome 13 open reading fram C13H5orf41	0.999926	241.5
ENSGALT0000 chromosome 13 open reading fram C13H5orf45	0.920788	746.996
ENSGALT0000 chromosome 14 open reading fram C14H16orf42	0.870761	338
ENSGALT0000 chromosome 14 open reading fram C14H16orf45	0.870508	601
ENSGALT0000 chromosome 14 open reading fram C14H16orf5	0.785254	535.5
ENSGALT0000 chromosome 14 open reading fram C14H16orf62	0.960627	1800.98
ENSGALT0000 chromosome 14 open reading fram C14H16orf79	0.0183259	126.5
ENSGALT0000 chromosome 14 open reading fram C14H17orf103	0.979248	2277.27
ENSGALT0000 chromosome 14 open reading fram C14H17orf39	0.948755	273.5
ENSGALT0000 chromosome 14 open reading fram C14H7orf26	0.873042	569
ENSGALT0000 chromosome 14 open reading fram C14H7orf50	0.840407	248
ENSGALT0000 chromosome 14 open reading fram C14H7orf62	0.782167	157

ENSGALT0000	chromosome 14 open reading fram	C14H8orf33	0.929283	692
ENSGALT0000	chromosome 14 open reading fram	C14orf1	0.949086	309.5
ENSGALT0000	chromosome 14 open reading fram	C14orf105	0.164317	0.5
ENSGALT0000	chromosome 14 open reading fram	C14orf166B	0.539038	0
ENSGALT0000	chromosome 14 open reading fram	C14orf37	0.962087	3773.12
ENSGALT0000	chromosome 14 open reading fram	C14orf38	0.603682	0
ENSGALT0000	chromosome 14 open reading fram	C14orf39	0.649519	0.5
ENSGALT0000	chromosome 14 open reading fram	C14orf45	0.989007	39
ENSGALT0000	chromosome 15 open reading fram	C15H12orf43	0.721764	133
ENSGALT0000	chromosome 15 open reading fram	C15H12orf49	0.95798	3578.5
ENSGALT0000	chromosome 15 open reading fram	C15H12orf51	0.899663	461.5
ENSGALT0000	chromosome 15 open reading fram	C15H14orf166B	0.881416	130.5
ENSGALT0000	chromosome 15 open reading fram	C15H22orf13	0.926342	153.5
ENSGALT0000	chromosome 15 open reading fram	C15H22orf25	0.96078	669.5
ENSGALT0000	chromosome 15 open reading fram	C15H22orf36	0.713602	945
ENSGALT0000	chromosome 15 open reading fram	C15orf17	0.895478	344
ENSGALT0000	chromosome 15 open reading fram	C15orf27	0.951014	367.668
ENSGALT0000	chromosome 15 open reading fram	C15orf48	0.464758	0
ENSGALT0000	chromosome 15 open reading fram	C15orf62	0.649519	3
ENSGALT0000	galectin CG-16	C-16	0.832321	1261.02
ENSGALT0000	chromosome 16 open reading fram	C16orf11	0.19245	0.5
ENSGALT0000	chromosome 16 open reading fram	C16orf48	0.952038	635
ENSGALT0000	chromosome 16 open reading fram	C16orf52	0.928585	98
ENSGALT0000	chromosome 16 open reading fram	C16orf59	0.98565	256.5
ENSGALT0000	chromosome 16 open reading fram	C16orf72	0.873223	1007
ENSGALT0000	chromosome 16 open reading fram	C16orf73	0.976505	78
ENSGALT0000	chromosome 16 open reading fram	C16orf88	0.875371	307
ENSGALT0000	chromosome 16 open reading fram	C16orf89	0.997584	6
ENSGALT0000	chromosome 16 open reading fram	C16orf93	0.882689	650
ENSGALT0000	chromosome 17 open reading fram	C17H9orf114	0.726376	839.5
ENSGALT0000	chromosome 17 open reading fram	C17H9orf16	0.815242	1031.5
ENSGALT0000	chromosome 17 open reading fram	C17H9orf167	0.995947	258
ENSGALT0000	chromosome 17 open reading fram	C17H9orf171	0.666233	13
ENSGALT0000	chromosome 17 open reading fram	C17H9orf7	0.781817	429.166
ENSGALT0000	chromosome 17 open reading fram	C17H9orf78	0.822936	705.5
ENSGALT0000	chromosome 17 open reading fram	C17H9orf9	0.949678	45.5
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ENSGALT0000	chromosome 17 open reading fram	C17orf101	0.951477	378.178
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ENSGALT0000	chromosome 17 open reading fram	C17orf70	0.822584	356
ENSGALT0000	chromosome 18 open reading fram	C18H17orf28	0.97923	2963
ENSGALT0000	chromosome 18 open reading fram	C18H17orf56	0.812688	297.5
ENSGALT0000	chromosome 18 open reading fram	C18H17orf62	0.921012	1428.5
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ENSGALT0000	chromosome 19 open reading fram	C19H17orf63	0.953839	2264.5
ENSGALT0000	chromosome 19 open reading fram	C19H17orf76	0.902866	360.5
ENSGALT0000	chromosome 19 open reading fram	C19H17orf78	0.956967	14.5
ENSGALT0000	chromosome 19 open reading fram	C19H17orf85	0.975033	1073
ENSGALT0000	chromosome 19 open reading fram	C19H7orf42	0.966441	3022.5
ENSGALT0000	chromosome 19 open reading fram	C19orf12	0.837581	806
ENSGALT0000	chromosome 19 open reading fram	C19orf21	0.637764	87

ENSGALT0000 chromosome 19 open reading fram	C19orf29	0.856257	948
ENSGALT0000 chromosome 19 open reading fram	C19orf44	0.993067	111.5
ENSGALT0000 chromosome 19 open reading fram	C19orf45	0.649519	2.5
ENSGALT0000 C1D nuclear receptor corepressor	C1D	0.93551	321
ENSGALT0000 core 1 synthase, glycoprotein-N-ac	C1GALT1	0.95441	3526
ENSGALT0000 C1GALT1-specific chaperone 1	C1GALT1C1	0.901078	551.5
ENSGALT0000 chromosome 1 open reading frame	C1H11orf30	0.96436	1108.5
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ENSGALT0000 chromosome 1 open reading frame	C1H11orf67	0.739114	212.064
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ENSGALT0000 chromosome 1 open reading frame	C1H11orf73	0.817507	1325.01
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ENSGALT0000 chromosome 1 open reading frame	C1H12orf23	0.969485	2930
ENSGALT0000 chromosome 1 open reading frame	C1H12orf26	0.975081	259
ENSGALT0000 chromosome 1 open reading frame	C1H12orf29	0.970113	298.5
ENSGALT0000 chromosome 1 open reading frame	C1H12orf32	0.963006	107
ENSGALT0000 chromosome 1 open reading frame	C1H12orf35	0.973158	925
ENSGALT0000 chromosome 1 open reading frame	C1H12orf4	0.930823	657.001
ENSGALT0000 chromosome 1 open reading frame	C1H12orf45	0.932313	563.5
ENSGALT0000 chromosome 1 open reading frame	C1H12orf48	0.923602	60
ENSGALT0000 chromosome 1 open reading frame	C1H12orf50	0.997127	197.5
ENSGALT0000 chromosome 1 open reading frame	C1H12orf66	0.976495	333
ENSGALT0000 chromosome 1 open reading frame	C1H12orf73	0.495345	149
ENSGALT0000 chromosome 1 open reading frame	C1H13orf15	0.509492	116
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ENSGALT0000 chromosome 1 open reading frame	C1H21orf33	0.816891	1791.52
ENSGALT0000 chromosome 1 open reading frame	C1H21orf59	0.971227	706.5
ENSGALT0000 chromosome 1 open reading frame	C1H21orf63	0.948423	45
ENSGALT0000 chromosome 1 open reading frame	C1H21orf91	0.986905	553
ENSGALT0000 chromosome 1 open reading frame	C1H22orf23	0.98348	114
ENSGALT0000 chromosome 1 open reading frame	C1H22orf28	0.902084	3213.5
ENSGALT0000 chromosome 1 open reading frame	C1H22orf33	0.938423	7.5
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ENSGALT0000 chromosome 1 open reading frame	C1H2orf29	0.850095	2027
ENSGALT0000 chromosome 1 open reading frame	C1H2orf49	0.956239	568.5
ENSGALT0000 chromosome 1 open reading frame	C1H3orf15	0.989964	135
ENSGALT0000 chromosome 1 open reading frame	C1H3orf26	0.933114	195
ENSGALT0000 chromosome 1 open reading frame	C1H3orf38	0.832729	233.5
ENSGALT0000 chromosome 1 open reading frame	C1H7orf23	0.992336	316.5
ENSGALT0000 chromosome 1 open reading frame	C1H7orf53	?	0
ENSGALT0000 chromosome 1 open reading frame	C1H7orf55	0.307004	1419
ENSGALT0000 chromosome 1 open reading frame	C1H7orf60	0.977022	594
ENSGALT0000 chromosome 1 open reading frame	C1HXorf22	0.963101	28.5
ENSGALT0000 chromosome 1 open reading frame	C1HXorf36	0.834796	151.5
ENSGALT0000 chromosome 1 open reading frame	C1orf101	0.990982	45.5
ENSGALT0000 chromosome 1 open reading frame	C1orf130	0.984152	46
ENSGALT0000 chromosome 1 open reading frame	C1orf170	0.464758	0
ENSGALT0000 chromosome 1 open reading frame	C1orf173	0.885314	65
ENSGALT0000 chromosome 1 open reading frame	C1orf174	0.928167	457
ENSGALT0000 chromosome 1 open reading frame	C1orf177	0.780657	3
ENSGALT0000 chromosome 1 open reading frame	C1orf190	0.681908	36.5
ENSGALT0000 chromosome 1 open reading frame	C1orf212	0.253864	0.00126
ENSGALT0000 chromosome 1 open reading frame	C1orf216	0.268313	260.5
ENSGALT0000 chromosome 1 open reading frame	C1orf222	0.983243	64.5
ENSGALT0000 chromosome 1 open reading frame	C1orf228	0.993867	61
ENSGALT0000 chromosome 1 open reading frame	C1orf53	0.40424	43.5

ENSGALT0000	chromosome 1 open reading frame	C1orf55	0.894577	1328
ENSGALT0000	chromosome 1 open reading frame	C1orf63	0.983502	2274.5
ENSGALT0000	chromosome 1 open reading frame	C1orf67	0.464758	0
ENSGALT0000	chromosome 1 open reading frame	C1orf95	0.589121	50
ENSGALT0000	complement component 1, q subco	C1QA	0.420128	15.3821
ENSGALT0000	complement component 1, q subco	C1QB	0.249225	24.1179
ENSGALT0000	complement component 1, q subco	C1QBP	0.700164	3422
ENSGALT0000	complement component 1, q subco	C1QC	0.174401	19
ENSGALT0000	complement component 1, q subco	C1QL2	0.0121508	22.5
ENSGALT0000	complement component 1, q subco	C1QL3	0.942866	2.5
ENSGALT0000	complement component 1, q subco	C1QL4	0.974924	75.5
ENSGALT0000	C1q and tumor necrosis factor rela	C1QTNF1	0.924392	104
ENSGALT0000	C1q and tumor necrosis factor rela	C1QTNF2	0.946301	12
ENSGALT0000	C1q and tumor necrosis factor rela	C1QTNF3	0.9264	14.5
ENSGALT0000	C1q and tumor necrosis factor rela	C1QTNF4	0.934995	554
ENSGALT0000	C1q and tumor necrosis factor rela	C1QTNF5	0.767549	204.189
ENSGALT0000	C1q and tumor necrosis factor rela	C1QTNF6	0.898514	88.5
ENSGALT0000	C1q and tumor necrosis factor rela	C1QTNF7	0.70681	12.5
ENSGALT0000	C1q and tumor necrosis factor rela	C1QTNF8	0.573438	10
ENSGALT0000	complement component 1, r subco	C1R	0.972697	410.998
ENSGALT0000	complement component 1, s subco	C1S	0.98457	66
ENSGALT0000	complement component 2	C2	0.9467	79
ENSGALT0000	chromosome 20 open reading fram	C20H20orf11	0.977313	1246
ENSGALT0000	chromosome 20 open reading fram	C20H20orf111	0.959602	510.999
ENSGALT0000	chromosome 20 open reading fram	C20H20orf151	0.815985	516
ENSGALT0000	chromosome 20 open reading fram	C20H20orf177	0.967424	102
ENSGALT0000	chromosome 20 open reading fram	C20H20orf20	0.898077	559.5
ENSGALT0000	chromosome 20 open reading fram	C20H20orf24	0.849405	2421
ENSGALT0000	chromosome 20 open reading fram	C20H20orf4	0.903501	1266
ENSGALT0000	chromosome 20 open reading fram	C20H20orf43	0.933279	2217.5
ENSGALT0000	chromosome 20 open reading fram	C20H20orf85	0.798388	9
ENSGALT0000	chromosome 20 open reading fram	C20H20orf96	0.931527	136.5
ENSGALT0000	chromosome 20 open reading fram	C20orf112	0.874765	339.5
ENSGALT0000	chromosome 20 open reading fram	C20orf118	0.464758	0
ENSGALT0000	chromosome 20 open reading fram	C20orf123	0.95016	15
ENSGALT0000	chromosome 20 open reading fram	C20orf160	0.682545	73
ENSGALT0000	chromosome 20 open reading fram	C20orf195	0.828826	2
ENSGALT0000	chromosome 20 open reading fram	C20orf196	0.997512	54
ENSGALT0000	chromosome 20 open reading fram	C20orf54	0.957267	722.5
ENSGALT0000	chromosome 20 open reading fram	C20orf7	0.712618	415
ENSGALT0000	chromosome 20 open reading fram	C20orf94	0.934124	119
ENSGALT0000	chromosome 21 open reading fram	C21H1orf144	0.975908	2211
ENSGALT0000	chromosome 21 open reading fram	C21H1orf159	0.941839	184.5
ENSGALT0000	chromosome 21 open reading fram	C21H1orf187	0.973041	137.5
ENSGALT0000	chromosome 21 open reading fram	C21H1orf50	0.673769	542
ENSGALT0000	chromosome 21 open reading fram	C21H1orf70	0.979016	95
ENSGALT0000	chromosome 21 open reading fram	C21orf62	0.102846	0.5
ENSGALT0000	chromosome 21 open reading fram	C21orf7	0.573093	5
ENSGALT0000	chromosome 22 open reading fram	C22H20orf30	0.931907	824.781
ENSGALT0000	chromosome 22 open reading fram	C22H2orf42	0.954176	506.5
ENSGALT0000	chromosome 22 open reading fram	C22H8orf4	0.705639	99.5
ENSGALT0000	chromosome 22 open reading fram	C22orf32	0.789262	1461
ENSGALT0000	chromosome 22 open reading fram	C22orf39	0.10674	200
ENSGALT0000	chromosome 23 open reading fram	C23H1orf109	0.826838	364.501
ENSGALT0000	chromosome 23 open reading fram	C23H1orf172	0.999135	635.5
ENSGALT0000	chromosome 23 open reading fram	C23H1orf38	0.84693	107

ENSGALT0000	chromosome 23 open reading fram	C23H1orf94	?	0
ENSGALT0000	chromosome 24 open reading fram	C24H11orf1	0.464758	0
ENSGALT0000	chromosome 24 open reading fram	C24H11orf34	0.835134	7
ENSGALT0000	chromosome 24 open reading fram	C24H11orf57	0.710773	254
ENSGALT0000	chromosome 25 open reading fram	C25H1orf43	0.834414	1064.01
ENSGALT0000	chromosome 26 open reading fram	C26H1orf116	0.779278	1803.02
ENSGALT0000	chromosome 26 open reading fram	C26H1orf74	0.623884	212
ENSGALT0000	chromosome 26 open reading fram	C26H1orf88	0.0811899	0.5
ENSGALT0000	chromosome 26 open reading fram	C26H6orf106	0.978578	4250.62
ENSGALT0000	chromosome 26 open reading fram	C26H6orf130	0.916474	807
ENSGALT0000	chromosome 26 open reading fram	C26H6orf89	0.967665	1123.5
ENSGALT0000	chromosome 27 open reading fram	C27H17orf105	0.965245	28.5
ENSGALT0000	chromosome 28 open reading fram	C28H19orf10	0.901381	3081
ENSGALT0000	chromosome 28 open reading fram	C28H19orf50	0.532563	473
ENSGALT0000	chromosome 28 open reading fram	C28H19orf6	0.954445	1786
ENSGALT0000	C2 calcium-dependent domain con	C2CD2	0.968064	599
ENSGALT0000	C2CD2-like	C2CD2L	0.983078	1103
ENSGALT0000	C2 calcium-dependent domain con	C2CD3	0.982126	513
ENSGALT0000	C2 calcium-dependent domain con	C2CD4C	0.612788	40
ENSGALT0000	chromosome 2 open reading frame	C2H18orf1	0.998159	924.994
ENSGALT0000	chromosome 2 open reading frame	C2H18orf21	0.921619	165.5
ENSGALT0000	chromosome 2 open reading frame	C2H18orf45	0.982533	481
ENSGALT0000	chromosome 2 open reading frame	C2H18orf55	0.895631	618.5
ENSGALT0000	chromosome 2 open reading frame	C2H18orf8	0.978081	897.287
ENSGALT0000	chromosome 2 open reading frame	C2H1orf35	0.766207	308.5
ENSGALT0000	chromosome 2 open reading frame	C2H3orf23	0.938686	630.5
ENSGALT0000	chromosome 2 open reading frame	C2H3orf24	0.943934	2
ENSGALT0000	chromosome 2 open reading frame	C2H3orf39	0.882726	744.5
ENSGALT0000	chromosome 2 open reading frame	C2H3orf75	0.924544	556.5
ENSGALT0000	chromosome 2 open reading frame	C2H5orf22	0.944271	302.001
ENSGALT0000	chromosome 2 open reading frame	C2H6orf105	0.562993	0.5
ENSGALT0000	chromosome 2 open reading frame	C2H6orf145	0.775801	128.5
ENSGALT0000	chromosome 2 open reading frame	C2H6orf62	0.916588	1690
ENSGALT0000	chromosome 2 open reading frame	C2H7orf11	0.994312	148.033
ENSGALT0000	chromosome 2 open reading frame	C2H7orf46	0.726461	50
ENSGALT0000	chromosome 2 open reading frame	C2H7orf57	0.778348	3
ENSGALT0000	chromosome 2 open reading frame	C2H7orf63	0.98958	559.5
ENSGALT0000	chromosome 2 open reading frame	C2H8orf22	0.47058	7.5
ENSGALT0000	chromosome 2 open reading frame	C2H8orf38	0.959099	429
ENSGALT0000	chromosome 2 open reading frame	C2H8orf45	0.989492	10
ENSGALT0000	chromosome 2 open reading frame	C2H8orf76	0.956645	587.5
ENSGALT0000	chromosome 2 open reading frame	C2H8orf83	0.97493	25.5
ENSGALT0000	chromosome 2 open reading frame	C2H8orf84	0.749459	36.8294
ENSGALT0000	chromosome 2 open reading frame	C2H9orf152	0.711353	3
ENSGALT0000	chromosome 2 open reading frame	C2H9orf4	0.963747	477.499
ENSGALT0000	chromosome 2 open reading frame	C2orf40	0.117371	168
ENSGALT0000	chromosome 2 open reading frame	C2orf50	0.649519	0.5
ENSGALT0000	chromosome 2 open reading frame	C2orf55	0.823063	192.5
ENSGALT0000	chromosome 2 open reading frame	C2orf62	0.904378	69.5
ENSGALT0000	chromosome 2 open reading frame	C2orf65	0.985609	101.5
ENSGALT0000	chromosome 2 open reading frame	C2orf71	0.780657	1.5
ENSGALT0000	chromosome 2 open reading frame	C2orf77	0.956681	694.5
ENSGALT0000	chromosome 2 open reading frame	C2orf89	0.872002	11.5
ENSGALT0000	complement component 3	C3	0.709265	28
ENSGALT0000	complement component 3a recepto	C3AR1	0.846579	18.5
ENSGALT0000	chromosome 3 open reading frame	C3H17orf59	0.419156	1120

ENSGALT0000	chromosome 3 open reading frame	C3H1orf100	0.651373	2.5
ENSGALT0000	chromosome 3 open reading frame	C3H1orf124	0.983304	523.97
ENSGALT0000	chromosome 3 open reading frame	C3H1orf131	0.765418	273
ENSGALT0000	chromosome 3 open reading frame	C3H1orf31	0.346609	238.5
ENSGALT0000	chromosome 3 open reading frame	C3H1orf96	0.93795	80
ENSGALT0000	chromosome 3 open reading frame	C3H20orf103	0.796318	69.5
ENSGALT0000	chromosome 3 open reading frame	C3H20orf26	0.999026	274.5
ENSGALT0000	chromosome 3 open reading frame	C3H20orf3	0.895856	1992
ENSGALT0000	chromosome 3 open reading frame	C3H20orf72	0.963165	328
ENSGALT0000	chromosome 3 open reading frame	C3H2orf18	0.701872	1542.5
ENSGALT0000	chromosome 3 open reading frame	C3H2orf43	0.893665	996.498
ENSGALT0000	chromosome 3 open reading frame	C3H2orf56	0.876278	558.996
ENSGALT0000	chromosome 3 open reading frame	C3H6orf120	0.954931	450
ENSGALT0000	chromosome 3 open reading frame	C3H6orf163	0.942866	24
ENSGALT0000	chromosome 3 open reading frame	C3H6orf165	0.994005	55.5
ENSGALT0000	chromosome 3 open reading frame	C3H6orf168	0.942475	305.5
ENSGALT0000	chromosome 3 open reading frame	C3H6orf186	0.889211	326
ENSGALT0000	chromosome 3 open reading frame	C3H6orf191	?	0
ENSGALT0000	chromosome 3 open reading frame	C3H6orf192	0.995304	947
ENSGALT0000	chromosome 3 open reading frame	C3H6orf203	0.974136	379
ENSGALT0000	chromosome 3 open reading frame	C3H6orf211	0.952484	356.5
ENSGALT0000	chromosome 3 open reading frame	C3H6orf57	0.847114	550
ENSGALT0000	chromosome 3 open reading frame	C3H6orf70	0.986648	401
ENSGALT0000	chromosome 3 open reading frame	C3H6orf72	0.994027	991.001
ENSGALT0000	chromosome 3 open reading frame	C3H6orf97	0.826707	64.5
ENSGALT0000	chromosome 3 open reading frame	C3H8orf42	0.990408	289
ENSGALT0000	chromosome 3 open reading frame	C3orf17	0.989771	275
ENSGALT0000	chromosome 3 open reading frame	C3orf25	0.9799	86
ENSGALT0000	chromosome 3 open reading frame	C3orf55	0.659863	688.5
ENSGALT0000	glycosyltransferase	C3orf64	0.891194	256
ENSGALT0000	chromosome 3 open reading frame	C3orf67	0.991114	90
ENSGALT0000	chromosome 3 open reading frame	C3orf77	0.943934	1
ENSGALT0000	chromosome 3 open reading frame	C3orf78	0.205645	686.5
ENSGALT0000	complement component 4 binding	C4BPA	0.987306	1787
ENSGALT0000	chromosome 4 open reading frame	C4H20orf194	0.808671	1661.5
ENSGALT0000	chromosome 4 open reading frame	C4H4orf17	0.933631	3
ENSGALT0000	chromosome 4 open reading frame	C4H4orf21	0.951414	117
ENSGALT0000	chromosome 4 open reading frame	C4H4orf27	0.78959	1728.5
ENSGALT0000	chromosome 4 open reading frame	C4H4orf29	0.983156	872.001
ENSGALT0000	chromosome 4 open reading frame	C4H4orf33	0.949953	208
ENSGALT0000	chromosome 4 open reading frame	C4H4orf34	0.985414	283.5
ENSGALT0000	chromosome 4 open reading frame	C4H4orf43	0.95316	366.5
ENSGALT0000	chromosome 4 open reading frame	C4H4orf44	0.982225	93.5001
ENSGALT0000	chromosome 4 open reading frame	C4H4orf45	0.971293	3
ENSGALT0000	chromosome 4 open reading frame	C4H4orf47	0.954031	9
ENSGALT0000	chromosome 4 open reading frame	C4H4orf52	0.824051	751
ENSGALT0000	chromosome 4 open reading frame	C4H8orf40	0.557506	1659.5
ENSGALT0000	chromosome 4 open reading frame	C4HXorf41	0.963677	509
ENSGALT0000	chromosome 4 open reading frame	C4HXorf56	0.906539	1744.5
ENSGALT0000	chromosome 4 open reading frame	C4HXorf57	0.985817	359
ENSGALT0000	chromosome 4 open reading frame	C4orf19	0.832763	183.5
ENSGALT0000	chromosome 4 open reading frame	C4orf32	0.937278	37
ENSGALT0000	complement component 5	C5	0.994247	142.5
ENSGALT0000	complement component 5a recepto	C5AR1	0.627809	4.5
ENSGALT0000	chromosome 5 open reading frame	C5H11orf10	0.125719	3287.5
ENSGALT0000	chromosome 5 open reading frame	C5H11orf41	0.860048	413.5

ENSGALT0000	chromosome 5 open reading frame	C5H11orf46	0.875195	763.499
ENSGALT0000	chromosome 5 open reading frame	C5H11orf49	0.941712	325
ENSGALT0000	small acidic protein	C5H11orf58	0.593356	2328
ENSGALT0000	chromosome 5 open reading frame	C5H14orf101	0.933511	718.5
ENSGALT0000	chromosome 5 open reading frame	C5H14orf102	0.979021	782.5
ENSGALT0000	chromosome 5 open reading frame	C5H14orf118	0.965337	498
ENSGALT0000	chromosome 5 open reading frame	C5H14orf129	0.962481	448
ENSGALT0000	chromosome 5 open reading frame	C5H14orf135	0.983682	901.5
ENSGALT0000	chromosome 5 open reading frame	C5H14orf149	0.963801	1376.5
ENSGALT0000	chromosome 5 open reading frame	C5H14orf159	0.966157	276
ENSGALT0000	chromosome 5 open reading frame	C5H14orf166	0.876905	2995.03
ENSGALT0000	chromosome 5 open reading frame	C5H14orf169	0.844775	1499.5
ENSGALT0000	chromosome 5 open reading frame	C5H14orf38	0.603682	0
ENSGALT0000	chromosome 5 open reading frame	C5H14orf43	0.9743	292
ENSGALT0000	chromosome 5 open reading frame	C5H14orf49	0.990015	162.5
ENSGALT0000	chromosome 5 open reading frame	C5H14orf79	0.944507	60.5
ENSGALT0000	chromosome 5 open reading frame	C5H15orf23	0.697096	833.5
ENSGALT0000	chromosome 5 open reading frame	C5H15orf24	0.895535	932.5
ENSGALT0000	chromosome 5 open reading frame	C5H15orf29	0.965088	485
ENSGALT0000	chromosome 5 open reading frame	C5H15orf41	0.998411	554.499
ENSGALT0000	chromosome 5 open reading frame	C5H15orf57	0.808222	1328
ENSGALT0000	P311 POU	C5orf13	0.934583	4716.95
ENSGALT0000	chromosome 5 open reading frame	C5orf24	0.895823	483.5
ENSGALT0000	chromosome 5 open reading frame	C5orf35	0.887836	356
ENSGALT0000	chromosome 5 open reading frame	C5orf63	0.995664	128.5
ENSGALT0000	complement component 6	C6	0.562993	0
ENSGALT0000	chromosome 6 open reading frame	C6H10orf11	0.970951	132
ENSGALT0000	chromosome 6 open reading frame	C6H10orf118	0.9978	783.5
ENSGALT0000	chromosome 6 open reading frame	C6H10orf137	0.96676	1014.98
ENSGALT0000	chromosome 6 open reading frame	C6H10orf26	0.937255	672
ENSGALT0000	chromosome 6 open reading frame	C6H10orf28	0.912072	300
ENSGALT0000	chromosome 6 open reading frame	C6H10orf32	0.863011	825.5
ENSGALT0000	chromosome 6 open reading frame	C6H10orf46	0.936442	475
ENSGALT0000	chromosome 6 open reading frame	C6H10orf57	0.939728	862
ENSGALT0000	chromosome 6 open reading frame	C6H10orf76	0.9385	1808.5
ENSGALT0000	chromosome 6 open reading frame	C6H10orf88	0.909252	971.5
ENSGALT0000	chromosome 6 open reading frame	C6H10orf96	?	0
ENSGALT0000	chromosome 6 open reading frame	C6orf115	0.38589	515
ENSGALT0000	chromosome 6 open reading frame	C6orf162	0.92333	187.5
ENSGALT0000	chromosome 6 open reading frame	C6orf170	0.985776	490.5
ENSGALT0000	chromosome 6 open reading frame	C6orf183	0.849633	2.5
ENSGALT0000	chromosome 6 open reading frame	C6orf94	0.999547	19.5
ENSGALT0000	complement component 7	C7	0.85177	9
ENSGALT0000	chromosome 7 open reading frame	C7H21orf58	0.166841	3.5
ENSGALT0000	chromosome 7 open reading frame	C7H2orf47	0.868555	1563
ENSGALT0000	chromosome 7 open reading frame	C7H2orf66	0.984358	14.5
ENSGALT0000	\N	C7H2orf69	0.973228	455
ENSGALT0000	chromosome 7 open reading frame	C7H2orf76	0.979347	162
ENSGALT0000	chromosome 7 open reading frame	C7orf10	0.85183	75
ENSGALT0000	chromosome 7 open reading frame	C7orf25	0.958951	250.5
ENSGALT0000	chromosome 7 open reading frame	C7orf31	?	0
ENSGALT0000	chromosome 7 open reading frame	C7orf41	0.991373	199
ENSGALT0000	chromosome 7 open reading frame	C7orf45	?	0
ENSGALT0000	chromosome 7 open reading frame	C7orf58	0.988375	116.5
ENSGALT0000	chromosome 7 open reading frame	C7orf72	0.603682	0
ENSGALT0000	complement component 8, alpha p	C8A	0.649519	0.5

ENSGALT0000	complement component 8, beta pol	C8B	0.981202	43
ENSGALT0000	complement component 8, gamma	C8G	0.744744	168.946
ENSGALT0000	chromosome 8 open reading frame	C8H14orf80	0.884552	89
ENSGALT0000	chromosome 8 open reading frame	C8H1orf111	0.990861	51.5
ENSGALT0000	chromosome 8 open reading frame	C8H1orf112	0.955572	492.696
ENSGALT0000	chromosome 8 open reading frame	C8H1orf123	0.785273	519
ENSGALT0000	chromosome 8 open reading frame	C8H1orf146	0.828826	1
ENSGALT0000	chromosome 8 open reading frame	C8H1orf168	0.821318	7.5
ENSGALT0000	chromosome 8 open reading frame	C8H1orf21	0.808221	124.5
ENSGALT0000	chromosome 8 open reading frame	C8H1orf27	0.942102	718.5
ENSGALT0000	chromosome 8 open reading frame	C8H1orf52	0.739844	542.5
ENSGALT0000	chromosome 8 open reading frame	C8H1orf9	0.985153	1627.01
ENSGALT0000	chromosome 8 open reading frame	C8orf34	0.871381	12
ENSGALT0000	chromosome 8 open reading frame	C8orf37	0.880162	119.5
ENSGALT0000	chromosome 8 open reading frame	C8orf46	0.649519	1
ENSGALT0000	chromosome 8 open reading frame	C8orf48	0.982875	29
ENSGALT0000	chromosome 9 open reading frame	C9H21orf2	0.935628	1915.5
ENSGALT0000	chromosome 9 open reading frame	C9H2orf54	0.991082	78
ENSGALT0000	chromosome 9 open reading frame	C9H2orf82	0.778033	35.5
ENSGALT0000	chromosome 9 open reading frame	C9H3orf58	0.985005	850.5
ENSGALT0000	chromosome 9 open reading frame	C9orf102	0.994787	352.5
ENSGALT0000	chromosome 9 open reading frame	C9orf103	0.852497	189.5
ENSGALT0000	chromosome 9 open reading frame	C9orf140	0.974862	535
ENSGALT0000	chromosome 9 open reading frame	C9orf174	0.992908	350.053
ENSGALT0000	chromosome 9 open reading frame	C9orf21	0.969888	85.5
ENSGALT0000	chromosome 9 open reading frame	C9orf30	0.94587	278
ENSGALT0000	chromosome 9 open reading frame	C9orf5	0.967561	840
ENSGALT0000	chromosome 9 open reading frame	C9orf71	?	0
ENSGALT0000	chromosome 9 open reading frame	C9orf86	0.922132	1837
ENSGALT0000	chromosome 9 open reading frame	C9orf93	0.974795	222.5
ENSGALT0000	chromosome 9 open reading frame	C9orf96	0.985155	102.224
ENSGALT0000	carbonic anhydrase X	CA10	0.650766	97.5
ENSGALT0000	carbonic anhydrase XII	CA12	0.251995	4
ENSGALT0000	carbonic anhydrase XIII	CA13	0.623827	23
ENSGALT0000	carbonic anhydrase II	CA2	0.394085	358.5
ENSGALT0000	carbonic anhydrase III, muscle spe	CA3	0.519089	22.5
ENSGALT0000	carbonic anhydrase IV	CA4	0.19245	0
ENSGALT0000	carbonic anhydrase VB, mitochond	CA5B	0.992114	314.322
ENSGALT0000	carbonic anhydrase VI	CA6	0.982551	15
ENSGALT0000	carbonic anhydrase VII	CA7	0.824984	13.5
ENSGALT0000	carbonic anhydrase VIII	CA8	0.858393	286
ENSGALT0000	carbonic anhydrase IX	CA9	0.745304	2735
ENSGALT0000	calcium binding protein 39	CAB39	0.961651	891
ENSGALT0000	calcium binding protein 39-like	CAB39L	0.747503	92.5
ENSGALT0000	calcineurin binding protein 1	CABIN1	0.983755	2899.5
ENSGALT0000	Cdk5 and Abl enzyme substrate 1	CABLES1	0.927624	197
ENSGALT0000	calcium binding protein 1	CABP1	0.761808	140.5
ENSGALT0000	calcium binding protein 7	CABP7	0.416421	98.5
ENSGALT0000	calcium binding tyrosine-(Y)-phosp	CABYR	0.998838	25
ENSGALT0000	cache domain containing 1	CACHD1	0.943674	6863
ENSGALT0000	calcium channel, voltage-depender	CACNA1B	0.791009	2573.48
ENSGALT0000	calcium channel, voltage-depender	CACNA1D	0.834186	281.499
ENSGALT0000	calcium channel, voltage-depender	CACNA1E	0.862735	1848.53
ENSGALT0000	calcium channel, voltage-depender	CACNA1G	0.991225	2332.64
ENSGALT0000	calcium channel, voltage-depender	CACNA1H	0.933132	1105.23
ENSGALT0000	calcium channel, voltage-depender	CACNA1I	0.47846	678.661

ENSGALT0000	calcium channel, voltage-depender	CACNA2D1	0.94943	227
ENSGALT0000	calcium channel, voltage-depender	CACNA2D3	0.777573	174.5
ENSGALT0000	calcium channel, voltage-depender	CACNA2D4	0.830056	58
ENSGALT0000	calcium channel, voltage-depender	CACNB2	0.943047	248.499
ENSGALT0000	calcium channel, voltage-depender	CACNB4	0.943406	114.5
ENSGALT0000	calcium channel, voltage-depender	CACNG1	0.649519	0.5
ENSGALT0000	calcium channel, voltage-depender	CACNG2	0.744615	94.5
ENSGALT0000	calcium channel, voltage-depender	CACNG3	0.363212	28
ENSGALT0000	calcium channel, voltage-depender	CACNG4	0.630829	54.5
ENSGALT0000	calcium channel, voltage-depender	CACNG7	0.733903	284
ENSGALT0000	calcyclin binding protein	CACYBP	0.952051	842.5
ENSGALT0000	carbamoyl-phosphate synthetase 2	CAD	0.952694	296
ENSGALT0000	cell adhesion molecule 1	CADM1	0.844055	4905.5
ENSGALT0000	cell adhesion molecule 2	CADM2	0.974108	397
ENSGALT0000	cell adhesion molecule 3	CADM3	0.176417	709
ENSGALT0000	Ca++-dependent secretion activato	CADPS	0.715424	964.502
ENSGALT0000	Ca++-dependent secretion activato	CADPS2	0.885722	546.5
ENSGALT0000	calbindin 1, 28kDa	CALB1	0.369297	57
ENSGALT0000	calbindin 2	CALB2	0.052046	103
ENSGALT0000	calcitonin-related polypeptide alpha	CALCA	0.834935	1023.5
ENSGALT0000	calcium binding and coiled-coil don	CALCOCO2	0.995197	619.5
ENSGALT0000	calcitonin receptor	CALCR	0.706903	4
ENSGALT0000	calcitonin receptor-like	CALCRL	0.971641	506
ENSGALT0000	caldesmon 1	CALD1	0.93114	1391.98
ENSGALT0000	calcium homeostasis modulator 1	CALHM1	0.649519	0
ENSGALT0000	calcium homeostasis modulator 2	CALHM2	0.973259	33.5
ENSGALT0000	calcium homeostasis modulator 3	CALHM3	0.358817	3.5
ENSGALT0000	calmodulin 2 (phosphorylase kinase	CALM	0.517901	12100.3
ENSGALT0000	calmodulin 1 (phosphorylase kinase	CALM1	0.673625	9187.19
ENSGALT0000	calmodulin-like 3	CALML3	0.353553	1
ENSGALT0000	calmodulin-like 4	CALML4	0.352091	917
ENSGALT0000	calneuron 1	CALN1	0.876172	74
ENSGALT0000	calreticulin 3	CALR3	0.932771	10
ENSGALT0000	calcium/calmodulin-dependent prot	CAMK1D	0.597125	139
ENSGALT0000	calcium/calmodulin-dependent prot	CAMK1G	0.945605	44
ENSGALT0000	calcium/calmodulin-dependent prot	CAMK2A	0.655485	20
ENSGALT0000	calcium/calmodulin-dependent prot	CAMK2D	0.99615	2139.97
ENSGALT0000	calcium/calmodulin-dependent prot	CAMK2G	0.960802	797.499
ENSGALT0000	calcium/calmodulin-dependent prot	CAMK4	0.707102	467.753
ENSGALT0000	calcium/calmodulin-dependent prot	CAMKK1	0.857125	174
ENSGALT0000	calcium/calmodulin-dependent prot	CAMKK2	0.906122	1718
ENSGALT0000	calmodulin-lysine N-methyltransfer:	CAMKMT	0.959709	150.5
ENSGALT0000	calcium modulating ligand	CAMLG	0.875813	851.117
ENSGALT0000	cathelicidin antimicrobial peptide	CAMP	0.459243	2.5
ENSGALT0000	calmodulin regulated spectrin-asso	CAMSAP1	0.928195	1665
ENSGALT0000	calmodulin regulated spectrin-asso	CAMSAP1L1	0.941865	1219.5
ENSGALT0000	calmodulin binding transcription act	CAMTA1	0.920207	1969.5
ENSGALT0000	cullin-associated and neddylation-d	CAND1	0.943421	4295.5
ENSGALT0000	cullin-associated and neddylation-d	CAND2	0.963858	656.003
ENSGALT0000	calcium activated nucleotidase 1	CANT1	0.951768	393
ENSGALT0000	calnexin	CANX	0.973011	5070.85
ENSGALT0000	CAP, adenylate cyclase-associated	CAP2	0.856913	191.5
ENSGALT0000	calpain 1, (mu/l) large subunit	CAPN1	0.889715	3611.5
ENSGALT0000	calpain 10	CAPN10	0.808119	625.495
ENSGALT0000	calpain 13	CAPN13	0.831511	12
ENSGALT0000	calpain 14	CAPN14	0.649519	0.5

ENSGALT0000	calpain 2, (m/II) large subunit	CAPN2	0.698526	289.5
ENSGALT0000	calpain 3, (p94)	CAPN3	0.482556	3
ENSGALT0000	calpain 5	CAPN5	0.978574	724
ENSGALT0000	calpain 6	CAPN6	0.994318	136.5
ENSGALT0000	calpain 7	CAPN7	0.966062	952
ENSGALT0000	calpain 8	CAPN8	0.897986	5.5
ENSGALT0000	calpain 9	CAPN9	0.705723	5.5
ENSGALT0000	cell cycle associated protein 1	CAPRIN1	0.936271	14868
ENSGALT0000	caprin family member 2	CAPRIN2	0.974303	622
ENSGALT0000	calcyphosine 2	CAPS2	0.957473	154.5
ENSGALT0000	calcyphosine-like	CAPSL	0.633484	18
ENSGALT0000	capping protein (actin filament) mu:	CAPZA1	0.885448	2874.03
ENSGALT0000	capping protein (actin filament) mu:	CAPZA2	0.908521	3238.01
ENSGALT0000	capping protein (actin filament) mu:	CAPZA3	?	0
ENSGALT0000	capping protein (actin filament) mu:	CAPZB	0.715656	3760.65
ENSGALT0000	caspase recruitment domain family	CARD10	0.908834	431
ENSGALT0000	caspase recruitment domain family	CARD11	0.690273	46
ENSGALT0000	caspase recruitment domain family	CARD8	0.970594	32.5
ENSGALT0000	caspase recruitment domain family	CARD9	0.974911	185
ENSGALT0000	calcium regulated heat stable prote	CARHSP1	0.947814	596
ENSGALT0000	carbohydrate kinase domain contai	CARKD	0.991015	1422
ENSGALT0000	cysteinyl-tRNA synthetase	CARS	0.9639	1207.51
ENSGALT0000	cysteinyl-tRNA synthetase 2, mitoc	CARS2	0.950134	787.5
ENSGALT0000	cancer susceptibility candidate 1	CASC1	0.979796	103.5
ENSGALT0000	cancer susceptibility candidate 3	CASC3	0.848648	2976
ENSGALT0000	cancer susceptibility candidate 4	CASC4	0.945654	3159
ENSGALT0000	CAS1 domain containing 1	CASD1	0.943433	604.997
ENSGALT0000	calcium/calmodulin-dependent seri	CASK	0.986511	3400
ENSGALT0000	CASK interacting protein 1	CASKIN1	0.912427	1901.5
ENSGALT0000	CASK interacting protein 2	CASKIN2	0.993451	1062.96
ENSGALT0000	caspase 1, apoptosis-related cyste	CASP1	0.966215	723.004
ENSGALT0000	initiator caspase	CASP18	0.79031	6
ENSGALT0000	caspase 2, apoptosis-related cyste	CASP2	0.972158	752.5
ENSGALT0000	caspase 3, apoptosis-related cyste	CASP3	0.744803	1699
ENSGALT0000	caspase 6, apoptosis-related cyste	CASP6	0.933114	539
ENSGALT0000	caspase 7, apoptosis-related cyste	CASP7	0.988297	40.5
ENSGALT0000	caspase 8, apoptosis-related cyste	CASP8	0.986095	417.5
ENSGALT0000	caspase 9, apoptosis-related cyste	CASP9	0.957898	641.92
ENSGALT0000	calsequestrin 2 (cardiac muscle)	CASQ2	0.57491	2
ENSGALT0000	calcium-sensing receptor	CASR	0.793629	46.5
ENSGALT0000	Cas scaffolding protein family mem	CASS4	0.586495	155.5
ENSGALT0000	calpastatin	CAST	0.971554	359.999
ENSGALT0000	catalase	CAT	0.990355	3656.47
ENSGALT0000	caveolin 2	CAV2	0.846531	126
ENSGALT0000	caveolin 3	CAV3	0.53482	1
ENSGALT0000	core-binding factor, runt domain, al	CBFA2T2	0.922843	922.996
ENSGALT0000	core-binding factor, runt domain, al	CBFA2T3	0.74997	333.501
ENSGALT0000	core-binding factor, beta subunit	CBFB	0.898941	744.001
ENSGALT0000	Cas-Br-M (murine) ecotropic retrov	CBL	0.936104	726.5
ENSGALT0000	Cas-Br-M (murine) ecotropic retrov	CBLB	0.967258	515.5
ENSGALT0000	Cbl proto-oncogene, E3 ubiquitin p	CBLL1	0.926632	1573
ENSGALT0000	cerebellin 1 precursor	CBLN1	0.548401	161
ENSGALT0000	cerebellin 4 precursor	CBLN4	0.753886	3737
ENSGALT0000	carbonyl reductase 1	CBR1	0.959055	2074
ENSGALT0000	carbonyl reductase 4	CBR4	0.995366	293.5
ENSGALT0000	cystathionine-beta-synthase	CBS	0.940636	723

ENSGALT0000	COBW domain containing 1	CBWD1	0.910853	498.003
ENSGALT0000	chromobox homolog 1 (HP1 beta h	CBX1	0.809351	3908.16
ENSGALT0000	chromobox homolog 3	CBX3	0.948708	5853.36
ENSGALT0000	chromobox homolog 4 (Pc class hc	CBX4	0.698163	138.5
ENSGALT0000	chromobox homolog 7	CBX7	0.983363	127.5
ENSGALT0000	chromobox homolog 8	CBX8	0.894011	194
ENSGALT0000	chibby homolog 1 (Drosophila)	CBY1	0.719932	1518
ENSGALT0000	coiled-coil and C2 domain containir	CC2D1B	0.970618	1143.5
ENSGALT0000	coiled-coil and C2 domain containir	CC2D2A	0.991504	1739.49
ENSGALT0000	cell division cycle and apoptosis re	CCAR1	0.947393	3307.92
ENSGALT0000	collagen and calcium binding EGF	CCBE1	0.95451	9.5
ENSGALT0000	cysteine conjugate-beta lyase, cyto	CCBL1	0.956636	509
ENSGALT0000	cysteine conjugate-beta lyase 2	CCBL2	0.997549	630
ENSGALT0000	chemokine binding protein 2	CCBP2	0.988623	26.5
ENSGALT0000	coiled-coil domain containing 101	CCDC101	0.770591	2115.51
ENSGALT0000	coiled-coil domain containing 102A	CCDC102A	0.97569	423.5
ENSGALT0000	coiled-coil domain containing 102B	CCDC102B	0.868245	4.5
ENSGALT0000	coiled-coil domain containing 103	CCDC103	0.468247	24.5
ENSGALT0000	coiled-coil domain containing 104	CCDC104	0.89077	640
ENSGALT0000	coiled-coil domain containing 107	CCDC107	0.685127	272.5
ENSGALT0000	coiled-coil domain containing 108	CCDC108	0.699683	3
ENSGALT0000	coiled-coil domain containing 109B	CCDC109B	0.46114	223.5
ENSGALT0000	coiled-coil domain containing 111	CCDC111	0.989747	237.674
ENSGALT0000	coiled-coil domain containing 112	CCDC112	0.94331	101.5
ENSGALT0000	coiled-coil domain containing 113	CCDC113	0.967153	90
ENSGALT0000	coiled-coil domain containing 117	CCDC117	0.918058	187
ENSGALT0000	coiled-coil domain containing 12	CCDC12	0.726254	1648.5
ENSGALT0000	coiled-coil domain containing 121	CCDC121	0.603682	2
ENSGALT0000	coiled-coil domain containing 122	CCDC122	0.534404	0.5
ENSGALT0000	coiled-coil domain containing 124	CCDC124	0.818315	1222
ENSGALT0000	coiled-coil domain containing 125	CCDC125	0.991588	77
ENSGALT0000	coiled-coil domain containing 126	CCDC126	0.94855	219.5
ENSGALT0000	coiled-coil domain containing 127	CCDC127	0.978873	866
ENSGALT0000	coiled-coil domain containing 13	CCDC13	0.994427	215.5
ENSGALT0000	coiled-coil domain containing 132	CCDC132	0.966448	1093.49
ENSGALT0000	coiled-coil domain containing 134	CCDC134	0.89125	676
ENSGALT0000	coiled-coil domain containing 135	CCDC135	0.896149	105
ENSGALT0000	coiled-coil domain containing 137	CCDC137	0.664083	243.5
ENSGALT0000	coiled-coil domain containing 14	CCDC14	0.961893	438.5
ENSGALT0000	coiled-coil domain containing 146	CCDC146	0.980212	37
ENSGALT0000	coiled-coil domain containing 147	CCDC147	0.948139	66.5
ENSGALT0000	coiled-coil domain containing 148	CCDC148	0.969573	82.5
ENSGALT0000	coiled-coil domain containing 149	CCDC149	0.976597	194
ENSGALT0000	coiled-coil domain containing 152	CCDC152	0.603682	1
ENSGALT0000	coiled-coil domain containing 153	CCDC153	0	0
ENSGALT0000	coiled-coil domain containing 157	CCDC157	0.952033	104.5
ENSGALT0000	coiled-coil domain containing 164	CCDC164	0.887366	263
ENSGALT0000	coiled-coil domain containing 165	CCDC165	0.833566	4163.1
ENSGALT0000	coiled-coil domain containing 167	CCDC167	0.942952	652.5
ENSGALT0000	coiled-coil domain containing 17	CCDC17	0.962762	196.5
ENSGALT0000	coiled-coil domain containing 18	CCDC18	0.992722	303.5
ENSGALT0000	coiled-coil domain containing 25	CCDC25	0.881069	348.5
ENSGALT0000	coiled-coil domain containing 27	CCDC27	0.952829	246.5
ENSGALT0000	coiled-coil domain containing 28A	CCDC28A	0.929523	587
ENSGALT0000	coiled-coil domain containing 28B	CCDC28B	0.55373	156
ENSGALT0000	coiled-coil domain containing 3	CCDC3	0.14417	4

ENSGALT0000 coiled-coil domain containing 30	CCDC30	0.985778	685.5
ENSGALT0000 coiled-coil domain containing 34	CCDC34	0.950346	265.5
ENSGALT0000 coiled-coil domain containing 36	CCDC36	0.780657	0.5
ENSGALT0000 coiled-coil domain containing 37	CCDC37	0.628455	4
ENSGALT0000 coiled-coil domain containing 39	CCDC39	0.933499	22
ENSGALT0000 coiled-coil domain containing 40	CCDC40	0.982615	246
ENSGALT0000 coiled-coil domain containing 41	CCDC41	0.977276	360.5
ENSGALT0000 coiled-coil domain containing 42	CCDC42	?	0
ENSGALT0000 coiled-coil domain containing 43	CCDC43	0.896263	1022.5
ENSGALT0000 coiled-coil domain containing 47	CCDC47	0.98384	1129.5
ENSGALT0000 coiled-coil domain containing 48	CCDC48	0.941245	137
ENSGALT0000 coiled-coil domain containing 50	CCDC50	0.859764	1457.5
ENSGALT0000 coiled-coil domain containing 51	CCDC51	0.91644	298.5
ENSGALT0000 coiled-coil domain containing 53	CCDC53	0.944028	344.5
ENSGALT0000 coiled-coil domain containing 56	CCDC56	0.19574	1618
ENSGALT0000 coiled-coil domain containing 57	CCDC57	0.998756	56
ENSGALT0000 coiled-coil domain containing 58	CCDC58	0.801412	220
ENSGALT0000 coiled-coil domain containing 59	CCDC59	0.780885	278
ENSGALT0000 coiled-coil domain containing 6	CCDC6	0.96838	1625.5
ENSGALT0000 coiled-coil domain containing 60	CCDC60	0.692088	71
ENSGALT0000 coiled-coil domain containing 61	CCDC61	0.763806	1822.03
ENSGALT0000 coiled-coil domain containing 63	CCDC63	0.603682	0.5
ENSGALT0000 coiled-coil domain containing 64	CCDC64	0.906162	159.5
ENSGALT0000 coiled-coil domain containing 66	CCDC66	0.966538	354.5
ENSGALT0000 coiled-coil domain containing 67	CCDC67	0.685935	4
ENSGALT0000 coiled-coil domain containing 69	CCDC69	0.698829	22
ENSGALT0000 coiled-coil domain containing 71	CCDC71	0.982308	713.5
ENSGALT0000 coiled-coil domain containing 72	CCDC72	0.349463	1861.5
ENSGALT0000 coiled-coil domain containing 73	CCDC73	0.983743	41
ENSGALT0000 coiled-coil domain containing 75	CCDC75	0.919391	575.5
ENSGALT0000 coiled-coil domain containing 76	CCDC76	0.965814	237.239
ENSGALT0000 coiled-coil domain containing 77	CCDC77	0.954662	210
ENSGALT0000 coiled-coil domain containing 78	CCDC78	0.556807	96
ENSGALT0000 coiled-coil domain containing 79	CCDC79	0.93182	29.5
ENSGALT0000 coiled-coil domain containing 80	CCDC80	0.939192	2225.13
ENSGALT0000 coiled-coil domain containing 81	CCDC81	0.982868	742.011
ENSGALT0000 coiled-coil domain containing 82	CCDC82	0.680821	341
ENSGALT0000 coiled-coil domain containing 83	CCDC83	0.980034	28
ENSGALT0000 coiled-coil domain containing 84	CCDC84	0.985517	204.5
ENSGALT0000 coiled-coil domain containing 85A	CCDC85A	0.959701	328.001
ENSGALT0000 coiled-coil domain containing 85C	CCDC85C	0.977589	760
ENSGALT0000 coiled-coil domain containing 86	CCDC86	0.434956	584
ENSGALT0000 coiled-coil domain containing 88A	CCDC88A	0.895259	2291.5
ENSGALT0000 coiled-coil domain containing 88C	CCDC88C	0.985741	6177.91
ENSGALT0000 coiled-coil domain containing 89	CCDC89	0.902038	29.5
ENSGALT0000 coiled-coil domain containing 90A	CCDC90A	0.861982	150.5
ENSGALT0000 coiled-coil domain containing 90B	CCDC90B	0.790553	426.5
ENSGALT0000 coiled-coil domain containing 91	CCDC91	0.981468	162
ENSGALT0000 coiled-coil domain containing 92	CCDC92	0.846448	427.5
ENSGALT0000 coiled-coil domain containing 93	CCDC93	0.934791	521.5
ENSGALT0000 coiled-coil domain containing 99	CCDC99	0.978938	638
ENSGALT0000 cholecystokinin	CCK	0.482693	28
ENSGALT0000 cholecystokinin A receptor	CCKAR	0.534404	1.5
ENSGALT0000 cholecystokinin B receptor	CCKBR	0.977477	76
ENSGALT0000 chemokine (C-C motif) ligand 1	CCL1	0.464758	0.5
ENSGALT0000 chemokine (C-C motif) ligand 17	CCL17	0.22713	8

ENSGALT0000	chemokine (C-C motif) ligand 20	CCL20	0.734344	1.5
ENSGALT0000	chemokine (C-C motif) ligand 4	CCL4	0.0869347	0.01959
ENSGALT0000	C-C motif chemokine 4 homolog [S	CCL4_CHICK	0.464758	0.48041
ENSGALT0000	chemokine (C-C motif) ligand 5	CCL5	0.464758	0
ENSGALT0000	chemokine	CCLI10	0.640925	22.7193
ENSGALT0000	chemokine	CCLI5	0.464758	0
ENSGALT0000	chemokine	CCLI7	0.36726	9.2897
ENSGALT0000	chemokine	CCLI8	0.558956	1.08E-20
ENSGALT0000	cerebral cavernous malformation 2	CCM2	0.917824	863
ENSGALT0000	cyclin A1	CCNA1	0.65978	19
ENSGALT0000	cyclin A2	CCNA2	0.892986	1438.01
ENSGALT0000	cyclin B2	CCNB2	0.780268	3322.9
ENSGALT0000	cyclin C	CCNC	0.984494	499.503
ENSGALT0000	cyclin D1	CCND1	0.994993	2647.5
ENSGALT0000	cyclin D2	CCND2	0.982363	989.5
ENSGALT0000	cyclin D3	CCND3	0.976195	704
ENSGALT0000	cyclin D-type binding-protein 1	CCNDBP1	0.886248	1348
ENSGALT0000	cyclin E1	CCNE1	0.976854	353
ENSGALT0000	cyclin E2	CCNE2	0.92608	252
ENSGALT0000	cyclin F	CCNF	0.934908	1282
ENSGALT0000	cyclin G1	CCNG1	0.90478	980
ENSGALT0000	cyclin G2	CCNG2	0.970265	847.5
ENSGALT0000	cyclin H	CCNH	0.802269	1154
ENSGALT0000	cyclin I	CCNI	0.88442	7475.58
ENSGALT0000	cyclin I family, member 2	CCNI2	0.957647	347.748
ENSGALT0000	cyclin J	CCNJ	0.955205	312.5
ENSGALT0000	cyclin J-like	CCNJL	0.953148	215.5
ENSGALT0000	cyclin K	CCNK	0.92683	1121.5
ENSGALT0000	cyclin L1	CCNL1	0.950873	1143.5
ENSGALT0000	cyclin L2	CCNL2	0.98488	2463.43
ENSGALT0000	cyclin T2	CCNT2	0.973983	924.5
ENSGALT0000	cyclin Y	CCNY	0.999711	331.5
ENSGALT0000	cyclin Y-like 1	CCNYL1	0.939893	1283.5
ENSGALT0000	centriolar coiled coil protein 110kDa	CCP110	0.89803	734.001
ENSGALT0000	cell cycle progression 1	CCPG1	0.99021	1743.15
ENSGALT0000	chemokine (C-C motif) receptor 2	CCR2	0.45147	1.12E-05
ENSGALT0000	chemokine (C-C motif) receptor 4	CCR4	0.938545	6.5
ENSGALT0000	chemokine (C-C motif) receptor 5 (	CCR5	0.915138	8.49999
ENSGALT0000	chemokine (C-C motif) receptor 8	CCR8	0.825884	7.5
ENSGALT0000	C-C chemokine receptor 8 like	CCR8-L	0.649519	0.5
ENSGALT0000	chemokine (C-C motif) receptor 9	CCR9	?	0
ENSGALT0000	chemokine (C-C motif) receptor-like	CCRL1	0.948741	9.5
ENSGALT0000	CCR4 carbon catabolite repression	CCRN4L	0.920171	428
ENSGALT0000	chaperonin containing TCP1, subur	CCT2	0.739851	6184
ENSGALT0000	chaperonin containing TCP1, subur	CCT4	0.833911	8616.64
ENSGALT0000	chaperonin containing TCP1, subur	CCT5	0.797018	8112.14
ENSGALT0000	chaperonin containing TCP1, subur	CCT6A	0.725809	7178
ENSGALT0000	chaperonin containing TCP1, subur	CCT7	0.819298	10625.3
ENSGALT0000	chaperonin containing TCP1, subur	CCT8	0.882133	7128.85
ENSGALT0000	CCZ1 vacuolar protein trafficking a	CCZ1	0.955496	1039.5
ENSGALT0000	CD101 molecule	CD101	0.990931	168.832
ENSGALT0000	CD109 molecule	CD109	0.969402	354.498
ENSGALT0000	CD14 molecule	CD14	0.773802	27.5
ENSGALT0000	CD151 molecule (Raph blood grou	CD151	0.982452	5323.07
ENSGALT0000	CD164 molecule, sialomucin	CD164	0.99747	1674.49
ENSGALT0000	CD180 molecule	CD180	0.750029	2.5

ENSGALT0000 CD2 molecule	CD2	0.649519	0.5
ENSGALT0000 CD200 molecule	CD200	0.841954	216
ENSGALT0000 CD200 receptor 1	CD200R1	0.983868	67
ENSGALT0000 CD226 molecule	CD226	0.943934	2.5
ENSGALT0000 CD247 molecule	CD247	0.748254	81
ENSGALT0000 CD274 molecule	CD274	0.978688	28.5
ENSGALT0000 CD276 molecule	CD276	0.752418	2875.5
ENSGALT0000 CD28 molecule	CD28	0.821187	0.5
ENSGALT0000 CD2-associated protein	CD2AP	0.970293	1265.99
ENSGALT0000 CD300a molecule	CD300A	0.973315	72.8812
ENSGALT0000 CD300 antigen-like family member	CD300L-S1	0.649519	0.5
ENSGALT0000 CD320 molecule	CD320	0.788895	469.999
ENSGALT0000 CD34 molecule	CD34	0.781443	199
ENSGALT0000 CD36 antigen	CD36	0.467007	9.5
ENSGALT0000 CD38 molecule	CD38	0.968502	190
ENSGALT0000 CD3d molecule, delta (CD3-TCR c	CD3D	0.157622	33
ENSGALT0000 CD3e molecule, epsilon (CD3-TCR	CD3E	0.975411	2526.5
ENSGALT0000 CD4 molecule	CD4	0.690817	6.5
ENSGALT0000 CD40 molecule, TNF receptor supe	CD40	0.993357	323.499
ENSGALT0000 CD40 ligand	CD40LG	?	0
ENSGALT0000 CD44 molecule (Indian blood group	CD44	0.950291	102
ENSGALT0000 CD47 molecule	CD47	0.85395	1851.01
ENSGALT0000 CD5 molecule	CD5	0.904865	13.5
ENSGALT0000 CD55 molecule, decay accelerating	CD55	0.987813	55.5
ENSGALT0000 CD59 molecule, complement regula	CD59	0.98942	590
ENSGALT0000 CD7 molecule	CD7	?	0
ENSGALT0000 CD72 molecule	CD72	0.0375599	0.5
ENSGALT0000 CD74 molecule, major histocompat	CD74	0.999316	1220.51
ENSGALT0000 CD79b molecule, immunoglobulin-a	CD79B	0.957171	65
ENSGALT0000 CD80 molecule	CD80	0.939217	28.5
ENSGALT0000 CD81 molecule	CD81	0.819109	3724.52
ENSGALT0000 CD82 antigen	CD82	0.846363	2339.5
ENSGALT0000 CD86 molecule	CD86	0.464758	0.5
ENSGALT0000 CD8a molecule	CD8A	0.604477	6.5
ENSGALT0000 CD8b molecule	CD8B	0.580649	0
ENSGALT0000 CD9 molecule	CD9	0.924598	127.5
ENSGALT0000 CD93 molecule	CD93	0.816202	328
ENSGALT0000 CD99 molecule	CD99	0.984541	527.5
ENSGALT0000 CD99 molecule-like 2	CD99L2	0.773649	700
ENSGALT0000 cytidine deaminase	CDA	0.96654	174.312
ENSGALT0000 cytidine and dCMP deaminase dom	CDADC1	0.988042	96.9999
ENSGALT0000 congenital dyserythropoietic anemi	CDAN1	0.971176	742
ENSGALT0000 cell division cycle 123 homolog (S.	CDC123	0.915323	814
ENSGALT0000 CDC14 cell division cycle 14 homol	CDC14A	0.97458	1701
ENSGALT0000 CDC14 cell division cycle 14 homol	CDC14B	0.97521	229
ENSGALT0000 cell division cycle 16 homolog (S. c	CDC16	0.96117	682.5
ENSGALT0000 cell division cycle 20 homolog (S. c	CDC20	0.751593	2002
ENSGALT0000 cell division cycle 23 homolog (S. c	CDC23	0.941565	1721
ENSGALT0000 cell division cycle 25 homolog A (S.	CDC25A	0.888369	469.5
ENSGALT0000 cell division cycle 26 homolog (S. c	CDC26	0.125357	784.5
ENSGALT0000 cell division cycle 27 homolog (S. c	CDC27	0.97573	3074.5
ENSGALT0000 cell division cycle 2-like 1 (PITSLRE	CDC2L1	0.908726	1302.5
ENSGALT0000 cell division cycle 34 homolog (S. c	CDC34	0.920348	958
ENSGALT0000 cell division cycle 37 homolog (S. c	CDC37L1	0.924303	301.5
ENSGALT0000 cell division cycle 40 homolog (S. c	CDC40	0.930811	1262.5
ENSGALT0000 cell division cycle 42 (GTP binding	CDC42	0.918934	8320.84

ENSGALT0000	CDC42 binding protein kinase alph	CDC42BPA	0.981142	1931.5
ENSGALT0000	CDC42 binding protein kinase beta	CDC42BPB	0.960039	5103
ENSGALT0000	CDC42 effector protein (Rho GTPa	CDC42EP3	0.941304	114.5
ENSGALT0000	CDC42 effector protein (Rho GTPa	CDC42EP4	0.83406	1604
ENSGALT0000	CDC42 small effector 2	CDC42SE2	0.843888	217
ENSGALT0000	cell division cycle 45 homolog (S. c	CDC45	0.926419	636.5
ENSGALT0000	CDC5 cell division cycle 5-like (S. p	CDC5L	0.945747	3449.51
ENSGALT0000	cell division cycle 7 homolog (S. ce	CDC7	0.935208	222
ENSGALT0000	cell division cycle 73, Paf1/RNA pol	CDC73	0.936703	1319.5
ENSGALT0000	cell division cycle associated 2	CDCA2	0.865573	272.5
ENSGALT0000	cell division cycle associated 3	CDCA3	0.746405	1256.5
ENSGALT0000	cell division cycle associated 4	CDCA4	0.994443	749.5
ENSGALT0000	cell division cycle associated 7	CDCA7	0.933267	698.434
ENSGALT0000	cell division cycle associated 7-like	CDCA7L	0.968155	1178
ENSGALT0000	CUB domain containing protein 1	CDCP1	0.968138	725.5
ENSGALT0000	CUB domain containing protein 2	CDCP2	0.673017	75.4213
ENSGALT0000	cytidine deaminase	CDD	0.667159	9.00216
ENSGALT0000	cadherin 1, type 1, E-cadherin (epit	CDH1	0.915627	12274.7
ENSGALT0000	cadherin 10, type 2 (T2-cadherin)	CDH10	0.659422	57
ENSGALT0000	cadherin 11, type 2, OB-cadherin (c	CDH11	0.985777	7706.99
ENSGALT0000	cadherin 12, type 2 (N-cadherin 2)	CDH12	0.674293	219
ENSGALT0000	cadherin 13, H-cadherin (heart)	CDH13	0.57851	1299.01
ENSGALT0000	cadherin 17, LI cadherin (liver-intes	CDH17	0.551223	41.5
ENSGALT0000	cadherin 18, type 2	CDH18	0.852536	166.5
ENSGALT0000	cadherin 19, type 2	CDH19	0.958734	123.5
ENSGALT0000	cadherin 2, type 1, N-cadherin (neu	CDH2	0.965193	10117.5
ENSGALT0000	cadherin 20, type 2	CDH20	0.731866	16.5
ENSGALT0000	cadherin 22, type 2	CDH22	0.834669	54
ENSGALT0000	cadherin-related 23	CDH23	0.609516	122
ENSGALT0000	cadherin 4, type 1, R-cadherin (reti	CDH4	0.795928	1681.5
ENSGALT0000	cadherin 5, type 2 (vascular endoth	CDH5	0.827533	1054.5
ENSGALT0000	cadherin 6, type 2, K-cadherin (feta	CDH6	0.85996	200.999
ENSGALT0000	cadherin 7, type 2	CDH7	0.825695	474.5
ENSGALT0000	cadherin 8, type 2	CDH8	0.98666	245.5
ENSGALT0000	cadherin 9, type 2 (T1-cadherin)	CDH9	0.880071	49.5
ENSGALT0000	cadherin-related family member 1	CDHR1	0.602902	8.5
ENSGALT0000	cadherin-related family member 2	CDHR2	0.937045	77.5
ENSGALT0000	cadherin-related family member 3	CDHR3	0.99194	48
ENSGALT0000	cadherin-related family member 5	CDHR5	0.603682	0
ENSGALT0000	cyclin-dependent kinase 1	CDK1	0.77679	2471.5
ENSGALT0000	cyclin-dependent kinase 10	CDK10	0.918475	981.5
ENSGALT0000	cyclin-dependent kinase 12	CDK12	0.973443	2111.5
ENSGALT0000	cyclin-dependent kinase 13	CDK13	0.987547	1891
ENSGALT0000	cyclin-dependent kinase 14	CDK14	0.883876	958.5
ENSGALT0000	cyclin-dependent kinase 15	CDK15	0.930904	56.5
ENSGALT0000	cyclin-dependent kinase 17	CDK17	0.940736	934.5
ENSGALT0000	cyclin-dependent kinase 19	CDK19	0.991967	497
ENSGALT0000	cyclin-dependent kinase 2 associat	CDK2AP1	0.941344	756.5
ENSGALT0000	cyclin-dependent kinase 3	CDK3	0.876691	7
ENSGALT0000	CDK5 regulatory subunit associate	CDK5RAP1	0.963087	1138.5
ENSGALT0000	CDK5 regulatory subunit associate	CDK5RAP2	0.989299	1661.48
ENSGALT0000	CDK5 regulatory subunit associate	CDK5RAP3	0.734303	125
ENSGALT0000	cyclin-dependent kinase 6	CDK6	0.965321	859.5
ENSGALT0000	cyclin-dependent kinase 7	CDK7	0.884944	359
ENSGALT0000	cyclin-dependent kinase 8	CDK8	0.939996	1233.5
ENSGALT0000	cyclin-dependent kinase 9	CDK9	0.894061	2457.5

ENSGALT0000	CDK5 regulatory subunit associate	CDKAL1	0.962151	533.499
ENSGALT0000	cyclin-dependent kinase-like 1 (CD	CDKL1	0.850864	226
ENSGALT0000	cyclin-dependent kinase-like 2 (CD	CDKL2	0.904678	348.293
ENSGALT0000	cyclin-dependent kinase-like 5	CDKL5	0.997696	305.5
ENSGALT0000	cyclin-dependent kinase inhibitor 1,	CDKN1A	0.35443	3
ENSGALT0000	cyclin-dependent kinase inhibitor 1l	CDKN1B	0.921585	1743
ENSGALT0000	CDKN2A interacting protein	CDKN2AIP	0.910954	879
ENSGALT0000	cyclin-dependent kinase inhibitor 2(	CDKN2C	0.644614	11
ENSGALT0000	cyclin-dependent kinase inhibitor 3	CDKN3	0.78805	351.5
ENSGALT0000	cysteine dioxygenase, type I	CDO1	0.854368	1006
ENSGALT0000	Cdon homolog (mouse)	CDON	0.996755	2721
ENSGALT0000	cerebellar degeneration-related prc	CDR2	0.925001	681.5
ENSGALT0000	cerebellar degeneration-related prc	CDR2L	0.939164	840
ENSGALT0000	CDP-diacylglycerol synthase (phos	CDS1	0.989586	301.5
ENSGALT0000	CDP-diacylglycerol synthase (phos	CDS2	0.967373	1059.5
ENSGALT0000	chromatin licensing and DNA replic	CDT1	0.843931	1070
ENSGALT0000	CDV3 homolog	CDV3	0.934573	799
ENSGALT0000	caudal type homeobox 1	CDX1	0.464758	1
ENSGALT0000	caudal type homeo box transcriptio	CDX2	?	0
ENSGALT0000	caudal type homeobox 4	CDX4	0.603682	1
ENSGALT0000	chromodomain protein, Y-like	CDYL	0.992949	339
ENSGALT0000	chromodomain protein, Y-like 2	CDYL2	0.890471	276
ENSGALT0000	UPF0542 protein C5orf43 homolog	CE043_CHICK	0.968492	1748
ENSGALT0000	CCAAT/enhancer binding protein ((	CEBPB	0.883321	23.5
ENSGALT0000	CCAAT/enhancer binding protein ((	CEBPG	0.923295	2004
ENSGALT0000	CCAAT/enhancer binding protein ((	CEBPZ	0.873272	1036.01
ENSGALT0000	cat eye syndrome chromosome reg	CECR1	0.95381	275.999
ENSGALT0000	cat eye syndrome chromosome reg	CECR2	0.898207	1026.5
ENSGALT0000	cat eye syndrome chromosome reg	CECR5	0.954308	400
ENSGALT0000	carboxyl ester lipase (bile salt-stim	CEL	0.464758	0
ENSGALT0000	chymotrypsin-like elastase family, r	CELA1	0.824704	12
ENSGALT0000	chymotrypsin-like elastase family, r	CELA2A	0.917094	16.5
ENSGALT0000	CUGBP, Elav-like family member 1	CELF1	0.973998	1406.99
ENSGALT0000	CUGBP, Elav-like family member 2	CELF2	0.963279	684
ENSGALT0000	CUGBP, Elav-like family member 4	CELF4	0.643132	46.5
ENSGALT0000	CUGBP, Elav-like family member 5	CELF5	0.893896	149.5
ENSGALT0000	cadherin, EGF LAG seven-pass G-	CELSR3	0.854602	2037.5
ENSGALT0000	cell cycle exit and neuronal differen	CEND1	0.690174	116.5
ENSGALT0000	centromere protein C 1	CENPC1	0.947785	386.5
ENSGALT0000	centromere protein F, 350/400kDa	CENPF	0.93638	951.002
ENSGALT0000	centromere protein H	CENPH	0.817975	886
ENSGALT0000	centromere protein I	CENPI	0.967766	553.502
ENSGALT0000	centromere protein J	CENPJ	0.992266	140.5
ENSGALT0000	centromere protein K	CENPK	0.866899	278.001
ENSGALT0000	centromere protein M	CENPM	0.725054	149.5
ENSGALT0000	centromere protein N	CENPN	0.905997	167
ENSGALT0000	centromere protein O	CENPO	0.968676	1264.52
ENSGALT0000	centromere protein P	CENPP	0.810881	261
ENSGALT0000	centromere protein Q	CENPQ	0.948479	467.501
ENSGALT0000	centromere protein T	CENPT	0.88803	339.056
ENSGALT0000	centromere protein V	CENPV	0.495088	358.5
ENSGALT0000	centrosomal protein 104kDa	CEP104	0.992441	996.494
ENSGALT0000	centrosomal protein 112kDa	CEP112	0.893598	203.5
ENSGALT0000	centrosomal protein 120kDa	CEP120	0.953494	355
ENSGALT0000	centrosomal protein 135kDa	CEP135	0.961301	241
ENSGALT0000	centrosomal protein 152kDa	CEP152	0.972002	220.5

ENSGALT0000	centrosomal protein 164kDa	CEP164	0.999308	595.5
ENSGALT0000	centrosomal protein 170kDa	CEP170	0.813655	1734.02
ENSGALT0000	centrosomal protein 19kDa	CEP19	0.920591	262.5
ENSGALT0000	centrosomal protein 192kDa	CEP192	0.90749	342.5
ENSGALT0000	centrosomal protein 250kDa	CEP250	0.930623	485.5
ENSGALT0000	centrosomal protein 290kDa	CEP290	0.969472	645
ENSGALT0000	centrosomal protein 350kDa	CEP350	0.978327	1294.5
ENSGALT0000	centrosomal protein 44kDa	CEP44	0.977411	204.5
ENSGALT0000	centrosomal protein 55kDa	CEP55	0.901499	92
ENSGALT0000	centrosomal protein 57kDa	CEP57	0.979616	529.5
ENSGALT0000	centrosomal protein 57kDa-like 1	CEP57L1	0.945488	11
ENSGALT0000	centrosomal protein 63kDa	CEP63	0.943671	611
ENSGALT0000	centrosomal protein 68kDa	CEP68	0.972287	1265
ENSGALT0000	centrosomal protein 70kDa	CEP70	0.93758	1055.5
ENSGALT0000	centrosomal protein 76kDa	CEP76	0.979421	512.828
ENSGALT0000	centrosomal protein 78kDa	CEP78	0.969539	278
ENSGALT0000	centrosomal protein 85kDa	CEP85	0.967118	741.5
ENSGALT0000	centrosomal protein 85kDa-like	CEP85L	0.86181	298
ENSGALT0000	centrosomal protein 89kDa	CEP89	0.986929	322
ENSGALT0000	centrosomal protein 95kDa	CEP95	0.963876	532.5
ENSGALT0000	centrosomal protein 97kDa	CEP97	0.974383	356.5
ENSGALT0000	choline/ethanolamine phosphotrans	CEPT1	0.956136	1030.5
ENSGALT0000	cerberus 1, cysteine knot superfam	CER1	?	0
ENSGALT0000	cerebral endothelial cell adhesion r	CERCAM	0.967198	625
ENSGALT0000	ceramide kinase	CERK	0.959298	995.244
ENSGALT0000	ceramide kinase-like	CERKL	0.554736	158.5
ENSGALT0000	ceramide synthase 1	CERS1	0.837849	935
ENSGALT0000	ceramide synthase 3	CERS3	0.932661	59.5
ENSGALT0000	ceramide synthase 5	CERS5	0.908392	1311
ENSGALT0000	ceramide synthase 6	CERS6	0.980367	490.5
ENSGALT0000	carboxylesterase 1 (monocyte/mac	CES1	0.983982	182.583
ENSGALT0000	centrin, EF-hand protein, 1	CETN1	0.981615	305.5
ENSGALT0000	centrin, EF-hand protein, 2	CETN2	0.979021	891
ENSGALT0000	centrin, EF-hand protein, 3	CETN3	0.774375	472
ENSGALT0000	cholesteryl ester transfer protein, p	CETP	1	0.5
ENSGALT0000	cripto, FRL-1, cryptic family 1B	CFC1B	0.558923	35.5
ENSGALT0000	craniofacial development protein 1	CFDP1	0.560385	1577.34
ENSGALT0000	complement factor H	CFH	0.72878	48.5
ENSGALT0000	complement factor I	CFI	0.975272	54
ENSGALT0000	cofilin 2 (muscle)	CFL2	0.79514	1699.5
ENSGALT0000	CASP8 and FADD-like apoptosis re	CFLAR	0.954194	488
ENSGALT0000	glycoprotein hormones, alpha polyp	CGA	0.372451	6
ENSGALT0000	CGG triplet repeat binding protein	CGGBP1	0.979001	283.5
ENSGALT0000	cingulin	CGN	0.979624	2056.5
ENSGALT0000	cingulin-like 1	CGNL1	0.99396	368.499
ENSGALT0000	cell growth regulator with ring finge	CGRRF1	0.906908	209
ENSGALT0000	cholesterol 25-hydroxylase	CH25H	0.639362	12.5
ENSGALT0000	ChaC, cation transport regulator ho	CHAC1	0.798669	38
ENSGALT0000	ChaC, cation transport regulator ho	CHAC2	0.971402	137
ENSGALT0000	chondroadherin	CHAD	0.995383	13.5
ENSGALT0000	chondroadherin-like	CHADL	0.937694	303
ENSGALT0000	chromatin assembly factor 1, subur	CHAF1A	0.939202	1031.01
ENSGALT0000	chromatin assembly factor 1, subur	CHAF1B	0.927566	676.5
ENSGALT0000	chromosome alignment maintaining	CHAMP1	0.974281	1347.5
ENSGALT0000	choline O-acetyltransferase	CHAT	0.400114	69.5
ENSGALT0000	coiled-coil-helix-coiled-coil-helix do	CHCHD10	0.713527	234

ENSGALT0000	coiled-coil-helix-coiled-coil-helix do	CHCHD2	0.30637	8766.22
ENSGALT0000	coiled-coil-helix-coiled-coil-helix do	CHCHD3	0.887726	1547
ENSGALT0000	coiled-coil-helix-coiled-coil-helix do	CHCHD4	0.0771314	530.5
ENSGALT0000	coiled-coil-helix-coiled-coil-helix do	CHCHD5	0.713954	708.5
ENSGALT0000	coiled-coil-helix-coiled-coil-helix do	CHCHD6	0.8309	1248
ENSGALT0000	coiled-coil-helix-coiled-coil-helix do	CHCHD8	0.356868	190
ENSGALT0000	chromodomain helicase DNA bindi	CHD1	0.992847	1160.23
ENSGALT0000	chromodomain helicase DNA bindi	CHD1L	0.931343	388
ENSGALT0000	chromodomain helicase DNA bindi	CHD2	0.981405	2043
ENSGALT0000	chromodomain helicase DNA bindi	CHD4	0.930575	18634.9
ENSGALT0000	chromodomain helicase DNA bindi	CHD5	0.835862	2132.5
ENSGALT0000	chromodomain helicase DNA bindi	CHD6	0.995005	5678.74
ENSGALT0000	chromodomain helicase DNA bindi	CHD7	0.946803	2985.89
ENSGALT0000	chromodomain helicase DNA bindi	CHD9	0.984991	2235.5
ENSGALT0000	choline dehydrogenase	CHDH	0.988398	225.5
ENSGALT0000	checkpoint kinase 1	CHEK1	0.651482	522.501
ENSGALT0000	CHK2 checkpoint homolog (S. pom	CHEK2	0.975119	343
ENSGALT0000	calcium homeostasis endoplasmic	CHERP	0.937055	2785.53
ENSGALT0000	checkpoint with forkhead and ring f	CHFR	0.924256	808
ENSGALT0000	chromogranin A (parathyroid secret	CHGA	0.362257	4612.66
ENSGALT0000	chromogranin B (secretogranin 1)	CHGB	0.955195	338
ENSGALT0000	chitinase, acidic	CHIA	0.464758	2.64E-12
ENSGALT0000	cysteine-rich hydrophobic domain 1	CHIC1	0.939979	187
ENSGALT0000	cysteine-rich hydrophobic domain 2	CHIC2	0.968314	164
ENSGALT0000	chitinase domain containing 1	CHID1	0.967	233.5
ENSGALT0000	choline kinase alpha	CHKA	0.969845	1278
ENSGALT0000	cell adhesion molecule with homolc	CHL1	0.882999	637.5
ENSGALT0000	choroideremia-like (Rab escort prot	CHML	0.99072	1268.01
ENSGALT0000	chromatin modifying protein 1A	CHMP1A	0.901546	1356.01
ENSGALT0000	chromatin modifying protein 1B	CHMP1B	0.834965	1013.5
ENSGALT0000	charged multivesicular body protein	CHMP2A	0.616366	1031.5
ENSGALT0000	chromatin modifying protein 2B	CHMP2B	0.985339	1385
ENSGALT0000	chromatin modifying protein 4B	CHMP4B	0.8541	2041
ENSGALT0000	chromatin modifying protein 4C	CHMP4C	0.975289	271.5
ENSGALT0000	chromatin modifying protein 5	CHMP5	0.83078	1603
ENSGALT0000	chromatin modifying protein 6	CHMP6	0.878487	2364
ENSGALT0000	CHMP family, member 7	CHMP7	0.962744	3069.39
ENSGALT0000	chimerin (chimaerin) 1	CHN1	0.872787	1037
ENSGALT0000	chimerin (chimaerin) 2	CHN2	0.942037	237
ENSGALT0000	chondrolectin	CHODL	0.903643	300
ENSGALT0000	cysteine and histidine-rich domain	CHORDC1	0.951787	508.501
ENSGALT0000	calcium binding protein P22	CHP	0.939589	2008
ENSGALT0000	chondroitin polymerizing factor	CHPF	0.920591	790
ENSGALT0000	chondroitin polymerizing factor 2	CHPF2	0.971245	933.723
ENSGALT0000	choline phosphotransferase 1	CHPT1	0.974532	683.5
ENSGALT0000	chordin-like 1	CHRDL1	0.757911	3374
ENSGALT0000	chordin-like 2	CHRDL2	0.970378	21
ENSGALT0000	cholinergic receptor, muscarinic 2	CHRM2	0.73468	20
ENSGALT0000	cholinergic receptor, muscarinic 3	CHRM3	0.931316	139.5
ENSGALT0000	cholinergic receptor, muscarinic 4	CHRM4	0.832521	100
ENSGALT0000	cholinergic receptor, muscarinic 5	CHRM5	0.920025	2.5
ENSGALT0000	cholinergic receptor, nicotinic, alpha	CHRNA1	0.575798	158
ENSGALT0000	cholinergic receptor, nicotinic, alpha	CHRNA10	0.204574	91.8804
ENSGALT0000	cholinergic receptor, nicotinic, alpha	CHRNA3	0.71476	8
ENSGALT0000	cholinergic receptor, nicotinic, alpha	CHRNA4	0.501077	312
ENSGALT0000	cholinergic receptor, nicotinic, alpha	CHRNA5	0.989923	88

ENSGALT0000 cholinergic receptor, nicotinic, alpha	CHRNA6	0.988878	19
ENSGALT0000 cholinergic receptor, nicotinic, alpha	CHRNA7	0.96749	27.5
ENSGALT0000 cholinergic receptor, nicotinic, alpha	CHRNA9	0.337704	1
ENSGALT0000 cholinergic receptor, nicotinic, beta	CHRNB3	0.704414	78
ENSGALT0000 cholinergic receptor, nicotinic, beta	CHRNB4	0.394608	1.5
ENSGALT0000 cholinergic receptor, nicotinic, delta	CHRND	0.649519	2
ENSGALT0000 cholinergic receptor, nicotinic, gamm	CHRNG	0.353553	0
ENSGALT0000 carbohydrate (keratan sulfate Gal-6	CHST1	0.743191	174.5
ENSGALT0000 carbohydrate sulfotransferase 10	CHST10	0.968581	1028
ENSGALT0000 carbohydrate (chondroitin 4) sulfotr	CHST11	0.874592	109
ENSGALT0000 carbohydrate (chondroitin 4) sulfotr	CHST12	0.973151	357.5
ENSGALT0000 carbohydrate (N-acetylgalactosami	CHST15	0.723035	105.5
ENSGALT0000 carbohydrate (N-acetylglucosamine	CHST2	0.816527	1072
ENSGALT0000 carbohydrate (chondroitin 6) sulfotr	CHST3	0.82987	1035.5
ENSGALT0000 carbohydrate (N-acetylglucosamine	CHST4	0.590433	3.0823
ENSGALT0000 carbohydrate (N-acetylgalactosami	CHST8	0.975932	120
ENSGALT0000 carbohydrate (N-acetylgalactosami	CHST9	0.820973	250.08
ENSGALT0000 chondroitin sulfate synthase 1	CHSY1	0.989578	812
ENSGALT0000 CTF18, chromosome transmission	CHTF18	0.824805	2374.97
ENSGALT0000 CTF8, chromosome transmission fi	CHTF8	0.586262	603.5
ENSGALT0000 chromatin target of PRMT1	CHTOP	0.8563	5229.5
ENSGALT0000 conserved helix-loop-helix ubiquito	CHUK	0.90382	1165
ENSGALT0000 CHUNK-1 protein	CHUNK-1	0.945294	13.5
ENSGALT0000 cytosolic iron-sulfur protein assemb	CIAO1	0.350926	1262
ENSGALT0000 cytokine induced apoptosis inhibito	CIAPIN1	0.80433	4593
ENSGALT0000 calcium and integrin binding 1 (calr	CIB1	0.993266	2942.01
ENSGALT0000 calcium and integrin binding family	CIB2	0.774667	182.5
ENSGALT0000 calcium and integrin binding family	CIB3	0.970319	5
ENSGALT0000 cell death-inducing DFFA-like effec	CIDEA	0.914907	52
ENSGALT0000 class II, major histocompatibility co	CIITA	0.579967	1.5
ENSGALT0000 cartilage intermediate layer protein	CILP	0.824031	15
ENSGALT0000 cyclin-dependent kinase 2 interacti	CINP	0.971313	338
ENSGALT0000 CBF1 interacting corepressor	CIR1	0.883869	328
ENSGALT0000 cold inducible RNA binding protein	CIRBP	0.894521	22040.9
ENSGALT0000 cirrhosis, autosomal recessive 1A (	CIRH1A	0.806219	775.5
ENSGALT0000 CDGSH iron sulfur domain 1	CISD1	0.874645	1321
ENSGALT0000 CDGSH iron sulfur domain 2	CISD2	0.810049	1495.5
ENSGALT0000 Cytokine-inducible SH2-containing	CISH	0.466238	30.6299
ENSGALT0000 citron (rho-interacting, serine/threor	CIT	0.940089	1096
ENSGALT0000 Cbp/p300-interacting transactivator	CITED2	0.729086	433
ENSGALT0000 Cbp/p300-interacting transactivator	CITED4	0.421663	348
ENSGALT0000 CDKN1A interacting zinc finger pro	CIZ1	0.828675	1760.02
ENSGALT0000 cytoskeleton associated protein 2	CKAP2	0.904136	1807.5
ENSGALT0000 cytoskeleton associated protein 2-li	CKAP2L	0.937766	1073
ENSGALT0000 cytoskeleton-associated protein 4	CKAP4	0.922164	4079
ENSGALT0000 cytoskeleton associated protein 5	CKAP5	0.937874	6137
ENSGALT0000 creatine kinase, brain	CKB	0.52008	3970.51
ENSGALT0000 creatine kinase, mitochondrial 1A	CKMT1A	0.389131	92.5
ENSGALT0000 creatine kinase, mitochondrial 2 (sa	CKMT2	0.347342	27.5
ENSGALT0000 CDC28 protein kinase regulatory su	CKS2	0.873479	101.5
ENSGALT0000 liver ribonuclease A	CL2	0.649519	0
ENSGALT0000 cytoplasmic linker associated prote	CLASP1	0.893553	3541.35
ENSGALT0000 cytoplasmic linker associated prote	CLASP2	0.948051	2537.5
ENSGALT0000 chloride channel, calcium activated	CLCA2	0.78893	3300
ENSGALT0000 chloride channel CLIC-like 1	CLCC1	0.968686	753.47
ENSGALT0000 chloride channel 1, skeletal muscle	CLCN1	0.995294	69.5

ENSGALT0000 chloride channel 3	CLCN3	0.949655	1916	
ENSGALT0000 chloride channel 4	CLCN4	0.867913	377.5	
ENSGALT0000 chloride channel 5	CLCN5	0.977286	711.5	
ENSGALT0000 chloride channel 6	CLCN6	0.88467	600.5	
ENSGALT0000 chloride channel 7	CLCN7	0.985148	2586.5	
ENSGALT0000 chloride channel, voltage-sensitive	CLCNKB	0.937349	17	
ENSGALT0000 claudin 1	CLDN1	0.945593	35256.5	
ENSGALT0000 claudin 10	CLDN10	0.882675	18	
ENSGALT0000 claudin 11	CLDN11	0.714021	262	
ENSGALT0000 claudin 12	CLDN12	0.974043	323	
ENSGALT0000 claudin 14	CLDN14	0.464758	1	
ENSGALT0000 claudin 15	CLDN15	0.797634	2.5	
ENSGALT0000 claudin 16	CLDN16	0.72999	71.5	
ENSGALT0000 claudin 18	CLDN18	?	0	
ENSGALT0000 claudin 19	CLDN19	0.829867	106.5	
ENSGALT0000 claudin 2	CLDN2	?	0	
ENSGALT0000 claudin 20	CLDN20	0.806981	9	
ENSGALT0000 claudin 22	CLDN22	0.821187	1.5	
ENSGALT0000 claudin 23	CLDN23	0.818503	20.5	
ENSGALT0000 \N	CLDN3	0.609666	15049.3	
ENSGALT0000 claudin 5	CLDN5	0.876339	246.338	
ENSGALT0000 claudin 8	CLDN8	0.711283	835.5	
ENSGALT0000 claudin domain containing 1	CLDND1	0.906921	2761.5	
ENSGALT0000 C-type lectin domain family 16, mer	CLEC16A	0.979178	535.001	
ENSGALT0000 C-type lectin domain family 17, mer	CLEC17A	0.718404	4.5	
ENSGALT0000 C-type lectin domain family 3, mem	CLEC3A	0.464758	0.5	
ENSGALT0000 C-type lectin domain family 3, mem	CLEC3B	0.917074	32	
ENSGALT0000 calmegin	CLGN	0.987649	642.5	
ENSGALT0000 chloride intracellular channel 2	CLIC2	0.811837	162.5	
ENSGALT0000 chloride intracellular channel 3	CLIC3	0.847723	53	
ENSGALT0000 chloride intracellular channel 4	CLIC4	0.916296	1814	
ENSGALT0000 chloride intracellular channel 5	CLIC5	0.716497	0.5	
ENSGALT0000 chloride intracellular channel 6	CLIC6	0.788162	639	
ENSGALT0000 clathrin interactor 1	CLINT1	0.984214	2729.5	
ENSGALT0000 CAP-GLY domain containing linker	CLIP1	0.918355	1855.99	
ENSGALT0000 CAP-GLY domain containing linker	CLIP2	0.826592	2073.5	
ENSGALT0000 CAP-GLY domain containing linker	CLIP4	0.997591	210	
ENSGALT0000 CDC-like kinase 1	CLK1	0.99702	738	
ENSGALT0000 CDC-like kinase 2	CLK2	0.908317	1269.49	
ENSGALT0000 CDC-like kinase 3	CLK3	0.933265	811.499	
ENSGALT0000 CDC-like kinase 4	CLK4	0.963063	1152.5	
ENSGALT0000 calmin (calponin-like, transmembra	CLMN	0.865906	143	
ENSGALT0000 CXADR-like membrane protein	CLMP	0.884681	563	
ENSGALT0000 ceroid-lipofuscinosis, neuronal 5	CLN5	0.917063	117.5	
ENSGALT0000 ceroid-lipofuscinosis, neuronal 6, la	CLN6	0.883081	1905.01	
ENSGALT0000 CLN8 protein	CLN8	0.928894	708	
ENSGALT0000 chloride channel, nucleotide-sensiti	CLNS1A	0.741325	2091	
ENSGALT0000 clock homolog (mouse)	CLOCK	0.998266	273	
ENSGALT0000 CLP1, cleavage and polyadenylatic	CLP1	0.707259	1391.5	
ENSGALT0000 colipase, pancreatic	CLPS	0.0441942	0	
ENSGALT0000 CLPTM1-like	CLPTM1L	0.976307	2436	
ENSGALT0000 ClpX caseinolytic peptidase X hom	CLPX	0.9609	2604.52	
ENSGALT0000 clarin 1	CLRN1	0.956882	313	
ENSGALT0000 clarin 3	CLRN3	0.464758	0	
ENSGALT0000 claspin	CLSPN	0.915539	320.5	
ENSGALT0000 calsyntenin 1	CLSTN1	0.968482	11947.9	

ENSGALT0000	calsyntenin 2	CLSTN2	0.897475	1091
ENSGALT0000	calsyntenin 3	CLSTN3	0.937033	4341
ENSGALT0000	clathrin, light chain A	CLTA	0.363434	3448
ENSGALT0000	clathrin, light chain B	CLTB	0.725132	2455.52
ENSGALT0000	clathrin, heavy chain (Hc)	CLTC	0.951379	14045.2
ENSGALT0000	clathrin, heavy chain-like 1	CLTCL1	0.955946	6494
ENSGALT0000	clusterin	CLU	0.902254	2114.53
ENSGALT0000	clusterin associated protein 1	CLUAP1	0.926638	886.5
ENSGALT0000	clusterin-like 1 (retinal)	CLUL1	0.699372	3.5
ENSGALT0000	clavesin 1	CLVS1	0.371458	11.5
ENSGALT0000	clavesin 2	CLVS2	0.741267	126.5
ENSGALT0000	citrate lyase beta like	CLYBL	0.945559	109.5
ENSGALT0000	cytidine monophosphate N-acetyln(	CMAS	0.869924	272
ENSGALT0000	carboxymethylenebutenolidase hor	CMBL	0.189571	3
ENSGALT0000	COX assembly mitochondrial prote	CMC1	0.90559	151.5
ENSGALT0000	COX assembly mitochondrial prote	CMC2	0.989314	311.5
ENSGALT0000	c-Maf inducing protein	CMIP	0.789741	1696.5
ENSGALT0000	cytidine monophosphate (UMP-CM	CMPK1	0.913299	2124.5
ENSGALT0000	cytidine monophosphate (UMP-CM	CMPK2	0.9642	27.5
ENSGALT0000	CKLF-like MARVEL transmembran	CMTM3	0.861517	877.498
ENSGALT0000	CKLF-like MARVEL transmembran	CMTM4	0.9591	109
ENSGALT0000	CKLF-like MARVEL transmembran	CMTM6	0.972425	354.5
ENSGALT0000	chemokine-like factor superfamily 7	CMTM7	0.820381	171.5
ENSGALT0000	CKLF-like MARVEL transmembran	CMTM8	0.501553	235.5
ENSGALT0000	cardiomyopathy associated 5	CMYA5	0.740073	1
ENSGALT0000	UPF0694 transmembrane protein (	CN109_CHICK	0.97962	132
ENSGALT0000	CCHC-type zinc finger, nucleic acid	CNBP	0.805512	11965.2
ENSGALT0000	carnosine dipeptidase 1 (metallope	CNDP1	0.884168	49.5
ENSGALT0000	CNDP dipeptidase 2 (metallopeptid	CNDP2	0.895847	5242.85
ENSGALT0000	cyclic nucleotide gated channel alp	CNGA1	1	0.5
ENSGALT0000	cyclic nucleotide gated channel alp	CNGA2	0.807809	125.5
ENSGALT0000	cyclic nucleotide gated channel alp	CNGA3	0.839648	122.5
ENSGALT0000	cyclic nucleotide gated channel alp	CNGA4	0.949895	122.5
ENSGALT0000	cyclic nucleotide gated channel bet	CNGB1	0.819058	37.5
ENSGALT0000	cyclic nucleotide gated channel bet	CNGB3	?	0
ENSGALT0000	cornichon homolog (Drosophila)	CNIH	0.834622	2434.5
ENSGALT0000	cornichon homolog 3 (Drosophila)	CNIH3	0.80321	1.5
ENSGALT0000	cornichon homolog 4 (Drosophila)	CNIH4	0.793963	513
ENSGALT0000	connector enhancer of kinase supp	CNKSR2	0.878758	377
ENSGALT0000	calponin 3, acidic	CNN3	0.830746	6689.37
ENSGALT0000	cyclin M1	CNNM1	0.882723	86.5
ENSGALT0000	cyclin M2	CNNM2	0.965739	1142.73
ENSGALT0000	cappuccino homolog (mouse)	CNO	0.750144	712
ENSGALT0000	CCR4-NOT transcription complex,	CNOT1	0.975686	12900.3
ENSGALT0000	CCR4-NOT transcription complex,	CNOT10	0.956481	1321.47
ENSGALT0000	CCR4-NOT transcription complex,	CNOT2	0.994076	1809
ENSGALT0000	CCR4-NOT transcription complex,	CNOT4	0.957802	888.505
ENSGALT0000	CCR4-NOT transcription complex,	CNOT6	0.984184	2226.5
ENSGALT0000	CCR4-NOT transcription complex,	CNOT6L	0.973008	402.501
ENSGALT0000	CCR4-NOT transcription complex,	CNOT7	0.97739	2848
ENSGALT0000	CCR4-NOT transcription complex,	CNOT8	0.941717	1927
ENSGALT0000	cyclin Pas1/PHO80 domain contair	CNPPD1	0.900949	970.9
ENSGALT0000	cannabinoid receptor 1 (brain)	CNR1	0.726028	698.505
ENSGALT0000	cannabinoid receptor 2 (macrophag	CNR2	0.943934	1
ENSGALT0000	cannabinoid receptor interacting pr	CNRIP1	0.378748	114
ENSGALT0000	consortin, connexin sorting protein	CNST	0.94206	205

ENSGALT0000	ciliary neurotrophic factor	CNTF	0.842464	21.5
ENSGALT0000	centlein, centrosomal protein	CNTLN	0.931865	67.5
ENSGALT0000	contactin 1	CNTN1	0.841049	943.004
ENSGALT0000	contactin 2 (axonal)	CNTN2	0.663885	8896.23
ENSGALT0000	contactin 3 (plasmacytoma associa	CNTN3	0.981285	317
ENSGALT0000	contactin 4	CNTN4	0.993531	4427.49
ENSGALT0000	contactin 5	CNTN5	0.709619	405.498
ENSGALT0000	contactin 6	CNTN6	0.91547	24.5
ENSGALT0000	contactin associated protein 1	CNTNAP1	0.866368	231
ENSGALT0000	contactin associated protein-like 2	CNTNAP2	0.873506	20
ENSGALT0000	contactin associated protein-like 5	CNTNAP5	0.843682	398.5
ENSGALT0000	cytochrome C oxidase assembly fa	COA5	0.909719	311
ENSGALT0000	cordon-bleu homolog (mouse)	COBL	0.969612	1428.5
ENSGALT0000	COBL-like 1	COBLL1	0.99559	422
ENSGALT0000	cofactor of BRCA1	COBRA1	0.937358	2246.58
ENSGALT0000	coagulation factor C homolog, coch	COCH	0.840257	257.5
ENSGALT0000	component of oligomeric golgi com	COG1	0.949594	2336.07
ENSGALT0000	component of oligomeric golgi com	COG2	0.962476	747.5
ENSGALT0000	component of oligomeric golgi com	COG3	0.973658	616
ENSGALT0000	component of oligomeric golgi com	COG4	0.925348	3042.5
ENSGALT0000	component of oligomeric golgi com	COG5	0.936273	748.5
ENSGALT0000	component of oligomeric golgi com	COG6	0.968768	1029.5
ENSGALT0000	component of oligomeric golgi com	COG7	0.96183	2764.13
ENSGALT0000	component of oligomeric golgi com	COG8	0.887653	1437.5
ENSGALT0000	coilin	COIL	0.933693	1067
ENSGALT0000	collagen, type X, alpha 1	COL10A1	0.657817	2
ENSGALT0000	collagen, type XI, alpha 1	COL11A1	0.911494	10341.8
ENSGALT0000	collagen, type XII, alpha 1	COL12A1	0.746984	1442.99
ENSGALT0000	collagen, type XIII, alpha 1	COL13A1	0.950465	116
ENSGALT0000	collagen, type XIV, alpha 1	COL14A1	0.664272	978.004
ENSGALT0000	collagen, type XV, alpha 1	COL15A1	0.603518	237.5
ENSGALT0000	collagen, type XVII, alpha 1	COL17A1	0.955491	199
ENSGALT0000	collagen, type XVIII, alpha 1	COL18A1	0.991064	42356.9
ENSGALT0000	collagen, type XIX, alpha 1	COL19A1	0.79295	196.5
ENSGALT0000	collagen, type I, alpha 1	COL1A1	0.948871	1120.57
ENSGALT0000	collagen, type I, alpha 2	COL1A2	0.940032	13606.5
ENSGALT0000	collagen, type XX, alpha 1	COL20A1	0.56163	10
ENSGALT0000	collagen, type XXI, alpha 1	COL21A1	0.987916	92
ENSGALT0000	collagen, type XXII, alpha 1	COL22A1	0.855938	46.5
ENSGALT0000	collagen, type XXIII, alpha 1	COL23A1	0.955725	140
ENSGALT0000	collagen, type XXIV, alpha 1	COL24A1	0.870783	1999.5
ENSGALT0000	collagen, type XXV, alpha 1	COL25A1	0.954112	114.5
ENSGALT0000	collagen, type XXVII, alpha 1	COL27A1	0.997433	1887
ENSGALT0000	collagen, type XXVIII, alpha 1	COL28A1	0.71377	5
ENSGALT0000	alpha 1 type IIA collagen precursor	COL2A1	0.990953	49389.6
ENSGALT0000	collagen, type III, alpha 1	COL3A1	0.961482	536.536
ENSGALT0000	collagen, type IV, alpha 1	COL4A1	0.876031	6143.03
ENSGALT0000	collagen, type IV, alpha 2	COL4A2	0.894714	5326.5
ENSGALT0000	collagen, type IV, alpha 3 (Goodpa:	COL4A3	0.879219	38
ENSGALT0000	collagen, type IV, alpha 3 (Goodpa:	COL4A3BP	0.983765	449.5
ENSGALT0000	collagen, type IV, alpha 4	COL4A4	0.954588	56.5
ENSGALT0000	collagen, type IV, alpha 5	COL4A5	0.981202	8908.31
ENSGALT0000	collagen, type IV, alpha 6	COL4A6	0.965957	17161.5
ENSGALT0000	collagen, type V, alpha 1	COL5A1	0.98336	9177.32
ENSGALT0000	collagen, type V, alpha 2	COL5A2	0.824733	9957.3
ENSGALT0000	collagen, type VI, alpha 1	COL6A1	0.977271	627.502

ENSGALT0000 collagen, type VI, alpha 2	COL6A2	0.958867	191.5
ENSGALT0000 collagen, type VI, alpha 3	COL6A3	0.921496	219.5
ENSGALT0000 collagen, type VI, alpha 6	COL6A6	0.847012	48
ENSGALT0000 collagen, type VII, alpha 1	COL7A1	0.950361	823.5
ENSGALT0000 collagen, type VIII, alpha 1	COL8A1	0.983346	141.5
ENSGALT0000 collagen, type VIII, alpha 2	COL8A2	0.986399	1835.5
ENSGALT0000 collagen, type IX, alpha 1	COL9A1	0.958738	10179.8
ENSGALT0000 collagen, type IX, alpha 3	COL9A3	0.85406	2825
ENSGALT0000 collectin sub-family member 10 (C-	COLEC10	0.713325	4
ENSGALT0000 collectin sub-family member 11	COLEC11	0.888662	4
ENSGALT0000 collectin sub-family member 12	COLEC12	0.99656	2224.05
ENSGALT0000 collagen-like tail subunit (single stra	COLQ	0.429811	1
ENSGALT0000 copper metabolism (Murr1) domain	COMMD1	0.765397	1165.5
ENSGALT0000 COMM domain containing 10	COMMD10	0.784365	488
ENSGALT0000 COMM domain containing 2	COMMD2	0.913927	1164.5
ENSGALT0000 COMM domain containing 3	COMMD3	0.2797	953.5
ENSGALT0000 COMM domain containing 4	COMMD4	0.37788	2575
ENSGALT0000 COMM domain containing 5	COMMD5	0.848966	2042.5
ENSGALT0000 COMM domain containing 6	COMMD6	0.961447	606
ENSGALT0000 COMM domain containing 7	COMMD7	0.70968	1012
ENSGALT0000 COMM domain containing 8	COMMD8	0.857367	670
ENSGALT0000 COMM domain containing 9	COMMD9	0.715289	465.335
ENSGALT0000 cartilage oligomeric matrix protein	COMP	0.985557	67.5
ENSGALT0000 catechol-O-methyltransferase	COMT	0.904191	2460.5
ENSGALT0000 catechol-O-methyltransferase doma	COMTD1	0.805795	59.5
ENSGALT0000 coatomer protein complex, subunit	COPA	0.94978	11949.4
ENSGALT0000 coatomer protein complex, subunit	COPB1	0.956943	5092
ENSGALT0000 coatomer protein complex, subunit	COPB2	0.946483	5238.5
ENSGALT0000 coatomer protein complex, subunit	COPE	0.803458	5558
ENSGALT0000 coatomer protein complex, subunit	COPG	0.908141	9040
ENSGALT0000 coatomer protein complex, subunit	COPG2	0.898401	4011.5
ENSGALT0000 opsin 5-like 2	COPN5L2	0.636572	1
ENSGALT0000 COP9 constitutive photomorphoge	COPS2	0.951283	1113.85
ENSGALT0000 COP9 constitutive photomorphoge	COPS3	0.954455	1415
ENSGALT0000 COP9 constitutive photomorphoge	COPS4	0.902237	2411.5
ENSGALT0000 COP9 constitutive photomorphoge	COPS5	0.428198	1934
ENSGALT0000 COP9 constitutive photomorphoge	COPS7A	0.861032	2624
ENSGALT0000 COP9 constitutive photomorphoge	COPS7B	0.919157	714.5
ENSGALT0000 COP9 constitutive photomorphoge	COPS8	0.828681	874.5
ENSGALT0000 coenzyme Q10 homolog A (S. cere	COQ10A	0.905544	257.5
ENSGALT0000 coenzyme Q10 homolog B (S. cere	COQ10B	0.91306	97.5358
ENSGALT0000 coenzyme Q2 homolog, prenyltrans	COQ2	0.846202	220
ENSGALT0000 coenzyme Q3 homolog, methyltran	COQ3	0.843096	470.5
ENSGALT0000 coenzyme Q4 homolog (S. cerevisi	COQ4	0.74574	1434
ENSGALT0000 coenzyme Q5 homolog, methyltran	COQ5	0.925803	672.5
ENSGALT0000 coenzyme Q6 homolog, monooxyg	COQ6	0.824579	952
ENSGALT0000 coenzyme Q7 homolog, ubiquinone	COQ7	0.815029	539.5
ENSGALT0000 coenzyme Q9 homolog (S. cerevisi	COQ9	0.701462	1491
ENSGALT0000 olfactory receptor 3	COR1	?	0
ENSGALT0000 olfactory receptor 3	cor3	?	0
ENSGALT0000 olfactory receptor 4	COR4	0.464758	0.97863
ENSGALT0000 olfactory receptor 4	cor4	?	0
ENSGALT0000 chick olfactory receptor 6	cor6	0.685935	0.5
ENSGALT0000 chick olfactory receptor 7a	cor7a	0.464758	2.74E-16
ENSGALT0000 chick olfactory receptor 8	cor8	0.89091	13.5
ENSGALT0000 coronin, actin binding protein, 1C	CORO1C	0.550513	3038.52

ENSGALT0000 coronin, actin binding protein, 2A	CORO2A	0.833931	356
ENSGALT0000 coronin, actin binding protein, 2B	CORO2B	0.603412	1610
ENSGALT0000 coronin 7	CORO7	0.681486	1636.6
ENSGALT0000 coactosin-like 1 (Dictyostelium)	COTL1	0.374731	4562.5
ENSGALT0000 cytochrome c oxidase subunit I	COX1	0.847904	351646
ENSGALT0000 COX10 homolog, cytochrome c oxi	COX10	0.905519	862.5
ENSGALT0000 COX11 cytochrome c oxidase asse	COX11	0.769787	498
ENSGALT0000 COX15 homolog, cytochrome c oxi	COX15	0.81024	928.5
ENSGALT0000 COX17 cytochrome c oxidase asse	COX17	0.711579	309
ENSGALT0000 COX18 cytochrome c oxidase asse	COX18	0.500768	224.5
ENSGALT0000 COX19 cytochrome c oxidase asse	COX19	0.705565	201.5
ENSGALT0000 Cytochrome c oxidase subunit 2	COX2	0.921938	105258
ENSGALT0000 Cytochrome c oxidase subunit 3	COX3	0.742908	205720
ENSGALT0000 cytochrome c oxidase subunit IV is	COX4I1	0.702192	8053.47
ENSGALT0000 COX4 neighbor	COX4NB	0.936841	865
ENSGALT0000 cytochrome c oxidase subunit Va	COX5A	0.768016	1646.5
ENSGALT0000 cytochrome c oxidase subunit VIa p	COX6A1	0.0581459	5519
ENSGALT0000 cytochrome c oxidase subunit VIc	COX6C	0.539326	2309.5
ENSGALT0000 cytochrome c oxidase subunit VIIa	COX7A2	0.709132	1661
ENSGALT0000 cytochrome c oxidase subunit VIIa	COX7A2L	0.450166	683.5
ENSGALT0000 cytochrome c oxidase subunit VIIc	COX7C	0.684987	1676
ENSGALT0000 ceruloplasmin (ferroxidase)	CP	0.994565	481
ENSGALT0000 carboxypeptidase A1 (pancreatic)	CPA1	0.207639	0
ENSGALT0000 carboxypeptidase A6	CPA6	0.52902	3
ENSGALT0000 C3 and PZP-like, alpha-2-macroglo	CPAMD8	0.890673	2289
ENSGALT0000 carboxypeptidase B1 (tissue)	CPB1	0.272808	7
ENSGALT0000 carboxypeptidase B2 (plasma)	CPB2	1	0.5
ENSGALT0000 carboxypeptidase D	CPD	0.970395	4994
ENSGALT0000 carboxypeptidase E	CPE	0.864683	1507
ENSGALT0000 cytoplasmic polyadenylation eleme	CPEB1	0.983076	118.5
ENSGALT0000 cytoplasmic polyadenylation eleme	CPEB2	0.99831	962.5
ENSGALT0000 cytoplasmic polyadenylation eleme	CPEB3	0.934246	208
ENSGALT0000 cytoplasmic polyadenylation eleme	CPEB4	0.845252	315
ENSGALT0000 complexin 2	CPLX2	0.739641	11.5
ENSGALT0000 complexin 4	CPLX4	?	0
ENSGALT0000 carboxypeptidase M	CPM	0.891596	879
ENSGALT0000 carboxypeptidase N, polypeptide 1	CPN1	0.847042	785.5
ENSGALT0000 copine I	CPNE1	0.971555	1583.5
ENSGALT0000 copine II	CPNE2	0.986339	508.498
ENSGALT0000 copine III	CPNE3	0.958937	322
ENSGALT0000 copine IV	CPNE4	0.72564	378.002
ENSGALT0000 copine VII	CPNE7	0.696741	15.5
ENSGALT0000 copine VIII	CPNE8	0.731909	14.5
ENSGALT0000 carboxypeptidase O	CPO	0.562993	0
ENSGALT0000 coproporphyrinogen oxidase	CPOX	0.787597	1166.5
ENSGALT0000 calcineurin-like phosphoesterase d	CPPED1	0.997672	866.5
ENSGALT0000 carbamoyl-phosphate synthase 1, r	CPS1	0.968954	65.5
ENSGALT0000 cleavage and polyadenylation spec	CPSF2	0.95816	1423
ENSGALT0000 cleavage and polyadenylation spec	CPSF3	0.865936	1948
ENSGALT0000 cleavage and polyadenylation spec	CPSF3L	0.928907	1743.5
ENSGALT0000 cleavage and polyadenylation spec	CPSF4	0.923508	981
ENSGALT0000 cleavage and polyadenylation spec	CPSF4L	0.938439	15.5
ENSGALT0000 cleavage and polyadenylation spec	CPSF6	0.959222	3468.5
ENSGALT0000 cleavage and polyadenylation spec	CPSF7	0.894091	895.5
ENSGALT0000 carnitine palmitoyltransferase 1A (li	CPT1A	0.95772	1044.01
ENSGALT0000 carnitine palmitoyltransferase 2	CPT2	0.946628	1050

ENSGALT0000	carboxypeptidase X (M14 family), r	CPXM2	0.797536	31.5
ENSGALT0000	carboxypeptidase Z	CPZ	0.5211	158.5
ENSGALT0000	complement component (3b/4b) re	CR1L	0.972781	1373.5
ENSGALT0000	complement component (3d/Epstei	CR2	0.729	1
ENSGALT0000	cellular retinoic acid binding protein	CRABP1	0.306567	279.501
ENSGALT0000	CASP2 and RIPK1 domain contain	CRADD	0.995832	699.5
ENSGALT0000	Crm, cramped-like (Drosophila)	CRAMP1L	0.991373	958.5
ENSGALT0000	carnitine O-acetyltransferase	CRAT	0.966445	431.5
ENSGALT0000	crumbs homolog 1 (Drosophila)	CRB1	0.521246	13
ENSGALT0000	crumbs homolog 2 (Drosophila)	CRB2	0.996881	207
ENSGALT0000	cereblon	CRBN	0.970325	504
ENSGALT0000	CGRP receptor component	CRCP	0.829297	1090.5
ENSGALT0000	photoreceptor outer segment meml	CRDS2	0.943384	12.5
ENSGALT0000	cAMP responsive element binding	CREB1	0.96086	902.5
ENSGALT0000	cAMP responsive element binding	CREB3	0.926542	1722.5
ENSGALT0000	cAMP responsive element binding	CREB3L1	0.995902	263
ENSGALT0000	cAMP responsive element binding	CREB3L3	0.916142	30.5
ENSGALT0000	cAMP responsive element binding	CREB5	0.723638	79
ENSGALT0000	CREB binding protein	CREBBP	0.982574	7151.58
ENSGALT0000	cAMP responsive element binding	CREBL2	0.858572	762.5
ENSGALT0000	cellular repressor of E1A-stimulated	CREG1	0.787291	775.495
ENSGALT0000	cellular repressor of E1A-stimulated	CREG2	0.878934	278
ENSGALT0000	cysteine-rich with EGF-like domain	CRELD2	0.920014	1170
ENSGALT0000	cAMP responsive element modulat	CREM	0.922547	81.5
ENSGALT0000	Corticotropin releasing hormoneUn	CRH	0.649519	0.5
ENSGALT0000	corticotropin releasing hormone bir	CRHBP	0.351647	16.5
ENSGALT0000	corticotropin releasing hormone rec	CRHR1	0.691869	39
ENSGALT0000	corticotropin releasing hormone rec	CRHR2	0.774397	32.5
ENSGALT0000	cysteine rich transmembrane BMP	CRIM1	0.915477	762.5
ENSGALT0000	cysteine-rich protein 2	CRIP2	0.469821	786
ENSGALT0000	cysteine-rich PDZ-binding protein	CRIPT	0.912876	1806
ENSGALT0000	cysteine-rich secretory protein LCC	CRISPLD1	0.985153	508.5
ENSGALT0000	cysteine-rich secretory protein LCC	CRISPLD2	0.998945	198.5
ENSGALT0000	v-crk sarcoma virus CT10 oncogen	CRK	0.947973	1657.5
ENSGALT0000	v-crk sarcoma virus CT10 oncogen	CRKL	0.950895	1133.5
ENSGALT0000	cytokine receptor-like factor 2	CRLF2	?	0
ENSGALT0000	cytokine receptor-like factor 3	CRLF3	0.963204	2473
ENSGALT0000	cardiolipin synthase 1	CRLS1	0.96501	730.5
ENSGALT0000	collapsin response mediator protein	CRMP1	0.65333	4185.47
ENSGALT0000	crooked neck pre-mRNA splicing fa	CRNKL1	0.98283	1516.5
ENSGALT0000	carnitine O-octanoyltransferase	CROT	0.984805	3018
ENSGALT0000	cartilage acidic protein 1	CRTAC1	0.675142	702
ENSGALT0000	cytotoxic and regulatory T cell mole	CRTAM	0.828826	1
ENSGALT0000	cartilage associated protein	CRTAP	0.935207	1216.49
ENSGALT0000	CREB regulated transcription coact	CRTC1	0.922695	1053.5
ENSGALT0000	cryptochrome 1 (photolyase-like)	CRY1	0.978202	1751.98
ENSGALT0000	cryptochrome 2 (photolyase-like)	CRY2	0.985279	2195.47
ENSGALT0000	crystallin, alpha A	CRYAA	0.966482	2
ENSGALT0000	crystallin, alpha B	CRYAB	0.839303	158
ENSGALT0000	crystallin, beta A1	CRYBA1	0.727853	102
ENSGALT0000	crystallin, beta A2	CRYBA2	0.235446	16
ENSGALT0000	crystallin, beta A4	CRYBA4	0.889087	83.5001
ENSGALT0000	crystallin, beta B1	CRYBB1	0.649745	373
ENSGALT0000	crystallin, beta B3	CRYBB3	?	0
ENSGALT0000	crystallin, gamma N	CRYGN	0.779673	7
ENSGALT0000	Gamma S-crystallinUncharacterize	CRYGS	0.853815	2

ENSGALT0000 crystallin, lambda 1	CRYL1	0.989895	534.502
ENSGALT0000 crystallin, mu	CRYM	0.866711	1867.5
ENSGALT0000 crystallin, zeta (quinone reductase)	CRYZ	0.965019	950.5
ENSGALT0000 crystallin, zeta (quinone reductase)	CRYZL1	0.921905	493.5
ENSGALT0000 cold shock domain protein A	CSDA	0.671173	4415.92
ENSGALT0000 cold shock domain containing C2, F	CSDC2	0.598299	714.5
ENSGALT0000 cold shock domain containing E1, F	CSDE1	0.974814	22375.4
ENSGALT0000 CSE1 chromosome segregation 1-l	CSE1L	0.936065	3878
ENSGALT0000 colony stimulating factor 1 receptor	CSF1R	0.775371	194
ENSGALT0000 colony stimulating factor 2 (granulo	CSF2	?	0
ENSGALT0000 colony stimulating factor 2 receptor	CSF2RB	0.98481	3
ENSGALT0000 hypothetical protein LOC419620	CSF3R	0.482887	17
ENSGALT0000 chondroitin sulfate N-acetylgalactos	CSGALNACT1	0.836195	46
ENSGALT0000 chondroitin sulfate N-acetylgalactos	CSGALNACT2	0.976683	630.5
ENSGALT0000 c-src tyrosine kinase	CSK	0.841412	2908
ENSGALT0000 CUB and Sushi multiple domains 1	CSMD1	0.93334	351.501
ENSGALT0000 CUB and Sushi multiple domains 2	CSMD2	0.899661	535.496
ENSGALT0000 CUB and Sushi multiple domains 3	CSMD3	0.958911	157
ENSGALT0000 casein kinase 1, alpha 1	CSNK1A1	0.963649	5077.08
ENSGALT0000 casein kinase 1, delta	CSNK1D	0.966231	2584.47
ENSGALT0000 casein kinase 1, epsilon	CSNK1E	0.822994	1878
ENSGALT0000 casein kinase 1, gamma 1	CSNK1G1	0.813472	2382
ENSGALT0000 casein kinase 2, alpha 1 polypeptid	CSNK2A1	0.907634	3087.5
ENSGALT0000 casein kinase 2, alpha prime polyp	CSNK2A2	0.921056	2709.68
ENSGALT0000 chondroitin sulfate proteoglycan 4	CSPG4	0.996799	759.032
ENSGALT0000 centrosome and spindle pole assoc	CSPP1	0.970775	285.5
ENSGALT0000 cysteine-serine-rich nuclear protein	CSRNP1	0.908725	415
ENSGALT0000 cysteine-serine-rich nuclear protein	CSRNP3	0.97995	812.5
ENSGALT0000 cysteine and glycine-rich protein 1	CSRP1	0.997079	583
ENSGALT0000 cysteine and glycine-rich protein 2	CSRP2	0.101405	4430
ENSGALT0000 CSRP2 binding protein	CSRP2BP	0.95933	1401.5
ENSGALT0000 cysteine and glycine-rich protein 3	CSRP3	0.600865	7.5
ENSGALT0000 cystatin C	CST3	0.550213	4991.5
ENSGALT0000 cystatin F (leukocystatin)	CST7	0.853815	0.5
ENSGALT0000 cystatin A (stefin A)	CSTA	0.509252	9
ENSGALT0000 cystatin B (stefin B)	CSTB	0.787939	757.5
ENSGALT0000 cleavage stimulation factor, 3' pre-F	CSTF1	0.969441	1251
ENSGALT0000 cleavage stimulation factor, 3' pre-F	CSTF2	0.866277	2245
ENSGALT0000 cleavage stimulation factor, 3' pre-F	CSTF3	0.967301	1798
ENSGALT0000 CTAGE family, member 5	CTAGE5	0.976456	723.5
ENSGALT0000 C-terminal binding protein 1	CTBP1	0.918779	7005.05
ENSGALT0000 C-terminal binding protein 2	CTBP2	0.927744	4800.73
ENSGALT0000 chitobiase, di-N-acetyl-	CTBS	0.992	566
ENSGALT0000 CTS telomere maintenance comple	CTC1	0.977385	160.5
ENSGALT0000 CCCTC-binding factor (zinc finger	CTCF	0.951556	3545.96
ENSGALT0000 CTD (carboxy-terminal domain, RN	CTDP1	0.996019	916.5
ENSGALT0000 CTD (carboxy-terminal domain, RN	CTDSPL	0.999596	1053
ENSGALT0000 CTD (carboxy-terminal domain, RN	CTDSPL2	0.992959	1610.5
ENSGALT0000 connective tissue growth factor	CTGF	0.786667	1116
ENSGALT0000 cystathionase (cystathionine gamm	CTH	0.768361	3350.5
ENSGALT0000 collagen triple helix repeat containi	CTHRC1	0.654019	1375.5
ENSGALT0000 CBP80/20-dependent translation in	CTIF	0.846095	301.499
ENSGALT0000 cytotoxic T-lymphocyte-associated	CTLA4	0.937481	51
ENSGALT0000 catenin (cadherin-associated protei	CTNNA1	0.95119	11818.5
ENSGALT0000 catenin (cadherin-associated protei	CTNNA2	0.817608	6138
ENSGALT0000 catenin (cadherin-associated protei	CTNNA3	0.570192	10.5

ENSGALT0000	catenin (cadherin-associated protei	CTNNAL1	0.981654	1394
ENSGALT0000	catenin (cadherin-associated protei	CTNNB1	0.996454	53763.3
ENSGALT0000	catenin, beta interacting protein 1	CTNNBIP1	0.96382	1006.5
ENSGALT0000	catenin, beta like 1	CTNNBL1	0.848731	1887
ENSGALT0000	catenin (cadherin-associated protei	CTNND1	0.98334	8387.99
ENSGALT0000	catenin (cadherin-associated protei	CTNND2	0.854248	1969.94
ENSGALT0000	cystinosin, lysosomal cystine transp	CTNS	0.930487	423.5
ENSGALT0000	CTP synthase	CTPS	0.716727	1922.5
ENSGALT0000	CTP synthase II	CTPS2	0.975486	577.503
ENSGALT0000	Ctr9, Paf1/RNA polymerase II comp	CTR9	0.977805	2278
ENSGALT0000	chymotrypsin C (caldecrin)	CTRC	0.980328	2
ENSGALT0000	chymotrypsin-like	CTRL	0.927729	1
ENSGALT0000	cathepsin A	CTSA	0.858894	3462
ENSGALT0000	cathepsin B	CTSB	0.940001	8680.22
ENSGALT0000	cathepsin C	CTSC	0.901787	2379
ENSGALT0000	cathepsin D	CTSD	0.931251	3768
ENSGALT0000	cathepsin E	CTSE	0.853815	1
ENSGALT0000	cathepsin H	CTSH	0.955289	1644
ENSGALT0000	cathepsin L2	CTSL2	0.863259	4330.97
ENSGALT0000	cathepsin O	CTSO	0.993101	750
ENSGALT0000	cathepsin S	CTSS	0.539658	122
ENSGALT0000	cathepsin Z	CTSZ	0.792839	1645
ENSGALT0000	cortactin	CTTN	0.943716	2606.53
ENSGALT0000	cortactin binding protein 2	CTTNBP2	0.932961	868.5
ENSGALT0000	CTTNBP2 N-terminal like	CTTNBP2NL	0.967575	1173
ENSGALT0000	cytosolic thiouridylase subunit 2 ho	CTU2	0.695946	605
ENSGALT0000	cortexin 1	CTXN1	0.811334	24
ENSGALT0000	cortexin 3	CTXN3	0.464758	0
ENSGALT0000	cubilin (intrinsic factor-cobalamin re	CUBN	0.998057	92
ENSGALT0000	CUE domain containing 1	CUEDC1	0.9879	972.5
ENSGALT0000	CUE domain containing 2	CUEDC2	0.882387	559
ENSGALT0000	cullin 1	CUL1	0.980595	1882
ENSGALT0000	cullin 2	CUL2	0.954393	1197
ENSGALT0000	cullin 3	CUL3	0.947293	2422
ENSGALT0000	cullin 4B	CUL4B	0.964042	1820
ENSGALT0000	cullin 5	CUL5	0.974082	842.5
ENSGALT0000	cullin 9	CUL9	0.952593	2454.55
ENSGALT0000	cutA divalent cation tolerance homo	CUTA	0.862085	141.5
ENSGALT0000	cutC copper transporter homolog (E	CUTC	0.838218	1101
ENSGALT0000	cut-like homeobox 2	CUX2	0.893692	3238.5
ENSGALT0000	CUB and zona pellucida-like domai	CUZD1	0.464758	0
ENSGALT0000	CWC15 spliceosome-associated pr	CWC15	0.815064	1760.5
ENSGALT0000	CWC22 spliceosome-associated pr	CWC22	0.982673	1148.5
ENSGALT0000	CWC25 spliceosome-associated pr	CWC25	0.890323	532
ENSGALT0000	CWC27 spliceosome-associated pr	CWC27	0.875172	360.5
ENSGALT0000	CWF19-like 1, cell cycle control (S.	CWF19L1	0.816616	1071.49
ENSGALT0000	CWF19-like 2, cell cycle control (S.	CWF19L2	0.954317	440.5
ENSGALT0000	cell wall biogenesis 43 C-terminal l	CWH43	0.790807	70
ENSGALT0000	chemokine (C-X3-C motif) ligand 1	CX3CL1	0.880639	14.5
ENSGALT0000	coxsackie virus and adenovirus rec	CXADR	0.915823	1304.5
ENSGALT0000	chemokine (C-X-C motif) ligand 12	CXCL12	0.996301	693.494
ENSGALT0000	chemokine	CXCL13L2	0.480067	11
ENSGALT0000	chemokine (C-X-C motif) ligand 14	CXCL14	0.450135	990.999
ENSGALT0000	chemokine (C-X-C motif) receptor 4	CXCR4	0.611253	684.5
ENSGALT0000	\N	CXCR5	0.783262	2.5
ENSGALT0000	chromosome X open reading frame	CXorf21	0.853815	0.5

ENSGALT0000	chromosome X open reading frame	CXorf23	0.998281	113
ENSGALT0000	chromosome X open reading frame	CXorf30	0.936648	13.5
ENSGALT0000	chromosome X open reading frame	CXorf69	0.814405	45.5
ENSGALT0000	CXXC finger protein 5	CXXC5	0.942833	1051.5
ENSGALT0000	cytochrome b-561	CYB561	0.988467	151
ENSGALT0000	cytochrome b5 type A (microsomal)	CYB5A	0.419894	2064.5
ENSGALT0000	outer mitochondrial membrane cytc	CYB5B	0.621822	2647.53
ENSGALT0000	cytochrome b5 domain containing 2	CYB5D2	0.881175	620
ENSGALT0000	cytochrome b5 reductase 2	CYB5R2	0.92635	849.757
ENSGALT0000	cytochrome b5 reductase 3	CYB5R3	0.749082	1805.5
ENSGALT0000	cytochrome b5 reductase 4	CYB5R4	0.918666	462.5
ENSGALT0000	cytochrome b5 reductase-like	CYB5RL	0.970007	958
ENSGALT0000	cytochrome b, ascorbate depender	CYBASC3	0.794623	410.5
ENSGALT0000	cytochrome b-245, beta polypeptid	CYBB	0.794244	8
ENSGALT0000	cytochrome b reductase 1	CYBRD1	0.930976	45
ENSGALT0000	cytochrome c, somatic	CYCS	0.454064	1974.52
ENSGALT0000	cytoplasmic FMR1 interacting prote	CYFIP1	0.951477	4175
ENSGALT0000	cytoplasmic FMR1 interacting prote	CYFIP2	0.921451	2235.5
ENSGALT0000	cytoglobin	CYGB	0.752484	1373.02
ENSGALT0000	cysteine/histidine-rich 1	CYHR1	0.948171	394.5
ENSGALT0000	cylindromatosis (turban tumor synd	CYLD	0.984698	625
ENSGALT0000	cytochrome P450, family 11, subfal	CYP11A1	0.843205	29.5
ENSGALT0000	cytochrome P450, family 17, subfal	CYP17A1	0.264959	68.5
ENSGALT0000	cytochrome P450, family 19, subfal	CYP19A1	?	0
ENSGALT0000	cytochrome P450 1A4	CYP1A4	0.761653	3.60764
ENSGALT0000	cytochrome P450, family 1, subfam	CYP1B1	0.775537	6.5
ENSGALT0000	cytochrome P450, family 20, subfal	CYP20A1	0.984947	1357.5
ENSGALT0000	steroid 21-hydroxylase	CYP21	0.515776	111.5
ENSGALT0000	cytochrome P450, family 24, subfal	CYP24A1	0.798612	659.027
ENSGALT0000	cytochrome P450, family 26, subfal	CYP26A1	0.48684	50
ENSGALT0000	cytochrome P450, family 26, subfal	CYP26B1	0.673637	286
ENSGALT0000	cytochrome P450, family 26, subfal	CYP26C1	0.406724	1880.53
ENSGALT0000	cytochrome P450, family 27, subfal	CYP27A1	0.904126	587
ENSGALT0000	cytochrome P450, family 27, subfal	CYP27C1	0.954403	1200.5
ENSGALT0000	cytochrome P450, family 2, subfam	CYP2A13	0.859039	19.5
ENSGALT0000	cytochrome P450, family 2, subfam	CYP2C18	0.308204	1.74E-08
ENSGALT0000	cytochrome P-450 2C45	CYP2C45	0.759049	7.5
ENSGALT0000	cytochrome P450, family 2, subfam	CYP2D6	0.981042	388.5
ENSGALT0000	cytochrome P450 2H1	CYP2H1	0.954809	8.5
ENSGALT0000	cytochrome P450, family 2, subfam	CYP2J2	0.992592	1214.95
ENSGALT0000	cytochrome P450, family 2, subfam	CYP2R1	0.966144	179
ENSGALT0000	cytochrome P450, family 2, subfam	CYP2W1	0.996935	81.5
ENSGALT0000	cytochrome P450, family 39, subfal	CYP39A1	0.86812	297.5
ENSGALT0000	cytochrome P450, family 3, subfam	CYP3A4	0.905015	30.5
ENSGALT0000	cytochrome P450 A 37	CYP3A7	0.0539949	3
ENSGALT0000	cytochrome P450, family 46, subfal	CYP46A1	0.980004	298
ENSGALT0000	cytochrome P450, family 4, subfam	CYP4B1	0.90773	2.5
ENSGALT0000	cytochrome P450, family 4, subfam	CYP4V2	0.634746	15.5
ENSGALT0000	cytochrome P450, family 51, subfal	CYP51A1	0.637697	1087
ENSGALT0000	cytochrome P450, family 7, subfam	CYP7A1	?	0
ENSGALT0000	\N	CYP8B1	0.834058	7.5
ENSGALT0000	cysteine-rich, angiogenic inducer, 6	CYR61	0.918912	729
ENSGALT0000	cysteinyl leukotriene receptor 1	CYSLTR1	0.996049	25.5
ENSGALT0000	cysteinyl leukotriene receptor 2	CYSLTR2	0.363607	1
ENSGALT0000	Cytochrome b	CYTB	0.87101	95721.5
ENSGALT0000	cytohesin 1	CYTH1	0.907959	484.5

ENSGALT0000	cytohesin 3	CYTH3	0.863964	305.501
ENSGALT0000	cytohesin 4	CYTH4	0.851285	8.5
ENSGALT0000	cytohesin 1 interacting protein	CYTIP	0.389843	8.5
ENSGALT0000	cytokine-like 1	CYTL1	0.210435	523
ENSGALT0000	cysteine/tyrosine-rich 1	CYYR1	0.899859	229.5
ENSGALT0000	chromosome Z open reading frame	CZH18orf10	0.912588	245
ENSGALT0000	chromosome Z open reading frame	CZH18orf25	0.983837	258.799
ENSGALT0000	chromosome Z open reading frame	CZH20orf134	0.845636	3.5
ENSGALT0000	chromosome Z open reading frame	CZH5orf28	0.916828	277.5
ENSGALT0000	chromosome Z open reading frame	CZH5orf30	0.909044	281
ENSGALT0000	chromosome Z open reading frame	CZH5orf34	0.937539	132.5
ENSGALT0000	chromosome Z open reading frame	CZH5orf44	0.927988	440.499
ENSGALT0000	chromosome Z open reading frame	CZH5orf51	0.521283	353.5
ENSGALT0000	chromosome Z open reading frame	CZH9orf100	0.930794	237
ENSGALT0000	chromosome Z open reading frame	CZH9orf125	0.932522	155
ENSGALT0000	chromosome Z open reading frame	CZH9orf150	0.700891	93
ENSGALT0000	chromosome Z open reading frame	CZH9orf24	0.0441942	1
ENSGALT0000	chromosome Z open reading frame	CZH9orf25	0.832335	251.5
ENSGALT0000	chromosome Z open reading frame	CZH9orf3	0.974403	226
ENSGALT0000	chromosome Z open reading frame	CZH9orf64	0.541531	494.5
ENSGALT0000	chromosome Z open reading frame	CZH9orf72	0.910508	156.5
ENSGALT0000	chromosome Z open reading frame	CZH9orf80	0.774448	1113.5
ENSGALT0000	chromosome Z open reading frame	CZH9orf82	0.90402	366.5
ENSGALT0000	chromosome Z open reading frame	CZH9orf95	0.992586	139.5
ENSGALT0000	D-2-hydroxyglutarate dehydrogena	D2HGDH	0.845703	296
ENSGALT0000	Uncharacterized protein	D6R3D0_CHICK	0.954028	3.5
ENSGALT0000	Uncharacterized protein	D9IAG9_CHICK	0.916294	48.5
ENSGALT0000	Sodium iodide symporter	D9IAH0_CHICK	0.353553	1
ENSGALT0000	dishevelled associated activator of	DAAM1	0.9225	2070
ENSGALT0000	dishevelled associated activator of	DAAM2	0.946284	242.5
ENSGALT0000	disabled homolog 1 (Drosophila)	DAB1	0.995892	1035.5
ENSGALT0000	disabled homolog 2, mitogen-respc	DAB2	0.973673	302.499
ENSGALT0000	DAB2 interacting protein	DAB2IP	0.900971	1062.5
ENSGALT0000	dachshund homolog 1 (Drosophila)	DACH1	0.954295	1061.5
ENSGALT0000	dachshund homolog 2 (Drosophila)	DACH2	0.732888	365
ENSGALT0000	dapper, antagonist of beta-catenin,	DACT1	0.841783	1815.89
ENSGALT0000	dapper, antagonist of beta-catenin,	DACT2	0.750228	185
ENSGALT0000	defender against cell death 1	DAD1	0.440857	3145.97
ENSGALT0000	diacylglycerol lipase, alpha	DAGLA	0.911122	773
ENSGALT0000	diacylglycerol lipase, beta	DAGLB	0.98327	872.505
ENSGALT0000	dihydroxyacetone kinase 2 homolog	DAK	0.689051	966
ENSGALT0000	DALR anticodon binding domain cc	DALRD3	0.934167	1152.5
ENSGALT0000	D-amino-acid oxidase	DAO	0.949508	179.5
ENSGALT0000	death-associated protein	DAP	0.920937	3841
ENSGALT0000	death associated protein 3	DAP3	0.787503	1678.5
ENSGALT0000	death-associated protein kinase 1	DAPK1	0.989271	822.502
ENSGALT0000	death-associated protein kinase 2	DAPK2	0.987623	65.5
ENSGALT0000	death associated protein-like 1	DAPL1	0.740073	24
ENSGALT0000	dual adaptor of phosphotyrosine ar	DAPP1	0.973483	337
ENSGALT0000	aspartyl-tRNA synthetase	DARS	0.773721	3100
ENSGALT0000	aspartyl-tRNA synthetase 2, mitoch	DARS2	0.92793	435
ENSGALT0000	chromosomal passenger complex p	DASRAA	0.959866	374
ENSGALT0000	DAZ associated protein 1	DAZAP1	0.962365	2746.5
ENSGALT0000	deleted in azoospermia-like	DAZL	0.849633	10
ENSGALT0000	deleted in bladder cancer 1	DBC1	0.689923	1854.5
ENSGALT0000	DBF4 homolog (S. cerevisiae)	DBF4	0.978272	653

ENSGALT0000	DBF4 homolog B (S. cerevisiae)	DBF4B	0.900673	105.5
ENSGALT0000	dopamine beta-hydroxylase (dopar	DBH	0.0634553	0.5
ENSGALT0000	diazepam binding inhibitor (GABA r	DBI	0.165669	2938.98
ENSGALT0000	dysbindin (dystrobrevin binding pro	DBNDD1	0.832589	2115
ENSGALT0000	dysbindin (dystrobrevin binding pro	DBNDD2	0.882895	803.5
ENSGALT0000	drebrin-like	DBNL	0.891912	2055
ENSGALT0000	debranching enzyme homolog 1 (S	DBR1	0.890428	1518.5
ENSGALT0000	dihydrolipoamide branched chain tr	DBT	0.984307	778.5
ENSGALT0000	developing brain homeobox 2	DBX2	0.98096	349.5
ENSGALT0000	DDB1 and CUL4 associated factor	DCAF10	0.981445	617.5
ENSGALT0000	DDB1 and CUL4 associated factor	DCAF12	0.973159	2576
ENSGALT0000	DDB1 and CUL4 associated factor	DCAF13	0.934563	2346
ENSGALT0000	DDB1 and CUL4 associated factor	DCAF17	0.949366	254
ENSGALT0000	DDB1 and CUL4 associated factor	DCAF4	0.953744	614.5
ENSGALT0000	DDB1 and CUL4 associated factor	DCAF5	0.959212	1031
ENSGALT0000	DDB1 and CUL4 associated factor	DCAF6	0.987381	993.5
ENSGALT0000	DDB1 and CUL4 associated factor	DCAF7	0.955071	2341
ENSGALT0000	discoidin, CUB and LCCL domain c	DCBLD1	0.839288	1534.5
ENSGALT0000	discoidin, CUB and LCCL domain c	DCBLD2	0.995502	5594.32
ENSGALT0000	doublecortin domain containing 2	DCDC2	0.371698	9
ENSGALT0000	dachsous 1 (Drosophila)	DCHS1	0.984001	7686.99
ENSGALT0000	dachsous 2 (Drosophila)	DCHS2	0.649304	2.5
ENSGALT0000	deoxycytidine kinase	DCK	0.979619	673.501
ENSGALT0000	doublecortin-like kinase 1	DCLK1	0.909817	1423
ENSGALT0000	doublecortin-like kinase 2	DCLK2	0.97709	952
ENSGALT0000	doublecortin-like kinase 3	DCLK3	0.69644	17.5
ENSGALT0000	DNA cross-link repair 1A	DCLRE1A	0.9561	593.5
ENSGALT0000	DNA cross-link repair 1B	DCLRE1B	0.94658	241.5
ENSGALT0000	DNA cross-link repair 1C	DCLRE1C	0.993154	311.5
ENSGALT0000	decorin	DCN	0.854111	639.503
ENSGALT0000	DCP1 decapping enzyme homolog	DCP1A	0.973318	322.5
ENSGALT0000	DCP1 decapping enzyme homolog	DCP1B	0.979564	996.5
ENSGALT0000	DCP2 decapping enzyme homolog	DCP2	0.974322	155.5
ENSGALT0000	decapping enzyme, scavenger	DCPS	0.772294	2127.5
ENSGALT0000	dopachrome tautomerase (dopachr	DCT	0.676252	5.5
ENSGALT0000	dCMP deaminase	DCTD	0.913626	875
ENSGALT0000	dynactin 3 (p22)	DCTN3	0.588922	798
ENSGALT0000	dynactin 4 (p62)	DCTN4	0.884896	2712.5
ENSGALT0000	dynactin 5 (p25)	DCTN5	0.639348	1103
ENSGALT0000	dynactin 6	DCTN6	0.0988666	2157
ENSGALT0000	DCN1, defective in cullin neddylatic	DCUN1D1	0.950105	1176.5
ENSGALT0000	DCN1, defective in cullin neddylatic	DCUN1D2	0.991605	266
ENSGALT0000	DCN1, defective in cullin neddylatic	DCUN1D3	0.905495	310
ENSGALT0000	DCN1, defective in cullin neddylatic	DCUN1D4	0.917376	550
ENSGALT0000	DCN1, defective in cullin neddylatic	DCUN1D5	0.856161	451
ENSGALT0000	doublecortin	DCX	0.808233	1294
ENSGALT0000	dicarbonyl/L-xylulose reductase	DCXR	0.812791	1262.48
ENSGALT0000	DET1- and DDB1-associated prote	DDA1	0.946794	2960.5
ENSGALT0000	dimethylarginine dimethylaminohyc	DDAH1	0.809156	433.5
ENSGALT0000	damage-specific DNA binding prote	DDB1	0.898816	7930.83
ENSGALT0000	damage-specific DNA binding prote	DDB2	0.976691	1041.5
ENSGALT0000	dopa decarboxylase (aromatic L-ar	DDC	0.782804	4.5
ENSGALT0000	DDHD domain containing 1	DDHD1	0.992015	1537
ENSGALT0000	DDHD domain containing 2	DDHD2	0.881539	678.5
ENSGALT0000	DNA-damage inducible 1 homolog	DDI2	0.912575	488
ENSGALT0000	D-aspartate oxidase	DDO	0.533681	11.5

ENSGALT0000	dolichyl-diphosphooligosaccharide-	DDOST	0.961608	9876.5
ENSGALT0000	discoidin domain receptor tyrosine	DDR2	0.888962	942.893
ENSGALT0000	DDRGK domain containing 1	DDRGK1	0.807965	929.461
ENSGALT0000	D-dopachrome tautomerase	DDT	0.83558	1802
ENSGALT0000	DEAD (Asp-Glu-Ala-Asp) box polyp	DDX1	0.932438	3292.43
ENSGALT0000	DEAD (Asp-Glu-Ala-Asp) box polyp	DDX10	0.910687	767.5
ENSGALT0000	DEAD/H (Asp-Glu-Ala-Asp/His) bo>	DDX11	0.908783	517.5
ENSGALT0000	DEAD (Asp-Glu-Ala-Asp) box polyp	DDX17	0.978576	11981.5
ENSGALT0000	DEAD (Asp-Glu-Ala-Asp) box polyp	DDX18	0.946379	887
ENSGALT0000	DEAD (Asp-Glu-Ala-Asp) box polyp	DDX19B	0.927088	8231.36
ENSGALT0000	DEAD (Asp-Glu-Ala-Asp) box polyp	DDX20	0.945033	639.499
ENSGALT0000	DEAD (Asp-Glu-Ala-Asp) box polyp	DDX21	0.81118	2935.16
ENSGALT0000	DEAD (Asp-Glu-Ala-Asp) box polyp	DDX25	0.946944	579.5
ENSGALT0000	DEAD/H (Asp-Glu-Ala-Asp/His) bo>	DDX26B	0.98067	1060
ENSGALT0000	DEAD (Asp-Glu-Ala-Asp) box polyp	DDX27	0.935784	1922.53
ENSGALT0000	DEAD (Asp-Glu-Ala-Asp) box polyp	DDX28	0.506883	193
ENSGALT0000	DEAD (Asp-Glu-Ala-Asp) box polyp	DDX31	0.972014	1043.5
ENSGALT0000	DEAD (Asp-Glu-Ala-Asp) box polyp	DDX3X	0.969649	18378.4
ENSGALT0000	DEAD (Asp-Glu-Ala-Asp) box polyp	DDX4	0.464758	1
ENSGALT0000	DEAD (Asp-Glu-Ala-Asp) box polyp	DDX41	0.830124	2086.5
ENSGALT0000	DEAD (Asp-Glu-Ala-Asp) box polyp	DDX42	0.915379	3956.54
ENSGALT0000	DEAD (Asp-Glu-Ala-Asp) box polyp	DDX43	0.864202	5
ENSGALT0000	DEAD (Asp-Glu-Ala-Asp) box polyp	DDX46	0.971878	2466
ENSGALT0000	DEAD (Asp-Glu-Ala-Asp) box polyp	DDX47	0.887799	987
ENSGALT0000	DEAD (Asp-Glu-Ala-Asp) box polyp	DDX49	0.853898	1314.01
ENSGALT0000	DEAD (Asp-Glu-Ala-Asp) box polyp	DDX5	0.916838	27532.4
ENSGALT0000	DEAD (Asp-Glu-Ala-Asp) box polyp	DDX50	0.951879	1958.82
ENSGALT0000	DEAD (Asp-Glu-Ala-Asp) box polyp	DDX51	0.924874	1032
ENSGALT0000	DEAD (Asp-Glu-Ala-Asp) box polyp	DDX52	0.979924	571.999
ENSGALT0000	DEAD (Asp-Glu-Ala-Asp) box polyp	DDX55	0.973899	403.522
ENSGALT0000	DEAD (Asp-Glu-Ala-Asp) box polyp	DDX59	0.976857	419.48
ENSGALT0000	DEAD (Asp-Glu-Ala-Asp) box polyp	DDX6	0.970067	3909.5
ENSGALT0000	deformed epidermal autoregulatory	DEAF1	0.938485	258.5
ENSGALT0000	2,4-dienoyl CoA reductase 1, mitoc	DECR1	0.86031	770.5
ENSGALT0000	death effector domain containing	DEDD	0.91312	2181
ENSGALT0000	differentially expressed in FDCP 6	DEF6	0.980625	1339
ENSGALT0000	defensin, beta 1	DEFB1	0.433517	5
ENSGALT0000	degenerative spermatocyte homolc	DEGS1	0.796181	1927.5
ENSGALT0000	degenerative spermatocyte homolc	DEGS2	0.748423	5.5
ENSGALT0000	DEK oncogene	DEK	0.953538	1664
ENSGALT0000	hypothetical protein LOC417102	DENND1A	0.959721	922.001
ENSGALT0000	DENN/MADD domain containing 1I	DENND1B	0.940665	196.5
ENSGALT0000	DENN/MADD domain containing 2/	DENND2A	0.997874	4204
ENSGALT0000	DENN/MADD domain containing 2(	DENND2C	0.96214	245
ENSGALT0000	DENN/MADD domain containing 2I	DENND2D	0.799598	81
ENSGALT0000	DENN/MADD domain containing 3	DENND3	0.882921	153
ENSGALT0000	DENN/MADD domain containing 4/	DENND4A	0.979838	875
ENSGALT0000	DENN/MADD domain containing 4(	DENND4C	0.999079	806
ENSGALT0000	DENN/MADD domain containing 5/	DENND5A	0.922413	1032.51
ENSGALT0000	DENN/MADD domain containing 5I	DENND5B	0.81723	338.5
ENSGALT0000	density-regulated protein	DENR	0.834961	1101.5
ENSGALT0000	DEP domain containing 1	DEPDC1	0.931976	259
ENSGALT0000	DEP domain containing 1B	DEPDC1B	0.965553	268
ENSGALT0000	DEP domain containing 5	DEPDC5	0.987622	1765
ENSGALT0000	DEP domain containing 6	DEPDC6	0.590624	36.5
ENSGALT0000	DEP domain containing 7	DEPDC7	0.967013	171

ENSGALT0000	DEP domain containing MTOR-inte	DEPTOR	0.797043	5.5
ENSGALT0000	deoxyribose-phosphate aldolase (p	DERA	0.880532	598.5
ENSGALT0000	Der1-like domain family, member 1	DERL1	0.964839	4176
ENSGALT0000	Der1-like domain family, member 2	DERL2	0.893179	376
ENSGALT0000	Der1-like domain family, member 3	DERL3	0.96268	558.503
ENSGALT0000	desmin	DES	0.707813	88.5044
ENSGALT0000	de-etiolated homolog 1 (Arabidopsi	DET1	0.986664	1053
ENSGALT0000	Dexi homolog (mouse)	DEXI	0.950976	15.5
ENSGALT0000	DNA fragmentation factor, 45kDa, a	DFFA	0.733125	689
ENSGALT0000	DNA fragmentation factor, 40kDa, k	DFFB	0.915012	140
ENSGALT0000	deafness, autosomal dominant 5	DFNA5	0.955935	1836
ENSGALT0000	deafness, autosomal recessive 31	DFNB31	0.76859	351
ENSGALT0000	deafness, autosomal recessive 59	DFNB59	0.194846	5
ENSGALT0000	diacylglycerol O-acyltransferase 2	DGAT2	0.963713	62
ENSGALT0000	DiGeorge syndrome critical region	DGCR14	0.997644	647
ENSGALT0000	DiGeorge syndrome critical region	DGCR2	0.995952	3226.47
ENSGALT0000	DGCR6 homolog	DGCR6	0.665524	2695.5
ENSGALT0000	DiGeorge syndrome critical region	DGCR8	0.975329	1748.5
ENSGALT0000	diacylglycerol kinase, beta 90kDa	DGKB	0.821307	64.5
ENSGALT0000	diacylglycerol kinase, delta 130kDa	DGKD	0.984154	1156
ENSGALT0000	diacylglycerol kinase, epsilon 64kD	DGKE	0.912465	815.488
ENSGALT0000	diacylglycerol kinase, gamma 90kD	DGKG	0.821392	70
ENSGALT0000	diacylglycerol kinase, eta	DGKH	0.97317	105.5
ENSGALT0000	diacylglycerol kinase, iota	DGKI	0.946616	139.5
ENSGALT0000	diacylglycerol kinase, theta 110kDa	DGKQ	0.971546	295.5
ENSGALT0000	diacylglycerol kinase, zeta	DGKZ	0.981686	3292.43
ENSGALT0000	deoxyguanosine kinase	DGUOK	0.755262	1680.5
ENSGALT0000	24-dehydrocholesterol reductase	DHCR24	0.785051	1306.5
ENSGALT0000	7-dehydrocholesterol reductase	DHCR7	0.874629	756
ENSGALT0000	dehydrodolichyl diphosphate syntha	DHDDS	0.962744	677.5
ENSGALT0000	dihydrofolate reductase	DHFR	0.735749	134
ENSGALT0000	dihydroorotate dehydrogenase	DHODH	0.763693	1049.5
ENSGALT0000	dehydrogenase/reductase (SDR fa	DHRS11	0.891211	1082.5
ENSGALT0000	dehydrogenase/reductase (SDR fa	DHRS12	0.94186	147.5
ENSGALT0000	dehydrogenase/reductase (SDR fa	DHRS13	0.50498	50
ENSGALT0000	dehydrogenase/reductase (SDR fa	DHRS2	0.883977	1195.5
ENSGALT0000	dehydrogenase/reductase (SDR fa	DHRS3	0.638354	515
ENSGALT0000	dehydrogenase/reductase (SDR fa	DHRS7	0.952794	1775.5
ENSGALT0000	dehydrogenase/reductase (SDR fa	DHRS7B	0.960158	463
ENSGALT0000	dehydrogenase/reductase (SDR fa	DHRS7C	0.293034	2.5
ENSGALT0000	dehydrogenase/reductase (SDR fa	DHRSX	0.931422	529.5
ENSGALT0000	dehydrogenase E1 and transketola	DHTKD1	0.9998	1354
ENSGALT0000	DEAH (Asp-Glu-Ala-His) box polyp	DHX15	0.925442	5137
ENSGALT0000	DEAH (Asp-Glu-Ala-His) box polyp	DHX29	0.952219	1164.5
ENSGALT0000	DEAH (Asp-Glu-Ala-His) box polyp	DHX30	0.897306	7780.75
ENSGALT0000	DEAH (Asp-Glu-Ala-His) box polyp	DHX32	0.900359	8
ENSGALT0000	DEAH (Asp-Glu-Ala-His) box polyp	DHX33	0.927774	1984.47
ENSGALT0000	DEAH (Asp-Glu-Ala-His) box polyp	DHX35	0.931681	275.5
ENSGALT0000	DEAH (Asp-Glu-Ala-His) box polyp	DHX36	0.8811	3448
ENSGALT0000	DEAH (Asp-Glu-Ala-His) box polyp	DHX37	0.942275	1071.5
ENSGALT0000	DEAH (Asp-Glu-Ala-His) box polyp	DHX38	0.945059	4373.13
ENSGALT0000	DEAH (Asp-Glu-Ala-His) box polyp	DHX40	0.962324	1275.5
ENSGALT0000	DEAH (Asp-Glu-Ala-Asp/His) box p	DHX57	0.968831	1236
ENSGALT0000	DEXH (Asp-Glu-X-His) box polyper	DHX58	0.968494	44
ENSGALT0000	DEAH (Asp-Glu-Ala-His) box polyp	DHX8	0.944127	1279.66
ENSGALT0000	diablo, IAP-binding mitochondrial p	DIABLO	0.848574	919.5

ENSGALT0000	diaphanous homolog 1 (Drosophila	DIAPH1	0.962072	829.998
ENSGALT0000	diaphanous homolog 3 (Drosophila	DIAPH3	0.973259	206.5
ENSGALT0000	dicer 1, ribonuclease type III	DICER1	0.981092	2623.96
ENSGALT0000	death inducer-obliterator 1	DIDO1	0.970769	2557.7
ENSGALT0000	digestive organ expansion factor ho	DIEXF	0.956479	1095.5
ENSGALT0000	DIM1 dimethyladenosine transferas	DIMT1L	0.969922	212.5
ENSGALT0000	deiodinase, iodothyronine, type II	DIO2	0.800606	1326
ENSGALT0000	deiodinase, iodothyronine, type III	DIO3	0.69956	12.5
ENSGALT0000	DIP2 disco-interacting protein 2 ho	DIP2A	0.976472	1818
ENSGALT0000	DIP2 disco-interacting protein 2 ho	DIP2B	0.968562	2710
ENSGALT0000	DIP2 disco-interacting protein 2 ho	DIP2C	0.929472	781
ENSGALT0000	DIRAS family, GTP-binding RAS-lik	DIRAS2	0.569611	6
ENSGALT0000	disrupted in renal carcinoma 2	DIRC2	0.973981	1054
ENSGALT0000	DIS3 mitotic control homolog (S. ce	DIS3	0.95614	1256
ENSGALT0000	DIS3 mitotic control homolog (S. ce	DIS3L	0.972678	848.5
ENSGALT0000	DIS3 mitotic control homolog (S. ce	DIS3L2	0.952416	1176
ENSGALT0000	dispatched homolog 1 (Drosophila)	DISP1	0.944757	689.5
ENSGALT0000	DIX domain containing 1	DIXDC1	0.720677	869
ENSGALT0000	dyskeratosis congenita 1, dyskerin	DKC1	0.927864	4739.5
ENSGALT0000	Dkk-1Uncharacterized protein	DKK1	0.410508	144.5
ENSGALT0000	dickkopf homolog 2 (Xenopus laevi	DKK2	0.795983	150.5
ENSGALT0000	dickkopf homolog 3 (Xenopus laevi	DKK3	0.956779	1775.5
ENSGALT0000	dihydrolipoamide S-acetyltransfera	DLAT	0.936025	1797.5
ENSGALT0000	deleted in liver cancer 1	DLC1	0.790545	556.5
ENSGALT0000	dihydrolipoamide dehydrogenase	DLD	0.854568	3220.97
ENSGALT0000	deleted in lung and esophageal car	DLEC1	0.974666	149
ENSGALT0000	deleted in lymphocytic leukemia, 7	DLEU7	?	0
ENSGALT0000	discs, large homolog 1 (Drosophila	DLG1	0.983928	2004.5
ENSGALT0000	discs, large homolog 2 (Drosophila	DLG2	0.664589	307.5
ENSGALT0000	discs, large homolog 3 (Drosophila	DLG3	0.894557	1097
ENSGALT0000	discs, large homolog 5 (Drosophila	DLG5	0.995926	2076.5
ENSGALT0000	discs, large (Drosophila) homolog-a	DLGAP1	0.811969	64
ENSGALT0000	discs, large (Drosophila) homolog-a	DLGAP2	0.963336	64
ENSGALT0000	discs, large (Drosophila) homolog-a	DLGAP3	0.663502	225.5
ENSGALT0000	discs, large (Drosophila) homolog-a	DLGAP4	0.896709	2137
ENSGALT0000	discs, large (Drosophila) homolog-a	DLGAP5	0.922946	909.5
ENSGALT0000	delta-like 1 homolog (Drosophila)	DLK1	0.666147	571.5
ENSGALT0000	delta-like 2 homolog (Drosophila)	DLK2	0.786053	277
ENSGALT0000	delta-like 1 (Drosophila)	DLL1	0.703738	1252.48
ENSGALT0000	delta-like 4 (Drosophila)	DLL4	0.8013	70.5
ENSGALT0000	dihydrolipoamide S-succinyltransfe	DLST	0.780511	2842.99
ENSGALT0000	distal-less homeobox 5	DLX5	0.881482	964
ENSGALT0000	distal-less homeobox 6	DLX6	0.378013	80.3856
ENSGALT0000	DNA methyltransferase 1 associate	DMAP1	0.955373	403.5
ENSGALT0000	diencephalon/mesencephalon hom	DMBX1	0.580649	2.5
ENSGALT0000	DMC1 dosage suppressor of mck1	DMC1	0.884932	19
ENSGALT0000	dystrophin	DMD	0.987197	3756.97
ENSGALT0000	dentin matrix acidic phosphoprotein	DMP1	0.84591	4
ENSGALT0000	doublesex and mab-3 related trans	DMRT1	0.191548	11
ENSGALT0000	doublesex and mab-3 related trans	DMRT3	0.519298	10
ENSGALT0000	DMRT-like family B with proline-rich	DMRTB1	0.83584	5
ENSGALT0000	cyclin D binding myb-like transcript	DMTF1	0.981996	620.499
ENSGALT0000	Dmx-like 1	DMXL1	0.989774	1373.5
ENSGALT0000	Dmx-like 2	DMXL2	0.954376	1842.58
ENSGALT0000	DNA replication helicase 2 homolog	DNA2	0.935462	532.501
ENSGALT0000	dynein, axonemal, assembly factor	DNAAF1	0.981856	225

ENSGALT0000	dynein, axonemal, assembly factor	DNAAF2	0.966624	131
ENSGALT0000	dynein, axonemal, heavy chain 1	DNAH1	0.993669	786
ENSGALT0000	dynein, axonemal, heavy chain 10	DNAH10	0.987323	494
ENSGALT0000	dynein, axonemal, heavy chain 12	DNAH12	0.99925	214.5
ENSGALT0000	dynein, axonemal, heavy chain 17	DNAH17	0.98751	365.928
ENSGALT0000	dynein, axonemal, heavy chain 3	DNAH3	0.989912	496
ENSGALT0000	dynein, axonemal, heavy chain 5	DNAH5	0.985576	360.5
ENSGALT0000	dynein, axonemal, heavy chain 7	DNAH7	0.977745	521.5
ENSGALT0000	dynein, axonemal, heavy chain 8	DNAH8	0.649519	0.5
ENSGALT0000	dynein, axonemal, heavy chain 9	DNAH9	0.95052	251
ENSGALT0000	dynein, axonemal, intermediate cha	DNAI1	0.954059	171.5
ENSGALT0000	dynein, axonemal, intermediate cha	DNAI2	0.999452	284
ENSGALT0000	DnaJ (Hsp40) homolog, subfamily /	DNAJA1	0.856885	4241
ENSGALT0000	DnaJ (Hsp40) homolog, subfamily /	DNAJA2	0.90665	3618.55
ENSGALT0000	DnaJ (Hsp40) homolog, subfamily /	DNAJA3	0.872249	1332.5
ENSGALT0000	DnaJ (Hsp40) homolog, subfamily /	DNAJA4	0.935517	1851
ENSGALT0000	DnaJ (Hsp40) homolog, subfamily I	DNAJB11	0.846402	2733
ENSGALT0000	DnaJ (Hsp40) homolog, subfamily I	DNAJB12	0.934756	952.483
ENSGALT0000	DnaJ (Hsp40) homolog, subfamily I	DNAJB13	0.955567	142
ENSGALT0000	DnaJ (Hsp40) homolog, subfamily I	DNAJB14	0.945335	1698
ENSGALT0000	DnaJ (Hsp40) homolog, subfamily I	DNAJB4	0.961102	219
ENSGALT0000	DnaJ (Hsp40) homolog, subfamily I	DNAJB5	0.880328	160.5
ENSGALT0000	DnaJ (Hsp40) homolog, subfamily I	DNAJB6	0.884307	1531.5
ENSGALT0000	DnaJ (Hsp40) homolog, subfamily I	DNAJB9	0.989232	294
ENSGALT0000	DnaJ (Hsp40) homolog, subfamily (	DNAJC1	0.962044	1028
ENSGALT0000	DnaJ (Hsp40) homolog, subfamily (	DNAJC10	0.97446	2335
ENSGALT0000	DnaJ (Hsp40) homolog, subfamily (	DNAJC11	0.908251	1367.5
ENSGALT0000	DnaJ (Hsp40) homolog, subfamily (	DNAJC12	0.993288	557
ENSGALT0000	DnaJ (Hsp40) homolog, subfamily (	DNAJC13	0.935989	2217.5
ENSGALT0000	DnaJ (Hsp40) homolog, subfamily (	DNAJC15	0.805207	360
ENSGALT0000	DnaJ (Hsp40) homolog, subfamily (	DNAJC16	0.956813	1638.54
ENSGALT0000	DnaJ (Hsp40) homolog, subfamily (	DNAJC17	0.735701	603.5
ENSGALT0000	DnaJ (Hsp40) homolog, subfamily (	DNAJC18	0.737203	1219
ENSGALT0000	DnaJ (Hsp40) homolog, subfamily (	DNAJC19	0.779992	269.766
ENSGALT0000	DnaJ (Hsp40) homolog, subfamily (	DNAJC2	0.910294	993.5
ENSGALT0000	DnaJ (Hsp40) homolog, subfamily (	DNAJC21	0.934992	411.5
ENSGALT0000	DnaJ (Hsp40) homolog, subfamily (	DNAJC22	0.676435	7
ENSGALT0000	DnaJ (Hsp40) homolog, subfamily (	DNAJC24	0.956725	400
ENSGALT0000	DnaJ (Hsp40) homolog, subfamily (	DNAJC27	0.958284	750.5
ENSGALT0000	DnaJ (Hsp40) homolog, subfamily (	DNAJC3	0.986507	5315.5
ENSGALT0000	DnaJ (Hsp40) homolog, subfamily (	DNAJC30	0.60486	154
ENSGALT0000	DnaJ (Hsp40) homolog, subfamily (	DNAJC5	0.912927	465.5
ENSGALT0000	DnaJ (Hsp40) homolog, subfamily (	DNAJC5B	0.750725	37
ENSGALT0000	DnaJ (Hsp40) homolog, subfamily (	DNAJC6	0.697899	1073
ENSGALT0000	DnaJ (Hsp40) homolog, subfamily (	DNAJC7	0.955678	4829.35
ENSGALT0000	DnaJ (Hsp40) homolog, subfamily (	DNAJC8	0.863583	2219.5
ENSGALT0000	DnaJ (Hsp40) homolog, subfamily (	DNAJC9	0.6319	1435.5
ENSGALT0000	dynein, axonemal, light chain 1	DNAL1	0.992558	66.5
ENSGALT0000	dynein, axonemal, light chain 4	DNAL4	0.923663	2221.5
ENSGALT0000	dynein, axonemal, light intermediat	DNALI1	0.945437	394.5
ENSGALT0000	deoxyribonuclease I	DNASE1	0.421875	2
ENSGALT0000	deoxyribonuclease I-like 2	DNASE1L2	1	0.5
ENSGALT0000	deoxyribonuclease I-like 3	DNASE1L3	0.659018	26
ENSGALT0000	deoxyribonuclease II beta	DNASE2B	0.997929	276
ENSGALT0000	dead end homolog 1 (zebrafish)	DND1	0.545308	3.5
ENSGALT0000	delta/notch-like EGF repeat contair	DNER	0.94668	4444

ENSGALT0000	DNL-type zinc finger	DNLZ	0.284545	309.5
ENSGALT0000	dynamin 1	DNM1	0.785924	1332.49
ENSGALT0000	dynamin 1-like	DNM1L	0.931189	3591.92
ENSGALT0000	dynamin binding protein	DNMBP	0.998742	3253.99
ENSGALT0000	DNA (cytosine-5-)-methyltransferas	DNMT3A	0.963768	8432.66
ENSGALT0000	DNA (cytosine-5-)-methyltransferas	DNMT3B	0.965594	3463
ENSGALT0000	aspartyl aminopeptidase	DNPEP	0.738823	3457
ENSGALT0000	deoxynucleotidyltransferase, termir	DNTT	0.649519	2.5
ENSGALT0000	deoxynucleotidyltransferase, termir	DNTTIP1	0.719634	1388.5
ENSGALT0000	deoxynucleotidyltransferase, termir	DNTTIP2	0.939343	728
ENSGALT0000	double C2-like domains, beta	DOC2B	0.904899	293
ENSGALT0000	dedicator of cytokinesis 1	DOCK1	0.987971	3694.34
ENSGALT0000	dedicator of cytokinesis 10	DOCK10	0.800157	255
ENSGALT0000	dedicator of cytokinesis 11	DOCK11	0.803707	840.5
ENSGALT0000	dedicator of cytokinesis 2	DOCK2	0.932918	15.5
ENSGALT0000	dedicator of cytokinesis 3	DOCK3	0.924204	1986
ENSGALT0000	dedicator of cytokinesis 4	DOCK4	0.888174	339
ENSGALT0000	dedicator of cytokinesis 5	DOCK5	0.996989	763.498
ENSGALT0000	dedicator of cytokinesis 7	DOCK7	0.938959	6523.84
ENSGALT0000	dedicator of cytokinesis 8	DOCK8	0.680229	87.0001
ENSGALT0000	dedicator of cytokinesis 9	DOCK9	0.992718	1208.5
ENSGALT0000	Deoxyhypusine hydroxylase	DOHH	0.48425	665
ENSGALT0000	docking protein 4	DOK4	0.731296	1130
ENSGALT0000	docking protein 5	DOK5	0.643449	478.5
ENSGALT0000	docking protein 6	DOK6	0.907239	93.5
ENSGALT0000	docking protein 7	DOK7	0.987299	142
ENSGALT0000	dolichol kinase	DOLK	0.936387	260.5
ENSGALT0000	dolichyl pyrophosphate phosphatas	DOLPP1	0.909125	701
ENSGALT0000	downstream neighbor of SON	DONSON	0.945251	436
ENSGALT0000	dopey family member 1	DOPEY1	0.951937	966
ENSGALT0000	dopey family member 2	DOPEY2	0.990247	1367
ENSGALT0000	DOT1-like, histone H3 methyltransf	DOT1L	0.978435	1721.68
ENSGALT0000	dolichyl-phosphate (UDP-N-acetylg	DPAGT1	0.965769	2578.5
ENSGALT0000	deleted in primary ciliary dyskinesia	DPCD	0.825963	1452.5
ENSGALT0000	dipeptidase 1 (renal)	DPEP1	0.438355	14
ENSGALT0000	dipeptidase 2	DPEP2	0.895318	3
ENSGALT0000	D4, zinc and double PHD fingers fa	DPF2	0.886531	1047.5
ENSGALT0000	D4, zinc and double PHD fingers, f	DPF3	0.72858	82.5
ENSGALT0000	DPH1 homolog (S. cerevisiae)	DPH1	0.940978	648
ENSGALT0000	DPH2 homolog (S. cerevisiae)	DPH2	0.699678	604.5
ENSGALT0000	DPH3, KTI11 homolog (S. cerevisia	DPH3	0.851412	321.5
ENSGALT0000	DPH5 homolog (S. cerevisiae)	DPH5	0.798267	643.5
ENSGALT0000	dolichyl-phosphate mannosyltransf	DPM1	0.900838	425.5
ENSGALT0000	dolichyl-phosphate mannosyltransf	DPM2	0.70464	1313
ENSGALT0000	dipeptidyl-peptidase 10 (non-functi	DPP10	0.814323	1169
ENSGALT0000	dipeptidyl-peptidase 4	DPP4	0.918819	100.5
ENSGALT0000	dipeptidyl-peptidase 6	DPP6	0.998841	371.5
ENSGALT0000	dipeptidyl-peptidase 7	DPP7	0.951732	2506.5
ENSGALT0000	dipeptidyl-peptidase 8	DPP8	0.950147	736
ENSGALT0000	dipeptidyl-peptidase 9	DPP9	0.957422	1216.5
ENSGALT0000	dermatopontin	DPT	0.603682	1
ENSGALT0000	dpy-19-like 1 (C. elegans)	DPY19L1	0.986333	1444.5
ENSGALT0000	dpy-19-like 3 (C. elegans)	DPY19L3	0.976987	596
ENSGALT0000	dpy-19-like 4 (C. elegans)	DPY19L4	0.98912	1184.5
ENSGALT0000	dpy-30 homolog (C. elegans)	DPY30	0.73949	717.5
ENSGALT0000	dihydropyrimidine dehydrogenase	DPYD	0.792517	422

ENSGALT0000	dihydropyrimidinase	DPYS	0.44595	16
ENSGALT0000	dihydropyrimidinase-like 2	DPYSL2	0.759679	11876.2
ENSGALT0000	dihydropyrimidinase-like 3	DPYSL3	0.597363	13084.2
ENSGALT0000	dihydropyrimidinase-like 4	DPYSL4	0.489908	2324.01
ENSGALT0000	down-regulator of transcription 1, T	DR1	0.893185	1733.5
ENSGALT0000	DNA-damage regulated autophagy	DRAM1	0.943934	3
ENSGALT0000	DNA-damage regulated autophagy	DRAM2	0.982719	423.5
ENSGALT0000	dopamine receptor D1	DRD1	0.754412	4.5
ENSGALT0000	dopamine receptor D2	DRD2	0.978063	4.5
ENSGALT0000	developmentally regulated GTP bin	DRG1	0.581844	1631.01
ENSGALT0000	developmentally regulated GTP bin	DRG2	0.877982	1500
ENSGALT0000	dorsal root ganglia homeobox	DRGX	0.599323	1.5
ENSGALT0000	drosha, ribonuclease type III	DROSHA	0.947307	1214
ENSGALT0000	dystrophin related protein 2	DRP2	0.674865	278.5
ENSGALT0000	desmocollin 2	DSC2	0.739802	187.5
ENSGALT0000	Down syndrome cell adhesion mole	DSCAM	0.895524	233
ENSGALT0000	Down syndrome cell adhesion mole	DSCAML1	0.654318	121
ENSGALT0000	defective in sister chromatid cohesi	DSCC1	0.755669	523.5
ENSGALT0000	Down syndrome critical region gen	DSCR3	0.911993	943
ENSGALT0000	Down syndrome critical region gen	DSCR6	?	0
ENSGALT0000	dermatan sulfate epimerase	DSE	0.986384	959
ENSGALT0000	dermatan sulfate epimerase-like	DSEL	0.955383	652
ENSGALT0000	desmoglein 2	DSG2	0.878919	3962
ENSGALT0000	DSN1, MIND kinetochore complex	DSN1	0.933138	1088
ENSGALT0000	desmoplakin	DSP	0.953148	1662
ENSGALT0000	dystonin	DST	0.897543	5773.97
ENSGALT0000	destrin (actin depolymerizing factor	DSTN	0.888452	20476
ENSGALT0000	dual serine/threonine and tyrosine	DSTYK	0.989118	1035
ENSGALT0000	D-tyrosyl-tRNA deacylase 1 homol	DTD1	0.900987	958
ENSGALT0000	death domain containing 1	DTHD1	0.464758	0
ENSGALT0000	denticleless homolog (Drosophila)	DTL	0.88362	463
ENSGALT0000	dystrobrevin, alpha	DTNA	0.97545	1695.5
ENSGALT0000	hypothetical protein LOC421992	DTNB	0.908028	336.001
ENSGALT0000	dystrobrevin binding protein 1	DTNBP1	0.782624	876.501
ENSGALT0000	DTW domain containing 1	DTWD1	0.998844	235
ENSGALT0000	DTW domain containing 2	DTWD2	0.937992	212
ENSGALT0000	deltex homolog 2 (Drosophila)	DTX2	0.965041	755.5
ENSGALT0000	deltex 3-like (Drosophila)	DTX3L	0.989728	102
ENSGALT0000	deltex homolog 4 (Drosophila)	DTX4	0.871433	3978
ENSGALT0000	deoxythymidylate kinase (thymidyl	DTYMK	0.615035	1493.51
ENSGALT0000	dual oxidase 2	DUOX2	0.928231	7.5
ENSGALT0000	dual oxidase maturation factor 1	DUOXA1	0.862425	2.5
ENSGALT0000	dual specificity phosphatase and p	DUPD1	0.534404	1
ENSGALT0000	dihydrouridine synthase 1-like (S. c	DUS1L	0.89346	818.004
ENSGALT0000	dihydrouridine synthase 2-like, SMI	DUS2L	0.975075	540.5
ENSGALT0000	dihydrouridine synthase 3-like (S. c	DUS3L	0.889195	666
ENSGALT0000	dihydrouridine synthase 4-like (S. c	DUS4L	0.842324	228
ENSGALT0000	dual specificity phosphatase 1	DUSP1	0.812925	377.356
ENSGALT0000	dual specificity phosphatase 10	DUSP10	0.815685	255
ENSGALT0000	dual specificity phosphatase 11 (RI	DUSP11	0.981523	149.5
ENSGALT0000	dual specificity phosphatase 12	DUSP12	0.821424	588.5
ENSGALT0000	dual specificity phosphatase 13	DUSP13	0.853815	0.5
ENSGALT0000	dual specificity phosphatase 14	DUSP14	0.999588	913.5
ENSGALT0000	dual specificity phosphatase 15	DUSP15	0.920316	230
ENSGALT0000	dual specificity phosphatase 16	DUSP16	0.992092	460.5
ENSGALT0000	dual specificity phosphatase 18	DUSP18	0.858323	77

ENSGALT0000	dual specificity phosphatase 19	DUSP19	0.903017	739.5
ENSGALT0000	dual specificity phosphatase 22	DUSP22	0.923431	1217
ENSGALT0000	dual specificity phosphatase 26 (pu	DUSP26	0.305671	116.5
ENSGALT0000	dual specificity phosphatase 27 (pu	DUSP27	0.966946	16
ENSGALT0000	dual specificity phosphatase 28	DUSP28	0.525697	20
ENSGALT0000	dual specificity phosphatase 3	DUSP3	0.941965	262
ENSGALT0000	mitogen-activated protein kinase pl	DUSP4	0.906372	351.646
ENSGALT0000	dual specificity phosphatase 5	DUSP5	0.769192	100.5
ENSGALT0000	dual specificity phosphatase 6	DUSP6	0.728107	1106
ENSGALT0000	dual specificity phosphatase 7	DUSP7	0.90435	344.5
ENSGALT0000	dual specificity phosphatase 8	DUSP8	0.803802	951.5
ENSGALT0000	deoxyuridine triphosphatase	DUT	0.93958	2288.49
ENSGALT0000	dishevelled, dsh homolog 1 (Droso|	DVL1	0.952029	2090.98
ENSGALT0000	dishevelled, dsh homolog 3 (Droso|	DVL3	0.847216	3220
ENSGALT0000	DPY30 domain containing 1	DYDC1	0.772973	2.5
ENSGALT0000	dymeclin	DYM	0.946962	903.003
ENSGALT0000	dynein, cytoplasmic 1, heavy chain	DYNC1H1	0.944833	33697.1
ENSGALT0000	dynein, cytoplasmic 1, intermediate	DYNC1I1	0.605696	1692.5
ENSGALT0000	dynein, cytoplasmic 1, intermediate	DYNC1I2	0.913638	3884.88
ENSGALT0000	dynein, cytoplasmic 1, light interme	DYNC1LI1	0.862037	2138
ENSGALT0000	dynein, cytoplasmic 1, light interme	DYNC1LI2	0.907945	1285.81
ENSGALT0000	dynein, cytoplasmic 2, heavy chain	DYNC2H1	0.998281	2140
ENSGALT0000	dynein, cytoplasmic 2, light interme	DYNC2LI1	0.973561	397.5
ENSGALT0000	dynein, light chain, LC8-type 1	DYNLL1	0.118363	55.5
ENSGALT0000	dynein, light chain, LC8-type 2	DYNLL2	0.682408	1987
ENSGALT0000	dynein, light chain, roadblock-type	DYNLRB1	0.892682	2108.5
ENSGALT0000	dynein, light chain, roadblock-type :	DYNLRB2	0.98027	71.5
ENSGALT0000	dynein, light chain, Tctex-type 1	DYNLT1	0.408789	1353
ENSGALT0000	dynein, light chain, Tctex-type 3	DYNLT3	0.978675	164.5
ENSGALT0000	dual-specificity tyrosine-(Y)-phosph	DYRK1A	0.982779	936
ENSGALT0000	dual-specificity tyrosine-(Y)-phosph	DYRK2	0.992675	593.5
ENSGALT0000	dual-specificity tyrosine-(Y)-phosph	DYRK3	0.996421	893
ENSGALT0000	dysferlin, limb girdle muscular dystr	DYSF	0.929708	688.502
ENSGALT0000	dysferlin interacting protein 1	DYSFIP1	0.921631	9
ENSGALT0000	dyslexia susceptibility 1 candidate	DYX1C1	0.963967	206
ENSGALT0000	double zinc ribbon and ankyrin repe	DZANK1	0.993493	257
ENSGALT0000	DAZ interacting protein 1	DZIP1	0.999366	545.495
ENSGALT0000	DAZ interacting protein 1-like	DZIP1L	0.907006	20
ENSGALT0000	Uncharacterized protein	E1AP57_CHICK	0.895136	6
ENSGALT0000	Uncharacterized protein	E1BQH3_CHICK	0.969174	493
ENSGALT0000	Uncharacterized protein	E1BQH4_CHICK	0.818488	0.5
ENSGALT0000	Uncharacterized protein	E1BQJ6_CHICK	0.919857	852.5
ENSGALT0000	Uncharacterized protein	E1BQL4_CHICK	0.752655	7.5
ENSGALT0000	Uncharacterized protein	E1BQM6_CHICK	?	0
ENSGALT0000	Gap junction protein	E1BQP7_CHICK	0.882246	90
ENSGALT0000	Transporter	E1BQT4_CHICK	0.992268	17
ENSGALT0000	Uncharacterized protein	E1BQU9_CHICK	0.881285	2142.5
ENSGALT0000	Uncharacterized protein	E1BR36_CHICK	0.924816	2269.51
ENSGALT0000	Uncharacterized protein	E1BR72_CHICK	0.964327	520.5
ENSGALT0000	Uncharacterized protein	E1BRX3_CHICK	0.0503556	0
ENSGALT0000	Gap junction protein	E1BRZ1_CHICK	0.796599	1416.98
ENSGALT0000	Uncharacterized protein	E1BRZ3_CHICK	0.997834	228
ENSGALT0000	Uncharacterized protein	E1BRZ4_CHICK	0.464758	0
ENSGALT0000	Uncharacterized protein	E1BS07_CHICK	0.142427	0
ENSGALT0000	Uncharacterized protein	E1BS81_CHICK	0.89922	354
ENSGALT0000	Uncharacterized protein	E1BSM5_CHICK	0.98024	802

ENSGALT0000	Uncharacterized protein	E1BSV1_CHICK	0.985338	40.5
ENSGALT0000	Uncharacterized protein	E1BSX0_CHICK	0.717929	11
ENSGALT0000	Uncharacterized protein	E1BTK4_CHICK	0.876691	14
ENSGALT0000	Uncharacterized protein	E1BTQ0_CHICK	0.967054	1155
ENSGALT0000	Uncharacterized protein	E1BTX8_CHICK	0.962215	3671
ENSGALT0000	Serine/threonine-protein phosphata	E1BTX9_CHICK	0.965358	37
ENSGALT0000	Uncharacterized protein	E1BUA5_CHICK	0.949192	4.5
ENSGALT0000	Uncharacterized protein	E1BUB0_CHICK	0.925217	3837.12
ENSGALT0000	Uncharacterized protein	E1BUI1_CHICK	0.829248	32.5
ENSGALT0000	Uncharacterized protein	E1BUQ1_CHICK	0.783178	2
ENSGALT0000	Uncharacterized protein	E1BV19_CHICK	0.973215	12
ENSGALT0000	Uncharacterized protein	E1BVC9_CHICK	?	0
ENSGALT0000	Uncharacterized protein	E1BVF5_CHICK	0.928697	537
ENSGALT0000	Uncharacterized protein	E1BVR7_CHICK	0.841456	3461
ENSGALT0000	Uncharacterized protein	E1BVY3_CHICK	0.622055	6
ENSGALT0000	Uncharacterized protein	E1BW57_CHICK	0.992345	151.745
ENSGALT0000	Uncharacterized protein	E1BW80_CHICK	0.98855	13
ENSGALT0000	Potassium voltage-gated channel s	E1BWC7_CHICK	0.880776	6.5
ENSGALT0000	Uncharacterized protein	E1BWJ9_CHICK	0.999864	918.5
ENSGALT0000	Uncharacterized protein	E1BWP2_CHICK	0.730382	21.5
ENSGALT0000	Uncharacterized protein	E1BWY5_CHICK	0.771232	11.5
ENSGALT0000	Uncharacterized protein	E1BX41_CHICK	0.956019	468.5
ENSGALT0000	Uncharacterized protein	E1BX72_CHICK	0.559737	7.5
ENSGALT0000	Uncharacterized protein	E1BX90_CHICK	0.909701	505.5
ENSGALT0000	Uncharacterized protein	E1BXF2_CHICK	0.800996	156.584
ENSGALT0000	Uncharacterized protein	E1BXM0_CHICK	0.908343	42
ENSGALT0000	Uncharacterized protein	E1BXV5_CHICK	0.790502	14.3463
ENSGALT0000	Uncharacterized protein	E1BY32_CHICK	0.780657	2.5
ENSGALT0000	Uncharacterized protein	E1BY69_CHICK	0.624337	453
ENSGALT0000	Uncharacterized protein	E1BYP1_CHICK	0.971822	1581.03
ENSGALT0000	Uncharacterized protein	E1BZ58_CHICK	0.854832	70.5
ENSGALT0000	Uncharacterized protein	E1BZ79_CHICK	0.782052	2386.5
ENSGALT0000	Uncharacterized protein	E1BZ84_CHICK	0.867112	44.5
ENSGALT0000	Uncharacterized protein	E1BZE8_CHICK	0.497671	120.5
ENSGALT0000	Uncharacterized protein	E1BZG4_CHICK	0.92393	23181.5
ENSGALT0000	Uncharacterized protein	E1BZP0_CHICK	0.930865	766.543
ENSGALT0000	Uncharacterized protein	E1BZP4_CHICK	0.867162	4.5
ENSGALT0000	Gap junction protein	E1BZR3_CHICK	0.464758	0
ENSGALT0000	Uncharacterized protein	E1BZR5_CHICK	0.950799	981
ENSGALT0000	Uncharacterized protein	E1BZY5_CHICK	0.936576	168
ENSGALT0000	Uncharacterized protein	E1BZZ9_CHICK	0.316534	336.579
ENSGALT0000	Ribosomal protein S27	E1C075_CHICK	0.643968	14671
ENSGALT0000	Uncharacterized protein	E1C0A1_CHICK	?	0
ENSGALT0000	Uncharacterized protein	E1C0B4_CHICK	0.649519	3
ENSGALT0000	Uncharacterized protein	E1C0F9_CHICK	?	0
ENSGALT0000	Uncharacterized protein	E1C0U5_CHICK	0.467819	4.5
ENSGALT0000	Uncharacterized protein	E1C105_CHICK	0.930721	40.5
ENSGALT0000	Uncharacterized protein	E1C120_CHICK	0.802638	272
ENSGALT0000	Uncharacterized protein	E1C162_CHICK	0.0478539	2.97926
ENSGALT0000	Uncharacterized protein	E1C182_CHICK	0.990287	655.5
ENSGALT0000	Uncharacterized protein	E1C1F8_CHICK	0.978806	328
ENSGALT0000	hypothetical protein LOC429283	E1C1N2_CHICK	0.501673	51.1144
ENSGALT0000	Uncharacterized protein	E1C202_CHICK	0.496193	827.5
ENSGALT0000	Uncharacterized protein	E1C2D6_CHICK	0.551968	1142.99
ENSGALT0000	Gap junction protein	E1C2J9_CHICK	0.998646	824.958
ENSGALT0000	Uncharacterized protein	E1C2K1_CHICK	0.667377	31.5

ENSGALT0000 Uncharacterized protein	E1C2N1_CHICK	0.904287	1122
ENSGALT0000 Uncharacterized protein	E1C379_CHICK	0.917835	2
ENSGALT0000 Uncharacterized protein	E1C3D1_CHICK	0.769075	353.5
ENSGALT0000 Uncharacterized protein	E1C3P8_CHICK	0.951408	320
ENSGALT0000 Uncharacterized protein	E1C3T9_CHICK	0.730178	11.5137
ENSGALT0000 Uncharacterized protein	E1C472_CHICK	0.997194	399
ENSGALT0000 Uncharacterized protein	E1C4B7_CHICK	0.59011	2
ENSGALT0000 Uncharacterized protein	E1C4G2_CHICK	0.988525	1610.5
ENSGALT0000 Uncharacterized protein	E1C4J3_CHICK	0.39733	3
ENSGALT0000 Uncharacterized protein	E1C4L1_CHICK	0.912779	147
ENSGALT0000 Uncharacterized protein	E1C4Q6_CHICK	0.0602016	321.12
ENSGALT0000 Uncharacterized protein	E1C4R3_CHICK	0.721726	238.167
ENSGALT0000 Potassium voltage-gated channel s	E1C564_CHICK	0.485881	10
ENSGALT0000 Uncharacterized protein	E1C5F0_CHICK	0.898356	2
ENSGALT0000 Uncharacterized protein	E1C5Q0_CHICK	0.994576	56
ENSGALT0000 Uncharacterized protein	E1C5R5_CHICK	0.973597	256
ENSGALT0000 Metallothionein	E1C5U7_CHICK	0.201893	85
ENSGALT0000 Uncharacterized protein	E1C5X9_CHICK	0.652372	1510
ENSGALT0000 Uncharacterized protein	E1C5Y2_CHICK	0.675555	17.3914
ENSGALT0000 Uncharacterized protein	E1C639_CHICK	0.898356	1
ENSGALT0000 Uncharacterized protein	E1C693_CHICK	0.787185	12.5
ENSGALT0000 Uncharacterized protein	E1C6C8_CHICK	0.424571	3.5
ENSGALT0000 DNA-directed RNA polymerase sub	E1C6D4_CHICK	0.50461	877
ENSGALT0000 Uncharacterized protein	E1C6D8_CHICK	0.963913	227.5
ENSGALT0000 Uncharacterized protein	E1C6E9_CHICK	0.740073	0.5
ENSGALT0000 Uncharacterized protein	E1C6K1_CHICK	0.979798	3.5
ENSGALT0000 Malic enzyme	E1C740_CHICK	0.840261	1215
ENSGALT0000 Uncharacterized protein	E1C744_CHICK	0.825324	329
ENSGALT0000 Uncharacterized protein	E1C779_CHICK	0.848255	19
ENSGALT0000 DNA-directed RNA polymerase	E1C7P0_CHICK	0.910678	106.5
ENSGALT0000 Gap junction protein	E1C7P9_CHICK	0.927729	1
ENSGALT0000 Uncharacterized protein	E1C7Q7_CHICK	0.842052	77
ENSGALT0000 Uncharacterized protein	E1C7Z8_CHICK	0.987834	54
ENSGALT0000 Uncharacterized protein	E1C8A0_CHICK	0.874236	135
ENSGALT0000 Uncharacterized protein	E1C8F2_CHICK	0.984273	4.5
ENSGALT0000 Uncharacterized protein	E1C8I0_CHICK	0.562993	1.5
ENSGALT0000 Transporter	E1C8K0_CHICK	0.661268	159
ENSGALT0000 Uncharacterized protein	E1C8X7_CHICK	0.982594	5052.75
ENSGALT0000 Uncharacterized protein	E1C8X8_CHICK	0.69334	8.07526
ENSGALT0000 Uncharacterized protein	E1C8Z8_CHICK	0.778337	1529.5
ENSGALT0000 Integrin beta	E1C9G7_CHICK	0.628851	617.5
ENSGALT0000 Uncharacterized protein	E1C9K4_CHICK	0.472763	0
ENSGALT0000 E2F transcription factor 1	E2F1	0.926695	335
ENSGALT0000 E2F transcription factor 3	E2F3	0.973262	265.5
ENSGALT0000 transcription factor E2F4	E2F4	0.827755	2768.27
ENSGALT0000 E2F transcription factor 5, p130-bir	E2F5	0.992482	671.213
ENSGALT0000 E2F transcription factor 6	E2F6	0.907881	665.999
ENSGALT0000 E2F transcription factor 7	E2F7	0.888942	447.5
ENSGALT0000 E2F transcription factor 8	E2F8	0.961085	488
ENSGALT0000 Uncharacterized protein	E2GHT0_CHICK	0.482185	1
ENSGALT0000 E4F transcription factor 1	E4F1	0.945283	889.5
ENSGALT0000 ELL associated factor 1	EAF1	0.878726	175.5
ENSGALT0000 ELL associated factor 2	EAF2	0.948366	263.484
ENSGALT0000 E2F-associated phosphoprotein	EAPP	0.914046	708.5
ENSGALT0000 glutamyl-tRNA synthetase 2, mitoch	EARS2	0.848042	442.5
ENSGALT0000 estrogen receptor binding site asso	EBAG9	0.911787	773.503

ENSGALT0000	early B-cell factor 1	EBF1	0.803934	1211.51
ENSGALT0000	early B-cell factor 2	EBF2	0.567177	50
ENSGALT0000	early B-cell factor 3	EBF3	0.91391	367
ENSGALT0000	EBNA1 binding protein 2	EBNA1BP2	0.854142	1818
ENSGALT0000	ecdysoneless homolog (Drosophila	ECD	0.923805	883.5
ENSGALT0000	endothelin converting enzyme 2	ECE2	0.70666	78.5
ENSGALT0000	endothelin converting enzyme-like	ECEL1	0.681622	54
ENSGALT0000	enoyl CoA hydratase domain conta	ECHDC1	0.961995	136
ENSGALT0000	enoyl CoA hydratase domain conta	ECHDC2	0.879252	475.5
ENSGALT0000	enoyl CoA hydratase domain conta	ECHDC3	0.940029	720
ENSGALT0000	enoyl-CoA delta isomerase 1	ECI1	0.818258	2353.01
ENSGALT0000	enoyl-CoA delta isomerase 2	ECI2	0.967465	747
ENSGALT0000	extracellular matrix protein 2, femal	ECM2	0.990608	171.5
ENSGALT0000	epithelial cell transforming sequenc	ECT2	0.935398	707.5
ENSGALT0000	ectodysplasin A	EDA	0.953822	269
ENSGALT0000	ectodysplasin A2 receptor	EDA2R	0.986368	100
ENSGALT0000	ectodysplasin A receptor	EDAR	0.440513	2.5
ENSGALT0000	EDAR-associated death domain	EDARADD	0.986115	423.5
ENSGALT0000	enhancer of mRNA decapping 3 ho	EDC3	0.983285	1465
ENSGALT0000	enhancer of mRNA decapping 4	EDC4	0.927258	3646.5
ENSGALT0000	ER degradation enhancer, mannos	EDEM1	0.990811	627.5
ENSGALT0000	ER degradation enhancer, mannos	EDEM2	0.989552	1006
ENSGALT0000	ER degradation enhancer, mannos	EDEM3	0.979441	861.5
ENSGALT0000	endothelial differentiation-related fa	EDF1	0.543765	4301.5
ENSGALT0000	EGF-like repeats and discoidin I-lik	EDIL3	0.861622	665
ENSGALT0000	endothelin 1	EDN1	0.942317	11
ENSGALT0000	endothelin 2	EDN2	0.525311	9
ENSGALT0000	endothelin 3	EDN3	0.968834	61
ENSGALT0000	endothelin receptor type A	EDNRA	0.833536	687
ENSGALT0000	endothelin receptor type B	EDNRB	0.585442	841
ENSGALT0000	endothelin receptor B subtype 2	EDNRB2	0.731137	185.5
ENSGALT0000	early endosome antigen 1	EEA1	0.966365	896
ENSGALT0000	embryonic ectoderm development	EED	0.965547	516.998
ENSGALT0000	eukaryotic translation elongation fa	EEF1A1	0.776827	307220
ENSGALT0000	eukaryotic translation elongation fa	EEF1A2	0.625392	13320.6
ENSGALT0000	eukaryotic translation elongation fa	EEF1B2	0.860069	18777.5
ENSGALT0000	eukaryotic translation elongation fa	EEF1E1	0.939496	927
ENSGALT0000	eukaryotic translation elongation fa	EEF2	0.893981	147517
ENSGALT0000	eukaryotic elongation factor-2 kinas	EEF2K	0.975768	894
ENSGALT0000	eukaryotic elongation factor, selenc	EEFSEC	0.98169	666.5
ENSGALT0000	endonuclease/exonuclease/phosph	EEPD1	0.704737	415
ENSGALT0000	EF-hand calcium binding domain 1	EFCAB1	0.776693	62.4862
ENSGALT0000	EF-hand calcium binding domain 1	EFCAB11	0.941526	54.5
ENSGALT0000	EF-hand calcium binding domain 2	EFCAB2	0.915804	38.5
ENSGALT0000	EF-hand calcium binding domain 4	EFCAB4A	0.993531	179
ENSGALT0000	EF-hand calcium binding domain 5	EFCAB5	0.989529	495.5
ENSGALT0000	EF-hand calcium binding domain 6	EFCAB6	0.416726	91.5
ENSGALT0000	EF-hand calcium binding domain 7	EFCAB7	0.995363	204
ENSGALT0000	EGF containing fibulin-like extracell	EFEMP1	0.710232	400
ENSGALT0000	EF-hand domain family, member A	EFHA1	0.993652	478
ENSGALT0000	EF-hand domain family, member A	EFHA2	0.963637	887.5
ENSGALT0000	EF-hand domain family, member B	EFHB	0.562993	1.5
ENSGALT0000	EF-hand domain (C-terminal) conta	EFHC1	0.986551	98.4999
ENSGALT0000	EF-hand domain (C-terminal) conta	EFHC2	0.985767	78
ENSGALT0000	EF-hand domain family, member D	EFHD1	0.700019	638.119
ENSGALT0000	EF-hand domain family, member D	EFHD2	0.585354	1267.38

ENSGALT0000	ephrin-A5	EFNA5	0.734774	62
ENSGALT0000	ephrin-B1	EFNB1	0.981683	4735.35
ENSGALT0000	ephrin-B2	EFNB2	0.904649	1052.01
ENSGALT0000	EFR3 homolog A (S. cerevisiae)	EFR3A	0.829772	3300.5
ENSGALT0000	EFR3 homolog B (S. cerevisiae)	EFR3B	0.788551	479
ENSGALT0000	elongation factor Tu GTP binding d	EFTUD1	0.973353	1269.98
ENSGALT0000	elongation factor Tu GTP binding d	EFTUD2	0.845714	7540.89
ENSGALT0000	epidermal growth factor	EGF	0.579739	28
ENSGALT0000	EGF-like-domain, multiple 6	EGFL6	0.955631	726.5
ENSGALT0000	EGF-like-domain, multiple 7	EGFL7	0.916288	985
ENSGALT0000	EGF-like, fibronectin type III and la	EGFLAM	0.786493	959
ENSGALT0000	epidermal growth factor receptor	EGFR	0.998485	3565.52
ENSGALT0000	egl nine homolog 1 (C. elegans)	EGLN1	0.984377	1303.52
ENSGALT0000	egl nine homolog 3 (C. elegans)	EGLN3	0.613445	136
ENSGALT0000	early growth response 1	EGR1	0.890941	219
ENSGALT0000	early growth response 4	EGR4	0.642448	7
ENSGALT0000	EH domain binding protein 1	EHBP1	0.919555	2701.5
ENSGALT0000	EH-domain containing 3	EHD3	0.95172	6346
ENSGALT0000	EH-domain containing 4	EHD4	0.939979	281
ENSGALT0000	ets homologous factor	EHF	0.916387	11
ENSGALT0000	enoyl-CoA, hydratase/3-hydroxyacy	EHHADH	0.991322	318.5
ENSGALT0000	euchromatic histone-lysine N-meth	EHMT1	0.969885	6419.47
ENSGALT0000	etoposide induced 2.4 mRNA	EI24	0.890799	3739
ENSGALT0000	eukaryotic translation initiation fact	EIF1	0.757709	6185.13
ENSGALT0000	eukaryotic translation initiation fact	EIF1AY	0.821031	2721.52
ENSGALT0000	eukaryotic translation initiation fact	EIF1B	0.961222	1212
ENSGALT0000	eukaryotic translation initiation fact	EIF2A	0.901145	1232.51
ENSGALT0000	eukaryotic translation initiation fact	EIF2AK1	0.977613	1342.99
ENSGALT0000	eukaryotic translation initiation fact	EIF2AK2	0.967755	332.5
ENSGALT0000	eukaryotic translation initiation fact	EIF2AK3	0.990552	825.5
ENSGALT0000	eukaryotic translation initiation fact	EIF2B2	0.702702	2655
ENSGALT0000	eukaryotic translation initiation fact	EIF2B3	0.83221	1178.01
ENSGALT0000	eukaryotic translation initiation fact	EIF2B4	0.863102	1779
ENSGALT0000	eukaryotic translation initiation fact	EIF2B5	0.893537	1359.5
ENSGALT0000	eukaryotic translation initiation fact	EIF2C1	0.967486	3243.11
ENSGALT0000	eukaryotic translation initiation fact	EIF2C2	0.986758	451
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ENSGALT0000	eukaryotic translation initiation fact	EIF2C4	0.996658	3909.13
ENSGALT0000	eukaryotic translation initiation fact	EIF2S1	0.83537	3242
ENSGALT0000	eukaryotic translation initiation fact	EIF2S2	0.521228	1892.98
ENSGALT0000	eukaryotic translation initiation fact	EIF2S3	0.89219	8602.5
ENSGALT0000	eukaryotic translation initiation fact	EIF3A	0.960425	10260.9
ENSGALT0000	eukaryotic translation initiation fact	EIF3D	0.912285	9636.26
ENSGALT0000	eukaryotic translation initiation fact	EIF3E	0.889266	9992.5
ENSGALT0000	eukaryotic translation initiation fact	EIF3F	0.69086	7976
ENSGALT0000	eukaryotic translation initiation fact	EIF3H	0.782588	8134.5
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ENSGALT0000	eukaryotic translation initiation fact	EIF4E3	0.96346	202
ENSGALT0000	eukaryotic translation initiation fact	EIF4EBP1	0.369683	4388

ENSGALT0000	eukaryotic translation initiation fact(	EIF4EBP2	0.460112	596
ENSGALT0000	eukaryotic translation initiation fact(	EIF4ENIF1	0.970534	1014.49
ENSGALT0000	eukaryotic translation initiation fact(	EIF4G1	0.961686	9019.5
ENSGALT0000	eukaryotic translation initiation fact(	EIF4G2	0.939957	44643
ENSGALT0000	eukaryotic translation initiation fact(	EIF4G3	0.973837	6660
ENSGALT0000	eukaryotic translation initiation fact(	EIF4H	0.934729	6533.45
ENSGALT0000	eukaryotic translation initiation fact(	EIF5	0.951201	8284.1
ENSGALT0000	eukaryotic translation initiation fact(	EIF5A2	0.827283	4508.53
ENSGALT0000	eukaryotic translation initiation fact(	EIF5B	0.947998	2654.48
ENSGALT0000	eukaryotic translation initiation fact(	EIF6	0.84358	3628.57
ENSGALT0000	elaC homolog 2 (E. coli)	ELAC2	0.92083	961.5
ENSGALT0000	ELAV (embryonic lethal, abnormal	ELAVL1	0.950965	2936.5
ENSGALT0000	ELAV (embryonic lethal, abnormal	ELAVL2	0.757897	166.5
ENSGALT0000	ELAV (embryonic lethal, abnormal	ELAVL4	0.663286	3236
ENSGALT0000	E74-like factor 1 (ets domain transc	ELF1	0.977507	625.002
ENSGALT0000	E74-like factor 2 (ets domain transc	ELF2	0.970579	1811
ENSGALT0000	E74-like factor 3 (ets domain transc	ELF3	0.994906	180.5
ENSGALT0000	E74-like factor 5 (ets domain transc	ELF5	0.494877	1378.5
ENSGALT0000	extracellular leucine-rich repeat an(	ELFN1	0.910356	323.5
ENSGALT0000	extracellular leucine-rich repeat an(	ELFN2	0.738338	18.5
ENSGALT0000	ELK3, ETS-domain protein (SRF a(	ELK3	0.804596	1852
ENSGALT0000	ELK4, ETS-domain protein (SRF a(	ELK4	0.949385	243.5
ENSGALT0000	elongation factor RNA polymerase	ELL	0.972247	1402
ENSGALT0000	elongation factor, RNA polymerase	ELL2	0.999868	136
ENSGALT0000	engulfment and cell motility 1	ELMO1	0.685353	584.501
ENSGALT0000	engulfment and cell motility 2	ELMO2	0.935943	4489.99
ENSGALT0000	engulfment and cell motility 3	ELMO3	0.969029	581.5
ENSGALT0000	ELMO/CED-12 domain containing	ELMOD1	0.994754	994
ENSGALT0000	ELMO/CED-12 domain containing	ELMOD2	0.947582	2038.5
ENSGALT0000	elastin	ELN	0.911666	1116.5
ENSGALT0000	ELOVL fatty acid elongase 1	ELOVL1	0.988481	2541.5
ENSGALT0000	ELOVL fatty acid elongase 2	ELOVL2	0.702221	38
ENSGALT0000	ELOVL fatty acid elongase 3	ELOVL3	0.261655	2
ENSGALT0000	ELOVL fatty acid elongase 4	ELOVL4	0.958477	572
ENSGALT0000	ELOVL fatty acid elongase 5	ELOVL5	0.763181	778
ENSGALT0000	ELOVL fatty acid elongase 6	ELOVL6	0.945077	289
ENSGALT0000	ELOVL fatty acid elongase 7	ELOVL7	0.935275	82.5
ENSGALT0000	elongation protein 2 homolog (S. c(	ELP2	0.894243	472
ENSGALT0000	elongation protein 3 homolog (S. c(	ELP3	0.889464	1017.5
ENSGALT0000	elongation protein 4 homolog (S. c(	ELP4	0.931374	411
ENSGALT0000	EGF, latrophilin and seven transme	ELTD1	0.82594	87.5
ENSGALT0000	embigin homolog (mouse)	EMB	0.884802	602.997
ENSGALT0000	essential meiotic endonuclease 1 h	EME1	0.928546	485
ENSGALT0000	essential meiotic endonuclease 1 h	EME2	0.948956	342.5
ENSGALT0000	EMG1 nucleolar protein homolog (§	EMG1	0.566527	616
ENSGALT0000	EMI domain containing 1	EMID1	0.953158	902
ENSGALT0000	elastin microfibril interfacer 2	EMILIN2	0.982666	1002.5
ENSGALT0000	elastin microfibril interfacer 3	EMILIN3	0.628141	571.5
ENSGALT0000	echinoderm microtubule associated	EML1	0.908473	2838.5
ENSGALT0000	echinoderm microtubule associated	EML4	0.993864	2767.06
ENSGALT0000	echinoderm microtubule associated	EML5	0.830035	87
ENSGALT0000	echinoderm microtubule associated	EML6	0.925712	176
ENSGALT0000	epithelial membrane protein 1	EMP1	0.959133	60.5
ENSGALT0000	epithelial membrane protein 2	EMP2	0.965659	200.5
ENSGALT0000	empty spiracles homeobox 2	EMX2	0.844766	3174.5
ENSGALT0000	enabled homolog (Drosophila)	ENAH	0.985977	4267.6

ENSGALT0000	ectodermal-neural cortex 1 (with B	ENC1	0.632053	462
ENSGALT0000	endonuclease domain containing 1	ENDOD1	0.932072	107
ENSGALT0000	endonuclease G	ENDOG	0.773673	989
ENSGALT0000	endonuclease, polyU-specific	ENDOU	0.639801	1
ENSGALT0000	endonuclease V	ENDOV	0.864987	475.238
ENSGALT0000	endoglin	ENG	0.898284	500
ENSGALT0000	endo-beta-N-acetylglucosaminidas	ENGASE	0.754256	372.5
ENSGALT0000	enkurin, TRPC channel interacting	ENKUR	0.755423	154.5
ENSGALT0000	enolase 1, (alpha)	ENO1	0.972604	61358.5
ENSGALT0000	enolase 2 (gamma, neuronal)	ENO2	0.736573	171.5
ENSGALT0000	enolase family member 4	ENO4	0.97502	139
ENSGALT0000	enolase-phosphatase 1	ENOPH1	0.734483	2353
ENSGALT0000	ecto-NOX disulfide-thiol exchanger	ENOX1	0.738347	312.5
ENSGALT0000	ecto-NOX disulfide-thiol exchanger	ENOX2	0.977083	1061
ENSGALT0000	glutamyl aminopeptidase (aminope	ENPEP	0.651023	26
ENSGALT0000	ectonucleotide pyrophosphatase/pl	ENPP1	0.995138	516
ENSGALT0000	ectonucleotide pyrophosphatase/pl	ENPP2	0.646894	65.5
ENSGALT0000	ectonucleotide pyrophosphatase/pl	ENPP3	0.98151	10
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ENSGALT0000	\N	ENSGALG000000000	0.935715	252.862
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ENSGALT0000	\N	ENSGALG000000000	0.996355	104.702
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ENSGALT0000	Uncharacterized protein	ENSGALG000000001	0.856697	6.11765
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ENSGALT0000	Uncharacterized protein	ENSGALG000000002	0.818488	0.5
ENSGALT0000	Uncharacterized protein	ENSGALG000000002	0.303206	4

ENSGALT0000	Uncharacterized protein	ENSGALG000000002	0.974256	59.5
ENSGALT0000	\N	ENSGALG000000002	0.566463	2.7031
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ENSGALT0000	Uncharacterized protein	ENSGALG000000002	0.992292	236.94
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ENSGALT0000	Uncharacterized protein	ENSGALG000000014	0.542743	1
ENSGALT0000	Uncharacterized protein	ENSGALG000000015	0.972432	654
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ENSGALT0000	\N	ENSGALG000000015	0.998193	69.2011

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ENSGALT0000	Uncharacterized protein	ENSGALG0000000017	0.924584	13.5
ENSGALT0000	ATP synthase subunit alphaUnchar	ENSGALG0000000017	0.742167	2076.91
ENSGALT0000	Uncharacterized protein	ENSGALG0000000017	0.722096	0.5
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ENSGALT0000	Uncharacterized protein	ENSGALG0000000018	0.696884	182.313
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ENSGALT0000	Uncharacterized protein	ENSGALG0000000021	0.97295	122
ENSGALT0000	Uncharacterized protein	ENSGALG0000000022	0.96608	886
ENSGALT0000	Uncharacterized protein	ENSGALG0000000022	?	0
ENSGALT0000	Uncharacterized protein	ENSGALG0000000022	0.943934	1
ENSGALT0000	\N	ENSGALG0000000022	?	0
ENSGALT0000	Uncharacterized protein	ENSGALG0000000022	0.602271	99
ENSGALT0000	Uncharacterized protein	ENSGALG0000000022	0.615447	16
ENSGALT0000	Uncharacterized protein	ENSGALG0000000023	0.990444	97.5151
ENSGALT0000	Uncharacterized protein	ENSGALG0000000023	0.666144	3171.5
ENSGALT0000	\N	ENSGALG0000000023	0.999751	263
ENSGALT0000	Uncharacterized protein	ENSGALG0000000023	0.955418	522
ENSGALT0000	Uncharacterized protein	ENSGALG0000000024	0.977343	788
ENSGALT0000	Uncharacterized protein	ENSGALG0000000024	0.738992	39
ENSGALT0000	Uncharacterized protein	ENSGALG0000000024	0.98212	0.55289
ENSGALT0000	Uncharacterized protein	ENSGALG0000000024	0.864678	4.29245
ENSGALT0000	Uncharacterized protein	ENSGALG0000000024	0.929757	53.1567
ENSGALT0000	Uncharacterized protein	ENSGALG0000000024	0.976552	297.5
ENSGALT0000	Uncharacterized protein	ENSGALG0000000025	0.952315	89.5
ENSGALT0000	Uncharacterized protein	ENSGALG0000000025	0.382218	22.183
ENSGALT0000	Uncharacterized protein	ENSGALG0000000025	0.860996	2134
ENSGALT0000	Uncharacterized protein	ENSGALG0000000025	0.112064	497

ENSGALT0000	Uncharacterized protein	ENSGALG000000025	0.464758	0
ENSGALT0000	Uncharacterized protein	ENSGALG000000025	0.958126	182
ENSGALT0000	Uncharacterized protein	ENSGALG000000025	0.9994	123.135
ENSGALT0000	Uncharacterized protein	ENSGALG000000025	0.932317	147.5
ENSGALT0000	Uncharacterized protein	ENSGALG000000025	0.984866	74.7287
ENSGALT0000	C-type lectin	ENSGALG000000026	0.659073	76.0285
ENSGALT0000	Uncharacterized protein	ENSGALG000000026	0.824484	1011
ENSGALT0000	Uncharacterized protein	ENSGALG000000026	0.853815	0.5
ENSGALT0000	\N	ENSGALG000000026	0.679716	233.5
ENSGALT0000	Uncharacterized protein	ENSGALG000000026	0.925643	164
ENSGALT0000	\N	ENSGALG000000027	0.755485	377
ENSGALT0000	Uncharacterized protein	ENSGALG000000027	0.988246	76
ENSGALT0000	Uncharacterized protein	ENSGALG000000027	0.843011	52
ENSGALT0000	Uncharacterized protein	ENSGALG000000027	0.978992	48.5
ENSGALT0000	Uncharacterized protein	ENSGALG000000027	0.862425	3.5
ENSGALT0000	Uncharacterized protein	ENSGALG000000027	0.964578	939.5
ENSGALT0000	Uncharacterized protein	ENSGALG000000027	0.875676	92.5
ENSGALT0000	Uncharacterized protein	ENSGALG000000027	0.760075	33
ENSGALT0000	\N	ENSGALG000000028	0.697576	7.10014
ENSGALT0000	Uncharacterized protein	ENSGALG000000028	0.940053	10.5
ENSGALT0000	\N	ENSGALG000000028	0.950605	29.4433
ENSGALT0000	Uncharacterized protein	ENSGALG000000028	?	0
ENSGALT0000	Uncharacterized protein	ENSGALG000000028	0.932023	1469.04
ENSGALT0000	Uncharacterized protein	ENSGALG000000028	0.865676	92
ENSGALT0000	\N	ENSGALG000000028	0.767851	38.6573
ENSGALT0000	\N	ENSGALG000000028	0.986751	1128.5
ENSGALT0000	Uncharacterized protein	ENSGALG000000028	0.972561	398.412
ENSGALT0000	Uncharacterized protein	ENSGALG000000029	0.801609	458.498
ENSGALT0000	\N	ENSGALG000000029	0.848102	2.18349
ENSGALT0000	Uncharacterized protein	ENSGALG000000029	0.88188	112.496
ENSGALT0000	Uncharacterized protein	ENSGALG000000029	0.924927	14
ENSGALT0000	\N	ENSGALG000000029	0.780657	1.5
ENSGALT0000	\N	ENSGALG000000029	0.822475	189.835
ENSGALT0000	Uncharacterized protein	ENSGALG000000030	0.63233	63.5975
ENSGALT0000	\N	ENSGALG000000030	0.995	61
ENSGALT0000	\N	ENSGALG000000030	0.913385	184.807
ENSGALT0000	\N	ENSGALG000000030	0.938262	1059.88
ENSGALT0000	\N	ENSGALG000000030	0.619466	3.4774
ENSGALT0000	Uncharacterized protein	ENSGALG000000030	0.909531	198.5
ENSGALT0000	Uncharacterized protein	ENSGALG000000030	0.734344	2.5
ENSGALT0000	Uncharacterized protein	ENSGALG000000030	0.963491	33
ENSGALT0000	\N	ENSGALG000000030	0.889863	4.68817
ENSGALT0000	\N	ENSGALG000000030	0.951018	336.5
ENSGALT0000	Uncharacterized protein	ENSGALG0000000031	0.586223	2
ENSGALT0000	Uncharacterized protein	ENSGALG0000000031	0.947766	2771
ENSGALT0000	\N	ENSGALG0000000031	0.948082	288.034
ENSGALT0000	\N	ENSGALG0000000031	0.680829	14
ENSGALT0000	Uncharacterized protein	ENSGALG0000000031	0.603682	0.5
ENSGALT0000	Uncharacterized protein	ENSGALG0000000031	0.812	4.5
ENSGALT0000	Uncharacterized protein	ENSGALG0000000031	0.994548	133.5
ENSGALT0000	Uncharacterized protein	ENSGALG0000000031	0.603682	0
ENSGALT0000	Uncharacterized protein	ENSGALG0000000031	0.876088	1.5
ENSGALT0000	Uncharacterized protein	ENSGALG000000032	0.991495	397
ENSGALT0000	\N	ENSGALG000000032	?	3.55E-25
ENSGALT0000	Uncharacterized protein	ENSGALG000000032	0.902085	2250
ENSGALT0000	Uncharacterized protein	ENSGALG000000032	0.977866	86

ENSGALT0000	\N	ENSGALG000000032	0.849586	126.5
ENSGALT0000	Uncharacterized protein	ENSGALG000000032	0.464758	0.5
ENSGALT0000	Uncharacterized protein	ENSGALG000000032	0.949058	9194.74
ENSGALT0000	\N	ENSGALG000000033	0.464758	1
ENSGALT0000	\N	ENSGALG000000033	0.827999	778.5
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ENSGALT0000	\N	ENSGALG000000033	0.98479	88.3009
ENSGALT0000	\N	ENSGALG000000033	0.464758	0
ENSGALT0000	\N	ENSGALG000000033	0.817958	69.152
ENSGALT0000	\N	ENSGALG000000033	0.959636	219
ENSGALT0000	Uncharacterized protein	ENSGALG000000034	0.99187	24
ENSGALT0000	Uncharacterized protein	ENSGALG000000034	0.984669	138.5
ENSGALT0000	Uncharacterized protein	ENSGALG000000034	0.848662	198.5
ENSGALT0000	Uncharacterized protein	ENSGALG000000034	0.123783	1443.5
ENSGALT0000	Uncharacterized protein	ENSGALG000000034	0.823894	24.5
ENSGALT0000	Uncharacterized protein	ENSGALG000000034	0.949981	142.5
ENSGALT0000	\N	ENSGALG000000034	0.944447	5354.99
ENSGALT0000	Uncharacterized protein	ENSGALG000000034	0.826166	14
ENSGALT0000	Uncharacterized protein	ENSGALG000000034	0.464758	0
ENSGALT0000	Uncharacterized protein	ENSGALG000000035	0.852983	7.5
ENSGALT0000	\N	ENSGALG000000035	0.933784	10.0404
ENSGALT0000	Uncharacterized protein	ENSGALG000000035	0.981276	1763.97
ENSGALT0000	Uncharacterized protein	ENSGALG000000035	0.596053	1738.5
ENSGALT0000	Uncharacterized protein	ENSGALG000000035	0.673533	5.5
ENSGALT0000	Uncharacterized protein	ENSGALG000000036	0.373857	27.5
ENSGALT0000	Uncharacterized protein	ENSGALG000000036	0.813275	7.5
ENSGALT0000	Uncharacterized protein	ENSGALG000000036	0.998726	270.5
ENSGALT0000	Uncharacterized protein	ENSGALG000000036	0.978953	188.5
ENSGALT0000	Uncharacterized protein	ENSGALG000000036	0.948028	290.5
ENSGALT0000	Uncharacterized protein	ENSGALG000000036	0.771164	89.5
ENSGALT0000	Uncharacterized protein	ENSGALG000000036	0.392103	2
ENSGALT0000	Uncharacterized protein	ENSGALG000000036	0.705754	298.5
ENSGALT0000	Uncharacterized protein	ENSGALG000000036	0.937839	25.5
ENSGALT0000	Uncharacterized protein	ENSGALG000000036	0.964692	554.116
ENSGALT0000	Uncharacterized protein	ENSGALG000000036	0.960915	2.5
ENSGALT0000	Uncharacterized protein	ENSGALG000000036	0.972532	5
ENSGALT0000	Uncharacterized protein	ENSGALG000000036	0.804859	1366
ENSGALT0000	Uncharacterized protein	ENSGALG000000036	0.862433	14.8301
ENSGALT0000	Uncharacterized protein	ENSGALG000000036	0.88772	1211
ENSGALT0000	Uncharacterized protein	ENSGALG000000037	0.972687	198
ENSGALT0000	\N	ENSGALG000000037	0.978949	22.3013
ENSGALT0000	\N	ENSGALG000000038	0.917109	264
ENSGALT0000	Uncharacterized protein	ENSGALG000000038	0.942967	67.5
ENSGALT0000	Uncharacterized protein	ENSGALG000000038	0.12121	23.8721
ENSGALT0000	Uncharacterized protein	ENSGALG000000038	0.932353	545.086
ENSGALT0000	Uncharacterized protein	ENSGALG000000038	0.978995	44.5
ENSGALT0000	\N	ENSGALG000000038	0.924264	18
ENSGALT0000	Uncharacterized protein	ENSGALG000000038	0.75615	1054.5
ENSGALT0000	Uncharacterized protein	ENSGALG000000039	0.847559	8.133
ENSGALT0000	Uncharacterized protein	ENSGALG000000039	0.818488	0.5
ENSGALT0000	Uncharacterized protein	ENSGALG000000039	0.881451	8.5
ENSGALT0000	Uncharacterized protein	ENSGALG000000039	0.950295	61
ENSGALT0000	\N	ENSGALG000000039	0.900334	37.1236
ENSGALT0000	\N	ENSGALG000000040	0.635152	2.75E-11
ENSGALT0000	\N	ENSGALG000000040	0.968927	440.918
ENSGALT0000	Uncharacterized protein	ENSGALG000000040	0.242157	6.5

ENSGALT0000 Uncharacterized protein	ENSGALG0000000041	0.793923	41.5
ENSGALT0000 Uncharacterized protein	ENSGALG0000000041	0.470372	11.3258
ENSGALT0000 Uncharacterized protein	ENSGALG000000041	?	0
ENSGALT0000 Uncharacterized protein	ENSGALG0000000041	0.694304	14.5
ENSGALT0000 Uncharacterized protein	ENSGALG0000000041	0.580062	1.5
ENSGALT0000 \N	ENSGALG0000000041	0.779047	29
ENSGALT0000 Uncharacterized protein	ENSGALG0000000041	0.964881	6.56209
ENSGALT0000 Uncharacterized protein	ENSGALG0000000041	0.464758	0
ENSGALT0000 Uncharacterized protein	ENSGALG0000000042	0.0930179	8.5
ENSGALT0000 Uncharacterized protein	ENSGALG0000000042	0.539519	7.5
ENSGALT0000 Uncharacterized protein	ENSGALG0000000042	0.99803	107
ENSGALT0000 Uncharacterized protein	ENSGALG0000000043	0.682925	139.5
ENSGALT0000 Uncharacterized protein	ENSGALG0000000043	0.746309	28
ENSGALT0000 \N	ENSGALG0000000043	0.994016	30.0283
ENSGALT0000 \N	ENSGALG0000000043	0.794527	157.5
ENSGALT0000 Uncharacterized protein	ENSGALG0000000043	0.944008	476.5
ENSGALT0000 \N	ENSGALG0000000043	0.957783	188.488
ENSGALT0000 \N	ENSGALG0000000043	0.893792	247.494
ENSGALT0000 \N	ENSGALG0000000044	0.953547	148.964
ENSGALT0000 Uncharacterized protein	ENSGALG000000044	?	0
ENSGALT0000 Uncharacterized protein	ENSGALG0000000044	0.385204	0.5
ENSGALT0000 Uncharacterized protein	ENSGALG0000000044	0.945146	508.5
ENSGALT0000 Uncharacterized protein	ENSGALG0000000044	0.464758	0
ENSGALT0000 \N	ENSGALG000000045	?	0
ENSGALT0000 Uncharacterized protein	ENSGALG0000000045	0.942077	398
ENSGALT0000 Uncharacterized protein	ENSGALG0000000046	0.879527	663.853
ENSGALT0000 Uncharacterized protein	ENSGALG0000000046	0.94332	132
ENSGALT0000 \N	ENSGALG0000000046	0.155972	40.6722
ENSGALT0000 \N	ENSGALG0000000046	0.971837	101
ENSGALT0000 Uncharacterized protein	ENSGALG0000000046	0.969168	132.5
ENSGALT0000 Uncharacterized protein	ENSGALG0000000046	0.813016	3.5
ENSGALT0000 Uncharacterized protein	ENSGALG0000000046	0.673888	18
ENSGALT0000 Uncharacterized protein	ENSGALG0000000047	0.258556	12.5
ENSGALT0000 Uncharacterized protein	ENSGALG0000000047	0.91809	497
ENSGALT0000 Uncharacterized protein	ENSGALG0000000047	0.806341	98
ENSGALT0000 Uncharacterized protein	ENSGALG0000000047	0.934058	9.7384
ENSGALT0000 Uncharacterized protein	ENSGALG0000000047	0.805033	1
ENSGALT0000 Uncharacterized protein	ENSGALG0000000047	0.866995	5.5
ENSGALT0000 Uncharacterized protein	ENSGALG0000000047	0.990163	30.5
ENSGALT0000 Uncharacterized protein	ENSGALG0000000047	0.969329	13
ENSGALT0000 Uncharacterized protein	ENSGALG0000000047	0.793556	249.919
ENSGALT0000 Uncharacterized protein	ENSGALG0000000047	0.985088	205
ENSGALT0000 Uncharacterized protein	ENSGALG0000000047	0.79915	2
ENSGALT0000 \N	ENSGALG0000000047	0.950081	205.5
ENSGALT0000 Uncharacterized protein	ENSGALG0000000048	0.971651	43.5
ENSGALT0000 Uncharacterized protein	ENSGALG0000000048	0.979977	31
ENSGALT0000 Uncharacterized protein	ENSGALG0000000048	0.969281	1303.92
ENSGALT0000 Uncharacterized protein	ENSGALG0000000049	0.746947	47.4676
ENSGALT0000 Uncharacterized protein	ENSGALG0000000049	0.976135	64
ENSGALT0000 Uncharacterized protein	ENSGALG0000000049	0.905149	41.5
ENSGALT0000 \N	ENSGALG0000000049	0.0107728	1.12E-05
ENSGALT0000 \N	ENSGALG0000000049	0.987928	2183
ENSGALT0000 \N	ENSGALG0000000049	0.349348	116.702
ENSGALT0000 Uncharacterized protein	ENSGALG0000000050	0.603682	0.5
ENSGALT0000 Uncharacterized protein	ENSGALG0000000050	0.942485	46.4603
ENSGALT0000 Uncharacterized protein	ENSGALG0000000050	0.975057	28

ENSGALT0000	\N	ENSGALG00000005(	0.975979	362.007
ENSGALT0000	Uncharacterized protein	ENSGALG00000005(	0.482439	4
ENSGALT0000	Uncharacterized protein	ENSGALG00000005(	0.954884	12.5529
ENSGALT0000	Uncharacterized protein	ENSGALG00000005(	0.932599	1
ENSGALT0000	\N	ENSGALG0000000510	0.982512	1646
ENSGALT0000	\N	ENSGALG0000000510	0.527988	13.0558
ENSGALT0000	Uncharacterized protein	ENSGALG0000000510	0.967134	16
ENSGALT0000	Uncharacterized protein	ENSGALG0000000510	0.876708	977.5
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ENSGALT0000	\N	ENSGALG0000000510	0.959705	888.02
ENSGALT0000	\N	ENSGALG0000000510	0.91425	145
ENSGALT0000	\N	ENSGALG000000052	0.984207	196.5
ENSGALT0000	Uncharacterized protein	ENSGALG000000052	0.89423	39.6072
ENSGALT0000	Uncharacterized protein	ENSGALG000000052	0.950719	282
ENSGALT0000	Uncharacterized protein	ENSGALG000000053	0.464758	0
ENSGALT0000	\N	ENSGALG000000053	0.74404	37.5
ENSGALT0000	Uncharacterized protein	ENSGALG000000053	0.887366	28
ENSGALT0000	\N	ENSGALG000000054	0.873687	611.882
ENSGALT0000	Uncharacterized protein	ENSGALG000000054	0.910136	67.5
ENSGALT0000	Uncharacterized protein	ENSGALG000000054	0.551216	10.5
ENSGALT0000	\N	ENSGALG000000054	0.987713	419
ENSGALT0000	Uncharacterized protein	ENSGALG000000054	0.801165	341.606
ENSGALT0000	Uncharacterized protein	ENSGALG000000054	0.0936793	157
ENSGALT0000	Uncharacterized protein	ENSGALG000000055	?	0
ENSGALT0000	Uncharacterized protein	ENSGALG000000055	0.932321	124.519
ENSGALT0000	Uncharacterized protein	ENSGALG000000055	0.870948	6.94427
ENSGALT0000	Uncharacterized protein	ENSGALG000000055	0.822285	69
ENSGALT0000	Uncharacterized protein	ENSGALG000000056	0.826578	257
ENSGALT0000	\N	ENSGALG000000056	0.989938	563.5
ENSGALT0000	Uncharacterized protein	ENSGALG000000056	0.982032	5.54602
ENSGALT0000	Uncharacterized protein	ENSGALG000000056	0.719379	34
ENSGALT0000	\N	ENSGALG000000056	0.233094	0.52192
ENSGALT0000	Uncharacterized protein	ENSGALG000000056	0.910472	34
ENSGALT0000	Uncharacterized protein	ENSGALG000000057	0.919129	696.51
ENSGALT0000	\N	ENSGALG000000057	0.941903	173.405
ENSGALT0000	Uncharacterized protein	ENSGALG000000057	0.77145	158.5
ENSGALT0000	\N	ENSGALG000000057	0.947414	4600.73
ENSGALT0000	Uncharacterized protein	ENSGALG000000057	0.632626	174.5
ENSGALT0000	Uncharacterized protein	ENSGALG000000057	?	0
ENSGALT0000	Uncharacterized protein	ENSGALG000000057	0.540768	70.5
ENSGALT0000	Uncharacterized protein	ENSGALG000000057	0.533957	1.78474
ENSGALT0000	Uncharacterized protein	ENSGALG000000058	0.207063	1
ENSGALT0000	Uncharacterized protein	ENSGALG000000058	0.405052	0
ENSGALT0000	\N	ENSGALG000000058	0.537267	12.3851
ENSGALT0000	Uncharacterized protein	ENSGALG000000058	0.91148	240.5
ENSGALT0000	\N	ENSGALG000000058	0.649519	0.5
ENSGALT0000	\N	ENSGALG000000058	?	0
ENSGALT0000	Uncharacterized protein	ENSGALG000000058	0.975236	425.5
ENSGALT0000	\N	ENSGALG000000058	?	0
ENSGALT0000	Uncharacterized protein	ENSGALG000000058	?	0
ENSGALT0000	Uncharacterized protein	ENSGALG000000059	?	0
ENSGALT0000	Uncharacterized protein	ENSGALG000000059	?	0
ENSGALT0000	Uncharacterized protein	ENSGALG000000059	?	0
ENSGALT0000	Uncharacterized protein	ENSGALG000000059	?	0
ENSGALT0000	Uncharacterized protein	ENSGALG000000059	?	0

ENSGALT0000	Uncharacterized protein	ENSGALG000000059	0.945249	3.5
ENSGALT0000	Uncharacterized protein	ENSGALG000000059	0.962392	13
ENSGALT0000	\N	ENSGALG000000059	0.932599	2
ENSGALT0000	Uncharacterized protein	ENSGALG000000059	0.615753	0.5
ENSGALT0000	\N	ENSGALG000000059	0.938745	3521
ENSGALT0000	\N	ENSGALG000000059	0.972836	1057.5
ENSGALT0000	Uncharacterized protein	ENSGALG000000060	0.961812	1359.51
ENSGALT0000	Uncharacterized protein	ENSGALG000000060	0.562993	1.5
ENSGALT0000	Uncharacterized protein	ENSGALG000000060	0.95694	917.951
ENSGALT0000	Uncharacterized protein	ENSGALG000000060	0.786293	9.5
ENSGALT0000	Uncharacterized protein	ENSGALG000000060	0.743366	16.5
ENSGALT0000	Uncharacterized protein	ENSGALG000000060	0.818488	1.5
ENSGALT0000	Uncharacterized protein	ENSGALG000000061	?	0
ENSGALT0000	Uncharacterized protein	ENSGALG000000061	0.969139	340.5
ENSGALT0000	Uncharacterized protein	ENSGALG000000061	0.954373	171.777
ENSGALT0000	Uncharacterized protein	ENSGALG000000061	?	0
ENSGALT0000	\N	ENSGALG000000061	0.983544	231
ENSGALT0000	Uncharacterized protein	ENSGALG000000061	?	0
ENSGALT0000	Uncharacterized protein	ENSGALG000000061	0.940346	137
ENSGALT0000	Uncharacterized protein	ENSGALG000000061	0.853815	3
ENSGALT0000	Uncharacterized protein	ENSGALG000000062	0.938594	215
ENSGALT0000	Uncharacterized protein	ENSGALG000000062	0.855394	11
ENSGALT0000	Uncharacterized protein	ENSGALG000000062	0.942519	2131.5
ENSGALT0000	\N	ENSGALG000000062	0.37837	0
ENSGALT0000	Uncharacterized protein	ENSGALG000000062	0.985786	399.5
ENSGALT0000	Uncharacterized protein	ENSGALG000000062	0.843394	2.5
ENSGALT0000	\N	ENSGALG000000062	0.955569	135.187
ENSGALT0000	\N	ENSGALG000000062	0.999478	17
ENSGALT0000	Uncharacterized protein	ENSGALG000000062	0.9281	48
ENSGALT0000	Uncharacterized protein	ENSGALG000000062	?	0
ENSGALT0000	EAV elementUncharacterized prote	ENSGALG000000062	?	0
ENSGALT0000	Uncharacterized protein	ENSGALG000000063	0.5605	67
ENSGALT0000	Uncharacterized protein	ENSGALG000000063	0.656052	28
ENSGALT0000	Uncharacterized protein	ENSGALG000000063	0.990907	444.997
ENSGALT0000	Uncharacterized protein	ENSGALG000000063	0.985838	1562.5
ENSGALT0000	Uncharacterized protein	ENSGALG000000063	0.93105	2
ENSGALT0000	Uncharacterized protein	ENSGALG000000063	0.361381	0.5
ENSGALT0000	\N	ENSGALG000000064	0.963884	546.353
ENSGALT0000	Uncharacterized protein	ENSGALG000000064	0.934416	150.5
ENSGALT0000	Uncharacterized protein	ENSGALG000000064	0.464758	0
ENSGALT0000	Uncharacterized protein	ENSGALG000000065	0.464758	1
ENSGALT0000	\N	ENSGALG000000065	0.988954	689.65
ENSGALT0000	Uncharacterized protein	ENSGALG000000065	0.992666	146.47
ENSGALT0000	Uncharacterized protein	ENSGALG000000065	0.464758	1.5
ENSGALT0000	Uncharacterized protein	ENSGALG000000065	0.853815	1
ENSGALT0000	Uncharacterized protein	ENSGALG000000065	0.968561	162
ENSGALT0000	Uncharacterized protein	ENSGALG000000065	0.992081	1352.5
ENSGALT0000	\N	ENSGALG000000065	0.575468	3.2504
ENSGALT0000	Uncharacterized protein	ENSGALG000000066	0.462222	4.20228
ENSGALT0000	Uncharacterized protein	ENSGALG000000066	0.464758	0
ENSGALT0000	Uncharacterized protein	ENSGALG000000066	0.414531	437
ENSGALT0000	Uncharacterized protein	ENSGALG000000066	0.540359	5
ENSGALT0000	Uncharacterized protein	ENSGALG000000066	0.972384	105
ENSGALT0000	Uncharacterized protein	ENSGALG000000067	0.970752	187
ENSGALT0000	\N	ENSGALG000000067	0.919677	30
ENSGALT0000	Uncharacterized protein	ENSGALG000000067	0.66061	6.5

ENSGALT0000	Uncharacterized protein	ENSGALG0000000067	0.800075	36
ENSGALT0000	\N	ENSGALG0000000067	0.579551	0.5
ENSGALT0000	Uncharacterized protein	ENSGALG0000000068	0.951675	247.5
ENSGALT0000	Uncharacterized protein	ENSGALG0000000068	0.841984	8
ENSGALT0000	Uncharacterized protein	ENSGALG0000000068	0.918141	560.581
ENSGALT0000	Uncharacterized protein	ENSGALG0000000068	0.919876	417.499
ENSGALT0000	Uncharacterized protein	ENSGALG0000000068	0.876429	792.5
ENSGALT0000	Uncharacterized protein	ENSGALG0000000068	0.603229	4778.08
ENSGALT0000	\N	ENSGALG0000000069	0.991113	141.5
ENSGALT0000	\N	ENSGALG0000000069	0.600193	2.66917
ENSGALT0000	Uncharacterized protein	ENSGALG0000000069	?	0
ENSGALT0000	Uncharacterized protein	ENSGALG0000000069	0.995257	127
ENSGALT0000	Uncharacterized protein	ENSGALG0000000069	0.984827	327
ENSGALT0000	Uncharacterized protein	ENSGALG0000000069	0.464758	0
ENSGALT0000	Uncharacterized protein	ENSGALG0000000069	0.898356	0.5
ENSGALT0000	Uncharacterized protein	ENSGALG0000000069	0.61307	4
ENSGALT0000	\N	ENSGALG0000000069	0.968787	202.651
ENSGALT0000	Uncharacterized protein	ENSGALG0000000069	0.41155	43.5
ENSGALT0000	Uncharacterized protein	ENSGALG0000000070	0.494106	1.5
ENSGALT0000	Uncharacterized protein	ENSGALG0000000070	0.669136	18.5
ENSGALT0000	Uncharacterized protein	ENSGALG0000000070	0.980644	304.5
ENSGALT0000	Uncharacterized protein	ENSGALG0000000070	0.464758	1
ENSGALT0000	Uncharacterized protein	ENSGALG0000000070	0.464758	0
ENSGALT0000	Uncharacterized protein	ENSGALG0000000070	0.980437	17
ENSGALT0000	\N	ENSGALG0000000070	0.991526	402.5
ENSGALT0000	Uncharacterized protein	ENSGALG0000000070	0.876256	355.5
ENSGALT0000	Uncharacterized protein	ENSGALG0000000070	0.886657	350.5
ENSGALT0000	\N	ENSGALG0000000070	0.577785	16.1209
ENSGALT0000	\N	ENSGALG0000000070	0.971582	97.6787
ENSGALT0000	Uncharacterized protein	ENSGALG0000000071	0.862425	1
ENSGALT0000	Uncharacterized protein	ENSGALG0000000071	0.672916	45
ENSGALT0000	Uncharacterized protein	ENSGALG0000000071	0.942624	6.24141
ENSGALT0000	Uncharacterized protein	ENSGALG0000000071	0.854189	9.5
ENSGALT0000	Uncharacterized protein	ENSGALG0000000071	0.97441	83.5
ENSGALT0000	Uncharacterized protein	ENSGALG0000000071	0.526834	11259.1
ENSGALT0000	Uncharacterized protein	ENSGALG0000000071	0.995122	76.6508
ENSGALT0000	Uncharacterized protein	ENSGALG0000000072	0.857325	225.5
ENSGALT0000	Uncharacterized protein	ENSGALG0000000072	0.922322	35.5
ENSGALT0000	Uncharacterized protein	ENSGALG0000000072	0.99887	161.5
ENSGALT0000	Uncharacterized protein	ENSGALG0000000072	1	5
ENSGALT0000	Uncharacterized protein	ENSGALG0000000072	0.882589	367
ENSGALT0000	Uncharacterized protein	ENSGALG0000000072	0.7999	1.5
ENSGALT0000	Uncharacterized protein	ENSGALG0000000072	0.93642	118.5
ENSGALT0000	\N	ENSGALG0000000072	0.464758	0
ENSGALT0000	Uncharacterized protein	ENSGALG0000000072	0.603682	0.5
ENSGALT0000	Uncharacterized protein	ENSGALG0000000072	0.855325	341
ENSGALT0000	Uncharacterized protein	ENSGALG0000000073	0.946504	3
ENSGALT0000	Uncharacterized protein	ENSGALG0000000074	?	0
ENSGALT0000	Uncharacterized protein	ENSGALG0000000074	0.754728	0.5
ENSGALT0000	Uncharacterized protein	ENSGALG0000000074	0.976665	140.862
ENSGALT0000	Uncharacterized protein	ENSGALG0000000074	0.0964621	236.902
ENSGALT0000	\N	ENSGALG0000000074	0.84671	5.5
ENSGALT0000	Uncharacterized protein	ENSGALG0000000074	0.788121	9.40202
ENSGALT0000	\N	ENSGALG0000000074	0.512802	48
ENSGALT0000	Uncharacterized protein	ENSGALG0000000075	0.842903	9
ENSGALT0000	Uncharacterized protein	ENSGALG0000000075	0.810568	5.5

ENSGALT0000	Uncharacterized protein	ENSGALG000000075	0.932279	54
ENSGALT0000	Uncharacterized protein	ENSGALG000000075	?	0
ENSGALT0000	Uncharacterized protein	ENSGALG000000075	0.982817	224
ENSGALT0000	Uncharacterized protein	ENSGALG000000075	0.631223	3
ENSGALT0000	Uncharacterized protein	ENSGALG000000075	0.957357	1533.5
ENSGALT0000	\N	ENSGALG000000075	0.621113	149
ENSGALT0000	\N	ENSGALG000000075	0.77774	307.5
ENSGALT0000	Uncharacterized protein	ENSGALG000000075	0.921923	275.5
ENSGALT0000	ENS-2Uncharacterized protein	ENSGALG000000075	?	0
ENSGALT0000	Uncharacterized protein	ENSGALG000000076	0.991431	378
ENSGALT0000	\N	ENSGALG000000076	0.532902	1.14E-06
ENSGALT0000	Uncharacterized protein	ENSGALG000000076	0.977304	308
ENSGALT0000	Uncharacterized protein	ENSGALG000000076	?	0
ENSGALT0000	Uncharacterized protein	ENSGALG000000076	0.733142	5
ENSGALT0000	Uncharacterized protein	ENSGALG000000076	0.945594	15.5
ENSGALT0000	Uncharacterized protein	ENSGALG000000076	0.790158	187.5
ENSGALT0000	Uncharacterized protein	ENSGALG000000076	0.729254	12
ENSGALT0000	Uncharacterized protein	ENSGALG000000076	0.832377	178
ENSGALT0000	Uncharacterized protein	ENSGALG000000076	0.887884	5369
ENSGALT0000	Uncharacterized protein	ENSGALG000000076	0.603682	0
ENSGALT0000	Uncharacterized protein	ENSGALG000000076	0.801236	3
ENSGALT0000	Uncharacterized protein	ENSGALG000000077	0.464758	0
ENSGALT0000	Uncharacterized protein	ENSGALG000000077	0.985038	2.5
ENSGALT0000	\N	ENSGALG000000077	0.566734	1.17234
ENSGALT0000	Uncharacterized protein	ENSGALG000000077	0.196173	20515.5
ENSGALT0000	Uncharacterized protein	ENSGALG000000077	?	0
ENSGALT0000	Uncharacterized protein	ENSGALG000000077	0.660369	17.4736
ENSGALT0000	Uncharacterized protein	ENSGALG000000078	0.603682	0.5
ENSGALT0000	Uncharacterized protein	ENSGALG000000078	?	0
ENSGALT0000	Olfactory receptor OR9	ENSGALG000000078	0.464758	3.83E-25
ENSGALT0000	Uncharacterized protein	ENSGALG000000078	0.971557	76.5
ENSGALT0000	Uncharacterized protein	ENSGALG000000078	0.898919	111
ENSGALT0000	Uncharacterized protein	ENSGALG000000078	0.852892	2113
ENSGALT0000	Uncharacterized protein	ENSGALG000000078	0.512308	7.5
ENSGALT0000	\N	ENSGALG000000079	0.754728	0.5
ENSGALT0000	Uncharacterized protein	ENSGALG000000079	0.951569	230
ENSGALT0000	Uncharacterized protein	ENSGALG000000079	0.878467	25.2306
ENSGALT0000	Uncharacterized protein	ENSGALG000000079	0.603682	1
ENSGALT0000	Uncharacterized protein	ENSGALG000000080	0.926619	7.5
ENSGALT0000	Uncharacterized protein	ENSGALG000000080	0.886158	2173.42
ENSGALT0000	Uncharacterized protein	ENSGALG000000080	0.932599	1.5
ENSGALT0000	Uncharacterized protein	ENSGALG000000080	0.763132	3.5
ENSGALT0000	\N	ENSGALG000000080	0.0539949	0
ENSGALT0000	\N	ENSGALG000000080	0.967913	2.98287
ENSGALT0000	Uncharacterized protein	ENSGALG000000080	0.776616	3
ENSGALT0000	Uncharacterized protein	ENSGALG000000080	0.491069	110
ENSGALT0000	Uncharacterized protein	ENSGALG000000081	0.537057	2.5
ENSGALT0000	Uncharacterized protein	ENSGALG000000081	0.928162	666.5
ENSGALT0000	\N	ENSGALG000000081	0.585621	136.5
ENSGALT0000	\N	ENSGALG000000081	0.94946	3118.1
ENSGALT0000	Uncharacterized protein	ENSGALG000000081	?	0
ENSGALT0000	Uncharacterized protein	ENSGALG000000081	0.971943	48.5
ENSGALT0000	Uncharacterized protein	ENSGALG000000081	0.995392	601.499
ENSGALT0000	\N	ENSGALG000000082	?	0
ENSGALT0000	\N	ENSGALG000000082	0.950044	296.616
ENSGALT0000	Uncharacterized protein	ENSGALG000000082	0.880941	2.5

ENSGALT0000	Uncharacterized protein	ENSGALG000000082	0.977747	61.5
ENSGALT0000	\N	ENSGALG000000082	0.7602	83.5
ENSGALT0000	Uncharacterized protein	ENSGALG000000082	?	0
ENSGALT0000	Uncharacterized protein	ENSGALG000000082	0.895306	1115.5
ENSGALT0000	Uncharacterized protein	ENSGALG000000083	0.948663	1177.5
ENSGALT0000	Uncharacterized protein	ENSGALG000000083	0.967168	30
ENSGALT0000	Uncharacterized protein	ENSGALG000000083	0.764084	28
ENSGALT0000	\N	ENSGALG000000083	0.566051	0.04082
ENSGALT0000	Uncharacterized protein	ENSGALG000000083	0.950793	485.5
ENSGALT0000	Uncharacterized protein	ENSGALG000000083	0.464758	0.5
ENSGALT0000	Uncharacterized protein	ENSGALG000000083	0.859674	153.551
ENSGALT0000	\N	ENSGALG000000084	0.978456	341.344
ENSGALT0000	Uncharacterized protein	ENSGALG000000084	0.983801	281
ENSGALT0000	Uncharacterized protein	ENSGALG000000084	0.57818	2.92306
ENSGALT0000	Uncharacterized protein	ENSGALG000000084	0.937307	37.4186
ENSGALT0000	Uncharacterized protein	ENSGALG000000085	0.96137	66
ENSGALT0000	Uncharacterized protein	ENSGALG000000085	0.952246	13.5
ENSGALT0000	\N	ENSGALG000000085	0.631537	911
ENSGALT0000	Uncharacterized protein	ENSGALG000000085	0.97936	365.429
ENSGALT0000	Uncharacterized protein	ENSGALG000000085	0.613302	3
ENSGALT0000	Uncharacterized protein	ENSGALG000000085	0.998891	24.5
ENSGALT0000	Uncharacterized protein	ENSGALG000000086	0.983288	184
ENSGALT0000	Uncharacterized protein	ENSGALG000000086	0.872927	142.5
ENSGALT0000	Uncharacterized protein	ENSGALG000000086	0.848447	7
ENSGALT0000	\N	ENSGALG000000086	0.962048	112.304
ENSGALT0000	\N	ENSGALG000000086	0.992086	922.686
ENSGALT0000	Uncharacterized protein	ENSGALG000000086	0.80945	173
ENSGALT0000	Uncharacterized protein	ENSGALG000000086	0.767554	14.5
ENSGALT0000	Uncharacterized protein	ENSGALG000000086	0.875379	79
ENSGALT0000	Uncharacterized protein	ENSGALG000000087	?	0
ENSGALT0000	POL-likeUncharacterized protein	ENSGALG000000087	?	0
ENSGALT0000	Uncharacterized protein	ENSGALG000000087	0.966265	91
ENSGALT0000	Uncharacterized protein	ENSGALG000000087	0.719324	6
ENSGALT0000	Uncharacterized protein	ENSGALG000000087	?	0
ENSGALT0000	\N	ENSGALG000000087	0.304848	23056.5
ENSGALT0000	Uncharacterized protein	ENSGALG000000087	0.696071	1601.5
ENSGALT0000	Uncharacterized protein	ENSGALG000000088	0.99381	353.5
ENSGALT0000	Uncharacterized protein	ENSGALG000000088	0.791983	9
ENSGALT0000	Uncharacterized protein	ENSGALG000000088	0.650932	4
ENSGALT0000	\N	ENSGALG000000088	0.907715	988.5
ENSGALT0000	Uncharacterized protein	ENSGALG000000088	0.968728	5.5
ENSGALT0000	\N	ENSGALG000000088	0.689726	240
ENSGALT0000	Uncharacterized protein	ENSGALG000000088	0.962383	43
ENSGALT0000	\N	ENSGALG000000088	0.976042	277.571
ENSGALT0000	Uncharacterized protein	ENSGALG000000089	0.173997	198.954
ENSGALT0000	Uncharacterized protein	ENSGALG000000089	0.722096	0.5
ENSGALT0000	Uncharacterized protein	ENSGALG000000089	?	0
ENSGALT0000	Uncharacterized protein	ENSGALG000000089	0.56484	14
ENSGALT0000	Uncharacterized protein	ENSGALG000000090	0.942971	44
ENSGALT0000	Uncharacterized protein	ENSGALG000000090	0.819063	2
ENSGALT0000	Uncharacterized protein	ENSGALG000000090	0.774504	15.5
ENSGALT0000	Uncharacterized protein	ENSGALG000000090	0.904804	4
ENSGALT0000	Uncharacterized protein	ENSGALG000000090	0.886079	12
ENSGALT0000	\N	ENSGALG000000090	0.894183	229.944
ENSGALT0000	Uncharacterized protein	ENSGALG000000090	0.464758	0
ENSGALT0000	Uncharacterized protein	ENSGALG000000090	0.850446	55

ENSGALT0000	Uncharacterized protein	ENSGALG0000000090	0.971221	395.5
ENSGALT0000	\N	ENSGALG0000000091	0.984519	41.5
ENSGALT0000	Uncharacterized protein	ENSGALG0000000091	0.991214	370
ENSGALT0000	\N	ENSGALG000000091	?	0
ENSGALT0000	\N	ENSGALG000000091	?	0
ENSGALT0000	\N	ENSGALG000000091	?	0
ENSGALT0000	PIT 54 protein	ENSGALG0000000091	0.539038	2
ENSGALT0000	Uncharacterized protein	ENSGALG0000000091	0.987944	59.5
ENSGALT0000	Uncharacterized protein	ENSGALG0000000091	0.65134	46.5
ENSGALT0000	Uncharacterized protein	ENSGALG0000000091	0.860759	640
ENSGALT0000	\N	ENSGALG000000091	?	0
ENSGALT0000	\N	ENSGALG0000000091	0.709664	1
ENSGALT0000	\N	ENSGALG0000000091	0.649519	0
ENSGALT0000	\N	ENSGALG0000000091	0.464758	0
ENSGALT0000	Uncharacterized protein	ENSGALG0000000091	0.976927	365
ENSGALT0000	Uncharacterized protein	ENSGALG0000000091	0.464758	0
ENSGALT0000	\N	ENSGALG0000000091	0.464758	1.98E-11
ENSGALT0000	\N	ENSGALG0000000091	0.315288	0
ENSGALT0000	\N	ENSGALG0000000091	0.464758	0
ENSGALT0000	Uncharacterized protein	ENSGALG000000092	0.887156	434.501
ENSGALT0000	Uncharacterized protein	ENSGALG000000092	0.867167	76
ENSGALT0000	Uncharacterized protein	ENSGALG000000092	?	0
ENSGALT0000	\N	ENSGALG000000092	0.970387	721
ENSGALT0000	\N	ENSGALG000000092	0.631223	0
ENSGALT0000	Uncharacterized protein	ENSGALG000000092	0.990746	38.5
ENSGALT0000	Uncharacterized protein	ENSGALG000000092	0.732556	3.5477
ENSGALT0000	Uncharacterized protein	ENSGALG000000092	0.962253	246
ENSGALT0000	Uncharacterized protein	ENSGALG000000092	0.917726	185
ENSGALT0000	Uncharacterized protein	ENSGALG000000093	0.946515	45.5
ENSGALT0000	Uncharacterized protein	ENSGALG000000093	0.725097	2
ENSGALT0000	\N	ENSGALG000000093	0.898977	130.067
ENSGALT0000	Uncharacterized protein	ENSGALG000000093	0.916017	26
ENSGALT0000	\N	ENSGALG000000093	0.675022	0.9997
ENSGALT0000	Uncharacterized protein	ENSGALG000000094	0.665746	899.5
ENSGALT0000	Uncharacterized protein	ENSGALG000000094	0.978515	6154.5
ENSGALT0000	\N	ENSGALG000000094	?	0
ENSGALT0000	Uncharacterized protein	ENSGALG000000094	0.99267	14.5
ENSGALT0000	Uncharacterized protein	ENSGALG000000094	0.603682	0
ENSGALT0000	Uncharacterized protein	ENSGALG000000094	0.739378	2
ENSGALT0000	Uncharacterized protein	ENSGALG000000094	0.604488	0.5
ENSGALT0000	Uncharacterized protein	ENSGALG000000095	0.959979	80
ENSGALT0000	Uncharacterized protein	ENSGALG000000095	0.975	159.51
ENSGALT0000	Uncharacterized protein	ENSGALG000000095	0.975997	249
ENSGALT0000	Uncharacterized protein	ENSGALG000000095	0.927291	3.5
ENSGALT0000	\N	ENSGALG000000095	0.464758	0
ENSGALT0000	Uncharacterized protein	ENSGALG000000095	?	0
ENSGALT0000	Uncharacterized protein	ENSGALG000000096	0.924961	132
ENSGALT0000	Uncharacterized protein	ENSGALG000000096	0.894185	7
ENSGALT0000	\N	ENSGALG000000096	0.464758	0
ENSGALT0000	Uncharacterized protein	ENSGALG000000096	0.639659	3.5
ENSGALT0000	Uncharacterized protein	ENSGALG000000096	0.794125	3
ENSGALT0000	Uncharacterized protein	ENSGALG000000096	0.464758	0
ENSGALT0000	Uncharacterized protein	ENSGALG000000096	0.649519	0.5
ENSGALT0000	Uncharacterized protein	ENSGALG000000096	0.95134	417
ENSGALT0000	Uncharacterized protein	ENSGALG000000096	0.464758	0.5
ENSGALT0000	Uncharacterized protein	ENSGALG000000096	0.989183	192.5

ENSGALT0000	\N	ENSGALG000000097	0.894692	963.404
ENSGALT0000	Uncharacterized protein	ENSGALG000000097	?	0
ENSGALT0000	Uncharacterized protein	ENSGALG000000097	0.926476	1097.86
ENSGALT0000	Uncharacterized protein	ENSGALG000000097	0.948878	94
ENSGALT0000	Uncharacterized protein	ENSGALG000000097	?	0
ENSGALT0000	Uncharacterized protein	ENSGALG000000098	0.892756	519
ENSGALT0000	Uncharacterized protein	ENSGALG000000098	0.778348	2.5
ENSGALT0000	Uncharacterized protein	ENSGALG000000098	0.751952	233
ENSGALT0000	\N	ENSGALG000000098	0.71008	3.42227
ENSGALT0000	Uncharacterized protein	ENSGALG000000099	0.898507	34
ENSGALT0000	Uncharacterized protein	ENSGALG000000099	0.966127	8.5
ENSGALT0000	Uncharacterized protein	ENSGALG000000099	0.90728	2.5
ENSGALT0000	Uncharacterized protein	ENSGALG000000099	0.90747	201
ENSGALT0000	Uncharacterized protein	ENSGALG000000099	0.940731	536
ENSGALT0000	Uncharacterized protein	ENSGALG000000099	0.464758	2.17E-25
ENSGALT0000	Uncharacterized protein	ENSGALG000000099	0.893692	279.5
ENSGALT0000	Uncharacterized protein	ENSGALG000000100	?	0
ENSGALT0000	\N	ENSGALG000000100	0.989521	548
ENSGALT0000	Uncharacterized protein	ENSGALG000000100	0.902063	50.4974
ENSGALT0000	Uncharacterized protein	ENSGALG000000101	0.534404	2
ENSGALT0000	Uncharacterized protein	ENSGALG000000101	?	0
ENSGALT0000	Uncharacterized protein	ENSGALG000000101	0.809509	297.5
ENSGALT0000	Uncharacterized protein	ENSGALG000000101	0.662104	0.5
ENSGALT0000	Uncharacterized protein	ENSGALG000000102	0.987675	199
ENSGALT0000	Uncharacterized protein	ENSGALG000000102	0.603682	0
ENSGALT0000	Uncharacterized protein	ENSGALG000000102	0.679696	0.42108
ENSGALT0000	Uncharacterized protein	ENSGALG000000102	0.819378	11
ENSGALT0000	Uncharacterized protein	ENSGALG000000102	0.895708	2.5
ENSGALT0000	\N	ENSGALG000000102	0.789107	69.5
ENSGALT0000	\N	ENSGALG000000102	0.559282	9.81149
ENSGALT0000	\N	ENSGALG000000102	0.967042	475.434
ENSGALT0000	Uncharacterized protein	ENSGALG000000102	0.962292	28.5
ENSGALT0000	Uncharacterized protein	ENSGALG000000102	0.930576	14.5
ENSGALT0000	Uncharacterized protein	ENSGALG000000103	0.649519	0.5
ENSGALT0000	Uncharacterized protein	ENSGALG000000103	0.464758	0
ENSGALT0000	Uncharacterized protein	ENSGALG000000103	0.704367	13
ENSGALT0000	Uncharacterized protein	ENSGALG000000103	0.960529	112
ENSGALT0000	Uncharacterized protein	ENSGALG000000103	0.76033	4.5
ENSGALT0000	Uncharacterized protein	ENSGALG000000104	0.909016	290.5
ENSGALT0000	\N	ENSGALG000000104	0.994641	209.839
ENSGALT0000	Uncharacterized protein	ENSGALG000000104	0.464758	1
ENSGALT0000	\N	ENSGALG000000105	0.967318	237
ENSGALT0000	\N	ENSGALG000000105	0.539616	2.16253
ENSGALT0000	Uncharacterized protein	ENSGALG000000105	0.94258	41.5
ENSGALT0000	Uncharacterized protein	ENSGALG000000105	0.976616	15
ENSGALT0000	\N	ENSGALG000000105	0.96683	476
ENSGALT0000	Uncharacterized protein	ENSGALG000000105	0.649519	0.5
ENSGALT0000	Uncharacterized protein	ENSGALG000000106	0.586338	32
ENSGALT0000	Uncharacterized protein	ENSGALG000000106	0.91497	6
ENSGALT0000	\N	ENSGALG000000106	?	0
ENSGALT0000	Uncharacterized protein	ENSGALG000000106	0.877941	2208
ENSGALT0000	Uncharacterized protein	ENSGALG000000106	0.901191	38
ENSGALT0000	\N	ENSGALG000000107	0.860909	353.5
ENSGALT0000	Uncharacterized protein	ENSGALG000000107	0.49274	79.5
ENSGALT0000	Uncharacterized protein	ENSGALG000000107	?	0
ENSGALT0000	Uncharacterized protein	ENSGALG000000107	0.806167	1.5

ENSGALT0000	Uncharacterized protein	ENSGALG0000000107	0.649519	0
ENSGALT0000	Uncharacterized protein	ENSGALG0000000108	0.747669	5
ENSGALT0000	\N	ENSGALG0000000108	0.852759	3
ENSGALT0000	Uncharacterized protein	ENSGALG0000000108	0.928569	317.5
ENSGALT0000	\N	ENSGALG0000000108	0.00597175	12.4186
ENSGALT0000	Uncharacterized protein	ENSGALG0000000108	?	0
ENSGALT0000	\N	ENSGALG0000000108	0.951584	214.764
ENSGALT0000	\N	ENSGALG0000000108	0.941596	471
ENSGALT0000	Uncharacterized protein	ENSGALG0000000109	0.821187	1.5
ENSGALT0000	Uncharacterized protein	ENSGALG0000000109	0.603682	1
ENSGALT0000	\N	ENSGALG0000000109	0.942642	222.007
ENSGALT0000	Uncharacterized protein	ENSGALG0000000109	0.482952	9.5
ENSGALT0000	Uncharacterized protein	ENSGALG0000000109	0.625472	0.66074
ENSGALT0000	Uncharacterized protein	ENSGALG0000000109	0.977671	245.15
ENSGALT0000	Uncharacterized protein	ENSGALG0000000109	0.464758	0
ENSGALT0000	Uncharacterized protein	ENSGALG0000000110	?	0
ENSGALT0000	Uncharacterized protein	ENSGALG0000000110	0.996821	531
ENSGALT0000	\N	ENSGALG0000000110	0.474387	230.363
ENSGALT0000	Uncharacterized protein	ENSGALG0000000110	0.869249	17.5
ENSGALT0000	Uncharacterized protein	ENSGALG0000000110	0.683568	236.065
ENSGALT0000	Uncharacterized protein	ENSGALG0000000110	0.887809	217
ENSGALT0000	Uncharacterized protein	ENSGALG0000000110	?	0
ENSGALT0000	Uncharacterized protein	ENSGALG0000000110	?	0
ENSGALT0000	\N	ENSGALG0000000110	0.684598	2.51541
ENSGALT0000	Uncharacterized protein	ENSGALG0000000111	?	0
ENSGALT0000	Uncharacterized protein	ENSGALG0000000111	0.752143	3209
ENSGALT0000	\N	ENSGALG0000000111	0.888171	158
ENSGALT0000	Uncharacterized protein	ENSGALG0000000111	?	0
ENSGALT0000	Uncharacterized protein	ENSGALG0000000111	0.755033	3054.5
ENSGALT0000	Uncharacterized protein	ENSGALG0000000111	0.774785	1979.5
ENSGALT0000	Uncharacterized protein	ENSGALG0000000111	0.302253	4.5
ENSGALT0000	Uncharacterized protein	ENSGALG0000000112	0.786806	2
ENSGALT0000	Uncharacterized protein	ENSGALG0000000112	0.916173	560
ENSGALT0000	\N	ENSGALG0000000112	0.981527	34
ENSGALT0000	Uncharacterized protein	ENSGALG0000000112	?	0
ENSGALT0000	Uncharacterized protein	ENSGALG0000000112	0.861411	317.5
ENSGALT0000	Uncharacterized protein	ENSGALG0000000113	0.866371	1075.33
ENSGALT0000	\N	ENSGALG0000000113	0.977439	44.5
ENSGALT0000	Uncharacterized protein	ENSGALG0000000113	0.464758	0
ENSGALT0000	Uncharacterized protein	ENSGALG0000000113	0.790622	86
ENSGALT0000	Uncharacterized protein	ENSGALG0000000113	0.999442	177.672
ENSGALT0000	\N	ENSGALG0000000113	0.791327	78.5
ENSGALT0000	\N	ENSGALG0000000113	0.942148	320.9
ENSGALT0000	Uncharacterized protein	ENSGALG0000000114	0.464758	0
ENSGALT0000	Uncharacterized protein	ENSGALG0000000114	0.84238	1.10853
ENSGALT0000	Uncharacterized protein	ENSGALG0000000114	0.997298	1193
ENSGALT0000	Uncharacterized protein	ENSGALG0000000114	0.991829	53
ENSGALT0000	Uncharacterized protein	ENSGALG0000000115	0.0720044	1
ENSGALT0000	\N	ENSGALG0000000115	0.722032	1.31247
ENSGALT0000	\N	ENSGALG0000000115	0.549003	1.03657
ENSGALT0000	Uncharacterized protein	ENSGALG0000000115	?	0
ENSGALT0000	Uncharacterized protein	ENSGALG0000000115	0.994841	5.5
ENSGALT0000	\N	ENSGALG0000000115	?	0
ENSGALT0000	Uncharacterized protein	ENSGALG0000000116	0.998436	169
ENSGALT0000	Uncharacterized protein	ENSGALG0000000116	0.995646	1131.85
ENSGALT0000	Uncharacterized protein	ENSGALG0000000116	0.961287	2739

ENSGALT0000	\N	ENSGALG000000116	0.464758	0
ENSGALT0000	Uncharacterized protein	ENSGALG000000116	0.958652	711
ENSGALT0000	\N	ENSGALG000000116	0.938718	1848.5
ENSGALT0000	Uncharacterized protein	ENSGALG000000116	0.943934	1
ENSGALT0000	\N	ENSGALG000000116	0.95458	482
ENSGALT0000	Uncharacterized protein	ENSGALG000000116	0.878116	37
ENSGALT0000	Putative uncharacterized protein H	ENSGALG000000117	0.918168	337
ENSGALT0000	Uncharacterized protein	ENSGALG000000117	0.84015	2030.5
ENSGALT0000	Uncharacterized protein	ENSGALG000000118	0.725097	3
ENSGALT0000	\N	ENSGALG000000118	0.643987	5.82569
ENSGALT0000	Uncharacterized protein	ENSGALG000000118	0.818133	3.5
ENSGALT0000	\N	ENSGALG000000118	0.63728	757.5
ENSGALT0000	Uncharacterized protein	ENSGALG000000119	0.923619	187.5
ENSGALT0000	\N	ENSGALG000000119	0.945568	85.8801
ENSGALT0000	Uncharacterized protein	ENSGALG000000119	0.85286	266.5
ENSGALT0000	Uncharacterized protein	ENSGALG000000119	0.995137	161
ENSGALT0000	Uncharacterized protein	ENSGALG000000119	0.637298	34
ENSGALT0000	Uncharacterized protein	ENSGALG000000119	0.769478	7.5
ENSGALT0000	Uncharacterized protein	ENSGALG000000119	0.904804	1
ENSGALT0000	Uncharacterized protein	ENSGALG000000119	0.751733	2451.99
ENSGALT0000	Fps proto-oncogene, 5' endUnchar	ENSGALG00000012C	0.464758	0
ENSGALT0000	\N	ENSGALG00000012C	0.357897	0
ENSGALT0000	Uncharacterized protein	ENSGALG00000012C	?	0
ENSGALT0000	Uncharacterized protein	ENSGALG00000012C	0.987012	881
ENSGALT0000	Uncharacterized protein	ENSGALG00000012C	0.906169	39.5
ENSGALT0000	Uncharacterized protein	ENSGALG00000012C	?	0
ENSGALT0000	\N	ENSGALG0000001210	0.769657	368.691
ENSGALT0000	Uncharacterized protein	ENSGALG0000001210	0.659786	156
ENSGALT0000	\N	ENSGALG000000121	?	0
ENSGALT0000	Uncharacterized protein	ENSGALG0000001210	0.966482	2
ENSGALT0000	Uncharacterized protein	ENSGALG0000001210	0.464758	0
ENSGALT0000	\N	ENSGALG0000001210	0.298752	0.01483
ENSGALT0000	\N	ENSGALG0000001210	0.689048	1936.18
ENSGALT0000	Uncharacterized protein	ENSGALG0000001210	0.889955	55
ENSGALT0000	Uncharacterized protein	ENSGALG0000001210	0.888332	6
ENSGALT0000	Uncharacterized protein	ENSGALG0000001222	0.47795	154.199
ENSGALT0000	\N	ENSGALG0000001222	0.934033	1600.5
ENSGALT0000	Uncharacterized protein	ENSGALG0000001222	0.649519	0.5
ENSGALT0000	Uncharacterized protein	ENSGALG0000001222	0.82552	49.16
ENSGALT0000	Uncharacterized protein	ENSGALG0000001222	0.376117	3
ENSGALT0000	Uncharacterized protein	ENSGALG0000001222	0.305453	1.5
ENSGALT0000	Uncharacterized protein	ENSGALG0000001233	0.969142	5
ENSGALT0000	Uncharacterized protein	ENSGALG0000001233	0.531934	84.9667
ENSGALT0000	Uncharacterized protein	ENSGALG0000001233	0.886043	10
ENSGALT0000	Uncharacterized protein	ENSGALG0000001233	0.649519	0.5
ENSGALT0000	Uncharacterized protein	ENSGALG0000001233	0.651156	10
ENSGALT0000	Uncharacterized protein	ENSGALG0000001233	0.988636	32.2164
ENSGALT0000	Uncharacterized protein	ENSGALG0000001233	0.924445	123.5
ENSGALT0000	Uncharacterized protein	ENSGALG0000001233	0.741912	5.5
ENSGALT0000	\N	ENSGALG0000001244	0.964061	80.5
ENSGALT0000	Uncharacterized protein	ENSGALG0000001244	0.828989	1.41203
ENSGALT0000	Uncharacterized protein	ENSGALG0000001244	0.649519	0.5
ENSGALT0000	Uncharacterized protein	ENSGALG0000001244	0.991431	836.5
ENSGALT0000	Uncharacterized protein	ENSGALG0000001244	0.970413	236
ENSGALT0000	Uncharacterized protein	ENSGALG0000001244	0.464758	0
ENSGALT0000	\N	ENSGALG0000001244	0.936444	30.4851

ENSGALT0000	Uncharacterized protein	ENSGALG000000124	0.500483	13
ENSGALT0000	\N	ENSGALG000000125	0.591329	8
ENSGALT0000	\N	ENSGALG000000125	0.464758	0.58665
ENSGALT0000	\N	ENSGALG000000125	0.943802	107.5
ENSGALT0000	Uncharacterized protein	ENSGALG000000125	?	0
ENSGALT0000	\N	ENSGALG000000127	?	5.43E-21
ENSGALT0000	\N	ENSGALG000000127	0.90098	830.999
ENSGALT0000	Uncharacterized protein	ENSGALG000000127	?	0
ENSGALT0000	\N	ENSGALG000000128	0.542546	25.4688
ENSGALT0000	\N	ENSGALG000000128	0.905747	479.143
ENSGALT0000	Uncharacterized protein	ENSGALG000000128	0.7458	92.7854
ENSGALT0000	\N	ENSGALG000000129	0.767432	387.376
ENSGALT0000	Uncharacterized protein	ENSGALG000000129	0.649519	0
ENSGALT0000	Uncharacterized protein	ENSGALG000000129	0.54132	2.5305
ENSGALT0000	Uncharacterized protein	ENSGALG000000129	0.464758	0
ENSGALT0000	Uncharacterized protein	ENSGALG000000129	0.464758	0
ENSGALT0000	Uncharacterized protein	ENSGALG000000129	?	0
ENSGALT0000	Uncharacterized protein	ENSGALG000000129	0.949129	386.501
ENSGALT0000	\N	ENSGALG000000129	0.55254	83.7849
ENSGALT0000	\N	ENSGALG000000129	0.583349	108.607
ENSGALT0000	\N	ENSGALG000000129	0.991217	1.7134
ENSGALT0000	\N	ENSGALG000000130	0.983389	120.515
ENSGALT0000	\N	ENSGALG000000130	?	0
ENSGALT0000	Uncharacterized protein	ENSGALG000000130	0.464758	1
ENSGALT0000	Uncharacterized protein	ENSGALG000000130	0.925573	23
ENSGALT0000	Uncharacterized protein	ENSGALG000000130	0.969467	23.5
ENSGALT0000	Uncharacterized protein	ENSGALG000000130	0.793974	154.5
ENSGALT0000	Uncharacterized protein	ENSGALG000000131	0.871499	26.7919
ENSGALT0000	Uncharacterized protein	ENSGALG000000131	0.980927	86.6722
ENSGALT0000	Uncharacterized protein	ENSGALG000000131	0.931193	38
ENSGALT0000	\N	ENSGALG000000131	?	0
ENSGALT0000	\N	ENSGALG000000131	?	2.99E-13
ENSGALT0000	Uncharacterized protein	ENSGALG000000131	?	0
ENSGALT0000	Uncharacterized protein	ENSGALG000000131	0.806127	54
ENSGALT0000	\N	ENSGALG000000132	0.880941	6
ENSGALT0000	Uncharacterized protein	ENSGALG000000132	0.562857	5.23E-18
ENSGALT0000	\N	ENSGALG000000132	0.805033	2.5
ENSGALT0000	Uncharacterized protein	ENSGALG000000132	0.603682	0
ENSGALT0000	Uncharacterized protein	ENSGALG000000132	?	0
ENSGALT0000	\N	ENSGALG000000132	0.649519	0
ENSGALT0000	\N	ENSGALG000000132	0.973329	381.5
ENSGALT0000	Uncharacterized protein	ENSGALG000000132	0.993192	76.9999
ENSGALT0000	Uncharacterized protein	ENSGALG000000132	0.951971	790.568
ENSGALT0000	Uncharacterized protein	ENSGALG000000132	0.726343	18
ENSGALT0000	\N	ENSGALG000000132	0.0359887	1.02137
ENSGALT0000	\N	ENSGALG000000132	0.93386	155.5
ENSGALT0000	\N	ENSGALG000000132	0.464758	0
ENSGALT0000	\N	ENSGALG000000132	0.898356	1
ENSGALT0000	\N	ENSGALG000000132	0.95579	409.5
ENSGALT0000	\N	ENSGALG000000133	0.0795697	1290.48
ENSGALT0000	\N	ENSGALG000000133	0.984498	357.005
ENSGALT0000	\N	ENSGALG000000133	0.860569	8157
ENSGALT0000	\N	ENSGALG000000133	0.900635	130
ENSGALT0000	Uncharacterized protein	ENSGALG000000133	0.534404	0.5
ENSGALT0000	\N	ENSGALG000000133	0.9518	3714.38
ENSGALT0000	Uncharacterized protein	ENSGALG000000133	0.418305	1

ENSGALT0000	Uncharacterized protein	ENSGALG000000133	0.870884	9.21421
ENSGALT0000	\N	ENSGALG000000133	0.959328	432.781
ENSGALT0000	\N	ENSGALG000000133	0.882296	29.4796
ENSGALT0000	\N	ENSGALG000000133	0.958867	128.528
ENSGALT0000	Uncharacterized protein	ENSGALG000000133	0.872414	122.666
ENSGALT0000	\N	ENSGALG000000133	0.919781	3515.57
ENSGALT0000	\N	ENSGALG000000133	0.464758	0
ENSGALT0000	MHC class II antigen	ENSGALG000000133	0.904881	60.0034
ENSGALT0000	\N	ENSGALG000000133	?	0
ENSGALT0000	\N	ENSGALG000000133	0.889795	329.5
ENSGALT0000	\N	ENSGALG000000133	0.998553	1754.54
ENSGALT0000	\N	ENSGALG000000134	0.712884	19.6107
ENSGALT0000	\N	ENSGALG000000134	0.735239	2.79781
ENSGALT0000	Uncharacterized protein	ENSGALG000000134	0.691826	160.5
ENSGALT0000	\N	ENSGALG000000134	0.640117	3.98293
ENSGALT0000	\N	ENSGALG000000134	0.674082	11.5103
ENSGALT0000	Uncharacterized protein	ENSGALG000000134	0.935881	28.5
ENSGALT0000	\N	ENSGALG000000134	0.75154	314.5
ENSGALT0000	\N	ENSGALG000000134	0.940189	574.34
ENSGALT0000	\N	ENSGALG000000134	0.438578	4459.5
ENSGALT0000	\N	ENSGALG000000134	0.939523	68.6134
ENSGALT0000	\N	ENSGALG000000134	0.464758	0
ENSGALT0000	\N	ENSGALG000000134	0.649519	0.5
ENSGALT0000	Uncharacterized protein	ENSGALG000000135	0.99724	4
ENSGALT0000	\N	ENSGALG000000135	0.795529	63.5
ENSGALT0000	\N	ENSGALG000000135	0.866515	2306.66
ENSGALT0000	\N	ENSGALG000000135	0.972602	21.346
ENSGALT0000	\N	ENSGALG000000135	0.550123	4.14011
ENSGALT0000	\N	ENSGALG000000135	0.979163	119.583
ENSGALT0000	\N	ENSGALG000000135	0.595783	272.5
ENSGALT0000	\N	ENSGALG000000135	0.960183	87.0001
ENSGALT0000	\N	ENSGALG000000135	0.949662	490
ENSGALT0000	\N	ENSGALG000000135	0.926874	149.055
ENSGALT0000	Uncharacterized protein	ENSGALG000000136	0.80451	477.198
ENSGALT0000	Uncharacterized protein	ENSGALG000000136	0.928212	149.5
ENSGALT0000	\N	ENSGALG000000136	0.464758	3.69E-06
ENSGALT0000	\N	ENSGALG000000136	0.464758	6.61E-07
ENSGALT0000	\N	ENSGALG000000136	?	0
ENSGALT0000	\N	ENSGALG000000136	0.960531	121
ENSGALT0000	Uncharacterized protein	ENSGALG000000136	0.840415	21
ENSGALT0000	\N	ENSGALG000000137	0.603456	1.03923
ENSGALT0000	\N	ENSGALG000000137	0.988486	5809.92
ENSGALT0000	\N	ENSGALG000000137	0.932031	283
ENSGALT0000	Uncharacterized protein	ENSGALG000000137	0.956712	570
ENSGALT0000	Uncharacterized protein	ENSGALG000000137	0.98994	41
ENSGALT0000	Uncharacterized protein	ENSGALG000000137	0.983237	68
ENSGALT0000	Uncharacterized protein	ENSGALG000000137	?	0
ENSGALT0000	Uncharacterized protein	ENSGALG000000137	0.628302	5.5
ENSGALT0000	Uncharacterized protein	ENSGALG000000137	0.508617	2284.5
ENSGALT0000	Uncharacterized protein	ENSGALG000000137	0.927256	18.4978
ENSGALT0000	Uncharacterized protein	ENSGALG000000138	0.475773	4.59774
ENSGALT0000	Uncharacterized protein	ENSGALG000000138	0.952567	3513.72
ENSGALT0000	Uncharacterized protein	ENSGALG000000138	0.389271	2237.37
ENSGALT0000	\N	ENSGALG000000138	0.499796	5.65846
ENSGALT0000	Uncharacterized protein	ENSGALG000000138	0.981789	50.5
ENSGALT0000	Uncharacterized protein	ENSGALG000000138	0.957578	1166.5

ENSGALT0000 \N	ENSGALG000000138	0.99218	237.121
ENSGALT0000 \N	ENSGALG000000138	0.95685	6.60011
ENSGALT0000 \N	ENSGALG000000138	0.923091	1148
ENSGALT0000 \N	ENSGALG000000139	?	0
ENSGALT0000 \N	ENSGALG000000139	0.639354	0.10681
ENSGALT0000 Uncharacterized protein	ENSGALG000000139	0.871291	275.5
ENSGALT0000 Uncharacterized protein	ENSGALG000000139	0.951722	8.5
ENSGALT0000 \N	ENSGALG000000139	0.89126	19.5
ENSGALT0000 Uncharacterized protein	ENSGALG000000139	0.889674	478
ENSGALT0000 Uncharacterized protein	ENSGALG000000139	0.948449	537.5
ENSGALT0000 Uncharacterized protein	ENSGALG000000139	0.980232	422.349
ENSGALT0000 Uncharacterized protein	ENSGALG000000139	0.830218	984.503
ENSGALT0000 \N	ENSGALG000000139	0.998509	9.5
ENSGALT0000 \N	ENSGALG000000139	0.464758	6.96E-22
ENSGALT0000 \N	ENSGALG000000139	0.922787	170.032
ENSGALT0000 Uncharacterized protein	ENSGALG000000139	0.464758	0.5
ENSGALT0000 \N	ENSGALG000000139	0.918275	1624.87
ENSGALT0000 \N	ENSGALG000000139	0.0613571	1.38E-18
ENSGALT0000 \N	ENSGALG000000140	0.964553	545.288
ENSGALT0000 \N	ENSGALG000000140	0.988694	368
ENSGALT0000 \N	ENSGALG000000140	0.649497	2.0575
ENSGALT0000 \N	ENSGALG000000140	?	0
ENSGALT0000 \N	ENSGALG000000140	0.397953	0.6495
ENSGALT0000 \N	ENSGALG000000140	0.713554	11155.5
ENSGALT0000 \N	ENSGALG000000140	0.988683	89.2545
ENSGALT0000 Uncharacterized protein	ENSGALG000000140	0.941973	40.5
ENSGALT0000 \N	ENSGALG000000140	0.650342	1.35989
ENSGALT0000 \N	ENSGALG000000140	0.973417	376.061
ENSGALT0000 \N	ENSGALG000000140	0.995268	135
ENSGALT0000 \N	ENSGALG000000140	0.571704	0
ENSGALT0000 Uncharacterized protein	ENSGALG000000140	0.891997	33
ENSGALT0000 \N	ENSGALG000000141	0.552365	382
ENSGALT0000 Uncharacterized protein	ENSGALG000000141	0.371997	2
ENSGALT0000 \N	ENSGALG000000141	?	0
ENSGALT0000 Uncharacterized protein	ENSGALG000000141	0.849979	22
ENSGALT0000 \N	ENSGALG000000141	0.970245	1019.97
ENSGALT0000 \N	ENSGALG000000141	0.943934	4
ENSGALT0000 \N	ENSGALG000000141	0.930179	476.487
ENSGALT0000 \N	ENSGALG000000141	0.925325	5.49999
ENSGALT0000 Uncharacterized protein	ENSGALG000000141	0.12148	1.02E-07
ENSGALT0000 Uncharacterized protein	ENSGALG000000142	0.954291	272.5
ENSGALT0000 \N	ENSGALG000000142	0.919563	61.5
ENSGALT0000 PPAR	ENSGALG000000142	0.940377	39.6478
ENSGALT0000 Uncharacterized protein	ENSGALG000000142	0.994103	8.5
ENSGALT0000 \N	ENSGALG000000142	0.693351	1.50351
ENSGALT0000 Uncharacterized protein	ENSGALG000000142	?	0
ENSGALT0000 Uncharacterized protein	ENSGALG000000142	?	0
ENSGALT0000 Uncharacterized protein	ENSGALG000000142	0.93843	255.5
ENSGALT0000 Uncharacterized protein	ENSGALG000000142	0.985905	220
ENSGALT0000 \N	ENSGALG000000142	0.970241	375.5
ENSGALT0000 Uncharacterized protein	ENSGALG000000142	0.953561	86
ENSGALT0000 Uncharacterized protein	ENSGALG000000143	0.972495	12953.7
ENSGALT0000 Uncharacterized protein	ENSGALG000000143	0.993199	27.5
ENSGALT0000 \N	ENSGALG000000143	0.88826	825.834
ENSGALT0000 \N	ENSGALG000000143	0.464758	3.70E-29
ENSGALT0000 Uncharacterized protein	ENSGALG000000143	0.9868	223.5

ENSGALT0000	Uncharacterized protein	ENSGALG000000143	0.99395	102.5
ENSGALT0000	Uncharacterized protein	ENSGALG000000143	0.973625	24
ENSGALT0000	\N	ENSGALG000000143	0.911534	77.686
ENSGALT0000	\N	ENSGALG000000143	0.853815	0.5
ENSGALT0000	Uncharacterized protein	ENSGALG000000143	0.989538	669.5
ENSGALT0000	\N	ENSGALG000000143	0.962235	88.6493
ENSGALT0000	\N	ENSGALG000000143	0.924025	31.0911
ENSGALT0000	Uncharacterized protein	ENSGALG000000143	0.974237	32.5
ENSGALT0000	\N	ENSGALG000000143	0.869612	26.1382
ENSGALT0000	Uncharacterized protein	ENSGALG000000144	0.649519	0
ENSGALT0000	\N	ENSGALG000000144	0.428668	14.5
ENSGALT0000	\N	ENSGALG000000144	0.932946	237.979
ENSGALT0000	\N	ENSGALG000000144	?	0
ENSGALT0000	\N	ENSGALG000000144	0.838812	22.9251
ENSGALT0000	Uncharacterized protein	ENSGALG000000144	0.634758	3675.12
ENSGALT0000	Uncharacterized protein	ENSGALG000000145	0.849034	189.5
ENSGALT0000	Uncharacterized protein	ENSGALG000000145	0.954464	440.5
ENSGALT0000	Uncharacterized protein	ENSGALG000000145	0.974388	164
ENSGALT0000	Uncharacterized protein	ENSGALG000000145	0.905477	5162
ENSGALT0000	Uncharacterized protein	ENSGALG000000145	0.973127	467.995
ENSGALT0000	Uncharacterized protein	ENSGALG000000145	0.411166	2.70962
ENSGALT0000	Uncharacterized protein	ENSGALG000000145	0.919214	62
ENSGALT0000	\N	ENSGALG000000145	0.765453	18.7066
ENSGALT0000	\N	ENSGALG000000145	0.995916	75.204
ENSGALT0000	\N	ENSGALG000000145	0.953239	232
ENSGALT0000	Uncharacterized protein	ENSGALG000000145	0.821889	1.67691
ENSGALT0000	Uncharacterized protein	ENSGALG000000145	0.903521	3042
ENSGALT0000	\N	ENSGALG000000146	0.689304	11.4349
ENSGALT0000	Uncharacterized protein	ENSGALG000000146	0.33276	8.39222
ENSGALT0000	\N	ENSGALG000000146	0.0503556	0.5
ENSGALT0000	\N	ENSGALG000000146	0.979461	94.0047
ENSGALT0000	Uncharacterized protein	ENSGALG000000146	0.973908	403.5
ENSGALT0000	Uncharacterized protein	ENSGALG000000146	0.936823	1024
ENSGALT0000	Uncharacterized protein	ENSGALG000000147	?	0
ENSGALT0000	\N	ENSGALG000000147	0.990848	99.2096
ENSGALT0000	Uncharacterized protein	ENSGALG000000147	0.83903	10.5
ENSGALT0000	Uncharacterized protein	ENSGALG000000147	0.951376	129
ENSGALT0000	Uncharacterized protein	ENSGALG000000147	0.947757	149.015
ENSGALT0000	Uncharacterized protein	ENSGALG000000147	?	7.58E-22
ENSGALT0000	Uncharacterized protein	ENSGALG000000147	0.649519	0
ENSGALT0000	Uncharacterized protein	ENSGALG000000147	0.171119	186.618
ENSGALT0000	Uncharacterized protein	ENSGALG000000148	0.952403	87.5
ENSGALT0000	Uncharacterized protein	ENSGALG000000148	0.464758	0
ENSGALT0000	\N	ENSGALG000000148	0.857759	426.5
ENSGALT0000	Uncharacterized protein	ENSGALG000000148	0.926935	874.355
ENSGALT0000	Uncharacterized protein	ENSGALG000000148	0.998293	74.8461
ENSGALT0000	Uncharacterized protein	ENSGALG000000148	0.920496	5
ENSGALT0000	Uncharacterized protein	ENSGALG000000148	0.464758	0
ENSGALT0000	Uncharacterized protein	ENSGALG000000149	0.603682	1
ENSGALT0000	Uncharacterized protein	ENSGALG000000149	0.977051	1303.5
ENSGALT0000	Uncharacterized protein	ENSGALG000000149	0.7833	186.5
ENSGALT0000	Uncharacterized protein	ENSGALG000000149	0.683403	2.5
ENSGALT0000	Uncharacterized protein	ENSGALG000000149	0.973025	64
ENSGALT0000	Uncharacterized protein	ENSGALG000000149	0.914433	14
ENSGALT0000	Uncharacterized protein	ENSGALG000000149	0.718486	904.5
ENSGALT0000	Uncharacterized protein	ENSGALG000000150	0.806167	1.5

ENSGALT0000	\N	ENSGALG0000001500	0.996824	445
ENSGALT0000	Uncharacterized protein	ENSGALG0000001500	0.995896	361
ENSGALT0000	\N	ENSGALG0000001500	0.464758	0
ENSGALT0000	Uncharacterized protein	ENSGALG0000001500	0.385204	0.5
ENSGALT0000	Uncharacterized protein	ENSGALG0000001500	0.985176	714
ENSGALT0000	Uncharacterized protein	ENSGALG0000001500	0.957731	1174.5
ENSGALT0000	Uncharacterized protein	ENSGALG000000151	?	0
ENSGALT0000	Uncharacterized protein	ENSGALG0000001510	0.539038	0
ENSGALT0000	Uncharacterized protein	ENSGALG0000001510	0.901842	11
ENSGALT0000	Uncharacterized protein	ENSGALG0000001510	0.962536	4
ENSGALT0000	Uncharacterized protein	ENSGALG0000001510	0.464758	0
ENSGALT0000	\N	ENSGALG0000001520	0.977624	63.5
ENSGALT0000	Uncharacterized protein	ENSGALG000000152	?	0
ENSGALT0000	Uncharacterized protein	ENSGALG0000001520	0.464758	0
ENSGALT0000	Uncharacterized protein	ENSGALG000000152	1	0.5
ENSGALT0000	Uncharacterized protein	ENSGALG0000001520	0.846939	1.5
ENSGALT0000	\N	ENSGALG0000001520	0.887851	883.736
ENSGALT0000	CHD-W	ENSGALG0000001520	0.960402	516.77
ENSGALT0000	Uncharacterized protein	ENSGALG000000152	?	0
ENSGALT0000	Uncharacterized protein	ENSGALG000000152	?	0
ENSGALT0000	\N	ENSGALG0000001530	0.875218	189.5
ENSGALT0000	Uncharacterized protein	ENSGALG0000001530	0.971293	1.5
ENSGALT0000	Uncharacterized protein	ENSGALG000000153	?	0
ENSGALT0000	Uncharacterized protein	ENSGALG0000001540	0.969272	54
ENSGALT0000	Uncharacterized protein	ENSGALG0000001540	0.818488	0.5
ENSGALT0000	Uncharacterized protein	ENSGALG0000001540	0.982596	577.639
ENSGALT0000	Uncharacterized protein	ENSGALG0000001540	0.953341	97.5
ENSGALT0000	\N	ENSGALG0000001540	0.831499	1344.83
ENSGALT0000	Uncharacterized protein	ENSGALG0000001540	0.22129	0.5
ENSGALT0000	Uncharacterized protein	ENSGALG0000001550	0.970851	63
ENSGALT0000	Uncharacterized protein	ENSGALG0000001550	0.741498	8
ENSGALT0000	Uncharacterized protein	ENSGALG0000001550	0.914156	24.5
ENSGALT0000	Uncharacterized protein	ENSGALG0000001550	0.990098	893.109
ENSGALT0000	Uncharacterized protein	ENSGALG0000001550	0.861668	13
ENSGALT0000	Uncharacterized protein	ENSGALG0000001560	0.984992	541
ENSGALT0000	Uncharacterized protein	ENSGALG0000001560	0.971419	803.537
ENSGALT0000	Uncharacterized protein	ENSGALG0000001560	0.86272	5.93388
ENSGALT0000	Uncharacterized protein	ENSGALG0000001560	0.603682	0
ENSGALT0000	Uncharacterized protein	ENSGALG0000001560	0.949958	12.5
ENSGALT0000	Uncharacterized protein	ENSGALG0000001560	0.99427	807
ENSGALT0000	Uncharacterized protein	ENSGALG0000001560	0.97425	2
ENSGALT0000	\N	ENSGALG0000001560	0.897938	536
ENSGALT0000	Uncharacterized protein	ENSGALG0000001560	0.847193	348.5
ENSGALT0000	Uncharacterized protein	ENSGALG0000001560	0.982419	30.5
ENSGALT0000	Uncharacterized protein	ENSGALG0000001570	0.954445	91
ENSGALT0000	Uncharacterized protein	ENSGALG0000001570	0.953762	336.936
ENSGALT0000	Uncharacterized protein	ENSGALG0000001570	0.954203	5
ENSGALT0000	Uncharacterized protein	ENSGALG0000001570	0.481193	0.5
ENSGALT0000	Uncharacterized protein	ENSGALG000000157	?	0
ENSGALT0000	\N	ENSGALG0000001570	0.808892	1.86612
ENSGALT0000	Uncharacterized protein	ENSGALG0000001570	0.164317	0
ENSGALT0000	\N	ENSGALG0000001570	0.936025	332.223
ENSGALT0000	Uncharacterized protein	ENSGALG0000001570	0.976824	41.5
ENSGALT0000	\N	ENSGALG0000001580	?	0
ENSGALT0000	Uncharacterized protein	ENSGALG0000001580	?	0
ENSGALT0000	Uncharacterized protein	ENSGALG0000001590	?	0

ENSGALT0000	Uncharacterized protein	ENSGALG000000159 ?	0
ENSGALT0000	Uncharacterized protein	ENSGALG000000159 0.985614	94.4431
ENSGALT0000	\N	ENSGALG000000159 0.974127	146
ENSGALT0000	Uncharacterized protein	ENSGALG000000160 0.997491	188
ENSGALT0000	Uncharacterized protein	ENSGALG000000160 0.649519	0
ENSGALT0000	Uncharacterized protein	ENSGALG000000160 ?	0
ENSGALT0000	Uncharacterized protein	ENSGALG000000160 0.669963	39.5
ENSGALT0000	Uncharacterized protein	ENSGALG000000160 0.931088	44.8576
ENSGALT0000	Uncharacterized protein	ENSGALG000000160 0.979245	5660.44
ENSGALT0000	Uncharacterized protein	ENSGALG000000160 0.603682	1
ENSGALT0000	Uncharacterized protein	ENSGALG000000160 0.968483	229.5
ENSGALT0000	Uncharacterized protein	ENSGALG000000161 ?	0
ENSGALT0000	Uncharacterized protein	ENSGALG000000161 0.974371	589.5
ENSGALT0000	Uncharacterized protein	ENSGALG000000161 0.950369	1427.16
ENSGALT0000	Uncharacterized protein	ENSGALG000000161 0.603682	1
ENSGALT0000	Uncharacterized protein	ENSGALG000000161 0.595159	0.5
ENSGALT0000	Uncharacterized protein	ENSGALG000000161 0.464758	0
ENSGALT0000	Uncharacterized protein	ENSGALG000000162 0.464758	1
ENSGALT0000	Uncharacterized protein	ENSGALG000000162 0.792671	8.5
ENSGALT0000	Uncharacterized protein	ENSGALG000000162 0.353553	0
ENSGALT0000	\N	ENSGALG000000162 0.631223	1
ENSGALT0000	Uncharacterized protein	ENSGALG000000162 0.412715	9
ENSGALT0000	\N	ENSGALG000000162 0.536413	1.5
ENSGALT0000	Uncharacterized protein	ENSGALG000000162 0.807959	6.5
ENSGALT0000	Uncharacterized protein	ENSGALG000000162 0.92006	21
ENSGALT0000	Uncharacterized protein	ENSGALG000000162 0.671068	4.88642
ENSGALT0000	Uncharacterized protein	ENSGALG000000162 0.94691	1.5
ENSGALT0000	Uncharacterized protein	ENSGALG000000163 0.993279	11.2504
ENSGALT0000	Uncharacterized protein	ENSGALG000000163 0.799073	29.218
ENSGALT0000	Uncharacterized protein	ENSGALG000000164 0.483373	90.5
ENSGALT0000	\N	ENSGALG000000164 0.464758	0
ENSGALT0000	Uncharacterized protein	ENSGALG000000164 0.996105	31.5
ENSGALT0000	Uncharacterized protein	ENSGALG000000164 0.649519	0
ENSGALT0000	Uncharacterized protein	ENSGALG000000164 ?	0
ENSGALT0000	Uncharacterized protein	ENSGALG000000164 0.976597	577
ENSGALT0000	Uncharacterized protein	ENSGALG000000165 0.892101	195
ENSGALT0000	Uncharacterized protein	ENSGALG000000165 0.893049	964
ENSGALT0000	Uncharacterized protein	ENSGALG000000165 0.841344	382.5
ENSGALT0000	Uncharacterized protein	ENSGALG000000165 0.852249	144.18
ENSGALT0000	Uncharacterized protein	ENSGALG000000165 0.877233	13.5
ENSGALT0000	Uncharacterized protein	ENSGALG000000165 0.800618	2.5
ENSGALT0000	Uncharacterized protein	ENSGALG000000165 0.464758	0
ENSGALT0000	Uncharacterized protein	ENSGALG000000166 0.832299	11.6574
ENSGALT0000	Uncharacterized protein	ENSGALG000000166 0.966792	44
ENSGALT0000	\N	ENSGALG000000166 0.971293	1.5
ENSGALT0000	Uncharacterized protein	ENSGALG000000166 0.898116	450.5
ENSGALT0000	Uncharacterized protein	ENSGALG000000166 0.363264	114
ENSGALT0000	Hydroxyindole-o-methyltransferase	ENSGALG000000166 ?	0
ENSGALT0000	Uncharacterized protein	ENSGALG000000166 0.905264	27.9342
ENSGALT0000	Uncharacterized protein	ENSGALG000000167 0.995907	333
ENSGALT0000	Uncharacterized protein	ENSGALG000000167 0.994054	6.5
ENSGALT0000	Uncharacterized protein	ENSGALG000000167 0.854041	170.5
ENSGALT0000	Uncharacterized protein	ENSGALG000000167 0.999457	462.5
ENSGALT0000	Uncharacterized protein	ENSGALG000000168 0.978422	1308.5
ENSGALT0000	Uncharacterized protein	ENSGALG000000168 0.578754	1.5
ENSGALT0000	Uncharacterized protein	ENSGALG000000168 ?	0

ENSGALT0000	Uncharacterized protein	ENSGALG0000001688	1	0.5
ENSGALT0000	Uncharacterized protein	ENSGALG0000001699	?	0
ENSGALT0000	Uncharacterized protein	ENSGALG0000001699	0.948363	191.5
ENSGALT0000	Uncharacterized protein	ENSGALG0000001699	?	0
ENSGALT0000	\N	ENSGALG0000001699	0.931991	20.5
ENSGALT0000	Uncharacterized protein	ENSGALG0000001700	0.769262	33
ENSGALT0000	\N	ENSGALG0000001700	0.815677	124.5
ENSGALT0000	Uncharacterized protein	ENSGALG0000001700	0.508149	14.5
ENSGALT0000	\N	ENSGALG0000001700	?	0
ENSGALT0000	Uncharacterized protein	ENSGALG0000001711	?	0
ENSGALT0000	Uncharacterized protein	ENSGALG0000001710	0.996884	1718.51
ENSGALT0000	Uncharacterized protein	ENSGALG0000001710	0.986187	190
ENSGALT0000	Uncharacterized protein	ENSGALG0000001710	0.667308	121.5
ENSGALT0000	Uncharacterized protein	ENSGALG0000001710	0.918676	171.388
ENSGALT0000	Uncharacterized protein	ENSGALG0000001710	0	2
ENSGALT0000	Uncharacterized protein	ENSGALG0000001710	0.988956	369
ENSGALT0000	Uncharacterized protein	ENSGALG0000001722	0.397587	4
ENSGALT0000	Uncharacterized protein	ENSGALG0000001722	0.740073	2
ENSGALT0000	Uncharacterized protein	ENSGALG0000001722	?	0
ENSGALT0000	Uncharacterized protein	ENSGALG0000001722	0.60689	0.5
ENSGALT0000	Uncharacterized protein	ENSGALG0000001722	0.99219	273
ENSGALT0000	Uncharacterized protein	ENSGALG0000001722	0.804174	3.5
ENSGALT0000	Uncharacterized protein	ENSGALG0000001733	0.950419	3.5
ENSGALT0000	Uncharacterized protein	ENSGALG0000001733	0.960261	191
ENSGALT0000	\N	ENSGALG0000001733	0.849553	4
ENSGALT0000	\N	ENSGALG0000001733	0.464758	0
ENSGALT0000	Uncharacterized protein	ENSGALG0000001733	0.925272	4029
ENSGALT0000	\N	ENSGALG0000001733	0.921801	433.5
ENSGALT0000	Uncharacterized protein	ENSGALG0000001733	0.898356	1
ENSGALT0000	Uncharacterized protein	ENSGALG0000001744	0.656952	2672.5
ENSGALT0000	\N	ENSGALG0000001744	0.556262	12.0165
ENSGALT0000	Uncharacterized protein	ENSGALG0000001744	0.212246	6.58E-23
ENSGALT0000	Uncharacterized protein	ENSGALG0000001744	0.876032	202.5
ENSGALT0000	\N	ENSGALG0000001755	0.96315	216.131
ENSGALT0000	\N	ENSGALG0000001755	0.982	19
ENSGALT0000	\N	ENSGALG0000001755	0.828596	435.117
ENSGALT0000	\N	ENSGALG0000001755	0.464758	0.5
ENSGALT0000	\N	ENSGALG0000001755	0.649322	0.6761
ENSGALT0000	\N	ENSGALG0000001755	0.464758	2.76E-18
ENSGALT0000	\N	ENSGALG0000001755	0.920093	6.5
ENSGALT0000	\N	ENSGALG0000001755	0.464758	0
ENSGALT0000	\N	ENSGALG0000001755	0.337282	1.64142
ENSGALT0000	\N	ENSGALG0000001755	?	0
ENSGALT0000	\N	ENSGALG0000001755	0.886624	885
ENSGALT0000	\N	ENSGALG0000001755	0.115299	2.80E-26
ENSGALT0000	\N	ENSGALG0000001755	0.639814	1
ENSGALT0000	\N	ENSGALG0000001766	0.694275	16.3294
ENSGALT0000	\N	ENSGALG0000001766	0.510452	3.5
ENSGALT0000	\N	ENSGALG0000001766	0.78516	22.0702
ENSGALT0000	\N	ENSGALG0000001766	0.831735	246.886
ENSGALT0000	Uncharacterized protein	ENSGALG0000001766	0.999328	59.4315
ENSGALT0000	\N	ENSGALG0000001766	0.956889	90.0154
ENSGALT0000	\N	ENSGALG0000001766	0.532084	0
ENSGALT0000	Uncharacterized protein	ENSGALG0000001766	0.298906	64.1198
ENSGALT0000	Uncharacterized protein	ENSGALG0000001766	0.785501	30.8826
ENSGALT0000	Uncharacterized protein	ENSGALG0000001777	0.955189	380.001

ENSGALT0000 \N	ENSGALG000000177	0.574193	0
ENSGALT0000 \N	ENSGALG000000177	0.0741644	4.11798
ENSGALT0000 \N	ENSGALG000000179	0.549432	1.25
ENSGALT0000 \N	ENSGALG000000179	0.391213	0
ENSGALT0000 \N	ENSGALG000000179	0.580814	5.10E-06
ENSGALT0000 \N	ENSGALG000000179	0.570242	0.91667
ENSGALT0000 \N	ENSGALG000000179	0.570242	0.91667
ENSGALT0000 \N	ENSGALG000000179	0.464758	0
ENSGALT0000 \N	ENSGALG000000179	?	1.48E-16
ENSGALT0000 \N	ENSGALG000000179	0.685727	0.45
ENSGALT0000 \N	ENSGALG000000179	0.464788	0.16667
ENSGALT0000 \N	ENSGALG000000179	0.562993	0.5
ENSGALT0000 \N	ENSGALG000000179	0.11822	0.08333
ENSGALT0000 \N	ENSGALG000000179	0.587519	0.5
ENSGALT0000 \N	ENSGALG000000179	0.570242	0.91667
ENSGALT0000 \N	ENSGALG000000179	0.570242	0.91667
ENSGALT0000 \N	ENSGALG000000179	0.11822	0.08333
ENSGALT0000 \N	ENSGALG000000179	0.11822	0.08333
ENSGALT0000 \N	ENSGALG000000179	0.11822	0.08333
ENSGALT0000 \N	ENSGALG000000179	0.464758	0
ENSGALT0000 \N	ENSGALG000000179	0.244778	0.5
ENSGALT0000 \N	ENSGALG000000179	0.371997	0.33333
ENSGALT0000 \N	ENSGALG000000179	0.464758	0
ENSGALT0000 \N	ENSGALG000000179	?	0
ENSGALT0000 \N	ENSGALG000000179	0.464758	0
ENSGALT0000 \N	ENSGALG000000179	?	0
ENSGALT0000 \N	ENSGALG000000179	?	0
ENSGALT0000 \N	ENSGALG000000179	?	0
ENSGALT0000 \N	ENSGALG000000179	0.550159	0.475
ENSGALT0000 \N	ENSGALG000000179	0.19245	0.25
ENSGALT0000 \N	ENSGALG000000179	0.371997	0.33333
ENSGALT0000 \N	ENSGALG000000179	0.280069	2.96E-16
ENSGALT0000 \N	ENSGALG000000179	0.464758	0
ENSGALT0000 \N	ENSGALG000000180	0.662104	0.25
ENSGALT0000 \N	ENSGALG000000180	0.464632	0
ENSGALT0000 \N	ENSGALG000000180	0.526362	3.83333
ENSGALT0000 \N	ENSGALG000000180	?	0
ENSGALT0000 \N	ENSGALG000000180	0.59426	0.16667
ENSGALT0000 \N	ENSGALG000000180	0.464758	1.5
ENSGALT0000 \N	ENSGALG000000180	?	0
ENSGALT0000 \N	ENSGALG000000180	0.570242	0.91667
ENSGALT0000 \N	ENSGALG000000180	0.464758	0
ENSGALT0000 \N	ENSGALG000000180	0.631223	0
ENSGALT0000 \N	ENSGALG000000180	0.853815	0.5
ENSGALT0000 \N	ENSGALG000000180	0.570242	0.91667
ENSGALT0000 \N	ENSGALG000000180	0.131521	0
ENSGALT0000 \N	ENSGALG000000180	0.550159	0.475
ENSGALT0000 \N	ENSGALG000000180	?	0
ENSGALT0000 \N	ENSGALG000000180	0.631223	0
ENSGALT0000 \N	ENSGALG000000180	0.649519	0.25
ENSGALT0000 \N	ENSGALG000000180	?	0
ENSGALT0000 \N	ENSGALG000000180	?	0
ENSGALT0000 \N	ENSGALG000000180	0.734344	0.75
ENSGALT0000 \N	ENSGALG000000180	0.734344	0.75
ENSGALT0000 \N	ENSGALG000000180	0.693102	1
ENSGALT0000 \N	ENSGALG000000180	?	0

ENSGALT0000 \N	ENSGALG0000001810	0.734344	0.75
ENSGALT0000 \N	ENSGALG0000001810	?	0
ENSGALT0000 \N	ENSGALG0000001810	0.693102	1
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ENSGALT0000 \N	ENSGALG0000001810	?	0
ENSGALT0000 \N	ENSGALG0000001810	0.464758	0.5
ENSGALT0000 \N	ENSGALG0000001810	?	0
ENSGALT0000 \N	ENSGALG0000001810	0.391213	0
ENSGALT0000 \N	ENSGALG0000001810	0.498892	0.12793
ENSGALT0000 \N	ENSGALG0000001810	0.391213	0
ENSGALT0000 \N	ENSGALG0000001810	0.554569	2
ENSGALT0000 \N	ENSGALG0000001810	0.464758	0
ENSGALT0000 \N	ENSGALG0000001810	0.550159	0.475
ENSGALT0000 \N	ENSGALG0000001810	0.391213	0
ENSGALT0000 \N	ENSGALG0000001810	?	0
ENSGALT0000 \N	ENSGALG0000001810	0.391213	0
ENSGALT0000 \N	ENSGALG0000001810	0.464758	0.5
ENSGALT0000 \N	ENSGALG0000001810	?	0
ENSGALT0000 \N	ENSGALG0000001810	?	0
ENSGALT0000 \N	ENSGALG0000001810	?	0
ENSGALT0000 \N	ENSGALG0000001810	0.899851	10.7428
ENSGALT0000 \N	ENSGALG0000001810	0.464758	0
ENSGALT0000 \N	ENSGALG0000001810	0.853815	1.5
ENSGALT0000 \N	ENSGALG0000001810	0.853815	1.5
ENSGALT0000 \N	ENSGALG0000001810	0.464758	0
ENSGALT0000 \N	ENSGALG0000001810	?	0
ENSGALT0000 \N	ENSGALG0000001810	0.693102	1
ENSGALT0000 \N	ENSGALG0000001810	0.441306	0.5
ENSGALT0000 \N	ENSGALG0000001810	?	0
ENSGALT0000 \N	ENSGALG0000001810	?	0
ENSGALT0000 \N	ENSGALG0000001810	?	0
ENSGALT0000 \N	ENSGALG0000001810	?	0
ENSGALT0000 \N	ENSGALG0000001810	?	0
ENSGALT0000 \N	ENSGALG0000001810	0.524047	0.1
ENSGALT0000 \N	ENSGALG0000001810	0.464758	0
ENSGALT0000 \N	ENSGALG0000001810	?	0
ENSGALT0000 \N	ENSGALG0000001810	0.618551	0.5
ENSGALT0000 \N	ENSGALG0000001810	0.618551	0.5
ENSGALT0000 \N	ENSGALG0000001810	0.464758	1.18E-09
ENSGALT0000 \N	ENSGALG0000001810	0.547092	0.5
ENSGALT0000 \N	ENSGALG0000001810	?	0
ENSGALT0000 \N	ENSGALG0000001810	0.464758	0
ENSGALT0000 \N	ENSGALG0000001810	0.618551	0.5
ENSGALT0000 \N	ENSGALG0000001810	0.550159	0.475
ENSGALT0000 \N	ENSGALG000000181	?	0
ENSGALT0000 \N	ENSGALG000000181	?	0
ENSGALT0000 \N	ENSGALG000000181	0.648108	2.83348
ENSGALT0000 \N	ENSGALG000000181	?	0
ENSGALT0000 \N	ENSGALG000000181	0.186286	5.5
ENSGALT0000 \N	ENSGALG000000181	0.481129	40
ENSGALT0000 \N	ENSGALG000000181	0.356623	6.5
ENSGALT0000 \N	ENSGALG000000181	0.526362	3.83333
ENSGALT0000 \N	ENSGALG000000181	0.693102	1
ENSGALT0000 \N	ENSGALG000000181	0.464758	0
ENSGALT0000 \N	ENSGALG000000181	?	0
ENSGALT0000 \N	ENSGALG000000181	0.693102	1

ENSGALT0000 \N	ENSGALG0000001810.604344	0.61667
ENSGALT0000 \N	ENSGALG0000001810.630547	2.01286
ENSGALT0000 \N	ENSGALG000000181?	1.48E-16
ENSGALT0000 \N	ENSGALG0000001810.391213	0
ENSGALT0000 \N	ENSGALG0000001810.391213	0
ENSGALT0000 \N	ENSGALG0000001810.441306	0.5
ENSGALT0000 \N	ENSGALG000000181?	0
ENSGALT0000 \N	ENSGALG000000181?	0
ENSGALT0000 \N	ENSGALG000000181?	0
ENSGALT0000 \N	ENSGALG000000181?	0
ENSGALT0000 \N	ENSGALG0000001810.649519	3
ENSGALT0000 \N	ENSGALG0000001810.464758	0
ENSGALT0000 \N	ENSGALG0000001810.899851	10.7428
ENSGALT0000 \N	ENSGALG0000001810.899851	10.7428
ENSGALT0000 \N	ENSGALG000000181?	0
ENSGALT0000 \N	ENSGALG0000001810.11822	0.08333
ENSGALT0000 \N	ENSGALG0000001810.617492	2.5
ENSGALT0000 \N	ENSGALG0000001810.630547	2.01286
ENSGALT0000 \N	ENSGALG0000001810.630547	2.01286
ENSGALT0000 \N	ENSGALG0000001810.587519	0.5
ENSGALT0000 \N	ENSGALG0000001810.12137	0.5
ENSGALT0000 \N	ENSGALG0000001810.707664	2
ENSGALT0000 \N	ENSGALG0000001810.464758	0
ENSGALT0000 \N	ENSGALG0000001810.464758	0
ENSGALT0000 \N	ENSGALG0000001810.875162	1.2
ENSGALT0000 \N	ENSGALG0000001810.371997	0.33333
ENSGALT0000 \N	ENSGALG000000181?	0
ENSGALT0000 \N	ENSGALG000000181?	0
ENSGALT0000 \N	ENSGALG000000181?	0
ENSGALT0000 \N	ENSGALG000000181?	0
ENSGALT0000 \N	ENSGALG000000181?	8.15E-13
ENSGALT0000 \N	ENSGALG000000181?	0
ENSGALT0000 \N	ENSGALG000000181?	0
ENSGALT0000 \N	ENSGALG0000001810.464758	0.16667
ENSGALT0000 \N	ENSGALG0000001810.853488	0.50049
ENSGALT0000 \N	ENSGALG000000181?	0
ENSGALT0000 \N	ENSGALG000000181?	0
ENSGALT0000 \N	ENSGALG0000001810.36417	3.99951
ENSGALT0000 \N	ENSGALG0000001810.526362	3.83333
ENSGALT0000 \N	ENSGALG0000001810.603682	0
ENSGALT0000 \N	ENSGALG0000001810.649519	0.25
ENSGALT0000 \N	ENSGALG000000181?	0
ENSGALT0000 \N	ENSGALG000000181?	0
ENSGALT0000 \N	ENSGALG000000182?	0
ENSGALT0000 \N	ENSGALG0000001830.865939	13.5
ENSGALT0000 \N	ENSGALG0000001830.970567	117.5
ENSGALT0000 \N	ENSGALG0000001830.969954	11
ENSGALT0000 \N	ENSGALG0000001830.938628	31.5
ENSGALT0000 \N	ENSGALG0000001830.665214	66
ENSGALT0000 \N	ENSGALG0000001830.878758	9.5
ENSGALT0000 \N	ENSGALG0000001830.949201	76.5
ENSGALT0000 \N	ENSGALG0000001830.874163	152
ENSGALT0000 \N	ENSGALG0000001830.876198	15591.3
ENSGALT0000 \N	ENSGALG0000001830.985471	238.5
ENSGALT0000 \N	ENSGALG0000001830.961366	240.5
ENSGALT0000 \N	ENSGALG0000001830.962018	334

ENSGALT0000	\N	ENSGALG000000183	0.764925	412.5
ENSGALT0000	\N	ENSGALG000000183	0.72017	31.5
ENSGALT0000	\N	ENSGALG000000183	0.593616	259
ENSGALT0000	\N	ENSGALG000000183	0.887808	130.5
ENSGALT0000	\N	ENSGALG000000183	0.922403	114.5
ENSGALT0000	\N	ENSGALG000000183	0.976289	60377
ENSGALT0000	\N	ENSGALG000000183	0.97808	27
ENSGALT0000	\N	ENSGALG000000183	0.927548	22742
ENSGALT0000	\N	ENSGALG000000183	0.384836	19
ENSGALT0000	\N	ENSGALG000000183	0.80379	30.9977
ENSGALT0000	\N	ENSGALG000000183	0.842394	31.6398
ENSGALT0000	\N	ENSGALG000000184	0.945368	55.0076
ENSGALT0000	\N	ENSGALG000000184	0.22129	0
ENSGALT0000	\N	ENSGALG000000184	?	0
ENSGALT0000	Uncharacterized protein	ENSGALG000000184	?	0
ENSGALT0000	\N	ENSGALG000000184	?	0
ENSGALT0000	\N	ENSGALG000000184	?	0
ENSGALT0000	Uncharacterized protein	ENSGALG000000184	0.996163	321
ENSGALT0000	Uncharacterized protein	ENSGALG000000184	0.545129	11.5
ENSGALT0000	\N	ENSGALG000000185	0.883221	4
ENSGALT0000	\N	ENSGALG000000185	0.995362	4.91369
ENSGALT0000	Uncharacterized protein	ENSGALG000000185	0.932761	1339
ENSGALT0000	Uncharacterized protein	ENSGALG000000185	0.943934	1
ENSGALT0000	\N	ENSGALG000000185	0.29877	7.20501
ENSGALT0000	\N	ENSGALG000000185	0.675796	21.147
ENSGALT0000	\N	ENSGALG000000185	?	0
ENSGALT0000	\N	ENSGALG000000185	0.708107	0.5433
ENSGALT0000	\N	ENSGALG000000185	0.782036	2.64712
ENSGALT0000	\N	ENSGALG000000185	0.568383	2.10E-07
ENSGALT0000	\N	ENSGALG000000185	0.980836	70.0569
ENSGALT0000	\N	ENSGALG000000185	0.631194	275.5
ENSGALT0000	\N	ENSGALG000000185	0.829769	312
ENSGALT0000	\N	ENSGALG000000185	0.670801	119
ENSGALT0000	Uncharacterized protein	ENSGALG000000186	0.982311	49.5
ENSGALT0000	\N	ENSGALG000000186	0.62319	2.02E-10
ENSGALT0000	Uncharacterized protein	ENSGALG000000186	0.777087	8.49714
ENSGALT0000	\N	ENSGALG000000186	?	0
ENSGALT0000	Uncharacterized protein	ENSGALG000000186	0.474548	1.03816
ENSGALT0000	Uncharacterized protein	ENSGALG000000186	?	0
ENSGALT0000	\N	ENSGALG000000186	0.464758	0.5
ENSGALT0000	\N	ENSGALG000000186	0.0391037	102.869
ENSGALT0000	\N	ENSGALG000000186	0.955786	16.0701
ENSGALT0000	\N	ENSGALG000000186	0.934893	55.7624
ENSGALT0000	Female-associated factor FAF	ENSGALG000000186	?	2.60E-38
ENSGALT0000	\N	ENSGALG000000187	0.930522	33
ENSGALT0000	\N	ENSGALG000000187	0.892456	3.90612
ENSGALT0000	\N	ENSGALG000000187	0.683403	5
ENSGALT0000	\N	ENSGALG000000187	0.761252	41
ENSGALT0000	Uncharacterized protein	ENSGALG000000187	0.639897	2
ENSGALT0000	Uncharacterized protein	ENSGALG000000187	0.86853	83.5
ENSGALT0000	\N	ENSGALG000000187	?	1.75E-20
ENSGALT0000	\N	ENSGALG000000187	0.330049	62
ENSGALT0000	\N	ENSGALG000000187	0.992943	244.246
ENSGALT0000	\N	ENSGALG000000187	0.960509	119.041
ENSGALT0000	\N	ENSGALG000000187	?	0
ENSGALT0000	\N	ENSGALG000000187	0.465055	3.89E-11

ENSGALT0000	\N	ENSGALG000000187	0.918379	442
ENSGALT0000	\N	ENSGALG000000187	0.000534261	2.28E-08
ENSGALT0000	Uncharacterized protein	ENSGALG000000187	0.906853	234
ENSGALT0000	\N	ENSGALG000000187	0.799021	4.7757
ENSGALT0000	\N	ENSGALG000000187	0.912943	56.3773
ENSGALT0000	Uncharacterized protein	ENSGALG000000187	0.995676	273
ENSGALT0000	\N	ENSGALG000000187	0.957088	52.5
ENSGALT0000	Uncharacterized protein	ENSGALG000000187	?	0
ENSGALT0000	\N	ENSGALG000000187	0.955583	4035.53
ENSGALT0000	\N	ENSGALG000000187	0.937099	12.8713
ENSGALT0000	\N	ENSGALG000000187	0.9864	92.1821
ENSGALT0000	\N	ENSGALG000000187	?	0
ENSGALT0000	\N	ENSGALG000000187	0.464758	2.28E-16
ENSGALT0000	\N	ENSGALG000000187	?	0
ENSGALT0000	Uncharacterized protein	ENSGALG000000187	0.975683	5
ENSGALT0000	\N	ENSGALG000000187	0.660891	6
ENSGALT0000	\N	ENSGALG000000187	0.954904	10.5501
ENSGALT0000	Partial mitochondrial ribosomal pro	ENSGALG00000018	0.87969	1786.29
ENSGALT0000	\N	ENSGALG00000018	0.464757	3.13E-10
ENSGALT0000	\N	ENSGALG00000018	0.689739	224.935
ENSGALT0000	\N	ENSGALG00000018	0.162035	615.5
ENSGALT0000	Uncharacterized protein	ENSGALG00000018	0.893077	1
ENSGALT0000	Uncharacterized protein	ENSGALG00000018	0.95955	348.663
ENSGALT0000	\N	ENSGALG00000018	0.929445	51.2516
ENSGALT0000	\N	ENSGALG00000018	0.851093	6.82344
ENSGALT0000	\N	ENSGALG00000018	0.815498	477
ENSGALT0000	\N	ENSGALG00000018	0.464761	1
ENSGALT0000	\N	ENSGALG00000018	0.985546	40.2234
ENSGALT0000	\N	ENSGALG00000018	0.464758	0.00294
ENSGALT0000	\N	ENSGALG00000189	?	8.55E-32
ENSGALT0000	\N	ENSGALG00000189	0.603682	0
ENSGALT0000	\N	ENSGALG00000189	0.991067	226.963
ENSGALT0000	\N	ENSGALG00000189	0.932886	34.8257
ENSGALT0000	Uncharacterized protein	ENSGALG00000189	0.603682	1
ENSGALT0000	\N	ENSGALG00000189	?	0
ENSGALT0000	\N	ENSGALG00000189	0.965184	1325.65
ENSGALT0000	Uncharacterized protein	ENSGALG00000189	0.464795	0.00025
ENSGALT0000	\N	ENSGALG00000189	0.855394	24.9498
ENSGALT0000	\N	ENSGALG00000189	0.723648	6562
ENSGALT0000	\N	ENSGALG0000019C	0.920128	21.5
ENSGALT0000	Uncharacterized protein	ENSGALG0000019C	0.539038	0
ENSGALT0000	Uncharacterized protein	ENSGALG0000019C	0.464758	7.60E-24
ENSGALT0000	\N	ENSGALG0000019C	?	0
ENSGALT0000	Uncharacterized protein	ENSGALG0000019C	0.764365	221.5
ENSGALT0000	Uncharacterized protein	ENSGALG0000019C	0.898356	1
ENSGALT0000	Uncharacterized protein	ENSGALG0000019C	0.781368	3
ENSGALT0000	Uncharacterized protein	ENSGALG0000019C	?	0
ENSGALT0000	Uncharacterized protein	ENSGALG0000019C	0.603682	0
ENSGALT0000	Uncharacterized protein	ENSGALG0000019C	?	0
ENSGALT0000	Uncharacterized protein	ENSGALG0000019C	0.649519	0
ENSGALT0000	Uncharacterized protein	ENSGALG0000019C	0.986263	1058
ENSGALT0000	Uncharacterized protein	ENSGALG0000019C	?	0
ENSGALT0000	Uncharacterized protein	ENSGALG0000019C	0.78376	263.5
ENSGALT0000	Uncharacterized protein	ENSGALG000000191	?	0
ENSGALT0000	Uncharacterized protein	ENSGALG0000001910	0.945872	18.5
ENSGALT0000	Uncharacterized protein	ENSGALG0000001910	0.852363	12

ENSGALT0000	Uncharacterized protein	ENSGALG0000001910.464758	0
ENSGALT0000	Uncharacterized protein	ENSGALG0000001910.457515	0.5
ENSGALT0000	Uncharacterized protein	ENSGALG000000191?	0
ENSGALT0000	Uncharacterized protein	ENSGALG000000191?	0
ENSGALT0000	Uncharacterized protein	ENSGALG0000001910.0262098	0
ENSGALT0000	Uncharacterized protein	ENSGALG0000001910.464758	0
ENSGALT0000	Uncharacterized protein	ENSGALG0000001910.97308	5.56579
ENSGALT0000	Uncharacterized protein	ENSGALG0000001910.631223	0
ENSGALT0000	Uncharacterized protein	ENSGALG0000001910.93408	5
ENSGALT0000	\N	ENSGALG0000001910.968247	554.375
ENSGALT0000	Uncharacterized protein	ENSGALG000000191?	0
ENSGALT0000	Uncharacterized protein	ENSGALG0000001910.853815	0.5
ENSGALT0000	Uncharacterized protein	ENSGALG0000001920.981816	26.5
ENSGALT0000	Uncharacterized protein	ENSGALG0000001920.155477	1.16118
ENSGALT0000	Uncharacterized protein	ENSGALG000000192?	0
ENSGALT0000	Uncharacterized protein	ENSGALG0000001920.8606	15
ENSGALT0000	Uncharacterized protein	ENSGALG0000001920.751311	61.5
ENSGALT0000	Uncharacterized protein	ENSGALG0000001920.464765	1.74E-05
ENSGALT0000	Uncharacterized protein	ENSGALG0000001920.740073	0.5
ENSGALT0000	Uncharacterized protein	ENSGALG0000001920.722096	1.5
ENSGALT0000	Uncharacterized protein	ENSGALG0000001920.824205	3
ENSGALT0000	Uncharacterized protein	ENSGALG000000192?	0
ENSGALT0000	Uncharacterized protein	ENSGALG0000001920.799916	118.5
ENSGALT0000	Uncharacterized protein	ENSGALG000000192?	0
ENSGALT0000	Uncharacterized protein	ENSGALG0000001920.954288	195
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ENSGALT0000	Uncharacterized protein	ENSGALG0000001920.959462	352.5
ENSGALT0000	Uncharacterized protein	ENSGALG000000192?	0
ENSGALT0000	Uncharacterized protein	ENSGALG0000001920.788013	33
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ENSGALT0000	Uncharacterized protein	ENSGALG0000001930.848767	28.5
ENSGALT0000	Uncharacterized protein	ENSGALG0000001930.891469	33.5
ENSGALT0000	Uncharacterized protein	ENSGALG0000001930.722096	1.5
ENSGALT0000	Uncharacterized protein	ENSGALG0000001930.838511	5
ENSGALT0000	Uncharacterized protein	ENSGALG000000193?	0
ENSGALT0000	Uncharacterized protein	ENSGALG0000001930.889958	95.5
ENSGALT0000	Uncharacterized protein	ENSGALG0000001930.853815	1
ENSGALT0000	Uncharacterized protein	ENSGALG0000001930.895318	3
ENSGALT0000	Uncharacterized protein	ENSGALG000000193?	0
ENSGALT0000	Uncharacterized protein	ENSGALG0000001930.988868	4
ENSGALT0000	Uncharacterized protein	ENSGALG000000193?	0
ENSGALT0000	Uncharacterized protein	ENSGALG0000001930.740073	1
ENSGALT0000	Uncharacterized protein	ENSGALG0000001940.464758	0.5
ENSGALT0000	Uncharacterized protein	ENSGALG000000194?	0
ENSGALT0000	Uncharacterized protein	ENSGALG000000194?	0
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ENSGALT0000	Uncharacterized protein	ENSGALG000000194?	0
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ENSGALT0000	\N	ENSGALG000000194?	0
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ENSGALT0000	Uncharacterized protein	ENSGALG000000194?	0
ENSGALT0000	\N	ENSGALG0000001940.997399	95.9999
ENSGALT0000	\N	ENSGALG0000001940.477659	0.08958
ENSGALT0000	Uncharacterized protein	ENSGALG0000001940.464758	0.5

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ENSGALT0000 Uncharacterized protein	ENSGALG000000194 0.649519	0
ENSGALT0000 Uncharacterized protein	ENSGALG000000195 0.927729	1.5
ENSGALT0000 Uncharacterized protein	ENSGALG000000195 0.838938	894.5
ENSGALT0000 Uncharacterized protein	ENSGALG000000195 0.892817	27
ENSGALT0000 \N	ENSGALG000000195 0.64056	50.5264
ENSGALT0000 Uncharacterized protein	ENSGALG000000195 ?	0
ENSGALT0000 Uncharacterized protein	ENSGALG000000195 0.631223	0
ENSGALT0000 Uncharacterized protein	ENSGALG000000195 0.969319	117.5
ENSGALT0000 Uncharacterized protein	ENSGALG000000195 0.794758	6.61621
ENSGALT0000 Uncharacterized protein	ENSGALG000000195 0.943934	2
ENSGALT0000 Uncharacterized protein	ENSGALG000000195 0.739931	215.5
ENSGALT0000 Uncharacterized protein	ENSGALG000000195 0.464758	0.5
ENSGALT0000 Uncharacterized protein	ENSGALG000000195 ?	0
ENSGALT0000 Uncharacterized protein	ENSGALG000000195 0.603682	0
ENSGALT0000 Uncharacterized protein	ENSGALG000000195 ?	0
ENSGALT0000 Uncharacterized protein	ENSGALG000000195 0.603682	0.5
ENSGALT0000 Uncharacterized protein	ENSGALG000000196 0.256049	2
ENSGALT0000 Uncharacterized protein	ENSGALG000000196 0.853673	9
ENSGALT0000 Uncharacterized protein	ENSGALG000000196 0.617737	15
ENSGALT0000 \N	ENSGALG000000196 0.503769	45.5
ENSGALT0000 Uncharacterized protein	ENSGALG000000196 1	1
ENSGALT0000 \N	ENSGALG000000196 ?	0
ENSGALT0000 Uncharacterized protein	ENSGALG000000196 0.713325	1
ENSGALT0000 Uncharacterized protein	ENSGALG000000196 0.943934	1.5
ENSGALT0000 Uncharacterized protein	ENSGALG000000196 ?	0
ENSGALT0000 Uncharacterized protein	ENSGALG000000196 ?	0
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ENSGALT0000 Uncharacterized protein	ENSGALG000000196 0.522055	2.5
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ENSGALT0000 Uncharacterized protein	ENSGALG000000196 0.988505	124.5
ENSGALT0000 Uncharacterized protein	ENSGALG000000196 0.9344	11
ENSGALT0000 Uncharacterized protein	ENSGALG000000197 0.944548	23
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ENSGALT0000 \N	ENSGALG000000197 0.906217	524.5
ENSGALT0000 Uncharacterized protein	ENSGALG000000197 0.983395	405.5
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ENSGALT0000 Uncharacterized protein	ENSGALG000000197 ?	0
ENSGALT0000 Uncharacterized protein	ENSGALG000000197 0.772643	12
ENSGALT0000 Uncharacterized protein	ENSGALG000000197 0.848796	358
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ENSGALT0000 Uncharacterized protein	ENSGALG000000197 0.983333	44.9394
ENSGALT0000 Uncharacterized protein	ENSGALG000000197 0.968613	222.5
ENSGALT0000 Uncharacterized protein	ENSGALG000000198 0.408246	59
ENSGALT0000 Uncharacterized protein	ENSGALG000000198 0.828477	4.5
ENSGALT0000 Uncharacterized protein	ENSGALG000000198 0.921104	6.5
ENSGALT0000 Uncharacterized protein	ENSGALG000000198 0.535947	99.5
ENSGALT0000 Uncharacterized protein	ENSGALG000000198 ?	0
ENSGALT0000 Uncharacterized protein	ENSGALG000000198 ?	0
ENSGALT0000 Wpkci	ENSGALG000000198 0.673553	484.042

ENSGALT0000 Uncharacterized protein	ENSGALG00000019δ	0.371997	0
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ENSGALT0000 Uncharacterized protein	ENSGALG00000019δ	0.898356	0.5
ENSGALT0000 Uncharacterized protein	ENSGALG00000019δ	?	0
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ENSGALT0000 Uncharacterized protein	ENSGALG00000019δ	0.694304	1.5
ENSGALT0000 Uncharacterized protein	ENSGALG00000019δ	0.464758	0
ENSGALT0000 Uncharacterized protein	ENSGALG00000019δ	0.985014	61.2522
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ENSGALT0000 Uncharacterized protein	ENSGALG00000019δ	0.464758	0
ENSGALT0000 Uncharacterized protein	ENSGALG00000019δ	0.926206	3.5
ENSGALT0000 Uncharacterized protein	ENSGALG00000019δ	0.164317	0
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ENSGALT0000 Uncharacterized protein	ENSGALG00000019δ	0.464758	0
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ENSGALT0000 Uncharacterized protein	ENSGALG00000019δ	?	0
ENSGALT0000 Uncharacterized protein	ENSGALG00000019δ	?	0
ENSGALT0000 Uncharacterized protein	ENSGALG00000019δ	?	0
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ENSGALT0000 \N	ENSGALG00000020δ	0.934672	90
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ENSGALT0000 Uncharacterized protein	ENSGALG00000020δ	0.980539	33
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ENSGALT0000 Uncharacterized protein	ENSGALG00000020δ	0.994045	641
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ENSGALT0000 Uncharacterized protein	ENSGALG0000002022	0.964535	170
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ENSGALT0000 Uncharacterized protein	ENSGALG0000002022	0.371997	0.5

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ENSGALT0000 Uncharacterized protein	ENSGALG000000202	0.649519	0
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ENSGALT0000 Uncharacterized protein	ENSGALG000000202	0.757978	2
ENSGALT0000 Uncharacterized protein	ENSGALG000000202	0.464758	0
ENSGALT0000 Uncharacterized protein	ENSGALG000000203	0.562993	0.5
ENSGALT0000 Uncharacterized protein	ENSGALG000000203	0.633788	87
ENSGALT0000 Uncharacterized protein	ENSGALG000000203	0.164317	0
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ENSGALT0000 Uncharacterized protein	ENSGALG000000203	0.852698	432
ENSGALT0000 Uncharacterized protein	ENSGALG000000203	0.888484	301
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ENSGALT0000 Uncharacterized protein	ENSGALG000000203	0.998803	276.5
ENSGALT0000 Uncharacterized protein	ENSGALG000000204	0.822838	3.5
ENSGALT0000 Uncharacterized protein	ENSGALG000000204	0.464758	0
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ENSGALT0000 Uncharacterized protein	ENSGALG000000204	0.740073	17
ENSGALT0000 Uncharacterized protein	ENSGALG000000204	0.978169	11.5
ENSGALT0000 Uncharacterized protein	ENSGALG000000204	0.75681	140
ENSGALT0000 Uncharacterized protein	ENSGALG000000204	0.440513	0.5
ENSGALT0000 \N	ENSGALG000000204	0.334414	1
ENSGALT0000 Uncharacterized protein	ENSGALG000000204	0.98774	174.5
ENSGALT0000 Uncharacterized protein	ENSGALG000000204	0.830806	80.5
ENSGALT0000 Uncharacterized protein	ENSGALG000000204	?	0
ENSGALT0000 Uncharacterized protein	ENSGALG000000204	?	0
ENSGALT0000 Uncharacterized protein	ENSGALG000000204	0.923519	4
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ENSGALT0000 \N	ENSGALG000000204	0.965386	445.498
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ENSGALT0000 Uncharacterized protein	ENSGALG000000205	0.927041	32.5
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ENSGALT0000 Uncharacterized protein	ENSGALG000000205	?	0
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ENSGALT0000	Uncharacterized protein	ENSGALG000000205	0.960312	20
ENSGALT0000	Uncharacterized protein	ENSGALG000000206	?	0
ENSGALT0000	\N	ENSGALG000000206	?	0
ENSGALT0000	\N	ENSGALG000000206	?	0
ENSGALT0000	Uncharacterized protein	ENSGALG000000206	0.904804	2
ENSGALT0000	Uncharacterized protein	ENSGALG000000206	0.898356	2
ENSGALT0000	Uncharacterized protein	ENSGALG000000206	0.831568	5.5
ENSGALT0000	Uncharacterized protein	ENSGALG000000206	0.895588	21.2642
ENSGALT0000	\N	ENSGALG000000206	0.458282	70.5
ENSGALT0000	Uncharacterized protein	ENSGALG000000206	0.853815	1.5
ENSGALT0000	\N	ENSGALG000000206	?	0
ENSGALT0000	Uncharacterized protein	ENSGALG000000206	0.76267	35
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ENSGALT0000	Uncharacterized protein	ENSGALG000000206	0.781247	70
ENSGALT0000	Uncharacterized protein	ENSGALG000000206	?	0
ENSGALT0000	Uncharacterized protein	ENSGALG000000206	0.519752	3
ENSGALT0000	Uncharacterized protein	ENSGALG000000206	?	0
ENSGALT0000	Uncharacterized protein	ENSGALG000000206	0.748922	145.5
ENSGALT0000	\N	ENSGALG000000206	0.949317	82.9977
ENSGALT0000	Uncharacterized protein	ENSGALG000000207	0.895653	955.818
ENSGALT0000	\N	ENSGALG000000207	0.945393	173.235
ENSGALT0000	Uncharacterized protein	ENSGALG000000207	0.970814	4
ENSGALT0000	Uncharacterized protein	ENSGALG000000207	?	0
ENSGALT0000	Uncharacterized protein	ENSGALG000000207	?	0
ENSGALT0000	Uncharacterized protein	ENSGALG000000207	0.869966	83.5
ENSGALT0000	Uncharacterized protein	ENSGALG000000207	0.649519	0.5
ENSGALT0000	Uncharacterized protein	ENSGALG000000207	0.464758	0.5
ENSGALT0000	Uncharacterized protein	ENSGALG000000207	0.562993	0
ENSGALT0000	Uncharacterized protein	ENSGALG000000207	0.54868	0.5
ENSGALT0000	Uncharacterized protein	ENSGALG000000207	?	0
ENSGALT0000	Uncharacterized protein	ENSGALG000000207	?	0
ENSGALT0000	\N	ENSGALG000000207	?	0
ENSGALT0000	Uncharacterized protein	ENSGALG000000207	0.927745	28
ENSGALT0000	Uncharacterized protein	ENSGALG000000207	0.464758	0
ENSGALT0000	Uncharacterized protein	ENSGALG000000207	?	0
ENSGALT0000	\N	ENSGALG000000207	0.97246	7
ENSGALT0000	Uncharacterized protein	ENSGALG000000207	0.464758	0
ENSGALT0000	Uncharacterized protein	ENSGALG000000207	?	0
ENSGALT0000	Uncharacterized protein	ENSGALG000000208	0.768934	8.5
ENSGALT0000	Uncharacterized protein	ENSGALG000000208	0.42917	4
ENSGALT0000	\N	ENSGALG000000208	?	0
ENSGALT0000	Uncharacterized protein	ENSGALG000000208	0.539038	0.5
ENSGALT0000	Uncharacterized protein	ENSGALG000000208	0.849633	4.5
ENSGALT0000	Uncharacterized protein	ENSGALG000000208	?	0
ENSGALT0000	Uncharacterized protein	ENSGALG000000208	?	0
ENSGALT0000	Uncharacterized protein	ENSGALG000000208	?	0
ENSGALT0000	Uncharacterized protein	ENSGALG000000208	0.153016	5
ENSGALT0000	Uncharacterized protein	ENSGALG000000208	0.732092	3
ENSGALT0000	Uncharacterized protein	ENSGALG000000208	0.992319	59.5
ENSGALT0000	Uncharacterized protein	ENSGALG000000208	0.978585	26.5
ENSGALT0000	Uncharacterized protein	ENSGALG000000208	0.832378	11
ENSGALT0000	Uncharacterized protein	ENSGALG000000209	0.872832	198.5
ENSGALT0000	\N	ENSGALG000000209	0.934681	221
ENSGALT0000	Uncharacterized protein	ENSGALG000000209	0.710706	3
ENSGALT0000	Uncharacterized protein	ENSGALG000000209	0.973247	867.977

ENSGALT0000 Uncharacterized protein	ENSGALG000000020§	0.990796	18
ENSGALT0000 Uncharacterized protein	ENSGALG000000020§	0.464758	0
ENSGALT0000 Uncharacterized protein	ENSGALG000000020§	0.951468	4
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ENSGALT0000 Uncharacterized protein	ENSGALG000000020§	0.334091	207.5
ENSGALT0000 Uncharacterized protein	ENSGALG000000020§	0.976471	7
ENSGALT0000 Uncharacterized protein	ENSGALG000000020§	0.929536	10
ENSGALT0000 \N	ENSGALG000000020§	0.266552	1.5
ENSGALT0000 Uncharacterized protein	ENSGALG000000020§	0.855454	13.5
ENSGALT0000 Uncharacterized protein	ENSGALG000000020§	0.464758	0.5
ENSGALT0000 Uncharacterized protein	ENSGALG000000020§	0.841582	44
ENSGALT0000 Uncharacterized protein	ENSGALG000000020§	0.431456	194.708
ENSGALT0000 Uncharacterized protein	ENSGALG000000020§	0.142232	669.458
ENSGALT0000 Uncharacterized protein	ENSGALG00000021C	0.894545	625.5
ENSGALT0000 \N	ENSGALG00000021C	0.900995	16.8941
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ENSGALT0000 \N	ENSGALG00000021C	0.989766	132.533
ENSGALT0000 Uncharacterized protein	ENSGALG00000021C	0.905192	3
ENSGALT0000 Uncharacterized protein	ENSGALG00000021C	?	0
ENSGALT0000 \N	ENSGALG00000021C	0.974282	721.5
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ENSGALT0000 Uncharacterized protein	ENSGALG00000021C	0.479015	9
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ENSGALT0000 Uncharacterized protein	ENSGALG0000002111	0.16225	193.5
ENSGALT0000 Uncharacterized protein	ENSGALG0000002111	0.877819	22.5
ENSGALT0000 Uncharacterized protein	ENSGALG0000002111	0.649519	0.5
ENSGALT0000 Uncharacterized protein	ENSGALG0000002111	0.805033	1
ENSGALT0000 Uncharacterized protein	ENSGALG0000002111	0.901223	2.5
ENSGALT0000 Uncharacterized protein	ENSGALG0000002111	?	0
ENSGALT0000 Uncharacterized protein	ENSGALG0000002111	0.763269	5
ENSGALT0000 Uncharacterized protein	ENSGALG0000002111	0.842903	11.5
ENSGALT0000 Uncharacterized protein	ENSGALG0000002111	0.464758	0
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ENSGALT0000 Uncharacterized protein	ENSGALG0000002111	0.549507	3.5
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ENSGALT0000 Uncharacterized protein	ENSGALG0000002111	0.943574	282
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ENSGALT0000 Uncharacterized protein	ENSGALG0000002112	0.960915	3.5
ENSGALT0000 Uncharacterized protein	ENSGALG0000002112	0.905051	32.5
ENSGALT0000 Uncharacterized protein	ENSGALG0000002112	0.649017	4
ENSGALT0000 Uncharacterized protein	ENSGALG0000002112	0.649519	0.5
ENSGALT0000 \N	ENSGALG0000002112	0.805673	29.2453
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ENSGALT0000	Uncharacterized protein	ENSGALG000000213	0.818488	2
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ENSGALT0000	Uncharacterized protein	ENSGALG000000213	?	0
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ENSGALT0000	Uncharacterized protein	ENSGALG000000213	0.91364	4
ENSGALT0000	Uncharacterized protein	ENSGALG000000213	0.962949	252
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ENSGALT0000	Uncharacterized protein	ENSGALG000000213	0.988772	99.367
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ENSGALT0000	Uncharacterized protein	ENSGALG000000214	0.971387	136
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ENSGALT0000	Uncharacterized protein	ENSGALG000000215	0.733311	8.5
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ENSGALT0000	Uncharacterized protein	ENSGALG000000215	0.751212	9.5
ENSGALT0000	Uncharacterized protein	ENSGALG000000215	0.913631	6
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ENSGALT0000	Uncharacterized protein	ENSGALG000000215	0.904804	3
ENSGALT0000	Uncharacterized protein	ENSGALG000000215	0.464758	1
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ENSGALT0000	Uncharacterized protein	ENSGALG000000215	?	0
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ENSGALT0000	Uncharacterized protein	ENSGALG00000021	0.649519	0.5
ENSGALT0000	Uncharacterized protein	ENSGALG00000021	0.464758	0
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ENSGALT0000	\N	ENSGALG00000021	0.977843	2745.92
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ENSGALT0000	Uncharacterized protein	ENSGALG00000021	0.989305	7
ENSGALT0000	Uncharacterized protein	ENSGALG00000021	0.363607	1.5
ENSGALT0000	Uncharacterized protein	ENSGALG00000021	0.164317	3
ENSGALT0000	Uncharacterized protein	ENSGALG00000021	0.464758	0
ENSGALT0000	Uncharacterized protein	ENSGALG00000021	0.955824	36.5
ENSGALT0000	Uncharacterized protein	ENSGALG00000021	0.993795	98.5
ENSGALT0000	Uncharacterized protein	ENSGALG00000021	0.908886	3004
ENSGALT0000	\N	ENSGALG0000217	0.939561	45.5
ENSGALT0000	\N	ENSGALG0000217	0.918194	25
ENSGALT0000	\N	ENSGALG0000217	0.865959	23.5
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ENSGALT0000	Uncharacterized protein	ENSGALG0000217	0.776975	21380.3
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ENSGALT0000	\N	ENSGALG00000021	?	0
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ENSGALT0000	Uncharacterized protein	ENSGALG00000021	0.707664	0.5
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ENSGALT0000	Uncharacterized protein	ENSGALG00000021	1	0.5
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ENSGALT0000	Uncharacterized protein	ENSGALG00000021	0.966761	10.5
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ENSGALT0000	Uncharacterized protein	ENSGALG00000021	0.711475	30

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ENSGALT0000	Uncharacterized protein	ENSGALG0000002l8	0.922605	41
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ENSGALT0000	Uncharacterized protein	ENSGALG0000002l8	0.0697923	11.5
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ENSGALT0000	Uncharacterized protein	ENSGALG0000002l8	0.464758	0
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ENSGALT0000	Uncharacterized protein	ENSGALG0000002l8	0.464758	0
ENSGALT0000	Uncharacterized protein	ENSGALG0000002l8	0.671225	6
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ENSGALT0000	Uncharacterized protein	ENSGALG0000002l8	0.988586	10142
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ENSGALT0000	Uncharacterized protein	ENSGALG0000002l8	0.577222	235
ENSGALT0000	Uncharacterized protein	ENSGALG0000002l8	0.973575	46.5
ENSGALT0000	Uncharacterized protein	ENSGALG0000002l8	0.464758	0
ENSGALT0000	Uncharacterized protein	ENSGALG0000002l8	?	0
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ENSGALT0000	Uncharacterized protein	ENSGALG0000002l8	0.899491	5
ENSGALT0000	Uncharacterized protein	ENSGALG0000002l8	0.882078	8
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ENSGALT0000	Uncharacterized protein	ENSGALG0000002l9	0.464758	0.5
ENSGALT0000	Uncharacterized protein	ENSGALG0000002l9	0.649519	0
ENSGALT0000	Uncharacterized protein	ENSGALG0000002l9	0.619353	9
ENSGALT0000	Uncharacterized protein	ENSGALG0000002l9	0.464758	0
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ENSGALT0000	\N	ENSGALG0000002l9	0.333733	1.67968
ENSGALT0000	\N	ENSGALG0000002l9	0.767232	4.5
ENSGALT0000	\N	ENSGALG0000002l9	0.861186	3.0225
ENSGALT0000	\N	ENSGALG0000002l9	?	0
ENSGALT0000	\N	ENSGALG0000002l9	?	0
ENSGALT0000	\N	ENSGALG0000002l9	?	0
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ENSGALT0000	\N	ENSGALG0000002l9	0.00026386	0

ENSGALT0000	\N	ENSGALG0000002219	?	0
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ENSGALT0000	\N	ENSGALG0000002219	0.421915	81.1998
ENSGALT0000	\N	ENSGALG0000002219	0.87793	5.59496
ENSGALT0000	\N	ENSGALG0000002219	0.6078	0.01033
ENSGALT0000	\N	ENSGALG0000002219	0.943134	92.3999
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ENSGALT0000	\N	ENSGALG0000002219	0.813438	20
ENSGALT0000	\N	ENSGALG0000002219	0.91351	22.478
ENSGALT0000	\N	ENSGALG0000002219	0.970773	18.1236
ENSGALT0000	\N	ENSGALG0000002219	0.475507	1.64E-06
ENSGALT0000	\N	ENSGALG0000002219	0.464758	0
ENSGALT0000	\N	ENSGALG0000002219	?	0
ENSGALT0000	\N	ENSGALG0000002219	?	0
ENSGALT0000	\N	ENSGALG0000002219	0.934962	52.8077
ENSGALT0000	\N	ENSGALG0000002219	0.464758	0.87555
ENSGALT0000	\N	ENSGALG0000002219	0.477174	6.91E-08
ENSGALT0000	\N	ENSGALG0000002219	?	0
ENSGALT0000	\N	ENSGALG0000002219	0.5533	1.34357
ENSGALT0000	\N	ENSGALG0000002219	0.464758	0
ENSGALT0000	\N	ENSGALG0000002219	0.476596	0.00141
ENSGALT0000	\N	ENSGALG0000002219	0.464758	0.16609
ENSGALT0000	\N	ENSGALG0000002219	0.567111	0.10681
ENSGALT0000	\N	ENSGALG0000002219	0.993468	25.6712
ENSGALT0000	\N	ENSGALG0000002219	0.741566	4
ENSGALT0000	\N	ENSGALG0000002219	0.972732	0.80583
ENSGALT0000	Uncharacterized protein	ENSGALG0000002219	0.569146	0.31467
ENSGALT0000	\N	ENSGALG0000002219	0.965313	72.6224
ENSGALT0000	\N	ENSGALG0000002219	0.4838	0.00502
ENSGALT0000	\N	ENSGALG0000002219	0.689479	4.5
ENSGALT0000	\N	ENSGALG0000002220	0.685312	146.5
ENSGALT0000	\N	ENSGALG0000002220	0.813069	22.5
ENSGALT0000	\N	ENSGALG0000002220	0.464758	3.07E-09
ENSGALT0000	\N	ENSGALG0000002220	0.637146	11.3275
ENSGALT0000	\N	ENSGALG0000002220	?	0
ENSGALT0000	\N	ENSGALG0000002220	0.859025	175
ENSGALT0000	\N	ENSGALG0000002220	0.476596	0.00141
ENSGALT0000	\N	ENSGALG0000002220	0.649428	0
ENSGALT0000	\N	ENSGALG0000002220	0.751341	3.10405
ENSGALT0000	\N	ENSGALG0000002220	?	0
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ENSGALT0000	\N	ENSGALG0000002220	?	0
ENSGALT0000	\N	ENSGALG0000002220	0.464365	1.49E-06
ENSGALT0000	Olfactory receptor OR29	ENSGALG0000002220	0.464758	0
ENSGALT0000	\N	ENSGALG0000002220	?	0
ENSGALT0000	\N	ENSGALG0000002220	0.481195	4.96E-20
ENSGALT0000	\N	ENSGALG0000002220	0.910566	126.5
ENSGALT0000	\N	ENSGALG0000002220	0.464758	2.45E-07
ENSGALT0000	\N	ENSGALG0000002220	0.707166	106.036
ENSGALT0000	\N	ENSGALG0000002220	0.995583	14.3923
ENSGALT0000	\N	ENSGALG0000002220	0.783903	135.5
ENSGALT0000	\N	ENSGALG0000002220	0.851278	2.46423
ENSGALT0000	\N	ENSGALG0000002220	0.892147	9.1772
ENSGALT0000	\N	ENSGALG0000002220	0.464758	4.02E-42
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ENSGALT0000	\N	ENSGALG00000022(	0.439528	2.05751
ENSGALT0000	\N	ENSGALG00000022(	0.464758	0
ENSGALT0000	\N	ENSGALG00000022(	0.849631	14.4113
ENSGALT0000	\N	ENSGALG00000022(	?	0
ENSGALT0000	\N	ENSGALG00000022(	?	0
ENSGALT0000	\N	ENSGALG00000022(	0.469968	1.39E-09
ENSGALT0000	\N	ENSGALG00000022(	0.864562	1056.5
ENSGALT0000	Olfactory receptor OR37	ENSGALG00000022(	0.464758	1.17E-08
ENSGALT0000	\N	ENSGALG00000022(	0.547652	0.86266
ENSGALT0000	\N	ENSGALG00000022(	0.823299	136
ENSGALT0000	\N	ENSGALG00000022(	0.800182	1.84133
ENSGALT0000	\N	ENSGALG00000022(	0.846823	9.14139
ENSGALT0000	\N	ENSGALG00000022(	0.464758	0.5
ENSGALT0000	\N	ENSGALG00000022(	0.624727	3.70E-16
ENSGALT0000	\N	ENSGALG00000022(	0.993896	146.5
ENSGALT0000	\N	ENSGALG00000022(	0.464758	0
ENSGALT0000	\N	ENSGALG00000022(	0.988633	72.4293
ENSGALT0000	\N	ENSGALG00000022(	0.464758	8.59E-09
ENSGALT0000	\N	ENSGALG00000022(	?	2.97E-38
ENSGALT0000	\N	ENSGALG00000022(	0.464758	9.72E-25
ENSGALT0000	\N	ENSGALG00000022(	?	0
ENSGALT0000	\N	ENSGALG00000022(	?	0
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ENSGALT0000	\N	ENSGALG00000022(	?	0
ENSGALT0000	\N	ENSGALG00000022(	0.471066	0.04363
ENSGALT0000	\N	ENSGALG00000022(	?	0
ENSGALT0000	\N	ENSGALG00000022(	0.464758	6.84E-09
ENSGALT0000	\N	ENSGALG00000022(	0.981683	272.571
ENSGALT0000	\N	ENSGALG00000022(	0.980556	175.705
ENSGALT0000	\N	ENSGALG00000022(	0.688681	0.16523
ENSGALT0000	\N	ENSGALG00000022(	0.464844	0.00263
ENSGALT0000	\N	ENSGALG00000022(	0.464758	0
ENSGALT0000	\N	ENSGALG00000022(	0.851878	12.7443
ENSGALT0000	\N	ENSGALG00000022(	0.999775	1295.66
ENSGALT0000	\N	ENSGALG00000022(	0.643881	29.0638
ENSGALT0000	\N	ENSGALG00000022(	0.00525607	0
ENSGALT0000	\N	ENSGALG00000022(	0.635464	1.92087
ENSGALT0000	\N	ENSGALG00000022(	?	0
ENSGALT0000	\N	ENSGALG00000022(	?	0
ENSGALT0000	\N	ENSGALG00000022(	0.464758	0
ENSGALT0000	\N	ENSGALG00000022(	?	0
ENSGALT0000	\N	ENSGALG00000022(	0.919529	237
ENSGALT0000	\N	ENSGALG00000022(	0.914911	200.537
ENSGALT0000	\N	ENSGALG00000022(	0.516758	7.90E-26
ENSGALT0000	\N	ENSGALG00000022(	0.981642	111.5
ENSGALT0000	\N	ENSGALG00000022(	0.872961	1.01429
ENSGALT0000	Olfactory receptor OR8	ENSGALG00000022(	0.464758	2.06E-07
ENSGALT0000	\N	ENSGALG00000022(	0.986808	133.915
ENSGALT0000	\N	ENSGALG00000022(	0.819336	175.5
ENSGALT0000	\N	ENSGALG00000022(	0.975765	270.957
ENSGALT0000	\N	ENSGALG00000022(	0.257865	32218.5
ENSGALT0000	\N	ENSGALG00000022(	0.990903	63.3526
ENSGALT0000	\N	ENSGALG00000022(	0.467629	0.76906
ENSGALT0000	\N	ENSGALG00000022(	?	7.11E-25
ENSGALT0000	\N	ENSGALG00000022(	?	0

ENSGALT0000	\N	ENSGALG0000002210	0.76667	1.21434
ENSGALT0000	\N	ENSGALG0000002210	0.785397	139.5
ENSGALT0000	Uncharacterized protein	ENSGALG0000002210	0.464758	0.16667
ENSGALT0000	\N	ENSGALG0000002210	0.491198	0.02786
ENSGALT0000	\N	ENSGALG0000002210	0.464758	0
ENSGALT0000	\N	ENSGALG0000002210	?	0
ENSGALT0000	\N	ENSGALG0000002210	0.81033	26.5635
ENSGALT0000	\N	ENSGALG0000002210	0.960235	210.074
ENSGALT0000	\N	ENSGALG0000002210	0.97715	47.7617
ENSGALT0000	\N	ENSGALG0000002210	0.90773	3
ENSGALT0000	\N	ENSGALG0000002210	0.46703	0.00398
ENSGALT0000	\N	ENSGALG0000002210	0.464552	6.08E-14
ENSGALT0000	\N	ENSGALG0000002210	0.801962	0.52691
ENSGALT0000	\N	ENSGALG0000002210	0.354477	2.76E-09
ENSGALT0000	\N	ENSGALG000000221	0.286494	195.072
ENSGALT0000	\N	ENSGALG000000221	?	1.08E-22
ENSGALT0000	\N	ENSGALG000000221	?	1.56E-19
ENSGALT0000	\N	ENSGALG000000221	0.464758	8.34E-11
ENSGALT0000	\N	ENSGALG000000221	0.640525	0
ENSGALT0000	\N	ENSGALG000000221	0.127045	1.14E-28
ENSGALT0000	\N	ENSGALG000000221	0.436506	352
ENSGALT0000	\N	ENSGALG000000221	0.464758	9.11E-44
ENSGALT0000	\N	ENSGALG000000221	0.464758	0
ENSGALT0000	\N	ENSGALG000000221	0.837074	3.85793
ENSGALT0000	\N	ENSGALG000000221	?	9.11E-44
ENSGALT0000	\N	ENSGALG000000221	0.958056	10.9186
ENSGALT0000	\N	ENSGALG000000221	?	0
ENSGALT0000	\N	ENSGALG000000221	0.981992	3.74966
ENSGALT0000	Olfactory receptor OR6	ENSGALG000000221	?	0
ENSGALT0000	\N	ENSGALG000000221	0.464758	0.99368
ENSGALT0000	\N	ENSGALG000000221	0.970818	283
ENSGALT0000	\N	ENSGALG000000221	0.92064	463.826
ENSGALT0000	\N	ENSGALG000000221	?	0
ENSGALT0000	\N	ENSGALG000000221	0.464758	0.28822
ENSGALT0000	\N	ENSGALG000000221	0.466137	0.74346
ENSGALT0000	\N	ENSGALG000000221	0.894077	50.438
ENSGALT0000	\N	ENSGALG000000221	0.46329	0.00038
ENSGALT0000	\N	ENSGALG000000221	0.575742	0.0004
ENSGALT0000	\N	ENSGALG000000221	0.464758	3.29E-15
ENSGALT0000	\N	ENSGALG000000221	0.453278	3.38533
ENSGALT0000	\N	ENSGALG000000221	?	0
ENSGALT0000	\N	ENSGALG000000221	?	0
ENSGALT0000	\N	ENSGALG000000221	0.760049	6.01135
ENSGALT0000	\N	ENSGALG000000221	0.999439	196.54
ENSGALT0000	\N	ENSGALG000000221	0.238589	279
ENSGALT0000	\N	ENSGALG000000221	0.980343	45
ENSGALT0000	\N	ENSGALG000000221	0.833029	25.9648
ENSGALT0000	\N	ENSGALG000000221	0.614731	1.54E-25
ENSGALT0000	Olfactory receptor OR18	ENSGALG000000221	0.464758	0.1578
ENSGALT0000	\N	ENSGALG000000221	?	0
ENSGALT0000	\N	ENSGALG000000221	0.562993	4
ENSGALT0000	\N	ENSGALG000000221	?	3.74E-25
ENSGALT0000	\N	ENSGALG000000221	0.958977	2174
ENSGALT0000	\N	ENSGALG000000221	0.881754	31.0308
ENSGALT0000	\N	ENSGALG000000221	?	0
ENSGALT0000	\N	ENSGALG000000221	0.000738758	0.16609

ENSGALT0000	\N	ENSGALG000000221	0.908347	244.603
ENSGALT0000	\N	ENSGALG000000221	0.980565	60.0841
ENSGALT0000	\N	ENSGALG000000221	0.464758	0
ENSGALT0000	\N	ENSGALG000000221	?	0
ENSGALT0000	\N	ENSGALG000000221	0.464758	0.2593
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ENSGALT0000	\N	ENSGALG000000221	0.878446	11.85
ENSGALT0000	\N	ENSGALG000000221	0.474033	5.51E-05
ENSGALT0000	\N	ENSGALG000000221	0.831639	8.19843
ENSGALT0000	\N	ENSGALG000000221	0.464758	0
ENSGALT0000	\N	ENSGALG000000221	0.543213	3
ENSGALT0000	\N	ENSGALG000000221	0.649519	0.5
ENSGALT0000	\N	ENSGALG000000221	0.940928	1433.5
ENSGALT0000	\N	ENSGALG000000221	?	0
ENSGALT0000	\N	ENSGALG000000221	?	0
ENSGALT0000	\N	ENSGALG000000221	?	0
ENSGALT0000	\N	ENSGALG000000221	0.809695	318.771
ENSGALT0000	\N	ENSGALG000000221	0.713484	187.649
ENSGALT0000	\N	ENSGALG000000221	0.476596	0.00141
ENSGALT0000	\N	ENSGALG000000221	0.828826	5
ENSGALT0000	\N	ENSGALG000000221	0.464758	0.00662
ENSGALT0000	\N	ENSGALG000000221	0.939104	9.08207
ENSGALT0000	\N	ENSGALG000000221	0.464758	0.66098
ENSGALT0000	\N	ENSGALG000000221	0.708067	1595.5
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ENSGALT0000	\N	ENSGALG000000221	?	0
ENSGALT0000	\N	ENSGALG000000221	0.464758	0
ENSGALT0000	\N	ENSGALG000000221	0.0203561	0.0128
ENSGALT0000	\N	ENSGALG000000221	0.889876	107
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ENSGALT0000	\N	ENSGALG000000221	0.932406	151.5
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ENSGALT0000	\N	ENSGALG000000221	0.645194	1.59033
ENSGALT0000	\N	ENSGALG000000221	?	0
ENSGALT0000	\N	ENSGALG000000221	0.984909	35
ENSGALT0000	\N	ENSGALG000000221	0.919378	526.415
ENSGALT0000	\N	ENSGALG000000221	0.929586	4.78167
ENSGALT0000	\N	ENSGALG000000221	?	0
ENSGALT0000	\N	ENSGALG000000221	0.670747	4.08994
ENSGALT0000	\N	ENSGALG000000221	0.962956	3.81321
ENSGALT0000	\N	ENSGALG000000221	0.649388	1.96E-10
ENSGALT0000	\N	ENSGALG000000221	?	0
ENSGALT0000	\N	ENSGALG000000221	0.464758	2.42E-25
ENSGALT0000	\N	ENSGALG000000222	?	0
ENSGALT0000	\N	ENSGALG000000222	?	0
ENSGALT0000	\N	ENSGALG000000222	0.464758	0.0527
ENSGALT0000	\N	ENSGALG000000222	?	2.19E-14
ENSGALT0000	Olfactory receptor OR39	ENSGALG000000222	0.46475	0
ENSGALT0000	\N	ENSGALG000000222	0.907462	5.16284
ENSGALT0000	\N	ENSGALG000000222	?	3.36E-13
ENSGALT0000	\N	ENSGALG000000222	?	0
ENSGALT0000	\N	ENSGALG000000222	0.464758	0
ENSGALT0000	\N	ENSGALG000000222	0.532124	1.93772
ENSGALT0000	\N	ENSGALG000000222	0.765663	2.11505
ENSGALT0000	\N	ENSGALG000000222	0.464758	0.5
ENSGALT0000	\N	ENSGALG000000222	0.632841	6.79933

ENSGALT0000	\N	ENSGALG000000222	0.464759	4.47E-06
ENSGALT0000	\N	ENSGALG000000222	0.589739	0.76962
ENSGALT0000	\N	ENSGALG000000222	0.46476	0.00291
ENSGALT0000	\N	ENSGALG000000222	0.894308	603.128
ENSGALT0000	\N	ENSGALG000000222	?	0
ENSGALT0000	\N	ENSGALG000000222	?	0
ENSGALT0000	Olfactory receptor OR38	ENSGALG000000222	?	0
ENSGALT0000	\N	ENSGALG000000222	?	2.49E-33
ENSGALT0000	\N	ENSGALG000000222	?	2.72E-30
ENSGALT0000	Olfactory receptor OR12	ENSGALG000000222	0.464758	1.54568
ENSGALT0000	\N	ENSGALG000000222	0.99938	122.447
ENSGALT0000	\N	ENSGALG000000222	0.464758	1.38E-21
ENSGALT0000	Olfactory receptor OR17	ENSGALG000000222	?	0
ENSGALT0000	\N	ENSGALG000000222	?	0
ENSGALT0000	\N	ENSGALG000000222	?	4.25E-25
ENSGALT0000	\N	ENSGALG000000222	?	0
ENSGALT0000	\N	ENSGALG000000222	0.464758	0
ENSGALT0000	\N	ENSGALG000000222	0	0
ENSGALT0000	\N	ENSGALG000000222	0.775807	9
ENSGALT0000	\N	ENSGALG000000222	0.441787	516
ENSGALT0000	\N	ENSGALG000000222	0.464758	4.70E-14
ENSGALT0000	\N	ENSGALG000000222	0.983236	232.085
ENSGALT0000	\N	ENSGALG000000222	0.77018	8.7612
ENSGALT0000	\N	ENSGALG000000222	0.464758	0.98559
ENSGALT0000	\N	ENSGALG000000222	0.735435	3.43767
ENSGALT0000	\N	ENSGALG000000222	0.891615	542
ENSGALT0000	MHC class II antigen	ENSGALG000000222	0.944054	64.9345
ENSGALT0000	\N	ENSGALG000000222	?	0
ENSGALT0000	\N	ENSGALG000000222	0.465077	9.20E-09
ENSGALT0000	\N	ENSGALG000000222	?	0
ENSGALT0000	\N	ENSGALG000000222	0.477151	0.4473
ENSGALT0000	\N	ENSGALG000000222	0.434573	2.89595
ENSGALT0000	\N	ENSGALG000000222	0.93426	13
ENSGALT0000	\N	ENSGALG000000222	0.574437	3.16667
ENSGALT0000	\N	ENSGALG000000222	0.464758	0.00099
ENSGALT0000	\N	ENSGALG000000222	0.464758	3.13E-13
ENSGALT0000	\N	ENSGALG000000222	0.880031	178.814
ENSGALT0000	\N	ENSGALG000000222	0.821793	879
ENSGALT0000	\N	ENSGALG000000222	0.564151	2.11E-20
ENSGALT0000	\N	ENSGALG000000222	0.464758	0
ENSGALT0000	\N	ENSGALG000000222	0.4648	0.0003
ENSGALT0000	Olfactory receptor OR10	ENSGALG000000222	?	3.17E-16
ENSGALT0000	\N	ENSGALG000000222	?	0
ENSGALT0000	\N	ENSGALG000000222	0.464758	6.57E-10
ENSGALT0000	\N	ENSGALG000000222	0.488876	0.34584
ENSGALT0000	\N	ENSGALG000000222	0.846187	3.30993
ENSGALT0000	\N	ENSGALG000000222	0.996026	46
ENSGALT0000	\N	ENSGALG000000222	?	0
ENSGALT0000	\N	ENSGALG000000222	0.532041	7.95E-31
ENSGALT0000	\N	ENSGALG000000222	0.464758	1.23113
ENSGALT0000	\N	ENSGALG000000222	0.931482	15.8792
ENSGALT0000	\N	ENSGALG000000222	0.578226	0.00017
ENSGALT0000	\N	ENSGALG000000222	0.464758	2.50E-09
ENSGALT0000	\N	ENSGALG000000222	0.97519	573.5
ENSGALT0000	\N	ENSGALG000000222	0.858885	39.3349
ENSGALT0000	\N	ENSGALG000000222	0.99063	144

ENSGALT0000	\N	ENSGALG000000222	0.99743	37
ENSGALT0000	\N	ENSGALG000000222	0.476596	0.00141
ENSGALT0000	\N	ENSGALG000000222	0.399141	0
ENSGALT0000	\N	ENSGALG000000222	0.0470083	2
ENSGALT0000	\N	ENSGALG000000222	?	2.10E-35
ENSGALT0000	\N	ENSGALG000000222	?	0
ENSGALT0000	Olfactory receptor OR40	ENSGALG000000222	0.0539949	1.5
ENSGALT0000	\N	ENSGALG000000222	0.954453	0.75644
ENSGALT0000	\N	ENSGALG000000222	0.464758	0
ENSGALT0000	\N	ENSGALG000000222	0.464758	6.60E-38
ENSGALT0000	Olfactory receptor OR13	ENSGALG000000222	?	0
ENSGALT0000	\N	ENSGALG000000222	?	2.51E-27
ENSGALT0000	\N	ENSGALG000000222	0.464758	1.49E-06
ENSGALT0000	\N	ENSGALG000000222	0.516641	110.005
ENSGALT0000	\N	ENSGALG000000222	0.992161	462.5
ENSGALT0000	\N	ENSGALG000000222	0.675373	6.86944
ENSGALT0000	\N	ENSGALG000000222	0.850534	126.822
ENSGALT0000	\N	ENSGALG000000222	0.674574	0.51814
ENSGALT0000	\N	ENSGALG000000222	0.987231	16.3025
ENSGALT0000	\N	ENSGALG000000222	?	0
ENSGALT0000	\N	ENSGALG000000222	?	0
ENSGALT0000	\N	ENSGALG000000223	?	0
ENSGALT0000	\N	ENSGALG000000223	0.464758	0.00138
ENSGALT0000	\N	ENSGALG000000223	?	2.32E-22
ENSGALT0000	\N	ENSGALG000000223	0.464758	0
ENSGALT0000	\N	ENSGALG000000223	0.986114	1458.97
ENSGALT0000	\N	ENSGALG000000223	0.713235	9.44694
ENSGALT0000	\N	ENSGALG000000223	0.308782	7.3055
ENSGALT0000	\N	ENSGALG000000223	0.464758	0
ENSGALT0000	\N	ENSGALG000000223	0.464758	0
ENSGALT0000	\N	ENSGALG000000223	0.464758	0
ENSGALT0000	\N	ENSGALG000000223	0.464758	0.00038
ENSGALT0000	\N	ENSGALG000000223	?	0
ENSGALT0000	\N	ENSGALG000000223	0.464758	0
ENSGALT0000	\N	ENSGALG000000223	0.357562	1.19317
ENSGALT0000	\N	ENSGALG000000223	0.974027	308
ENSGALT0000	\N	ENSGALG000000223	0.982406	177.5
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ENSGALT0000	\N	ENSGALG000000223	0.464758	0.52201
ENSGALT0000	\N	ENSGALG000000223	0.0903914	2.11668
ENSGALT0000	\N	ENSGALG000000223	0.603682	1
ENSGALT0000	\N	ENSGALG000000223	0.98741	44
ENSGALT0000	\N	ENSGALG000000223	0.875856	146.376
ENSGALT0000	\N	ENSGALG000000223	0.859047	23.4311
ENSGALT0000	\N	ENSGALG000000223	0.802774	1188.47
ENSGALT0000	\N	ENSGALG000000223	0.685235	9.6243
ENSGALT0000	Olfactory receptor OR8	ENSGALG000000223	0.464758	1.03E-08
ENSGALT0000	\N	ENSGALG000000223	0.464758	1.59E-09
ENSGALT0000	\N	ENSGALG000000223	0.937889	363.5
ENSGALT0000	\N	ENSGALG000000223	?	0
ENSGALT0000	\N	ENSGALG000000223	0.963665	6
ENSGALT0000	\N	ENSGALG000000223	0.603682	0
ENSGALT0000	\N	ENSGALG000000223	0.935153	124.52
ENSGALT0000	\N	ENSGALG000000223	0.870738	671.981
ENSGALT0000	\N	ENSGALG000000223	0.626214	25.8417

ENSGALT0000	Olfactory receptor OR28	ENSGALG000000223	?	0
ENSGALT0000	\N	ENSGALG000000223	0.473788	0.21178
ENSGALT0000	\N	ENSGALG000000223	?	0
ENSGALT0000	\N	ENSGALG000000223	0.464758	1.08E-31
ENSGALT0000	\N	ENSGALG000000223	?	0
ENSGALT0000	\N	ENSGALG000000223	0.464758	0.81061
ENSGALT0000	\N	ENSGALG000000223	?	0
ENSGALT0000	\N	ENSGALG000000223	0.464758	0.07706
ENSGALT0000	\N	ENSGALG000000223	?	0
ENSGALT0000	\N	ENSGALG000000223	?	0
ENSGALT0000	\N	ENSGALG000000223	?	3.47E-35
ENSGALT0000	\N	ENSGALG000000223	0.963041	453.298
ENSGALT0000	\N	ENSGALG000000223	0.927923	32.0885
ENSGALT0000	\N	ENSGALG000000223	0.603682	1
ENSGALT0000	\N	ENSGALG000000223	0.821068	455.5
ENSGALT0000	\N	ENSGALG000000223	0.0293934	1.17647
ENSGALT0000	\N	ENSGALG000000223	0.464758	0
ENSGALT0000	\N	ENSGALG000000223	?	0
ENSGALT0000	Uncharacterized protein	ENSGALG000000223	0.603682	0.25
ENSGALT0000	Olfactory receptor OR1	ENSGALG000000223	0.464758	0
ENSGALT0000	Uncharacterized protein	ENSGALG000000223	0.570637	0.3125
ENSGALT0000	\N	ENSGALG000000223	0.88595	14.5
ENSGALT0000	\N	ENSGALG000000223	0.916586	288
ENSGALT0000	\N	ENSGALG000000223	0.79577	185.327
ENSGALT0000	\N	ENSGALG000000223	?	0
ENSGALT0000	\N	ENSGALG000000223	0.464758	6.36E-33
ENSGALT0000	\N	ENSGALG000000223	0.611627	12.5
ENSGALT0000	\N	ENSGALG000000223	0.649515	1.66886
ENSGALT0000	\N	ENSGALG000000223	0.959882	53.6272
ENSGALT0000	\N	ENSGALG000000223	0.950427	73.9869
ENSGALT0000	\N	ENSGALG000000223	0.978071	32.7178
ENSGALT0000	\N	ENSGALG000000223	0.457466	10595.5
ENSGALT0000	\N	ENSGALG000000223	0.464758	3.83E-07
ENSGALT0000	\N	ENSGALG000000223	0.916515	182.5
ENSGALT0000	\N	ENSGALG000000223	?	0
ENSGALT0000	\N	ENSGALG000000223	?	0
ENSGALT0000	\N	ENSGALG000000223	0.889363	5.47595
ENSGALT0000	\N	ENSGALG000000223	0.668866	0.60933
ENSGALT0000	\N	ENSGALG000000223	?	1.82E-13
ENSGALT0000	\N	ENSGALG000000223	0.791162	1.03801
ENSGALT0000	\N	ENSGALG000000223	0.464758	0
ENSGALT0000	\N	ENSGALG000000223	?	1.70E-38
ENSGALT0000	Olfactory receptor OR27	ENSGALG000000223	0.464758	1
ENSGALT0000	\N	ENSGALG000000223	?	8.04E-15
ENSGALT0000	\N	ENSGALG000000223	0.48003	2.28E-12
ENSGALT0000	\N	ENSGALG000000223	?	0
ENSGALT0000	\N	ENSGALG000000223	0.464758	2.33E-31
ENSGALT0000	Olfactory receptor OR4	ENSGALG000000223	?	0
ENSGALT0000	\N	ENSGALG000000223	?	6.46E-37
ENSGALT0000	\N	ENSGALG000000223	0.464758	0.84358
ENSGALT0000	\N	ENSGALG000000223	0.464758	0
ENSGALT0000	\N	ENSGALG000000223	?	0
ENSGALT0000	Olfactory receptor OR17	ENSGALG000000223	0.464758	0
ENSGALT0000	\N	ENSGALG000000223	?	0
ENSGALT0000	\N	ENSGALG000000224	0.464758	1.95E-12
ENSGALT0000	\N	ENSGALG000000224	0.806311	97.6941

ENSGALT0000	Wpkci	ENSGALG000000224 0.611996	24.5766
ENSGALT0000	\N	ENSGALG000000224 0.747952	54.5637
ENSGALT0000	\N	ENSGALG000000224 0.9978	234.083
ENSGALT0000	\N	ENSGALG000000224 0.91851	206.055
ENSGALT0000	\N	ENSGALG000000224 ?	7.52E-40
ENSGALT0000	\N	ENSGALG000000224 0.464758	0
ENSGALT0000	\N	ENSGALG000000224 ?	1.46E-31
ENSGALT0000	\N	ENSGALG000000224 ?	0
ENSGALT0000	\N	ENSGALG000000224 0.464758	1.32E-25
ENSGALT0000	\N	ENSGALG000000224 ?	0
ENSGALT0000	\N	ENSGALG000000224 0.929365	1.10833
ENSGALT0000	\N	ENSGALG000000224 ?	1.11E-15
ENSGALT0000	\N	ENSGALG000000224 0.464758	0
ENSGALT0000	\N	ENSGALG000000224 0.736407	1.81573
ENSGALT0000	\N	ENSGALG000000224 ?	0
ENSGALT0000	\N	ENSGALG000000224 0.464758	0
ENSGALT0000	\N	ENSGALG000000224 0.464758	0
ENSGALT0000	\N	ENSGALG000000224 ?	0
ENSGALT0000	\N	ENSGALG000000224 ?	0
ENSGALT0000	\N	ENSGALG000000224 ?	0
ENSGALT0000	\N	ENSGALG000000224 ?	0
ENSGALT0000	\N	ENSGALG000000224 0.972288	2.4926
ENSGALT0000	\N	ENSGALG000000224 0.956734	54.463
ENSGALT0000	\N	ENSGALG000000224 0.618308	1.5
ENSGALT0000	\N	ENSGALG000000224 0.768468	2.31817
ENSGALT0000	\N	ENSGALG000000224 0.464758	3.40E-09
ENSGALT0000	\N	ENSGALG000000224 0.649519	3.40E-09
ENSGALT0000	\N	ENSGALG000000224 0.464758	1.00E-08
ENSGALT0000	\N	ENSGALG000000224 0.98208	665.259
ENSGALT0000	\N	ENSGALG000000224 ?	0
ENSGALT0000	\N	ENSGALG000000224 0.190889	0
ENSGALT0000	Uncharacterized protein	ENSGALG000000224 0.930671	347.617
ENSGALT0000	\N	ENSGALG000000224 0.464758	0
ENSGALT0000	\N	ENSGALG000000224 0.283623	20931.5
ENSGALT0000	\N	ENSGALG000000224 0.285666	3.06E-07
ENSGALT0000	\N	ENSGALG000000224 0.645034	1.43641
ENSGALT0000	\N	ENSGALG000000224 0.916989	12
ENSGALT0000	\N	ENSGALG000000224 ?	0
ENSGALT0000	\N	ENSGALG000000224 0.987013	570.5
ENSGALT0000	\N	ENSGALG000000224 0.470272	2.67E-11
ENSGALT0000	\N	ENSGALG000000224 0.704835	5
ENSGALT0000	\N	ENSGALG000000224 ?	0
ENSGALT0000	\N	ENSGALG000000224 0.857455	18.5
ENSGALT0000	\N	ENSGALG000000224 0.464758	7.58E-13
ENSGALT0000	\N	ENSGALG000000224 0.948619	180.782
ENSGALT0000	\N	ENSGALG000000224 0.378278	0.49962
ENSGALT0000	\N	ENSGALG000000224 0.943035	3.20376
ENSGALT0000	\N	ENSGALG000000224 0.985133	5.00223
ENSGALT0000	\N	ENSGALG000000224 0.918836	13
ENSGALT0000	\N	ENSGALG000000224 0.464758	1.30E-09
ENSGALT0000	\N	ENSGALG000000224 0.238663	1.69806
ENSGALT0000	\N	ENSGALG000000224 0.988937	143.5
ENSGALT0000	\N	ENSGALG000000224 0.998899	165.181
ENSGALT0000	\N	ENSGALG000000224 0.263517	10.0704
ENSGALT0000	\N	ENSGALG000000224 0.464758	0
ENSGALT0000	Olfactory receptor OR22	ENSGALG000000224 0.464759	0.69982

ENSGALT0000	\N	ENSGALG000000224	?	0
ENSGALT0000	\N	ENSGALG000000224	0.464758	0
ENSGALT0000	\N	ENSGALG000000224	0.464758	0
ENSGALT0000	\N	ENSGALG000000224	0.464758	3.74E-31
ENSGALT0000	Olfactory receptor OR24	ENSGALG000000224	0.357389	0.0621
ENSGALT0000	\N	ENSGALG000000224	?	7.28E-26
ENSGALT0000	\N	ENSGALG000000224	0.464758	3.67E-22
ENSGALT0000	\N	ENSGALG000000224	?	0
ENSGALT0000	\N	ENSGALG000000224	?	0
ENSGALT0000	\N	ENSGALG000000224	?	0
ENSGALT0000	\N	ENSGALG000000224	0.464758	0.3422
ENSGALT0000	\N	ENSGALG000000224	0.895314	1.17011
ENSGALT0000	\N	ENSGALG000000224	?	0
ENSGALT0000	\N	ENSGALG000000224	0.464758	0.5
ENSGALT0000	\N	ENSGALG000000224	0.464758	0
ENSGALT0000	Olfactory receptor OR3	ENSGALG000000224	?	2.31E-15
ENSGALT0000	\N	ENSGALG000000224	?	0
ENSGALT0000	\N	ENSGALG000000224	0.470806	1.68E-40
ENSGALT0000	\N	ENSGALG000000224	?	0
ENSGALT0000	\N	ENSGALG000000224	?	0
ENSGALT0000	\N	ENSGALG000000224	0.849215	9.85693
ENSGALT0000	\N	ENSGALG000000224	0.945806	16.5
ENSGALT0000	\N	ENSGALG000000224	0.874103	131.373
ENSGALT0000	\N	ENSGALG000000224	0.998264	11.6849
ENSGALT0000	\N	ENSGALG000000224	0.958249	185.593
ENSGALT0000	\N	ENSGALG000000224	0.999534	393.473
ENSGALT0000	\N	ENSGALG000000224	?	0
ENSGALT0000	\N	ENSGALG000000224	0.675544	43.8181
ENSGALT0000	\N	ENSGALG000000224	0.649519	0.5
ENSGALT0000	\N	ENSGALG000000224	0.842917	394
ENSGALT0000	\N	ENSGALG000000224	0.46733	0
ENSGALT0000	\N	ENSGALG000000224	0.537365	1.99554
ENSGALT0000	\N	ENSGALG000000224	?	0
ENSGALT0000	\N	ENSGALG000000224	?	0
ENSGALT0000	\N	ENSGALG000000224	0.887112	681
ENSGALT0000	\N	ENSGALG000000224	0.464758	0
ENSGALT0000	\N	ENSGALG000000224	?	0
ENSGALT0000	\N	ENSGALG000000225	?	0
ENSGALT0000	\N	ENSGALG000000225	0.464758	0.5
ENSGALT0000	\N	ENSGALG000000225	0.999988	666.986
ENSGALT0000	\N	ENSGALG000000225	0.504952	7
ENSGALT0000	\N	ENSGALG000000225	0.960409	141.5
ENSGALT0000	\N	ENSGALG000000225	0.464758	4.65E-15
ENSGALT0000	Uncharacterized protein	ENSGALG000000225	?	4.02E-16
ENSGALT0000	Uncharacterized protein	ENSGALG000000225	0.464869	1.49826
ENSGALT0000	\N	ENSGALG000000225	0.828826	0.5
ENSGALT0000	\N	ENSGALG000000225	0.358257	3.5
ENSGALT0000	\N	ENSGALG000000225	0.649519	0.5
ENSGALT0000	\N	ENSGALG000000225	?	0
ENSGALT0000	\N	ENSGALG000000225	0.516202	8.73E-30
ENSGALT0000	\N	ENSGALG000000225	0.762013	2.30728
ENSGALT0000	Uncharacterized protein	ENSGALG000000225	0.465785	0.3125
ENSGALT0000	\N	ENSGALG000000225	0.950451	15.8074
ENSGALT0000	\N	ENSGALG000000225	0.0694891	5.19345
ENSGALT0000	\N	ENSGALG000000225	0.929628	5.95053
ENSGALT0000	\N	ENSGALG000000225	0.944229	73

ENSGALT0000	\N	ENSGALG0000000225	0.381797	204.984
ENSGALT0000	\N	ENSGALG0000000225	0.196914	2.52708
ENSGALT0000	\N	ENSGALG0000000225	0.464758	0.10546
ENSGALT0000	\N	ENSGALG0000000225	0.833825	0.9761
ENSGALT0000	\N	ENSGALG0000000225	0.109338	0
ENSGALT0000	\N	ENSGALG0000000225	0.468515	2.45E-07
ENSGALT0000	\N	ENSGALG0000000225	0.643336	0.79558
ENSGALT0000	\N	ENSGALG0000000225	0.464758	0
ENSGALT0000	\N	ENSGALG0000000225	0.527078	5.10115
ENSGALT0000	\N	ENSGALG0000000225	0.873779	324
ENSGALT0000	\N	ENSGALG0000000225	0.706204	68.3231
ENSGALT0000	\N	ENSGALG0000000225	0.960152	132.393
ENSGALT0000	\N	ENSGALG0000000225	0.993218	119.5
ENSGALT0000	\N	ENSGALG0000000225	0.990725	323.448
ENSGALT0000	\N	ENSGALG0000000225	?	0
ENSGALT0000	\N	ENSGALG0000000225	?	0
ENSGALT0000	\N	ENSGALG0000000225	0.464758	1.63E-21
ENSGALT0000	\N	ENSGALG0000000225	0.490714	0.20073
ENSGALT0000	\N	ENSGALG0000000225	0.468211	0
ENSGALT0000	\N	ENSGALG0000000225	0.993287	97.4646
ENSGALT0000	\N	ENSGALG0000000225	0.999792	5.348
ENSGALT0000	\N	ENSGALG0000000225	0.958869	308.502
ENSGALT0000	\N	ENSGALG0000000225	0.138495	2.58168
ENSGALT0000	\N	ENSGALG0000000225	0.47906	2.94E-32
ENSGALT0000	\N	ENSGALG0000000225	0.788621	1.75365
ENSGALT0000	\N	ENSGALG0000000225	0.464759	1.10E-07
ENSGALT0000	\N	ENSGALG0000000225	0.956068	1119
ENSGALT0000	\N	ENSGALG0000000225	0.948092	102.239
ENSGALT0000	\N	ENSGALG0000000225	0.963928	53.243
ENSGALT0000	\N	ENSGALG0000000225	?	0
ENSGALT0000	\N	ENSGALG0000000225	0.834571	1072
ENSGALT0000	\N	ENSGALG0000000225	0.857191	423
ENSGALT0000	\N	ENSGALG0000000225	0.464758	2.44E-33
ENSGALT0000	\N	ENSGALG0000000225	?	0
ENSGALT0000	\N	ENSGALG0000000225	0.469097	1.92E-09
ENSGALT0000	\N	ENSGALG0000000225	?	0
ENSGALT0000	\N	ENSGALG0000000225	?	0
ENSGALT0000	Zona pellucida protein 1	ENSGALG0000000225	0.637409	5.5
ENSGALT0000	\N	ENSGALG0000000225	0.293541	1313.5
ENSGALT0000	\N	ENSGALG0000000225	0.942837	57.705
ENSGALT0000	\N	ENSGALG0000000225	?	0
ENSGALT0000	\N	ENSGALG0000000225	0.655247	0.65737
ENSGALT0000	\N	ENSGALG0000000225	0.777798	4031
ENSGALT0000	\N	ENSGALG0000000225	0.80696	12.5
ENSGALT0000	\N	ENSGALG0000000225	0.350508	1.31913
ENSGALT0000	\N	ENSGALG0000000225	0.321704	0
ENSGALT0000	\N	ENSGALG0000000225	0.464758	0
ENSGALT0000	Olfactory receptor OR14	ENSGALG0000000225	0.464758	2.00E-31
ENSGALT0000	\N	ENSGALG0000000225	0.793507	168.684
ENSGALT0000	\N	ENSGALG0000000225	0.92377	174.797
ENSGALT0000	\N	ENSGALG0000000225	?	0
ENSGALT0000	\N	ENSGALG0000000225	?	0
ENSGALT0000	\N	ENSGALG0000000225	0.564149	6.70E-32
ENSGALT0000	Olfactory receptor OR26	ENSGALG0000000225	0.464758	0
ENSGALT0000	\N	ENSGALG0000000225	0.464758	0
ENSGALT0000	\N	ENSGALG0000000225	?	0

ENSGALT0000	Uncharacterized protein	ENSGALG000000225	0.464734	0
ENSGALT0000	\N	ENSGALG000000225	0.952733	131.364
ENSGALT0000	\N	ENSGALG000000225	0.826774	1.13574
ENSGALT0000	\N	ENSGALG000000225	0.464758	1.43E-12
ENSGALT0000	\N	ENSGALG000000225	0.96237	183.5
ENSGALT0000	\N	ENSGALG000000225	0.727328	1.30398
ENSGALT0000	\N	ENSGALG000000225	?	0
ENSGALT0000	\N	ENSGALG000000225	0.464757	4.18E-17
ENSGALT0000	\N	ENSGALG000000225	0.488989	1.63E-06
ENSGALT0000	\N	ENSGALG000000225	0.780657	1.5
ENSGALT0000	\N	ENSGALG000000225	0.328124	4
ENSGALT0000	\N	ENSGALG000000225	0.936827	4.17158
ENSGALT0000	\N	ENSGALG000000226	0.953497	255.5
ENSGALT0000	\N	ENSGALG000000226	0.947785	90.7534
ENSGALT0000	\N	ENSGALG000000226	0.464758	9.35E-11
ENSGALT0000	\N	ENSGALG000000226	?	1.09E-14
ENSGALT0000	\N	ENSGALG000000226	0.464758	3.10E-06
ENSGALT0000	\N	ENSGALG000000226	0.464758	0
ENSGALT0000	\N	ENSGALG000000226	?	5.82E-19
ENSGALT0000	\N	ENSGALG000000226	0.649519	3.40E-09
ENSGALT0000	\N	ENSGALG000000226	0.961763	79.9626
ENSGALT0000	\N	ENSGALG000000226	0.634512	0.71352
ENSGALT0000	\N	ENSGALG000000226	0.63667	0
ENSGALT0000	\N	ENSGALG000000226	0.989607	6400
ENSGALT0000	\N	ENSGALG000000226	0.982509	3.64981
ENSGALT0000	\N	ENSGALG000000226	0.498615	0.00708
ENSGALT0000	Uncharacterized protein	ENSGALG000000226	0.877869	841.927
ENSGALT0000	Olfactory receptor OR31	ENSGALG000000226	0.465077	1.88E-09
ENSGALT0000	\N	ENSGALG000000226	?	0
ENSGALT0000	\N	ENSGALG000000226	0.844847	570
ENSGALT0000	\N	ENSGALG000000226	0.957673	203.204
ENSGALT0000	\N	ENSGALG000000226	0.317257	15.5725
ENSGALT0000	\N	ENSGALG000000226	?	0
ENSGALT0000	\N	ENSGALG000000226	0.464758	0
ENSGALT0000	\N	ENSGALG000000226	0.598053	0.01388
ENSGALT0000	\N	ENSGALG000000226	0.686611	0.83335
ENSGALT0000	Uncharacterized protein	ENSGALG000000226	0.926253	11.5
ENSGALT0000	Uncharacterized protein	ENSGALG000000226	?	0
ENSGALT0000	Uncharacterized protein	ENSGALG000000226	0.560742	0.5
ENSGALT0000	Uncharacterized protein	ENSGALG000000226	0.938699	102
ENSGALT0000	Uncharacterized protein	ENSGALG000000226	0.680622	1
ENSGALT0000	Uncharacterized protein	ENSGALG000000226	0.70316	1.5
ENSGALT0000	Uncharacterized protein	ENSGALG000000226	0.907598	474.5
ENSGALT0000	Uncharacterized protein	ENSGALG000000226	0.79689	1089
ENSGALT0000	Uncharacterized protein	ENSGALG000000226	0.487185	75.743
ENSGALT0000	Uncharacterized protein	ENSGALG000000226	0.991923	49.5
ENSGALT0000	Uncharacterized protein	ENSGALG000000226	?	0
ENSGALT0000	\N	ENSGALG000000226	0.752829	26
ENSGALT0000	Uncharacterized protein	ENSGALG000000226	0.848628	148.5
ENSGALT0000	Uncharacterized protein	ENSGALG000000226	0.896382	612.5
ENSGALT0000	Uncharacterized protein	ENSGALG000000226	0.978182	2
ENSGALT0000	Uncharacterized protein	ENSGALG000000226	0.908975	188.008
ENSGALT0000	Uncharacterized protein	ENSGALG000000226	0.215945	52.8805
ENSGALT0000	Uncharacterized protein	ENSGALG000000226	0.916581	34.5
ENSGALT0000	Uncharacterized protein	ENSGALG000000226	0.943426	420
ENSGALT0000	Uncharacterized protein	ENSGALG000000226	0.886335	717

ENSGALT0000	Uncharacterized protein	ENSGALG000000226	0.0753379	0.5
ENSGALT0000	Uncharacterized protein	ENSGALG000000226	?	0
ENSGALT0000	Uncharacterized protein	ENSGALG000000226	0.595461	0.87009
ENSGALT0000	Uncharacterized protein	ENSGALG000000226	0.585662	0.5
ENSGALT0000	Uncharacterized protein	ENSGALG000000226	0.994127	107
ENSGALT0000	Wpkci	ENSGALG000000226	0.611996	24.5766
ENSGALT0000	Wpkci	ENSGALG000000226	0.611996	24.5766
ENSGALT0000	Wpkci	ENSGALG000000226	0.611996	24.5766
ENSGALT0000	Female-associated factor FAF	ENSGALG000000226	0.51816	63.8964
ENSGALT0000	Wpkci	ENSGALG000000226	0.611996	24.5766
ENSGALT0000	Wpkci	ENSGALG000000226	0.611996	24.5766
ENSGALT0000	Wpkci	ENSGALG000000226	0.257436	0.01346
ENSGALT0000	Wpkci	ENSGALG000000226	0.611996	24.5766
ENSGALT0000	Wpkci	ENSGALG000000226	0.611996	24.5766
ENSGALT0000	Wpkci	ENSGALG000000226	0.611996	24.5766
ENSGALT0000	HINTW	ENSGALG000000226	0.714353	6780.71
ENSGALT0000	Wpkci	ENSGALG000000226	0.611996	24.5766
ENSGALT0000	\N	ENSGALG000000226	0.961818	12.3392
ENSGALT0000	\N	ENSGALG000000226	0.952782	12.6339
ENSGALT0000	\N	ENSGALG000000226	0.97315	55.7922
ENSGALT0000	\N	ENSGALG000000226	0.916362	20.991
ENSGALT0000	Putative uncharacterized protein	ENSGALG000000226	0.709	9.92937
ENSGALT0000	\N	ENSGALG000000226	0.464758	5.75E-24
ENSGALT0000	\N	ENSGALG000000226	0.950283	468.15
ENSGALT0000	\N	ENSGALG000000226	0.854594	30.3965
ENSGALT0000	Wpkci	ENSGALG000000226	0.611996	24.5766
ENSGALT0000	Wpkci	ENSGALG000000226	0.611996	24.5766
ENSGALT0000	Wpkci	ENSGALG000000226	0.611996	24.5766
ENSGALT0000	Female-associated factor FAF	ENSGALG000000226	?	1.93E-39
ENSGALT0000	\N	ENSGALG000000226	0.919676	2680.2
ENSGALT0000	Female-associated factor FAF	ENSGALG000000226	0.573429	1.36838
ENSGALT0000	Uncharacterized protein	ENSGALG000000226	0.765794	18
ENSGALT0000	Uncharacterized protein	ENSGALG000000226	0.797901	222.5
ENSGALT0000	Uncharacterized protein	ENSGALG000000226	0.776103	204.5
ENSGALT0000	Uncharacterized protein	ENSGALG000000226	0.109531	52.9423
ENSGALT0000	Uncharacterized protein	ENSGALG000000226	0.464758	5.96E-14
ENSGALT0000	Uncharacterized protein	ENSGALG000000226	0.751372	41.1579
ENSGALT0000	Uncharacterized protein	ENSGALG000000227	0.956361	46.397
ENSGALT0000	Uncharacterized protein	ENSGALG000000227	?	0
ENSGALT0000	Uncharacterized protein	ENSGALG000000227	0.851539	138.5
ENSGALT0000	Uncharacterized protein	ENSGALG000000227	?	0
ENSGALT0000	Uncharacterized protein	ENSGALG000000227	0.464758	0
ENSGALT0000	Uncharacterized protein	ENSGALG000000227	0.464758	0
ENSGALT0000	Uncharacterized protein	ENSGALG000000227	?	0
ENSGALT0000	Uncharacterized protein	ENSGALG000000227	0.987219	89
ENSGALT0000	Uncharacterized protein	ENSGALG000000227	0.961181	370.5
ENSGALT0000	Uncharacterized protein	ENSGALG000000227	0.994985	98
ENSGALT0000	Uncharacterized protein	ENSGALG000000227	0.839976	13
ENSGALT0000	Uncharacterized protein	ENSGALG000000227	0.618997	1
ENSGALT0000	Uncharacterized protein	ENSGALG000000227	0.998721	6.18379
ENSGALT0000	Uncharacterized protein	ENSGALG000000227	0.993526	602
ENSGALT0000	Uncharacterized protein	ENSGALG000000227	0.987274	59
ENSGALT0000	Uncharacterized protein	ENSGALG000000227	0.464758	0
ENSGALT0000	Uncharacterized protein	ENSGALG000000227	0.514337	1.39704
ENSGALT0000	Uncharacterized protein	ENSGALG000000227	0.754829	8.5
ENSGALT0000	Uncharacterized protein	ENSGALG000000227	0.829514	16.7972

ENSGALT0000 Uncharacterized protein	ENSGALG000000227	?	0
ENSGALT0000 Uncharacterized protein	ENSGALG000000227	0.737462	39
ENSGALT0000 Uncharacterized protein	ENSGALG000000227	0.930282	12.5
ENSGALT0000 Uncharacterized protein	ENSGALG000000227	0.464758	0
ENSGALT0000 Uncharacterized protein	ENSGALG000000227	0	0
ENSGALT0000 Uncharacterized protein	ENSGALG000000227	0.966518	673.998
ENSGALT0000 \N	ENSGALG000000227	?	0
ENSGALT0000 \N	ENSGALG000000227	?	0
ENSGALT0000 Uncharacterized protein	ENSGALG000000227	0.911822	21.5
ENSGALT0000 \N	ENSGALG000000227	?	0
ENSGALT0000 Uncharacterized protein	ENSGALG000000227	0.992707	182
ENSGALT0000 \N	ENSGALG000000227	?	0
ENSGALT0000 \N	ENSGALG000000227	?	0
ENSGALT0000 \N	ENSGALG000000227	?	0
ENSGALT0000 Uncharacterized protein	ENSGALG000000227	?	0
ENSGALT0000 Uncharacterized protein	ENSGALG000000227	0.769873	3
ENSGALT0000 Uncharacterized protein	ENSGALG000000227	0.150565	0
ENSGALT0000 Uncharacterized protein	ENSGALG000000227	0.569146	0.31467
ENSGALT0000 Uncharacterized protein	ENSGALG000000227	0.569146	0.31467
ENSGALT0000 Uncharacterized protein	ENSGALG000000227	0.464869	1.49826
ENSGALT0000 Uncharacterized protein	ENSGALG000000227	0.543335	0.3125
ENSGALT0000 Uncharacterized protein	ENSGALG000000227	0.963388	257.5
ENSGALT0000 Uncharacterized protein	ENSGALG000000227	?	0
ENSGALT0000 Uncharacterized protein	ENSGALG000000227	?	0
ENSGALT0000 Uncharacterized protein	ENSGALG000000227	0.464758	0.16667
ENSGALT0000 Uncharacterized protein	ENSGALG000000227	0.464758	0.16667
ENSGALT0000 Uncharacterized protein	ENSGALG000000227	0.925945	1.5
ENSGALT0000 Uncharacterized protein	ENSGALG000000227	?	0
ENSGALT0000 \N	ENSGALG000000227	?	0
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ENSGALT0000 \N	ENSGALG000000227	?	0
ENSGALT0000 \N	ENSGALG000000227	?	0
ENSGALT0000 Uncharacterized protein	ENSGALG000000227	0.464758	0
ENSGALT0000 Uncharacterized protein	ENSGALG000000227	0.603682	0
ENSGALT0000 Uncharacterized protein	ENSGALG000000227	0.780657	1.5
ENSGALT0000 Uncharacterized protein	ENSGALG000000227	0.99306	193.5
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ENSGALT0000 Uncharacterized protein	ENSGALG000000227	?	0
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ENSGALT0000 Uncharacterized protein	ENSGALG000000227	0.737335	2.29038
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ENSGALT0000 Uncharacterized protein	ENSGALG000000227	0.464758	1.43E-08
ENSGALT0000 Uncharacterized protein	ENSGALG000000227	0.980281	242
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ENSGALT0000 Uncharacterized protein	ENSGALG000000227	0.342787	3.47964
ENSGALT0000 Uncharacterized protein	ENSGALG000000227	0.887839	4
ENSGALT0000 Uncharacterized protein	ENSGALG000000227	0.91023	24.5
ENSGALT0000 Uncharacterized protein	ENSGALG000000227	0.0085035	0.55888
ENSGALT0000 Uncharacterized protein	ENSGALG000000227	0.966162	6.92282
ENSGALT0000 Uncharacterized protein	ENSGALG000000227	0.914235	8.79823
ENSGALT0000 Uncharacterized protein	ENSGALG000000227	0.924695	18.0485
ENSGALT0000 Uncharacterized protein	ENSGALG000000228	0.998054	253.5
ENSGALT0000 Uncharacterized protein	ENSGALG000000228	0.980848	153.5

ENSGALT0000	Uncharacterized protein	ENSGALG00000022ε	0.896164	831.5
ENSGALT0000	Uncharacterized protein	ENSGALG00000022ε	0.649519	0.5
ENSGALT0000	Uncharacterized protein	ENSGALG00000022ε	0.754728	0.5
ENSGALT0000	Uncharacterized protein	ENSGALG00000022ε	0.464758	0.5
ENSGALT0000	Uncharacterized protein	ENSGALG00000022ε	0.944959	21.5
ENSGALT0000	Uncharacterized protein	ENSGALG00000022ε	0.464758	0
ENSGALT0000	\N	ENSGALG00000022ε	0.838966	8.5
ENSGALT0000	Uncharacterized protein	ENSGALG00000022ε	0.780657	1.5
ENSGALT0000	Uncharacterized protein	ENSGALG00000022ε	0.653755	3.98201
ENSGALT0000	Uncharacterized protein	ENSGALG00000022ε	?	0
ENSGALT0000	Uncharacterized protein	ENSGALG00000022ε	0.957787	398
ENSGALT0000	Uncharacterized protein	ENSGALG00000022ε	0.754734	18.9237
ENSGALT0000	Uncharacterized protein	ENSGALG00000022ε	?	0
ENSGALT0000	Uncharacterized protein	ENSGALG00000022ε	?	0
ENSGALT0000	Uncharacterized protein	ENSGALG00000022ε	?	0
ENSGALT0000	Uncharacterized protein	ENSGALG00000022ε	0.984382	70.5
ENSGALT0000	Uncharacterized protein	ENSGALG00000022ε	0.850701	1.5
ENSGALT0000	Uncharacterized protein	ENSGALG00000022ε	0.731094	3.5
ENSGALT0000	\N	ENSGALG00000022ε	0.411389	31
ENSGALT0000	Uncharacterized protein	ENSGALG00000022ε	0.954991	191
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ENSGALT0000	Uncharacterized protein	ENSGALG00000022ε	0.534404	0
ENSGALT0000	Uncharacterized protein	ENSGALG00000022ε	0.907441	4.4808
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ENSGALT0000	Uncharacterized protein	ENSGALG00000022ε	0.626003	4.37733
ENSGALT0000	Uncharacterized protein	ENSGALG00000022ε	0.776684	578.657
ENSGALT0000	Uncharacterized protein	ENSGALG00000022ε	0.955888	51.2479
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ENSGALT0000	Uncharacterized protein	ENSGALG00000022ε	0.984704	1264
ENSGALT0000	Uncharacterized protein	ENSGALG00000022ε	0.574657	149.42
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ENSGALT0000	Uncharacterized protein	ENSGALG00000022ε	?	0
ENSGALT0000	Uncharacterized protein	ENSGALG00000022ε	0.621817	56
ENSGALT0000	\N	ENSGALG00000022ε	0.469245	0.27157
ENSGALT0000	Uncharacterized protein	ENSGALG00000022ε	0.736063	73.3283
ENSGALT0000	Uncharacterized protein	ENSGALG00000022ε	0.815983	123.5
ENSGALT0000	Uncharacterized protein	ENSGALG00000022ε	0.733505	2
ENSGALT0000	Uncharacterized protein	ENSGALG00000022ε	0.832954	261.744
ENSGALT0000	Uncharacterized protein	ENSGALG00000022ε	0.712363	232.335
ENSGALT0000	Uncharacterized protein	ENSGALG00000022ε	0.275219	38.4217
ENSGALT0000	Uncharacterized protein	ENSGALG00000022ε	0.965946	12.5
ENSGALT0000	Uncharacterized protein	ENSGALG00000022ε	0.836902	62.5
ENSGALT0000	Uncharacterized protein	ENSGALG00000022ε	0.982679	36
ENSGALT0000	Uncharacterized protein	ENSGALG00000022ε	0.593421	8.34E-27
ENSGALT0000	Uncharacterized protein	ENSGALG00000022ε	0.820501	166.5
ENSGALT0000	Uncharacterized protein	ENSGALG00000022ε	0.882433	3
ENSGALT0000	\N	ENSGALG00000022ε	?	0
ENSGALT0000	\N	ENSGALG00000022ε	0.371997	0.33333
ENSGALT0000	Uncharacterized protein	ENSGALG00000022ε	0.997334	179.5
ENSGALT0000	Uncharacterized protein	ENSGALG00000022ε	0.475488	0.03743
ENSGALT0000	Uncharacterized protein	ENSGALG00000022ε	0.494106	1.5
ENSGALT0000	Uncharacterized protein	ENSGALG00000022ε	0.751048	137.355
ENSGALT0000	Uncharacterized protein	ENSGALG00000022ε	0.97039	71
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ENSGALT0000 \N	ENSGALG000000229	0.371997	0.33333
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ENSGALT0000	Uncharacterized protein	ENSGALG0000000237	?	0
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ENSGALT0000	\N	ENSGALG0000000237	0.841488	140
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ENSGALT0000	Uncharacterized protein	ENSGALG0000000238	0.828753	7.5
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ENSGALT0000	\N	ENSGALG00000023ε	0.464758	0
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ENSGALT0000	Uncharacterized protein	ENSGALG0000002395	0.986077	84.5
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ENSGALT0000 Uncharacterized protein	ENSGALG000000242 ?	4.60E-16	

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ENSGALT0000	MHC type antigen B-G	ENSGALG000000244 0.994696	12.4109
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ENSGALT0000	ectonucleoside triphosphate diphos	ENTPD3	0.932902	47
ENSGALT0000	ectonucleoside triphosphate diphos	ENTPD4	0.977245	574
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ENSGALT0000	ectonucleoside triphosphate diphos	ENTPD8	0.989244	332.333
ENSGALT0000	enhancer of yellow 2 homolog (Dro	ENY2	0.769197	766.224
ENSGALT0000	eomesodermin	EOMES	0.464758	0.5
ENSGALT0000	E1A binding protein p300	EP300	0.987019	7014.1
ENSGALT0000	E1A binding protein p400	EP400	0.964446	3781.57
ENSGALT0000	endothelial PAS domain protein 1	EPAS1	0.677672	458
ENSGALT0000	erythrocyte membrane protein ban	EPB41	0.872665	2409.5
ENSGALT0000	erythrocyte membrane protein ban	EPB41L1	0.849791	1781.96
ENSGALT0000	erythrocyte membrane protein ban	EPB41L2	0.995764	1160.5
ENSGALT0000	erythrocyte membrane protein ban	EPB41L3	0.72511	964.5
ENSGALT0000	erythrocyte membrane protein ban	EPB41L4A	0.73774	204.5
ENSGALT0000	erythrocyte membrane protein ban	EPB41L4B	0.964364	519.498
ENSGALT0000	erythrocyte membrane protein ban	EPB41L5	0.997528	1287.5
ENSGALT0000	erythrocyte membrane protein ban	EPB42	0.857995	33.5
ENSGALT0000	enhancer of polycomb homolog 1 (	EPC1	0.962385	1452.5
ENSGALT0000	enhancer of polycomb homolog 2 (	EPC2	0.963874	1010.5
ENSGALT0000	epithelial cell adhesion molecule	EPCAM	0.986785	11777.5
ENSGALT0000	ependymin related protein 1 (zebra	EPDR1	0.696292	192
ENSGALT0000	ectopic P-granules autophagy prote	EPG5	0.9728	632.5
ENSGALT0000	epithelial mitogen homolog (mouse	EPGN	0.969011	52.5
ENSGALT0000	EPH receptor A1	EPHA1	0.961279	246
ENSGALT0000	EPH receptor A10	EPHA10	0.818047	390
ENSGALT0000	EPH receptor A3	EPHA3	0.955767	430.002
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ENSGALT0000	EPH receptor A6	EPHA6	0.990527	97
ENSGALT0000	EPH receptor A7	EPHA7	0.977699	4979
ENSGALT0000	EPH receptor A8	EPHA8	0.631278	9.05905
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ENSGALT0000	EPH receptor B3	EPHB3	0.999445	7286.92
ENSGALT0000	EPH receptor B6	EPHB6	0.962307	2372.5
ENSGALT0000	epoxide hydrolase 1, microsomal (x	EPHX1	0.981418	347
ENSGALT0000	epoxide hydrolase 2, cytoplasmic	EPHX2	0.847009	898
ENSGALT0000	epoxide hydrolase 4	EPHX4	0.740556	17
ENSGALT0000	epilepsy, progressive myoclonus ty	EPM2A	0.893818	169.5

ENSGALT0000 epsin 2	EPN2	0.920387	2268.55
ENSGALT0000 epiplakin 1	EPPK1	0.934795	558.085
ENSGALT0000 glutamyl-prolyl-tRNA synthetase	EPRS	0.936637	6518
ENSGALT0000 epidermal growth factor receptor pa	EPS15	0.917355	2393.47
ENSGALT0000 epidermal growth factor receptor pa	EPS15L1	0.950181	609
ENSGALT0000 epidermal growth factor receptor pa	EPS8	0.968487	1920.5
ENSGALT0000 EPS8-like 2	EPS8L2	0.994307	1412.5
ENSGALT0000 epithelial stromal interaction 1 (brea	EPSTI1	0.186209	0.5
ENSGALT0000 ethanolaminephosphotransferase 1	EPT1	0.853808	2062
ENSGALT0000 epiphycan	EPYC	0.718289	373.5
ENSGALT0000 Era G-protein-like 1 (E. coli)	ERAL1	0.961473	580.5
ENSGALT0000 endoplasmic reticulum aminopeptic	ERAP1	0.932766	132
ENSGALT0000 v-erb-b2 erythroblastic leukemia vir	ERBB2	0.995669	3255.99
ENSGALT0000 erbb2 interacting protein	ERBB2IP	0.984635	2167.01
ENSGALT0000 v-erb-a erythroblastic leukemia vira	ERBB4	0.85687	452.503
ENSGALT0000 ELKS/RAB6-interacting/CAST fami	ERC1	0.955505	916
ENSGALT0000 ELKS/RAB6-interacting/CAST fami	ERC2	0.883622	57
ENSGALT0000 excision repair cross-complementir	ERCC3	0.940008	1736
ENSGALT0000 excision repair cross-complementir	ERCC4	0.962377	353.999
ENSGALT0000 excision repair cross-complementir	ERCC5	0.990936	470.999
ENSGALT0000 excision repair cross-complementir	ERCC6	0.976779	743
ENSGALT0000 excision repair cross-complementir	ERCC6L	0.884157	289.5
ENSGALT0000 excision repair cross-complementir	ERCC8	0.983714	199
ENSGALT0000 epiregulin	EREG	0.851404	2
ENSGALT0000 v-ets erythroblastosis virus E26 onc	ERG	0.866851	91.9999
ENSGALT0000 endoplasmic reticulum-golgi interm	ERGIC1	0.925959	3155.5
ENSGALT0000 ERGIC and golgi 2	ERGIC2	0.88898	1474
ENSGALT0000 ERGIC and golgi 3	ERGIC3	0.961049	1876
ENSGALT0000 enhancer of rudimentary homolog (	ERH	0.675547	5050
ENSGALT0000 exoribonuclease 1	ERI1	0.960535	936
ENSGALT0000 ERI1 exoribonuclease family memt	ERI2	0.965889	143
ENSGALT0000 ERI1 exoribonuclease family memt	ERI3	0.949933	1127
ENSGALT0000 glutamate-rich 1	ERICH1	0.93536	64
ENSGALT0000 endoplasmic reticulum lectin 1	ERLEC1	0.955074	1560.28
ENSGALT0000 ER lipid raft associated 1	ERLIN1	0.971728	3843.5
ENSGALT0000 ER lipid raft associated 2	ERLIN2	0.900375	2316.5
ENSGALT0000 ermin, ERM-like protein	ERMN	0.696267	62
ENSGALT0000 endoplasmic reticulum metallopept	ERMP1	0.971011	363.5
ENSGALT0000 endoplasmic reticulum to nucleus s	ERN1	0.997843	785
ENSGALT0000 ERO1-like (S. cerevisiae)	ERO1L	0.99837	640.001
ENSGALT0000 ERO1-like beta (S. cerevisiae)	ERO1LB	0.975862	350
ENSGALT0000 endoplasmic reticulum protein 27	ERP27	0.956208	1.5
ENSGALT0000 endoplasmic reticulum protein 29	ERP29	0.903813	2849
ENSGALT0000 endoplasmic reticulum protein 44	ERP44	0.950927	2354.5
ENSGALT0000 ERBB receptor feedback inhibitor 1	ERRFI1	0.975822	382
ENSGALT0000 endothelial cell adhesion molecule	ESAM	0.889442	475.5
ENSGALT0000 establishment of cohesion 1 homol	ESCO1	0.970802	570.503
ENSGALT0000 establishment of cohesion 1 homol	ESCO2	0.972231	546.5
ENSGALT0000 esterase D	ESD	0.946798	2320
ENSGALT0000 ESF1, nucleolar pre-rRNA processi	ESF1	0.93212	325
ENSGALT0000 extra spindle pole bodies homolog	ESPL1	0.950769	2215
ENSGALT0000 espin	ESPN	0.66795	383.5
ENSGALT0000 espin-like	ESPNL	0.087774	24.5
ENSGALT0000 estrogen receptor 1	ESR1	0.982196	5.5
ENSGALT0000 estrogen receptor 2 (ER beta)	ESR2	0.96438	15
ENSGALT0000 epithelial splicing regulatory protein	ESRP1	0.958593	728

ENSGALT0000	epithelial splicing regulatory protei	ESRP2	0.965102	4276
ENSGALT0000	estrogen-related receptor beta	ESRRB	0.898767	104
ENSGALT0000	estrogen-related receptor gamma	ESRRG	0.650798	917.994
ENSGALT0000	extended synaptotagmin-like protei	ESYT2	0.998593	606.5
ENSGALT0000	Ewing tumor-associated antigen 1	ETAA1	0.984296	681
ENSGALT0000	eukaryotic translation termination fa	ETF1	0.919239	1640.5
ENSGALT0000	electron-transfer-flavoprotein, alpha	ETFA	0.766946	5276.67
ENSGALT0000	electron-transferring-flavoprotein de	ETFDH	0.952002	1953.16
ENSGALT0000	ethylmalonic encephalopathy 1	ETHE1	0.427167	410.5
ENSGALT0000	ethanolamine kinase 1	ETNK1	0.99638	2010
ENSGALT0000	ethanolamine kinase 2	ETNK2	0.751855	99
ENSGALT0000	v-ets erythroblastosis virus E26 on	ETS2	0.908274	478.5
ENSGALT0000	ets variant 1	ETV1	0.811995	1123.5
ENSGALT0000	ets variant 3	ETV3	0.971593	1071.5
ENSGALT0000	ets variant 4	ETV4	0.855213	5634.61
ENSGALT0000	ets variant 5	ETV5	0.952908	2290.52
ENSGALT0000	ets variant gene 6 (TEL oncogene)	ETV6	0.911316	440.93
ENSGALT0000	ets variant 7	ETV7	0.947745	32.5
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ENSGALT0000	Ellis van Creveld syndrome 2	EVC2	0.922039	571.002
ENSGALT0000	ecotropic viral integration site 2A	EVI2A	0.996824	7
ENSGALT0000	ecotropic viral integration site 5	EVI5	0.971502	1036.5
ENSGALT0000	ecotropic viral integration site 5-like	EVI5L	0.945222	786.5
ENSGALT0000	Enah/Vasp-like	EVL	0.769933	1536.5
ENSGALT0000	envoplakin	EVPL	0.772507	795.5
ENSGALT0000	even-skipped homeobox 2	EVX2	0.464758	0.5
ENSGALT0000	Ewing sarcoma breakpoint region 1	EWSR1	0.794686	5045.09
ENSGALT0000	exonuclease 3'-5' domain containin	EXD2	0.98437	1227
ENSGALT0000	exonuclease 3'-5' domain containin	EXD3	0.976498	737.5
ENSGALT0000	exonuclease 1	EXO1	0.914654	308
ENSGALT0000	exocyst complex component 1	EXOC1	0.954552	1116.5
ENSGALT0000	exocyst complex component 2	EXOC2	0.971882	1273.5
ENSGALT0000	exocyst complex component 3	EXOC3	0.95137	1189
ENSGALT0000	exocyst complex component 3-like	EXOC3L1	0.874093	1490
ENSGALT0000	exocyst complex component 3-like	EXOC3L4	0.980905	17.5
ENSGALT0000	exocyst complex component 4	EXOC4	0.975163	3392.48
ENSGALT0000	exocyst complex component 5	EXOC5	0.954944	2257
ENSGALT0000	exocyst complex component 6	EXOC6	0.965388	363
ENSGALT0000	exocyst complex component 6B	EXOC6B	0.951303	416
ENSGALT0000	exocyst complex component 7	EXOC7	0.975827	2820.06
ENSGALT0000	exocyst complex component 8	EXOC8	0.906748	1221
ENSGALT0000	endo/exonuclease (5'-3'), endonucl	EXOG	0.927792	735
ENSGALT0000	exosome component 1	EXOSC1	0.268471	781
ENSGALT0000	exosome component 10	EXOSC10	0.939426	1636
ENSGALT0000	exosome component 2	EXOSC2	0.733171	2132
ENSGALT0000	exosome component 3	EXOSC3	0.210006	268
ENSGALT0000	exosome component 7	EXOSC7	0.74868	644
ENSGALT0000	exosome component 8	EXOSC8	0.889493	738
ENSGALT0000	exosome component 9	EXOSC9	0.954373	626.999
ENSGALT0000	exostosin 1	EXT1	0.993155	2146.5
ENSGALT0000	hypothetical protein LOC425859	EXT2	0.974551	1929.52
ENSGALT0000	exostoses (multiple)-like 2	EXTL2	0.98632	139
ENSGALT0000	exostoses (multiple)-like 3	EXTL3	0.957435	3163
ENSGALT0000	eyes absent homolog 1 (Drosophila	EYA1	0.994195	4951.5
ENSGALT0000	eyes absent homolog 2 (Drosophila	EYA2	0.521981	671.5
ENSGALT0000	eyes absent homolog 3 (Drosophila	EYA3	0.955959	1210

ENSGALT0000	eyes absent homolog 4 (Drosophila	EYA4	0.98085	3834
ENSGALT0000	eyes shut homolog (Drosophila)	EYS	0.672602	4
ENSGALT0000	enhancer of zeste homolog 1 (Dros	EZH1	0.99654	651
ENSGALT0000	enhancer of zeste homolog 2 (Dros	EZH2	0.915336	1603.69
ENSGALT0000	ezrin	EZR	0.993374	3952.5
ENSGALT0000	coagulation factor XI	F11	?	0
ENSGALT0000	coagulation factor XIII, A1 polypept	F13A1	0.982666	89.0001
ENSGALT0000	coagulation factor XIII, B polypeptic	F13B	0.541593	1
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ENSGALT0000	Uncharacterized protein	F1N8J3_CHICK	0.649519	0.5
ENSGALT0000	Uncharacterized protein	F1N8T2_CHICK	0.966495	329
ENSGALT0000	Uncharacterized protein	F1N959_CHICK	0.72751	1164.99
ENSGALT0000	Uncharacterized protein	F1N960_CHICK	0.978482	418
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ENSGALT0000	Uncharacterized protein	F1N976_CHICK	0.584732	483
ENSGALT0000	cholinergic receptor, nicotinic, alpha	F1N9F1_CHICK	0.411685	8.5
ENSGALT0000	mesotrypsin	F1N9P3_CHICK	?	0
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ENSGALT0000	Uncharacterized protein	F1NAF9_CHICK	0.803414	762
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ENSGALT0000	Uncharacterized protein	F1NC59_CHICK	?	0
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ENSGALT0000	Uncharacterized protein	F1NCZ4_CHICK	0.6556	119.312
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ENSGALT0000	Uncharacterized protein	F1ND50_CHICK	0.853626	192
ENSGALT0000	Uncharacterized protein	F1NDC2_CHICK	0.369486	30612
ENSGALT0000	Histone H2A	F1NDD7_CHICK	?	0
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ENSGALT0000	Uncharacterized protein	F1NFK7_CHICK	0.840509	2.5
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ENSGALT0000	Uncharacterized protein	F1NFS8_CHICK	0.87829	60.7946
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ENSGALT0000	Uncharacterized protein	F1NHV5_CHICK	0.982525	763.312
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ENSGALT0000	Uncharacterized protein	F1NK63_CHICK	0.710836	154
ENSGALT0000	Uncharacterized protein	F1NK64_CHICK	0.846939	3.5
ENSGALT0000	Uncharacterized protein	F1NKE5_CHICK	0.884738	54.9676
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ENSGALT0000	Uncharacterized protein	F1NKJ6_CHICK	0.909347	61
ENSGALT0000	Iodothyronine deiodinase	F1NKJ9_CHICK	0.725779	11
ENSGALT0000	Uncharacterized protein	F1NL93_CHICK	0.696461	6
ENSGALT0000	Uncharacterized protein	F1NLA4_CHICK	0.071141	9.5
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ENSGALT0000	Uncharacterized protein	F1NLG8_CHICK	0.704456	927.478
ENSGALT0000	Beta-galactosidase	F1NLL2_CHICK	0.845192	1044
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ENSGALT0000 Transporter	F1NN76_CHICK	0.940119	242
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ENSGALT0000 Protein Wnt	F1NP78_CHICK	0.603682	1
ENSGALT0000 Uncharacterized protein	F1NPD4_CHICK	?	0
ENSGALT0000 Transporter	F1NPI2_CHICK	1	1
ENSGALT0000 Uncharacterized protein	F1NPR7_CHICK	0.507482	100.87
ENSGALT0000 Iodothyronine deiodinase	F1NPW0_CHICK	0.924492	19
ENSGALT0000 Ubiquitin carboxyl-terminal hydrolas	F1NPW7_CHICK	0.975677	541.5
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ENSGALT0000 Uncharacterized protein	F1NQ65_CHICK	0.814116	259.5
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ENSGALT0000 Uncharacterized protein	F1NRX7_CHICK	0.947047	157
ENSGALT0000 Transporter	F1NS02_CHICK	0.695795	113.5
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ENSGALT0000 P2X purinoceptor	F1NSV8_CHICK	0.434081	4
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ENSGALT0000 Uncharacterized protein	F1NTI2_CHICK	0.689337	8
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ENSGALT0000 Caveolin	F1NTW2_CHICK	0.948473	22.5
ENSGALT0000 Uncharacterized protein	F1NU82_CHICK	0.627549	51
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ENSGALT0000 Uncharacterized protein	F1NUF1_CHICK	0.947731	107.677
ENSGALT0000 Uncharacterized protein	F1NV35_CHICK	0.944103	99.5

ENSGALT0000 Uncharacterized protein	F1NV81_CHICK	0.971669	35.5
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ENSGALT0000 Uncharacterized protein	F1NVF2_CHICK	0.972163	305.5
ENSGALT0000 Uncharacterized protein	F1NVI2_CHICK	0.724782	7.5
ENSGALT0000 Protein Wnt	F1NVM5_CHICK	0.0113846	1.5
ENSGALT0000 homeodomain protein	F1NVN6_CHICK	0.462455	18.4837
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ENSGALT0000 Uncharacterized protein	F1NW72_CHICK	0.671459	741
ENSGALT0000 Uncharacterized protein	F1NW97_CHICK	0.264439	123429
ENSGALT0000 Uncharacterized protein	F1NWE7_CHICK	0.771892	156
ENSGALT0000 Uncharacterized protein	F1NWS2_CHICK	0.873131	123.5
ENSGALT0000 Uncharacterized protein	F1NWU8_CHICK	0.464758	1
ENSGALT0000 Uncharacterized protein	F1NWX5_CHICK	?	0
ENSGALT0000 Uncharacterized protein	F1NX43_CHICK	0.652877	302.5
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ENSGALT0000 Uncharacterized protein	F1NXK7_CHICK	?	0
ENSGALT0000 Uncharacterized protein	F1NXY6_CHICK	0.312833	1106
ENSGALT0000 Glutathione peroxidase	F1NXZ1_CHICK	0.898074	3623
ENSGALT0000 Uncharacterized protein	F1NYB0_CHICK	0.890633	47.5
ENSGALT0000 Uncharacterized protein	F1NYH7_CHICK	0.462597	28
ENSGALT0000 Uncharacterized protein	F1NYS7_CHICK	0.996506	567.5
ENSGALT0000 Gap junction protein	F1NYX4_CHICK	0.834221	19.5501
ENSGALT0000 Uncharacterized protein	F1NYX6_CHICK	0.0898817	10
ENSGALT0000 Uncharacterized protein	F1NYX8_CHICK	0.948106	57.5
ENSGALT0000 Uncharacterized protein	F1NZ25_CHICK	0.953163	7332.5
ENSGALT0000 Uncharacterized protein	F1NZ97_CHICK	0.685935	2
ENSGALT0000 Alkaline phosphatase	F1NZG4_CHICK	0.710687	24.5
ENSGALT0000 Uncharacterized protein	F1NZH9_CHICK	0.869046	362
ENSGALT0000 Uncharacterized protein	F1NZK5_CHICK	0.488992	58.5
ENSGALT0000 Uncharacterized protein	F1NZL8_CHICK	0.164344	1.00418
ENSGALT0000 Uncharacterized protein	F1NZW6_CHICK	0.560837	19
ENSGALT0000 Uncharacterized protein	F1NZW8_CHICK	0.961437	640
ENSGALT0000 Uncharacterized protein	F1NZX2_CHICK	0.98531	397
ENSGALT0000 Glutamine synthetase	F1P0D2_CHICK	0.98493	72
ENSGALT0000 Uncharacterized protein	F1P0G0_CHICK	0.992472	1366.5
ENSGALT0000 Uncharacterized protein	F1P0G3_CHICK	0.910448	333.5
ENSGALT0000 Uncharacterized protein	F1P0H2_CHICK	0.489324	2.5
ENSGALT0000 Uncharacterized protein	F1P0K6_CHICK	0.822069	51.5
ENSGALT0000 Uncharacterized protein	F1P0Q5_CHICK	0.921027	22.5
ENSGALT0000 Uncharacterized protein	F1P0R9_CHICK	0.34567	59
ENSGALT0000 Uncharacterized protein	F1P0W4_CHICK	0.828219	8067
ENSGALT0000 Uncharacterized protein	F1P101_CHICK	0.717565	26
ENSGALT0000 Uncharacterized protein	F1P102_CHICK	0.845659	42.5
ENSGALT0000 Uncharacterized protein	F1P106_CHICK	0.804137	28
ENSGALT0000 Uncharacterized protein	F1P132_CHICK	0.914122	597.5
ENSGALT0000 Uncharacterized protein	F1P146_CHICK	0.731851	0.5378
ENSGALT0000 Uncharacterized protein	F1P150_CHICK	0.91151	6075.97
ENSGALT0000 Uncharacterized protein	F1P1H8_CHICK	0.845143	6
ENSGALT0000 Uncharacterized protein	F1P1I5_CHICK	0.718101	693.5
ENSGALT0000 Uncharacterized protein	F1P1J2_CHICK	0.976035	1784
ENSGALT0000 Uncharacterized protein	F1P1L4_CHICK	0.890685	152.5
ENSGALT0000 ATP-binding cassette, sub-family C	F1P204_CHICK	0.988	1639
ENSGALT0000 SUMO-1 activating enzyme subuni	F1P226_CHICK	0.962943	2602.98
ENSGALT0000 Uncharacterized protein	F1P2C9_CHICK	0.647449	123.5

ENSGALT0000	Uncharacterized protein	F1P2F8_CHICK	0.965542	148.5
ENSGALT0000	Adenylyl cyclase-associated protein	F1P2G4_CHICK	0.957234	4333
ENSGALT0000	Uncharacterized protein	F1P2H1_CHICK	0.944395	1268.78
ENSGALT0000	Uncharacterized protein	F1P2L2_CHICK	0.780166	29
ENSGALT0000	Uncharacterized protein	F1P2S6_CHICK	0.678459	72.5
ENSGALT0000	Uncharacterized protein	F1P2U0_CHICK	0.639897	7
ENSGALT0000	Uncharacterized protein	F1P2U1_CHICK	0.967184	567
ENSGALT0000	Uncharacterized protein	F1P342_CHICK	0.770722	48.5
ENSGALT0000	Uncharacterized protein	F1P380_CHICK	0.649519	1
ENSGALT0000	Nucleoside diphosphate kinase	F1P3E1_CHICK	0.786301	1216.5
ENSGALT0000	Uncharacterized protein	F1P3H6_CHICK	0.509041	39.5
ENSGALT0000	Uncharacterized protein	F1P3N2_CHICK	0.222799	5709.61
ENSGALT0000	Pseudouridine synthase	F1P3X5_CHICK	0.903317	577.669
ENSGALT0000	Uncharacterized protein	F1P450_CHICK	0.934312	5.5
ENSGALT0000	Uncharacterized protein	F1P492_CHICK	?	0
ENSGALT0000	Uncharacterized protein	F1P4G4_CHICK	0.976698	69
ENSGALT0000	Uncharacterized protein	F1P4H2_CHICK	0.850856	23.5
ENSGALT0000	Uncharacterized protein	F1P4K3_CHICK	0.933887	803.5
ENSGALT0000	Uncharacterized protein	F1P4U7_CHICK	?	0
ENSGALT0000	Uncharacterized protein	F1P4V0_CHICK	0.464758	0
ENSGALT0000	Uncharacterized protein	F1P4V2_CHICK	0.603682	1
ENSGALT0000	Uncharacterized protein	F1P4W0_CHICK	0.777137	1246
ENSGALT0000	Uncharacterized protein	F1P546_CHICK	0.563672	18
ENSGALT0000	Uncharacterized protein	F1P5B4_CHICK	0.884163	1801.32
ENSGALT0000	Uncharacterized protein	F1P5E3_CHICK	0.016655	3.5
ENSGALT0000	Uncharacterized protein	F1P5J3_CHICK	0.833597	12.6006
ENSGALT0000	Uncharacterized protein	F1P5Q6_CHICK	0.896785	392
ENSGALT0000	coagulation factor II (thrombin)	F2	0.9763	60.5
ENSGALT0000	coagulation factor II (thrombin) rece	F2RL1	0.94416	998.5
ENSGALT0000	coagulation factor II (thrombin) rece	F2RL2	0.931865	159.5
ENSGALT0000	coagulation factor III (thromboplast	F3	0.92552	510
ENSGALT0000	coagulation factor V (proaccelerin,	F5	0.995293	412.501
ENSGALT0000	Uncharacterized protein	F6VFN9_CHICK	1	0.5
ENSGALT0000	coagulation factor VII (serum prothr	F7	0.407108	5
ENSGALT0000	coagulation factor VIII, procoagular	F8	0.979137	61
ENSGALT0000	coagulation factor IX	F9	0.0624122	0.5
ENSGALT0000	fatty acid 2-hydroxylase	FA2H	0.971357	200.5
ENSGALT0000	fatty acid amide hydrolase	FAAH	0.879691	908.5
ENSGALT0000	fatty acid binding protein 1, liver	FABP1	0.464758	0
ENSGALT0000	fatty acid binding protein 2, intestin	FABP2	0.603682	2
ENSGALT0000	fatty acid binding protein 3, muscle	FABP3	0.630882	687.503
ENSGALT0000	fatty acid binding protein 4, adipocy	FABP4	0.0483637	0
ENSGALT0000	fatty acid binding protein 5 (psorias	FABP5	0.264606	501.5
ENSGALT0000	fatty acid binding protein 6, ileal	FABP6	0.982054	56.5
ENSGALT0000	fatty acid binding protein 7, brain	FABP7	0.26097	1005.5
ENSGALT0000	Fas (TNFRSF6)-associated via dea	FADD	0.978194	441
ENSGALT0000	fatty acid desaturase 1	FADS1	0.794828	1102
ENSGALT0000	fatty acid desaturase 2	FADS2	0.908226	2833.5
ENSGALT0000	fatty acid desaturase domain family	FADS6	0.720731	30.5
ENSGALT0000	Fas (TNFRSF6) associated factor	FAF1	0.922984	844
ENSGALT0000	Fas associated factor family memb	FAF2	0.889808	1746
ENSGALT0000	fumarylacetoacetate hydrolase (fun	FAH	0.928758	8
ENSGALT0000	fumarylacetoacetate hydrolase don	FAHD1	0.895674	362
ENSGALT0000	Fas apoptotic inhibitory molecule	FAIM	0.973653	284.5
ENSGALT0000	Fas apoptotic inhibitory molecule 2	FAIM2	0.815863	316.5
ENSGALT0000	family with sequence similarity 100	FAM100A	0.768554	445.643

ENSGALT0000 family with sequence similarity 100	FAM100B	0.402996	761
ENSGALT0000 family with sequence similarity 101	FAM101A	0.846317	172
ENSGALT0000 family with sequence similarity 101	FAM101B	0.945566	383
ENSGALT0000 family with sequence similarity 102	FAM102A	0.989695	564.5
ENSGALT0000 family with sequence similarity 102	FAM102B	0.797096	129.755
ENSGALT0000 family with sequence similarity 103	FAM103A1	0.951576	255.5
ENSGALT0000 family with sequence similarity 104	FAM104A	0.970493	1219.41
ENSGALT0000 family with sequence similarity 105	FAM105A	0.998136	698.497
ENSGALT0000 family with sequence similarity 105	FAM105B	0.969942	129
ENSGALT0000 family with sequence similarity 107	FAM107A	0.80886	12
ENSGALT0000 family with sequence similarity 107	FAM107B	0.921018	151
ENSGALT0000 family with sequence similarity 108	FAM108A1	0.915241	1990
ENSGALT0000 family with sequence similarity 108	FAM108B1	0.974267	906.5
ENSGALT0000 family with sequence similarity 108	FAM108C1	0.930001	1370.5
ENSGALT0000 family with sequence similarity 109	FAM109A	0.778358	196.771
ENSGALT0000 family with sequence similarity 109	FAM109B	0.937197	898.729
ENSGALT0000 family with sequence similarity 110,	FAM110B	0.90768	655
ENSGALT0000 family with sequence similarity 110,	FAM110C	0.873575	897.5
ENSGALT0000 family with sequence similarity 110,	FAM110D	0.776213	136.5
ENSGALT0000 family with sequence similarity 114,	FAM114A1	0.913391	269.5
ENSGALT0000 family with sequence similarity 114,	FAM114A2	0.969283	656
ENSGALT0000 family with sequence similarity 116,	FAM116A	0.974275	882
ENSGALT0000 family with sequence similarity 116,	FAM116B	0.98235	967.5
ENSGALT0000 family with sequence similarity 117,	FAM117A	0.995955	593.5
ENSGALT0000 family with sequence similarity 117,	FAM117B	0.942445	310
ENSGALT0000 family with sequence similarity 118,	FAM118B	0.942174	930.5
ENSGALT0000 family with sequence similarity 120,	FAM120A	0.958985	4945.14
ENSGALT0000 family with sequence similarity 120	FAM120B	0.968127	285.5
ENSGALT0000 protein FAM122A	FAM122A	0.980773	2413.65
ENSGALT0000 family with sequence similarity 122	FAM122B	0.939286	1197.88
ENSGALT0000 family with sequence similarity 123,	FAM123A	0.976825	862
ENSGALT0000 family with sequence similarity 123	FAM123B	0.995443	674.5
ENSGALT0000 family with sequence similarity 124	FAM124B	0.921002	4.5
ENSGALT0000 hypothetical protein LOC426089	FAM125A	0.952113	1305.25
ENSGALT0000 family with sequence similarity 125	FAM125B	0.889296	3426.13
ENSGALT0000 family with sequence similarity 126	FAM126A	0.799903	949
ENSGALT0000 family with sequence similarity 126	FAM126B	0.979584	173
ENSGALT0000 family with sequence similarity 129	FAM129A	0.977436	855
ENSGALT0000 family with sequence similarity 129	FAM129B	0.925045	1556.5
ENSGALT0000 family with sequence similarity 131	FAM131A	0.701567	36
ENSGALT0000 family with sequence similarity 131	FAM131B	0.992443	517.5
ENSGALT0000 family with sequence similarity 132	FAM132A	0.89681	130
ENSGALT0000 protein FAM133	FAM133	0.945399	456.001
ENSGALT0000 family with sequence similarity 134	FAM134A	0.900769	4153.16
ENSGALT0000 family with sequence similarity 134	FAM134B	0.888835	543
ENSGALT0000 family with sequence similarity 134	FAM134C	0.943984	1100.5
ENSGALT0000 family with sequence similarity 135	FAM135A	0.999224	2108.97
ENSGALT0000 family with sequence similarity 135	FAM135B	0.971039	35
ENSGALT0000 family with sequence similarity 136	FAM136A	0.136455	5248.07
ENSGALT0000 family with sequence similarity 13,	FAM13A	0.959894	215.847
ENSGALT0000 family with sequence similarity 13,	FAM13C	0.706199	9.5
ENSGALT0000 family with sequence similarity 149	FAM149A	0.902302	53
ENSGALT0000 family with sequence similarity 149	FAM149B1	0.967248	977
ENSGALT0000 family with sequence similarity 150	FAM150B	0.942268	18.5
ENSGALT0000 family with sequence similarity 151	FAM151B	0.984779	1074.5
ENSGALT0000 family with sequence similarity 154	FAM154B	0.954417	29

ENSGALT0000 family with sequence similarity 155 FAM155A	0.798855	8
ENSGALT0000 family with sequence similarity 155 FAM155B	0.940043	700.502
ENSGALT0000 family with sequence similarity 159 FAM159A	0.95556	13
ENSGALT0000 family with sequence similarity 160 FAM160A1	0.948815	210
ENSGALT0000 family with sequence similarity 160 FAM160A2	0.908748	1879.49
ENSGALT0000 family with sequence similarity 160 FAM160B1	0.966208	679
ENSGALT0000 family with sequence similarity 161 FAM161A	0.997241	70
ENSGALT0000 family with sequence similarity 161 FAM161B	0.997482	231
ENSGALT0000 family with sequence similarity 162 FAM162A	0.826856	931.5
ENSGALT0000 family with sequence similarity 162 FAM162B	?	0
ENSGALT0000 family with sequence similarity 163 FAM163A	0.532091	21
ENSGALT0000 family with sequence similarity 164 FAM164A	0.903655	237.5
ENSGALT0000 family with sequence similarity 164 FAM164C	0.997017	86.7169
ENSGALT0000 family with sequence similarity 165 FAM165A	0.995542	31.5
ENSGALT0000 family with sequence similarity 166 FAM166A	0.579551	3
ENSGALT0000 family with sequence similarity 167 FAM167A	0.95977	75
ENSGALT0000 family with sequence similarity 167 FAM167B	0.98894	22.5
ENSGALT0000 family with sequence similarity 168 FAM168A	0.977524	1001.5
ENSGALT0000 family with sequence similarity 168 FAM168B	0.955055	1236.5
ENSGALT0000 family with sequence similarity 169 FAM169A	0.982047	445
ENSGALT0000 family with sequence similarity 169 FAM169B	0.894106	93
ENSGALT0000 family with sequence similarity 171 FAM171A1	0.976948	2723
ENSGALT0000 family with sequence similarity 171 FAM171B	0.841425	859
ENSGALT0000 family with sequence similarity 172 FAM172A	0.864458	1118.5
ENSGALT0000 family with sequence similarity 173 FAM173A	0.916626	366
ENSGALT0000 family with sequence similarity 173 FAM173B	0.965654	97.5
ENSGALT0000 family with sequence similarity 174 FAM174A	0.353792	1279.02
ENSGALT0000 family with sequence similarity 175 FAM175A	0.974352	604.188
ENSGALT0000 hypothetical protein LOC423954 Fam175b	0.966541	522.999
ENSGALT0000 family with sequence similarity 176 FAM176A	0.982233	66.5
ENSGALT0000 family with sequence similarity 176 FAM176B	0.39995	60.5
ENSGALT0000 family with sequence similarity 177 FAM177A1	0.8749	1419.5
ENSGALT0000 family with sequence similarity 178 FAM178A	0.961883	542
ENSGALT0000 family with sequence similarity 178 FAM178B	0.600762	8
ENSGALT0000 family with sequence similarity 179 FAM179A	0.945488	10.5
ENSGALT0000 family with sequence similarity 179 FAM179B	0.992902	990.881
ENSGALT0000 family with sequence similarity 180 FAM180A	0.464758	0
ENSGALT0000 family with sequence similarity 181 FAM181B	0.651249	287.5
ENSGALT0000 family with sequence similarity 183 FAM183A	0.79697	60.5
ENSGALT0000 family with sequence similarity 184 FAM184A	0.893199	198
ENSGALT0000 family with sequence similarity 184 FAM184B	0.823716	36
ENSGALT0000 family with sequence similarity 185 FAM185A	0.970148	199
ENSGALT0000 family with sequence similarity 187 FAM187A	0.603682	0
ENSGALT0000 family with sequence similarity 188 FAM188A	0.878488	670.5
ENSGALT0000 family with sequence similarity 188 FAM188B	0.93165	213
ENSGALT0000 family with sequence similarity 188 FAM188B2	0.559691	18.5
ENSGALT0000 family with sequence similarity 189 FAM189A1	0.974759	407.5
ENSGALT0000 family with sequence similarity 189 FAM189A2	0.662034	154
ENSGALT0000 family with sequence similarity 18, FAM18A	0.689558	54
ENSGALT0000 family with sequence similarity 18, FAM18B1	0.949534	3186
ENSGALT0000 family with sequence similarity 190 FAM190A	0.995779	53.5
ENSGALT0000 family with sequence similarity 190 FAM190B	0.866754	283.5
ENSGALT0000 family with sequence similarity 192 FAM192A	0.879116	1739
ENSGALT0000 family with sequence similarity 193 FAM193A	0.934077	1191.5
ENSGALT0000 family with sequence similarity 193 FAM193B	0.906166	2293.5
ENSGALT0000 family with sequence similarity 194 FAM194A	0.991024	7.5

ENSGALT0000 family with sequence similarity 194	FAM194B	?	0
ENSGALT0000 family with sequence similarity 195	FAM195A	0.326338	167
ENSGALT0000 family with sequence similarity 196	FAM196A	0.789615	40.5
ENSGALT0000 family with sequence similarity 196	FAM196B	1	0.5
ENSGALT0000 family with sequence similarity 198	FAM198A	0.624335	62.5
ENSGALT0000 family with sequence similarity 198	FAM198B	0.844734	37
ENSGALT0000 family with sequence similarity 199	FAM199X	0.94671	373
ENSGALT0000 family with sequence similarity 19 (	FAM19A1	0.796267	9.5
ENSGALT0000 family with sequence similarity 19 (	FAM19A2	0.731519	23.5
ENSGALT0000 family with sequence similarity 19 (	FAM19A3	0.976013	108.5
ENSGALT0000 family with sequence similarity 19 (	FAM19A4	0.484026	90.5
ENSGALT0000 family with sequence similarity 19 (	FAM19A5	0.78131	20.5
ENSGALT0000 family with sequence similarity 204	FAM204A	0.77641	717.5
ENSGALT0000 family with sequence similarity 206	FAM206A	0.869011	532.998
ENSGALT0000 family with sequence similarity 207	FAM207A	0.740617	631.5
ENSGALT0000 family with sequence similarity 208	FAM208A	0.983414	1381.5
ENSGALT0000 family with sequence similarity 208	FAM208B	0.979831	1674.5
ENSGALT0000 family with sequence similarity 20,	FAM20A	0.868568	296.5
ENSGALT0000 family with sequence similarity 20,	FAM20B	0.990704	2328.5
ENSGALT0000 family with sequence similarity 20,	FAM20C	0.776681	745
ENSGALT0000 chromosome 2 open reading frame	FAM210A	0.996722	554.5
ENSGALT0000 family with sequence similarity 212	FAM212B	0.291514	36.5
ENSGALT0000 family with sequence similarity 213	FAM213A	0.628619	505.319
ENSGALT0000 family with sequence similarity 21,	FAM21A	0.987509	1466
ENSGALT0000 family with sequence similarity 26,	FAM26D	0.649519	0
ENSGALT0000 family with sequence similarity 26,	FAM26E	0.840435	28.5
ENSGALT0000 family with sequence similarity 26,	FAM26F	0.353553	0
ENSGALT0000 family with sequence similarity 32,	FAM32A	0.642264	2824.5
ENSGALT0000 family with sequence similarity 35,	FAM35A	0.993621	438.5
ENSGALT0000 family with sequence similarity 36,	FAM36A	0.936062	165.5
ENSGALT0000 family with sequence similarity 38,	FAM38A	0.971873	1008.5
ENSGALT0000 family with sequence similarity 3, m	FAM3B	0.921435	53.5
ENSGALT0000 family with sequence similarity 3, m	FAM3C	0.986619	526
ENSGALT0000 family with sequence similarity 3, m	FAM3D	0.853815	0.5
ENSGALT0000 family with sequence similarity 40,	FAM40A	0.881069	1292.5
ENSGALT0000 family with sequence similarity 40,	FAM40B	0.922059	389
ENSGALT0000 family with sequence similarity 43,	FAM43A	0.880936	3490.5
ENSGALT0000 family with sequence similarity 45,	FAM45A	0.924799	719.998
ENSGALT0000 family with sequence similarity 46,	FAM46A	0.974341	1031
ENSGALT0000 family with sequence similarity 46,	FAM46B	0.984928	629
ENSGALT0000 Protein FAM46C	FAM46C	0.918078	43
ENSGALT0000 family with sequence similarity 46,	FAM46D	0.956728	29
ENSGALT0000 family with sequence similarity 48,	FAM48A	0.969588	1423.02
ENSGALT0000 family with sequence similarity 49,	FAM49A	0.943621	1602
ENSGALT0000 family with sequence similarity 49,	FAM49B	0.855706	939.5
ENSGALT0000 family with sequence similarity 53,	FAM53A	0.990639	956.991
ENSGALT0000 family with sequence similarity 53,	FAM53B	0.916584	216.5
ENSGALT0000 family with sequence similarity 54,	FAM54A	0.940778	403.5
ENSGALT0000 family with sequence similarity 54,	FAM54B	0.932987	813
ENSGALT0000 family with sequence similarity 55,	FAM55C	0.976692	334
ENSGALT0000 family with sequence similarity 57,	FAM57A	0.893477	237.5
ENSGALT0000 family with sequence similarity 59,	FAM59A	0.924386	766
ENSGALT0000 family with sequence similarity 59,	FAM59B	0.56783	58
ENSGALT0000 family with sequence similarity 5, m	FAM5B	0.552012	22
ENSGALT0000 family with sequence similarity 5, m	FAM5C	0.839104	61.5
ENSGALT0000 family with sequence similarity 60,	FAM60A	0.989135	3441.5

ENSGALT0000	family with sequence similarity 62 (	FAM62C	0.964128	121
ENSGALT0000	family with sequence similarity 64,	FAM64A	0.981994	139.5
ENSGALT0000	family with sequence similarity 65,	FAM65A	0.801724	2283.5
ENSGALT0000	family with sequence similarity 65,	FAM65B	0.701727	707.499
ENSGALT0000	family with sequence similarity 65,	FAM65C	0.990708	629.5
ENSGALT0000	family with sequence similarity 69,	FAM69A	0.947979	68
ENSGALT0000	family with sequence similarity 69,	FAM69B	0.983678	751
ENSGALT0000	family with sequence similarity 69,	FAM69C	0.528914	478.5
ENSGALT0000	family with sequence similarity 70,	FAM70A	0.84751	498.5
ENSGALT0000	family with sequence similarity 70,	FAM70B	0.434068	29.5
ENSGALT0000	family with sequence similarity 71,	FAM71D	?	0
ENSGALT0000	family with sequence similarity 72,	FAM72A	0.744678	266.5
ENSGALT0000	family with sequence similarity 73,	FAM73A	0.981524	236
ENSGALT0000	family with sequence similarity 73,	FAM73B	0.964569	674.5
ENSGALT0000	family with sequence similarity 76,	FAM76A	0.988068	2256.95
ENSGALT0000	family with sequence similarity 76,	FAM76B	0.982073	661.5
ENSGALT0000	family with sequence similarity 78,	FAM78A	0.859769	37.5
ENSGALT0000	family with sequence similarity 78,	FAM78B	0.845927	136.5
ENSGALT0000	family with sequence similarity 81,	FAM81A	0.864766	132.5
ENSGALT0000	family with sequence similarity 81,	FAM81B	?	0
ENSGALT0000	family with sequence similarity 82,	FAM82A1	0.9316	68.5
ENSGALT0000	family with sequence similarity 82,	FAM82A2	0.924116	499.501
ENSGALT0000	family with sequence similarity 82,	FAM82B	0.903238	149
ENSGALT0000	family with sequence similarity 83,	FAM83A	0.627428	20.5
ENSGALT0000	family with sequence similarity 83,	FAM83B	0.906608	61
ENSGALT0000	family with sequence similarity 83,	FAM83C	0.960915	2.5
ENSGALT0000	family with sequence similarity 83,	FAM83D	0.929422	184
ENSGALT0000	family with sequence similarity 83,	FAM83F	0.580939	229.5
ENSGALT0000	family with sequence similarity 83,	FAM83G	0.984669	365.5
ENSGALT0000	family with sequence similarity 83,	FAM83H	0.96352	773
ENSGALT0000	family with sequence similarity 84,	FAM84A	0.988221	966
ENSGALT0000	family with sequence similarity 84,	FAM84B	0.984694	282
ENSGALT0000	family with sequence similarity 86,	FAM86A	0.961078	577.501
ENSGALT0000	family with sequence similarity 89,	FAM89A	0.896151	3438
ENSGALT0000	family with sequence similarity 8, m	FAM8A1	0.943562	179.5
ENSGALT0000	family with sequence similarity 91,	FAM91A1	0.955646	1059.5
ENSGALT0000	family with sequence similarity 92,	FAM92A1	0.950554	284
ENSGALT0000	family with sequence similarity 96,	FAM96A	0.340416	751.498
ENSGALT0000	family with sequence similarity 96,	FAM96B	0.581288	1456
ENSGALT0000	family with sequence similarity 98,	FAM98A	0.884849	1153
ENSGALT0000	family with sequence similarity 98,	FAM98B	0.906903	1084.5
ENSGALT0000	FANCD2/FANCI-associated nuclea	FAN1	0.963752	779.003
ENSGALT0000	Fanconi anemia, complementation	FANCA	0.935433	681.49
ENSGALT0000	Fanconi anemia, complementation	FANCB	0.961597	71.5
ENSGALT0000	Fanconi anemia, complementation	FANCC	0.961275	539.5
ENSGALT0000	Fanconi anemia, complementation	FANCD2	0.928921	757.497
ENSGALT0000	Fanconi anemia, complementation	FANCE	0.945521	331.5
ENSGALT0000	Fanconi anemia, complementation	FANCF	0.472567	150.5
ENSGALT0000	Fanconi anemia, complementation	FANCG	0.807276	131
ENSGALT0000	Fanconi anemia, complementation	FANCI	0.952269	567.227
ENSGALT0000	Fanconi anemia, complementation	FANCL	0.840941	808.394
ENSGALT0000	Fanconi anemia, complementation	FANCM	0.985542	1313.01
ENSGALT0000	fibroblast activation protein, alpha	FAP	0.962098	112
ENSGALT0000	fatty acyl CoA reductase 1	FAR1	0.995759	2320.04
ENSGALT0000	fatty acyl CoA reductase 2	FAR2	0.909564	219
ENSGALT0000	FERM, RhoGEF (ARHGEF) and pl	FARP1	0.999764	5904

ENSGALT0000	FERM, RhoGEF and pleckstrin dor	FARP2	0.927597	1238.5
ENSGALT0000	phenylalanyl-tRNA synthetase 2, m	FARS2	0.825638	560
ENSGALT0000	phenylalanyl-tRNA synthetase, beta	FARSB	0.879281	2224
ENSGALT0000	Fas (TNF receptor superfamily, me	FAS	0.72105	6
ENSGALT0000	Fas ligand (TNF superfamily, memt	FASLG	0.935494	6.15867
ENSGALT0000	fatty acid synthase	FASN	0.937061	16497.6
ENSGALT0000	FAST kinase domains 1	FASTKD1	0.993092	371
ENSGALT0000	FAST kinase domains 2	FASTKD2	0.930588	854
ENSGALT0000	FAST kinase domains 3	FASTKD3	0.964851	269.5
ENSGALT0000	FAT tumor suppressor homolog 1 (I	FAT1	0.974282	10868.5
ENSGALT0000	FAT tumor suppressor homolog 2 (I	FAT2	0.980926	262.5
ENSGALT0000	FAT tumor suppressor homolog 3 (I	FAT3	0.917505	2189.5
ENSGALT0000	FAT tumor suppressor homolog 4 (I	FAT4	0.989269	4373.5
ENSGALT0000	Fas (TNFRSF6) binding factor 1	FBF1	0.952448	4451.48
ENSGALT0000	filamin binding LIM protein 1	FBLIM1	0.87277	449.001
ENSGALT0000	fibulin 1	FBLN1	0.93585	2782.5
ENSGALT0000	fibulin 2	FBLN2	0.80481	2407
ENSGALT0000	fibulin 5	FBLN5	0.713839	222.5
ENSGALT0000	fibulin 7	FBLN7	0.939314	283
ENSGALT0000	fibrillin 1	FBN1	0.920353	1964.01
ENSGALT0000	fibrillin 2	FBN2	0.99788	58412.3
ENSGALT0000	fructose-1,6-bisphosphatase 1	FBP1	0.88339	303
ENSGALT0000	fructose-1,6-bisphosphatase 2	FBP2	0.647324	19
ENSGALT0000	fibrosin-like 1	FBRSL1	0.940858	1826.5
ENSGALT0000	F-box and leucine-rich repeat prote	FBXL13	0.961098	20.5901
ENSGALT0000	F-box and leucine-rich repeat prote	FBXL14	0.936069	820.005
ENSGALT0000	F-box and leucine-rich repeat prote	FBXL15	0.990788	703.5
ENSGALT0000	F-box and leucine-rich repeat prote	FBXL16	0.554364	340
ENSGALT0000	F-box and leucine-rich repeat prote	FBXL17	0.973529	260
ENSGALT0000	F-box and leucine-rich repeat prote	FBXL18	0.939812	427.501
ENSGALT0000	F-box and leucine-rich repeat prote	FBXL2	0.992766	1034
ENSGALT0000	F-box and leucine-rich repeat prote	FBXL20	0.948348	1173.5
ENSGALT0000	F-box and leucine-rich repeat prote	FBXL21	0.999891	379
ENSGALT0000	F-box and leucine-rich repeat prote	FBXL3	0.976112	1037
ENSGALT0000	F-box and leucine-rich repeat prote	FBXL4	0.978358	241
ENSGALT0000	F-box and leucine-rich repeat prote	FBXL5	0.967252	1436.5
ENSGALT0000	F-box and leucine-rich repeat prote	FBXL7	0.914025	298
ENSGALT0000	F-box protein 11	FBXO11	0.963559	2542
ENSGALT0000	F-box protein 15	FBXO15	0.879477	83
ENSGALT0000	F-box protein 16	FBXO16	0.883768	15.5
ENSGALT0000	F-box protein, helicase, 18	FBXO18	0.999737	1214.5
ENSGALT0000	F-box protein 2	FBXO2	0.903712	264
ENSGALT0000	F-box protein 21	FBXO21	0.938072	1653.5
ENSGALT0000	F-box protein 22	FBXO22	0.934302	1875.5
ENSGALT0000	F-box protein 25	FBXO25	0.997792	392.5
ENSGALT0000	F-box protein 28	FBXO28	0.933531	553
ENSGALT0000	F-box protein 3	FBXO3	0.920258	1599
ENSGALT0000	F-box protein 30	FBXO30	0.980521	334
ENSGALT0000	F-box protein 31	FBXO31	0.885183	906.5
ENSGALT0000	F-box protein 32	FBXO32	0.950295	805
ENSGALT0000	F-box protein 33	FBXO33	0.971886	595.5
ENSGALT0000	F-box only protein 34	FBXO34	0.905251	967.5
ENSGALT0000	F-box protein 39	FBXO39	0.958115	191
ENSGALT0000	F-box protein 4	FBXO4	0.924696	104
ENSGALT0000	F-box protein 40	FBXO40	0.852968	19.5
ENSGALT0000	F-box protein 41	FBXO41	0.714259	122

ENSGALT0000	F-box protein 42	FBXO42	0.92939	1877
ENSGALT0000	F-box protein 43	FBXO43	0.464758	0
ENSGALT0000	F-box protein 45	FBXO45	0.867505	2087
ENSGALT0000	F-box protein 47	FBXO47	?	0
ENSGALT0000	F-box protein 48	FBXO48	0.541007	81
ENSGALT0000	F-box protein 5	FBXO5	0.951333	217.393
ENSGALT0000	F-box protein 6	FBXO6	0.948145	246.5
ENSGALT0000	F-box protein 7	FBXO7	0.974529	1432.5
ENSGALT0000	F-box protein 8	FBXO8	0.954406	361
ENSGALT0000	F-box protein 9	FBXO9	0.906171	2144.5
ENSGALT0000	F-box and WD repeat domain conta	FBXW11	0.956955	2743
ENSGALT0000	F-box and WD repeat domain conta	FBXW2	0.961767	932
ENSGALT0000	F-box and WD repeat domain conta	FBXW4	0.819802	802
ENSGALT0000	F-box and WD repeat domain conta	FBXW5	0.937349	1485.04
ENSGALT0000	F-box and WD repeat domain conta	FBXW7	0.941078	859.5
ENSGALT0000	F-box and WD repeat domain conta	FBXW8	0.968998	1897
ENSGALT0000	FCF1 small subunit (SSU) process	FCF1	0.777977	1035.5
ENSGALT0000	Fc fragment of IgG binding protein	FCGBP	0.676602	14
ENSGALT0000	FCH domain only 2	FCHO2	0.991364	458.501
ENSGALT0000	FCH and double SH3 domains 1	FCHSD1	0.881525	538.996
ENSGALT0000	FCH and double SH3 domains 2	FCHSD2	0.849492	907.5
ENSGALT0000	ficolin (collagen/fibrinogen domain	FCN2	0.989685	49.5
ENSGALT0000	farnesyl-diphosphate farnesyltransf	FDFT1	0.771653	2100.53
ENSGALT0000	ferredoxin 1	FDX1	0.929428	154.5
ENSGALT0000	ferredoxin-fold anticodon binding d	FDXACB1	0.972242	331.5
ENSGALT0000	ferredoxin reductase	FDXR	0.888608	1148.5
ENSGALT0000	ferrochelatase	FECH	0.926211	586.002
ENSGALT0000	fem-1 homolog a (C. elegans)	FEM1A	0.932859	2853.5
ENSGALT0000	fem-1 homolog b (C. elegans)	FEM1B	0.953904	2692.5
ENSGALT0000	fem-1 homolog c (C. elegans)	FEM1C	0.998372	230
ENSGALT0000	Flap endonuclease 1	FEN1	0.859396	3484.5
ENSGALT0000	fer (fps/fes related) tyrosine kinase	FER	0.995997	425.998
ENSGALT0000	fer-1-like 4 (C. elegans)	FER1L4	0.893126	421.5
ENSGALT0000	fer-1-like 6 (C. elegans)	FER1L6	0.888837	7.5
ENSGALT0000	Fer3-like (Drosophila)	FERD3L	0.649519	0
ENSGALT0000	fermitin family member 1	FERMT1	0.982287	435
ENSGALT0000	feline sarcoma oncogene	FES	0.499521	47
ENSGALT0000	fetuin B	FETUB	0.853815	0.5
ENSGALT0000	fasciculation and elongation protein	FEZ1	0.585874	4152
ENSGALT0000	fasciculation and elongation protein	FEZ2	0.989956	625.502
ENSGALT0000	FEZ family zinc finger 1	FEZF1	0.200252	0
ENSGALT0000	FEZ family zinc finger 2	FEZF2	0.959758	23
ENSGALT0000	fibrinogen alpha chain	FGA	?	0
ENSGALT0000	fibrinogen beta chain	FGB	0.852274	25
ENSGALT0000	FYVE, RhoGEF and PH domain co	FGD3	0.892448	2346.49
ENSGALT0000	FYVE, RhoGEF and PH domain co	FGD4	0.988177	242.5
ENSGALT0000	FYVE, RhoGEF and PH domain co	FGD5	0.807986	317.001
ENSGALT0000	FYVE, RhoGEF and PH domain co	FGD6	0.98318	923
ENSGALT0000	fibroblast growth factor 1 (acidic)	FGF1	0.970252	180.181
ENSGALT0000	fibroblast growth factor 10	FGF10	0.969978	208
ENSGALT0000	fibroblast growth factor 12	FGF12	0.652203	809.997
ENSGALT0000	fibroblast growth factor 13	FGF13	0.613876	139.5
ENSGALT0000	fibroblast growth factor 14	FGF14	0.809987	52
ENSGALT0000	fibroblast growth factor 16	FGF16	0.638426	196.5
ENSGALT0000	fibroblast growth factor 18	FGF18	0.517022	185
ENSGALT0000	fibroblast growth factor 19	FGF19	0.576828	347.999

ENSGALT0000 fibroblast growth factor 2 (basic)	FGF2	0.990183	119
ENSGALT0000 fibroblast growth factor 20	FGF20	0.733274	207
ENSGALT0000 fibroblast growth factor 22	FGF22	0.163632	33.5
ENSGALT0000 fibroblast growth factor 23	FGF23	?	0
ENSGALT0000 fibroblast growth factor 3	FGF3	0.993191	253.5
ENSGALT0000 fibroblast growth factor 4	FGF4	0.579551	0.5
ENSGALT0000 fibroblast growth factor 5	FGF5	0.834055	21
ENSGALT0000 fibroblast growth factor 6	FGF6	0.694304	1.5
ENSGALT0000 fibroblast growth factor 7	FGF7	0.87118	3.5
ENSGALT0000 fibroblast growth factor 8 (androger FGF8		0.48136	265.5
ENSGALT0000 fibroblast growth factor 9 (glia-activ FGF9		0.973636	244.001
ENSGALT0000 fibroblast growth factor binding prot FGFBP1		0.0332725	0
ENSGALT0000 fibroblast growth factor binding prot FGFBP2		0.841321	30.5
ENSGALT0000 fibroblast growth factor receptor 1	FGFR1	0.971575	10326.5
ENSGALT0000 FGFR1 oncogene partner	FGFR1OP	0.955113	318
ENSGALT0000 FGFR1 oncogene partner 2	FGFR1OP2	0.980574	514
ENSGALT0000 fibroblast growth factor receptor 2	FGFR2	0.875894	5375.81
ENSGALT0000 fibroblast growth factor receptor 3	FGFR3	0.663572	5832.88
ENSGALT0000 fibroblast growth factor receptor-lik FGFRL1		0.917173	4224.5
ENSGALT0000 fibrinogen gamma chain	FGG	0.549507	0
ENSGALT0000 FGGY carbohydrate kinase domair FGGY		0.807835	310.5
ENSGALT0000 fibrinogen-like 1	FGL1	0.865032	23
ENSGALT0000 fibrinogen-like 2	FGL2	0.293034	1
ENSGALT0000 fumarate hydratase	FH	0.796436	2366.5
ENSGALT0000 forkhead-associated (FHA) phosph FHAD1		0.992821	67.5
ENSGALT0000 FH2 domain containing 1	FHDC1	0.884588	793
ENSGALT0000 fragile histidine triad gene	FHIT	0.372458	70.5
ENSGALT0000 four and a half LIM domains 1	FHL1	0.90168	34
ENSGALT0000 four and a half LIM domains 2	FHL2	0.558439	149.5
ENSGALT0000 four and a half LIM domains 3	FHL3	0.730978	691.5
ENSGALT0000 four and a half LIM domains 5	FHL5	0.900073	17
ENSGALT0000 formin homology 2 domain containi FHOD1		0.968132	510.5
ENSGALT0000 formin homology 2 domain containi FHOD3		0.853846	466.501
ENSGALT0000 fibrinogen C domain containing 1	FIBCD1	0.936244	57.5
ENSGALT0000 fin bud initiation factor homolog (ze FIBIN		0.571139	765.431
ENSGALT0000 FIC domain containing	FICD	0.989381	470.5
ENSGALT0000 FIG4 homolog, SAC1 lipid phospha FIG4		0.998549	600.5
ENSGALT0000 c-fos induced growth factor (vascul FIGF		0.838683	1090.99
ENSGALT0000 filamin A interacting protein 1	FILIP1	0.993256	753
ENSGALT0000 filamin A interacting protein 1-like	FILIP1L	0.968862	37.5
ENSGALT0000 FIP1 like 1 (S. cerevisiae)	FIP1L1	0.924368	957.503
ENSGALT0000 fat storage-inducing transmembran FITM2		0.910685	259
ENSGALT0000 FK506 binding protein 10, 65 kDa	FKBP10	0.988321	1915
ENSGALT0000 FK506 binding protein 14, 22 kDa	FKBP14	0.954878	532.5
ENSGALT0000 FK506 binding protein 15, 133kDa	FKBP15	0.951576	1416.5
ENSGALT0000 FK506 binding protein 1B, 12.6 kDa FKBP1B		0.684124	278.5
ENSGALT0000 FK506 binding protein 3, 25kDa	FKBP3	0.867445	1469.02
ENSGALT0000 FK506 binding protein 4, 59kDa	FKBP4	0.859336	4932.47
ENSGALT0000 FK506 binding protein 5	FKBP5	0.958776	1742
ENSGALT0000 FK506 binding protein 6, 36kDa	FKBP6	0.932927	49.5
ENSGALT0000 FK506 binding protein 7	FKBP7	0.729607	880.5
ENSGALT0000 FK506 binding protein 8, 38kDa	FKBP8	0.941917	1117.5
ENSGALT0000 FK506 binding protein 9, 63 kDa	FKBP9	0.977484	7324
ENSGALT0000 feather keratin I	F-KER	?	0
ENSGALT0000 fukutin related protein	FKRP	0.880326	802
ENSGALT0000 fukutin	FKTN	0.977219	290.5

ENSGALT0000	folliculin	FLCN	0.960811	1562.5
ENSGALT0000	Friend leukemia virus integration 1	FLI1	0.787095	231.5
ENSGALT0000	flightless I homolog (Drosophila)	FLII	0.865006	4368.97
ENSGALT0000	filamin B, beta	FLNB	0.994697	23370.2
ENSGALT0000	flotillin 2	FLOT2	0.88249	2960.33
ENSGALT0000	fibronectin leucine rich transmembr	FLRT2	0.94802	754.5
ENSGALT0000	fibronectin leucine rich transmembr	FLRT3	0.988063	3130
ENSGALT0000	fms-related tyrosine kinase 1 (vasc	FLT1	0.918342	196.5
ENSGALT0000	fms-related tyrosine kinase 4	FLT4	0.899302	375.5
ENSGALT0000	feline leukemia virus subgroup C cq	FLVCR1	0.903319	669
ENSGALT0000	feline leukemia virus subgroup C cq	FLVCR2	0.990433	393.5
ENSGALT0000	FLYWCH family member 2	FLYWCH2	0.898356	1
ENSGALT0000	formin 1	FMN1	0.996435	804.5
ENSGALT0000	formin 2	FMN2	0.684953	154.5
ENSGALT0000	formin-like 1	FMNL1	0.618773	19.5
ENSGALT0000	formin-like 2	FMNL2	0.972156	2114.01
ENSGALT0000	flavin containing monooxygenase 4	FMO4	0.630933	2
ENSGALT0000	flavin containing monooxygenase 6	FMO6P	0.975869	25
ENSGALT0000	fibromodulin	FMOD	0.960844	18
ENSGALT0000	fragile X mental retardation 1	FMR1	0.977273	1977.5
ENSGALT0000	fibronectin 1	FN1	0.983635	63782.5
ENSGALT0000	fructosamine 3 kinase	FN3K	0.998898	25
ENSGALT0000	fructosamine 3 kinase related prote	FN3KRP	0.895309	572.5
ENSGALT0000	formin binding protein 1	FNBP1	0.955917	952.5
ENSGALT0000	formin binding protein 1-like	FNBP1L	0.965131	3150.5
ENSGALT0000	formin binding protein 4	FNBP4	0.916109	4750.5
ENSGALT0000	fibronectin type III domain containir	FNDC1	0.516499	105.5
ENSGALT0000	fibronectin type III domain containir	FNDC3A	0.954787	4839.5
ENSGALT0000	fibronectin type III domain containir	FNDC3B	0.984672	2076
ENSGALT0000	fibronectin type III domain containir	FNDC4	0.812105	68
ENSGALT0000	fibronectin type III domain containir	FNDC5	0.673273	38.5
ENSGALT0000	fibronectin type III domain containir	FNDC7	0.988676	275.167
ENSGALT0000	fibronectin type III domain containir	FNDC9	0.925168	4.5
ENSGALT0000	folliculin interacting protein 1	FNIP1	0.963153	1394.96
ENSGALT0000	folliculin interacting protein 2	FNIP2	0.930358	905.5
ENSGALT0000	farnesyltransferase, CAAX box, alp	FNTA	0.909166	583.5
ENSGALT0000	folate hydrolase (prostate-specific r	FOLH1	0.912512	81.5
ENSGALT0000	folate receptor 1 (adult)	FOLR1	0.562993	0
ENSGALT0000	FGFR1OP N-terminal like	FOPNL	0.70294	568
ENSGALT0000	FOS-like antigen 2	FOSL2	0.700447	65
ENSGALT0000	forkhead box A2	FOXA2	0.464758	0.5
ENSGALT0000	forkhead box C2 (MFH-1, mesench	FOXC2	0.721942	774.453
ENSGALT0000	Forkhead box protein D3	FOXD3	0.489421	228.902
ENSGALT0000	forkhead box E3	FOXE3	0.127965	2.50842
ENSGALT0000	forkhead box F1	FOXF1	0.992711	46
ENSGALT0000	forkhead box G1	FOXG1	0.763128	2213.37
ENSGALT0000	forkhead box I1	FOXI1	0.707664	0.5
ENSGALT0000	forkhead box I3	FOXI3	0.947775	20.5
ENSGALT0000	forkhead box J1	FOXJ1	0.974307	87.5
ENSGALT0000	forkhead box J2	FOXJ2	0.990304	1286.5
ENSGALT0000	forkhead box K1	FOXK1	0.93867	687.001
ENSGALT0000	forkhead box K2	FOXK2	0.931259	1307.5
ENSGALT0000	forkhead box L1	FOXL1	0.914324	32.5895
ENSGALT0000	forkhead box L2	FOXL2	0.577126	13
ENSGALT0000	forkhead box M1	FOXM1	0.961701	938.529
ENSGALT0000	forkhead box N1	FOXN1	0.721383	2.5

ENSGALT0000 forkhead box N3	FOXN3	0.993105	491.5
ENSGALT0000 forkhead box N4	FOXN4	0.732031	29
ENSGALT0000 forkhead box O1A	FOXO1A	0.972879	76.5
ENSGALT0000 forkhead box O3	FOXO3	0.950636	539
ENSGALT0000 forkhead box O4	FOXO4	0.99517	818
ENSGALT0000 forkhead box P1	FOXP1	0.920181	1912.02
ENSGALT0000 forkhead box P2	FOXP2	0.939321	371.58
ENSGALT0000 forkhead box P3	FOXP3	0.970796	287.471
ENSGALT0000 forkhead box P4	FOXP4	0.995258	3845.5
ENSGALT0000 FAD-dependent oxidoreductase do	FOXRED1	0.681742	796
ENSGALT0000 FAD-dependent oxidoreductase do	FOXRED2	0.960804	482.148
ENSGALT0000 forkhead box S1	FOXS1	0.415803	65.6825
ENSGALT0000 folylpolyglutamate synthase	FPGS	0.962481	257.5
ENSGALT0000 fragile site, folic acid type, rare, fra	FRA10AC1	0.952128	481.5
ENSGALT0000 Fraser syndrome 1	FRAS1	0.98771	7825.03
ENSGALT0000 FRAS1 related extracellular matrix	FREM1	0.962274	1637
ENSGALT0000 FRAS1 related extracellular matrix	FREM2	0.779103	6767
ENSGALT0000 FSHD region gene 1	FRG1	0.928214	756.5
ENSGALT0000 fyn-related kinase	FRK	0.714442	1.5
ENSGALT0000 FERM domain containing 1	FRMD1	0.842789	303
ENSGALT0000 FERM domain containing 3	FRMD3	0.732447	261.5
ENSGALT0000 FERM domain containing 4A	FRMD4A	0.847303	2432.5
ENSGALT0000 FERM domain containing 4B	FRMD4B	0.898075	762.959
ENSGALT0000 FERM domain containing 5	FRMD5	0.800561	133
ENSGALT0000 FERM domain containing 6	FRMD6	0.834113	471.5
ENSGALT0000 FERM and PDZ domain containing	FRMPD1	0.705711	156
ENSGALT0000 FERM and PDZ domain containing	FRMPD3	0.84544	5.5
ENSGALT0000 FERM and PDZ domain containing	FRMPD4	0.825537	581.502
ENSGALT0000 ferric-chelate reductase 1	FRRS1	0.990468	357
ENSGALT0000 fibroblast growth factor receptor su	FRS2	0.977433	293
ENSGALT0000 fibroblast growth factor receptor su	FRS3	0.966694	901.5
ENSGALT0000 furry homolog (Drosophila)	FRY	0.808368	722.999
ENSGALT0000 FRY-like	FRYL	0.964683	2586.5
ENSGALT0000 frizzled-related protein	FRZB	0.768592	2512.48
ENSGALT0000 fibrous sheath CABYR binding prot	FSCB	?	0
ENSGALT0000 fascin homolog 1, actin-bundling pr	FSCN1	0.779248	6149.29
ENSGALT0000 fascin homolog 2, actin-bundling pr	FSCN2	0.855611	177.5
ENSGALT0000 fibronectin type III and SPRY doma	FSD1L	0.942895	148
ENSGALT0000 fibronectin type III and SPRY doma	FSD2	0.576035	1
ENSGALT0000 follicle stimulating hormone, beta p	FSHB	0.280847	576
ENSGALT0000 follicle stimulating hormone recepto	FSHR	0.659096	9
ENSGALT0000 follistatin	FST	0.751141	13
ENSGALT0000 follistatin-like 1	FSTL1	0.900293	7542.54
ENSGALT0000 follistatin-like 3 (secreted glycoprot	FSTL3	0.165989	122.5
ENSGALT0000 follistatin-like 4	FSTL4	0.995017	1359.48
ENSGALT0000 follistatin-like 5	FSTL5	0.693514	91.5
ENSGALT0000 formiminotransferase cyclodeamina	FTCD	?	0
ENSGALT0000 ferritin, heavy polypeptide 1	FTH1	0.470988	23066.4
ENSGALT0000 ferritin, light polypeptide	FTL	0.940691	444
ENSGALT0000 fat mass and obesity associated	FTO	0.989377	39
ENSGALT0000 FtsJ homolog 3 (E. coli)	FTSJ3	0.92288	1595.52
ENSGALT0000 FtsJ methyltransferase domain con	FTSJD1	0.971036	277
ENSGALT0000 FtsJ methyltransferase domain con	FTSJD2	0.953867	864
ENSGALT0000 far upstream element (FUSE) bindi	FUBP1	0.93785	13207.4
ENSGALT0000 far upstream element (FUSE) bindi	FUBP3	0.94575	2405.55
ENSGALT0000 fucosidase, alpha-L- 1, tissue	FUCA1	0.866986	974

ENSGALT0000	fucosidase, alpha-L- 2, plasma	FUCA2	0.947519	705.5
ENSGALT0000	FUN14 domain containing 1	FUNDC1	0.918331	1142.5
ENSGALT0000	FUN14 domain containing 2	FUNDC2	0.924921	1816.5
ENSGALT0000	furin (paired basic amino acid cleav	FURIN	0.966842	3041
ENSGALT0000	fucosyltransferase 10 (alpha (1,3) f	FUT10	0.970437	118
ENSGALT0000	fucosyltransferase 11 (alpha (1,3) f	FUT11	0.97503	813.5
ENSGALT0000	fucosyltransferase 3 (galactoside 3	FUT3	0.740073	2
ENSGALT0000	fucosyltransferase 4 (alpha (1,3) fu	FUT4	0.871117	104.5
ENSGALT0000	fucosyltransferase 7 (alpha (1,3) fu	FUT7	0.932599	2
ENSGALT0000	fucosyltransferase 8 (alpha (1,6) fu	FUT8	0.888737	4014.54
ENSGALT0000	frataxin	FXN	0.686899	123
ENSGALT0000	fragile X mental retardation, autoso	FXR1	0.929572	2959.99
ENSGALT0000	FXYD domain containing ion transp	FXYD6	0.801406	207.5
ENSGALT0000	FYN binding protein	FYB	0.959251	11
ENSGALT0000	FYVE and coiled-coil domain conta	FYCO1	0.982305	663.497
ENSGALT0000	FYN oncogene related to SRC, FG	FYN	0.780875	1241
ENSGALT0000	forty-two-three domain containing 1	FYTTD1	0.960417	3025.5
ENSGALT0000	frizzled family receptor 1	FZD1	0.89789	4144.9
ENSGALT0000	frizzled family receptor 10	FZD10	0.760062	1500
ENSGALT0000	frizzled homolog 2	FZD2	0.946772	3360.91
ENSGALT0000	frizzled family receptor 3	FZD3	0.972486	1802.97
ENSGALT0000	Frizzled-4	FZD4	0.992446	3124.5
ENSGALT0000	frizzled family receptor 5	FZD5	0.771012	14.008
ENSGALT0000	frizzled family receptor 6	FZD6	0.98356	1571.99
ENSGALT0000	frizzled family receptor 7	FZD7	0.969519	11036.7
ENSGALT0000	fizzy/cell division cycle 20 related 1	FZR1	0.917471	1904.98
ENSGALT0000	G0/G1switch 2	G0S2	0.357518	4
ENSGALT0000	G2/M-phase specific E3 ubiquitin p	G2E3	0.941969	717.994
ENSGALT0000	GTPase activating protein (SH3 do	G3BP1	0.930019	9380
ENSGALT0000	GTPase activating protein (SH3 do	G3BP2	0.872635	2540.04
ENSGALT0000	glucose-6-phosphatase, catalytic, 2	G6PC2	0.990734	164.5
ENSGALT0000	glucosidase, alpha; acid	GAA	0.98177	436
ENSGALT0000	GRB2-associated binding protein 1	GAB1	0.969859	845
ENSGALT0000	GRB2-associated binding protein 2	GAB2	0.746722	500.499
ENSGALT0000	GRB2-associated binding protein 3	GAB3	0.749357	52.5
ENSGALT0000	GABA(A) receptor-associated prote	GABARAPL1	0.982663	415.5
ENSGALT0000	GABA(A) receptor-associated prote	GABARAPL2	0.613091	1731.5
ENSGALT0000	gamma-aminobutyric acid (GABA)	GABBR2	0.742319	141.5
ENSGALT0000	GA binding protein transcription fac	GABPA	0.964366	1422.5
ENSGALT0000	GA binding protein transcription fac	GABPB1	0.961926	1364.49
ENSGALT0000	GA binding protein transcription fac	GABPB2	0.675067	666
ENSGALT0000	gamma-aminobutyric acid (GABA)	GABRA1	0.975252	45.5
ENSGALT0000	gamma-aminobutyric acid (GABA)	GABRA2	0.899675	47.5
ENSGALT0000	gamma-aminobutyric acid (GABA)	GABRA3	0.465022	41
ENSGALT0000	gamma-aminobutyric acid (GABA)	GABRA4	0.59782	6.5
ENSGALT0000	gamma-aminobutyric acid (GABA)	GABRA5	0.876465	47
ENSGALT0000	gamma-aminobutyric acid (GABA)	GABRA6	0.935842	1.5
ENSGALT0000	gamma-aminobutyric acid (GABA)	GABRB2	0.865212	60.5
ENSGALT0000	gamma-aminobutyric acid (GABA)	GABRB3	0.812703	149
ENSGALT0000	gamma-aminobutyric acid (GABA)	GABRE	0.359511	0.5
ENSGALT0000	gamma-aminobutyric acid (GABA)	GABRG1	0.909505	765
ENSGALT0000	gamma-aminobutyric acid (GABA)	GABRG2	0.692943	49.5
ENSGALT0000	gamma-aminobutyric acid (GABA)	GABRP	0.961071	213.5
ENSGALT0000	gamma-aminobutyric acid (GABA)	GABRQ	0.525188	2
ENSGALT0000	gamma-aminobutyric acid (GABA)	GABRR1	0.847446	1
ENSGALT0000	gamma-aminobutyric acid (GABA)	GABRR2	0.578857	3.5

ENSGALT0000	gamma-aminobutyric acid (GABA)	GABRR3	0.95556	11
ENSGALT0000	glutamate decarboxylase 1 (brain,	GAD1	0.659305	122
ENSGALT0000	glutamate decarboxylase 2 (pancre	GAD2	0.796906	1
ENSGALT0000	growth arrest and DNA-damage-inc	GADD45B	0.682369	141.5
ENSGALT0000	cyclin G associated kinase	GAK	0.990739	1092.02
ENSGALT0000	galanin prepropeptide	GAL	0.582337	10
ENSGALT0000	Gal 10	GAL10	?	0
ENSGALT0000	Gallinacin-11	GAL11	?	0
ENSGALT0000	beta-defensin 12	GAL12	0.464758	0
ENSGALT0000	beta-defensin 13	GAL13	?	0
ENSGALT0000	gallinacin 2	GAL2	0.464758	0
ENSGALT0000	galactose-3-O-sulfotransferase 1	GAL3ST1	0.852877	1245.5
ENSGALT0000	galactose-3-O-sulfotransferase 2	GAL3ST2	0.984733	4.5
ENSGALT0000	galactose-3-O-sulfotransferase 4	GAL3ST4	0.464758	0
ENSGALT0000	Gal 4	GAL4	0.0441942	0.5
ENSGALT0000	Gal 5	GAL5	0.173876	66
ENSGALT0000	Gal 6	GAL6	0.64602	1
ENSGALT0000	Gal 7	GAL7	0.554111	1.28E-16
ENSGALT0000	Gal 8	GAL8	?	0
ENSGALT0000	Gal 9	GAL9	?	0
ENSGALT0000	galactosylceramidase	GALC	0.992841	488
ENSGALT0000	UDP-galactose-4-epimerase	GALE	0.832642	2105.5
ENSGALT0000	galactokinase 1	GALK1	0.856005	1282.5
ENSGALT0000	galactokinase 2	GALK2	0.986595	620.998
ENSGALT0000	galactose mutarotase (aldose 1-epi	GALM	0.941444	1024
ENSGALT0000	galactosamine (N-acetyl)-6-sulfate	GALNS	0.972931	1499.5
ENSGALT0000	UDP-N-acetyl-alpha-D-galactosam	GALNT1	0.945661	3325
ENSGALT0000	UDP-N-acetyl-alpha-D-galactosam	GALNT10	0.971027	398
ENSGALT0000	UDP-N-acetyl-alpha-D-galactosam	GALNT11	0.898967	835
ENSGALT0000	UDP-N-acetyl-alpha-D-galactosam	GALNT12	0.996107	242.5
ENSGALT0000	UDP-N-acetyl-alpha-D-galactosam	GALNT13	0.904304	186.5
ENSGALT0000	UDP-N-acetyl-alpha-D-galactosam	GALNT14	0.685099	9
ENSGALT0000	UDP-N-acetyl-alpha-D-galactosam	GALNT2	0.987274	1851.5
ENSGALT0000	UDP-N-acetyl-alpha-D-galactosam	GALNT3	0.923201	502.5
ENSGALT0000	UDP-N-acetyl-alpha-D-galactosam	GALNT5	0.828723	215.5
ENSGALT0000	polypeptide N-acetylgalactosaminy	GALNT6	0.94744	3753.5
ENSGALT0000	UDP-N-acetyl-alpha-D-galactosam	GALNT7	0.997154	1309.5
ENSGALT0000	UDP-N-acetyl-alpha-D-galactosam	GALNT9	0.803974	342.5
ENSGALT0000	UDP-N-acetyl-alpha-D-galactosam	GALNTL1	0.823819	306
ENSGALT0000	UDP-N-acetyl-alpha-D-galactosam	GALNTL2	0.996336	28.5
ENSGALT0000	UDP-N-acetyl-alpha-D-galactosam	GALNTL4	0.940879	576.5
ENSGALT0000	UDP-N-acetyl-alpha-D-galactosam	GALNTL6	0.829333	156
ENSGALT0000	galanin receptor 1	GALR1	0.537979	1.5
ENSGALT0000	galanin receptor 2	GALR2	0.899847	39.5
ENSGALT0000	galanin receptor 3	GALR3	0.872443	2
ENSGALT0000	guanidinoacetate N-methyltransfera	GAMT	0.782718	71.5
ENSGALT0000	gigaxonin	GAN	0.900397	128
ENSGALT0000	glucosidase, alpha; neutral C	GANC	0.984572	455
ENSGALT0000	growth associated protein 43	GAP43	0.485174	1147
ENSGALT0000	glyceraldehyde-3-phosphate dehyc	GAPDH	0.91412	147098
ENSGALT0000	GTPase activating protein and VPS	GAPVD1	0.991964	1719
ENSGALT0000	GAR1 ribonucleoprotein homolog (	GAR1	0.924367	379
ENSGALT0000	GTPase activating Rap/RanGAP d	GARNL3	0.93695	1334
ENSGALT0000	glycyl-tRNA synthetase	GARS	0.751504	3682.22
ENSGALT0000	phosphoribosylglycinamide formylt	GART	0.924553	1867.02
ENSGALT0000	growth arrest-specific 1	GAS1	0.771617	339

ENSGALT0000	growth arrest-specific 2	GAS2	0.961938	425
ENSGALT0000	growth arrest-specific 2 like 2	GAS2L2	0.639897	1
ENSGALT0000	growth arrest-specific 2 like 3	GAS2L3	0.902243	120.5
ENSGALT0000	growth arrest-specific 6	GAS6	0.867996	231
ENSGALT0000	growth arrest-specific 7	GAS7	0.897764	217.5
ENSGALT0000	growth arrest-specific 8	GAS8	0.987513	1173
ENSGALT0000	GATA binding protein 2	GATA2	0.756037	11037
ENSGALT0000	GATA binding protein 3	GATA3	0.721699	7731.5
ENSGALT0000	GATA binding protein 4	GATA4	0.464758	1
ENSGALT0000	GATA binding protein 5	GATA5	0.578338	3.19797
ENSGALT0000	GATA binding protein 6	GATA6	0.821238	11.5
ENSGALT0000	GATA zinc finger domain containing	GATAD1	0.921266	352.5
ENSGALT0000	GATA zinc finger domain containing	GATAD2A	0.967884	2720.5
ENSGALT0000	GATA zinc finger domain containing	GATAD2B	0.935483	1623
ENSGALT0000	glutamyl-tRNA(Gln) amidotransfera	GATC	0.608866	644
ENSGALT0000	glycine amidinotransferase (L-argir	GATM	0.558601	17
ENSGALT0000	GATS-like protein 1	GATSL1	0.975092	769.5
ENSGALT0000	GATS protein-like 3	GATSL3	0.806876	160.376
ENSGALT0000	glucosidase, beta (bile acid) 2	GBA2	0.849357	1452.5
ENSGALT0000	glioblastoma amplified sequence	GBAS	0.689579	2942
ENSGALT0000	eye-globin	GBE	0.236825	399.5
ENSGALT0000	glucan (1,4-alpha-), branching enzy	GBE1	0.95555	1186.5
ENSGALT0000	golgi brefeldin A resistant guanine r	GBF1	0.979753	5586.5
ENSGALT0000	globoside alpha-1,3-N-acetylgalact	GBGT1	0.950589	398.5
ENSGALT0000	\N	GBX1	0.435284	0.7652
ENSGALT0000	gastrulation brain homeobox 2	GBX2	0.0449694	21.2348
ENSGALT0000	group-specific component (vitamin	GC	0.579551	0.5
ENSGALT0000	glycine C-acetyltransferase	GCAT	0.752301	2046
ENSGALT0000	Golgi coiled-coil protein 1	GCC1	0.931577	653.5
ENSGALT0000	GRIP and coiled-coil domain contai	GCC2	0.983575	520
ENSGALT0000	GC-rich sequence DNA-binding fac	GCFC1	0.978278	1109.5
ENSGALT0000	GC-rich sequence DNA-binding fac	GCFC2	0.980921	354.095
ENSGALT0000	glucagon	GCG	0.734793	3.5
ENSGALT0000	GTP cyclohydrolase 1	GCH1	0.704782	59
ENSGALT0000	GTP cyclohydrolase I feedback reg	GCHFR	0.160654	68
ENSGALT0000	glutamate-cysteine ligase, catalytic	GCLC	0.982313	336.5
ENSGALT0000	glutamate-cysteine ligase, modifier	GCLM	0.962197	2499.5
ENSGALT0000	glial cells missing homolog 1 (Dros	GCM1	0.562993	0
ENSGALT0000	glial cells missing homolog 2 (Dros	GCM2	0.818488	1.5
ENSGALT0000	GCN1 general control of amino-aci	GCN1L1	0.966573	5423
ENSGALT0000	glucosaminyl (N-acetyl) transferase	GCNT1	0.992192	519.5
ENSGALT0000	glucosaminyl (N-acetyl) transferase	GCNT2	0.925945	2.5
ENSGALT0000	glucosaminyl (N-acetyl) transferase	GCNT3	0.799357	19
ENSGALT0000	glucosaminyl (N-acetyl) transferase	GCNT4	0.688787	23.5
ENSGALT0000	glucosaminyl (N-acetyl) transferase	GCNT7	0.86692	96
ENSGALT0000	GRINL1A complex locus	GCOM1	0.952604	293.147
ENSGALT0000	glycine cleavage system protein H	GCSH	0.343304	1370.97
ENSGALT0000	guanine deaminase	GDA	0.603065	11.5
ENSGALT0000	ganglioside-induced differentiation-	GDAP1	0.807506	118.5
ENSGALT0000	ganglioside-induced differentiation-	GDAP1L1	0.512577	282.5
ENSGALT0000	ganglioside induced differentiation :	GDAP2	0.92245	745
ENSGALT0000	glycerophosphodiester phosphodie	GDE1	0.964351	383.999
ENSGALT0000	growth differentiation factor 2	GDF2	0.586226	7
ENSGALT0000	growth differentiation factor 3	GDF3	0.835676	1166.91
ENSGALT0000	growth differentiation factor 5	GDF5	0.667099	31
ENSGALT0000	growth differentiation factor 9	GDF9	0.20566	2.5

ENSGALT0000	GDP dissociation inhibitor 2	GDI2	0.720209	13869.3
ENSGALT0000	glial cell derived neurotrophic facto	GDNF	0.769206	7.5
ENSGALT0000	glycerophosphodiester phosphodie	GDPD1	0.948561	914.5
ENSGALT0000	glycerophosphodiester phosphodie	GDPD2	0.990818	370.982
ENSGALT0000	glycerophosphodiester phosphodie	GDPD4	0.662462	452.5
ENSGALT0000	glycerophosphodiester phosphodie	GDPD5	0.739164	3255.43
ENSGALT0000	GTP binding protein overexpressec	GEM	0.436677	7
ENSGALT0000	gem (nuclear organelle) associatec	GEMIN4	0.882403	3845.14
ENSGALT0000	gem (nuclear organelle) associatec	GEMIN5	0.922264	2385
ENSGALT0000	gem (nuclear organelle) associatec	GEMIN6	0.805176	512.5
ENSGALT0000	gem (nuclear organelle) associatec	GEMIN8	0.97605	511
ENSGALT0000	Gen homolog 1, endonuclease (Drc	GEN1	0.962803	405.001
ENSGALT0000	golgi to ER traffic protein 4 homolo	GET4	0.888747	1469.5
ENSGALT0000	glial fibrillary acidic protein	GFAP	0.942584	9
ENSGALT0000	growth factor, augmenter of liver re	GFER	0.850623	173
ENSGALT0000	growth factor independent 1 transc	GFI1	0.463836	76.5
ENSGALT0000	growth factor independent 1B trans	GFI1B	0.880596	4.5
ENSGALT0000	G elongation factor, mitochondrial 1	GFM1	0.912868	1848.67
ENSGALT0000	G elongation factor, mitochondrial 2	GFM2	0.971572	536.5
ENSGALT0000	glucose-fructose oxidoreductase dc	GFOD1	0.91683	159.5
ENSGALT0000	glucose-fructose oxidoreductase dc	GFOD2	0.893865	3251.96
ENSGALT0000	glutamine--fructose-6-phosphate tr:	GFPT1	0.967042	6828.35
ENSGALT0000	glutamine-fructose-6-phosphate tra	GFPT2	0.999891	1126.5
ENSGALT0000	GDNF family receptor alpha 1	GFRA1	0.935135	799
ENSGALT0000	GDNF family receptor alpha 2	GFRA2	0.878004	348.5
ENSGALT0000	GDNF family receptor alpha 3	GFRA3	0.765092	7.5
ENSGALT0000	GDNF family receptor alpha 4	GFRA4	0.866139	268.5
ENSGALT0000	GDNF family receptor alpha like	GFRAL	0.0441942	0
ENSGALT0000	golgi-associated, gamma adaptin e	GGA1	0.963761	2113
ENSGALT0000	golgi-associated, gamma adaptin e	GGA2	0.960769	437
ENSGALT0000	golgi-associated, gamma adaptin e	GGA3	0.973763	1947
ENSGALT0000	gga-let-7a-1	gga-let-7a-1	?	0
ENSGALT0000	gga-let-7a-2	gga-let-7a-2	?	0
ENSGALT0000	gga-let-7a-3	gga-let-7a-3	?	0
ENSGALT0000	gga-let-7b	gga-let-7b	0.722096	0.5
ENSGALT0000	gga-let-7c	gga-let-7c	?	0
ENSGALT0000	gga-let-7d	gga-let-7d	0.983555	53
ENSGALT0000	gga-let-7f	gga-let-7f	0.639897	0
ENSGALT0000	gga-let-7g	gga-let-7g	?	0
ENSGALT0000	gga-let-7i	gga-let-7i	0.289928	3.5
ENSGALT0000	gga-let-7j	gga-let-7j	0.464758	0
ENSGALT0000	gga-let-7k	gga-let-7k	?	0
ENSGALT0000	gga-mir-100	gga-mir-100	0.464758	0.5
ENSGALT0000	gga-mir-101	gga-mir-101	?	0
ENSGALT0000	gga-mir-101-2	gga-mir-101-2	0.603682	1
ENSGALT0000	gga-mir-103-1	gga-mir-103-1	?	0
ENSGALT0000	gga-mir-103-2	gga-mir-103-2	?	0
ENSGALT0000	gga-mir-106	gga-mir-106	?	0
ENSGALT0000	gga-mir-107	gga-mir-107	0.464758	0
ENSGALT0000	gga-mir-10a	gga-mir-10a	?	0
ENSGALT0000	gga-mir-10b	gga-mir-10b	?	0
ENSGALT0000	gga-mir-122-1	gga-mir-122-1	?	0
ENSGALT0000	gga-mir-122-2	gga-mir-122-2	?	0
ENSGALT0000	gga-mir-124a	gga-mir-124a	0.649519	0.5
ENSGALT0000	gga-mir-124a-2	gga-mir-124a-2	?	0
ENSGALT0000	gga-mir-124b-1	gga-mir-124b-1	0.649519	0

ENSGALT0000 gga-mir-125b	gga-mir-125b	0.649519	2
ENSGALT0000 gga-mir-126	gga-mir-126	0.464758	1.5
ENSGALT0000 gga-mir-128-1	gga-mir-128-1	?	0
ENSGALT0000 gga-mir-128-2	gga-mir-128-2	?	0
ENSGALT0000 gga-mir-1306	gga-mir-1306	0.46476	1.20E-07
ENSGALT0000 gga-mir-130a	gga-mir-130a	?	0
ENSGALT0000 gga-mir-130b	gga-mir-130b	0.957472	7.5
ENSGALT0000 gga-mir-130c	gga-mir-130c	?	0
ENSGALT0000 gga-mir-1329	gga-mir-1329	?	0
ENSGALT0000 gga-mir-133a-1	gga-mir-133a-1	0.464758	0
ENSGALT0000 gga-mir-133a-2	gga-mir-133a-2	?	0
ENSGALT0000 gga-mir-133b	gga-mir-133b	?	0
ENSGALT0000 gga-mir-133c	gga-mir-133c	0.464758	0
ENSGALT0000 gga-mir-1354	gga-mir-1354	?	0
ENSGALT0000 gga-mir-135a-1	gga-mir-135a-1	0.464758	0
ENSGALT0000 gga-mir-135a-2	gga-mir-135a-2	0.649519	0
ENSGALT0000 gga-mir-135a-3	gga-mir-135a-3	?	0
ENSGALT0000 gga-mir-137	gga-mir-137	0.479357	5.5
ENSGALT0000 gga-mir-138-1	gga-mir-138-1	0.464758	0
ENSGALT0000 gga-mir-138-2	gga-mir-138-2	0.904804	1.5
ENSGALT0000 gga-mir-1397	gga-mir-1397	?	0
ENSGALT0000 gga-mir-140	gga-mir-140	0.464758	0.5
ENSGALT0000 gga-mir-1416	gga-mir-1416	?	0
ENSGALT0000 gga-mir-142	gga-mir-142	?	0
ENSGALT0000 gga-mir-144	gga-mir-144	0.464758	0
ENSGALT0000 gga-mir-1451	gga-mir-1451	0.464758	0
ENSGALT0000 gga-mir-1452	gga-mir-1452	?	0
ENSGALT0000 gga-mir-1453	gga-mir-1453	0.464758	0.5
ENSGALT0000 gga-mir-1456	gga-mir-1456	0.534404	4.5
ENSGALT0000 gga-mir-1457	gga-mir-1457	?	0
ENSGALT0000 gga-mir-1458	gga-mir-1458	?	0
ENSGALT0000 gga-mir-1460	gga-mir-1460	0.464758	0
ENSGALT0000 gga-mir-1462	gga-mir-1462	?	0
ENSGALT0000 gga-mir-1463	gga-mir-1463	?	0
ENSGALT0000 gga-mir-1464	gga-mir-1464	0.590316	1.5
ENSGALT0000 gga-mir-1465	gga-mir-1465	0.828826	1
ENSGALT0000 gga-mir-1466	gga-mir-1466	?	6.65E-18
ENSGALT0000 gga-mir-1467	gga-mir-1467	0	1
ENSGALT0000 gga-mir-146a	gga-mir-146a	?	0
ENSGALT0000 gga-mir-146b	gga-mir-146b	?	0
ENSGALT0000 gga-mir-146c	gga-mir-146c	0.603682	0.5
ENSGALT0000 gga-mir-147-1	gga-mir-147-1	?	0
ENSGALT0000 gga-mir-148a	gga-mir-148a	?	0
ENSGALT0000 gga-mir-153	gga-mir-153	?	0
ENSGALT0000 gga-mir-155	gga-mir-155	?	0
ENSGALT0000 gga-mir-1550	gga-mir-1550	?	0
ENSGALT0000 gga-mir-1551	gga-mir-1551	0.464758	0
ENSGALT0000 gga-mir-1552	gga-mir-1552	0.562993	0.5
ENSGALT0000 gga-mir-1553	gga-mir-1553	0.464758	1
ENSGALT0000 gga-mir-1554	gga-mir-1554	?	0
ENSGALT0000 gga-mir-1555	gga-mir-1555	0.865626	42.5
ENSGALT0000 gga-mir-1556	gga-mir-1556	0.603682	0
ENSGALT0000 gga-mir-1557	gga-mir-1557	?	0
ENSGALT0000 gga-mir-1558	gga-mir-1558	?	0
ENSGALT0000 gga-mir-1559	gga-mir-1559	0.464758	0
ENSGALT0000 gga-mir-1560	gga-mir-1560	?	0

ENSGALT0000 gga-mir-1561	gga-mir-1561	0.649519	0	
ENSGALT0000 gga-mir-1562	gga-mir-1562	0.79915	5	
ENSGALT0000 gga-mir-1564	gga-mir-1564	0.631804	17.5	
ENSGALT0000 gga-mir-1565	gga-mir-1565	0.464758	0	
ENSGALT0000 gga-mir-1566	gga-mir-1566	?	0	
ENSGALT0000 gga-mir-1567	gga-mir-1567	?	0	
ENSGALT0000 gga-mir-1568	gga-mir-1568	?	0	
ENSGALT0000 gga-mir-1570	gga-mir-1570	?	0	
ENSGALT0000 gga-mir-1571	gga-mir-1571	0.988484	5	
ENSGALT0000 gga-mir-1572	gga-mir-1572	0.464758	0	
ENSGALT0000 gga-mir-1573	gga-mir-1573	?	0	
ENSGALT0000 gga-mir-1574	gga-mir-1574	?	0	
ENSGALT0000 gga-mir-1575	gga-mir-1575	0.464758	0	
ENSGALT0000 gga-mir-1576	gga-mir-1576	0.649519	0	
ENSGALT0000 gga-mir-1577	gga-mir-1577	0.603682	2	
ENSGALT0000 gga-mir-1578	gga-mir-1578	0.904804	1.5	
ENSGALT0000 gga-mir-1579	gga-mir-1579	0.0441942	0.5	
ENSGALT0000 gga-mir-1580	gga-mir-1580	0.464758	0.5	
ENSGALT0000 gga-mir-1581	gga-mir-1581	0.353553	0	
ENSGALT0000 gga-mir-1582	gga-mir-1582	0.464758	0	
ENSGALT0000 gga-mir-1583	gga-mir-1583	0.748346	2	
ENSGALT0000 gga-mir-1584	gga-mir-1584	?	0	
ENSGALT0000 gga-mir-1585	gga-mir-1585	?	0	
ENSGALT0000 gga-mir-1586	gga-mir-1586	0.943934	1.5	
ENSGALT0000 gga-mir-1587	gga-mir-1587	0.775034	3.5	
ENSGALT0000 gga-mir-1588	gga-mir-1588	?	0	
ENSGALT0000 gga-mir-1589	gga-mir-1589	0.562993	0	
ENSGALT0000 gga-mir-1590	gga-mir-1590	?	0	
ENSGALT0000 gga-mir-1591	gga-mir-1591	?	0	
ENSGALT0000 gga-mir-1592	gga-mir-1592	0.464758	0	
ENSGALT0000 gga-mir-1593	gga-mir-1593	0.649519	0.5	
ENSGALT0000 gga-mir-1594	gga-mir-1594	?	0	
ENSGALT0000 gga-mir-1595	gga-mir-1595	0.464758	0	
ENSGALT0000 gga-mir-1596	gga-mir-1596	?	0	
ENSGALT0000 gga-mir-1597	gga-mir-1597	0.464758	0	
ENSGALT0000 gga-mir-1598	gga-mir-1598	0.722096	0.5	
ENSGALT0000 gga-mir-1599	gga-mir-1599	?	0	
ENSGALT0000 gga-mir-15a	gga-mir-15a	?	0	
ENSGALT0000 gga-mir-15b	gga-mir-15b	0.464758	0	
ENSGALT0000 gga-mir-15c	gga-mir-15c	0.857288	8	
ENSGALT0000 gga-mir-1600	gga-mir-1600	0.859062	22.5	
ENSGALT0000 gga-mir-1601	gga-mir-1601	?	0	
ENSGALT0000 gga-mir-1602	gga-mir-1602	?	0	
ENSGALT0000 gga-mir-1603	gga-mir-1603	0.464758	2.53E-16	
ENSGALT0000 gga-mir-1604	gga-mir-1604	0.464758	0	
ENSGALT0000 gga-mir-1605	gga-mir-1605	?	0	
ENSGALT0000 gga-mir-1606	gga-mir-1606	0.464758	0	
ENSGALT0000 gga-mir-1607	gga-mir-1607	0.0503556	0	
ENSGALT0000 gga-mir-1608	gga-mir-1608	0.91235	2.5	
ENSGALT0000 gga-mir-1609-1	gga-mir-1609-1	0.464758	0	
ENSGALT0000 gga-mir-16-1	gga-mir-16-1	?	0	
ENSGALT0000 gga-mir-1610	gga-mir-1610	0.377563	4.5	
ENSGALT0000 gga-mir-1611	gga-mir-1611	0.46476	1	
ENSGALT0000 gga-mir-1612	gga-mir-1612	?	0	
ENSGALT0000 gga-mir-1613-1	gga-mir-1613-1	?	0	
ENSGALT0000 gga-mir-1614	gga-mir-1614	?	0	

ENSGALT0000 gga-mir-1615	gga-mir-1615	0.776616	1
ENSGALT0000 gga-mir-1616	gga-mir-1616	?	0
ENSGALT0000 gga-mir-1617	gga-mir-1617	?	0
ENSGALT0000 gga-mir-1618	gga-mir-1618	0.464758	0
ENSGALT0000 gga-mir-1619	gga-mir-1619	?	0
ENSGALT0000 gga-mir-16-2	gga-mir-16-2	?	0
ENSGALT0000 gga-mir-1620	gga-mir-1620	?	0
ENSGALT0000 gga-mir-1621	gga-mir-1621	?	0
ENSGALT0000 gga-mir-1622	gga-mir-1622	?	0
ENSGALT0000 gga-mir-1623	gga-mir-1623	?	0
ENSGALT0000 gga-mir-1624	gga-mir-1624	0.562993	0.5
ENSGALT0000 gga-mir-1625	gga-mir-1625	0.464758	0
ENSGALT0000 gga-mir-1626	gga-mir-1626	0.464758	0
ENSGALT0000 gga-mir-1627	gga-mir-1627	0.730283	12.5
ENSGALT0000 gga-mir-1628	gga-mir-1628	0.603682	0
ENSGALT0000 gga-mir-1629	gga-mir-1629	0.722096	1.5
ENSGALT0000 gga-mir-1630	gga-mir-1630	?	0
ENSGALT0000 gga-mir-1631	gga-mir-1631	0.964074	8
ENSGALT0000 gga-mir-1632	gga-mir-1632	?	0
ENSGALT0000 gga-mir-1633	gga-mir-1633	0.8762	10
ENSGALT0000 gga-mir-1634	gga-mir-1634	0.534478	1
ENSGALT0000 gga-mir-1635	gga-mir-1635	0.464758	0
ENSGALT0000 gga-mir-1636	gga-mir-1636	?	0
ENSGALT0000 gga-mir-1637	gga-mir-1637	?	0
ENSGALT0000 gga-mir-1640	gga-mir-1640	0.603682	0
ENSGALT0000 gga-mir-1641	gga-mir-1641	?	0
ENSGALT0000 gga-mir-1642	gga-mir-1642	?	0
ENSGALT0000 gga-mir-1643	gga-mir-1643	0.464758	0
ENSGALT0000 gga-mir-1644	gga-mir-1644	0.464758	0
ENSGALT0000 gga-mir-1645	gga-mir-1645	?	0
ENSGALT0000 gga-mir-1646	gga-mir-1646	0.862425	1
ENSGALT0000 gga-mir-1647	gga-mir-1647	0.984633	46.5
ENSGALT0000 gga-mir-1648	gga-mir-1648	?	0
ENSGALT0000 gga-mir-1649	gga-mir-1649	?	0
ENSGALT0000 gga-mir-1650	gga-mir-1650	0.886241	23
ENSGALT0000 gga-mir-1651	gga-mir-1651	?	0
ENSGALT0000 gga-mir-1652	gga-mir-1652	0.999009	100.5
ENSGALT0000 gga-mir-1653	gga-mir-1653	0.997559	36
ENSGALT0000 gga-mir-1654-1	gga-mir-1654-1	?	0
ENSGALT0000 gga-mir-1655	gga-mir-1655	?	0
ENSGALT0000 gga-mir-1656	gga-mir-1656	?	0
ENSGALT0000 gga-mir-1657	gga-mir-1657	?	0
ENSGALT0000 gga-mir-1658	gga-mir-1658	0.649519	0.5
ENSGALT0000 gga-mir-1659	gga-mir-1659	?	0
ENSGALT0000 gga-mir-1661	gga-mir-1661	0.562993	0
ENSGALT0000 gga-mir-1662	gga-mir-1662	?	0
ENSGALT0000 gga-mir-1663	gga-mir-1663	0.464758	2
ENSGALT0000 gga-mir-1664	gga-mir-1664	?	0
ENSGALT0000 gga-mir-1665	gga-mir-1665	?	0
ENSGALT0000 gga-mir-1666	gga-mir-1666	?	0
ENSGALT0000 gga-mir-1667	gga-mir-1667	?	0
ENSGALT0000 gga-mir-1668	gga-mir-1668	0.464758	0
ENSGALT0000 gga-mir-1669	gga-mir-1669	?	0
ENSGALT0000 gga-mir-1670	gga-mir-1670	1	0.5
ENSGALT0000 gga-mir-1671	gga-mir-1671	0.464758	0
ENSGALT0000 gga-mir-1672	gga-mir-1672	?	0

ENSGALT0000 gga-mir-1673	gga-mir-1673	0.464758	0
ENSGALT0000 gga-mir-1674	gga-mir-1674	0.973393	4.5
ENSGALT0000 gga-mir-1675	gga-mir-1675	0.534404	1
ENSGALT0000 gga-mir-1676	gga-mir-1676	?	0
ENSGALT0000 gga-mir-1677	gga-mir-1677	0.464758	0
ENSGALT0000 gga-mir-1678	gga-mir-1678	?	0
ENSGALT0000 gga-mir-1679	gga-mir-1679	0.562993	0
ENSGALT0000 gga-mir-1680	gga-mir-1680	0.649519	0.5
ENSGALT0000 gga-mir-1681	gga-mir-1681	?	0
ENSGALT0000 gga-mir-1682	gga-mir-1682	0.9299	4
ENSGALT0000 gga-mir-1683	gga-mir-1683	0.943147	17
ENSGALT0000 gga-mir-1684	gga-mir-1684	0.464758	0
ENSGALT0000 gga-mir-1685	gga-mir-1685	1	1.5
ENSGALT0000 gga-mir-1686	gga-mir-1686	0.740073	2
ENSGALT0000 gga-mir-1687	gga-mir-1687	?	0
ENSGALT0000 gga-mir-1688	gga-mir-1688	?	0
ENSGALT0000 gga-mir-1689	gga-mir-1689	0.932599	1.5
ENSGALT0000 gga-mir-1690	gga-mir-1690	?	0
ENSGALT0000 gga-mir-1691	gga-mir-1691	?	0
ENSGALT0000 gga-mir-1693	gga-mir-1693	?	0
ENSGALT0000 gga-mir-1694	gga-mir-1694	?	0
ENSGALT0000 gga-mir-1695	gga-mir-1695	?	0
ENSGALT0000 gga-mir-1696	gga-mir-1696	?	0
ENSGALT0000 gga-mir-1697	gga-mir-1697	0.818488	1.5
ENSGALT0000 gga-mir-1698	gga-mir-1698	0.829873	9
ENSGALT0000 gga-mir-1699	gga-mir-1699	0.464758	0.5
ENSGALT0000 gga-mir-16c	gga-mir-16c	0.440774	4
ENSGALT0000 gga-mir-17	gga-mir-17	?	0
ENSGALT0000 gga-mir-1700	gga-mir-1700	?	0
ENSGALT0000 gga-mir-1702	gga-mir-1702	0.649519	0
ENSGALT0000 gga-mir-1703	gga-mir-1703	?	0
ENSGALT0000 gga-mir-1704	gga-mir-1704	0.649519	0.5
ENSGALT0000 gga-mir-1705	gga-mir-1705	0.603682	0.5
ENSGALT0000 gga-mir-1706	gga-mir-1706	0.649519	0.5
ENSGALT0000 gga-mir-1707	gga-mir-1707	0.603682	1
ENSGALT0000 gga-mir-1708	gga-mir-1708	?	0
ENSGALT0000 gga-mir-1709	gga-mir-1709	?	0
ENSGALT0000 gga-mir-1710	gga-mir-1710	0.603682	0
ENSGALT0000 gga-mir-1712	gga-mir-1712	?	0
ENSGALT0000 gga-mir-1713	gga-mir-1713	?	0
ENSGALT0000 gga-mir-1714	gga-mir-1714	0.464758	0
ENSGALT0000 gga-mir-1715	gga-mir-1715	0.997585	32.5
ENSGALT0000 gga-mir-1716	gga-mir-1716	?	0
ENSGALT0000 gga-mir-1717	gga-mir-1717	?	0
ENSGALT0000 gga-mir-1718	gga-mir-1718	?	0
ENSGALT0000 gga-mir-1719	gga-mir-1719	0.649519	0.5
ENSGALT0000 gga-mir-1720	gga-mir-1720	1	0.5
ENSGALT0000 gga-mir-1721	gga-mir-1721	?	0
ENSGALT0000 gga-mir-1722	gga-mir-1722	0.603682	0.5
ENSGALT0000 gga-mir-1723	gga-mir-1723	0.975572	133.5
ENSGALT0000 gga-mir-1724	gga-mir-1724	?	0
ENSGALT0000 gga-mir-1726	gga-mir-1726	0.649519	0
ENSGALT0000 gga-mir-1727-1	gga-mir-1727-1	0.464758	0
ENSGALT0000 gga-mir-1728	gga-mir-1728	0.623826	7
ENSGALT0000 gga-mir-1729	gga-mir-1729	?	0
ENSGALT0000 gga-mir-1730	gga-mir-1730	0.464758	0.5

ENSGALT0000 gga-mir-1731	gga-mir-1731	?	0
ENSGALT0000 gga-mir-1732	gga-mir-1732	?	0
ENSGALT0000 gga-mir-1733	gga-mir-1733	?	0
ENSGALT0000 gga-mir-1734	gga-mir-1734	?	0
ENSGALT0000 gga-mir-1735	gga-mir-1735	0.464758	0
ENSGALT0000 gga-mir-1736	gga-mir-1736	?	0
ENSGALT0000 gga-mir-1737	gga-mir-1737	0.662104	4.5
ENSGALT0000 gga-mir-1738	gga-mir-1738	?	0
ENSGALT0000 gga-mir-1739	gga-mir-1739	0.464758	0
ENSGALT0000 gga-mir-1740	gga-mir-1740	0.603682	1
ENSGALT0000 gga-mir-1741	gga-mir-1741	?	0
ENSGALT0000 gga-mir-1742	gga-mir-1742	0.361744	0.5
ENSGALT0000 gga-mir-1743	gga-mir-1743	0.464758	0.5
ENSGALT0000 gga-mir-1744	gga-mir-1744	0.684597	3
ENSGALT0000 gga-mir-1745-1	gga-mir-1745-1	?	0
ENSGALT0000 gga-mir-1745-1	gga-mir-1745-2	?	0
ENSGALT0000 gga-mir-1746	gga-mir-1746	?	0
ENSGALT0000 gga-mir-1747	gga-mir-1747	0.649519	0.5
ENSGALT0000 gga-mir-1748	gga-mir-1748	0.780657	0.5
ENSGALT0000 gga-mir-1749	gga-mir-1749	0.562993	0
ENSGALT0000 gga-mir-1750	gga-mir-1750	?	0
ENSGALT0000 gga-mir-1751	gga-mir-1751	0.464758	0.5
ENSGALT0000 gga-mir-1752	gga-mir-1752	0.464758	0
ENSGALT0000 gga-mir-1753-1	gga-mir-1753-1	?	0
ENSGALT0000 gga-mir-1754	gga-mir-1754	0.464758	0
ENSGALT0000 gga-mir-1755	gga-mir-1755	0.749343	1
ENSGALT0000 gga-mir-1756a	gga-mir-1756a	0.603682	0.5
ENSGALT0000 gga-mir-1756b	gga-mir-1756b	?	0
ENSGALT0000 gga-mir-1757	gga-mir-1757	0.464758	0
ENSGALT0000 gga-mir-1759	gga-mir-1759	?	0
ENSGALT0000 gga-mir-1760	gga-mir-1760	0.464758	0.5
ENSGALT0000 gga-mir-1762	gga-mir-1762	?	0
ENSGALT0000 gga-mir-1763	gga-mir-1763	?	0
ENSGALT0000 gga-mir-1764	gga-mir-1764	0.261655	1
ENSGALT0000 gga-mir-1765	gga-mir-1765	0.603682	0
ENSGALT0000 gga-mir-1766-1	gga-mir-1766-1	?	0
ENSGALT0000 gga-mir-1766-2	gga-mir-1766-2	?	0
ENSGALT0000 gga-mir-1767	gga-mir-1767	?	0
ENSGALT0000 gga-mir-1768	gga-mir-1768	0.464758	0
ENSGALT0000 gga-mir-1769	gga-mir-1769	?	0
ENSGALT0000 gga-mir-1770	gga-mir-1770	0.722096	1.5
ENSGALT0000 gga-mir-1771	gga-mir-1771	0.464758	0
ENSGALT0000 gga-mir-1772	gga-mir-1772	0.722096	1
ENSGALT0000 gga-mir-1773	gga-mir-1773	?	0
ENSGALT0000 gga-mir-1774	gga-mir-1774	0.846336	1.5
ENSGALT0000 gga-mir-1775	gga-mir-1775	?	0
ENSGALT0000 gga-mir-1776	gga-mir-1776	?	0
ENSGALT0000 gga-mir-1777	gga-mir-1777	?	0
ENSGALT0000 gga-mir-1778	gga-mir-1778	0.902354	8.5
ENSGALT0000 gga-mir-1779	gga-mir-1779	?	0
ENSGALT0000 gga-mir-1780	gga-mir-1780	0.353553	1
ENSGALT0000 gga-mir-1781	gga-mir-1781	0.603682	1
ENSGALT0000 gga-mir-1782	gga-mir-1782	?	0
ENSGALT0000 gga-mir-1783	gga-mir-1783	0.603682	0
ENSGALT0000 gga-mir-1784	gga-mir-1784	?	0
ENSGALT0000 gga-mir-1785	gga-mir-1785	?	0

ENSGALT0000 gga-mir-1786	gga-mir-1786	?	0
ENSGALT0000 gga-mir-1787	gga-mir-1787	0.917894	21
ENSGALT0000 gga-mir-1788	gga-mir-1788	?	0
ENSGALT0000 gga-mir-1789	gga-mir-1789	?	0
ENSGALT0000 gga-mir-1790	gga-mir-1790	0.942866	2
ENSGALT0000 gga-mir-1791	gga-mir-1791	0.464758	0
ENSGALT0000 gga-mir-1792	gga-mir-1792	?	0
ENSGALT0000 gga-mir-1793	gga-mir-1793	?	0
ENSGALT0000 gga-mir-1794	gga-mir-1794	?	0
ENSGALT0000 gga-mir-1795	gga-mir-1795	0.464758	0.5
ENSGALT0000 gga-mir-1796	gga-mir-1796	?	0
ENSGALT0000 gga-mir-1797	gga-mir-1797	0.878854	18
ENSGALT0000 gga-mir-1798	gga-mir-1798	?	0
ENSGALT0000 gga-mir-1799	gga-mir-1799	?	0
ENSGALT0000 gga-mir-1800	gga-mir-1800	0.995234	4.5
ENSGALT0000 gga-mir-1801	gga-mir-1801	?	0
ENSGALT0000 gga-mir-1802	gga-mir-1802	?	0
ENSGALT0000 gga-mir-1803	gga-mir-1803	?	0
ENSGALT0000 gga-mir-1804	gga-mir-1804	0.601558	0.5
ENSGALT0000 gga-mir-1805	gga-mir-1805	?	0
ENSGALT0000 gga-mir-1806	gga-mir-1806	?	0
ENSGALT0000 gga-mir-1807	gga-mir-1807	?	0
ENSGALT0000 gga-mir-1808	gga-mir-1808	0.464758	0.5
ENSGALT0000 gga-mir-1809	gga-mir-1809	0.464758	0
ENSGALT0000 gga-mir-1810	gga-mir-1810	?	0
ENSGALT0000 gga-mir-1811	gga-mir-1811	?	0
ENSGALT0000 gga-mir-1812	gga-mir-1812	0.464758	0
ENSGALT0000 gga-mir-1813-1	gga-mir-1813-1	?	0
ENSGALT0000 gga-mir-1813-2	gga-mir-1813-2	?	0
ENSGALT0000 gga-mir-1815	gga-mir-1815	?	0
ENSGALT0000 gga-mir-1816	gga-mir-1816	?	0
ENSGALT0000 gga-mir-181a-1	gga-mir-181a-1	?	0
ENSGALT0000 gga-mir-181a-2	gga-mir-181a-2	?	0
ENSGALT0000 gga-mir-181b-1	gga-mir-181b-1	0.872443	1.5
ENSGALT0000 gga-mir-181b-2	gga-mir-181b-2	0.989779	3.5
ENSGALT0000 gga-mir-183	gga-mir-183	0.603682	1
ENSGALT0000 gga-mir-184	gga-mir-184	?	0
ENSGALT0000 gga-mir-1845	gga-mir-1845	0.464758	0
ENSGALT0000 gga-mir-187	gga-mir-187	?	0
ENSGALT0000 gga-mir-18a	gga-mir-18a	?	0
ENSGALT0000 gga-mir-18b	gga-mir-18b	0.464758	0
ENSGALT0000 gga-mir-190	gga-mir-190	?	0
ENSGALT0000 gga-mir-193a	gga-mir-193a	?	0
ENSGALT0000 gga-mir-193b	gga-mir-193b	0.464758	0.5
ENSGALT0000 gga-mir-194	gga-mir-194	?	0
ENSGALT0000 gga-mir-196-1	gga-mir-196-1	?	0
ENSGALT0000 gga-mir-196-2	gga-mir-196-2	?	0
ENSGALT0000 gga-mir-196-3	gga-mir-196-3	?	0
ENSGALT0000 gga-mir-199-1	gga-mir-199-1	0.19245	0.5
ENSGALT0000 gga-mir-199-2	gga-mir-199-2	0.649519	0.5
ENSGALT0000 gga-mir-199b	gga-mir-199b	?	0
ENSGALT0000 gga-mir-19a	gga-mir-19a	?	0
ENSGALT0000 gga-mir-19b	gga-mir-19b	0.464758	0
ENSGALT0000 gga-mir-1a-1	gga-mir-1a-1	?	0
ENSGALT0000 gga-mir-1a-2	gga-mir-1a-2	?	0
ENSGALT0000 gga-mir-1b	gga-mir-1b	?	0

ENSGALT0000 gga-mir-200a	gga-mir-200a	?	0
ENSGALT0000 gga-mir-200b	gga-mir-200b	?	0
ENSGALT0000 gga-mir-202	gga-mir-202	?	0
ENSGALT0000 gga-mir-203	gga-mir-203	?	0
ENSGALT0000 gga-mir-204-2	gga-mir-204-2	0.464758	0
ENSGALT0000 gga-mir-205a	gga-mir-205a	?	0
ENSGALT0000 gga-mir-205b	gga-mir-205b	?	0
ENSGALT0000 gga-mir-206	gga-mir-206	?	0
ENSGALT0000 gga-mir-20a	gga-mir-20a	?	0
ENSGALT0000 gga-mir-20b	gga-mir-20b	0.649519	0.5
ENSGALT0000 gga-mir-21	gga-mir-21	0.603682	1
ENSGALT0000 gga-mir-211	gga-mir-211	?	0
ENSGALT0000 gga-mir-2126	gga-mir-2126	0.507614	20.5
ENSGALT0000 gga-mir-2127	gga-mir-2127	0.353553	0
ENSGALT0000 gga-mir-2128	gga-mir-2128	0.942866	1.5
ENSGALT0000 gga-mir-2129	gga-mir-2129	0.92197	19
ENSGALT0000 gga-mir-2130	gga-mir-2130	?	0
ENSGALT0000 gga-mir-2131	gga-mir-2131	0.464758	0
ENSGALT0000 gga-mir-214	gga-mir-214	?	0
ENSGALT0000 gga-mir-215	gga-mir-215	?	0
ENSGALT0000 gga-mir-216	gga-mir-216	?	0
ENSGALT0000 gga-mir-216c	gga-mir-216c	?	0
ENSGALT0000 gga-mir-217	gga-mir-217	?	0
ENSGALT0000 gga-mir-218-2	gga-mir-218-2	?	0
ENSGALT0000 gga-mir-218-1	gga-mir-218-3	0.464758	0.5
ENSGALT0000 gga-mir-219	gga-mir-219	?	0
ENSGALT0000 gga-mir-22	gga-mir-22	0.649519	0.5
ENSGALT0000 gga-mir-221	gga-mir-221	0.464758	0
ENSGALT0000 gga-mir-222	gga-mir-222	?	0
ENSGALT0000 gga-mir-223	gga-mir-223	?	0
ENSGALT0000 gga-mir-23b	gga-mir-23b	?	0
ENSGALT0000 gga-mir-24	gga-mir-24	?	0
ENSGALT0000 gga-mir-26a	gga-mir-26a	?	0
ENSGALT0000 gga-mir-27b	gga-mir-27b	?	0
ENSGALT0000 gga-mir-29a	gga-mir-29a	?	0
ENSGALT0000 gga-mir-29b-1	gga-mir-29b-1	?	0
ENSGALT0000 gga-mir-29b-2	gga-mir-29b-2	0.740073	1
ENSGALT0000 gga-mir-29c	gga-mir-29c	0.818488	1.5
ENSGALT0000 gga-mir-301	gga-mir-301	0.485412	2.5
ENSGALT0000 gga-mir-301b	gga-mir-301b	?	0
ENSGALT0000 gga-mir-302a	gga-mir-302a	?	0
ENSGALT0000 gga-mir-302b	gga-mir-302b	?	0
ENSGALT0000 gga-mir-302c	gga-mir-302c	?	0
ENSGALT0000 gga-mir-302d	gga-mir-302d	?	0
ENSGALT0000 gga-mir-30a	gga-mir-30a	?	0
ENSGALT0000 gga-mir-30b	gga-mir-30b	0.943934	2.5
ENSGALT0000 gga-mir-30c-1	gga-mir-30c-1	?	0
ENSGALT0000 gga-mir-30c-2	gga-mir-30c-2	0.464758	0
ENSGALT0000 gga-mir-30d	gga-mir-30d	?	0
ENSGALT0000 gga-mir-30e	gga-mir-30e	0.464758	0
ENSGALT0000 gga-mir-31	gga-mir-31	?	0
ENSGALT0000 gga-mir-32	gga-mir-32	0.976096	2
ENSGALT0000 gga-mir-33-1	gga-mir-33-1	0.464758	0
ENSGALT0000 gga-mir-34a	gga-mir-34a	0.562993	0
ENSGALT0000 gga-mir-34b	gga-mir-34b	?	0
ENSGALT0000 gga-mir-34c	gga-mir-34c	?	0

ENSGALT0000	gga-mir-365-1	gga-mir-365-1	?	0
ENSGALT0000	gga-mir-365-2	gga-mir-365-2	0.649519	0
ENSGALT0000	gga-mir-367	gga-mir-367	?	0
ENSGALT0000	gga-mir-375	gga-mir-375	?	0
ENSGALT0000	gga-mir-383	gga-mir-383	?	0
ENSGALT0000	gga-mir-429	gga-mir-429	?	0
ENSGALT0000	gga-mir-449	gga-mir-449	?	0
ENSGALT0000	gga-mir-449b	gga-mir-449b	?	0
ENSGALT0000	gga-mir-449c	gga-mir-449c	?	0
ENSGALT0000	gga-mir-451	gga-mir-451	0.464758	0
ENSGALT0000	gga-mir-454	gga-mir-454	0.19245	0
ENSGALT0000	gga-mir-455	gga-mir-455	?	0
ENSGALT0000	gga-mir-456	gga-mir-456	?	0
ENSGALT0000	gga-mir-458	gga-mir-458	?	0
ENSGALT0000	gga-mir-460	gga-mir-460	?	0
ENSGALT0000	gga-mir-460b	gga-mir-460b	?	0
ENSGALT0000	gga-mir-466	gga-mir-466	?	0
ENSGALT0000	gga-mir-489	gga-mir-489	?	0
ENSGALT0000	gga-mir-490	gga-mir-490	?	0
ENSGALT0000	gga-mir-499	gga-mir-499	?	0
ENSGALT0000	gga-mir-551	gga-mir-551	?	0
ENSGALT0000	gga-mir-7-1	gga-mir-7-1	0.783262	1.5
ENSGALT0000	gga-mir-7-2	gga-mir-7-2	1	0.5
ENSGALT0000	gga-mir-7-3	gga-mir-7-3	?	0
ENSGALT0000	gga-mir-757-1	gga-mir-757-1	?	0
ENSGALT0000	gga-mir-762	gga-mir-762	0.591263	7.80E-10
ENSGALT0000	gga-mir-7b	gga-mir-7b	?	0
ENSGALT0000	gga-mir-9-1	gga-mir-9-1	?	0
ENSGALT0000	gga-mir-92	gga-mir-92	0.874724	3.5
ENSGALT0000	gga-mir-9-2	gga-mir-9-2	0.464758	0
ENSGALT0000	gga-mir-99a	gga-mir-99a	?	0
ENSGALT0000	chemokine-like ligand 1	GGCL1	?	0
ENSGALT0000	gamma-glutamylcyclotransferase	GGCT	0.44735	399.5
ENSGALT0000	gamma-glutamyl hydrolase (conjug	GGH	0.990269	807.5
ENSGALT0000	gametogenetin binding protein 2	GGNBP2	0.954387	707.003
ENSGALT0000	gamma-glutamyltransferase 1	GGT1	0.991722	72.5
ENSGALT0000	gamma-glutamyltransferase 5	GGT5	0.86823	235.5
ENSGALT0000	gamma-glutamyltransferase 7	GGT7	0.890588	417.5
ENSGALT0000	growth hormone 1	GH	0.937361	89
ENSGALT0000	GH3 domain containing	GHDC	0.979124	528
ENSGALT0000	hypothetical protein LOC423621	GHITM	0.947205	4420.06
ENSGALT0000	growth hormone receptor	GHR	0.988142	727.5
ENSGALT0000	growth hormone releasing hormone	GHRH	0.749131	93.5
ENSGALT0000	growth-hormone releasing hormon	GHRH-LR	0.469597	7
ENSGALT0000	growth hormone releasing hormon	GHRHR	0.539038	0
ENSGALT0000	ghrelin/obestatin prepropeptide	GHRL	0.990052	12.5
ENSGALT0000	growth hormone secretagogue rec	GHSR	0.84545	59.5
ENSGALT0000	gypsy retrotransposon integrase 1	GIN1	0.98168	60
ENSGALT0000	GINS complex subunit 1 (Psf1 hom	GINS1	0.729607	442
ENSGALT0000	GINS complex subunit 3 (Psf3 hom	GINS3	0.908266	642
ENSGALT0000	gastric inhibitory polypeptide	GIP	0.557652	84.5
ENSGALT0000	GIPC PDZ domain containing famil	GIPC2	0.971663	74
ENSGALT0000	G protein-coupled receptor kinase i	GIT2	0.966728	2693.46
ENSGALT0000	gap junction protein, alpha 1, 43kD	GJA1	0.980474	4363.06
ENSGALT0000	gap junction protein, alpha 3, 46kD	GJA3	0.998299	167.5
ENSGALT0000	connexin 39	GJA4	0.679921	106

ENSGALT0000	gap junction protein, alpha 5, 40kD	GJA5	0.743877	66
ENSGALT0000	gap junction protein, alpha 8, 50kD	GJA8	0.77419	2.5
ENSGALT0000	gap junction protein, beta 1, 32kDa	GJB1	0.220881	65.4716
ENSGALT0000	gap junction protein, beta 6, 30kDa	GJB6	0.886621	6714.02
ENSGALT0000	gap junction protein, gamma 1, 45k	GJC1	0.958242	1274.5
ENSGALT0000	gap junction protein, delta 2, 36kDa	GJD2	0.585877	6
ENSGALT0000	glycerol kinase	GK	0.914199	129.5
ENSGALT0000	glycerol kinase 5 (putative)	GK5	0.995828	282.5
ENSGALT0000	G kinase anchoring protein 1	GKAP1	0.954952	133.5
ENSGALT0000	gastrokine 1	GKN1	?	0
ENSGALT0000	gastrokine 2	GKN2	0.464758	1
ENSGALT0000	galactosidase, alpha	GLA	0.88193	268
ENSGALT0000	galactosidase, beta 1	GLB1	0.995461	1472.51
ENSGALT0000	galactosidase, beta 1-like	GLB1L	0.954763	917.5
ENSGALT0000	glucocorticoid induced transcript 1	GLCCI1	0.996705	3297.42
ENSGALT0000	glucuronic acid epimerase	GLCE	0.998617	1731.5
ENSGALT0000	glycine dehydrogenase (decarboxy	GLDC	0.845404	3524.04
ENSGALT0000	gliomedin	GLDN	0.987205	65.5
ENSGALT0000	GLE1 RNA export mediator homolo	GLE1	0.944179	798.5
ENSGALT0000	golgi glycoprotein 1	GLG1	0.968373	7961.02
ENSGALT0000	GLI family zinc finger 1	GLI1	0.931606	418
ENSGALT0000	GLI family zinc finger 2	GLI2	0.963686	934.495
ENSGALT0000	GLI family zinc finger 3	GLI3	0.980931	955.007
ENSGALT0000	GLI pathogenesis-related 1-like	GLIPR1L	0.951844	993.499
ENSGALT0000	GLI pathogenesis-related 1 like 2	GLIPR1L2	0.783611	8
ENSGALT0000	GLI pathogenesis-related 2	GLIPR2	0.771172	161.5
ENSGALT0000	GLIS family zinc finger 1	GLIS1	0.945231	46.5
ENSGALT0000	GLIS family zinc finger 3	GLIS3	0.933919	25
ENSGALT0000	glomulin, FKBP associated protein	GLMN	0.947811	294
ENSGALT0000	glyoxalase I	GLO1	0.955332	3931
ENSGALT0000	glyoxalase domain containing 5	GLOD5	0.464758	0
ENSGALT0000	glucagon-like peptide 1 receptor	GLP1R	0.871832	52
ENSGALT0000	glucagon-like peptide 2 receptor	GLP2R	0.818488	1.5
ENSGALT0000	glycine receptor, alpha 1	GLRA1	0.631223	0
ENSGALT0000	glycine receptor, alpha 2	GLRA2	0.726187	3.5
ENSGALT0000	glycine receptor, alpha 3	GLRA3	0.549852	4
ENSGALT0000	glycine receptor, alpha 4	GLRA4	0.577306	451.5
ENSGALT0000	glycine receptor, beta	GLRB	0.730897	79.5
ENSGALT0000	glutaredoxin	GLRX	0.507643	2
ENSGALT0000	glutaredoxin 2	GLRX2	0.935178	283
ENSGALT0000	glutaredoxin 3	GLRX3	0.895655	2003
ENSGALT0000	glutaredoxin 5	GLRX5	0.851803	1364.12
ENSGALT0000	glutaminase	GLS	0.907619	517.001
ENSGALT0000	glycosyltransferase 1 domain conta	GLT1D1	0.8878	677.5
ENSGALT0000	glycosyltransferase 25 domain con	GLT25D1	0.818869	337.5
ENSGALT0000	glycosyltransferase 25 domain con	GLT25D2	0.849543	839.008
ENSGALT0000	glycosyltransferase 8 domain conta	GLT8D1	0.966402	1165.5
ENSGALT0000	glycosyltransferase 8 domain conta	GLT8D2	0.750896	47.5
ENSGALT0000	glycolipid transfer protein	GLTP	0.90105	431
ENSGALT0000	glycolipid transfer protein domain c	GLTPD1	0.743046	273
ENSGALT0000	glutamate dehydrogenase 1	GLUD1	0.928553	1055
ENSGALT0000	glutamate-ammonia ligase	GLUL	0.941143	2666.87
ENSGALT0000	glycerate kinase	GLYCTK	0.960568	396
ENSGALT0000	glyoxylate reductase 1 homolog (A	GLYR1	0.911418	2616.57
ENSGALT0000	GM2 ganglioside activator	GM2A	0.877215	85.5
ENSGALT0000	GDP-mannose 4,6-dehydratase	GMDS	0.895245	1263.5

ENSGALT0000	glucocorticoid modulatory element	GMEB1	0.915469	1030.5
ENSGALT0000	glucocorticoid modulatory element	GMEB2	0.993956	222
ENSGALT0000	glia maturation factor, beta	GMFB	0.833218	480.499
ENSGALT0000	geminin coiled-coil domain containi	GMNC	0.733785	33.5
ENSGALT0000	geminin, DNA replication inhibitor	GMNN	0.868223	471.5
ENSGALT0000	GDP-mannose pyrophosphorylase	GMPPB	0.0864407	1485.33
ENSGALT0000	guanosine monophosphate reducta	GMPR	0.918815	473.5
ENSGALT0000	guanine monphosphate synthetase	GMPS	0.915193	1557
ENSGALT0000	\N	GNA11	0.976951	1382
ENSGALT0000	guanine nucleotide binding protein	GNA12	0.931307	594.5
ENSGALT0000	guanine nucleotide binding protein	GNA13	0.924383	448
ENSGALT0000	guanine nucleotide binding protein	GNA14	0.590316	2.5
ENSGALT0000	guanine nucleotide binding protein	GNAI1	0.888836	1768.49
ENSGALT0000	guanine nucleotide binding protein	GNAI2	0.919203	6496.93
ENSGALT0000	guanine nucleotide binding protein	GNAI3	0.784712	3514.03
ENSGALT0000	guanine nucleotide binding protein	GNAL	0.968112	563.5
ENSGALT0000	guanine nucleotide binding protein	GNAO1	0.611393	502
ENSGALT0000	guanine nucleotide binding protein	GNAQ	0.987905	1077
ENSGALT0000	GNAS complex locus	GNAS	0.997371	1172
ENSGALT0000	guanine nucleotide binding protein,	GNAT3	0.943934	1
ENSGALT0000	guanine nucleotide binding protein	GNAZ	0.727557	136.411
ENSGALT0000	guanine nucleotide binding protein	GNB1	0.891556	14034.7
ENSGALT0000	guanine nucleotide binding protein	GNB1L	0.919534	2564.5
ENSGALT0000	guanine nucleotide binding protein	GNB2L1	0.821815	67897
ENSGALT0000	guanine nucleotide binding protein	GNB3	0.889474	419.5
ENSGALT0000	guanine nucleotide binding protein	GNB4	0.895736	2062.5
ENSGALT0000	guanine nucleotide binding protein	GNB5	0.930342	689.5
ENSGALT0000	glucosamine (UDP-N-acetyl)-2-epir	GNE	0.970682	2073
ENSGALT0000	guanine nucleotide binding protein	GNG10	0.379456	255
ENSGALT0000	guanine nucleotide binding protein	GNG11	0.875977	382
ENSGALT0000	guanine nucleotide binding protein	GNG12	0.970087	234.5
ENSGALT0000	guanine nucleotide binding protein	GNG13	0.0115974	40.5
ENSGALT0000	guanine nucleotide binding protein	GNG2	0.688823	3921
ENSGALT0000	guanine nucleotide binding protein	GNG4	0.688011	24.5
ENSGALT0000	guanine nucleotide binding protein-	GNL2	0.967345	1262
ENSGALT0000	guanine nucleotide binding protein-	GNL3	0.939442	1787
ENSGALT0000	glycine N-methyltransferase	GNMT	0.830219	2356.5
ENSGALT0000	Gnot1 homeodomain protein	GNOT1	0.736543	58
ENSGALT0000	glyceronephosphate O-acyltransfer	GNPAT	0.906906	1766.49
ENSGALT0000	glucosamine-6-phosphate deamina	GNPDA1	0.936459	1436
ENSGALT0000	glucosamine-6-phosphate deamina	GNPDA2	0.940058	885
ENSGALT0000	glucosamine-phosphate N-acetyltra	GNPNAT1	0.975937	606.5
ENSGALT0000	N-acetylglucosamine-1-phosphate	GNPTAB	0.933021	1889
ENSGALT0000	N-acetylglucosamine-1-phosphate	GNPTG	0.887042	470
ENSGALT0000	gonadotropin-releasing hormone re	GNRHR	0.616042	4
ENSGALT0000	glucosamine (N-acetyl)-6-sulfatase	GNS	0.977719	2646.5
ENSGALT0000	golgin A1	GOLGA1	0.995919	459
ENSGALT0000	golgi autoantigen, golgin subfamily	GOLGA2	0.966998	1977.99
ENSGALT0000	golgin A3	GOLGA3	0.955805	1198.99
ENSGALT0000	golgin A4	GOLGA4	0.995176	1093.52
ENSGALT0000	golgin A5	GOLGA5	0.980783	679.5
ENSGALT0000	golgin A7	GOLGA7	0.89325	3545.5
ENSGALT0000	golgin B1	GOLGB1	0.984356	2903
ENSGALT0000	golgi integral membrane protein 4	GOLIM4	0.985598	2604.92
ENSGALT0000	golgi membrane protein 1	GOLM1	0.986906	1174
ENSGALT0000	golgi phosphoprotein 3 (coat-protei	GOLPH3	0.96435	1351.94

ENSGALT0000	golgi phosphoprotein 3-like	GOLPH3L	0.974862	900
ENSGALT0000	golgi transport 1B	GOLT1B	0.927288	87.5
ENSGALT0000	Progonadoliberin-1Gonadoliberin-1	GON1_CHICK	0.547885	9
ENSGALT0000	gon-4-like (C. elegans)	GON4L	0.985386	1922.5
ENSGALT0000	golgi-associated PDZ and coiled-cc	GOPC	0.953983	839
ENSGALT0000	golgin, RAB6-interacting	GORAB	0.953754	577.499
ENSGALT0000	golgi reassembly stacking protein 1	GORASP1	0.991124	1154
ENSGALT0000	golgi reassembly stacking protein 2	GORASP2	0.951957	2814.56
ENSGALT0000	golgi SNAP receptor complex mem	GOSR1	0.975714	1045.5
ENSGALT0000	golgi SNAP receptor complex mem	GOSR2	0.969831	563.499
ENSGALT0000	glutamic-oxaloacetic transaminase	GOT1	0.767434	2587
ENSGALT0000	glutamic-oxaloacetic transaminase	GOT2	0.852821	10680
ENSGALT0000	glycoprotein Ib (platelet), alpha poly	GP1BA	0.919972	31.5
ENSGALT0000	glycoprotein Ib (platelet), beta poly	GP1BB	0.842414	27.5
ENSGALT0000	glycoprotein IX (platelet)	GP9	0.636572	0.5
ENSGALT0000	glycoprotein A33 (transmembrane)	GPA33	0.649519	0
ENSGALT0000	glycerol-3-phosphate acyltransfera:	GPAM	0.895038	705.5
ENSGALT0000	glycerol-3-phosphate acyltransfera:	GPAT2	0.962812	859
ENSGALT0000	G patch domain containing 1	GPATCH1	0.944541	563.499
ENSGALT0000	G patch domain containing 2	GPATCH2	0.961595	1084
ENSGALT0000	G patch domain containing 3	GPATCH3	0.839982	255.5
ENSGALT0000	G patch domain containing 8	GPATCH8	0.957413	3237.5
ENSGALT0000	GC-rich promoter binding protein 1	GPBP1	0.965715	611.5
ENSGALT0000	GC-rich promoter binding protein 1	GPBP1L1	0.979684	1667
ENSGALT0000	glypican 3	GPC3	0.856164	4490
ENSGALT0000	glypican 4	GPC4	0.897267	7023.5
ENSGALT0000	glypican 5	GPC5	0.97529	120
ENSGALT0000	glypican 6	GPC6	0.796889	167.5
ENSGALT0000	glycerophosphocholine phosphodie	GPCPD1	0.94488	844
ENSGALT0000	glycerol-3-phosphate dehydrogena	GPD1	0.798985	47
ENSGALT0000	glycerol-3-phosphate dehydrogena	GPD1L	0.894522	908
ENSGALT0000	glycerol-3-phosphate dehydrogena	GPD2	0.971579	2043.8
ENSGALT0000	G protein-coupled estrogen recepto	GPER	0.625644	2
ENSGALT0000	gephyrin	GPHN	0.924338	831.499
ENSGALT0000	glucose-6-phosphate isomerase	GPI	0.968253	6760.96
ENSGALT0000	glycosylphosphatidylinositol specifi	GPLD1	0.97268	5
ENSGALT0000	glycoprotein M6A	GPM6A	0.531744	457.969
ENSGALT0000	glycoprotein M6B	GPM6B	0.855466	1728.98
ENSGALT0000	GPN-loop GTPase 3	GPN3	0.839099	822.5
ENSGALT0000	glycoprotein (transmembrane) nmb	GPNMB	0.853815	0.5
ENSGALT0000	G protein-coupled receptor 107	GPR107	0.963241	1062.5
ENSGALT0000	G protein-coupled receptor 112	GPR112	0.840509	1.5
ENSGALT0000	G protein-coupled receptor 114	GPR114	0.901516	5
ENSGALT0000	G protein-coupled receptor 116	GPR116	0.720277	35
ENSGALT0000	G protein-coupled receptor 119	GPR119	0.847974	4
ENSGALT0000	G protein-coupled receptor 123	GPR123	0.854921	129
ENSGALT0000	G protein-coupled receptor 125	GPR125	0.939519	1804
ENSGALT0000	G protein-coupled receptor 126	GPR126	0.921757	4138
ENSGALT0000	G protein-coupled receptor 128	GPR128	?	0
ENSGALT0000	G protein-coupled receptor 133	GPR133	0.534977	75.3588
ENSGALT0000	G protein-coupled receptor 137C	GPR137C	0.924433	349.499
ENSGALT0000	G protein-coupled receptor 139	GPR139	0.933741	22.5
ENSGALT0000	G protein-coupled receptor 141	GPR141	0.562993	0.5
ENSGALT0000	G protein-coupled receptor 142	GPR142	0.906302	137.5
ENSGALT0000	G protein-coupled receptor 143	GPR143	0.770193	45.5
ENSGALT0000	G protein-coupled receptor 144	GPR144	0.593777	0.5

ENSGALT0000	G protein-coupled receptor 146	GPR146	0.927086	774.5
ENSGALT0000	G protein-coupled receptor 148	GPR148	?	0
ENSGALT0000	G protein-coupled receptor 149	GPR149	0.764227	40.5
ENSGALT0000	G protein-coupled receptor 15	GPR15	1	0.5
ENSGALT0000	G protein-coupled receptor 155	GPR155	0.95572	509
ENSGALT0000	G protein-coupled receptor 156	GPR156	0.963095	134.5
ENSGALT0000	G protein-coupled receptor 157	GPR157	0.937538	123.5
ENSGALT0000	G protein-coupled receptor 158	GPR158	0.741901	361
ENSGALT0000	G protein-coupled receptor 160	GPR160	0.919776	40
ENSGALT0000	G protein-coupled receptor 161	GPR161	0.959086	793
ENSGALT0000	G protein-coupled receptor 162	GPR162	0.959069	2393.5
ENSGALT0000	G protein-coupled receptor 17	GPR17	0.605075	2
ENSGALT0000	G protein-coupled receptor 171	GPR171	0.828826	0.5
ENSGALT0000	G protein-coupled receptor 174	GPR174	0.722096	0.5
ENSGALT0000	G protein-coupled receptor 176	GPR176	0.968154	197
ENSGALT0000	G protein-coupled receptor 180	GPR180	0.948696	253.5
ENSGALT0000	G protein-coupled receptor 19	GPR19	0.749343	2
ENSGALT0000	G protein-coupled receptor 22	GPR22	0.498581	20.5
ENSGALT0000	G protein-coupled receptor 26	GPR26	0.149326	1.5
ENSGALT0000	G protein-coupled receptor 27	GPR27	0.901402	1700.5
ENSGALT0000	G protein-coupled receptor 34	GPR34	0.889103	13
ENSGALT0000	G protein-coupled receptor 35	GPR35	0.464758	0.5
ENSGALT0000	G protein-coupled receptor 37 (end	GPR37	0.82534	525
ENSGALT0000	G protein-coupled receptor 37 like	GPR37L1	0.742433	423
ENSGALT0000	G protein-coupled receptor 39	GPR39	0.759941	114.185
ENSGALT0000	G protein-coupled receptor 55	GPR55	0.464758	0
ENSGALT0000	G protein-coupled receptor 56	GPR56	0.996034	2011.48
ENSGALT0000	G protein-coupled receptor 61	GPR61	0.609738	29
ENSGALT0000	G protein-coupled receptor 63	GPR63	0.991844	114.5
ENSGALT0000	G protein-coupled receptor 64	GPR64	0.787496	211
ENSGALT0000	G protein-coupled receptor 65	GPR65	0.790237	2
ENSGALT0000	G protein-coupled receptor 68	GPR68	0.382871	1
ENSGALT0000	G protein-coupled receptor 75	GPR75	0.890197	367
ENSGALT0000	G protein-coupled receptor 78	GPR78	0.601978	0.5
ENSGALT0000	G protein-coupled receptor 83	GPR83	0.942117	8
ENSGALT0000	uncharacterized LOC428696	GPR83-L	0.989343	23
ENSGALT0000	G protein-coupled receptor 85	GPR85	0.893776	143.5
ENSGALT0000	G protein-coupled receptor 87	GPR87	0.978182	2.5
ENSGALT0000	G protein-coupled receptor 88	GPR88	0.971817	65
ENSGALT0000	G protein-coupled receptor 89B	GPR89B	0.9571	712.218
ENSGALT0000	G protein-coupled receptor 97	GPR97	0.818488	0.5
ENSGALT0000	G protein-coupled receptor 98	GPR98	0.66548	232.5
ENSGALT0000	G protein-coupled receptor, family (	GPRC5A	0.768165	3.5
ENSGALT0000	G protein-coupled receptor, family (	GPRC5B	0.926845	377.5
ENSGALT0000	G protein-coupled receptor, family (	GPRC5C	0.988359	1185.95
ENSGALT0000	G protein-coupled receptor, family (	GPRC6A	?	0
ENSGALT0000	G protein regulated inducer of neur	GPRIN2	0.992495	258.5
ENSGALT0000	G protein pathway suppressor 1	GPS1	0.930535	2535.99
ENSGALT0000	G-protein signaling modulator 1	GPSM1	0.812522	208
ENSGALT0000	G-protein signaling modulator 2	GPSM2	0.999066	4699.52
ENSGALT0000	glutamic pyruvate transaminase (al	GPT2	0.891318	952.5
ENSGALT0000	glutathione peroxidase 4 (phosphol	GPX4	0.464562	2054
ENSGALT0000	glutathione peroxidase 7	GPX7	0.997276	429.5
ENSGALT0000	glutathione peroxidase 8 (putative)	GPX8	0.93836	319.5
ENSGALT0000	GRAM domain containing 1B	GRAMD1B	0.883417	271
ENSGALT0000	GRAM domain containing 1C	GRAMD1C	0.985778	1152.5

ENSGALT0000	GRAM domain containing 2	GRAMD2	0.927088	399.5
ENSGALT0000	GRAM domain containing 3	GRAMD3	0.992105	569.5
ENSGALT0000	GRAM domain containing 4	GRAMD4	0.958471	762
ENSGALT0000	GRB2-related adaptor protein	GRAP	0.366818	7.5
ENSGALT0000	GRB2-related adaptor protein 2	GRAP2	0.70962	16
ENSGALT0000	growth factor receptor-bound prote	GRB10	0.935532	572.499
ENSGALT0000	growth factor receptor-bound prote	GRB14	0.808642	5.5
ENSGALT0000	growth factor receptor-bound prote	GRB2	0.926757	2304
ENSGALT0000	growth regulation by estrogen in br	GREB1	0.735692	157
ENSGALT0000	growth regulation by estrogen in br	GREB1L	0.955159	1651.5
ENSGALT0000	gremlin 1	GREM1	0.776616	1
ENSGALT0000	gremlin 2	GREM2	0.82062	12
ENSGALT0000	grainyhead-like 1 (Drosophila)	GRHL1	0.982557	197.5
ENSGALT0000	grainyhead-like 2 (Drosophila)	GRHL2	0.993015	887.002
ENSGALT0000	grainyhead-like 3 (Drosophila)	GRHL3	0.999206	440
ENSGALT0000	glyoxylate reductase/hydroxypyruv	GRHPR	0.528189	426
ENSGALT0000	glutamate receptor, ionotropic, AMF	GRIA1	0.744804	126
ENSGALT0000	glutamate receptor, ionotropic, AMF	GRIA2	0.730022	176.937
ENSGALT0000	glutamate receptor, ionotrophic, AN	GRIA3	0.759801	108.215
ENSGALT0000	glutamate receptor, ionotrophic, AN	GRIA4	0.850728	92.8481
ENSGALT0000	glutamate receptor, ionotropic, delt	GRID1	0.748999	78.5
ENSGALT0000	glutamate receptor, ionotropic, delt	GRID2	0.915152	259
ENSGALT0000	glutamate receptor, ionotropic, delt	GRID2IP	0.770991	93.0001
ENSGALT0000	galectin-related inter-fiber protein	GRIFIN	?	0
ENSGALT0000	glutamate receptor, ionotropic, kain	GRIK1	0.953468	861.391
ENSGALT0000	glutamate receptor, ionotropic, kain	GRIK2	0.742092	215.609
ENSGALT0000	glutamate receptor, ionotropic, kain	GRIK3	0.409622	4.5
ENSGALT0000	glutamate receptor, ionotropic, kain	GRIK4	0.970694	1420.5
ENSGALT0000	glutamate receptor, ionotropic, N-m	GRIN1	0.637854	147
ENSGALT0000	glutamate receptor, ionotropic, N-m	GRIN2A	0.812802	27.5
ENSGALT0000	glutamate receptor, ionotropic, N-m	GRIN2B	0.770847	211.5
ENSGALT0000	glutamate receptor, ionotropic, N-m	GRIN3A	0.895966	855.503
ENSGALT0000	glutamate receptor interacting prote	GRIP1	0.974112	1149.5
ENSGALT0000	glutamate receptor interacting prote	GRIP2	0.96297	385
ENSGALT0000	G protein-coupled receptor kinase	GRK4	0.986372	395.5
ENSGALT0000	G protein-coupled receptor kinase	GRK5	0.761823	74.5
ENSGALT0000	G protein-coupled receptor kinase	GRK6	0.942576	443
ENSGALT0000	G protein-coupled receptor kinase	GRK7	0.974715	45.5
ENSGALT0000	glutamate receptor, metabotropic 1	GRM1	0.771597	50.5
ENSGALT0000	glutamate receptor, metabotropic 3	GRM3	0.725616	157
ENSGALT0000	glutamate receptor, metabotropic 4	GRM4	0.826739	1122.5
ENSGALT0000	glutamate receptor, metabotropic 5	GRM5	0.830585	6.5
ENSGALT0000	glutamate receptor, metabotropic 7	GRM7	0.86517	445
ENSGALT0000	glutamate receptor, metabotropic 8	GRM8	0.79555	45
ENSGALT0000	Gastrin-releasing peptideNeurome	GRP	0.464758	0
ENSGALT0000	GrpE-like 1, mitochondrial (E. coli)	GRPEL1	0.78645	1296.5
ENSGALT0000	GrpE-like 2, mitochondrial (E. coli)	GRPEL2	0.888688	951.5
ENSGALT0000	gastrin-releasing peptide receptor	GRPR	0.547794	5
ENSGALT0000	G-rich RNA sequence binding facto	GRSF1	0.910939	2195.5
ENSGALT0000	growth hormone regulated TBC pro	GRTP1	0.964035	136.5
ENSGALT0000	glutaredoxin, cysteine rich 1	GRXCR1	0.203007	12.5
ENSGALT0000	glutaredoxin, cysteine rich 2	GRXCR2	0.0297313	4.5
ENSGALT0000	goosecoid homeobox	GSC	0.72199	75
ENSGALT0000	goosecoid homeobox 2	GSC2	0.429924	55.5
ENSGALT0000	gasdermin 1	GSDMA	0.918082	199
ENSGALT0000	germ cell associated 1	GSG1	0.683403	1

ENSGALT0000	germ cell-specific gene 1-like prote	GSG1L	0.923308	12
ENSGALT0000	glycogen synthase kinase 3 beta	GSK3B	0.934822	2515.5
ENSGALT0000	gelsolin	GSN	0.884091	5024.14
ENSGALT0000	G1 to S phase transition 1	GSPT1	0.865826	1716.49
ENSGALT0000	glutathione reductase	GSR	0.770931	1136
ENSGALT0000	glutathione synthetase	GSS	0.775031	1628
ENSGALT0000	glutathione S-transferase class-alpl	GSTA	0.710254	632.211
ENSGALT0000	glutathione S-transferase alpha 3	GSTA3	0.673152	226.869
ENSGALT0000	glutathione S-transferase, C-termin	GSTCD	0.986	557.996
ENSGALT0000	glutathione S-transferase kappa 1	GSTK1	0.8572	689
ENSGALT0000	glutathione S-transferase omega 1	GSTO1	0.802846	1125
ENSGALT0000	glutathione S-transferase theta 1	GSTT1	0.82912	77
ENSGALT0000	glutathione transferase zeta 1	GSTZ1	0.8235	420.5
ENSGALT0000	glycosyltransferase-like domain cor	GTDC1	0.952697	456.001
ENSGALT0000	general transcription factor IIA, 1, 1	GTF2A1	0.973154	1952.49
ENSGALT0000	general transcription factor IIA, 2, 1	GTF2A2	0.874907	847.5
ENSGALT0000	general transcription factor IIB	GTF2B	0.783762	1024
ENSGALT0000	general transcription factor IIE, poly	GTF2E1	0.94052	1004
ENSGALT0000	general transcription factor IIE, poly	GTF2E2	0.937923	1074.5
ENSGALT0000	general transcription factor IIF, poly	GTF2F2	0.898907	990.5
ENSGALT0000	general transcription factor IIH, poly	GTF2H1	0.965794	702.5
ENSGALT0000	general transcription factor IIH, poly	GTF2H3	0.90017	864
ENSGALT0000	general transcription factor IIH, poly	GTF2H4	0.993782	15785.5
ENSGALT0000	General transcription factor IIH sub	GTF2H5	0.993318	1526.5
ENSGALT0000	general transcription factor IIi	GTF2I	0.953156	912.5
ENSGALT0000	GTF2I repeat domain containing 1	GTF2IRD1	0.99246	5189
ENSGALT0000	general transcription factor IIIA	GTF3A	0.938234	675.5
ENSGALT0000	general transcription factor IIIC, pol	GTF3C1	0.962424	2705.93
ENSGALT0000	general transcription factor IIIC, pol	GTF3C3	0.953237	817.494
ENSGALT0000	general transcription factor IIIC, pol	GTF3C5	0.97371	963.004
ENSGALT0000	general transcription factor IIIC, pol	GTF3C6	0.536286	1058.5
ENSGALT0000	GTP binding protein 1	GTPBP1	0.928587	5391.29
ENSGALT0000	GTP-binding protein 10 (putative)	GTPBP10	0.909902	754.5
ENSGALT0000	GTP binding protein 2	GTPBP2	0.950286	761
ENSGALT0000	GTP binding protein 4	GTPBP4	0.846144	2477
ENSGALT0000	GTP binding protein 5 (putative)	GTPBP5	0.888238	319
ENSGALT0000	GTP binding protein 6 (putative)	GTPBP6	0.957136	184
ENSGALT0000	GTP-binding protein 8 (putative)	GTPBP8	0.870396	405.5
ENSGALT0000	G-2 and S-phase expressed 1	GTSE1	0.935138	382.239
ENSGALT0000	gametocyte specific factor 1	GTSF1	0.428055	61
ENSGALT0000	guanylate cyclase activator 1A (reti	GUCA1A	0.94691	2
ENSGALT0000	guanylate cyclase activator 1B (reti	GUCA1B	0	0
ENSGALT0000	guanylate cyclase activator 1C	GUCA1C	0.828826	0.5
ENSGALT0000	guanylate cyclase 1, soluble, alpha	GUCY1A2	0.873703	42.5
ENSGALT0000	guanylate cyclase 1, soluble, alpha	GUCY1A3	0.943828	584
ENSGALT0000	guanylate cyclase 1, soluble, beta :	GUCY1B2	0.885912	131.5
ENSGALT0000	guanylate cyclase 1, soluble, beta :	GUCY1B3	0.960301	789
ENSGALT0000	guanylate cyclase 2C (heat stable	GUCY2C	0.874365	4.5
ENSGALT0000	guanylate cyclase 2F, retinal	GUCY2F	0.946028	5
ENSGALT0000	GUF1 GTPase homolog (S. cerevis	GUF1	0.946299	273
ENSGALT0000	guanylate kinase 1	GUK1	0.706365	486.095
ENSGALT0000	GULP, engulfment adaptor PTB do	GULP1	0.989985	340
ENSGALT0000	glucuronidase, beta	GUSB	0.932703	1300.5
ENSGALT0000	glucoside xylosyltransferase 1	GXYLT1	0.995841	1272.5
ENSGALT0000	glucoside xylosyltransferase 2	GXYLT2	0.94711	707.5
ENSGALT0000	glycogenin 1	GYG1	0.907951	1309.5

ENSGALT0000 glycogenin 2	GYG2	0.92409	101.5
ENSGALT0000 glycosyltransferase-like 1B	GYLTL1B	0.992163	3480.09
ENSGALT0000 glycophorin C	GYPC	0.717898	59.5
ENSGALT0000 glycogen synthase 2 (liver)	GYS2	0.738693	11
ENSGALT0000 GDNF-inducible zinc finger protein	GZF1	0.964462	454.499
ENSGALT0000 granzyme A (granzyme 1, cytotoxic	GZMA	0.464758	0
ENSGALT0000 granzyme K (granzyme 3; tryptase	GZMK	0.150565	2.5
ENSGALT0000 H1 histone family, member 0	H1F0	0.590867	43.5
ENSGALT0000 H1 histone family, member O, oocy	H1FOO	0.19245	4
ENSGALT0000 Histone H2A-IV	H2A4_CHICK	0.573794	594.883
ENSGALT0000 H2A histone family, member Y	H2AFY	0.814547	1436.99
ENSGALT0000 H2A histone family, member Y2	H2AFY2	0.974279	4335
ENSGALT0000 Histone H2A	H2A-IX	0.0450891	113.017
ENSGALT0000 Histone H2A.Z	H2AZ_CHICK	0.479687	6446.83
ENSGALT0000 histone cluster 1, H2bn	H2B-V	0.640577	20.8805
ENSGALT0000 Histone H2B 1/2/3/4/6	H2B-VII	0.170101	231.712
ENSGALT0000 H3 histone, family 3C	H3F3C	0.740647	35596
ENSGALT0000 H3 histone, family 3A	H3-VIII	0.473513	562.96
ENSGALT0000 germinal histone H4 gene	H4	0.00248832	571.009
ENSGALT0000 histone H4-VII	H4-VII	0.417863	446.278
ENSGALT0000 hexose-6-phosphate dehydrogenas	H6PD	0.99964	540.001
ENSGALT0000 3-hydroxyanthranilate 3,4-dioxygen	HAAO	0.927729	1
ENSGALT0000 hyaluronan binding protein 2	HABP2	0.829421	5.5
ENSGALT0000 hyaluronan binding protein 4	HABP4	0.932132	306.5
ENSGALT0000 HECT domain and ankyrin repeat c	HACE1	0.984908	920.503
ENSGALT0000 2-hydroxyacyl-CoA lyase 1	HACL1	0.954004	340
ENSGALT0000 hydroxyacyl-CoA dehydrogenase	HADH	0.879973	1669.5
ENSGALT0000 hydroxyacyl-CoA dehydrogenase/3	HADHA	0.89441	4981.5
ENSGALT0000 hydroxyacyl-CoA dehydrogenase/3	HADHB	0.913918	3191
ENSGALT0000 hydroxyacylglutathione hydrolase	HAGH	0.837175	324.5
ENSGALT0000 hydroxyacylglutathione hydrolase-li	HAGHL	0.941952	1558
ENSGALT0000 histidine ammonia-lyase	HAL	0.988002	18
ENSGALT0000 heart and neural crest derivatives e	HAND2	0.670211	5
ENSGALT0000 hydroxyacid oxidase (glycolate oxic	HAO1	0.909127	12
ENSGALT0000 hydroxyacid oxidase 2 (long chain)	HAO2	0.496138	7.5
ENSGALT0000 hyaluronan and proteoglycan link p	HAPLN1	0.930203	279.5
ENSGALT0000 hyaluronan and proteoglycan link p	HAPLN2	0.878124	25.5
ENSGALT0000 hyaluronan and proteoglycan link p	HAPLN3	0.9007	221.5
ENSGALT0000 Human accelerated region 1F	HAR1F	?	0
ENSGALT0000 harbinger transposase derived 1	HARBI1	0.919065	317
ENSGALT0000 histidyl-tRNA synthetase	HARS	0.696037	3563.17
ENSGALT0000 histidyl-tRNA synthetase 2, mitoch	HARS2	0.841077	470.384
ENSGALT0000 hyaluronan synthase 2	HAS2	0.9083	395.999
ENSGALT0000 hyaluronan synthase 3	HAS3	0.996158	49
ENSGALT0000 histone acetyltransferase 1	HAT1	0.944359	1072
ENSGALT0000 HAUS augmin-like complex, subun	HAUS1	0.807853	267.5
ENSGALT0000 HAUS augmin-like complex, subun	HAUS2	0.931377	673
ENSGALT0000 HAUS augmin-like complex, subun	HAUS3	0.957573	270
ENSGALT0000 HAUS augmin-like complex, subun	HAUS6	0.939802	1150.48
ENSGALT0000 HAUS augmin-like complex, subun	HAUS8	0.964306	356.5
ENSGALT0000 hepatitis A virus cellular receptor 1	HAVCR1	0.700513	19
ENSGALT0000 hemoglobin, alpha 1	HBAA	0.174547	4795.5
ENSGALT0000 hemoglobin, beta	HBE	0.445228	1954.19
ENSGALT0000 hemoglobin, epsilon 1	HBE1	0.376157	962.035
ENSGALT0000 heparin-binding EGF-like growth fa	HBEGF	0.358516	16.5
ENSGALT0000 hemoglobin, gamma A	HBG1	0.446759	8182.14

ENSGALT0000 hemoglobin, mu	HBM	0.248439	3771.04
ENSGALT0000 HMG-box transcription factor 1	HBP1	0.976676	840
ENSGALT0000 HBS1-like (S. cerevisiae)	HBS1L	0.943563	1189
ENSGALT0000 hepatitis B virus x interacting protei	HBXIP	0.334909	1161.5
ENSGALT0000 hemoglobin, zeta	HBZ	0.423968	2177.53
ENSGALT0000 holocytochrome c synthase	HCCS	0.953505	1019.5
ENSGALT0000 host cell factor C2	HCFC2	0.991359	492.5
ENSGALT0000 hemopoietic cell kinase	HCK	0.185958	17
ENSGALT0000 hematopoietic cell-specific Lyn sub	HCLS1	0.762897	36.5
ENSGALT0000 hyperpolarization activated cyclic n	HCN1	0.671032	21.5
ENSGALT0000 hyperpolarization activated cyclic n	HCN2	0.931508	3269.5
ENSGALT0000 hyperpolarization activated cyclic n	HCN4	0.889451	136.5
ENSGALT0000 hypocretin (orexin) neuropeptide	HCRT	0.539158	7
ENSGALT0000 hypocretin (orexin) receptor 2	HCRTR2	0.56815	1
ENSGALT0000 histone deacetylase 1	HDAC1	0.989526	2726.5
ENSGALT0000 histone deacetylase 11	HDAC11	0.994003	351.5
ENSGALT0000 histone deacetylase 2	HDAC2	0.886543	10252
ENSGALT0000 histone deacetylase 3	HDAC3	0.934674	2102.04
ENSGALT0000 histone deacetylase 4	HDAC4	0.995745	1577.96
ENSGALT0000 histone deacetylase 7	HDAC7	0.92252	2028
ENSGALT0000 histone deacetylase 8	HDAC8	0.883919	2777.5
ENSGALT0000 histone deacetylase 9	HDAC9	0.992932	495.498
ENSGALT0000 histidine decarboxylase	HDC	0.649519	4
ENSGALT0000 HD domain containing 2	HDDC2	0.450341	1059
ENSGALT0000 haloacid dehalogenase-like hydrola	HDHD1	0.889855	234
ENSGALT0000 haloacid dehalogenase-like hydrola	HDHD2	0.827883	516
ENSGALT0000 haloacid dehalogenase-like hydrola	HDHD3	0.638911	1840
ENSGALT0000 high density lipoprotein binding pro	HDLBP	0.961034	36886
ENSGALT0000 highly divergent homeobox	HDX	0.98255	475.5
ENSGALT0000 HEAT repeat containing 1	HEATR1	0.955828	2063.15
ENSGALT0000 HEAT repeat containing 2	HEATR2	0.929389	488.5
ENSGALT0000 HEAT repeat containing 3	HEATR3	0.933211	745.126
ENSGALT0000 HEAT repeat containing 5A	HEATR5A	0.979119	1482.5
ENSGALT0000 HEAT repeat containing 5B	HEATR5B	0.96355	1858.5
ENSGALT0000 HEAT repeat containing 6	HEATR6	0.952875	1252
ENSGALT0000 heme binding protein 1	HEBP1	0.992064	1297
ENSGALT0000 heme binding protein 2	HEBP2	0.656469	8
ENSGALT0000 headcase homolog (Drosophila)	HECA	0.972373	848
ENSGALT0000 HECT domain containing 1	HECTD1	0.965116	3946.53
ENSGALT0000 HECT domain containing 2	HECTD2	0.982356	177
ENSGALT0000 HECT domain containing 3	HECTD3	0.937703	1616
ENSGALT0000 HECT, C2 and WW domain contain	HECW1	0.844342	720.5
ENSGALT0000 HECT, C2 and WW domain contain	HECW2	0.989503	1309
ENSGALT0000 HEG homolog 1 (zebrafish)	HEG1	0.970578	2592.5
ENSGALT0000 helicase (DNA) B	HELB	0.997899	655
ENSGALT0000 helicase, lymphoid-specific	HELLS	0.916398	1128.5
ENSGALT0000 helicase, POLQ-like	HELQ	0.933833	306
ENSGALT0000 helicase with zinc finger	HELZ	0.97921	1864
ENSGALT0000 hemogen	HEMGN	0.407108	2.5
ENSGALT0000 HemK methyltransferase family me	HEMK1	0.931962	276.499
ENSGALT0000 HEN1 methyltransferase homolog	HENMT1	0.968554	88.5
ENSGALT0000 Hep21 protein	HEP21	0.649519	0.5
ENSGALT0000 hepatic and glial cell adhesion mole	HEPACAM	0.794065	7
ENSGALT0000 HEPACAM family member 2	HEPACAM2	0.553616	2.5
ENSGALT0000 hephaestin	HEPH	0.995926	1234.02
ENSGALT0000 hephaestin-like 1	HEPHL1	0.6535	2.5

ENSGALT0000	hect (homologous to the E6-AP (UI	HERC1	0.962731	7052
ENSGALT0000	hect domain and RLD 2	HERC2	0.937461	8972.62
ENSGALT0000	hect domain and RLD 3	HERC3	0.975973	1379.49
ENSGALT0000	hect domain and RLD 4	HERC4	0.918576	798.503
ENSGALT0000	homocysteine-inducible, endoplasn	HERPUD1	0.962592	1624.5
ENSGALT0000	HERPUD family member 2	HERPUD2	0.916375	2677
ENSGALT0000	hairy and enhancer of split 1, (Dros	HES1	0.822642	507.497
ENSGALT0000	hairy and enhancer of split 5 (Drosc	HES5	0.625382	237.675
ENSGALT0000	hairy and enhancer of split 6 (Drosc	HES6	0.807303	161
ENSGALT0000	hairy and enhancer of split 7 (Drosc	HES7	0.880628	26.7125
ENSGALT0000	hexosaminidase A (alpha polypepti	HEXA	0.987956	4290
ENSGALT0000	hexosaminidase B (beta polypeptid	HEXB	0.912484	782.5
ENSGALT0000	hexosaminidase (glycosyl hydrolas	HEXDC	0.988059	532
ENSGALT0000	hairy/enhancer-of-split related with	HEY1	0.856352	7924.5
ENSGALT0000	hairy/enhancer-of-split related with	HEY2	0.52837	272.5
ENSGALT0000	hairy/enhancer-of-split related with	HEYL	0.781234	390
ENSGALT0000	homogentisate 1,2-dioxygenase	HGD	0.89781	5.5
ENSGALT0000	hepatocyte growth factor (hepapoie	HGF	0.494516	382.501
ENSGALT0000	HGF activator	HGFAC	0.353553	1
ENSGALT0000	hepatocyte growth factor-regulated	HGS	0.831201	3400.5
ENSGALT0000	heparan-alpha-glucosaminide N-ac	HGSNAT	0.959756	608
ENSGALT0000	hedgehog acyltransferase	HHAT	0.996363	268
ENSGALT0000	hedgehog acyltransferase-like	HHATL	0.839482	525
ENSGALT0000	hematopoietically expressed home	HHEX	0.762318	47
ENSGALT0000	hedgehog interacting protein	HHIP	0.521284	134
ENSGALT0000	HHIP-like 1	HHIPL1	0.940204	489
ENSGALT0000	HHIP-like 2	HHIPL2	0.83951	14
ENSGALT0000	HERV-H LTR-associating 2	HHLA2	0.865492	174.5
ENSGALT0000	hippocampus abundant transcript 1	HIAT1	0.967018	1477.5
ENSGALT0000	3-hydroxyisobutyrate dehydrogena	HIBADH	0.94053	612
ENSGALT0000	3-hydroxyisobutyryl-CoA hydrolase	HIBCH	0.870952	1528
ENSGALT0000	hypermethylated in cancer 2	HIC2	0.985353	659
ENSGALT0000	hypoxia inducible factor 1, alpha su	HIF1A	0.945482	8541.09
ENSGALT0000	hypoxia inducible factor 1, alpha su	HIF1AN	0.942165	639
ENSGALT0000	HIG1 hypoxia inducible domain fan	HIGD1A	0.385284	741
ENSGALT0000	HIG1 hypoxia inducible domain fan	HIGD2A	0.0411224	2416
ENSGALT0000	histone H4 transcription factor	HINFP	0.85147	477.5
ENSGALT0000	histidine triad nucleotide binding pr	HINT1	0.515962	3339.54
ENSGALT0000	histidine triad nucleotide binding pr	HINT3	0.531028	124.5
ENSGALT0000	HINTW	HINTW	0.521533	3858.33
ENSGALT0000	huntingtin interacting protein 1	HIP1	0.723242	5942.13
ENSGALT0000	huntingtin interacting protein 1 rela	HIP1R	0.948566	1709.03
ENSGALT0000	homeodomain interacting protein ki	HIPK1	0.997972	4880.5
ENSGALT0000	homeodomain interacting protein ki	HIPK2	0.978173	4599.97
ENSGALT0000	homeodomain interacting protein ki	HIPK3	0.96323	1522
ENSGALT0000	HIR histone cell cycle regulation de	HIRA	0.979083	2154.97
ENSGALT0000	histone 1, H1c	HIST1H1C	0.263619	4.81128
ENSGALT0000	histone cluster 1, H2bo	HIST1H2BO	0.126839	123.768
ENSGALT0000	histone cluster 2, H2ac	HIST2H2AC	0.194418	24.1962
ENSGALT0000	human immunodeficiency virus typ	HIVEP1	0.99679	1967.5
ENSGALT0000	human immunodeficiency virus typ	HIVEP2	0.894651	748.498
ENSGALT0000	human immunodeficiency virus typ	HIVEP3	0.914036	237.5
ENSGALT0000	Holliday junction recognition protein	HJURP	0.919724	319.999
ENSGALT0000	hexokinase 1	HK1	0.896841	7548.58
ENSGALT0000	hexokinase 2	HK2	0.992356	3767.19
ENSGALT0000	hexokinase 3 (white cell)	HK3	0.466498	20.5

ENSGALT0000	hexokinase domain containing 1	HKDC1	0.810055	272.5
ENSGALT0000	holocarboxylase synthetase (biotin-	HLCS	0.953694	413
ENSGALT0000	hepatic leukemia factor	HLF	0.992297	232
ENSGALT0000	histocompatibility (minor) 13	HM13	0.921593	5698
ENSGALT0000	homeobox containing 1	HMBOX1	0.997338	913
ENSGALT0000	hydroxymethylbilane synthase	HMBS	0.858884	1705
ENSGALT0000	hemicentin 1	HMCN1	0.996589	6041.5
ENSGALT0000	high-mobility group 20A	HMG20A	0.92799	2043.5
ENSGALT0000	high mobility group AT-hook 2	HMGA2	0.9931	49.5
ENSGALT0000	high mobility group box 1	HMGB1	0.89435	8092.19
ENSGALT0000	high mobility group box 2	HMGB2	0.822067	4702.5
ENSGALT0000	high mobility group box 3	HMGB3	0.717014	1903
ENSGALT0000	3-hydroxymethyl-3-methylglutaryl-C	HMGCL	0.730459	1129.49
ENSGALT0000	3-hydroxymethyl-3-methylglutaryl-C	HMGCLL1	0.660213	260.5
ENSGALT0000	3-hydroxy-3-methylglutaryl-CoA rec	HMGCR	0.828646	2011.03
ENSGALT0000	3-hydroxy-3-methylglutaryl-CoA sy	HMGCS1	0.657954	1314.99
ENSGALT0000	3-hydroxy-3-methylglutaryl-CoA sy	HMGCS2	0.819553	4.5
ENSGALT0000	high mobility group nucleosome bir	HMGN1	0.910247	1959
ENSGALT0000	high mobility group nucleosomal bir	HMGN2	0.936742	14658.5
ENSGALT0000	high mobility group nucleosomal bir	HMGN3	0.947739	2073.5
ENSGALT0000	high mobility group nucleosome bir	HMGN5	0.684652	3664.5
ENSGALT0000	HMG box domain containing 3	HMGXB3	0.969693	1107.5
ENSGALT0000	HMG box domain containing 4	HMGXB4	0.96604	799.5
ENSGALT0000	histocompatibility (minor) HA-1	HMHA1	0.963321	105
ENSGALT0000	hyaluronan-mediated motility recep	HMMR	0.954282	506.5
ENSGALT0000	heme oxygenase (decycling) 1	HMOX1	0.522942	273
ENSGALT0000	heme oxygenase (decycling) 2	HMOX2	0.844738	1855.5
ENSGALT0000	H6 family homeobox 1	HMX1	0.620735	60.9955
ENSGALT0000	H6 family homeobox 3	HMX3	0.495766	529.218
ENSGALT0000	hematological and neurological exp	HN1	0.677539	5595
ENSGALT0000	hematological and neurological exp	HN1L	0.957353	2426.54
ENSGALT0000	HNF1 homeobox A	HNF1A	0.991821	44
ENSGALT0000	hepatocyte nuclear factor 4, alpha	HNF4A	0.886894	4.5
ENSGALT0000	hepatic nuclear factor 4beta	HNF4beta	0.790199	5
ENSGALT0000	hepatocyte nuclear factor 4, gamm	HNF4G	0.65697	2
ENSGALT0000	histamine N-methyltransferase	HNMT	0.785001	13.5
ENSGALT0000	heterogeneous nuclear ribonucleor	HNRNPA0	0.817583	5904.5
ENSGALT0000	heterogeneous nuclear ribonucleor	HNRNPA2B1	0.775557	17616
ENSGALT0000	heterogeneous nuclear ribonucleor	HNRNPA3	0.803949	17389.4
ENSGALT0000	heterogeneous nuclear ribonucleor	HNRNPAB	0.895617	6865.54
ENSGALT0000	heterogeneous nuclear ribonucleor	HNRNPD	0.793877	2447
ENSGALT0000	heterogeneous nuclear ribonucleor	HNRNPH1	0.724917	27774.4
ENSGALT0000	heterogeneous nuclear ribonucleor	HNRNPH3	0.655896	13497.8
ENSGALT0000	heterogeneous nuclear ribonucleor	HNRNPK	0.923881	8768.43
ENSGALT0000	heterogeneous nuclear ribonucleor	HNRNPM	0.883805	9186.17
ENSGALT0000	heterogeneous nuclear ribonucleor	HNRNPR	0.915372	8266.1
ENSGALT0000	heterogeneous nuclear ribonucleor	HNRNPU	0.94593	9081.86
ENSGALT0000	heterogeneous nuclear ribonucleor	HNRPDL	0.840492	8522.01
ENSGALT0000	hypothetical protein LOC426516	HNRPK	0.969174	2314.07
ENSGALT0000	heterogeneous nuclear ribonucleor	HNRPLL	0.932191	2179.5
ENSGALT0000	4-hydroxy-2-oxoglutarate aldolase	HOGA1	0.781934	6.5
ENSGALT0000	homer homolog 1 (Drosophila)	HOMER1	0.954456	136.5
ENSGALT0000	homer homolog 2 (Drosophila)	HOMER2	0.942507	463
ENSGALT0000	homer homolog 3 (Drosophila)	HOMER3	0.943953	711.5
ENSGALT0000	hook homolog 1 (Drosophila)	HOOK1	0.996193	456
ENSGALT0000	hook homolog 3 (Drosophila)	HOOK3	0.887781	278

ENSGALT0000	HOP homeobox	HOPX	0.751341	73.0001
ENSGALT0000	HORMA domain containing 1	HORMAD1	0.985576	144
ENSGALT0000	HORMA domain containing 2	HORMAD2	0.89355	2.5
ENSGALT0000	homeobox A11	HOXA11	0.464758	0
ENSGALT0000	homeobox A13	HOXA13	?	0
ENSGALT0000	homeobox A3	HOXA3	0.697633	3.5
ENSGALT0000	homeobox A4	HOXA4	0.649519	0.5
ENSGALT0000	homeobox A7	HOXA7	0.464758	0.5
ENSGALT0000	homeobox A9	HOXA9	?	0
ENSGALT0000	homeobox B13	HOXB13	?	0
ENSGALT0000	homeo box B3	HOXB3	0.574695	1.5
ENSGALT0000	Homeobox protein Hox-B4	HOXB4	0.649519	0.5
ENSGALT0000	Homeobox protein Hox-B5	HOXB5	0.464758	0
ENSGALT0000	homeobox B7	HOXB7	0.850701	2
ENSGALT0000	homeobox B8	HOXB8	0.353553	0.5
ENSGALT0000	homeobox C10	HOXC10	?	0
ENSGALT0000	homeobox C11	HOXC11	0.464758	0
ENSGALT0000	homeobox C12	HOXC12	?	0
ENSGALT0000	homeobox C13	HOXC13	?	0
ENSGALT0000	homeobox C9	HOXC9	?	0
ENSGALT0000	homeobox D12	HOXD12	?	0
ENSGALT0000	homeobox D13	HOXD13	?	0
ENSGALT0000	homeobox D3	HOXD3	0.898356	1
ENSGALT0000	homeobox D4	HOXD4	0.722096	0.5
ENSGALT0000	homeobox D8	HOXD8	0.888194	4
ENSGALT0000	heterochromatin protein 1, binding	HP1BP3	0.950952	6022
ENSGALT0000	hippocalcin	HPCA	0.179324	13.011
ENSGALT0000	hippocalcin-like 1	HPCAL1	0.526495	949.487
ENSGALT0000	hippocalcin like 4	HPCAL4	0.792026	145
ENSGALT0000	4-hydroxyphenylpyruvate dioxygen	HPD	0.799979	96.5
ENSGALT0000	4-hydroxyphenylpyruvate dioxygen	HPDL	0.937806	249
ENSGALT0000	hydroxyprostaglandin dehydrogena	HPGD	0.196285	33.5
ENSGALT0000	hematopoietic prostaglandin D syn	HPGDS	0.0218266	4
ENSGALT0000	hypoxanthine phosphoribosyltransf	HPRT1	0.844652	335.999
ENSGALT0000	Hermansky-Pudlak syndrome 1	HPS1	0.960034	1180.01
ENSGALT0000	Hermansky-Pudlak syndrome 3	HPS3	0.98754	840.5
ENSGALT0000	Hermansky-Pudlak syndrome 4	HPS4	0.949273	414.5
ENSGALT0000	Hermansky-Pudlak syndrome 5	HPS5	0.974192	765
ENSGALT0000	Hermansky-Pudlak syndrome 6	HPS6	0.939542	2101.5
ENSGALT0000	heparanase	HPSE	0.985234	116.5
ENSGALT0000	heparanase 2	HPSE2	0.845653	104
ENSGALT0000	hemopexin	HPX	0.938786	7
ENSGALT0000	v-Ha-ras Harvey rat sarcoma viral	HRAS	0.222212	7117.76
ENSGALT0000	HRAS-like suppressor	HRASLS	0.888314	585
ENSGALT0000	histidine-rich glycoprotein	HRG	0.464758	0.5
ENSGALT0000	histamine receptor H2	HRH2	0.737616	18
ENSGALT0000	histamine receptor H3	HRH3	0.883315	16.5
ENSGALT0000	histamine receptor H4	HRH4	0.464758	0
ENSGALT0000	heat-responsive protein 12	HRSP12	0.786583	399
ENSGALT0000	HCLS1 binding protein 3	HS1BP3	0.990518	110.5
ENSGALT0000	heparan sulfate 2-O-sulfotransfera	HS2ST1	0.97199	1201
ENSGALT0000	heparan sulfate (glucosamine) 3-O	HS3ST1	0.587782	474
ENSGALT0000	heparan sulfate (glucosamine) 3-O	HS3ST2	0.616602	203.986
ENSGALT0000	heparan sulfate (glucosamine) 3-O	HS3ST4	0.654997	61.9726
ENSGALT0000	heparan sulfate (glucosamine) 3-O	HS3ST5	0.882056	31
ENSGALT0000	heparan sulfate (glucosamine) 3-O	HS3ST6	0.689896	1926.54

ENSGALT0000	Heparan-sulfate 6-O-sulfotransfera	HS6ST1	0.956659	2139.82
ENSGALT0000	heparan sulfate 6-O-sulfotransferas	HS6ST2	0.862226	1321.96
ENSGALT0000	heparan sulfate 6-O-sulfotransferas	HS6ST3	0.863224	24.2244
ENSGALT0000	heat shock factor binding protein 1	HSBP1	0.609471	1455
ENSGALT0000	heat shock factor binding protein 1-	HSBP1L1	0.951716	185.5
ENSGALT0000	HscB iron-sulfur cluster co-chaperc	HSCB	0.536388	858.5
ENSGALT0000	hydroxysteroid (11-beta) dehydroge	HSD11B1	0.649519	2
ENSGALT0000	hydroxysteroid (11-beta) dehydroge	HSD11B1L	0.975643	649.002
ENSGALT0000	hydroxysteroid (11-beta) dehydroge	HSD11B2	0.614658	14
ENSGALT0000	hydroxysteroid (17-beta) dehydroge	HSD17B10	0.714941	1669.5
ENSGALT0000	hydroxysteroid (17-beta) dehydroge	HSD17B11	0.991918	512
ENSGALT0000	hydroxysteroid (17-beta) dehydroge	HSD17B12	0.940798	1512.5
ENSGALT0000	hydroxysteroid (17-beta) dehydroge	HSD17B4	0.953428	1520.51
ENSGALT0000	hydroxysteroid (17-beta) dehydroge	HSD17B7	0.551397	304.5
ENSGALT0000	hydroxy-delta-5-steroid dehydroger	HSD3B1	0.759263	20.0207
ENSGALT0000	hydroxy-delta-5-steroid dehydroger	HSD3B7	0.464758	0
ENSGALT0000	hydroxysteroid dehydrogenase like	HSDL1	0.988236	425
ENSGALT0000	hydroxysteroid dehydrogenase like	HSDL2	0.94303	1976.5
ENSGALT0000	heat shock transcription factor 1	HSF1	0.977263	366
ENSGALT0000	heat shock transcription factor 2	HSF2	0.904986	1549.53
ENSGALT0000	heat shock transcription factor 2 bir	HSF2BP	0.952691	116
ENSGALT0000	heat shock factor protein 3	HSF3	0.989089	658.499
ENSGALT0000	heat shock transcription factor 4	HSF4	0.8762	5
ENSGALT0000	\N	HSP25	0.182524	392.727
ENSGALT0000	heat shock protein 90kDa alpha (cy	HSP90AB1	0.873431	21712.4
ENSGALT0000	heat shock protein 90kDa beta (Grp	HSP90B1	0.970592	21810
ENSGALT0000	heat shock 70kDa protein 12A	HSPA12A	0.839954	1164.5
ENSGALT0000	heat shock protein 70kDa family, m	HSPA13	0.925662	328
ENSGALT0000	Heat shock 70 kDa protein 14	HSPA14	0.903872	970.005
ENSGALT0000	heat shock 70kDa protein 2	HSPA2	0.976408	7284.37
ENSGALT0000	heat shock 70kDa protein 4	HSPA4	0.952083	4583
ENSGALT0000	heat shock 70kDa protein 4-like	HSPA4L	0.900389	2598.5
ENSGALT0000	heat shock 70kDa protein 5 (glucos	HSPA5	0.966764	25657.5
ENSGALT0000	heat shock 70kDa protein 8	HSPA8	0.902645	45906.3
ENSGALT0000	heat shock 70kDa protein 9 (mortal	HSPA9	0.868141	6354.5
ENSGALT0000	heat shock 27kDa protein 1	HSPB1	0.842593	425.499
ENSGALT0000	heat shock protein family B (small),	HSPB11	0.822167	242
ENSGALT0000	heat shock 27kDa protein 2	HSPB2	0.889829	7
ENSGALT0000	heat shock 27kDa protein 3	HSPB3	0.696461	0.5
ENSGALT0000	heat shock 27kDa protein family, m	HSPB7	0.737648	7.5
ENSGALT0000	heat shock 22kDa protein 8	HSPB8	0.893665	239.5
ENSGALT0000	HSPB (heat shock 27kDa) associat	HSPBAP1	0.985883	472
ENSGALT0000	heat shock 60kDa protein 1 (chape	HSPD1	0.734417	6886
ENSGALT0000	heat shock 10kDa protein 1 (chape	HSPE1	0.660403	2542.01
ENSGALT0000	heparan sulfate proteoglycan 2	HSPG2	0.973875	14906
ENSGALT0000	heat shock 105kDa/110kDa protein	HSPH1	0.960914	1388
ENSGALT0000	HIV-1 Tat interactive protein 2, 30kl	HTATIP2	0.395942	558
ENSGALT0000	HIV-1 Tat specific factor 1	HTATSF1	0.969894	1172.5
ENSGALT0000	5-hydroxytryptamine (serotonin) rec	HTR1A	0.556899	391
ENSGALT0000	5-hydroxytryptamine (serotonin) rec	HTR1D	0.988176	57
ENSGALT0000	5-hydroxytryptamine (serotonin) rec	HTR1E	0.463787	10.5
ENSGALT0000	5-hydroxytryptamine (serotonin) rec	HTR1F	0.776616	1
ENSGALT0000	5-hydroxytryptamine (serotonin) rec	HTR2A	0.823665	8.5
ENSGALT0000	5-hydroxytryptamine (serotonin) rec	HTR2C	0.870078	4
ENSGALT0000	5-hydroxytryptamine (serotonin) rec	HTR3A	0.595719	65.5
ENSGALT0000	5-hydroxytryptamine (serotonin) rec	HTR5A	0.631223	0

ENSGALT0000	5-hydroxytryptamine (serotonin) re	HTR6	0.60304	9.94987
ENSGALT0000	5-hydroxytryptamine (serotonin) re	HTR7	0.859361	9.5
ENSGALT0000	HtrA serine peptidase 1	HTRA1	0.718725	515.497
ENSGALT0000	HtrA serine peptidase 2	HTRA2	0.720636	789
ENSGALT0000	HtrA serine peptidase 3	HTRA3	0.977299	139
ENSGALT0000	huntingtin	HTT	0.970414	1939.47
ENSGALT0000	hormonally up-regulated Neu-asso	HUNK	0.887566	314
ENSGALT0000	HUS1 checkpoint homolog (S. pom	HUS1	0.957021	322
ENSGALT0000	hydrogen voltage-gated channel 1	HVCN1	0.990668	3169.04
ENSGALT0000	hyaluronoglucosaminidase 1	HYAL1	0.895641	721.5
ENSGALT0000	hyaluronoglucosaminidase 2	HYAL2	0.834032	1770
ENSGALT0000	hyaluronoglucosaminidase pseudo	HYALP1	?	0
ENSGALT0000	axonemal central pair apparatus pr	HYDIN	0.857046	164.5
ENSGALT0000	hydroxypyruvate isomerase (putativ	HYI	0.490839	792
ENSGALT0000	hydrolethalus syndrome 1	HYLS1	0.74402	480.831
ENSGALT0000	hypoxia up-regulated 1	HYOU1	0.976126	6969.41
ENSGALT0000	isoamyl acetate-hydrolyzing estera	IAH1	0.65311	1339
ENSGALT0000	islet amyloid polypeptide	IAPP	0.00893133	9.5
ENSGALT0000	isoleucyl-tRNA synthetase	IARS	0.926009	3057
ENSGALT0000	isoleucyl-tRNA synthetase 2, mitoc	IARS2	0.918619	1678
ENSGALT0000	IBA57, iron-sulfur cluster assembly	IBA57	0.936932	950.496
ENSGALT0000	integrin-binding sialoprotein	IBSP	?	0
ENSGALT0000	inhibitor of Bruton agammaglobulin	IBTK	0.977845	1569.5
ENSGALT0000	islet cell autoantigen 1, 69kDa	ICA1	0.999873	735.5
ENSGALT0000	intestinal cell (MAK-like) kinase	ICK	0.92687	920
ENSGALT0000	isoprenylcysteine carboxyl methyltr	ICMT	0.879143	1246.46
ENSGALT0000	inducible T-cell co-stimulator	ICOS	0.649519	0.5
ENSGALT0000	inducible T-cell co-stimulator ligand	ICOSLG	0.868324	98.5
ENSGALT0000	immature colon carcinoma transcri	ICT1	0.684279	635
ENSGALT0000	inhibitor of DNA binding 1, dominar	ID1	0.531542	1709.5
ENSGALT0000	inhibitor of DNA binding 2, dominar	ID2	0.73549	6010.11
ENSGALT0000	inhibitor of DNA binding 4, dominar	ID4	0.618232	2135.16
ENSGALT0000	isocitrate dehydrogenase 1 (NADP	IDH1	0.904789	8046
ENSGALT0000	isocitrate dehydrogenase 3 (NAD+)	IDH3A	0.950501	1480.52
ENSGALT0000	isocitrate dehydrogenase 3, beta su	IDH3B	0.813735	3309.84
ENSGALT0000	isopentenyl-diphosphate delta isom	IDI1	0.495453	627
ENSGALT0000	iduronate 2-sulfatase	IDS	0.996028	562
ENSGALT0000	iduronidase, alpha-L-	IDUA	0.96556	887
ENSGALT0000	immediate early response 5	IER5	0.428287	353.291
ENSGALT0000	intermediate filament family orphan	IFFO1	0.980825	1257.5
ENSGALT0000	ISG12-1 protein-like	IFI27L2	0.176854	367.5
ENSGALT0000	interferon, gamma-inducible protei	IFI30	0.209739	76
ENSGALT0000	interferon-induced protein 35	IFI35	0.742191	423.5
ENSGALT0000	interferon induced with helicase C	IFIH1	0.999842	111.5
ENSGALT0000	interferon induced transmembrane	IFITM10	0.655449	52.5
ENSGALT0000	interferon induced transmembrane	IFITM5	0.915243	55.5
ENSGALT0000	interferon	IFNA3	0.949722	147.555
ENSGALT0000	interferon (alpha, beta and omega)	IFNAR1	0.925747	510.5
ENSGALT0000	interferon (alpha, beta and omega)	IFNAR2	0.948327	950.5
ENSGALT0000	interferon beta	IFNB	0.898356	1
ENSGALT0000	interferon, gamma	IFNG	?	0
ENSGALT0000	interferon gamma receptor 1	IFNGR1	0.962191	247
ENSGALT0000	interferon gamma receptor 2 (interf	IFNGR2	0.993825	1107
ENSGALT0000	interferon-related developmental re	IFRD1	0.893515	2037
ENSGALT0000	intraflagellar transport 122 homolog	IFT122	0.985494	2504.5
ENSGALT0000	intraflagellar transport 140 homolog	IFT140	0.990814	1690.5

ENSGALT0000 intraflagellar transport 172 homolo IFT172	0.992311	3747.5
ENSGALT0000 intraflagellar transport 20 homolog IFT20	0.954135	1400
ENSGALT0000 intraflagellar transport 27 homolog IFT27	0.897805	279
ENSGALT0000 intraflagellar transport 43 homolog IFT43	0.804721	204
ENSGALT0000 intraflagellar transport 46 homolog IFT46	0.995588	1009
ENSGALT0000 intraflagellar transport 52 homolog IFT52	0.949388	990.492
ENSGALT0000 intraflagellar transport 57 homolog IFT57	0.930444	1014
ENSGALT0000 intraflagellar transport 74 homolog IFT74	0.996227	422.5
ENSGALT0000 intraflagellar transport 80 homolog IFT80	0.996924	1583.49
ENSGALT0000 intraflagellar transport 81 homolog IFT81	0.998024	672
ENSGALT0000 intraflagellar transport 88 homolog IFT88	0.951345	849.5
ENSGALT0000 immunoglobulin (CD79A) binding p IGBP1	0.619797	1272.5
ENSGALT0000 immunoglobulin superfamily, DCC IGDCC3	0.971956	1222.01
ENSGALT0000 immunoglobulin superfamily, DCC IGDCC4	0.999785	2017
ENSGALT0000 insulin-like growth factor 1 (somato IGF1	?	0
ENSGALT0000 insulin-like growth factor 1 receptor IGF1R	0.987222	6780.24
ENSGALT0000 insulin-like growth factor 2 (somato IGF2	0.837425	106
ENSGALT0000 insulin-like growth factor 2 mRNA b IGF2BP1	0.993447	3488.5
ENSGALT0000 insulin-like growth factor 2 mRNA b IGF2BP2	0.998983	2674.48
ENSGALT0000 insulin-like growth factor 2 mRNA b IGF2BP3	0.980836	6772.5
ENSGALT0000 insulin-like growth factor 2 receptor IGF2R	0.986216	2061.51
ENSGALT0000 insulin-like growth factor binding pr IGFALS	0.724567	29
ENSGALT0000 insulin-like growth factor binding pr IGFBP1	0.716497	5.5
ENSGALT0000 insulin-like growth factor binding pr IGFBP2	0.837842	3802.94
ENSGALT0000 insulin-like growth factor binding pr IGFBP3	0.929675	102.5
ENSGALT0000 insulin-like growth factor binding pr IGFBP5	0.722635	1850.99
ENSGALT0000 insulin-like growth factor binding pr IGFBP7	0.901901	1912
ENSGALT0000 immunoglobulin-like and fibronectir IGFN1	0.521698	904.5
ENSGALT0000 immunoglobulin mu binding protein IGHMBP2	0.939533	1037
ENSGALT0000 immunoglobulin J polypeptide, linke IGJ	0.815415	9.1894
ENSGALT0000 immunoglobulin superfamily, memb IGSF1	0.814911	2.5
ENSGALT0000 immunoglobulin superfamily, memb IGSF10	0.848605	330.5
ENSGALT0000 immunoglobulin superfamily, memb IGSF11	0.727485	91.5
ENSGALT0000 immunoglobin superfamily, membe IGSF21	0.794874	163
ENSGALT0000 immunoglobulin superfamily, memb IGSF3	0.947611	4701.67
ENSGALT0000 immunoglobulin superfamily, memb IGSF5	0.805648	13.5
ENSGALT0000 immunoglobulin superfamily, memb IGSF6	0.927592	59.5
ENSGALT0000 immunoglobulin superfamily, memb IGSF9	0.988875	8291.26
ENSGALT0000 immunoglobulin superfamily, memb IGSF9B	0.859928	244.5
ENSGALT0000 Indian hedgehog homolog IHH	0.164317	0
ENSGALT0000 IK cytokine, down-regulator of HLA IK	0.762088	2985
ENSGALT0000 IKBKB interacting protein IKBIP	0.991878	261.5
ENSGALT0000 inhibitor of kappa light polypeptide IKBKAP	0.904582	833.993
ENSGALT0000 inhibitor of kappa light polypeptide IKBKB	0.96106	891.495
ENSGALT0000 inhibitor of kappa light polypeptide IKBKE	0.965106	37.5
ENSGALT0000 IKAROS family zinc finger 1 (Ikaros IKZF1	0.744025	10
ENSGALT0000 IKAROS family zinc finger 2 (Helios IKZF2	0.992526	529.445
ENSGALT0000 lymphoid transcription factor IKZF3	0.685306	73.0544
ENSGALT0000 zinc finger protein, subfamily 1A, 5 IKZF5	0.993072	369.999
ENSGALT0000 interleukin 10 IL10	0.19245	1
ENSGALT0000 interleukin 10 receptor, alpha IL10RA	0.913872	82
ENSGALT0000 interleukin 10 receptor, beta IL10RB	0.986315	254.5
ENSGALT0000 interleukin 11 receptor, alpha IL11RA	0.795846	568
ENSGALT0000 interleukin 12A (natural killer cell st IL12A	0.985038	2.5
ENSGALT0000 interleukin 12B (natural killer cell st IL12B	0.554363	0.5
ENSGALT0000 interleukin 12 receptor, beta 2 IL12RB2	0.90773	1.5

ENSGALT0000 interleukin 13	IL13	0.464758	0
ENSGALT0000 interleukin 13 receptor, alpha 1	IL13RA1	0.994853	76
ENSGALT0000 interleukin 13 receptor, alpha 2	IL13RA2	0.900922	20.5453
ENSGALT0000 interleukin 15	IL15	0.716057	2.5
ENSGALT0000 interleukin 16 (lymphocyte chemoa	IL16	0.848021	123.5
ENSGALT0000 interleukin 17B	IL17B	0.865211	2.5
ENSGALT0000 interleukin 17D	IL17D	0.896679	22
ENSGALT0000 interleukin 17F	IL17F	0.464758	0
ENSGALT0000 interleukin 17 receptor A	IL17RA	0.994587	544.497
ENSGALT0000 interleukin 17 receptor D	IL17RD	0.821135	722.999
ENSGALT0000 interleukin 17 receptor E-like	IL17REL	0.165497	5
ENSGALT0000 interleukin 18 (interferon-gamma-in	IL18	0.902263	6.5
ENSGALT0000 interleukin 18 receptor 1	IL18R1	0.932599	16.5
ENSGALT0000 interleukin 18 receptor accessory p	IL18RAP	0.649519	0.5
ENSGALT0000 interleukin 19	IL19	?	0
ENSGALT0000 interleukin 1, beta	IL1B	0.493354	2
ENSGALT0000 interleukin 1 receptor, type I	IL1R1	0.97386	40
ENSGALT0000 interleukin 1 receptor, type II	IL1R2	0.757073	1
ENSGALT0000 interleukin 1 receptor accessory pro	IL1RAP	0.981332	1266
ENSGALT0000 interleukin 1 receptor accessory pro	IL1RAPL1	0.990919	58
ENSGALT0000 interleukin 1 receptor accessory pro	IL1RAPL2	0.611696	244.5
ENSGALT0000 interleukin 1 receptor-like 1	IL1RL1	0.865869	19
ENSGALT0000 interleukin 1 receptor-like 2	IL1RL2	0.881321	155
ENSGALT0000 interleukin 2	IL2	?	0
ENSGALT0000 interleukin 20 receptor, alpha	IL20RA	0.955431	60
ENSGALT0000 interleukin 20 receptor beta	IL20RB	0.268957	0.5
ENSGALT0000 interleukin 21	IL21	?	0
ENSGALT0000 interleukin 21 receptor	IL21R	0.455369	1.5
ENSGALT0000 interleukin 22	IL22	0.649519	0.5
ENSGALT0000 interleukin 22 receptor, alpha 1	IL22RA1	0.686782	363
ENSGALT0000 interleukin 22 receptor, alpha 2	IL22RA2	0.0741325	3
ENSGALT0000 interleukin 23 receptor	IL23R	0.93777	11.5
ENSGALT0000 interleukin 26	IL26	?	0
ENSGALT0000 interleukin 28B (interferon, lambda	IL28B	0.853815	1
ENSGALT0000 interleukin 28 receptor, alpha (inter	IL28RA	0.978657	65
ENSGALT0000 interleukin 2 receptor, alpha	IL2RA	0.649519	0.5
ENSGALT0000 interleukin 2 receptor, beta	IL2RB	0.907389	4
ENSGALT0000 interleukin 2 receptor, gamma (sev	IL2RG	0.419222	39
ENSGALT0000 interleukin 3	IL3	?	0
ENSGALT0000 interleukin 31 receptor A	IL31RA	0.883992	15.5
ENSGALT0000 interleukin 4	IL4	0.464758	0
ENSGALT0000 interleukin 4 induced 1	IL4I1	0.853815	2
ENSGALT0000 interleukin 4 receptor	IL4R	0.996604	151.5
ENSGALT0000 interleukin 5	IL5	?	0
ENSGALT0000 interleukin 5 receptor, alpha	IL5RA	0.982463	31.5
ENSGALT0000 interleukin 6 (interferon, beta 2)	IL6	0.821187	1.5
ENSGALT0000 interleukin 6 signal transducer (gp1	IL6ST	0.929957	761.5
ENSGALT0000 interleukin 7	IL7	0.464758	0
ENSGALT0000 interleukin 7 receptor	IL7R	?	0
ENSGALT0000 interleukin 8	IL8	0.853815	1
ENSGALT0000 interleukin 9	IL9	?	0
ENSGALT0000 interleukin 9 receptor	IL9R	0.319424	0
ENSGALT0000 immunoglobulin-like domain contail	ILDR1	0.993538	840.5
ENSGALT0000 immunoglobulin-like domain contail	ILDR2	0.997192	796.51
ENSGALT0000 interleukin enhancer binding factor	ILF2	0.839245	9843
ENSGALT0000 integrin-linked kinase	ILK	0.814902	4007

ENSGALT0000	integrin-linked kinase-associated s	ILKAP	0.698595	1561.5
ENSGALT0000	IMP1 inner mitochondrial membran	IMMP1L	0.947062	178.5
ENSGALT0000	IMP2 inner mitochondrial membran	IMMP2L	0.953886	83.5
ENSGALT0000	inner membrane protein, mitochonc	IMMT	0.892807	3517
ENSGALT0000	IMP3, U3 small nucleolar ribonucle	IMP3	0.193267	1002
ENSGALT0000	inositol(myo)-1(or 4)-monophospha	IMPA1	0.880982	586
ENSGALT0000	inositol(myo)-1(or 4)-monophospha	IMPA2	0.986401	440.5
ENSGALT0000	Impact homolog (mouse)	IMPACT	0.857515	133.5
ENSGALT0000	inositol monophosphatase domain	IMPAD1	0.893045	1050.5
ENSGALT0000	IMP (inosine 5'-monophosphate) de	IMPDH2	0.762345	6025.53
ENSGALT0000	interphotoreceptor matrix proteogly	IMPG1	0.818488	8
ENSGALT0000	interphotoreceptor matrix proteogly	IMPG2	0.992581	162.5
ENSGALT0000	InaD-like (Drosophila)	INADL	0.997768	2058
ENSGALT0000	inner centromere protein antigens '	INCENP	0.897095	2089.03
ENSGALT0000	indoleamine-pyrrole 2,3 dioxygenas	INDOL1	0.643623	0.5
ENSGALT0000	inverted formin, FH2 and WH2 dom	INF2	0.942417	174.5
ENSGALT0000	inhibitor of growth family, member '	ING1	0.959262	571.5
ENSGALT0000	inhibitor of growth family, member 2	ING2	0.990659	177.5
ENSGALT0000	inhibitor of growth family, member 3	ING3	0.954937	426.5
ENSGALT0000	inhibitor of growth family, member 4	ING4	0.930457	1318.32
ENSGALT0000	inhibitor of growth family, member 5	ING5	0.941348	545.682
ENSGALT0000	inhibin, alpha	INHA	0.859517	18.5
ENSGALT0000	inhibin, beta A	INHBA	0.703988	102.5
ENSGALT0000	INO80 homolog (S. cerevisiae)	INO80	0.968523	834.5
ENSGALT0000	INO80 complex subunit B	INO80B	0.635132	745.5
ENSGALT0000	INO80 complex subunit C	INO80C	0.917151	169.5
ENSGALT0000	INO80 complex subunit D	INO80D	0.99387	497
ENSGALT0000	inositol polyphosphate-4-phosphata	INPP4A	0.909081	1106
ENSGALT0000	inositol polyphosphate-4-phosphata	INPP4B	0.960517	261
ENSGALT0000	inositol polyphosphate-5-phosphata	INPP5A	0.964125	461.5
ENSGALT0000	inositol polyphosphate-5-phosphata	INPP5B	0.984434	618
ENSGALT0000	inositol polyphosphate-5-phosphata	INPP5D	0.777911	66
ENSGALT0000	inositol polyphosphate-5-phosphata	INPP5E	0.964417	945.325
ENSGALT0000	inositol polyphosphate-5-phosphata	INPP5F	0.96749	872
ENSGALT0000	inositol polyphosphate-5-phosphata	INPP5J	0.974168	621.5
ENSGALT0000	inositol polyphosphate-5-phosphata	INPP5K	0.969003	1863.5
ENSGALT0000	inositol polyphosphate phosphatase	INPPL1	0.50752	11.5
ENSGALT0000	insulin	INS	0.562993	0.5
ENSGALT0000	inscuteable homolog (Drosophila)	INSC	0.834281	176.5
ENSGALT0000	insulin induced gene 1	INSIG1	0.751954	78
ENSGALT0000	insulin induced gene 2	INSIG2	0.991791	164
ENSGALT0000	insulin receptor	INSR	0.997138	5216
ENSGALT0000	integrator complex subunit 1	INTS1	0.969181	4684.5
ENSGALT0000	integrator complex subunit 10	INTS10	0.952878	1306
ENSGALT0000	integrator complex subunit 12	INTS12	0.923512	526.5
ENSGALT0000	integrator complex subunit 2	INTS2	0.938158	4136.5
ENSGALT0000	integrator complex subunit 6	INTS6	0.998331	1514
ENSGALT0000	integrator complex subunit 7	INTS7	0.963042	1145.99
ENSGALT0000	integrator complex subunit 8	INTS8	0.948736	2350.5
ENSGALT0000	integrator complex subunit 9	INTS9	0.963525	2017.5
ENSGALT0000	inturned planar cell polarity effector	INTU	0.949351	426
ENSGALT0000	inversin	INVS	0.988442	581.169
ENSGALT0000	inositol hexakisphosphate kinase 1	IP6K1	0.964026	2539.5
ENSGALT0000	inositol hexakisphosphate kinase 2	IP6K2	0.888993	2090.98
ENSGALT0000	inositol hexakisphosphate kinase 3	IP6K3	0.72395	502.5
ENSGALT0000	inositol polyphosphate multikinase	IPMK	0.968996	418.498

ENSGALT0000 importin 11	IPO11	0.974349	892.498
ENSGALT0000 importin 13	IPO13	0.933956	3987.86
ENSGALT0000 importin 5	IPO5	0.993386	13263.5
ENSGALT0000 importin 7	IPO7	0.962516	6501.5
ENSGALT0000 importin 8	IPO8	0.959988	2335
ENSGALT0000 importin 9	IPO9	0.974922	3802.5
ENSGALT0000 intracisternal A particle-promoted p IPP	IPP	0.892317	514.5
ENSGALT0000 inositol 1,3,4,5,6-pentakisphosphat IPPK	IPPK	0.997226	539.003
ENSGALT0000 IQ motif containing with AAA domai IQCA1	IQCA1	0.979734	18
ENSGALT0000 IQ motif containing B1	IQCB1	0.996996	378
ENSGALT0000 IQ motif containing C	IQCC	0.954909	251.5
ENSGALT0000 IQ motif containing D	IQCD	0.992627	445.5
ENSGALT0000 IQ motif containing E	IQCE	0.991584	1055.5
ENSGALT0000 IQ motif containing G	IQCG	0.974667	37.5
ENSGALT0000 IQ motif containing H	IQCH	0.982456	372
ENSGALT0000 IQ motif containing J	IQCJ	0.306346	6.5
ENSGALT0000 IQ motif containing GTPase activat IQGAP1	IQGAP1	0.988728	4652.5
ENSGALT0000 IQ motif containing GTPase activat IQGAP2	IQGAP2	0.940693	847.5
ENSGALT0000 IQ motif and Sec7 domain 1	IQSEC1	0.920931	779
ENSGALT0000 IQ motif and Sec7 domain 3	IQSEC3	0.798203	165
ENSGALT0000 IQ motif and ubiquitin domain conta IQUB	IQUB	0.970039	110
ENSGALT0000 interleukin-1 receptor-associated ki IRAK1BP1	IRAK1BP1	0.653617	266
ENSGALT0000 interleukin-1 receptor-associated ki IRAK2	IRAK2	0.994943	1952.01
ENSGALT0000 interleukin-1 receptor-associated ki IRAK4	IRAK4	0.989897	263.999
ENSGALT0000 iron-responsive element binding pr IREB2	IREB2	0.91955	3206.1
ENSGALT0000 interferon regulatory factor 1	IRF1	0.589988	6
ENSGALT0000 interferon regulatory factor 10	IRF10	0.65125	67.5
ENSGALT0000 interferon regulatory factor 2	IRF2	0.986332	440.5
ENSGALT0000 interferon regulatory factor 2 bindin IRF2BP2	IRF2BP2	0.823616	729
ENSGALT0000 interferon regulatory factor 2 bindin IRF2BPL	IRF2BPL	0.86654	2776.5
ENSGALT0000 interferon regulatory factor 4	IRF4	0.916781	12
ENSGALT0000 interferon regulatory factor 6	IRF6	0.983833	1262
ENSGALT0000 interferon regulatory factor 7	IRF7	0.982646	195
ENSGALT0000 interferon regulatory factor 8	IRF8	0.894145	650.5
ENSGALT0000 immunoresponsive 1 homolog (mo IRG1	IRG1	0.874121	38.5
ENSGALT0000 insulin receptor substrate 1	IRS1	0.970692	631
ENSGALT0000 insulin receptor substrate 2	IRS2	0.919365	1320.5
ENSGALT0000 insulin receptor substrate 4	IRS4	0.997586	1567.5
ENSGALT0000 iroquois homeobox 1	IRX1	0.748466	977.504
ENSGALT0000 iroquois homeobox 2	IRX2	0.63554	917.56
ENSGALT0000 iroquois homeobox 5	IRX5	0.861074	1061
ENSGALT0000 iron-sulfur cluster assembly 1 homo ISCA1	ISCA1	0.605938	1121.5
ENSGALT0000 iron-sulfur cluster assembly 2 homo ISCA2	ISCA2	0.452773	1338
ENSGALT0000 iron-sulfur cluster scaffold homolog ISCU	ISCU	0.73277	589.502
ENSGALT0000 ISG12-2 protein-like	ISG12-2	0.301196	2.5
ENSGALT0000 interferon stimulated exonuclease ISG20L2	ISG20L2	0.909591	670
ENSGALT0000 immunoglobulin superfamily contai ISLR	ISLR	0.98816	902
ENSGALT0000 isthmin 1 homolog (zebrafish)	ISM1	0.553459	576.997
ENSGALT0000 isthmin 2 homolog (zebrafish)	ISM2	0.964597	287
ENSGALT0000 isochorismatase domain containing ISOC1	ISOC1	0.538593	258.499
ENSGALT0000 isoprenoid synthase domain contai ISPD	ISPD	0.98142	179
ENSGALT0000 ISY1 splicing factor homolog (S. ce ISY1	ISY1	0.945903	609.5
ENSGALT0000 itchy E3 ubiquitin protein ligase hor ITCH	ITCH	0.984275	521.5
ENSGALT0000 integrin alpha FG-GAP repeat cont ITFG1	ITFG1	0.897561	3531.93
ENSGALT0000 integrin alpha FG-GAP repeat cont ITFG2	ITFG2	0.956973	772.5
ENSGALT0000 integrin alpha FG-GAP repeat cont ITFG3	ITFG3	0.992625	1738.5

ENSGALT0000 integrin, alpha 1	ITGA1	0.809323	114.5
ENSGALT0000 integrin, alpha 11	ITGA11	0.570591	233
ENSGALT0000 integrin, alpha 4 (antigen CD49D, a	ITGA4	0.941355	1105.5
ENSGALT0000 integrin, alpha 6	ITGA6	0.825107	3053.51
ENSGALT0000 integrin, alpha 8	ITGA8	0.961713	2203.5
ENSGALT0000 integrin, alpha 9	ITGA9	0.954117	1816.5
ENSGALT0000 integrin, alpha V (vitronectin recept	ITGAV	0.985338	1537.05
ENSGALT0000 integrin, beta 1 (fibronectin recepto	ITGB1	0.970439	9250.49
ENSGALT0000 integrin beta 1 binding protein 1	ITGB1BP1	0.941337	310.5
ENSGALT0000 integrin beta 1 binding protein (mel	ITGB1BP2	0.717459	4.5
ENSGALT0000 integrin beta 1 binding protein 3	ITGB1BP3	0.397075	12136.2
ENSGALT0000 integrin, beta 2 (complement comp	ITGB2	0.558689	37.5
ENSGALT0000 integrin, beta 3 (platelet glycoprotei	ITGB3	0.866352	6358.5
ENSGALT0000 integrin beta 3 binding protein (beta	ITGB3BP	0.94626	110.5
ENSGALT0000 integrin, beta 5	ITGB5	0.966309	6042.5
ENSGALT0000 integrin, beta 6	ITGB6	0.673998	5046
ENSGALT0000 integrin, beta 8	ITGB8	0.96069	1391.1
ENSGALT0000 integrin, beta-like 1 (with EGF-like	ITGBL1	0.555948	47.5
ENSGALT0000 inter-alpha-trypsin inhibitor heavy c	ITIH3	?	0
ENSGALT0000 inter-alpha (globulin) inhibitor H5	ITIH5	0.792176	33
ENSGALT0000 inter-alpha-trypsin inhibitor heavy c	ITIH6	0.761254	33
ENSGALT0000 IL2-inducible T-cell kinase	ITK	0.832016	1.5
ENSGALT0000 integral membrane protein 2A	ITM2A	0.992997	16389
ENSGALT0000 integral membrane protein 2B	ITM2B	0.801017	7194.5
ENSGALT0000 integral membrane protein 2C	ITM2C	0.921998	165.5
ENSGALT0000 inosine triphosphatase (nucleoside	ITPA	0.704383	1019
ENSGALT0000 inositol-tetrakisphosphate 1-kinase	ITPK1	0.820894	1107.5
ENSGALT0000 inositol 1,4,5-trisphosphate 3-kinas	ITPKA	0.953292	433.501
ENSGALT0000 inositol-trisphosphate 3-kinase B	ITPKB	0.988388	555.5
ENSGALT0000 inositol 1,4,5-trisphosphate recepto	ITPR1	0.858065	3847.32
ENSGALT0000 inositol 1,4,5-trisphosphate recepto	ITPR2	0.978978	997
ENSGALT0000 inositol 1,4,5-trisphosphate recepto	ITPR3	0.897025	2812.71
ENSGALT0000 inositol 1,4,5-trisphosphate recepto	ITPRIP	0.971157	55.5
ENSGALT0000 intersectin 1 (SH3 domain protein)	ITSN1	0.931997	2725.5
ENSGALT0000 intersectin 2	ITSN2	0.973585	1310.99
ENSGALT0000 isovaleryl-CoA dehydrogenase	IVD	0.867382	972.5
ENSGALT0000 influenza virus NS1A binding protei	IVNS1ABP	0.973694	2553
ENSGALT0000 IWS1 homolog (S. cerevisiae)	IWS1	0.951368	2002.5
ENSGALT0000 iodotyrosine deiodinase	IYD	0.60955	12.5
ENSGALT0000 jagged 1	JAG1	0.96141	9399.5
ENSGALT0000 jagged 2	JAG2	0.864504	1329.5
ENSGALT0000 Janus kinase 1	JAK1	0.95966	2626.03
ENSGALT0000 janus kinase 2	JAK2	0.988097	380.5
ENSGALT0000 janus kinase and microtubule intera	JAKMIP1	0.623826	9.5
ENSGALT0000 janus kinase and microtubule intera	JAKMIP2	0.979769	1967
ENSGALT0000 Janus kinase and microtubule inter	JAKMIP3	0.892441	20.5
ENSGALT0000 junctional adhesion molecule 2	JAM2	0.995583	142
ENSGALT0000 junctional adhesion molecule 3	JAM3	0.876964	1189.5
ENSGALT0000 jumonji, AT rich interactive domain	JARID2	0.977953	3074
ENSGALT0000 JAZF zinc finger 1	JAZF1	0.88061	77.5
ENSGALT0000 Jun dimerization protein 2	JDP2	0.770475	304
ENSGALT0000 jumonji C domain containing histon	JHDM1D	0.942671	471.5
ENSGALT0000 JNK1/MAPK8-associated membrar	JKAMP	0.944313	912
ENSGALT0000 jumonji domain containing 1C	JMJD1C	0.980538	2711.5
ENSGALT0000 jumonji domain containing 4	JMJD4	0.911938	1627.5
ENSGALT0000 jumonji domain containing 5	JMJD5	0.764756	274.5

ENSGALT0000	jumonji domain containing 6	JMJD6	0.973559	1764.8
ENSGALT0000	jumonji domain containing 7	JMJD7	0.866194	187.5
ENSGALT0000	junction mediating and regulatory p	JMY	0.991825	598.5
ENSGALT0000	Josephin domain containing 1	JOSD1	0.981538	720.5
ENSGALT0000	junctophilin 1	JPH1	0.973502	1296
ENSGALT0000	junctophilin 3	JPH3	0.719002	639
ENSGALT0000	junctional sarcoplasmic reticulum p	JSRP1	0.831653	12
ENSGALT0000	jun proto-oncogene	JUN	0.658739	2929.94
ENSGALT0000	K123 protein	K123	0.464758	1
ENSGALT0000	Kallmann syndrome 1 sequence	KAL1	0.899441	489.5
ENSGALT0000	kalirin, RhoGEF kinase	KALRN	0.912388	1975
ENSGALT0000	KN motif and ankyrin repeat domai	KANK1	0.915014	1634.29
ENSGALT0000	KN motif and ankyrin repeat domai	KANK3	0.687992	423.501
ENSGALT0000	KN motif and ankyrin repeat domai	KANK4	0.888653	1960.08
ENSGALT0000	KAT8 regulatory NSL complex subt	KANSL1L	0.980958	871
ENSGALT0000	KAT8 regulatory NSL complex subt	KANSL3	0.949745	1580
ENSGALT0000	lysyl-tRNA synthetase	KARS	0.871907	5391.52
ENSGALT0000	K(lysine) acetyltransferase 2A	KAT2A	0.847082	2225
ENSGALT0000	K(lysine) acetyltransferase 2B	KAT2B	0.990768	539
ENSGALT0000	K(lysine) acetyltransferase 6A	KAT6A	0.982856	952
ENSGALT0000	katanin p60 (ATPase containing) su	KATNA1	0.998115	374.5
ENSGALT0000	katanin p60 subunit A-like 1	KATNAL1	0.945414	501.5
ENSGALT0000	katanin p60 subunit A-like 2	KATNAL2	0.924582	92.5
ENSGALT0000	katanin p80 (WD repeat containing	KATNB1	0.974315	1284.51
ENSGALT0000	Kazal-type serine peptidase inhibitc	KAZALD1	0.780184	4319
ENSGALT0000	kazrin, periplakin interacting proteir	KAZN	0.932667	534.5
ENSGALT0000	kainate binding protein	KBP	0.991332	107
ENSGALT0000	kelch repeat and BTB (POZ) domai	KBTBD10	0.912605	138.5
ENSGALT0000	kelch repeat and BTB (POZ) domai	KBTBD11	0.869929	789.5
ENSGALT0000	kelch repeat and BTB (POZ) domai	KBTBD13	0.706531	2.5
ENSGALT0000	kelch repeat and BTB (POZ) domai	KBTBD2	0.952761	478.5
ENSGALT0000	kelch repeat and BTB (POZ) domai	KBTBD3	0.803164	49
ENSGALT0000	kelch repeat and BTB (POZ) domai	KBTBD4	0.942384	805.5
ENSGALT0000	kelch repeat and BTB (POZ) domai	KBTBD5	0.473204	30
ENSGALT0000	kelch repeat and BTB (POZ) domai	KBTBD8	0.87799	413.5
ENSGALT0000	potassium channel modulatory fact	KCMF1	0.915517	866.521
ENSGALT0000	potassium voltage-gated channel, s	KCNA1	0.906849	37
ENSGALT0000	Potassium voltage-gated channel s	KCNA10	0.303115	3.91374
ENSGALT0000	potassium voltage-gated channel, s	KCNA2	0.86047	205.561
ENSGALT0000	potassium voltage-gated channel, s	KCNA3	0.999723	191.685
ENSGALT0000	potassium voltage-gated channel, s	KCNA4	0.962345	68.5
ENSGALT0000	potassium voltage-gated channel, s	KCNA5	0.933408	185.5
ENSGALT0000	potassium voltage-gated channel, s	KCNA6	0.872923	444.34
ENSGALT0000	potassium voltage-gated channel, s	KCNAB1	0.755817	714.499
ENSGALT0000	potassium voltage-gated channel, s	KCNAB2	0.682493	1966.5
ENSGALT0000	potassium voltage-gated channel, s	KCNB1	0.818156	61
ENSGALT0000	potassium voltage-gated channel, s	KCNB2	0.798537	88.5001
ENSGALT0000	potassium voltage-gated channel, s	KCNC1	0.813011	127.413
ENSGALT0000	potassium voltage-gated channel, s	KCNC2	0.900405	295.087
ENSGALT0000	potassium voltage-gated channel, s	KCNC4	0.712598	344.5
ENSGALT0000	potassium voltage-gated channel, s	KCND2	0.859036	130
ENSGALT0000	potassium voltage-gated channel, s	KCND3	0.784985	54
ENSGALT0000	potassium voltage-gated channel, I	KCNE1	0.562993	1.5
ENSGALT0000	potassium voltage-gated channel, I	KCNE2	0.783116	3.5
ENSGALT0000	potassium voltage-gated channel, I	KCNE4	0.956509	9
ENSGALT0000	potassium voltage-gated channel, s	KCNF1	0.54451	185

ENSGALT0000	potassium voltage-gated channel, s	KCNG1	0.559174	62.5
ENSGALT0000	potassium voltage-gated channel, s	KCNG2	0.932273	700.5
ENSGALT0000	potassium voltage-gated channel, s	KCNG3	0.972208	44
ENSGALT0000	potassium voltage-gated channel, s	KCNG4	0.774948	4.5
ENSGALT0000	potassium voltage-gated channel, s	KCNH1	0.68088	8.5
ENSGALT0000	potassium voltage-gated channel, s	KCNH4	0.811274	93
ENSGALT0000	potassium voltage-gated channel, s	KCNH5	0.967876	293
ENSGALT0000	potassium voltage-gated channel, s	KCNH6	0.958944	194
ENSGALT0000	potassium voltage-gated channel, s	KCNH7	0.760529	149.5
ENSGALT0000	potassium voltage-gated channel, s	KCNH8	1	0.5
ENSGALT0000	Kv channel interacting protein 1	KCNIP1	0.81854	15.5
ENSGALT0000	Kv channel interacting protein 2	KCNIP2	0.5933	110
ENSGALT0000	Kv channel interacting protein 4	KCNIP4	0.944629	332.146
ENSGALT0000	potassium inwardly-rectifying chann	KCNJ1	0.562993	0
ENSGALT0000	potassium inwardly-rectifying chann	KCNJ12	0.938058	87.5
ENSGALT0000	potassium inwardly-rectifying chann	KCNJ16	0.845269	158
ENSGALT0000	potassium inwardly-rectifying chann	KCNJ2	0.632812	97
ENSGALT0000	potassium inwardly-rectifying chann	KCNJ3	0.846132	98.5
ENSGALT0000	potassium inwardly-rectifying chann	KCNJ6	0.745781	10.5
ENSGALT0000	potassium channel, subfamily K, m	KCNK1	0.979646	344.5
ENSGALT0000	potassium channel, subfamily K, m	KCNK10	0.565652	65.5
ENSGALT0000	potassium channel, subfamily K, m	KCNK13	0.315562	1
ENSGALT0000	potassium channel, subfamily K, m	KCNK17	0.417139	0.5
ENSGALT0000	potassium channel, subfamily K, m	KCNK2	0.698067	78.5
ENSGALT0000	potassium channel, subfamily K, m	KCNK5	0.699591	225.5
ENSGALT0000	potassium channel, subfamily K, m	KCNK9	0.822007	32
ENSGALT0000	potassium large conductance calciu	KCNMA1	0.824267	166.5
ENSGALT0000	potassium large conductance calciu	KCNMB1	0.898356	1
ENSGALT0000	potassium large conductance calciu	KCNMB2	0.834967	8.5
ENSGALT0000	potassium large conductance calciu	KCNMB4	0.445061	1117.5
ENSGALT0000	potassium intermediate/small cond	KCNN2	0.780093	59.5
ENSGALT0000	potassium voltage-gated channel, I	KCNQ1	0.996084	201.5
ENSGALT0000	potassium voltage-gated channel, I	KCNQ2	0.880544	431.998
ENSGALT0000	potassium voltage-gated channel, I	KCNQ3	0.987764	507
ENSGALT0000	potassium voltage-gated channel, I	KCNQ4	0.729205	58
ENSGALT0000	potassium voltage-gated channel, I	KCNQ5	0.632056	17
ENSGALT0000	potassium channel regulator	KCNRG	0.898507	73.5
ENSGALT0000	potassium voltage-gated channel, c	KCNS1	0.857782	143
ENSGALT0000	potassium voltage-gated channel, c	KCNS2	0.62984	72.5
ENSGALT0000	potassium voltage-gated channel, c	KCNS3	0.974602	8.5
ENSGALT0000	potassium channel, subfamily T, me	KCNT1	0.807154	152
ENSGALT0000	potassium channel, subfamily T, me	KCNT2	0.875893	383.5
ENSGALT0000	potassium channel, subfamily U, m	KCNU1	0.550476	9.5
ENSGALT0000	potassium channel, subfamily V, m	KCNV1	0.720845	10.1431
ENSGALT0000	potassium channel, subfamily V, m	KCNV2	0.464758	0.5
ENSGALT0000	potassium channel tetramerisation	KCTD1	0.801571	572.5
ENSGALT0000	potassium channel tetramerisation	KCTD10	0.890631	1194
ENSGALT0000	potassium channel tetramerisation	KCTD12	0.927615	153
ENSGALT0000	potassium channel tetramerisation	KCTD14	0.615529	27.5
ENSGALT0000	potassium channel tetramerisation	KCTD15	0.978294	397
ENSGALT0000	potassium channel tetramerisation	KCTD16	0.847806	77
ENSGALT0000	potassium channel tetramerisation	KCTD17	0.864233	203.5
ENSGALT0000	potassium channel tetramerisation	KCTD18	0.985214	182.5
ENSGALT0000	potassium channel tetramerisation	KCTD19	0.994867	4
ENSGALT0000	potassium channel tetramerisation	KCTD2	0.96302	5443.5
ENSGALT0000	potassium channel tetramerisation	KCTD20	0.929989	931

ENSGALT0000	potassium channel tetramerisation	KCTD21	0.978968	46.5
ENSGALT0000	potassium channel tetramerisation	KCTD3	0.947349	4201
ENSGALT0000	potassium channel tetramerisation	KCTD4	0.997925	8.5
ENSGALT0000	potassium channel tetramerisation	KCTD5	0.962376	1162.5
ENSGALT0000	potassium channel tetramerisation	KCTD6	0.963524	315
ENSGALT0000	potassium channel tetramerisation	KCTD7	0.817779	388
ENSGALT0000	potassium channel tetramerisation	KCTD8	0.643945	96.955
ENSGALT0000	potassium channel tetramerisation	KCTD9	0.997599	1110
ENSGALT0000	KDEL (Lys-Asp-Glu-Leu) containing	KDELC1	0.994919	1871.5
ENSGALT0000	KDEL (Lys-Asp-Glu-Leu) containing	KDELC2	0.946805	628.5
ENSGALT0000	KDEL (Lys-Asp-Glu-Leu) endoplas	KDELR2	0.981356	6737.5
ENSGALT0000	KDEL (Lys-Asp-Glu-Leu) endoplas	KDELR3	0.965612	766
ENSGALT0000	lysine (K)-specific demethylase 1A	KDM1A	0.946818	8269
ENSGALT0000	lysine (K)-specific demethylase 1B	KDM1B	0.967266	132
ENSGALT0000	lysine (K)-specific demethylase 2A	KDM2A	0.976487	2637.5
ENSGALT0000	lysine (K)-specific demethylase 2B	KDM2B	0.980622	2644
ENSGALT0000	lysine (K)-specific demethylase 3A	KDM3A	0.997758	5156.09
ENSGALT0000	lysine (K)-specific demethylase 3B	KDM3B	0.977519	3564.5
ENSGALT0000	lysine (K)-specific demethylase 4A	KDM4A	0.964442	3304.5
ENSGALT0000	lysine (K)-specific demethylase 4B	KDM4B	0.999897	3111.02
ENSGALT0000	lysine (K)-specific demethylase 4C	KDM4C	0.984761	166.5
ENSGALT0000	lysine (K)-specific demethylase 5A	KDM5A	0.978693	4708.5
ENSGALT0000	lysine (K)-specific demethylase 5B	KDM5B	0.993931	14303.4
ENSGALT0000	lysine (K)-specific demethylase 6A	KDM6A	0.994623	2600.98
ENSGALT0000	kinase insert domain receptor (a ty	KDR	0.84057	324.5
ENSGALT0000	3-ketodihydrosphingosine reductas	KDSR	0.984646	778
ENSGALT0000	Kell blood group, metallo-endopept	KEL	0.49347	4.5
ENSGALT0000	keratocan	KERA	0.94692	807.5
ENSGALT0000	KH domain containing, RNA binding	KHDRBS1	0.930527	3624.94
ENSGALT0000	KH domain containing, RNA binding	KHDRBS2	0.830907	442
ENSGALT0000	KH domain containing, RNA binding	KHDRBS3	0.615451	1333.5
ENSGALT0000	KIAA0020	KIAA0020	0.943366	934.012
ENSGALT0000	KIAA0090	KIAA0090	0.961516	5937
ENSGALT0000	KIAA0100	KIAA0100	0.958474	3749.5
ENSGALT0000	KIAA0146	KIAA0146	0.964613	169.5
ENSGALT0000	KIAA0174	KIAA0174	0.910153	2441.72
ENSGALT0000	KIAA0182	KIAA0182	0.872557	931.135
ENSGALT0000	KIAA0195	KIAA0195	0.990768	2173
ENSGALT0000	KIAA0196	KIAA0196	0.945328	1485
ENSGALT0000	KIAA0226	KIAA0226	0.862647	463.58
ENSGALT0000	KIAA0226-like	KIAA0226L	0.981828	106
ENSGALT0000	KIAA0232	KIAA0232	0.984363	1544.5
ENSGALT0000	KIAA0240	KIAA0240	0.995497	511
ENSGALT0000	KIAA0247	KIAA0247	0.882561	959.5
ENSGALT0000	KIAA0284	KIAA0284	0.996745	3220
ENSGALT0000	KIAA0317	KIAA0317	0.966593	1313
ENSGALT0000	KIAA0319	KIAA0319	0.917844	493
ENSGALT0000	KIAA0319-like	KIAA0319L	0.97862	2725.93
ENSGALT0000	KIAA0355	KIAA0355	0.969828	855.744
ENSGALT0000	KIAA0368	KIAA0368	0.935569	1978.5
ENSGALT0000	KIAA0391	KIAA0391	0.97474	378.5
ENSGALT0000	KIAA0408	KIAA0408	0.83433	609.5
ENSGALT0000	KIAA0415	KIAA0415	0.918128	1754.5
ENSGALT0000	KIAA0430	KIAA0430	0.967672	1722.5
ENSGALT0000	KIAA0494	KIAA0494	0.955083	444.934
ENSGALT0000	KIAA0528	KIAA0528	0.998058	1378.47

ENSGALT0000 KIAA0564	KIAA0564	0.975939	576.5
ENSGALT0000 KIAA0586	KIAA0586	0.997568	1513.49
ENSGALT0000 KIAA0664	KIAA0664	0.934823	1461.5
ENSGALT0000 KIAA0753	KIAA0753	0.996332	511
ENSGALT0000 KIAA0776	KIAA0776	0.985913	1105.5
ENSGALT0000 KIAA0825	KIAA0825	0.982758	328
ENSGALT0000 KIAA0889	KIAA0889	0.911498	3281
ENSGALT0000 KIAA0895	KIAA0895	0.888206	669
ENSGALT0000 KIAA0895-like	KIAA0895L	0.606335	328
ENSGALT0000 KIAA0907	KIAA0907	0.957566	1711.5
ENSGALT0000 KIAA0922	KIAA0922	0.975437	1694
ENSGALT0000 KIAA0930	KIAA0930	0.923938	677.5
ENSGALT0000 KIAA1009	KIAA1009	0.995524	389
ENSGALT0000 KIAA1024	KIAA1024	0.713491	433
ENSGALT0000 KIAA1033	KIAA1033	0.967682	945
ENSGALT0000 KIAA1045	KIAA1045	0.57316	15
ENSGALT0000 KIAA1107	KIAA1107	0.795608	545.5
ENSGALT0000 KIAA1109	KIAA1109	0.966548	3106.5
ENSGALT0000 KIAA1143	KIAA1143	0.980128	808
ENSGALT0000 KIAA1147	KIAA1147	0.973149	265
ENSGALT0000 KIAA1161	KIAA1161	0.836209	234.119
ENSGALT0000 KIAA1191	KIAA1191	0.868154	1391.5
ENSGALT0000 KIAA1199	KIAA1199	0.776156	341.5
ENSGALT0000 KIAA1211	KIAA1211	0.856382	750.5
ENSGALT0000 KIAA1217	KIAA1217	0.965539	4154.5
ENSGALT0000 KIAA1244	KIAA1244	0.999908	1373
ENSGALT0000 KIAA1267	KIAA1267	0.953273	2398
ENSGALT0000 KIAA1274	KIAA1274	0.807243	7403.53
ENSGALT0000 KIAA1279	KIAA1279	0.875895	1726
ENSGALT0000 KIAA1324-like	KIAA1324L	0.966996	463.5
ENSGALT0000 KIAA1328	KIAA1328	0.962109	177
ENSGALT0000 hypothetical protein LOC415416	KIAA1370	0.995263	2718.5
ENSGALT0000 KIAA1377	KIAA1377	0.941757	7
ENSGALT0000 KIAA1383	KIAA1383	0.971933	196.5
ENSGALT0000 KIAA1407	KIAA1407	0.947852	254
ENSGALT0000 KIAA1409	KIAA1409	0.996584	1328.5
ENSGALT0000 KIAA1429	KIAA1429	0.972206	1934.5
ENSGALT0000 KIAA1430	KIAA1430	0.967186	171.5
ENSGALT0000 KIAA1432	KIAA1432	0.982	915.5
ENSGALT0000 KIAA1456	KIAA1456	0.96504	17
ENSGALT0000 KIAA1462	KIAA1462	0.979924	1135.5
ENSGALT0000 KIAA1467	KIAA1467	0.961498	1485
ENSGALT0000 KIAA1468	KIAA1468	0.956759	949.5
ENSGALT0000 KIAA1486	KIAA1486	0.758904	54
ENSGALT0000 KIAA1522	KIAA1522	0.774172	1523
ENSGALT0000 KIAA1524	KIAA1524	0.915389	735.5
ENSGALT0000 KIAA1549	KIAA1549	0.942725	4924.5
ENSGALT0000 KIAA1598	KIAA1598	0.925449	437
ENSGALT0000 KIAA1609	KIAA1609	0.875059	657.498
ENSGALT0000 KIAA1614	KIAA1614	0.97604	233
ENSGALT0000 KIAA1644	KIAA1644	0.903509	36.5
ENSGALT0000 KIAA1704	KIAA1704	0.954687	631.5
ENSGALT0000 KIAA1715	KIAA1715	0.923891	677
ENSGALT0000 KIAA1731	KIAA1731	0.986609	580.5
ENSGALT0000 KIAA1737	KIAA1737	0.960925	337
ENSGALT0000 KIAA1755 ortholog	KIAA1755	0.497431	102

ENSGALT0000	KIAA1797	KIAA1797	0.990033	1964
ENSGALT0000	KIAA1826	KIAA1826	0.857039	426.5
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ENSGALT0000	KIAA1919	KIAA1919	0.982937	359
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ENSGALT0000	KIAA2013	KIAA2013	0.971082	1394.48
ENSGALT0000	KIAA2018	KIAA2018	0.995288	929.5
ENSGALT0000	KIAA2022	KIAA2022	0.958423	928.5
ENSGALT0000	kinase D-interacting substrate, 220	KIDINS220	0.941379	7688.99
ENSGALT0000	kinesin family member 11	KIF11	0.927103	1670.5
ENSGALT0000	kinesin family member 13A	KIF13A	0.976382	861.004
ENSGALT0000	kinesin family member 14	KIF14	0.93846	88.5
ENSGALT0000	kinesin family member 15	KIF15	0.951099	1620
ENSGALT0000	kinesin family member 16B	KIF16B	0.982287	923.5
ENSGALT0000	kinesin family member 18A	KIF18A	0.972385	409
ENSGALT0000	kinesin family member 18B	KIF18B	0.909499	784
ENSGALT0000	kinesin family member 1A	KIF1A	0.806684	15779
ENSGALT0000	kinesin family member 1B	KIF1B	0.939811	4687
ENSGALT0000	kinesin family member 20A	KIF20A	0.90877	2148.72
ENSGALT0000	kinesin family member 21A	KIF21A	0.982899	3943.51
ENSGALT0000	kinesin family member 21B	KIF21B	0.947779	2069.01
ENSGALT0000	kinesin family member 23	KIF23	0.916898	1400.98
ENSGALT0000	kinesin family member 24	KIF24	0.975124	332.5
ENSGALT0000	kinesin heavy chain member 2A	KIF2A	0.962037	3464
ENSGALT0000	kinesin family member 2B	KIF2B	0.464758	0
ENSGALT0000	kinesin family member 2C	KIF2C	0.901686	1058
ENSGALT0000	kinesin family member 3A	KIF3A	0.867285	1879.49
ENSGALT0000	kinesin family member 3B	KIF3B	0.960721	2113.5
ENSGALT0000	kinesin family member 4A	KIF4A	0.910304	4025.5
ENSGALT0000	kinesin family member 5B	KIF5B	0.931153	2915.5
ENSGALT0000	kinesin family member 5C	KIF5C	0.719832	2518.95
ENSGALT0000	kinesin family member 7	KIF7	0.946331	2547
ENSGALT0000	kinesin family member 9	KIF9	0.851225	288
ENSGALT0000	kinesin-associated protein 3	KIFAP3	0.733763	4524.89
ENSGALT0000	kinesin family member C3	KIFC3	0.984254	922
ENSGALT0000	KIN, antigenic determinant of recA	KIN	0.91056	268
ENSGALT0000	kin of IRRE like (Drosophila)	KIRREL	0.969181	1994.5
ENSGALT0000	kin of IRRE like 3 (Drosophila)	KIRREL3	0.769024	622.815
ENSGALT0000	Protein kish-A	KISHA_CHICK	0.735997	275.5
ENSGALT0000	v-kit Hardy-Zuckerman 4 feline sar	KIT	0.93666	280
ENSGALT0000	KIT ligand	KITLG	0.945571	102.5
ENSGALT0000	klotho	KL	0.363165	0.60296
ENSGALT0000	kinesin light chain 1	KLC1	0.704148	1785.5
ENSGALT0000	kinesin light chain 4	KLC4	0.810696	3914
ENSGALT0000	Kruppel-like factor 1 (erythroid)	KLF1	0.550666	36.5
ENSGALT0000	Kruppel-like factor 10	KLF10	0.884848	955.5
ENSGALT0000	Kruppel-like factor 11	KLF11	0.945348	720
ENSGALT0000	Kruppel-like factor 12	KLF12	0.909542	253
ENSGALT0000	Kruppel-like factor 13	KLF13	0.71958	20
ENSGALT0000	Kruppel-like factor 15	KLF15	0.818246	88
ENSGALT0000	Kruppel-like factor 2 (lung)	KLF2	0.860469	174
ENSGALT0000	Kruppel-like factor 3 (basic)	KLF3	0.968537	401.5
ENSGALT0000	Kruppel-like factor 5 (intestinal)	KLF5	0.933119	349
ENSGALT0000	Kruppel-like factor 6	KLF6	0.921719	852.5
ENSGALT0000	Kruppel-like factor 7 (ubiquitous)	KLF7	0.766098	100
ENSGALT0000	Kruppel-like factor 8	KLF8	0.846801	614.5

ENSGALT0000 kelch domain containing 1	KLHDC1	0.985144	1588
ENSGALT0000 kelch domain containing 10	KLHDC10	0.921556	647.5
ENSGALT0000 kelch domain containing 2	KLHDC2	0.936181	4209
ENSGALT0000 kelch domain containing 3	KLHDC3	0.935985	1707
ENSGALT0000 kelch domain containing 4	KLHDC4	0.884242	1533
ENSGALT0000 kelch domain containing 5	KLHDC5	0.984667	342.999
ENSGALT0000 kelch domain containing 7A	KLHDC7A	0.952362	110
ENSGALT0000 kelch domain containing 8A	KLHDC8A	0.557553	292.5
ENSGALT0000 kelch domain containing 8B	KLHDC8B	0.956091	105
ENSGALT0000 kelch-like 1 (Drosophila)	KLHL1	0.905156	23
ENSGALT0000 kelch-like 10 (Drosophila)	KLHL10	0.975734	65.5
ENSGALT0000 kelch-like 11 (Drosophila)	KLHL11	0.982384	1627
ENSGALT0000 kelch-like 12 (Drosophila)	KLHL12	0.942044	1134
ENSGALT0000 kelch-like 9 (Drosophila)	KLHL13	0.917525	1737.5
ENSGALT0000 kelch-like 14 (Drosophila)	KLHL14	0.985642	1008.5
ENSGALT0000 kelch-like 15 (Drosophila)	KLHL15	0.972584	556
ENSGALT0000 kelch-like 17 (Drosophila)	KLHL17	0.940577	228.5
ENSGALT0000 kelch-like 18 (Drosophila)	KLHL18	0.949164	2235.99
ENSGALT0000 kelch-like 2, Mayven (Drosophila)	KLHL2	0.94793	1285
ENSGALT0000 kelch-like 20 (Drosophila)	KLHL20	0.910333	1036.49
ENSGALT0000 kelch-like 21 (Drosophila)	KLHL21	0.928864	1462
ENSGALT0000 kelch-like 22 (Drosophila)	KLHL22	0.983345	507.5
ENSGALT0000 kelch-like 23 (Drosophila)	KLHL23	0.403161	26.5
ENSGALT0000 DRE1 protein	KLHL24	0.958197	1424.48
ENSGALT0000 kelch-like 25 (Drosophila)	KLHL25	0.728087	1188
ENSGALT0000 kelch-like 26 (Drosophila)	KLHL26	0.860554	253
ENSGALT0000 kelch-like 28 (Drosophila)	KLHL28	0.895745	555
ENSGALT0000 kelch-like 29 (Drosophila)	KLHL29	0.916895	704.5
ENSGALT0000 kelch-like 3 (Drosophila)	KLHL3	0.994615	974
ENSGALT0000 kelch-like 30 (Drosophila)	KLHL30	0.552343	1.5
ENSGALT0000 kelch-like 31 (Drosophila)	KLHL31	0.569094	19
ENSGALT0000 kelch-like 32 (Drosophila)	KLHL32	0.917448	243
ENSGALT0000 kelch-like 34 (Drosophila)	KLHL34	0.44331	3
ENSGALT0000 kelch-like 35 (Drosophila)	KLHL35	0.549829	159.031
ENSGALT0000 kelch-like 36 (Drosophila)	KLHL36	0.784331	616
ENSGALT0000 kelch-like 38 (Drosophila)	KLHL38	0.773322	3.5
ENSGALT0000 kelch-like 4 (Drosophila)	KLHL4	0.811088	109
ENSGALT0000 kelch-like 5 (Drosophila)	KLHL5	0.822865	1046.5
ENSGALT0000 kelch-like 6 (Drosophila)	KLHL6	0.878011	37.5
ENSGALT0000 kelch-like 7 (Drosophila)	KLHL7	0.879108	1404
ENSGALT0000 kelch-like 8 (Drosophila)	KLHL8	0.984829	642
ENSGALT0000 kynurenine 3-monooxygenase (kyn KMO	0.551385	0
ENSGALT0000 kinase non-catalytic C-lobe domain KNDC1	0.96184	986
ENSGALT0000 kininogen 1	KNG1	0.649519	0.5
ENSGALT0000 kinetochore associated 1	KNTC1	0.964634	1112
ENSGALT0000 Importin subunit alpha-1	KPNA1	0.950916	1818.53
ENSGALT0000 karyopherin alpha 2 (RAG cohort 1 KPNA2	0.85343	3366
ENSGALT0000 karyopherin alpha 3 (importin alpha KPNA3	0.9806	1282
ENSGALT0000 karyopherin alpha 4 (importin alpha KPNA4	0.974796	5001.5
ENSGALT0000 karyopherin alpha 5 (importin alpha KPNA5	0.991864	506.5
ENSGALT0000 karyopherin alpha 6 (importin alpha KPNA6	0.921549	1550
ENSGALT0000 karyopherin alpha 7 (importin alpha KPNA7	0.98481	3
ENSGALT0000 karyopherin (importin) beta 1	KPNB1	0.89474	8540.5
ENSGALT0000 v-Ki-ras2 Kirsten rat sarcoma viral KRAS	0.961885	257.423
ENSGALT0000 kringle containing transmembrane KREMEN1	0.999364	811.5
ENSGALT0000 KRIT1, ankyrin repeat containing	KRIT1	0.948775	788.5

ENSGALT0000	KRR1, small subunit (SSU) proces:	KRR1	0.951571	779.5
ENSGALT0000	keratin 10	KRT10	0.756016	21
ENSGALT0000	keratin 14	KRT14	0.718792	439.25
ENSGALT0000	keratin 15	KRT15	0.865633	11.2249
ENSGALT0000	keratin 19	KRT19	0.912004	5688.89
ENSGALT0000	keratin 20	KRT20	0.977456	17
ENSGALT0000	keratin 222	KRT222	0.975607	136
ENSGALT0000	keratin 23 (histone deacetylase ind	KRT23	0.816896	14.5
ENSGALT0000	type II alpha-keratin IIC	KRT75	0.784205	119.404
ENSGALT0000	keratin 80	KRT80	0.954744	23.9427
ENSGALT0000	keratin associated protein 10-4	KRTAP10-4	?	0
ENSGALT0000	keratin associated protein 19-2	KRTAP19-2	0.464758	1.98E-09
ENSGALT0000	keratinocyte associated protein 3	KRTCAP3	0.92498	282
ENSGALT0000	Ribosomal protein S6 kinase 2 alpl	KS6AA_CHICK	0.920223	3710.04
ENSGALT0000	kinase suppressor of ras 1	KSR1	0.935681	403.498
ENSGALT0000	kinase suppressor of ras 2	KSR2	0.732395	95.5
ENSGALT0000	kinectin 1 (kinesin receptor)	KTN1	0.947147	3556.31
ENSGALT0000	kyphoscoliosis peptidase	KY	0.868237	16.5
ENSGALT0000	kynureninase	KYNU	0.341881	1.5
ENSGALT0000	L-2-hydroxyglutarate dehydrogena:	L2HGDH	0.965535	459.5
ENSGALT0000	l(3)mbt-like 1 (Drosophila)	L3MBTL1	0.989918	405.5
ENSGALT0000	l(3)mbt-like 2 (Drosophila)	L3MBTL2	0.957264	1678.5
ENSGALT0000	l(3)mbt-like 4 (Drosophila)	L3MBTL4	0.935587	142
ENSGALT0000	Ig lambda chain C region	LAC_CHICK	?	0
ENSGALT0000	laccase (multicopper oxidoreductas	LACC1	0.722096	1
ENSGALT0000	lactation elevated 1	LACE1	0.970306	141
ENSGALT0000	lactamase, beta	LACTB	0.957501	428.5
ENSGALT0000	lactamase, beta 2	LACTB2	0.888019	415.598
ENSGALT0000	ladinin 1	LAD1	0.184135	24.5148
ENSGALT0000	lymphocyte-activation gene 3	LAG3	0.853815	0.5
ENSGALT0000	laminin, alpha 1	LAMA1	0.926928	3497.51
ENSGALT0000	laminin, alpha 2	LAMA2	0.674092	191
ENSGALT0000	laminin, alpha 3	LAMA3	0.943182	92.5
ENSGALT0000	laminin, alpha 4	LAMA4	0.71865	833.5
ENSGALT0000	laminin, alpha 5	LAMA5	0.998082	10755.5
ENSGALT0000	laminin, beta 1	LAMB1	0.943751	18983.3
ENSGALT0000	laminin, beta 2 (laminin S)	LAMB2	0.979525	2324.51
ENSGALT0000	laminin, beta 3	LAMB3	0.970831	55
ENSGALT0000	laminin, beta 4	LAMB4	0.613548	37
ENSGALT0000	laminin, gamma 1 (formerly LAMB2	LAMC1	0.935826	15469.9
ENSGALT0000	laminin, gamma 2	LAMC2	0.736124	26.0041
ENSGALT0000	laminin, gamma 3	LAMC3	0.909755	475.5
ENSGALT0000	lysosomal-associated membrane p	LAMP1	0.962062	4723.46
ENSGALT0000	lysosomal-associated membrane p	LAMP2	0.849443	1446.5
ENSGALT0000	lysosomal-associated membrane p	LAMP3	0.756413	6
ENSGALT0000	late endosomal/lysosomal adaptor,	LAMTOR2	0.458379	1293.5
ENSGALT0000	late endosomal/lysosomal adaptor,	LAMTOR3	0.906758	2285.5
ENSGALT0000	LanC lantibiotic synthetase compor	LANCL1	0.899531	2581
ENSGALT0000	LanC lantibiotic synthetase compor	LANCL2	0.892711	1017
ENSGALT0000	LanC lantibiotic synthetase compor	LANCL3	0.916551	59.5
ENSGALT0000	leucine aminopeptidase 3	LAP3	0.80017	1265
ENSGALT0000	lysosomal protein transmembrane ·	LAPTM4A	0.963083	6539.1
ENSGALT0000	lysosomal protein transmembrane ·	LAPTM4B	0.810401	43
ENSGALT0000	lysosomal protein transmembrane !	LAPTM5	0.658802	97.5
ENSGALT0000	like-glycosyltransferase	LARGE	0.950388	1221.5
ENSGALT0000	La ribonucleoprotein domain family	LARP1	0.94994	4033

ENSGALT0000 La ribonucleoprotein domain family	LARP1B	0.981227	463
ENSGALT0000 La ribonucleoprotein domain family	LARP4	0.962658	3259
ENSGALT0000 La ribonucleoprotein domain family	LARP4B	0.977607	682
ENSGALT0000 La ribonucleoprotein domain family	LARP6	0.967158	146
ENSGALT0000 La ribonucleoprotein domain family	LARP7	0.894886	703.999
ENSGALT0000 leucyl-tRNA synthetase	LARS	0.920556	2840.5
ENSGALT0000 leucyl-tRNA synthetase 2, mitochor	LARS2	0.945553	751.5
ENSGALT0000 LAS1-like (S. cerevisiae)	LAS1L	0.975162	2111.51
ENSGALT0000 LIM and SH3 protein 1	LASP1	0.791632	4295.5
ENSGALT0000 ceramide synthase 4	LASS4	0.994497	1208.5
ENSGALT0000 linker for activation of T cells family	LAT2	0.82207	3
ENSGALT0000 LATS, large tumor suppressor, hom	LATS1	0.9822	1453
ENSGALT0000 LATS, large tumor suppressor, hom	LATS2	0.960364	351.816
ENSGALT0000 liver basic fatty acid binding protein	LBFABP	0.904992	2.5
ENSGALT0000 limb bud and heart development ho	LBH	0.98073	2349
ENSGALT0000 lamin B receptor	LBR	0.941661	2702.49
ENSGALT0000 Leber congenital amaurosis 5	LCA5	0.997685	188
ENSGALT0000 Leber congenital amaurosis 5-like	LCA5L	0.990924	91.5
ENSGALT0000 lysocardiolipin acyltransferase 1	LCLAT1	0.958176	2396.5
ENSGALT0000 leucine carboxyl methyltransferase	LCMT1	0.763603	559.5
ENSGALT0000 leucine carboxyl methyltransferase	LCMT2	0.93099	1499.5
ENSGALT0000 lipocalin 15	LCN15	0.753279	7.5
ENSGALT0000 ligand dependent nuclear receptor	LCOR	0.973531	399
ENSGALT0000 ligand dependent nuclear receptor	LCORL	0.974763	331.5
ENSGALT0000 lymphocyte cytosolic protein 1 (L-p	LCP1	0.759064	237.5
ENSGALT0000 lymphocyte cytosolic protein 2 (SH:	LCP2	0.886629	7.5
ENSGALT0000 lactase	LCT	0.973593	69.5
ENSGALT0000 LIM domain binding 1	LDB1	0.851903	2512.04
ENSGALT0000 LIM domain binding 2	LDB2	0.864206	443
ENSGALT0000 LIM domain binding 3	LDB3	0.652678	73.5
ENSGALT0000 lactate dehydrogenase A	LDHA	0.451112	8425.98
ENSGALT0000 lactate dehydrogenase B	LDHB	0.628691	20699
ENSGALT0000 lactate dehydrogenase D	LDHD	0.968734	495.5
ENSGALT0000 low density lipoprotein receptor cla:	LDLRAD1	0.753326	24.5
ENSGALT0000 low density lipoprotein receptor cla:	LDLRAD3	0.972203	1064.51
ENSGALT0000 low density lipoprotein receptor ada	LDLRAP1	0.999424	778
ENSGALT0000 liver expressed antimicrobial peptic	LEAP2	0.562993	0.5
ENSGALT0000 leukocyte cell derived chemotaxin	LECT1	0.957801	1577.5
ENSGALT0000 leukocyte cell-derived chemotaxin :	LECT2	0.160596	1.5
ENSGALT0000 lymphoid enhancer-binding factor 1	LEF1	0.8323	1176.5
ENSGALT0000 left-right determination factor 2	LEFTY2	0.547885	2.5
ENSGALT0000 leucine, glutamate and lysine rich 1	LEKR1	0.939174	48
ENSGALT0000 LEM domain containing 2	LEMD2	0.956142	1316.5
ENSGALT0000 LEM domain containing 3	LEMD3	0.991753	737.006
ENSGALT0000 Leo1, Paf1/RNA polymerase II com	LEO1	0.897937	993.5
ENSGALT0000 leptin receptor	LEPR	0.910564	53.5
ENSGALT0000 leucine proline-enriched proteoglyc	LEPRE1	0.984622	3442.98
ENSGALT0000 leprecan-like 1	LEPREL1	0.823364	817.5
ENSGALT0000 leprecan-like 2	LEPREL2	0.99624	1563.49
ENSGALT0000 leptin receptor overlapping transcri	LEPROT	0.975484	3392
ENSGALT0000 leptin receptor overlapping transcri	LEPROTL1	0.937769	1150.5
ENSGALT0000 leucine zipper-EF-hand containing	LETM1	0.918389	717.5
ENSGALT0000 leucine zipper-EF-hand containing	LETM2	0.955107	470
ENSGALT0000 LFNG O-fucosylpeptide 3-beta-N-a	LFNG	0.939095	2378.5
ENSGALT0000 lectin, galactoside-binding, soluble,	LGALS1	0.649359	16
ENSGALT0000 lectin, galactoside-binding, soluble,	LGALS2	0.903603	7.5

ENSGALT0000	lectin, galactoside-binding, soluble,	LGALS3	0.929509	211.158
ENSGALT0000	lectin, galactoside-binding, soluble,	LGALS8	0.88484	584.501
ENSGALT0000	lectin, galactoside-binding-like	LGALSL	0.905708	1484.5
ENSGALT0000	leucine-rich, glioma inactivated 1	LGI1	0.963519	178.5
ENSGALT0000	leucine-rich repeat LGI family, mem	LGI2	0.884483	403.998
ENSGALT0000	legumain	LGMN	0.861878	2507
ENSGALT0000	leucine-rich repeat containing G pro	LGR4	0.994128	1606.5
ENSGALT0000	leucine-rich repeat containing G pro	LGR5	0.786618	3157
ENSGALT0000	leucine-rich repeat containing G pro	LGR6	0.981307	171.5
ENSGALT0000	lengsin, lens protein with glutamine	LGSN	?	0
ENSGALT0000	ligatin	LGTN	0.850484	1841.5
ENSGALT0000	luteinizing hormone/choriogonadotr	LHCGR	0.839792	32
ENSGALT0000	lipoma HMGIC fusion partner	LHFP	0.940113	521.5
ENSGALT0000	lipoma HMGIC fusion partner-like 2	LHFPL2	0.74135	129
ENSGALT0000	lipoma HMGIC fusion partner-like 3	LHFPL3	0.690194	77
ENSGALT0000	lipoma HMGIC fusion partner-like 5	LHFPL5	0.947499	661
ENSGALT0000	phospholysine phosphohistidine inc	LHPP	0.721393	1102.5
ENSGALT0000	LIM homeobox 1	LHX1	0.652361	11.5
ENSGALT0000	LIM homeobox 3	LHX3	0.31716	42
ENSGALT0000	LIM homeobox 4	LHX4	0.828826	1
ENSGALT0000	LIM homeobox 5	LHX5	0.621882	2.5
ENSGALT0000	LIM homeobox 6	LHX6	0.973807	25.5
ENSGALT0000	LIM homeobox 8	LHX8	0.687934	33.5
ENSGALT0000	LIM homeobox 9	LHX9	0.683403	2
ENSGALT0000	lipoic acid synthetase	LIAS	0.869472	653.3
ENSGALT0000	leukemia inhibitory factor (cholinerg	LIF	?	0
ENSGALT0000	leukemia inhibitory factor receptor a	LIFR	0.984253	2223.5
ENSGALT0000	ligase I, DNA, ATP-dependent	LIG1	0.821294	1971.54
ENSGALT0000	ligase III, DNA, ATP-dependent	LIG3	0.93974	2269.5
ENSGALT0000	ligase IV, DNA, ATP-dependent	LIG4	0.973457	273
ENSGALT0000	LIM domain and actin binding 1	LIMA1	0.90378	1920
ENSGALT0000	LIM and calponin homology domain	LIMCH1	0.873449	1085
ENSGALT0000	LIM domains containing 1	LIMD1	0.993837	1795.54
ENSGALT0000	LIM domain containing 2	LIMD2	0.699179	2804.96
ENSGALT0000	LIM domain kinase 1	LIMK1	0.951794	1561.49
ENSGALT0000	LIM domain kinase 2	LIMK2	0.98505	1577
ENSGALT0000	LIM and senescent cell antigen-like	LIMS1	0.974696	1840.47
ENSGALT0000	LIM and senescent cell antigen-like	LIMS2	0.914608	1078
ENSGALT0000	lin-28 homolog A (C. elegans)	LIN28A	0.76755	48.5
ENSGALT0000	lin-28 homolog B (C. elegans)	LIN28B	0.92665	112
ENSGALT0000	lin-52 homolog (C. elegans)	LIN52	0.788804	153
ENSGALT0000	lin-54 homolog (C. elegans)	LIN54	0.966078	399
ENSGALT0000	lin-7 homolog A (C. elegans)	LIN7A	0.841681	117
ENSGALT0000	lin-7 homolog C (C. elegans)	LIN7C	0.964672	1619.5
ENSGALT0000	lin-9 homolog (C. elegans)	LIN9	0.985628	262.5
ENSGALT0000	leucine rich repeat and Ig domain c	LINGO1	0.83839	2049.02
ENSGALT0000	leucine rich repeat and Ig domain c	LINGO2	0.985431	471
ENSGALT0000	leucine rich repeat and Ig domain c	LINGO3	0.96853	192
ENSGALT0000	lines homolog (Drosophila)	LINS	0.992302	118.5
ENSGALT0000	lipase A, lysosomal acid, cholestero	LIPA	0.686998	142.5
ENSGALT0000	lipase, hepatic	LIPC	0.464758	0
ENSGALT0000	lipase, endothelial	LIPG	0.836285	391
ENSGALT0000	lipase, member H	LIPH	0.948241	186.5
ENSGALT0000	lipase, member I	LIPI	0.371997	0
ENSGALT0000	lipoyltransferase 1	LIPT1	0.893943	321
ENSGALT0000	lipopolysaccharide-induced TNF fac	LITAF	0.891591	284

ENSGALT0000	Lix1 homolog (chicken)	LIX1	0.87701	10.5
ENSGALT0000	lung lectin	LL	0.461677	1.5
ENSGALT0000	lethal giant larvae homolog 1 (Dros	LLGL1	0.916039	2568.5
ENSGALT0000	lethal giant larvae homolog 2 (Dros	LLGL2	0.997313	5997.88
ENSGALT0000	LLP homolog, long-term synaptic fa	LLPH	0.263699	744.004
ENSGALT0000	lectin, mannose-binding, 1	LMAN1	0.963311	1407.98
ENSGALT0000	limb region 1 homolog (mouse)	LMBR1	0.970235	1362.02
ENSGALT0000	LMBR1 domain containing 1	LMBRD1	0.938797	534
ENSGALT0000	LMBR1 domain containing 2	LMBRD2	0.97501	457.502
ENSGALT0000	LIM and cysteine-rich domains 1	LMCD1	0.746512	215.5
ENSGALT0000	lipase maturation factor 1	LMF1	0.964854	1083.5
ENSGALT0000	Lipase maturation factor 2	LMF2	0.924584	1531
ENSGALT0000	leishmanolysin-like (metallopeptida	LMLN	0.965479	365
ENSGALT0000	lamin B1	LMNB1	0.897394	2415.05
ENSGALT0000	lamin B2	LMNB2	0.904269	4107.49
ENSGALT0000	LIM domain only 1 (rhombotin 1)	LMO1	0.561924	1328
ENSGALT0000	LIM domain only 2 (rhombotin-like	LMO2	0.703373	314
ENSGALT0000	LIM domain only 3 (rhombotin-like :	LMO3	0.880542	603.5
ENSGALT0000	LIM domain only 4	LMO4	0.657791	4498
ENSGALT0000	LIM domain 7	LMO7	0.987599	918.999
ENSGALT0000	leiomodin 2 (cardiac)	LMOD2	0.268957	2.5
ENSGALT0000	leiomodin 3 (fetal)	LMOD3	0.892832	9
ENSGALT0000	lemur tyrosine kinase 2	LMTK2	0.971667	640.5
ENSGALT0000	LIM homeobox transcription factor	LMX1B	0.951224	1951.99
ENSGALT0000	leukemia NUP98 fusion partner 1	LNP1	0.970019	15.5
ENSGALT0000	leucyl/cystinyl aminopeptidase	LNPEP	0.986243	485.5
ENSGALT0000	ligand of numb-protein X 1	LNX1	0.930984	47
ENSGALT0000	ligand of numb-protein X 2	LNX2	0.947665	477
ENSGALT0000	death domain-containing tumor nec	LOC378902	0.945428	162.5
ENSGALT0000	keratin	LOC395095	0.464758	9.35E-11
ENSGALT0000	cryptochrome 4	LOC395100	0.993166	103
ENSGALT0000	Schwann cell-specific EGF-like rep	LOC395159	0.226976	304
ENSGALT0000	AQ	LOC395744	0.956208	1
ENSGALT0000	otokeratin	LOC395772	0.555766	2712.94
ENSGALT0000	smooth muscle protein phosphatas	LOC395787	0.912207	3282.71
ENSGALT0000	vitamin D3 hydroxylase associated	LOC395824	0.973962	54.4724
ENSGALT0000	lymphotactin	LOC395914	?	0
ENSGALT0000	pepsinogen	LOC395926	0.649519	0
ENSGALT0000	sulfotransferase	LOC395933	0.539038	0.5
ENSGALT0000	L-type calcium channel, alpha 1 su	LOC395985	0.939614	15.5
ENSGALT0000	crescent	LOC395991	0.999718	19
ENSGALT0000	B6.1	LOC396098	0.712034	12.3388
ENSGALT0000	neuronal acetylcholine receptor sul	LOC396120	0.19245	1.5
ENSGALT0000	ovostatin	LOC396151	0.178396	1
ENSGALT0000	mature avidin	LOC396260	0.885026	22.7463
ENSGALT0000	glutathione transferase	LOC396380	0.781344	560.923
ENSGALT0000	purpurin	LOC396454	0.82093	9
ENSGALT0000	\N	LOC408038	0.674908	52
ENSGALT0000	cHz-cadherin	LOC414835	0.926137	180
ENSGALT0000	uncharacterized LOC415312	LOC415312	0.675036	3.5
ENSGALT0000	uncharacterized LOC415325	LOC415325	?	0
ENSGALT0000	uncharacterized LOC415345	LOC415345	0.970187	55.9767
ENSGALT0000	unc-13-like	LOC415414	0.629109	2.5
ENSGALT0000	lamin-L(III)-like	LOC415464	0.909519	158.5
ENSGALT0000	ubiquitin-associated protein 1-like	LOC415529	0.983685	26.5
ENSGALT0000	uncharacterized oxidoreductase-lik	LOC415661	0.309727	5.94976

ENSGALT0000	receptor-interacting serine-threonin	LOC415708	0.548476	32.5
ENSGALT0000	galanin receptor type 1-like	LOC415713	0.297457	19.5
ENSGALT0000	uncharacterized LOC415758	LOC415758	0.59814	193
ENSGALT0000	uncharacterized LOC415795	LOC415795	0.917193	373.805
ENSGALT0000	uncharacterized LOC415844	LOC415844	0.00285695	1.5
ENSGALT0000	5-hydroxyisourate hydrolase	LOC415859	0.418997	92.5
ENSGALT0000	uncharacterized LOC415872	LOC415872	0.984963	5
ENSGALT0000	semaphorin-3D-like	LOC415932	0.966366	903
ENSGALT0000	protein BTG1-like	LOC415950	0.763232	498
ENSGALT0000	cat eye syndrome critical region pro	LOC415969	0.93364	220
ENSGALT0000	uncharacterized LOC416053	LOC416053	0.654898	18
ENSGALT0000	uncharacterized LOC416055	LOC416055	0.888752	729.5
ENSGALT0000	uncharacterized LOC416082	LOC416082	0.328002	0
ENSGALT0000	monocarboxylate transporter 2-like	LOC416086	0.832859	19.5
ENSGALT0000	uncharacterized LOC416090	LOC416090	?	0
ENSGALT0000	rho GTPase-activating protein 7-like	LOC416169	0.809421	12
ENSGALT0000	uncharacterized LOC416178	LOC416178	0.464758	0
ENSGALT0000	uncharacterized LOC416179	LOC416179	0.936777	11.5
ENSGALT0000	uncharacterized LOC416190	LOC416190	0.657043	37.5
ENSGALT0000	neuron-specific protein family mem	LOC416212	0.515957	288.5
ENSGALT0000	ovoinhibitor	LOC416235	0.259935	54.5
ENSGALT0000	LON peptidase N-terminal domain	LOC416263	0.884225	171
ENSGALT0000	uncharacterized LOC416292	LOC416292	0.922633	29
ENSGALT0000	C-terminal binding protein-like	LOC416354	0.962317	5069.5
ENSGALT0000	testis-expressed sequence 2 protei	LOC416541	0.931843	212.5
ENSGALT0000	class II, major histocompatibility co	LOC416633	0.649519	1.5
ENSGALT0000	uncharacterized LOC416797	LOC416797	0.931631	7.5
ENSGALT0000	solute carrier family 2, facilitated gl	LOC416916	0.994264	440.5
ENSGALT0000	RPE-spondin-like	LOC416923	0.585248	79
ENSGALT0000	vacuolar protein sorting 29 homolo	LOC416931	0.935061	13.5
ENSGALT0000	solute carrier family 2, facilitated gl	LOC416935	0.976471	3
ENSGALT0000	melanotransferrin-like	LOC416959	0.93568	116
ENSGALT0000	signal peptide peptidase-like 3-like	LOC416968	0.969358	2062.97
ENSGALT0000	uncharacterized LOC416993	LOC416993	0.965941	10
ENSGALT0000	putative acyl-CoA dehydrogenase /	LOC417013	0.986079	38
ENSGALT0000	uncharacterized LOC417028	LOC417028	0.371997	0
ENSGALT0000	torsin family 1, member B-like	LOC417192	0.99715	14
ENSGALT0000	uncharacterized LOC417263	LOC417263	0.8033	227
ENSGALT0000	uncharacterized LOC417340	LOC417340	0.990725	79
ENSGALT0000	uncharacterized LOC417345	LOC417345	0.947611	15
ENSGALT0000	uncharacterized LOC417380	LOC417380	0.988195	77.5
ENSGALT0000	angiopoietin-related protein 1-like	LOC417459	0.958654	28.7521
ENSGALT0000	chemokine ah221	LOC417536	0.606869	20.491
ENSGALT0000	merlin-like	LOC417537	0.89009	513
ENSGALT0000	sucrase-isomaltase, intestinal-like	LOC417691	0.433063	5.5239
ENSGALT0000	secreted frizzled-related protein 2-l	LOC417741	0.549507	3
ENSGALT0000	prolactin-like protein	LOC417800	0.779377	6
ENSGALT0000	cathepsin E-A-like	LOC417848	0.649519	0.5
ENSGALT0000	solute carrier family 23 member 1-l	LOC417937	0.979988	77
ENSGALT0000	histone H1.10	LOC417948	0.277806	88.4392
ENSGALT0000	histone H3.2-like	LOC417953	0.0715936	25.9142
ENSGALT0000	histone H1.01	LOC417954	0.832544	497.632
ENSGALT0000	histone H2A-IV-like	LOC417955	0.504035	117.87
ENSGALT0000	uncharacterized LOC417962	LOC417962	0.722096	1.5
ENSGALT0000	uncharacterized LOC417973	LOC417973	0.734945	17.5
ENSGALT0000	family with sequence similarity 20,	LOC418020	0.749025	8.5

ENSGALT0000	arf-GAP with dual PH domain-conta	LOC418038	0.873215	1163.5
ENSGALT0000	poly [ADP-ribose] polymerase 12-li	LOC418108	0.727873	37
ENSGALT0000	cystine/glutamate transporter-like	LOC418109	0.583025	375.5
ENSGALT0000	uncharacterized LOC418114	LOC418114	0.901031	15.5
ENSGALT0000	aldo-keto reductase family 1 memb	LOC418170	0.941071	1975.33
ENSGALT0000	solute carrier organic anion transpc	LOC418189	0.806085	6
ENSGALT0000	uncharacterized LOC418209	LOC418209	0.371997	1
ENSGALT0000	poly(U)-specific endoribonuclease-	LOC418221	0.779364	1.5
ENSGALT0000	heat shock transcription factor, X-li	LOC418222	0.580649	0
ENSGALT0000	solute carrier family 25 member 33	LOC418298	0.877517	229.5
ENSGALT0000	T-cell receptor beta chain V region	LOC418309	0.636311	3.5
ENSGALT0000	fatty acid amide hydrolase-like	LOC418339	0.938652	1196.5
ENSGALT0000	uncharacterized LOC418416	LOC418416	?	0
ENSGALT0000	uncharacterized LOC418424	LOC418424	0.125	0.5
ENSGALT0000	uncharacterized LOC418453	LOC418453	0.988601	406.831
ENSGALT0000	uncharacterized LOC418465	LOC418465	0.464758	0
ENSGALT0000	multidrug resistance-associated prc	LOC418468	0.974476	266.5
ENSGALT0000	uncharacterized LOC418472	LOC418472	0.990546	149.5
ENSGALT0000	V-set domain containing T cell activ	LOC418554	0.567285	2
ENSGALT0000	histone H2A type 2-B-like	LOC418707	?	0
ENSGALT0000	DNA-binding protein RFX8-like	LOC418713	0.746688	12.5
ENSGALT0000	uncharacterized LOC418771	LOC418771	0.464758	0
ENSGALT0000	ES1 protein homolog, mitochondria	LOC418811	0.814644	2177.5
ENSGALT0000	mannose receptor, C type 2-like	LOC418836	0.371997	6
ENSGALT0000	complement C4-like	LOC418892	0.892092	4
ENSGALT0000	uncharacterized LOC418918	LOC418918	0.464758	0
ENSGALT0000	RNA polymerase 1-3	LOC418927	0.665804	435.5
ENSGALT0000	F-box/WD repeat-containing proteii	LOC419074	0.942728	1302
ENSGALT0000	hypothetical protein LOC419104	LOC419104	0.972524	1337
ENSGALT0000	transmembrane protein 110-like	LOC419112	0.23512	251.5
ENSGALT0000	uncharacterized LOC419113	LOC419113	0.577584	4.5
ENSGALT0000	CMP-N-acetylneuraminate-beta-ga	LOC419136	0.957309	236.5
ENSGALT0000	neuritin-like	LOC419182	0.164317	1.5
ENSGALT0000	bactericidal permeability-increasing	LOC419276	0.0072347	2
ENSGALT0000	uncharacterized LOC419328	LOC419328	0.876995	7
ENSGALT0000	uncharacterized LOC419335	LOC419335	0.71229	726
ENSGALT0000	uncharacterized LOC419389	LOC419389	0.97211	2704.5
ENSGALT0000	hairy and enhancer of split 5-like	LOC419390	0.708215	262.112
ENSGALT0000	uncharacterized LOC419404	LOC419404	0.924271	1389.5
ENSGALT0000	rho guanine nucleotide exchange fi	LOC419425	0.950621	41
ENSGALT0000	protein tyrosine phosphatase, non-	LOC419429	0.630117	470.5
ENSGALT0000	uncharacterized LOC419602	LOC419602	0.191655	228
ENSGALT0000	protein FAM49A-like	LOC419677	0.726052	764
ENSGALT0000	transmembrane protein 45B-like	LOC419726	0.609798	18
ENSGALT0000	uncharacterized LOC419749	LOC419749	0.857787	14.5
ENSGALT0000	UPF0722 protein C11orf88-like	LOC419782	0.182233	0.5
ENSGALT0000	uncharacterized LOC419830	LOC419830	0.47691	23.5
ENSGALT0000	Krueppel-like factor 15-like	LOC419834	0.577717	34.5
ENSGALT0000	bile acid receptor-like	LOC419888	0.872443	4
ENSGALT0000	uncharacterized LOC420093	LOC420093	0.464758	0
ENSGALT0000	uncharacterized LOC420108	LOC420108	0.33545	51.5
ENSGALT0000	cathepsin L1-like	LOC420160	0.683403	4.5
ENSGALT0000	uncharacterized LOC420220	LOC420220	0.778348	3
ENSGALT0000	lymphocyte antigen 6 complex, loci	LOC420301	0.22129	0.5
ENSGALT0000	uncharacterized LOC420352	LOC420352	0.985038	2
ENSGALT0000	uncharacterized LOC420454	LOC420454	?	0

ENSGALT0000	uncharacterized LOC420466	LOC420466	0.749245	19
ENSGALT0000	macrophage mannose receptor 1-li	LOC420516	0.988417	60
ENSGALT0000	uncharacterized LOC420552	LOC420552	0.95386	76.5
ENSGALT0000	1-aminocyclopropane-1-carboxylat	LOC420553	0.712106	38.5
ENSGALT0000	probable acyl coa dehydrogenase (	LOC420562	0.993241	440.5
ENSGALT0000	multidrug resistance protein 1-like	LOC420606	0.353553	2
ENSGALT0000	uncharacterized LOC420609	LOC420609	0.464758	0
ENSGALT0000	nucleoporin-like protein 2-like	LOC420615	0.680505	10.3927
ENSGALT0000	uncharacterized LOC420726	LOC420726	0.649519	1
ENSGALT0000	uncharacterized LOC420734	LOC420734	?	0
ENSGALT0000	uncharacterized LOC420770	LOC420770	0.649519	0.5
ENSGALT0000	uncharacterized LOC420795	LOC420795	0.705342	109
ENSGALT0000	uncharacterized LOC420807	LOC420807	0.963723	234
ENSGALT0000	transmembrane protein 14C-like	LOC420860	0.648271	1011.5
ENSGALT0000	uncharacterized LOC420864	LOC420864	0.464758	0.5
ENSGALT0000	uncharacterized LOC420992	LOC420992	0.938677	596.5
ENSGALT0000	uncharacterized LOC421015	LOC421015	0.464758	0
ENSGALT0000	transthyretin-like	LOC421091	0.464758	0.5
ENSGALT0000	Ras-related protein Rab-10-like	LOC421099	0.99835	332
ENSGALT0000	transmembrane protein 68-like	LOC421125	0.988352	24.5
ENSGALT0000	receptor-type tyrosine-protein phos	LOC421174	0.979028	1846
ENSGALT0000	transmembrane protein 121-like	LOC421253	0.944061	194.5
ENSGALT0000	MACRO domain-containing protein	LOC421259	0.962234	417
ENSGALT0000	uncharacterized LOC421285	LOC421285	?	0
ENSGALT0000	uncharacterized LOC421394	LOC421394	0.452025	2.5
ENSGALT0000	uncharacterized LOC421415	LOC421415	0.98391	57
ENSGALT0000	epoxide hydrolase 1-like	LOC421447	0.846862	43.5
ENSGALT0000	uncharacterized LOC421512	LOC421512	0.649519	0.5
ENSGALT0000	sulfotransferase family, cytosolic, 6	LOC421560	0.464758	0.5
ENSGALT0000	UPF0762 protein C6orf58 homolog	LOC421712	0.454233	0.5
ENSGALT0000	sulfotransferase family 3A, membe	LOC421740	0.385204	3.5
ENSGALT0000	uncharacterized LOC421792	LOC421792	0.864778	274.5
ENSGALT0000	uncharacterized LOC421856	LOC421856	0.464758	2
ENSGALT0000	zona pellucida glycoprotein-like	LOC421956	0.813533	4.5
ENSGALT0000	B(0,+)-type amino acid transporter	LOC421965	0.591845	1
ENSGALT0000	WD repeat-containing protein C2or	LOC421975	0.863317	1020.5
ENSGALT0000	UPF0638 protein B-like	LOC421978	0.97645	66
ENSGALT0000	sterile alpha motif domain-containir	LOC421996	0.874177	24
ENSGALT0000	uncharacterized LOC422008	LOC422008	0.464758	0
ENSGALT0000	gallin 1	LOC422030	?	0
ENSGALT0000	gallin 2	LOC422031	?	0
ENSGALT0000	cytochrome P450 2K1-like	LOC422046	0.464758	0
ENSGALT0000	zinc finger protein 91-like	LOC422051	0.984818	343
ENSGALT0000	uncharacterized LOC422071	LOC422071	0.102295	439.5
ENSGALT0000	alpha-N-acetylgalactosaminide alpl	LOC422075	0.711955	43.5
ENSGALT0000	uncharacterized LOC422090	LOC422090	0.927189	326.5
ENSGALT0000	fibronectin type III domain containir	LOC422151	0.999527	3967.5
ENSGALT0000	PCTP-like protein-like	LOC422154	0.94805	36
ENSGALT0000	ferredoxin 1-like	LOC422172	0.164317	1.5
ENSGALT0000	hypothetical protein LOC422173	LOC422173	0.77092	1481.5
ENSGALT0000	uncharacterized LOC422179	LOC422179	0.928358	22
ENSGALT0000	uncharacterized LOC422198	LOC422198	0.649519	0.5
ENSGALT0000	uncharacterized LOC422212	LOC422212	0.758067	302.5
ENSGALT0000	forty-two-three domain containing 1	LOC422221	0.98177	199
ENSGALT0000	transmembrane 9 superfamily men	LOC422249	0.956517	1927.5
ENSGALT0000	uncharacterized LOC422270	LOC422270	0.998177	243

ENSGALT0000	sodium/hydrogen exchanger 2-like	LOC422276	0.931225	73.7586
ENSGALT0000	response gene to complement 32 p	LOC422284	0.377717	118.5
ENSGALT0000	uncharacterized LOC422293	LOC422293	0.801449	550.998
ENSGALT0000	SLAIN motif-containing protein-like	LOC422298	0.902818	1107.5
ENSGALT0000	centrin-1-like	LOC422304	0.796356	5
ENSGALT0000	ES1 protein homolog, mitochondria	LOC422305	0.903823	16.5
ENSGALT0000	immune-responsive gene 1 protein	LOC422307	0.578696	29
ENSGALT0000	exocyst complex component 1-like	LOC422308	0.631223	0
ENSGALT0000	vascular endothelial growth factor r	LOC422316	0.866111	987.5
ENSGALT0000	ligand of Numb protein X 2-like	LOC422320	0.948026	965.5
ENSGALT0000	ras-like protein family member 11A	LOC422321	0.877393	368.5
ENSGALT0000	wiskott-Aldrich syndrome protein fa	LOC422323	0.887009	176
ENSGALT0000	uncharacterized LOC422372	LOC422372	0.973515	308
ENSGALT0000	uncharacterized LOC422426	LOC422426	0.976458	287
ENSGALT0000	uncharacterized LOC422442	LOC422442	0.820571	699
ENSGALT0000	mannosyl (alpha-1,3-)-glycoprotein	LOC422448	0.866459	8
ENSGALT0000	uncharacterized LOC422459	LOC422459	0.991055	22.5
ENSGALT0000	viral interleukin-8 homolog	LOC422509	0.477728	0.5
ENSGALT0000	cytochrome P450 2U1-like	LOC422528	0.987981	62.5
ENSGALT0000	GTPase IMAP family member-like	LOC422532	0.972445	27.5
ENSGALT0000	uncharacterized LOC422577	LOC422577	0.464758	0.5
ENSGALT0000	uncharacterized LOC422619	LOC422619	0.603682	0.5
ENSGALT0000	uncharacterized LOC422643	LOC422643	0.927329	23.3106
ENSGALT0000	chemokine (C-X-C motif) ligand 1-li	LOC422654	0.19245	0.5
ENSGALT0000	uncharacterized LOC422681	LOC422681	0.85632	3
ENSGALT0000	uncharacterized LOC422725	LOC422725	0.734793	3.5
ENSGALT0000	Neuropeptide-like protein C4orf48 l	LOC422894	0.75249	943.5
ENSGALT0000	uncharacterized LOC422895	LOC422895	0.854559	453.002
ENSGALT0000	transmembrane emp24 protein trar	LOC422906	0.649519	0.5
ENSGALT0000	uncharacterized LOC422928	LOC422928	0.94691	6
ENSGALT0000	interferon-induced transmembrane	LOC422993	0.399635	1
ENSGALT0000	protein-L-isoaspartate (D-aspartate	LOC423008	0.915603	496.5
ENSGALT0000	proteoglycan 2, bone marrow-like	LOC423134	0.891761	86.5
ENSGALT0000	cytosolic phospholipase A2 epsilon	LOC423229	0.643623	3
ENSGALT0000	acyl-coenzyme A thioesterase 2, m	LOC423247	0.911688	554.5
ENSGALT0000	CGI-146 protein	LOC423256	0.938396	65
ENSGALT0000	galectin-related protein-like	LOC423277	0.975818	65.5
ENSGALT0000	uncharacterized LOC423306	LOC423306	0.960065	70
ENSGALT0000	uncharacterized LOC423317	LOC423317	0.446169	5
ENSGALT0000	uncharacterized LOC423321	LOC423321	0.927641	290.5
ENSGALT0000	acyl-CoA synthetase short-chain fa	LOC423347	0.953889	20.5
ENSGALT0000	uncharacterized LOC423393	LOC423393	?	0
ENSGALT0000	protein unc-79 homolog	LOC423425	0.989168	51
ENSGALT0000	uncharacterized LOC423462	LOC423462	0.809337	18.5
ENSGALT0000	uncharacterized LOC423478	LOC423478	0.906881	66.5
ENSGALT0000	uncharacterized LOC423523	LOC423523	0.97871	756
ENSGALT0000	potassium channel, subfamily K, m	LOC423536	0.782832	46
ENSGALT0000	protein NDNF-like	LOC423605	0.368197	94.5
ENSGALT0000	rap1 GTPase-GDP dissociation stir	LOC423623	0.997408	7.5
ENSGALT0000	uncharacterized LOC423629	LOC423629	?	0
ENSGALT0000	phenylserine dehydratase-like	LOC423635	0.663175	17
ENSGALT0000	solute carrier family 22 member 15	LOC423653	0.951185	104.5
ENSGALT0000	neurotrypsin-like	LOC423740	0.946141	409
ENSGALT0000	uncharacterized LOC423752	LOC423752	0.971944	319.5
ENSGALT0000	lipase member M-like	LOC423786	0.845084	0.42843
ENSGALT0000	uncharacterized LOC423820	LOC423820	0.99662	10

ENSGALT0000	uncharacterized LOC423995	LOC423995	0.649519	1
ENSGALT0000	uncharacterized LOC424007	LOC424007	0.828826	3
ENSGALT0000	putative methyltransferase	LOC424014	0.738882	6112
ENSGALT0000	aryl hydrocarbon receptor-like	LOC424033	0.892686	37
ENSGALT0000	alpha-aspartyl dipeptidase	LOC424109	0.811161	386.5
ENSGALT0000	uncharacterized LOC424199	LOC424199	0.531737	4.5
ENSGALT0000	transforming growth factor, beta rec	LOC424261	0.600269	130.5
ENSGALT0000	uncharacterized LOC424334	LOC424334	0.547092	0.5
ENSGALT0000	ADAMTS-like protein 2-like	LOC424420	0.93518	846.999
ENSGALT0000	quinone oxidoreductase-like 2	LOC424430	0.450122	163.5
ENSGALT0000	uncharacterized LOC424473	LOC424473	0.972072	11.5
ENSGALT0000	epithelial chloride channel protein-l	LOC424523	0.897102	10.5
ENSGALT0000	uncharacterized LOC424620	LOC424620	0.60689	0.5
ENSGALT0000	cytochrome P450 2J2-like	LOC424676	0.977462	420.41
ENSGALT0000	cytochrome P450 2J2-like	LOC424677	0.993672	1129.81
ENSGALT0000	FRAS1-related extracellular matrix	LOC424679	0.757159	16
ENSGALT0000	structure-specific endonuclease su	LOC424727	0.508356	348.5
ENSGALT0000	cytochrome P450 2J2-like	LOC424729	0.661596	106
ENSGALT0000	\N	LOC424740	0.974608	471
ENSGALT0000	uncharacterized LOC424816	LOC424816	0.464758	0
ENSGALT0000	D-beta-hydroxybutyrate dehydroge	LOC424892	0.948264	259.058
ENSGALT0000	organic solute transporter subunit a	LOC424916	0.79356	4
ENSGALT0000	deoxyribodipyrimidine photo-lyase-	LOC424919	0.914698	1040.92
ENSGALT0000	uncharacterized LOC424925	LOC424925	0.930057	23.5
ENSGALT0000	cytochrome P450 2J6-like	LOC424943	0.898356	0.5
ENSGALT0000	cytochrome P450 2J2-like	LOC424944	0.738072	3
ENSGALT0000	uncharacterized LOC425004	LOC425004	0.464758	0
ENSGALT0000	hypothetical protein LOC425111	LOC425111	0.975767	458.603
ENSGALT0000	hypothetical protein LOC425113	LOC425113	0.494491	24.5988
ENSGALT0000	aldo-keto reductase family 1, meml	LOC425137	0.754574	646.724
ENSGALT0000	adenylate kinase isoenzyme 6	LOC425215	0.912366	477.5
ENSGALT0000	HEAT repeat-containing protein 7B	LOC425311	0.856595	1.5
ENSGALT0000	hypothetical protein LOC425375	LOC425375	0.987574	704
ENSGALT0000	zona pellucida-binding protein 2-lik	LOC425470	?	0
ENSGALT0000	ras-related protein Rab-18-B-like	LOC425531	0.92963	133
ENSGALT0000	hypothetical protein LOC425534	LOC425534	0.211987	4.34E-35
ENSGALT0000	lymphoid-restricted membrane prot	LOC425540	0.964359	5
ENSGALT0000	ovostatin-like	LOC425757	0.948209	19
ENSGALT0000	histone H2B	LOC426037	?	0
ENSGALT0000	claw keratin-like	LOC426218	?	1.07E-26
ENSGALT0000	meiosis-specific nuclear structural	LOC426295	0.9897	94.2982
ENSGALT0000	tetratricopeptide repeat protein 38-l	LOC426599	0.961688	257.899
ENSGALT0000	uncharacterized LOC426710	LOC426710	0.865074	1.5
ENSGALT0000	uncharacterized LOC426893	LOC426893	0.64457	12.5
ENSGALT0000	uncharacterized LOC426902	LOC426902	0.456411	6.5
ENSGALT0000	scale keratin-like	LOC426912	0.817456	0.49706
ENSGALT0000	feather keratin 1-like	LOC426913	?	0
ENSGALT0000	exonuclease NEF-sp	LOC427001	0.974981	682.007
ENSGALT0000	uncharacterized LOC427240	LOC427240	0.818488	1.5
ENSGALT0000	riboflavin kinase-like	LOC427259	0.760538	50.5
ENSGALT0000	S-adenosylmethionine synthase isc	LOC427292	0.813752	3
ENSGALT0000	lipid phosphate phosphatase-relate	LOC427306	0.794558	991
ENSGALT0000	uncharacterized LOC427369	LOC427369	0.464758	1
ENSGALT0000	avidin-related protein 2-like	LOC427416	0.932897	14.9612
ENSGALT0000	uncharacterized LOC427470	LOC427470	?	0
ENSGALT0000	histamine H3 receptor-like	LOC427545	0.951154	94

ENSGALT0000	neural-cadherin-like	LOC427547	0.975308	34
ENSGALT0000	parvalbumin beta-like	LOC427654	0.649519	0.5
ENSGALT0000	forkhead box protein L1-like	LOC427656	0.629678	4
ENSGALT0000	chemokine-like receptor 1-like	LOC427665	0.697918	5
ENSGALT0000	sodium-dependent serotonin transp	LOC427700	0.325147	18.5
ENSGALT0000	ectonucleoside triphosphate diphos	LOC427773	0.678887	4.5
ENSGALT0000	3-ketosteroid-9-alpha-hydroxylase	LOC427775	0.539038	0.5
ENSGALT0000	apoptosis-inducing factor 3-like	LOC427826	0.786348	17.5
ENSGALT0000	histone H2A	LOC427881	0.637611	108.285
ENSGALT0000	histone H1	LOC427882	0.713352	77.8017
ENSGALT0000	histone H4-like	LOC427884	0.439289	0.07084
ENSGALT0000	histone H2A-IV-like	LOC427891	0.736554	305.247
ENSGALT0000	histone 11R H1	LOC427896	0.406115	13.3155
ENSGALT0000	BPI fold-containing family C protein	LOC427911	0.649519	0.5
ENSGALT0000	sodium- and chloride-dependent G.	LOC427923	0.93105	3
ENSGALT0000	GART-B	LOC427977	0.961086	28.5
ENSGALT0000	regucalcin-like	LOC428008	0.455998	1
ENSGALT0000	fibrinogen-like protein 1-like	LOC428073	0.467211	50.5
ENSGALT0000	high affinity choline transporter 1-lik	LOC428094	0.285445	0
ENSGALT0000	olfactory receptor 52B2-like	LOC428111	0.607862	3.5
ENSGALT0000	olfactory receptor 52I1-like	LOC428119	0.603682	3
ENSGALT0000	thyrotropin-releasing hormone rece	LOC428144	0.464758	0
ENSGALT0000	ras-related protein Rab-39B-like	LOC428212	0.993163	27.5
ENSGALT0000	parathyroid hormone/parathyroid h	LOC428277	0.635721	13
ENSGALT0000	myosin light chain kinase, smooth r	LOC428278	0.856456	7.5
ENSGALT0000	feather keratin 3-like	LOC428289	?	0
ENSGALT0000	feather keratin Cos1-1/Cos1-3/Cos	LOC428291	?	0
ENSGALT0000	feather keratin Cos1-1/Cos1-3/Cos	LOC428293	0.464794	0
ENSGALT0000	feather keratin Cos1-1/Cos1-3/Cos	LOC428295	0.107383	0
ENSGALT0000	feather keratin Cos1-1/Cos1-3/Cos	LOC428297	?	0
ENSGALT0000	feather keratin Cos1-1/Cos1-3/Cos	LOC428298	0.464758	1.45E-15
ENSGALT0000	feather keratin Cos1-1/Cos1-3/Cos	LOC428299	?	1.45E-15
ENSGALT0000	excitatory amino acid transporter 5	LOC428322	0.957871	29
ENSGALT0000	leucine-rich repeat-containing prote	LOC428383	0.649519	0.5
ENSGALT0000	carboxymethylenebutenolidase hor	LOC428499	?	0
ENSGALT0000	epidermal retinol dehydrogenase 2	LOC428538	0.464758	0
ENSGALT0000	uncharacterized LOC428541	LOC428541	0.481181	13
ENSGALT0000	diacylglycerol O-acyltransferase 2-I	LOC428693	0.988322	42
ENSGALT0000	uncharacterized LOC428714	LOC428714	0.625644	4.5
ENSGALT0000	testis-specific serine/threonine-prot	LOC428720	0.464758	0.5
ENSGALT0000	general transcription factor IIE subu	LOC428778	0.962735	2.5
ENSGALT0000	SITS-binding protein-like	LOC428824	0.933518	32
ENSGALT0000	\N	LOC428834	0.711006	5.5
ENSGALT0000	embryonic protein UVS.2-like	LOC428867	0.649519	1
ENSGALT0000	2-hydroxyacylsphingosine 1-beta-g	LOC428949	0.412698	80
ENSGALT0000	lysosomal acid lipase/cholesteryl e	LOC428958	0.636897	0.07157
ENSGALT0000	dopamine D1C receptor	LOC428961	0.464758	0
ENSGALT0000	solute carrier family 2, facilitated gl	LOC428971	0.848019	121.5
ENSGALT0000	fatty-acid amide hydrolase 1-like	LOC429098	0.803695	2.52762
ENSGALT0000	methylcrotonoyl-Coenzyme A carbc	LOC429115	0.955786	469
ENSGALT0000	cytochrome P450 2J6-like	LOC429152	?	0
ENSGALT0000	cytochrome P450 2J6-like	LOC429153	0.464758	0
ENSGALT0000	feather keratin Cos1-1/Cos1-3/Cos	LOC429206	0.63888	4.60E-16
ENSGALT0000	tetraspanin-7-like	LOC429348	0.863524	5
ENSGALT0000	keratin D	LOC429492	?	0
ENSGALT0000	feather keratin Cos1-1/Cos1-3/Cos	LOC429742	0.474108	4.60E-16

ENSGALT0000	G protein-activated inward rectifier	LOC429785	0.61007	48.5
ENSGALT0000	zinc finger protein 184-like	LOC429800	0.986577	6
ENSGALT0000	claw keratin-like	LOC430658	0.464758	1.27E-09
ENSGALT0000	claw keratin-like	LOC430661	0.464758	2.49E-09
ENSGALT0000	G-protein coupled receptor 183-like	LOC431250	0.930458	13
ENSGALT0000	feather keratin Cos1-1/Cos1-3/Cos	LOC431276	0.464758	0
ENSGALT0000	keratin	LOC431321	?	0
ENSGALT0000	beta-keratin-related protein-like	LOC431323	?	0
ENSGALT0000	keratin A	LOC431324	?	0
ENSGALT0000	feather keratin Cos1-1/Cos1-3/Cos	LOC431352	0.464758	1.5
ENSGALT0000	uncharacterized LOC431615	LOC431615	0.818488	0.5
ENSGALT0000	aminopeptidase Q-like	LOC431649	0.725192	31.5
ENSGALT0000	probable phospholipid-transporting	LOC431656	0.987926	1006.01
ENSGALT0000	avidin-like	LOC431660	0.005247	4.5
ENSGALT0000	noggin 4	LOC693258	0.649519	0
ENSGALT0000	\N	LOC693265	0.884612	146.5
ENSGALT0000	histone H3.2-like	LOC768333	0.159397	38.4175
ENSGALT0000	tubulin beta-2 chain-like	LOC768337	0.643503	30330.6
ENSGALT0000	MHC-like class I Y	LOC768350	0.122649	271.592
ENSGALT0000	B-cell differentiation antigen CD72-	LOC768355	0.648521	0.5
ENSGALT0000	uncharacterized LOC768416	LOC768416	0.483482	1.15E-05
ENSGALT0000	zinc finger FYVE domain-containing	LOC768418	0.997422	148.893
ENSGALT0000	uncharacterized LOC768436	LOC768436	0.712114	353.5
ENSGALT0000	uncharacterized LOC768497	LOC768497	0.464758	0
ENSGALT0000	uncharacterized LOC768535	LOC768535	0.680693	1.5
ENSGALT0000	E3 SUMO-protein ligase RanBP2-li	LOC768553	0.916974	14.9346
ENSGALT0000	baculoviral IAP repeat-containing p	LOC768589	?	0
ENSGALT0000	uncharacterized LOC768596	LOC768596	0.464758	0
ENSGALT0000	interferon type A3-like	LOC768614	0.646548	0.61929
ENSGALT0000	uncharacterized LOC768635	LOC768635	0.942701	42.5
ENSGALT0000	dual specificity protein phosphatase	LOC768665	0.164317	0
ENSGALT0000	uncharacterized protein KIAA1671	LOC768701	0.999325	1432
ENSGALT0000	uncharacterized LOC768709	LOC768709	0.405524	536.5
ENSGALT0000	uncharacterized LOC768735	LOC768735	0.838306	74.5
ENSGALT0000	platelet glycoprotein VI-like	LOC768742	0.464302	1.3461
ENSGALT0000	uncharacterized LOC768770	LOC768770	0.883833	3
ENSGALT0000	uncharacterized LOC768803	LOC768803	0.541644	43
ENSGALT0000	trypsin I-P1-like	LOC768817	?	0
ENSGALT0000	uncharacterized LOC768834	LOC768834	?	0
ENSGALT0000	claw keratin-like	LOC768967	0.464758	2.49E-09
ENSGALT0000	olfactory receptor 52R1-like	LOC769103	?	0
ENSGALT0000	ADP-ribosylation factor-like 8B-like	LOC769134	0.314033	423.141
ENSGALT0000	feather keratin 1-like	LOC769139	0.584645	0
ENSGALT0000	C-type lectin-like receptor variant	LOC769174	0.722096	0.5
ENSGALT0000	uncharacterized LOC769207	LOC769207	0.93009	19.5
ENSGALT0000	uncharacterized LOC769232	LOC769232	0.853815	1
ENSGALT0000	TBC1 domain family member 24-lik	LOC769242	0.979667	84.9999
ENSGALT0000	uncharacterized LOC769250	LOC769250	0.722096	1.5
ENSGALT0000	uncharacterized LOC769251	LOC769251	0.826334	11
ENSGALT0000	neuropeptide B-like	LOC769277	0.157863	791
ENSGALT0000	olfactory receptor 52R1-like	LOC769317	0.916871	3
ENSGALT0000	fatty acyl-CoA hydrolase precursor,	LOC769339	0.941046	188.488
ENSGALT0000	uncharacterized LOC769382	LOC769382	0.649519	0.5
ENSGALT0000	C-type lectin domain family 2 meml	LOC769384	0.787355	60.9066
ENSGALT0000	uncharacterized LOC769438	LOC769438	0.994715	84
ENSGALT0000	feather keratin 1-like	LOC769491	0.440838	0.31467

ENSGALT0000	microsomal triglyceride transfer pro	LOC769580	0.79946	2
ENSGALT0000	uncharacterized LOC769608	LOC769608	0.00141703	1.35E-08
ENSGALT0000	uncharacterized LOC769642	LOC769642	0.20548	0
ENSGALT0000	uncharacterized LOC769670	LOC769670	0.85858	2
ENSGALT0000	PR domain zinc finger protein 10-lil	LOC769676	0.982824	625.5
ENSGALT0000	uncharacterized LOC769697	LOC769697	0.898356	0.5
ENSGALT0000	kazal-type serine protease inhibitor	LOC769726	0.917269	10.5
ENSGALT0000	uncharacterized LOC769727	LOC769727	0.982871	38
ENSGALT0000	uncharacterized LOC769731	LOC769731	?	0
ENSGALT0000	magnesium transporter NIPA2-like	LOC769755	0.959769	513
ENSGALT0000	uncharacterized LOC769806	LOC769806	0.969644	144.5
ENSGALT0000	histone H3.2-like	LOC769809	0.417683	794.017
ENSGALT0000	probable G-protein coupled recepto	LOC769837	0.70447	8
ENSGALT0000	uncharacterized LOC769885	LOC769885	0.826353	1.5
ENSGALT0000	histone H2B 1/2/3/4/6-like	LOC769973	0.362619	78.3527
ENSGALT0000	histone H4-like	LOC770005	0.93631	194.407
ENSGALT0000	uncharacterized LOC770010	LOC770010	?	0
ENSGALT0000	histone H3.2-like	LOC770022	0.0864548	27.5473
ENSGALT0000	histone H4-like	LOC770079	0.93631	194.407
ENSGALT0000	uncharacterized LOC770113	LOC770113	0.74806	3.5
ENSGALT0000	cytochrome P450 2J2-like	LOC770119	0.853815	5
ENSGALT0000	uncharacterized LOC770127	LOC770127	0.914565	19.5
ENSGALT0000	histone H4-like	LOC770142	0.151749	21.1209
ENSGALT0000	feather keratin Cos1-1/Cos1-3/Cos	LOC770152	0.639428	0
ENSGALT0000	uncharacterized LOC770184	LOC770184	0.633851	23.5
ENSGALT0000	histone H2B 1/2/3/4/6-like	LOC770188	0.404486	27.5029
ENSGALT0000	uncharacterized LOC770260	LOC770260	0.988161	11.5
ENSGALT0000	mitochondrial ubiquitin ligase activa	LOC770265	0.832711	199.5
ENSGALT0000	histone H2B 1/2/3/4/6-like	LOC770267	0.329358	32.9862
ENSGALT0000	low affinity cationic amino acid tran	LOC770309	0.585907	6
ENSGALT0000	uncharacterized LOC770340	LOC770340	0.986383	78
ENSGALT0000	uncharacterized LOC770352	LOC770352	0.740073	0.5
ENSGALT0000	uncharacterized LOC770371	LOC770371	0.977955	314
ENSGALT0000	cytosolic 5'-nucleotidase 1A-like	LOC770392	0.947423	177
ENSGALT0000	WD repeat-containing protein C2or	LOC770429	0.94691	2.5
ENSGALT0000	uncharacterized LOC770446	LOC770446	0.757187	17.5
ENSGALT0000	uncharacterized LOC770458	LOC770458	?	0
ENSGALT0000	mitochondrial import receptor subu	LOC770490	0.345438	653.5
ENSGALT0000	ras-related and estrogen-regulated	LOC770492	0.852144	15.5
ENSGALT0000	1-acyl-sn-glycerol-3-phosphate acy	LOC770506	0.871074	4.5
ENSGALT0000	fibrinogen silencer-binding protein-l	LOC770634	0.993569	332.5
ENSGALT0000	nucleophosmin-like	LOC770649	?	0
ENSGALT0000	tripartite motif-containing protein 39	LOC770718	0.580411	27
ENSGALT0000	feather keratin Cos1-1/Cos1-3/Cos	LOC770723	?	1.45E-15
ENSGALT0000	trypsin inhibitor ClTI-1-like	LOC770729	0.108094	67
ENSGALT0000	WW domain-binding protein 2-like	LOC770780	0.923162	1459.5
ENSGALT0000	uncharacterized LOC770838	LOC770838	?	0
ENSGALT0000	uncharacterized LOC770857	LOC770857	0.660747	487.255
ENSGALT0000	lipase member M-like	LOC770870	0.945734	14
ENSGALT0000	lipase member M-like	LOC770883	0.637409	6.5
ENSGALT0000	lipase member M-like	LOC770890	0.956481	6.5
ENSGALT0000	deoxycytidine kinase-like	LOC770922	0.857873	983.97
ENSGALT0000	serine/threonine-protein kinase SR	LOC770936	0.763338	134.03
ENSGALT0000	feather keratin 3-like	LOC770940	?	0
ENSGALT0000	L-gulonolactone oxidase-like	LOC770996	0.903391	54.5
ENSGALT0000	feather keratin 2-like	LOC771021	?	0

ENSGALT0000	uncharacterized LOC771028	LOC771028	0.47963	2.5
ENSGALT0000	uncharacterized LOC771030	LOC771030	0.740073	1
ENSGALT0000	C-factor-like	LOC771069	0.841087	35
ENSGALT0000	pinopsin-like	LOC771085	0.615036	0.5
ENSGALT0000	uncharacterized LOC771141	LOC771141	0.898356	0.5
ENSGALT0000	urotensin-2 receptor-like	LOC771154	0.988724	79
ENSGALT0000	uncharacterized LOC771455	LOC771455	0.949577	26
ENSGALT0000	uncharacterized LOC771537	LOC771537	0.990993	139
ENSGALT0000	uncharacterized LOC771545	LOC771545	0.899554	141.5
ENSGALT0000	HEPACAM family member 2-like	LOC771647	0.713771	4.69298
ENSGALT0000	hepatocyte cell adhesion molecule-	LOC771657	0.997687	8.80702
ENSGALT0000	C-type lectin domain family 19 men	LOC771758	0.430114	117.5
ENSGALT0000	tyrosine 3-monooxygenase-like	LOC771761	?	0
ENSGALT0000	complement receptor type 2-like	LOC771877	0.644023	43
ENSGALT0000	uncharacterized LOC771935	LOC771935	0.612578	3
ENSGALT0000	uncharacterized LOC771972	LOC771972	0.963694	78
ENSGALT0000	kelch repeat-containing protein 2-li	LOC772017	0.995332	34.5
ENSGALT0000	uncharacterized LOC772071	LOC772071	0.958582	1759.53
ENSGALT0000	uncharacterized LOC772117	LOC772117	0.94691	3.5
ENSGALT0000	organic solute transporter subunit a	LOC772218	0.915403	37
ENSGALT0000	uncharacterized LOC772245	LOC772245	0.98121	25
ENSGALT0000	protein CXorf40A-like	LOC772269	0.921398	251
ENSGALT0000	SUN domain-containing protein 3-li	LOC776146	0.72719	13.6533
ENSGALT0000	loss of heterozygosity, 12, chromos	LOH12CR1	0.961226	1209.23
ENSGALT0000	lon peptidase 1, mitochondrial	LONP1	0.981198	2339
ENSGALT0000	lon peptidase 2, peroxisomal	LONP2	0.947653	1047.5
ENSGALT0000	LON peptidase N-terminal domain :	LONRF1	0.970308	168
ENSGALT0000	LON peptidase N-terminal domain :	LONRF2	0.991913	1533
ENSGALT0000	LON peptidase N-terminal domain :	LONRF3	0.769212	219.5
ENSGALT0000	lysyl oxidase	LOX	0.861465	78.5
ENSGALT0000	lipoxygenase homology domains 1	LOXHD1	0.53465	66
ENSGALT0000	lysyl oxidase-like 2	LOXL2	0.956748	344
ENSGALT0000	lysyl oxidase-like 3	LOXL3	0.947221	250
ENSGALT0000	lysyl oxidase-like 4	LOXL4	0.792764	8.5
ENSGALT0000	lysophosphatidic acid receptor 2	LPAR2	0.930507	302.5
ENSGALT0000	lysophosphatidic acid receptor 3	LPAR3	0.775512	133.5
ENSGALT0000	\N	LPAR6	0.928818	628.5
ENSGALT0000	lysophosphatidylcholine acyltransfe	LPCAT1	0.990584	493
ENSGALT0000	lysophosphatidylcholine acyltransfe	LPCAT2	0.944145	273.5
ENSGALT0000	lysophosphatidylcholine acyltransfe	LPCAT3	0.949126	1278.5
ENSGALT0000	lysophosphatidylglycerol acyltransf	LPGAT1	0.924707	676
ENSGALT0000	latrophilin 3	LPHN3	0.969484	5165.5
ENSGALT0000	lipin 1	LPIN1	0.97488	434
ENSGALT0000	lipin 2	LPIN2	0.953698	706.501
ENSGALT0000	lipin 3	LPIN3	0.990977	3.5
ENSGALT0000	lipoprotein lipase	LPL	0.929516	366.501
ENSGALT0000	lactoperoxidase	LPO	0.464758	0.5
ENSGALT0000	LIM domain containing preferred tra	LPP	0.979195	785.227
ENSGALT0000	lipid phosphate phosphatase-relate	LPPR4	0.929951	316
ENSGALT0000	lipid phosphate phosphatase-relate	LPPR5	0.716175	53.5
ENSGALT0000	leupaxin	LPXN	0.638699	16
ENSGALT0000	lecithin retinol acyltransferase (pho	LRAT	0.887439	22
ENSGALT0000	LPS-responsive vesicle trafficking,	LRBA	0.987759	3223
ENSGALT0000	leucine-rich repeats and calponin h	LRCH1	0.982089	174.5
ENSGALT0000	leucine-rich repeats and calponin h	LRCH2	0.942715	548.5
ENSGALT0000	leucine rich repeat and fibronectin t	LRFN2	0.637345	3.5

ENSGALT0000	leucine rich repeat and fibronectin	LRFN3	0.808113	153
ENSGALT0000	leucine rich repeat and fibronectin	LRFN5	0.759589	276.001
ENSGALT0000	leucine-rich repeats and guanylate	LRGUK	0.973796	83
ENSGALT0000	ligand dependent nuclear receptor	LRIF1	0.98966	380
ENSGALT0000	leucine-rich repeats and immunogl	LRIG1	0.589287	1189
ENSGALT0000	leucine-rich repeats and immunogl	LRIG2	0.988205	2247
ENSGALT0000	leucine-rich repeats and immunogl	LRIG3	0.983864	697
ENSGALT0000	leucine-rich repeat, immunoglobulir	LRIT1	0.699173	27
ENSGALT0000	leucine-rich repeat, immunoglobulir	LRIT2	0.624698	2.5
ENSGALT0000	leucine-rich repeat, immunoglobulir	LRIT3	0.293716	0.5
ENSGALT0000	lymphoid-restricted membrane prot	LRMP	0.951722	10
ENSGALT0000	low density lipoprotein receptor-rela	LRP11	0.694972	1248
ENSGALT0000	low density lipoprotein receptor-rela	LRP12	0.994067	1651.5
ENSGALT0000	low density lipoprotein receptor-rela	LRP1B	0.967682	1303
ENSGALT0000	low density lipoprotein receptor-rela	LRP2	0.979556	7312.06
ENSGALT0000	LRP2 binding protein	LRP2BP	0.975207	214.5
ENSGALT0000	low density lipoprotein receptor-rela	LRP3	0.980938	486.5
ENSGALT0000	low density lipoprotein receptor-rela	LRP4	0.880944	1584
ENSGALT0000	low density lipoprotein receptor-rela	LRP5	0.996206	1169.01
ENSGALT0000	low density lipoprotein receptor-rela	LRP6	0.988494	1287
ENSGALT0000	low density lipoprotein receptor-rela	LRP8	0.863687	409.5
ENSGALT0000	low density lipoprotein receptor-rela	LRPAP1	0.975791	1901
ENSGALT0000	leucine-rich PPR-motif containing	LRPPRC	0.921404	3899.46
ENSGALT0000	leucine rich repeat protein 1	LRR1	0.880631	508.5
ENSGALT0000	leucine rich repeat containing 1	LRRC1	0.996552	706
ENSGALT0000	leucine rich repeat containing 10	LRRC10	0.464758	0
ENSGALT0000	leucine rich repeat containing 10B	LRRC10B	0.955281	93.5
ENSGALT0000	leucine rich repeat containing 14B	LRRC14B	?	0
ENSGALT0000	leucine rich repeat containing 15	LRRC15	0.890837	32.5
ENSGALT0000	leucine rich repeat containing 16A	LRRC16A	0.951571	2374
ENSGALT0000	leucine rich repeat containing 17	LRRC17	0.98269	691.41
ENSGALT0000	leucine rich repeat containing 18	LRRC18	0.639897	1.5
ENSGALT0000	leucine rich repeat containing 19	LRRC19	0.955526	94.5
ENSGALT0000	leucine rich repeat containing 2	LRRC2	0.464758	0
ENSGALT0000	leucine rich repeat containing 20	LRRC20	0.365594	352
ENSGALT0000	leucine rich repeat containing 23	LRRC23	0.935565	34
ENSGALT0000	leucine rich repeat containing 26	LRRC26	?	0
ENSGALT0000	leucine rich repeat containing 28	LRRC28	0.984901	631.998
ENSGALT0000	leucine rich repeat containing 30	LRRC30	?	0
ENSGALT0000	leucine rich repeat containing 31	LRRC31	0.927758	209.5
ENSGALT0000	leucine rich repeat containing 32	LRRC32	0.774051	48.5
ENSGALT0000	leucine rich repeat containing 33	LRRC33	0.978114	117
ENSGALT0000	leucine rich repeat containing 34	LRRC34	0.951232	108
ENSGALT0000	leucine rich repeat containing 38	LRRC38	0.993614	84.5
ENSGALT0000	leucine rich repeat containing 39	LRRC39	0.914884	9.76054
ENSGALT0000	leucine rich repeat containing 3B	LRRC3B	0.974461	31.5
ENSGALT0000	leucine rich repeat containing 40	LRRC40	0.936105	1165.5
ENSGALT0000	leucine rich repeat containing 41	LRRC41	0.953683	448.658
ENSGALT0000	leucine rich repeat containing 42	LRRC42	0.832299	737
ENSGALT0000	leucine rich repeat containing 43	LRRC43	0.803731	6.5
ENSGALT0000	leucine rich repeat containing 45	LRRC45	0.978468	1215.02
ENSGALT0000	leucine rich repeat containing 46	LRRC46	0.964623	42
ENSGALT0000	leucine rich repeat containing 47	LRRC47	0.81652	911
ENSGALT0000	leucine rich repeat containing 48	LRRC48	0.974944	122.5
ENSGALT0000	leucine rich repeat containing 49	LRRC49	0.962289	270
ENSGALT0000	leucine rich repeat containing 4C	LRRC4C	0.989428	377.501

ENSGALT0000	leucine rich repeat containing 52	LRRC52	0.69838	52
ENSGALT0000	leucine rich repeat containing 56	LRRC56	0.983207	42.5
ENSGALT0000	leucine rich repeat containing 57	LRRC57	0.994085	160.5
ENSGALT0000	leucine rich repeat containing 58	LRRC58	0.948203	205
ENSGALT0000	leucine rich repeat containing 59	LRRC59	0.958461	1817.54
ENSGALT0000	leucine rich repeat containing 6	LRRC6	0.756658	324
ENSGALT0000	leucine rich repeat containing 61	LRRC61	0.49411	184
ENSGALT0000	leucine rich repeat containing 67	LRRC67	0.868279	30.5
ENSGALT0000	leucine rich repeat containing 7	LRRC7	0.757368	160
ENSGALT0000	leucine rich repeat containing 72	LRRC72	0.87343	14.5
ENSGALT0000	leucine rich repeat containing 73	LRRC73	0.668253	598.999
ENSGALT0000	leucine rich repeat containing 8 fam	LRRC8A	0.960168	1924.5
ENSGALT0000	leucine rich repeat containing 8 fam	LRRC8B	0.921457	462.5
ENSGALT0000	leucine rich repeat containing 8 fam	LRRC8C	0.995522	329.5
ENSGALT0000	leucine rich repeat containing 8 fam	LRRC8D	0.998067	757.5
ENSGALT0000	leucine rich repeat containing 9	LRRC9	0.522055	0.5
ENSGALT0000	leucine rich repeat and coiled-coil c	LRRCC1	0.948934	151.5
ENSGALT0000	leucine-rich repeats and death dom	LRRD1	0.859598	13
ENSGALT0000	leucine rich repeat (in FLII) interact	LRRFIP1	0.90685	356.5
ENSGALT0000	leucine rich repeat (in FLII) interact	LRRFIP2	0.878577	1629.01
ENSGALT0000	leucine-rich repeats and IQ motif cc	LRRIQ1	0.904115	123.5
ENSGALT0000	leucine-rich repeats and IQ motif cc	LRRIQ4	0.910609	8.5
ENSGALT0000	leucine-rich repeat kinase 1	LRRK1	0.736463	2362.5
ENSGALT0000	leucine rich repeat neuronal 1	LRRN1	0.931471	2946
ENSGALT0000	leucine rich repeat neuronal 2	LRRN2	0.757889	332.5
ENSGALT0000	leucine rich repeat neuronal 3	LRRN3	0.663101	37.5
ENSGALT0000	leucine rich repeat neuronal 4	LRRN4	0.947054	320
ENSGALT0000	leucine rich repeat transmembrane	LRRTM1	0.88487	190.5
ENSGALT0000	leucine rich repeat transmembrane	LRRTM2	0.760368	18.5
ENSGALT0000	leucine rich repeat transmembrane	LRRTM3	0.631904	57.5
ENSGALT0000	leucine rich repeat transmembrane	LRRTM4	0.916664	245
ENSGALT0000	leucine rich repeat and sterile alpha	LRSAM1	0.865433	840
ENSGALT0000	leucine-rich repeats and transmem	LRTM1	0.538823	5.5
ENSGALT0000	leucine-rich repeats and transmem	LRTM2	0.892545	10.5
ENSGALT0000	leucine-rich repeats and WD repea	LRWD1	0.963455	2113.76
ENSGALT0000	limbic system-associated membran	LSAMP	0.692581	466.498
ENSGALT0000	large subunit GTPase 1 homolog (S	LSG1	0.910897	2034.51
ENSGALT0000	LSM1 homolog, U6 small nuclear F	LSM1	0.27613	412
ENSGALT0000	LSM10, U7 small nuclear RNA assc	LSM10	0.547549	287.5
ENSGALT0000	LSM11, U7 small nuclear RNA assc	LSM11	0.906744	308.5
ENSGALT0000	LSM12 homolog (S. cerevisiae)	LSM12	0.795514	315.5
ENSGALT0000	LSM14A, SCD6 homolog A (S. cere	LSM14A	0.958964	3790.06
ENSGALT0000	LSM14B, SCD6 homolog B (S. cere	LSM14B	0.904156	1112.5
ENSGALT0000	LSM3 homolog, U6 small nuclear F	LSM3	0.85757	564.5
ENSGALT0000	LSM4 homolog, U6 small nuclear F	LSM4	0.617595	1445
ENSGALT0000	LSM5 homolog, U6 small nuclear F	LSM5	0.8835	439.5
ENSGALT0000	LSM6 homolog, U6 small nuclear F	LSM6	0.908475	441
ENSGALT0000	LSM7 homolog, U6 small nuclear F	LSM7	0.918833	1461.5
ENSGALT0000	lymphocyte-specific protein 1	LSP1	0.917561	2145.46
ENSGALT0000	lanosterol synthase (2,3-oxidosqua	LSS	0.748159	1291.5
ENSGALT0000	leukotriene A4 hydrolase	LTA4H	0.858045	2177.5
ENSGALT0000	latent transforming growth factor be	LTBP1	0.882597	9325.5
ENSGALT0000	latent transforming growth factor be	LTBP2	0.890122	847.5
ENSGALT0000	leukotriene C4 synthase	LTC4S	0.926054	10
ENSGALT0000	lactotransferrin	LTF	0.930259	3216.95
ENSGALT0000	leukocyte receptor tyrosine kinase	LTK	0.788664	230

ENSGALT0000	listerin E3 ubiquitin protein ligase 1	LTN1	0.982682	1473.5
ENSGALT0000	LTV1 homolog (S. cerevisiae)	LTV1	0.983137	998
ENSGALT0000	LUC7-like (S. cerevisiae)	LUC7L	0.92521	1071
ENSGALT0000	LUC7-like 2 (S. cerevisiae)	LUC7L2	0.956758	2373.5
ENSGALT0000	LUC7-like 3 (S. cerevisiae)	LUC7L3	0.982152	4214.11
ENSGALT0000	lumican	LUM	0.521199	124
ENSGALT0000	leucine zipper protein 1	LUZP1	0.89631	65.5
ENSGALT0000	leucine zipper protein 2	LUZP2	0.861598	68.5
ENSGALT0000	latexin	LXN	0.978815	126.324
ENSGALT0000	lymphocyte antigen 6 complex, locu	LY6E	0.68596	1741
ENSGALT0000	lymphocyte antigen 75	LY75	0.972017	1599.5
ENSGALT0000	lymphocyte antigen 86	LY86	0.731556	44.5
ENSGALT0000	lymphocyte antigen 96	LY96	0.927729	4
ENSGALT0000	Ly1 antibody reactive homolog (mo	LYAR	0.973882	680.5
ENSGALT0000	lysozyme G-like 2	LYG2	0.881603	9
ENSGALT0000	v-yes-1 Yamaguchi sarcoma viral r	LYN	0.998965	321.5
ENSGALT0000	LY6/PLAUR domain containing 1	LYPD1	0.658346	369.815
ENSGALT0000	LY6/PLAUR domain containing 2	LYPD2	?	0
ENSGALT0000	LY6/PLAUR domain containing 6	LYPD6	0.894292	125
ENSGALT0000	LY6/PLAUR domain containing 6B	LYPD6B	0.820581	325.5
ENSGALT0000	lysophospholipase II	LYPLA2	0.836719	2135.5
ENSGALT0000	lysophospholipase-like 1	LYPLAL1	0.890138	206
ENSGALT0000	LYR motif containing 1	LYRM1	0.970133	520.5
ENSGALT0000	LYR motif containing 2	LYRM2	0.435179	243.77
ENSGALT0000	LYR motif containing 4	LYRM4	0.863359	15.5
ENSGALT0000	LYR motif containing 5	LYRM5	0.939972	98.0769
ENSGALT0000	Lyrm7 homolog (mouse)	LYRM7	0.992542	65.5
ENSGALT0000	LysM, putative peptidoglycan-bindi	LYSMD2	0.753775	857
ENSGALT0000	LysM, putative peptidoglycan-bindi	LYSMD3	0.957283	448.5
ENSGALT0000	LysM, putative peptidoglycan-bindi	LYSMD4	0.963237	819
ENSGALT0000	lysosomal trafficking regulator	LYST	0.999951	1356.5
ENSGALT0000	lymphatic vessel endothelial hyalur	LYVE1	0.970707	19.5
ENSGALT0000	lysozyme (renal amyloidosis)	LYZ	0.955266	21.5
ENSGALT0000	leucine zipper and CTNNBIP1 dom	LZIC	0.898063	2453.5
ENSGALT0000	leucine zipper transcription factor-li	LZTFL1	0.98659	991
ENSGALT0000	leucine-zipper-like transcription reg	LZTR1	0.907267	1171.5
ENSGALT0000	leucine zipper, putative tumor supp	LZTS1	0.78293	384.5
ENSGALT0000	leucine zipper, putative tumor supp	LZTS2	0.940294	391.5
ENSGALT0000	Protein MRP-126	M126_CHICK	0.963731	27.4425
ENSGALT0000	mannose-6-phosphate receptor (ca	M6PR	0.9443	3525.47
ENSGALT0000	mab-21-like 1 (C. elegans)	MAB21L1	0.583129	195.034
ENSGALT0000	\N	MAB21L2	0.439627	36.9664
ENSGALT0000	mab-21-like 3 (C. elegans)	MAB21L3	0.985046	68.5
ENSGALT0000	metastasis associated in colon can	MACC1	0.985966	73
ENSGALT0000	microtubule-actin crosslinking facto	MACF1	0.907534	15559
ENSGALT0000	MAD1 mitotic arrest deficient-like 1	MAD1L1	0.897718	792
ENSGALT0000	MAD2 mitotic arrest deficient-like 1	MAD2L1	0.62057	1581
ENSGALT0000	MAD2L1 binding protein	MAD2L1BP	0.921587	240
ENSGALT0000	MAD2 mitotic arrest deficient-like 2	MAD2L2	0.928989	1180
ENSGALT0000	MAP-kinase activating death doma	MADD	0.967724	2821
ENSGALT0000	ADP-ribosyltransferase 1	MADPRT	0.46679	1
ENSGALT0000	macrophage erythroblast attacher	MAEA	0.954626	1586.51
ENSGALT0000	maelstrom homolog (Drosophila)	MAEL	0.734344	1.5
ENSGALT0000	v-maf musculoaponeurotic fibrosar	MAFB	0.716377	686
ENSGALT0000	v-maf musculoaponeurotic fibrosar	MAFF	0.747581	992.5
ENSGALT0000	v-maf musculoaponeurotic fibrosar	MAFG	0.925662	236.5

ENSGALT0000	v-maf musculoaponeurotic fibrosar	MAFK	0.916657	188.5
ENSGALT0000	membrane associated guanylate ki	MAGI1	0.764512	2188.49
ENSGALT0000	membrane associated guanylate ki	MAGI2	0.974835	306
ENSGALT0000	membrane associated guanylate ki	MAGI3	0.998135	2327.5
ENSGALT0000	mago-nashi homolog, proliferation-	MAGOH	0.385589	3319.95
ENSGALT0000	magnesium transporter 1	MAGT1	0.951581	3914
ENSGALT0000	male germ cell-associated kinase	MAK	0.961955	37.5
ENSGALT0000	MAK16 homolog (S. cerevisiae)	MAK16	0.890511	855.5
ENSGALT0000	mal, T-cell differentiation protein	MAL	0.714799	3
ENSGALT0000	mal, T-cell differentiation protein 2 (	MAL2	0.993027	71.5
ENSGALT0000	mal, T-cell differentiation protein-lik	MALL	0.960077	125.5
ENSGALT0000	mitochondrial assembly of ribosom	MALSU1	0.929581	483.5
ENSGALT0000	mucosa associated lymphoid tissue	MALT1	0.951898	373
ENSGALT0000	MAM domain containing 2	MAMDC2	0.670963	39
ENSGALT0000	MAM domain containing 4	MAMDC4	0.939346	10
ENSGALT0000	mastermind-like 1 (Drosophila)	MAML1	0.994114	1462.5
ENSGALT0000	mastermind-like 3 (Drosophila)	MAML3	0.991267	841
ENSGALT0000	mastermind-like domain containing	MAMLD1	0.990305	562.998
ENSGALT0000	mannosidase, alpha, class 1A, mer	MAN1A1	0.886341	170
ENSGALT0000	mannosidase, alpha, class 1A, mer	MAN1A2	0.991927	1316.5
ENSGALT0000	mannosidase, alpha, class 1B, mer	MAN1B1	0.943133	1177.5
ENSGALT0000	mannosidase, alpha, class 1C, mer	MAN1C1	0.872303	301
ENSGALT0000	mannosidase, alpha, class 2A, mer	MAN2A1	0.967543	494.5
ENSGALT0000	mannosidase, alpha, class 2A, mer	MAN2A2	0.952723	4566.5
ENSGALT0000	mannosidase, alpha, class 2B, mer	MAN2B2	0.984075	4953
ENSGALT0000	mannosidase, alpha, class 2C, mer	MAN2C1	0.955663	1308.49
ENSGALT0000	mannosidase, beta A, lysosomal	MANBA	0.992725	772.5
ENSGALT0000	mannosidase, endo-alpha	MANEA	0.982467	478.5
ENSGALT0000	mannosidase, endo-alpha-like	MANEAL	0.793551	177
ENSGALT0000	mesencephalic astrocyte-derived n	MANF	0.604318	3302
ENSGALT0000	MANSC domain containing 1	MANSC1	0.956801	167.853
ENSGALT0000	monoamine oxidase A	MAOA	0.674262	104
ENSGALT0000	monoamine oxidase B	MAOB	0.890915	84
ENSGALT0000	microtubule-associated protein 1A	MAP1A	0.806181	3432
ENSGALT0000	microtubule-associated protein 1B	MAP1B	0.77277	4890.52
ENSGALT0000	microtubule-associated protein 1 lig	MAP1LC3A	0.849822	916
ENSGALT0000	microtubule-associated protein 1 lig	MAP1LC3C	0.839015	25.5
ENSGALT0000	microtubule-associated protein 2	MAP2	0.778066	1457
ENSGALT0000	mitogen-activated protein kinase ki	MAP2K1	0.926768	1794
ENSGALT0000	mitogen-activated protein kinase ki	MAP2K2	0.729407	1503
ENSGALT0000	mitogen-activated protein kinase ki	MAP2K3	0.906309	745.497
ENSGALT0000	mitogen-activated protein kinase ki	MAP2K4	0.924061	557
ENSGALT0000	mitogen-activated protein kinase ki	MAP2K5	0.737035	2370.52
ENSGALT0000	mitogen-activated protein kinase ki	MAP3K1	0.910737	987.5
ENSGALT0000	mitogen-activated protein kinase ki	MAP3K13	0.858285	707.226
ENSGALT0000	mitogen-activated protein kinase ki	MAP3K14	0.969407	1061.99
ENSGALT0000	mitogen-activated protein kinase ki	MAP3K15	0.754254	38.5
ENSGALT0000	mitogen-activated protein kinase ki	MAP3K2	0.978209	686
ENSGALT0000	mitogen-activated protein kinase ki	MAP3K3	0.973203	779.499
ENSGALT0000	mitogen-activated protein kinase ki	MAP3K4	0.951014	840
ENSGALT0000	mitogen-activated protein kinase ki	MAP3K5	0.942104	700.5
ENSGALT0000	mitogen-activated protein kinase ki	MAP3K7	0.954068	3903.5
ENSGALT0000	mitogen-activated protein kinase ki	MAP3K8	0.868647	12.5
ENSGALT0000	microtubule-associated protein 4	MAP4	0.743994	2446
ENSGALT0000	mitogen-activated protein kinase ki	MAP4K3	0.977833	1518
ENSGALT0000	mitogen-activated protein kinase ki	MAP4K4	0.92248	4908.77

ENSGALT0000	mitogen-activated protein kinase ki	MAP4K5	0.972793	1078
ENSGALT0000	microtubule-associated protein 6	MAP6	0.716237	919
ENSGALT0000	microtubule-associated protein 7	MAP7	0.982304	1184
ENSGALT0000	MAP7 domain containing 1	MAP7D1	0.74766	1925.5
ENSGALT0000	MAP7 domain containing 2	MAP7D2	0.952013	1101
ENSGALT0000	MAP7 domain containing 3	MAP7D3	0.899367	1220.5
ENSGALT0000	microtubule-associated protein 9	MAP9	0.999205	23
ENSGALT0000	mitogen-activated protein kinase 1	MAPK1	0.94035	1499.98
ENSGALT0000	mitogen-activated protein kinase 1(	MAPK10	0.649405	231.5
ENSGALT0000	mitogen-activated protein kinase 11	MAPK11	0.935237	519.503
ENSGALT0000	mitogen-activated protein kinase 1:	MAPK12	0.775458	104
ENSGALT0000	mitogen-activated protein kinase 1:	MAPK13	0.850566	383.5
ENSGALT0000	mitogen-activated protein kinase 14	MAPK14	0.956695	1096.5
ENSGALT0000	mitogen-activated protein kinase 1!	MAPK15	0.995098	250.5
ENSGALT0000	mitogen-activated protein kinase 1	MAPK1IP1L	0.910129	1545
ENSGALT0000	mitogen-activated protein kinase 6	MAPK6	0.845502	30786.5
ENSGALT0000	mitogen-activated protein kinase 8	MAPK8	0.988781	1566
ENSGALT0000	mitogen-activated protein kinase 8	MAPK8IP1	0.860984	3058
ENSGALT0000	mitogen-activated protein kinase 8	MAPK8IP3	0.928732	6837.07
ENSGALT0000	mitogen-activated protein kinase 9	MAPK9	0.975407	548.5
ENSGALT0000	mitogen-activated protein kinase as	MAPKAP1	0.963083	1019
ENSGALT0000	mitogen-activated protein kinase-ad	MAPKAPK2	0.971898	2835
ENSGALT0000	mitogen-activated protein kinase-ad	MAPKAPK3	0.942693	967.5
ENSGALT0000	mitogen-activated protein kinase-ad	MAPKAPK5	0.955087	551.503
ENSGALT0000	mitogen-activated protein kinase bi	MAPKBP1	0.96306	993.758
ENSGALT0000	microtubule-associated protein, RP	MAPRE1	0.82204	7390.5
ENSGALT0000	microtubule-associated protein, RP	MAPRE2	0.863425	3155.49
ENSGALT0000	membrane-associated ring finger ((	Mar-04	0.761455	61
ENSGALT0000	mitochondrial amidoxime reducing	MARC2	0.911797	698
ENSGALT0000	membrane-associated ring finger ((	MARCH1	0.852079	127
ENSGALT0000	membrane-associated ring finger ((	MARCH11	0.399721	2
ENSGALT0000	membrane-associated ring finger ((	MARCH2	0.90902	212
ENSGALT0000	membrane-associated ring finger ((	MARCH3	0.0330281	2.5
ENSGALT0000	membrane-associated ring finger ki	MARCH6	0.942366	1642
ENSGALT0000	membrane-associated ring finger ((	MARCH7	0.959418	1698
ENSGALT0000	membrane-associated ring finger ((	MARCH8	0.985044	240.5
ENSGALT0000	MARCKS-like 1	MARCKSL1	0.661982	13705
ENSGALT0000	macrophage receptor with collagen	MARCO	0.274016	4
ENSGALT0000	E3 ubiquitin-protein ligase MARCH	MARH5_CHICK	0.980373	1469.5
ENSGALT0000	MAP/microtubule affinity-regulating	MARK1	0.928042	1484.5
ENSGALT0000	MAP/microtubule affinity-regulating	MARK3	0.959257	3146.5
ENSGALT0000	methionyl-tRNA synthetase 2, mito	MARS2	0.904959	506
ENSGALT0000	MARVEL domain containing 3	MARVELD3	0.978736	568.5
ENSGALT0000	MAS1 oncogene	MAS1	?	0
ENSGALT0000	mannan-binding lectin serine pepti	MASP1	0.90097	53.5
ENSGALT0000	mannan-binding lectin serine pepti	MASP2	0.858289	10.5
ENSGALT0000	microtubule associated serine/three	MAST2	0.911837	3416.5
ENSGALT0000	microtubule associated serine/three	MAST3	0.9445	1278
ENSGALT0000	microtubule associated serine/three	MAST4	0.996774	512
ENSGALT0000	microtubule associated serine/three	MASTL	0.949662	187.5
ENSGALT0000	methionine adenosyltransferase I, a	MAT1A	0.707664	34
ENSGALT0000	methionine adenosyltransferase II,	MAT2B	0.95597	898
ENSGALT0000	megakaryocyte-associated tyrosine	MATK	0.977121	76.5
ENSGALT0000	matrilin 1, cartilage matrix protein	MATN1	0.981212	24
ENSGALT0000	matrilin 2	MATN2	0.995707	76.5
ENSGALT0000	matrilin 3	MATN3	0.998991	12

ENSGALT0000	matrilin 4	MATN4	0.811101	11591
ENSGALT0000	matrin 3	MATR3	0.96004	11803
ENSGALT0000	MAU2 chromatid cohesion factor h	MAU2	0.96872	1767
ENSGALT0000	mitochondrial antiviral signaling pro	MAVS	0.991494	1639
ENSGALT0000	myoglobin	MB	0.466351	5.5
ENSGALT0000	Mab-21 domain containing 1	MB21D1	0.890426	178.5
ENSGALT0000	Mab-21 domain containing 2	MB21D2	0.741957	715.5
ENSGALT0000	methyl-CpG binding domain protein	MBD3	0.952858	3815.5
ENSGALT0000	methyl-CpG binding domain protein	MBD4	0.615169	27628.5
ENSGALT0000	methyl-CpG binding domain protein	MBD5	0.993878	1995
ENSGALT0000	MAP3K12 binding inhibitory protein	MBIP	0.94494	454.5
ENSGALT0000	mannose-binding lectin (protein C)	MBL2	0.727157	14
ENSGALT0000	metallo-beta-lactamase domain con	MBLAC2	0.986337	241.5
ENSGALT0000	muscleblind-like (Drosophila)	MBNL1	0.961302	1471
ENSGALT0000	muscleblind-like 2 (Drosophila)	MBNL2	0.993291	222
ENSGALT0000	muscleblind-like 3 (Drosophila)	MBNL3	0.958858	790.494
ENSGALT0000	membrane bound O-acyltransferas	MBOAT1	0.950029	539.5
ENSGALT0000	membrane bound O-acyltransferas	MBOAT2	0.999621	828.5
ENSGALT0000	membrane bound O-acyltransferas	MBOAT4	0.464758	0
ENSGALT0000	myelin basic protein	MBP	0.8976	63
ENSGALT0000	mbt domain containing 1	MBTD1	0.992949	1526
ENSGALT0000	membrane-bound transcription fact	MBTPS1	0.995765	3639
ENSGALT0000	membrane-bound transcription fact	MBTPS2	0.935887	147
ENSGALT0000	melanocortin 1 receptor	MC1R	0.170215	9
ENSGALT0000	melanocortin 2 receptor (adrenoco	MC2R	?	0
ENSGALT0000	melanocortin 4 receptor	MC4R	0.714805	1.5
ENSGALT0000	melanocortin 5 receptor	MC5R	0.915522	13
ENSGALT0000	melanoma cell adhesion molecule	MCAM	0.975302	5699.53
ENSGALT0000	malonyl CoA:ACP acyltransferase	MCAT	0.874737	759
ENSGALT0000	mutated in colorectal cancers	MCC	0.952034	392
ENSGALT0000	methylcrotonoyl-CoA carboxylase 1	MCCC1	0.968202	873
ENSGALT0000	methylcrotonoyl-CoA carboxylase 2	MCCC2	0.948471	857
ENSGALT0000	methylmalonyl CoA epimerase	MCEE	0.9313	159.5
ENSGALT0000	MCF.2 cell line derived transformin	MCF2	0.912663	561.5
ENSGALT0000	MCF.2 cell line derived transformin	MCF2L	0.895079	401.5
ENSGALT0000	MCF.2 cell line derived transformin	MCF2L2	0.699372	74
ENSGALT0000	multiple coagulation factor deficien	MCFD2	0.991965	1795
ENSGALT0000	melanin-concentrating hormone rec	MCHR1	1	0.5
ENSGALT0000	myeloid cell leukemia sequence 1 (	MCL1	0.909589	651.503
ENSGALT0000	minichromosome maintenance con	MCM10	0.938756	680.998
ENSGALT0000	minichromosome maintenance con	MCM2	0.89474	4518
ENSGALT0000	minichromosome maintenance con	MCM3	0.872468	4099.5
ENSGALT0000	minichromosome maintenance con	MCM3AP	0.967993	3130.5
ENSGALT0000	minichromosome maintenance con	MCM4	0.919119	2608.5
ENSGALT0000	minichromosome maintenance con	MCM5	0.742044	5364
ENSGALT0000	minichromosome maintenance con	MCM6	0.912778	3903.25
ENSGALT0000	minichromosome maintenance con	MCM8	0.978348	662
ENSGALT0000	minichromosome maintenance con	MCMBP	0.881531	2453.48
ENSGALT0000	mucolipin 1	MCOLN1	0.947394	2563.5
ENSGALT0000	mucolipin 2	MCOLN2	0.8048	45.5
ENSGALT0000	mucolipin 3	MCOLN3	0.879966	42.5
ENSGALT0000	microcephalin 1	MCPH1	0.9573	190.5
ENSGALT0000	microspherule protein 1	MCRS1	0.713744	5370.5
ENSGALT0000	multiple C2 domains, transmembra	MCTP1	0.957307	180.5
ENSGALT0000	multiple C2 domains, transmembra	MCTP2	0.950402	41
ENSGALT0000	malignant T cell amplified sequenc	MCTS1	0.747854	1163.5

ENSGALT0000	mitochondrial calcium uniporter	MCU	0.943773	750.5
ENSGALT0000	MyoD family inhibitor	MDFI	0.833503	1633.5
ENSGALT0000	MyoD family inhibitor domain conta	MDFIC	0.988814	327.42
ENSGALT0000	MAM domain containing glycosylph	MDGA1	0.722672	823.5
ENSGALT0000	MAM domain containing glycosylph	MDGA2	0.967178	2966.46
ENSGALT0000	malate dehydrogenase 1, NAD (sol	MDH1	0.851986	5915
ENSGALT0000	malate dehydrogenase 1B, NAD (s	MDH1B	0.951963	51
ENSGALT0000	malate dehydrogenase 2, NAD (mit	MDH2	0.609051	5044
ENSGALT0000	midkine (neurite growth-promoting	MDK	0.721824	89793
ENSGALT0000	Mdm1 nuclear protein homolog (mo	MDM1	0.998143	888.996
ENSGALT0000	Mdm2 p53 binding protein homolog	MDM2	0.982081	565.497
ENSGALT0000	Mdm4 p53 binding protein homolog	MDM4	0.989867	993.5
ENSGALT0000	MDN1, midasin homolog (yeast)	MDN1	0.964707	3595.5
ENSGALT0000	malic enzyme 1, NADP(+)-depende	ME1	0.891097	1789.47
ENSGALT0000	malic enzyme 2, NAD(+)-depender	ME2	0.872506	628
ENSGALT0000	hypothetical protein LOC419617	MEAF6	0.887887	1601.51
ENSGALT0000	MDS1 and EVI1 complex locus	MECOM	0.996285	729
ENSGALT0000	mitochondrial trans-2-enoyl-CoA re	MECR	0.747665	354.5
ENSGALT0000	mediator complex subunit 1	MED1	0.951584	2107.5
ENSGALT0000	mediator complex subunit 10	MED10	0.723393	913
ENSGALT0000	mediator complex subunit 12	MED12	0.961302	4746.83
ENSGALT0000	mediator complex subunit 12-like	MED12L	0.986086	1189
ENSGALT0000	mediator complex subunit 13	MED13	0.982782	4227.5
ENSGALT0000	mediator complex subunit 13-like	MED13L	0.988598	2790.5
ENSGALT0000	mediator complex subunit 14	MED14	0.980396	1995
ENSGALT0000	mediator complex subunit 15	MED15	0.969454	851.5
ENSGALT0000	mediator complex subunit 16	MED16	0.938537	3005.5
ENSGALT0000	mediator complex subunit 17	MED17	0.905972	1501.5
ENSGALT0000	mediator complex subunit 19	MED19	0.778646	650.5
ENSGALT0000	mediator complex subunit 20	MED20	0.569155	1409.5
ENSGALT0000	mediator complex subunit 21	MED21	0.402605	916
ENSGALT0000	mediator complex subunit 22	MED22	0.899479	889.505
ENSGALT0000	mediator complex subunit 23	MED23	0.984326	2939
ENSGALT0000	thyroid hormone receptor associate	MED24	0.929755	3933
ENSGALT0000	mediator complex subunit 26	MED26	0.971959	102
ENSGALT0000	mediator complex subunit 27	MED27	0.787528	1130
ENSGALT0000	mediator complex subunit 28	MED28	0.737765	695
ENSGALT0000	mediator complex subunit 30	MED30	0.914318	527.5
ENSGALT0000	mediator complex subunit 31	MED31	0.940436	1219
ENSGALT0000	mediator complex subunit 4	MED4	0.88851	657.5
ENSGALT0000	mediator complex subunit 6	MED6	0.882013	890.638
ENSGALT0000	mediator complex subunit 7	MED7	0.901595	381.5
ENSGALT0000	mediator complex subunit 8	MED8	0.880236	542
ENSGALT0000	mediator complex subunit 9	MED9	0.895732	1242
ENSGALT0000	myocyte enhancer factor 2A	MEF2A	0.999487	1138.5
ENSGALT0000	myocyte enhancer factor 2B	MEF2B	0.485412	3.5
ENSGALT0000	MEF2B neighbor	MEF2BNB	0.633157	895.5
ENSGALT0000	myocyte enhancer factor 2C	MEF2C	0.986962	336
ENSGALT0000	myocyte enhancer factor 2D	MEF2D	0.965975	305.5
ENSGALT0000	multiple EGF-like-domains 10	MEGF10	0.957779	847
ENSGALT0000	multiple EGF-like-domains 6	MEGF6	0.977459	1359.5
ENSGALT0000	multiple EGF-like-domains 9	MEGF9	0.908426	424
ENSGALT0000	meiosis inhibitor 1	MEI1	0.983838	129.5
ENSGALT0000	Swi5-dependent recombination DN	MEIR5	0.965897	130
ENSGALT0000	Meis homeobox 2	MEIS2	0.63825	82.0803
ENSGALT0000	maternal embryonic leucine zipper	MELK	0.904022	512.5

ENSGALT0000	mediator of cell motility 1	MEMO1	0.916913	1920
ENSGALT0000	mesenchyme homeobox 1	MEOX1	0.928065	56.5
ENSGALT0000	mesenchyme homeobox 2	MEOX2	0.384024	74
ENSGALT0000	meprin A, alpha (PABA peptide hyd	MEP1A	0.738888	4.5
ENSGALT0000	meprin A, beta	MEP1B	0.653239	28.5
ENSGALT0000	matrix extracellular phosphoglycop	MEPE	0.649519	0.5
ENSGALT0000	c-mer proto-oncogene tyrosine kina	MERTK	0.967953	747.503
ENSGALT0000	mesoderm development candidate	MESDC1	0.869838	776.5
ENSGALT0000	mesoderm development candidate	MESDC2	0.923764	3474.5
ENSGALT0000	mesoderm specific transcript homo	MEST	0.975415	233.5
ENSGALT0000	met proto-oncogene (hepatocyte gi	MET	0.650244	201.5
ENSGALT0000	methionyl aminopeptidase 1	METAP1	0.959526	1138
ENSGALT0000	methionyl aminopeptidase type 1D	METAP1D	0.833816	77.5
ENSGALT0000	methionyl aminopeptidase 2	METAP2	0.895482	2201.5
ENSGALT0000	meteorin, glial cell differentiation re	METRN	0.459754	855
ENSGALT0000	meteorin, glial cell differentiation re	METRNL	0.712801	2928.5
ENSGALT0000	methyltransferase like 10	METTL10	0.874471	384.5
ENSGALT0000	methyltransferase like 11A	METTL11A	0.724171	763
ENSGALT0000	methyltransferase like 11B	METTL11B	0.808974	6.5
ENSGALT0000	methyltransferase like 13	METTL13	0.928756	633.5
ENSGALT0000	methyltransferase like 14	METTL14	0.981572	1231.5
ENSGALT0000	methyltransferase like 15	METTL15	0.995725	159.5
ENSGALT0000	methyltransferase like 16	METTL16	0.962862	771
ENSGALT0000	methyltransferase like 19	METTL19	0.924324	285.5
ENSGALT0000	methyltransferase like 20	METTL20	0.971233	241.5
ENSGALT0000	methyltransferase like 21A	METTL21A	0.846106	396
ENSGALT0000	methyltransferase like 21C	METTL21C	0.933985	178
ENSGALT0000	methyltransferase like 21D	METTL21D	0.898131	421
ENSGALT0000	methyltransferase like 22	METTL22	0.962279	443.501
ENSGALT0000	methyltransferase like 23	METTL23	0.88212	389.5
ENSGALT0000	methyltransferase like 2A	METTL2A	0.940506	639
ENSGALT0000	methyltransferase like 4	METTL4	0.984071	138
ENSGALT0000	methyltransferase like 5	METTL5	0.913746	733.133
ENSGALT0000	methyltransferase like 6	METTL6	0.985346	478.5
ENSGALT0000	methyltransferase like 7A	METTL7A	0.913369	277.368
ENSGALT0000	methyltransferase like 8	METTL8	0.997045	73.5
ENSGALT0000	methyltransferase like 9	METTL9	0.99537	1960
ENSGALT0000	mex-3 homolog A (C. elegans)	MEX3A	0.947389	3400
ENSGALT0000	mex-3 homolog B (C. elegans)	MEX3B	0.859631	3913.5
ENSGALT0000	mex-3 homolog D (C. elegans)	MEX3D	0.841363	1192.45
ENSGALT0000	microfibrillar-associated protein 1	MFAP1	0.387646	716.5
ENSGALT0000	microfibrillar-associated protein 3	MFAP3	0.950122	4161
ENSGALT0000	microfibrillar-associated protein 3-li	MFAP3L	0.917638	114
ENSGALT0000	microfibrillar associated protein 5	MFAP5	0.555373	12
ENSGALT0000	mitochondrial fission factor	MFF	0.916839	430.5
ENSGALT0000	milk fat globule-EGF factor 8 protei	MFGE8	0.828089	773
ENSGALT0000	antigen p97 (melanoma associated	MFI2	0.990089	307.5
ENSGALT0000	mitofusin 1	MFN1	0.949517	1867.47
ENSGALT0000	mitofusin 2	MFN2	0.950708	1489
ENSGALT0000	MFNG O-fucosylpeptide 3-beta-N-a	MFNG	0.987025	12
ENSGALT0000	major facilitator superfamily domain	MFSD1	0.933582	1312.01
ENSGALT0000	major facilitator superfamily domain	MFSD10	0.960161	851
ENSGALT0000	major facilitator superfamily domain	MFSD11	0.981348	823
ENSGALT0000	major facilitator superfamily domain	MFSD12	0.973994	656.5
ENSGALT0000	major facilitator superfamily domain	MFSD2A	0.850252	1640.5
ENSGALT0000	major facilitator superfamily domain	MFSD2B	0.884391	4

ENSGALT0000	major facilitator superfamily domair	MFSD4	0.934421	436
ENSGALT0000	major facilitator superfamily domair	MFSD5	0.859505	1268.95
ENSGALT0000	major facilitator superfamily domair	MFSD6	0.931141	919
ENSGALT0000	major facilitator superfamily domair	MFSD7	0.931551	122.5
ENSGALT0000	major facilitator superfamily domair	MFSD8	0.961517	210.5
ENSGALT0000	major facilitator superfamily domair	MFSD9	0.97032	446.5
ENSGALT0000	MAX gene associated	MGA	0.98861	842
ENSGALT0000	\N	MGAT3	0.950147	1910
ENSGALT0000	mannosyl (alpha-1,3-)-glycoprotein	MGAT4A	0.914653	333
ENSGALT0000	mannosyl (alpha-1,3-)-glycoprotein	MGAT4B	0.906751	3790.5
ENSGALT0000	mannosyl (alpha-1,3-)-glycoprotein	MGAT4C	0.880181	191
ENSGALT0000	mannosyl (alpha-1,6-)-glycoprotein	MGAT5	0.949729	1013.5
ENSGALT0000	mannosyl (alpha-1,6-)-glycoprotein	MGAT5B	0.69951	2102.02
ENSGALT0000	meningioma expressed antigen 5 (l	MGEA5	0.986286	6052.42
ENSGALT0000	monoglyceride lipase	MGLL	0.84858	213.5
ENSGALT0000	O-6-methylguanine-DNA methyltrar	MGMT	0.919729	520
ENSGALT0000	matrix Gla protein	MGP	0.437769	63
ENSGALT0000	mahogunin, ring finger 1	MGRN1	0.862192	3534.43
ENSGALT0000	microsomal glutathione S-transfera	MGST1	0.969324	1003.5
ENSGALT0000	microsomal glutathione S-transfera	MGST2	0.77378	18.5
ENSGALT0000	microsomal glutathione S-transfera	MGST3	0.635915	2129.45
ENSGALT0000	melanoma inhibitory activity family,	MIA3	0.977114	2057.5
ENSGALT0000	mindbomb homolog 1 (Drosophila)	MIB1	0.937527	5136
ENSGALT0000	mindbomb homolog 2 (Drosophila)	MIB2	0.978029	1494.49
ENSGALT0000	microtubule associated monoxyger	MICAL1	0.991761	300
ENSGALT0000	microtubule associated monoxyger	MICAL2	0.978451	72.5
ENSGALT0000	microtubule associated monoxyger	MICAL3	0.976344	990.5
ENSGALT0000	MICAL C-terminal like	MICALCL	0.951468	6
ENSGALT0000	MICAL-like 1	MICALL1	0.937948	3318.45
ENSGALT0000	MICAL-like 2	MICALL2	0.962122	462.5
ENSGALT0000	mitochondrial calcium uptake 1	MICU1	0.784739	1311.24
ENSGALT0000	midline 1 (Opitz/BBB syndrome)	MID1	0.946589	1745.49
ENSGALT0000	MID1 interacting protein 1 (gastrula	MID1IP1	0.272958	1159.5
ENSGALT0000	mesoderm induction early response	MIER1	0.989568	711
ENSGALT0000	mesoderm induction early response	MIER2	0.978779	775
ENSGALT0000	mesoderm induction early response	MIER3	0.985282	251.137
ENSGALT0000	Macrophage migration inhibitory fa	MIF	0.65795	14226.7
ENSGALT0000	migration and invasion inhibitory pr	MIIP	0.945313	116.121
ENSGALT0000	mast cell immunoglobulin-like recep	MILR1	0.988176	153
ENSGALT0000	MYC induced nuclear antigen	MINA	0.98085	1080.23
ENSGALT0000	mitochondrial inner membrane orga	MINOS1	0.193716	1143
ENSGALT0000	multiple inositol-polyphosphate pho	MINPP1	0.955446	529.003
ENSGALT0000	missing oocyte, meiosis regulator, I	MIOS	0.978604	933.5
ENSGALT0000	mitochondrial intermediate peptida:	MIPEP	0.976416	1412.5
ENSGALT0000	mirror-image polydactyly 1	MIPOL1	0.955164	155.5
ENSGALT0000	MIS12, MIND kinetochore complex	MIS12	0.873291	331.5
ENSGALT0000	MIS18 kinetochore protein homolog	MIS18A	0.790514	561.002
ENSGALT0000	MIS18 binding protein 1	MIS18BP1	0.977532	785
ENSGALT0000	MIT, microtubule interacting and tra	MITD1	0.988051	279
ENSGALT0000	microphthalmia-associated transcri	MITF	0.959534	526.501
ENSGALT0000	Mix paired-like homeobox	MIXL1	0.135054	13.5
ENSGALT0000	MKI67 (FHA domain) interacting nu	MKI67IP	0.837212	1965
ENSGALT0000	McKusick-Kaufman syndrome	MKKS	0.961006	731.5
ENSGALT0000	megakaryoblastic leukemia (translc	MKL1	0.928687	1608.5
ENSGALT0000	MKL/myocardin-like 2	MKL2	0.983685	656.5
ENSGALT0000	muskelin 1, intracellular mediator c	MKLN1	0.961737	1053.5

ENSGALT0000	MAP kinase interacting serine/threc	MKNK1	0.90874	75
ENSGALT0000	MAP kinase interacting serine/threc	MKNK2	0.921744	574.5
ENSGALT0000	makorin ring finger protein 1	MKRN1	0.963999	4532
ENSGALT0000	makorin ring finger protein 2	MKRN2	0.964997	951.5
ENSGALT0000	Meckel syndrome, type 1	MKS1	0.953143	774
ENSGALT0000	mohawk homeobox	MKX	0.992899	55.5
ENSGALT0000	melan-A	MLANA	0.464758	0
ENSGALT0000	megalencephalic leukoencephalop:	MLC1	0.636572	1.5
ENSGALT0000	malectin	MLEC	0.95083	928.5
ENSGALT0000	myeloid leukemia factor 1	MLF1	0.909492	750.001
ENSGALT0000	MLF1 interacting protein	MLF1IP	0.987875	167.826
ENSGALT0000	myeloid leukemia factor 2	MLF2	0.774214	5106
ENSGALT0000	mutL homolog 1, colon cancer, non	MLH1	0.950117	449
ENSGALT0000	mutL homolog 3 (E. coli)	MLH3	0.971976	1028.5
ENSGALT0000	muscular LMNA-interacting protein	MLIP	0.00511917	0
ENSGALT0000	mixed lineage kinase domain-like	MLKL	0.749343	2.5
ENSGALT0000	myeloid/lymphoid or mixed-lineage	MLL2	0.985286	933
ENSGALT0000	myeloid/lymphoid or mixed-lineage	MLL3	0.994618	5989
ENSGALT0000	myeloid/lymphoid or mixed-lineage	MLL5	0.998347	8839
ENSGALT0000	myeloid/lymphoid or mixed-lineage	MLLT1	0.954793	1333.5
ENSGALT0000	myeloid/lymphoid or mixed-lineage	MLLT10	0.984008	1189
ENSGALT0000	myeloid/lymphoid or mixed-lineage	MLLT3	0.972416	647
ENSGALT0000	myeloid/lymphoid or mixed-lineage	MLLT4	0.970974	3382.49
ENSGALT0000	myeloid/lymphoid or mixed-lineage	MLLT6	0.960192	853
ENSGALT0000	Motilin	MLN	0.464758	0
ENSGALT0000	melanophilin	MLPH	0.82004	2
ENSGALT0000	MTOR associated protein, LST8 hc	MLST8	0.823229	2396.5
ENSGALT0000	MAX-like protein X	MLX	0.966688	2020.5
ENSGALT0000	MLX interacting protein	MLXIP	0.902508	712
ENSGALT0000	MLX interacting protein-like	MLXIPL	0.951167	83
ENSGALT0000	methylmalonic aciduria (cobalamin	MMAA	0.996678	190.5
ENSGALT0000	methylmalonic aciduria (cobalamin	MMAB	0.92677	141.5
ENSGALT0000	methylmalonic aciduria (cobalamin	MMACHC	0.966923	134
ENSGALT0000	methylmalonic aciduria (cobalamin	MMADHC	0.983144	2299.5
ENSGALT0000	monocyte to macrophage differenti:	MMD	0.701409	3156.5
ENSGALT0000	monocyte to macrophage differenti:	MMD2	0.582503	1582
ENSGALT0000	membrane metallo-endopeptidase	MME	0.644098	87
ENSGALT0000	membrane metallo-endopeptidase-	MMEL1	0.642873	35.5
ENSGALT0000	membrane magnesium transporter	MMGT1	0.924339	277
ENSGALT0000	matrix metallopeptidase 1 (interstiti	MMP1	0.671151	0.5
ENSGALT0000	matrix metallopeptidase 11 (strome	MMP11	0.935741	1400.7
ENSGALT0000	matrix metallopeptidase 13 (collage	MMP13	0.892475	2.5
ENSGALT0000	matrix metallopeptidase 15 (membi	MMP15	0.785181	4277
ENSGALT0000	matrix metallopeptidase 16 (membi	MMP16	0.994694	914.001
ENSGALT0000	matrix metallopeptidase 17 (membi	MMP17	0.713382	757.5
ENSGALT0000	matrix metallopeptidase 2 (gelatina	MMP2	0.971637	3413
ENSGALT0000	matrix metallopeptidase 23B	MMP23B	0.951116	22.5
ENSGALT0000	matrix metallopeptidase 24 (membi	MMP24	0.964284	869
ENSGALT0000	matrix metallopeptidase 27	MMP27	0.331575	0
ENSGALT0000	matrix metallopeptidase 28	MMP28	0.523405	57
ENSGALT0000	matrix metallopeptidase 3 (stromely	MMP3	0.464758	0
ENSGALT0000	matrix metallopeptidase 7 (matrilys	MMP7	0.464758	0
ENSGALT0000	matrix metallopeptidase 9 (gelatina	MMP9	0.510784	9
ENSGALT0000	multimerin 1	MMRN1	0.682978	41
ENSGALT0000	multimerin 2	MMRN2	0.781102	89.5
ENSGALT0000	MMS19 nucleotide excision repair I	MMS19	0.922653	2521

ENSGALT0000	MMS22-like, DNA repair protein	MMS22L	0.95523	345
ENSGALT0000	menage a trois homolog 1, cyclin H	MNAT1	0.947154	975.001
ENSGALT0000	meiotic nuclear divisions 1 homolog	MND1	0.863817	567
ENSGALT0000	MAX binding protein	MNT	0.845098	668.5
ENSGALT0000	motor neuron and pancreas homec	MNX1	0.698763	1.01634
ENSGALT0000	MOB kinase activator 2	MOB2	0.830506	497
ENSGALT0000	MOB kinase activator 3B	MOB3B	0.883496	24.5
ENSGALT0000	MOB kinase activator 3C	MOB3C	0.256868	125
ENSGALT0000	MOB family member 4, phocein	MOB4	0.927767	1553.12
ENSGALT0000	MOB1, Mps One Binder kinase act	MOBKL1A	0.983044	340
ENSGALT0000	molybdenum cofactor sulfurase	MOCOS	0.951419	28.5
ENSGALT0000	molybdenum cofactor synthesis 1	MOCS1	0.997445	786.501
ENSGALT0000	molybdenum cofactor synthesis 2	MOCS2	0.883713	317
ENSGALT0000	molybdenum cofactor synthesis 3	MOCS3	0.644815	554.5
ENSGALT0000	monoacylglycerol O-acyltransferas	MOGAT1	0.95383	120
ENSGALT0000	monoacylglycerol O-acyltransferas	MOGAT2	0.987496	8.5
ENSGALT0000	MON1 homolog A (yeast)	MON1A	0.939355	941
ENSGALT0000	MON2 homolog (S. cerevisiae)	MON2	0.993569	2055.98
ENSGALT0000	MORC family CW-type zinc finger 2	MORC2	0.971924	2235
ENSGALT0000	MORC family CW-type zinc finger 3	MORC3	0.985435	1249.5
ENSGALT0000	mortality factor 4 like 1	MORF4L1	0.929889	2543.47
ENSGALT0000	MORN repeat containing 2	MORN2	0.900359	20.5
ENSGALT0000	MORN repeat containing 3	MORN3	0.952712	34.5
ENSGALT0000	MORN repeat containing 4	MORN4	0.759369	2892.5
ENSGALT0000	MORN repeat containing 5	MORN5	0.865449	275.5
ENSGALT0000	v-mos Moloney murine sarcoma vir	MOS	0.286122	1.5
ENSGALT0000	motile sperm domain containing 1	MOSPD1	0.939484	1158.5
ENSGALT0000	motile sperm domain containing 2	MOSPD2	0.998217	351
ENSGALT0000	Mov10, Moloney leukemia virus 10	MOV10	0.798364	254.5
ENSGALT0000	Mov10l1, Moloney leukemia virus 1	MOV10L1	0.683151	62.0001
ENSGALT0000	monooxygenase, DBH-like 1	MOXD1	0.738208	1629.5
ENSGALT0000	multiple PDZ domain protein	MPDZ	0.981876	2253.5
ENSGALT0000	N-methylpurine-DNA glycosylase	MPG	0.88574	301
ENSGALT0000	M-phase phosphoprotein 10 (U3 sr	MPHOSPH10	0.949739	575.5
ENSGALT0000	M-phase phosphoprotein 6	MPHOSPH6	0.97535	609
ENSGALT0000	M-phase phosphoprotein 8	MPHOSPH8	0.966969	684
ENSGALT0000	M-phase phosphoprotein 9	MPHOSPH9	0.939239	356.5
ENSGALT0000	myeloproliferative leukemia virus o	MPL	0.902613	65.5
ENSGALT0000	myeloperoxidase	MPO	0.976206	23.5
ENSGALT0000	membrane protein, palmitoylated 1	MPP1	0.910032	2102
ENSGALT0000	membrane protein, palmitoylated 2	MPP2	0.899632	1109.5
ENSGALT0000	membrane protein, palmitoylated 3	MPP3	0.802571	205.5
ENSGALT0000	membrane protein, palmitoylated 4	MPP4	0.929999	203
ENSGALT0000	membrane protein, palmitoylated 5	MPP5	0.978992	492
ENSGALT0000	membrane protein, palmitoylated 6	MPP6	0.972097	908.5
ENSGALT0000	membrane protein, palmitoylated 7	MPP7	0.933078	472
ENSGALT0000	metallophosphoesterase 1	MPPE1	0.983304	547
ENSGALT0000	metallophosphoesterase domain cc	MPPED1	0.971407	548.5
ENSGALT0000	metallophosphoesterase domain cc	MPPED2	0.918838	1001.5
ENSGALT0000	myosin phosphatase Rho interactin	MPRIP	0.917707	5444.5
ENSGALT0000	mercaptopyruvate sulfurtransferase	MPST	0.804497	1008.23
ENSGALT0000	myelin protein zero-like 1	MPZL1	0.950046	640
ENSGALT0000	myelin protein zero-like 2	MPZL2	0.942933	1206.01
ENSGALT0000	myelin protein zero-like 3	MPZL3	0.959326	1875.55
ENSGALT0000	major histocompatibility complex, c	MR1	0.455953	121.605
ENSGALT0000	melanocortin 2 receptor accessory	MRAP2	0.555607	9.5

ENSGALT0000	muscle RAS oncogene homolog	MRAS	0.921491	300
ENSGALT0000	mannose receptor, C type 2	MRC2	0.973682	5981
ENSGALT0000	MRE11 meiotic recombination 11 h	MRE11A	0.980509	987.495
ENSGALT0000	melanoregulin	MREG	0.959644	167
ENSGALT0000	mitochondrial rRNA methyltransfera	MRM1	0.866349	273
ENSGALT0000	mitochondrial ribosomal protein 63	MRP63	0.384689	1130.5
ENSGALT0000	mitochondrial ribosomal protein L1	MRPL1	0.781128	710
ENSGALT0000	mitochondrial ribosomal protein L1(	MRPL10	0.729287	2414.5
ENSGALT0000	mitochondrial ribosomal protein L1:	MRPL12	0.288357	3538.5
ENSGALT0000	mitochondrial ribosomal protein L1:	MRPL13	0.947699	746.494
ENSGALT0000	mitochondrial ribosomal protein L14	MRPL14	0.813746	954
ENSGALT0000	mitochondrial ribosomal protein L1!	MRPL15	0.600008	903.5
ENSGALT0000	mitochondrial ribosomal protein L1(	MRPL16	0.681187	1691
ENSGALT0000	mitochondrial ribosomal protein L1:	MRPL17	0.417108	2919.5
ENSGALT0000	mitochondrial ribosomal protein L1{	MRPL18	0.507156	1019.5
ENSGALT0000	mitochondrial ribosomal protein L1!	MRPL19	0.827407	739.251
ENSGALT0000	mitochondrial ribosomal protein L2	MRPL2	0.263906	2944
ENSGALT0000	mitochondrial ribosomal protein L2(	MRPL20	0.288712	2374
ENSGALT0000	mitochondrial ribosomal protein L2:	MRPL21	0.849346	572.5
ENSGALT0000	mitochondrial ribosomal protein L2:	MRPL22	0.913425	567.5
ENSGALT0000	mitochondrial ribosomal protein L2:	MRPL23	0.688925	1450.5
ENSGALT0000	mitochondrial ribosomal protein L24	MRPL24	0.47995	1097.5
ENSGALT0000	mitochondrial ribosomal protein L2:	MRPL27	0.382113	1103
ENSGALT0000	mitochondrial ribosomal protein L2{	MRPL28	0.324188	2254.52
ENSGALT0000	mitochondrial ribosomal protein L3	MRPL3	0.862988	1359.5
ENSGALT0000	mitochondrial ribosomal protein L3(	MRPL30	0.762246	595
ENSGALT0000	mitochondrial ribosomal protein L3:	MRPL32	0.725097	558
ENSGALT0000	mitochondrial ribosomal protein L3:	MRPL33	0.740813	337.5
ENSGALT0000	mitochondrial ribosomal protein L34	MRPL34	0.621667	574.5
ENSGALT0000	mitochondrial ribosomal protein L3:	MRPL37	0.954421	1144.99
ENSGALT0000	mitochondrial ribosomal protein L3{	MRPL38	0.826201	1368
ENSGALT0000	mitochondrial ribosomal protein L3!	MRPL39	0.846354	497.5
ENSGALT0000	mitochondrial ribosomal protein L4(	MRPL40	0.773752	974
ENSGALT0000	mitochondrial ribosomal protein L4:	MRPL41	0.895918	861
ENSGALT0000	mitochondrial ribosomal protein L44	MRPL44	0.786143	2026.5
ENSGALT0000	mitochondrial ribosomal protein L4!	MRPL45	0.826734	814.5
ENSGALT0000	mitochondrial ribosomal protein L4(	MRPL46	0.678041	752.5
ENSGALT0000	mitochondrial ribosomal protein L4:	MRPL47	0.639646	199.556
ENSGALT0000	mitochondrial ribosomal protein L4{	MRPL48	0.828934	1065
ENSGALT0000	mitochondrial ribosomal protein L5(	MRPL50	0.606161	817.5
ENSGALT0000	mitochondrial ribosomal protein L5:	MRPL51	0.407269	1381
ENSGALT0000	mitochondrial ribosomal protein L5:	MRPL53	0.698798	513
ENSGALT0000	mitochondrial ribosomal protein S1(	MRPS10	0.879843	481.5
ENSGALT0000	mitochondrial ribosomal protein S1:	MRPS11	0.658188	1744.5
ENSGALT0000	mitochondrial ribosomal protein S1:	MRPS12	0.36488	1031
ENSGALT0000	mitochondrial ribosomal protein S14	MRPS14	0.359244	1670
ENSGALT0000	mitochondrial ribosomal protein S1(	MRPS16	0.400075	745.5
ENSGALT0000	mitochondrial ribosomal protein S1:	MRPS17	0.941531	1468
ENSGALT0000	mitochondrial ribosomal protein S1{	MRPS18A	0.891914	994
ENSGALT0000	mitochondrial ribosomal protein S2	MRPS2	0.70509	346.5
ENSGALT0000	mitochondrial ribosomal protein S2:	MRPS21	0.19864	1682.5
ENSGALT0000	mitochondrial ribosomal protein S2:	MRPS22	0.818488	635.5
ENSGALT0000	mitochondrial ribosomal protein S2:	MRPS23	0.808982	1179.5
ENSGALT0000	mitochondrial ribosomal protein S2:	MRPS25	0.7911	902
ENSGALT0000	mitochondrial ribosomal protein S2(	MRPS26	0.599769	1316.73
ENSGALT0000	mitochondrial ribosomal protein S2:	MRPS27	0.81941	664.5

ENSGALT0000	mitochondrial ribosomal protein S2	MRPS28	0.396293	731
ENSGALT0000	mitochondrial ribosomal protein S3	MRPS30	0.777568	747.5
ENSGALT0000	mitochondrial ribosomal protein S3	MRPS31	0.9249	139
ENSGALT0000	mitochondrial ribosomal protein S3	MRPS33	0.885345	1115.5
ENSGALT0000	mitochondrial ribosomal protein S3	MRPS34	0.675652	983
ENSGALT0000	mitochondrial ribosomal protein S3	MRPS35	0.832325	566
ENSGALT0000	mitochondrial ribosomal protein S3	MRPS36	0.640071	218
ENSGALT0000	mitochondrial ribosomal protein S5	MRPS5	0.922749	908.5
ENSGALT0000	hypothetical protein LOC427978	MRPS6	0.973686	530
ENSGALT0000	mitochondrial ribosomal protein S7	MRPS7	0.947353	1731.5
ENSGALT0000	mitochondrial ribosomal protein S9	MRPS9	0.85909	920.5
ENSGALT0000	mitochondrial ribosome recycling fa	MRRF	0.938343	850.5
ENSGALT0000	MRS2 magnesium homeostasis fac	MRS2	0.971262	222.5
ENSGALT0000	mRNA turnover 4 homolog (S. cere	MRTO4	0.731516	1565.9
ENSGALT0000	murine retrovirus integration site 1	MRVI1	0.94646	145
ENSGALT0000	musculin	MSC	0.56009	842.5
ENSGALT0000	mesogenin 1	MSGN1	0.0741325	3
ENSGALT0000	mutS homolog 2, colon cancer, non	MSH2	0.88012	2592.53
ENSGALT0000	mutS homolog 4 (E. coli)	MSH4	0.999172	739
ENSGALT0000	mutS homolog 6 (E. coli)	MSH6	0.904978	2659.5
ENSGALT0000	musashi homolog 1 (Drosophila)	MSI1	0.961967	4317.91
ENSGALT0000	musashi homolog 2 (Drosophila)	MSI2	0.934537	1713
ENSGALT0000	male-specific lethal 1 homolog (Dro	MSL1	0.939381	1918.5
ENSGALT0000	male-specific lethal 2 homolog (Dro	MSL2	0.967272	470
ENSGALT0000	male-specific lethal 3 homolog (Dro	MSL3	0.928353	826.5
ENSGALT0000	mesothelin	MSLN	0.90056	46
ENSGALT0000	mesothelin-like	MSLNL	?	0
ENSGALT0000	microseminoprotein, beta-	MSMB	?	0
ENSGALT0000	methionine sulfoxide reductase A	MSRA	0.835256	69
ENSGALT0000	methionine sulfoxide reductase B3	MSRB3	0.985248	192
ENSGALT0000	macrophage stimulating 1 (hepatoc	MST1	0.9112	918.997
ENSGALT0000	macrophage stimulating 1 receptor	MST1R	0.889756	21.5
ENSGALT0000	serine/threonine protein kinase MS	MST4	0.99916	2849
ENSGALT0000	myostatin	MSTN	0.936231	55.9849
ENSGALT0000	misato homolog 1 (Drosophila)	MSTO1	0.911709	589
ENSGALT0000	msh homeobox 1	MSX1	0.340794	3782.6
ENSGALT0000	msh homeobox 2	MSX2	0.691367	21.2412
ENSGALT0000	metastasis associated 1	MTA1	0.984511	2759.05
ENSGALT0000	metastasis associated 1 family, me	MTA3	0.981743	1108
ENSGALT0000	methylthioadenosine phosphorylas	MTAP	0.999148	758.5
ENSGALT0000	Mdm2, transformed 3T3 cell double	MTBP	0.978694	292
ENSGALT0000	mitochondrial carrier 1	MTCH1	0.956769	488
ENSGALT0000	mitochondrial carrier homolog 2	MTCH2	0.500107	1994
ENSGALT0000	metadherin	MTDH	0.980536	1827.04
ENSGALT0000	MTERF domain containing 1	MTERFD1	0.88141	746.5
ENSGALT0000	MTERF domain containing 3	MTERFD3	0.931429	41
ENSGALT0000	metal-regulatory transcription facto	MTF1	0.984858	316
ENSGALT0000	metal response element binding tra	MTF2	0.935362	2188
ENSGALT0000	mitochondrial methionyl-tRNA form	MTFMT	0.862413	324
ENSGALT0000	mitochondrial fission process 1	MTFP1	0.254196	163.5
ENSGALT0000	mitochondrial fission regulator 1	MTFR1	0.928334	2563.52
ENSGALT0000	methylenetetrahydrofolate dehydro	MTHFD1	0.965274	1520
ENSGALT0000	methylenetetrahydrofolate dehydro	MTHFD1L	0.835093	364.5
ENSGALT0000	methylene tetrahydrofolate dehydro	MTHFD2	0.746601	645.497
ENSGALT0000	methylenetetrahydrofolate dehydro	MTHFD2L	0.865381	108
ENSGALT0000	Methylenetetrahydrofolate reductas	MTHFR	0.945037	1229

ENSGALT0000	5,10-methenyltetrahydrofolate synt	MTHFS	0.973804	381.5
ENSGALT0000	methenyltetrahydrofolate synthetas	MTHFSD	0.862716	288
ENSGALT0000	mitochondrial translational initiation	MTIF2	0.961185	1048.5
ENSGALT0000	mitochondrial translational initiation	MTIF3	0.943391	245
ENSGALT0000	myotubularin 1	MTM1	0.9729	378.5
ENSGALT0000	myotubularin related protein 1	MTMR1	0.98789	1532
ENSGALT0000	myotubularin related protein 10	MTMR10	0.970094	943
ENSGALT0000	myotubularin related protein 12	MTMR12	0.958437	163
ENSGALT0000	myotubularin related protein 14	MTMR14	0.877785	982
ENSGALT0000	myotubularin related protein 2	MTMR2	0.925015	1597
ENSGALT0000	myotubularin related protein 3	MTMR3	0.979836	3698.03
ENSGALT0000	myotubularin related protein 4	MTMR4	0.974218	4517
ENSGALT0000	myotubularin related protein 6	MTMR6	0.964865	659.5
ENSGALT0000	myotubularin related protein 7	MTMR7	0.887545	225.412
ENSGALT0000	myotubularin related protein 8	MTMR8	0.958809	2009.5
ENSGALT0000	myotubularin related protein 9	MTMR9	0.958983	3089.5
ENSGALT0000	myotubularin related protein 9-like,	MTMR9LP	0.911506	231
ENSGALT0000	melatonin receptor 1A	MTNR1A	0.743047	29
ENSGALT0000	Melatonin receptor type 1B	MTNR1B	0.995974	34
ENSGALT0000	mitochondrial translation optimizati	MTO1	0.950923	1714.47
ENSGALT0000	mechanistic target of rapamycin (se	MTOR	0.957781	2749.5
ENSGALT0000	mitochondrial poly(A) polymerase	MTPAP	0.903321	883.5
ENSGALT0000	myotrophin	MTPN	0.946302	4515
ENSGALT0000	5-methyltetrahydrofolate-homocyst	MTR	0.999005	886.561
ENSGALT0000	mitochondrial translational release	MTRF1	0.945576	657
ENSGALT0000	mitochondrial translational release	MTRF1L	0.966113	466
ENSGALT0000	5-methyltetrahydrofolate-homocyst	MTRR	0.973347	602
ENSGALT0000	metastasis suppressor 1	MTSS1	0.931813	642.497
ENSGALT0000	metastasis suppressor 1-like	MTSS1L	0.889571	566.5
ENSGALT0000	microsomal triglyceride transfer pro	MTTP	0.949586	7.5
ENSGALT0000	Mitochondrial tRNA-specific 2-thiou	MTU1_CHICK	0.969122	483.984
ENSGALT0000	microtubule associated tumor supp	MTUS1	0.808744	359
ENSGALT0000	microtubule associated tumor supp	MTUS2	0.782941	234.5
ENSGALT0000	metaxin 2	MTX2	0.860638	1269.5
ENSGALT0000	metaxin 3	MTX3	0.966117	441
ENSGALT0000	mucin 13, cell surface associated	MUC13	0.999155	124.5
ENSGALT0000	mucin 16, cell surface associated	MUC16	0.415343	0.5
ENSGALT0000	mucin 2, oligomeric mucus/gel-forn	MUC2	0.851364	13.6482
ENSGALT0000	mucin 4, cell surface associated	MUC4	0.312784	11
ENSGALT0000	ovomucin alpha-subunit	MUC5B	0.659379	13.5
ENSGALT0000	mucin 6, oligomeric mucus/gel-forn	MUC6	0.164317	0
ENSGALT0000	mucin 7, secreted	MUC7	?	0
ENSGALT0000	MU-2/AP1M2 domain containing, d	MUDENG	0.784148	927
ENSGALT0000	mitochondrial E3 ubiquitin protein li	MUL1	0.909702	535.5
ENSGALT0000	melanoma associated antigen (mut	MUM1	0.978509	1364.5
ENSGALT0000	muscle-related coiled-coil protein	MURC	0.674827	209.5
ENSGALT0000	muscle, skeletal, receptor tyrosine	MUSK	0.876569	13
ENSGALT0000	musculoskeletal, embryonic nuclea	MUSTN1	0.376367	6
ENSGALT0000	methylmalonyl CoA mutase	MUT	0.957315	1104
ENSGALT0000	muted homolog (mouse)	MUTED	0.941836	834
ENSGALT0000	mutY homolog (E. coli)	MUTYH	0.869754	486.498
ENSGALT0000	mevalonate (diphospho) decarboxy	MVD	0.35565	1608.54
ENSGALT0000	major vault protein	MVP	0.97953	2232.01
ENSGALT0000	myxovirus (influenza virus) resistan	MX1	0.859236	8.5
ENSGALT0000	MAX dimerization protein 1	MXD1	0.965312	1390.99
ENSGALT0000	MAX dimerization protein 4	MXD4	0.994228	1183.5

ENSGALT0000	MAX interactor 1	MXI1	0.961717	1125.5
ENSGALT0000	matrix-remodelling associated 5	MXRA5	0.989967	4094.5
ENSGALT0000	matrix-remodelling associated 7	MXRA7	0.690648	276
ENSGALT0000	matrix-remodelling associated 8	MXRA8	0.98787	1005
ENSGALT0000	myeloid-associated differentiation r	MYADM	0.773441	286.5
ENSGALT0000	myeloid-associated differentiation r	MYADML2	0.93044	32.5
ENSGALT0000	v-myb myeloblastosis viral oncoger	MYB	0.935207	119
ENSGALT0000	MYB binding protein (P160) 1a	MYBBP1A	0.931211	1709.5
ENSGALT0000	v-myb myeloblastosis viral oncoger	MYBL1	0.989492	117
ENSGALT0000	v-myb myeloblastosis viral oncoger	MYBL2	0.913906	2371.06
ENSGALT0000	myosin binding protein C, slow type	MYBPC1	0.740811	1.5
ENSGALT0000	myosin binding protein C, cardiac	MYBPC3	0.649519	0.5
ENSGALT0000	myosin binding protein H	MYBPH	0.884004	54.5
ENSGALT0000	v-myc myelocytomatosis viral onco	MYC	0.829184	981.367
ENSGALT0000	c-myc binding protein	MYCBP	0.898087	230
ENSGALT0000	MYC binding protein 2	MYCBP2	0.958733	5614
ENSGALT0000	MYCBP associated protein	MYCBPAP	0.951736	531
ENSGALT0000	v-myc myelocytomatosis viral onco	MYCL1	0.990617	1342
ENSGALT0000	v-myc myelocytomatosis viral relate	MYCN	0.855564	374.634
ENSGALT0000	myc target 1	MYCT1	0.723031	15
ENSGALT0000	myeloid differentiation primary resp	MYD88	0.983036	597.501
ENSGALT0000	myelin expression factor 2	MYEF2	0.965359	2832.65
ENSGALT0000	myeloma overexpressed 2	MYEOV2	0.261742	1393
ENSGALT0000	myogenic factor 5	MYF5	0.889974	6.5
ENSGALT0000	myogenic factor 6 (herculin)	MYF6	0.148008	18.5
ENSGALT0000	myosin, heavy chain 1, skeletal mu	MYH1	0.602147	4.01918
ENSGALT0000	myosin, heavy chain 10, non-muscl	MYH10	0.953933	19369.3
ENSGALT0000	myosin, heavy chain 11, smooth m	MYH11	0.953929	764.889
ENSGALT0000	myosin, heavy chain 13, skeletal m	MYH13	0.628023	5.62935
ENSGALT0000	myosin, heavy chain 15	MYH15	0.866061	52
ENSGALT0000	myosin, heavy chain 2, skeletal mu	MYH2	0.510376	1.68312
ENSGALT0000	myosin, heavy chain 3, skeletal mu	MYH3	0.922494	9.33237
ENSGALT0000	myosin, heavy chain 4, skeletal mu	MYH4	0.599091	1.5
ENSGALT0000	myosin, heavy chain 7, cardiac mu:	MYH7	0.990631	115.446
ENSGALT0000	myosin, heavy chain 7B, cardiac m	MYH7B	0.951874	15
ENSGALT0000	myosin, heavy chain 8, skeletal mu	MYH8	0.324485	0.85464
ENSGALT0000	myosin, heavy polypeptide 9, non-r	MYH9	0.949083	6569.5
ENSGALT0000	myosin, light chain 1, alkali; skeleta	MYL1	0.431589	32.5
ENSGALT0000	myosin, light chain 10, regulatory	MYL10	0.439736	7.5
ENSGALT0000	myosin, light chain 12A, regulatory,	MYL12A	0.848724	5790.65
ENSGALT0000	myosin, light chain 2, regulatory, ca	MYL2	0.76475	15
ENSGALT0000	myosin, light chain 3, alkali; ventric	MYL3	0.164317	1.5
ENSGALT0000	myosin, light chain 4, alkali; atrial, e	MYL4	0.282573	1435.5
ENSGALT0000	myosin, light chain 9, regulatory	MYL9	0.867606	2078.03
ENSGALT0000	myosin regulatory light chain intera	MYLIP	0.997598	1266
ENSGALT0000	myosin light chain kinase	MYLK	0.801594	6179.43
ENSGALT0000	myosin light chain kinase 2	MYLK2	0.653125	22.5
ENSGALT0000	myosin light chain kinase 3	MYLK3	0.972169	152
ENSGALT0000	myosin light chain kinase family, me	MYLK4	0.7891	10
ENSGALT0000	myoneurin	MYNN	0.963425	546
ENSGALT0000	myosin X	MYO10	0.990184	3234.52
ENSGALT0000	myosin XVA	MYO15A	0.822721	133.5
ENSGALT0000	myosin XVB pseudogene	MYO15B	0.930639	55
ENSGALT0000	myosin XVI	MYO16	0.989259	912.002
ENSGALT0000	myosin XVIIIA	MYO18A	0.909553	10310.6
ENSGALT0000	myosin XVIIIB	MYO18B	0.548474	34.3479

ENSGALT0000 myosin XIX	MYO19	0.963898	655.504
ENSGALT0000 myosin IA	MYO1A	0.478445	85
ENSGALT0000 myosin IB	MYO1B	0.78215	371
ENSGALT0000 myosin IC	MYO1C	0.965717	883.996
ENSGALT0000 myosin ID	MYO1D	0.994379	1270.5
ENSGALT0000 myosin IE	MYO1E	0.983595	682.5
ENSGALT0000 myosin IF	MYO1F	0.500721	39
ENSGALT0000 myosin IG	MYO1G	0.842779	17.5
ENSGALT0000 myosin IH	MYO1H	0.862728	227.5
ENSGALT0000 myosin IIIA	MYO3A	0.840446	83.5
ENSGALT0000 myosin IIIB	MYO3B	0.664463	27
ENSGALT0000 myosin VA (heavy chain 12, myoxir	MYO5A	0.926229	2926.41
ENSGALT0000 myosin VB	MYO5B	0.93106	12.5
ENSGALT0000 myosin VC	MYO5C	0.88991	147
ENSGALT0000 myosin VI	MYO6	0.869578	2527.5
ENSGALT0000 myosin VIIA	MYO7A	0.861899	1221.5
ENSGALT0000 myosin VIIB	MYO7B	0.893516	36
ENSGALT0000 myosin IXA	MYO9A	0.912766	2563
ENSGALT0000 myosin IXB	MYO9B	0.982091	1860.49
ENSGALT0000 myocilin, trabecular meshwork indu	MYOC	0.804853	87.3977
ENSGALT0000 myocardin	MYOCD	0.754899	38
ENSGALT0000 myogenic differentiation 1	MYOD1	0.748168	4
ENSGALT0000 myoferlin	MYOF	0.990407	342.5
ENSGALT0000 myogenin (myogenic factor 4)	MYOG	0.524047	0.5
ENSGALT0000 myomesin 1, 185kDa	MYOM1	0.882595	56.4626
ENSGALT0000 myomesin (M-protein) 2, 165kDa	MYOM2	0.949788	13
ENSGALT0000 myomesin family, member 3	MYOM3	0.946544	8.5
ENSGALT0000 myotilin	MYOT	0.953493	4
ENSGALT0000 myozenin 1	MYOZ1	0.603682	0
ENSGALT0000 myozenin 2	MYOZ2	0.464758	0
ENSGALT0000 myozenin 3	MYOZ3	0.919314	19.5
ENSGALT0000 myopalladin	MYPN	0.978182	2.5
ENSGALT0000 myosin VIIA and Rab interacting pr	MYRIP	0.960334	76
ENSGALT0000 myb-like, SWIRM and MPN domain	MYSM1	0.979784	516.5
ENSGALT0000 MYST histone acetyltransferase 2	MYST2	0.933025	2566
ENSGALT0000 MYST histone acetyltransferase (m	MYST4	0.987785	516.5
ENSGALT0000 myelin transcription factor 1	MYT1	0.674247	745.5
ENSGALT0000 myelin transcription factor 1-like	MYT1L	0.651073	118.5
ENSGALT0000 mitotic spindle organizing protein 1	MZT1	0.981291	562
ENSGALT0000 NEDD4 binding protein 1	N4BP1	0.982509	786.506
ENSGALT0000 NEDD4 binding protein 2	N4BP2	0.946809	122
ENSGALT0000 NEDD4 binding protein 2-like 1	N4BP2L1	0.963625	69.5
ENSGALT0000 NEDD4 binding protein 2-like 2	N4BP2L2	0.978277	415.998
ENSGALT0000 NEDD4 binding protein 3	N4BP3	0.830076	710.001
ENSGALT0000 N-6 adenine-specific DNA methyltra	N6AMT1	0.920528	707.5
ENSGALT0000 N-6 adenine-specific DNA methyltra	N6AMT2	0.953149	723
ENSGALT0000 N(alpha)-acetyltransferase 15, Nat/	NAA15	0.923471	1729
ENSGALT0000 N(alpha)-acetyltransferase 16, Nat/	NAA16	0.974463	618.5
ENSGALT0000 N(alpha)-acetyltransferase 20, Natl	NAA20	0.467116	1780.5
ENSGALT0000 N(alpha)-acetyltransferase 25, Natl	NAA25	0.950075	1015
ENSGALT0000 N(alpha)-acetyltransferase 30, Nat(	NAA30	0.943856	623
ENSGALT0000 N(alpha)-acetyltransferase 35, Nat(	NAA35	0.950927	1326.5
ENSGALT0000 N(alpha)-acetyltransferase 38, Nat(	NAA38	0.813607	527
ENSGALT0000 N(alpha)-acetyltransferase 40, Natl	NAA40	0.797315	3155
ENSGALT0000 N-acylethanolamine acid amidase	NAAA	0.740067	76
ENSGALT0000 N-acetylated alpha-linked acidic di	NAALAD2	0.987374	20.5

ENSGALT0000	NGFI-A binding protein 1 (EGR1 bi	NAB1	0.924226	672.5
ENSGALT0000	Prostaglandin E synthase 3	NACA	0.804255	1613.5
ENSGALT0000	nascent polypeptide-associated co	NACA2	0.266712	15766
ENSGALT0000	NAC alpha domain containing	NACAD	0.660919	1137.99
ENSGALT0000	NACC family member 2, BEN and I	NACC2	0.933231	817.5
ENSGALT0000	NAD kinase	NADK	0.997781	2040
ENSGALT0000	NAD kinase domain containing 1	NADKD1	0.980469	450.499
ENSGALT0000	NAD synthetase 1	NADSYN1	0.961795	720.5
ENSGALT0000	amyloid beta precursor protein bind	NAE1	0.80851	1069.46
ENSGALT0000	nuclear assembly factor 1 homolog	NAF1	0.750011	313.5
ENSGALT0000	N-acetylgalactosaminidase, alpha-	NAGA	0.988864	1407
ENSGALT0000	N-acetylglucosaminidase, alpha	NAGLU	0.95559	1025.5
ENSGALT0000	N-acetylglucosamine-1-phosphodie	NAGPA	0.941082	475
ENSGALT0000	hypothetical protein LOC417229	NAIF1	0.97729	2425
ENSGALT0000	sodium leak channel, non-selective	NALCN	0.951027	446.5
ENSGALT0000	nicotinamide phosphoribosyltransfe	NAMPT	0.947283	541.505
ENSGALT0000	N-acetylneuraminic acid phosphata	NANP	0.905627	809.707
ENSGALT0000	N-acetylneuraminic acid synthase	NANS	0.884397	2295.46
ENSGALT0000	nucleosome assembly protein 1-lik	NAP1L1	0.955705	11136.5
ENSGALT0000	nucleosome assembly protein 1-lik	NAP1L4	0.947236	2528
ENSGALT0000	N-ethylmaleimide-sensitive factor a	NAPB	0.663742	237
ENSGALT0000	N-acyl phosphatidylethanolamine p	NAPEPLD	0.949402	562
ENSGALT0000	N-ethylmaleimide-sensitive factor a	NAPG	0.965747	534.4
ENSGALT0000	nicotinate phosphoribosyltransfera:	NAPRT1	0.856836	2521.99
ENSGALT0000	nuclear prelamin A recognition fact	NARF	0.951299	1900.5
ENSGALT0000	nuclear prelamin A recognition fact	NARFL	0.917125	379.5
ENSGALT0000	NMDA receptor regulated 2	NARG2	0.973153	461
ENSGALT0000	asparaginyl-tRNA synthetase	NARS	0.912966	2505
ENSGALT0000	asparaginyl-tRNA synthetase 2, mi	NARS2	0.967826	550.5
ENSGALT0000	nuclear autoantigenic sperm protei	NASP	0.758144	4858.01
ENSGALT0000	N-acetyltransferase, liver isozyme	NAT	0.377357	47
ENSGALT0000	N-acetyltransferase 10 (GCN5-rela	NAT10	0.917153	1136
ENSGALT0000	Mak3 homolog	NAT13	0.93442	4200.5
ENSGALT0000	N-acetyltransferase 8 (GCN5-relate	NAT8	0.613068	537
ENSGALT0000	N-acetyltransferase 8-like (GCN5-r	NAT8L	0.993054	305
ENSGALT0000	N-acetyltransferase 9 (GCN5-relate	NAT9	0.932163	903.5
ENSGALT0000	neuron navigator 1	NAV1	0.83767	3254.95
ENSGALT0000	neuron navigator 2	NAV2	0.988268	2797.12
ENSGALT0000	neuron navigator 3	NAV3	0.849932	1020.5
ENSGALT0000	neuroblastoma amplified sequence	NBAS	0.978593	1594.5
ENSGALT0000	neurobeachin	NBEA	0.845616	1340
ENSGALT0000	neurobeachin-like 1	NBEAL1	0.996407	865
ENSGALT0000	neuroblastoma, suppression of tum	NBL1	0.526949	7079.62
ENSGALT0000	nibrin	NBN	0.939071	444.5
ENSGALT0000	neighbor of BRCA1 gene 1	NBR1	0.976825	3148
ENSGALT0000	neurocalcin delta	NCALD	0.97804	1957
ENSGALT0000	neural cell adhesion molecule 1	NCAM1	0.841804	6347.35
ENSGALT0000	neural cell adhesion molecule 2	NCAM2	0.786381	113.5
ENSGALT0000	chondroitin sulfate proteoglycan 3 (	NCAN	0.840318	5168.46
ENSGALT0000	non-SMC condensin II complex, su	NCAPD3	0.899545	1191.5
ENSGALT0000	non-SMC condensin I complex, sub	NCAPG	0.945725	1000
ENSGALT0000	non-SMC condensin II complex, su	NCAPG2	0.945566	341
ENSGALT0000	non-SMC condensin II complex, su	NCAPH2	0.820138	1336.48
ENSGALT0000	nuclear cap binding protein subunit	NCBP1	0.920946	2314
ENSGALT0000	nuclear cap binding protein subunit	NCBP2	0.657108	4984.5
ENSGALT0000	neurochondrin	NCDN	0.972455	1667

ENSGALT0000	neutral cholesterol ester hydrolase	NCEH1	0.927494	280.959
ENSGALT0000	neutrophil cytosolic factor 1	NCF1	0.842068	40.5
ENSGALT0000	neutrophil cytosolic factor 2	NCF2	0.833382	4
ENSGALT0000	neutrophil cytosolic factor 4, 40kDa	NCF4	0.98229	14
ENSGALT0000	NCK adaptor protein 2	NCK2	0.934183	1519
ENSGALT0000	NCK-associated protein 1	NCKAP1	0.981313	6513
ENSGALT0000	NCK-associated protein 5	NCKAP5	0.914589	880
ENSGALT0000	NCK interacting protein with SH3 d	NCKIPSD	0.881977	1363.5
ENSGALT0000	nucleolin	NCL	0.94168	13134.8
ENSGALT0000	nicalin	NCLN	0.940727	1504
ENSGALT0000	nuclear receptor coactivator 1	NCOA1	0.876959	3346.64
ENSGALT0000	nuclear receptor coactivator 2	NCOA2	0.976229	2167.56
ENSGALT0000	nuclear receptor coactivator 3	NCOA3	0.872477	834.5
ENSGALT0000	nuclear receptor coactivator 4	NCOA4	0.938179	3485
ENSGALT0000	nuclear receptor coactivator 5	NCOA5	0.934594	1488
ENSGALT0000	nuclear receptor coactivator 6	NCOA6	0.991573	3114.5
ENSGALT0000	nuclear receptor coactivator 7	NCOA7	0.985059	704.502
ENSGALT0000	nuclear receptor corepressor 1	NCOR1	0.972377	3278
ENSGALT0000	neuronal calcium sensor 1	NCS1	0.684479	978
ENSGALT0000	nicastrin	NCSTN	0.985472	2551.5
ENSGALT0000	NDC80 homolog, kinetochore comp	NDC80	0.921175	516.5
ENSGALT0000	nudE nuclear distribution gene E hc	NDE1	0.948407	1517.52
ENSGALT0000	nudE nuclear distribution gene E hc	NDEL1	0.859208	442
ENSGALT0000	Nedd4 family interacting protein 1	NDFIP1	0.672528	3686.5
ENSGALT0000	Nedd4 family interacting protein 2	NDFIP2	0.987876	965.505
ENSGALT0000	neuron-derived neurotrophic factor	NDNF	0.81841	208
ENSGALT0000	NADPH dependent diflavin oxidore	NDOR1	0.901046	865.5
ENSGALT0000	Norrie disease (pseudoglioma)	NDP	0.774689	36
ENSGALT0000	N-myc downstream regulated 1	NDRG1	0.864228	922.5
ENSGALT0000	NDRG family member 3	NDRG3	0.914275	1431.5
ENSGALT0000	NDRG family member 4	NDRG4	0.684325	991.5
ENSGALT0000	N-deacetylase/N-sulfotransferase (	NDST1	0.976811	2722
ENSGALT0000	N-deacetylase/N-sulfotransferase (	NDST2	0.833269	2622.5
ENSGALT0000	N-deacetylase/N-sulfotransferase (	NDST3	0.793751	222.462
ENSGALT0000	N-deacetylase/N-sulfotransferase (	NDST4	0.760222	129.538
ENSGALT0000	NADH dehydrogenase (ubiquinone	NDUFA1	0.0770898	2286.05
ENSGALT0000	NADH dehydrogenase (ubiquinone	NDUFA10	0.833419	5202
ENSGALT0000	NADH dehydrogenase (ubiquinone	NDUFA11	0.539739	2422.5
ENSGALT0000	NADH dehydrogenase (ubiquinone	NDUFA12	0.117085	1758.5
ENSGALT0000	NADH dehydrogenase (ubiquinone	NDUFA2	0.0534399	1445.96
ENSGALT0000	NADH dehydrogenase (ubiquinone	NDUFA4	0.687426	2387
ENSGALT0000	NADH dehydrogenase (ubiquinone	NDUFA5	0.73295	1442
ENSGALT0000	NADH dehydrogenase (ubiquinone	NDUFA6	0.224114	1649
ENSGALT0000	NADH dehydrogenase (ubiquinone	NDUFA7	0.256361	534.5
ENSGALT0000	NADH dehydrogenase (ubiquinone	NDUFA8	0.250852	2831.5
ENSGALT0000	NADH dehydrogenase (ubiquinone	NDUFA9	0.897485	2029.01
ENSGALT0000	NADH dehydrogenase (ubiquinone	NDUFAB1	0.0240622	2281.5
ENSGALT0000	NADH dehydrogenase (ubiquinone	NDUFAF1	0.930059	1423
ENSGALT0000	NADH dehydrogenase (ubiquinone	NDUFAF2	0.658415	491.5
ENSGALT0000	NADH dehydrogenase (ubiquinone	NDUFAF4	0.819191	127
ENSGALT0000	NADH dehydrogenase (ubiquinone	NDUFB10	0.383044	5005.5
ENSGALT0000	NADH dehydrogenase (ubiquinone	NDUFB2	0.0675121	3302.64
ENSGALT0000	NADH dehydrogenase (ubiquinone	NDUFB3	0.604696	1258
ENSGALT0000	NADH dehydrogenase (ubiquinone	NDUFB4	0.123118	3510.4
ENSGALT0000	NADH dehydrogenase (ubiquinone	NDUFB5	0.39488	2702.5
ENSGALT0000	NADH dehydrogenase (ubiquinone	NDUFB6	0.438209	1659.5

ENSGALT0000	NADH dehydrogenase (ubiquinone	NDUFB8	0.499093	2479
ENSGALT0000	NADH dehydrogenase (ubiquinone	NDUFB9	0.0425032	3616.5
ENSGALT0000	NADH dehydrogenase (ubiquinone	NDUFS1	0.881222	3789.5
ENSGALT0000	NADH dehydrogenase (ubiquinone	NDUFS2	0.847087	1429.99
ENSGALT0000	NADH dehydrogenase (ubiquinone	NDUFS3	0.886008	1516
ENSGALT0000	NADH dehydrogenase (ubiquinone	NDUFS4	0.637082	875.501
ENSGALT0000	NADH dehydrogenase (ubiquinone	NDUFS5	0.214018	1707
ENSGALT0000	NADH dehydrogenase (ubiquinone	NDUFS6	0.597162	798.5
ENSGALT0000	NADH dehydrogenase (ubiquinone	NDUFS7	0.253195	1279.5
ENSGALT0000	NADH dehydrogenase (ubiquinone	NDUFS8	0.208301	3435
ENSGALT0000	NADH dehydrogenase (ubiquinone	NDUFV2	0.653222	1474.5
ENSGALT0000	NADH dehydrogenase (ubiquinone	NDUFV3	0.341536	645
ENSGALT0000	nebulette	NEBL	0.94136	507.498
ENSGALT0000	N-terminal EF-hand calcium bindin	NECAB1	0.81267	382
ENSGALT0000	N-terminal EF-hand calcium bindin	NECAB2	0.600087	20
ENSGALT0000	N-terminal EF-hand calcium bindin	NECAB3	0.549394	966.5
ENSGALT0000	NECAP endocytosis associated 1	NECAP1	0.899282	1081
ENSGALT0000	NECAP endocytosis associated 2	NECAP2	0.956436	1526
ENSGALT0000	neural precursor cell expressed, de	NEDD1	0.971285	1447
ENSGALT0000	neural precursor cell expressed, de	NEDD4	0.966541	701.501
ENSGALT0000	neural precursor cell expressed, de	NEDD4L	0.958493	3168.5
ENSGALT0000	neural precursor cell expressed, de	NEDD9	0.955184	309.5
ENSGALT0000	neurofilament, light polypeptide	NEFL	0.743777	6039.99
ENSGALT0000	neurofilament, medium polypeptide	NEFM	0.667216	8702.98
ENSGALT0000	neuronal growth regulator 1	NEGR1	0.584637	244
ENSGALT0000	nei endonuclease VIII-like 1 (E. col	NEIL1	0.908607	123
ENSGALT0000	nei endonuclease VIII-like 2 (E. col	NEIL2	0.464758	0
ENSGALT0000	nei endonuclease VIII-like 3 (E. col	NEIL3	0.97154	127
ENSGALT0000	NIMA (never in mitosis gene a)-rela	NEK1	0.969699	1270
ENSGALT0000	NIMA (never in mitosis gene a)- rel	NEK10	0.833324	1.5
ENSGALT0000	NIMA (never in mitosis gene a)- rel	NEK11	0.979069	53.5
ENSGALT0000	NIMA (never in mitosis gene a)-rela	NEK2	0.815143	437
ENSGALT0000	NIMA (never in mitosis gene a)-rela	NEK3	0.912177	272.5
ENSGALT0000	NIMA (never in mitosis gene a)-rela	NEK4	0.963522	1608.01
ENSGALT0000	NIMA (never in mitosis gene a)-rela	NEK5	0.924978	47
ENSGALT0000	NIMA (never in mitosis gene a)-rela	NEK6	0.979811	5074.5
ENSGALT0000	NIMA (never in mitosis gene a)-rela	NEK7	0.951069	395.002
ENSGALT0000	NIMA (never in mitosis gene a)- rel	NEK8	0.998878	769
ENSGALT0000	NIMA (never in mitosis gene a)- rel	NEK9	0.963523	4151.5
ENSGALT0000	nasal embryonic LHRH factor	NELF	0.859468	228
ENSGALT0000	NEL-like 1 (chicken)	NELL1	0.866456	1252.5
ENSGALT0000	NEL-like 2 (chicken)	NELL2	0.732585	3271.11
ENSGALT0000	neudesin neurotrophic factor	NENF	0.960739	559
ENSGALT0000	neogenin 1	NEO1	0.945985	12841.5
ENSGALT0000	nestin	NES	0.849824	8764.2
ENSGALT0000	neuroepithelial cell transforming 1	NET1	0.989304	2402
ENSGALT0000	neuropilin (NRP) and tolloid (TLL)-l	NETO1	0.816213	201
ENSGALT0000	neuropilin (NRP) and tolloid (TLL)-l	NETO2	0.995807	1462
ENSGALT0000	sialidase 2 (cytosolic sialidase)	NEU2	0.649519	4
ENSGALT0000	sialidase 3 (membrane sialidase)	NEU3	0.970199	522
ENSGALT0000	sialidase 4	NEU4	0.990721	307
ENSGALT0000	neuralized homolog (Drosophila)	NEURL	0.792666	200
ENSGALT0000	neuralized homolog 1B (Drosophila	NEURL1B	0.62168	121
ENSGALT0000	neuralized homolog 2 (Drosophila)	NEURL2	0.5865	4.5
ENSGALT0000	neurogenic differentiation 1	NEUROD1	0.194863	259.5
ENSGALT0000	NeuroM protein	NEUROD4	0.367971	43.5

ENSGALT0000	neurogenic differentiation 6	NEUROD6	0.677553	0.5
ENSGALT0000	neurogenin 1	NEUROG1	0.842762	10
ENSGALT0000	nexilin (F actin binding protein)	NEXN	0.933785	101.5
ENSGALT0000	neurofibromin 1	NF1	0.970167	3656.96
ENSGALT0000	neurofibromin 2 (bilateral acoustic	NF2	0.859249	3715.53
ENSGALT0000	NFAT activating protein with ITAM	NFAM1	0.545576	4
ENSGALT0000	neurofascin	NFASC	0.783034	657.498
ENSGALT0000	nuclear factor of activated T-cells 5	NFAT5	0.977927	4468
ENSGALT0000	nuclear factor of activated T-cells, c	NFATC1	0.991055	424
ENSGALT0000	nuclear factor of activated T-cells, c	NFATC2	0.948881	38.5
ENSGALT0000	nuclear factor of activated T-cells, c	NFATC3	0.993706	1518
ENSGALT0000	nuclear factor (erythroid-derived 2)	NFE2L1	0.972281	4808.13
ENSGALT0000	nuclear factor (erythroid-derived 2)	NFE2L2	0.983944	776.476
ENSGALT0000	nuclear factor I/A	NFIA	0.963278	2326.99
ENSGALT0000	nuclear factor I/B	NFIB	0.903088	466.5
ENSGALT0000	nuclear factor, interleukin 3 regulate	NFIL3	0.965762	357
ENSGALT0000	nuclear factor of kappa light polype	NFKB1	0.98588	1006.99
ENSGALT0000	nuclear factor of kappa light polype	NFKB2	0.928474	625.5
ENSGALT0000	nuclear factor of kappa light polype	NFKBIA	0.924927	522.5
ENSGALT0000	nuclear factor of kappa light polype	NFKBIE	0.584693	184.5
ENSGALT0000	nuclear factor of kappa light polype	NFKBIZ	0.999803	164.5
ENSGALT0000	nuclear factor related to kappa B bi	NFRKB	0.965404	2080.48
ENSGALT0000	NFS1 nitrogen fixation 1 homolog (	NFS1	0.980079	1704.5
ENSGALT0000	NFU1 iron-sulfur cluster scaffold hc	NFU1	0.883428	825.5
ENSGALT0000	nuclear transcription factor, X-box t	NFX1	0.987471	839.5
ENSGALT0000	nuclear transcription factor, X-box t	NFXL1	0.975173	757.5
ENSGALT0000	nuclear transcription factor Y, alpha	NFYA	0.974061	3192.42
ENSGALT0000	nuclear transcription factor Y, beta	NFYB	0.937293	736.501
ENSGALT0000	nuclear transcription factor Y, gamn	NFYC	0.725965	5985
ENSGALT0000	neuroglobin	NGB	0.840653	34
ENSGALT0000	neuronal guanine nucleotide excha	NGEF	0.973901	53
ENSGALT0000	nerve growth factor (beta polypepti	NGF	0.877181	11.5
ENSGALT0000	nerve growth factor receptor (TNFF	NGFR	0.731494	481
ENSGALT0000	N-glycanase 1	NGLY1	0.98245	954.003
ENSGALT0000	Na+/H+ exchanger domain contain	NHEDC2	0.928764	317
ENSGALT0000	nonhomologous end-joining factor	NHEJ1	0.91357	99.5
ENSGALT0000	nescient helix loop helix 1	NHLH1	0.362513	99.9999
ENSGALT0000	NHL repeat containing 1	NHLRC1	0.748565	286.5
ENSGALT0000	NHL repeat containing 2	NHLRC2	0.950884	582
ENSGALT0000	NHL repeat containing 3	NHLRC3	0.991231	299.5
ENSGALT0000	NHP2 ribonucleoprotein homolog ('	NHP2	0.0883956	1631
ENSGALT0000	NHP2 non-histone chromosome pr	NHP2L1	0.84838	2276.47
ENSGALT0000	Nance-Horan syndrome (congenita	NHS	0.989537	1098
ENSGALT0000	nidogen 1	NID1	0.977841	10311.1
ENSGALT0000	nidogen 2 (osteonidogen)	NID2	0.71769	2326.5
ENSGALT0000	NIF3 NGG1 interacting factor 3-like	NIF3L1	0.888177	918.5
ENSGALT0000	serine/threonine-protein kinase NIN	NIM1	0.927537	11
ENSGALT0000	ninein (GSK3B interacting protein)	NIN	0.905913	1872.5
ENSGALT0000	ninjurin 1	NINJ1	0.95193	165
ENSGALT0000	ninjurin 2	NINJ2	0.514506	58
ENSGALT0000	ninein-like	NINL	0.938962	184
ENSGALT0000	nuclear import 7 homolog (S. cerev	NIP7	0.517904	2729.5
ENSGALT0000	non imprinted in Prader-Willi/Angel	NIPA1	0.910324	637.499
ENSGALT0000	non imprinted in Prader-Willi/Angel	NIPA2	0.90383	1067.5
ENSGALT0000	NIPA-like domain containing 1	NIPAL1	0.952407	14.5
ENSGALT0000	NIPA-like domain containing 2	NIPAL2	0.847454	155.5

ENSGALT0000	NIPA-like domain containing 3	NIPAL3	0.966369	1582
ENSGALT0000	NIPA-like domain containing 4	NIPAL4	0.927977	3.5
ENSGALT0000	Nipped-B homolog (Drosophila)	NIPBL	0.991405	3054.79
ENSGALT0000	nipsnap homolog 1 (C. elegans)	NIPSNAP1	0.447187	968
ENSGALT0000	nipsnap homolog 3A (C. elegans)	NIPSNAP3A	0.679853	1521.5
ENSGALT0000	nischarin	NISCH	0.948188	1279
ENSGALT0000	nitrilase family, member 2	NIT2	0.971404	451
ENSGALT0000	Na+/K+ transporting ATPase intera	NKAIN1	0.682926	519.5
ENSGALT0000	Na+/K+ transporting ATPase intera	NKAIN2	0.874935	234.5
ENSGALT0000	Na+/K+ transporting ATPase intera	NKAIN3	0.926706	220
ENSGALT0000	Na+/K+ transporting ATPase intera	NKAIN4	0.592978	222
ENSGALT0000	NFKB activating protein	NKAP	0.930801	693.501
ENSGALT0000	naked cuticle homolog 1 (Drosophi	NKD1	0.991027	604
ENSGALT0000	NFKB inhibitor interacting Ras-like	NKIRAS1	0.80289	147.5
ENSGALT0000	NFKB inhibitor interacting Ras-like	NKIRAS2	0.841926	4512
ENSGALT0000	NF-kappaB repressing factor	NKRF	0.941282	774
ENSGALT0000	natural killer-tumor recognition sequ	NKTR	0.99723	2722.12
ENSGALT0000	NK2 homeobox 1	NKX2-1	0.464758	0
ENSGALT0000	NK2 transcription factor related, loc	NKX2-5	0	0
ENSGALT0000	NK2 homeobox 6	NKX2-6	0.649519	0
ENSGALT0000	NK6 homeobox 2	NKX6-2	0.945018	34.5
ENSGALT0000	NK6 homeobox 3	NKX6-3	1	1.5
ENSGALT0000	notchless homolog 1 (Drosophila)	NLE1	0.879721	412
ENSGALT0000	neuroligin 1	NLGN1	0.831812	150
ENSGALT0000	neuroligin 3	NLGN3	0.790085	971.5
ENSGALT0000	neuroligin 4, X-linked	NLGN4X	0.802343	91
ENSGALT0000	nemo-like kinase	NLK	0.970698	1059.5
ENSGALT0000	neurolysin (metallopeptidase M3 fa	NLN	0.918664	381
ENSGALT0000	NLR family, CARD domain containi	NLRC3	0.714122	7.5
ENSGALT0000	neuromedin B	NMB	0.040986	63
ENSGALT0000	neuromedin B receptor	NMBR	0.603682	0.5
ENSGALT0000	NMD3 homolog (S. cerevisiae)	NMD3	0.941442	845
ENSGALT0000	non-metastatic cells 1, protein (NM	NME1	0.600538	739.719
ENSGALT0000	non-metastatic cells 2, protein (NM	NME2	0.598915	22155.3
ENSGALT0000	non-metastatic cells 6, protein expr	NME6	0.829863	116.5
ENSGALT0000	N-myc (and STAT) interactor	NMI	0.965169	323
ENSGALT0000	nicotinamide nucleotide adenylyltra	NMNAT1	0.929857	138
ENSGALT0000	nicotinamide nucleotide adenylyltra	NMNAT2	0.586579	601
ENSGALT0000	nicotinamide nucleotide adenylyltra	NMNAT3	0.713319	5.5
ENSGALT0000	NmrA-like family domain containing	NMRAL1	0.838799	1456.5
ENSGALT0000	N-myristoyltransferase 1	NMT1	0.837735	1948.5
ENSGALT0000	N-myristoyltransferase 2	NMT2	0.949647	581
ENSGALT0000	neuromedin U	NMU	0.853815	0.5
ENSGALT0000	neuromedin U receptor 2	NMUR2	0.593377	2.5
ENSGALT0000	nicotinamide nucleotide transhydro	NNT	0.95022	2533
ENSGALT0000	nitric oxide associated 1	NOA1	0.878946	1262
ENSGALT0000	NIN1/RPN12 binding protein 1 hom	NOB1	0.622522	1858.5
ENSGALT0000	nucleolar complex associated 2 ho	NOC2L	0.879334	2246
ENSGALT0000	nucleolar complex associated 3 ho	NOC3L	0.980894	794
ENSGALT0000	nucleolar complex associated 4 ho	NOC4L	0.850637	4675.5
ENSGALT0000	nucleotide-binding oligomerization	NOD1	0.940477	154
ENSGALT0000	nodal homolog (mouse)	NODAL	0.465683	1.5
ENSGALT0000	noggin	NOG	0.42002	265
ENSGALT0000	noggin 2	NOG2	0.870109	57
ENSGALT0000	nucleolar protein 10	NOL10	0.932618	632.5
ENSGALT0000	nucleolar protein 11	NOL11	0.949964	1192

ENSGALT0000	nucleolar protein 12	NOL12	0.803677	570.5
ENSGALT0000	nucleolar protein 4	NOL4	0.675244	98
ENSGALT0000	nucleolar protein family 6 (RNA-ass	NOL6	0.906417	1175.52
ENSGALT0000	nucleolar protein 7, 27kDa	NOL7	0.300186	753.5
ENSGALT0000	nucleolar protein 8	NOL8	0.996517	628.5
ENSGALT0000	nucleolar and coiled-body phospho	NOLC1	0.924526	2482
ENSGALT0000	nucleolar protein with MIF4G doma	NOM1	0.915458	339.5
ENSGALT0000	non-POU domain containing, octan	NONO	0.896971	16778.5
ENSGALT0000	NOP14 nucleolar protein homolog (	NOP14	0.94789	766.991
ENSGALT0000	NOP16 nucleolar protein homolog (	NOP16	0.350833	943.5
ENSGALT0000	NOP2 nucleolar protein homolog (y	NOP2	0.886964	1838.53
ENSGALT0000	NOP56 ribonucleoprotein homolog	NOP56	0.793186	3257.28
ENSGALT0000	NOP58 ribonucleoprotein homolog	NOP58	0.953236	2577.5
ENSGALT0000	nitric oxide synthase 1 (neuronal)	NOS1	0.690185	2.5
ENSGALT0000	nitric oxide synthase 1 (neuronal) a	NOS1AP	0.711806	1345
ENSGALT0000	nitric oxide synthase 2, inducible	NOS2	0.994688	703.496
ENSGALT0000	notch 1	NOTCH1	0.989916	25734.3
ENSGALT0000	notch 2	NOTCH2	0.999138	10820.8
ENSGALT0000	notum pectinacetylesterase homolc	NOTUM	0.715469	1308.5
ENSGALT0000	nephroblastoma overexpressed ge	NOV	0.913607	82.5
ENSGALT0000	neuro-oncological ventral antigen 1	NOVA1	0.858986	578.999
ENSGALT0000	NADPH oxidase 1	NOX1	0.906566	5
ENSGALT0000	NADPH oxidase 3	NOX3	0.36651	1.5
ENSGALT0000	NADPH oxidase 4	NOX4	0.945197	307.5
ENSGALT0000	NADPH oxidase, EF-hand calcium	NOX5	0.950295	115
ENSGALT0000	NADPH oxidase activator 1	NOXA1	0.99106	264.5
ENSGALT0000	NADPH oxidase organizer 1	NOXO1	0.376542	54
ENSGALT0000	NADP-dependent oxidoreductase (	NOXRED1	0.935801	19.5
ENSGALT0000	neuronal PAS domain protein 2	NPAS2	0.888655	61.5001
ENSGALT0000	nuclear protein, ataxia-telangiectas	NPAT	0.970578	741.5
ENSGALT0000	neuropeptides B/W receptor 1	NPBWR1	0.649519	0.5
ENSGALT0000	Niemann-Pick disease, type C1	NPC1	0.977903	1267.21
ENSGALT0000	Niemann-Pick disease, type C2	NPC2	0.932795	1816.01
ENSGALT0000	neural proliferation, differentiation a	NPDC1	0.846495	979.5
ENSGALT0000	aminopeptidase-like 1	NPEPL1	0.879731	1899
ENSGALT0000	aminopeptidase puromycin sensitiv	NPEPPS	0.967445	8613.42
ENSGALT0000	neuropeptide FF receptor 1	NPFFR1	0.460332	3
ENSGALT0000	neuropeptide FF receptor 2	NPFFR2	0.700858	4
ENSGALT0000	nephronophthisis 1 (juvenile)	NPHP1	0.969879	974.549
ENSGALT0000	nephronophthisis 3 (adolescent)	NPHP3	0.97674	1026
ENSGALT0000	nephronophthisis 4	NPHP4	0.939932	442.5
ENSGALT0000	nephrosis 2, idiopathic, steroid-resi	NPHS2	?	0
ENSGALT0000	N-acetylneuraminate pyruvate lyas	NPL	0.59311	115.5
ENSGALT0000	nuclear protein localization 4 homo	NPLOC4	0.954088	2079.5
ENSGALT0000	nucleophosmin (nucleolar phospho	NPM1	0.870174	21281.8
ENSGALT0000	nucleophosmin/nucleoplasmin 3	NPM3	0.693608	883
ENSGALT0000	nephronectin	NPNT	0.84295	4303.5
ENSGALT0000	natriuretic peptide B	NPPB	0.77419	3.5
ENSGALT0000	C-type natriuretic peptide	NPPC	0.649519	0.5
ENSGALT0000	natriuretic peptide receptor A/guany	NPR1	0.83162	5
ENSGALT0000	natriuretic peptide receptor C/guan	NPR3	0.803386	468.5
ENSGALT0000	nitrogen permease regulator-like 2	NPRL2	0.895426	935.5
ENSGALT0000	nitrogen permease regulator-like 3	NPRL3	0.96264	818.504
ENSGALT0000	neuropeptide S receptor 1	NPSR1	0.464758	0
ENSGALT0000	neuroplastin	NPTN	0.802572	3016.51
ENSGALT0000	neuronal pentraxin I	NPTX1	0.420011	14.5

ENSGALT0000	neuronal pentraxin II	NPTX2	0.434977	84
ENSGALT0000	neuronal pentraxin receptor	NPTXR	0.850416	215.5
ENSGALT0000	neuropeptide VF precursor	NPVF	0.524047	0.5
ENSGALT0000	neuropeptide Y	NPY	0.762855	54
ENSGALT0000	neuropeptide Y receptor Y1	NPY1R	0.358817	2
ENSGALT0000	neuropeptide Y receptor Y2	NPY2R	0.887859	63.5
ENSGALT0000	neuropeptide Y receptor Y5	NPY5R	0.80726	43
ENSGALT0000	NPY receptor Y6	NPY6R	?	0
ENSGALT0000	neuropeptide Y7 receptor	NPY7R	0.761864	10.5
ENSGALT0000	NAD(P)H dehydrogenase, quinone	NQO1	0.788986	21
ENSGALT0000	NAD(P)H dehydrogenase, quinone	NQO2	0.963025	323.5
ENSGALT0000	nuclear receptor subfamily 0, group	NR0B1	0.871347	61.5
ENSGALT0000	nuclear receptor subfamily 0, group	NR0B2	0.9977	8.5
ENSGALT0000	nuclear receptor subfamily 1, group	NR1D2	0.951812	281
ENSGALT0000	nuclear receptor subfamily 1, group	NR1H3	0.979304	1365.03
ENSGALT0000	nuclear receptor subfamily 1, group	NR1H4	0.464758	0
ENSGALT0000	nuclear receptor subfamily 2, group	NR2C1	0.991531	855.492
ENSGALT0000	nuclear receptor subfamily 2, group	NR2C2	0.985782	719.996
ENSGALT0000	nuclear receptor subfamily 2, group	NR2E1	0.732378	2.5
ENSGALT0000	nuclear receptor subfamily 2, group	NR2E3	0.632435	238.5
ENSGALT0000	nuclear receptor subfamily 2, group	NR2F2	0.898958	5737.15
ENSGALT0000	nuclear receptor subfamily 3, group	NR3C1	0.991224	775.499
ENSGALT0000	nuclear receptor subfamily 3, group	NR3C2	0.999316	792.001
ENSGALT0000	nuclear receptor subfamily 4, group	NR4A2	0.792947	20.5035
ENSGALT0000	nuclear receptor subfamily 4, group	NR4A3	0.813436	117.5
ENSGALT0000	nuclear receptor subfamily 5, group	NR5A1	0.746966	8.49989
ENSGALT0000	nuclear receptor subfamily 5, group	NR5A2	0.854478	13.5
ENSGALT0000	nuclear receptor subfamily 6, group	NR6A1	0.958535	269
ENSGALT0000	nebulin-related anchoring protein	NRAP	0.720381	5
ENSGALT0000	neuroblastoma RAS viral (v-ras) on	NRAS	0.945081	655.5
ENSGALT0000	nuclear receptor binding factor 2	NRBF2	0.970465	398
ENSGALT0000	nuclear receptor binding protein 1	NRBP1	0.779364	1640.5
ENSGALT0000	nuclear receptor binding protein 2	NRBP2	0.985962	705.5
ENSGALT0000	neuronal cell adhesion molecule	NRCAM	0.927989	1356.99
ENSGALT0000	nardilysin (N-arginine dibasic conve	NRD1	0.954054	3925
ENSGALT0000	nuclear respiratory factor 1	NRF1	0.943456	1044.5
ENSGALT0000	neuregulin 1	NRG1	0.785088	288.501
ENSGALT0000	neuregulin 2	NRG2	0.780486	59
ENSGALT0000	neuregulin 3	NRG3	0.811724	141
ENSGALT0000	neuregulin 4	NRG4	0.990224	285.5
ENSGALT0000	neurogranin (protein kinase C subs	NRGN	0.783969	265
ENSGALT0000	nuclear receptor interacting protein	NRIP3	0.70587	41.5
ENSGALT0000	Nik related kinase	NRK	0.891354	567
ENSGALT0000	neuritin 1	NRN1	0.415829	248.5
ENSGALT0000	ncRNA Repressor of NFAT (nuclea	NRON	?	0
ENSGALT0000	neuropilin 1	NRP1	0.941948	2051.5
ENSGALT0000	neuropilin 2	NRP2	0.705228	1749.02
ENSGALT0000	neurensin 1	NRSN1	0.901067	227
ENSGALT0000	NAD(P)(+)--arginine ADP-ribosyltra	NRT2_CHICK	?	0
ENSGALT0000	neurexin 1	NRXN1	0.768328	813.997
ENSGALT0000	neurexin 3	NRXN3	0.896248	249
ENSGALT0000	NSA2 ribosome biogenesis homolc	NSA2	0.796645	2634.46
ENSGALT0000	nuclear receptor binding SET doma	NSD1	0.987402	5225.98
ENSGALT0000	NAD(P) dependent steroid dehydrc	NSDHL	0.709636	247.5
ENSGALT0000	N-ethylmaleimide-sensitive factor	NSF	0.868308	1607.5
ENSGALT0000	NSFL1 (p97) cofactor (p47)	NSFL1C	0.754481	2367.01

ENSGALT0000	LZ1	NSG1	0.80257	2746.5
ENSGALT0000	NSL1, MIND kinetochore complex	NSL1	0.849854	698.996
ENSGALT0000	neutral sphingomyelinase (N-SMas	NSMAF	0.995983	863
ENSGALT0000	non-SMC element 1 homolog (S. c	NSMCE1	0.868886	469.5
ENSGALT0000	non-SMC element 2, MMS21 homc	NSMCE2	0.878268	155
ENSGALT0000	non-SMC element 4 homolog A (S.	NSMCE4A	0.948134	456
ENSGALT0000	nuclear speckle splicing regulatory	NSRP1	0.828868	380.5
ENSGALT0000	NOP2/Sun domain family, member	NSUN2	0.963833	766
ENSGALT0000	NOP2/Sun domain family, member	NSUN3	0.994124	219.5
ENSGALT0000	NOP2/Sun domain family, member	NSUN4	0.704578	581.5
ENSGALT0000	NOP2/Sun domain family, member	NSUN5	0.773276	592.5
ENSGALT0000	NOP2/Sun domain family, member	NSUN6	0.973817	212
ENSGALT0000	NOP2/Sun domain family, member	NSUN7	0.992725	17.5
ENSGALT0000	5'-nucleotidase, cytosolic IA	NT5C1A	0.880033	40
ENSGALT0000	5'-nucleotidase, cytosolic IB	NT5C1B	0.970771	108
ENSGALT0000	5'-nucleotidase, cytosolic II	NT5C2	0.936201	2653.5
ENSGALT0000	5'-nucleotidase, cytosolic III	NT5C3	0.981381	693.999
ENSGALT0000	5'-nucleotidase, cytosolic III-like	NT5C3L	0.831385	1785.5
ENSGALT0000	5'-nucleotidase domain containing	NT5DC1	0.992554	788.5
ENSGALT0000	5'-nucleotidase domain containing	NT5DC2	0.725455	4442
ENSGALT0000	5'-nucleotidase domain containing	NT5DC3	0.897381	137
ENSGALT0000	5'-nucleotidase, ecto (CD73)	NT5E	0.261655	1
ENSGALT0000	5',3'-nucleotidase, mitochondrial	NT5M	0.955329	264.5
ENSGALT0000	N-terminal asparagine amidase	NTAN1	0.860577	678.5
ENSGALT0000	Neurotrophin-3	NTF3	0.910121	119.5
ENSGALT0000	nth endonuclease III-like 1 (E. coli)	NTHL1	0.762219	608
ENSGALT0000	neurotrimin	NTM	0.605852	735.409
ENSGALT0000	netrin 1	NTN1	0.5403	239.743
ENSGALT0000	netrin 4	NTN4	0.940482	42.5
ENSGALT0000	netrin G1	NTNG1	0.994178	653.5
ENSGALT0000	netrin G2	NTNG2	0.716263	397.5
ENSGALT0000	nucleoside-triphosphatase, cancer-	NTPCR	0.869592	555
ENSGALT0000	neurotrophic tyrosine kinase, recep	NTRK1	0.668012	30.602
ENSGALT0000	neurotrophic tyrosine kinase, recep	NTRK2	0.784431	1373
ENSGALT0000	neurotrophic tyrosine kinase, recep	NTRK3	0.728338	208.999
ENSGALT0000	neurotensin	NTS	0.983711	70
ENSGALT0000	neurotensin receptor 1 (high affinity	NTSR1	0.993262	12
ENSGALT0000	NADH-ubiquinone oxidoreductase	NU1M_CHICK	0.914268	74333
ENSGALT0000	NADH-ubiquinone oxidoreductase	NU2M_CHICK	0.911594	40521
ENSGALT0000	NADH-ubiquinone oxidoreductase	NU3M_CHICK	0.684336	15037
ENSGALT0000	NADH-ubiquinone oxidoreductase	NU4LM_CHICK	0.88836	13438.5
ENSGALT0000	NADH-ubiquinone oxidoreductase	NU4M_CHICK	0.860309	82548.5
ENSGALT0000	NADH-ubiquinone oxidoreductase	NU5M_CHICK	0.91691	81766.5
ENSGALT0000	NADH-ubiquinone oxidoreductase	NU6M_CHICK	0.540486	25575
ENSGALT0000	NUAK family, SNF1-like kinase, 1	NUAK1	0.877673	979.5
ENSGALT0000	NUAK family, SNF1-like kinase, 2	NUAK2	0.710744	948.5
ENSGALT0000	negative regulator of ubiquitin-like	NUB1	0.968439	549
ENSGALT0000	nucleotide binding protein 1	NUBP1	0.711271	827.5
ENSGALT0000	nucleotide binding protein 2	NUBP2	0.704305	918.5
ENSGALT0000	nucleotide binding protein-like	NUBPL	0.604464	476.5
ENSGALT0000	nucleobindin 2	NUCB2	0.982342	1705.48
ENSGALT0000	nuclear casein kinase and cyclin-de	NUCKS1	0.960335	2591
ENSGALT0000	nuclear distribution gene C homolo	NUDC	0.890308	4351
ENSGALT0000	NudC domain containing 1	NUDCD1	0.791704	601.5
ENSGALT0000	NudC domain containing 2	NUDCD2	0.813454	417
ENSGALT0000	NudC domain containing 3	NUDCD3	0.787155	1415.5

ENSGALT0000	nudix (nucleoside diphosphate link(	NUDT1	0.409371	1814.5
ENSGALT0000	nudix (nucleoside diphosphate link(	NUDT12	0.996715	185
ENSGALT0000	nudix (nucleoside diphosphate link(	NUDT13	0.996303	198
ENSGALT0000	nudix (nucleoside diphosphate link(	NUDT14	0.885072	1102
ENSGALT0000	nudix (nucleoside diphosphate link(	NUDT15	0.46351	245
ENSGALT0000	Nucleoside diphosphate-linked moi	NUDT19	0.919882	154
ENSGALT0000	nudix (nucleoside diphosphate link(	NUDT21	0.538303	1927
ENSGALT0000	nudix (nucleoside diphosphate link(	NUDT3	0.785502	1281
ENSGALT0000	nudix (nucleoside diphosphate link(	NUDT4	0.919345	830
ENSGALT0000	nudix (nucleoside diphosphate link(	NUDT6	0.964849	214
ENSGALT0000	nudix (nucleoside diphosphate link(	NUDT7	0.882359	203.595
ENSGALT0000	nudix (nucleoside diphosphate link(	NUDT9	0.926435	694.5
ENSGALT0000	NUF2, NDC80 kinetochore comple:	NUF2	0.867882	963.996
ENSGALT0000	nuclear fragile X mental retardation	NUFIP1	0.968223	592.502
ENSGALT0000	nuclear fragile X mental retardation	NUFIP2	0.936414	697
ENSGALT0000	nuclear mitotic apparatus protein 1	NUMA1	0.9772	3280
ENSGALT0000	numb homolog (Drosophila)	NUMB	0.995587	3020.5
ENSGALT0000	nucleoporin 107kDa	NUP107	0.896374	2207.99
ENSGALT0000	nucleoporin 133kDa	NUP133	0.901566	1423
ENSGALT0000	nucleoporin 153kDa	NUP153	0.951549	2897.5
ENSGALT0000	nucleoporin 155kDa	NUP155	0.950491	2542.5
ENSGALT0000	nucleoporin 160kDa	NUP160	0.89562	4781.15
ENSGALT0000	nucleoporin 188kDa	NUP188	0.978086	5309.01
ENSGALT0000	nucleoporin 205kDa	NUP205	0.931969	5028.5
ENSGALT0000	nucleoporin 210kDa	NUP210	0.968545	781
ENSGALT0000	nucleoporin 210kDa-like	NUP210L	0.927507	71.5
ENSGALT0000	nucleoporin 214kDa	NUP214	0.952562	2333
ENSGALT0000	nucleoporin 35kDa	NUP35	0.939442	502
ENSGALT0000	nucleoporin 37kDa	NUP37	0.927115	1151
ENSGALT0000	nucleoporin 43kDa	NUP43	0.887396	1220.5
ENSGALT0000	nucleoporin 50kDa	NUP50	0.949526	2289.5
ENSGALT0000	nucleoporin 54kDa	NUP54	0.965135	1048.5
ENSGALT0000	nucleoporin 62kDa	NUP62	0.822648	1719
ENSGALT0000	nucleoporin 85kDa	NUP85	0.922244	2903.57
ENSGALT0000	nucleoporin 88kDa	NUP88	0.942898	1760
ENSGALT0000	nucleoporin 93kDa	NUP93	0.948564	2652.55
ENSGALT0000	nucleoporin 98kDa	NUP98	0.960956	4582.5
ENSGALT0000	nucleoporin like 1	NUPL1	0.946032	1218.5
ENSGALT0000	nucleoporin like 2	NUPL2	0.867631	567.947
ENSGALT0000	nuclear undecaprenyl pyrophospha	NUS1	0.557127	1109
ENSGALT0000	nucleolar and spindle associated pi	NUSAP1	0.909074	827
ENSGALT0000	nuclear transport factor 2	NUTF2	0.7508	2372
ENSGALT0000	nuclear VCP-like	NVL	0.927533	834.501
ENSGALT0000	nucleoredoxin	NXN	0.976995	4298.5
ENSGALT0000	nucleoredoxin-like 1	NXNL1	0.795827	116
ENSGALT0000	neurexophilin 1	NXPH1	0.818796	285.5
ENSGALT0000	neurexophilin 2	NXPH2	0.806276	6
ENSGALT0000	neurexophilin 3	NXPH3	0.257569	13
ENSGALT0000	nuclear transport factor 2-like expoi	NXT2	0.964403	1035
ENSGALT0000	nyctalopin	NYX	0.896215	6.5
ENSGALT0000	Uncharacterized protein	O42419_CHICK	0.77406	134.452
ENSGALT0000	Uncharacterized protein	O57389_CHICK	0.934795	400.5
ENSGALT0000	Uncharacterized proteinVariant reti	O57531_CHICK	?	0
ENSGALT0000	Uncharacterized protein	O57651_CHICK	0.652277	158
ENSGALT0000	homeo box (expressed in ES cells)	O73593_CHICK	0.97928	54
ENSGALT0000	Uncharacterized protein	O73605_CHICK	0.893267	4.5

ENSGALT0000	Uncharacterized protein	O73607_CHICK	0.239947	1
ENSGALT0000	OAF homolog (Drosophila)	OAF	0.880116	1391.5
ENSGALT0000	2'-5'-oligoadenylate synthetase-like	OASL	0.875842	153.5
ENSGALT0000	ornithine aminotransferase	OAT	0.828491	1686
ENSGALT0000	ornithine decarboxylase antizyme 1	OAZ1	0.767625	4684.46
ENSGALT0000	oligonucleotide/oligosaccharide-bin	OBFC1	0.970368	212.5
ENSGALT0000	oligonucleotide/oligosaccharide-bin	OBFC2A	0.862732	519.5
ENSGALT0000	obscurin, cytoskeletal calmodulin a	OBSCN	0.761391	41.5
ENSGALT0000	obscurin-like 1	OBSL1	0.902038	43
ENSGALT0000	otoconin 90	OC90	0.936542	60857.4
ENSGALT0000	oculocutaneous albinism II	OCA2	0.897055	186.5
ENSGALT0000	OCIA domain containing 1	OCIAD1	0.948576	787.5
ENSGALT0000	oncomodulin 2	OCM2	0.227877	27.5
ENSGALT0000	oculocerebrorenal syndrome of Lov	OCRL	0.946682	1830.98
ENSGALT0000	ornithine decarboxylase 1	ODC1	0.881478	8439.08
ENSGALT0000	outer dense fiber of sperm tails 2	ODF2	0.907675	707
ENSGALT0000	outer dense fiber of sperm tails 2-lil	ODF2L	0.798832	267.999
ENSGALT0000	odz, odd Oz/ten-m homolog 1 (Dro	ODZ1	0.83428	498.002
ENSGALT0000	odz, odd Oz/ten-m homolog 2 (Dro	ODZ2	0.867087	1247.33
ENSGALT0000	odz, odd Oz/ten-m homolog 3 (Dro	ODZ3	0.994646	3544.06
ENSGALT0000	odz, odd Oz/ten-m homolog 4 (Dro	ODZ4	0.946024	17174.3
ENSGALT0000	orofacial cleft 1 candidate 1	OFCC1	0.707664	1
ENSGALT0000	oral-facial-digital syndrome 1	OFD1	0.982833	586
ENSGALT0000	ovoglycoprotein	OGCHI	0.562993	0.5
ENSGALT0000	oxoglutarate (alpha-ketoglutarate)	OGDH	0.808313	3785.5
ENSGALT0000	oxoglutarate dehydrogenase-like	OGDHL	0.834648	414
ENSGALT0000	2-oxoglutarate and iron-dependent	OGFOD1	0.816305	1433
ENSGALT0000	2-oxoglutarate and iron-dependent	OGFOD2	0.950597	377
ENSGALT0000	opioid growth factor receptor	OGFR	0.924759	225.5
ENSGALT0000	opioid growth factor receptor-like 1	OGFRL1	0.977077	96
ENSGALT0000	8-oxoguanine DNA glycosylase	OGG1	0.562389	321.5
ENSGALT0000	osteoglycin	OGN	0.55553	27
ENSGALT0000	O-linked N-acetylglucosamine (Glc	OGT	0.998047	16504.1
ENSGALT0000	Opa interacting protein 5	OIP5	0.775386	431.5
ENSGALT0000	oncoprotein induced transcript 3	OIT3	0.928858	134
ENSGALT0000	Obg-like ATPase 1	OLA1	0.87019	1591.5
ENSGALT0000	oleoyl-ACP hydrolase	OLAH	0.825994	3.5
ENSGALT0000	Olfactory receptor-like protein COR	OLF9_CHICK	0.663287	0.25
ENSGALT0000	olfactomedin 1	OLFM1	0.7562	2466.97
ENSGALT0000	olfactomedin 3	OLFM3	0.921841	500.5
ENSGALT0000	olfactomedin 4	OLFM4	0.332911	217.5
ENSGALT0000	olfactomedin-like 1	OLFML1	0.89236	17
ENSGALT0000	olfactomedin-like 2A	OLFML2A	0.819808	1651.5
ENSGALT0000	olfactomedin-like 2B	OLFML2B	0.495004	407.5
ENSGALT0000	olfactomedin-like 3	OLFML3	0.487863	2077
ENSGALT0000	oligodendrocyte transcription factor	OLIG3	0.649519	0.5
ENSGALT0000	OMA1 homolog, zinc metallopeptid	OMA1	0.997214	722.5
ENSGALT0000	oligodendrocyte myelin glycoprotei	OMG	0.624347	9.5
ENSGALT0000	optic atrophy 1 (autosomal dominal	OPA1	0.914383	1327.5
ENSGALT0000	opioid binding protein/cell adhesion	OPCML	0.785953	98.5929
ENSGALT0000	oligophrenin 1	OPHN1	0.918205	1784
ENSGALT0000	opsin 1 (cone pigments), long-wave	OPN1LW	0.464758	0
ENSGALT0000	opsin 3	OPN3	0.610369	3.5
ENSGALT0000	opsin 4	OPN4	0.840509	1.5
ENSGALT0000	photopigment melanopsin-like	OPN4-1	0.53503	2
ENSGALT0000	opsin 5	OPN5	0.73683	1

ENSGALT0000 opioid receptor, delta 1	OPRD1	0.902597	11.5
ENSGALT0000 opioid receptor, kappa 1	OPRK1	0.464758	0
ENSGALT0000 opiate receptor-like 1	OPRL1	0.948384	215.5
ENSGALT0000 opticin	OPTC	0.538314	472
ENSGALT0000 optineurin	OPTN	0.913795	1029.5
ENSGALT0000 olfactory receptor, family 10, subfar	OR10A7	?	0
ENSGALT0000 olfactory receptor, family 4, subfam	OR4S2	?	0
ENSGALT0000 olfactory receptor, family 51, subfar	OR51M1	0.649519	0
ENSGALT0000 olfactory receptor, family 52, subfar	OR52R1	0.265683	1.39E-22
ENSGALT0000 olfactory receptor, family 5, subfam	OR5AS1	0.772317	0.25
ENSGALT0000 olfactory receptor, family 6, subfam	OR6B3	0.556215	0.46221
ENSGALT0000 olfactory receptor, family 8, subfam	OR8D4	0.638905	0.02137
ENSGALT0000 olfactory receptor, family 9, subfam	OR9Q1	?	0
ENSGALT0000 ORAI calcium release-activated cal	ORAI1	0.840158	189
ENSGALT0000 ORAI calcium release-activated cal	ORAI2	0.99724	1911
ENSGALT0000 oral cancer overexpressed 1	ORAOV1	0.542454	331.501
ENSGALT0000 origin recognition complex, subunit	ORC1	0.875556	277
ENSGALT0000 origin recognition complex, subunit	ORC2	0.97778	344
ENSGALT0000 origin recognition complex, subunit	ORC3	0.910001	752.501
ENSGALT0000 origin recognition complex, subunit	ORC4	0.880763	1166.5
ENSGALT0000 origin recognition complex, subunit	ORC5	0.939579	511
ENSGALT0000 origin recognition complex, subunit	ORC6	0.788104	628.5
ENSGALT0000 hypothetical protein LOC425059	ORMDL2	0.921991	1866.03
ENSGALT0000 ORM1-like 3 (S. cerevisiae)	ORMDL3	0.996376	975.5
ENSGALT0000 oxysterol binding protein	OSBP	0.726747	794.5
ENSGALT0000 oxysterol binding protein 2	OSBP2	0.897788	1130
ENSGALT0000 oxysterol binding protein-like 10	OSBPL10	0.951958	1033
ENSGALT0000 oxysterol binding protein-like 11	OSBPL11	0.867478	886.5
ENSGALT0000 oxysterol binding protein-like 1A	OSBPL1A	0.955483	951
ENSGALT0000 oxysterol binding protein-like 2	OSBPL2	0.930932	688
ENSGALT0000 oxysterol binding protein-like 3	OSBPL3	0.985257	256.001
ENSGALT0000 oxysterol binding protein-like 5	OSBPL5	0.93081	930
ENSGALT0000 oxysterol binding protein-like 6	OSBPL6	0.777838	234
ENSGALT0000 oxysterol binding protein-like 8	OSBPL8	0.780477	951
ENSGALT0000 oxysterol binding protein-like 9	OSBPL9	0.948815	1188
ENSGALT0000 organic solute carrier partner 1	OSCP1	0.862691	689.5
ENSGALT0000 O-sialoglycoprotein endopeptidase	OSGEPL1	0.969504	764.661
ENSGALT0000 oxidative stress induced growth inh	OSGIN1	0.971293	8.5
ENSGALT0000 oxidative stress induced growth inh	OSGIN2	0.886575	423
ENSGALT0000 oncostatin M receptor	OSMR	0.865971	342
ENSGALT0000 odd-skipped related 1 (Drosophila)	OSR1	0.988495	65.5
ENSGALT0000 odd-skipped related 2 (Drosophila)	OSR2	0.940519	31
ENSGALT0000 organic solute transporter beta	OSTBETA	0.305019	4.5
ENSGALT0000 oligosaccharyltransferase complex	OSTC	0.869538	1652
ENSGALT0000 osteoclast stimulating factor 1	OSTF1	0.90188	808.994
ENSGALT0000 osteopetrosis associated transmem	OSTM1	0.934352	1222.5
ENSGALT0000 osteocrin	OSTN	0.207639	2
ENSGALT0000 ornithine carbamoyltransferase	OTC	0.966482	2
ENSGALT0000 otoancorin	OTOA	0.852304	4024.5
ENSGALT0000 otoferlin	OTOF	0.768561	1000
ENSGALT0000 otogelin-like	OTOGL	0.871578	34119.8
ENSGALT0000 otolin 1	OTOL1	0.141155	16
ENSGALT0000 otopetrin 1	OTOP1	0.574134	3969.5
ENSGALT0000 otopetrin 2	OTOP2	0.371997	2
ENSGALT0000 otoraplin	OTOR	0.763131	4058.5
ENSGALT0000 otospiralin	OTOS	0.996077	37.5

ENSGALT0000	OTU domain containing 1	OTUD1	0.84876	422
ENSGALT0000	OTU domain containing 3	OTUD3	0.86535	443.5
ENSGALT0000	OTU domain containing 4	OTUD4	0.965291	1587
ENSGALT0000	OTU domain containing 6B	OTUD6B	0.90055	1369.5
ENSGALT0000	OTU domain containing 7A	OTUD7A	0.983147	182
ENSGALT0000	OTU domain containing 7B	OTUD7B	0.993198	843.5
ENSGALT0000	orthodenticle homeobox 2	OTX2	0.951837	251.5
ENSGALT0000	ovochymase 2 (gene/pseudogene)	OVCH2	0.979	44.5
ENSGALT0000	ovo-like 2 (Drosophila)	OVOL2	0.94445	190
ENSGALT0000	oxidase (cytochrome c) assembly 1	OXA1L	0.689302	320
ENSGALT0000	3-oxoacid CoA transferase 1	OXCT1	0.817555	776.503
ENSGALT0000	oxoglutarate (alpha-ketoglutarate)	OXGR1	0.649519	0
ENSGALT0000	oxidoreductase NAD-binding doma	OXNAD1	0.867594	304
ENSGALT0000	oxidation resistance 1	OXR1	0.976064	738.5
ENSGALT0000	3-oxoacyl-ACP synthase, mitochon	OXSM	0.968389	175.5
ENSGALT0000	oxidative-stress responsive 1	OXSR1	0.981863	1138.5
ENSGALT0000	oxytocin, prepro- (neurophysin I)	OXT	0.53002	0.5
ENSGALT0000	oxytocin receptor	OXTR	0.745347	6
ENSGALT0000	quiescence-specific protein	P20K	0.0564264	167.5
ENSGALT0000	purinergic receptor P2X, ligand-gat	P2RX1	0.464758	0
ENSGALT0000	purinergic receptor P2X, ligand-gat	P2RX3	0.719481	481.5
ENSGALT0000	purinergic receptor P2X, ligand-gat	P2RX4	0.991826	468.406
ENSGALT0000	purinergic receptor P2X, ligand-gat	P2RX5	0.973331	315
ENSGALT0000	purinergic receptor P2X, ligand-gat	P2RX7	0.939471	12
ENSGALT0000	purinergic receptor P2Y, G-protein	P2RY1	0.773636	130
ENSGALT0000	purinergic receptor P2Y, G-protein	P2RY10	0.464758	0
ENSGALT0000	purinergic receptor P2Y, G-protein	P2RY12	0.683022	4
ENSGALT0000	purinergic receptor P2Y, G-protein	P2RY13	0.272398	6
ENSGALT0000	purinergic receptor P2Y, G-protein	P2RY14	0.90773	1.5
ENSGALT0000	purinergic receptor P2Y, G-protein	P2RY2	0.824876	26
ENSGALT0000	pyrimidinergic receptor P2Y, G-prot	P2RY6	0.78298	28
ENSGALT0000	purinergic receptor P2Y, G-protein	P2RY8	0.865547	38.5
ENSGALT0000	prolyl 4-hydroxylase, alpha polypep	P4HA1	0.973692	4420.33
ENSGALT0000	procollagen-proline, 2-oxoglutarate	P4HA2	0.944089	675.5
ENSGALT0000	prolyl 4-hydroxylase, alpha polypep	P4HA3	0.881557	575
ENSGALT0000	prolyl 4-hydroxylase, beta polypept	P4HB	0.991398	11461
ENSGALT0000	prolyl 4-hydroxylase, transmembra	P4HTM	0.966482	477.5
ENSGALT0000	Connectin/titinUncharacterized prot	P79757_CHICK	0.911638	8
ENSGALT0000	proteasomal ATPase-associated fa	PAAF1	0.646114	741
ENSGALT0000	poly(A) binding protein, cytoplasmi	PABPC1	0.983109	29276.1
ENSGALT0000	poly(A) binding protein, cytoplasmi	PABPC1L	0.967629	148.5
ENSGALT0000	poly(A) binding protein, cytoplasmi	PABPC4	0.918982	1010.5
ENSGALT0000	poly(A) binding protein, nuclear 1	PABPN1	0.968588	3.5
ENSGALT0000	PARK2 co-regulated	PACRG	0.875464	78
ENSGALT0000	PARK2 co-regulated-like	PACRGL	0.99694	229.353
ENSGALT0000	phosphofurin acidic cluster sorting	PACS1	0.857	1496.5
ENSGALT0000	phosphofurin acidic cluster sorting	PACS2	0.951246	1289.14
ENSGALT0000	protein kinase C and casein kinase	PACSIN1	0.722392	1631.5
ENSGALT0000	protein kinase C and casein kinase	PACSIN2	0.989473	1229.5
ENSGALT0000	protein kinase C and casein kinase	PACSIN3	0.964637	1764.5
ENSGALT0000	peptidyl arginine deiminase, type I	PADI1	0.914671	27.0158
ENSGALT0000	peptidyl arginine deiminase, type II	PADI2	0.942576	30.5
ENSGALT0000	peptidyl arginine deiminase, type II	PADI3	0.726053	1721.48
ENSGALT0000	platelet-activating factor acetylhydr	PAFAH1B1	0.899628	7156.5
ENSGALT0000	platelet-activating factor acetylhydr	PAFAH1B2	0.886247	8613.19
ENSGALT0000	platelet-activating factor acetylhydr	PAFAH2	0.994826	114.5

ENSGALT0000	phosphoprotein associated with gly	PAG1	0.871598	167.5
ENSGALT0000	phenylalanine hydroxylase	PAH	0.631223	1.5
ENSGALT0000	phosphoribosylaminoimidazole carl	PAICS	0.948548	2184.5
ENSGALT0000	poly(A) binding protein interacting	PAIP1	0.99295	1079
ENSGALT0000	poly(A) binding protein interacting	PAIP2	0.921412	2748
ENSGALT0000	p21 protein (Cdc42/Rac)-activated	PAK1	0.998837	1587.5
ENSGALT0000	PAK1 interacting protein 1	PAK1IP1	0.911448	896
ENSGALT0000	p21 protein (Cdc42/Rac)-activated	PAK2	0.992716	2030
ENSGALT0000	p21 protein (Cdc42/Rac)-activated	PAK3	0.937577	1103.5
ENSGALT0000	p21 protein (Cdc42/Rac)-activated	PAK4	0.722603	1851.5
ENSGALT0000	p21 protein (Cdc42/Rac)-activated	PAK6	0.718681	12.5
ENSGALT0000	p21 protein (Cdc42/Rac)-activated	PAK7	0.848842	437.001
ENSGALT0000	partner and localizer of BRCA2	PALB2	0.996458	437.5
ENSGALT0000	palladin, cytoskeletal associated pr	PALLD	0.985147	5850.04
ENSGALT0000	paralemmin	PALM	0.663596	5381.66
ENSGALT0000	palmdelphin	PALMD	0.883183	10.5
ENSGALT0000	peptidylglycine alpha-amidating mc	PAM	0.974502	829
ENSGALT0000	presequence translocase-associate	PAM16	0.491637	494.39
ENSGALT0000	PAN3 poly(A) specific ribonuclease	PAN3	0.999286	1381
ENSGALT0000	pantothenate kinase 1	PANK1	0.940771	423.5
ENSGALT0000	pantothenate kinase 2	PANK2	0.969138	548
ENSGALT0000	pantothenate kinase 3	PANK3	0.928628	1495.45
ENSGALT0000	pantothenate kinase 4	PANK4	0.952729	556.5
ENSGALT0000	pannexin 1	PANX1	0.813112	242.5
ENSGALT0000	pannexin 2	PANX2	0.862524	188.5
ENSGALT0000	pannexin 3	PANX3	0.974272	227.5
ENSGALT0000	polyamine oxidase (exo-N4-amino)	PAOX	0.942872	539.5
ENSGALT0000	PAP associated domain containing	PAPD4	0.990041	423
ENSGALT0000	PAP associated domain containing	PAPD5	0.978983	543.5
ENSGALT0000	PAP associated domain containing	PAPD7	0.9658	210.5
ENSGALT0000	papilin, proteoglycan-like sulfated g	PAPLN	0.918878	546.5
ENSGALT0000	poly(A) polymerase alpha	PAPOLA	0.951772	2772.8
ENSGALT0000	poly(A) polymerase gamma	PAPOLG	0.603682	0
ENSGALT0000	pregnancy-associated plasma prot	PAPPA	0.754905	297.5
ENSGALT0000	pappalysin 2	PAPPA2	0.515425	14.5
ENSGALT0000	3'-phosphoadenosine 5'-phosphos	PAPSS1	0.996695	19619.5
ENSGALT0000	3'-phosphoadenosine 5'-phosphos	PAPSS2	0.991206	842
ENSGALT0000	progestin and adipoQ receptor fam	PAQR3	0.947804	500.5
ENSGALT0000	progestin and adipoQ receptor fam	PAQR5	0.788369	18
ENSGALT0000	progestin and adipoQ receptor fam	PAQR7	0.865209	57.5
ENSGALT0000	progestin and adipoQ receptor fam	PAQR8	0.957911	310.5
ENSGALT0000	progestin and adipoQ receptor fam	PAQR9	0.875138	116.5
ENSGALT0000	par-3 partitioning defective 3 homo	PARD3	0.994246	1825
ENSGALT0000	par-3 partitioning defective 3 homo	PARD3B	0.951108	336.5
ENSGALT0000	par-6 partitioning defective 6 homo	PARD6A	0.691606	100
ENSGALT0000	par-6 partitioning defective 6 homo	PARD6B	0.980227	217
ENSGALT0000	par-6 partitioning defective 6 homo	PARD6G	0.954671	550
ENSGALT0000	poly (ADP-ribose) glycohydrolase	PARG	0.968592	2558.03
ENSGALT0000	parkinson protein 2, E3 ubiquitin pr	PARK2	0.763065	43
ENSGALT0000	Parkinson disease (autosomal rece	PARK7	0.698216	2743
ENSGALT0000	presenilin associated, rhomboid-like	PARL	0.813248	1217
ENSGALT0000	prostate androgen-regulated mucin	PARM1	0.940992	67.5
ENSGALT0000	poly(A)-specific ribonuclease	PARN	0.967215	712
ENSGALT0000	poly (ADP-ribose) polymerase 1	PARP1	0.901086	6800.25
ENSGALT0000	poly (ADP-ribose) polymerase fami	PARP11	0.991323	255
ENSGALT0000	poly (ADP-ribose) polymerase fami	PARP12	0.996775	540.5

ENSGALT0000	poly (ADP-ribose) polymerase fami	PARP14	0.806694	66
ENSGALT0000	poly (ADP-ribose) polymerase fami	PARP16	0.903726	778
ENSGALT0000	poly (ADP-ribose) polymerase fami	PARP3	0.970307	291
ENSGALT0000	poly (ADP-ribose) polymerase fami	PARP4	0.987738	1628.5
ENSGALT0000	poly (ADP-ribose) polymerase fami	PARP6	0.770937	1173.5
ENSGALT0000	poly (ADP-ribose) polymerase fami	PARP8	0.809852	151.5
ENSGALT0000	poly (ADP-ribose) polymerase fami	PARP9	0.955926	166.5
ENSGALT0000	parvin, alpha	PARVA	0.979359	212
ENSGALT0000	parvin, beta	PARVB	0.851398	1141
ENSGALT0000	parvin, gamma	PARVG	0.881463	12
ENSGALT0000	PAS domain containing serine/threo	PASK	0.999919	506
ENSGALT0000	protein associated with topoisomer	PATL2	0.950599	69.5
ENSGALT0000	POZ (BTB) and AT hook containing	PATZ1	0.988087	2221
ENSGALT0000	PRKC, apoptosis, WT1, regulator	PAWR	0.987542	788.5
ENSGALT0000	paired box 2	PAX2	0.766095	2243.48
ENSGALT0000	paired box 5	PAX5	?	0
ENSGALT0000	paired box 6	PAX6	0.887839	5
ENSGALT0000	paired box 7	PAX7	0.756654	1
ENSGALT0000	paired box 9	PAX9	0.96002	26.5
ENSGALT0000	PAX interacting (with transcription-a	PAXIP1	0.969779	538.5
ENSGALT0000	PDZ binding kinase	PBK	0.861364	1337
ENSGALT0000	phenazine biosynthesis-like protein	PBLD	0.830627	108.5
ENSGALT0000	polybromo 1	PBRM1	0.959162	3597
ENSGALT0000	pre-B-cell leukemia homeobox 1	PBX1	0.963183	4288.91
ENSGALT0000	pre-B-cell leukemia homeobox 3	PBX3	0.938805	1155
ENSGALT0000	pre-B-cell leukemia homeobox 4	PBX4	0.875995	1102
ENSGALT0000	pterin-4 alpha-carbinolamine dehyd	PCBD2	0.747705	332
ENSGALT0000	poly(rC) binding protein 3	PCBP3	0.567533	691.502
ENSGALT0000	propionyl CoA carboxylase, alpha p	PCCA	0.841741	914.999
ENSGALT0000	propionyl CoA carboxylase, beta po	PCCB	0.941671	1773.5
ENSGALT0000	protocadherin 1	PCDH1	0.819082	819.006
ENSGALT0000	protocadherin 10	PCDH10	0.990295	1836.49
ENSGALT0000	protocadherin 12	PCDH12	0.846098	423.5
ENSGALT0000	protocadherin-related 15	PCDH15	0.674807	84.5
ENSGALT0000	protocadherin 17	PCDH17	0.919669	5087.48
ENSGALT0000	protocadherin 18	PCDH18	0.869792	830
ENSGALT0000	protocadherin 20	PCDH20	0.997638	318
ENSGALT0000	protocadherin 7	PCDH7	0.939431	1699
ENSGALT0000	protocadherin 8	PCDH8	0.870105	719
ENSGALT0000	protocadherin 9	PCDH9	0.949114	342.5
ENSGALT0000	protocadherin alpha subfamily C, 2	PCDHAC2	0.755781	468.001
ENSGALT0000	primary ciliary dyskinesia protein 1	PCDP1	0.861461	14
ENSGALT0000	PCF11, cleavage and polyadenylat	PCF11	0.988835	1512.92
ENSGALT0000	polycomb group ring finger 2	PCGF2	0.82653	311.499
ENSGALT0000	polycomb group ring finger 3	PCGF3	0.996584	519.5
ENSGALT0000	polycomb group ring finger 5	PCGF5	0.96839	81.5
ENSGALT0000	polycomb group ring finger 6	PCGF6	0.946728	447
ENSGALT0000	PCI domain containing 2	PCID2	0.946561	1329
ENSGALT0000	PDX1 C-terminal inhibiting factor 1	PCIF1	0.937714	2501
ENSGALT0000	phosphoenolpyruvate carboxykinas	PCK1	0.155413	12
ENSGALT0000	phosphoenolpyruvate carboxykinas	PCK2	0.932639	900
ENSGALT0000	piccolo (presynaptic cytomatrix pro	PCLO	0.813605	499.002
ENSGALT0000	pericentriolar material 1	PCM1	0.971046	3717.84
ENSGALT0000	protein-L-isoaspartate (D-aspartate	PCMT1	0.923985	1934.02
ENSGALT0000	protein-L-isoaspartate (D-aspartate	PCMTD1	0.974383	1151
ENSGALT0000	protein-L-isoaspartate (D-aspartate	PCMTD2	0.994802	708.5

ENSGALT0000	proliferating cell nuclear antigen	PCNA	0.721636	7032.01
ENSGALT0000	PEST proteolytic signal containing	PCNP	0.95154	2332.5
ENSGALT0000	pericentrin	PCNT	0.99262	2256.5
ENSGALT0000	pecanex-like 2 (Drosophila)	PCNXL2	0.959233	1402.5
ENSGALT0000	procollagen C-endopeptidase enha	PCOLCE2	0.935241	37.5
ENSGALT0000	Purkinje cell protein 4	PCP4	0.960636	814
ENSGALT0000	proprotein convertase subtilisin/kex	PCSK2	0.810685	523
ENSGALT0000	proprotein convertase subtilisin/kex	PCSK5	0.97123	803.993
ENSGALT0000	proprotein convertase subtilisin/kex	PCSK6	0.99382	430.5
ENSGALT0000	proprotein convertase subtilisin/kex	PCSK7	0.932547	1139.35
ENSGALT0000	proprotein convertase subtilisin/kex	PCSK9	0.904804	1
ENSGALT0000	PCTAIRE protein kinase 3	PCTK3	0.985857	510.5
ENSGALT0000	phosphatidylcholine transfer protein	PCTP	0.977992	243.5
ENSGALT0000	prenylcysteine oxidase 1	PCYOX1	0.980294	947.344
ENSGALT0000	prenylcysteine oxidase 1 like	PCYOX1L	0.868323	1777.31
ENSGALT0000	phosphate cytidylyltransferase 1, cl	PCYT1A	0.907045	843
ENSGALT0000	phosphate cytidylyltransferase 1, cl	PCYT1B	0.934419	238.5
ENSGALT0000	sirtuin 7	PCYT2	0.835589	1906.1
ENSGALT0000	PDGFA associated protein 1	PDAP1	0.900453	2674
ENSGALT0000	phosducin	PDC	0.740073	2
ENSGALT0000	programmed cell death 1	PDCD1	0.412004	1
ENSGALT0000	programmed cell death 10	PDCD10	0.987973	686.5
ENSGALT0000	programmed cell death 11	PDCD11	0.968674	2231.5
ENSGALT0000	programmed cell death 1 ligand 2	PDCD1LG2	0.96481	13.5
ENSGALT0000	programmed cell death 2	PDCD2	0.738114	287.5
ENSGALT0000	programmed cell death 2-like	PDCD2L	0.915727	488
ENSGALT0000	programmed cell death 4 (neoplast	PDCD4	0.980347	3807.5
ENSGALT0000	programmed cell death 5	PDCD5	0.848352	1769
ENSGALT0000	programmed cell death 6	PDCD6	0.945697	914
ENSGALT0000	programmed cell death 6 interactin	PDCD6IP	0.957256	3660.91
ENSGALT0000	programmed cell death 7	PDCD7	0.875845	565.5
ENSGALT0000	phosducin-like	PDCL	0.891037	793.5
ENSGALT0000	phosducin-like 2	PDCL2	0.995569	25.5
ENSGALT0000	phosducin-like 3	PDCL3	0.85134	1921
ENSGALT0000	Parkinson disease 7 domain contai	PDDC1	0.759392	787
ENSGALT0000	phosphodiesterase 10A	PDE10A	0.989166	589.5
ENSGALT0000	phosphodiesterase 11A	PDE11A	0.811977	89
ENSGALT0000	phosphodiesterase 12	PDE12	0.831852	692
ENSGALT0000	phosphodiesterase 1A, calmodulin	PDE1A	0.747454	14
ENSGALT0000	phosphodiesterase 1C, calmodulin	PDE1C	0.750693	240
ENSGALT0000	phosphodiesterase 3A, cGMP-inhit	PDE3A	0.987246	553.5
ENSGALT0000	phosphodiesterase 3B, cGMP-inhit	PDE3B	0.901538	582.499
ENSGALT0000	phosphodiesterase 4B, cAMP-spec	PDE4B	0.844614	450.5
ENSGALT0000	phosphodiesterase 4D, cAMP-spec	PDE4D	0.875365	264
ENSGALT0000	phosphodiesterase 5A, cGMP-spec	PDE5A	0.85598	636.496
ENSGALT0000	phosphodiesterase 6B, cGMP-spec	PDE6B	1	2
ENSGALT0000	phosphodiesterase 6C, cGMP-spec	PDE6C	0.977749	13.5
ENSGALT0000	phosphodiesterase 6D, cGMP-spec	PDE6D	0.933288	365
ENSGALT0000	phosphodiesterase 6G, cGMP-spec	PDE6G	0.95829	49.5
ENSGALT0000	phosphodiesterase 6H, cGMP-spec	PDE6H	0.998454	7.5
ENSGALT0000	phosphodiesterase 7A	PDE7A	0.958683	834
ENSGALT0000	phosphodiesterase 7B	PDE7B	0.828645	77.5
ENSGALT0000	phosphodiesterase 8A	PDE8A	0.886882	232.5
ENSGALT0000	phosphodiesterase 8B	PDE8B	0.857455	15
ENSGALT0000	phosphodiesterase 9A	PDE9A	0.604503	84.5
ENSGALT0000	platelet-derived growth factor alpha	PDGFA	0.978624	1096

ENSGALT0000	platelet-derived growth factor beta	PDGFB	0.864505	98.5
ENSGALT0000	platelet derived growth factor C	PDGFC	0.857096	219.5
ENSGALT0000	platelet derived growth factor D	PDGFD	0.805113	184
ENSGALT0000	platelet-derived growth factor recep	PDGFRA	0.992438	757.996
ENSGALT0000	platelet-derived growth factor recep	PDGFRB	0.936026	642
ENSGALT0000	platelet-derived growth factor recep	PDGFRL	0.82077	479
ENSGALT0000	pyruvate dehydrogenase (lipoamide	PDHA1	0.792519	1344.5
ENSGALT0000	pyruvate dehydrogenase (lipoamide	PDHB	0.87917	3671
ENSGALT0000	pyruvate dehydrogenase complex,	PDHX	0.955871	200.379
ENSGALT0000	protein disulfide isomerase family A	PDIA3	0.942333	23334
ENSGALT0000	protein disulfide isomerase family A	PDIA4	0.937411	6215.5
ENSGALT0000	protein disulfide isomerase family A	PDIA5	0.973845	1097
ENSGALT0000	protein disulfide isomerase family A	PDIA6	0.946145	11167.9
ENSGALT0000	PDLIM1 interacting kinase 1 like	PDIK1L	0.985268	317
ENSGALT0000	pyruvate dehydrogenase kinase, is	PDK1	0.927082	1249.5
ENSGALT0000	pyruvate dehydrogenase kinase, is	PDK3	0.958353	1397.5
ENSGALT0000	pyruvate dehydrogenase kinase, is	PDK4	0.856562	41.5
ENSGALT0000	PDZ and LIM domain 1	PDLIM1	0.483049	255
ENSGALT0000	PDZ and LIM domain 3	PDLIM3	0.361671	3.5
ENSGALT0000	PDZ and LIM domain 4	PDLIM4	0.927184	2166.99
ENSGALT0000	PDZ and LIM domain 5	PDLIM5	0.958359	980.505
ENSGALT0000	pyruvate dehyrogenase phosphata	PDP2	0.942798	326
ENSGALT0000	3-phosphoinositide dependent prot	PDPK1	0.967846	3553.03
ENSGALT0000	podoplanin	PDPN	0.950807	16
ENSGALT0000	pyruvate dehydrogenase phosphat	PDPR	0.982598	1168.5
ENSGALT0000	p53 and DNA-damage regulated 1	PDRG1	0.497249	1217
ENSGALT0000	PDS5, regulator of cohesion mainte	PDS5A	0.987685	2368
ENSGALT0000	PDS5, regulator of cohesion mainte	PDS5B	0.927343	1479.97
ENSGALT0000	prenyl (decaprenyl) diphosphate sy	PDSS1	0.791893	607.5
ENSGALT0000	prenyl (decaprenyl) diphosphate sy	PDSS2	0.940725	570.497
ENSGALT0000	pancreatic and duodenal homeobo	PDX1	?	0
ENSGALT0000	pyridoxal-dependent decarboxylase	PDXDC1	0.98723	948.5
ENSGALT0000	pyridoxal (pyridoxine, vitamin B6) k	PDXK	0.967886	248.5
ENSGALT0000	pyridoxal (pyridoxine, vitamin B6) p	PDXP	0.370111	367.865
ENSGALT0000	PDZ domain containing 11	PDZD11	0.910512	2231.5
ENSGALT0000	PDZ domain containing 3	PDZD3	0.999183	615.857
ENSGALT0000	PDZ domain containing 7	PDZD7	0.943033	1041.5
ENSGALT0000	PDZ domain containing 8	PDZD8	0.963846	823.5
ENSGALT0000	PDZ domain containing 1	PDZK1	0.882707	38.2827
ENSGALT0000	PDZK1 interacting protein 1	PDZK1IP1	0.506721	4.5
ENSGALT0000	PDZ domain containing RING finge	PDZRN3	0.859496	825
ENSGALT0000	PDZ domain containing RING finge	PDZRN4	0.995753	426.997
ENSGALT0000	phosphatidylethanolamine binding	PEBP1	0.698734	16940
ENSGALT0000	peroxisomal trans-2-enoyl-CoA red	PECR	0.850659	434
ENSGALT0000	penta-EF-hand domain containing	PEF1	0.828315	2280
ENSGALT0000	pellino homolog 1 (Drosophila)	PELI1	0.945316	3559.06
ENSGALT0000	pellino homolog 2 (Drosophila)	PELI2	0.94739	420.5
ENSGALT0000	pelota homolog	PELO	0.634156	947.012
ENSGALT0000	phosphatidylethanolamine N-methy	PEMT	0.96665	2750.02
ENSGALT0000	proenkephalin	PENK	0.331699	99.5
ENSGALT0000	Twinkle protein, mitochondrial	PEO1_CHICK	0.798467	1028
ENSGALT0000	period homolog 2 (Drosophila)	PER2	0.977202	977.497
ENSGALT0000	period homolog 3 (Drosophila)	PER3	0.99508	555.001
ENSGALT0000	PERP, TP53 apoptosis effector	PERP	0.957896	261.5
ENSGALT0000	pescadillo homolog 1, containing B	PES1	0.91596	4103
ENSGALT0000	PET112 homolog (yeast)	PET112	0.974969	514.5

ENSGALT0000	peroxisomal biogenesis factor 1	PEX1	0.989013	569
ENSGALT0000	peroxisomal biogenesis factor 10	PEX10	0.897638	765.5
ENSGALT0000	peroxisomal biogenesis factor 11 al	PEX11A	0.99944	93
ENSGALT0000	peroxisomal biogenesis factor 11 g	PEX11G	0.949076	592.5
ENSGALT0000	peroxisomal biogenesis factor 12	PEX12	0.957012	287
ENSGALT0000	peroxisomal biogenesis factor 13	PEX13	0.966765	666.5
ENSGALT0000	peroxisomal biogenesis factor 14	PEX14	0.91321	711
ENSGALT0000	peroxisomal biogenesis factor 16	PEX16	0.956795	1254.21
ENSGALT0000	peroxisomal biogenesis factor 2	PEX2	0.970004	945.5
ENSGALT0000	peroxisomal biogenesis factor 3	PEX3	0.946346	802.5
ENSGALT0000	peroxisomal biogenesis factor 5	PEX5	0.973025	1368.51
ENSGALT0000	peroxisomal biogenesis factor 5-lik	PEX5L	0.996477	11
ENSGALT0000	peroxisomal biogenesis factor 6	PEX6	0.990406	2652.5
ENSGALT0000	peroxisomal biogenesis factor 7	PEX7	0.893959	247.5
ENSGALT0000	prefoldin subunit 1	PFDN1	0.251092	2162.5
ENSGALT0000	prefoldin subunit 4	PFDN4	0.859653	800
ENSGALT0000	prefoldin subunit 5	PFDN5	0.789428	1368
ENSGALT0000	6-phosphofructo-2-kinase/fructose-	PFKFB1	0.738743	316
ENSGALT0000	6-phosphofructo-2-kinase/fructose-	PFKFB2	0.980902	302
ENSGALT0000	6-phosphofructo-2-kinase/fructose-	PFKFB3	0.941045	1399.5
ENSGALT0000	6-phosphofructo-2-kinase/fructose-	PFKFB4	0.92025	671
ENSGALT0000	phosphofructokinase, liver	PFKL	0.778208	4688.33
ENSGALT0000	muscle phosphofructokinase	PFKM	0.750493	70
ENSGALT0000	phosphofructokinase, platelet	PFKP	0.929972	3870.98
ENSGALT0000	profilin 2	PFN2	0.931134	13217
ENSGALT0000	profilin 3	PFN3	0.457515	1
ENSGALT0000	profilin family, member 4	PFN4	0.889925	86
ENSGALT0000	pepsinogen 5, group I (pepsinogen	PGA	0.952761	3
ENSGALT0000	phosphoglycerate mutase 1 (brain)	PGAM1	0.966406	25977.5
ENSGALT0000	phosphoglycerate mutase family m	PGAM5	0.918622	965.163
ENSGALT0000	post-GPI attachment to proteins 1	PGAP1	0.959978	470.5
ENSGALT0000	post-GPI attachment to proteins 3	PGAP3	0.874521	584.5
ENSGALT0000	piggyBac transposable element de	PGBD5	0.726803	153
ENSGALT0000	progastricsin (pepsinogen C)	PGC	0.949526	60
ENSGALT0000	6-phosphogluconate dehydrogena	PGD	0.823931	2760.5
ENSGALT0000	protein geranylgeranyltransferase t	PGGT1B	0.950166	281
ENSGALT0000	phosphoglycerate kinase 1	PGK1	0.893314	15722.5
ENSGALT0000	phosphoglucomutase 1	PGM1	0.944486	2317.46
ENSGALT0000	phosphoglucomutase 2	PGM2	0.863114	724.517
ENSGALT0000	phosphoglucomutase 2-like 1	PGM2L1	0.728143	283.5
ENSGALT0000	phosphoglucomutase 3	PGM3	0.994837	1148.5
ENSGALT0000	phosphoglucomutase 5	PGM5	0.927974	161
ENSGALT0000	phosphoglycolate phosphatase	PGP	0.733895	400.5
ENSGALT0000	pyroglutamyl-peptidase I	PGPEP1	0.900965	304
ENSGALT0000	pyroglutamyl-peptidase I-like	PGPEP1L	0.899728	4.5
ENSGALT0000	progesterone receptor	PGR	0.877776	99.5
ENSGALT0000	progesterone receptor membrane c	PGRMC1	0.970201	4309.01
ENSGALT0000	progesterone receptor membrane c	PGRMC2	0.859322	834.5
ENSGALT0000	phosphatidylglycerophosphate syn	PGS1	0.982554	1907.58
ENSGALT0000	phosphatase and actin regulator 1	PHACTR1	0.80062	90
ENSGALT0000	phosphatase and actin regulator 2	PHACTR2	0.877954	613.5
ENSGALT0000	phosphatase and actin regulator 3	PHACTR3	0.858744	726
ENSGALT0000	phosphatase and actin regulator 4	PHACTR4	0.9929	2090
ENSGALT0000	phosphorylated adaptor for RNA ex	PHAX	0.952137	923.5
ENSGALT0000	Prohibitin	PHB	0.625605	3235.47
ENSGALT0000	prohibitin 2	PHB2	0.864026	6323.8

ENSGALT0000	polyhomeotic homolog 1 (Drosophi	PHC1	0.976755	2235.58
ENSGALT0000	polyhomeotic homolog 3 (Drosophi	PHC3	0.977162	263.5
ENSGALT0000	phosphate regulating endopeptidas	PHEX	0.758417	24
ENSGALT0000	PHD finger protein 10	PHF10	0.974097	676.5
ENSGALT0000	PHD finger protein 11	PHF11	0.938773	280
ENSGALT0000	PHD finger protein 12	PHF12	0.989258	3812.5
ENSGALT0000	PHD finger protein 13	PHF13	0.940771	662
ENSGALT0000	PHD finger protein 14	PHF14	0.89015	1544.5
ENSGALT0000	PHD finger protein 15	PHF15	0.938094	197
ENSGALT0000	PHD finger protein 16	PHF16	0.973192	1641
ENSGALT0000	PHD finger protein 17	PHF17	0.992752	440.5
ENSGALT0000	PHD finger protein 19	PHF19	0.870098	42
ENSGALT0000	PHD finger protein 2	PHF2	0.937156	671
ENSGALT0000	PHD finger protein 20	PHF20	0.951931	1640
ENSGALT0000	PHD finger protein 20-like 1	PHF20L1	0.97725	1333.5
ENSGALT0000	PHD finger protein 21A	PHF21A	0.997703	1402
ENSGALT0000	PHD finger protein 21B	PHF21B	0.775441	106
ENSGALT0000	PHD finger protein 3	PHF3	0.979704	2125
ENSGALT0000	PHD finger protein 5A	PHF5A	0.552207	2442.5
ENSGALT0000	PHD finger protein 6	PHF6	0.982645	1023.5
ENSGALT0000	phosphoglycerate dehydrogenase	PHGDH	0.217853	1277.5
ENSGALT0000	pleckstrin homology domain interac	PHIP	0.987576	1955
ENSGALT0000	phosphorylase kinase, alpha 1 (mu	PHKA1	0.980536	3686.43
ENSGALT0000	phosphorylase kinase, alpha 2 (live	PHKA2	0.957626	873
ENSGALT0000	phosphorylase kinase, beta	PHKB	0.988094	1828.5
ENSGALT0000	phosphorylase kinase, gamma 1 (n	PHKG1	0.843122	2461.5
ENSGALT0000	pleckstrin homology-like domain, fa	PHLDA2	0.418535	266.5
ENSGALT0000	pleckstrin homology-like domain, fa	PHLDA3	0.649519	0.5
ENSGALT0000	pleckstrin homology-like domain, fa	PHLDB1	0.952448	1437.5
ENSGALT0000	pleckstrin homology-like domain, fa	PHLDB2	0.864754	948
ENSGALT0000	PH domain and leucine rich repeat	PHLPP1	0.962134	732.5
ENSGALT0000	PH domain and leucine rich repeat	PHLPP2	0.984469	1232.55
ENSGALT0000	phosphatase, orphan 1	PHOSPHO1	0.901522	27
ENSGALT0000	phosphatase, orphan 2	PHOSPHO2	0.9793	156
ENSGALT0000	paired-like homeobox 2b	PHOX2B	0.616957	0.5
ENSGALT0000	phosphohistidine phosphatase 1	PHPT1	0.134103	2188
ENSGALT0000	PHD and ring finger domains 1	PHRF1	0.962208	673.5
ENSGALT0000	putative homeodomain transcriptioi	PHTF1	0.968267	1582
ENSGALT0000	putative homeodomain transcriptioi	PHTF2	0.975521	751.494
ENSGALT0000	phytanoyl-CoA 2-hydroxylase	PHYH	0.908848	326
ENSGALT0000	phytanoyl-CoA dioxygenase domai	PHYHD1	0.775036	106.5
ENSGALT0000	phytanoyl-CoA 2-hydroxylase intera	PHYHIPL	0.615999	173.5
ENSGALT0000	peptidase inhibitor 15	PI15	0.989781	73.0001
ENSGALT0000	peptidase inhibitor 16	PI16	0.985038	2.5
ENSGALT0000	phosphatidylinositol 4-kinase type i	PI4K2A	0.852431	739.5
ENSGALT0000	phosphatidylinositol 4-kinase type i	PI4K2B	0.996273	638.5
ENSGALT0000	phosphatidylinositol 4-kinase, catal	PI4KA	0.97364	3889.5
ENSGALT0000	phosphatidylinositol 4-kinase, catal	PI4KB	0.908513	2688
ENSGALT0000	protein inhibitor of activated STAT,	PIAS1	0.939236	755.006
ENSGALT0000	protein inhibitor of activated STAT,	PIAS2	0.973499	939.996
ENSGALT0000	protein inhibitor of activated STAT,	PIAS4	0.93879	646
ENSGALT0000	progesterone immunomodulatory b	PIBF1	0.974691	221
ENSGALT0000	phosphatidylinositol binding clathrir	PICALM	0.953577	951
ENSGALT0000	protein interacting with PRKCA 1	PICK1	0.995943	1621.5
ENSGALT0000	phosphotyrosine interaction domair	PID1	0.999082	199.5
ENSGALT0000	p53-induced death domain protein	PIDD	0.997433	227

ENSGALT0000	piezo-type mechanosensitive ion ch	PIEZO2	0.802006	5804.5
ENSGALT0000	PIF1 5'-to-3' DNA helicase homolog	PIF1	0.891769	319.5
ENSGALT0000	phosphatidylinositol glycan anchor	PIGA	0.998523	772
ENSGALT0000	phosphatidylinositol glycan anchor	PIGB	0.980326	535.846
ENSGALT0000	phosphatidylinositol glycan anchor	PIGF	0.987066	515.5
ENSGALT0000	phosphatidylinositol glycan anchor	PIGG	0.909472	1471
ENSGALT0000	phosphatidylinositol glycan anchor	PIGH	0.861907	307.5
ENSGALT0000	phosphatidylinositol glycan anchor	PIGK	0.99548	1973.5
ENSGALT0000	phosphatidylinositol glycan anchor	PIGL	0.941696	110.5
ENSGALT0000	phosphatidylinositol glycan anchor	PIGM	0.783717	298.5
ENSGALT0000	phosphatidylinositol glycan anchor	PIGN	0.991952	311.999
ENSGALT0000	phosphatidylinositol glycan anchor	PIGO	0.998431	916
ENSGALT0000	phosphatidylinositol glycan anchor	PIGP	0.971177	124.5
ENSGALT0000	phosphatidylinositol glycan anchor	PIGQ	0.962394	448.5
ENSGALT0000	polymeric immunoglobulin receptor	PIGR	0.631223	0
ENSGALT0000	phosphatidylinositol glycan anchor	PIGS	0.919698	2431
ENSGALT0000	phosphatidylinositol glycan anchor	PIGT	0.935192	2293.5
ENSGALT0000	phosphatidylinositol glycan anchor	PIGU	0.957775	553.5
ENSGALT0000	phosphatidylinositol glycan anchor	PIGV	0.972705	267.5
ENSGALT0000	phosphatidylinositol glycan anchor	PIGW	0.924278	311.5
ENSGALT0000	phosphatidylinositol glycan anchor	PIGX	0.573452	1058.5
ENSGALT0000	phosphatidylinositol glycan anchor	PIGY	0.67791	380.5
ENSGALT0000	PIH1 domain containing 2	PIH1D2	0.912081	413
ENSGALT0000	phosphoinositide-3-kinase adaptor	PIK3AP1	0.950769	341.999
ENSGALT0000	phosphoinositide-3-kinase, class 2,	PIK3C2A	0.983116	2522
ENSGALT0000	phosphoinositide-3-kinase, class 2,	PIK3C2B	0.88091	3809.5
ENSGALT0000	phosphoinositide-3-kinase, class 2,	PIK3C2G	0.876982	42.5
ENSGALT0000	phosphoinositide-3-kinase, class 3	PIK3C3	0.948512	709.501
ENSGALT0000	phosphoinositide-3-kinase, catalytic	PIK3CA	0.963488	822.507
ENSGALT0000	phosphoinositide-3-kinase, catalytic	PIK3CB	0.947703	380
ENSGALT0000	phosphoinositide-3-kinase, catalytic	PIK3CD	0.988759	508.5
ENSGALT0000	phosphoinositide-3-kinase, catalytic	PIK3CG	0.985999	384.5
ENSGALT0000	phosphoinositide-3-kinase interacti	PIK3IP1	0.827342	1738
ENSGALT0000	phosphoinositide-3-kinase, regulato	PIK3R1	0.823533	175
ENSGALT0000	phosphoinositide-3-kinase, regulato	PIK3R2	0.954678	6162.5
ENSGALT0000	phosphoinositide-3-kinase, regulato	PIK3R3	0.90663	640.999
ENSGALT0000	phosphoinositide-3-kinase, regulato	PIK3R4	0.993999	2325.53
ENSGALT0000	phosphoinositide 3-kinase regulato	PIK3R5	0.984121	106.5
ENSGALT0000	phosphoinositide-3-kinase, regulato	PIK3R6	0.870681	33.5
ENSGALT0000	phosphoinositide kinase, FYVE fing	PIKFYVE	0.954178	1155.5
ENSGALT0000	pim-1 oncogene	PIM1	0.987315	424
ENSGALT0000	protein (peptidylprolyl cis/trans isom	PIN4	0.131333	1722
ENSGALT0000	PTEN induced putative kinase 1	PINK1	0.951148	2038.5
ENSGALT0000	PIN2/TERF1 interacting, telomeras	PINX1	0.944535	300.5
ENSGALT0000	pigeon homolog (Drosophila)	PION	0.959494	416
ENSGALT0000	phosphatidylinositol-5-phosphate 4	PIP4K2A	0.898001	1490
ENSGALT0000	phosphatidylinositol-5-phosphate 4	PIP4K2B	0.880348	1375
ENSGALT0000	phosphatidylinositol-4-phosphate 5	PIP5K1A	0.63604	5280.99
ENSGALT0000	phosphatidylinositol-4-phosphate 5	PIP5K1B	0.992386	406.999
ENSGALT0000	phosphatidylinositol-4-phosphate 5	PIP5K1C	0.970491	2111
ENSGALT0000	phosphoinositide-interacting regula	PIRT	0.494778	15.5
ENSGALT0000	phosphatidylserine decarboxylase	PISD	0.952642	435
ENSGALT0000	PITH (C-terminal proteasome-inter	PITHD1	0.575799	1024.5
ENSGALT0000	phosphatidylinositol transfer protein	PITPNA	0.915003	1007
ENSGALT0000	phosphatidylinositol transfer protein	PITPNB	0.884263	2156.97
ENSGALT0000	phosphatidylinositol transfer protein	PITPNC1	0.772483	296

ENSGALT0000	phosphatidylinositol transfer protein	PITPNM1	0.961088	2548.39
ENSGALT0000	phosphatidylinositol transfer protein	PITPNM2	0.906765	1026.5
ENSGALT0000	PITPNM family member 3	PITPNM3	0.994104	512.5
ENSGALT0000	pitrilysin metallopeptidase 1	PITRM1	0.977108	1203.98
ENSGALT0000	paired-like homeodomain 1	PITX1	0.725097	2
ENSGALT0000	paired-like homeodomain 3	PITX3	0.574317	2.5
ENSGALT0000	piwi-like 1 (Drosophila)	PIWIL1	0.71193	243
ENSGALT0000	praja ring finger 2, E3 ubiquitin prot	PJA2	0.999755	455
ENSGALT0000	polycystic kidney disease 1 (autosc	PKD1	0.993226	1258.5
ENSGALT0000	polycystic kidney disease 2 (autosc	PKD2	0.972775	1959.5
ENSGALT0000	polycystic kidney disease 2-like 1	PKD2L1	0.575173	6
ENSGALT0000	polycystic kidney disease 2-like 2	PKD2L2	0.99406	87.5
ENSGALT0000	protein kinase domain containing, c	PKDCC	0.942069	2075.5
ENSGALT0000	polycystic kidney disease (polycyst	PKDREJ	0.987002	70.5
ENSGALT0000	polycystic kidney and hepatic disea	PKHD1	0.995913	135
ENSGALT0000	cAMP-dependent protein kinase inl	PKIA	0.770016	598
ENSGALT0000	protein kinase (cAMP-dependent, c	PKIB	0.58528	83
ENSGALT0000	protein kinase (cAMP-dependent, c	PKIG	0.00931889	181
ENSGALT0000	pyruvate kinase, muscle	PKM2	0.916335	50419.2
ENSGALT0000	protein kinase N3	PKN3	0.993497	452.5
ENSGALT0000	PBX/knotted 1 homeobox 1	PKNOX1	0.968448	334.5
ENSGALT0000	PBX/knotted 1 homeobox 2	PKNOX2	0.9943	1239.51
ENSGALT0000	plakophilin 1 (ectodermal dysplasia	PKP1	0.824645	5
ENSGALT0000	plakophilin 2	PKP2	0.682691	1912.51
ENSGALT0000	plakophilin 3	PKP3	0.951034	808.5
ENSGALT0000	plakophilin 4	PKP4	0.996109	2624.08
ENSGALT0000	phospholipase A1 member A	PLA1A	0.933864	16
ENSGALT0000	phospholipase A2, group XIIA	PLA2G12A	0.965359	751
ENSGALT0000	phospholipase A2, group XIIB	PLA2G12B	0.631223	1.5
ENSGALT0000	phospholipase A2, group XV	PLA2G15	0.962458	439.5
ENSGALT0000	phospholipase A2, group IB (pancr	PLA2G1B	0.649519	2
ENSGALT0000	phospholipase A2, group IIA (platel	PLA2G2A	0.649045	4.5
ENSGALT0000	phospholipase A2, group IIE	PLA2G2E	0.7378	50
ENSGALT0000	phospholipase A2, group IVA (cytos	PLA2G4A	0.934385	176
ENSGALT0000	phospholipase A2, group IVE	PLA2G4E	0.560649	2.5
ENSGALT0000	phospholipase A2, group IVF	PLA2G4F	0.941817	27
ENSGALT0000	phospholipase A2, group VI (cytos	PLA2G6	0.947926	931.5
ENSGALT0000	phospholipase A2, group VII (platel	PLA2G7	0.944446	745.498
ENSGALT0000	phospholipase A2 receptor 1, 180k	PLA2R1	0.991518	1599.48
ENSGALT0000	phospholipase A2-activating protein	PLAA	0.908982	1306
ENSGALT0000	placenta-specific 8	PLAC8	0.392103	0.5
ENSGALT0000	Zinc finger protein PLAG1	PLAG1	0.992993	288.115
ENSGALT0000	pleiomorphic adenoma gene-like 1	PLAGL1	0.979526	1473
ENSGALT0000	pleiomorphic adenoma gene-like 2	PLAGL2	0.983459	565
ENSGALT0000	plasminogen activator, tissue	PLAT	0.897145	215
ENSGALT0000	plasminogen activator, urokinase	PLAU	0.826357	154.5
ENSGALT0000	phospholipase B1	PLB1	0.68037	7
ENSGALT0000	phospholipase B domain containing	PLBD1	0.946463	1036.5
ENSGALT0000	phospholipase C, beta 1 (phosphoi	PLCB1	0.985587	264.5
ENSGALT0000	phospholipase C, beta 2	PLCB2	0.977291	89
ENSGALT0000	phospholipase C, beta 4	PLCB4	0.981312	319
ENSGALT0000	phospholipase C, delta 1	PLCD1	0.737653	554.001
ENSGALT0000	phospholipase C, delta 4	PLCD4	0.91139	483.5
ENSGALT0000	phospholipase C, epsilon 1	PLCE1	0.980537	832
ENSGALT0000	phospholipase C, gamma 1	PLCG1	0.871039	7398.33
ENSGALT0000	phospholipase C, gamma 2 (phosp	PLCG2	0.872778	338.5

ENSGALT0000	phospholipase C, eta 1	PLCH1	0.924076	1813.02
ENSGALT0000	phospholipase C, eta 2	PLCH2	0.983171	699
ENSGALT0000	phospholipase C-like 1	PLCL1	0.819536	85
ENSGALT0000	phospholipase C-like 2	PLCL2	0.99345	219.5
ENSGALT0000	phosphatidylinositol-specific phospl	PLCXD1	0.997657	8
ENSGALT0000	phosphatidylinositol-specific phospl	PLCXD2	0.954444	24
ENSGALT0000	phosphatidylinositol-specific phospl	PLCXD3	0.884725	42.5
ENSGALT0000	phospholipase C, zeta 1	PLCZ1	0.464758	0.5
ENSGALT0000	phospholipase D1, phosphatidylcho	PLD1	0.987167	745
ENSGALT0000	phospholipase D family, member 4	PLD4	0.649519	0.5
ENSGALT0000	phospholipase D family, member 5	PLD5	0.980127	99
ENSGALT0000	pallidin homolog (mouse)	PLDN	0.796798	291.5
ENSGALT0000	pleckstrin	PLEK	0.993304	93
ENSGALT0000	pleckstrin 2	PLEK2	0.888684	183
ENSGALT0000	pleckstrin homology domain contail	PLEKHA1	0.980928	567.504
ENSGALT0000	pleckstrin homology domain contail	PLEKHA2	0.80296	78
ENSGALT0000	pleckstrin homology domain contail	PLEKHA3	0.98776	379.5
ENSGALT0000	pleckstrin homology domain contail	PLEKHA5	0.991137	1467
ENSGALT0000	pleckstrin homology domain contail	PLEKHA6	0.911699	628.5
ENSGALT0000	pleckstrin homology domain contail	PLEKHA7	0.995468	1050
ENSGALT0000	pleckstrin homology domain contail	PLEKHA8	0.888746	232
ENSGALT0000	pleckstrin homology domain contail	PLEKHB1	0.939224	884.554
ENSGALT0000	pleckstrin homology domain contail	PLEKHB2	0.957058	2554.42
ENSGALT0000	pleckstrin homology domain contail	PLEKHC1	0.903205	3313
ENSGALT0000	pleckstrin homology domain contail	PLEKHD1	0.872883	153
ENSGALT0000	pleckstrin homology domain contail	PLEKHF1	0.86912	94.5
ENSGALT0000	pleckstrin homology domain contail	PLEKHF2	0.966289	593
ENSGALT0000	pleckstrin homology domain contail	PLEKHG1	0.992284	1739.99
ENSGALT0000	pleckstrin homology domain contail	PLEKHG4	0.913484	516
ENSGALT0000	pleckstrin homology domain contail	PLEKHG7	0.363607	0
ENSGALT0000	pleckstrin homology domain contail	PLEKHH1	0.981582	751.5
ENSGALT0000	pleckstrin homology domain contail	PLEKHH2	0.960124	442.5
ENSGALT0000	pleckstrin homology domain contail	PLEKHJ1	0.926393	2655.73
ENSGALT0000	pleckstrin homology domain contail	PLEKHM1	0.946371	953.488
ENSGALT0000	pleckstrin homology domain contail	PLEKHM2	0.906022	2440.5
ENSGALT0000	pleckstrin homology domain contail	PLEKHM3	0.892207	270.5
ENSGALT0000	pleckstrin homology domain contail	PLEKHN1	0.581745	16.5
ENSGALT0000	pleckstrin homology domain contail	PLEKHO1	0.66541	852.5
ENSGALT0000	plasminogen	PLG	?	0
ENSGALT0000	perilipin 1	PLIN1	0.937267	16.5
ENSGALT0000	perilipin 2	PLIN2	0.89928	1406
ENSGALT0000	perilipin 3	PLIN3	0.419336	3
ENSGALT0000	perilipin 5	PLIN5	0.6463	1298.5
ENSGALT0000	polo-like kinase 1	PLK1	0.778551	3541.5
ENSGALT0000	polo-like kinase 1 substrate 1	PLK1S1	0.927864	1877.51
ENSGALT0000	polo-like kinase 2	PLK2	0.883763	966
ENSGALT0000	polo-like kinase 3	PLK3	0.830433	459.5
ENSGALT0000	polo-like kinase 4	PLK4	0.946905	818
ENSGALT0000	plasmolipin	PLLP	0.780106	35.5
ENSGALT0000	phospholamban	PLN	0.773583	1.5
ENSGALT0000	procollagen-lysine, 2-oxoglutarate !	PLOD1	0.96502	3555.5
ENSGALT0000	procollagen-lysine, 2-oxoglutarate !	PLOD2	0.974221	3474.5
ENSGALT0000	proteolipid protein 1	PLP1	0.524813	42
ENSGALT0000	pleiotropic regulator 1	PLRG1	0.913083	1762.5
ENSGALT0000	plastin 1	PLS1	0.809352	211
ENSGALT0000	plastin 3	PLS3	0.986308	5979.5

ENSGALT0000	phospholipid scramblase 1	PLSCR1	0.781179	470
ENSGALT0000	phospholipid scramblase family, me	PLSCR5	0.778956	92.5
ENSGALT0000	phospholipid transfer protein	PLTP	0.910962	391.5
ENSGALT0000	plexin domain containing 1	PLXDC1	0.944155	113.5
ENSGALT0000	plexin domain containing 2	PLXDC2	0.985542	434
ENSGALT0000	plexin A1	PLXNA1	0.960516	7727.19
ENSGALT0000	plexin A2	PLXNA2	0.801757	620.289
ENSGALT0000	plexin A4, B	PLXNA4B	0.960164	785.486
ENSGALT0000	plexin B1	PLXNB1	0.984377	1331
ENSGALT0000	plexin B2	PLXNB2	0.926177	3239.19
ENSGALT0000	plexin C1	PLXNC1	0.968537	956
ENSGALT0000	plexin D1	PLXND1	0.847109	1431
ENSGALT0000	peptidase M20 domain containing 1	PM20D1	0.935108	1023.5
ENSGALT0000	peptidase M20 domain containing 2	PM20D2	0.939651	219.5
ENSGALT0000	pM5 protein	PM5	0.970707	4433
ENSGALT0000	MMP115 protein	PMEL	0.824565	95
ENSGALT0000	prostate transmembrane protein, ar	PMEPA1	0.916531	267.501
ENSGALT0000	polyamine modulated factor 1 bindi	PMFBP1	0.950517	9.5
ENSGALT0000	phosphomannomutase 1	PMM1	0.937026	147
ENSGALT0000	phosphomannomutase 2	PMM2	0.924354	558.001
ENSGALT0000	peripheral myelin protein 2	PMP2	0.309576	1.5
ENSGALT0000	peripheral myelin protein 22	PMP22	0.959885	637.5
ENSGALT0000	peptidase (mitochondrial processin	PMPCA	0.908736	2458
ENSGALT0000	peptidase (mitochondrial processin	PMPCB	0.860261	1246.5
ENSGALT0000	PMS1 postmeiotic segregation incr	PMS1	0.968962	612
ENSGALT0000	PMS2 postmeiotic segregation incr	PMS2	0.954352	803.495
ENSGALT0000	N-acetyltransferase, pineal gland is	PNAT10	0.787709	81
ENSGALT0000	Arylamine N-acetyltransferase, pine	PNAT3	0.638744	106.109
ENSGALT0000	PNN-interacting serine/arginine-rich	PNISR	0.996126	3450.85
ENSGALT0000	paroxysmal nonkinesigenic dyskine	PNKD	0.841029	349.5
ENSGALT0000	poly(A)-specific ribonuclease (PARI	PNLDC1	0.826302	18
ENSGALT0000	pancreatic lipase	PNLIP	0.164317	0.5
ENSGALT0000	pinin, desmosome associated prote	PNN	0.954233	2385
ENSGALT0000	partner of NOB1 homolog (S. cerev	PNO1	0.880413	807.997
ENSGALT0000	prepronociceptin	PNOC	0.832462	12
ENSGALT0000	purine nucleoside phosphorylase	PNP	0.0533012	0.5
ENSGALT0000	patatin-like phospholipase domain	PNPLA1	0.539038	1.5
ENSGALT0000	patatin-like phospholipase domain	PNPLA2	0.981379	234.5
ENSGALT0000	patatin-like phospholipase domain	PNPLA3	0.939067	809.5
ENSGALT0000	patatin-like phospholipase domain	PNPLA4	0.974223	43.5
ENSGALT0000	patatin-like phospholipase domain	PNPLA6	0.884851	1138.51
ENSGALT0000	patatin-like phospholipase domain	PNPLA7	0.982348	2690.55
ENSGALT0000	patatin-like phospholipase domain	PNPLA8	0.99024	802.5
ENSGALT0000	polyribonucleotide nucleotidyltransf	PNPT1	0.945257	444.5
ENSGALT0000	proline-rich nuclear receptor coacti	PNRC1	0.997546	3834.58
ENSGALT0000	proline-rich nuclear receptor coacti	PNRC2	0.966527	2997.5
ENSGALT0000	POC1 centriolar protein homolog A	POC1A	0.987848	486.865
ENSGALT0000	POC5 centriolar protein homolog (C	POC5	0.938847	265
ENSGALT0000	podocan	PODN	0.955074	37.5
ENSGALT0000	podocalyxin-like	PODXL	0.814759	269.5
ENSGALT0000	podocalyxin-like 2	PODXL2	0.733463	983.845
ENSGALT0000	premature ovarian failure, 1B	POF1B	0.915828	584.5
ENSGALT0000	protein O-fucosyltransferase 1	POFUT1	0.975694	3708.58
ENSGALT0000	protein O-fucosyltransferase 2	POFUT2	0.952886	1779.47
ENSGALT0000	protein O-glucosyltransferase 1	POGLUT1	0.990776	1897
ENSGALT0000	pogo transposable element with ZN	POGZ	0.980902	1058

ENSGALT0000	polymerase (DNA directed), alpha	POLA1	0.963446	1831
ENSGALT0000	polymerase (DNA directed), beta	POLB	0.893797	1018.5
ENSGALT0000	polymerase (DNA-directed), delta 3	POLD3	0.984546	2130
ENSGALT0000	polymerase (DNA-directed), delta ii	POLDIP3	0.965274	3008.5
ENSGALT0000	polymerase (DNA directed), epsilor	POLE	0.930961	2050.48
ENSGALT0000	polymerase (DNA directed), epsilor	POLE2	0.946691	1385.51
ENSGALT0000	polymerase (DNA directed), epsilor	POLE3	0.782125	2475.5
ENSGALT0000	polymerase (DNA directed), gamm;	POLG2	0.990348	1099.5
ENSGALT0000	polymerase (DNA directed), eta	POLH	0.90465	1093.5
ENSGALT0000	polymerase (DNA directed) kappa	POLK	0.997575	204
ENSGALT0000	polymerase (DNA directed), lambd;	POLL	0.955225	758.505
ENSGALT0000	polymerase (DNA directed) nu	POLN	0.499681	10.5
ENSGALT0000	polymerase (DNA directed), theta	POLQ	0.954123	88
ENSGALT0000	polymerase (RNA) I polypeptide B,	POLR1B	0.92673	1914.51
ENSGALT0000	polymerase (RNA) I polypeptide C,	POLR1C	0.76975	1177
ENSGALT0000	polymerase (RNA) I polypeptide D,	POLR1D	0.542974	365
ENSGALT0000	polymerase (RNA) I polypeptide E,	POLR1E	0.914148	839
ENSGALT0000	polymerase (RNA) II (DNA directed	POLR2B	0.945721	3314.14
ENSGALT0000	polymerase (RNA) II (DNA directed	POLR2C	0.83525	3445
ENSGALT0000	polymerase (RNA) II (DNA directed	POLR2D	0.847257	932
ENSGALT0000	polymerase (RNA) II (DNA directed	POLR2E	0.392058	2649
ENSGALT0000	polymerase (RNA) II (DNA directed	POLR2F	0.334358	2856.5
ENSGALT0000	polymerase (RNA) II (DNA directed	POLR2H	0.579182	1983.5
ENSGALT0000	polymerase (RNA) II (DNA directed	POLR2I	0.357993	1512.5
ENSGALT0000	polymerase (RNA) II (DNA directed	POLR2J2	0.912953	867.744
ENSGALT0000	polymerase (RNA) II (DNA directed	POLR2K	0.226319	147.142
ENSGALT0000	polymerase (RNA) II (DNA directed	POLR2L	0.408501	983
ENSGALT0000	polymerase (RNA) III (DNA directe	POLR3A	0.964522	770
ENSGALT0000	polymerase (RNA) III (DNA directe	POLR3B	0.915595	1383.5
ENSGALT0000	polymerase (RNA) III (DNA directe	POLR3C	0.856735	242.5
ENSGALT0000	polymerase (RNA) III (DNA directe	POLR3E	0.937629	851
ENSGALT0000	polymerase (RNA) III (DNA directe	POLR3F	0.755677	893.5
ENSGALT0000	polymerase (RNA) III (DNA directe	POLR3G	0.909496	5.5
ENSGALT0000	polymerase (RNA) III (DNA directe	POLR3H	0.878043	436.5
ENSGALT0000	polymerase (RNA) mitochondrial (C	POLRMT	0.94623	1322.71
ENSGALT0000	proopiomelanocortin	POMC	0.508319	3.5
ENSGALT0000	protein O-linked mannose beta1,2-	POMGNT1	0.966069	1233.5
ENSGALT0000	proteasome maturation protein	POMP	0.954635	1332.5
ENSGALT0000	protein-O-mannosyltransferase 1	POMT1	0.987256	1937.97
ENSGALT0000	protein-O-mannosyltransferase 2	POMT2	0.96344	886.5
ENSGALT0000	paraoxonase 2	PON2	0.937033	199
ENSGALT0000	processing of precursor 1, ribonucl	POP1	0.955236	240
ENSGALT0000	processing of precursor 4, ribonucl	POP4	0.972198	443.5
ENSGALT0000	processing of precursor 5, ribonucl	POP5	0.19828	1206.5
ENSGALT0000	popeye domain containing 2	POPDC2	0.896625	161
ENSGALT0000	popeye domain containing 3	POPDC3	0.670227	138
ENSGALT0000	P450 (cytochrome) oxidoreductase	POR	0.942559	3034
ENSGALT0000	periostin, osteoblast specific factor	POSTN	0.705399	712
ENSGALT0000	protection of telomeres 1 homolog	POT1	0.977933	420.5
ENSGALT0000	POTE ankyrin domain family, meml	POTEJ	0.660309	47708.1
ENSGALT0000	POU class 1 homeobox 1	POU1F1	0.94939	5
ENSGALT0000	POU class 2 associating factor 1	POU2AF1	0.819665	8
ENSGALT0000	POU class 2 homeobox 1	POU2F1	0.968874	738.49
ENSGALT0000	POU class 2 homeobox 3	POU2F3	0.671958	1.5
ENSGALT0000	Brain-specific homeobox/POU dom	POU4F3	0.489828	380
ENSGALT0000	POU class 6 homeobox 2	POU6F2	0.77305	35.5

ENSGALT0000	protein phosphatase 2C-like domai	PP2D1	0.373883	2
ENSGALT0000	pyrophosphatase (inorganic) 1	PPA1	0.577361	3054.5
ENSGALT0000	pyrophosphatase (inorganic) 2	PPA2	0.832583	827
ENSGALT0000	phosphatidic acid phosphatase typ	PPAP2A	0.895512	306.508
ENSGALT0000	phosphatidic acid phosphatase typ	PPAP2B	0.958274	1548.5
ENSGALT0000	phosphatidic acid phosphatase typ	PPAPDC1A	0.72935	358.5
ENSGALT0000	phosphatidic acid phosphatase typ	PPAPDC1B	0.767156	1082
ENSGALT0000	phosphatidic acid phosphatase typ	PPAPDC2	0.860556	639
ENSGALT0000	phosphatidic acid phosphatase typ	PPAPDC3	0.370459	15
ENSGALT0000	peroxisome proliferator-activated re	PPARA	0.935995	136.852
ENSGALT0000	peroxisome proliferator-activated re	PPARD	0.976709	1037.5
ENSGALT0000	peroxisome proliferator-activated re	PPARG	0.826277	14
ENSGALT0000	peroxisome proliferator-activated re	PPARGC1A	0.940899	69.5
ENSGALT0000	peroxisome proliferator-activated re	PPARGC1B	0.89478	342
ENSGALT0000	phosphoribosyl pyrophosphate ami	PPAT	0.930538	454
ENSGALT0000	phosphopantothenoylcysteine deca	PPCDC	0.888232	369
ENSGALT0000	phosphopantothenoylcysteine syntl	PPCS	0.452163	521.5
ENSGALT0000	pancreatic progenitor cell differentia	PPDPF	0.847139	283
ENSGALT0000	protein phosphatase, EF-hand calc	PPEF2	0.973889	55
ENSGALT0000	protein tyrosine phosphatase, rece	PPFIA1	0.983409	1921.57
ENSGALT0000	protein tyrosine phosphatase, rece	PPFIA2	0.831781	2673
ENSGALT0000	protein tyrosine phosphatase, rece	PPFIA4	0.799589	219
ENSGALT0000	PTPRF interacting protein, binding	PPFIBP1	0.986118	3358
ENSGALT0000	PTPRF interacting protein, binding	PPFIBP2	0.951489	303.745
ENSGALT0000	periphilin 1	PPHLN1	0.891343	792
ENSGALT0000	peptidylprolyl isomerase B (cycloph	PPIB	0.565269	21309
ENSGALT0000	peptidylprolyl isomerase C (cycloph	PPIC	0.913984	757
ENSGALT0000	peptidylprolyl isomerase D	PPID	0.81838	808.846
ENSGALT0000	peptidylprolyl isomerase E (cycloph	PPIE	0.420942	1880.51
ENSGALT0000	peptidylprolyl isomerase F	PPIF	0.740531	346.5
ENSGALT0000	peptidylprolyl isomerase G (cycloph	PPIG	0.850983	1278
ENSGALT0000	peptidylprolyl isomerase H (cycloph	PPIH	0.630571	1578.5
ENSGALT0000	peptidylprolyl isomerase (cyclophili	PPIL2	0.956514	1252
ENSGALT0000	peptidylprolyl isomerase (cyclophili	PPIL3	0.729031	317.5
ENSGALT0000	peptidylprolyl isomerase (cyclophili	PPIL4	0.926527	705.5
ENSGALT0000	peptidylprolyl isomerase (cyclophili	PPIL6	0.853815	1
ENSGALT0000	diphosphoinositol pentakisphospha	PPIP5K1	0.945879	350.788
ENSGALT0000	diphosphoinositol pentakisphospha	PPIP5K2	0.945317	764.506
ENSGALT0000	periplakin	PPL	0.994754	2386
ENSGALT0000	protein phosphatase, Mg2+/Mn2+ c	PPM1A	0.950804	1507.5
ENSGALT0000	protein phosphatase 1B	PPM1B	0.97107	972.5
ENSGALT0000	protein phosphatase, Mg2+/Mn2+ c	PPM1D	0.961796	1112
ENSGALT0000	protein phosphatase, Mg2+/Mn2+ c	PPM1E	0.907742	718.999
ENSGALT0000	protein phosphatase, Mg2+/Mn2+ c	PPM1F	0.888084	228.5
ENSGALT0000	protein phosphatase, Mg2+/Mn2+ c	PPM1H	0.961563	743.5
ENSGALT0000	protein phosphatase, Mg2+/Mn2+ c	PPM1J	0.989415	185.5
ENSGALT0000	protein phosphatase, Mg2+/Mn2+ c	PPM1K	0.977527	741.999
ENSGALT0000	protein phosphatase, Mg2+/Mn2+ c	PPM1L	0.958215	599.5
ENSGALT0000	protein phosphatase, Mg2+/Mn2+ c	PPM1M	0.958112	1148.5
ENSGALT0000	protein phosphatase methylesteras	PPME1	0.946616	4203.58
ENSGALT0000	protein phosphatase 1, catalytic su	PPP1CB	0.896483	3125.5
ENSGALT0000	protein phosphatase 1, catalytic su	PPP1CC	0.928375	5888
ENSGALT0000	protein phosphatase 1, regulatory (	PPP1R12A	0.96294	2261.99
ENSGALT0000	protein phosphatase 1, regulatory (	PPP1R12B	0.9895	2019.99
ENSGALT0000	protein phosphatase 1, regulatory (	PPP1R13B	0.999694	1319
ENSGALT0000	protein phosphatase 1, regulatory (	PPP1R14C	0.278148	195

ENSGALT0000	protein phosphatase 1, regulatory (	PPP1R14D	0.806794	17
ENSGALT0000	protein phosphatase 1, regulatory s	PPP1R15B	0.975643	293.5
ENSGALT0000	protein phosphatase 1, regulatory (	PPP1R16B	0.979235	378
ENSGALT0000	protein phosphatase 1, regulatory s	PPP1R17	0.552669	290
ENSGALT0000	protein phosphatase 1, regulatory (	PPP1R1C	0.0945523	657
ENSGALT0000	protein phosphatase 1, regulatory (	PPP1R2	0.940962	1958.51
ENSGALT0000	protein phosphatase 1, regulatory s	PPP1R21	0.965737	1036.51
ENSGALT0000	protein phosphatase 1, regulatory s	PPP1R26	0.98071	389.5
ENSGALT0000	protein phosphatase 1, regulatory s	PPP1R36	0.953519	5.5
ENSGALT0000	protein phosphatase 1, regulatory (	PPP1R3A	0.464758	0
ENSGALT0000	protein phosphatase 1, regulatory s	PPP1R3B	0.954072	68.5
ENSGALT0000	protein phosphatase 1, regulatory s	PPP1R3D	0.992997	101.5
ENSGALT0000	protein phosphatase 1, regulatory s	PPP1R3G	0.953041	13
ENSGALT0000	protein phosphatase 1, regulatory (	PPP1R7	0.810325	2229
ENSGALT0000	protein phosphatase 1, regulatory (	PPP1R8	0.958795	1600.5
ENSGALT0000	protein phosphatase 1, regulatory (	PPP1R9A	0.976496	1111
ENSGALT0000	protein phosphatase 1, regulatory (	PPP1R9B	0.989048	1349
ENSGALT0000	protein phosphatase 2, catalytic su	PPP2CA	0.756764	4654
ENSGALT0000	protein phosphatase 2, catalytic su	PPP2CB	0.882007	4145
ENSGALT0000	protein phosphatase 2, regulatory s	PPP2R2A	0.935457	2156.97
ENSGALT0000	protein phosphatase 2, regulatory s	PPP2R2B	0.714312	328.5
ENSGALT0000	protein phosphatase 2, regulatory s	PPP2R2C	0.595375	171.5
ENSGALT0000	protein phosphatase 2, regulatory s	PPP2R2D	0.935176	929.011
ENSGALT0000	protein phosphatase 2, regulatory s	PPP2R3A	0.981066	1341
ENSGALT0000	protein phosphatase 2, regulatory s	PPP2R3B	0.988053	527.5
ENSGALT0000	protein phosphatase 2, regulatory s	PPP2R3C	0.803664	366.5
ENSGALT0000	protein phosphatase 2A activator, r	PPP2R4	0.867983	4500.98
ENSGALT0000	protein phosphatase 2, regulatory s	PPP2R5A	0.945849	750.5
ENSGALT0000	protein phosphatase 2, regulatory s	PPP2R5C	0.973171	1590
ENSGALT0000	protein phosphatase 2, regulatory s	PPP2R5D	0.910193	1030.5
ENSGALT0000	protein phosphatase 2, regulatory s	PPP2R5E	0.963765	746.999
ENSGALT0000	protein phosphatase 3, catalytic su	PPP3CB	0.943566	1633.03
ENSGALT0000	protein phosphatase 3, regulatory s	PPP3R1	0.892466	2330.5
ENSGALT0000	protein phosphatase 4, regulatory s	PPP4R1	0.936865	1790
ENSGALT0000	protein phosphatase 4, regulatory s	PPP4R1L	0.978407	1175.5
ENSGALT0000	protein phosphatase 4, regulatory s	PPP4R2	0.955935	2141.5
ENSGALT0000	protein phosphatase 4, regulatory s	PPP4R4	0.947905	160.5
ENSGALT0000	protein phosphatase 6, catalytic su	PPP6C	0.82543	1477.99
ENSGALT0000	protein phosphatase 6, regulatory s	PPP6R2	0.965724	1124
ENSGALT0000	protein phosphatase 6, regulatory s	PPP6R3	0.952218	1706.51
ENSGALT0000	PPPDE peptidase domain containin	PPPDE1	0.963975	1544
ENSGALT0000	PPPDE peptidase domain containin	PPPDE2	0.838742	919.5
ENSGALT0000	peroxisome proliferator-activated re	PPRC1	0.887697	663
ENSGALT0000	palmitoyl-protein thioesterase 1	PPT1	0.829184	1047.5
ENSGALT0000	PTC7 protein phosphatase homolo	PPTC7	0.978051	901.5
ENSGALT0000	peptidylprolyl isomerase domain an	PPWD1	0.872586	912
ENSGALT0000	pancreatic polypeptide receptor 1	PPYR1	0.150565	1
ENSGALT0000	PQ loop repeat containing 1	PQLC1	0.937524	491.5
ENSGALT0000	PQ loop repeat containing 2	PQLC2	0.836172	305.582
ENSGALT0000	PQ loop repeat containing 3	PQLC3	0.953915	167.5
ENSGALT0000	protease-associated domain contai	PRADC1	0.68017	883
ENSGALT0000	PML-RARA regulated adaptor mole	PRAM1	0.380899	13
ENSGALT0000	protein regulator of cytokinesis 1	PRC1	0.886515	1765.93
ENSGALT0000	papillary renal cell carcinoma (trans	PRCC	0.929649	2628.5
ENSGALT0000	prolylcarboxypeptidase (angiotensi	PRCP	0.939488	737
ENSGALT0000	PR domain containing 10	PRDM10	0.962077	1172

ENSGALT0000	PR domain containing 11	PRDM11	0.997566	809.006
ENSGALT0000	PR domain containing 12	PRDM12	0.0218123	4.5
ENSGALT0000	PR domain containing 14	PRDM14	0.458549	2.5
ENSGALT0000	PR domain containing 15	PRDM15	0.952888	828
ENSGALT0000	PR domain containing 16	PRDM16	0.998162	1995
ENSGALT0000	PR domain containing 2, with ZNF	PRDM2	0.970159	1381.5
ENSGALT0000	PR domain containing 4	PRDM4	0.984423	1235.5
ENSGALT0000	PR domain containing 5	PRDM5	0.943427	96
ENSGALT0000	PR domain containing 6	PRDM6	0.71619	6
ENSGALT0000	peroxiredoxin 1	PRDX1	0.890155	10843
ENSGALT0000	peroxiredoxin 3	PRDX3	0.771744	1790
ENSGALT0000	peroxiredoxin 4	PRDX4	0.879535	4341
ENSGALT0000	peroxiredoxin 6	PRDX6	0.850924	4965.49
ENSGALT0000	PRELI domain containing 1	PRELID1	0.933972	1958
ENSGALT0000	proline/arginine-rich end leucine-ric	PRELP	0.977261	574.5
ENSGALT0000	prolyl endopeptidase	PREP	0.871879	2841
ENSGALT0000	prolyl endopeptidase-like	PREPL	0.983152	149.5
ENSGALT0000	phosphatidylinositol-3,4,5-trisphosp	PREX1	0.822586	1049
ENSGALT0000	phosphatidylinositol-3,4,5-trisphosp	PREX2	0.707697	79
ENSGALT0000	perforin 1 (pore forming protein)	PRF1	0.649519	1
ENSGALT0000	proteoglycan 4	PRG4	0.904524	74
ENSGALT0000	peroxisomal proliferator-activated r	PRIC285	0.996804	741
ENSGALT0000	prickle homolog 1 (Drosophila)	PRICKLE1	0.940202	783.5
ENSGALT0000	prickle homolog 2 (Drosophila)	PRICKLE2	0.86934	351.5
ENSGALT0000	primase, DNA, polypeptide 2 (58kD	PRIM2	0.948139	645.5
ENSGALT0000	proline rich membrane anchor 1	PRIMA1	0.91777	9
ENSGALT0000	protein kinase, AMP-activated, alph	PRKAA1	0.889136	524
ENSGALT0000	protein kinase, AMP-activated, alph	PRKAA2	0.994828	491.5
ENSGALT0000	protein kinase, AMP-activated, beta	PRKAB1	0.977578	1896.5
ENSGALT0000	protein kinase, AMP-activated, beta	PRKAB2	0.807481	644.5
ENSGALT0000	protein kinase, cAMP-dependent, c	PRKACB	0.966861	1323.5
ENSGALT0000	protein kinase, AMP-activated, gam	PRKAG2	0.943816	832.5
ENSGALT0000	protein kinase, AMP-activated, gam	PRKAG3	0.986252	303.5
ENSGALT0000	protein kinase, cAMP-dependent, r	PRKAR1A	0.983599	7179.85
ENSGALT0000	protein kinase, cAMP-dependent, r	PRKAR1B	0.842783	922
ENSGALT0000	protein kinase, cAMP-dependent, r	PRKAR2A	0.943236	4220
ENSGALT0000	protein kinase, cAMP-dependent, r	PRKAR2B	0.862551	333.5
ENSGALT0000	protein kinase C, alpha	PRKCA	0.929223	859.5
ENSGALT0000	protein kinase C, beta	PRKCB	0.61624	759.504
ENSGALT0000	protein kinase C, delta	PRKCD	0.883987	742.007
ENSGALT0000	protein kinase C, epsilon	PRKCE	0.732744	402.5
ENSGALT0000	protein kinase C, eta	PRKCH	0.990138	268.5
ENSGALT0000	protein kinase C, iota	PRKCI	0.992913	2849.45
ENSGALT0000	protein kinase C, zeta	PRKCZ	0.993712	533
ENSGALT0000	protein kinase D1	PRKD1	0.988139	1118.49
ENSGALT0000	protein kinase D3	PRKD3	0.881254	482
ENSGALT0000	protein kinase, DNA-activated, cata	PRKDC	0.986151	2438.07
ENSGALT0000	protein kinase, cGMP-dependent, t	PRKG1	0.706582	644.502
ENSGALT0000	protein kinase, cGMP-dependent, t	PRKG2	0.991792	253.5
ENSGALT0000	PRKR interacting protein 1 (IL11 in	PRKRIP1	0.898902	779
ENSGALT0000	protein-kinase, interferon-inducible	PRKRIR	0.966928	298.5
ENSGALT0000	protein kinase, X-linked	PRKX	0.994453	467.5
ENSGALT0000	prolactin	PRL	0.860468	3.5
ENSGALT0000	prolactin releasing hormone recept	PRLHR	0.959507	15.5
ENSGALT0000	prolactin receptor	PRLR	0.983444	64
ENSGALT0000	protein arginine methyltransferase	PRMT10	0.939331	1148.5

ENSGALT0000	protein arginine methyltransferase	PRMT3	0.934392	929.5
ENSGALT0000	protein arginine methyltransferase	PRMT7	0.947175	757.5
ENSGALT0000	protein arginine methyltransferase	PRMT8	0.99815	489
ENSGALT0000	prion protein	PRNP	0.791488	1025.13
ENSGALT0000	protein C (inactivator of coagulation	PROC	0.912785	6.82824
ENSGALT0000	protein C receptor, endothelial	PROCR	0.616095	83.5
ENSGALT0000	proline dehydrogenase (oxidase) 1	PRODH	0.829482	155
ENSGALT0000	prokineticin 1	PROK1	0.295514	2.5
ENSGALT0000	prokineticin 2	PROK2	0.646882	33.5
ENSGALT0000	prominin 1	PROM1	0.952184	2101.49
ENSGALT0000	prominin 2	PROM2	0.914869	105.5
ENSGALT0000	protein S (alpha)	PROS1	0.988278	657.5
ENSGALT0000	ProSAPiP1 protein	PROSAPIP1	0.973625	1204
ENSGALT0000	proline synthetase co-transcribed h	PROSC	0.846753	1200
ENSGALT0000	proline and serine rich 1	PROSER1	0.972185	1479
ENSGALT0000	prospero-related homeobox 1	PROX1	0.821532	1743
ENSGALT0000	prospero homeobox 2	PROX2	0.649519	0
ENSGALT0000	protein Z, vitamin K-dependent plas	PROZ	0.106727	0.5
ENSGALT0000	PRP18 pre-mRNA processing facto	PRPF18	0.880298	1103.5
ENSGALT0000	PRP19/PSO4 pre-mRNA processin	PRPF19	0.892138	3028.4
ENSGALT0000	PRP3 pre-mRNA processing factor	PRPF3	0.96957	4924.54
ENSGALT0000	PRP38 pre-mRNA processing facto	PRPF38A	0.867405	1163
ENSGALT0000	PRP38 pre-mRNA processing facto	PRPF38B	0.863212	821.834
ENSGALT0000	PRP39 pre-mRNA processing facto	PRPF39	0.973901	2192.5
ENSGALT0000	PRP4 pre-mRNA processing factor	PRPF4	0.866981	1327.5
ENSGALT0000	PRP40 pre-mRNA processing facto	PRPF40A	0.958684	2927.03
ENSGALT0000	PRP4 pre-mRNA processing factor	PRPF4B	0.973452	1948
ENSGALT0000	PRP6 pre-mRNA processing factor	PRPF6	0.952017	4289.5
ENSGALT0000	PRP8 pre-mRNA processing factor	PRPF8	0.966356	22084.5
ENSGALT0000	peripherin 2 (retinal degeneration,	PRPH2	0.464758	0
ENSGALT0000	phosphoribosyl pyrophosphate syn	PRPS1	0.83693	5145
ENSGALT0000	phosphoribosyl pyrophosphate syn	PRPS2	0.949929	295.501
ENSGALT0000	phosphoribosyl pyrophosphate syn	PRPSAP1	0.821907	1192.5
ENSGALT0000	phosphoribosyl pyrophosphate syn	PRPSAP2	0.9479	2061.5
ENSGALT0000	proline rich 11	PRR11	0.86501	192.5
ENSGALT0000	proline rich 13	PRR13	0.649519	0
ENSGALT0000	proline rich 14-like	PRR14L	0.980532	253
ENSGALT0000	proline rich 16	PRR16	0.956803	19
ENSGALT0000	proline rich 5 (renal)	PRR5	0.957115	1058
ENSGALT0000	proline rich 5 like	PRR5L	0.746395	50.5
ENSGALT0000	proline rich 9	PRR9	?	0
ENSGALT0000	proline-rich coiled-coil 1	PRRC1	0.982078	1544.5
ENSGALT0000	proline-rich coiled-coil 2B	PRRC2B	0.979082	10848
ENSGALT0000	proline rich Gla (G-carboxyglutamic	PRRG1	0.976511	213.5
ENSGALT0000	proline rich Gla (G-carboxyglutamic	PRRG3	0.968469	218
ENSGALT0000	proline rich Gla (G-carboxyglutamic	PRRG4	0.992083	33.5
ENSGALT0000	paired related homeobox 1	PRRX1	0.743378	714.962
ENSGALT0000	paired related homeobox 2	PRRX2	0.962688	161.5
ENSGALT0000	protease, serine, 12 (neurotrypsin,	PRSS12	0.862626	345
ENSGALT0000	protease, serine, 2 (trypsin 2)	PRSS2	0.464758	0
ENSGALT0000	protease, serine, 3	PRSS3	?	0
ENSGALT0000	phosphoribosyl transferase domain	PRTFDC1	0.954194	406
ENSGALT0000	protogenin	PRTG	0.826939	79
ENSGALT0000	prune homolog (Drosophila)	PRUNE	0.722469	808
ENSGALT0000	prune homolog 2 (Drosophila)	PRUNE2	0.966885	703.5
ENSGALT0000	prosaposin	PSAP	0.976656	17368.2

ENSGALT0000	phosphoserine aminotransferase 1	PSAT1	0.783837	246
ENSGALT0000	prostate stem cell antigen	PSCA	0.567585	6.5
ENSGALT0000	pleckstrin and Sec7 domain contair	PSD	0.867062	157.5
ENSGALT0000	pleckstrin and Sec7 domain contair	PSD2	0.717489	116
ENSGALT0000	pleckstrin and Sec7 domain contair	PSD3	0.946491	403.5
ENSGALT0000	presenilin 1	PSEN1	0.974034	1065.49
ENSGALT0000	presenilin 2 (Alzheimer disease 4)	PSEN2	0.975575	914.494
ENSGALT0000	PC4 and SFRS1 interacting protein	PSIP1	0.969239	1112
ENSGALT0000	protein serine kinase H1	PSKH1	0.985639	469.5
ENSGALT0000	proteasome (prosome, macropain)	PSMA1	0.697867	4544.49
ENSGALT0000	proteasome (prosome, macropain)	PSMA2	0.876035	2276.45
ENSGALT0000	proteasome (prosome, macropain)	PSMA3	0.516233	3758.5
ENSGALT0000	proteasome (prosome, macropain)	PSMA4	0.833142	2862
ENSGALT0000	proteasome alpha 5 subunit	PSMA5	0.749618	2807.05
ENSGALT0000	proteasome (prosome, macropain)	PSMA6	0.468415	2716.5
ENSGALT0000	proteasome (prosome, macropain)	PSMA7	0.574666	2722
ENSGALT0000	proteasome (prosome, macropain)	PSMB1	0.217846	4535
ENSGALT0000	proteasome (prosome, macropain)	PSMB2	0.514084	3644
ENSGALT0000	proteasome (prosome, macropain)	PSMB3	0.477335	3156
ENSGALT0000	proteasome (prosome, macropain)	PSMB4	0.269639	6595.5
ENSGALT0000	proteasome (prosome, macropain)	PSMB7	0.578919	5451.14
ENSGALT0000	proteasome (prosome, macropain)	PSMC1	0.797657	3100.44
ENSGALT0000	proteasome (prosome, macropain)	PSMC2	0.821617	4272.92
ENSGALT0000	proteasome (prosome, macropain)	PSMC3	0.856766	3782.91
ENSGALT0000	PSMC3 interacting protein	PSMC3IP	0.695965	494.5
ENSGALT0000	proteasome (prosome, macropain)	PSMC5	0.475363	5793.5
ENSGALT0000	proteasome (prosome, macropain)	PSMC6	0.836505	4599.09
ENSGALT0000	proteasome (prosome, macropain)	PSMD1	0.880956	5839.49
ENSGALT0000	proteasome (prosome, macropain)	PSMD10	0.408752	883
ENSGALT0000	proteasome (prosome, macropain)	PSMD11	0.598356	888.5
ENSGALT0000	proteasome (prosome, macropain)	PSMD12	0.762111	1869.5
ENSGALT0000	proteasome (prosome, macropain)	PSMD13	0.829449	4114.56
ENSGALT0000	proteasome (prosome, macropain)	PSMD14	0.817062	1477.5
ENSGALT0000	proteasome (prosome, macropain)	PSMD2	0.803262	7956.43
ENSGALT0000	proteasome (prosome, macropain)	PSMD3	0.708732	5486.77
ENSGALT0000	proteasome (prosome, macropain)	PSMD5	0.969881	1663
ENSGALT0000	proteasome (prosome, macropain)	PSMD6	0.568238	2139.5
ENSGALT0000	proteasome (prosome, macropain)	PSMD7	0.864836	2289.5
ENSGALT0000	proteasome (prosome, macropain)	PSMD9	0.681395	1771
ENSGALT0000	proteasome (prosome, macropain)	PSME3	0.902767	6533.13
ENSGALT0000	proteasome (prosome, macropain)	PSME4	0.969618	1497
ENSGALT0000	proteasome (prosome, macropain)	PSMF1	0.935329	4411.5
ENSGALT0000	proteasome (prosome, macropain)	PSMG1	0.94041	1370
ENSGALT0000	proteasome (prosome, macropain)	PSMG2	0.820742	728.5
ENSGALT0000	proteasome (prosome, macropain)	PSMG3	0.883405	2913.5
ENSGALT0000	proteasome (prosome, macropain)	PSMG4	0.217446	662
ENSGALT0000	paraspeckle component 1	PSPC1	0.856475	2919
ENSGALT0000	phosphoserine phosphatase	PSPH	0.556079	98.5
ENSGALT0000	phosphoseryl-tRNA kinase	PSTK	0.66641	304.5
ENSGALT0000	proline-serine-threonine phosphata	PSTPIP1	0.977537	14
ENSGALT0000	proline-serine-threonine phosphata	PSTPIP2	0.83346	3
ENSGALT0000	platelet-activating factor receptor	PTAFR	0.743749	5.5
ENSGALT0000	protein prenyltransferase alpha sut	PTAR1	0.993572	158
ENSGALT0000	polypyrimidine tract binding protein	PTBP1	0.988173	15367.7
ENSGALT0000	polypyrimidine tract binding protein	PTBP2	0.849215	529.5
ENSGALT0000	polypyrimidine tract binding protein	PTBP3	0.974518	190.5

ENSGALT0000	pentatricopeptide repeat domain 1	PTCD1	0.959983	571
ENSGALT0000	pentatricopeptide repeat domain 2	PTCD2	0.93884	210
ENSGALT0000	Pentatricopeptide repeat domain 3	PTCD3	0.94599	1087.5
ENSGALT0000	patched 1	PTCH1	0.941282	802
ENSGALT0000	patched domain containing 1	PTCHD1	0.991128	639.5
ENSGALT0000	patched domain containing 2	PTCHD2	0.956078	1702
ENSGALT0000	patched domain containing 4	PTCHD4	0.701609	4
ENSGALT0000	phosphatidylserine synthase 1	PTDSS1	0.941079	2742.5
ENSGALT0000	phosphatidylserine synthase 2	PTDSS2	0.958921	789
ENSGALT0000	phosphatase and tensin homolog	PTEN	0.973851	1642
ENSGALT0000	phosphotriesterase related	PTER	0.943455	326.5
ENSGALT0000	prostaglandin E receptor 3, subtype	PTGER3	0.743672	23.5
ENSGALT0000	prostaglandin E receptor 4 (subtype	PTGER4	0.974167	43
ENSGALT0000	prostaglandin E synthase	PTGES	0.683307	65
ENSGALT0000	prostaglandin E synthase 2	PTGES2	0.843131	1333
ENSGALT0000	prostaglandin F receptor (FP)	PTGFR	0.986166	108
ENSGALT0000	prostaglandin F2 receptor negative	PTGFRN	0.964253	1933.5
ENSGALT0000	prostaglandin reductase 1	PTGR1	0.862708	1110
ENSGALT0000	prostaglandin reductase 2	PTGR2	0.986794	756
ENSGALT0000	prostaglandin-endoperoxide syntha	PTGS1	0.997097	249
ENSGALT0000	prostaglandin-endoperoxide syntha	PTGS2	0.830606	30.5
ENSGALT0000	parathyroid hormone	PTH	0.943934	1
ENSGALT0000	parathyroid hormone 1 receptor	PTH1R	0.85294	11
ENSGALT0000	parathyroid hormone-like hormone	PTHLH	0.882548	108.5
ENSGALT0000	PTK2 protein tyrosine kinase 2	PTK2	0.983898	7515.18
ENSGALT0000	PTK2B protein tyrosine kinase 2 be	PTK2B	0.844806	159
ENSGALT0000	PTK7 protein tyrosine kinase 7	PTK7	0.883754	17519
ENSGALT0000	parathymosin	PTMS	0.339897	1374
ENSGALT0000	pleiotrophin	PTN	0.528158	1804.5
ENSGALT0000	protein tyrosine phosphatase type I	PTP4A1	0.946531	8799.5
ENSGALT0000	protein tyrosine phosphatase type I	PTP4A2	0.956563	2589.5
ENSGALT0000	protein tyrosine phosphatase type I	PTP4A3	0.939907	486.5
ENSGALT0000	protein tyrosine phosphatase doma	PTPDC1	0.997155	288
ENSGALT0000	protein tyrosine phosphatase-like (	PTPLA	0.925606	89.5
ENSGALT0000	protein tyrosine phosphatase-like A	PTPLAD1	0.971606	2411.05
ENSGALT0000	protein tyrosine phosphatase-like A	PTPLAD2	0.832149	19.5
ENSGALT0000	protein tyrosine phosphatase-like (	PTPLB	0.947136	2119.53
ENSGALT0000	protein tyrosine phosphatase, non-	PTPN1	0.933805	459.499
ENSGALT0000	protein tyrosine phosphatase, non-	PTPN11	0.968591	1023.82
ENSGALT0000	protein tyrosine phosphatase, non-	PTPN12	0.94907	929.5
ENSGALT0000	protein tyrosine phosphatase, non-	PTPN13	0.910577	2157
ENSGALT0000	protein tyrosine phosphatase, non-	PTPN14	0.964727	763.5
ENSGALT0000	protein tyrosine phosphatase, non-	PTPN2	0.916045	1110
ENSGALT0000	protein tyrosine phosphatase, non-	PTPN21	0.941993	342.002
ENSGALT0000	protein tyrosine phosphatase, non-	PTPN22	0.99859	43.5
ENSGALT0000	protein tyrosine phosphatase, non-	PTPN4	0.996274	1012
ENSGALT0000	protein tyrosine phosphatase, non-	PTPN5	0.779914	198
ENSGALT0000	protein tyrosine phosphatase, non-	PTPN6	0.920719	109.5
ENSGALT0000	protein tyrosine phosphatase, non-	PTPN7	0.944643	40.5
ENSGALT0000	protein tyrosine phosphatase, non-	PTPN9	0.718469	1962
ENSGALT0000	protein tyrosine phosphatase, rece	PTPRA	0.958294	4199.92
ENSGALT0000	protein tyrosine phosphatase, rece	PTPRB	0.985597	255
ENSGALT0000	protein tyrosine phosphatase, rece	PTPRC	0.914748	32
ENSGALT0000	pentain tyrosine phosphatase, rece	PTPRD	0.923087	562.5
ENSGALT0000	protein tyrosine phosphatase, rece	PTPRE	0.789156	168.5
ENSGALT0000	protein tyrosine phosphatase, rece	PTPRF	0.939878	28246.5

ENSGALT0000	protein tyrosine phosphatase, rece	PTPRG	0.895884	1284
ENSGALT0000	protein tyrosine phosphatase, rece	PTPRJ	0.994437	637.5
ENSGALT0000	protein tyrosine phosphatase, rece	PTPRK	0.980424	2834
ENSGALT0000	protein tyrosine phosphatase, rece	PTPRM	0.811487	368
ENSGALT0000	protein tyrosine phosphatase, rece	PTPRN2	0.784481	163
ENSGALT0000	protein tyrosine phosphatase, rece	PTPRO	0.778741	601.008
ENSGALT0000	protein tyrosine phosphatase, rece	PTPRQ	0.742489	122
ENSGALT0000	protein tyrosine phosphatase, rece	PTPRR	0.612272	492
ENSGALT0000	protein tyrosine phosphatase, rece	PTPRS	0.970334	13786.3
ENSGALT0000	protein tyrosine phosphatase, rece	PTPRT	0.897258	1545.97
ENSGALT0000	protein tyrosine phosphatase, rece	PTPRU	0.787854	1619.01
ENSGALT0000	protein tyrosine phosphatase, rece	PTPRZ1	0.821029	2731.43
ENSGALT0000	polymerase I and transcript release	PTRF	0.835593	286
ENSGALT0000	peptidyl-tRNA hydrolase 2	PTRH2	0.532735	1026.5
ENSGALT0000	peptidyl-tRNA hydrolase domain cc	PTRHD1	0.447134	544.5
ENSGALT0000	6-pyruvoyltetrahydropterin synthas	PTS	0.862985	940.002
ENSGALT0000	pituitary tumor-transforming 1	PTTG1	0.810282	717.5
ENSGALT0000	pituitary tumor-transforming 1 intera	PTTG1IP	0.966131	2627
ENSGALT0000	pentraxin 3, long	PTX3	0.824829	387.5
ENSGALT0000	poly-U binding splicing factor 60KD	PUF60	0.823089	4709.66
ENSGALT0000	pumilio homolog 1 (Drosophila)	PUM1	0.96994	6386.39
ENSGALT0000	pumilio homolog 2 (Drosophila)	PUM2	0.981313	4794.89
ENSGALT0000	purine-rich element binding protein	PURA	0.968588	141
ENSGALT0000	purine-rich element binding protein	PURB	0.894907	393.501
ENSGALT0000	purine-rich element binding protein	PURG	0.981126	20
ENSGALT0000	pseudouridylate synthase 1	PUS1	0.893826	1028.68
ENSGALT0000	pseudouridylate synthase 10	PUS10	0.952122	386.5
ENSGALT0000	pseudouridylate synthase 7 homolc	PUS7	0.969352	769
ENSGALT0000	pseudouridylate synthase 7 homolc	PUS7L	0.97197	282.5
ENSGALT0000	pseudouridylate synthase-like 1	PUSL1	0.98105	221
ENSGALT0000	parvalbumin	PVALB	0.667458	124
ENSGALT0000	poliovirus receptor-related 1 (herpe	PVRL1	0.873512	2720.5
ENSGALT0000	poliovirus receptor-related 3	PVRL3	0.926692	754
ENSGALT0000	PWP1 homolog (S. cerevisiae)	PWP1	0.935014	1635.02
ENSGALT0000	PWP2 periodic tryptophan protein F	PWP2	0.945578	529.124
ENSGALT0000	PWWP domain containing 2A	PWWP2A	0.933999	321
ENSGALT0000	PWWP domain containing 2B	PWWP2B	0.927918	543.5
ENSGALT0000	peroxidasin homolog (Drosophila)	PXDN	0.979679	2940.5
ENSGALT0000	peroxidasin homolog (Drosophila)-l	PXDNL	0.879368	66.5
ENSGALT0000	PX domain containing serine/threor	PXK	0.933352	223
ENSGALT0000	peroxisomal membrane protein 4, 2	PXMP4	0.767868	1092
ENSGALT0000	paxillin	PXN	0.90587	1859
ENSGALT0000	pyrroline-5-carboxylate reductase f	PYCR2	0.872284	727
ENSGALT0000	pyrroline-5-carboxylate reductase-l	PYCRL	0.464818	1240
ENSGALT0000	phosphorylase, glycogen; brain	PYGB	0.940013	2869.41
ENSGALT0000	phosphorylase, glycogen, liver	PYGL	0.94647	7125.5
ENSGALT0000	pygopus homolog 1 (Drosophila)	PYGO1	0.95793	697.5
ENSGALT0000	pyridine nucleotide-disulphide oxidc	PYROXD1	0.841035	156.5
ENSGALT0000	pyridine nucleotide-disulphide oxidc	PYROXD2	0.931775	87.5
ENSGALT0000	Uncharacterized protein	Q0ZM05_CHICK	0.678226	11
ENSGALT0000	Taste receptor type 2	Q2AB82_CHICK	0.697457	2.5
ENSGALT0000	Uncharacterized protein	Q5F3E9_CHICK	0.985045	9526.72
ENSGALT0000	Uncharacterized protein	Q5J1N8_CHICK	0.80844	206
ENSGALT0000	Uncharacterized protein	Q5MQR1_CHICK	0.586254	4
ENSGALT0000	CX3C chemokineUncharacterized	Q5UHA2_CHICK	0.918767	37.5
ENSGALT0000	Putative uncharacterized protein	Q5ZHS2_CHICK	0.341257	457

ENSGALT0000	T-cell leukemia virus enhancer fact	Q5ZHS5_CHICK	0.870116	417.001
ENSGALT0000	Uncharacterized protein	Q5ZHT9_CHICK	0.890858	1700.49
ENSGALT0000	Uncharacterized protein	Q5ZI15_CHICK	0.922994	812.5
ENSGALT0000	Uncharacterized protein	Q5ZI19_CHICK	0.964653	1620
ENSGALT0000	hypothetical protein LOC427551	Q5ZI21_CHICK	0.95251	2243.99
ENSGALT0000	Uncharacterized protein	Q5ZI68_CHICK	0.983479	1169.5
ENSGALT0000	Uncharacterized protein	Q5ZI75_CHICK	0.876565	63.5
ENSGALT0000	hypothetical protein LOC428168	Q5ZIS2_CHICK	0.955937	1086
ENSGALT0000	Uncharacterized protein	Q5ZIY1_CHICK	0.953677	1506
ENSGALT0000	Uncharacterized protein	Q5ZKW3_CHICK	0.993444	1337.49
ENSGALT0000	Uncharacterized protein	Q5ZKW6_CHICK	0.938458	1409
ENSGALT0000	Uncharacterized protein	Q5ZKZ3_CHICK	0.920911	21329.7
ENSGALT0000	microtubule-associated proteins 1A	Q5ZLF8_CHICK	0.935066	5311
ENSGALT0000	transmembrane 7 superfamily mem	Q5ZLT1_CHICK	0.692493	455.501
ENSGALT0000	Uncharacterized protein	Q5ZLW4_CHICK	0.999031	1156.5
ENSGALT0000	Putative uncharacterized protein	Q5ZM75_CHICK	0.564769	1742.5
ENSGALT0000	hypothetical protein LOC427256	Q5ZMK1_CHICK	0.983405	309.5
ENSGALT0000	Uncharacterized protein	Q5ZMN4_CHICK	0.954561	4250.5
ENSGALT0000	Rolly proteinUncharacterized prote	Q6BDI7_CHICK	0.550328	1302.5
ENSGALT0000	Ribosomal protein L17Uncharacter	Q6EE61_CHICK	0.89508	3541.39
ENSGALT0000	cytokeratin type II	Q6PVZ5_CHICK	0.744388	80.3322
ENSGALT0000	Protocadherin gammaC5-like	Q6V0P2_CHICK	0.9179	107.5
ENSGALT0000	hypothetical protein LOC407087	Q6VXX8_CHICK	0.485412	1
ENSGALT0000	Fructose-bisphosphate aldolase	Q7LZE8_CHICK	0.966408	280.5
ENSGALT0000	12K serum protein, beta-2-m cross	Q7LZS1_CHICK	?	0
ENSGALT0000	Uncharacterized protein	Q804C5_CHICK	0.651529	51
ENSGALT0000	Uncharacterized protein	Q8AV15_CHICK	0.905501	8.5
ENSGALT0000	Secreted chemorepellent semapho	Q8AXA8_CHICK	0.982216	4866.13
ENSGALT0000	Uncharacterized protein	Q8QGG9_CHICK	0.797159	2841.5
ENSGALT0000	CFUT9Uncharacterized protein	Q8UWC1_CHICK	0.78836	52
ENSGALT0000	TenascinUncharacterized protein	Q90996_CHICK	0.780395	77.5
ENSGALT0000	Gallus gallus	Q91954_CHICK	0.386988	3754.73
ENSGALT0000	Uncharacterized protein	Q98SE8_CHICK	0.967132	1319.5
ENSGALT0000	Uncharacterized protein	Q9DDF5_CHICK	0.80732	2355.02
ENSGALT0000	Uncharacterized protein	Q9DEH4_CHICK	0.919762	319
ENSGALT0000	Microtubule-associated protein	Q9PRV3_CHICK	0.594912	967
ENSGALT0000	Uncharacterized protein	Q9PRY6_CHICK	0.164317	0
ENSGALT0000	Uncharacterized protein	Q9PST8_CHICK	0.997372	648.5
ENSGALT0000	Uncharacterized protein	Q9YGR0_CHICK	0.978337	2242.51
ENSGALT0000	Insulin receptor related tyrosine kin	Q9YI41_CHICK	0.839573	19.5
ENSGALT0000	glutaminyl-tRNA synthetase	QARS	0.693271	2722
ENSGALT0000	quinoid dihydropteridine reductase	QDPR	0.522572	120
ENSGALT0000	quaking homolog, KH domain RNA	QKI	0.956223	1670.5
ENSGALT0000	glutaminyl-peptide cyclotransferase	QPCT	0.866638	1313.5
ENSGALT0000	glutaminyl-peptide cyclotransferase	QPCTL	0.75078	1507
ENSGALT0000	pyroglutamylated RFamide peptide	QRFPR	0.892141	12.5
ENSGALT0000	glutamine-rich 1	QRICH1	0.953995	3199.5
ENSGALT0000	glutamine rich 2	QRICH2	0.694388	18
ENSGALT0000	glutaminyl-tRNA synthase (glutamir	QRSL1	0.927401	451.5
ENSGALT0000	glutamine and serine rich 1	QSER1	0.9774	2140
ENSGALT0000	quiescin Q6 sulfhydryl oxidase 1	QSOX1	0.977223	2063.5
ENSGALT0000	quiescin Q6 sulfhydryl oxidase 2	QSOX2	0.947234	874
ENSGALT0000	queuine tRNA-ribosyltransferase dr	QTRTD1	0.886615	1800.5
ENSGALT0000	R3H domain and coiled-coil contair	R3HCC1	0.964178	3198.45
ENSGALT0000	R3H domain containing 1	R3HDM1	0.889747	1748
ENSGALT0000	R3H domain containing 2	R3HDM2	0.751379	1384

ENSGALT0000	R3H domain containing 4	R3HDM4	0.915746	1214
ENSGALT0000	R3H domain containing-like	R3HDML	0.335101	14.5
ENSGALT0000	RAB10, member RAS oncogene fa	RAB10	0.846425	2070.5
ENSGALT0000	RAB11A, member RAS oncogene f	RAB11A	0.858206	3382
ENSGALT0000	RAB11B, member RAS oncogene f	RAB11B	0.875433	8572
ENSGALT0000	RAB11 family interacting protein 1	RAB11FIP1	0.998213	673
ENSGALT0000	RAB11 family interacting protein 2	RAB11FIP2	0.997537	1195
ENSGALT0000	RAB11 family interacting protein 3	RAB11FIP3	0.947162	599.5
ENSGALT0000	RAB11 family interacting protein 4	RAB11FIP4	0.99403	1034.5
ENSGALT0000	RAB11 family interacting protein 5	RAB11FIP5	0.972989	305
ENSGALT0000	RAB14, member RAS oncogene fa	RAB14	0.929914	4332.5
ENSGALT0000	RAB17, member RAS oncogene fa	RAB17	0.293254	2.5
ENSGALT0000	RAB18, member RAS oncogene fa	RAB18	0.873181	2358.5
ENSGALT0000	RAB19, member RAS oncogene fa	RAB19	0.963013	238
ENSGALT0000	RAB1A, member RAS oncogene fa	RAB1A	0.878151	4929
ENSGALT0000	RAB20, member RAS oncogene fa	RAB20	0.892601	258.5
ENSGALT0000	RAB21, member RAS oncogene fa	RAB21	0.869445	834
ENSGALT0000	RAB22A, member RAS oncogene f	RAB22A	0.940886	718
ENSGALT0000	RAB23, member RAS oncogene fa	RAB23	0.925841	313.5
ENSGALT0000	RAB24, member RAS oncogene fa	RAB24	0.446495	753.5
ENSGALT0000	RAB26, member RAS oncogene fa	RAB26	0.525783	156.5
ENSGALT0000	RAB27A, member RAS oncogene f	RAB27A	0.980445	415.5
ENSGALT0000	RAB28, member RAS oncogene fa	RAB28	0.936701	284.5
ENSGALT0000	RAB2A, member RAS oncogene fa	RAB2A	0.932117	2767.99
ENSGALT0000	RAB30, member RAS oncogene fa	RAB30	0.868655	631.5
ENSGALT0000	RAB31, member RAS oncogene fa	RAB31	0.983764	143.5
ENSGALT0000	RAB32, member RAS oncogene fa	RAB32	0.953447	202
ENSGALT0000	RAB33B, member RAS oncogene f	RAB33B	0.892807	1218.5
ENSGALT0000	RAB35, member RAS oncogene fa	RAB35	0.941337	1348.84
ENSGALT0000	RAB36, member RAS oncogene fa	RAB36	0.717286	96.5
ENSGALT0000	RAB38, member RAS oncogene fa	RAB38	0.888069	5
ENSGALT0000	RAB39A, member RAS oncogene f	RAB39A	0.92051	52
ENSGALT0000	RAB39B, member RAS oncogene f	RAB39B	0.902795	591.5
ENSGALT0000	RAB3B, member RAS oncogene fa	RAB3B	0.928696	98
ENSGALT0000	RAB3 GTPase activating protein su	RAB3GAP1	0.966773	2183
ENSGALT0000	RAB3 GTPase activating protein su	RAB3GAP2	0.969527	1555.5
ENSGALT0000	RAB3A interacting protein (rabin3)-	RAB3IL1	0.89496	1153
ENSGALT0000	RAB3A interacting protein (rabin3)	RAB3IP	0.973765	2845.5
ENSGALT0000	RAB40B, member RAS oncogene f	RAB40B	0.924504	36.5
ENSGALT0000	RAB40C, member RAS oncogene	RAB40C	0.959015	515
ENSGALT0000	RAB43, member RAS oncogene fa	RAB43	0.981785	412
ENSGALT0000	RAB4A, member RAS oncogene fa	RAB4A	0.968893	830
ENSGALT0000	RAB5A, member RAS oncogene fa	RAB5A	0.921868	1494
ENSGALT0000	RAB5C, member RAS oncogene fa	RAB5C	0.678738	3231.01
ENSGALT0000	RAB6A, member RAS oncogene fa	RAB6A	0.793622	1899.01
ENSGALT0000	RAB7A, member RAS oncogene fa	RAB7A	0.832035	3179.5
ENSGALT0000	RAB7, member RAS oncogene fan	RAB7L1	0.950839	190
ENSGALT0000	RAB8A, member RAS oncogene fa	RAB8A	0.83044	4800.5
ENSGALT0000	RAB8B, member RAS oncogene fa	RAB8B	0.851824	531.5
ENSGALT0000	RAB9A, member RAS oncogene fa	RAB9A	0.9467	682
ENSGALT0000	rabaptin, RAB GTPase binding effe	RABEP1	0.933259	1612.01
ENSGALT0000	Rab9 effector protein with kelch mc	RABEPK	0.785124	1080.5
ENSGALT0000	RAB GTPase activating protein 1	RABGAP1	0.931401	1918.5
ENSGALT0000	RAB GTPase activating protein 1-li	RABGAP1L	0.987273	1129.99
ENSGALT0000	RAB guanine nucleotide exchange	RABGEF1	0.913213	601
ENSGALT0000	Rab geranylgeranyltransferase, bet	RABGGTB	0.880892	744

ENSGALT0000	RAB interacting factor	RABIF	0.328299	521.5
ENSGALT0000	RAB, member of RAS oncogene fa	RABL2B	0.803458	366.5
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ENSGALT0000	ras-related C3 botulinum toxin subs	RAC1	0.9021	3397.98
ENSGALT0000	ras-related C3 botulinum toxin subs	RAC2	0.138282	17
ENSGALT0000	ras-related C3 botulinum toxin subs	RAC3	0.859603	2266.02
ENSGALT0000	Rac GTPase activating protein 1	RACGAP1	0.823488	1186.5
ENSGALT0000	RAD1 homolog (S. pombe)	RAD1	0.923192	260
ENSGALT0000	RAD17 homolog (S. pombe)	RAD17	0.945096	356
ENSGALT0000	RAD18 homolog (S. cerevisiae)	RAD18	0.883675	706
ENSGALT0000	RAD21 homolog (S. pombe)	RAD21	0.94231	4739
ENSGALT0000	RAD21-like 1 (S. pombe)	RAD21L1	0.863143	69.5
ENSGALT0000	RAD23 homolog B (S. cerevisiae)	RAD23B	0.91627	1711
ENSGALT0000	RAD50 homolog (S. cerevisiae)	RAD50	0.975502	1045.99
ENSGALT0000	RAD51 homolog (S. cerevisiae)	RAD51	0.809915	1104.94
ENSGALT0000	RAD51 associated protein 1	RAD51AP1	0.979851	245.5
ENSGALT0000	RAD51 homolog B (S. cerevisiae)	RAD51B	0.914031	70.5
ENSGALT0000	RAD51 homolog C (S. cerevisiae)	RAD51C	0.880452	408.001
ENSGALT0000	RAD51 homolog D (S. cerevisiae)	RAD51D	0.872774	586
ENSGALT0000	RAD52 homolog (S. cerevisiae)	RAD52	0.903358	400.5
ENSGALT0000	RAD54 homolog B (S. cerevisiae)	RAD54B	0.935534	454.5
ENSGALT0000	RAD54-like (S. cerevisiae)	RAD54L	0.917139	602.006
ENSGALT0000	RAD54-like 2 (S. cerevisiae)	RAD54L2	0.930345	2635
ENSGALT0000	RAD9 homolog A	RAD9A	0.955427	325.5
ENSGALT0000	RAD9 homolog B (S. pombe)	RAD9B	0.926975	5
ENSGALT0000	Ras association and DIL domains	RADIL	0.780684	96.5
ENSGALT0000	RAE1 RNA export 1 homolog (S. p	RAE1	0.967919	824.994
ENSGALT0000	v-raf-1 murine leukemia viral oncog	RAF1	0.993277	1740
ENSGALT0000	recombination activating gene 1	RAG1	0.150565	0
ENSGALT0000	V(D)J recombination-activating pro	RAG2	0.834394	7.5
ENSGALT0000	renal tumor antigen	RAGE	0.956857	108.5
ENSGALT0000	retinoic acid induced 1	RAI1	0.86226	2117
ENSGALT0000	retinoic acid induced 14	RAI14	0.984463	1375
ENSGALT0000	retinoic acid induced 2	RAI2	0.849207	514
ENSGALT0000	v-ral simian leukemia viral oncogen	RALA	0.988221	2558.5
ENSGALT0000	v-ral simian leukemia viral oncogen	RALB	0.919352	1337.5
ENSGALT0000	ralA binding protein 1	RALBP1	0.940765	2497.98
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ENSGALT0000	Ral GTPase activating protein, alph	RALGAPA2	0.996625	1311
ENSGALT0000	Ral GTPase activating protein, beta	RALGAPB	0.982717	2533.5
ENSGALT0000	ral guanine nucleotide dissociation	RALGDS	0.849312	2472
ENSGALT0000	Ral GEF with PH domain and SH3	RALGPS1	0.981002	816
ENSGALT0000	Ral GEF with PH domain and SH3	RALGPS2	0.95859	2684.5
ENSGALT0000	RNA binding protein, autoantigenic	RALY	0.687296	365.999
ENSGALT0000	RALY RNA binding protein-like	RALYL	0.858929	84.5001
ENSGALT0000	receptor (G protein-coupled) activit	RAMP1	0.390687	157.5
ENSGALT0000	RAN, member RAS oncogene fami	RAN	0.89278	9556.45
ENSGALT0000	RAN binding protein 1	RANBP1	0.946465	2113.99
ENSGALT0000	RAN binding protein 10	RANBP10	0.896807	809.5
ENSGALT0000	RAN binding protein 17	RANBP17	0.981792	219
ENSGALT0000	RAN binding protein 3	RANBP3	0.944218	2097
ENSGALT0000	RAN binding protein 3-like	RANBP3L	0.715235	88
ENSGALT0000	RAN binding protein 9	RANBP9	0.967756	1511
ENSGALT0000	Ran GTPase activating protein 1	RANGAP1	0.940578	2915
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ENSGALT0000	RAP1B, member of RAS oncogene	RAP1B	0.994164	4075.5
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ENSGALT0000	RAP1, GTP-GDP dissociation stim	RAP1GDS1	0.655254	1978
ENSGALT0000	RAP2A, member of RAS oncogene	RAP2A	0.914211	607.793
ENSGALT0000	RAP2B, member of RAS oncogene	RAP2B	0.136995	0.5
ENSGALT0000	RAP2C, member of RAS oncogene	RAP2C	0.810561	1422.71
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ENSGALT0000	Rap guanine nucleotide exchange	RAPGEF5	0.667501	223
ENSGALT0000	Rap guanine nucleotide exchange	RAPGEF6	0.910993	1903.49
ENSGALT0000	Ras association (RalGDS/AF-6) an	RAPH1	0.965565	533
ENSGALT0000	receptor-associated protein of the s	RAPSN	0.254786	14.5
ENSGALT0000	retinoic acid receptor, beta	RARB	0.764205	670
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ENSGALT0000	arginyl-tRNA synthetase	RARS	0.918535	2976
ENSGALT0000	arginyl-tRNA synthetase 2, mitochc	RARS2	0.968352	608
ENSGALT0000	RAS p21 protein activator 2	RASA2	0.993226	719.5
ENSGALT0000	RAS p21 protein activator 3	RASA3	0.925014	739.5
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ENSGALT0000	RAS protein activator like 1 (GAP1	RASAL1	0.689337	2
ENSGALT0000	RAS protein activator like 2	RASAL2	0.945648	1250
ENSGALT0000	RAS, dexamethasone-induced 1	RASD1	0.615745	82.5
ENSGALT0000	RASD family, member 2	RASD2	0.683246	1
ENSGALT0000	RasGEF domain family, member 1/	RASGEF1A	0.772695	263
ENSGALT0000	RasGEF domain family, member 1l	RASGEF1B	0.979384	299.5
ENSGALT0000	RasGEF domain family, member 1(	RASGEF1C	0.881935	189.5
ENSGALT0000	Ras protein-specific guanine nucle	RASGRF2	0.7623	8.5
ENSGALT0000	RAS guanyl releasing protein 1 (ca	RASGRP1	0.897214	63.9999
ENSGALT0000	RAS guanyl releasing protein 3 (ca	RASGRP3	0.68959	70
ENSGALT0000	RAS-like, family 10, member B	RASL10B	0.556687	24
ENSGALT0000	RAS-like, family 11, member A	RASL11A	0.0150427	6.5
ENSGALT0000	RAS-like, family 11, member B	RASL11B	0.631916	2994
ENSGALT0000	RAS-like, family 12	RASL12	0.496385	42.5
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ENSGALT0000	Ras association (RalGDS/AF-6) do	RASSF5	0.818086	16
ENSGALT0000	Ras association (RalGDS/AF-6) do	RASSF6	0.950213	27
ENSGALT0000	Ras association (RalGDS/AF-6) do	RASSF7	0.943406	429
ENSGALT0000	Ras association (RalGDS/AF-6) do	RASSF8	0.860069	1003
ENSGALT0000	Ras association (RalGDS/AF-6) do	RASSF9	0.827887	418
ENSGALT0000	ribonucleoprotein, PTB-binding 2	RAVER2	0.968506	2516.5
ENSGALT0000	Retinal homeobox protein Rx1	RAX	0.482529	101
ENSGALT0000	retinoblastoma 1	RB1	0.923282	1602.53
ENSGALT0000	RB1-inducible coiled-coil 1	RB1CC1	0.988934	1220.5
ENSGALT0000	retinoblastoma binding protein 4	RBBP4	0.908732	11805
ENSGALT0000	retinoblastoma binding protein 5	RBBP5	0.947395	2777
ENSGALT0000	retinoblastoma binding protein 6	RBBP6	0.938114	716
ENSGALT0000	retinoblastoma binding protein 7	RBBP7	0.880971	604.5
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ENSGALT0000	ribosome binding factor A (putative	RBFA	0.975805	391.001
ENSGALT0000	RNA binding protein, fox-1 homolo(	RBFOX1	0.542337	93.1348
ENSGALT0000	RNA binding protein, fox-1 homolo(	RBFOX2	0.90491	2574.36

ENSGALT0000	ribokinase	RBKS	0.987593	555
ENSGALT0000	retinoblastoma-like 1 (p107)	RBL1	0.956905	985.5
ENSGALT0000	RNA binding motif protein 12	RBM12	0.971904	2645
ENSGALT0000	RNA binding motif protein 12B	RBM12B	0.980883	725.5
ENSGALT0000	RNA binding motif protein 14	RBM14	0.749392	844.5
ENSGALT0000	RNA binding motif protein 15	RBM15	0.911185	666.5
ENSGALT0000	RNA binding motif protein 15B	RBM15B	0.932052	1760.5
ENSGALT0000	RNA binding motif protein 17	RBM17	0.93872	1460
ENSGALT0000	RNA binding motif protein 18	RBM18	0.875748	1160.5
ENSGALT0000	RNA binding motif protein 19	RBM19	0.900308	1190.99
ENSGALT0000	RNA binding motif protein 22	RBM22	0.906919	4097
ENSGALT0000	RNA binding motif protein 24	RBM24	0.531566	576.5
ENSGALT0000	RNA binding motif protein 25	RBM25	0.954901	1329
ENSGALT0000	RNA binding motif protein 26	RBM26	0.967466	3623.95
ENSGALT0000	RNA binding motif protein 27	RBM27	0.970735	1108
ENSGALT0000	RNA binding motif protein 34	RBM34	0.749081	871
ENSGALT0000	RNA binding motif protein 38	RBM38	0.708693	260.5
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ENSGALT0000	RNA binding motif protein 41	RBM41	0.802216	354
ENSGALT0000	RNA binding motif protein 43	RBM43	0.965519	154
ENSGALT0000	RNA binding motif protein 44	RBM44	0.712777	2.5
ENSGALT0000	RNA binding motif protein 45	RBM45	0.941752	1381.5
ENSGALT0000	RNA binding motif protein 46	RBM46	0.856255	42
ENSGALT0000	RNA binding motif protein 47	RBM47	0.999966	1023.5
ENSGALT0000	RNA binding motif protein 48	RBM48	0.980443	264.014
ENSGALT0000	RNA binding motif protein 5	RBM5	0.987167	15547.5
ENSGALT0000	RNA binding motif protein 6	RBM6	0.966303	1752.53
ENSGALT0000	RNA binding motif protein 7	RBM7	0.607134	1154.5
ENSGALT0000	RNA binding motif, single stranded	RBMS1	0.949847	1091.99
ENSGALT0000	RNA binding motif, single stranded	RBMS3	0.942834	507.5
ENSGALT0000	RNA binding motif protein, X-linked	RBMX	0.853042	6334
ENSGALT0000	RNA binding motif protein, X-linked	RBMX2	0.896979	712
ENSGALT0000	retinol binding protein 1, cellular	RBP1	0.939579	4
ENSGALT0000	retinol binding protein 2, cellular	RBP2	0.464758	0
ENSGALT0000	retinol binding protein 3, interstitial	RBP3	0.916851	11.5
ENSGALT0000	retinol binding protein 4, plasma	RBP4	0.994033	10.5
ENSGALT0000	retinol binding protein 5, cellular	RBP5	0.556241	1634
ENSGALT0000	recombination signal binding protei	RBPJ	0.948755	708.5
ENSGALT0000	recombination signal binding protei	RBPJL	0.95881	636.5
ENSGALT0000	RNA binding protein with multiple s	RBPMS	0.917059	542
ENSGALT0000	RNA binding protein with multiple s	RBPMS2	0.827687	60.5
ENSGALT0000	ring-box 1, E3 ubiquitin protein liga	RBX1	0.72606	2207
ENSGALT0000	ring finger and CCCH-type domain:	RC3H1	0.98477	2585
ENSGALT0000	ring finger and CCCH-type domain:	RC3H2	0.963587	1239
ENSGALT0000	regulator of calcineurin 1	RCAN1	0.982451	213.5
ENSGALT0000	regulator of calcineurin 2	RCAN2	0.871477	309
ENSGALT0000	RCAN family member 3	RCAN3	0.998437	2352.5
ENSGALT0000	regulator of chromosome condensa	RCBTB1	0.996914	3125.94
ENSGALT0000	regulator of chromosome condensa	RCBTB2	0.937218	467.059
ENSGALT0000	regulator of chromosome condensa	RCC2	0.946456	8978.22
ENSGALT0000	RCC1 domain containing 1	RCCD1	0.863372	264
ENSGALT0000	ring finger and CHY zinc finger don	RCHY1	0.86299	2778.58
ENSGALT0000	RNA terminal phosphate cyclase-lil	RCL1	0.866605	406.5
ENSGALT0000	reticulocalbin 1, EF-hand calcium b	RCN1	0.993062	1099
ENSGALT0000	reticulocalbin 2, EF-hand calcium b	RCN2	0.944853	7462
ENSGALT0000	REST corepressor 1	RCOR1	0.980726	1083.5

ENSGALT0000	REST corepressor 3	RCOR3	0.955553	2364.02
ENSGALT0000	RCSD domain containing 1	RCSD1	0.829901	62
ENSGALT0000	retinal degeneration 3	RD3	0.863124	58
ENSGALT0000	retinol dehydrogenase 10 (all-trans	RDH10	0.928617	1457
ENSGALT0000	retinol dehydrogenase 12 (all-trans	RDH12	0.96356	2408.5
ENSGALT0000	retinol dehydrogenase 5 (11-cis/9-c	RDH5	0.932742	15.5
ENSGALT0000	retinol dehydrogenase 8 (all-trans)	RDH8	0.970827	16
ENSGALT0000	RAD52 motif 1	RDM1	0.889822	945
ENSGALT0000	radixin	RDX	0.888281	3468.98
ENSGALT0000	reversion-inducing-cysteine-rich pr	RECK	0.945389	484
ENSGALT0000	RecQ protein-like (DNA helicase Q	RECQL	0.911659	466
ENSGALT0000	RecQ protein-like 5	RECQL5	0.950556	481.502
ENSGALT0000	receptor accessory protein 1	REEP1	0.688961	378
ENSGALT0000	receptor accessory protein 2	REEP2	0.948318	267.5
ENSGALT0000	receptor accessory protein 3	REEP3	0.986946	416.5
ENSGALT0000	receptor accessory protein 5	REEP5	0.51237	1337
ENSGALT0000	receptor accessory protein 6	REEP6	0.755155	134.5
ENSGALT0000	regenerating islet-derived family, m	REG4	0.371997	2
ENSGALT0000	v-rel reticuloendotheliosis viral onc	REL	0.90683	333.5
ENSGALT0000	RELT-like 1	RELL1	0.949968	405.5
ENSGALT0000	reelin	RELN	0.848419	2519.5
ENSGALT0000	RAS (RAD and GEM)-like GTP-bin	REM1	0.903502	55.5
ENSGALT0000	RALBP1 associated Eps domain cc	REPS1	0.94177	930
ENSGALT0000	RALBP1 associated Eps domain cc	REPS2	0.996256	1140.5
ENSGALT0000	RER1 retention in endoplasmic reti	RER1	0.960211	1657.52
ENSGALT0000	arginine-glutamic acid dipeptide (R	RERE	0.983189	4283.5
ENSGALT0000	RAS-like, estrogen-regulated, grow	RERG	0.916155	61.5
ENSGALT0000	RERG/RAS-like	RERGL	0.896307	144
ENSGALT0000	RE1-silencing transcription factor	REST	0.996176	2040.5
ENSGALT0000	ret proto-oncogene	RET	0.947466	425.501
ENSGALT0000	retinol saturase (all-trans-retinol 13	RETSAT	0.918573	802
ENSGALT0000	REV1 homolog (S. cerevisiae)	REV1	0.997458	726
ENSGALT0000	REV3-like, catalytic subunit of DNA	REV3L	0.987385	1814
ENSGALT0000	REX1, RNA exonuclease 1 homolo	REXO1	0.981836	2123
ENSGALT0000	REX2, RNA exonuclease 2 homolo	REXO2	0.684696	1138.53
ENSGALT0000	REX4, RNA exonuclease 4 homolo	REXO4	0.866289	225.769
ENSGALT0000	replication factor C (activator 1) 1,	RFC1	0.953406	911.748
ENSGALT0000	replication factor C (activator 1) 2,	RFC2	0.839102	1213.5
ENSGALT0000	replication factor C (activator 1) 3,	RFC3	0.905412	527.5
ENSGALT0000	replication factor C (activator 1) 4,	RFC4	0.805479	1192.01
ENSGALT0000	Rieske (Fe-S) domain containing	RFESD	0.853815	3
ENSGALT0000	ring finger and FYVE-like domain c	RFFL	0.994254	1056.5
ENSGALT0000	riboflavin kinase	RFK	0.953848	352
ENSGALT0000	RFNG O-fucosylpeptide 3-beta-N-a	RFNG	0.999904	1846
ENSGALT0000	RFT1 homolog (S. cerevisiae)	RFT1	0.972044	830
ENSGALT0000	raftlin, lipid raft linker 1	RFTN1	0.947016	498.5
ENSGALT0000	raftlin family member 2	RFTN2	0.842848	347.998
ENSGALT0000	ring finger and WD repeat domain :	RFWD2	0.942639	836
ENSGALT0000	ring finger and WD repeat domain :	RFWD3	0.92817	666
ENSGALT0000	regulatory factor X, 2 (influences H	RFX2	0.982164	403.002
ENSGALT0000	regulatory factor X, 3 (influences H	RFX3	0.998456	576.5
ENSGALT0000	regulatory factor X, 4 (influences H	RFX4	0.611562	1
ENSGALT0000	regulatory factor X, 5 (influences H	RFX5	0.897206	568
ENSGALT0000	regulatory factor X, 6	RFX6	0.35572	3
ENSGALT0000	regulatory factor X-associated anky	RFXANK	0.841294	324.5
ENSGALT0000	regulatory factor X-associated prot	RFXAP	0.648868	410.5

ENSGALT0000	RNA (guanine-9-) methyltransferas	RG9MTD1	0.939028	448
ENSGALT0000	RNA (guanine-9-) methyltransferas	RG9MTD2	0.92961	279
ENSGALT0000	ral guanine nucleotide dissociation	RGL1	0.810508	2514.94
ENSGALT0000	RGM domain family, member A	RGMA	0.817126	970.5
ENSGALT0000	RGM domain family, member B	RGMB	0.818639	481
ENSGALT0000	regucalcin	RGN	0.83746	521.001
ENSGALT0000	RGP1 retrograde golgi transport hc	RGP1	0.944837	979.5
ENSGALT0000	retinal G protein coupled receptor	RGR	0.156867	619
ENSGALT0000	regulator of G-protein signaling 1	RGS1	0.464758	0
ENSGALT0000	regulator of G-protein signaling 10	RGS10	0.87318	26
ENSGALT0000	regulator of G-protein signaling 11	RGS11	0.636342	44.5
ENSGALT0000	regulator of G-protein signaling 12	RGS12	0.939982	614.5
ENSGALT0000	regulator of G-protein signaling 14	RGS14	0.811242	597.342
ENSGALT0000	regulator of G-protein signaling 16	RGS16	0.927729	1
ENSGALT0000	regulator of G-protein signaling 17	RGS17	0.73805	63
ENSGALT0000	regulator of G-protein signaling 18	RGS18	0.549327	11.5
ENSGALT0000	regulator of G-protein signaling 19	RGS19	0.622414	72
ENSGALT0000	regulator of G-protein signaling 2, 2	RGS2	0.500935	183
ENSGALT0000	regulator of G-protein signaling 20	RGS20	0.762467	19
ENSGALT0000	regulator of G-protein signaling 21	RGS21	?	0
ENSGALT0000	regulator of G-protein signaling 22	RGS22	0.783262	1
ENSGALT0000	regulator of G-protein signaling 3	RGS3	0.616895	539.5
ENSGALT0000	regulator of G-protein signaling 4	RGS4	0.432553	21
ENSGALT0000	regulator of G-protein signaling 5	RGS5	0.561646	10.5
ENSGALT0000	regulator of G-protein signaling 6	RGS6	0.68751	28.5
ENSGALT0000	regulator of G-protein signaling 7	RGS7	0.741965	28.5
ENSGALT0000	regulator of G-protein signaling 7 b	RGS7BP	0.78375	151
ENSGALT0000	regulator of G-protein signaling 8	RGS8	0.739991	24.5
ENSGALT0000	regulator of G-protein signaling 9	RGS9	0.940809	411.5
ENSGALT0000	regulator of G protein signaling 9 b	RGS9BP	0.831264	232.5
ENSGALT0000	Rh-associated glycoprotein	RHAG	0.62812	2.5
ENSGALT0000	rhomboid domain containing 1	RHBDD1	0.987351	121.5
ENSGALT0000	rhomboid domain containing 2	RHBDD2	0.938731	291.5
ENSGALT0000	rhomboid 5 homolog 1 (Drosophila	RHBDF1	0.999243	1065.5
ENSGALT0000	rhomboid 5 homolog 2 (Drosophila	RHBDF2	0.928941	740.5
ENSGALT0000	rhomboid, veinlet-like 3 (Drosophila	RHBDL3	0.940331	9.5
ENSGALT0000	Rh family, B glycoprotein	RHBG	0.948185	258.5
ENSGALT0000	Rh blood group, CcEe antigens	RHCE	0.993871	259.156
ENSGALT0000	Rh family, C glycoprotein	RHCG	0.348765	0.5
ENSGALT0000	Rh blood group, D antigen	RHD	0.973287	162.845
ENSGALT0000	Ras homolog enriched in brain	RHEB	0.902805	874
ENSGALT0000	rhodopsin	RHO	0.864672	43
ENSGALT0000	ras homolog gene family, member /	RHOA	0.907177	15011
ENSGALT0000	ras homolog gene family, member I	RHOB	0.790842	3062
ENSGALT0000	Rho-related BTB domain containing	RHOBTB1	0.934834	837
ENSGALT0000	Rho-related BTB domain containing	RHOBTB2	0.959449	3586
ENSGALT0000	Rho-related BTB domain containing	RHOBTB3	0.775008	29.5
ENSGALT0000	ras homolog gene family, member (	RHOC	0.963997	263
ENSGALT0000	ras homolog gene family, member I	RHOF	0.947211	162.5
ENSGALT0000	ras homolog gene family, member (	RHOG	0.965687	874
ENSGALT0000	ras homolog gene family, member I	RHOH	0.462785	10.5
ENSGALT0000	ras homolog gene family, member .	RHOJ	0.860016	315.5
ENSGALT0000	ras homolog gene family, member (	RHOQ	0.981178	366.5
ENSGALT0000	ras homolog gene family, member	RHOT1	0.974343	1114
ENSGALT0000	ras homolog gene family, member	RHOT2	0.89516	1022.99
ENSGALT0000	ras homolog gene family, member	RHOV	0.84918	142

ENSGALT0000	rhophilin, Rho GTPase binding pro	RHPN1	0.965171	977.5
ENSGALT0000	rhophilin, Rho GTPase binding pro	RHPN2	0.913457	841
ENSGALT0000	RIB43A domain with coiled-coils 2	RIBC2	0.788762	44.5
ENSGALT0000	resistance to inhibitors of cholinest	RIC3	0.771826	217
ENSGALT0000	resistance to inhibitors of cholinest	RIC8A	0.958007	2913.5
ENSGALT0000	resistance to inhibitors of cholinest	RIC8B	0.887519	809.5
ENSGALT0000	RPTOR independent companion of	RICTOR	0.99185	1151
ENSGALT0000	RAP1 interacting factor homolog (y	RIF1	0.9702	3253.12
ENSGALT0000	Rab interacting lysosomal protein	RILP	0.514491	125.5
ENSGALT0000	Rab interacting lysosomal protein-li	RILPL1	0.913936	1080
ENSGALT0000	Rab interacting lysosomal protein-li	RILPL2	0.734424	1451.5
ENSGALT0000	RIMS binding protein 2	RIMBP2	0.982775	358.001
ENSGALT0000	ribosomal modification protein rimK	RIMKLB	0.886134	630.5
ENSGALT0000	regulating synaptic membrane exo	RIMS1	0.985775	1045.5
ENSGALT0000	regulating synaptic membrane exo	RIMS2	0.784871	226.5
ENSGALT0000	regulating synaptic membrane exo	RIMS3	0.785111	82
ENSGALT0000	regulating synaptic membrane exo	RIMS4	0.999278	422.5
ENSGALT0000	Ras and Rab interactor 2	RIN2	0.962926	918.5
ENSGALT0000	Ras and Rab interactor 3	RIN3	0.820012	78.5
ENSGALT0000	RAD50 interactor 1	RINT1	0.891544	630
ENSGALT0000	RIO kinase 1 (yeast)	RIOK1	0.913243	726.612
ENSGALT0000	RIO kinase 2 (yeast)	RIOK2	0.937179	785
ENSGALT0000	RIO kinase 3 (yeast)	RIOK3	0.991401	778
ENSGALT0000	receptor (TNFRSF)-interacting seri	RIPK1	0.984652	600
ENSGALT0000	receptor-interacting serine-threonin	RIPK2	0.952242	206.5
ENSGALT0000	receptor-interacting serine-threonin	RIPK4	0.998556	454.5
ENSGALT0000	ripply2 homolog (zebrafish)	RIPPLY2	0.338137	45.5
ENSGALT0000	Ras-like without CAAX 1	RIT1	0.948289	3124
ENSGALT0000	Ras-like without CAAX 2	RIT2	0.92736	27.5
ENSGALT0000	retinaldehyde binding protein 1	RLBP1	0.670063	1261
ENSGALT0000	rearranged L-myc fusion	RLF	0.999589	1500.5
ENSGALT0000	ring finger protein, LIM domain inte	RLIM	0.954254	1834
ENSGALT0000	relaxin 3	RLN3	0.923467	12.5
ENSGALT0000	RGD motif, leucine rich repeats, tr	RLTPR	0.82004	2
ENSGALT0000	RMI1, RecQ mediated genome inst	RMI1	0.960607	333
ENSGALT0000	RMI2, RecQ mediated genome inst	RMI2	0.425526	469.5
ENSGALT0000	required for meiotic nuclear division	RMND1	0.982452	658
ENSGALT0000	required for meiotic nuclear division	RMND5A	0.949158	1175.49
ENSGALT0000	RNase MRP	RNase_MRP	0.565879	8
ENSGALT0000	ribonuclease H1	RNASEH1	0.845033	763
ENSGALT0000	ribonuclease H2, subunit B	RNASEH2B	0.544846	1000.71
ENSGALT0000	ribonuclease L	RNASEL	0.976803	313.501
ENSGALT0000	Nuclear RNase P	RNaseP_nuc	0.614524	44.5
ENSGALT0000	ribonuclease T2	RNASET2	0.987353	816.503
ENSGALT0000	Rho family GTPase 2	RND2	0.780809	82.5984
ENSGALT0000	Rho family GTPase 3	RND3	0.646959	351.402
ENSGALT0000	ring finger protein 10	RNF10	0.944476	4740.5
ENSGALT0000	ring finger protein 103	RNF103	0.894911	850.5
ENSGALT0000	ring finger protein 11	RNF11	0.925691	2079.5
ENSGALT0000	ring finger protein 111	RNF111	0.986208	1679.53
ENSGALT0000	ring finger protein 113A	RNF113A	0.746866	605
ENSGALT0000	ring finger protein 114	RNF114	0.93472	1171.5
ENSGALT0000	ring finger protein 121	RNF121	0.921297	1057
ENSGALT0000	ring finger protein 122	RNF122	0.134312	489
ENSGALT0000	ring finger protein 123	RNF123	0.877742	2613.66
ENSGALT0000	ring finger protein 126	RNF126	0.786836	1064.5

ENSGALT0000	ring finger protein 128	RNF128	0.862185	653.5
ENSGALT0000	ring finger protein 13	RNF13	0.974831	2276.55
ENSGALT0000	ring finger protein 130	RNF130	0.845714	2528.5
ENSGALT0000	ring finger protein 138	RNF138	0.993266	282.999
ENSGALT0000	ring finger protein 14	RNF14	0.957396	1150.49
ENSGALT0000	ring finger protein 141	RNF141	0.975228	2199
ENSGALT0000	ring finger protein 144A	RNF144A	0.905796	339.5
ENSGALT0000	ring finger protein 144B	RNF144B	0.822857	60
ENSGALT0000	ring finger protein 145	RNF145	0.975158	2391.97
ENSGALT0000	ring finger protein 149	RNF149	0.858254	926.5
ENSGALT0000	ring finger protein 150	RNF150	0.887774	1774.01
ENSGALT0000	ring finger protein 151	RNF151	0.852364	399.5
ENSGALT0000	ring finger protein 152	RNF152	0.728885	67.5
ENSGALT0000	ring finger protein 157	RNF157	0.657931	701.074
ENSGALT0000	ring finger protein 165	RNF165	0.966598	646
ENSGALT0000	ring finger protein 166	RNF166	0.980325	3763.03
ENSGALT0000	ring finger protein 168	RNF168	0.968747	487.5
ENSGALT0000	ring finger protein 169	RNF169	0.979146	326
ENSGALT0000	ring finger protein 17	RNF17	0.768245	3.5
ENSGALT0000	ring finger protein 170	RNF170	0.971211	215.5
ENSGALT0000	ring finger protein 180	RNF180	0.99689	96
ENSGALT0000	ring finger protein 182	RNF182	0.995968	150
ENSGALT0000	ring finger protein 185	RNF185	0.928051	1712.5
ENSGALT0000	ring finger protein 19A	RNF19A	0.960698	1354
ENSGALT0000	ring finger protein 19B	RNF19B	0.500528	787
ENSGALT0000	ring finger protein 2	RNF2	0.879349	553
ENSGALT0000	ring finger protein 20	RNF20	0.932673	3546.5
ENSGALT0000	ring finger protein 207	RNF207	0.967434	865.497
ENSGALT0000	ring finger protein 208	RNF208	0.916823	491.5
ENSGALT0000	ring finger protein 212	RNF212	0.649519	0.5
ENSGALT0000	ring finger protein 213	RNF213	0.939577	136.5
ENSGALT0000	ring finger protein 214	RNF214	0.957772	1206
ENSGALT0000	ring finger protein 215	RNF215	0.815432	1710.5
ENSGALT0000	ring finger protein 216	RNF216	0.946966	1018.5
ENSGALT0000	ring finger protein 217	RNF217	0.998703	318
ENSGALT0000	ring finger protein 219	RNF219	0.947719	724
ENSGALT0000	ring finger protein 220	RNF220	0.939075	1202.5
ENSGALT0000	ring finger protein 222	RNF222	0.464758	0
ENSGALT0000	ring finger protein 223	RNF223	0.649519	0
ENSGALT0000	ring finger protein 25	RNF25	0.888925	909.498
ENSGALT0000	ring finger protein 26	RNF26	0.940316	1166
ENSGALT0000	ring finger protein 32	RNF32	0.734344	2.5
ENSGALT0000	ring finger protein 34	RNF34	0.900597	1561
ENSGALT0000	ring finger protein 38	RNF38	0.979717	1085.5
ENSGALT0000	ring finger protein 4	RNF4	0.962995	2591.97
ENSGALT0000	ring finger protein 41	RNF41	0.865408	1441
ENSGALT0000	ring finger protein 43	RNF43	0.989647	125
ENSGALT0000	ring finger protein (C3H2C3 type) 6	RNF6	0.975676	783
ENSGALT0000	ring finger protein 7	RNF7	0.841029	1768.5
ENSGALT0000	ring finger protein, transmembrane	RNFT1	0.990693	666.5
ENSGALT0000	ring finger protein, transmembrane	RNFT2	0.986213	607
ENSGALT0000	RNA guanylyltransferase and 5'-ph	RNGTT	0.957338	616
ENSGALT0000	ribonuclease/angiogenin inhibitor 1	RNH1	0.782356	3636
ENSGALT0000	renalase, FAD-dependent amine o>	RNLS	0.959246	178.5
ENSGALT0000	RNA (guanine-7-) methyltransferas	RNMT	0.982898	1795
ENSGALT0000	RNA methyltransferase like 1	RNMTL1	0.647476	462

ENSGALT0000	RNA-binding region (RNP1, RRM)	RNPC3	0.995134	635
ENSGALT0000	arginyl aminopeptidase (aminopept	RNPEP	0.796121	2225.5
ENSGALT0000	arginyl aminopeptidase (aminopept	RNPEPL1	0.901128	365
ENSGALT0000	RNA binding protein S1, serine-rich	RNPS1	0.667484	2240.5
ENSGALT0000	roundabout, axon guidance recepto	ROBO1	0.948519	3121.43
ENSGALT0000	roundabout, axon guidance recepto	ROBO2	0.982896	1155.51
ENSGALT0000	roundabout, axon guidance recepto	ROBO3	0.753772	7
ENSGALT0000	roundabout, axon guidance recepto	ROBO4	0.857827	43.5
ENSGALT0000	Rho-associated, coiled-coil contain	ROCK1	0.981428	985.005
ENSGALT0000	Rho-associated, coiled-coil contain	ROCK2	0.969335	909
ENSGALT0000	rogdi homolog (Drosophila)	ROGDI	0.852344	804
ENSGALT0000	reactive oxygen species modulator	ROMO1	0.266229	3711.5
ENSGALT0000	ropporin 1-like	ROPN1L	0.829525	118.5
ENSGALT0000	receptor tyrosine kinase-like orphai	ROR1	0.9575	4074
ENSGALT0000	receptor tyrosine kinase-like orphai	ROR2	0.945824	1006.5
ENSGALT0000	RAR-related orphan receptor A	RORA	0.991239	89.5
ENSGALT0000	RAR-related orphan receptor B	RORB	0.796305	288.499
ENSGALT0000	c-ros oncogene 1 , receptor tyrosin	ROS1	0.694339	836.507
ENSGALT0000	retinitis pigmentosa 1 (autosomal d	RP1	1	0.5
ENSGALT0000	retinitis pigmentosa 1-like 1	RP1L1	?	0
ENSGALT0000	retinitis pigmentosa 2 (X-linked rec	RP2	0.974966	1544.5
ENSGALT0000	retinitis pigmentosa 9 (autosomal d	RP9	0.912082	134
ENSGALT0000	replication protein A1, 70kDa	RPA1	0.880144	2394
ENSGALT0000	replication protein A2, 32kDa	RPA2	0.613797	2066.5
ENSGALT0000	replication protein A3, 14kDa	RPA3	0.381237	474.5
ENSGALT0000	RPA interacting protein	RPAIN	0.814278	345
ENSGALT0000	RNA polymerase II associated prot	RPAP1	0.97621	1506.03
ENSGALT0000	RNA polymerase II associated prot	RPAP2	0.960504	318
ENSGALT0000	RNA polymerase II associated prot	RPAP3	0.967227	615
ENSGALT0000	ribulose-5-phosphate-3-epimerase	RPE	0.584205	2658.5
ENSGALT0000	retinal pigment epithelium-specific	RPE65	0.986775	62
ENSGALT0000	ribosome production factor 1 homo	RPF1	0.928315	659
ENSGALT0000	ribosome production factor 2 homo	RPF2	0.961178	847
ENSGALT0000	retinitis pigmentosa GTPase regula	RPGR	0.989583	196
ENSGALT0000	RPGRIP1-like	RPGRIP1L	0.968935	360
ENSGALT0000	rabphilin 3A homolog (mouse)	RPH3A	0.72438	15
ENSGALT0000	ribose 5-phosphate isomerase A	RPIA	0.876263	1181.5
ENSGALT0000	ribosomal protein L10a	RPL10A	0.726264	31935
ENSGALT0000	ribosomal protein L11	RPL11	0.822329	18753.3
ENSGALT0000	ribosomal protein L12	RPL12	0.454563	18336.5
ENSGALT0000	ribosomal protein L13	RPL13	0.634482	38652
ENSGALT0000	ribosomal protein L14	RPL14	0.603822	20858.7
ENSGALT0000	ribosomal protein 17-like	RPL17L	0.85151	41687.2
ENSGALT0000	ribosomal protein L18a	RPL18A	0.801611	30747.8
ENSGALT0000	ribosomal protein L19	RPL19	0.682079	31658.4
ENSGALT0000	ribosomal protein L21	RPL21	0.741919	18922
ENSGALT0000	ribosomal protein L22	RPL22	0.541671	13419.3
ENSGALT0000	ribosomal protein L22-like 1	RPL22L1	0.878074	3904
ENSGALT0000	ribosomal protein L23	RPL23	0.325601	31877
ENSGALT0000	ribosomal protein L23a	RPL23A	0.701242	23061
ENSGALT0000	ribosomal protein L24	RPL24	0.797198	15944
ENSGALT0000	ribosomal protein L26-like 1	RPL26L1	0.835597	40205.2
ENSGALT0000	ribosomal protein L27	RPL27	0.224198	26528.6
ENSGALT0000	ribosomal protein L27a	RPL27A	0.783949	20794.5
ENSGALT0000	ribosomal protein L29	RPL29	0.631238	13241
ENSGALT0000	ribosomal protein L30	RPL30	0.84795	16523.5

ENSGALT0000	ribosomal protein L31	RPL31	0.464529	23836
ENSGALT0000	ribosomal protein L35	RPL35	0.413887	27373.8
ENSGALT0000	ribosomal protein L35a	RPL35A	0.490977	26652.5
ENSGALT0000	60S ribosomal protein L36	RPL36	0.836601	9931.04
ENSGALT0000	ribosomal protein L37	RPL37	0.768299	32242.5
ENSGALT0000	ribosomal protein L37a	RPL37A	0.472779	26809.2
ENSGALT0000	ribosomal protein L38	RPL38	0.396641	16550.5
ENSGALT0000	ribosomal protein L39	RPL39	0.964952	19326.6
ENSGALT0000	ribosomal protein L3-like	RPL3L	0.964359	6.00008
ENSGALT0000	ribosomal protein L4	RPL4	0.889218	58657.7
ENSGALT0000	ribosomal protein L5	RPL5	0.895901	38261.9
ENSGALT0000	ribosomal protein L6	RPL6	0.783009	27112.4
ENSGALT0000	ribosomal protein L7	RPL7	0.945347	34933
ENSGALT0000	ribosomal protein L7a	RPL7A	0.847206	50112.3
ENSGALT0000	ribosomal protein L7-like 1	RPL7L1	0.877577	3447
ENSGALT0000	ribosomal protein L8	RPL8	0.849108	72739
ENSGALT0000	ribosomal protein L9	RPL9	0.915681	21386.3
ENSGALT0000	ribosomal protein, large, P0	RPLP0	0.486549	54895.5
ENSGALT0000	ribosomal protein, large, P1	RPLP1	0.365667	49010.5
ENSGALT0000	ribosomal protein, large, P2	RPLP2	0.672738	11647
ENSGALT0000	ribophorin I	RPN1	0.983376	11496
ENSGALT0000	ribophorin II	RPN2	0.925958	7382.13
ENSGALT0000	ribonuclease P/MRP 14kDa subuni	RPP14	0.940758	199.5
ENSGALT0000	ribonuclease P/MRP 25kDa subuni	RPP25	0.677914	7.5
ENSGALT0000	ribonuclease P/MRP 30kDa subuni	RPP30	0.905284	452.5
ENSGALT0000	ribonuclease P/MRP 38kDa subuni	RPP38	0.973614	277
ENSGALT0000	ribonuclease P/MRP 40kDa subuni	RPP40	0.905333	377
ENSGALT0000	regulation of nuclear pre-mRNA do	RPRD1A	0.965351	942.503
ENSGALT0000	regulation of nuclear pre-mRNA do	RPRD1B	0.965531	3586.5
ENSGALT0000	reprimo-like	RPRML	0.408084	5.23853
ENSGALT0000	ribosomal protein S10	RPS10	0.468924	42061
ENSGALT0000	ribosomal protein S12	RPS12	0.650288	47448
ENSGALT0000	ribosomal protein S13	RPS13	0.625928	12686.7
ENSGALT0000	ribosomal protein S14	RPS14	0.848684	40325.2
ENSGALT0000	ribosomal protein S15	RPS15	0.706852	36443.9
ENSGALT0000	ribosomal protein S15a	RPS15A	0.90842	32388
ENSGALT0000	ribosomal protein S16	RPS16	0.777735	26893
ENSGALT0000	ribosomal protein S17-like	RPS17L	0.572149	21954.9
ENSGALT0000	ribosomal protein S19 binding prote	RPS19BP1	0.738633	1224
ENSGALT0000	ribosomal protein S2	RPS2	0.547494	49171.5
ENSGALT0000	ribosomal protein S20	RPS20	0.792328	19680
ENSGALT0000	ribosomal protein S21	RPS21	0.817662	9756.5
ENSGALT0000	ribosomal protein S24	RPS24	0.857798	24269
ENSGALT0000	ribosomal protein S25	RPS25	0.644418	21314
ENSGALT0000	ribosomal protein S27a	RPS27A	0.383649	31123.2
ENSGALT0000	ribosomal protein S28	RPS28	0.397174	26826.9
ENSGALT0000	ribosomal protein S29	RPS29	0.489417	32026
ENSGALT0000	ribosomal protein S3	RPS3	0.627249	46499.1
ENSGALT0000	ribosomal protein S3A	RPS3A	0.688477	50998.5
ENSGALT0000	ribosomal protein S4, X-linked	RPS4X	0.724727	53311.4
ENSGALT0000	ribosomal protein S6	RPS6	0.558681	64952.5
ENSGALT0000	ribosomal protein S6 kinase, 90kDa	RPS6KA2	0.770633	178
ENSGALT0000	ribosomal protein S6 kinase, 90kDa	RPS6KA3	0.9218	1063
ENSGALT0000	ribosomal protein S6 kinase, 90kDa	RPS6KA5	0.964839	464
ENSGALT0000	ribosomal protein S6 kinase, 90kDa	RPS6KA6	0.982278	521
ENSGALT0000	ribosomal protein S6 kinase, 70kDa	RPS6KB1	0.972057	980

ENSGALT0000	ribosomal protein S6 kinase, 70kDa	RPS6KB2	0.903557	793.5
ENSGALT0000	ribosomal protein S6 kinase, 52kDa	RPS6KC1	0.910408	1267
ENSGALT0000	ribosomal protein S6 kinase-like 1	RPS6KL1	0.822424	1020
ENSGALT0000	ribosomal protein S7	RPS7	0.919269	19189
ENSGALT0000	ribosomal protein S8	RPS8	0.807337	61296.5
ENSGALT0000	ribosomal protein SA	RPSA	0.796474	61320.4
ENSGALT0000	regulatory associated protein of MT	RPTOR	0.940395	1492.5
ENSGALT0000	RNA pseudouridylate synthase dor	RPUSD1	0.925521	248.464
ENSGALT0000	RNA pseudouridylate synthase dor	RPUSD4	0.887431	622
ENSGALT0000	RCD1 required for cell differentiatic	RQCD1	0.937519	5295.38
ENSGALT0000	Ras-related associated with diabete	RRAD	0.647766	27.5
ENSGALT0000	Ras-related GTP binding B	RRAGB	0.974228	1959.01
ENSGALT0000	Ras-related GTP binding C	RRAGC	0.949905	1377.5
ENSGALT0000	Ras-related GTP binding D	RRAGD	0.927981	421
ENSGALT0000	related RAS viral (r-ras) oncogene	RRAS2	0.888847	2179.5
ENSGALT0000	ribosome binding protein 1 homolog	RRBP1	0.987194	1462.5
ENSGALT0000	ras responsive element binding pro	RREB1	0.99484	1853.96
ENSGALT0000	retinal pigment epithelium-derived i	RRH	0.693395	4.5
ENSGALT0000	ribonucleotide reductase M1	RRM1	0.954355	8729
ENSGALT0000	ribonucleotide reductase M2	RRM2	0.840073	2367.5
ENSGALT0000	ribonucleotide reductase M2 B (TP	RRM2B	0.995921	650
ENSGALT0000	RRN3 RNA polymerase I transcript	RRN3	0.932974	665
ENSGALT0000	ribosomal RNA adenine dimethylas	RRNAD1	0.759138	157
ENSGALT0000	ribosomal RNA processing 12 hom	RRP12	0.935712	4391
ENSGALT0000	ribosomal RNA processing 15 hom	RRP15	0.738756	384.5
ENSGALT0000	ribosomal RNA processing 1 homol	RRP1B	0.957188	1403.49
ENSGALT0000	ribosomal RNA processing 7 homol	RRP7A	0.718309	901.5
ENSGALT0000	ribosomal RNA processing 9, small	RRP9	0.895299	1568.5
ENSGALT0000	retinoschisin 1	RS1	0.401219	2
ENSGALT0000	radical S-adenosyl methionine dom	RSAD2	0.853815	1
ENSGALT0000	round spermatid basic protein 1	RSBN1	0.987477	728.5
ENSGALT0000	round spermatid basic protein 1-like	RSBN1L	0.981077	646
ENSGALT0000	leukocyte ribonuclease A-2	RSFR	0.280743	14.1389
ENSGALT0000	Angiogenin	RSFR_CHICK	0.0657539	1.85995
ENSGALT0000	ribosomal L1 domain containing 1	RSL1D1	0.985596	1046.5
ENSGALT0000	ribosomal L24 domain containing 1	RSL24D1	0.843261	834.5
ENSGALT0000	radial spoke head 1 homolog (Chla	RSPH1	0.949907	15.5
ENSGALT0000	radial spoke 3 homolog (Chlamydo	RSPH3	0.990577	191
ENSGALT0000	radial spoke head 4 homolog A (Ch	RSPH4A	0.894723	138
ENSGALT0000	radial spoke head 9 homolog (Chla	RSPH9	0.873589	235.5
ENSGALT0000	R-spondin 1	RSPO1	0.647768	18.5
ENSGALT0000	R-spondin 2	RSPO2	0.967364	133
ENSGALT0000	R-spondin 3	RSPO3	0.754249	391.001
ENSGALT0000	R-spondin 4	RSPO4	0.811579	8
ENSGALT0000	ring finger and SPRY domain conta	RSPRY1	0.989794	1141
ENSGALT0000	arginine/serine-rich coiled-coil 1	RSRC1	0.90905	747
ENSGALT0000	arginine/serine-rich coiled-coil 2	RSRC2	0.928026	1828
ENSGALT0000	Ras suppressor protein 1	RSU1	0.92232	1132.5
ENSGALT0000	retbindin	RTBDN	0.970763	12.5
ENSGALT0000	RNA terminal phosphate cyclase do	RTCD1	0.937396	1204.5
ENSGALT0000	rhabdoid tumor deletion region gen	RTDR1	0.979626	50.0892
ENSGALT0000	regulator of telomere elongation he	RTEL1	0.984445	491.501
ENSGALT0000	Rtf1, Paf1/RNA polymerase II comp	RTF1	0.946823	2791.52
ENSGALT0000	rhotekin 2	RTKN2	0.961696	269
ENSGALT0000	reticulon 1	RTN1	0.427423	4975.54
ENSGALT0000	reticulon 4	RTN4	0.811666	8253

ENSGALT0000	reticulon 4 interacting protein 1	RTN4IP1	0.88325	639
ENSGALT0000	reticulon 4 receptor	RTN4R	0.963803	169.5
ENSGALT0000	reticulon 4 receptor-like 1	RTN4RL1	0.925945	2.5
ENSGALT0000	reticulon 4 receptor-like 2	RTN4RL2	0.415836	332
ENSGALT0000	rotatin	RTTN	0.95905	299
ENSGALT0000	RUN and FYVE domain containing	RUFY1	0.971642	984.599
ENSGALT0000	RUN and FYVE domain containing	RUFY2	0.848327	256.5
ENSGALT0000	RUN and FYVE domain containing	RUFY3	0.744184	1458.5
ENSGALT0000	RUN domain containing 1	RUNDC1	0.866495	807.5
ENSGALT0000	RUN domain containing 3B	RUNDC3B	0.853009	422
ENSGALT0000	runt-related transcription factor 1	RUNX1	0.740631	213
ENSGALT0000	runt-related transcription factor 1; tr	RUNX1T1	0.728257	296
ENSGALT0000	runt-related transcription factor 2	RUNX2	0.731229	43
ENSGALT0000	runt-related transcription factor 3	RUNX3	0.747554	10
ENSGALT0000	RUN and SH3 domain containing 1	RUSC1	0.828463	707.5
ENSGALT0000	RUN and SH3 domain containing 2	RUSC2	0.685578	1208.5
ENSGALT0000	RuvB-like 1 (E. coli)	RUVBL1	0.877871	2134
ENSGALT0000	RWD domain containing 1	RWDD1	0.952257	809
ENSGALT0000	RWD domain containing 2A	RWDD2A	0.911383	134
ENSGALT0000	RWD domain containing 2B	RWDD2B	0.943746	275.366
ENSGALT0000	RWD domain containing 3	RWDD3	0.989652	199
ENSGALT0000	RWD domain containing 4	RWDD4	0.904583	512.5
ENSGALT0000	relaxin/insulin-like family peptide re	RXFP1	0.766247	48.5
ENSGALT0000	relaxin/insulin-like family peptide re	RXFP2	0.8606	13
ENSGALT0000	relaxin/insulin-like family peptide re	RXFP3	0.940515	32
ENSGALT0000	retinoid X receptor, gamma	RXRG	0.449592	385.218
ENSGALT0000	RING1 and YY1 binding protein	RYBP	0.962176	352.5
ENSGALT0000	RYK receptor-like tyrosine kinase	RYK	0.997218	1930.5
ENSGALT0000	ryanodine receptor 2 (cardiac)	RYR2	0.822313	302
ENSGALT0000	ryanodine receptor 3	RYR3	0.987108	62.9999
ENSGALT0000	S100 calcium binding protein A11	S100A11	0.489846	4588.5
ENSGALT0000	S100 calcium binding protein A13	S100A13	0.698164	145.5
ENSGALT0000	S100 calcium-binding protein A6	S100A6	0.409318	1981.5
ENSGALT0000	S100 calcium binding protein B	S100B	0.80348	24
ENSGALT0000	S100 calcium binding protein Z	S100Z	?	0
ENSGALT0000	sphingosine-1-phosphate receptor	S1PR3	0.8902	91.5
ENSGALT0000	sphingosine-1-phosphate receptor	S1PR4	0.597407	9
ENSGALT0000	serum amyloid A-like 1	SAAL1	0.980312	457
ENSGALT0000	SAC1 suppressor of actin mutation	SACM1L	0.948855	608
ENSGALT0000	spastic ataxia of Charlevoix-Sague	SACS	0.82555	2035.5
ENSGALT0000	S-antigen; retina and pineal gland (	SAG	0.922589	12.5
ENSGALT0000	sal-like 1 (Drosophila)	SALL1	0.959803	6604.55
ENSGALT0000	sal-like 3 (Drosophila)	SALL3	0.956936	6515
ENSGALT0000	sal-like 4 (Drosophila)	SALL4	0.987164	1431.02
ENSGALT0000	sterile alpha motif domain containir	SAMD10	0.618124	15
ENSGALT0000	sterile alpha motif domain containir	SAMD11	0.768586	1862.02
ENSGALT0000	sterile alpha motif domain containir	SAMD12	0.984406	172.5
ENSGALT0000	sterile alpha motif domain containir	SAMD13	0.996792	285
ENSGALT0000	sterile alpha motif domain containir	SAMD15	0.988215	42.5
ENSGALT0000	sterile alpha motif domain containir	SAMD3	0.499585	1
ENSGALT0000	sterile alpha motif domain containir	SAMD4A	0.911273	1125
ENSGALT0000	sterile alpha motif domain containir	SAMD5	0.629714	1.5
ENSGALT0000	sterile alpha motif domain containir	SAMD7	0.861016	5
ENSGALT0000	sterile alpha motif domain containir	SAMD8	0.871712	197.5
ENSGALT0000	SAM domain and HD domain 1	SAMHD1	0.962841	656.5
ENSGALT0000	sorting and assembly machinery cc	SAMM50	0.849655	2075.5

ENSGALT0000	SAM domain, SH3 domain and nuc	SAMSN1	0.623366	9
ENSGALT0000	Sin3A-associated protein, 130kDa	SAP130	0.949548	4125.91
ENSGALT0000	Sin3A-associated protein, 18kDa	SAP18	0.283785	6907.5
ENSGALT0000	Sin3A-associated protein, 30kDa	SAP30	0.934993	345
ENSGALT0000	SAP30 binding protein	SAP30BP	0.793509	734.5
ENSGALT0000	SAP30-like	SAP30L	0.969377	435.5
ENSGALT0000	SAR1 homolog A (S. cerevisiae)	SAR1A	0.830105	4695.5
ENSGALT0000	SAR1 homolog B (S. cerevisiae)	SAR1B	0.907061	897.497
ENSGALT0000	sarcosine dehydrogenase	SARDH	0.971661	1177
ENSGALT0000	sterile alpha and TIR motif containi	SARM1	0.745158	463.5
ENSGALT0000	hypothetical protein LOC425058	SARNP	0.932014	2813.59
ENSGALT0000	squamous cell carcinoma antigen r	SART3	0.921638	2073.99
ENSGALT0000	SAM and SH3 domain containing 1	SASH1	0.95438	1147
ENSGALT0000	SAM and SH3 domain containing 3	SASH3	0.702633	11
ENSGALT0000	spindle assembly 6 homolog (C. ele	SASS6	0.946233	667
ENSGALT0000	spermidine/spermine N1-acetyltran	SAT1	0.870438	1618.5
ENSGALT0000	SATB homeobox 1	SATB1	0.988865	769.5
ENSGALT0000	SATB homeobox 2	SATB2	0.999298	43
ENSGALT0000	salvador homolog 1 (Drosophila)	SAV1	0.939729	2428
ENSGALT0000	SAYSVFN motif domain containing	SAYSD1	0.749425	925
ENSGALT0000	Shwachman-Bodian-Diamond sync	SBDS	0.960809	1283.5
ENSGALT0000	SET binding factor 1	SBF1	0.953585	7875.5
ENSGALT0000	SET binding factor 2	SBF2	0.959771	1142
ENSGALT0000	SH3-binding domain kinase 1	SBK1	0.716679	607
ENSGALT0000	SH3-binding domain kinase family,	SBK2	0.853815	0.5
ENSGALT0000	strawberry notch homolog 1 (Drosc	SBNO1	0.968347	2300.5
ENSGALT0000	strawberry notch homolog 2 (Drosc	SBNO2	0.998417	1064
ENSGALT0000	sterol-C4-methyl oxidase-like	SC4MOL	0.810258	1064
ENSGALT0000	SR-related CTD-associated factor	SCAF11	0.9762	1572.5
ENSGALT0000	SR-related CTD-associated factor 4	SCAF4	0.936009	1374.02
ENSGALT0000	SR-related CTD-associated factor 8	SCAF8	0.969885	1292.5
ENSGALT0000	suppressor of cancer cell invasion	SCAI	0.960187	494.5
ENSGALT0000	secretory carrier membrane protein	SCAMP1	0.959112	1031
ENSGALT0000	secretory carrier membrane protein	SCAMP2	0.937001	2094.5
ENSGALT0000	secretory carrier membrane protein	SCAMP4	0.924511	641.5
ENSGALT0000	secretory carrier membrane protein	SCAMP5	0.809241	1415.5
ENSGALT0000	SREBF chaperone	SCAP	0.906052	4635.03
ENSGALT0000	S-phase cyclin A-associated protei	SCAPER	0.893912	4393
ENSGALT0000	scavenger receptor class A, membr	SCARA5	0.173104	26
ENSGALT0000	scavenger receptor class B, membr	SCARB1	0.730071	300
ENSGALT0000	scavenger receptor class B, membr	SCARB2	0.95603	1307.5
ENSGALT0000	scavenger receptor class F, membe	SCARF1	0.814952	175
ENSGALT0000	scavenger receptor class F, membe	SCARF2	0.916584	710
ENSGALT0000	Small Cajal body specific RNA 1	SCARNA1	0.649519	0.5
ENSGALT0000	Small Cajal body specific RNA 11	SCARNA11	0.749832	2.5
ENSGALT0000	Small Cajal body specific RNA 13	SCARNA13	0.912085	32
ENSGALT0000	Small Cajal body specific RNA 14	SCARNA14	0.479357	1.5
ENSGALT0000	Small Cajal body specific RNA 15	SCARNA15	0.70003	5
ENSGALT0000	Small Cajal body specific RNA 16	SCARNA16	0.649519	4
ENSGALT0000	Small Cajal body specific RNA 20	SCARNA20	0.760726	0.5
ENSGALT0000	Small Cajal body specific RNA 23	SCARNA23	0.995591	5.5
ENSGALT0000	Small Cajal body specific RNA 24	SCARNA24	?	0
ENSGALT0000	Small Cajal body specific RNA 3	SCARNA3	0.580649	1
ENSGALT0000	Small Cajal body specific RNA 4	SCARNA4	0.475693	2.5
ENSGALT0000	Small Cajal body specific RNA 6	SCARNA6	0.994111	43
ENSGALT0000	Small Cajal body specific RNA 8	SCARNA8	0.965446	6.5

ENSGALT0000	saccharopine dehydrogenase (puta	SCCPDH	0.912951	3768.5
ENSGALT0000	stearoyl-CoA desaturase (delta-9-d	SCD	0.760846	322
ENSGALT0000	stearoyl-CoA desaturase 5	SCD5	0.882324	6263.5
ENSGALT0000	sec1 family domain containing 1	SCFD1	0.983547	1079
ENSGALT0000	secretogranin II	SCG2	0.768066	363.5
ENSGALT0000	secretogranin III	SCG3	0.652506	2590.5
ENSGALT0000	secretogranin V (7B2 protein)	SCG5	0.394517	563
ENSGALT0000	secretoglobin, family 1C, member 1	SCGB1C1	?	0
ENSGALT0000	secretagogin, EF-hand calcium bin	SCGN	0.4572	27
ENSGALT0000	schwannomin interacting protein 1	SCHIP1	0.584929	1008
ENSGALT0000	scinderin	SCIN	0.919543	287
ENSGALT0000	sodium channel and clathrin linker	SCLT1	0.999806	380.207
ENSGALT0000	selenocysteine lyase	SCLY	0.886726	789.5
ENSGALT0000	sex comb on midleg homolog 1 (Dr	SCMH1	0.832468	735.5
ENSGALT0000	sex comb on midleg-like 2 (Drosopl	SCML2	0.992674	462.5
ENSGALT0000	sex comb on midleg-like 4 (Drosopl	SCML4	0.946372	13
ENSGALT0000	sodium channel, voltage-gated, typ	SCN1A	0.84343	169.097
ENSGALT0000	sodium channel, voltage-gated, typ	SCN2A	0.823576	356.218
ENSGALT0000	sodium channel, voltage-gated, typ	SCN2B	0.994016	95.5
ENSGALT0000	sodium channel, voltage-gated, typ	SCN3B	0.73039	664
ENSGALT0000	sodium channel, voltage-gated, typ	SCN4B	0.976678	436
ENSGALT0000	sodium channel, voltage-gated, typ	SCN5A	0.730049	31.1537
ENSGALT0000	sodium channel, voltage gated, typ	SCN8A	0.908437	412.5
ENSGALT0000	sodium channel, nonvoltage-gated	SCNN1A	0.907534	1225
ENSGALT0000	sodium channel, nonvoltage-gated	SCNN1B	0.986518	1482.5
ENSGALT0000	sodium channel, nonvoltage-gated	SCNN1D	0.853815	0.5
ENSGALT0000	sodium channel, nonvoltage-gated	SCNN1G	0.949515	392.5
ENSGALT0000	SCO cytochrome oxidase deficient	SCO1	0.876895	293.499
ENSGALT0000	SCO cytochrome oxidase deficient	SCO2	0.671991	385
ENSGALT0000	short coiled-coil protein	SCOC	0.990203	310
ENSGALT0000	serine carboxypeptidase 1	SCPEP1	0.971223	1683
ENSGALT0000	stimulator of chondrogenesis 1	SCRG1	0.846485	6
ENSGALT0000	scribbled homolog (Drosophila)	SCRIB	0.980885	4145.04
ENSGALT0000	secernin 1	SCRN1	0.93202	1667.02
ENSGALT0000	secernin 2	SCRN2	0.933948	486
ENSGALT0000	secernin 3	SCRN3	0.826346	384.486
ENSGALT0000	secretin	SCT	?	0
ENSGALT0000	secretin receptor	SCTR	0.643623	0.5
ENSGALT0000	signal peptide, CUB domain, EGF-l	SCUBE1	0.964038	1428.5
ENSGALT0000	signal peptide, CUB domain, EGF-l	SCUBE2	0.973103	901.5
ENSGALT0000	signal peptide, CUB domain, EGF-l	SCUBE3	0.994392	458
ENSGALT0000	SCY1-like 2 (S. cerevisiae)	SCYL2	0.959956	1049.5
ENSGALT0000	SCY1-like 3 (S. cerevisiae)	SCYL3	0.949157	1316.7
ENSGALT0000	SDA1 domain containing 1	SDAD1	0.884425	684
ENSGALT0000	syndecan 1	SDC1	0.996486	951.5
ENSGALT0000	syndecan 2	SDC2	0.898252	1600.48
ENSGALT0000	syndecan 3	SDC3	0.934599	1681
ENSGALT0000	syndecan 4	SDC4	0.865632	1118
ENSGALT0000	syntenin	SDCBP	0.970027	5860
ENSGALT0000	serologically defined colon cancer a	SDCCAG3	0.729075	255.5
ENSGALT0000	serologically defined colon cancer a	SDCCAG8	0.974644	365.5
ENSGALT0000	stromal cell-derived factor 2	SDF2	0.192739	1596.5
ENSGALT0000	stromal cell-derived factor 2-like 1	SDF2L1	0.948416	1984
ENSGALT0000	stromal cell derived factor 4	SDF4	0.99843	1914.5
ENSGALT0000	succinate dehydrogenase complex	SDHA	0.839965	2439.04
ENSGALT0000	succinate dehydrogenase complex	SDHB	0.749572	1726.5

ENSGALT0000	succinate dehydrogenase complex	SDHD	0.240986	3820
ENSGALT0000	sidekick homolog 1, cell adhesion r	SDK1	0.874473	4300
ENSGALT0000	sidekick homolog 2 (chicken)	SDK2	0.998613	6833.83
ENSGALT0000	serum deprivation response (phosp	SDPR	0.989251	534.5
ENSGALT0000	short chain dehydrogenase/reducta	SDR16C5	0.990636	311.5
ENSGALT0000	short chain dehydrogenase/reducta	SDR42E2	0.766524	52.5
ENSGALT0000	serine dehydratase-like	SDSL	0.901223	4
ENSGALT0000	SEC11 homolog A (S. cerevisiae)	SEC11A	0.604119	2727.01
ENSGALT0000	SEC11 homolog C (S. cerevisiae)	SEC11C	0.725712	235.5
ENSGALT0000	SEC13 homolog (S. cerevisiae)	SEC13	0.787802	4317
ENSGALT0000	SEC14-like 1 (S. cerevisiae)	SEC14L1	0.832146	1411.5
ENSGALT0000	SEC14-like 2 (S. cerevisiae)	SEC14L2	0.950877	1416.5
ENSGALT0000	SEC14-like 5 (S. cerevisiae)	SEC14L5	0.749877	281
ENSGALT0000	SEC16 homolog A (S. cerevisiae)	SEC16A	0.984213	5016
ENSGALT0000	SEC16 homolog B (S. cerevisiae)	SEC16B	0.985385	92
ENSGALT0000	SEC22 vesicle trafficking protein hc	SEC22A	0.940743	1111.5
ENSGALT0000	Vesicle-trafficking protein SEC22b	SEC22B	0.570925	599.832
ENSGALT0000	SEC22 vesicle trafficking protein hc	SEC22C	0.985793	409.5
ENSGALT0000	Sec23 homolog A (S. cerevisiae)	SEC23A	0.947232	2123
ENSGALT0000	Sec23 homolog B (S. cerevisiae)	SEC23B	0.946193	3770
ENSGALT0000	SEC23 interacting protein	SEC23IP	0.955635	1558.5
ENSGALT0000	SEC24 family, member A (S. cerevi	SEC24A	0.962868	2487.35
ENSGALT0000	SEC24 family, member B (S. cerev	SEC24B	0.968499	1249.35
ENSGALT0000	SEC24 family, member C (S. cerev	SEC24C	0.975812	5144
ENSGALT0000	SEC24 family, member D (S. cerev	SEC24D	0.916833	945.5
ENSGALT0000	SEC31 homolog A (S. cerevisiae)	SEC31A	0.915598	8917
ENSGALT0000	SEC31 homolog B (S. cerevisiae)	SEC31B	0.957495	2201.97
ENSGALT0000	Sec61 alpha 1 subunit (S. cerevisia	SEC61A1	0.960416	4113.5
ENSGALT0000	Sec61 beta subunit	SEC61B	0.273813	1596.5
ENSGALT0000	Sec61 gamma subunit	SEC61G	0.846079	898.5
ENSGALT0000	SEC62 homolog (S. cerevisiae)	SEC62	0.97363	2174
ENSGALT0000	SEC63 homolog (S. cerevisiae)	SEC63	0.962467	2903
ENSGALT0000	SECIS binding protein 2	SECISBP2	0.990768	707.5
ENSGALT0000	SECIS binding protein 2-like	SECISBP2L	0.959559	1007
ENSGALT0000	SEH1-like (S. cerevisiae)	SEH1L	0.805112	911
ENSGALT0000	sel-1 suppressor of lin-12-like (C. e	SEL1L	0.980002	1508.5
ENSGALT0000	sel-1 suppressor of lin-12-like 3 (C.	SEL1L3	0.976983	869
ENSGALT0000	selectin E (endothelial adhesion mc	SELE	0.641669	2
ENSGALT0000	selenium binding protein 1	SELENBP1	0.796941	444
ENSGALT0000	selenoprotein K	SELK	0.729243	1382
ENSGALT0000	selenoprotein O	SELO	0.928873	122.5
ENSGALT0000	selectin P (granule membrane prot	SELP	0.914567	9
ENSGALT0000	Sel1 repeat containing 1	SELRC1	0.727989	654.003
ENSGALT0000	selenoprotein S	SELS	0.84418	1513.5
ENSGALT0000	selenoprotein T	SELT	0.907989	1900
ENSGALT0000	sema domain, immunoglobulin don	SEMA3A	0.994952	2964
ENSGALT0000	sema domain, immunoglobulin don	SEMA3C	0.85577	1201.01
ENSGALT0000	sema domain, immunoglobulin don	SEMA3D	0.975767	946.5
ENSGALT0000	sema domain, immunoglobulin don	SEMA3E	0.868792	30
ENSGALT0000	sema domain, immunoglobulin don	SEMA3G	0.892145	1012.5
ENSGALT0000	sema domain, immunoglobulin don	SEMA4B	0.846799	1311.5
ENSGALT0000	sema domain, immunoglobulin don	SEMA4D	0.959176	823.003
ENSGALT0000	sema domain, seven thrombospon	SEMA5A	0.975233	4131.5
ENSGALT0000	sema domain, seven thrombospon	SEMA5B	0.981109	4503.5
ENSGALT0000	sema domain, transmembrane don	SEMA6A	0.838561	940
ENSGALT0000	sema domain, transmembrane don	SEMA6B	0.828354	2393

ENSGALT0000	sema domain, transmembrane dom	SEMA6D	0.885387	1087
ENSGALT0000	semaphorin 7A, GPI membrane an	SEMA7A	0.854963	802.5
ENSGALT0000	SUMO1/sentrin specific peptidase	SENP1	0.956067	679.5
ENSGALT0000	SUMO1/sentrin/SMT3 specific pept	SENP2	0.964077	393.499
ENSGALT0000	SUMO1/sentrin specific peptidase	SENP5	0.946038	904
ENSGALT0000	SUMO1/sentrin specific peptidase	SENP6	0.979672	2222.52
ENSGALT0000	SUMO1/sentrin specific peptidase	SENP7	0.970478	324.5
ENSGALT0000	septin 5	Sep-05	0.862315	4173.48
ENSGALT0000	15 kDa selenoprotein	SEP15	0.948259	2857
ENSGALT0000	selenophosphate synthetase 1	SEPHS1	0.880706	1763
ENSGALT0000	selenoprotein N, 1	SEPN1	0.989274	1633.98
ENSGALT0000	selenoprotein P, plasma, 1	SEPP1	0.919993	1219.01
ENSGALT0000	Sep (O-phosphoserine) tRNA:Sec	SEPSECS	0.948294	809.5
ENSGALT0000	septin 10	SEPT10	0.99118	251.5
ENSGALT0000	septin 11	SEPT11	0.908495	1890.23
ENSGALT0000	septin 12	SEPT12	0.958066	1193.5
ENSGALT0000	septin 2	SEPT2	0.885721	7569.49
ENSGALT0000	septin 3	SEPT3	0.594028	494
ENSGALT0000	septin 6	SEPT6	0.8654	2930.26
ENSGALT0000	septin 7	SEPT7	0.94854	4446
ENSGALT0000	septin 8	SEPT8	0.887662	693.752
ENSGALT0000	septin 9	SEPT9	0.793881	8290.81
ENSGALT0000	selenoprotein X, 1	SEPX1	0.647629	374.5
ENSGALT0000	serine active site containing 1	SERAC1	0.99193	211.5
ENSGALT0000	SERPINE1 mRNA binding protein	SERBP1	0.906465	7736.85
ENSGALT0000	small EDRK-rich factor 1A (telomer	SERF1A	0.620052	4019
ENSGALT0000	small EDRK-rich factor 2	SERF2	0.368638	1152
ENSGALT0000	secretion regulating guanine nucle	SERGEF	0.914155	216.5
ENSGALT0000	serine hydrolase-like 2	SERHL2	0.9781	849
ENSGALT0000	serine incorporator 1	SERINC1	0.75245	12617.5
ENSGALT0000	serine incorporator 2	SERINC2	0.990411	427.5
ENSGALT0000	serine incorporator 3	SERINC3	0.759474	1013.5
ENSGALT0000	serine incorporator 4	SERINC4	0.990829	101
ENSGALT0000	serine incorporator 5	SERINC5	0.927237	323.5
ENSGALT0000	serpin peptidase inhibitor, clade A (	SERPINA1	0.464758	0
ENSGALT0000	serpin peptidase inhibitor, clade A (	SERPINA10	?	0
ENSGALT0000	serpin peptidase inhibitor, clade A (	SERPINA3	0.532919	31.5
ENSGALT0000	serpin peptidase inhibitor, clade A (	SERPINA4	0.464758	0.5
ENSGALT0000	serpin peptidase inhibitor, clade A (	SERPINA5	?	0
ENSGALT0000	serpin peptidase inhibitor, clade A (	SERPINA9	0.603682	1
ENSGALT0000	serpin peptidase inhibitor, clade B (	SERPINB1	0.539038	0
ENSGALT0000	serpin peptidase inhibitor, clade B (	SERPINB10	0.553949	1
ENSGALT0000	serpin peptidase inhibitor, clade B (	SERPINB12	0.386686	1.5
ENSGALT0000	ovalbumin	SERPINB14	0.895318	3
ENSGALT0000	serpin peptidase inhibitor, clade B (	SERPINB14B	0	0
ENSGALT0000	serpin peptidase inhibitor, clade B (	SERPINB2	0.542485	0
ENSGALT0000	serpin peptidase inhibitor, clade B (	SERPINB5	0.70003	4
ENSGALT0000	serpin peptidase inhibitor, clade B (	SERPINB6	0.921129	736.5
ENSGALT0000	serpin peptidase inhibitor, clade B (	SERPINBP1	0.853815	1
ENSGALT0000	serpin peptidase inhibitor, clade D (	SERPIND1	0.940794	6
ENSGALT0000	serpin peptidase inhibitor, clade E (	SERPINE2	0.906401	1160
ENSGALT0000	serpin peptidase inhibitor, clade F (	SERPINF1	0.995279	492
ENSGALT0000	serpin peptidase inhibitor, clade F (	SERPINF2	0.666798	76
ENSGALT0000	serpin peptidase inhibitor, clade G (	SERPING1	0.984374	781
ENSGALT0000	serpin peptidase inhibitor, clade H (	SERPINH1	0.989042	20535.5
ENSGALT0000	serpin peptidase inhibitor, clade I (r	SERPINI1	0.869902	2284

ENSGALT0000	SERTA domain containing 2	SERTAD2	0.960613	894
ENSGALT0000	SERTA domain containing 4	SERTAD4	0.968118	715
ENSGALT0000	serine-rich and transmembrane dor	SERTM1	0.725737	34
ENSGALT0000	sestrin 1	SESN1	0.938787	1595.5
ENSGALT0000	sestrin 2	SESN2	0.952092	792
ENSGALT0000	sestrin 3	SESN3	0.971511	983.5
ENSGALT0000	SEC14 and spectrin domains 1	SESTD1	0.876117	2146.5
ENSGALT0000	SET nuclear oncogene	SET	0.950296	6746.5
ENSGALT0000	SET binding protein 1	SETBP1	0.979551	1833
ENSGALT0000	SET domain containing 1B	SETD1B	0.997359	1797.5
ENSGALT0000	SET domain containing 2	SETD2	0.975292	7682
ENSGALT0000	SET domain containing 3	SETD3	0.969495	895.01
ENSGALT0000	SET domain containing 4	SETD4	0.993995	111
ENSGALT0000	SET domain containing 5	SETD5	0.999112	3446
ENSGALT0000	SET domain containing 6	SETD6	0.931661	393.5
ENSGALT0000	SET domain containing (lysine met	SETD7	0.775733	1252
ENSGALT0000	SET domain containing (lysine met	SETD8	0.907442	171.5
ENSGALT0000	SET domain, bifurcated 2	SETDB2	0.981295	811.01
ENSGALT0000	senataxin	SETX	0.966759	1505
ENSGALT0000	seizure related 6 homolog (mouse)	SEZ6L	0.763282	119.5
ENSGALT0000	splicing factor 3a, subunit 1, 120kD	SF3A1	0.935369	5814
ENSGALT0000	splicing factor 3a, subunit 2, 66kDa	SF3A2	0.799496	1029
ENSGALT0000	splicing factor 3a, subunit 3, 60kDa	SF3A3	0.874086	2090
ENSGALT0000	splicing factor 3b, subunit 1, 155kD	SF3B1	0.97607	11417
ENSGALT0000	splicing factor 3B, 14 kDa subunit	SF3B14	0.606595	1587
ENSGALT0000	splicing factor 3b, subunit 3, 130kD	SF3B3	0.950227	9702.34
ENSGALT0000	splicing factor 3b, subunit 4, 49kDa	SF3B4	0.840553	4750.5
ENSGALT0000	splicing factor 3b, subunit 5, 10kDa	SF3B5	0.374658	1872.5
ENSGALT0000	Sfi1 homolog, spindle assembly as	SFI1	0.999118	794.5
ENSGALT0000	Scm-like with four mbt domains 1	SFMBT1	0.934731	153.5
ENSGALT0000	Scm-like with four mbt domains 2	SFMBT2	0.90709	90
ENSGALT0000	splicing factor proline/glutamine-ricl	SFPQ	0.935133	11676.2
ENSGALT0000	secreted frizzled-related protein 1	SFRP1	0.993207	11404.5
ENSGALT0000	secreted frizzled-related protein 2	SFRP2	0.790597	2971
ENSGALT0000	secreted frizzled-related protein 4	SFRP4	0.621968	33.0338
ENSGALT0000	secreted frizzled-related protein 5	SFRP5	0.670536	20.5
ENSGALT0000	splicing factor, suppressor of white-	SFSWAP	0.997421	2516
ENSGALT0000	SFT2 domain containing 1	SFT2D1	0.80575	652.5
ENSGALT0000	SFT2 domain containing 2	SFT2D2	0.975554	678
ENSGALT0000	surfactant, pulmonary-associated p	SFTPA1	0.729711	1
ENSGALT0000	sideroflexin 1	SFXN1	0.848274	886.929
ENSGALT0000	sideroflexin 2	SFXN2	0.855436	1039.5
ENSGALT0000	sideroflexin 3	SFXN3	0.83252	1468.5
ENSGALT0000	sideroflexin 4	SFXN4	0.945517	465.5
ENSGALT0000	sideroflexin 5	SFXN5	0.931343	358.5
ENSGALT0000	sarcoglycan, beta (43kDa dystroph	SGCB	0.886783	1084.5
ENSGALT0000	sarcoglycan, delta (35kDa dystropl	SGCD	0.914357	163
ENSGALT0000	sarcoglycan, epsilon	SGCE	0.944018	998.5
ENSGALT0000	sarcoglycan, gamma (35kDa dystrc	SGCG	0.991282	189
ENSGALT0000	sarcoglycan, zeta	SGCZ	0.951338	19.5
ENSGALT0000	SH3-domain GRB2-like (endophilin	SGIP1	0.74926	203.5
ENSGALT0000	serum/glucocorticoid regulated kina	SGK1	0.969188	1241.5
ENSGALT0000	protein kinase-like protein SgK196	SGK196	0.96441	982.553
ENSGALT0000	serum/glucocorticoid regulated kina	SGK2	?	0
ENSGALT0000	homolog of rat pragma of Rnd2	SGK223	0.837355	256
ENSGALT0000	serum/glucocorticoid regulated kina	SGK3	0.997065	870.002

ENSGALT0000	transmembrane protein 23	SGMS1	0.997876	397.001
ENSGALT0000	sphingomyelin synthase 2	SGMS2	0.865372	214.56
ENSGALT0000	shugoshin-like 1 (S. pombe)	SGOL1	0.924522	273
ENSGALT0000	shugoshin-like 2 (S. pombe)	SGOL2	0.957426	69
ENSGALT0000	sphingosine-1-phosphate lyase 1	SGPL1	0.899301	3598
ENSGALT0000	sphingosine-1-phosphate phospha	SGPP1	0.979831	94.5
ENSGALT0000	sphingosine-1-phosphate phospha	SGPP2	0.99162	260.5
ENSGALT0000	N-sulfoglucosamine sulfohydrolase	SGSH	0.947015	317.807
ENSGALT0000	small G protein signaling modulato	SGSM1	0.888384	347
ENSGALT0000	small G protein signaling modulato	SGSM2	0.973762	381.5
ENSGALT0000	small G protein signaling modulato	SGSM3	0.985161	702.5
ENSGALT0000	small glutamine-rich tetratricopepti	SGTA	0.937	2942.5
ENSGALT0000	small glutamine-rich tetratricopepti	SGTB	0.862219	544
ENSGALT0000	SH2B adaptor protein 2	SH2B2	0.958698	556
ENSGALT0000	SH2B adaptor protein 3	SH2B3	0.911963	81.5
ENSGALT0000	SH2 domain containing 1A	SH2D1A	0.0539949	0
ENSGALT0000	SH2 domain containing 2A	SH2D2A	0.603682	0
ENSGALT0000	SH2 domain containing 3C	SH2D3C	0.600051	707.5
ENSGALT0000	SH2 domain containing 4A	SH2D4A	0.8552	26.5
ENSGALT0000	SH2 domain containing 4B	SH2D4B	0.663461	35.5
ENSGALT0000	SH3 domain binding glutamic acid-	SH3BGR	0.438628	4
ENSGALT0000	SH3 domain binding glutamic acid-	SH3BGRL	0.950786	7486
ENSGALT0000	SH3 domain binding glutamic acid-	SH3BGRL2	0.844706	541.5
ENSGALT0000	SH3 domain binding glutamic acid-	SH3BGRL3	0.790502	2605.5
ENSGALT0000	SH3-domain binding protein 1	SH3BP1	0.492441	3.5
ENSGALT0000	SH3-domain binding protein 2	SH3BP2	0.861937	153.5
ENSGALT0000	SH3-domain binding protein 4	SH3BP4	0.93085	2077.5
ENSGALT0000	SH3-domain binding protein 5 (BTI	SH3BP5	0.921839	971.483
ENSGALT0000	SH3 domain containing 19	SH3D19	0.976243	520.5
ENSGALT0000	SH3-domain GRB2-like 1	SH3GL1	0.946347	3107.01
ENSGALT0000	SH3-domain GRB2-like 2	SH3GL2	0.877036	82.5
ENSGALT0000	SH3-domain GRB2-like 3	SH3GL3	0.880457	132
ENSGALT0000	SH3-domain GRB2-like endophilin	SH3GLB1	0.929843	2025.5
ENSGALT0000	SH3-domain GRB2-like endophilin	SH3GLB2	0.923748	1099.5
ENSGALT0000	SH3-domain kinase binding protein	SH3KBP1	0.925094	1170
ENSGALT0000	SH3 and PX domains 2B	SH3PXD2B	0.833426	1038
ENSGALT0000	SH3 domain containing ring finger	SH3RF1	0.998804	1421.5
ENSGALT0000	SH3 domain containing ring finger	SH3RF2	0.875315	30.5
ENSGALT0000	SH3 domain containing ring finger	SH3RF3	0.656897	194
ENSGALT0000	SH3 domain and tetratricopeptide r	SH3TC1	0.983122	91.9999
ENSGALT0000	SH3 domain and tetratricopeptide r	SH3TC2	0.888929	124.4
ENSGALT0000	SH3 domain containing, Ysc84-like	SH3YL1	0.997063	304
ENSGALT0000	SH3 and multiple ankyrin repeat dc	SHANK2	0.874909	169
ENSGALT0000	SH3 and multiple ankyrin repeat dc	SHANK3	0.848452	83
ENSGALT0000	SHANK-associated RH domain inte	SHARPIN	0.905261	483
ENSGALT0000	SHC (Src homology 2 domain cont	SHC1	0.960257	452
ENSGALT0000	SHC (Src homology 2 domain cont	SHC2	0.57813	973.5
ENSGALT0000	SHC (Src homology 2 domain cont	SHC3	0.945058	9
ENSGALT0000	SHC (Src homology 2 domain cont	SHC4	0.882616	376
ENSGALT0000	SHC SH2-domain binding protein 1	SHCBP1	0.889414	307.5
ENSGALT0000	Src homology 2 domain containing	SHF	0.852158	1395
ENSGALT0000	split hand/foot malformation (ectroc	SHFM1	0.53447	2359.5
ENSGALT0000	sonic hedgehog	SHH	0.86371	68.5
ENSGALT0000	shisa homolog 2 (Xenopus laevis)	SHISA2	0.773208	8425
ENSGALT0000	shisa homolog 5 (Xenopus laevis)	SHISA5	0.909521	2730
ENSGALT0000	shisa homolog 9 (Xenopus laevis)	SHISA9	0.995946	80

ENSGALT0000	serine hydroxymethyltransferase 1	SHMT1	0.665941	434.5
ENSGALT0000	soc-2 suppressor of clear homolog	SHOC2	0.957372	530.5
ENSGALT0000	sedoheptulokinase	SHPK	0.951476	479.5
ENSGALT0000	SNF2 histone linker PHD RING hel	SHPRH	0.98893	783
ENSGALT0000	SHQ1 homolog (S. cerevisiae)	SHQ1	0.861006	207.5
ENSGALT0000	shroom family member 1	SHROOM1	0.447453	26.5
ENSGALT0000	shroom family member 2	SHROOM2	0.972642	1671.5
ENSGALT0000	shroom family member 3	SHROOM3	0.939878	5899.5
ENSGALT0000	sucrase-isomaltase (alpha-glucosic	SI	0.911208	46.5
ENSGALT0000	seven in absentia homolog 1 (Dros	SIAH1	0.891506	610.497
ENSGALT0000	seven in absentia homolog 2 (Dros	SIAH2	0.955967	440
ENSGALT0000	seven in absentia homolog 3 (Dros	SIAH3	0.0980301	2.5
ENSGALT0000	SID1 transmembrane family, memb	SIDT1	0.871321	398.501
ENSGALT0000	SID1 transmembrane family, memb	SIDT2	0.976275	2032.15
ENSGALT0000	single immunoglobulin and toll-inter	SIGIRR	0.876494	153
ENSGALT0000	sialic acid binding Ig-like lectin 15	SIGLEC15	0.649519	0
ENSGALT0000	salt-inducible kinase 1	SIK1	0.973103	1460
ENSGALT0000	salt-inducible kinase 2	SIK2	0.982087	1297
ENSGALT0000	SIK family kinase 3	SIK3	0.969027	1515
ENSGALT0000	suppressor of IKBKE 1	SIKE1	0.730461	2296.99
ENSGALT0000	SIL1 homolog, endoplasmic reticulu	SIL1	0.920756	542.5
ENSGALT0000	single-minded homolog 1 (Drosoph	SIM1	0.649519	0.5
ENSGALT0000	single-minded homolog 2 (Drosoph	SIM2	0.649519	0
ENSGALT0000	SIN3 homolog A, transcription regu	SIN3A	0.981167	3673.5
ENSGALT0000	SIN3 homolog B, transcription regu	SIN3B	0.969957	1203
ENSGALT0000	survival of motor neuron protein int	SIP1	0.860554	827.5
ENSGALT0000	signal-induced proliferation-associa	SIPA1L1	0.994111	3236.5
ENSGALT0000	signal-induced proliferation-associa	SIPA1L2	0.969326	2290.5
ENSGALT0000	signal-regulatory protein alpha	SIRPA	0.973807	835.996
ENSGALT0000	sirtuin 1	SIRT1	0.961715	1357.5
ENSGALT0000	sirtuin (silent mating type informatic	SIRT3	0.970889	1046
ENSGALT0000	sirtuin 5	SIRT5	0.971739	1625.5
ENSGALT0000	sirtuin 6	SIRT6	0.798952	2233
ENSGALT0000	SIVA1, apoptosis-inducing factor	SIVA1	0.569894	805.5
ENSGALT0000	sine oculis homeobox homolog 1	SIX1	0.878597	4170.1
ENSGALT0000	SIX homeobox 6	SIX6	0.325394	5
ENSGALT0000	spindle and kinetochore associated	SKA2	0.804749	2276.5
ENSGALT0000	spindle and kinetochore associated	SKA3	0.833971	385.5
ENSGALT0000	src kinase associated phosphoprot	SKAP2	0.904465	508.5
ENSGALT0000	v-ski sarcoma viral oncogene homo	SKI	0.982769	807.994
ENSGALT0000	SKI-like oncogene	SKIL	0.978994	803.499
ENSGALT0000	superkiller viralicidic activity 2-like (	SKIV2L	0.633987	318.5
ENSGALT0000	superkiller viralicidic activity 2-like 2	SKIV2L2	0.883095	1166.49
ENSGALT0000	SKI family transcriptional corepress	SKOR1	0.272544	15.5
ENSGALT0000	SKI family transcriptional corepress	SKOR2	0.0647758	1
ENSGALT0000	S-phase kinase-associated protein	SKP1	0.870094	8582
ENSGALT0000	S-phase kinase-associated protein	SKP2	0.976863	1659.5
ENSGALT0000	Src-like-adaptor	SLA	0.681497	2.5
ENSGALT0000	SLAIN motif family, member 1	SLAIN1	0.90493	179
ENSGALT0000	SLAIN motif family, member 2	SLAIN2	0.91514	538.5
ENSGALT0000	signaling lymphocytic activation mc	SLAMF1	0.649519	0
ENSGALT0000	SLAM family member 8	SLAMF8	0.754757	66.5
ENSGALT0000	stem-loop binding protein	SLBP	0.878884	369.5
ENSGALT0000	solute carrier family 10 (sodium/bile	SLC10A1	1	0.5
ENSGALT0000	solute carrier family 10 (sodium/bile	SLC10A2	0.722096	1.5
ENSGALT0000	solute carrier family 10 (sodium/bile	SLC10A4	0.401817	147

ENSGALT0000	solute carrier family 10 (sodium/bil	SLC10A7	0.955984	882.498
ENSGALT0000	solute carrier family 11 (proton-cou	SLC11A1	0.990978	162.5
ENSGALT0000	solute carrier family 12 (sodium/pot	SLC12A1	0.933716	6.5
ENSGALT0000	solute carrier family 12 (sodium/pot	SLC12A2	0.938017	2111.05
ENSGALT0000	solute carrier family 12 (sodium/chl	SLC12A3	0.988681	30.5
ENSGALT0000	solute carrier family 12 (potassium/	SLC12A4	0.978001	2596.95
ENSGALT0000	solute carrier family 12 (potassium/	SLC12A5	0.777877	234.554
ENSGALT0000	solute carrier family 12 (potassium/	SLC12A7	0.993192	997.005
ENSGALT0000	solute carrier family 12 (potassium/	SLC12A8	0.964658	212.5
ENSGALT0000	solute carrier family 12 (potassium/	SLC12A9	0.898106	1070.5
ENSGALT0000	solute carrier family 13 (sodium/sul	SLC13A1	0	1
ENSGALT0000	solute carrier family 13 (sodium-de	SLC13A2	0.719627	3.5
ENSGALT0000	solute carrier family 13 (sodium-de	SLC13A3	0.910029	294.5
ENSGALT0000	solute carrier family 13 (sodium/sul	SLC13A4	0.607623	4
ENSGALT0000	solute carrier family 13 (sodium-de	SLC13A5	0.770869	24.5
ENSGALT0000	solute carrier family 14 (urea transp	SLC14A2	0.898356	2
ENSGALT0000	solute carrier family 15 (oligopeptid	SLC15A1	0.742508	5
ENSGALT0000	solute carrier family 15 (H+/peptide	SLC15A2	0.899038	18.5
ENSGALT0000	solute carrier family 15, member 4	SLC15A4	0.969884	714
ENSGALT0000	solute carrier family 15, member 5	SLC15A5	0.524047	0.5
ENSGALT0000	solute carrier family 16, member 1	SLC16A1	0.996356	3792.44
ENSGALT0000	solute carrier family 16, member 10	SLC16A10	0.956509	184
ENSGALT0000	solute carrier family 16, member 12	SLC16A12	0.692545	87
ENSGALT0000	solute carrier family 16, member 13	SLC16A13	0.96456	25
ENSGALT0000	solute carrier family 16, member 14	SLC16A14	0.944986	214.5
ENSGALT0000	solute carrier family 16, member 2	SLC16A2	0.996552	3609.5
ENSGALT0000	solute carrier family 16, member 3	SLC16A3	0.949262	1215
ENSGALT0000	solute carrier family 16, member 4	SLC16A4	0.949875	85
ENSGALT0000	solute carrier family 16, member 5	SLC16A5	0.917564	39
ENSGALT0000	solute carrier family 16, member 6	SLC16A6	0.950186	474
ENSGALT0000	solute carrier family 16, member 7	SLC16A7	0.843071	164
ENSGALT0000	solute carrier family 16, member 8	SLC16A8	0.6669	61.5
ENSGALT0000	solute carrier family 16, member 9	SLC16A9	0.981216	780.142
ENSGALT0000	solute carrier family 17 (anion/suga	SLC17A5	0.974784	1113.5
ENSGALT0000	solute carrier family 17 (sodium-de	SLC17A6	0.653837	125
ENSGALT0000	solute carrier family 17 (sodium-de	SLC17A8	0.29734	18.5
ENSGALT0000	solute carrier family 17, member 9	SLC17A9	0.984505	55
ENSGALT0000	solute carrier family 18 (vesicular m	SLC18A1	0.951461	124
ENSGALT0000	solute carrier family 18 (vesicular m	SLC18A2	0.776106	9
ENSGALT0000	vesicular acetylcholine transporter	SLC18A3	0.862442	67
ENSGALT0000	solute carrier family 19 (folate trans	SLC19A1	0.895996	2101.4
ENSGALT0000	solute carrier family 19 (thiamine tr	SLC19A2	0.988498	164.5
ENSGALT0000	solute carrier family 19, member 3	SLC19A3	0.896148	12.5
ENSGALT0000	solute carrier family 1 (neuronal/epi	SLC1A1	0.955382	100.914
ENSGALT0000	solute carrier family 1 (glial high aff	SLC1A2	0.864245	807.997
ENSGALT0000	solute carrier family 1 (glial high aff	SLC1A3	0.922731	629.499
ENSGALT0000	solute carrier family 1 (glutamate/n	SLC1A4	0.95984	825.5
ENSGALT0000	solute carrier family 1 (high affinity	SLC1A6	0.609758	213.5
ENSGALT0000	solute carrier family 1 (glutamate tr	SLC1A7	0.377772	7
ENSGALT0000	solute carrier family 20 (phosphate	SLC20A1	0.919304	866.5
ENSGALT0000	solute carrier family 20 (phosphate	SLC20A2	0.971987	1571.51
ENSGALT0000	solute carrier family 22 member 13	SLC22A13	0.970481	327.5
ENSGALT0000	solute carrier family 22, member 15	SLC22A15	0.959306	93.5
ENSGALT0000	solute carrier family 22 (organic cat	SLC22A16	0.859517	10
ENSGALT0000	solute carrier family 22, member 18	SLC22A18	0.781338	11
ENSGALT0000	solute carrier family 22 (organic cat	SLC22A2	0.780657	0.5

ENSGALT0000	solute carrier family 22, member 23	SLC22A23	0.961962	1194
ENSGALT0000	solute carrier family 22 (extraneuro	SLC22A3	0.966104	3
ENSGALT0000	solute carrier family 22 (organic cat	SLC22A4	0.830471	12.648
ENSGALT0000	solute carrier family 22 (organic cat	SLC22A5	0.938065	839.854
ENSGALT0000	solute carrier family 22 (organic ani	SLC22A7	0.727601	118.5
ENSGALT0000	solute carrier family 23 (nucleobase	SLC23A1	0.649519	1.5
ENSGALT0000	solute carrier family 23 (nucleobase	SLC23A2	0.951655	1057.01
ENSGALT0000	solute carrier family 23 (nucleobase	SLC23A3	0.687989	0.5
ENSGALT0000	solute carrier family 24 (sodium/pot	SLC24A1	0.818488	0.5
ENSGALT0000	solute carrier family 24 (sodium/pot	SLC24A2	0.85818	69.4999
ENSGALT0000	solute carrier family 24 (sodium/pot	SLC24A3	0.984777	506.5
ENSGALT0000	solute carrier family 24 (sodium/pot	SLC24A4	0.814407	168.5
ENSGALT0000	solute carrier family 24, member 5	SLC24A5	0.986917	558.844
ENSGALT0000	solute carrier family 24 (sodium/pot	SLC24A6	0.987195	215
ENSGALT0000	solute carrier family 25 (mitochond	SLC25A1	0.729101	3101.5
ENSGALT0000	solute carrier family 25 (mitochond	SLC25A10	0.839677	526
ENSGALT0000	solute carrier family 25 (mitochond	SLC25A12	0.945599	1246
ENSGALT0000	solute carrier family 25, member 13	SLC25A13	0.938974	1845.53
ENSGALT0000	solute carrier family 25 (mitochond	SLC25A14	0.690797	1430.97
ENSGALT0000	solute carrier family 25 (mitochond	SLC25A15	0.875113	732.004
ENSGALT0000	solute carrier family 25 (mitochond	SLC25A16	0.995374	271
ENSGALT0000	solute carrier family 25 (mitochond	SLC25A17	0.879014	1094.76
ENSGALT0000	solute carrier family 25 (mitochond	SLC25A19	0.993086	156
ENSGALT0000	solute carrier family 25 (mitochond	SLC25A21	0.994419	63.5
ENSGALT0000	solute carrier family 25 (mitochond	SLC25A22	0.922137	1125.01
ENSGALT0000	solute carrier family 25 (mitochond	SLC25A24	0.90776	599.5
ENSGALT0000	solute carrier family 25 (mitochond	SLC25A25	0.949192	486.002
ENSGALT0000	solute carrier family 25, member 29	SLC25A29	0.95057	622.5
ENSGALT0000	solute carrier family 25 (mitochond	SLC25A3	0.8606	11389.2
ENSGALT0000	solute carrier family 25, member 30	SLC25A30	0.767173	196.5
ENSGALT0000	solute carrier family 25, member 32	SLC25A32	0.96703	631.5
ENSGALT0000	solute carrier family 25, member 33	SLC25A33	0.858529	764.5
ENSGALT0000	solute carrier family 25, member 36	SLC25A36	0.96175	1496.5
ENSGALT0000	solute carrier family 25, member 37	SLC25A37	0.991754	153
ENSGALT0000	solute carrier family 25, member 38	SLC25A38	0.908294	133.5
ENSGALT0000	solute carrier family 25 (mitochond	SLC25A4	0.856963	1821
ENSGALT0000	solute carrier family 25, member 42	SLC25A42	0.985503	117
ENSGALT0000	solute carrier family 25, member 43	SLC25A43	0.883336	187
ENSGALT0000	solute carrier family 25, member 46	SLC25A46	0.948277	531
ENSGALT0000	solute carrier family 25, member 47	SLC25A47	0.937923	86.5
ENSGALT0000	solute carrier family 25 (mitochond	SLC25A5	0.570954	5417
ENSGALT0000	solute carrier family 25 (mitochond	SLC25A6	0.803773	42452.8
ENSGALT0000	solute carrier family 26 (sulfate tran	SLC26A1	1	3
ENSGALT0000	solute carrier family 26, member 11	SLC26A11	0.873665	468.195
ENSGALT0000	solute carrier family 26 (sulfate tran	SLC26A2	0.908899	134.5
ENSGALT0000	solute carrier family 26, member 3	SLC26A3	0.464758	0
ENSGALT0000	solute carrier family 26, member 4	SLC26A4	0.973709	184
ENSGALT0000	solute carrier family 26, member 5	SLC26A5	0.97746	268.5
ENSGALT0000	solute carrier family 26, member 7	SLC26A7	0.649519	1
ENSGALT0000	solute carrier family 26, member 8	SLC26A8	0.988206	145.5
ENSGALT0000	solute carrier family 26, member 9	SLC26A9	0.79312	129
ENSGALT0000	solute carrier family 27, member 1	SLC27A1	0.939967	1112
ENSGALT0000	solute carrier family 27 (fatty acid tr	SLC27A4	0.93299	2220
ENSGALT0000	solute carrier family 27 (fatty acid tr	SLC27A5	0.997745	224.5
ENSGALT0000	solute carrier family 27 (fatty acid tr	SLC27A6	0.709702	15.5
ENSGALT0000	solute carrier family 28 (sodium-cou	SLC28A2	0.937693	76

ENSGALT0000 solute carrier family 28 (sodium-cou	SLC28A3	0.872443	1
ENSGALT0000 solute carrier family 29 (nucleoside	SLC29A1	0.932357	846.5
ENSGALT0000 solute carrier family 29 (nucleoside	SLC29A3	0.913196	191.675
ENSGALT0000 solute carrier family 29 (nucleoside	SLC29A4	0.570252	483.04
ENSGALT0000 solute carrier family 2 (facilitated gl	SLC2A1	0.932975	4924.5
ENSGALT0000 solute carrier family 2 (facilitated gl	SLC2A11	0.948298	33
ENSGALT0000 solute carrier family 2 (facilitated gl	SLC2A12	0.977992	47.5
ENSGALT0000 solute carrier family 2 (facilitated gl	SLC2A2	0.79181	1.5
ENSGALT0000 solute carrier family 2 (facilitated gl	SLC2A3	0.833815	406.002
ENSGALT0000 solute carrier family 2 (facilitated gl	SLC2A5	0.36134	5.5
ENSGALT0000 solute carrier family 2 (facilitated gl	SLC2A8	0.959534	1046
ENSGALT0000 solute carrier family 2 (facilitated gl	SLC2A9	0.697984	151.5
ENSGALT0000 solute carrier family 30 (zinc transp	SLC30A1	0.941584	364
ENSGALT0000 solute carrier family 30, member 10	SLC30A10	0.994942	43.5
ENSGALT0000 solute carrier family 30 (zinc transp	SLC30A2	0.446534	1.5
ENSGALT0000 solute carrier family 30 (zinc transp	SLC30A5	0.990513	1799.04
ENSGALT0000 solute carrier family 30 (zinc transp	SLC30A6	0.995875	607
ENSGALT0000 solute carrier family 30 (zinc transp	SLC30A7	0.98649	709.5
ENSGALT0000 solute carrier family 30 (zinc transp	SLC30A8	0.252982	0
ENSGALT0000 solute carrier family 30 (zinc transp	SLC30A9	0.990085	1047.5
ENSGALT0000 solute carrier family 31 (copper trar	SLC31A1	0.947658	576.5
ENSGALT0000 solute carrier family 31 (copper trar	SLC31A2	0.69444	36.5
ENSGALT0000 solute carrier family 32 (GABA vesi	SLC32A1	0.603682	1
ENSGALT0000 solute carrier family 33 (acetyl-CoA	SLC33A1	0.934651	745.5
ENSGALT0000 solute carrier family 34 (sodium pho	SLC34A1	0.75221	1.5
ENSGALT0000 solute carrier family 34 (sodium pho	SLC34A2	0.80961	12.5
ENSGALT0000 solute carrier family 35 (CMP-sialic	SLC35A1	0.872775	718.5
ENSGALT0000 solute carrier family 35 (UDP-N-ace	SLC35A3	0.990872	261.501
ENSGALT0000 solute carrier family 35, member A4	SLC35A4	0.942187	666
ENSGALT0000 solute carrier family 35, member A5	SLC35A5	0.99053	522
ENSGALT0000 solute carrier family 35, member B1	SLC35B1	0.841649	3784.01
ENSGALT0000 solute carrier family 35, member B2	SLC35B2	0.953066	895.5
ENSGALT0000 solute carrier family 35, member B3	SLC35B3	0.986448	488
ENSGALT0000 solute carrier family 35, member B4	SLC35B4	0.931087	1687.5
ENSGALT0000 solute carrier family 35, member C1	SLC35C1	0.914669	1487.56
ENSGALT0000 solute carrier family 35, member C2	SLC35C2	0.989519	1063.5
ENSGALT0000 solute carrier family 35 (UDP-glucu	SLC35D1	0.995696	580.5
ENSGALT0000 solute carrier family 35, member D2	SLC35D2	0.948255	11.5
ENSGALT0000 solute carrier family 35, member D3	SLC35D3	0.762552	10
ENSGALT0000 solute carrier family 35, member E1	SLC35E1	0.899958	1052.5
ENSGALT0000 solute carrier family 35, member E2	SLC35E2B	0.867797	1097
ENSGALT0000 solute carrier family 35, member E3	SLC35E3	0.959583	2924.5
ENSGALT0000 solute carrier family 35, member F1	SLC35F1	0.939078	1546
ENSGALT0000 solute carrier family 35, member F2	SLC35F2	0.908099	125.5
ENSGALT0000 solute carrier family 35, member F3	SLC35F3	0.743528	394
ENSGALT0000 solute carrier family 35, member F4	SLC35F4	0.965626	14.5
ENSGALT0000 solute carrier family 35, member F5	SLC35F5	0.996416	440
ENSGALT0000 solute carrier family 35, member G	SLC35G1	0.985524	49
ENSGALT0000 solute carrier family 36 (proton/ami	SLC36A4	0.998038	75.5
ENSGALT0000 solute carrier family 37 (glycerol-3-	SLC37A1	0.950783	216.5
ENSGALT0000 solute carrier family 37 (glycerol-3-	SLC37A2	0.772315	162.5
ENSGALT0000 solute carrier family 37 (glycerol-3-	SLC37A3	0.951402	1760.51
ENSGALT0000 solute carrier family 37 (glucose-6-	SLC37A4	0.947282	1882.5
ENSGALT0000 solute carrier family 38, member 1	SLC38A1	0.967168	1791
ENSGALT0000 solute carrier family 38, member 10	SLC38A10	0.969691	10743.5
ENSGALT0000 solute carrier family 38, member 11	SLC38A11	0.943804	32.5

ENSGALT0000	solute carrier family 38, member 2	SLC38A2	0.930109	3613.6
ENSGALT0000	solute carrier family 38, member 4	SLC38A4	0.295989	3
ENSGALT0000	solute carrier family 38, member 5	SLC38A5	0.627171	72
ENSGALT0000	solute carrier family 38, member 6	SLC38A6	0.974223	1199.5
ENSGALT0000	solute carrier family 38, member 7	SLC38A7	0.928538	879.893
ENSGALT0000	solute carrier family 38, member 8	SLC38A8	0.13619	0.5
ENSGALT0000	solute carrier family 38, member 9	SLC38A9	0.991151	195
ENSGALT0000	solute carrier family 39 (zinc transp	SLC39A10	0.993134	1812
ENSGALT0000	solute carrier family 39 (metal ion t	SLC39A11	0.954626	734
ENSGALT0000	solute carrier family 39 (zinc transp	SLC39A12	0.696875	149.5
ENSGALT0000	solute carrier family 39 (zinc transp	SLC39A13	0.995617	1370.5
ENSGALT0000	solute carrier family 39 (zinc transp	SLC39A3	0.93559	359
ENSGALT0000	solute carrier family 39 (zinc transp	SLC39A6	0.971406	1332
ENSGALT0000	solute carrier family 39 (zinc transp	SLC39A8	0.909561	82
ENSGALT0000	solute carrier family 39 (zinc transp	SLC39A9	0.954839	2689
ENSGALT0000	solute carrier family 3 (cystine, diba	SLC3A1	0.991599	76.5
ENSGALT0000	solute carrier family 40 (iron-regula	SLC40A1	0.935627	1116
ENSGALT0000	solute carrier family 41, member 1	SLC41A1	0.988082	936.5
ENSGALT0000	solute carrier family 41, member 2	SLC41A2	0.952937	737.5
ENSGALT0000	solute carrier family 41, member 3	SLC41A3	0.909629	679.5
ENSGALT0000	solute carrier family 43, member 2	SLC43A2	0.912917	492.5
ENSGALT0000	solute carrier family 43, member 3	SLC43A3	0.718422	300
ENSGALT0000	solute carrier family 44, member 1	SLC44A1	0.955537	886
ENSGALT0000	solute carrier family 44, member 3	SLC44A3	0.935622	769
ENSGALT0000	solute carrier family 44, member 5	SLC44A5	0.981657	693
ENSGALT0000	solute carrier family 45, member 1	SLC45A1	0.988433	1255
ENSGALT0000	solute carrier family 45, member 2	SLC45A2	0.766479	205.5
ENSGALT0000	solute carrier family 45, member 3	SLC45A3	0.840467	122
ENSGALT0000	solute carrier family 45, member 4	SLC45A4	0.983358	412.5
ENSGALT0000	solute carrier family 46 (folate trans	SLC46A1	0.963305	526
ENSGALT0000	solute carrier family 46, member 3	SLC46A3	0.985992	107.5
ENSGALT0000	solute carrier family 47, member 1	SLC47A1	0.983034	585.501
ENSGALT0000	solute carrier family 47, member 2	SLC47A2	0.646369	6
ENSGALT0000	hypothetical protein LOC426887	SLC48A1	0.962498	515.5
ENSGALT0000	solute carrier family 4, sodium bica	SLC4A10	0.999072	429
ENSGALT0000	solute carrier family 4, sodium bora	SLC4A11	0.893629	374.5
ENSGALT0000	solute carrier family 4 (anion excha	SLC4A1AP	0.910261	639.997
ENSGALT0000	solute carrier family 4, anion excha	SLC4A3	0.912339	1839.5
ENSGALT0000	solute carrier family 4, sodium bica	SLC4A4	0.927901	1390.04
ENSGALT0000	solute carrier family 4, sodium bica	SLC4A5	0.968682	56.5
ENSGALT0000	solute carrier family 4, sodium bica	SLC4A7	0.934809	563
ENSGALT0000	solute carrier family 4, sodium bica	SLC4A8	0.964708	3979.53
ENSGALT0000	solute carrier family 4, sodium bica	SLC4A9	0.895318	3
ENSGALT0000	solute carrier family 5 (sodium/gluc	SLC5A1	0.864156	36
ENSGALT0000	solute carrier family 5 (sodium/gluc	SLC5A11	0.900654	26.5
ENSGALT0000	solute carrier family 5 (sodium/gluc	SLC5A12	0.722096	0.5
ENSGALT0000	solute carrier family 5 (choline trans	SLC5A7	0.522813	3.5
ENSGALT0000	solute carrier family 5 (iodide transp	SLC5A8	0.540829	2.5
ENSGALT0000	solute carrier family 5 (sodium/gluc	SLC5A9	0.995905	63
ENSGALT0000	solute carrier family 6 (neurotransm	SLC6A1	0.665984	29
ENSGALT0000	solute carrier family 6 (neurotransm	SLC6A11	0.676863	5.5
ENSGALT0000	solute carrier family 6 (neutral amin	SLC6A15	0.866781	361
ENSGALT0000	solute carrier family 6 (neutral amin	SLC6A19	0.534404	1.5
ENSGALT0000	solute carrier family 6 (neurotransm	SLC6A2	0.844676	71.5
ENSGALT0000	solute carrier family 6 (proline IMIN	SLC6A20	0.631223	1
ENSGALT0000	solute carrier family 6 (neurotransm	SLC6A4	0.999048	10

ENSGALT0000	solute carrier family 6 (neurotransn	SLC6A5	0.440513	0.5
ENSGALT0000	solute carrier family 6 (neurotransn	SLC6A6	0.830686	696.5
ENSGALT0000	solute carrier family 6 (neurotransn	SLC6A7	0.430654	4.5
ENSGALT0000	solute carrier family 6 (neurotransn	SLC6A9	0.993388	1754
ENSGALT0000	solute carrier family 7 (cationic ami	SLC7A1	0.952135	708
ENSGALT0000	solute carrier family 7, (neutral ami	SLC7A10	0.916731	167.5
ENSGALT0000	solute carrier family 7 (anionic amir	SLC7A11	0.697918	101.5
ENSGALT0000	solute carrier family 7 (anionic amir	SLC7A13	0.464758	0.5
ENSGALT0000	solute carrier family 7 (orphan trans	SLC7A14	0.640086	97.5001
ENSGALT0000	solute carrier family 7 (cationic ami	SLC7A2	0.98026	46.5
ENSGALT0000	solute carrier family 7 (cationic ami	SLC7A3	0.898469	776
ENSGALT0000	solute carrier family 7 (amino acid t	SLC7A5	0.86566	4911.73
ENSGALT0000	solute carrier family 7 (amino acid t	SLC7A6	0.959449	589
ENSGALT0000	solute carrier family 7, member 6 o	SLC7A6OS	0.889012	696
ENSGALT0000	solute carrier family 7 (amino acid t	SLC7A7	0.974887	46.5
ENSGALT0000	solute carrier family 7 (glycoprotein	SLC7A9	0.983074	22
ENSGALT0000	solute carrier family 8 (sodium/calc	SLC8A1	0.863732	165
ENSGALT0000	solute carrier family 8 (sodium/calc	SLC8A3	0.751141	111
ENSGALT0000	solute carrier family 9 (sodium/hydr	SLC9A1	0.921288	2164.31
ENSGALT0000	solute carrier family 9 (sodium/hydr	SLC9A2	0.679163	280
ENSGALT0000	solute carrier family 9 (sodium/hydr	SLC9A3	0.580104	0.5
ENSGALT0000	solute carrier family 9 (sodium/hydr	SLC9A3R1	0.956999	1111
ENSGALT0000	solute carrier family 9 (sodium/hydr	SLC9A3R2	0.820899	1190
ENSGALT0000	solute carrier family 9 (sodium/hydr	SLC9A4	0.783349	379.001
ENSGALT0000	solute carrier family 9 (sodium/hydr	SLC9A6	0.912064	1343.5
ENSGALT0000	solute carrier family 9 (sodium/hydr	SLC9A7	0.938103	404.5
ENSGALT0000	solute carrier family 9 (sodium/hydr	SLC9A8	0.993493	1489
ENSGALT0000	solute carrier family 9 (sodium/hydr	SLC9A9	0.878584	105.5
ENSGALT0000	solute carrier organic anion transpc	SLCO1A2	0.732378	1.5
ENSGALT0000	solute carrier organic anion transpc	SLCO1B3	0.818488	1
ENSGALT0000	solute carrier organic anion transpc	SLCO1C1	?	0
ENSGALT0000	solute carrier organic anion transpc	SLCO2A1	0.707338	147.5
ENSGALT0000	solute carrier organic anion transpc	SLCO2B1	0.751173	47
ENSGALT0000	solute carrier organic anion transpc	SLCO3A1	0.781522	197
ENSGALT0000	solute carrier organic anion transpc	SLCO4A1	0.878397	191.5
ENSGALT0000	solute carrier organic anion transpc	SLCO5A1	0.989532	1287
ENSGALT0000	slit homolog 2 (Drosophila)	SLIT2	0.992403	2861.53
ENSGALT0000	slit homolog 3 (Drosophila)	SLIT3	0.857944	1817.51
ENSGALT0000	SLIT and NTRK-like family, membe	SLITRK1	0.792914	40.5
ENSGALT0000	SLIT and NTRK-like family, membe	SLITRK2	0.980543	882
ENSGALT0000	SLIT and NTRK-like family, membe	SLITRK4	0.872675	189.5
ENSGALT0000	SLIT and NTRK-like family, membe	SLITRK6	0.997218	912.5
ENSGALT0000	STE20-like kinase	SLK	0.990594	2046.5
ENSGALT0000	sarcolemma associated protein	SLMAP	0.994341	1628
ENSGALT0000	slowmo homolog 1 (Drosophila)	SLMO1	0.819997	440.973
ENSGALT0000	slowmo homolog 2 (Drosophila)	SLMO2	0.962354	1637.01
ENSGALT0000	SAFB-like, transcription modulator	SLTM	0.928932	1949
ENSGALT0000	SLU7 splicing factor homolog (S. c	SLU7	0.980137	1404.49
ENSGALT0000	SLX4 structure-specific endonucle	SLX4	0.952414	1089.5
ENSGALT0000	SMAD family member 1	SMAD1	0.892094	2399.5
ENSGALT0000	SMAD family member 2	SMAD2	0.959878	1499.51
ENSGALT0000	SMAD family member 3	SMAD3	0.997288	2493.96
ENSGALT0000	SMAD family member 5	SMAD5	0.932148	1652.5
ENSGALT0000	SMAD family member 6	SMAD6	0.865204	1799.03
ENSGALT0000	SMAD family member 7	SMAD7	0.923622	396
ENSGALT0000	SMAD family member 9	SMAD9	0.79456	257

ENSGALT0000	small ArfGAP 1	SMAP1	0.976496	2922
ENSGALT0000	small ArfGAP2	SMAP2	0.917188	848.006
ENSGALT0000	SWI/SNF related, matrix associated	SMARCA1	0.956172	1394.5
ENSGALT0000	SWI/SNF related, matrix associated	SMARCA2	0.986372	3019
ENSGALT0000	SWI/SNF related, matrix associated	SMARCA4	0.850047	3185.5
ENSGALT0000	SWI/SNF related, matrix associated	SMARCA5	0.952889	3567.57
ENSGALT0000	SWI/SNF-related, matrix-associate	SMARCAD1	0.979883	1030
ENSGALT0000	SWI/SNF related, matrix associated	SMARCAL1	0.968954	533.5
ENSGALT0000	SWI/SNF related, matrix associated	SMARCB1	0.869033	4292.5
ENSGALT0000	SWI/SNF related, matrix associated	SMARCC1	0.908767	13780.2
ENSGALT0000	SWI/SNF related, matrix associated	SMARCD1	0.896605	3154.5
ENSGALT0000	SWI/SNF related, matrix associated	SMARCD2	0.884253	2364
ENSGALT0000	SWI/SNF related, matrix associated	SMARCD3	0.996974	712.5
ENSGALT0000	SWI/SNF related, matrix associated	SMARCE1	0.922457	10587.5
ENSGALT0000	structural maintenance of chromos	SMC1B	0.649519	0
ENSGALT0000	structural maintenance of chromos	SMC2	0.901999	1994.49
ENSGALT0000	structural maintenance of chromos	SMC3	0.980555	3733.02
ENSGALT0000	structural maintenance of chromos	SMC4	0.944056	1429.49
ENSGALT0000	SMC5 protein	SMC5	0.926853	485.997
ENSGALT0000	structural maintenance of chromos	SMC6	0.986935	639
ENSGALT0000	structural maintenance of chromos	SMCHD1	0.989528	1022.5
ENSGALT0000	Smith-Magenis syndrome chromos	SMCR7	0.894926	185
ENSGALT0000	Smith-Magenis syndrome chromos	SMCR7L	0.929015	593
ENSGALT0000	Smith-Magenis syndrome chromos	SMCR8	0.960906	217.5
ENSGALT0000	SMEK homolog 1, suppressor of m	SMEK1	0.968387	1217.5
ENSGALT0000	SMEK homolog 2, suppressor of m	SMEK2	0.934754	2579.5
ENSGALT0000	smg-1 homolog, phosphatidylinosit	SMG1	0.971302	3352
ENSGALT0000	Smg-5 homolog, nonsense mediate	SMG5	0.966383	1038.5
ENSGALT0000	Smg-6 homolog, nonsense mediate	SMG6	0.956268	1282.5
ENSGALT0000	Smg-7 homolog, nonsense mediate	SMG7	0.954899	2220.5
ENSGALT0000	smg-8 homolog, nonsense mediate	SMG8	0.938573	2317.5
ENSGALT0000	survival motor neuron	SMN	0.880409	1579
ENSGALT0000	survival motor neuron domain cont	SMNDC1	0.955295	730.5
ENSGALT0000	smoothened, frizzled family recepto	SMO	0.945841	4020
ENSGALT0000	SPARC related modular calcium bi	SMOC1	0.559072	95
ENSGALT0000	SPARC related modular calcium bi	SMOC2	0.901811	903
ENSGALT0000	spermine oxidase	SMOX	0.903978	385
ENSGALT0000	sphingomyelin phosphodiesterase	SMPD1	0.972797	34.6499
ENSGALT0000	sphingomyelin phosphodiesterase	SMPD2	0.912981	624
ENSGALT0000	sphingomyelin phosphodiesterase	SMPD3	0.762424	497
ENSGALT0000	sphingomyelin phosphodiesterase	SMPD4	0.990199	685
ENSGALT0000	sphingomyelin phosphodiesterase,	SMPDL3B	0.979913	410.5
ENSGALT0000	small muscle protein, X-linked	SMPX	0.976096	2
ENSGALT0000	spermine synthase	SMS	0.857434	1572
ENSGALT0000	smoothelin	SMTN	0.856089	478.501
ENSGALT0000	smoothelin-like 2	SMTNL2	0.936852	718.106
ENSGALT0000	smu-1 suppressor of mec-8 and un	SMU1	0.954518	4319.5
ENSGALT0000	single-strand-selective monofunctic	SMUG1	0.646558	1177
ENSGALT0000	SMAD specific E3 ubiquitin protein	SMURF1	0.916244	410
ENSGALT0000	SMAD specific E3 ubiquitin protein	SMURF2	0.979243	535
ENSGALT0000	SET and MYND domain containing	SMYD1	0.59243	0.5
ENSGALT0000	SET and MYND domain containing	SMYD2	0.717915	649.5
ENSGALT0000	SET and MYND domain containing	SMYD3	0.9908	56.5
ENSGALT0000	SET and MYND domain containing	SMYD4	0.918234	574.497
ENSGALT0000	SMYD family member 5	SMYD5	0.825288	1630.5
ENSGALT0000	snail homolog 1 (Drosophila)	SNAI1	0.793725	1017

ENSGALT0000	snail homolog 2 (Drosophila)	SNAI2	0.880437	232.936
ENSGALT0000	synaptosomal-associated protein, 2	SNAP23	0.985611	775.5
ENSGALT0000	synaptosomal-associated protein, 2	SNAP25	0.360716	645.498
ENSGALT0000	synaptosomal-associated protein, 2	SNAP29	0.901449	1107
ENSGALT0000	synaptosomal-associated protein, 4	SNAP47	0.924835	321.5
ENSGALT0000	synaptosomal-associated protein, 9	SNAP91	0.668432	1384.51
ENSGALT0000	small nuclear RNA activating comp	SNAPC1	0.910443	665.999
ENSGALT0000	small nuclear RNA activating comp	SNAPC3	0.844521	462
ENSGALT0000	small nuclear RNA activating comp	SNAPC4	0.973791	607.5
ENSGALT0000	small nuclear RNA activating comp	SNAPC5	0.901674	1166
ENSGALT0000	synuclein, alpha (non A4 compone	SNCA	0.340254	27.5
ENSGALT0000	synuclein, alpha interacting protein	SNCAIP	0.797814	1304
ENSGALT0000	synuclein, beta	SNCB	0.507939	589
ENSGALT0000	synuclein, gamma	SNCG	0.00559734	137.5
ENSGALT0000	sushi, nidogen and EGF-like domai	SNED1	0.983833	2611
ENSGALT0000	SNF8, ESCRT-II complex subunit, l	SNF8	0.637667	908
ENSGALT0000	Smad nuclear interacting protein 1	SNIP1	0.933249	964.5
ENSGALT0000	stannin	SNN	0.921636	97.5
ENSGALT0000	Small nucleolar RNA MBII-202	snoMBII-202	0.161718	14
ENSGALT0000	Small nucleolar RNA Me28S-Am98	snoMe28S-Am982	1	0.5
ENSGALT0000	Small nucleolar RNA R11/Z151	snoR11	?	0
ENSGALT0000	Small nucleolar RNA SNORA1	SNORA1	0.596151	6
ENSGALT0000	Small nucleolar RNA SNORA12	SNORA12	0.464758	0
ENSGALT0000	Small nucleolar RNA SNORA13	SNORA13	0.780657	1
ENSGALT0000	Small nucleolar RNA SNORA14	SNORA14	0.746327	1
ENSGALT0000	Small nucleolar RNA SNORA15	SNORA15	0.641802	1
ENSGALT0000	Small nucleolar RNA SNORA16B/S	SNORA16	0.881672	9.5
ENSGALT0000	Small nucleolar RNA SNORA17	SNORA17	0.390283	3.5
ENSGALT0000	Small nucleolar RNA SNORA18	SNORA18	0.997433	29.5
ENSGALT0000	Small nucleolar RNA SNORA19	SNORA19	0.821187	1.5
ENSGALT0000	Small nucleolar RNA SNORA20	SNORA20	0.882433	4
ENSGALT0000	Small nucleolar RNA SNORA21	SNORA21	0.914503	14.5
ENSGALT0000	Small nucleolar RNA SNORA22	SNORA22	0.680622	1
ENSGALT0000	Small nucleolar RNA SNORA23	SNORA23	0.935842	2.5
ENSGALT0000	Small nucleolar RNA SNORA24	SNORA24	0.842641	8.5
ENSGALT0000	Small nucleolar RNA SNORA25	SNORA25	0.96276	25.5
ENSGALT0000	Small nucleolar RNA SNORA26	SNORA26	0.610298	8.5
ENSGALT0000	Small nucleolar RNA SNORA27	SNORA27	0.559671	2.5
ENSGALT0000	Small nucleolar RNA SNORA28	SNORA28	0.963974	6
ENSGALT0000	Small nucleolar RNA SNORA29	SNORA29	0.733661	2
ENSGALT0000	Small nucleolar RNA SNORA3/SN(	SNORA3	0.811905	15
ENSGALT0000	Small nucleolar RNA SNORA31	SNORA31	0.867081	45
ENSGALT0000	Small nucleolar RNA SNORA32	SNORA32	0.859886	9.5
ENSGALT0000	Small nucleolar RNA SNORA33	SNORA33	0.838748	4.5
ENSGALT0000	Small nucleolar RNA SNORA35	SNORA35	0.778348	2
ENSGALT0000	Small nucleolar RNA SNORA36 far	SNORA36	0.956132	9
ENSGALT0000	Small nucleolar RNA SNORA4	SNORA4	0.970051	17
ENSGALT0000	Small nucleolar RNA SNORA40	SNORA40	0.961639	18
ENSGALT0000	Small nucleolar RNA SNORA41	SNORA41	0.824346	4
ENSGALT0000	Small nucleolar RNA SNORA44	SNORA44	0.904885	10
ENSGALT0000	Small nucleolar RNA SNORA46	SNORA46	0.821187	0.5
ENSGALT0000	Small nucleolar RNA SNORA47	SNORA47	0.849633	4.5
ENSGALT0000	Small nucleolar RNA SNORA5	SNORA5	0.84112	15
ENSGALT0000	Small nucleolar RNA SNORA51	SNORA51	0.998956	15.5
ENSGALT0000	Small nucleolar RNA SNORA52	SNORA52	0.75221	1.5
ENSGALT0000	Small nucleolar RNA SNORA53	SNORA53	0.86806	5.5

ENSGALT0000	Small nucleolar RNA SNORA54	SNORA54	0.806823	1
ENSGALT0000	Small nucleolar RNA SNORA55	SNORA55	0.929536	14
ENSGALT0000	Small nucleolar RNA SNORA56	SNORA56	0.828826	1
ENSGALT0000	Small nucleolar RNA SNORA58	SNORA58	0.512345	2
ENSGALT0000	Small nucleolar RNA SNORA61	SNORA61	0.868542	8.5
ENSGALT0000	Small nucleolar RNA SNORA62/SN	SNORA62	0.646923	20
ENSGALT0000	Small nucleolar RNA SNORA63	SNORA63	0.990693	13.5
ENSGALT0000	Small nucleolar RNA SNORA65	SNORA65	0.984457	29
ENSGALT0000	Small nucleolar RNA SNORA66	SNORA66	0.780657	4
ENSGALT0000	Small nucleolar RNA SNORA68	SNORA68	0.464758	7.48E-15
ENSGALT0000	Small nucleolar RNA SNORA69	SNORA69	0.675214	4.5
ENSGALT0000	Small nucleolar RNA SNORA7	SNORA7	0.984177	39
ENSGALT0000	Small nucleolar RNA SNORA71	SNORA71	0.820338	22
ENSGALT0000	Small nucleolar RNA SNORA72	SNORA72	0.773583	1.5
ENSGALT0000	Small nucleolar RNA SNORA73 far	SNORA73	0.579702	23.5
ENSGALT0000	Small nucleolar RNA SNORA74	SNORA74	0.649519	0
ENSGALT0000	Small nucleolar RNA SNORA75	SNORA75	0.928091	4.5
ENSGALT0000	Small nucleolar RNA SNORA76	SNORA76	0.649519	0
ENSGALT0000	Small nucleolar RNA SNORA77	SNORA77	0.947433	5.5
ENSGALT0000	Small nucleolar RNA SNORA8	SNORA8	0.993781	49
ENSGALT0000	Small nucleolar RNA SNORA84	SNORA84	0.464758	0
ENSGALT0000	Small Nucleolar RNA SNORD100	SNORD100	0.712781	51.5
ENSGALT0000	Small nucleolar RNA SNORD101	SNORD101	0.712387	2
ENSGALT0000	Small nucleolar RNA SNORD102	SNORD102	0.927729	1
ENSGALT0000	Small nucleolar RNA SNORD103/S	SNORD103	0.998645	7.5
ENSGALT0000	Small Nucleolar RNA SNORD111	SNORD111	0.464758	0
ENSGALT0000	Small nucleolar RNA SNORD11B	SNORD11B	1	1
ENSGALT0000	Small nucleolar SNORD12/SNORD	SNORD12	0.867316	15
ENSGALT0000	Small nucleolar RNA SNORD121A	SNORD121A	0.603682	1
ENSGALT0000	Small nucleolar RNA SNORD123	SNORD123	0.780657	1.5
ENSGALT0000	Small nucleolar RNA SNORD125	SNORD125	0.832974	6.5
ENSGALT0000	Small nucleolar RNA SNORD127	SNORD127	0.980285	8
ENSGALT0000	Small nucleolar RNA SNORD14	SNORD14	0.864227	27
ENSGALT0000	Small nucleolar RNA SNORD15	SNORD15	0.805033	7
ENSGALT0000	Small nucleolar RNA SNORD16	SNORD16	0.440193	3
ENSGALT0000	Small nucleolar RNA SNORD17	SNORD17	0.616191	23.5
ENSGALT0000	Small nucleolar RNA SNORD18	SNORD18	0.464758	0
ENSGALT0000	Small nucleolar RNA SNORD19	SNORD19	0.464758	1
ENSGALT0000	Small nucleolar RNA SNORD20	SNORD20	0.649519	0.5
ENSGALT0000	Small nucleolar RNA SNORD21	SNORD21	0.31292	34.5
ENSGALT0000	Small nucleolar RNA SNORD24	SNORD24	0.957672	7
ENSGALT0000	Small nucleolar RNA SNORD35	SNORD35	0.475596	34
ENSGALT0000	Small nucleolar RNA SNORD36	SNORD36	0.360463	1
ENSGALT0000	Small nucleolar RNA SNORD37	SNORD37	?	0
ENSGALT0000	Small nucleolar RNA SNORD38	SNORD38	0.594124	31.5
ENSGALT0000	Small nucleolar RNA SNORD43	SNORD43	0.800529	5.5
ENSGALT0000	Small nucleolar RNA SNORD44	SNORD44	0.914923	5.5
ENSGALT0000	Small nucleolar RNA SNORD45	SNORD45	0.967215	4
ENSGALT0000	Small nucleolar RNA SNORD47	SNORD47	0.464758	2.11E-06
ENSGALT0000	Small nucleolar RNA SNORD49	SNORD49	0.740073	2
ENSGALT0000	Small nucleolar RNA SNORD5	SNORD5	?	0
ENSGALT0000	Small nucleolar RNA SNORD50	SNORD50	0.806823	1
ENSGALT0000	Small nucleolar RNA SNORD57	SNORD57	0.683403	2.5
ENSGALT0000	Small nucleolar RNA SNORD58	SNORD58	0.995157	7.5
ENSGALT0000	Small nucleolar RNA SNORD59	SNORD59	0.614288	1
ENSGALT0000	Small nucleolar RNA SNORD61	SNORD61	0.649519	1.5

ENSGALT0000 Small nucleolar RNA SNORD62	SNORD62	0.562993	0	
ENSGALT0000 Small nucleolar RNA SNORD63	SNORD63	0	0	
ENSGALT0000 Small nucleolar RNA SNORD65	SNORD65	0.690534	0.5	
ENSGALT0000 Small nucleolar RNA SNORD66	SNORD66	0.760726	1	
ENSGALT0000 Small nucleolar RNA SNORD67	SNORD67	0.406098	5	
ENSGALT0000 Small nucleolar RNA SNORD69	SNORD69	0.603682	0.5	
ENSGALT0000 Small nucleolar RNA SNORD70	SNORD70	0.464758	0	
ENSGALT0000 Small nucleolar RNA SNORD71	SNORD71	0.419108	4.5	
ENSGALT0000 Small nucleolar RNA SNORD72	SNORD72	0.464758	0.5	
ENSGALT0000 Small nucleolar RNA SNORD73	SNORD73	0.539038	0	
ENSGALT0000 Small nucleolar RNA SNORD74	SNORD74	0.690314	6	
ENSGALT0000 Small nucleolar RNA SNORD75	SNORD75	0.464758	0	
ENSGALT0000 Small nucleolar RNA SNORD77	SNORD77	?	0	
ENSGALT0000 Small nucleolar RNA SNORD78	SNORD78	0.464758	0	
ENSGALT0000 Small nucleolar RNA SNORD79	SNORD79	0.886864	2	
ENSGALT0000 Small nucleolar RNA SNORD81	SNORD81	0.754955	4.5	
ENSGALT0000 Small nucleolar RNA SNORD82	SNORD82	0.603682	1	
ENSGALT0000 Small nucleolar RNA SNORD83	SNORD83	0.63545	2.5	
ENSGALT0000 Small nucleolar RNA SNORD87	SNORD87	0.722096	1.5	
ENSGALT0000 Small nucleolar RNA SNORD88	SNORD88	0.539038	2	
ENSGALT0000 Small nucleolar RNA SNORD89	SNORD89	0.93805	21.5	
ENSGALT0000 Small nucleolar RNA SNORD90	SNORD90	0.464758	0	
ENSGALT0000 Small nucleolar RNA SNORD91 far	SNORD91	0.22129	0.5	
ENSGALT0000 Small Nucleolar RNA SNORD93	SNORD93	0.649519	0.5	
ENSGALT0000 Small Nucleolar RNA SNORD94	SNORD94	0.757978	10	
ENSGALT0000 Small nucleolar RNA SNORD95	SNORD95	?	0	
ENSGALT0000 Small Nucleolar RNA SNORD98	SNORD98	0.464758	0	
ENSGALT0000 Small Nucleolar RNA SNORD99	SNORD99	0.880635	3.5	
ENSGALT0000 Small nucleolar RNA snR60/Z15/Z1	snosnR60_Z15	0.905659	4	
ENSGALT0000 Small nucleolar RNA U109	snoU109	0.968204	7.5	
ENSGALT0000 Small nucleolar RNA U13	snoU13	0.424745	2.5	
ENSGALT0000 Small nucleolar RNA U2-19	snoU2_19	0.707201	81	
ENSGALT0000 Small nucleolar RNA U2-30	snoU2-30	0.667601	13	
ENSGALT0000 Small nucleolar RNA U54	snoU54	0.932599	1	
ENSGALT0000 Small nucleolar RNA U83B	snoU83B	0.534404	7	
ENSGALT0000 Small nucleolar RNA U85	snoU85	0.992797	5.5	
ENSGALT0000 Small nucleolar RNA U90	snoU90	0.863407	170.5	
ENSGALT0000 Small nucleolar RNA U97	snoU97	0.946291	57.5	
ENSGALT0000 Small nucleolar RNA Z17	snoZ17	0.464758	0	
ENSGALT0000 Z30 small nucleolar RNA	snoZ30	0.464758	1	
ENSGALT0000 Small nucleolar RNA Z39	snoZ39	?	0	
ENSGALT0000 Small nucleolar RNA Z40	snoZ40	0.90773	1.5	
ENSGALT0000 Small nucleolar RNA snR39B	snR39B	0.839856	13.5	
ENSGALT0000 Small nucleolar RNA snR47	snR47	0.675556	1.5	
ENSGALT0000 SNF related kinase	SNRK	0.885603	558	
ENSGALT0000 small nuclear ribonucleoprotein 27k	SNRNP27	0.76251	1436.5	
ENSGALT0000 small nuclear ribonucleoprotein 35k	SNRNP35	0.932266	204.5	
ENSGALT0000 small nuclear ribonucleoprotein 40k	SNRNP40	0.786365	2217.53	
ENSGALT0000 small nuclear ribonucleoprotein 48k	SNRNP48	0.641321	273	
ENSGALT0000 small nuclear ribonucleoprotein pol	SNRPA1	0.726311	1569.5	
ENSGALT0000 small nuclear ribonucleoprotein pol	SNRPB	0.204786	5366	
ENSGALT0000 small nuclear ribonucleoprotein pol	SNRPB2	0.847403	1727.5	
ENSGALT0000 small nuclear ribonucleoprotein pol	SNRPC	0.800255	2093.5	
ENSGALT0000 small nuclear ribonucleoprotein D1	SNRPD1	0.468736	2649	
ENSGALT0000 small nuclear ribonucleoprotein D3	SNRPD3	0.344618	5952.5	
ENSGALT0000 small nuclear ribonucleoprotein pol	SNRPE	0.349179	3140	

ENSGALT0000	small nuclear ribonucleoprotein pol	SNRPF	0.182338	3213.5
ENSGALT0000	syntrophin, beta 1 (dystrophin-asso	SNTB1	0.936133	3987.59
ENSGALT0000	syntrophin, beta 2 (dystrophin-asso	SNTB2	0.990592	110
ENSGALT0000	syntrophin, gamma 1	SNTG1	0.93885	131
ENSGALT0000	syntrophin, gamma 2	SNTG2	0.983003	21.5
ENSGALT0000	sentan, cilia apical structure protein	SNTN	1	0.5
ENSGALT0000	snurportin 1	SNUPN	0.878143	822.997
ENSGALT0000	SNW domain containing 1	SNW1	0.911465	2055.5
ENSGALT0000	sorting nexin 1	SNX1	0.87092	2518
ENSGALT0000	sorting nexin 10	SNX10	0.661574	253.499
ENSGALT0000	sorting nexin 11	SNX11	0.823924	365.5
ENSGALT0000	sorting nexin 12	SNX12	0.751482	4657
ENSGALT0000	sorting nexin 13	SNX13	0.984956	728.5
ENSGALT0000	sorting nexin 14	SNX14	0.97036	1429.48
ENSGALT0000	sorting nexin 16	SNX16	0.934033	262
ENSGALT0000	sorting nexin 17	SNX17	0.896011	3356.5
ENSGALT0000	sorting nexin 18	SNX18	0.86275	467
ENSGALT0000	sorting nexin 19	SNX19	0.975248	977.5
ENSGALT0000	sorting nexin 2	SNX2	0.855197	1273.5
ENSGALT0000	sorting nexin 20	SNX20	0.992324	86.6988
ENSGALT0000	sorting nexin family member 21	SNX21	0.755269	293.422
ENSGALT0000	sorting nexin 22	SNX22	0.957025	43.5
ENSGALT0000	sorting nexin 24	SNX24	0.946044	168
ENSGALT0000	sorting nexin 25	SNX25	0.952042	694.5
ENSGALT0000	sorting nexin family member 27	SNX27	0.828405	1945.98
ENSGALT0000	sorting nexin 29	SNX29	0.98908	114.5
ENSGALT0000	sorting nexin 29 pseudogene 2	SNX29P2	0.989142	79
ENSGALT0000	sorting nexin 3	SNX3	0.876209	1590.5
ENSGALT0000	sorting nexin family member 30	SNX30	0.922586	405.5
ENSGALT0000	sorting nexin 33	SNX33	0.977864	1031.5
ENSGALT0000	sorting nexin 4	SNX4	0.974457	1844.5
ENSGALT0000	sorting nexin 5	SNX5	0.905773	361
ENSGALT0000	sorting nexin 6	SNX6	0.923205	2187.5
ENSGALT0000	sorting nexin 7	SNX7	0.8492	611.5
ENSGALT0000	sorting nexin 8	SNX8	0.914677	194
ENSGALT0000	sorting nexin 9	SNX9	0.999675	1259
ENSGALT0000	sterol O-acyltransferase 1	SOAT1	0.982484	925.5
ENSGALT0000	Sine oculis-binding protein homolog	SOBP	0.968751	745
ENSGALT0000	suppressor of cytokine signaling 1	SOCS1	0.855035	176.5
ENSGALT0000	suppressor of cytokine signalling 1-	SOCS1B	0.974068	130.5
ENSGALT0000	suppressor of cytokine signaling 2	SOCS2	0.741344	356.5
ENSGALT0000	suppressor of cytokine signaling 3	SOCS3	0.950819	57
ENSGALT0000	suppressor of cytokine signaling 4	SOCS4	0.856654	271
ENSGALT0000	Suppressor of cytokine signaling 5l	SOCS5	0.861715	942.5
ENSGALT0000	Suppressor of cytokine signaling 6l	SOCS6	0.99012	385.5
ENSGALT0000	suppressor of cytokine signaling 7	SOCS7	0.918648	405.5
ENSGALT0000	superoxide dismutase 1, soluble	SOD1	0.521455	3332.49
ENSGALT0000	superoxide dismutase 2, mitochond	SOD2	0.709232	1176.5
ENSGALT0000	superoxide dismutase 3, extracellul	SOD3	0.90773	10
ENSGALT0000	sensory organ homeobox protein S	SOHO-1	0.563069	323.489
ENSGALT0000	small optic lobes homolog (Drosopl	SOLH	0.96705	1073
ENSGALT0000	SON DNA binding protein	SON	0.983051	2079.5
ENSGALT0000	sorbin and SH3 domain containing	SORBS1	0.844406	728
ENSGALT0000	sorbin and SH3 domain containing	SORBS2	0.924136	1149
ENSGALT0000	sortilin-related VPS10 domain cont	SORCS1	0.931378	2760.5
ENSGALT0000	sortilin-related VPS10 domain cont	SORCS2	0.955983	299.5

ENSGALT0000	sortilin-related VPS10 domain cont	SORCS3	0.743698	1109
ENSGALT0000	sorbitol dehydrogenase	SORD	0.808501	1047.5
ENSGALT0000	sortilin-related receptor, L(DLR clas	SORL1	0.995402	2464
ENSGALT0000	son of sevenless homolog 1 (Drosc	SOS1	0.956638	1121
ENSGALT0000	son of sevenless homolog 2 (Drosc	SOS2	0.95628	1604.5
ENSGALT0000	sclerostin	SOST	0.998974	10.5
ENSGALT0000	Sclerostin domain-containing prote	SOSTDC1	0.734514	147.5
ENSGALT0000	SOUL protein	SOUL	0.994889	197.5
ENSGALT0000	SRY (sex determining region Y)-bo	SOX10	0.967635	22405.4
ENSGALT0000	SRY (sex determining region Y)-bo	SOX11	0.851447	4230.5
ENSGALT0000	SRY (sex determining region Y)-bo	SOX13	0.97359	1638
ENSGALT0000	SRY (sex determining region Y)-bo	SOX14	0.463738	41.5
ENSGALT0000	\N	SOX18	0.757119	69.5
ENSGALT0000	SRY (sex determining region Y)-bo	SOX2	0.820388	2013.38
ENSGALT0000	SRY (sex determining region Y)-bo	SOX3	0.412487	97.1217
ENSGALT0000	SRY (sex determining region Y)-bo	SOX30	0.293034	0
ENSGALT0000	SRY (sex determining region Y)-bo	SOX5	0.992778	889.005
ENSGALT0000	SRY (sex determining region Y)-bo	SOX6	0.972971	305
ENSGALT0000	SRY (sex determining region Y)-bo	SOX7	0.715424	39.5763
ENSGALT0000	SRY (sex determining region Y)-bo	SOX8	0.981654	3584.1
ENSGALT0000	SRY (sex determining region Y)-bo	SOX9	0.884032	2534.94
ENSGALT0000	Sp1 transcription factor	SP1	0.97491	170.185
ENSGALT0000	Sp2 transcription factor	SP2	0.9353	739.5
ENSGALT0000	Sp3 transcription factor	SP3	0.973082	1853
ENSGALT0000	Sp4 transcription factor	SP4	0.999997	1082.5
ENSGALT0000	Sp8 transcription factor	SP8	0.929706	163.315
ENSGALT0000	sperm acrosome associated 1	SPACA1	0.740073	2
ENSGALT0000	sperm associated antigen 1	SPAG1	0.997488	126.5
ENSGALT0000	sperm associated antigen 17	SPAG17	0.942391	205
ENSGALT0000	sperm associated antigen 6	SPAG6	0.966787	374.5
ENSGALT0000	sperm associated antigen 9	SPAG9	0.967835	4593.84
ENSGALT0000	sperm adhesion molecule 1 (PH-20	SPAM1	0.603682	0
ENSGALT0000	secreted protein, acidic, cysteine-ri	SPARC	0.974762	35791.5
ENSGALT0000	SPARC-like 1 (hevin)	SPARCL1	0.763245	140
ENSGALT0000	spastin	SPAST	0.951338	1197.98
ENSGALT0000	spermatogenesis associated 1	SPATA1	0.997096	63
ENSGALT0000	spermatogenesis associated 13	SPATA13	0.981716	1636.5
ENSGALT0000	spermatogenesis associated 16	SPATA16	0.464758	0
ENSGALT0000	spermatogenesis associated 17	SPATA17	0.987462	95
ENSGALT0000	spermatogenesis associated 18 ho	SPATA18	0.914865	160
ENSGALT0000	spermatogenesis associated 2	SPATA2	0.945924	338.5
ENSGALT0000	spermatogenesis associated 20	SPATA20	0.926886	1175.5
ENSGALT0000	spermatogenesis associated 2-like	SPATA2L	0.94551	114
ENSGALT0000	spermatogenesis associated 4	SPATA4	0.893851	20.2767
ENSGALT0000	spermatogenesis associated 5	SPATA5	0.939983	740
ENSGALT0000	spermatogenesis associated 5-like	SPATA5L1	0.924893	487
ENSGALT0000	spermatogenesis associated 6	SPATA6	0.987339	834.505
ENSGALT0000	spermatogenesis associated 7	SPATA7	0.945625	70
ENSGALT0000	spermatogenesis associated, serin	SPATS2	0.881215	1376.5
ENSGALT0000	spermatogenesis associated, serin	SPATS2L	0.946183	742.5
ENSGALT0000	SPC25, NDC80 kinetochore compl	SPC25	0.830489	479
ENSGALT0000	signal peptidase complex subunit 1	SPCS1	0.547962	1259.5
ENSGALT0000	signal peptidase complex subunit 2	SPCS2	0.563881	1810
ENSGALT0000	signal peptidase complex subunit 3	SPCS3	0.9733	847.497
ENSGALT0000	SAM pointed domain containing ets	SPDEF	0.882378	22.5
ENSGALT0000	speedy homolog A (Xenopus laevis	SPDYA	0.872541	38.3657

ENSGALT0000	sperm antigen with calponin homol	SPECC1	0.941109	1682
ENSGALT0000	sperm antigen with calponin homol	SPECC1L	0.996185	4572.97
ENSGALT0000	spen homolog, transcriptional regul	SPEN	0.982538	7012.65
ENSGALT0000	spermatid associated	SPERT	0.320565	0
ENSGALT0000	spastic paraplegia 11 (autosomal re	SPG11	0.979035	2651.51
ENSGALT0000	spastic paraplegia 20 (Troyer syndr	SPG20	0.957833	190
ENSGALT0000	spastic paraplegia 21 (autosomal re	SPG21	0.970429	1243
ENSGALT0000	spastic paraplegia 7 (pure and com	SPG7	0.923391	5516.5
ENSGALT0000	sphingosine kinase 1	SPHK1	0.653776	572
ENSGALT0000	SPHK1 interactor, AKAP domain co	SPHKAP	0.660419	9
ENSGALT0000	spleen focus forming virus (SFFV)	SPI1	0.524061	26
ENSGALT0000	Spi-C transcription factor (Spi-1/PU	SPIC	0.464758	0
ENSGALT0000	spindle and centriole associated pr	SPICE1	0.999684	1150.67
ENSGALT0000	serine peptidase inhibitor, Kazal typ	SPINK1	?	0
ENSGALT0000	serine peptidase inhibitor, Kazal typ	SPINK4	0.889974	31.5
ENSGALT0000	serine peptidase inhibitor, Kazal typ	SPINK6	?	0
ENSGALT0000	serine peptidase inhibitor, Kazal typ	SPINK7	0.603682	0.5
ENSGALT0000	serine peptidase inhibitor, Kunitz ty	SPINT1	0.999667	4177.5
ENSGALT0000	spindlin 1	SPINZ	0.920972	1872.51
ENSGALT0000	spire homolog 1 (Drosophila)	SPIRE1	0.78449	696.504
ENSGALT0000	spire homolog 2 (Drosophila)	SPIRE2	0.70888	2393
ENSGALT0000	spinster homolog 2 (Drosophila)	SPNS2	0.699652	26
ENSGALT0000	spinster homolog 3 (Drosophila)	SPNS3	0.665306	5
ENSGALT0000	SPO11 meiotic protein covalently b	SPO11	0.934011	8
ENSGALT0000	sparc/osteonectin, cwcv and kazal-	SPOCK1	0.869851	9499.5
ENSGALT0000	sparc/osteonectin, cwcv and kazal-	SPOCK3	0.780065	609
ENSGALT0000	spondin 1, extracellular matrix prote	SPON1	0.803991	353
ENSGALT0000	spondin 2, extracellular matrix prote	SPON2	0.915041	29.5
ENSGALT0000	speckle-type POZ protein	SPOP	0.94534	1326.5
ENSGALT0000	speckle-type POZ protein-like	SPOPL	0.974039	329.5
ENSGALT0000	secreted phosphoprotein 1	SPP1	0.211986	21
ENSGALT0000	secreted phosphoprotein 2, 24kDa	SPP2	0.708164	2
ENSGALT0000	signal peptide peptidase-like 2A	SPPL2A	0.99075	4746.37
ENSGALT0000	signal peptide peptidase like 2B	SPPL2B	0.958112	2537.5
ENSGALT0000	sepiapterin reductase (7,8-dihydrob	SPR	0.857732	800.5
ENSGALT0000	sprouty-related, EVH1 domain cont	SPRED1	0.940041	545
ENSGALT0000	sprouty-related, EVH1 domain cont	SPRED2	0.981328	1042
ENSGALT0000	sprouty homolog 2	SPRY2	0.978089	1922.01
ENSGALT0000	sprouty homolog 3 (Drosophila)	SPRY3	0.873625	47
ENSGALT0000	SPRY domain containing 7	SPRYD7	0.851463	743.5
ENSGALT0000	splA/ryanodine receptor domain an	SPSB1	0.940052	319.5
ENSGALT0000	splA/ryanodine receptor domain an	SPSB3	0.944782	1015.5
ENSGALT0000	splA/ryanodine receptor domain an	SPSB4	0.581894	89.5
ENSGALT0000	spectrin, alpha, non-erythrocytic 1 (	SPTAN1	0.894798	16743.8
ENSGALT0000	spectrin, beta, erythrocytic	SPTB	0.895869	641
ENSGALT0000	spectrin, beta, non-erythrocytic 1	SPTBN1	0.859378	16181.5
ENSGALT0000	spectrin, beta, non-erythrocytic 5	SPTBN5	0.824063	43.5
ENSGALT0000	serine palmitoyltransferase, long ch	SPTLC1	0.989048	676
ENSGALT0000	serine palmitoyltransferase, long ch	SPTLC2	0.978039	810
ENSGALT0000	serine palmitoyltransferase, long ch	SPTLC3	0.808909	10
ENSGALT0000	serine palmitoyltransferase, small s	SPTSSA	0.403582	312
ENSGALT0000	SPT2, Suppressor of Ty, domain co	SPTY2D1	0.969853	362
ENSGALT0000	squalene monooxygenase	SQLE	0.773375	588.5
ENSGALT0000	sulfide quinone reductase-like (yea	SQRDL	0.990994	189.5
ENSGALT0000	sequestosome 1	SQSTM1	0.698533	1144
ENSGALT0000	steroid receptor RNA activator 1	SRA1	0.585157	1291.5

ENSGALT0000	S1 RNA binding domain 1	SRBD1	0.970501	1007
ENSGALT0000	v-src sarcoma viral oncogene	SRC	0.95528	3338.88
ENSGALT0000	SRC kinase signaling inhibitor 1	SRCIN1	0.968266	2375
ENSGALT0000	steroid-5-alpha-reductase, alpha p	SRD5A1	0.952154	187
ENSGALT0000	steroid-5-alpha-reductase, alpha p	SRD5A2	0.943902	37.5
ENSGALT0000	steroid 5 alpha-reductase 3	SRD5A3	0.917533	1569.5
ENSGALT0000	sterol regulatory element binding tr	SREBF2	0.887036	6191.23
ENSGALT0000	splicing regulatory glutamine/lysine	SREK1	0.963413	910
ENSGALT0000	SREK1-interacting protein 1	SREK1IP1	0.84356	83.5
ENSGALT0000	serum response factor (c-fos serum	SRF	0.911586	1261.5
ENSGALT0000	serum response factor binding prot	SRFBP1	0.944435	504
ENSGALT0000	SLIT-ROBO Rho GTPase activating	SRGAP1	0.991049	2674
ENSGALT0000	SLIT-ROBO Rho GTPase activating	SRGAP2	0.982894	2024.5
ENSGALT0000	SLIT-ROBO Rho GTPase activating	SRGAP3	0.92142	4362.74
ENSGALT0000	serglycin	SRGN	0.395467	19.9379
ENSGALT0000	sorcin	SRI	0.819749	1521.5
ENSGALT0000	sarcalumenin	SRL	0.887979	101.5
ENSGALT0000	spermidine synthase	SRM	0.866206	884.162
ENSGALT0000	src-related kinase lacking C-termin	SRMS	0.985882	2.5
ENSGALT0000	signal recognition particle 14kDa (h	SRP14	0.904993	2275
ENSGALT0000	signal recognition particle 19kDa	SRP19	0.963125	926
ENSGALT0000	signal recognition particle 54kDa	SRP54	0.972734	1176.5
ENSGALT0000	signal recognition particle 68kDa	SRP68	0.943974	3254
ENSGALT0000	signal recognition particle 72kDa	SRP72	0.926362	4418.17
ENSGALT0000	signal recognition particle 9kDa	SRP9	0.947176	1770
ENSGALT0000	SFRS protein kinase 1	SRPK1	0.949277	2239.5
ENSGALT0000	SRSF protein kinase 2	SRPK2	0.984284	1327.49
ENSGALT0000	signal recognition particle receptor	SRPR	0.937773	6191
ENSGALT0000	sushi-repeat containing protein, X-l	SRPX	0.727199	2061
ENSGALT0000	sushi-repeat containing protein, X-l	SRPX2	0.991542	182
ENSGALT0000	serine racemase	SRR	0.876893	377.5
ENSGALT0000	SRR1 domain containing	SRRD	0.654568	605.274
ENSGALT0000	serine/arginine repetitive matrix 1	SRRM1	0.986219	6825.11
ENSGALT0000	serine/arginine repetitive matrix 3	SRRM3	0.620027	119
ENSGALT0000	serine/arginine repetitive matrix 4	SRRM4	0.777686	181.5
ENSGALT0000	serine/arginine-rich splicing factor 1	SRSF1	0.947385	6824.03
ENSGALT0000	serine/arginine-rich splicing factor 1	SRSF10	0.906197	3314
ENSGALT0000	serine/arginine-rich splicing factor 1	SRSF11	0.976183	3786.42
ENSGALT0000	serine/arginine-rich splicing factor 3	SRSF3	0.672116	9711
ENSGALT0000	serine/arginine-rich splicing factor 4	SRSF4	0.824134	1192.49
ENSGALT0000	serine/arginine-rich splicing factor 5	SRSF5	0.917659	6961.26
ENSGALT0000	serine/arginine-rich splicing factor 5	SRSF5A	0.93416	4201.99
ENSGALT0000	serine/arginine-rich splicing factor 6	SRSF6	0.971687	6829
ENSGALT0000	splicing factor, arginine/serine-rich	SRSF7	0.854292	4938.58
ENSGALT0000	synovial sarcoma translocation, chr	SS18	0.980144	5067.59
ENSGALT0000	synovial sarcoma translocation gen	SS18L1	0.740787	179
ENSGALT0000	synovial sarcoma translocation gen	SS18L2	0.345472	485.756
ENSGALT0000	somatostatin II	SS2	0.979998	13
ENSGALT0000	Sjogren syndrome antigen B (autoa	SSB	0.935303	1279.87
ENSGALT0000	single-stranded DNA binding protei	SSBP1	0.653945	1373
ENSGALT0000	single-stranded DNA binding protei	SSBP2	0.998548	587.5
ENSGALT0000	single stranded DNA binding protei	SSBP3	0.913917	4645.98
ENSGALT0000	scavenger receptor cysteine rich d	SSC5D	0.996114	75.5
ENSGALT0000	sperm specific antigen 2	SSFA2	0.983792	776.5
ENSGALT0000	slingshot homolog 1 (Drosophila)	SSH1	0.978974	1004
ENSGALT0000	slingshot homolog 2 (Drosophila)	SSH2	0.995145	1677.52

ENSGALT0000	Sjogren syndrome nuclear autoanti	SSNA1	0.92908	190.5
ENSGALT0000	sarcospan (Kras oncogene-associa	SSPN	0.889233	26
ENSGALT0000	SCO-spondin homolog (Bos taurus	SSPO	0.98833	8
ENSGALT0000	signal sequence receptor, alpha	SSR1	0.948687	6685.5
ENSGALT0000	signal sequence receptor, beta (tra	SSR2	0.932842	5071.5
ENSGALT0000	signal sequence receptor, gamma (	SSR3	0.885742	4236.5
ENSGALT0000	structure specific recognition protei	SSRP1	0.870733	6632.29
ENSGALT0000	somatostatin	SST	0.362524	86.5
ENSGALT0000	somatostatin receptor 1	SSTR1	0.834102	108.79
ENSGALT0000	somatostatin receptor 2	SSTR2	0.895232	436.498
ENSGALT0000	somatostatin receptor 3	SSTR3	0.722256	9.5
ENSGALT0000	somatostatin receptor 4	SSTR4	0.633396	116.5
ENSGALT0000	somatostatin receptor 5	SSTR5	0.785948	508
ENSGALT0000	SSU72 RNA polymerase II CTD ph	SSU72	0.802977	1193
ENSGALT0000	synovial sarcoma, X breakpoint 2 ir	SSX2IP	0.913752	1015.01
ENSGALT0000	suppression of tumorigenicity 13 (c	ST13	0.96385	4151
ENSGALT0000	suppression of tumorigenicity 14 (c	ST14	0.975846	7757
ENSGALT0000	suppression of tumorigenicity 18 (b	ST18	0.639159	85.5
ENSGALT0000	ST3 beta-galactoside alpha-2,3-sia	ST3GAL1	0.961972	3384.5
ENSGALT0000	ST3 beta-galactoside alpha-2,3-sia	ST3GAL2	0.930451	345.5
ENSGALT0000	ST3 beta-galactoside alpha-2,3-sia	ST3GAL3	0.929261	538.999
ENSGALT0000	ST3 beta-galactoside alpha-2,3-sia	ST3GAL4	0.86146	1439.02
ENSGALT0000	ST3 beta-galactoside alpha-2,3-sia	ST3GAL5	0.715478	125.863
ENSGALT0000	ST3 beta-galactoside alpha-2,3-sia	ST3GAL6	0.987046	1245.5
ENSGALT0000	suppression of tumorigenicity 5	ST5	0.94044	2347
ENSGALT0000	ST6 beta-galactosamide alpha-2,6-	ST6GAL1	0.967152	720.5
ENSGALT0000	ST6 beta-galactosamide alpha-2,6-	ST6GAL2	0.98183	589.001
ENSGALT0000	ST6 (alpha-N-acetyl-neuraminyl-2,:	ST6GALNAC1	0.98635	59
ENSGALT0000	ST6 (alpha-N-acetyl-neuraminyl-2,:	ST6GALNAC2	0.806232	2415.5
ENSGALT0000	ST6 (alpha-N-acetyl-neuraminyl-2,:	ST6GALNAC3	0.795695	71.5
ENSGALT0000	ST6 (alpha-N-acetyl-neuraminyl-2,:	ST6GALNAC4	0.85222	407.498
ENSGALT0000	ST6 (alpha-N-acetyl-neuraminyl-2,:	ST6GALNAC5	0.965629	612.5
ENSGALT0000	ST6 (alpha-N-acetyl-neuraminyl-2,:	ST6GALNAC6	0.881826	384
ENSGALT0000	suppression of tumorigenicity 7	ST7	0.805872	270.5
ENSGALT0000	suppression of tumorigenicity 7 like	ST7L	0.982342	1259
ENSGALT0000	ST8 alpha-N-acetyl-neuraminide al	ST8SIA1	0.738976	414.501
ENSGALT0000	ST8 alpha-N-acetyl-neuraminide al	ST8SIA2	0.71273	1810
ENSGALT0000	ST8 alpha-N-acetyl-neuraminide al	ST8SIA3	0.700112	19.8586
ENSGALT0000	ST8 alpha-N-acetyl-neuraminide al	ST8SIA4	0.923624	79
ENSGALT0000	ST8 alpha-N-acetyl-neuraminide al	ST8SIA5	0.825385	144.5
ENSGALT0000	ST8 alpha-N-acetyl-neuraminide al	ST8SIA6	0.883038	325
ENSGALT0000	stabilin 1	STAB1	0.923432	500.5
ENSGALT0000	stabilin 2	STAB2	0.845042	57.5
ENSGALT0000	SH3 and cysteine rich domain	STAC	0.898971	135.5
ENSGALT0000	stromal antigen 1	STAG1	0.982243	1638.53
ENSGALT0000	stromal antigen 2	STAG2	0.997354	3010.09
ENSGALT0000	stromal antigen 3	STAG3	0.970911	570
ENSGALT0000	signal transducing adaptor molecul	STAM	0.964425	890
ENSGALT0000	signal transducing adaptor molecul	STAM2	0.959158	583.004
ENSGALT0000	STAM binding protein	STAMBP	0.971983	766
ENSGALT0000	STAM binding protein-like 1	STAMBPL1	0.882404	197
ENSGALT0000	signal transducing adaptor family m	STAP1	0.853236	3
ENSGALT0000	steroidogenic acute regulatory prot	STAR	0.878686	42.5
ENSGALT0000	StAR-related lipid transfer (START)	STARD10	0.415108	672
ENSGALT0000	StAR-related lipid transfer (START)	STARD13	0.774	292.5
ENSGALT0000	StAR-related lipid transfer (START)	STARD3	0.930205	850

ENSGALT0000	STARD3 N-terminal like	STARD3NL	0.957358	686.5
ENSGALT0000	StAR-related lipid transfer (START)	STARD4	0.797213	430.5
ENSGALT0000	StAR-related lipid transfer (START)	STARD5	0.976172	572.5
ENSGALT0000	START domain containing 8	STARD8	0.85711	844
ENSGALT0000	StAR-related lipid transfer (START)	STARD9	0.876408	195
ENSGALT0000	signal transducer and activator of t	STAT1	0.958868	829.655
ENSGALT0000	signal transducer and activator of t	STAT3	0.937278	2439.09
ENSGALT0000	signal transducer and activator of t	STAT4	0.784225	1.34116
ENSGALT0000	signal transducer and activator of t	STAT5B	0.849857	1714.49
ENSGALT0000	staufen, RNA binding protein, homc	STAU1	0.935812	4503.99
ENSGALT0000	staufen, RNA binding protein, homc	STAU2	0.892778	2121.05
ENSGALT0000	stanniocalcin 1	STC1	0.897786	108
ENSGALT0000	stanniocalcin 2	STC2	0.688395	911.507
ENSGALT0000	six transmembrane epithelial antige	STEAP2	0.993484	145.5
ENSGALT0000	STEAP family member 3	STEAP3	0.752342	47.5
ENSGALT0000	STEAP family member 4	STEAP4	0.22129	3
ENSGALT0000	SCL/TAL1 interrupting locus	STIL	0.979254	309
ENSGALT0000	stromal interaction molecule 1	STIM1	0.950819	1006.5
ENSGALT0000	stromal interaction molecule 2	STIM2	0.999743	698.5
ENSGALT0000	serine/threonine kinase 10	STK10	0.746449	224.5
ENSGALT0000	serine/threonine kinase 11	STK11	0.960752	663
ENSGALT0000	serine/threonine kinase 11 interacti	STK11IP	0.997164	646
ENSGALT0000	serine/threonine kinase 16	STK16	0.746708	1418.5
ENSGALT0000	serine/threonine kinase 17a	STK17A	0.740368	492.5
ENSGALT0000	serine/threonine kinase 17b	STK17B	0.966735	218
ENSGALT0000	serine/threonine kinase 24	STK24	0.99802	597.003
ENSGALT0000	serine/threonine kinase 25	STK25	0.950352	4027.96
ENSGALT0000	serine/threonine kinase 31	STK31	0.96178	20.5
ENSGALT0000	serine/threonine kinase 32A	STK32A	0.257292	29.5
ENSGALT0000	serine/threonine kinase 32B	STK32B	0.707582	15.5
ENSGALT0000	serine/threonine kinase 32C	STK32C	0.79982	118
ENSGALT0000	serine/threonine kinase 36, fused h	STK36	0.993445	820.006
ENSGALT0000	serine/threonine kinase 38	STK38	0.961361	882.5
ENSGALT0000	serine/threonine kinase 38 like	STK38L	0.978536	466.501
ENSGALT0000	serine threonine kinase 39	STK39	0.998453	775.5
ENSGALT0000	serine/threonine kinase 4	STK4	0.956917	3034
ENSGALT0000	serine/threonine kinase 40	STK40	0.933766	2259.93
ENSGALT0000	stathmin 1	STMN1	0.508279	34936.8
ENSGALT0000	stathmin-like 2	STMN2	0.380716	1862.01
ENSGALT0000	stathmin-like 3	STMN3	0.607812	1051.99
ENSGALT0000	stathmin-like 4	STMN4	0.489495	329
ENSGALT0000	stomatin	STOM	0.259518	33.5
ENSGALT0000	stomatin (EPB72)-like 1	STOML1	0.760903	680.5
ENSGALT0000	stomatin (EPB72)-like 2	STOML2	0.75027	1782.5
ENSGALT0000	stomatin (EPB72)-like 3	STOML3	0.808121	3.5
ENSGALT0000	storkhead box 1	STOX1	0.983507	1911.5
ENSGALT0000	storkhead box 2	STOX2	0.983758	1002.5
ENSGALT0000	stimulated by retinoic acid gene 6 h	STRA6	0.979016	5182.5
ENSGALT0000	stimulated by retinoic acid gene 8 h	STRA8	0.882937	5.5
ENSGALT0000	STE20-related kinase adaptor alph	STRADA	0.95267	1861.49
ENSGALT0000	STE20-related kinase adaptor beta	STRADB	0.975702	570
ENSGALT0000	serine/threonine kinase receptor as	STRAP	0.827036	3173
ENSGALT0000	spermatid perinuclear RNA binding	STRBP	0.982539	2140
ENSGALT0000	striatin, calmodulin binding protein	STRN	0.972681	464.5
ENSGALT0000	striatin, calmodulin binding protein :	STRN3	0.968093	2064
ENSGALT0000	steroid sulfatase (microsomal), isoz	STS	0.967573	124

ENSGALT0000	STT3, subunit of the oligosacchary	STT3A	0.916433	8233
ENSGALT0000	STT3, subunit of the oligosacchary	STT3B	0.994218	8439.02
ENSGALT0000	STIP1 homology and U-box contair	STUB1	0.882388	1886.5
ENSGALT0000	syntaxin 11	STX11	0.874724	2
ENSGALT0000	syntaxin 12	STX12	0.83136	956
ENSGALT0000	syntaxin 16	STX16	0.942782	1549
ENSGALT0000	syntaxin 17	STX17	0.943989	510
ENSGALT0000	syntaxin 18	STX18	0.972884	527.5
ENSGALT0000	syntaxin 1A (brain)	STX1A	0.683906	809.5
ENSGALT0000	syntaxin 2	STX2	0.957181	608.143
ENSGALT0000	syntaxin 3	STX3	0.684107	399.5
ENSGALT0000	syntaxin 6	STX6	0.932576	2732.5
ENSGALT0000	syntaxin 7	STX7	0.894145	1213.5
ENSGALT0000	syntaxin 8	STX8	0.779841	1527.5
ENSGALT0000	syntaxin binding protein 1	STXBP1	0.865456	3134.51
ENSGALT0000	syntaxin binding protein 3	STXBP3	0.99165	689.003
ENSGALT0000	syntaxin binding protein 4	STXBP4	0.941967	569.5
ENSGALT0000	syntaxin binding protein 5 (tomosyr	STXBP5	0.954287	533.5
ENSGALT0000	syntaxin binding protein 5-like	STXBP5L	0.862001	281
ENSGALT0000	syntaxin binding protein 6 (amisyn)	STXBP6	0.894751	89
ENSGALT0000	serine/threonine/tyrosine kinase 1	STYK1	0.995529	292.328
ENSGALT0000	serine/threonine/tyrosine interactinç	STYX	0.975311	195.5
ENSGALT0000	serine/threonine/tyrosine interactinç	STYXL1	0.677406	103
ENSGALT0000	activated RNA polymerase II transc	SUB1	0.956759	5410.96
ENSGALT0000	succinate-CoA ligase, ADP-forming	SUCLA2	0.941591	1175.01
ENSGALT0000	succinate-CoA ligase, alpha subuni	SUCLG1	0.916652	2716.5
ENSGALT0000	succinate-CoA ligase, GDP-forming	SUCLG2	0.998382	1721
ENSGALT0000	succinate receptor 1	SUCNR1	0.860955	8.5
ENSGALT0000	suppressor of defective silencing 3	SUDS3	0.970531	2072.99
ENSGALT0000	suppressor of fused homolog (Dros	SUFU	0.986194	2468.06
ENSGALT0000	SURP and G patch domain contain	SUGP1	0.9509	1202.5
ENSGALT0000	SURP and G patch domain contain	SUGP2	0.972875	2412.5
ENSGALT0000	SGT1, suppressor of G2 allele of S	SUGT1	0.962851	1643
ENSGALT0000	sulfatase 2	SULF2	0.985012	1969
ENSGALT0000	sulfotransferase family, cytosolic, 1	SULT1B1	0.763575	1088.5
ENSGALT0000	sulfotransferase family, cytosolic, 1	SULT1C3	0.0332725	2
ENSGALT0000	sulfotransferase family 1E, estroge	SULT1E1	0.982841	419
ENSGALT0000	sulfotransferase family 4A, membe	SULT4A1	0.792078	565
ENSGALT0000	sulfotransferase family, cytosolic, 6	SULT6B1	0.770375	13.5
ENSGALT0000	sulfatase modifying factor 1	SUMF1	0.901475	962.5
ENSGALT0000	sulfatase modifying factor 2	SUMF2	0.812494	883
ENSGALT0000	SMT3 suppressor of mif two 3 hom	SUMO1	0.944544	2508.5
ENSGALT0000	SMT3 suppressor of mif two 3 hom	SUMO2	0.841679	3717
ENSGALT0000	SMT3 suppressor of mif two 3 hom	SUMO3	0.604654	5562
ENSGALT0000	Sad1 and UNC84 domain containir	SUN1	0.998302	1708
ENSGALT0000	suppressor of Ty 3 homolog (S. cer	SUPT3H	0.989721	684.997
ENSGALT0000	suppressor of Ty 4 homolog 1 (S. c	SUPT4H1	0.61357	2602
ENSGALT0000	suppressor of Ty 5 homolog	SUPT5H	0.830879	5251.57
ENSGALT0000	suppressor of Ty 6 homolog (S. cer	SUPT6H	0.956409	5007.5
ENSGALT0000	suppressor of Ty 7 (S. cerevisiae)-l	SUPT7L	0.969481	687.5
ENSGALT0000	suppressor of var1, 3-like 1 (S. cer	SUPV3L1	0.90612	1049.51
ENSGALT0000	surfeit 1	SURF1	0.957392	683.5
ENSGALT0000	surfeit 2	SURF2	0.652188	486
ENSGALT0000	surfeit 4	SURF4	0.998162	9630.5
ENSGALT0000	surfeit 6	SURF6	0.786729	746.672
ENSGALT0000	sushi domain containing 1	SUSD1	0.929036	175

ENSGALT0000	sushi domain containing 2	SUSD2	0.79946	1.5
ENSGALT0000	sushi domain containing 3	SUSD3	0.455292	118.5
ENSGALT0000	sushi domain containing 4	SUSD4	0.833363	54
ENSGALT0000	sushi domain containing 5	SUSD5	0.715897	114.5
ENSGALT0000	suppressor of variegation 3-9 homo	SUV39H2	0.997266	1097
ENSGALT0000	suppressor of variegation 4-20 hon	SUV420H1	0.952047	836
ENSGALT0000	suppressor of zeste 12 homolog (D	SUZ12	0.965926	659.5
ENSGALT0000	synaptic vesicle glycoprotein 2B	SV2B	0.769666	114.5
ENSGALT0000	synaptic vesicle glycoprotein 2C	SV2C	0.983735	113.5
ENSGALT0000	sushi, von Willebrand factor type A	SVEP1	0.996228	1040.5
ENSGALT0000	supervillin	SVIL	0.972568	4428.5
ENSGALT0000	SV2 related protein homolog (rat)	SVOP	0.772266	48.4365
ENSGALT0000	SVOP-like	SVOPL	0.929798	7.5
ENSGALT0000	SWAP switching B-cell complex 70	SWAP70	0.984786	1335.64
ENSGALT0000	SWT1 RNA endoribonuclease hom	SWT1	0.993874	256.5
ENSGALT0000	synapse associated protein 1	SYAP1	0.965149	580
ENSGALT0000	syntabulin (syntaxin-interacting)	SYBU	0.56945	141
ENSGALT0000	syncollin	SYCN	0.783372	18.5
ENSGALT0000	synaptonemal complex protein 1	SYCP1	0.876838	5.5
ENSGALT0000	synaptonemal complex protein 2-lil	SYCP2L	0.649519	0.5
ENSGALT0000	synaptonemal complex protein 3	SYCP3	0.979294	29.5
ENSGALT0000	synapse defective 1, Rho GTPase,	SYDE2	0.898807	331.5
ENSGALT0000	SYF2 homolog, RNA splicing facto	SYF2	0.677816	1120.5
ENSGALT0000	spleen tyrosine kinase	SYK	0.741352	18.5
ENSGALT0000	synapsin I	SYN1	0.932986	36.6042
ENSGALT0000	synapsin III	SYN3	0.761114	228
ENSGALT0000	syncoilin, intermediate filament pro	SYNC	0.857541	141.5
ENSGALT0000	synaptotagmin binding, cytoplasmi	SYNCRIP	0.873992	4569
ENSGALT0000	synapse differentiation inducing 1	SYNDIG1	0.768754	13.5
ENSGALT0000	synapse differentiation inducing 1-l	SYNDIG1L	0.855216	73.5
ENSGALT0000	spectrin repeat containing, nuclear	SYNE1	0.974484	834
ENSGALT0000	spectrin repeat containing, nuclear	SYNE2	0.984136	7883.5
ENSGALT0000	synaptogyrin 3	SYNGR3	0.953259	384.5
ENSGALT0000	synaptojanin 1	SYNJ1	0.933971	841.5
ENSGALT0000	synaptojanin 2	SYNJ2	0.810734	1524.5
ENSGALT0000	synaptojanin 2 binding protein	SYNJ2BP	0.851042	113
ENSGALT0000	desmuslin	SYNM	0.90532	1096.51
ENSGALT0000	synaptopodin 2	SYNPO2	0.703569	185
ENSGALT0000	synaptopodin 2-like	SYNPO2L	0.568647	1
ENSGALT0000	synaptoporin	SYNPR	0.609863	458.999
ENSGALT0000	synergin, gamma	SYNRG	0.965032	1952.96
ENSGALT0000	synaptophysin-like 1	SYPL1	0.628211	2.5
ENSGALT0000	SYS1 Golgi-localized integral mem	SYS1	0.8819	904.5
ENSGALT0000	synaptotagmin I	SYT1	0.733764	238.5
ENSGALT0000	synaptotagmin X	SYT10	0.632972	58.5
ENSGALT0000	synaptotagmin XI	SYT11	0.899765	1866
ENSGALT0000	synaptotagmin XII	SYT12	0.883663	133
ENSGALT0000	synaptotagmin XIII	SYT13	0.929985	23
ENSGALT0000	synaptotagmin XIV	SYT14	0.897662	79.5
ENSGALT0000	synaptotagmin XV	SYT15	0.988235	140.5
ENSGALT0000	synaptotagmin XVI	SYT16	0.950117	533.5
ENSGALT0000	synaptotagmin XVII	SYT17	0.879738	138.5
ENSGALT0000	synaptotagmin IV	SYT4	0.813559	82
ENSGALT0000	synaptotagmin VI	SYT6	0.914117	59
ENSGALT0000	synaptotagmin VII	SYT7	0.674435	624.498
ENSGALT0000	synaptotagmin VIII	SYT8	0.777575	170.5

ENSGALT0000	synaptotagmin IX	SYT9	0.994941	365.5
ENSGALT0000	synaptotagmin-like 2	SYTL2	0.9698	341.501
ENSGALT0000	synaptotagmin-like 3	SYTL3	0.954645	29.5
ENSGALT0000	synaptotagmin-like 4	SYTL4	0.987889	486.5
ENSGALT0000	synaptotagmin-like 5	SYTL5	0.879907	12
ENSGALT0000	seizure threshold 2 homolog (mous	SZT2	0.976626	191.5
ENSGALT0000	T, brachyury homolog (mouse)	T	0.854495	158
ENSGALT0000	trace amine associated receptor 5	TAAR5	?	0
ENSGALT0000	TGF-beta activated kinase 1/MAP3	TAB1	0.936438	1755
ENSGALT0000	TGF-beta activated kinase 1/MAP3	TAB2	0.989302	2109
ENSGALT0000	TGF-beta activated kinase 1/MAP3	TAB3	0.94744	1008
ENSGALT0000	tachykinin, precursor 1	TAC1	0.298589	184.5
ENSGALT0000	transforming, acidic coiled-coil cont	TACC1	0.951964	598.999
ENSGALT0000	transforming, acidic coiled-coil cont	TACC2	0.928433	1495
ENSGALT0000	transforming, acidic coiled-coil cont	TACC3	0.968789	2345.5
ENSGALT0000	tachykinin receptor 1	TACR1	0.973655	280
ENSGALT0000	tachykinin receptor 2	TACR2	0.840911	1.5
ENSGALT0000	tachykinin receptor 3	TACR3	0.243555	9.5
ENSGALT0000	tumor-associated calcium signal tra	TACSTD2	0.985995	6.5
ENSGALT0000	transcriptional adaptor 1	TADA1	0.981757	1088.5
ENSGALT0000	transcriptional adaptor 2A	TADA2A	0.951741	1163
ENSGALT0000	transcriptional adaptor 2B	TADA2B	0.857975	102.5
ENSGALT0000	transcriptional adaptor 3	TADA3	0.834033	2009
ENSGALT0000	TAF1 RNA polymerase II, TATA bo>	TAF1	0.947096	6112.01
ENSGALT0000	TAF11 RNA polymerase II, TATA bc	TAF11	0.833889	1347.5
ENSGALT0000	TAF12 RNA polymerase II, TATA bc	TAF12	0.870842	1034.98
ENSGALT0000	TAF13 RNA polymerase II, TATA bc	TAF13	0.641941	1237
ENSGALT0000	TAF15 RNA polymerase II, TATA bc	TAF15	0.8176	4358
ENSGALT0000	TATA box binding protein (TBP)-as:	TAF1A	0.911685	469
ENSGALT0000	TATA box binding protein (TBP)-as:	TAF1B	0.971337	400
ENSGALT0000	TATA box binding protein (TBP)-as:	TAF1D	0.9997	800.506
ENSGALT0000	TAF2 RNA polymerase II, TATA bo>	TAF2	0.955033	1484
ENSGALT0000	TAF3 RNA polymerase II, TATA bo>	TAF3	0.854357	2623.47
ENSGALT0000	TAF4 RNA polymerase II, TATA bo>	TAF4	0.954042	465.999
ENSGALT0000	TAF4b RNA polymerase II, TATA bc	TAF4B	0.872701	124.5
ENSGALT0000	TAF5 RNA polymerase II, TATA bo>	TAF5	0.944154	1056
ENSGALT0000	TAF5-like RNA polymerase II, p300	TAF5L	0.970532	888.5
ENSGALT0000	TAF7 RNA polymerase II, TATA bo>	TAF7	0.857131	1724.5
ENSGALT0000	TAF8 RNA polymerase II, TATA bo>	TAF8	0.973616	671.5
ENSGALT0000	TAF9 RNA polymerase II, TATA bo>	TAF9	0.741729	1013
ENSGALT0000	T-cell activation RhoGTPase activa	TAGAP	0.567223	8.5
ENSGALT0000	transgelin	TAGLN	0.72724	9
ENSGALT0000	transgelin 3	TAGLN3	0.231997	1418
ENSGALT0000	\N	TAL1	0.735405	16.5
ENSGALT0000	T-cell acute lymphocytic leukemia 2	TAL2	0.649519	5
ENSGALT0000	transaldolase 1	TALDO1	0.831176	1552
ENSGALT0000	TAM41, mitochondrial translocator	TAMM41	0.994359	409
ENSGALT0000	tetratricopeptide repeat, ankyrin ref	TANC1	0.999529	1820.06
ENSGALT0000	tetratricopeptide repeat, ankyrin ref	TANC2	0.949579	1350
ENSGALT0000	TRAF family member-associated N	TANK	0.99979	576
ENSGALT0000	TAO kinase 1	TAOK1	0.961223	2389.97
ENSGALT0000	TAO kinase 3	TAOK3	0.917316	1316
ENSGALT0000	transporter 1, ATP-binding cassette	TAP1	0.81298	75.5
ENSGALT0000	transporter 2, ATP-binding cassette	TAP2	0.569109	65
ENSGALT0000	TAP binding protein (tapasin)	TAPBP	0.911747	657.5
ENSGALT0000	TAP binding protein-like	TAPBPL	0.97231	13.5

ENSGALT0000	transmembrane anterior posterior t	TAPT1	0.958295	567.997
ENSGALT0000	Tar (HIV-1) RNA binding protein 1	TARBP1	0.987136	746.5
ENSGALT0000	TAR DNA binding protein	TARDBP	0.956297	4578.5
ENSGALT0000	threonyl-tRNA synthetase	TARS	0.913078	1608.99
ENSGALT0000	threonyl-tRNA synthetase-like 2	TARSL2	0.923933	925.5
ENSGALT0000	taste receptor, type 1, member 1	TAS1R1	0.955186	229.5
ENSGALT0000	taste receptor, type 1, member 3	TAS1R3	0.766328	10
ENSGALT0000	taste receptor, type 2, member 7	TAS2R7	0.524047	2
ENSGALT0000	taspase, threonine aspartase, 1	TASP1	0.999985	228.5
ENSGALT0000	tyrosine aminotransferase	TAT	0.189835	5.5
ENSGALT0000	TatD DNase domain containing 1	TATDN1	0.942217	512
ENSGALT0000	TatD DNase domain containing 3	TATDN3	0.685148	510
ENSGALT0000	Tax1 (human T-cell leukemia virus t	TAX1BP1	0.923596	3038.96
ENSGALT0000	Tax1 (human T-cell leukemia virus t	TAX1BP3	0.829286	2270
ENSGALT0000	TBC1 (tre-2/USP6, BUB2, cdc16) c	TBC1D1	0.98583	1338.5
ENSGALT0000	TBC1 domain family, member 10A	TBC1D10A	0.860755	2145.5
ENSGALT0000	TBC1 domain family, member 12	TBC1D12	0.941109	744.995
ENSGALT0000	TBC1 domain family, member 13	TBC1D13	0.950914	931
ENSGALT0000	TBC1 domain family, member 14	TBC1D14	0.986084	922
ENSGALT0000	TBC1 domain family, member 15	TBC1D15	0.991476	1136
ENSGALT0000	TBC1 domain family, member 16	TBC1D16	0.953642	1636
ENSGALT0000	TBC1 domain family, member 19	TBC1D19	0.93116	776.5
ENSGALT0000	TBC1 domain family, member 2	TBC1D2	0.97607	350.5
ENSGALT0000	TBC1 domain family, member 20	TBC1D20	0.971214	479
ENSGALT0000	TBC1 domain family, member 22A	TBC1D22A	0.954132	913.998
ENSGALT0000	TBC1 domain family, member 22B	TBC1D22B	0.966939	1724.5
ENSGALT0000	TBC1 domain family, member 23	TBC1D23	0.968	1167.5
ENSGALT0000	TBC1 domain family, member 2B	TBC1D2B	0.960527	614.5
ENSGALT0000	TBC1 domain family, member 30	TBC1D30	0.8717	554.5
ENSGALT0000	TBC1 domain family, member 4	TBC1D4	0.979512	526
ENSGALT0000	TBC1 domain family, member 5	TBC1D5	0.965893	923.5
ENSGALT0000	TBC1 domain family, member 7	TBC1D7	0.911206	541
ENSGALT0000	TBC1 domain family, member 8 (wi	TBC1D8	0.999975	882
ENSGALT0000	TBC1 domain family, member 8B (\	TBC1D8B	0.980782	622
ENSGALT0000	TBC1 domain family, member 9 (wi	TBC1D9	0.895121	3666.77
ENSGALT0000	TBC1 domain family, member 9B (\	TBC1D9B	0.894519	3139.23
ENSGALT0000	tubulin folding cofactor A	TBCA	0.716392	725.5
ENSGALT0000	tubulin folding cofactor B	TBCB	0.739847	621.5
ENSGALT0000	beta-tubulin cofactor C	TBCC	0.547035	712.876
ENSGALT0000	TBCC domain containing 1	TBCCD1	0.884276	718.367
ENSGALT0000	tubulin folding cofactor D	TBCD	0.928512	2920.51
ENSGALT0000	tubulin folding cofactor E	TBCE	0.91696	593.5
ENSGALT0000	tubulin folding cofactor E-like	TBCEL	0.997959	671
ENSGALT0000	TBC1 domain containing kinase	TBCK	0.972399	964.5
ENSGALT0000	TANK-binding kinase 1	TBK1	0.99924	667.5
ENSGALT0000	transducin (beta)-like 1X-linked	TBL1X	0.962867	1835
ENSGALT0000	transducin (beta)-like 1 X-linked rec	TBL1XR1	0.99437	1712
ENSGALT0000	transducin (beta)-like 3	TBL3	0.862532	2361
ENSGALT0000	TATA box binding protein	TBP	0.908695	681.004
ENSGALT0000	TBP-like 1	TBPL1	0.960567	332
ENSGALT0000	TATA box binding protein like 2	TBPL2	0.244778	0
ENSGALT0000	T-box, brain, 1	TBR1	0.822838	4
ENSGALT0000	transforming growth factor beta reg	TBRG4	0.837303	3231.5
ENSGALT0000	T-box 10	TBX10	0.956023	12.5
ENSGALT0000	T-box 15	TBX15	0.805714	129
ENSGALT0000	T-box 18	TBX18	0.979453	1545.52

ENSGALT0000 T-box 19	TBX19	0.923222	11
ENSGALT0000 T-box 2	TBX2	0.731487	656.496
ENSGALT0000 T-box 20	TBX20	0.869886	21
ENSGALT0000 T-box 22	TBX22	0.61458	5
ENSGALT0000 T-box 3	TBX3	0.875731	2711.48
ENSGALT0000 T-box 4	TBX4	0.771868	4
ENSGALT0000 T-box 5	TBX5	0.603682	0
ENSGALT0000 T-box 6	TBX6	0.829366	18
ENSGALT0000 tandem C2 domains, nuclear	TC2N	0.881716	262
ENSGALT0000 transcription elongation factor A (SI	TCEA1	0.983594	1187.99
ENSGALT0000 transcription elongation factor A (SI	TCEA2	0.890684	2054
ENSGALT0000 transcription elongation factor A (SI	TCEANC	0.978796	140.5
ENSGALT0000 transcription elongation factor A (SI	TCEANC2	0.798104	415
ENSGALT0000 transcription elongation factor B (SI	TCEB1	0.9201	1585.5
ENSGALT0000 transcription elongation factor B (SI	TCEB3	0.914785	875.5
ENSGALT0000 transcription elongation regulator 1	TCERG1	0.957786	3212
ENSGALT0000 transcription elongation regulator 1	TCERG1L	0.823937	104.5
ENSGALT0000 transcription factor 12	TCF12	0.894893	6565.64
ENSGALT0000 transcription factor 20 (AR1)	TCF20	0.977859	3489.5
ENSGALT0000 transcription factor 21	TCF21	0.339868	5.5
ENSGALT0000 transcription factor 25 (basic helix-l	TCF25	0.917255	2679.5
ENSGALT0000 transcription factor 3 (E2A immuno	TCF3	0.975722	6733.89
ENSGALT0000 transcription factor 7 (T-cell specific	TCF7	0.551035	85
ENSGALT0000 transcription factor 7-like 2 (T-cell s	TCF7L2	0.938556	1283.5
ENSGALT0000 transcription factor-like 5 (basic hel	TCFL5	0.981824	111.5
ENSGALT0000 T-cell, immune regulator 1, ATPase	TCIRG1	0.968764	882.5
ENSGALT0000 transcobalamin II	TCN2	0.80112	867
ENSGALT0000 Treacher Collins-Franceschetti syn	TCOF1	0.902558	2806.82
ENSGALT0000 t-complex 1	TCP1	0.829557	8120.82
ENSGALT0000 t-complex 11 homolog (mouse)	TCP11	0.980158	27
ENSGALT0000 t-complex 11 (mouse)-like 1	TCP11L1	0.984684	526.5
ENSGALT0000 t-complex 11 (mouse)-like 2	TCP11L2	0.99375	1164.99
ENSGALT0000 t-complex-associated-testis-expres	TCTE1	0.87867	214.5
ENSGALT0000 t-complex-associated-testis-expres	TCTE3	0.891927	24.5
ENSGALT0000 Tctex1 domain containing 1	TCTEX1D1	0.858269	141
ENSGALT0000 tectonic family member 1	TCTN1	0.992466	462.975
ENSGALT0000 tectonic family member 2	TCTN2	0.993802	2003
ENSGALT0000 tectonic family member 3	TCTN3	0.998865	1893
ENSGALT0000 thymine-DNA glycosylase	TDG	0.939088	3544.5
ENSGALT0000 L-threonine dehydrogenase	TDH	0.596083	184.5
ENSGALT0000 tryptophan 2,3-dioxygenase	TDO2	0.972073	15.5
ENSGALT0000 tyrosyl-DNA phosphodiesterase 1	TDP1	0.96941	1149.5
ENSGALT0000 tyrosyl-DNA phosphodiesterase 2	TDP2	0.83546	734.5
ENSGALT0000 tudor domain containing 1	TDRD1	0.790606	44.5
ENSGALT0000 tudor domain containing 12	TDRD12	0.814645	4
ENSGALT0000 tudor domain containing 3	TDRD3	0.960887	1004
ENSGALT0000 tudor domain containing 6	TDRD6	0.920328	7.5
ENSGALT0000 Tudor domain-containing protein 7	TDRD7	0.995602	275.5
ENSGALT0000 tudor domain containing 9	TDRD9	0.967171	51
ENSGALT0000 TDRD9 antisense RNA 1 (non-prot	TDRD9-AS1	0.79794	9
ENSGALT0000 tudor and KH domain containing	TDRKH	0.553145	43.5
ENSGALT0000 TEA domain family member 1 (SV4	TEAD1	0.977438	974.5
ENSGALT0000 TEA domain family member 3	TEAD3	0.983778	662.995
ENSGALT0000 TEA domain family member 4	TEAD4	0.994218	1438.01
ENSGALT0000 tec protein tyrosine kinase	TEC	0.99257	114
ENSGALT0000 tectonin beta-propeller repeat conta	TECPR1	0.968856	838

ENSGALT0000	tectonin beta-propeller repeat conta	TECPR2	0.992066	1502
ENSGALT0000	trans-2,3-enoyl-CoA reductase	TECR	0.98836	147
ENSGALT0000	trans-2,3-enoyl-CoA reductase-like	TECRL	0.603682	0
ENSGALT0000	tectorin alpha	TECTA	0.953813	43295.4
ENSGALT0000	tectorin beta	TECTB	0.328934	924
ENSGALT0000	thyrotrophic embryonic factor	TEF	0.981892	897.497
ENSGALT0000	TEK tyrosine kinase, endothelial	TEK	0.962012	153
ENSGALT0000	tektin 1	TEKT1	0.949642	188.5
ENSGALT0000	tektin 2 (testicular)	TEKT2	0.624919	17
ENSGALT0000	tektin 3	TEKT3	0.649519	1.5
ENSGALT0000	tektin 4	TEKT4	0.91258	76
ENSGALT0000	tektin 5	TEKT5	0.738242	2.5
ENSGALT0000	TEL2, telomere maintenance 2, ho	TELO2	0.965471	672
ENSGALT0000	Vertebrate telomerase RNA	Telomerase-vert	0.464758	0
ENSGALT0000	TEN1 telomerase capping complex	TEN1	0.78024	56
ENSGALT0000	TENP protein	TENP	0.0167155	1
ENSGALT0000	telomeric repeat binding factor (NIN	TERF1	0.964402	821.177
ENSGALT0000	telomeric repeat binding factor 2	TERF2	0.930725	1427
ENSGALT0000	telomeric repeat binding factor 2, in	TERF2IP	0.652799	813.529
ENSGALT0000	telomerase reverse transcriptase	TERT	0.929483	290.001
ENSGALT0000	testis derived transcript (3 LIM dom	TES	0.684217	2365.52
ENSGALT0000	tescalcin	TESC	0.725321	1015.5
ENSGALT0000	testis-specific kinase 2	TESK2	0.97266	267.5
ENSGALT0000	tet oncogene 1	TET1	0.964732	843
ENSGALT0000	tet methylcytosine dioxygenase 2	TET2	0.96482	830.5
ENSGALT0000	tet methylcytosine dioxygenase 3	TET3	0.98261	2981.5
ENSGALT0000	testis expressed 10	TEX10	0.964083	2439.82
ENSGALT0000	testis expressed 11	TEX11	0.957106	318
ENSGALT0000	testis expressed 14	TEX14	0.980695	42
ENSGALT0000	testis expressed 2	TEX2	0.966109	594
ENSGALT0000	testis expressed 264	TEX264	0.763192	1753.5
ENSGALT0000	testis expressed 30	TEX30	0.96971	102.5
ENSGALT0000	testis expressed 9	TEX9	0.993646	181.5
ENSGALT0000	transcription factor A, mitochondrial	TFAM	0.823092	1805.5
ENSGALT0000	transcription factor AP-2 alpha (acti	TFAP2A	0.584805	136
ENSGALT0000	transcription factor AP-2 beta (activ	TFAP2B	0.586414	8
ENSGALT0000	transcription factor AP-2 gamma (a	TFAP2C	0.994957	47.5
ENSGALT0000	transcription factor AP-2 delta (activ	TFAP2D	?	0
ENSGALT0000	transcription factor AP-2 epsilon (ac	TFAP2E	0.853815	1
ENSGALT0000	transcription factor B1, mitochondri	TFB1M	0.980412	360
ENSGALT0000	transcription factor B2, mitochondri	TFB2M	0.973398	459.5
ENSGALT0000	transcription factor CP2	TFCP2	0.972852	2716.48
ENSGALT0000	transcription factor CP2-like 1	TFCP2L1	0.861741	62.0001
ENSGALT0000	transcription factor Dp-1	TFDP1	0.971475	1104
ENSGALT0000	transcription factor Dp-2 (E2F dime	TFDP2	0.960016	482.5
ENSGALT0000	transcription factor EB	TFEB	0.990054	837.5
ENSGALT0000	transcription factor EC	TFEC	0.604528	0.5
ENSGALT0000	trefoil factor 2	TFF2	0.898356	0.5
ENSGALT0000	TRK-fused gene	TFG	0.750575	5248.5
ENSGALT0000	tuftelin interacting protein 11	TFIP11	0.946405	2046.73
ENSGALT0000	tissue factor pathway inhibitor (lipo	TFPI	0.994113	120
ENSGALT0000	tissue factor pathway inhibitor 2	TFPI2	0.740748	106
ENSGALT0000	transferrin receptor (p90, CD71)	TFRC	0.971676	3062.93
ENSGALT0000	TDP-glucose 4,6-dehydratase	TGDS	0.968258	334
ENSGALT0000	transforming growth factor, alpha	TGFA	0.672357	29
ENSGALT0000	transforming growth factor, beta 2	TGFB2	0.958207	4168.9

ENSGALT0000	transforming growth factor, beta 3	TGFB3	0.975964	2028.96
ENSGALT0000	transforming growth factor, beta-inc	TGFBI	0.962266	4588.5
ENSGALT0000	transforming growth factor, beta rec	TGFBR1	0.990085	1780.5
ENSGALT0000	transforming growth factor, beta rec	TGFBR2	0.917746	555.998
ENSGALT0000	transforming growth factor, beta rec	TGFBR3	0.985637	528
ENSGALT0000	transforming growth factor, beta rec	TGFBRAP1	0.985653	293
ENSGALT0000	TGFB-induced factor homeobox 1	TGIF1	0.996655	1472
ENSGALT0000	TGFB-induced factor homeobox 2	TGIF2	0.887972	731
ENSGALT0000	transglutaminase 2 (C polypeptide,	TGM2	0.570722	74.5
ENSGALT0000	transglutaminase 3 (E polypeptide,	TGM3	0.998257	38.5
ENSGALT0000	transglutaminase 4 (prostate)	TGM4	0.392405	2
ENSGALT0000	transglutaminase 6	TGM6	0.993324	34.5
ENSGALT0000	trans-golgi network protein 2	TGOLN2	0.947616	769
ENSGALT0000	trimethylguanosine synthase 1	TGS1	0.927747	1115.01
ENSGALT0000	tyrosine hydroxylase	TH	0.631223	0
ENSGALT0000	TH1-like (Drosophila)	TH1L	0.954949	2235
ENSGALT0000	thyroid adenoma associated	THADA	0.988926	1176.5
ENSGALT0000	THAP domain containing, apoptosi:	THAP1	0.950868	92.5
ENSGALT0000	THAP domain containing 11	THAP11	0.846286	269.5
ENSGALT0000	THAP domain containing 4	THAP4	0.895394	1068
ENSGALT0000	THAP domain containing 5	THAP5	0.930687	935.5
ENSGALT0000	THAP domain containing 9	THAP9	0.978227	363
ENSGALT0000	thrombomodulin	THBD	0.67843	154.5
ENSGALT0000	thrombospondin 1	THBS1	0.711381	4173.96
ENSGALT0000	thrombospondin 2	THBS2	0.916199	1504.5
ENSGALT0000	thrombospondin 4	THBS4	0.949312	376
ENSGALT0000	thymocyte selection associated	THEMIS	0.649519	0.5
ENSGALT0000	tRNA-histidine guanylyltransferase	THG1L	0.971512	775.5
ENSGALT0000	threonine synthase-like 1 (S. cerevi	THNSL1	0.968424	402.499
ENSGALT0000	threonine synthase-like 2 (S. cerevi	THNSL2	0.986835	962
ENSGALT0000	THO complex 1	THOC1	0.85066	1305
ENSGALT0000	THO complex 2	THOC2	0.990988	2591
ENSGALT0000	THO complex 3	THOC3	0.827385	1983.5
ENSGALT0000	THO complex 4	THOC4	0.482634	3498
ENSGALT0000	THO complex 5	THOC5	0.914567	4616.56
ENSGALT0000	THO complex 7 homolog (Drosoph	THOC7	0.804593	1904.5
ENSGALT0000	thimet oligopeptidase 1	THOP1	0.885989	308
ENSGALT0000	thyroid hormone receptor, alpha	THRA	0.956916	341.5
ENSGALT0000	thyroid hormone receptor associate	THRAP3	0.943685	8230.74
ENSGALT0000	thyroid hormone receptor, beta (ery	THRB	0.917004	64.0001
ENSGALT0000	thyroid hormone responsive	THRSP	0.49992	3.5
ENSGALT0000	thrombospondin, type I, domain cor	THSD1	0.859613	240
ENSGALT0000	thrombospondin, type I, domain cor	THSD4	0.811296	1137
ENSGALT0000	thrombospondin, type I, domain cor	THSD7A	0.743223	703
ENSGALT0000	thrombospondin, type I, domain cor	THSD7B	0.858744	3133.5
ENSGALT0000	THUMP domain containing 1	THUMPD1	0.787509	393.5
ENSGALT0000	THUMP domain containing 2	THUMPD2	0.98918	426.5
ENSGALT0000	THUMP domain containing 3	THUMPD3	0.814302	2317.5
ENSGALT0000	Thy-1 cell surface antigen	THY1	0.938464	1130.5
ENSGALT0000	thymocyte nuclear protein 1	THYN1	0.773664	310.191
ENSGALT0000	TIA1 cytotoxic granule-associated I	TIA1	0.935011	4561
ENSGALT0000	TIA1 cytotoxic granule-associated I	TIAL1	0.963216	2038.52
ENSGALT0000	T-cell lymphoma invasion and meta	TIAM1	0.92407	2346.5
ENSGALT0000	T-cell lymphoma invasion and meta	TIAM2	0.987503	488.996
ENSGALT0000	toll-like receptor adaptor molecule	TICAM1	0.969746	234
ENSGALT0000	tyrosine kinase with immunoglobuli	TIE1	0.83658	588

ENSGALT0000	TRAF-interacting protein with forkh	TIFA	0.780657	5
ENSGALT0000	tigger transposable element derive	TIGD5	0.954374	376
ENSGALT0000	Mitochondrial import inner membra	TIM9_CHICK	0.768255	465
ENSGALT0000	T-cell immunoglobulin and mucin d	TIMD4	0.871196	28.5
ENSGALT0000	translocase of inner mitochondrial r	TIMM10	0.236623	1809.5
ENSGALT0000	translocase of inner mitochondrial r	TIMM17A	0.90063	2957
ENSGALT0000	translocase of inner mitochondrial r	TIMM22	0.722925	966
ENSGALT0000	translocase of inner mitochondrial r	TIMM23	0.784534	975
ENSGALT0000	translocase of inner mitochondrial r	TIMM44	0.897163	999.5
ENSGALT0000	translocase of inner mitochondrial r	TIMM8A	0.702268	2212.5
ENSGALT0000	TIMP metallopeptidase inhibitor 3	TIMP3	0.675265	330
ENSGALT0000	TIMP metallopeptidase inhibitor 4	TIMP4	0.481544	20.3958
ENSGALT0000	tubulointerstitial nephritis antigen	TINAG	1	0.5
ENSGALT0000	tubulointerstitial nephritis antigen-li	TINAGL1	0.740205	107
ENSGALT0000	TCDD-inducible poly(ADP-ribose)	TIPARP	0.928312	288
ENSGALT0000	TIMELESS interacting protein	TIPIN	0.955312	911
ENSGALT0000	TIP41, TOR signaling pathway reg	TIPRL	0.838938	968.5
ENSGALT0000	toll-interleukin 1 receptor (TIR) don	TIRAP	0.922397	817
ENSGALT0000	tight junction associated protein 1 (	TJAP1	0.980958	840.5
ENSGALT0000	tight junction protein 1 (zona occlu	TJP1	0.961026	4940.13
ENSGALT0000	tight junction protein 2 (zona occlu	TJP2	0.983271	5079.5
ENSGALT0000	tight junction protein 3 (zona occlu	TJP3	0.962685	1112.99
ENSGALT0000	thymidine kinase 1, soluble	TK1	0.813328	1239
ENSGALT0000	transketolase	TKT	0.840844	5112
ENSGALT0000	TLC domain containing 1	TLCD1	0.852584	2406
ENSGALT0000	TLC domain containing 2	TLCD2	0.889494	112.5
ENSGALT0000	transducin-like enhancer of split 1 (	TLE1	0.952549	1617.23
ENSGALT0000	transducin-like enhancer of split 4 (	TLE4	0.879237	1571.27
ENSGALT0000	tousled-like kinase 1	TLK1	0.99891	1005
ENSGALT0000	tousled-like kinase 2	TLK2	0.9832	1218.5
ENSGALT0000	tolloid-like 1	TLL1	0.773777	106
ENSGALT0000	talin 1	TLN1	0.920561	6965.06
ENSGALT0000	talin 2	TLN2	0.897566	2258.49
ENSGALT0000	toll-like receptor 15	TLR15	0.806665	3.5
ENSGALT0000	Toll-like receptor 21	TLR21	0.910526	225
ENSGALT0000	toll-like receptor 2 type1	TLR2-1	0.800059	100.899
ENSGALT0000	toll-like receptor 4	TLR4	0.733619	14.5
ENSGALT0000	toll-like receptor 5	TLR5	0.974066	83
ENSGALT0000	toll-like receptor 6	TLR6	0.833616	13.7832
ENSGALT0000	toll-like receptor 7	TLR7	0.824205	6
ENSGALT0000	T-cell leukemia homeobox 1	TLX1	0.417534	16.5
ENSGALT0000	T-cell leukemia homeobox 3	TLX3	0.20121	14.5
ENSGALT0000	TM2 domain containing 1	TM2D1	0.912319	342
ENSGALT0000	TM2 domain containing 2	TM2D2	0.579451	1579.5
ENSGALT0000	TM2 domain containing 3	TM2D3	0.827323	254.004
ENSGALT0000	transmembrane 4 L six family mem	TM4SF1	0.898897	72.5
ENSGALT0000	transmembrane 4 L six family mem	TM4SF18	0.847573	153.5
ENSGALT0000	transmembrane 4 L six family mem	TM4SF19	0.918081	14.5
ENSGALT0000	transmembrane 4 L six family mem	TM4SF4	0.499253	18.5
ENSGALT0000	transmembrane 6 superfamily mem	TM6SF1	0.82616	368.5
ENSGALT0000	transmembrane 7 superfamily mem	TM7SF3	0.995489	312
ENSGALT0000	transmembrane 7 superfamily mem	TM7SF4	?	0
ENSGALT0000	transmembrane 9 superfamily mem	TM9SF2	0.988672	4664.5
ENSGALT0000	transmembrane 9 superfamily mem	TM9SF3	0.992943	4121.47
ENSGALT0000	transmembrane 9 superfamily prote	TM9SF4	0.971749	1857
ENSGALT0000	transmembrane BAX inhibitor motif	TMBIM1	0.986658	2497

ENSGALT0000 transmembrane BAX inhibitor motif	TMBIM4	0.629761	1277
ENSGALT0000 transmembrane channel-like 1	TMC1	0.831837	52
ENSGALT0000 transmembrane channel-like 2	TMC2	0.387651	2.5
ENSGALT0000 transmembrane channel-like 3	TMC3	0.989399	150
ENSGALT0000 transmembrane channel-like 5	TMC5	0.935842	65
ENSGALT0000 transmembrane channel-like 6	TMC6	0.979794	911.491
ENSGALT0000 transmembrane channel-like 7	TMC7	0.987568	377.5
ENSGALT0000 transmembrane and coiled-coil don	TMCC1	0.898909	729
ENSGALT0000 transmembrane and coiled-coil don	TMCC2	0.867816	2422.5
ENSGALT0000 transmembrane and coiled-coil don	TMCC3	0.87044	74
ENSGALT0000 transmembrane and coiled-coil don	TMCO1	0.670565	1134
ENSGALT0000 transmembrane and coiled-coil don	TMCO3	0.992196	582.501
ENSGALT0000 transmembrane and coiled-coil don	TMCO4	0.975475	74
ENSGALT0000 transmembrane and coiled-coil don	TMCO6	0.872168	942.542
ENSGALT0000 transmembrane and coiled-coil don	TMCO7	0.87419	2075
ENSGALT0000 transmembrane emp24-like trafficki	TMED10	0.964307	9231.5
ENSGALT0000 transmembrane emp24 domain traf	TMED2	0.951884	5519
ENSGALT0000 transmembrane emp24 protein trar	TMED3	0.94351	763.5
ENSGALT0000 transmembrane emp24 protein trar	TMED5	0.953568	4625.5
ENSGALT0000 transmembrane emp24 protein trar	TMED8	0.910823	855
ENSGALT0000 transmembrane protein with EGF-li	TMEFF1	0.754392	1110
ENSGALT0000 transmembrane protein with EGF-li	TMEFF2	0.650907	1633
ENSGALT0000 transmembrane protein 100	TMEM100	0.982101	71.5
ENSGALT0000 transmembrane protein 104	TMEM104	0.988647	1387
ENSGALT0000 transmembrane protein 106B	TMEM106B	0.976613	938
ENSGALT0000 transmembrane protein 106C	TMEM106C	0.949918	662.5
ENSGALT0000 transmembrane protein 108	TMEM108	0.81964	295.5
ENSGALT0000 transmembrane protein 11	TMEM11	0.709272	686
ENSGALT0000 transmembrane protein 111	TMEM111	0.806991	1282.5
ENSGALT0000 transmembrane protein 114	TMEM114	0.575119	0.5
ENSGALT0000 transmembrane protein 115	TMEM115	0.863466	1488.5
ENSGALT0000 transmembrane protein 116	TMEM116	0.754281	34.6566
ENSGALT0000 transmembrane protein 117	TMEM117	0.943501	77
ENSGALT0000 transmembrane protein 119	TMEM119	0.712106	103
ENSGALT0000 transmembrane protein 120A	TMEM120A	0.916303	811
ENSGALT0000 transmembrane protein 120B	TMEM120B	0.930234	388
ENSGALT0000 transmembrane protein 121	TMEM121	0.69751	417
ENSGALT0000 transmembrane protein 123	TMEM123	0.937014	1696.51
ENSGALT0000 transmembrane protein 125	TMEM125	0.499665	5
ENSGALT0000 transmembrane protein 126A	TMEM126A	0.913567	344.46
ENSGALT0000 transmembrane protein 128	TMEM128	0.61958	154.5
ENSGALT0000 transmembrane protein 129	TMEM129	0.896845	724.5
ENSGALT0000 transmembrane protein 130	TMEM130	0.974416	626.5
ENSGALT0000 transmembrane protein 131	TMEM131	0.953344	3163.97
ENSGALT0000 transmembrane protein 132B	TMEM132B	0.858212	177.037
ENSGALT0000 transmembrane protein 132C	TMEM132C	0.630584	163.422
ENSGALT0000 transmembrane protein 132D	TMEM132D	0.820177	350
ENSGALT0000 transmembrane protein 132E	TMEM132E	0.641318	2103.5
ENSGALT0000 transmembrane protein 135	TMEM135	0.976014	396
ENSGALT0000 transmembrane protein 136	TMEM136	0.922547	69.0001
ENSGALT0000 transmembrane protein 138	TMEM138	0.707172	332
ENSGALT0000 transmembrane protein 140	TMEM140	0.973409	18
ENSGALT0000 transmembrane protein 141	TMEM141	0.262095	866
ENSGALT0000 transmembrane protein 144	TMEM144	0.98434	276
ENSGALT0000 transmembrane protein 14A	TMEM14A	0.754387	215.5
ENSGALT0000 transmembrane protein 14C	TMEM14C	0.960954	1107

ENSGALT0000 transmembrane protein 150A	TMEM150A	0.679643	76
ENSGALT0000 transmembrane protein 150C	TMEM150C	0.93124	224
ENSGALT0000 transmembrane protein 151B	TMEM151B	0.834624	518.5
ENSGALT0000 transmembrane protein 154	TMEM154	0.264962	6
ENSGALT0000 transmembrane protein 156	TMEM156	0.669282	1.5
ENSGALT0000 transmembrane protein 161B	TMEM161B	0.944749	122
ENSGALT0000 transmembrane protein 163	TMEM163	0.587116	163
ENSGALT0000 transmembrane protein 164	TMEM164	0.981408	1519.5
ENSGALT0000 transmembrane protein 167B	TMEM167B	0.164296	824.5
ENSGALT0000 transmembrane protein 168	TMEM168	0.943026	406
ENSGALT0000 transmembrane protein 169	TMEM169	0.964654	606
ENSGALT0000 transmembrane protein 17	TMEM17	0.892313	57
ENSGALT0000 transmembrane protein 170B	TMEM170B	0.660301	43.5
ENSGALT0000 transmembrane protein 171	TMEM171	0.848443	261.5
ENSGALT0000 transmembrane protein 173	TMEM173	0.972802	144.5
ENSGALT0000 transmembrane protein 174	TMEM174	0.958562	11.5
ENSGALT0000 transmembrane protein 175	TMEM175	0.978015	1097.5
ENSGALT0000 transmembrane protein 177	TMEM177	0.939112	198.5
ENSGALT0000 transmembrane protein 179	TMEM179	0.748531	42
ENSGALT0000 transmembrane protein 18	TMEM18	0.929359	525
ENSGALT0000 transmembrane protein 180	TMEM180	0.965268	1336
ENSGALT0000 transmembrane protein 181	TMEM181	0.977278	368.5
ENSGALT0000 transmembrane protein 182	TMEM182	?	0
ENSGALT0000 transmembrane protein 183A	TMEM183A	0.800545	1042.51
ENSGALT0000 transmembrane protein 184A	TMEM184A	0.743508	404
ENSGALT0000 transmembrane protein 184B	TMEM184B	0.944648	3862.17
ENSGALT0000 transmembrane protein 184C	TMEM184C	0.929855	2186.5
ENSGALT0000 transmembrane protein 185A	TMEM185A	0.934184	715
ENSGALT0000 transmembrane protein 186	TMEM186	0.842862	340
ENSGALT0000 transmembrane protein 188	TMEM188	0.949962	168
ENSGALT0000 transmembrane protein 19	TMEM19	0.963199	666
ENSGALT0000 transmembrane protein 192	TMEM192	0.974076	120.5
ENSGALT0000 transmembrane protein 194A	TMEM194A	0.998751	283
ENSGALT0000 transmembrane protein 194B	TMEM194B	0.893795	673
ENSGALT0000 transmembrane protein 196	TMEM196	0.723283	7.5
ENSGALT0000 transmembrane protein 198	TMEM198	0.911425	1486.5
ENSGALT0000 transmembrane protein 199	TMEM199	0.253308	1298
ENSGALT0000 transmembrane protein 2	TMEM2	0.965306	3184.05
ENSGALT0000 transmembrane protein 200A	TMEM200A	0.950091	688
ENSGALT0000 transmembrane protein 200B	TMEM200B	0.83176	35.5
ENSGALT0000 transmembrane protein 200C	TMEM200C	0.964917	399
ENSGALT0000 transmembrane protein 201	TMEM201	0.952258	1218.5
ENSGALT0000 transmembrane protein 203	TMEM203	0.652335	860.5
ENSGALT0000 transmembrane protein 204	TMEM204	0.736687	100.5
ENSGALT0000 transmembrane protein 206	TMEM206	0.984741	585.5
ENSGALT0000 transmembrane protein 207	TMEM207	0.464758	0
ENSGALT0000 transmembrane protein 209	TMEM209	0.964743	1079.5
ENSGALT0000 transmembrane protein 211	TMEM211	0.8179	100
ENSGALT0000 transmembrane protein 213	TMEM213	0.898356	1
ENSGALT0000 transmembrane protein 214	TMEM214	0.880844	2913.67
ENSGALT0000 transmembrane protein 215	TMEM215	0.790055	8.5
ENSGALT0000 transmembrane protein 216	TMEM216	0.56633	141.5
ENSGALT0000 transmembrane protein 22	TMEM22	0.912409	1033.5
ENSGALT0000 transmembrane protein 222	TMEM222	0.959644	866
ENSGALT0000 transmembrane protein 229B	TMEM229B	0.994225	1814.72
ENSGALT0000 transmembrane protein 231	TMEM231	0.910546	1101.5

ENSGALT0000 transmembrane protein 234	TMEM234	0.991401	147.5
ENSGALT0000 transmembrane protein 237	TMEM237	0.994286	646
ENSGALT0000 transmembrane protein 242	TMEM242	0.956933	320
ENSGALT0000 transmembrane protein 26	TMEM26	0.930687	520
ENSGALT0000 transmembrane protein 27	TMEM27	0.668575	6
ENSGALT0000 transmembrane protein 30A	TMEM30A	0.960053	4114.5
ENSGALT0000 transmembrane protein 30C	TMEM30C	0.954375	44.5
ENSGALT0000 transmembrane protein 33	TMEM33	0.938623	978.5
ENSGALT0000 transmembrane protein 35	TMEM35	0.706783	906
ENSGALT0000 transmembrane protein 37	TMEM37	0.747465	16.5
ENSGALT0000 transmembrane protein 38A	TMEM38A	0.960474	1672.52
ENSGALT0000 transmembrane protein 38B	TMEM38B	0.979839	606
ENSGALT0000 transmembrane protein 39A	TMEM39A	0.959533	1448.5
ENSGALT0000 transmembrane protein 39B	TMEM39B	0.922917	964.985
ENSGALT0000 transmembrane protein 41A	TMEM41A	0.9368	896.5
ENSGALT0000 transmembrane protein 41B	TMEM41B	0.925363	863
ENSGALT0000 transmembrane protein 43	TMEM43	0.927287	668.5
ENSGALT0000 transmembrane protein 45A	TMEM45A	0.488744	57.5
ENSGALT0000 transmembrane protein 45B	TMEM45B	0.856988	15.5
ENSGALT0000 transmembrane protein 47	TMEM47	0.977928	737
ENSGALT0000 transmembrane protein 48	TMEM48	0.90908	1562.5
ENSGALT0000 transmembrane protein 5	TMEM5	0.920807	249
ENSGALT0000 transmembrane protein 50A	TMEM50A	0.710041	1563
ENSGALT0000 transmembrane protein 50B	TMEM50B	0.933421	641
ENSGALT0000 transmembrane protein 51	TMEM51	0.926067	372.5
ENSGALT0000 transmembrane protein 52	TMEM52	0.938369	48.5
ENSGALT0000 transmembrane protein 53	TMEM53	0.741809	443.5
ENSGALT0000 transmembrane protein 55A	TMEM55A	0.762425	837.5
ENSGALT0000 transmembrane protein 56	TMEM56	0.98991	145
ENSGALT0000 transmembrane protein 57	TMEM57	0.955897	2188.5
ENSGALT0000 transmembrane protein 59	TMEM59	0.971887	4026
ENSGALT0000 transmembrane protein 59-like	TMEM59L	0.691378	77
ENSGALT0000 transmembrane protein 60	TMEM60	0.998898	361.5
ENSGALT0000 transmembrane protein 61	TMEM61	0.38447	160.5
ENSGALT0000 transmembrane protein 62	TMEM62	0.996151	515.5
ENSGALT0000 transmembrane protein 63A	TMEM63A	0.993573	322
ENSGALT0000 transmembrane protein 63B	TMEM63B	0.95226	2635.13
ENSGALT0000 transmembrane protein 63C	TMEM63C	0.983714	1469.87
ENSGALT0000 transmembrane protein 64	TMEM64	0.914557	563
ENSGALT0000 transmembrane protein 65	TMEM65	0.940594	990.006
ENSGALT0000 transmembrane protein 66	TMEM66	0.948499	1016
ENSGALT0000 transmembrane protein 67	TMEM67	0.998835	752.5
ENSGALT0000 transmembrane protein 68	TMEM68	0.968436	607
ENSGALT0000 transmembrane protein 69	TMEM69	0.909409	294.5
ENSGALT0000 transmembrane protein 70	TMEM70	0.869707	538.5
ENSGALT0000 transmembrane protein 71	TMEM71	0.844654	8.5
ENSGALT0000 transmembrane protein 72	TMEM72	0.75214	3
ENSGALT0000 transmembrane protein 74	TMEM74	0.631695	258
ENSGALT0000 transmembrane protein 79	TMEM79	0.982175	546.5
ENSGALT0000 transmembrane protein 80	TMEM80	0.968037	99
ENSGALT0000 transmembrane protein 81	TMEM81	0.482185	1
ENSGALT0000 transmembrane protein 82	TMEM82	0.953745	143
ENSGALT0000 transmembrane protein 86A	TMEM86A	0.909433	96
ENSGALT0000 transmembrane protein 87A	TMEM87A	0.995163	1484.5
ENSGALT0000 transmembrane protein 88B	TMEM88B	0.768245	2.5
ENSGALT0000 transmembrane protein 8A	TMEM8A	0.995554	1467

ENSGALT0000 transmembrane protein 8B	TMEM8B	0.732102	151	
ENSGALT0000 transmembrane protein 8C	TMEM8C	0.562993	0	
ENSGALT0000 transmembrane protein 9	TMEM9	0.944702	1097.5	
ENSGALT0000 transmembrane protein 93	TMEM93	0.127348	81.6453	
ENSGALT0000 transmembrane protein 97	TMEM97	0.940293	644.5	
ENSGALT0000 TMEM9 domain family, member B	TMEM9B	0.805841	1081	
ENSGALT0000 TATA element modulatory factor 1	TMF1	0.970759	1490	
ENSGALT0000 transmembrane inner ear	TMIE	0.62814	0	
ENSGALT0000 transmembrane and immunoglobul	TMIGD1	0.261655	2.5	
ENSGALT0000 trimethyllysine hydroxylase, epsilor	TMLHE	0.941942	1662	
ENSGALT0000 tropomodulin 1	TMOD1	0.797177	238.5	
ENSGALT0000 tropomodulin 2 (neuronal)	TMOD2	0.854627	406	
ENSGALT0000 tropomodulin 3 (ubiquitous)	TMOD3	0.902419	949	
ENSGALT0000 tropomodulin 4 (muscle)	TMOD4	0.685355	10	
ENSGALT0000 thymopoietin	TMPO	0.96816	3915.53	
ENSGALT0000 transmembrane (C-terminal) protea	TMPRSS12	0.603682	0.5	
ENSGALT0000 transmembrane protease, serine 1:	TMPRSS13	0.952328	342	
ENSGALT0000 transmembrane protease, serine 2	TMPRSS2	0.992787	178	
ENSGALT0000 transmembrane protease, serine 3	TMPRSS3	0.322362	1	
ENSGALT0000 transmembrane protease, serine 4	TMPRSS4	0.93272	28.5	
ENSGALT0000 transmembrane protease, serine 6	TMPRSS6	0.842049	13	
ENSGALT0000 transmembrane protease, serine 7	TMPRSS7	0.622943	721	
ENSGALT0000 transmembrane protease, serine 9	TMPRSS9	0.745715	1243	
ENSGALT0000 thymosin, beta 10	TMSB10	0.369284	42	
ENSGALT0000 transmembrane and tetratricopepti	TMTC1	0.994463	1165	
ENSGALT0000 transmembrane and tetratricopepti	TMTC2	0.901076	329	
ENSGALT0000 transmembrane and tetratricopepti	TMTC3	0.975992	885	
ENSGALT0000 transmembrane and tetratricopepti	TMTC4	0.966868	1631.5	
ENSGALT0000 thioredoxin-related transmembrane	TMX1	0.882222	24	
ENSGALT0000 thioredoxin-related transmembrane	TMX2	0.773628	1977.5	
ENSGALT0000 thioredoxin-related transmembrane	TMX3	0.984936	1291	
ENSGALT0000 thioredoxin-related transmembrane	TMX4	0.97052	318	
ENSGALT0000 tenascin C	TNC	0.881612	17034.9	
ENSGALT0000 tumor necrosis factor, alpha-induce	TNFAIP1	0.960637	2100.5	
ENSGALT0000 tumor necrosis factor, alpha-induce	TNFAIP2	0.924729	38.5	
ENSGALT0000 tumor necrosis factor, alpha-induce	TNFAIP3	0.966846	156.5	
ENSGALT0000 tumor necrosis factor, alpha-induce	TNFAIP6	0.793434	190	
ENSGALT0000 tumor necrosis factor, alpha-induce	TNFAIP8	0.96524	143	
ENSGALT0000 tumor necrosis factor, alpha-induce	TNFAIP8L1	0.888708	1248.5	
ENSGALT0000 tumor necrosis factor, alpha-induce	TNFAIP8L3	0.719584	21.5	
ENSGALT0000 tumor necrosis factor receptor supe	TNFRSF11A	0.948622	278.001	
ENSGALT0000 tumor necrosis factor receptor supe	TNFRSF11B	0.841263	474.499	
ENSGALT0000 tumor necrosis factor receptor supe	TNFRSF13B	0.753791	7.5	
ENSGALT0000 tumor necrosis factor receptor supe	TNFRSF13C	0.898356	0.5	
ENSGALT0000 tumor necrosis factor receptor supe	TNFRSF18	0.742226	4.5	
ENSGALT0000 tumor necrosis factor receptor supe	TNFRSF19	0.99118	1668.5	
ENSGALT0000 tumor necrosis factor receptor supe	TNFRSF1A	0.982362	429.499	
ENSGALT0000 tumor necrosis factor receptor supe	TNFRSF1B	0.998866	88	
ENSGALT0000 tumor necrosis factor receptor supe	TNFRSF21	0.873167	1309.97	
ENSGALT0000 tumor necrosis factor receptor supe	TNFRSF4	0.969305	12.5	
ENSGALT0000 tumor necrosis factor receptor supe	TNFRSF6B	0.464758	0	
ENSGALT0000 tumor necrosis factor receptor supe	TNFRSF8	0.977878	19	
ENSGALT0000 tumor necrosis factor receptor supe	TNFRSF9	0.987866	774.5	
ENSGALT0000 tumor necrosis factor (ligand) supe	TNFSF10	0.765017	455.001	
ENSGALT0000 tumor necrosis factor (ligand) supe	TNFSF11	0.961454	9	
ENSGALT0000 tumor necrosis factor (ligand) supe	TNFSF13B	0.611393	4	

ENSGALT0000 tumor necrosis factor (ligand) supe	TNFSF15	0.748809	2
ENSGALT0000 tumor necrosis factor (ligand) supe	TNFSF4	0.709213	0.5
ENSGALT0000 tumor necrosis factor (ligand) supe	TNFSF8	0.551771	0
ENSGALT0000 TRAF2 and NCK interacting kinase	TNIK	0.896404	2451.5
ENSGALT0000 TNFAIP3 interacting protein 1	TNIP1	0.861233	766.502
ENSGALT0000 TNFAIP3 interacting protein 2	TNIP2	0.989008	116.5
ENSGALT0000 TNFAIP3 interacting protein 3	TNIP3	0.562993	1.5
ENSGALT0000 tankyrase, TRF1-interacting ankyrii	TNKS	0.975919	4165
ENSGALT0000 tankyrase, TRF1-interacting ankyrii	TNKS2	0.979783	1922.53
ENSGALT0000 tenomodulin	TNMD	0.824033	123.5
ENSGALT0000 tenascin N	TNN	0.95932	11
ENSGALT0000 troponin C type 1 (slow)	TNNC1	0.747166	200.5
ENSGALT0000 Troponin C, skeletal muscle	TNNC2	0.478782	2431.5
ENSGALT0000 troponin I type 1 (skeletal, slow)	TNNI1	0.841658	68
ENSGALT0000 troponin I type 2 (skeletal, fast)	TNNI2	0.825184	20.5
ENSGALT0000 troponin T type 2 (cardiac)	TNNT2	0.21406	64
ENSGALT0000 troponin T type 3 (skeletal, fast)	TNNT3	0.635249	33
ENSGALT0000 transportin 1	TNPO1	0.964762	2227.1
ENSGALT0000 transportin 3	TNPO3	0.917637	4658.5
ENSGALT0000 tenascin R (restrictin, janusin)	TNR	0.757685	32
ENSGALT0000 trinucleotide repeat containing 15	TNRC15	0.975151	2504.41
ENSGALT0000 trinucleotide repeat containing 6A	TNRC6A	0.979329	3874
ENSGALT0000 trinucleotide repeat containing 6B	TNRC6B	0.984419	2277
ENSGALT0000 trinucleotide repeat containing 6C	TNRC6C	0.942693	3650.02
ENSGALT0000 tensin 1	TNS1	0.987334	3689.87
ENSGALT0000 tensin 3	TNS3	0.992094	1405
ENSGALT0000 tenascin XB	TNXB	0.900699	40.2557
ENSGALT0000 transducer of ERBB2, 1	TOB1	0.973229	520
ENSGALT0000 transducer of ERBB2, 2	TOB2	0.974077	2689
ENSGALT0000 target of EGR1, member 1 (nuclea	TOE1	0.936771	711.5
ENSGALT0000 toll interacting protein	TOLLIP	0.870911	1107
ENSGALT0000 target of myb1 (chicken)	TOM1	0.941949	987.501
ENSGALT0000 target of myb1 (chicken)-like 1	TOM1L1	0.886225	228
ENSGALT0000 target of myb1-like 2 (chicken)	TOM1L2	0.937949	941
ENSGALT0000 translocase of outer mitochondrial i	TOMM20	0.880561	2125.5
ENSGALT0000 translocase of outer mitochondrial i	TOMM22	0.316968	3450
ENSGALT0000 translocase of outer mitochondrial i	TOMM34	0.777476	559
ENSGALT0000 translocase of outer mitochondrial i	TOMM40L	0.515157	1157.5
ENSGALT0000 translocase of outer mitochondrial i	TOMM5	0.332816	1829.5
ENSGALT0000 translocase of outer mitochondrial i	TOMM7	0.37762	1112
ENSGALT0000 translocase of outer mitochondrial i	TOMM70A	0.860239	1620.5
ENSGALT0000 topoisomerase (DNA) I	TOP1	0.963745	5931
ENSGALT0000 topoisomerase (DNA) I, mitochondi	TOP1MT	0.907289	867.5
ENSGALT0000 topoisomerase (DNA) II alpha 170k	TOP2A	0.923321	9523.17
ENSGALT0000 topoisomerase (DNA) II beta 180kL	TOP2B	0.96448	6722.35
ENSGALT0000 topoisomerase (DNA) III alpha	TOP3A	0.967049	1005.5
ENSGALT0000 topoisomerase (DNA) III beta	TOP3B	0.96968	1296.48
ENSGALT0000 topoisomerase (DNA) II binding prc	TOPBP1	0.951351	293
ENSGALT0000 topoisomerase I binding, arginine/s	TOPORS	0.981705	176.5
ENSGALT0000 torsin family 1, member A (torsin A)	TOR1A	0.935112	1707.5
ENSGALT0000 torsin A interacting protein 1	TOR1AIP1	0.981051	466
ENSGALT0000 torsin A interacting protein 2	TOR1AIP2	0.994898	100
ENSGALT0000 torsin family 1, member B (torsin B	TOR1B	0.95569	596.002
ENSGALT0000 torsin family 2, member A	TOR2A	0.99397	387.5
ENSGALT0000 torsin family 3, member A	TOR3A	0.981965	574
ENSGALT0000 thymocyte selection-associated hig	TOX	0.975868	599.502

ENSGALT0000	TOX high mobility group box family	TOX2	0.901417	792.5
ENSGALT0000	TOX high mobility group box family	TOX3	0.992181	496.004
ENSGALT0000	tumor protein p53 binding protein 1	TP53BP1	0.931507	3287.5
ENSGALT0000	tumor protein p53 binding protein, 2	TP53BP2	0.980544	6073
ENSGALT0000	tumor protein p53 inducible protein	TP53I11	0.64871	1586
ENSGALT0000	tumor protein p53 inducible protein	TP53I3	0.797002	66
ENSGALT0000	tumor protein p53 inducible nuclear	TP53INP1	0.991119	4274
ENSGALT0000	tumor protein p53 inducible nuclear	TP53INP2	0.86684	219.5
ENSGALT0000	TP53 regulating kinase	TP53RK	0.50926	642.422
ENSGALT0000	TP53 target 5	TP53TG5	0.971175	11
ENSGALT0000	tumor protein p63	TP63	0.913286	189
ENSGALT0000	tumor protein p73	TP73	0.929362	170.5
ENSGALT0000	trophoblast glycoprotein	TPBG	0.92569	91
ENSGALT0000	two pore segment channel 1	TPCN1	0.996044	1234.5
ENSGALT0000	two pore segment channel 2	TPCN2	0.974539	254
ENSGALT0000	tumor protein D52	TPD52	0.887406	1871.49
ENSGALT0000	tumor protein D52-like 2	TPD52L2	0.950091	5002.5
ENSGALT0000	Tumor protein D53 homolog	TPD53_CHICK	0.970003	259.377
ENSGALT0000	tryptophan hydroxylase 1	TPH1	0.807039	869
ENSGALT0000	tryptophan hydroxylase 2	TPH2	0.966278	104.5
ENSGALT0000	triosephosphate isomerase 1	TPI1	0.928029	13866.5
ENSGALT0000	thiamin pyrophosphokinase 1	TPK1	0.910405	287.5
ENSGALT0000	tropomyosin 1 (alpha)	TPM1	0.899148	3652.49
ENSGALT0000	tropomyosin 2 (beta)	TPM2	0.696738	1027.01
ENSGALT0000	tropomyosin 3	TPM3	0.881555	11827
ENSGALT0000	thiopurine S-methyltransferase	TPMT	0.548531	578.5
ENSGALT0000	thyroid peroxidase	TPO	0.534404	2
ENSGALT0000	tripeptidyl peptidase I	TPP1	0.825483	2621.59
ENSGALT0000	tripeptidyl peptidase II	TPP2	0.949487	1879
ENSGALT0000	tubulin polymerization promoting pr	TPPP	0.963587	10
ENSGALT0000	tubulin polymerization-promoting pr	TPPP2	?	0
ENSGALT0000	tubulin polymerization-promoting pr	TPPP3	0.294446	458.5
ENSGALT0000	translocated promoter region (to ac	TPR	0.945167	5593
ENSGALT0000	transmembrane protein, adipocyte	TPRA1	0.991212	2250.5
ENSGALT0000	tumor protein p63 regulated 1-like	TPRG1L	0.829096	3441
ENSGALT0000	TP53RK binding protein	TPRKB	0.709741	302.5
ENSGALT0000	taperin	TPRN	0.974018	630.5
ENSGALT0000	tetra-peptide repeat homeobox-like	TPRXL	0.628565	1.5
ENSGALT0000	tyrosylprotein sulfotransferase 1	TPST1	0.873616	1146
ENSGALT0000	tyrosylprotein sulfotransferase 2	TPST2	0.955952	718
ENSGALT0000	tumor protein, translationally-contro	TPT1	0.72593	27279.3
ENSGALT0000	transmembrane phosphatase with t	TPTE	0.927231	202
ENSGALT0000	TPX2, microtubule-associated, hon	TPX2	0.918544	2589
ENSGALT0000	transformer 2 alpha homolog (Dros	TRA2A	0.820598	5665.46
ENSGALT0000	transformer 2 beta homolog (Droso	TRA2B	0.895205	4679
ENSGALT0000	TraB domain containing	TRABD	0.966315	1260
ENSGALT0000	TNFRSF1A-associated via death d	TRADD	0.977053	203.5
ENSGALT0000	TNF receptor-associated factor 1	TRAF1	0.976536	126.5
ENSGALT0000	TNF receptor-associated factor 2	TRAF2	0.990247	868
ENSGALT0000	TNF receptor-associated factor 3	TRAF3	0.957206	146
ENSGALT0000	TNF receptor-associated factor 3 ir	TRAF3IP1	0.925908	751
ENSGALT0000	TRAF3 interacting protein 2	TRAF3IP2	0.995921	467
ENSGALT0000	TRAF3 interacting protein 3	TRAF3IP3	0.801887	10.5
ENSGALT0000	TNF receptor-associated factor 4	TRAF4	0.61056	492
ENSGALT0000	TNF receptor-associated factor 5	TRAF5	0.990099	327
ENSGALT0000	TNF receptor-associated factor 6	TRAF6	0.993129	291.5

ENSGALT0000	TNF receptor-associated factor 7	TRAF7	0.91703	2004.98
ENSGALT0000	TRAF-type zinc finger domain cont	TRAFD1	0.97511	994.507
ENSGALT0000	TNF-related apoptosis inducing liga	TRAIL-LIKE	0.923676	760.5
ENSGALT0000	TRAF interacting protein	TRAIP	0.855397	646
ENSGALT0000	trafficking protein, kinesin binding 1	TRAK1	0.989592	1636.5
ENSGALT0000	trafficking protein, kinesin binding 2	TRAK2	0.900262	354
ENSGALT0000	translocation associated membrane	TRAM1	0.983906	1708
ENSGALT0000	translocation associated membrane	TRAM2	0.968199	1927
ENSGALT0000	tetratricopeptide repeat and ankyrir	TRANK1	0.96131	43.5
ENSGALT0000	TNF receptor-associated protein 1	TRAP1	0.884623	3227
ENSGALT0000	trafficking protein particle complex	TRAPPC11	0.951148	1321.99
ENSGALT0000	Trafficking protein particle complex	TRAPPC2	0.960641	1342.5
ENSGALT0000	trafficking protein particle complex :	TRAPPC2L	0.34398	1269.5
ENSGALT0000	trafficking protein particle complex :	TRAPPC3	0.96068	2487
ENSGALT0000	trafficking protein particle complex	TRAPPC4	0.698708	1547.49
ENSGALT0000	trafficking protein particle complex	TRAPPC6B	0.23182	418
ENSGALT0000	trafficking protein particle complex	TRAPPC8	0.97485	896.5
ENSGALT0000	trafficking protein particle complex	TRAPPC9	0.944549	1380.99
ENSGALT0000	T cell receptor associated transmer	TRAT1	0.904804	1
ENSGALT0000	tRNA aspartic acid methyltransfera	TRDMT1	0.979594	567.001
ENSGALT0000	triadin	TRDN	0.517485	0.5
ENSGALT0000	triggering receptor expressed on m	TREM2	0.377765	14.5
ENSGALT0000	triggering receptor expressed on m	TREM-B2V2	0.796779	2
ENSGALT0000	transcriptional regulating factor 1	TRERF1	0.973731	1217
ENSGALT0000	thyrotropin-releasing hormone	TRH	0.861519	25.5
ENSGALT0000	thyrotropin-releasing hormone degr	TRHDE	0.964851	164.5
ENSGALT0000	thyrotropin-releasing hormone rece	TRHR	0.231544	4
ENSGALT0000	TP53 regulated inhibitor of apoptos	TRIAP1	0.936699	681.5
ENSGALT0000	tribbles homolog 1 (Drosophila)	TRIB1	0.968619	110.5
ENSGALT0000	tribbles homolog 2 (Drosophila)	TRIB2	0.954384	4082.69
ENSGALT0000	tripartite motif containing 13	TRIM13	0.989629	542
ENSGALT0000	tripartite motif containing 14	TRIM14	0.990267	156.5
ENSGALT0000	tripartite motif-containing 2	TRIM2	0.795032	508
ENSGALT0000	tripartite motif containing 23	TRIM23	0.865575	354.5
ENSGALT0000	tripartite motif containing 24	TRIM24	0.973318	653
ENSGALT0000	tripartite motif containing 25	TRIM25	0.987134	339.5
ENSGALT0000	tripartite motif-containing 27	TRIM27	0.828826	5
ENSGALT0000	tripartite motif containing 28	TRIM28	0.974901	709.5
ENSGALT0000	tripartite motif containing 29	TRIM29	0.457187	3
ENSGALT0000	tripartite motif containing 3	TRIM3	0.771226	3934.5
ENSGALT0000	tripartite motif containing 32	TRIM32	0.981584	639.5
ENSGALT0000	tripartite motif containing 33	TRIM33	0.969686	1448
ENSGALT0000	tripartite motif containing 35	TRIM35	0.551995	213.649
ENSGALT0000	tripartite motif containing 36	TRIM36	0.961977	537
ENSGALT0000	tripartite motif containing 37	TRIM37	0.95723	1788.5
ENSGALT0000	tripartite motif-containing 39	TRIM39	0.920793	25.5082
ENSGALT0000	tripartite motif containing 41	TRIM41	0.954096	427
ENSGALT0000	tripartite motif containing 42	TRIM42	0.464758	0
ENSGALT0000	tripartite motif containing 45	TRIM45	0.966298	857
ENSGALT0000	tripartite motif containing 50	TRIM50	0.964702	47
ENSGALT0000	tripartite motif containing 55	TRIM55	0.313263	1
ENSGALT0000	tripartite motif containing 59	TRIM59	0.991129	1138.5
ENSGALT0000	tripartite motif containing 62	TRIM62	0.952584	283
ENSGALT0000	tripartite motif containing 63	TRIM63	0.988416	276.5
ENSGALT0000	tripartite motif containing 65	TRIM65	0.896354	191
ENSGALT0000	tripartite motif containing 66	TRIM66	0.841415	112

ENSGALT0000	tripartite motif containing 67	TRIM67	0.800191	244.5
ENSGALT0000	tripartite motif-containing 7	TRIM7	0.973194	543.5
ENSGALT0000	tripartite motif containing 71	TRIM71	0.962448	601.998
ENSGALT0000	tripartite motif containing 8	TRIM8	0.934685	2010.5
ENSGALT0000	tripartite motif containing 9	TRIM9	0.709196	217.5
ENSGALT0000	triple functional domain (PTPRF int	TRIO	0.932251	4929.68
ENSGALT0000	TRIO and F-actin binding protein	TRIOBP	0.955985	1978.5
ENSGALT0000	thyroid hormone receptor interactor	TRIP11	0.990165	935.5
ENSGALT0000	thyroid hormone receptor interactor	TRIP12	0.968445	6116
ENSGALT0000	thyroid hormone receptor interactor	TRIP13	0.876981	279.5
ENSGALT0000	thyroid hormone receptor interactor	TRIP4	0.859534	815
ENSGALT0000	tRNA isopentenyltransferase 1	TRIT1	0.919478	1087.5
ENSGALT0000	tRNA methyltransferase 11 homolo	TRMT11	0.970906	211.063
ENSGALT0000	tRNA methyltransferase 12 homolo	TRMT12	0.919274	491.5
ENSGALT0000	TRM1 tRNA methyltransferase 1-lik	TRMT1L	0.990121	894
ENSGALT0000	TRM2 tRNA methyltransferase 2 ho	TRMT2A	0.97795	1036
ENSGALT0000	TRM2 tRNA methyltransferase 2 ho	TRMT2B	0.87299	652
ENSGALT0000	TRM5 tRNA methyltransferase 5 ho	TRMT5	0.939159	486.5
ENSGALT0000	tRNA methyltransferase 6 homolog	TRMT6	0.904059	609.501
ENSGALT0000	tRNA methyltransferase 61 homolo	TRMT61A	0.859738	507
ENSGALT0000	tRNA methyltransferase 61 homolo	TRMT61B	0.882755	404.634
ENSGALT0000	TROVE domain family, member 2	TROVE2	0.954878	679.5
ENSGALT0000	transient receptor potential cation c	TRPA1	0.938894	92.5
ENSGALT0000	transient receptor potential cation c	TRPC1	0.990853	1110.5
ENSGALT0000	transient receptor potential cation c	TRPC3	0.999657	128
ENSGALT0000	transient receptor potential cation c	TRPC4	0.788621	13
ENSGALT0000	transient receptor potential cation c	TRPC4AP	0.985211	3303
ENSGALT0000	transient receptor potential cation c	TRPC5	0.94772	122.5
ENSGALT0000	transient receptor potential cation c	TRPC6	0.980119	21.5
ENSGALT0000	transient receptor potential cation c	TRPC7	0.812631	84.5
ENSGALT0000	transient receptor potential cation c	TRPM1	0.856257	9
ENSGALT0000	transient receptor potential cation c	TRPM2	0.874913	163
ENSGALT0000	transient receptor potential cation c	TRPM3	0.799554	1722.5
ENSGALT0000	transient receptor potential cation c	TRPM5	0.449686	1.5
ENSGALT0000	transient receptor potential cation c	TRPM6	0.745031	99.5
ENSGALT0000	transient receptor potential cation c	TRPM7	0.992956	2050.95
ENSGALT0000	transient receptor potential cation c	TRPM8	0.427605	9
ENSGALT0000	trichorhinophalangeal syndrome I	TRPS1	0.982815	545.998
ENSGALT0000	transient receptor potential cation c	TRPV1	0.991375	51.5
ENSGALT0000	transient receptor potential cation c	TRPV2	0.920076	152.5
ENSGALT0000	transient receptor potential cation c	TRPV3	0.979341	68.5
ENSGALT0000	transient receptor potential cation c	TRPV4	0.869716	674
ENSGALT0000	transient receptor potential cation c	TRPV6	?	0
ENSGALT0000	transformation/transcription domair	TRRAP	0.958199	7998.79
ENSGALT0000	tRNA selenocysteine associated pr	TRSPAP1	0.968692	320.5
ENSGALT0000	TruB pseudouridine (psi) synthase	TRUB1	0.864981	332.5
ENSGALT0000	TruB pseudouridine (psi) synthase	TRUB2	0.89243	1131
ENSGALT0000	tuberous sclerosis 1	TSC1	0.945674	1079
ENSGALT0000	tuberous sclerosis 2	TSC2	0.97603	3486.5
ENSGALT0000	TSC22 domain family 1 isoform 1	TSC22D1	0.921301	1801
ENSGALT0000	TSC22 domain family, member 2	TSC22D2	0.989122	309
ENSGALT0000	TSC22 domain family, member 3	TSC22D3	0.656608	78.5
ENSGALT0000	tRNA splicing endonuclease 15 hor	TSEN15	0.72452	252
ENSGALT0000	tRNA splicing endonuclease 2 hom	TSEN2	0.983573	791.5
ENSGALT0000	tRNA splicing endonuclease 54 hor	TSEN54	0.968083	917.499
ENSGALT0000	tumor susceptibility gene 101	TSG101	0.932794	2351

ENSGALT0000	testis specific, 10	TSGA10	0.799536	7.5
ENSGALT0000	testis specific, 14	TSGA14	0.946635	1057
ENSGALT0000	thyroid stimulating hormone, beta	TSHB	0.603682	0
ENSGALT0000	thyroid stimulating hormone recept	TSHR	0.571217	0
ENSGALT0000	teashirt zinc finger homeobox 1	TSHZ1	0.954482	288
ENSGALT0000	teashirt zinc finger homeobox 2	TSHZ2	0.660232	122
ENSGALT0000	Tsukushin	TSKU	0.903218	297
ENSGALT0000	translin	TSN	0.922037	3309.41
ENSGALT0000	t-SNARE domain containing 1	TSNARE1	0.847616	126.5
ENSGALT0000	translin-associated factor X	TSNAX	0.963906	968.002
ENSGALT0000	translin-associated factor X interact	TSNAXIP1	0.996767	35.5
ENSGALT0000	tetraspanin 1	TSPAN1	0.954415	36.5
ENSGALT0000	tetraspanin 10	TSPAN10	0.995045	6
ENSGALT0000	tetraspanin 12	TSPAN12	0.921659	228
ENSGALT0000	tetraspanin 13	TSPAN13	0.992753	2923.5
ENSGALT0000	tetraspanin 14	TSPAN14	0.940811	864.5
ENSGALT0000	tetraspanin 15	TSPAN15	0.908188	435.5
ENSGALT0000	tetraspanin 18	TSPAN18	0.946258	308
ENSGALT0000	tetraspanin 2	TSPAN2	0.934751	88.5
ENSGALT0000	tetraspanin 3	TSPAN3	0.96418	10600.5
ENSGALT0000	tetraspanin 32	TSPAN32	0.881598	15.5
ENSGALT0000	tetraspanin 4	TSPAN4	0.956111	423
ENSGALT0000	tetraspanin 5	TSPAN5	0.883015	643
ENSGALT0000	tetraspanin 6	TSPAN6	0.913953	5972
ENSGALT0000	tetraspanin 7	TSPAN7	0.689249	1376
ENSGALT0000	tetraspanin 8	TSPAN8	?	0
ENSGALT0000	tetraspanin 9	TSPAN9	0.992446	602
ENSGALT0000	thrombospondin-type laminin G do	TSPEAR	0.9755	94
ENSGALT0000	translocator protein (18kDa)	TSPO	0.937188	1406
ENSGALT0000	translocator protein 2	TSPO2	0.698697	94
ENSGALT0000	TSR1, 20S rRNA accumulation, ho	TSR1	0.892757	1848.5
ENSGALT0000	tumor suppressing subtransferable	TSSC1	0.846432	860.999
ENSGALT0000	tumor suppressing subtransferable	TSSC4	0.884604	1446
ENSGALT0000	testis-specific serine kinase 3	TSSK3	0.93105	8
ENSGALT0000	testis-specific serine kinase 6	TSSK6	0.464758	0.5
ENSGALT0000	thiosulfate sulfurtransferase (rhoda	TST	0.981554	1863.53
ENSGALT0000	tissue specific transplantation antig	TSTA3	0.793117	972.5
ENSGALT0000	thiosulfate sulfurtransferase (rhoda	TSTD2	0.979673	293
ENSGALT0000	tau tubulin kinase 1	TTBK1	0.91138	712
ENSGALT0000	tau tubulin kinase 2	TTBK2	0.844113	367
ENSGALT0000	tetratricopeptide repeat domain 1	TTC1	0.952266	880
ENSGALT0000	tetratricopeptide repeat domain 12	TTC12	0.996568	677
ENSGALT0000	tetratricopeptide repeat domain 13	TTC13	0.975294	340
ENSGALT0000	tetratricopeptide repeat domain 14	TTC14	0.998742	1291.5
ENSGALT0000	tetratricopeptide repeat domain 15	TTC15	0.965543	928
ENSGALT0000	tetratricopeptide repeat domain 16	TTC16	0.997579	59.5
ENSGALT0000	tetratricopeptide repeat domain 17	TTC17	0.965854	1340.55
ENSGALT0000	tetratricopeptide repeat domain 18	TTC18	0.914563	538.5
ENSGALT0000	tetratricopeptide repeat domain 19	TTC19	0.838468	607.333
ENSGALT0000	tetratricopeptide repeat domain 21I	TTC21B	0.990108	1339.47
ENSGALT0000	tetratricopeptide repeat domain 26	TTC26	0.996827	967.5
ENSGALT0000	tetratricopeptide repeat domain 27	TTC27	0.901257	1015.5
ENSGALT0000	tetratricopeptide repeat domain 28	TTC28	0.934504	3685.5
ENSGALT0000	tetratricopeptide repeat domain 29	TTC29	0.960681	19
ENSGALT0000	tetratricopeptide repeat domain 3	TTC3	0.97869	1109.5
ENSGALT0000	tetratricopeptide repeat domain 30/	TTC30A	0.963374	1227

ENSGALT0000	tetratricopeptide repeat domain 32	TTC32	0.887985	188.5
ENSGALT0000	tetratricopeptide repeat domain 33	TTC33	0.913582	327
ENSGALT0000	tetratricopeptide repeat domain 34	TTC34	0.79712	17.5
ENSGALT0000	tetratricopeptide repeat domain 35	TTC35	0.794971	767.5
ENSGALT0000	tetratricopeptide repeat domain 36	TTC36	0.816184	33
ENSGALT0000	tetratricopeptide repeat domain 37	TTC37	0.935202	1471.5
ENSGALT0000	tetratricopeptide repeat domain 38	TTC38	0.980355	712.6
ENSGALT0000	tetratricopeptide repeat domain 39/	TTC39A	0.980337	277.5
ENSGALT0000	tetratricopeptide repeat domain 39E	TTC39B	0.96389	166.5
ENSGALT0000	tetratricopeptide repeat domain 39C	TTC39C	0.968583	426.5
ENSGALT0000	tetratricopeptide repeat domain 4	TTC4	0.780865	905.5
ENSGALT0000	tetratricopeptide repeat domain 6	TTC6	0.773122	27
ENSGALT0000	tetratricopeptide repeat domain 7A	TTC7A	0.962119	361.5
ENSGALT0000	tetratricopeptide repeat domain 7B	TTC7B	0.921181	495
ENSGALT0000	tetratricopeptide repeat domain 8	TTC8	0.892975	1032
ENSGALT0000	tetratricopeptide repeat domain 9	TTC9	0.581235	245
ENSGALT0000	transcription termination factor, RN/	TTF2	0.962436	897.995
ENSGALT0000	Tel2 interacting protein 1 homolog (	TTI1	0.975083	917.5
ENSGALT0000	chromosome 8 open reading frame	TTI2	0.867599	387.5
ENSGALT0000	TTK protein kinase	TTK	0.95165	785
ENSGALT0000	tubulin tyrosine ligase	TTL	0.896273	2227
ENSGALT0000	tubulin tyrosine ligase-like family, m	TTLL1	0.880054	143
ENSGALT0000	tubulin tyrosine ligase-like family, m	TTLL11	0.979911	251
ENSGALT0000	tubulin tyrosine ligase-like family, m	TTLL12	0.967708	3821
ENSGALT0000	tubulin tyrosine ligase-like family, m	TTLL5	0.974729	2655.93
ENSGALT0000	tubulin tyrosine ligase-like family, m	TTLL7	0.975685	584
ENSGALT0000	tubulin tyrosine ligase-like family, m	TTLL9	0.992952	220.5
ENSGALT0000	titin	TTN	0.979934	2.5
ENSGALT0000	tocopherol (alpha) transfer protein	TTPA	0.936714	44.5
ENSGALT0000	tocopherol (alpha) transfer protein-	TTPAL	0.99748	893
ENSGALT0000	transthyretin	TTR	0.353553	1.5
ENSGALT0000	tweety homolog 3 (Drosophila)	TTYH3	0.946011	2276.5
ENSGALT0000	tubby homolog (mouse)	TUB	0.972825	493
ENSGALT0000	tubulin, alpha 3e	TUBA3E	0.87091	6397.51
ENSGALT0000	tubulin, alpha 4a	TUBA4A	0.23643	0.5
ENSGALT0000	tubulin, alpha 8	TUBA8	0.547437	2
ENSGALT0000	tubulin, alpha-like 3	TUBAL3	0.917822	4971.95
ENSGALT0000	tubulin, beta 1	TUBB1	0.986778	475
ENSGALT0000	tubulin, beta 2B class IIb	TUBB2B	0.09508	30358.5
ENSGALT0000	tubulin, beta 2C	TUBB2C	0.519661	17060.7
ENSGALT0000	tubulin, beta 6 class V	TUBB6	0.654359	347
ENSGALT0000	tubulin, delta 1	TUBD1	0.987067	354
ENSGALT0000	tubulin, epsilon 1	TUBE1	0.996663	191.5
ENSGALT0000	tubulin, gamma 1	TUBG1	0.842502	2956.5
ENSGALT0000	tubulin, gamma complex associate	TUBGCP2	0.957692	2244.54
ENSGALT0000	tubulin, gamma complex associate	TUBGCP3	0.99601	1764
ENSGALT0000	tubulin, gamma complex associate	TUBGCP4	0.928576	1861
ENSGALT0000	tubulin, gamma complex associate	TUBGCP5	0.981152	854
ENSGALT0000	tubulin, gamma complex associate	TUBGCP6	0.972447	667.003
ENSGALT0000	tuftelin 1	TUFT1	0.950884	627.5
ENSGALT0000	tubby like protein 1	TULP1	0.539038	12
ENSGALT0000	tubby like protein 3	TULP3	0.969284	497.5
ENSGALT0000	tubby like protein 4	TULP4	0.925852	1272
ENSGALT0000	tumor suppressor candidate 1	TUSC1	0.313044	256.5
ENSGALT0000	tumor suppressor candidate 2	TUSC2	0.900022	861.5
ENSGALT0000	tumor suppressor candidate 3	TUSC3	0.812652	661.001

ENSGALT0000	tumor suppressor candidate 5	TUSC5	0.801029	35
ENSGALT0000	twinfilin, actin-binding protein, home	TWF1	0.996212	595.997
ENSGALT0000	twinfilin, actin-binding protein, home	TWF2	0.90461	4481.59
ENSGALT0000	twist homolog 2 (Drosophila)	TWIST2	0.557021	165.5
ENSGALT0000	Twist3	TWIST3	0.868856	39
ENSGALT0000	TWIST neighbor	TWISTNB	0.82744	249
ENSGALT0000	Twisted gastrulation protein homolo	TWSG1	0.925213	1861
ENSGALT0000	TXK tyrosine kinase	TXK	0.927729	1
ENSGALT0000	taxilin alpha	TXLNA	0.950005	1736
ENSGALT0000	taxilin beta	TXLNB	0.725097	0.5
ENSGALT0000	taxilin gamma	TXLNG	0.997527	612.5
ENSGALT0000	thioredoxin	TXN	0.0870464	5978.5
ENSGALT0000	thioredoxin 2	TXN2	0.740658	2768.98
ENSGALT0000	thioredoxin domain containing 11	TXNDC11	0.961165	762
ENSGALT0000	thioredoxin domain containing 12 (e	TXNDC12	0.98308	2004
ENSGALT0000	thioredoxin domain containing 15	TXNDC15	0.877692	662
ENSGALT0000	thioredoxin domain containing 16	TXNDC16	0.978459	1024
ENSGALT0000	thioredoxin domain containing 17	TXNDC17	0.695103	1611.5
ENSGALT0000	thioredoxin domain containing 3 (sp	TXNDC3	0.649519	0.5
ENSGALT0000	thioredoxin domain containing 5 (er	TXNDC5	0.968268	5732
ENSGALT0000	thioredoxin domain containing 9	TXNDC9	0.907748	828
ENSGALT0000	thioredoxin-like 1	TXNL1	0.739529	1443.5
ENSGALT0000	thioredoxin-like 4A	TXNL4A	0.588348	760
ENSGALT0000	thioredoxin-like 4B	TXNL4B	0.745636	189.5
ENSGALT0000	thioredoxin reductase 1	TXNRD1	0.981574	1055.5
ENSGALT0000	thioredoxin reductase 2	TXNRD2	0.969033	154.5
ENSGALT0000	thioredoxin reductase 3	TXNRD3	0.977402	2517.5
ENSGALT0000	tyrosine kinase 2	TYK2	0.911244	317
ENSGALT0000	thymidylate synthetase	TYMS	0.847513	1596.5
ENSGALT0000	tyrosinase (oculocutaneous albinisr	TYR	0.649519	2.5
ENSGALT0000	TYRO3 protein tyrosine kinase	TYRO3	0.984438	5288
ENSGALT0000	tyrosinase-related protein 1	TYRP1	0.862641	6
ENSGALT0000	trypsin domain containing 1	TYSND1	0.901722	870.5
ENSGALT0000	tRNA-yW synthesizing protein 1 ho	TYW1	0.968424	1008
ENSGALT0000	tRNA-yW synthesizing protein 3 ho	TYW3	0.830433	264
ENSGALT0000	tRNA-yW synthesizing protein 5	TYW5	0.927798	245.53
ENSGALT0000	U1 spliceosomal RNA	U1	0.750911	306.5
ENSGALT0000	U11 spliceosomal RNA	U11	0.94691	6
ENSGALT0000	U12 minor spliceosomal RNA	U12	0.460161	3.5
ENSGALT0000	U2 spliceosomal RNA	U2	0.973024	102.5
ENSGALT0000	U2 small nuclear RNA auxiliary fact	U2AF1	0.92069	5519.29
ENSGALT0000	U2 snRNP-associated SURP doma	U2SURP	0.975368	2397
ENSGALT0000	Small nucleolar RNA U3	U3	0.06175	351.5
ENSGALT0000	U4 spliceosomal RNA	U4	0.916047	14
ENSGALT0000	U4atac minor spliceosomal RNA	U4atac	0.371997	2
ENSGALT0000	U5 spliceosomal RNA	U5	0.294776	9.5
ENSGALT0000	Small nucleolar RNA U54	U54	?	0
ENSGALT0000	U6 spliceosomal RNA	U6	0.991989	108.5
ENSGALT0000	U6atac minor spliceosomal RNA	U6atac	0.588798	15.5
ENSGALT0000	U7 small nuclear RNA	U7	0.464758	0
ENSGALT0000	uveal autoantigen with coiled-coil d	UACA	0.980463	2220.5
ENSGALT0000	UDP-N-acteylglucosamine pyropho	UAP1	0.792422	1469
ENSGALT0000	UDP-N-acteylglucosamine pyropho	UAP1L1	0.998305	1028.49
ENSGALT0000	ubiquitin-like modifier activating enz	UBA3	0.919383	1308.32
ENSGALT0000	ubiquitin-like modifier activating enz	UBA5	0.965545	486
ENSGALT0000	ubiquitin-like modifier activating enz	UBA6	0.960667	1140

ENSGALT0000	ubiquitin-like modifier activating en	UBA7	0.722875	1022.5
ENSGALT0000	UBA domain containing 1	UBAC1	0.838341	486.5
ENSGALT0000	UBA domain containing 2	UBAC2	0.947404	1109.5
ENSGALT0000	ubiquitin associated protein 1	UBAP1	0.987118	362
ENSGALT0000	ubiquitin associated protein 2	UBAP2	0.949763	784.764
ENSGALT0000	ubiquitin associated protein 2-like	UBAP2L	0.898799	6431.17
ENSGALT0000	ubiquitin associated and SH3 doma	UBASH3A	0.464758	0
ENSGALT0000	ubiquitin associated and SH3 doma	UBASH3B	0.799762	326.5
ENSGALT0000	Polyubiquitin-BUbiquitin	UBB_CHICK	0.926059	508.831
ENSGALT0000	ubiquitin-conjugating enzyme E2A	UBE2A	0.918585	537.5
ENSGALT0000	ubiquitin-conjugating enzyme E2C	UBE2CBP	0.891421	162
ENSGALT0000	ubiquitin-conjugating enzyme E2D	UBE2D1	0.890528	324
ENSGALT0000	ubiquitin-conjugating enzyme E2D	UBE2D2	0.954894	865.93
ENSGALT0000	ubiquitin-conjugating enzyme E2D	UBE2D3	0.945073	5559.57
ENSGALT0000	ubiquitin-conjugating enzyme E2E	UBE2E1	0.874646	1691.52
ENSGALT0000	ubiquitin-conjugating enzyme E2E	UBE2E3	0.933942	1941
ENSGALT0000	ubiquitin-conjugating enzyme E2F	UBE2F	0.731108	1457
ENSGALT0000	ubiquitin-conjugating enzyme E2G	UBE2G2	0.954298	867
ENSGALT0000	ubiquitin-conjugating enzyme E2H	UBE2H	0.98675	2550.42
ENSGALT0000	ubiquitin-conjugating enzyme E2I	UBE2I	0.946038	2160.99
ENSGALT0000	ubiquitin-conjugating enzyme E2, J	UBE2J1	0.890994	503.5
ENSGALT0000	ubiquitin-conjugating enzyme E2, J	UBE2J2	0.90911	1516
ENSGALT0000	huntingtin interacting protein 2	UBE2K	0.739653	960.491
ENSGALT0000	ubiquitin-conjugating enzyme E2L :	UBE2L3	0.885097	1691.5
ENSGALT0000	ubiquitin-conjugating enzyme E2N	UBE2N	0.882097	3181.52
ENSGALT0000	ubiquitin-conjugating enzyme E2O	UBE2O	0.901429	3885.5
ENSGALT0000	ubiquitin-conjugating enzyme E2Q	UBE2Q2	0.995574	1163.51
ENSGALT0000	ubiquitin-conjugating enzyme E2Q	UBE2QL1	0.666832	588
ENSGALT0000	ubiquitin-conjugating enzyme E2R	UBE2R2	0.944483	1938
ENSGALT0000	ubiquitin-conjugating enzyme E2T	UBE2T	0.915423	524.5
ENSGALT0000	ubiquitin-conjugating enzyme E2 va	UBE2V2	0.85331	1186.08
ENSGALT0000	ubiquitin-conjugating enzyme E2Z	UBE2Z	0.988221	446
ENSGALT0000	ubiquitin protein ligase E3A	UBE3A	0.974699	1862
ENSGALT0000	ubiquitin protein ligase E3C	UBE3C	0.978089	1141.49
ENSGALT0000	ubiquitination factor E4A	UBE4A	0.941043	3175.06
ENSGALT0000	ubiquitination factor E4B	UBE4B	0.95218	2988
ENSGALT0000	ubiquitin family domain containing	UBFD1	0.817766	786.003
ENSGALT0000	transitional epithelia response prot	UBIAD1	0.940193	1750
ENSGALT0000	ubiquitin-like 3	UBL3	0.990146	1356
ENSGALT0000	ubiquitin-like 7 (bone marrow strom	UBL7	0.835594	1384.5
ENSGALT0000	ubiquitin-like domain containing CT	UBLCP1	0.951635	767.501
ENSGALT0000	ubinuclein 1	UBN1	0.960255	703
ENSGALT0000	ubinuclein 2	UBN2	0.996917	1367
ENSGALT0000	U-box domain containing 5	UBOX5	0.946908	673
ENSGALT0000	upstream binding protein 1 (LBP-1a	UBP1	0.973412	1610.51
ENSGALT0000	ubiquilin 1	UBQLN1	0.925465	987.5
ENSGALT0000	ubiquilin 4	UBQLN4	0.914226	6844.02
ENSGALT0000	ubiquitin protein ligase E3 compone	UBR1	0.969193	1604
ENSGALT0000	ubiquitin protein ligase E3 compone	UBR2	0.969381	1693.02
ENSGALT0000	ubiquitin protein ligase E3 compone	UBR4	0.976569	11165.5
ENSGALT0000	ubiquitin domain containing 1	UBTD1	0.631621	259.5
ENSGALT0000	ubiquitin domain containing 2	UBTD2	0.951932	801
ENSGALT0000	UBX domain protein 10	UBXN10	0.965992	130
ENSGALT0000	UBX domain protein 11	UBXN11	0.763305	19
ENSGALT0000	UBX domain protein 2A	UBXN2A	0.97902	567.5
ENSGALT0000	UBX domain protein 2B	UBXN2B	0.902878	345.501

ENSGALT0000	UBX domain protein 4	UBXN4	0.911869	2220
ENSGALT0000	UBX domain protein 6	UBXN6	0.899731	540
ENSGALT0000	UBX domain protein 7	UBXN7	0.987829	839
ENSGALT0000	ubiquitin carboxyl-terminal esterase	UCHL1	0.0530368	5185
ENSGALT0000	ubiquitin carboxyl-terminal esterase	UCHL3	0.832344	912
ENSGALT0000	ubiquitin carboxyl-terminal hydrolas	UCHL5	0.784948	1185.5
ENSGALT0000	uridine-cytidine kinase 1	UCK1	0.945099	1409.5
ENSGALT0000	uridine-cytidine kinase 2	UCK2	0.619287	742.5
ENSGALT0000	uridine-cytidine kinase 1-like 1	UCKL1	0.96267	306.5
ENSGALT0000	urocortin 3 (stresscopin)	UCN3	0.778348	2
ENSGALT0000	uncoupling protein 3 (mitochondrial	UCP3	0.976949	49.5
ENSGALT0000	UEV and lactate/malate dehyrogen	UEVLD	0.965547	475
ENSGALT0000	ubiquitin fusion degradation 1 like (	UFD1L	0.873383	2058
ENSGALT0000	ubiquitin-fold modifier 1	UFM1	0.951284	1241.99
ENSGALT0000	UFM1-specific peptidase 2	UFSP2	0.936715	1241
ENSGALT0000	UDP-glucose ceramide glucosyltrai	UGCG	0.947117	302
ENSGALT0000	UDP-glucose 6-dehydrogenase	UGDH	0.947605	1828.5
ENSGALT0000	UDP-glucose glycoprotein glucosyl	UGGT1	0.942999	3209.44
ENSGALT0000	UDP-glucose glycoprotein glucosyl	UGGT2	0.957435	707.004
ENSGALT0000	UDP-glucose pyrophosphorylase 2	UGP2	0.984637	1490
ENSGALT0000	UDP glucuronosyltransferase 1 fan	UGT1A1	0.722096	0.5
ENSGALT0000	UDP glucuronosyltransferase 2 fan	UGT2A3	0.348675	2
ENSGALT0000	UDP glycosyltransferase 8	UGT8	0.950902	1086
ENSGALT0000	U2AF homology motif (UHM) kinas	UHMK1	0.94531	581
ENSGALT0000	ubiquitin-like with PHD and ring finç	UHRF1	0.920325	1356.5
ENSGALT0000	UHRF1 binding protein 1	UHRF1BP1	0.992199	2256.5
ENSGALT0000	UHRF1 binding protein 1-like	UHRF1BP1L	0.954432	761
ENSGALT0000	ubiquitin-like with PHD and ring finç	UHRF2	0.979148	1551.5
ENSGALT0000	ubiquitin interaction motif containinç	UIMC1	0.976781	857.99
ENSGALT0000	unc-51-like kinase 1 (C. elegans)	ULK1	0.980842	862.5
ENSGALT0000	unc-51-like kinase 2 (C. elegans)	ULK2	0.948483	2178.5
ENSGALT0000	uromodulin-like 1	UMODL1	0.927977	23
ENSGALT0000	uridine monophosphate synthetase	UMPS	0.871736	2001
ENSGALT0000	unc-119 homolog (C. elegans)	UNC119	0.891874	133
ENSGALT0000	unc-119 homolog B (C. elegans)	UNC119B	0.998495	1829
ENSGALT0000	unc-13 homolog B (C. elegans)	UNC13B	0.989567	1928.98
ENSGALT0000	unc-13 homolog C (C. elegans)	UNC13C	0.834862	89
ENSGALT0000	unc-13 homolog D (C. elegans)	UNC13D	0.846714	82
ENSGALT0000	unc-45 homolog A (C. elegans)	UNC45A	0.906037	2605.5
ENSGALT0000	unc-45 homolog B (C. elegans)	UNC45B	0.821187	1.5
ENSGALT0000	unc-50 homolog (C. elegans)	UNC50	0.830877	1022.5
ENSGALT0000	unc-5 homolog A (C. elegans)	UNC5A	0.630499	637.502
ENSGALT0000	unc-5 homolog B (C. elegans)	UNC5B	0.838689	3347.92
ENSGALT0000	unc-5 homolog C (C. elegans)	UNC5C	0.932534	3169.93
ENSGALT0000	unc-5 homolog D (C. elegans)	UNC5D	0.706634	116.5
ENSGALT0000	unc-80 homolog (C. elegans)	UNC80	0.774528	404
ENSGALT0000	unc-93 homolog A (C. elegans)	UNC93A	0.603682	0
ENSGALT0000	uracil-DNA glycosylase	UNG	0.745655	1074.29
ENSGALT0000	unkempt homolog (Drosophila)	UNK	0.997554	1126
ENSGALT0000	unkempt homolog (Drosophila)-like	UNKL	0.974672	407
ENSGALT0000	ureidopropionase, beta	UPB1	0.915271	6
ENSGALT0000	UPF1 regulator of nonsense transc	UPF1	0.974494	4750.59
ENSGALT0000	UPF2 regulator of nonsense transc	UPF2	0.997508	2336.5
ENSGALT0000	UPF3 regulator of nonsense transc	UPF3A	0.845745	22.5
ENSGALT0000	UPF3 regulator of nonsense transc	UPF3B	0.916922	1562.96
ENSGALT0000	uroplakin 1B	UPK1B	0.948339	1040.5

ENSGALT0000	uroplakin 3A	UPK3A	0.278927	6
ENSGALT0000	uroplakin 3B	UPK3B	0.94047	15
ENSGALT0000	uroplakin 3B-like	UPK3BL	0.965976	3564.5
ENSGALT0000	uridine phosphorylase 1	UPP1	0.916169	785.5
ENSGALT0000	uridine phosphorylase 2	UPP2	0.762661	4.5
ENSGALT0000	uracil phosphoribosyltransferase (F	UPRT	0.903658	508
ENSGALT0000	ubiquinol-cytochrome c reductase (	UQCC	0.866125	936.5
ENSGALT0000	ubiquinol-cytochrome c reductase,	UQCR10	0.470498	4484
ENSGALT0000	ubiquinol-cytochrome c reductase,	UQCR11	0.201779	1346
ENSGALT0000	ubiquinol-cytochrome c reductase	UQCRB	0.60608	1586.5
ENSGALT0000	ubiquinol-cytochrome c reductase (	UQCRC1	0.766579	5247.5
ENSGALT0000	ubiquinol-cytochrome c reductase (	UQCRC2	0.764882	5492.5
ENSGALT0000	ubiquinol-cytochrome c reductase,	UQCRFS1	0.613182	4160
ENSGALT0000	ubiquinol-cytochrome c reductase	UQCRH	0.295693	5660.5
ENSGALT0000	ubiquinol-cytochrome c reductase,	UQCRQ	0.096818	2938.5
ENSGALT0000	URB1 ribosome biogenesis 1 homo	URB1	0.969969	1249
ENSGALT0000	URB2 ribosome biogenesis 2 homo	URB2	0.950247	973
ENSGALT0000	URI1, prefoldin-like chaperone	URI1	0.964039	1790.5
ENSGALT0000	ubiquitin related modifier 1	URM1	0.814096	3697.5
ENSGALT0000	urocanase domain containing 1	UROC1	0.99475	49
ENSGALT0000	uroporphyrinogen decarboxylase	UROD	0.688778	1085.5
ENSGALT0000	uroporphyrinogen III synthase	UROS	0.892002	313
ENSGALT0000	unconventional SNARE in the ER 1	USE1	0.810056	738.998
ENSGALT0000	upstream stimulatory factor 1	USF1	0.394307	2317.96
ENSGALT0000	Usher syndrome 1C (autosomal re	USH1C	0.980585	1648.01
ENSGALT0000	Usher syndrome 1G (autosomal re	USH1G	0.790584	130
ENSGALT0000	Usher syndrome 2A (autosomal re	USH2A	0.744444	62.5
ENSGALT0000	USO1 vesicle docking protein hom	USO1	0.95316	4409.5
ENSGALT0000	ubiquitin specific peptidase 1	USP1	0.963189	1575.01
ENSGALT0000	ubiquitin specific peptidase 10	USP10	0.930087	3594.57
ENSGALT0000	ubiquitin specific peptidase 12	USP12	0.918418	48.212
ENSGALT0000	ubiquitin specific peptidase 12 pse	USP12P1	0.942797	1212.79
ENSGALT0000	ubiquitin specific peptidase 13 (iso	USP13	0.988731	234.5
ENSGALT0000	ubiquitin specific peptidase 14 (tRN	USP14	0.848584	1820
ENSGALT0000	ubiquitin specific peptidase 15	USP15	0.936972	895.992
ENSGALT0000	ubiquitin specific peptidase 16	USP16	0.964129	1047.13
ENSGALT0000	ubiquitin specific peptidase 18	USP18	0.937594	201
ENSGALT0000	ubiquitin specific peptidase 19	USP19	0.945926	1926.5
ENSGALT0000	ubiquitin specific peptidase 2	USP2	0.926597	571.502
ENSGALT0000	ubiquitin specific peptidase 20	USP20	0.967975	1513.5
ENSGALT0000	ubiquitin specific peptidase 22	USP22	0.975052	2516.5
ENSGALT0000	ubiquitin specific peptidase 24	USP24	0.97545	4176.19
ENSGALT0000	ubiquitin specific peptidase 25	USP25	0.960933	777.003
ENSGALT0000	ubiquitin specific peptidase 28	USP28	0.961968	1433
ENSGALT0000	ubiquitin specific peptidase 3	USP3	0.94636	1372.5
ENSGALT0000	ubiquitin specific peptidase 30	USP30	0.976313	233.517
ENSGALT0000	ubiquitin specific peptidase 32	USP32	0.95028	823.5
ENSGALT0000	ubiquitin specific peptidase 33	USP33	0.963111	980
ENSGALT0000	ubiquitin specific peptidase 34	USP34	0.986855	2851.5
ENSGALT0000	ubiquitin specific peptidase 35	USP35	0.901417	86.5
ENSGALT0000	ubiquitin specific peptidase 37	USP37	0.980938	892.997
ENSGALT0000	ubiquitin specific peptidase 38	USP38	0.984037	946
ENSGALT0000	ubiquitin specific peptidase 4 (proto	USP4	0.938773	2358.04
ENSGALT0000	ubiquitin specific peptidase 40	USP40	0.998006	364.5
ENSGALT0000	ubiquitin specific peptidase 42	USP42	0.993014	933
ENSGALT0000	ubiquitin specific peptidase 43	USP43	0.974254	266

ENSGALT0000	ubiquitin specific peptidase 44	USP44	0.990671	1080
ENSGALT0000	ubiquitin specific peptidase 45	USP45	0.987722	840.997
ENSGALT0000	ubiquitin specific peptidase 46	USP46	0.883306	1166
ENSGALT0000	ubiquitin specific peptidase 47	USP47	0.965965	1864
ENSGALT0000	ubiquitin specific peptidase 48	USP48	0.951018	2438.5
ENSGALT0000	ubiquitin specific peptidase 5 (isope	USP5	0.836332	5231
ENSGALT0000	ubiquitin specific protease 52	USP52	0.98827	2722.5
ENSGALT0000	ubiquitin specific peptidase 53	USP53	0.957912	261.501
ENSGALT0000	ubiquitin specific peptidase 54	USP54	0.973107	902
ENSGALT0000	USP6 N-terminal like	USP6NL	0.865056	406.514
ENSGALT0000	ubiquitin specific peptidase 7 (herp	USP7	0.968533	3630.05
ENSGALT0000	ubiquitin specific peptidase 8	USP8	0.977516	1327.5
ENSGALT0000	ubiquitin specific peptidase 9, X-linl	USP9X	0.957455	5963.47
ENSGALT0000	ubiquitin specific peptidase like 1	USPL1	0.994225	2541.5
ENSGALT0000	uronyl-2-sulfotransferase	UST	0.992557	359.5
ENSGALT0000	UTP11-like, U3 small nucleolar ribc	UTP11L	0.882831	838.5
ENSGALT0000	U3 small nucleolar RNA-associatec	UTP15	0.897203	808
ENSGALT0000	UTP18 small subunit (SSU) proces	UTP18	0.786871	727.5
ENSGALT0000	UTP20, small subunit (SSU) proces	UTP20	0.903325	1794.54
ENSGALT0000	UTP23, small subunit (SSU) proces	UTP23	0.876621	218.5
ENSGALT0000	UTP3, small subunit (SSU) process	UTP3	0.946312	525.5
ENSGALT0000	UTP6, small subunit (SSU) process	UTP6	0.934056	888.504
ENSGALT0000	utrophin	UTRN	0.981288	3821
ENSGALT0000	urotensin 2	UTS2	0.898356	0.5
ENSGALT0000	urotensin 2 domain containing	UTS2D	0.0523832	1
ENSGALT0000	urotensin 2 receptor	UTS2R	0.511741	5.57331
ENSGALT0000	UV radiation resistance associated	UVRAG	0.993551	298.001
ENSGALT0000	UDP-glucuronate decarboxylase 1	UXS1	0.897714	537.5
ENSGALT0000	Vac14 homolog (S. cerevisiae)	VAC14	0.873235	1921
ENSGALT0000	vesicle-associated membrane prote	VAMP1	0.990557	92.5
ENSGALT0000	vesicle-associated membrane prote	VAMP2	0.958383	24.5
ENSGALT0000	vesicle-associated membrane prote	VAMP3	0.742529	1583.5
ENSGALT0000	vesicle-associated membrane prote	VAMP4	0.821864	1006.5
ENSGALT0000	vesicle-associated membrane prote	VAMP7	0.948775	479.5
ENSGALT0000	vang-like 1 (van gogh, Drosophila)	VANGL1	0.985191	578.5
ENSGALT0000	vang-like 2 (van gogh, Drosophila)	VANGL2	0.914784	2439
ENSGALT0000	VAMP (vesicle-associated membra	VAPA	0.865698	2223.98
ENSGALT0000	VAMP (vesicle-associated membra	VAPB	0.92897	1142
ENSGALT0000	vasohibin 1	VASH1	0.947159	4102.5
ENSGALT0000	vasohibin 2	VASH2	0.875135	615
ENSGALT0000	vasorin	VASN	0.859729	1493.5
ENSGALT0000	vesicle amine transport protein 1 hc	VAT1	0.815965	1987
ENSGALT0000	vesicle amine transport protein 1 hc	VAT1L	0.9202	231
ENSGALT0000	Vault RNA	Vault	0.534404	0.5
ENSGALT0000	vav 2 guanine nucleotide exchange	VAV2	0.853841	3061
ENSGALT0000	vav 3 guanine nucleotide exchange	VAV3	0.984528	1042
ENSGALT0000	ventral anterior homeobox 1	VAX1	0.712429	6
ENSGALT0000	von Hippel-Lindau binding protein 1	VBP1	0.847595	719
ENSGALT0000	vascular cell adhesion molecule 1	VCAM1	0.965908	37
ENSGALT0000	versican	VCAN	0.842166	2916
ENSGALT0000	vinculin	VCL	0.880534	3705
ENSGALT0000	valosin containing protein	VCP	0.849357	10569.1
ENSGALT0000	valosin containing protein (p97)/p4	VCPIP1	0.944531	584
ENSGALT0000	voltage-dependent anion channel 1	VDAC1	0.982322	2308
ENSGALT0000	voltage-dependent anion channel 2	VDAC2	0.89877	7868.93
ENSGALT0000	voltage-dependent anion channel 3	VDAC3	0.812616	2843.5

ENSGALT0000	vitamin D (1,25- dihydroxyvitamin D	VDR	0.852502	33.5
ENSGALT0000	vascular endothelial growth factor A	VEGFA	0.993417	428.5
ENSGALT0000	vascular endothelial growth factor C	VEGFC	0.970478	247
ENSGALT0000	VENT homeobox	VENTX	0.540722	2.5
ENSGALT0000	ventricular zone expressed PH dom	VEPH1	0.71206	92
ENSGALT0000	vascular endothelial zinc finger 1	VEZF1	0.974381	1864.51
ENSGALT0000	vezatin, adherens junctions transm	VEZT	0.941239	770.725
ENSGALT0000	vestigial like 1 (Drosophila)	VGLL1	0.846336	1.5
ENSGALT0000	vestigial like 2 (Drosophila)	VGLL2	0.315365	8.5
ENSGALT0000	vestigial like 3 (Drosophila)	VGLL3	0.622295	59
ENSGALT0000	vestigial like 4 (Drosophila)	VGLL4	0.95903	3238.5
ENSGALT0000	von Hippel-Lindau tumor suppresso	VHL	0.755202	1451
ENSGALT0000	villin 1	VIL1	0.632377	122.5
ENSGALT0000	villin-like	VILL	0.967685	2790
ENSGALT0000	vimentin	VIM	0.647023	42035.5
ENSGALT0000	vasoactive intestinal peptide	VIP	0.113706	62
ENSGALT0000	VPS33B interacting protein, apical-	VIPAR	0.939442	1200.5
ENSGALT0000	vasoactive intestinal peptide recept	VIPR1	0.917438	152.5
ENSGALT0000	vasoactive intestinal peptide recept	VIPR2	0.925236	11.5
ENSGALT0000	vitrin	VIT	0.800197	2.5
ENSGALT0000	Vitellogenin-3Phosvitin	VIT3_CHICK	0.856518	7.5
ENSGALT0000	vitamin K epoxide reductase compl	VKORC1L1	0.88824	331
ENSGALT0000	very low density lipoprotein recepto	VLDLR	0.855259	420
ENSGALT0000	VMA21 vacuolar H+-ATPase homo	VMA21	0.973011	1206
ENSGALT0000	vitelline membrane outer layer 1 ho	VMO1	0.421875	1
ENSGALT0000	vacuole membrane protein 1	VMP1	0.957385	1166.5
ENSGALT0000	vanin 1	VNN1	0.987121	68.5
ENSGALT0000	vesicular, overexpressed in cancer,	VOPP1	0.854294	53
ENSGALT0000	Vpr (HIV-1) binding protein	VPRBP	0.978338	2172.5
ENSGALT0000	pre-B lymphocyte 3	VPREB3	0.689337	1
ENSGALT0000	vacuolar protein sorting 11 homolog	VPS11	0.924793	1970
ENSGALT0000	vacuolar protein sorting 13 homolo	VPS13A	0.979177	653
ENSGALT0000	vacuolar protein sorting 13 homolo	VPS13B	0.982569	1828.5
ENSGALT0000	vacuolar protein sorting 13 homolo	VPS13C	0.972349	1184.5
ENSGALT0000	vacuolar protein sorting 13 homolo	VPS13D	0.991247	2092.54
ENSGALT0000	vacuolar protein sorting 16 homolo	VPS16	0.825799	4570.5
ENSGALT0000	vacuolar protein sorting 18 homolo	VPS18	0.932069	964
ENSGALT0000	vacuolar protein sorting 24 homolo	VPS24	0.768383	1498.5
ENSGALT0000	vacuolar protein sorting 25 homolo	VPS25	0.739226	1576
ENSGALT0000	vacuolar protein sorting 26 homolo	VPS26A	0.981647	844
ENSGALT0000	vacuolar protein sorting 26 homolo	VPS26B	0.968852	1561
ENSGALT0000	vacuolar protein sorting 29	VPS29	0.886186	2539.03
ENSGALT0000	vacuolar protein sorting 33 homolo	VPS33A	0.845548	1366
ENSGALT0000	vacuolar protein sorting 33 homolo	VPS33B	0.852629	3937.13
ENSGALT0000	vacuolar protein sorting 35 homolo	VPS35	0.961067	2819
ENSGALT0000	vacuolar protein sorting 36 homolo	VPS36	0.954236	845
ENSGALT0000	vacuolar protein sorting 37 homolo	VPS37A	0.954948	302.088
ENSGALT0000	vacuolar protein sorting 37 homolo	VPS37B	0.821258	712.5
ENSGALT0000	vacuolar protein sorting 37 homolo	VPS37C	0.889155	734.5
ENSGALT0000	vacuolar protein sorting 39 homolo	VPS39	0.983542	870.51
ENSGALT0000	vacuolar protein sorting 41 homolo	VPS41	0.964005	1567.98
ENSGALT0000	vacuolar protein sorting 45A	VPS45	0.896599	2010
ENSGALT0000	vacuolar protein sorting 4 homolog	VPS4A	0.906297	1235.83
ENSGALT0000	vacuolar protein sorting 4 homolog	VPS4B	0.946271	1609
ENSGALT0000	vacuolar protein sorting 53 homolo	VPS53	0.936559	2750.5
ENSGALT0000	vacuolar protein sorting 54 homolo	VPS54	0.941107	1211.5

ENSGALT0000	vacuolar protein sorting 72 homolog	VPS72	0.425906	4049
ENSGALT0000	vacuolar protein sorting 8 homolog	VPS8	0.938124	2993
ENSGALT0000	vaccinia related kinase 1	VRK1	0.965215	599
ENSGALT0000	vaccinia related kinase 2	VRK2	0.975733	241.606
ENSGALT0000	vaccinia related kinase 3	VRK3	0.991406	985
ENSGALT0000	V-set and immunoglobulin domain	VSIG1	0.464758	0.5
ENSGALT0000	V-set and immunoglobulin domain	VSIG10	0.969048	1499
ENSGALT0000	V-set and immunoglobulin domain	VSIG4	0.464758	0
ENSGALT0000	visinin-like 1	VSNL1	0.921865	848
ENSGALT0000	V-set and transmembrane domain	VSTM2A	0.410121	101.5
ENSGALT0000	V-set and transmembrane domain	VSTM2B	0.764603	236.5
ENSGALT0000	V-set and transmembrane domain	VSTM2L	0.242543	446.5
ENSGALT0000	V-set and transmembrane domain	VSTM4	0.988451	211
ENSGALT0000	V-set and transmembrane domain	VSTM5	0.878922	146.5
ENSGALT0000	visual system homeobox 1	VSX1	0.711147	8
ENSGALT0000	visual system homeobox 2	VSX2	0.539038	0
ENSGALT0000	Vps20-associated 1 homolog (S. ce	VTA1	0.918118	1208
ENSGALT0000	V-set domain containing T cell activ	VTCN1	0.427997	4
ENSGALT0000	vitellogenin 2	VTG2	0.982719	324.001
ENSGALT0000	vesicle transport through interaction	VTI1A	0.753532	387
ENSGALT0000	vesicle transport through interaction	VTI1B	0.95956	790.677
ENSGALT0000	vitronectin	VTN	0.820333	1192.49
ENSGALT0000	von Willebrand factor A domain cor	VWA1	0.939864	100
ENSGALT0000	von Willebrand factor A domain cor	VWA2	0.391028	255
ENSGALT0000	von Willebrand factor A domain cor	VWA3A	0.721717	56
ENSGALT0000	von Willebrand factor A domain cor	VWA3B	0.95625	49
ENSGALT0000	von Willebrand factor A domain cor	VWA5A	0.828268	202.5
ENSGALT0000	von Willebrand factor A domain cor	VWA5B1	0.993064	308
ENSGALT0000	von Willebrand factor A domain cor	VWA5B2	0.969438	128
ENSGALT0000	von Willebrand factor C domain cor	VWC2	0.971194	293
ENSGALT0000	von Willebrand factor C domain cor	VWC2L	0.992423	138
ENSGALT0000	von Willebrand factor D and EGF d	VWDE	0.453981	216
ENSGALT0000	von Willebrand factor	VWF	0.864258	318
ENSGALT0000	WW domain containing adaptor wit	WAC	0.977434	1981
ENSGALT0000	wings apart-like homolog (Drosoph	WAPAL	0.97876	2212.46
ENSGALT0000	tryptophanyl-tRNA synthetase	WARS	0.986909	1056
ENSGALT0000	WAS protein family, member 1	WASF1	0.983354	1849.5
ENSGALT0000	WAS protein family, member 2	WASF2	0.955766	1311
ENSGALT0000	WAS protein family, member 3	WASF3	0.967489	245.5
ENSGALT0000	WAS protein family homolog 1	WASH1	0.962354	1342
ENSGALT0000	Wiskott-Aldrich syndrome-like	WASL	0.965696	1055.58
ENSGALT0000	WW domain binding protein 11	WBP11	0.902368	2382
ENSGALT0000	WW domain binding protein 2	WBP2	0.808699	386
ENSGALT0000	WW domain binding protein 4 (form	WBP4	0.987476	1545.5
ENSGALT0000	Williams-Beuren syndrome chromo	WBSCR16	0.916686	488.5
ENSGALT0000	Williams-Beuren syndrome chromo	WBSCR17	0.768349	881
ENSGALT0000	Williams Beuren syndrome chromo	WBSCR22	0.758743	838
ENSGALT0000	WD repeat and FYVE domain conta	WDFY1	0.974526	2902
ENSGALT0000	WD repeat and FYVE domain conta	WDFY2	0.879668	841
ENSGALT0000	WD repeat and FYVE domain conta	WDFY3	0.972082	5646.97
ENSGALT0000	WDFY family member 4	WDFY4	0.655225	1.5
ENSGALT0000	WD repeat and HMG-box DNA bind	WDHD1	0.893676	785.5
ENSGALT0000	WD repeat containing planar cell po	WDPCP	0.997848	148.5
ENSGALT0000	WD repeat domain 1	WDR1	0.987792	4610.93
ENSGALT0000	WD repeat domain 11	WDR11	0.949363	1793.5
ENSGALT0000	WD repeat domain 12	WDR12	0.887083	1776.5

ENSGALT0000 WD repeat domain 16	WDR16	0.981768	198
ENSGALT0000 WD repeat domain 17	WDR17	0.844103	143.5
ENSGALT0000 WD repeat domain 18	WDR18	0.928717	536.5
ENSGALT0000 WD repeat domain 19	WDR19	0.97482	672
ENSGALT0000 WD repeat domain 20	WDR20	0.968822	431
ENSGALT0000 WD repeat domain 24	WDR24	0.842735	2290.5
ENSGALT0000 WD repeat domain 25	WDR25	0.975675	45.5
ENSGALT0000 WD repeat domain 26	WDR26	0.975166	1692.5
ENSGALT0000 WD repeat domain 27	WDR27	0.985882	2.5
ENSGALT0000 WD repeat domain 3	WDR3	0.897707	2389
ENSGALT0000 WD repeat domain 31	WDR31	0.976972	246.5
ENSGALT0000 WD repeat domain 33	WDR33	0.969442	2536
ENSGALT0000 WD repeat domain 34	WDR34	0.943316	676.5
ENSGALT0000 WD repeat domain 35	WDR35	0.998463	1600.96
ENSGALT0000 WD repeat domain 36	WDR36	0.911277	1117.5
ENSGALT0000 WD repeat domain 37	WDR37	0.99191	533.5
ENSGALT0000 WD repeat domain 4	WDR4	0.887297	573.5
ENSGALT0000 WD repeat domain 41	WDR41	0.931504	201
ENSGALT0000 WD repeat domain 43	WDR43	0.9759	2295.48
ENSGALT0000 WD repeat domain 44	WDR44	0.932876	1539.5
ENSGALT0000 WDR45-like	WDR45L	0.955882	1102.5
ENSGALT0000 WD repeat domain 47	WDR47	0.836946	1260.5
ENSGALT0000 WD repeat domain 48	WDR48	0.972557	1406.5
ENSGALT0000 WD repeat domain 5	WDR5	0.935906	2376
ENSGALT0000 WD repeat domain 51B	WDR51B	0.967029	845
ENSGALT0000 WD repeat domain 52	WDR52	0.971135	96
ENSGALT0000 WD repeat domain 53	WDR53	0.813237	657.5
ENSGALT0000 WD repeat domain 54	WDR54	0.957901	648.5
ENSGALT0000 WD repeat domain 59	WDR59	0.97366	1515
ENSGALT0000 WD repeat domain 6	WDR6	0.928243	537.5
ENSGALT0000 WD repeat domain 60	WDR60	0.992016	291
ENSGALT0000 WD repeat domain 61	WDR61	0.651667	1323.5
ENSGALT0000 WD repeat domain 63	WDR63	0.997707	24
ENSGALT0000 WD repeat domain 64	WDR64	0.60689	0.5
ENSGALT0000 WD repeat domain 65	WDR65	0.957442	136
ENSGALT0000 WD repeat domain 66	WDR66	0.478993	76
ENSGALT0000 WD repeat domain 67	WDR67	0.979652	657
ENSGALT0000 WD repeat domain 69	WDR69	0.944597	41
ENSGALT0000 WD repeat domain 7	WDR7	0.916109	716.494
ENSGALT0000 WD repeat domain 70	WDR70	0.85683	991.505
ENSGALT0000 WD repeat domain 72	WDR72	0.826353	1.5
ENSGALT0000 WD repeat domain 73	WDR73	0.939961	1346.18
ENSGALT0000 WD repeat domain 75	WDR75	0.937194	1654.54
ENSGALT0000 WD repeat domain 76	WDR76	0.940621	1735.49
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ENSGALT0000 WD repeat domain 83 opposite stra	WDR83OS	0.497319	1246
ENSGALT0000 WD repeat domain 85	WDR85	0.983827	1027.5
ENSGALT0000 WD repeat domain 86	WDR86	0.515653	157.5
ENSGALT0000 WD repeat domain 88	WDR88	0.9137	1.5
ENSGALT0000 WD repeat domain 89	WDR89	0.929544	442.409
ENSGALT0000 WD repeat domain 90	WDR90	0.977932	2320.5
ENSGALT0000 WD repeat domain 91	WDR91	0.829595	2109.99
ENSGALT0000 WD repeat domain 92	WDR92	0.908767	1019

ENSGALT0000	WD repeat, sterile alpha motif and	WDSUB1	0.973088	597.943
ENSGALT0000	WD and tetratricopeptide repeats 1	WDTC1	0.984155	3163.98
ENSGALT0000	WDYHV motif containing 1	WDYHV1	0.934903	225.5
ENSGALT0000	WEE1 homolog (S. pombe)	WEE1	0.959446	1636
ENSGALT0000	Wee1-like protein kinase 2	WEE2	0.934507	10.5
ENSGALT0000	WAP four-disulfide core domain 1	WFDC1	0.632655	498
ENSGALT0000	WAP four-disulfide core domain 2	WFDC2	0.799368	541
ENSGALT0000	WAP, follistatin/kazal, immunoglobu	WFIKKN1	0.909062	36.5
ENSGALT0000	WAP, follistatin/kazal, immunoglobu	WFIKKN2	0.554583	74
ENSGALT0000	Wolfram syndrome 1 (wolframin)	WFS1	0.982362	675.178
ENSGALT0000	WAS protein homology region 2 do	WHDC1	0.99842	630.5
ENSGALT0000	Wolf-Hirschhorn syndrome candida	WHSC1	0.997587	2362
ENSGALT0000	Wolf-Hirschhorn syndrome candida	WHSC1L1	0.971083	2518.5
ENSGALT0000	Wolf-Hirschhorn syndrome candida	WHSC2	0.992475	3724.5
ENSGALT0000	WNT inhibitory factor 1	WIF1	0.714706	118
ENSGALT0000	WAS/WASL interacting protein fam	WIPF1	0.812223	239.5
ENSGALT0000	WAS/WASL interacting protein fam	WIPF2	0.895579	405.001
ENSGALT0000	WAS/WASL interacting protein fam	WIPF3	0.982143	190.5
ENSGALT0000	WD repeat domain, phosphoinositi	WIPI1	0.937122	1842.5
ENSGALT0000	WD repeat domain, phosphoinositi	WIPI2	0.921974	2309
ENSGALT0000	WNT1 inducible signaling pathway	WISP1	0.222949	120
ENSGALT0000	WNT1 inducible signaling pathway	WISP2	0.0503556	0
ENSGALT0000	WNT1 inducible signaling pathway	WISP3	0.980057	30.5
ENSGALT0000	widely interspaced zinc finger motif	WIZ	0.98789	1906
ENSGALT0000	wntless homolog (Drosophila)	WLS	0.974838	19599
ENSGALT0000	WNK lysine deficient protein kinase	WNK1	0.970227	5303.85
ENSGALT0000	WNK lysine deficient protein kinase	WNK2	0.988899	6078
ENSGALT0000	WNK lysine deficient protein kinase	WNK4	0.944581	2868.5
ENSGALT0000	wingless-type MMTV integration sit	WNT10A	0.93408	5
ENSGALT0000	wingless-type MMTV integration sit	WNT11	0.751538	145
ENSGALT0000	wingless-type MMTV integration sit	WNT16	0.355227	10.5
ENSGALT0000	wingless-type MMTV integration sit	WNT2	0.248583	1.5
ENSGALT0000	wingless-type MMTV integration sit	WNT2B	0.109684	15
ENSGALT0000	wingless-type MMTV integration sit	WNT3A	0.383157	2
ENSGALT0000	wingless-type MMTV integration sit	WNT4	0.491954	2402.52
ENSGALT0000	wingless-type MMTV integration sit	WNT5A	0.63647	3274.5
ENSGALT0000	wingless-type MMTV integration sit	WNT5B	0.788798	997.993
ENSGALT0000	wingless-type MMTV integration sit	WNT6	0.705489	1976.5
ENSGALT0000	wingless-type MMTV integration sit	WNT7A	0.756937	512.5
ENSGALT0000	wingless-type MMTV integration sit	WNT7B	0.980757	578.497
ENSGALT0000	wingless-type MMTV integration sit	WNT8A	0.873451	5.5
ENSGALT0000	wingless-type MMTV integration sit	WNT8B	0.493676	38.5
ENSGALT0000	wingless-type MMTV integration sit	WNT9A	0.923092	347.501
ENSGALT0000	wingless-type MMTV integration sit	WNT9B	0.534404	1
ENSGALT0000	WD repeat containing, antisense to	WRAP73	0.983332	512.5
ENSGALT0000	tryptophan rich basic protein	WRB	0.930435	1637.51
ENSGALT0000	Werner syndrome	WRN	0.966497	624.5
ENSGALT0000	Werner helicase interacting protein	WRNIP1	0.967213	674.498
ENSGALT0000	WD repeat and SOCS box containi	WSB1	0.988522	7317.21
ENSGALT0000	WD repeat and SOCS box containi	WSB2	0.92728	2546
ENSGALT0000	WSC domain containing 1	WSCD1	0.966473	357.5
ENSGALT0000	WSC domain containing 2	WSCD2	0.830497	1398
ENSGALT0000	Wilms tumor 1	WT1	0.933629	21
ENSGALT0000	Wilms tumor 1 associated protein	WTAP	0.951745	1915
ENSGALT0000	Wilms tumor 1 interacting protein	WTIP	0.982622	197.5
ENSGALT0000	WW and C2 domain containing 1	WWC1	0.996929	2221.51

ENSGALT0000	WW and C2 domain containing 2	WWC2	0.991934	2103.5
ENSGALT0000	WWC family member 3	WWC3	0.970254	1016.5
ENSGALT0000	WW domain containing oxidoreduc	WWOX	0.943218	790
ENSGALT0000	WW domain containing E3 ubiquitir	WWP1	0.962356	675
ENSGALT0000	WW domain containing E3 ubiquitir	WWP2	0.98674	2801.54
ENSGALT0000	WW domain containing transcriptio	WWTR1	0.955179	290.5
ENSGALT0000	XPA binding protein 1, GTPase	XAB1	0.813651	907
ENSGALT0000	XIAP associated factor 1	XAF1	0.526678	4.5
ENSGALT0000	X-box binding protein 1	XBP1	0.902961	3864.06
ENSGALT0000	chemokine (C motif) receptor 1	XCR1	?	0
ENSGALT0000	xanthine dehydrogenase	XDH	0.661802	1
ENSGALT0000	Xg blood group	XG	0.464758	1
ENSGALT0000	X-linked inhibitor of apoptosis	XIAP	0.991549	276.5
ENSGALT0000	xin actin-binding repeat containing	XIRP1	0.853815	2
ENSGALT0000	X-linked Kx blood group (McLeod s	XK	0.760879	27
ENSGALT0000	XK, Kell blood group complex subu	XKR4	0.994713	343.5
ENSGALT0000	XK, Kell blood group complex subu	XKR6	0.941648	56.5
ENSGALT0000	XK, Kell blood group complex subu	XKR7	0.555667	129
ENSGALT0000	XK, Kell blood group complex subu	XKR8	0.8514	503
ENSGALT0000	XK, Kell blood group complex subu	XKR9	0.898356	1
ENSGALT0000	XK, Kell blood group complex subu	XKRX	0.901109	42
ENSGALT0000	xeroderma pigmentosum, complem	XPA	0.956814	170
ENSGALT0000	xeroderma pigmentosum, complem	XPC	0.998449	742.5
ENSGALT0000	X-prolyl aminopeptidase (aminopep	XPNPEP1	0.943644	3040.5
ENSGALT0000	X-prolyl aminopeptidase (aminopep	XPNPEP2	0.754215	1
ENSGALT0000	X-prolyl aminopeptidase (aminopep	XPNPEP3	0.892847	940
ENSGALT0000	exportin 1 (CRM1 homolog, yeast)	XPO1	0.969651	5395.83
ENSGALT0000	exportin 4	XPO4	0.948237	822
ENSGALT0000	exportin 5	XPO5	0.951038	7100.5
ENSGALT0000	exportin 6	XPO6	0.942638	3362.5
ENSGALT0000	exportin 7	XPO7	0.953925	4327.41
ENSGALT0000	exportin, tRNA (nuclear export rece	XPOT	0.98427	2369.5
ENSGALT0000	xenotropic and polytropic retrovirus	XPR1	0.874411	4080.5
ENSGALT0000	X-ray repair complementing defecti	XRCC2	0.979858	175
ENSGALT0000	X-ray repair complementing defecti	XRCC3	0.947398	927
ENSGALT0000	X-ray repair complementing defecti	XRCC4	0.857018	100
ENSGALT0000	X-ray repair complementing defecti	XRCC5	0.993396	1594.5
ENSGALT0000	X-ray repair complementing defecti	XRCC6	0.789293	897.997
ENSGALT0000	XRCC6 binding protein 1	XRCC6BP1	0.905432	727.5
ENSGALT0000	5'-3' exoribonuclease 1	XRN1	0.993316	1417
ENSGALT0000	5'-3' exoribonuclease 2	XRN2	0.973804	4580
ENSGALT0000	X-ray radiation resistance associate	XRRA1	0.840206	5.5
ENSGALT0000	xyloside xylosyltransferase 1	XXYLT1	0.975163	1692
ENSGALT0000	xylulokinase homolog (H. influenza	XYLB	0.979436	403.5
ENSGALT0000	xylosyltransferase I	XYLT1	0.808951	878.495
ENSGALT0000	xylosyltransferase II	XYLT2	0.935238	1085.5
ENSGALT0000	Y RNA	Y_RNA	0.457958	31.5
ENSGALT0000	Yae1 domain containing 1	YAE1D1	0.845347	277
ENSGALT0000	YY1 associated factor 2	YAF2	0.940027	552.5
ENSGALT0000	Yes-associated protein 1	YAP1	0.99518	4423.54
ENSGALT0000	tyrosyl-tRNA synthetase	YARS	0.855617	2541.12
ENSGALT0000	tyrosyl-tRNA synthetase 2, mitocho	YARS2	0.91526	588
ENSGALT0000	Y box binding protein 1	YBX1	0.292243	63145
ENSGALT0000	YdjC homolog (bacterial)	YDJC	0.99805	331
ENSGALT0000	YEATS domain containing 2	YEATS2	0.97622	2641.49
ENSGALT0000	YEATS domain containing 4	YEATS4	0.7195	830.505

ENSGALT0000 v-yes-1 Yamaguchi sarcoma viral o	YES1	0.965553	1508.5
ENSGALT0000 Yip1 domain family, member 1	YIPF1	0.894044	1107.5
ENSGALT0000 Yip1 domain family, member 3	YIPF3	0.926167	3096
ENSGALT0000 Yip1 domain family, member 4	YIPF4	0.963666	819.5
ENSGALT0000 Yip1 domain family, member 5	YIPF5	0.85779	1872
ENSGALT0000 Yip1 domain family, member 6	YIPF6	0.971922	702.5
ENSGALT0000 Yip1 domain family, member 7	YIPF7	0.649519	0
ENSGALT0000 YKT6 v-SNARE homolog (S. cerev	YKT6	0.752218	1015.5
ENSGALT0000 YLP motif containing 1	YLPM1	0.986892	3303.5
ENSGALT0000 YME1-like 1 (S. cerevisiae)	YME1L1	0.957928	3936.41
ENSGALT0000 YOD1 OTU deubiquinating enzyme	YOD1	0.962991	3424.5
ENSGALT0000 yippee-like 1 (Drosophila)	YPEL1	0.987952	803.5
ENSGALT0000 yippee-like 2 (Drosophila)	YPEL2	0.975496	1756.5
ENSGALT0000 yippee-like 4 (Drosophila)	YPEL4	0.718046	57.5
ENSGALT0000 yippee-like 5 (Drosophila)	YPEL5	0.914223	3148
ENSGALT0000 yrdC domain containing (E. coli)	YRDC	0.56536	1205
ENSGALT0000 YSK4 Sps1/Ste20-related kinase h	YSK4	0.79247	11.5
ENSGALT0000 YTH domain containing 1	YTHDC1	0.981985	3039.49
ENSGALT0000 YTH domain containing 2	YTHDC2	0.972394	1070.5
ENSGALT0000 YTH domain family, member 1	YTHDF1	0.952272	2731.5
ENSGALT0000 YTH domain family, member 2	YTHDF2	0.901948	1635.5
ENSGALT0000 YTH domain family, member 3	YTHDF3	0.971634	1883.91
ENSGALT0000 tyrosine 3-monooxygenase/tryptopl	YWHAB	0.92118	10310.5
ENSGALT0000 tyrosine 3-monooxygenase/tryptopl	YWHAE	0.800162	14924.1
ENSGALT0000 tyrosine 3-monooxygenase/tryptopl	YWHAG	0.700888	7603.5
ENSGALT0000 tyrosine 3-monooxygenase/tryptopl	YWHAH	0.521137	5629.69
ENSGALT0000 tyrosine 3-monooxygenase/tryptopl	YWHAQ	0.789139	21429.6
ENSGALT0000 tyrosine 3-monooxygenase/tryptopl	YWHAZ	0.876108	13233
ENSGALT0000 YY1 transcription factor	YY1	0.966058	670.995
ENSGALT0000 zinc binding alcohol dehydrogenas	ZADH2	0.971838	566
ENSGALT0000 sterile alpha motif and leucine zipp	ZAK	0.991405	193.5
ENSGALT0000 zeta-chain (TCR) associated protei	ZAP70	0.988092	21
ENSGALT0000 zygote arrest 1-like	ZAR1L	0.722715	26.5
ENSGALT0000 zinc finger, BED-type containing 4	ZBED4	0.992892	1596.5
ENSGALT0000 zinc finger and BTB domain contain	ZBTB10	0.995023	815.5
ENSGALT0000 zinc finger and BTB domain contain	ZBTB11	0.967745	676
ENSGALT0000 zinc finger and BTB domain contain	ZBTB16	0.963824	353.5
ENSGALT0000 zinc finger and BTB domain contain	ZBTB17	0.885403	1353.99
ENSGALT0000 zinc finger and BTB domain contain	ZBTB2	0.974794	1095
ENSGALT0000 zinc finger and BTB domain contain	ZBTB20	0.987161	499
ENSGALT0000 zinc finger and BTB domain contain	ZBTB24	0.978623	267.5
ENSGALT0000 zinc finger and BTB domain contain	ZBTB25	0.957583	225
ENSGALT0000 zinc finger and BTB domain contain	ZBTB26	0.976106	457.5
ENSGALT0000 zinc finger and BTB domain contain	ZBTB34	0.990323	447
ENSGALT0000 zinc finger and BTB domain contain	ZBTB37	0.995244	441.5
ENSGALT0000 zinc finger and BTB domain contain	ZBTB38	0.981107	478
ENSGALT0000 zinc finger and BTB domain contain	ZBTB40	0.990492	298.001
ENSGALT0000 zinc finger and BTB domain contain	ZBTB41	0.986807	559.5
ENSGALT0000 zinc finger and BTB domain contain	ZBTB42	0.970164	314
ENSGALT0000 zinc finger and BTB domain contain	ZBTB43	0.996629	275
ENSGALT0000 zinc finger and BTB domain contain	ZBTB44	0.994919	1127.5
ENSGALT0000 zinc finger and BTB domain contain	ZBTB45	0.891899	389.5
ENSGALT0000 zinc finger and BTB domain contain	ZBTB46	0.965402	957.5
ENSGALT0000 zinc finger and BTB domain contain	ZBTB47	0.943434	1657.5
ENSGALT0000 zinc finger and BTB domain contain	ZBTB48	0.91864	684
ENSGALT0000 zinc finger and BTB domain contain	ZBTB49	0.979979	363

ENSGALT0000 zinc finger and BTB domain contair	ZBTB5	0.973963	763
ENSGALT0000 zinc finger and BTB domain contair	ZBTB6	0.954293	373.5
ENSGALT0000 zinc finger and BTB domain contair	ZBTB7C	0.905365	30.5
ENSGALT0000 zinc finger and BTB domain contair	ZBTB8A	0.859196	579
ENSGALT0000 zinc finger and BTB domain contair	ZBTB8B	0.895968	460.5
ENSGALT0000 zinc finger and BTB domain contair	ZBTB8OS	0.791434	565
ENSGALT0000 zinc finger CCCH-type containing 1	ZC3H11A	0.994093	2542
ENSGALT0000 zinc finger CCCH-type containing 1	ZC3H12A	0.988841	236
ENSGALT0000 zinc finger CCCH-type containing 1	ZC3H12B	0.988682	667.5
ENSGALT0000 zinc finger CCCH-type containing 1	ZC3H12C	0.971106	219.5
ENSGALT0000 zinc finger CCCH-type containing 1	ZC3H12D	0.895318	3
ENSGALT0000 zinc finger CCCH-type containing 1	ZC3H13	0.944803	5160.5
ENSGALT0000 zinc finger CCCH-type containing 1	ZC3H14	0.908817	1495.49
ENSGALT0000 zinc finger CCCH-type containing 1	ZC3H15	0.942566	1817
ENSGALT0000 zinc finger CCCH-type containing 1	ZC3H18	0.963404	2166.5
ENSGALT0000 zinc finger CCCH-type containing 3	ZC3H3	0.968042	350.5
ENSGALT0000 zinc finger CCCH-type containing 6	ZC3H6	0.973949	1529
ENSGALT0000 zinc finger CCCH-type containing 7	ZC3H7A	0.984598	2062
ENSGALT0000 zinc finger CCCH-type containing 7	ZC3H7B	0.991783	2139.5
ENSGALT0000 zinc finger CCCH-type, antiviral 1	ZC3HAV1	0.971668	135.5
ENSGALT0000 zinc finger, C3HC-type containing 1	ZC3HC1	0.931414	956
ENSGALT0000 zinc finger, C4H2 domain containin	ZC4H2	0.893162	482
ENSGALT0000 zinc finger, CCHC domain containir	ZCCHC10	0.997813	132.5
ENSGALT0000 zinc finger, CCHC domain containir	ZCCHC11	0.978966	1019
ENSGALT0000 zinc finger, CCHC domain containir	ZCCHC14	0.949855	1017.51
ENSGALT0000 zinc finger, CCHC domain containir	ZCCHC17	0.776416	875.5
ENSGALT0000 zinc finger, CCHC domain containir	ZCCHC2	0.981194	1281
ENSGALT0000 zinc finger, CCHC domain containir	ZCCHC24	0.728161	238.5
ENSGALT0000 zinc finger, CCHC domain containir	ZCCHC4	0.974849	419
ENSGALT0000 zinc finger, CCHC domain containir	ZCCHC6	0.979141	798.495
ENSGALT0000 zinc finger, CCHC domain containir	ZCCHC7	0.920674	241.5
ENSGALT0000 zinc finger, CCHC domain containir	ZCCHC8	0.98201	666
ENSGALT0000 zinc finger, CCHC domain containir	ZCCHC9	0.8385	367.5
ENSGALT0000 zinc finger CCHC-type and RNA bir	ZCRB1	0.951916	345.5
ENSGALT0000 zinc finger, DBF-type containing 2	ZDBF2	0.997282	451
ENSGALT0000 zinc finger, DHHC-type containing	ZDHHC1	0.996792	361.499
ENSGALT0000 zinc finger, DHHC-type containing	ZDHHC12	0.959848	263.5
ENSGALT0000 zinc finger, DHHC-type containing	ZDHHC13	0.97786	960.505
ENSGALT0000 zinc finger, DHHC-type containing	ZDHHC14	0.979423	422
ENSGALT0000 zinc finger, DHHC-type containing	ZDHHC15	0.895686	136.5
ENSGALT0000 zinc finger, DHHC-type containing	ZDHHC16	0.923598	888
ENSGALT0000 zinc finger, DHHC-type containing	ZDHHC17	0.712855	695
ENSGALT0000 zinc finger, DHHC-type containing	ZDHHC18	0.949782	260.001
ENSGALT0000 zinc finger, DHHC-type containing	ZDHHC2	0.853433	77.5
ENSGALT0000 zinc finger, DHHC-type containing	ZDHHC20	0.918698	1007
ENSGALT0000 zinc finger, DHHC-type containing	ZDHHC21	0.889246	93
ENSGALT0000 zinc finger, DHHC-type containing	ZDHHC22	0.813876	3.5
ENSGALT0000 zinc finger, DHHC-type containing	ZDHHC23	0.960035	1414
ENSGALT0000 zinc finger, DHHC-type containing	ZDHHC3	0.97537	1145
ENSGALT0000 zinc finger, DHHC-type containing	ZDHHC4	0.927683	118.5
ENSGALT0000 zinc finger, DHHC-type containing	ZDHHC5	0.938942	1465.53
ENSGALT0000 zinc finger, DHHC-type containing	ZDHHC6	0.971125	1530
ENSGALT0000 zinc finger, DHHC-type containing	ZDHHC7	0.967041	703.5
ENSGALT0000 zinc finger, DHHC-type containing	ZDHHC8	0.987379	1157
ENSGALT0000 zinc finger, DHHC-type containing	ZDHHC9	0.912919	5250.5
ENSGALT0000 zinc finger E-box binding homeobo	ZEB1	0.7874	623.5

ENSGALT0000	zinc finger E-box binding homeobo	ZEB2	0.706524	968
ENSGALT0000	zer-1 homolog (C. elegans)	ZER1	0.970661	1790.5
ENSGALT0000	zinc finger, AN1-type domain 1	ZFAND1	0.993682	233.5
ENSGALT0000	zinc finger, AN1-type domain 2A	ZFAND2A	0.64421	177.5
ENSGALT0000	zinc finger, AN1-type domain 3	ZFAND3	0.94262	1437
ENSGALT0000	zinc finger, AN1-type domain 4	ZFAND4	0.935055	587
ENSGALT0000	zinc finger, AN1-type domain 5	ZFAND5	0.911258	1350.5
ENSGALT0000	zinc finger, AN1-type domain 6	ZFAND6	0.883231	1294
ENSGALT0000	zinc finger and AT hook domain cor	ZFAT	0.967423	274
ENSGALT0000	zinc finger, C3H1-type containing	ZFC3H1	0.990619	2094
ENSGALT0000	zinc finger homeobox 3	ZFHX3	0.99205	4823.98
ENSGALT0000	zinc finger protein 106 homolog (m	ZFP106	0.971478	1034
ENSGALT0000	zinc finger protein 161 homolog (m	ZFP161	0.966525	288
ENSGALT0000	zinc finger protein 64 homolog (mo	ZFP64	0.945085	1737.01
ENSGALT0000	zinc finger protein 91 homolog (mo	ZFP91	0.962113	4535.18
ENSGALT0000	zinc finger protein 92 homolog (mo	ZFP92	0.963871	666.998
ENSGALT0000	zinc finger protein, multitype 1	ZFPM1	0.886991	5137.5
ENSGALT0000	zinc finger protein, multitype 2	ZFPM2	0.661028	143.5
ENSGALT0000	zinc finger RNA binding protein	ZFR	0.922965	2321.5
ENSGALT0000	zinc finger protein, X-linked	ZFX	0.98125	953.005
ENSGALT0000	zinc finger, FYVE domain containin	ZFYVE1	0.93272	1380.5
ENSGALT0000	zinc finger, FYVE domain containin	ZFYVE19	0.926037	1433.5
ENSGALT0000	zinc finger, FYVE domain containin	ZFYVE20	0.946556	1016.08
ENSGALT0000	zinc finger, FYVE domain containin	ZFYVE21	0.862504	746
ENSGALT0000	zinc finger, FYVE domain containin	ZFYVE26	0.942262	78.5
ENSGALT0000	zinc finger, FYVE domain containin	ZFYVE27	0.923403	960
ENSGALT0000	zinc finger, FYVE domain containin	ZFYVE28	0.974804	210.5
ENSGALT0000	zinc finger, FYVE domain containin	ZFYVE9	0.991664	1400
ENSGALT0000	zinc finger, CCCH-type with G patc	ZGPAT	0.940582	509.5
ENSGALT0000	zinc fingers and homeoboxes 1	ZHX1	0.992063	459.5
ENSGALT0000	Zic family member 1	ZIC1	0.332219	126.369
ENSGALT0000	Zic family member 3 heterotaxy 1 (	ZIC3	0.596438	24.5
ENSGALT0000	Zic family member 5	ZIC5	0.474702	31.6307
ENSGALT0000	zinc finger, matrin-type 2	ZMAT2	0.899891	2436.5
ENSGALT0000	zinc finger, matrin-type 3	ZMAT3	0.942332	448
ENSGALT0000	zinc finger, matrin-type 4	ZMAT4	0.92632	62.5
ENSGALT0000	zinc finger, matrin type 5	ZMAT5	0.723037	1007
ENSGALT0000	zinc finger, MIZ-type containing 1	ZMIZ1	0.986483	4154
ENSGALT0000	zinc metallopeptidase (STE24 hom	ZMPSTE24	0.932178	950.5
ENSGALT0000	zinc finger, MYM-type 3	ZMYM3	0.977111	1652
ENSGALT0000	zinc finger, MYM-type 4	ZMYM4	0.967777	2495.02
ENSGALT0000	ZMYM6 neighbor	ZMYM6NB	0.364604	252.5
ENSGALT0000	zinc finger, MYND-type containing	ZMYND10	0.932522	173
ENSGALT0000	zinc finger, MYND-type containing	ZMYND11	0.993771	2390.5
ENSGALT0000	zinc finger, MYND-type containing	ZMYND12	0.988479	118.5
ENSGALT0000	zinc finger, MYND-type containing	ZMYND17	0.911673	41.5
ENSGALT0000	zinc finger, MYND-type containing	ZMYND19	0.829071	202.501
ENSGALT0000	zinc finger, MYND-type containing	ZMYND8	0.982362	3148
ENSGALT0000	zinc finger protein 131	ZNF131	0.919841	132.5
ENSGALT0000	zinc finger protein 142	ZNF142	0.964221	1424.5
ENSGALT0000	zinc finger protein 143	ZNF143	0.988613	1046.5
ENSGALT0000	zinc finger protein 148	ZNF148	0.97525	383.5
ENSGALT0000	zinc finger protein 185 (LIM domair	ZNF185	0.872997	530.5
ENSGALT0000	zinc finger protein 207	ZNF207	0.871228	8290.5
ENSGALT0000	zinc finger protein 217	ZNF217	0.987032	3683.5
ENSGALT0000	zinc finger protein 236	ZNF236	0.971059	700

ENSGALT0000 zinc finger protein 238	ZNF238	0.827075	717.5
ENSGALT0000 zinc finger protein 250	ZNF250	0.934539	186.463
ENSGALT0000 zinc finger protein 259	ZNF259	0.897435	1333.98
ENSGALT0000 zinc finger protein 276	ZNF276	0.978719	849
ENSGALT0000 zinc finger protein 277	ZNF277	0.878474	246
ENSGALT0000 zinc finger protein 281	ZNF281	0.917404	538
ENSGALT0000 zinc finger protein 292	ZNF292	0.999748	1661
ENSGALT0000 zinc finger protein 295	ZNF295	0.96885	477
ENSGALT0000 zinc finger protein 318	ZNF318	0.96914	899.5
ENSGALT0000 zinc finger protein 319	ZNF319	0.974873	1076.09
ENSGALT0000 zinc finger protein 326	ZNF326	0.938826	2887.5
ENSGALT0000 zinc finger protein 330	ZNF330	0.93731	984.5
ENSGALT0000 zinc finger protein 335	ZNF335	0.933755	3594.48
ENSGALT0000 zinc finger protein 341	ZNF341	0.976686	793.5
ENSGALT0000 zinc finger protein 346	ZNF346	0.965347	486
ENSGALT0000 zinc finger protein 365	ZNF365	0.908102	200
ENSGALT0000 zinc finger protein 366	ZNF366	0.80536	15.5
ENSGALT0000 zinc finger protein 367	ZNF367	0.873152	127.5
ENSGALT0000 zinc finger protein 384	ZNF384	0.986446	2492
ENSGALT0000 zinc finger protein 385B	ZNF385B	0.87291	249.5
ENSGALT0000 zinc finger protein 385C	ZNF385C	0.932076	1045.5
ENSGALT0000 zinc finger protein 385D	ZNF385D	0.751979	74.5
ENSGALT0000 zinc finger protein 395	ZNF395	0.982309	605.5
ENSGALT0000 zinc finger protein 407	ZNF407	0.964608	344.5
ENSGALT0000 zinc finger protein 410	ZNF410	0.987937	1154.5
ENSGALT0000 zinc finger protein 414	ZNF414	0.797837	413
ENSGALT0000 zinc finger protein 423	ZNF423	0.98562	6356
ENSGALT0000 zinc finger protein 438	ZNF438	0.998104	332.5
ENSGALT0000 zinc finger protein 451	ZNF451	0.979293	897
ENSGALT0000 zinc finger protein 462	ZNF462	0.99782	11088
ENSGALT0000 zinc finger protein 469	ZNF469	0.99347	265.5
ENSGALT0000 zinc finger protein 474	ZNF474	?	0
ENSGALT0000 zinc finger protein 488	ZNF488	0.499978	38.5
ENSGALT0000 zinc finger protein 503	ZNF503	0.672711	305.631
ENSGALT0000 zinc finger protein 507	ZNF507	0.993127	365.5
ENSGALT0000 zinc finger protein 511	ZNF511	0.9134	235
ENSGALT0000 zinc finger protein 512	ZNF512	0.955473	1135.5
ENSGALT0000 zinc finger protein 512B	ZNF512B	0.980171	3000.48
ENSGALT0000 zinc finger protein 516	ZNF516	0.974765	2973.5
ENSGALT0000 zinc finger protein 518B	ZNF518B	0.98123	1178.99
ENSGALT0000 zinc finger protein 521	ZNF521	0.910352	2581.5
ENSGALT0000 zinc finger protein 536	ZNF536	0.889824	2309.5
ENSGALT0000 zinc finger protein 541	ZNF541	0.922734	313
ENSGALT0000 zinc finger protein 592	ZNF592	0.958997	712.5
ENSGALT0000 zinc finger protein 593	ZNF593	0.664811	7407
ENSGALT0000 zinc finger protein 598	ZNF598	0.960163	1670.5
ENSGALT0000 zinc finger protein 608	ZNF608	0.963215	1149.5
ENSGALT0000 zinc finger protein 609	ZNF609	0.933166	6535
ENSGALT0000 zinc finger protein 618	ZNF618	0.981685	1187
ENSGALT0000 zinc finger protein 622	ZNF622	0.856024	1164.71
ENSGALT0000 Nuclear protein NP220	ZNF638	0.933023	1043.5
ENSGALT0000 zinc finger protein 644	ZNF644	0.98965	1811.5
ENSGALT0000 zinc finger protein 650	ZNF650	0.978927	894
ENSGALT0000 zinc finger protein 652	ZNF652	0.9938	1272.51
ENSGALT0000 zinc finger protein 687	ZNF687	0.971154	147
ENSGALT0000 zinc finger protein 692	ZNF692	0.960674	1163

ENSGALT0000	zinc finger protein 704	ZNF704	0.935324	463.5
ENSGALT0000	Zinc finger protein 706	ZNF706	0.957853	3868.99
ENSGALT0000	zinc finger protein 711	ZNF711	0.974175	1491.49
ENSGALT0000	zinc finger protein 750	ZNF750	0.589588	2
ENSGALT0000	zinc finger protein 76	ZNF76	0.925398	680
ENSGALT0000	zinc finger family member 767	ZNF767	0.921313	1418.87
ENSGALT0000	zinc finger protein 770	ZNF770	0.978853	226.5
ENSGALT0000	zinc finger protein 800	ZNF800	0.952117	122
ENSGALT0000	zinc finger protein 804A	ZNF804A	0.806917	437
ENSGALT0000	zinc finger protein 804B	ZNF804B	0.729893	43
ENSGALT0000	zinc finger protein 821	ZNF821	0.982568	2753.74
ENSGALT0000	zinc finger protein 827	ZNF827	0.966639	888.508
ENSGALT0000	zinc finger protein 830	ZNF830	0.826925	529
ENSGALT0000	zinc finger protein 839	ZNF839	0.992089	301.5
ENSGALT0000	zinc finger, NFX1-type containing 1	ZNFX1	0.990048	815.5
ENSGALT0000	zinc finger, HIT-type containing 3	ZNHIT3	0.241765	767.5
ENSGALT0000	zinc finger, HIT-type containing 6	ZNHIT6	0.961927	299.5
ENSGALT0000	zinc and ring finger 1	ZNRF1	0.924593	1036.24
ENSGALT0000	zinc and ring finger 3	ZNRF3	0.998847	792.004
ENSGALT0000	zinc and ring finger 4	ZNRF4	?	0
ENSGALT0000	zona pellucida glycoprotein 1 (sper	ZP1	0.840839	55
ENSGALT0000	zona pellucida glycoprotein 2 (sper	ZP2	0.753678	5.5
ENSGALT0000	zona pellucida glycoprotein 3 (sper	ZP3	0.826415	45
ENSGALT0000	zona pellucida glycoprotein 4	ZP4	0.64056	2.5
ENSGALT0000	zona pellucida protein	ZPAX	0.731507	2
ENSGALT0000	zona pellucida binding protein	ZPBP	0.611019	29
ENSGALT0000	zona pellucida binding protein 2	ZPBP2	0.923023	5.5
ENSGALT0000	zona pellucida protein D	ZPD	0.19245	0.5
ENSGALT0000	zona pellucida-like domain containi	ZPLD1	0.270313	37.5
ENSGALT0000	zinc finger, RAN-binding domain cc	ZRANB1	0.985692	1419
ENSGALT0000	zinc finger, RAN-binding domain cc	ZRANB2	0.971913	1949
ENSGALT0000	zinc finger, RAN-binding domain cc	ZRANB3	0.972053	271.501
ENSGALT0000	zinc finger (CCCH type), RNA-bind	ZRSR2	0.857158	606
ENSGALT0000	zinc finger, SWIM-type containing 1	ZSWIM1	0.983389	306
ENSGALT0000	zinc finger, SWIM-type containing 3	ZSWIM3	0.966612	249.001
ENSGALT0000	zinc finger, SWIM-type containing 5	ZSWIM5	0.923994	2726
ENSGALT0000	zinc finger, SWIM-type containing 7	ZSWIM7	0.937802	669.167
ENSGALT0000	zinc finger with UFM1-specific pept	ZUFSP	0.975365	260.5
ENSGALT0000	ZW10, kinetochore associated, hor	ZW10	0.91931	1563.5
ENSGALT0000	Zwilch, kinetochore associated, hor	ZWILCH	0.929069	810.5
ENSGALT0000	ZXD family zinc finger C	ZXDC	0.963257	990.5
ENSGALT0000	zyg-11 homolog B (C. elegans)	ZYG11B	0.923796	659
ENSGALT0000	zyxin	ZYX	0.932488	3372.5
ENSGALT0000	zinc finger, ZZ-type with EF-hand d	ZZEF1	0.96509	1461.5
ENSGALT0000	zinc finger, ZZ-type containing 3	ZZZ3	0.975264	1159.49

Mid	Prox	p-value(Distal vs. Mid	Log2(Distal vs. Mid)	p-value(Distal vs. Prox)
1944.25	1313.46	0.279429	-0.933107756	0.702864
3695.44	271.5	0.38816	-2.076741728	0.842924
879.501	233	0.374549	-1.583324715	0.921226
164.5	400.5	0.981827	0.055908741	0.446927
1457	1508	0.871711	-0.306661338	0.84867
0	0	?	#DIV/0!	?
152.5	155.5	0.73147	-0.298469122	0.705154
492.031	763.925	0.963183	0.089440323	0.727339
498	500	0.920312	-0.211809082	0.917981
18	42.5	0.990088	-0.040641984	0.548486
1	3	0.679547	1.321928095	0.888898
71.5	69.5	0.981961	0.039801008	0.963936
544	582.5	0.827412	-0.443606651	0.782883
497	451.5	0.095833	-0.997100109	0.144842
4704.5	4785.5	0.666589	-0.552142416	0.650336
1815.51	1948.52	0.560172	-1.030121175	0.509241
37	56.5	0.970449	0.075948853	0.748201
26	30.5	0.962983	-0.085729874	0.853171
64.7491	78.322	0.670635	-0.743488691	0.526702
431	401	0.748393	-0.46383168	0.809875
2675	3039	0.821733	-0.408401108	0.72833
1701	1826	0.851161	-0.390648602	0.806316
3499.57	3057.95	0.506055	-0.718846075	0.644595
76.5	47.5	0.723759	0.379236778	0.444709
12089.5	12304	0.63063	-0.721771068	0.615999
1843	1825	0.720641	-0.521410869	0.72908
2361.5	2048	0.529892	-0.576586668	0.700903
528.5	567	0.96895	0.0705843	0.985935
229.5	208.5	0.685731	-0.502500341	0.778684
1063	1006.5	0.864548	-0.293205934	0.903332
1282.51	1266.49	0.742198	-0.478486717	0.753022
553	520.5	0.72437	-0.693283155	0.764708
783	756.5	0.73762	-0.582201361	0.763051
704	1040.99	0.986686	-0.040512241	0.762249
42	439	0.95614	0.573466862	0.352931
10977.5	10305	0.724293	-0.697961241	0.766153
249.5	323.5	0.996828	0.008647549	0.848169
2396	2577.5	0.845184	-0.411028897	0.799273
539.5	381.5	0.802241	-0.390730529	0.952926
73.8935	165.5	0.82266	-0.885447464	0.432142
78	96.5	0.643997	-0.945552216	0.500203
624.5	630	0.93489	-0.131739653	0.928346
489.498	499.5	0.73969	-0.500530927	0.72267
709.5	806	0.909145	-0.215630304	0.821895
317	341	0.630264	-1.009131012	0.582311
1788.5	1810	0.974514	-0.059700565	0.966962
65.5	55	0.807959	-0.404066381	0.933083
722	808	0.893454	-0.27064759	0.820828
120.5	146	0.982082	-0.048703192	0.868776
2879.5	3139.5	0.940354	-0.154265035	0.887668
257.5	261.5	0.94263	0.133673328	0.951791
1839	1410.5	0.968348	-0.067039484	0.870079
631.506	668.996	0.81483	-0.48247686	0.777607
2847.5	2161	0.823368	-0.348775654	0.978057
792	767.5	0.809981	-0.379058202	0.834804

4270.46	4727.56	0.863424	-0.298828153	0.787678
4008.43	4219.41	0.757578	-0.507342118	0.717195
5193.5	5036	0.613393	-0.647915874	0.642184
146	193.5	0.923963	0.193879734	0.904183
321.5	324	0.579612	-0.984379019	0.574004
875	706	0.544295	-1.340597306	0.674129
18	26	0.824098	0.38466385	0.919223
1	0	1	0	0.450185
285.5	296.5	0.752594	-0.446540502	0.718991
290.5	241.5	0.556683	-0.612538745	0.757667
3901	4099.5	0.849312	-0.343023022	0.814014
2036	2548	0.399068	-0.711331054	0.204879
759.5	770	0.931607	-0.134277927	0.921019
484	641.5	0.935911	-0.167319178	0.751608
211.5	665.5	0.949292	0.197327084	0.415576
275.5	286	0.925175	-0.166329294	0.899178
545.5	517.5	0.69368	-0.540688601	0.740922
3033.5	2724.49	0.755965	-0.463171608	0.844151
1896.5	2141	0.825923	-0.451371584	0.746145
45.5	45.5	0.978845	0.046794211	0.978845
254.5	36.5	0.448131	1.145469266	0.234103
11727.5	11756.6	0.850385	-0.361294067	0.848739
1447	1351	0.827515	-0.449681334	0.86955
1794.5	1494.5	0.612312	-1.16011003	0.72046
536.5	471.5	0.894194	-0.20170109	0.992408
294	247	0.368865	-1.77340759	0.473952
1864.51	1705.47	0.672918	-0.786416666	0.734974
1	1	0.710482	-1	0.710482
2103.5	2022	0.859545	-0.312357943	0.887169
10	9	0.920936	0.137503524	0.843079
1456	1422.5	0.625296	-0.723159795	0.644792
3052.5	2820.5	0.690467	-0.433349378	0.776652
6258.65	6499.02	0.826644	-0.435771282	0.801882
938	1104	0.849496	-0.323659445	0.723454
1714.5	1681.5	0.54206	-0.773466298	0.559753
3426.02	3714.51	0.733895	-0.438822481	0.655934
5922.11	4690.43	0.605051	-0.55656704	0.853057
2391	2413.5	0.836483	-0.32290893	0.828991
1162.43	1309.62	0.962115	-0.079469828	0.87338
256	271.5	0.559658	1.124118726	0.578803
1974.99	2084.53	0.874028	-0.260691461	0.832618
7633	6154	0.454373	-2.046285435	0.568827
4778.5	4451.5	0.527398	-0.859576359	0.588371
4304.11	4128.91	0.352372	-1.048313201	0.386232
2187.5	2451	0.793378	-0.373968113	0.691578
1048	904.999	0.721861	-0.483634484	0.851603
1944.4	2086.56	0.364364	-0.809454382	0.300495
273	277.5	0.626986	-0.748461233	0.613662
647.5	491	0.403891	-1.627929949	0.577453
3653.99	3079.97	0.489403	-1.592654464	0.590203
1	2	0.559404	1.584962501	0.764931
485	478.5	0.859521	-0.303455435	0.869301
898.167	963.167	0.845649	-0.333717132	0.793226
313.7	293.5	0.962874	-0.07420876	0.989438
4	11.5	0.804606	0.584962501	0.511508
5.5	7	0.702697	0.628031223	0.847091

190	147	0.485233	-1.11042399	0.677294
415.5	460.5	0.962133	-0.085836169	0.891597
15131.7	16202.2	0.719997	-0.594029407	0.666308
41.5	18.5	0.238589	-2.28757659	0.68671
419.5	359	0.434452	-0.651831069	0.624906
2068.5	2203.02	0.764244	-0.479084144	0.713358
13137.5	12876.5	0.640071	-0.702513967	0.656749
483.5	558	0.338741	-1.216932361	0.244893
73	58	0.695197	0.591535155	0.586993
513	476	0.17929	-0.805598322	0.242674
4283.5	4028.5	0.369117	-1.170893635	0.415919
1086	1163.5	0.464901	-0.701104095	0.395144
1011.51	875.002	0.740189	-0.554984119	0.847116
1993	2122	0.911141	-0.191301353	0.8654
432	396	0.997117	-0.005018075	0.93382
260.5	247	0.744105	-0.466718849	0.790143
1316	1045.5	0.535551	-0.565092978	0.815054
1070	1133	0.966801	-0.063395081	0.921498
863.5	851	0.725441	-0.382275723	0.741539
866.5	1154	0.839067	-0.432626452	0.648508
6	4.5	0.92941	0.115477217	0.725977
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340.5	421.5	0.77292	-0.559761947	0.621089
82	118.5	0.854007	0.41063232	0.948232
1825.5	1737	0.455694	-1.480929128	0.487298
974	828.995	0.906998	0.162996093	0.794185
450	390	0.789882	-0.391716425	0.906318
2255	2250.5	0.906875	-0.186170471	0.908399
2118	2383	0.685539	-0.896836044	0.610309
3576.5	2583	0.945762	-0.098052567	0.826904
10	16	0.873267	-0.415037499	0.596636
408.999	595.003	0.778353	-0.684431659	0.546155
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4	7.5	0.667337	0.906890596	1
18.5	22.5	0.859118	-0.351472371	0.724931
452.5	459.5	0.964841	0.074558422	0.97509
2200	2008.5	0.605233	-0.820778502	0.676738
240.5	249.501	0.793897	-0.382416078	0.762219
6998.96	7508.51	0.589914	-0.712455199	0.526827
381.521	848.006	0.553741	-1.20917404	0.126922
2.5	1.5	0.669515	-0.736965594	1
80.3103	138.897	0.747888	-0.390196983	0.246276
57134.7	54670.5	0.434253	-0.946461624	0.472441
10520.5	11929.3	0.330338	-0.864618592	0.229803
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3264.98	3681.61	0.866951	-0.293783373	0.77781
55.5	70.0001	0.910787	0.227951947	0.952934
4475	4791.5	0.764706	-0.445335697	0.706093
4138.54	3731.53	0.61046	-0.64966093	0.707291
10609.5	9323.5	0.618674	-0.760085396	0.722926
5176.98	5180.98	0.751535	-0.489862901	0.750902
6242.5	5791.5	0.581699	-0.701393356	0.651384
942.5	823.5	0.675059	-0.612391724	0.788053
563	574	0.808958	-0.363851905	0.792784
2926.98	3383.98	0.541505	-0.616588228	0.392989
1932	1932.5	0.635744	-0.604698719	0.635499

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1629.5	1880.5	0.839063	-0.351670827	0.729998
3377.55	2924.02	0.723652	-0.580957198	0.832132
18.5	15	0.965377	0.075948853	0.845655
3338.02	3294.07	0.777179	-0.56553252	0.785874
1437.48	1406.5	0.899373	-0.246783204	0.913073
877.001	664.497	0.0697192	-0.948298193	0.26269
162.5	193.5	0.942155	-0.120294234	0.80698
8	7.5	0.54184	-1.192645078	0.584965
508.59	519.484	0.878999	-0.238828616	0.862261
5245.95	5188.78	0.946323	-0.117330149	0.953797
138	115.5	0.678011	-0.841737916	0.791302
409	628.5	0.688701	-1.007072049	0.428479
26	16.5	0.812187	-0.452512205	0.932056
4394.9	4469.36	0.920729	-0.16236233	0.908193
843.5	1218	0.502025	-2.505925137	0.326144
535.5	452.499	0.698936	-0.797956224	0.80434
1185	1065	0.865123	0.308964909	0.809396
16	45	0.950012	0.209453366	0.522723
358.5	396.5	0.803416	-0.444170157	0.728916
10	15.5	0.965441	-0.074000581	0.611907
2644.02	2769.59	0.917875	-0.174339191	0.883934
5989.34	3395.01	0.55179	1.017729967	0.411882
639	1026.5	0.690571	-1.076498137	0.414561
833	947.5	0.853945	0.343586976	0.92812
1104	1029.5	0.868922	-0.284361247	0.918011
723	912	0.674216	-1.012022528	0.531802
4351	3023.5	0.866994	0.267531322	0.679886
3608	2448	0.986138	0.027329838	0.759073
180	238	0.970318	0.066567617	0.829177
195	234	0.666272	-1.206450877	0.56504
4746	3237.5	0.957498	0.091854936	0.757898
2383.5	2714	0.899777	-0.269039199	0.819796
1160.5	1013.5	0.873448	0.282993566	0.801451
135.5	172	0.909928	0.244280446	0.958458
3348.31	3486.67	0.645223	-1.038676206	0.619996
305	286.5	0.862627	-0.2926635	0.907612
2261	3706	0.800492	-0.658929499	0.50408
490.5	386	0.883311	-0.274551222	0.973087
203	205	0.377704	2.067679405	0.378982
107.5	39	0.479201	0.89566334	0.255226
1671	1447	0.645117	-0.858655662	0.74427
34.5	24.5	0.38176	-1.064130337	0.680345
3490.52	3282.63	0.806228	-0.399628916	0.852941
935	934.992	0.803652	-0.474362004	0.803658
116.5	72.5	0.952618	-0.102634912	0.790485
741	697	0.951966	-0.101832128	0.993812
664	541.5	0.0783655	-1.050858885	0.189282
550	485	0.567656	-0.647960588	0.695557
310.5	286	0.790325	-0.392753085	0.858316
949.5	949.5	0.859709	-0.30512274	0.859709
3098	2914	0.898457	0.197700545	0.857979
28	37.5	0.655715	-1.415037499	0.502037
68.5	189	0.987384	0.051715037	0.477175
1000	1009.01	0.899379	-0.244693643	0.893625
284.5	179.5	0.660422	0.751597003	0.50878

165	150.5	0.697449	-0.858527574	0.753397
2427.08	2493.99	0.870346	-0.330777801	0.853194
195	201.5	0.09735	-2.099535674	0.088746
148	170.5	0.641486	-1.389274403	0.566069
8475	9989	0.87827	-0.271434102	0.756157
3860.99	4237.5	0.923606	-0.160506435	0.8538
13.5	49.804	0.889022	0.470757618	0.431788
12539.8	12623	0.555242	-0.583173444	0.547883
162	160.5	0.994381	-0.008933125	0.99719
439.999	572.998	0.634709	-0.584134826	0.3888
11	8.5	0.538908	-1.289506617	0.699088
4058	4113.5	0.593667	-0.697687076	0.581278
1690.53	1598.49	0.93302	-0.135463638	0.973669
1762.5	1641	0.515558	-0.76799249	0.583632
29.5	58.5	0.828874	-0.456378295	0.355478
5408.5	6236.5	0.928689	-0.190493663	0.841754
882	973.5	0.973282	-0.062681233	0.908381
40.5	38.5	0.571369	-0.982297998	0.608444
80.5	119.5	0.889556	-0.353636955	0.659294
158	91	0.66591	-0.749191896	0.983563
27.5	24.5	0.693675	-0.652076697	0.781183
1691.5	1622	0.805706	-0.41859567	0.836639
1207.5	1205.5	0.804084	-0.336942175	0.805591
216	236	0.252241	-1.884522783	0.209261
2755	2721	0.804185	-0.425021588	0.813376
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122.5	174.5	0.634434	0.68541388	0.883567
13.5	12.5	0.425212	-1.054447784	0.487732
13.5	17.5	0.81267	0.454565863	0.962003
1141	1092.5	0.717773	-0.558961647	0.753096
1392.5	1430.5	0.883901	-0.277926471	0.866069
4337.79	4336.48	0.635465	-0.631548842	0.635741
4108.4	3694.99	0.482012	-0.739677907	0.591039
2224.99	2223.5	0.795227	-0.37811615	0.795803
159.5	164.5	0.793796	-0.434769564	0.769984
350.5	378	0.963618	-0.082583227	0.912538
301	331	0.685395	-0.435958151	0.580691
5742.09	6558.22	0.634607	-1.071349167	0.550786
1044.5	1280	0.915861	-0.180740766	0.759962
740	1022.5	0.62287	-1.096753233	0.417445
2146	1883.5	0.835537	-0.402098444	0.917546
1241	1471.5	0.966607	-0.090554111	0.865608
2022.52	2035.96	0.81606	-0.394198235	0.811095
877	892	0.801789	-0.371291569	0.787388
1105.5	1107.99	0.916524	-0.167964406	0.914822
1764.5	1786	0.757978	-0.346771659	0.744901
1445	1438	0.795599	-0.536851845	0.798678
3044	2800.5	0.623553	-0.710277968	0.694254
138.5	261	0.899284	-0.306387244	0.49554
35	28.5	0.860535	-0.296393003	1
7	1.5	0.303056	-2.222392421	1
90.5	67.5	0.557167	-1.024112456	0.763568
1245	1266	0.671644	-0.598935443	0.65691
2566	2666.5	0.733631	-0.620969484	0.705846
521	542	0.932702	-0.139443189	0.903451
1352	1180.51	0.602384	-0.747138658	0.717095

1271	1211	0.860661	-0.31951805	0.893414
51.6489	41.7694	0.804966	-0.424392644	0.950621
3	9	0.757899	-2.584962501	0.334253
206	168.5	0.649508	-0.521593601	0.853383
1116.87	1297.07	0.956101	0.105219273	0.9503
421.5	517.5	0.904624	-0.201719433	0.744355
618.5	720.5	0.90495	-0.195814188	0.784857
2103	2155	0.828389	-0.375119826	0.81038
926	996	0.82171	-0.368033362	0.764269
392.5	384.5	0.419997	-0.755461938	0.441063
1312.5	1398.5	0.818284	-0.410464769	0.772057
222	131	0.966804	-0.049582029	0.649579
8216.5	11585.5	0.777173	0.468128739	0.984144
42392	45031.7	0.862313	-0.342350934	0.822663
13.5	10	0.56161	-1.169925001	0.751465
9	11.5	0.483158	-1.847996907	0.349808
461	382.5	0.691051	-0.785227859	0.811498
17.5	24	0.57086	-1.807354922	0.405998
118	103.5	0.496366	-0.975752454	0.603211
451	342	0.993315	-0.008019448	0.724305
62	47	0.782358	-0.384340702	0.992344
42.4171	47	0.925909	-0.164829219	0.852761
106.372	124.807	0.938534	0.154660297	0.967291
1976.48	2248.46	0.995666	0.010581603	0.923472
7799.5	7775.5	0.512468	-0.717277631	0.515532
5703	6059	0.660271	-0.670754328	0.610029
2703.5	2662.5	0.723133	-0.526399706	0.736054
202.5	162	0.942552	0.113008962	0.804432
1990.5	1694	0.72976	-0.642067972	0.838585
14	13	0.566774	-1.347923303	0.610883
4699.87	4395.86	0.393911	-0.797408326	0.461747
1323.63	1191.64	0.503641	-0.693835163	0.614632
1.5	3.5	0.895809	0.415037499	0.698091
0.5	1	0.622002	1	1
1228.5	1331.51	0.769604	-0.524584815	0.710195
3222.02	2882.86	0.823779	-0.300641513	0.921578
3149	2920	0.647155	-0.57355413	0.719582
204.5	206.5	0.552536	-0.843067019	0.544366
72	60.5	0.96247	-0.071892918	0.914426
659.5	641	0.810648	-0.252789342	0.842953
73	79.5	0.944953	-0.113008962	0.880456
1121.5	988.5	0.835333	0.278707336	0.747692
2032	1459	0.476927	-0.585672663	0.908039
1545	1519.5	0.60924	-0.612537516	0.625645
850.5	944.5	0.584027	-0.57482049	0.473626
66	51	0.663078	-0.722466024	0.851604
51	30.5	0.781821	-0.443606651	0.885209
5099.41	4874.38	0.622895	-0.576874069	0.668425
290	272	0.74208	-0.40512203	0.805077
872	670	0.8336	-0.252484486	0.925623
149.5	186	0.69179	-0.848962243	0.547191
36.5	33	0.924195	0.113956189	0.837173
92	82.5	0.878396	0.183797176	0.788666
2870.5	3096.5	0.818906	-0.417636573	0.764483
1160	1162.5	0.769046	-0.51902182	0.767472
4290.92	4126.39	0.582952	-1.266171388	0.606657

2863	3063	0.967028	0.082266182	0.993717
10.5	6.5	0.611386	0.415037499	0.312473
525	527.5	0.863934	-0.299771681	0.860535
178	152.5	0.723773	-0.694373717	0.823936
1586.5	1441.5	0.494471	-1.787710755	0.547553
168.5	165	0.694896	-0.58282359	0.712615
1178.5	1240.5	0.649134	-0.736149706	0.608567
3162	2844	0.656301	-0.640779715	0.746604
3584.77	3550.18	0.956129	-0.104154864	0.9622
8	9.5	0.88627	0.247927513	1
314.499	320.501	0.556853	-0.930589405	0.542162
2284	2135.5	0.627939	-0.708714368	0.684618
3202.44	3396.96	0.778957	-0.36914559	0.72289
4115.01	4039.65	0.93682	-0.100274362	0.954016
1628.71	1465.29	0.825156	-0.252980372	0.933506
3702.5	7290	0.55747	-1.574093228	0.204049
3237	3224	0.557448	-0.635994526	0.561621
1658.02	1877.09	0.913893	-0.197613371	0.826667
507.974	604.918	0.872649	-0.32609912	0.756996
1022	907	0.828402	-0.308920428	0.927848
1598	1764.5	0.518641	-0.819480862	0.432381
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39.5	46	0.861521	-0.326500825	0.753433
834.5	674.5	0.845648	-0.181206283	0.903046
2254	1678	0.975968	0.046603543	0.792638
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741	11619	0.998485	-0.031492547	0.255164
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6092.5	6615.5	0.648632	-0.59518094	0.571911
3962.5	3722.5	0.704	-0.489948586	0.762995
205.5	223.5	0.579291	-0.812629864	0.509888
989	1011	0.75269	-0.609976708	0.737619
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636	572.5	0.753571	-0.424139706	0.847736
613	577	0.752869	-0.434784523	0.806681
515	412	0.707152	-0.477047162	0.912276
2077.99	2211.54	0.866966	-0.269044047	0.8179
918	986	0.773447	-0.367630397	0.703644
237.5	248	0.840785	-0.295593947	0.803884
749	754	0.866766	-0.221269264	0.860609
1123.5	1047	0.771666	-0.390633015	0.835458
426	422.001	0.84642	-0.29177027	0.854152
737.498	694.503	0.812136	-0.326822982	0.865194
1101.5	1050.5	0.819005	-0.305162792	0.862163
1362	1409	0.835698	-0.318093424	0.807854
185	276.501	0.739282	0.695025915	0.946162
1147	1269	0.78417	-0.447687686	0.703547
335.668	298.994	0.642104	-0.456015011	0.778668
742.5	635	0.957131	-0.078866337	0.926309
85	79	0.62609	-0.654503434	0.692112

1174.5	1179.5	0.829922	-0.372077165	0.826815
548.5	503.5	0.844658	-0.236710453	0.928314
374.5	406	0.868382	-0.322409716	0.814446
46	45	0.717611	-0.546282033	0.73592
103	99	0.857431	0.208317236	0.822623
5.5	5	1	0	0.930262
51	41	0.696632	-0.563900885	0.876448
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1345.5	1527.5	0.895718	-0.172339554	0.774307
2562	2441.5	0.957717	-0.096040567	0.988589
142	188.5	0.850326	-0.435501602	0.674376
453	468.001	0.956033	-0.10740525	0.935798
0.5	0	0.495025	1.584962501	0.329316
13	35	0.921657	-0.308122295	0.371995
360	338	0.735421	-0.375509135	0.803325
2.5	4	1	0	0.651448
3539	3544.87	0.854109	-0.309305371	0.852877
1581	1890	0.713926	-0.635808573	0.576833
59	58	0.767578	-0.439699554	0.781964
1311	1259.5	0.740625	-0.512530919	0.773143
3656.5	3521	0.79247	-0.425531313	0.821722
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58	52.5	0.839658	0.351472371	0.786361
360.5	485	0.460689	-1.901398412	0.302512
351	351	0.854017	-0.354664881	0.854017
987.5	987.5	0.860071	-0.332007301	0.860071
113.5	75.5	0.011107	-1.287389676	0.0929094
110	88	0.695506	-0.5334322	0.888727
2799.5	3052	0.88226	-0.281028463	0.823547
678.5	802.5	0.703335	-0.797026267	0.591058
1859	1841	0.624598	-0.687258597	0.633096
6	15	0.88852	-0.415037499	0.364203
33	23.5	0.95454	0.084888898	0.74548
413.5	328.5	0.790383	-0.489619695	0.939087
710.5	679.5	0.528011	-1.338264519	0.556225
810.087	842.93	0.807763	-0.412964225	0.777647
34.9135	122.57	0.911103	-0.567390342	0.367664
35.5	25	0.397688	-1.062284278	0.699154
3206.5	3643	0.842918	-0.393231629	0.756899
204.5	221	0.861457	-0.296578666	0.802944
3511.5	3108.5	0.385533	-0.79309726	0.513833
5405	5220	0.535573	-0.800630921	0.566767
1220	1363	0.808186	-0.405608086	0.721437
1194.4	1263.63	0.770404	-0.481066926	0.726157
1556	1413.5	0.722252	-0.450707769	0.813651
0.00222	0.00668	0.523843	-0.961104823	0.0342223
2703.5	2910.51	0.906507	-0.217299824	0.85603
817	879.5	0.910926	-0.189369374	0.856295
132.5	114.5	0.973497	-0.044224	0.907539
415.999	210.5	0.760477	0.406783441	0.462515
692.5	681	0.932842	-0.11599814	0.94724
459.5	474	0.997283	0.004701889	0.976459
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7051.45	5416.99	0.797812	-0.429295053	0.979557
239.5	200.5	0.713263	-0.533194439	0.86065
6.5	9.5	0.840484	0.387023123	0.919607
5	27	1	0	0.385812
3460	3959.5	0.862686	-0.330553709	0.76928
2304.5	2176.51	0.684804	-0.689447851	0.727819
5406	5893.5	0.932037	-0.171226576	0.877797
1998	2325	0.942691	-0.14695744	0.847127
13.5	21	0.601285	-1.94753258	0.383265
1601	1884.5	0.965625	-0.087293891	0.862957
1245.5	1234	0.827511	-0.339994801	0.834922
1982.48	1753.53	0.665668	-0.555961489	0.780282
9	9.5	0.963326	-0.08246216	0.926774
1945.97	1908.47	0.802593	-0.482801781	0.815582
2126.5	2246	0.827172	-0.347769122	0.783412
1045	1215.5	0.891063	-0.280255845	0.793111
588	589	0.798687	-0.366782331	0.797214
3549	4157	0.885415	-0.31366919	0.787837
15	10	0.463708	-1	0.79822
8.5	11.5	0.90685	-0.180572246	0.646023
658.5	512	0.477552	-1.200648301	0.657346
290.5	334	0.953606	-0.113616075	0.862826
1681.5	1914	0.946612	-0.12120846	0.856078
10.5	8.5	0.711181	-0.691877705	0.851698
584	655.5	0.999035	-0.002472486	0.930211
7.5	5.5	0.863583	0.263034406	0.692068
6	3	0.411079	-1.263034406	0.900374
11.5	22.5	0.837926	0.520832163	0.806433
61.5	53	0.462281	-1.135159583	0.574946
683	641.5	0.69243	-0.48648336	0.754025
64.5	67	0.884771	0.236700258	0.909629
2218.04	3028.4	0.786984	-0.679409824	0.601021
1215.5	1149.5	0.800514	-0.423170968	0.84213
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75.5	74	0.814536	0.38364708	0.802817
2940.5	3278.5	0.844633	0.377511148	0.903746
2406	2519.5	0.825603	-0.462996286	0.796587
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1	2.5	0.739226	1	0.866773
34.5	31.5	0.396299	-0.97924144	0.475721
471.817	855.111	0.981305	-0.051634935	0.583131
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30.5	21.5	0.56688	-1.230297619	0.775775
2148.51	2144.45	0.866421	-0.335681694	0.867619
197.5	206	0.779007	-0.570426408	0.751293
596	595	0.906955	-0.195414167	0.908179
54.2287	45.3263	0.738514	-0.682571249	0.849465
474.5	421	0.861913	-0.305301776	0.943172
1673	1605.5	0.762058	-0.468038604	0.795409
1315.49	1540.99	0.763724	-0.617393388	0.657025
49.5	26.5	0.978043	-0.044394119	0.697383
379.5	412.5	0.901307	-0.217016894	0.840896

7.5	6	0.792322	-0.447458977	0.947192
255	199.5	0.903927	-0.209718591	0.94138
187	310.5	0.615126	-1.992305608	0.369946
3176.5	3297.5	0.732501	-0.708780911	0.708031
146	392	0.912832	-0.434937057	0.43949
8	3.5	0.675272	0.584962501	0.398265
3457.5	3092.5	0.726382	-0.467224194	0.82746
17644.8	17534.8	0.867589	-0.244395583	0.872814
11656.6	12053.1	0.745063	-0.465440751	0.715614
202	187.5	0.592063	-0.769468234	0.655194
90.5	189	0.943299	-0.214443668	0.542059
996	1111	0.875687	-0.309847718	0.803358
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9312.54	10151.9	0.61419	-0.590160887	0.528295
702	633.5	0.79252	-0.299244144	0.89921
337	182	0.908327	0.097250668	0.411966
91	67	0.516811	-1.115477217	0.733397
162.5	141	0.94627	0.119228465	0.864628
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537	527	0.992977	-0.013495842	0.992977
6294.86	6103.13	0.686916	-0.623552175	0.712133
6840	7326	0.874381	-0.288440692	0.826184
3436.5	3292	0.611354	-0.631355406	0.652525
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5589.5	4898.5	0.473419	-1.191705133	0.568886
6330.14	6486.26	0.814483	-0.44862261	0.797918
4895.5	4999	0.773181	-0.4090088	0.754687
1842.5	1959	0.788368	-0.456205315	0.741494
1498.51	1420	0.822336	-0.28899324	0.872791
3190	3133.5	0.438564	-0.553204484	0.461872
2092	1812.5	0.790038	-0.393145641	0.906252
1048.49	1036.5	0.864884	-0.309585239	0.872777
94.5	60.5	0.974217	-0.038680468	0.688374
681.5	665.999	0.904064	-0.201903373	0.920678
1007	928	0.739099	-0.649418481	0.793307
3057.5	2598.5	0.504711	-1.118705165	0.623372
1580.5	1448	0.787296	-0.396745632	0.859948
274.5	162.5	0.635187	0.662550028	0.436966
2207.03	2327.96	0.842438	-0.400583165	0.807817
986	704	0.322242	-2.294392145	0.503762
3428	3483.52	0.778014	-0.607115134	0.768002
2357.5	4562.5	0.89348	-0.3552017	0.497621
248	292	0.490471	-1.920773309	0.402546
1747	1643	0.630635	-0.601991775	0.689402

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2892.98	3065.76	0.762407	-0.43216397	0.711049
939.5	917	0.864453	-0.222008573	0.886949
519	524.5	0.810029	-0.322623202	0.800305
376.001	281.501	0.83125	-0.266884926	0.916879
473.5	399.5	0.419878	-1.152510995	0.552163
16173.6	15117.7	0.769496	-0.460182214	0.822952
1645.79	114.65	0.519764	0.514162867	0.104317
2287	1934.5	0.489724	-0.610900363	0.693264
1.96606	0.98303	0.483945	-1.97530735	0.80998
84.5	94.5	0.633594	-0.530514717	0.517099
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19.5	30	0.6848	-0.893084796	0.403696
1012.5	874.5	0.670749	-0.523250296	0.812304
381.5	400.5	0.950928	-0.112014874	0.918357
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42109.7	41137.4	0.932618	-0.129972565	0.950635
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505.5	509	0.843336	-0.38165444	0.838768
1027.5	1160.5	0.875382	-0.289818669	0.789338
655.002	564.498	0.779616	-0.302782017	0.939331
14	27	0.733597	0.550197083	0.733597
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3.5	2.5	0.898492	-0.222392421	0.898492
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882	443	0.792502	0.409506393	0.521809
454.5	264.5	0.978495	0.042228235	0.689019
1301	1453	0.699138	-0.838601809	0.627745
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23068.3	21482.7	0.604528	-0.488929572	0.690457
9522.5	10078	0.569578	-0.543815592	0.505129
2959	3259	0.832857	-0.399680076	0.765554
2657	2614.5	0.680277	-0.556600973	0.694986
1640.99	1631.49	0.950068	0.098572377	0.945988
3199	4148.5	0.900529	-0.273807931	0.736527
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1036	1094.5	0.836088	-0.293143931	0.787416
1322.01	1238.01	0.722587	-0.505893964	0.779466
920.5	784	0.717859	-0.425261056	0.878394
6289	5525	0.859228	-0.259551737	0.962807
2742	2791.5	0.866802	-0.319037185	0.854884
616.5	587	0.878893	-0.255332546	0.914359

237	334.5	0.843223	-0.413009818	0.607655
1093	1191.5	0.879716	-0.294796064	0.822343
38	31.5	0.332233	-1.440572591	0.462019
7508.97	7238.37	0.859495	-0.301355741	0.886034
1374.46	1972.68	0.863637	-0.372325701	0.623883
2986	3521.5	0.698449	-0.711503966	0.577392
51	40	0.580627	-1.11783649	0.735635
3622	3906.5	0.897435	-0.261044207	0.849525
100	89.5	0.870302	0.244887059	0.798716
583	515.5	0.903485	-0.183131607	0.997212
47.5	59	0.686081	-0.841935154	0.539989
1414.49	1596.03	0.936205	-0.141311902	0.849618
711	1007	0.703496	-1.041163849	0.503514
746.5	850	0.920857	-0.191955024	0.834254
1032	1769	0.772609	-0.957301374	0.491417
3894.92	3839.99	0.803534	-0.494716035	0.812795
16500	15123	0.803582	-0.473202738	0.861073
4.5	4.5	1	0	1
1480.5	1750	0.887067	-0.261573449	0.767227
213	244.5	0.666108	-1.09808355	0.585499
477.5	519.5	0.982316	0.043157582	0.966473
625	502.5	0.972543	-0.051698188	0.875336
2226.5	2663	0.961475	-0.095422334	0.844932
370.5	307.499	0.823798	-0.391227782	0.949344
260	254.5	0.865184	-0.2410081	0.883497
9123.5	8968	0.546152	-0.743595893	0.562193
8074	7958.5	0.475283	-0.909785947	0.487696
1521.98	1851.61	0.722989	-0.847591639	0.603081
3336.1	3126.42	0.795342	-0.443656471	0.84279
4850	4449.5	0.788315	-0.465486522	0.850284
4612.5	4779	0.849677	-0.400462864	0.827802
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2497	2377	0.66609	-0.670350469	0.705947
1264	1241.5	0.888837	-0.243760394	0.901457
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255	218.5	0.978698	-0.040157126	0.910508
393	592	0.987595	0.030870675	0.730438
165.5	101.5	0.853803	-0.272655324	0.818774
494	447.5	0.915207	-0.193479729	0.978743
2488.94	2698.47	0.692745	-0.7509094	0.635515
1613.5	1877.5	0.764371	-0.606129313	0.661103
229	278.5	0.660822	-1.031848866	0.539596
2241.05	2207.12	0.922126	-0.191614513	0.931567
8072.74	7648.66	0.834723	-0.39313135	0.87055
2245.5	2488.5	0.910822	-0.219557576	0.843545
2167	1778	0.76391	-0.516857575	0.902768
54	61.5	0.596126	-0.800691192	0.490426
1212.51	1237.99	0.863337	-0.303471738	0.848469
910.5	868.5	0.951308	-0.108575261	0.982275
210.5	183.5	0.632618	-0.712051874	0.745592
2007.5	1439	0.912866	0.191521746	0.745344
4187.5	4211.06	0.772772	-0.439673417	0.76812
1377.5	1422	0.837123	-0.319312147	0.811347
3851	3522.5	0.46041	-0.69427155	0.558696
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62	54	0.928153	-0.108706259	0.944072

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255	301.5	0.842944	-0.413152855	0.733325
266.5	260.5	0.846366	-0.283204663	0.865462
426.999	378.501	0.898944	-0.185419783	0.994087
1227.5	1196	0.782191	-0.470344421	0.801596
1048	1096.5	0.891895	-0.203700266	0.854479
791.5	824.5	0.90777	-0.171064661	0.87377
8752.5	7143.5	0.38433	-0.750490097	0.617196
1387.5	1245	0.634812	-0.473209299	0.760835
4535	3799.5	0.628898	-0.56168954	0.807018
2612	2519.54	0.5835	-0.783933811	0.614096
1168.15	1053.81	0.609348	-0.642425042	0.706818
281.5	249.5	0.714867	-0.352356267	0.860771
1304.5	1326.5	0.801638	-0.373433261	0.787498
80.5	74	0.750793	-0.498026864	0.817474
200.5	237.5	0.890911	0.232124823	0.993736
51	54.5	0.817909	0.393663848	0.856977
65	58	0.680324	-0.718587065	0.763269
4174	3779	0.64545	-0.729152317	0.723877
1013	920	0.7772	-0.327100009	0.87624
913.5	974.5	0.878902	-0.248421131	0.828836
563.5	596	0.971825	0.065076203	0.992954
8177.93	8036.87	0.748979	-0.449902444	0.764373
2060.46	2148.08	0.88602	-0.272391094	0.858269
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1011.5	944.5	0.943905	0.122331252	0.902179
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676	754.5	0.414486	-1.025840005	0.329861
7098.47	7014.06	0.581843	-0.58057715	0.594747
3836	3369	0.340458	-0.60246254	0.519622
5132	4539	0.238019	-0.770237064	0.367287
6026.9	5813.51	0.576591	-0.704483653	0.610226
2552.01	2474.53	0.878674	-0.212505064	0.905343
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5.62479	7.68846	0.997871	0.006178389	0.822437
2554	2022.5	0.982289	0.030738419	0.813825
554.5	526	0.814784	-0.278993295	0.867988
970	919.5	0.830773	-0.379776395	0.868217
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22.6626	26.1719	0.998585	-0.002829265	0.887366
266	270.5	0.920134	-0.166539187	0.907822
480.202	393.857	0.767523	-0.461712972	0.918533
2725	2722	0.904218	0.200367279	0.903516
136.5	157.5	0.943954	-0.132755209	0.847165
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266.5	275	0.571775	-0.687304316	0.541911
1885	1781	0.944061	-0.076217787	0.995958
3	4	0.738921	0.584962501	0.91071

832	1019.5	0.9084	-0.256460176	0.785102
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131	127	0.879524	-0.285230152	0.899844
2	1.5	0.791627	-0.415037499	1
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1755.5	1674.5	0.521574	-0.621583205	0.57438
1665.5	1556.5	0.870182	-0.247954583	0.923636
1243	1494	0.897589	-0.24618758	0.769944
57	73.5001	0.847382	-0.278301162	0.617272
9	10.5	0.931134	-0.169925001	0.829576
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892.502	875.001	0.755608	-0.36395952	0.776168
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51	81.5	0.563474	-3.087462841	0.356847
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239.562	295.72	0.883584	-0.188231526	0.673943
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771	738	0.676744	-0.520466105	0.719204
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875	906.999	0.819401	-0.367997744	0.791053
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510	607	0.455256	-1.350497247	0.343228
1022	1157	0.982502	-0.040078891	0.89856
150.5	177	0.522894	-2.004800986	0.438861
1797	2397	0.886166	-0.338683854	0.713207
4	2	0.714152	0.584962501	0.479515
2251.5	2081.5	0.868483	-0.24071687	0.932745
595.5	468.5	0.584553	-0.557961805	0.850955
85.4908	128.06	0.322138	-1.169769756	0.11068
278.5	304	0.994935	-0.010397847	0.930494
2	1.5	0.499897	1	0.409442
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6838.71	5227.41	0.475397	-1.928936862	0.618377
2068	2065	0.860539	-0.34735263	0.861469
818.499	918.988	0.88611	-0.308317287	0.815098
844	1062	0.912878	-0.251457371	0.776247
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1958.5	2016	0.731453	-0.524552146	0.707352
864.5	945.5	0.924062	-0.178293326	0.863589
2907.5	2987.5	0.669764	-0.606584272	0.64597
471.501	596.499	0.945088	-0.153199968	0.803545
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1887.53	1809	0.73553	-0.536324263	0.769293
37	45.5	0.583698	-1.30256277	0.458403
11475.5	10101.2	0.740978	-0.470737607	0.849553
1210	1267.49	0.828156	-0.40395986	0.795784
767.5	642	0.706962	-0.549223978	0.854279
2494	2829	0.954265	-0.110880919	0.871984
180	156	0.629556	-0.520309542	0.784045
1470.5	1038.5	0.333183	-0.746480788	0.774171
2214	2211	0.9291	-0.163342351	0.929994
450.5	429	0.678152	-0.678392184	0.716168
1665.5	1667.5	0.752731	-0.582150018	0.751882
1455	1696	0.930598	-0.186002889	0.83705
1544.5	1366.5	0.590235	-0.544437282	0.728829
696.5	732	0.896507	-0.212758362	0.858585
2493	2415	0.774042	-0.477117546	0.798252
556	539.5	0.873315	-0.256303715	0.896185
797	822.5	0.928109	-0.145581294	0.904303
448.502	421.501	0.691697	-0.582553599	0.744215
2503.07	2423.94	0.768679	-0.530868267	0.791532
527	475.5	0.956336	0.073384499	0.875273
8098.5	8090.5	0.860827	-0.192072587	0.861913
1847.5	2077	0.707435	-0.588089449	0.610923
1450.5	1434	0.773615	-0.440288442	0.783017
1366	1528	0.934666	-0.166628316	0.864427
417.5	424	0.938671	-0.145299553	0.928744
12662	12003	0.827875	-0.394598003	0.864668
168.5	484	0.35149	1.601977187	0.935256
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2920.5	2484	0.519073	-0.507076991	0.741991
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3.5	5	0.626095	-1.222392421	0.413611
757.004	1058.5	0.905335	-0.260369517	0.689051
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2739.55	3070.56	0.919548	-0.194527835	0.84366
3452	4254.79	0.910613	-0.240945411	0.779292
8	5.5	0.847091	-0.299560282	0.897511
4629.92	4564.88	0.84905	-0.327671441	0.85931
1635.02	1503	0.952202	-0.108039648	0.994304
2895	3303.5	0.945257	-0.138774851	0.861953
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22	27.9318	0.767554	-0.52486794	0.585249
13653	20263.8	0.817322	-0.521175949	0.55953
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3717.5	3893.5	0.759144	-0.518876206	0.723635
19.5	22	0.719091	-0.641546029	0.628906
7079.03	7804.77	0.837119	-0.423213237	0.773828
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896.507	634.002	0.612846	-1.004040016	0.829929
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6072	6063.5	0.0628144	-1.087418292	0.0632072
9637	8467.5	0.459063	-0.657057588	0.610822
8722.5	7153	0.127242	-1.021747699	0.26933
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8314.5	8318.5	0.159257	-0.824965349	0.158932
8745	4905.5	0.213438	-0.988825179	0.867836
5422.5	4654	0.555165	-0.63759252	0.716281
6872	6462	0.0320497	-1.070336844	0.0435612
9612.5	7955	0.244804	-0.840527022	0.443977
529.5	405	0.405972	-0.636975886	0.763695
158510	151437	0.722455	-0.579924469	0.757915
35	51	0.518956	-1.321928095	0.289392
3633.06	3110	0.616792	-0.611436477	0.766889
3675.18	3780.58	0.711985	-0.70629421	0.692274
1890.5	1815.5	0.887236	-0.230363661	0.917348
109.5	228.5	0.840799	-0.53638232	0.397295
7139.5	5919	0.545316	-0.688027928	0.733619
7229	6356.5	0.444486	-0.980179726	0.554585
1.5	1	0.391002	-1.584962501	0.651448
1315	1361.5	0.696056	-0.339867145	0.649742
2735	2162	0.0574643	-1.477011521	0.136377
2954.47	2887.38	0.765774	-0.518484246	0.782676
6169.9	5909.67	0.604937	-0.800275641	0.63961
981.396	886.924	0.706879	-0.524704081	0.795512
75.5	66.5	0.387312	-1.431049817	0.473384
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3185	2725.5	0.467903	-1.019610192	0.594922
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970	1166	0.739792	-0.849038403	0.632964
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24	24.5	0.320682	-4.584962501	0.31202
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3166	2895.5	0.732442	-0.530084413	0.803986
16151.8	13582.5	0.895753	-0.149753958	0.935875
2457.5	2027.5	0.603969	-1.184824893	0.717766
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1723	1911	0.499582	-1.311915134	0.431906
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226	220.5	0.768369	-0.48032896	0.787498
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5057.94	4883.22	0.661369	-0.431132359	0.703091
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10.5	10	0.832215	0.251538767	0.791627
702.5	615.5	0.122285	-1.127679488	0.19782
1333.2	1590	0.896442	-0.27938462	0.786324
2104	2046.5	0.695196	-0.480020008	0.722652
188	131.5	0.297813	-2	0.50609
256.5	297.001	0.780483	-0.491070267	0.669441
19.5	17	1	0	0.826179
0.5	1	0.622002	#NUM!	0.353387
1408.5	1269	0.852133	-0.331949527	0.922875
0.5	0	0.495025	1.584962501	0.329316

661.5	652.5	0.72188	-0.598107877	0.732353
464.5	458	0.922673	-0.167791267	0.932489
113	156	0.92621	0.185445587	0.869709
0	0.5	1	#DIV/0!	0.308068
3.5	2.5	0.345015	-1.807354922	0.550362
25.5	43.5	0.912216	-0.280107919	0.591394
1503	1632	0.653031	-0.393757957	0.547359
525.5	463	0.770713	-0.502271577	0.861512
1387.5	1272	0.856272	-0.307058151	0.918206
4013.5	3899.5	0.515046	-0.599957775	0.54828
372.5	338	0.659797	-0.456288228	0.769639
97.5	105.5	0.704485	-0.618645627	0.641748
11	5.5	0.847091	0.184424571	0.399272
3424.04	3255.52	0.594083	-0.662319098	0.642131
1223.5	1065	0.380773	-0.914723718	0.511769
786	725.5	0.709932	-0.580838548	0.774038
83	94.0001	0.988148	-0.026311277	0.901623
153	114	0.725759	-0.314873337	0.915296
99	76.5	0.107606	-0.618129365	0.48687
123.5	136	0.863467	0.327757174	0.917242
101	106	0.36677	-2.166358386	0.341402
3	1	0.710482	-0.263034406	0.308068
939.005	911.492	0.930071	-0.165894875	0.948886
187.5	188	0.260655	-0.843387653	0.258381
61	59.5	0.833669	-0.330824495	0.85325
527.5	562.5	0.819839	-0.459944516	0.77767
658.907	640.949	0.766264	-0.465305473	0.788471
3426.49	3116.05	0.418159	-0.783977545	0.516102
72.5	69.5	0.824298	-0.398549376	0.853834
2578.5	2381.5	0.454837	-0.699321133	0.542031
5.5	4	0.545049	-0.874469118	0.803152
782.5	523	0.864873	-0.247812287	0.851434
0	0.5	0.450185	#DIV/0!	1
141.5	121	0.619009	-0.778336029	0.742272
513.5	466	0.601486	-1.018378529	0.666859
8184	6866	0.0827813	-0.799224813	0.209099
0.5	0	0.308068	#NUM!	1
1352	1278	0.0172303	-0.987251507	0.0236072
256.5	218.5	0.71675	0.624718869	0.646582
350.5	271.5	0.505268	-0.51369142	0.86368
0	1.5	1	#DIV/0!	0.308068
4399.5	4290	0.827091	-0.251960443	0.853429
531	518.5	0.912607	-0.189930693	0.929208
30.5	30	0.88791	0.259087221	0.878678
243.5	240	0.994897	-0.011898583	0.996174
1016.49	968.003	0.724994	-0.4444236	0.772125
510	471.5	0.64333	-0.593474001	0.717141
1035	1021	0.667672	-0.784193872	0.677449
981	825.5	0.527001	-0.873366561	0.673926
2259.99	2350.51	0.838377	-0.327534229	0.807401
351.5	1136	0.271194	-1.474387304	0.00911919
2830.7	2725.27	0.85891	-0.313853507	0.885465
323.5	374.5	0.88161	-0.242224879	0.765006
890.5	810	0.643797	-0.646186959	0.726581
404.5	389.499	0.620477	-0.705799582	0.653019
233	166.5	0.550525	-0.569565396	0.938483

924.5	938.5	0.766152	-0.417901282	0.752764
413	397	0.781745	-0.416202372	0.81444
0	1.5	0.450185	#DIV/0!	0.18169
2	0.5	0.320255	#NUM!	0.785812
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45	43.5	0.895267	-0.206450877	0.921295
200	216.5	0.563984	-0.588573754	0.479328
4577.5	4578.5	0.814884	-0.355204906	0.814704
720.493	912.999	0.806392	-0.642653766	0.672708
163.5	109.5	0.776107	-0.325240829	0.855734
224.5	215.5	0.740088	-0.548476789	0.771511
844	794	0.800121	-0.334158943	0.856224
2203	2083.5	0.488211	-1.221083261	0.527213
487.5	450	0.675867	-0.502993654	0.755675
439.361	529.164	0.896378	-0.257003197	0.770684
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1	4	0.559404	1.584962501	0.764931
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1	0	0.308068	-1	0.308068
764	605	0.82484	-0.266816046	0.958769
145	155	0.783115	-0.565199246	0.739349
260.5	223	0.987833	-0.022324547	0.898526
1543.99	1633.97	0.701512	-0.616599725	0.656099
94	103.5	0.900505	-0.269186633	0.842418
420	293	0.697452	-0.452150672	0.961035
6	6.5	1	0	0.955734
854.5	758	0.645285	-0.394640774	0.805179
1340	1202.5	0.473784	-0.67463077	0.595188
1578.5	1428.5	0.567604	-0.613810439	0.673849
271	246.5	0.964863	-0.070921786	0.968914
15.5	23.5	0.839911	-0.253756592	0.423425
1044.11	1038.13	0.569696	-1.282666022	0.573237
1050.5	869.5	0.564927	-0.574358174	0.77923
39.5	35.5	0.859145	0.204013892	0.768589
35.5	54.5	0.495405	-0.690315501	0.159358
497.459	462.072	0.777111	-0.395512186	0.841583
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25	17.5	0.741127	-0.556393349	0.983355
572	550.5	0.598899	-0.684137906	0.634126
3651.5	3602	0.865523	-0.301430604	0.875063
499.5	448.5	0.566957	-0.74759501	0.664439
2108.5	1803.5	0.708951	-0.561715985	0.835427
79	119	0.798463	-0.445799753	0.477202
701	782.5	0.757349	-0.493268702	0.667681
572	544.5	0.980049	-0.039633459	0.984553
858	792.5	0.918419	-0.135655099	0.987783
53	56.5	0.946818	-0.098563834	0.894005
3114.5	2925	0.787132	-0.459808033	0.833348
476	583.5	0.827115	-0.400962314	0.676951
19.5	21	0.840365	-0.427421224	0.793965
1314.5	1232	0.838469	-0.292864066	0.892996
3351	3905	0.929012	-0.148849347	0.811712
1265	1070	0.584318	-0.650285641	0.748461
153	151	0.434307	-0.814444347	0.446898

1447	1504	0.672691	-0.610105958	0.63918
98.5	111	0.923575	0.17884808	0.997054
1	1.5	0.398521	1.321928095	0.559404
423	430	0.77778	-0.398084366	0.763216
3539	4668.5	0.997757	-0.005309287	0.805968
717	729.5	0.724686	-0.378612233	0.705343
1320	1523	0.89877	-0.251929159	0.803949
468.5	422.5	0.653812	-0.505583023	0.76213
329.899	234.332	0.497238	-0.637524675	0.893493
143	138	0.922922	0.106915204	0.888191
2016.16	1858.1	0.575298	-0.605606886	0.661908
4812	5358.5	0.88822	-0.260697766	0.813197
3316	3743	0.912968	-0.178543342	0.818627
312.999	287.5	0.836089	-0.27320595	0.91279
370.5	344.5	0.822633	-0.311742611	0.885802
137.5	124.5	0.80095	-0.361820822	0.884518
1009.5	1216.5	0.95152	-0.12611564	0.834495
902.002	764.995	0.727699	-0.457235066	0.876892
779.5	738	0.744773	-0.468133413	0.791851
66.5	89	0.936676	-0.14839184	0.725934
187.5	204	0.966456	0.074962058	0.978191
400	400	0.861699	-0.264477823	0.861699
234	277.5	0.44809	-0.651196199	0.279706
200	278.5	0.548361	-0.785875195	0.28306
79.5	61	0.620577	-0.758294104	0.827951
2845.51	2639.97	0.578767	-0.6675031	0.651668
818.5	724	0.835942	-0.212292856	0.974084
47	57.5	0.964073	-0.062735755	0.779872
606.5	611	0.90123	-0.133228165	0.892998
107	98	0.941371	0.091423028	0.866784
4512.5	4724.5	0.738174	-0.48978146	0.698459
11.5	11	0.762645	-0.61667136	0.79117
482.5	462.5	0.822762	-0.312614344	0.85978
3223	2911	0.61182	-0.6690581	0.704526
675.5	731.5	0.858066	-0.24879542	0.78612
116	126.5	0.896075	0.218834602	0.953341
265	236.5	0.733081	-0.442518236	0.83864
374	298	0.577263	-0.67961572	0.793392
344	333	0.909606	-0.120203065	0.945646
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2476	3882.5	0.476987	-0.803136725	0.155313
648.498	752.505	0.946223	-0.126639194	0.844965
23	33.5	0.894277	0.309328058	0.903811
249.5	312	0.732461	-0.719722022	0.582346
51	53.5	0.933536	-0.164630702	0.903521
50.5	54	0.926249	-0.134649527	0.869518
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44.5	84.4999	0.812981	0.546634382	0.821859
619	605.5	0.747904	-0.437745244	0.767934
2.5	1.5	0.825659	0.263034406	0.523243
94.5	93	0.472676	-1.372417865	0.483175
10.6763	1.07408	0.150265	-13.04890651	0.859136
694	734	0.18885	-1.41365229	0.161385
63.5	76	0.990245	0.022542569	0.888391
68	66.5	0.922676	-0.156725504	0.939188
53	75.5	0.679478	-0.284976959	0.222243

1865	1890.5	0.711631	-0.489920484	0.698947
2803	2521.5	0.866623	-0.30142231	0.937305
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299.001	227.5	0.353964	-2.580150309	0.492379
30.5483	41.9118	0.446908	-0.98983962	0.224171
37.9517	74.0882	0.606522	-0.654060217	0.130079
6038	5471.5	0.456563	-0.819230997	0.55197
30.5	57.5	0.508728	-0.682809824	0.0873697
59	22	0.0080571	-1.390789953	0.936602
2	1.5	0.873517	0.321928095	0.751907
88	85.5	0.844366	-0.221026879	0.875043
127.5	92.5	0.80843	-0.293913719	0.905155
16.5	18	0.824641	-0.459431619	0.768466
14.5	11.5	1	0	0.754229
721	779.5	0.80847	-0.380113283	0.74455
276.815	197.398	0.574863	-0.439016974	0.956901
129	87	0.715745	-0.543621705	0.989102
9	8.5	0.529173	0.473931188	0.47679
4.5	9	0.355752	1.152003093	0.855681
384.001	489.502	0.957234	0.098021306	0.876331
58.5	70	0.91675	0.1740294	0.955509
79	61	1	0	0.791213
1508.5	1426.5	0.84699	-0.275810628	0.894248
638.502	628.5	0.811687	-0.321370671	0.826075
387	243	0.775673	0.415037499	0.556597
130.5	137.5	0.857049	-0.355480655	0.822761
763.5	639.5	0.671371	-0.448490026	0.865947
3564.5	3567.5	0.646509	-0.558096642	0.645679
1869.01	1820.48	0.707748	-0.561996883	0.729785
2786.01	2551.94	0.733273	-0.329266332	0.839979
10	16	0.932455	-0.152003093	0.565197
193	171.5	0.730882	-0.499699896	0.830123
602.5	565	0.658335	-0.827549667	0.703204
0	0.5	1	#DIV/0!	0.308068
22.5	20	0.772232	-0.584962501	0.846313
154.5	180	0.545252	-1.081638469	0.437735
1	1	0.622002	1	0.622002
53.5	50	0.994046	0.013420516	0.952412
898	906.5	0.81766	-0.313717857	0.809088
652.501	595.001	0.464672	-0.652868776	0.571497
157.5	178	0.825814	-0.404390255	0.737474
2693.5	2675.5	0.857433	-0.28478304	0.862667
265	224	0.749709	-0.522371543	0.874699
169	165.5	0.844089	-0.297591628	0.86112
854.5	788.5	0.433687	-0.65678764	0.528247
114	110.5	0.858445	-0.263034406	0.884201
2.5	0.5	0.0662756	-2.321928095	1
14.5	9	0.331277	-1.5360529	0.659709
1078.83	1019.26	0.740457	-0.387384542	0.798979
705	631.5	0.780099	-0.477060988	0.859824
151.5	161.5	0.538657	-0.606549363	0.469784
2100	2066	0.569787	-0.52343315	0.589352
519.5	597	0.0924857	-1.377123749	0.0562183
539	536.502	0.617366	-0.5643625	0.622185
608	620.5	0.969463	0.063820802	0.983339
82.5	74.5	0.696986	0.375144772	0.609267

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0.5	0	0.308068	#NUM!	1
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1575.99	1656.01	0.654962	-0.566746671	0.607572
1359.99	921.496	0.735815	0.406819357	0.514721
348.5	280	0.369658	-0.717094391	0.636171
2.5	1	0.0405193	-2.321928095	0.450185
5200.34	5048.96	0.858305	-0.290932661	0.8806
1092	993	0.704473	-0.436332278	0.802992
1427.5	1495.5	0.855826	-0.345490621	0.824325
36.5	38.5	0.852656	-0.356934545	0.816741
3990.5	3298.5	0.687124	-0.373170842	0.922144
843	709.5	0.304554	-0.833692448	0.487336
2480.5	2435	0.801113	-0.473898877	0.813757
734.5	822	0.88705	-0.294206488	0.815761
1290	1387.5	0.912196	-0.225938275	0.86697
591.5	641	0.915096	-0.205419343	0.862235
224.5	170	0.371862	-2.48864354	0.513998
974.003	974.5	0.961563	-0.074482208	0.961174
236.5	234.5	0.742915	-0.515008967	0.749776
562.5	527.5	0.863117	-0.225816202	0.921492
864.5	724.5	0.666103	-0.483092369	0.850381
1055.28	945.673	0.849822	-0.233984429	0.953614
489.5	420	0.504252	-0.66603837	0.672888
910.5	805	0.745447	-0.530162647	0.838693
3	2	0.785812	-0.584962501	1
1015.5	1277	0.811996	-0.447846486	0.645191
746.5	685.5	0.720547	-0.423760573	0.806869
390.999	429.498	0.830992	-0.372611591	0.760837
1.5	0	0.495025	-1.584962501	0.724378
196.5	264.5	0.734689	-0.612760953	0.510964
2419.5	2696	0.785691	-0.517685693	0.709409
161.282	147.775	0.93273	-0.123666612	0.998688
96	68	0.463818	-0.941106311	0.764684
1.5	3	0.567924	1	1
490	490.5	0.907689	0.191356382	0.908349
22.5	18	0.265989	-1.584962501	0.410228
540	497.5	0.791819	-0.33198176	0.870081
8.5	10	0.90763	0.234465254	1
729	648	0.784522	-0.311329963	0.906393
32	31	0.847026	-0.327574658	0.870204
41.835	51.9241	0.81197	-0.183852541	0.490838
1.5	3.5	0.573338	1	0.847091
628.499	645.495	0.837685	-0.396412737	0.81988
252.5	587.5	0.598221	-0.587822155	0.0616894
0.5	0	1	0	0.450185
239.5	113.5	0.82721	-0.31516721	0.715907
64.5	48.5	0.923794	0.107713817	0.692017
102.5	120.5	0.994133	-0.014144182	0.889094
0.5	2	0.663808	1.584962501	0.825659
946.5	870	0.789043	-0.446627812	0.851673
16.5	11	0.689561	-0.520832163	0.967653
35	55.5	0.843419	-0.321928095	0.459987
18	28.5	0.981587	0.039528364	0.650794
2000.5	1668	0.22585	-0.836861896	0.413949

9.5	9.5	0.451737	-1.925999419	0.451737
620.435	574.346	0.865778	-0.243795862	0.929525
440.5	369	0.501326	-0.690241068	0.691713
385	454.5	0.327937	-0.69086918	0.18412
101	124.5	0.875365	-0.336283388	0.741619
141.5	150.5	0.609331	-1.02571717	0.567801
264.5	265	0.971215	0.053538427	0.972653
2803	2711	0.692153	-0.492754097	0.724745
411	420	0.836017	-0.325442579	0.818695
2442.5	2592	0.529823	-0.663088073	0.469375
1381.99	1607.51	0.782768	-0.471808362	0.66546
780.004	852.502	0.729384	-0.480643563	0.648702
599.5	536.5	0.780444	-0.413834752	0.87125
27	33	0.916884	-0.169925001	0.756155
49	54.5	0.925242	0.179706022	0.988473
479	454.5	0.769149	-0.648853276	0.80059
386	468.5	0.84909	-0.243728883	0.656344
0	0	?	#DIV/0!	?
963	888.5	0.985441	-0.024171372	0.946823
446.5	460	0.869472	-0.236462327	0.843848
475	467.997	0.797437	-0.414025437	0.809035
751.5	676	0.598896	-0.450341486	0.738254
450	478.5	0.924674	-0.166322765	0.881278
1056	992.5	0.929591	-0.091651416	0.998373
45	34.5	0.710649	0.519374159	0.574739
293.5	329	0.989503	-0.022291011	0.907024
298.5	317.5	0.941804	-0.118299313	0.895083
86.5	105	0.996568	-0.008363473	0.870495
1722	1850	0.485097	-1.322556583	0.437848
320.5	449.5	0.882918	-0.324180547	0.663713
103.5	101.5	0.90918	-0.201633861	0.922563
1	1.5	1	0	0.785812
1224.5	1083.5	0.106534	-0.834861148	0.190485
2025.7	2064.84	0.906883	-0.180880897	0.891752
2773.5	4382	0.801463	-0.739221432	0.549844
3.5	5	0.933926	-0.222392421	0.742577
155	173	0.846045	-0.405759686	0.775678
2548	2625.5	0.596837	-0.559844674	0.564569
1011.5	1070	0.907159	-0.214094625	0.868697
268.5	234	0.768484	-0.36833856	0.89866
299.5	333.5	0.960447	-0.079207268	0.87709
455	436	0.786146	-0.312053347	0.830829
87	79	0.937614	0.103952507	0.861711
3	4	1	0	0.847091
9	12.5	1	0	0.806223
1112.5	990.5	0.572425	-0.566920523	0.70372
2792	2668	0.355558	-0.750550312	0.403439
603.5	526.5	0.813626	-0.245688115	0.964999
2379.5	2050.5	0.683085	-0.447844857	0.842153
441.5	425.5	0.883232	-0.298429594	0.905692
130.5	100	0.721703	0.491730256	0.581187
45	35	0.801136	-0.282399731	0.949506
134	153	0.964723	0.088728919	0.956434
14	14.5	0.443287	-1.637429921	0.422237
5888.5	5832	0.0790395	-0.840909283	0.0830303
892	907.496	0.664178	-1.109156381	0.654371

1201.49	1105	0.649895	-0.654126468	0.721392
419.5	444.5	0.809976	-0.368231093	0.761827
4107	3190	0.345312	-0.818993889	0.625887
980.5	932.5	0.747836	-0.448529474	0.792205
900.5	991.5	0.914726	-0.202635524	0.849922
670.5	669.5	0.831416	-0.42909159	0.832371
528.5	585.5	0.881487	-0.238404739	0.799784
1056	1107.5	0.904016	-0.228210438	0.872398
1619	1590.5	0.818771	-0.234098376	0.839588
339.5	345	0.841051	-0.298743307	0.827608
4264.54	3743.05	0.638241	-0.509819678	0.778839
2197.5	2311	0.667495	-0.551381643	0.61956
0.5	1	0.622002	#NUM!	0.353387
300	375.5	0.985374	-0.038994132	0.848776
140.5	170.5	0.926301	0.209869588	0.973148
59.5	46.5	0.983947	0.024045474	0.779777
1544	1338.5	0.444753	-0.889418648	0.576977
1324	1251	0.683275	-0.505727492	0.738621
556	653.5	0.917505	-0.197100136	0.806715
550	579.999	0.994232	0.01175324	0.967331
1997	1660	0.547261	-0.588579186	0.759219
6390.5	5464.67	0.735065	-0.438074505	0.878781
781.5	745.5	0.691211	-0.692729984	0.726038
522	417.5	0.656378	-0.552172566	0.866947
140	132	0.933229	-0.123658468	0.979645
1	3	0.724378	#NUM!	0.329316
135.5	165.5	0.982955	-0.037754922	0.838597
731.5	779	0.955989	0.09907541	0.996188
1134.5	1343	0.930941	-0.160605309	0.812853
964.5	912.5	0.755534	-0.521320005	0.797365
422	336.5	0.699843	-0.492280498	0.906986
1249.5	1218.5	0.652019	-0.598010781	0.675141
619.5	680	0.817788	-0.383176769	0.745022
1185.5	1062	0.747425	-0.459735888	0.84124
2425	2599.5	0.806701	-0.423191149	0.754429
1314.5	1413.5	0.764681	-0.436228241	0.701262
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889.5	764	0.207445	-0.788422173	0.364892
218	169	0.819096	-0.217437539	0.889323
406	434	0.878318	0.272773409	0.918363
2	4.5	0.918711	0.321928095	0.687418
20	20	0.98083	-0.036525876	0.98083
18	17.5	0.640392	-1	0.658371
3	12	0.904922	0.222392421	0.114423
2076	2203.5	0.708486	-0.409488665	0.643032
12	14	0.877103	0.273018494	0.975273
584.5	545.5	0.834238	-0.361336479	0.883482
191.5	176.5	0.850692	-0.241350579	0.926095
107.5	85	0.609779	-0.519374159	0.872395
310.5	267	0.796139	-0.309782665	0.943028
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228.5	222.5	0.908636	-0.199425735	0.927127
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133.5	136	0.910068	-0.196509787	0.896951
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44.5	51.5	0.976256	-0.049468676	0.866413
260.313	215.895	0.478744	-0.623685168	0.706268
141	137.5	0.681747	-0.663817921	0.701527
49	58	0.973166	0.071790683	0.93035
647.784	635.628	0.802477	-0.394815076	0.817515
777.5	729	0.544554	-0.583108137	0.618509
1	0.5	1	0	0.622002
5	9.5	0.742971	0.584962501	0.792322
206	249	0.692367	-0.726498595	0.553107
890.5	1014	0.852739	-0.309627455	0.751316
875	830	0.506187	-0.689659879	0.561445
1792.51	2006.01	0.94456	-0.139758049	0.873712
24	18	0.628531	-1	0.805715
87.5	72.5	0.753517	0.449655696	0.648126
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24	26.5	0.864021	0.273018494	0.931619
2573.5	2445.5	0.750916	-0.426010757	0.797535
77	70.5	0.987902	0.018615678	0.909564
48.5	46	0.536209	-0.450165723	0.613015
903	1005	0.957227	-0.086414752	0.874846
325.5	318.5	0.943509	0.114965714	0.928918
279	222.5	0.606321	-0.558067274	0.846011
650	656	0.860664	-0.280900827	0.85352
320.148	360.36	0.937242	0.128834373	0.978339
98.5	88	0.829899	-0.204199305	0.966906
392	403.5	0.800005	-0.495768771	0.780597
980	1144	0.912942	-0.222392421	0.813118
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2473.5	2900	0.823797	-0.429202273	0.712275
266	284	0.88587	-0.25762091	0.839503
107.859	123.024	0.966635	-0.077412613	0.877545
180.5	366.5	0.783413	-0.888524713	0.401924
10	99.5	0.912625	-1.321928095	0.153961
51	75.5	0.613818	-1.148863386	0.369916
847	1573	0.566483	-1.240388851	0.208662
52.5	73.5	0.50745	-1.222392421	0.291825
0.5	1	0.308068	#NUM!	0.0917211
325.35	355.47	0.976027	-0.049749301	0.910823
17.5	15.5	0.870196	-0.222392421	0.973864
25	19.5	0.567391	-0.888968688	0.760232
226	388.5	0.849263	0.339692374	0.74701
1693.5	1629.5	0.54736	0.691532846	0.524735
1101.5	1218	0.869519	-0.305972158	0.799288
208	243	0.598049	-1.169058258	0.499548
3259	3618	0.933371	-0.168625214	0.867558
253	310	0.85819	-0.360941755	0.720893
333.5	357.5	0.575395	-1.247116631	0.531911
267.5	319.5	0.341326	-1.441343262	0.236601
23.5	24.5	0.9652	0.089267338	0.988395
10406	8964.5	0.755004	-0.600504353	0.852288
1933.51	4791.04	0.888823	0.412498345	0.634836
594.499	708.497	0.690066	-1.078544586	0.591095
3960.99	3753.97	0.648147	-1.099482602	0.679529
2531.13	2148.65	0.949344	-0.117817936	0.953036
1641.42	1774.32	0.794283	-0.570597809	0.745763
123	56.5	0.343496	2.464032794	0.297874

305.001	345.999	0.847367	-0.426121675	0.770062
474.504	315.5	0.513108	-1.443193213	0.751062
85	42	0.721773	-0.551409941	0.831585
381	319	0.75246	-0.616550952	0.865832
179	152	0.754107	-0.644611989	0.854615
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326.5	249.5	0.48595	-1.788696757	0.633152
84	111.5	0.344582	-1.584962501	0.193743
320.999	227.001	0.381251	-2.558240668	0.554872
615.5	469.5	0.46887	-1.115867927	0.675025
1115	1016.5	0.775396	-0.404295119	0.85478
376.5	411	0.844221	-0.347052689	0.779744
9207	8572.5	0.617627	-0.908330954	0.668445
513	423.999	0.840113	-0.369819818	0.962411
2071	1995	0.107427	-1.546470021	0.120928
3206.62	2441.49	0.456794	-1.733197263	0.613793
888.502	956.003	0.721511	-0.701153528	0.671116
120	43	0.287019	-1.074000581	0.792785
145	1104	0.883322	-0.493408563	0.0319117
1074	1522.5	0.958191	-0.069482891	0.613116
577	635.5	0.94931	0.102532963	0.9809
4	8	1	0	0.499897
583	669.5	0.916843	-0.204358499	0.825166
1051	1537.99	0.811132	0.405375813	0.918137
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40.5	45	0.896618	-0.273760812	0.831416
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22911.5	21918.8	0.329079	-0.921029098	0.368558
18775	15865.6	0.422211	-1.031117337	0.564376
0	2	0.450185	#DIV/0!	0.450185
1532	1471.5	0.213191	-0.740422658	0.25052
108.5	136.5	0.79093	-0.552097867	0.636047
13.5	15	0.813487	-0.432959407	0.737458
400.5	677	0.627227	-1.52671736	0.348258
48.5	58	0.92207	-0.140481224	0.762661
115	107	0.438819	-2.523561956	0.474524
1960	2118.98	0.941002	0.126736917	0.993108
1092.5	997.491	0.798465	-0.454078665	0.862119
1084.78	652.058	0.452971	-1.213583673	0.813856
232	326	0.843238	-0.415037499	0.611801
2803.5	2916	0.735732	-0.706499033	0.71017
192	191	0.81656	-0.351342824	0.820862
1357.49	1345.48	0.675907	-0.673512198	0.682946
11	19	0.515234	-2.137503524	0.248582
2566.5	2613	0.763312	-0.624280083	0.751712
1694	1946	0.83655	-0.474144117	0.753379
3331	2961	0.716016	-0.758125937	0.789866
5794	6081.5	0.805183	-0.431733612	0.769324
818.51	903.495	0.871216	-0.31929763	0.805613
512.5	454	0.772011	-0.383022692	0.881728
6402.27	6001.6	0.833577	-0.336355921	0.882973
357	345	0.644313	-0.898579682	0.667641
5348.5	5629	0.721386	-0.56653617	0.679981
1238.51	1351.01	0.632134	-0.98553526	0.574208
18.5	25.5	0.782623	-0.624490865	0.575421
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554.997	725.5	0.62428	-0.938916625	0.437504
7.5	8	0.344593	-1.321928095	0.30199
765	900	0.965835	-0.07947005	0.854552
150.5	149.5	0.929742	-0.140862536	0.934743
843.5	714.5	0.911636	0.174573505	0.808895
7.5	4.5	0.777386	-0.447458977	0.886945
11.5	15	0.618725	-1.064130337	0.445615
20181.4	21538.9	0.800119	-0.440815666	0.751409
751	793.5	0.87907	-0.271898327	0.839967
113	141.5	0.790504	0.451284065	0.933277
9	3.5	0.570506	1	0.38153
4060.01	4245.92	0.715176	-0.49840816	0.674225
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5758.82	6160.77	0.549205	-0.614791187	0.47809
335	277	0.801726	0.363526774	0.689794
71	133.5	0.815669	-0.626185163	0.43894
28.5	36	0.904168	0.189477799	0.916072
237.5	221.5	0.83939	-0.360402243	0.887719
738	632.5	0.771286	-0.308308486	0.939989
1529	1626	0.948198	-0.104666942	0.901523
1551.48	1540.49	0.825771	-0.361609963	0.831208
1024	985	0.783167	-0.378863887	0.817849
83	89.5	0.855447	0.318447526	0.900824
4734.5	4179	0.604946	-0.669837547	0.719857
4063	4320	0.818648	-0.363077427	0.769121
844.5	862.5	0.792752	-0.481169435	0.77779
3813	4127.5	0.93141	-0.165391785	0.879667
3038	2113	0.710164	-0.675983931	0.944157
1169.55	1207.53	0.940104	-0.137866232	0.91886
883.998	769.001	0.814523	-0.290039477	0.946304
2.5	8	0.68405	1.263034406	0.814202
881.004	946	0.886091	-0.227456988	0.829627
3616.5	3034.5	0.488765	-1.089908299	0.621786
608.5	749	0.910414	-0.17497199	0.736325
43.5	47	0.947948	-0.103093493	0.887682
478.5	452	0.877805	-0.196742727	0.930599
820.851	751.378	0.788626	-0.354726858	0.869177
7.5	15.5	0.671203	-1.906890596	0.333294
17	28.9552	0.532823	1.45169597	0.704087
490	611.5	0.481295	-1.655867169	0.354286
436	467.501	0.878719	-0.276335236	0.829483
4201.49	4025.98	0.9	-0.200449525	0.93205
123	187	0.981877	0.034765418	0.650603
1.5	5.5	0.907467	-0.584962501	0.338171
1297.5	1293.5	0.747014	-0.491338238	0.749575
1130.01	841.001	0.488904	-1.760572547	0.650686
1106	1100.49	0.709297	-0.57197492	0.713415
1083.5	1136	0.787685	-0.57666445	0.757884
555.5	688.5	0.957911	-0.107814484	0.820275
2229	2145.5	0.740548	-0.502877946	0.772053
471.325	295.699	0.312227	-1.549661518	0.635218
3801.68	1710.8	0.984236	-0.024756537	0.549767
2471.48	2128	0.805775	-0.252959338	0.973202
313.5	289	0.945695	-0.09510494	0.987767
1005.5	1041	0.793137	-0.475845529	0.768236

701.497	671.999	0.711867	-0.494282501	0.751319
5916.46	4495.91	0.558922	-0.598244693	0.860117
7557.56	7511.66	0.792578	-0.368655516	0.797973
256	297.5	0.566611	-0.886257834	0.448962
127.5	103.5	1	0	0.883711
298	287	0.690358	-0.619255678	0.720871
2073.5	2229.5	0.569626	-0.449896256	0.474564
1396	1509.5	0.879147	-0.287842576	0.825974
1901.47	2007.49	0.942373	-0.128450792	0.904881
4510	4582.73	0.798721	-0.447203089	0.786987
11.5	14	0.900145	-0.275634443	0.77899
605	675	0.873826	-0.249269486	0.784622
673.5	666	0.951861	-0.096326117	0.960149
22.5	24	0.890273	0.236067358	0.931213
3341.54	3426.4	0.573141	-0.659507639	0.548538
501	455.5	0.838814	-0.242448634	0.932847
4.5	7.5	1	0	0.669515
34.5	37.5	0.377846	-0.493814613	0.272114
943.5	803	0.657762	-0.559950613	0.809483
397.5	447	0.565106	-0.544698631	0.434539
5.5	5.5	0.493436	-0.874469118	0.493436
351	564	0.63438	-0.651196199	0.253681
241.765	274.017	0.989137	-0.024621312	0.903863
84.9999	76.0001	0.839933	0.255946678	0.756185
90	69.5	1	0	0.836379
290.5	263.5	0.713063	-0.635499894	0.784554
2610	2324	0.47121	-0.66289592	0.604002
0	1	0.353387	#DIV/0!	0.622002
2	1	0.308068	-2	0.710482
2033.5	1876	0.58054	-0.734720706	0.652858
73	69	0.952202	0.076961982	0.904673
273.5	311	0.85966	-0.317319893	0.765742
1022	1084.5	0.894811	-0.238956266	0.85331
235.5	240.5	0.941279	-0.128039191	0.926657
1390.98	1404.49	0.838332	-0.347161649	0.831157
927	974	0.727106	-0.455546092	0.68004
111	73	0.948565	-0.080170349	0.733557
375.5	384	0.475829	-0.624891135	0.450587
532	587	0.872433	-0.278849403	0.799435
34.5	30	0.948095	0.100928909	0.855757
54.5	45.5	0.86322	0.287098111	0.764362
89.5	68.5	0.939964	-0.117493563	0.880458
229.5	251	0.901357	-0.242437501	0.842608
0	0.5	0.353387	#DIV/0!	0.622002
3	0	0	#NUM!	?
124	93.5	0.854591	-0.246837178	0.917483
213.5	158.5	0.82852	0.30082673	0.652362
5194.22	2232.98	0.844701	-0.319248907	0.716306
819	746	0.752686	-0.32788555	0.85865
196	158.5	0.997662	0.003675658	0.824607
320	345.999	0.965761	-0.076375389	0.912052
474.5	417.5	0.643175	-0.445249431	0.796926
269	202.5	0.923561	-0.126018526	0.851526
838	813	0.748592	-0.513589741	0.772502
248.5	193.5	0.317406	-0.671699823	0.660819
15	42.5	0.492225	-1.906890596	0.0719204

724.5	607	0.959389	-0.079829024	0.918427
316.5	241.501	0.844053	-0.253493639	0.926036
2	1.5	0.523243	-2	0.663808
6.5	2.5	0.564576	-0.700439718	0.724378
18.5	13.5	0.88758	0.249978253	0.73371
249	210	0.990457	-0.017487427	0.886093
446	404.5	0.843407	-0.307044451	0.918809
0	0	?	#DIV/0!	?
1474.5	1371.5	0.680164	-0.528124979	0.748695
1318	1297.5	0.879472	-0.2226661	0.892447
195	201	0.791801	-0.509298231	0.771155
2898.5	2360.56	0.615826	-0.991810602	0.749711
431	396	0.709981	-0.529956938	0.783093
441	456	0.802389	-0.356274673	0.772898
2772	3507	0.237482	-0.77671565	0.0950949
58	59	0.975991	-0.050626073	0.963997
343.5	256	0.549963	-0.642806575	0.857313
409.5	429	0.598417	-0.558778569	0.54853
1959.5	2184.5	0.889324	-0.269602017	0.816429
35.5	28.5	0.528124	1	0.45694
2908.51	2659.55	0.516485	-0.674733551	0.61141
1	0	0.622002	-1	0.622002
237	263	0.766658	-0.571330635	0.693751
443	472.5	0.862105	-0.321521071	0.817252
2	4.5	0.534406	1	0.87225
32	17.5	0.587203	-0.540568381	0.802729
845	910	0.908817	-0.244037912	0.864317
3943.5	2537.5	0.185646	-1.083011026	0.617307
51	47.5	0.869423	-0.314873337	0.914779
781.5	761.5	0.731266	-0.441429945	0.756003
274.18	311.743	0.903677	-0.208782142	0.80797
271.5	258.5	0.789839	-0.37056287	0.833108
77.5	21.5	0.793905	0.308838095	0.333738
45.5	41.5	0.739087	-0.625151591	0.801856
2866.08	3431.7	0.861419	-0.365189254	0.744238
891.367	907.354	0.888348	-0.264578976	0.87654
532.5	335	0.483214	-0.643009786	0.981625
28	34	1	0	0.872571
231	218	0.874946	-0.175792008	0.935987
272.5	370.001	0.88025	0.267443983	0.909149
853	675	0.918169	-0.166546323	0.925175
1038.5	709	0.244463	-0.830460942	0.717831
3476.94	4322.46	0.79878	-0.601525886	0.665958
6143.34	7292.99	0.9967	0.008095623	0.894027
21.5	15.5	0.809502	0.456378295	0.676523
237.5	248	0.680543	-0.658164026	0.645827
673.5	667	0.575793	-0.659132204	0.585322
154.5	136.5	0.959217	0.068386975	0.862324
726.001	544.498	0.597113	-0.764047115	0.832197
739	629.5	0.735018	-0.502907112	0.865446
771	772	0.869595	-0.273174436	0.868628
44.5	65	0.585247	-0.668378509	0.26511
1	0	0.710482	0.584962501	0.308068
88.5	72.5	0.883619	-0.219678037	0.967245
0	0	0.308068	#DIV/0!	0.308068
1	2	0.129088	3	0.172724

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3	0.5	0.0469762	-7.258480376	0.635184
9.46E-11	0	0.308068	32.2414692	0.308068
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29.1057	34.8471	0.629362	-0.35738333	0.38395
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12.2805	23.0624	0.750505	-0.402665389	0.2069
0.70313	2.20528	0.734585	-65.81788011	0.327582
1249	1314	0.761335	-0.533341012	0.72352
45	36.5	0.407873	-1.243925583	0.564202
2058.01	2440	0.785665	-0.517176284	0.663796
5087.46	5532.2	0.617798	-0.614502669	0.537346
573.5	587.501	0.898478	-0.199300143	0.879481
2890	2695.5	0.930534	-0.126438809	0.986224
838.492	1025.99	0.894838	0.238902688	0.974478
765.5	852	0.933118	-0.120826949	0.84045
1923.5	1962.5	0.703142	-0.512913333	0.684642
402.5	442.5	0.912114	-0.1893206	0.842231
312.5	379.5	0.862668	-0.310432456	0.718055
1694.5	1865	0.814988	-0.402463375	0.742134
1396.5	1578.5	0.777689	-0.510961919	0.687303
1060	1118.5	0.865755	-0.322778991	0.82959
1692	1467.5	0.542079	-0.552086344	0.71618
11960.2	11557.7	0.678576	-0.677984093	0.705248
416.302	459.348	0.868289	-0.259588272	0.788076
405.5	421.5	0.825072	-0.375845725	0.795938
166	164	0.808219	0.376504628	0.80072
1602	1611	0.757149	-0.514444527	0.752829
1556.5	1513.5	0.789928	-0.444849211	0.811119
2814.07	2968.94	0.913188	-0.191989739	0.875261
1027	1214	0.940895	-0.151690957	0.834716
340	338.5	0.983436	-0.036525876	0.986359
1570	1874.5	0.874067	-0.290681263	0.745593
1234.49	1320	0.733724	-0.750061216	0.691585
1657	1507.3	0.962742	0.073123118	0.898378
5.83652	8.6526	0.408869	-18.98486237	0.250749
10	7.5	0.749864	-0.621488377	0.926774
12.6635	13.8474	0.772149	-0.57514315	0.711367
13	10.5	0.568878	-0.793549123	0.750854
0.5	0	1	0	0.450185
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6.5	10.5	0.828752	0.547487795	0.942294
659.501	627.001	0.72791	-0.62376405	0.76421
10210	9711.5	0.508075	-0.723370642	0.55835
13824.6	12691	0.5962	-0.682040423	0.675385
13381.1	12537.4	0.561166	-0.722042262	0.622319
12316.5	11441.5	0.487217	-0.778938513	0.558944
16658.4	16359.6	0.603053	-0.648746264	0.620281
10457.5	8872.94	0.644406	-0.552796728	0.806146
1279.5	1361.5	0.841388	-0.299690389	0.788943
198.004	178.256	0.903012	-0.229941201	0.96856
301.5	262.5	0.894767	0.233619486	0.818985
43	37	0.512105	-0.644905041	0.680318
5759.49	6413.55	0.944912	-0.113682529	0.863244
1804	1760.51	0.948625	-0.107477578	0.965859
4	2	0.606286	-0.678071905	0.860525

0	0.5	0.450185	#DIV/0!	1
360	373.5	0.652708	-0.736965594	0.623855
56	62	0.868196	0.258734268	0.939746
4	4	0.785812	-0.678071905	0.785812
65.5	40.5	0.781424	0.306427001	0.485857
22.5	23.5	0.858275	0.341036918	0.881596
4703.01	5490.46	0.627248	-0.709771562	0.496655
1.5	1.5	0.613399	-1.584962501	0.613399
1475.5	1610.01	0.890902	-0.220937912	0.822332
83.1901	87.8726	0.885203	-0.190865138	0.834062
1	1.5	0.651448	-1	0.391002
757.502	815.502	0.616439	-0.68859201	0.55123
403.5	481	0.642795	-1.019800243	0.529662
14	35	0.830864	-0.559427409	0.278678
172	217	0.925871	0.143590854	0.889119
52.5	65.5	0.20613	-0.669851398	0.0750135
2117	2098	0.861792	0.255118911	0.855488
12.5	8.5	0.434707	-0.943416472	0.783893
358.499	335.499	0.91664	-0.148207842	0.971348
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137.5	121.5	0.768897	-0.430862466	0.871056
3269.49	2705.43	0.606742	-0.820752921	0.752742
13.5	17	1	0	0.720062
53	60.5	0.962264	0.066495412	0.924661
648.5	584	0.912116	-0.13639162	0.990958
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2.5432	0	0.0343973	-2.346644922	0.432532
1256.5	1236.49	0.972863	-0.041926556	0.987943
63	44.5	0.980618	0.04508789	0.804461
38.5	43.5	0.829842	-0.433896527	0.7485
5004.03	6860.39	0.808118	-0.426035929	0.562213
3018	4020	0.826948	-0.367392577	0.596449
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14	28	0.732024	-1.106915204	0.360192
1	2.5	0.680109	#NUM!	0.338084
159.5	187	0.84315	-0.323059177	0.715393
713	874	0.68161	-1.120206262	0.566693
604.5	552	0.873517	-0.196571246	0.959515
1564.5	1729.5	0.599705	-1.160274831	0.53622
221.747	194.508	0.810687	-0.347242696	0.918406
112	109.5	0.893867	-0.207443567	0.911431
848	996	0.925945	-0.192645078	0.82442
1082	1099	0.744138	-0.4105998	0.72887
1428.5	1330.5	0.881783	0.251882105	0.840048
270	285	0.883684	-0.237611809	0.84189
833.5	888.5	0.853887	-0.288353153	0.802162
3273	3609.5	0.594011	-0.709171628	0.506705
2212.5	2376.5	0.81694	-0.362430358	0.758451
724	755.5	0.714132	-0.624864539	0.681582
1426	1107.5	0.0578452	-0.862128629	0.228531
3610.5	3908.5	0.896698	-0.231846836	0.84026
1905.99	1786.02	0.702806	-0.549257177	0.758696
1193.5	1010	0.720439	-0.317101005	0.936282
407.5	339	0.718305	-0.434642057	0.897353
1653	1731.5	0.785228	-0.388803337	0.744206
11531.5	10771.6	0.716584	-0.470779106	0.78059

2139	2476.93	0.945836	-0.147214805	0.858631
6278.5	7164.5	0.880572	-0.299074283	0.793069
151.5	174	0.842585	-0.403970195	0.750875
2597.5	2304	0.588192	-0.695449607	0.698896
373.5	340.5	0.60937	-0.7834132	0.684044
824	907	0.806132	-0.372483823	0.724906
4644.51	4570.07	0.783148	-0.429134956	0.796178
286	312.5	0.815502	-0.36545547	0.742706
1782.5	1672.5	0.749538	-0.433910726	0.806933
366.5	508	0.841225	-0.427556968	0.622544
2093.5	2119	0.542341	-0.736506247	0.530961
818	770.5	0.924372	-0.126172365	0.976765
833.285	951.315	0.854024	-0.254686219	0.732134
1391.99	1514.99	0.882692	-0.240809308	0.816799
583	562.5	0.850455	0.315479731	0.829426
189.175	246.584	0.578254	-1.326677522	0.418639
4.38801	2.50771	0.553335	1.036704393	0.418026
15763.1	12355.4	0.733766	-0.360863521	0.993656
120.5	192	0.676446	-1.079999322	0.399715
8416.49	9223.52	0.941769	-0.12705118	0.87615
713.5	494.5	0.413342	-1.70398256	0.634181
611.999	293.5	0.498266	1.085811336	0.342678
14	14	0.371908	1.567684509	0.371908
321	221.5	0.607152	-0.94705112	0.851583
168	158.499	0.799371	-0.443950191	0.841195
13260.5	13469.5	0.837088	-0.390282326	0.826515
58	69	0.576657	-1.813586876	0.487295
114	97.5	0.590886	-1.078002512	0.693024
147.5	392	0.932029	-0.273833807	0.398978
4068.5	2663.5	0.535124	-1.274748212	0.792534
1712	2202	0.740875	-0.699123607	0.571689
439.5	346.5	0.615226	-1.128674842	0.755605
818	1080.51	0.741858	-0.785692756	0.569227
203	232	0.882517	0.274243297	0.96249
80.5	69.5	0.645623	-0.701560258	0.76406
2	4	0.36267	2.087462841	0.512179
83	115.5	0.964133	-0.098915026	0.758119
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1	0.5	0.353387	#NUM!	0.622002
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1310	1260	0.723784	-0.416506639	0.763714
2699.5	2670.5	0.849448	-0.35442397	0.856745
2136.5	2306.5	0.931605	-0.176099954	0.884657
1616	1883	0.749134	-0.753576861	0.655953
72.5	50.5	0.805085	-0.359730128	0.925902
1278.5	1383	0.812504	-0.452185591	0.757998
567	573.5	0.923044	-0.190102883	0.915938
988	941.5	0.761743	-0.385170959	0.807964
5	3.5	0.784667	0.485426827	0.637318
1483.5	1424	0.812987	-0.381870635	0.844531
1798.59	1970.42	0.952205	-0.114397426	0.892716
197	215.5	0.577117	-0.656267535	0.490362
1040	1212.5	0.899966	-0.275013984	0.806608
528.5	459	0.650211	-0.557919628	0.786432
1664	1574.5	0.758444	-0.431897718	0.806919
3576	3613.5	0.708957	-0.54115532	0.699919

658.001	669.502	0.83234	-0.30260421	0.817261
353	335	0.626932	-0.643345411	0.67479
440.142	561.807	0.857725	-0.337667568	0.680846
330.5	327	0.953921	-0.113477892	0.960363
7.5	10	0.35288	-1.321928095	0.186525
2536.5	2381	0.724868	-0.541266591	0.776289
1273.5	1294	0.736002	-0.534863889	0.723136
24.5	35	0.610548	-1.155278225	0.387929
511.5	580.5	0.658158	-0.541209551	0.534141
1381	1226.5	0.606685	-0.457083014	0.758307
2500.5	2669.95	0.943438	0.121920352	0.986889
917.5	1061.5	0.821508	-0.428994501	0.718453
1190	1103	0.753653	-0.502500341	0.81283
277.5	257	0.942669	0.119670231	0.894047
1355	1401.5	0.849763	-0.354909264	0.826669
1448.5	1664	0.731093	-0.436948888	0.595479
1049.5	1137.99	0.808152	-0.393434758	0.743605
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279	158.5	0.99212	-0.015596855	0.702833
2136	1895.5	0.817321	-0.289206462	0.929722
26.5	29.5	0.815695	-0.173331603	0.64607
2790	2398.5	0.7127	-0.477382614	0.851968
1587.02	1572.5	0.672162	-0.615282381	0.680054
351.501	377.001	0.838001	-0.348865754	0.785118
1698.53	1878.55	0.747432	-0.726553072	0.68481
547	560	0.815238	-0.451540833	0.799421
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1648.49	1839.5	0.905923	-0.228533061	0.832856
901.5	843.501	0.807628	-0.398331167	0.85792
158	166.5	0.460903	-1.764621937	0.430918
254	250.346	0.699343	-0.764683013	0.709103
4637.49	3957.49	0.617639	-1.186544111	0.709466
426.5	319	0.432988	-1.872215787	0.596681
478.999	551.497	0.865172	-0.30955423	0.763345
1311.5	1380	0.792994	-0.463697527	0.755455
1308.5	1323.5	0.615941	-0.56253532	0.604072
642.502	729.992	0.904942	-0.215112415	0.813523
150.5	161.5	0.956375	-0.099193357	0.908631
399.001	343	0.62247	-0.52130229	0.788054
259.5	233	0.476582	-0.795589054	0.581563
232	269.501	0.795513	-0.474276703	0.685545
1461.98	1101.01	0.898592	-0.20933372	0.915913
389	377	0.586531	-0.575720348	0.620395
617.002	572.505	0.770278	-0.400305715	0.836839
480.549	453.582	0.671583	-0.50315997	0.729965
652.5	710.5	0.373534	-0.864004783	0.300258
1104	1133.99	0.932712	-0.147807149	0.914048
295	308	0.723713	-0.53568616	0.687464
460.5	482.5	0.825251	-0.375382132	0.790027
252	316.001	0.971778	-0.064390587	0.810382
243.5	287	0.940152	-0.143143117	0.828808

613.5	621.5	0.98151	-0.042961836	0.973297
3903.61	4125.5	0.623111	-1.170688385	0.589789
358	289.5	0.71589	-0.447642165	0.917089
402.5	584	0.921653	-0.232884795	0.696168
687	792.5	0.82021	-0.500838803	0.730795
832.5	815	0.83532	-0.368151112	0.850392
1476.5	1699.5	0.930847	-0.189786391	0.8473
250	246.5	0.859427	-0.289827252	0.870083
145	142.5	0.708904	-0.656347134	0.721731
611	659	0.90715	-0.206541696	0.853257
10.5	14.5	0.97151	0.067114196	0.803701
851	810.5	0.769171	-0.477986752	0.806804
1370.5	1505.5	0.923565	-0.115564943	0.827492
1416	1430.5	0.778278	-0.423894687	0.769744
598.367	620.46	0.887412	-0.222555579	0.858764
340	354	0.860273	-0.290449863	0.829411
915	990	0.870797	-0.303325051	0.816272
626	582	0.642031	-1.070850326	0.685818
375	338	0.884147	-0.219829907	0.964849
671	642.5	0.812791	-0.333531241	0.850514
443	460	0.869851	-0.313404622	0.84474
1306.5	1312.5	0.812751	-0.34236262	0.808802
0	0	?	#DIV/0!	?
777.5	684	0.813426	-0.314986485	0.92692
1232.89	1368.82	0.866882	-0.308921912	0.792955
406	652	0.5893	-1.356996887	0.315767
1665	1907.5	0.688493	-0.832483907	0.597473
56.5	39.5	0.961402	0.074638801	0.749294
1818.5	2040	0.78206	-0.47208124	0.693302
592	601.5	0.879579	-0.271344039	0.868462
154.847	187.28	0.895663	0.237709012	0.982255
357	353.5	0.873722	-0.224751694	0.882202
1057	979	0.849602	-0.24647804	0.919731
591.5	391	0.688194	-0.325591309	0.783884
0.5	0.5	1	0	1
116.5	113	0.369075	-1.714439025	0.387324
2693.53	2622.65	0.366257	-0.772004463	0.393364
96.5	132.5	0.66533	-0.992544195	0.464278
65	71	0.895098	-0.267480311	0.838891
3451.5	3742	0.615794	-1.022113122	0.561748
652	689.5	0.82851	-0.417990817	0.79059
11.5	35	0.784804	-0.938599455	0.213574
339	358	0.891578	-0.257936538	0.855023
2308.5	1953.5	0.89719	-0.166764661	0.957825
405.002	410.501	0.935354	-0.136268328	0.925656
284	314.5	0.776581	-0.442387987	0.691908
6	15	0.526666	1.058893689	0.801387
30.5	37.5	0.577525	0.317190176	0.969488
173	166.5	0.834938	-0.336596145	0.864239
12	13.5	0.938804	0.169925001	1
390.5	460.5	0.853541	-0.366004755	0.741461
1378.51	1395.51	0.782162	-0.419051407	0.771953
891	1059	0.840218	-0.397335498	0.72142
1642	1775	0.887158	-0.285168854	0.83714
46	5.5	0.604552	0.595379117	0.214291
394.5	270	0.467859	-0.75351677	0.864337

17153.1	17007.6	0.195972	-0.968442541	0.201825
2083.99	1758.5	0.655092	-0.429875158	0.85811
946.5	955	0.0510325	-0.835249755	0.0485702
1069	1233	0.600269	-0.593422095	0.45798
1810.5	1493.5	0.575545	-0.536770243	0.802332
285	240.5	0.183896	-0.584962501	0.427939
1319.18	1225.61	0.912545	-0.185230603	0.963934
532	561.5	0.786519	-0.455369593	0.74495
2496.5	2571	0.887229	-0.289217703	0.868947
27158.4	27153.9	0.761328	-0.54339141	0.761447
4098.57	3779.49	0.605584	-0.942574897	0.662988
6380.02	6288.22	0.932394	-0.167990087	0.941217
3996.55	4635.42	0.85231	-0.420594121	0.762488
2542	2781.5	0.928385	-0.185366484	0.873007
230.5	259	0.984435	-0.031639317	0.896168
873.504	942.494	0.494262	-0.741380511	0.421578
421	439.5	0.874633	-0.295611657	0.845429
3759.02	3977.58	0.797957	-0.432404737	0.754659
1224	1205	0.74531	-0.59917636	0.756357
28000.5	36516.1	0.31418	-2.601781729	0.198435
421	425	0.81323	-0.316796987	0.804507
0.6904	1.57E-13	0.308068	-37.92626569	1
217	266	0.90209	-0.214656773	0.748025
200.5	202.5	0.843672	-0.289906422	0.835293
293.5	289	0.830134	-0.329937953	0.842603
1427	1678	0.932743	-0.159097499	0.821497
1156	1186.5	0.697508	-0.858644151	0.681181
1442	1425.5	0.909243	-0.185505041	0.9178
1814.52	1649.02	0.678469	-0.420220141	0.789102
1517	1353	0.586734	-0.581874997	0.709815
1674.5	1520	0.381324	-0.698986555	0.493436
1603.5	1600.5	0.890114	-0.211338378	0.891608
3114.5	3039.5	0.641161	-0.60972439	0.663784
276.5	235.5	0.981546	-0.026327282	0.868069
2317	1834.5	0.581669	-0.531483619	0.854543
3578	3569.5	0.681886	-0.597923352	0.683928
3866.49	3938.49	0.83349	-0.333072514	0.818841
1747	1578.5	0.644745	-0.752463714	0.722892
202.5	291	0.901176	0.226965151	0.846213
449.5	406.5	0.686669	-0.583358615	0.772171
676.498	710.5	0.821423	-0.411835058	0.786531
2691.5	2333	0.745012	-0.422651156	0.876152
985.5	1203.5	0.857913	-0.319003218	0.707836
1130.55	1194.91	0.871824	-0.275958273	0.830781
835.5	822.5	0.850139	-0.28969849	0.862748
4984	8372.5	0.821412	-0.562844095	0.500272
27.5	27	0.838956	-0.389042291	0.851108
62	66	0.544247	-1.632268215	0.509381
181	223.5	0.86244	-0.375724575	0.728079
169.5	196.5	0.692395	-0.761285273	0.587766
4	4	0.743666	-0.678071905	0.743666
229.5	541.5	0.852472	-0.538569595	0.356868
204.653	554.986	0.617868	-1.155350773	0.107205
15	23.5	0.721772	-0.906890596	0.450079
682.5	1899	0.786796	-1.129283017	0.294799
89.5	102.5	0.990143	-0.024384159	0.905066

20.5	23	0.959147	-0.109624491	0.891513
38.5	35.5	0.818691	-0.485426827	0.867289
2.5	27	0.932707	-1.321928095	0.210125
225	193	0.460305	-1.528378972	0.555931
6.5	3.5	0.209089	-2.115477217	0.568955
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1	2	0.450185	#NUM!	0.18169
491	333.5	0.477136	-1.492495988	0.711297
1250.5	1399.5	0.889442	-0.282664793	0.817047
149.5	212.5	0.850287	-0.455817349	0.635701
459.5	433.5	0.836071	-0.36212162	0.877251
140	290	0.890543	-0.408183828	0.482077
1599.5	1434	0.565366	-0.577316087	0.688398
1651.97	1941.5	0.702887	-0.673859934	0.580929
0.51268	9.15189	0.76623	2.587868321	0.498048
148.5	147	0.85648	-0.307428525	0.863915
425.152	281.818	0.585319	-0.765589041	0.919009
927.5	932.5	0.910006	-0.191867554	0.906138
3732.53	3816.06	0.627964	-0.652244566	0.607947
909.5	1079.5	0.52441	-0.591719867	0.34521
7764	7032.5	0.617332	-0.570127103	0.71917
1704.5	1763	0.733089	-0.549018645	0.706128
19.5	14.5	0.772706	-0.530514717	0.961307
2311	2529	0.270474	-0.872805349	0.202037
7106.5	6708	0.56947	-0.629702414	0.629204
3171.43	3139.99	0.921302	-0.108331349	0.932044
353.5	446	0.665838	-0.953813751	0.515419
3.5	4.5	0.824188	0.514573173	0.940721
57.5	77.5	0.935625	-0.145050333	0.711495
0.5	5	0.824001	1.584962501	0.458318
23.5	37.5	0.825477	-0.647698256	0.569703
379	317.5	0.883971	-0.165174602	0.941743
476	372.5	0.654987	-0.537265759	0.891266
31188.9	26687.1	0.663387	-0.500849536	0.822739
1191.5	1169	0.5878	-0.619580265	0.607133
2035	1907.5	0.653794	-0.623398328	0.710883
1957.5	1453	0.617449	-0.388384397	0.962475
78.4669	138.126	0.575469	-1.357143548	0.253964
1480.5	1704	0.838549	-0.433836692	0.748733
840.5	723.5	0.475029	-0.956880795	0.602244
1071.5	1285.98	0.342558	-1.622472639	0.240857
2882.99	3108.48	0.656532	-0.71197401	0.596284
2598.5	2903.5	0.770487	-0.523683412	0.6882
1460.51	1461.01	0.774361	-0.44482216	0.774081
4306	6138	0.969853	-0.078132812	0.734534
8334	9478	0.829891	-0.441475517	0.745284
8329.67	9805.7	0.425576	-1.068935012	0.306013
293.5	249.5	0.220727	-1.665835233	0.314757
150	111	0.184817	-2.447458977	0.326793
142	161	0.74639	-0.484411202	0.638459
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5671.21	6797.8	0.775927	-0.679357143	0.666582
3502.5	3820	0.827161	-0.464977228	0.772438
2039	1508	0.657136	0.694604249	0.535589
936.638	980.813	0.859524	-0.313941499	0.826407
71	78	0.988188	-0.030806047	0.933183

2644.46	2613.6	0.793038	-0.464875592	0.801514
716	719	0.670424	-0.923482943	0.667771
846.5	902	0.891546	-0.250646311	0.84769
1120.5	1131	0.694127	-0.899906498	0.688446
3079	2913.5	0.875539	-0.251460676	0.917066
17	21	1	0	0.773457
35088	26969	0.995586	0.006911545	0.786982
20.5	28.5	0.914786	-0.187627003	0.658785
551	494.5	0.472354	-1.072485507	0.556626
403	368	0.833055	-0.319245674	0.905347
0	0	0.308068	#DIV/0!	0.308068
9	7	0.544169	-1.847996907	0.669033
121.5	81	0.488266	-0.764941167	0.890496
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157.5	155	0.615203	-0.564498398	0.631876
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15	8.5	0.612655	-0.736965594	0.965517
0.5	1.5	0.613399	1.584962501	1
26	11	0.827754	-0.342887714	0.709482
16468.9	22085.4	0.849571	-0.130047814	0.381277
362.385	429.556	0.763884	-0.556884045	0.63949
909.5	377.5	0.917681	-0.12243381	0.537036
3753.5	3546.5	0.698898	-0.442784356	0.758305
629.997	687.992	0.907266	-0.23580337	0.851488
15.5	14	0.48562	-1.784271309	0.542519
0	0	0.308068	#DIV/0!	0.308068
44.5	51	0.8024	-0.475733431	0.705822
755.5	694	0.884655	-0.233735301	0.947202
295.486	301.704	0.611261	-0.86265006	0.595532
80.5	63	0.600345	-0.602996424	0.845484
2240.5	2856	0.873865	-0.304646271	0.701449
2.5	3.5	0.611155	-2.321928095	0.458483
321.5	340.5	0.567501	0.990997194	0.589615
3067	3246.5	0.915717	-0.16819147	0.871397
2952.05	2751.04	0.720447	-0.66952822	0.769209
4303	4245.5	0.615197	-1.053274793	0.623932
224	225	0.957397	-0.093109404	0.954359
758	702.5	0.979787	-0.038577032	0.964134
1822	1682	0.697104	-0.521273928	0.769948
1117	1093.99	0.757926	-0.460967964	0.775361
1481.01	1261.02	0.80401	-0.361814631	0.934325
280	295.5	0.684087	-0.96941168	0.651793
607.5	954	0.961413	-0.109749486	0.67584
162.5	193	0.818652	-0.467778961	0.702996
2378	2842.17	0.813807	-0.319950144	0.645713
1016.5	1019	0.759414	-0.52178895	0.757559
3330	3145	0.505396	-0.671329115	0.566671
278	293	0.989595	-0.026183932	0.958403
2202	2383	0.546654	-0.66217356	0.467996
0.5	2.5	0.450185	#NUM!	0.0227138
2618	3035.5	0.952193	-0.103950964	0.843965
3418.99	3098.94	0.796155	-0.392552688	0.874895
421	355	0.786075	-0.427657576	0.915441
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15588.7	13974.1	0.81598	-0.383743553	0.896584

1608.5	2105.5	0.824672	-0.560064834	0.668114
6565	5528	0.73978	-0.596767589	0.858247
5625.5	5364.5	0.217374	-0.706221556	0.264147
4953.2	4522.14	0.486224	-1.012332302	0.559048
18443.9	19974.8	0.834679	-0.393066581	0.779168
8438	9075.5	0.840977	-0.377793703	0.790492
2907.16	2740.35	0.691243	-0.459273446	0.752501
1084.5	915.5	0.738619	-0.290837517	0.960614
9.5	13	0.613892	-1.440572591	0.43974
29	10.5	0.253688	-1.334419039	0.940913
494	474.5	0.521723	-1.965373657	0.542502
109.5	84	1	0	0.788969
396	412.5	0.692122	-0.541893779	0.655002
14	19	0.195835	-2.222392421	0.0948389
213	177	0.682832	-0.491535637	0.863702
352.5	333	0.89261	-0.178391094	0.943491
3843	3267.5	0.539396	-1.179671546	0.647997
3028	2855	0.711084	-0.511241862	0.763553
21.5	25.5	0.806928	0.355094959	0.934745
1199.5	1511.49	0.794651	-0.450965415	0.614676
99	139.5	0.949352	0.138827705	0.84686
406	320	0.896543	-0.1956941	0.930525
272.5	354	0.743118	-0.668047653	0.562381
439	496.5	0.398435	-0.89849388	0.296862
3	2	0.474021	-1.584962501	0.710482
147	158.5	0.915763	-0.155278225	0.852096
15722.6	16549.5	0.636214	-0.3939953	0.567738
70	50.5	0.683729	-0.499926397	0.983893
6660.65	8110.68	0.828499	-0.345311704	0.665491
0.5	0.5	1	0	1
104	224.5	0.916959	0.271103836	0.637983
90	62	0.765308	0.444784843	0.585946
165.5	132.5	0.777535	-0.434049468	0.947235
81	89	0.643454	-1.111031312	0.586638
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3585.5	3394	0.603536	-0.558548817	0.66266
4	2	0.562529	-1.415037499	0.904922
701	526	0.572072	-0.450455618	0.967871
658	520.5	0.639287	-0.80352306	0.807955
10278	9896.77	0.607401	-0.619617307	0.644462
150.5	98	0.665079	-0.798991449	0.936915
1574.19	1488.21	0.818096	-0.462125111	0.853625
1172	1084	0.507775	-0.719023423	0.587043
15246.4	16745.2	0.901263	-0.241064016	0.839275
1705.52	1524.96	0.783516	-0.368068	0.883663
1992.5	1943	0.922672	-0.139387316	0.943467
1127.5	1225	0.851306	-0.343675633	0.792502
2421	2709.5	0.947392	-0.120825468	0.870122
460.002	531.999	0.923634	-0.192647766	0.829677
3256	3480	0.899944	-0.193151553	0.845898
2623	2421	0.756122	-0.444861236	0.824751
1447.31	1424.55	0.708005	-0.575979352	0.721031
2569.53	2507.5	0.511009	-1.879162148	0.524065
1.5	1	0.785812	-0.584962501	1
549	487	0.22408	-2.267772325	0.281534
270.5	315	0.849589	-0.400004684	0.751595

38	42.5	0.683443	-0.821662759	0.607179
88	103	0.840957	-0.382616022	0.73017
1959.03	1517.5	0.588422	-1.054803695	0.755206
48905.4	37977.6	0.417033	-2.45872778	0.543912
332.5	387.5	0.970026	-0.0688715	0.864648
4068.02	4616.48	0.945979	0.122162276	0.971573
187	148.5	0.53868	1.116656529	0.475278
33	41	0.840204	-0.429684275	0.698511
415.5	440	0.687749	-0.846955625	0.650289
39	42.5	0.704421	-0.963474124	0.654989
732.5	1014	0.766403	-0.878249035	0.591242
422	446.5	0.756464	-0.440328419	0.706234
1216	1084.5	0.888216	0.232357807	0.820535
446	469.5	0.965071	-0.079800711	0.930972
2980.59	3124.56	0.795303	-0.4078675	0.756963
173	139.5	0.701369	0.573800394	0.597002
3134.1	2991.15	0.780851	-0.423967708	0.818929
916	986.5	0.860748	-0.293274019	0.804066
777	785.5	0.857396	-0.334984248	0.850004
4370.5	4217	0.739496	-0.522541075	0.768182
1058.49	993.502	0.750902	-0.499933418	0.801202
1322.5	1243.5	0.822444	-0.361323892	0.869524
3277.47	3518.61	0.863561	-0.245757106	0.801232
2126	2014.5	0.67426	-0.564579641	0.723354
1421	1452.5	0.776961	-0.413346378	0.758039
5	1.5	0.492814	-1.321928095	0.904922
9711.91	15909.8	0.970335	0.090660353	0.744818
2224.94	4567.25	0.859293	-0.62470513	0.496818
109.5	147	0.961697	0.083193936	0.819678
1532.5	3786.98	0.868101	-0.647974803	0.42742
328	1178.5	0.92993	-0.465768301	0.393854
143.5	199.5	0.810183	0.471717694	0.998264
47127.9	48982.9	0.931296	-0.153984391	0.904755
89	95	0.573236	1.142652071	0.593663
1600.5	1376.73	0.765437	-0.514289903	0.87272
13468.2	19234.1	0.994509	0.01473896	0.78104
48	58.5	0.44213	-2.263034406	0.34162
83.5	77.5	0.933122	0.139857664	0.886313
79.5	109	0.782273	-0.773724144	0.60722
213	174	0.781686	-0.605426603	0.896716
1854.53	1021.5	0.94571	0.108585675	0.652179
130	168.5	0.936806	-0.183164025	0.78377
1818.5	1736	0.976121	0.053345497	0.947409
6	13.5	0.931335	-0.263034406	0.484442
51211.8	56435.4	0.975278	-0.052268983	0.904744
572.497	742.364	0.966095	-0.093593158	0.808797
11510.9	12804.9	0.716136	-0.905978304	0.653927
9361.5	9682	0.716315	-0.813551851	0.69546
24	22.5	0.699782	0.662965013	0.670397
422.5	373.5	0.953309	0.089369774	0.869384
38.5	49.5	0.78047	0.553392422	0.913149
6997.14	8222.86	0.85937	0.348386406	0.9492
12823	13276	0.825235	0.42044183	0.843091
11138.6	11358.4	0.890266	-0.279423095	0.878111
9586.22	18494.6	0.982647	0.054792548	0.624764
741.495	823.495	0.908686	-0.240816907	0.844044

246.5	273	0.85923	-0.364243254	0.793416
230.5	353.5	0.977725	-0.070545811	0.736497
27	26	0.650914	0.830074999	0.636094
891	625	0.942334	-0.113656782	0.832168
126	155	0.928002	0.167378319	0.93726
2206	2056	0.87952	-0.265259676	0.928019
7445.58	9262.33	0.79264	0.451253075	0.929299
3715	5643.5	0.869956	-0.395111343	0.612062
6	8.5	0.725181	-0.584962501	0.448923
7	5	0.659835	-0.807354922	0.881442
2434.53	2266.06	0.942386	-0.130454056	0.988487
3	11.5	0.804606	-1.584962501	0.251224
1678.5	1682	0.556228	-0.526223533	0.553708
609.5	706.5	0.713985	-0.320745073	0.521077
1561.5	1556	0.732208	-0.42322193	0.735701
1599	1543	0.168279	-0.745865095	0.197222
4111	3968.5	0.2311	-0.67491694	0.267322
3143.5	3013	0.627733	-0.622035685	0.667536
714.5	774.5	0.869134	-0.237616218	0.798763
1805.5	1617	0.462519	-0.83518913	0.567387
1014	939	0.625887	-0.597824652	0.700579
737.561	692.547	0.478075	-0.664492669	0.548246
56	66	0.88502	0.269460675	0.984922
2553.5	1871	0.957876	-0.053524543	0.740343
111.5	104.5	0.574599	-0.906082137	0.624633
15841.6	16106.9	0.804158	-0.406779875	0.791276
6226	6587	0.841963	-0.290073158	0.793221
6787	7173.5	0.816549	-0.373620246	0.77253
7808	7397	0.565125	-0.490387218	0.634804
12176.5	13035	0.761256	-0.429704828	0.700289
5689	5733.5	0.714145	-0.504033284	0.707097
6	8	0.527911	-2.584962501	0.392404
1452.49	1318.07	0.772392	-0.38297327	0.860832
1853.5	1838.5	0.80396	-0.389450062	0.810463
3282	3077	0.688821	-0.444644429	0.758025
3748.97	3319.59	0.24425	-0.954906486	0.350557
3739	3559.5	0.637535	-0.510884751	0.690828
1023.5	1031	0.745235	-0.518505186	0.739396
1440	1422	0.616601	-0.719538522	0.627365
370.5	333.5	0.686985	-0.52490111	0.784626
112.01	153.519	0.920922	-0.199623784	0.704626
336	315.5	0.616471	-0.610957709	0.677804
734	612.5	0.590412	-0.64158534	0.76742
2179.5	2277.5	0.56176	-0.60395218	0.515064
927	920.5	0.750254	-0.463035071	0.756314
1290	1457	0.701797	-0.438337587	0.573587
746	697	0.571401	-0.467552671	0.662035
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740	625.5	0.587781	-1.05564803	0.699663
5044.5	4457.5	0.38098	-1.647650591	0.458052
3764.34	3383.04	0.445223	-1.201695183	0.523802
14290.5	16122	0.283456	-1.647159931	0.219201
531218	475957	0.604651	-0.595180226	0.716511
1254	1318.5	0.743144	-0.539940986	0.703707
767.5	869	0.631981	-0.624021008	0.517424
1316.5	1369.5	0.625741	-0.503733706	0.581733
446.5	308	0.505547	-0.531053337	0.995968
416.501	382.499	0.302448	-0.891604514	0.381947
315	304	0.480507	-0.64457199	0.520601
145923	127656	0.710643	-0.471277407	0.836633
306856	255752	0.476859	-0.576879734	0.715223
12245.1	10980.1	0.448105	-0.604522119	0.586269
1067.5	1061.5	0.769335	-0.303464032	0.775882
2728	2493.5	0.522427	-0.728441132	0.611247
11629.5	14235	0.0670309	-1.07531028	0.0277372
3514	4580.5	0.559113	-0.605533645	0.304645
2748	2463	0.458936	-0.726329931	0.576078
1166.5	1182	0.304121	-0.771173064	0.291598
2870	2688.5	0.452629	-0.776028588	0.518236
440	496.5	0.946123	0.12853337	0.979611
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3158.5	4293.5	0.845546	-0.464522109	0.658229
36.5	187	0.776451	-2.382469637	0.154386
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6024.5	6656.5	0.889351	-0.270645689	0.822917
2384.5	2556	0.695654	-0.662007366	0.642057
142	139.5	0.876777	-0.261003871	0.889747
977	912.173	0.990887	-0.021572021	0.968383
322.5	247	0.738057	-0.632715632	0.908455
660	716.327	0.668139	-1.067114196	0.620085
29.5	41	0.654744	-1.359081093	0.476814
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1899	1909	0.850179	-0.262123038	0.845522
593.497	550.996	0.878537	-0.222998638	0.938993
422.5	392.5	0.794861	-0.391890653	0.854809
789.004	510.001	0.468303	-1.061638747	0.807487
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1687	1746.5	0.598556	-0.532273666	0.559823
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79	88.9999	0.894262	-0.270357747	0.817637
1810.5	1800.5	0.812895	-0.347452515	0.81759
2952	2701.5	0.634037	-0.599699044	0.718393
2242.5	2386.5	0.792452	-0.363121621	0.735655
1269	1441	0.818391	-0.371367028	0.715888
12.5	10.5	0.843737	0.310340121	0.744115
4514.5	4623	0.826951	-0.380254327	0.809514
1336	1227.5	0.675075	-0.57715467	0.75033
1182.98	1493.01	0.934327	-0.180290152	0.791294
1356.5	1377	0.797904	-0.36949972	0.784889

16	35	0.629398	0.977279923	0.911383
301.5	689.005	0.761147	-0.927675162	0.304791
1650.5	1746.5	0.876713	-0.265046228	0.834825
2.5	3.5	0.651448	-1.321928095	0.465798
1034.5	1400.51	0.299075	-1.888008295	0.159833
753.5	745.5	0.937808	-0.107283454	0.946999
1082	1128.5	0.932018	-0.174850162	0.90658
538.5	571	0.859575	-0.319585785	0.817955
28	79	0.799823	-1.106915204	0.310126
197.5	218	0.973091	0.067778114	0.968845
648.5	560	0.822515	-0.363682841	0.930445
1552.5	1265	0.576148	-0.509603498	0.828519
11.5	15.5	0.93922	0.120294234	0.819842
1196	1179	0.816352	-0.406218552	0.826716
2337.5	2420	0.770496	-0.440462382	0.74132
239.5	260	0.938853	0.135037144	0.992182
51	46	0.711121	-0.741688004	0.778268
271.5	247.5	0.492464	-1.78102764	0.543941
8908.52	8356.24	0.865835	-0.31692376	0.907645
995	717.5	0.688255	-0.383959188	0.937181
591.501	370.5	0.765362	0.390736872	0.524028
448	323.5	0.65056	-0.688413849	0.901739
1594	1512	0.722359	-0.4461431	0.773511
122	106	0.713261	-0.582009183	0.822669
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21	52.5	0.805129	0.63005039	0.671418
1331.51	1052	0.698496	-0.804254021	0.842133
1663.5	1799.5	0.345118	-1.081620649	0.287192
2414.5	1943.5	0.707121	-0.418926571	0.931472
530.999	598	0.969212	-0.06246137	0.878232
188.5	189.5	0.969339	0.074574484	0.972403
2150.5	2271.5	0.818747	-0.375663261	0.775931
1485	1633.5	0.840677	-0.38967854	0.775761
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3147.5	3264.05	0.841703	-0.347944138	0.815067
919.5	914.5	0.82893	-0.331965302	0.83335
11525.9	12825.9	0.49144	-1.461417866	0.425393
1783	1766	0.87821	-0.233561205	0.885893
3462.5	3331.5	0.875312	-0.198221265	0.911775
1590	774	0.456287	-1.17948383	0.949205
0.5	1	0.622002	1	1
1318	1596	0.929854	-0.11562591	0.744397
1677.5	1669	0.74642	-0.671122452	0.749694
1985.01	2160.99	0.91231	-0.18015997	0.847093
2611.49	2592.52	0.888196	-0.250343358	0.893246
2	1.5	1	0	0.834708
165.5	220.5	0.950805	-0.066906659	0.615629
202.5	138.5	0.466988	-0.989352756	0.782542
18.5	12	0.462019	-0.209453366	0.271022
44.5	63	0.655004	0.907972589	0.811798
219.5	457	0.569414	0.764954691	0.750431
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14	14	0.569269	-1	0.569269
4.5	3.5	0.606453	-1.169925001	0.753462

591.501	529.999	0.913029	-0.146185261	0.993109
2618	2140.5	0.625952	-0.487356854	0.856506
1171	1195.5	0.84046	-0.300982544	0.823168
671.5	655.5	0.736321	-0.444337315	0.758826
7213.72	7362.82	0.479496	-0.70802939	0.458571
1836	1624	0.374099	-1.361560142	0.460259
26249.9	28336.8	0.893712	-0.230398453	0.837495
5181	5450	0.794319	-0.41791778	0.753812
254	412	0.85543	-0.388771845	0.523132
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66	99.5	0.834276	-0.520832163	0.584962
787.5	756	0.849897	-0.320783553	0.879609
4782.08	4370.81	0.605258	-0.717610996	0.68373
590.376	480.281	0.732352	-0.74810528	0.852577
1003	987.492	0.707985	-0.905373902	0.717016
207.122	146.22	0.836473	-0.399716242	0.964454
6438.92	6543.71	0.834387	-0.342819732	0.821965
3223.97	3270.54	0.840078	-0.318969863	0.828704
3180.48	3104.49	0.605816	-0.760047451	0.626045
3590.19	3645.37	0.612829	-0.591886783	0.597504
4470	4178.5	0.699848	-0.533835695	0.759721
3812.99	3798.77	0.7438	-0.492800261	0.746926
794.189	839.35	0.974293	-0.065321669	0.941338
350	388.5	0.889069	-0.293864176	0.824232
637	664.5	0.7422	-0.618182036	0.712346
721	922	0.932637	0.172368554	0.919451
572.5	555	0.979126	0.02622019	0.944397
8547.5	9071	0.0762604	-0.948195819	0.0576897
1869.5	1900	0.82367	-0.415680727	0.812503
6	4	0.670131	0.321928095	0.352547
7488.5	7584.5	0.379223	-0.585203339	0.363652
0.5	1	1	0	0.651448
9	23	1	0	0.340442
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1508	1479	0.833857	-0.269554639	0.852246
3260.47	3298.48	0.672714	-0.5383645	0.661615
2270	2185	0.823512	-0.336299277	0.854681
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5388.85	6698.35	0.912998	-0.16672363	0.727198
609.5	557.5	0.92741	-0.106824168	0.985786
199	181.5	0.84397	-0.310195133	0.914287
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1003	945.5	0.935562	-0.13011482	0.978364
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1767	1804	0.933468	-0.133793379	0.917818
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2377.5	2143	0.413453	-0.789489201	0.520639
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46	37	0.906251	0.148863386	0.74379
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23.5	45	0.69262	-1.162271429	0.331457

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3649.89	3731.63	0.659694	-0.889701296	0.644844
553.5	563	0.769684	-0.386221347	0.753671
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470.999	490.5	0.84705	0.294104444	0.874652
2757	2663	0.853783	-0.27533152	0.882109
2.5	2.5	0.873517	-0.321928095	0.873517
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4936	5275.5	0.694541	-0.51173667	0.631485
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3108.5	3468.5	0.780991	-0.385863307	0.680644
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1916.5	2050.5	0.853933	-0.221263699	0.78442
5468.88	3890.49	0.72371	-0.336555227	0.89006
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173.5	243	0.636629	-0.508054515	0.306109
2248	2103	0.545951	-0.450554452	0.64175
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2170.5	2316	0.905009	-0.205760795	0.857768
1513.98	1576	0.82574	-0.338922995	0.792761
3211	3343.5	0.809614	-0.4068238	0.778845
2178	2568	0.90459	-0.259065504	0.803123
961	1105.5	0.924066	-0.189859745	0.833022
3395.71	2896.5	0.774082	-0.4682547	0.892126
127.5	93.4999	0.88421	0.150304806	0.62484
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1366	1318	0.869729	-0.250206627	0.898198
794.5	720	0.666038	-0.578620974	0.755228
518	468	0.641019	-0.522952838	0.747641
1607.98	1682.49	0.632821	-0.585631077	0.588674
565.5	538	0.788439	-0.360385005	0.833775
75.5	36	0.932774	-0.109121722	0.610731
28	29	0.696662	-0.949373927	0.676093
1919	2096.5	0.773658	-0.556857767	0.712292
668.501	628.996	0.975672	0.052953682	0.937307
21	23	0.363033	-0.932885804	0.289299
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9.5	15	0.813581	0.506959989	0.929216
94	100.5	0.629621	-1.046794211	0.586729
1458	1228	0.752514	-0.47154187	0.890266
145.5	135	0.962071	0.053529396	0.890147
3120.5	2722	0.22634	-0.595984793	0.414345
4263.57	3941.13	0.391458	-0.687414911	0.482401
942.5	869.5	0.657789	-0.604224403	0.729912
1155.43	1056.21	0.723699	-0.443307613	0.810091
3310.5	3053	0.509674	-0.87465071	0.579993
691.499	622.001	0.711016	-0.580273799	0.795032
1146.5	1198	0.865009	-0.259138794	0.828925
595	598	0.587598	-0.535507446	0.581872
18	20	0.621335	-1.169925001	0.557195
56	65	0.847	-0.315501826	0.72783
3787.97	3796.94	0.301405	-0.939922924	0.299445
5127.5	5788.5	0.863784	-0.296479389	0.772491
3604.5	3708	0.755238	-0.689201603	0.737753
3102.09	2481.06	0.491718	-1.175887903	0.651105
579	560	0.784301	-0.553538048	0.805783
652	758.5	0.975252	-0.061015775	0.87835
24	35.5	0.792544	0.297680549	0.774446
156	125	0.134267	-1.187370136	0.279652
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7.5	2.5	0.606982	-1.055835214	0.880909
16.5	11.5	0.510681	-1.343954401	0.734507
1596	1533.5	0.877001	-0.233508454	0.908975
202	195	0.330162	-0.857311583	0.363137
1253.44	935.048	0.536508	-0.92748346	0.767768
24.5	130.5	0.774611	1.029146346	0.395632
1041.5	980.5	0.45504	-1.864575787	0.488899
562.941	159.037	0.333882	1.740083691	0.230313
681.5	492	0.834512	-0.215353154	0.833656
1482	1621.5	0.852779	-0.303910044	0.78222
30.5	42.5	0.804403	-0.645335119	0.611364
2.05451	0.8257	0.156889	-26.81446036	0.505079
8.5	20.5	0.960496	-0.180572246	0.534842
450	467.5	0.893569	-0.212010403	0.863696
8.44549	12.1743	0.997127	0.009281712	0.809268
1365.69	1240.31	0.916428	-0.168733099	0.9859
160	214.5	0.933482	0.161887682	0.876276
86.5	90	0.966292	-0.085900073	0.942746
425	465.5	0.718582	-0.514573173	0.637885
40	35.5	0.680597	-0.391190757	0.826502
0	3	0.034897	#DIV/0!	1
360.5	326.5	0.85326	-0.274686929	0.932612
1.5	3	0.78878	0.736965594	0.892901
21.5	37	0.798622	-0.472068444	0.391635
2734	3208.5	0.503763	-1.330661303	0.401101
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12	6.5	0.665956	-0.678071905	0.922273
1057.5	1017	0.727582	-0.536666944	0.759449
23.5	23	0.950573	0.11783649	0.938251
1.5	3	0.710482	-0.584962501	0.200976
159986	155040	0.66196	-0.741030754	0.685754
724.502	712.5	0.718385	-0.580493007	0.731605

478.001	599.997	0.767857	-0.645836534	0.619687
15	18.5	0.733666	-0.819427754	0.605889
10	4.5	0.698091	-0.234465254	0.337423
175.5	136.5	0.151909	1.575339916	0.123482
259.5	327	0.897204	-0.177240385	0.679077
380	350	0.706976	-0.633217669	0.768816
302.061	309.851	0.895813	-0.223007883	0.877268
9.5	8.5	0.617054	-1.440572591	0.674729
381.5	364	0.719342	-0.459195286	0.764181
374	360	0.70833	-0.41246814	0.749765
176.5	151.5	0.741394	-0.413675824	0.88573
599.003	560	0.732154	-0.443424485	0.795421
529.5	402	0.304243	-0.582920469	0.755761
325	280.5	0.727051	-0.455552659	0.86182
204	229.5	0.822457	-0.396300937	0.734566
87.5	50.5	0.921869	0.087947699	0.47065
5	6	0.0405193	-2.321928095	0.0227138
595.5	605	0.630612	-1.243543108	0.621619
258.5	280.5	0.900757	-0.193841508	0.834788
881	879	0.363489	-0.833171498	0.365628
234.5	221.5	0.708987	-0.583425266	0.754842
1585	1221	0.527705	-0.509381282	0.88132
537.5	503.5	0.695207	-0.552451556	0.752364
156	147.5	0.910516	-0.161280907	0.956504
525.5	460.5	0.603989	-0.828093588	0.706652
5.5	4.5	0.777386	-0.652076697	0.886945
80	77	0.726318	-0.722015253	0.750976
4	1	0.230584	-2	1
3162.49	3025.98	0.733542	-0.61143015	0.765213
215.5	325.498	0.942021	0.170296878	0.823821
1048.5	1139.01	0.992309	-0.017999308	0.938829
383.001	362	0.837389	-0.340417786	0.879211
1821	1855.5	0.720424	-0.777268081	0.708587
1044.5	1407	0.990584	0.023291879	0.811442
464.5	833	0.877495	-0.347782133	0.487857
3238.23	3923.52	0.716161	-0.834528647	0.595373
333	533.5	0.758492	-0.847996907	0.485737
5111.91	4110.51	0.2364	-0.700357523	0.521302
1213	1389	0.781087	-0.650039231	0.699209
1020	1046	0.893769	-0.225333848	0.875264
1575	1457	0.449769	-0.705256734	0.534905
1551	1417.5	0.738189	-0.428431936	0.823076
254	208.5	0.76853	-0.500844653	0.908158
3511	2658	0.918463	0.129599968	0.716784
2561.5	2404	0.548239	-0.609816355	0.618009
930.999	805.999	0.913855	-0.178760431	0.986858
74.5	76	0.908198	-0.185745519	0.893031
39.5	27	0.497517	-0.718818247	0.891021
334.5	269.5	0.994409	0.010742381	0.850425
5358.5	4630	0.516733	-0.789560989	0.653677
581	619	0.7877	-0.417522763	0.735335
449.5	464.5	0.836935	-0.265282846	0.805469
3581.5	3447	0.811969	-0.38296965	0.84157
5.5	8.5	0.604887	0.862496476	0.859964
6586	4676.5	0.428961	-1.828372244	0.62426
776.5	800.5	0.880059	-0.249902933	0.857112

163	146.5	0.681932	-0.627628966	0.768369
5.5	6	0.0466619	-3.459431619	0.0367468
6369.41	6302.46	0.104556	-1.1158442	0.108973
2724.5	2972.5	0.695459	-0.365333828	0.586949
935.5	1165.5	0.866031	-0.21943963	0.649243
2831.5	2497	0.660242	-0.462428136	0.800013
2239	2203	0.692369	-0.56020762	0.706612
888	920	0.903643	-0.189862637	0.875802
397	410.5	0.893317	-0.183846552	0.863411
725.5	772	0.903146	-0.232536478	0.862002
3141.5	3266.5	0.868563	-0.286320987	0.840068
3147	2915.5	0.741673	-0.423774165	0.813772
337.999	269	0.780399	-0.412190481	0.960007
813	800	0.799581	-0.403842342	0.812312
1362.5	1214	0.790647	-0.402211897	0.882948
1068	1157.5	0.946803	-0.104319774	0.883417
3101	3266.5	0.829154	-0.405608592	0.793151
2333	1296.5	0.684318	-0.604417662	0.902157
6043.4	5440.18	0.950005	-0.111397655	0.982824
16	163	0.950515	-0.830074999	0.234836
9600.24	8906.28	0.870163	-0.320651681	0.916913
7	16	0.764832	-1.485426827	0.398338
802.503	774.499	0.858878	-0.252826698	0.889161
2271	2250.5	0.724495	-0.674392044	0.730749
1212	1079.99	0.842755	-0.34835622	0.921988
50	58.5	0.545665	-1.514573173	0.454467
756	853.5	0.863771	-0.349138205	0.784594
311	344	0.838493	-0.364891391	0.764768
340	348.5	0.936674	-0.126302583	0.91788
649.003	1008	0.990415	-0.02127402	0.647812
337.5	401	0.969104	-0.065588342	0.839963
1151.5	1153.5	0.871899	-0.208572701	0.870269
195.5	194.5	0.853656	-0.330254027	0.857253
3145	3127.5	0.558687	-0.563900885	0.565058
2	10.5	0.724378	1.459431619	0.61863
1147	1205	0.760976	-0.390510469	0.713199
1561	1155	0.342067	-0.968009886	0.63474
4416.5	4122.5	0.669031	-0.703280374	0.722111
1848.5	1884	0.45166	-0.744922253	0.432638
4398.5	3762	0.0484904	-1.027985436	0.104273
1541.5	1610	0.816815	-0.389833569	0.783665
291	295.5	0.924992	-0.129592907	0.911571
412.5	496.5	0.819721	-0.412125904	0.681743
781	717	0.710619	-0.50589093	0.787238
738.5	764.5	0.66872	-0.711470488	0.641849
3066.59	3612.35	0.654838	-1.244797675	0.563793
1778.52	1620.98	0.561732	-0.494416665	0.681996
3946	3945	0.791297	-0.414550102	0.791501
987.506	895.007	0.573693	-1.18775752	0.63628
11511.5	11372.1	0.705985	-0.537532071	0.716653
1209.5	1298.01	0.897114	-0.21574793	0.843815
3	8	0.844837	0.584962501	0.653035
1641	1748.5	0.95421	-0.094458074	0.90713
1095.5	1090.5	0.685276	-0.691168764	0.688744
728	844	0.79274	-0.577057303	0.698935
19	22.5	0.465798	-0.724365557	0.308893

12157.8	11684.4	0.80688	-0.299810411	0.846076
1326.8	1521.17	0.768041	-0.49278495	0.660109
1444.98	1235	0.549086	-0.636583288	0.716635
2550.5	2846.5	0.696552	-0.50118109	0.5912
4404.52	3795.84	0.730673	-0.419832036	0.875067
1089	1067.5	0.720589	-0.504765298	0.738175
784.5	728	0.701653	-0.600214585	0.761428
14795.5	14281	0.857039	-0.304349917	0.882849
1183	1156	0.781676	-0.415444064	0.800906
11326	11309.6	0.754778	-0.460435715	0.756017
852.998	873.497	0.797933	-0.415600256	0.77928
4514.16	4788.56	0.633484	-0.621018405	0.578667
750	625.5	0.76856	-0.372081934	0.936238
1196.5	1342.5	0.929749	-0.174756132	0.855569
2617.04	2630.4	0.772735	-0.444929865	0.768557
428.5	442.5	0.351199	-1.150694357	0.327617
1210.5	1330.5	0.898488	-0.214172479	0.826975
21968.4	23816.5	0.881601	-0.257418626	0.821978
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3226.5	3110	0.607272	-0.628885105	0.642905
5346.01	5633.47	0.762668	-0.434223194	0.716575
5.5	3	0.923267	-0.137503524	0.703704
3017.5	3160.5	0.868296	-0.291180971	0.834837
1461	1473	0.699123	-0.565834188	0.6921
1926.99	1840	0.630764	-0.55237283	0.678301
38956	38070.9	0.729251	-0.500715174	0.74909
2642.86	2402.96	0.775427	-0.432115172	0.852398
1447	1313.5	0.721121	-0.487621951	0.807454
680.498	662.5	0.862491	-0.250578297	0.885029
486.318	492.269	0.85945	-0.269252659	0.84953
505.154	508.008	0.865038	-0.268121244	0.860612
4706.39	5235.54	0.891796	-0.267636768	0.821465
323.5	362.5	0.838013	-0.323601432	0.745101
1108.5	987	0.61738	-0.524741908	0.745593
3069.5	3101	0.737171	-0.4930139	0.728414
1259	1137	0.942711	0.088877678	0.856386
5	30.5	1	0	0.285854
2945	2976	0.591782	-0.611536774	0.581156
4.5	2	0.838734	0.289506617	0.494216
2024	2178.5	0.845697	-0.282553857	0.781702
1209.98	1282.52	0.841399	-0.392142981	0.802611
242	310	0.896995	-0.300477735	0.748742
4432.5	4491	0.963874	-0.076357962	0.954639
315	335	0.849194	-0.362570079	0.807284
109	148	0.791435	-0.428334322	0.539003
250.5	185.5	0.651201	-0.711278951	0.878137
952	1123	0.954884	-0.121678557	0.855821
835	792	0.979134	-0.050996359	0.989925
1630.98	1639.52	0.749286	-0.659583337	0.7459
771.498	837.506	0.635901	-1.188506583	0.587848
1584.01	1287.99	0.582706	-0.524111948	0.827731
366.5	374.5	0.772357	-0.5008611	0.756222
313	355.5	0.899742	-0.223929656	0.807262
2070.5	2077	0.900793	-0.230311019	0.8987
56.5	125.5	0.825403	-0.630354404	0.362879
191	218	0.919042	-0.159576313	0.812032

12.5	13.5	0.613399	-1.184424571	0.56643
862.5	889.5	0.700738	-0.52717321	0.672745
5157.5	5070	0.823542	-0.304550204	0.83892
471.5	524	0.77804	-0.326525109	0.665483
689.998	695.997	0.82945	-0.30502715	0.821869
157.017	158.004	0.503566	-0.82709968	0.497939
1174	1268	0.932361	-0.156926972	0.8803
11.5	13.5	0.770136	0.430634354	0.88314
1170.5	1100.5	0.498095	-0.764549046	0.558163
199	207.5	0.754048	-0.507341604	0.72077
2348	2312.5	0.804075	-0.35486635	0.817272
731.5	515.5	0.504467	-1.059386834	0.765193
28	14.5	0.093986	-2.485426827	0.390811
66	82	0.962018	-0.090197809	0.812741
680	687.5	0.961346	-0.071769034	0.952576
3467.5	3566.52	0.954387	-0.103939271	0.935704
4478	3812	0.40911	-0.732301619	0.591084
2015.48	2300	0.920347	-0.205005671	0.836849
133	104.5	0.564515	-1.04405518	0.731264
1375.5	1440	0.903263	-0.250814742	0.87516
1313.48	1376.5	0.748008	-0.68765868	0.718114
65.5	115	0.960842	0.095860015	0.630977
118	144	0.945264	-0.161543861	0.833149
204.616	206.71	0.794311	-0.552653839	0.78794
401.5	364.5	0.827314	-0.442241857	0.886786
3922.46	3774.45	0.865446	-0.252605967	0.896737
2415.5	2171	0.496639	-0.52343131	0.642211
2480.5	2835	0.631752	-0.924923833	0.538507
1175	1185	0.681336	-0.636202617	0.674395
867	856.5	0.821053	-0.355811047	0.830727
221.5	184	0.471102	-0.725073698	0.67043
1695.5	1629	0.535076	-0.692008618	0.575302
1663	1441	0.660975	-0.619421144	0.784155
185	143	0.7947	-0.326810316	0.974931
90.5	113	0.465245	-0.855989697	0.285048
1556.5	1483	0.664239	-0.380691447	0.72789
641	1460	0.90799	-0.315751925	0.415672
2134.5	1895	0.778347	-0.265672802	0.924851
579.5	615	0.846894	-0.323796468	0.801584
1.5	0	0.495025	0.736965594	0.14822
616	460.5	0.845877	-0.218299667	0.876617
1334	1361.5	0.989669	0.021469072	0.996126
6878	7376.5	0.787057	-0.421063042	0.729393
1359.5	1697	0.916309	-0.223365512	0.775609
12502.2	11894.6	0.692498	-0.684200856	0.729496
13.5	11	0.673177	-0.754887502	0.815909
2667.49	2821.08	0.783293	-0.42672911	0.73711
380.5	401.5	0.786492	-0.465844135	0.745892
5228	5632.5	0.720188	-0.600499367	0.66213
1419.5	1538	0.818779	-0.405750999	0.759657
5692.02	5705.17	0.789013	-0.380274495	0.786987
1622	1599	0.819146	-0.346710921	0.830858
1512.5	1643	0.877055	-0.291256399	0.82033
53.5	52.5	0.831833	-0.282035368	0.849184
1730.03	1772.52	0.796076	-0.435036512	0.77759
1425	1381	0.63176	-0.63204044	0.660595

933.997	1123.99	0.928387	-0.170310056	0.800484
241.5	272.499	0.909189	-0.225881407	0.830226
3039.52	3358.5	0.918934	-0.212097784	0.857527
3075.17	3433.83	0.894777	-0.265819111	0.823345
1393.5	1431.5	0.823412	-0.347123518	0.801586
251	263	0.867731	-0.240224523	0.827399
2753	3357.5	0.668111	-1.053923834	0.548465
8	6.5	0.563569	0.64385619	0.451594
2275.5	2268	0.860519	-0.323831387	0.862769
3370.5	3699.5	0.87833	-0.314669774	0.819095
1207	1254	0.772384	-0.628031223	0.748525
2	8	0.499897	1.584962501	0.72755
1314.5	1249	0.838791	-0.318639275	0.878753
1576.5	1642	0.829973	-0.327888706	0.796317
1020	1087	0.879545	-0.265582587	0.833416
1572.5	1522	0.791276	-0.419171957	0.817073
702.5	965	0.989539	-0.026947674	0.782651
2027	2489	0.59453	-1.221918007	0.467174
6190	6362.5	0.770787	-0.385204541	0.744923
470.5	467.5	0.267977	-1.70312523	0.271527
176.5	289.5	0.909517	-0.229904697	0.556247
2002	1591.5	0.879478	-0.173216614	0.901892
2387	2650.5	0.820052	-0.409206796	0.743351
953	1323.5	0.736831	-0.776094527	0.527178
4730.02	4978	0.678897	-0.55435106	0.631726
132	111.5	0.924469	0.174774401	0.834882
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2126.5	2436	0.963632	-0.085238437	0.872168
1084	895.999	0.421473	-1.817706441	0.532172
1704.5	1748	0.714993	-0.635785074	0.696104
2063	2275.5	0.996229	0.009410051	0.944484
104	150.5	0.777646	-0.700439718	0.552
77.0001	92.0001	0.906548	-0.266788414	0.801307
740.5	688	0.442436	-1.715372302	0.485883
3452.5	3503	0.713364	-0.692054506	0.703152
1175.5	1420.5	0.846253	-0.370128996	0.712126
259.5	181	0.518462	1.13901896	0.42851
200.5	412.5	0.813465	0.46628374	0.679346
4337.51	2911.48	0.439493	-1.792079518	0.665279
139.5	183.5	0.703727	-0.984569959	0.542308
4884.37	4836	0.56586	-0.780763467	0.574562
637.5	951.5	0.681484	0.596607804	0.987259
38.6746	211.5	0.727464	1.055550715	0.315291
543	527	0.798935	-0.428383525	0.82135
1	0	0.544016	1.321928095	0.338084
28.5	33	0.759393	-0.584962501	0.655021
4470.52	4314.52	0.888107	-0.250873056	0.912394
6	7.5	0.757041	-0.584962501	0.594901
36	52	0.234161	-1.710493383	0.0928507
8.5	2.5	0.824188	0.234465254	0.312473
3	3	0.630057	0.736965594	0.630057
765	729	0.866	-0.302030863	0.899058
1407.5	1621.5	0.986651	-0.035278012	0.903004
2500.31	2716.7	0.838217	-0.440379719	0.786751
633	785.498	0.893392	-0.249421265	0.738109
233	195	0.971835	-0.050404953	0.894829

162.5	156	0.820027	-0.310872906	0.856452
740.5	688.5	0.961349	0.086029577	0.917359
400	461	0.884666	0.304511042	0.959315
209	219.5	0.985092	0.037474705	0.986447
413.98	444.24	0.929091	-0.178001259	0.884831
445	412.999	0.936232	0.156534785	0.896504
295.5	300	0.888112	0.286841129	0.895787
403.5	493	0.851363	0.370098579	0.963789
3.5	3	0.419531	-2.807354922	0.493436
188	281.5	0.845514	0.416954702	0.924639
160.5	132	0.938789	0.095635279	0.784131
277	281.5	0.975987	0.036004953	0.991422
6221.5	6140.5	0.648963	-0.552857972	0.661924
5056.69	4542.42	0.687063	-0.48278163	0.793992
2040.5	1991	0.664594	-0.614787178	0.686051
2425	2030	0.742161	-0.389679852	0.917523
4047.5	3744	0.610253	-0.566545621	0.692154
1310.03	1276.53	0.75877	-0.459834602	0.780425
140	117	0.983927	0.020464103	0.802324
2180.5	1834.99	0.764192	-0.360822532	0.931594
271.5	296.5	0.862743	-0.310021328	0.799215
264	260.5	0.680539	-0.717964632	0.690466
2344.5	2132	0.65897	-0.614334912	0.742379
332	332	0.90649	-0.175367087	0.90649
1262	1048	0.816929	-0.295871646	0.984134
2717	2916.5	0.891967	-0.218592016	0.836579
1891	1918.5	0.732025	-0.46760853	0.71885
499	570.5	0.934911	0.158637512	0.984825
3400	3237.5	0.756781	-0.616600642	0.788877
592.5	560	0.573176	-0.718818247	0.625311
2202.03	2246.58	0.819547	-0.426423232	0.805708
931	780	0.470095	-0.625427397	0.686889
2069.5	1805	0.480509	-0.763584123	0.618474
406.047	322.909	0.518598	-0.5899382	0.794608
1462.5	1361.5	0.703788	-0.557844752	0.764255
551	443	0.747093	-0.421159888	0.941404
14.5	16.5	0.530195	-1.050626073	0.436125
509.5	454.5	0.783998	-0.349082146	0.8909
974.5	942.5	0.803401	-0.376810114	0.830769
6233.5	6061	0.886357	-0.229837034	0.907544
299	279	0.387555	-0.957215134	0.448653
749	704.5	0.713981	-0.686184551	0.756473
64	113	0.798692	-0.790546634	0.490221
3923	2759	0.435989	-1.870307259	0.632569
6486.43	6499.77	0.810495	-0.425595642	0.809016
3368.5	2931.5	0.620688	-0.601871591	0.75576
2223	2321.5	0.462422	-0.630954618	0.414189
75.5	72.5	0.91194	-0.183122304	0.941189
2673	2084	0.786624	-0.266925696	0.933882
440.5	345.5	0.88037	-0.159116719	0.872669
1	4	0.651448	1	0.391002
0.5	0.5	1	0	1
41	53	0.624491	-0.657112286	0.399974
260.5	271.5	0.954021	0.083384894	0.98664
2	8.5	0.805083	0.807354922	0.435351
3523	3129	0.834327	0.335054342	0.766191

532.5	583	0.225907	-0.782842116	0.15922
3108.91	3255.11	0.590842	-1.222284147	0.56242
5147.84	4949.83	0.748787	-0.519211995	0.779378
3325	3434.5	0.985596	-0.031144523	0.963402
11267.3	9693.44	0.802704	-0.41808215	0.911095
4299.89	4509.98	0.853492	-0.312277366	0.817623
5668.5	5266	0.497975	-0.713446416	0.57404
0.5	3	0.504632	2.321928095	0.862169
2116.5	2178	0.528381	-0.608153311	0.496834
1008.5	967.5	0.762465	-0.470200728	0.795889
414	406	0.711667	-0.498730103	0.729534
3607.5	4239.32	0.985473	0.034317253	0.909134
271	507	0.971112	-0.087795604	0.579656
1982.5	1978	0.593625	-1.238001141	0.595006
20.5	22.5	0.810693	-0.403355694	0.738666
3449.5	2961	0.719181	-0.796521638	0.809421
572.502	677.502	0.759855	-0.75599546	0.660713
695.5	755.497	0.947807	0.134573863	0.993852
8811.74	9823.74	0.823881	-0.433705528	0.749428
85.5001	220.5	0.993333	0.025090952	0.478603
1243	1385.5	0.983643	-0.040608823	0.916313
1137.5	1288.5	0.394377	-0.7744403	0.281819
2328.5	1708.5	0.465442	-1.04307811	0.714218
939	590	0.403434	-0.972606233	0.829367
123	167.5	0.870364	-0.395620045	0.68617
121	137.5	0.888716	0.230883882	0.976037
355	324	0.743002	-0.446535652	0.82466
948.5	914	0.709682	-0.436233329	0.747853
542	597.5	0.840847	-0.313964717	0.760804
1306	1424.5	0.835692	-0.435059803	0.780421
1538	1619	0.931621	-0.17004226	0.899457
2220	2186.5	0.863256	-0.366742655	0.872321
3182.5	3166.5	0.830803	-0.303628469	0.835183
1854	1586	0.575124	-0.35210308	0.848204
35.5	33	0.268218	-1.342392197	0.316908
1.5	2	0.670131	1	0.774348
1600	1444	0.660439	-0.611121661	0.750442
289	303.5	0.533599	-1.808603468	0.507408
865	866	0.780671	-0.41670632	0.7797
993.502	1025	0.509924	-0.716780532	0.479133
419.5	412.5	0.637578	-0.383852073	0.660892
911	880	0.569169	-0.501510906	0.612439
599	568.5	0.69259	-0.493396871	0.743379
2123	1850.5	0.447105	-0.693237455	0.603179
2419.52	2888	0.672421	-1.049445935	0.566705
97	147.5	0.980963	0.051138849	0.750955
363	352	0.984609	0.033392663	0.964705
3041.5	3183	0.82737	-0.27910877	0.783305
968	1055.5	0.835284	-0.395301281	0.775406
1528.5	1685.5	0.858445	-0.329380232	0.789398
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1577	1737.5	0.944877	-0.126612456	0.878695
640	756.5	0.957789	-0.102759574	0.847397
1139.5	1344.5	0.977256	0.055877274	0.919332
1126	1040.5	0.494732	-0.650156091	0.583261
648.5	860.5	0.738452	-0.619863576	0.529378

16	44.5	1	0	0.294648
27585.6	28091.5	0.555418	-1.215842066	0.543586
29310.5	26778.3	0.378559	-1.163591862	0.448443
8336.98	5931.44	0.271869	-1.842908598	0.479381
2363	2472	0.727611	-0.446931793	0.684092
4	3	0.785812	-0.415037499	1
492.5	461.5	0.863634	-0.217761755	0.924496
13.5	19	0.661471	-1.584962501	0.492324
4.5	3.5	1	0	0.866407
2583.98	2605.45	0.400237	-0.663829276	0.391029
2102.5	2253.5	0.719904	-0.4871433	0.655988
1.5	4.5	1	0	0.409302
1638.5	1703.5	0.808111	-0.432607251	0.779831
1082.5	932.5	0.438265	-1.958617792	0.520719
120.5	69.5	0.675204	0.637857449	0.474979
440	399.5	0.682282	-0.917173569	0.740573
112	303.001	0.969619	0.111508315	0.464467
622	979	0.882115	-0.248725043	0.509873
1300	1237	0.710415	-0.463181947	0.758802
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898	793	0.955719	0.09481537	0.880117
854.5	613	0.827377	-0.390208527	0.966354
2613	2311	0.717024	0.600521756	0.659284
1461	1300.5	0.732503	-0.425277622	0.844464
1357	1151.5	0.864738	0.292499661	0.776623
9486.19	10890.9	0.761456	-0.716265153	0.677968
29900.5	26317	0.656829	-0.546235698	0.780597
1229.5	1155.5	0.892594	-0.248440967	0.933262
1382	1212.5	0.675768	-0.528660055	0.799713
0.5	0	0.308068	#NUM!	1
568.5	757.5	0.868947	-0.296148156	0.650687
2191	2060	0.842813	-0.3698787	0.883826
496.499	538.999	0.759938	-0.563325285	0.700634
1646.5	1434.5	0.530879	-0.90957487	0.644034
239.5	247	0.986875	-0.027364899	0.965015
272	270.5	0.771956	-0.359542387	0.777421
855	959.5	0.904153	-0.178492665	0.805833
99.5	115	0.984108	0.035800721	0.917578
6136.5	5538	0.639016	-0.625372762	0.732068
2420.5	2016.99	0.363621	-0.696598197	0.588802
4.5	7	0.739529	0.736965594	0.955355
2	1	0.866773	0.321928095	0.622002
2	0.5	0.474021	-1	0.710482
1228.52	1194.51	0.692437	-0.586741542	0.716139
649	575	0.839419	-0.26392386	0.948445
965.5	955	0.692636	-0.535754082	0.702605
359.5	355	0.632192	-0.656957946	0.643419
567.592	642.711	0.67457	-0.588928042	0.564004
337	492	0.836407	-0.402251344	0.561793
185.5	166.5	0.858832	-0.311273702	0.932908
873	691	0.567639	-0.568939239	0.832444
0.5	1	1	0	0.651448
926	936	0.988304	-0.019607465	0.97895
313	291.5	0.71719	-0.444528796	0.787243
496	429.5	0.950572	-0.107138964	0.956827
109.5	123.5	0.725023	-0.508000519	0.618954

1013.5	950	0.690414	-0.454724036	0.758184
1694.5	1846.5	0.787918	-0.477530469	0.724175
478	378	0.16302	-2.036680663	0.275276
12.5	13	0.825055	0.35614381	0.849542
50.5	39.5	0.299587	-1.336283388	0.482264
341.5	347	0.789403	-0.382318767	0.775423
409.905	532.292	0.895777	-0.221165781	0.688674
111	189	0.939642	-0.143364175	0.538087
1366	2329	0.876099	-0.304606098	0.483257
432.5	585	0.879507	-0.32819615	0.682809
2240.5	1742.5	0.545341	-1.235545165	0.70458
2907.48	3038.56	0.800742	-0.34537328	0.760383
2904.5	2990.5	0.812343	-0.474110567	0.793174
5154.5	4803	0.61712	-0.678771801	0.68015
3.5	7.5	0.896328	-0.485426827	0.52984
1163.5	1211	0.810495	-0.365668525	0.777255
49430	51804.6	0.80336	-0.552762469	0.774846
5083.5	4983.5	0.408386	-1.586666304	0.420733
5628.14	5749.7	0.742371	-0.53478818	0.725495
3278	2947.5	0.624928	-0.616554001	0.725565
2032.3	1966.71	0.713744	-0.660435907	0.737392
1996.5	2098	0.958083	0.100137725	0.987724
484	418.5	0.837923	-0.284052187	0.960245
89.5	46.5	0.104638	-0.689399911	0.585084
3309.5	3361.5	0.486232	-0.736021398	0.470786
2680	2570	0.678309	-0.346015979	0.736249
82.5	81	0.865259	-0.206450877	0.883411
2414.5	1872	0.215767	-0.835562624	0.5001
189.5	185	0.857518	-0.204110264	0.882843
1013.5	1166.5	0.95464	-0.114765654	0.865979
675	675	0.922896	-0.185639472	0.922896
973.5	975	0.946626	-0.124520804	0.945634
1126.51	997.001	0.731828	-0.71032737	0.80822
11.5	8	0.794897	-0.353636955	0.916736
255.5	213.999	0.815987	-0.310678954	0.969849
264.5	235.5	0.979055	-0.041499363	0.940036
536.504	524.995	0.988544	0.023977046	0.973883
16.5	27.5	0.897639	0.277533976	0.783985
6.5	9.5	0.953487	-0.115477217	0.687562
605.5	629.5	0.858449	-0.296539313	0.828918
1	1.5	0.764931	-1	0.559404
1184	1369	0.809902	-0.473897342	0.709949
13	19	0.730466	-0.793549123	0.486833
0	0	?	#DIV/0!	?
158.5	175.5	0.724685	-0.816485934	0.662253
19	19	0.920783	-0.160464672	0.920783
2423	1319.5	0.908014	-0.1774992	0.737014
2991.51	2972.49	0.748485	-0.39849304	0.754778
624.5	695	0.882589	-0.262803408	0.805001
1.5	2.5	0.0805096	#NUM!	0.0227138
2288	2327	0.594809	-0.691267657	0.579317
246	236	0.951723	-0.109624491	0.978525
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0	2	1	#DIV/0!	0.0917211
498.501	435.5	0.671729	-0.493847038	0.808932
991	973	0.867475	-0.305282821	0.879939

35.5	36.5	0.881018	0.190102883	0.904614
7.5	18.5	0.805947	0.552541023	0.605784
7	10	0.637318	1	0.784667
1229.5	1533.98	0.964516	-0.090178883	0.821792
4631	4434	0.808567	-0.335150643	0.846996
40	30.5	0.939442	-0.112474729	0.869517
6	4	0.829521	-0.415037499	0.942559
5524.17	6730.96	0.831603	-0.525733834	0.717514
29.5	54	0.947948	0.139724764	0.64643
5.5	2.5	0.548832	-1.459431619	0.92941
14	14	0.852323	-0.222392421	0.852323
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782.5	692	0.725895	-0.543168664	0.823609
5531.5	5299	0.619353	-0.676481814	0.657671
3	2.5	0.463813	1	0.400619
165.484	156.985	0.9099	-0.125042755	0.965539
13	11	1	0	0.903569
9	9.5	0.715723	-0.469485283	0.663808
931	919.5	0.989102	-0.019501446	0.999128
42.5	33.5	0.465838	-0.983126181	0.6665
17.5	26	0.776769	-0.605721061	0.508005
338.5	346.999	0.80461	0.468893214	0.817018
24	24	0.378416	-1.678071905	0.378416
782	733	0.706574	-0.629457515	0.755737
327.076	379.981	0.648316	-1.062689099	0.55544
62	51.5	0.686199	-0.561878888	0.845998
18.6306	7.75471	0.798398	-0.376995432	0.696733
3	1.5	0.825659	-0.263034406	0.663808
961	969.5	0.432875	-1.085025381	0.426056
2128.01	1868.46	0.825703	-0.428640187	0.907567
90	153	0.904771	-0.352301744	0.620542
3540.5	3161.5	0.525161	-0.56905678	0.663092
69	70.5	0.677443	-0.632791026	0.659554
365.5	1228	0.797177	-1.60083826	0.293974
29020.5	24306	0.729338	-0.324098455	0.946285
1042.33	982.787	0.739997	-0.443373476	0.793896
7.3096	5.5	0.627053	-0.699867459	0.860006
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1461.5	1418.5	0.791073	-0.575124788	0.80918
211	260	0.875148	-0.328781766	0.738828
384.713	181.252	0.702124	-0.192837415	0.267455
19712	20455.5	0.477209	-0.42610695	0.421188
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0.5	1.5	0.393741	2.584962501	0.593125
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6.5	16	0.833653	-0.530514717	0.279622
66.5	53	0.726967	-0.715432433	0.865507
461	469.5	0.60116	-0.761160099	0.585761
2.05601	17.8517	0.831838	0.535106752	0.033604
698.5	768	0.961063	-0.091664335	0.898499
367	402	0.919774	-0.162084248	0.848816
205.825	186.5	0.311444	-2.009616535	0.365854
788	443.5	0.908447	0.070563682	0.311283
2012.5	3575.49	0.698859	-0.816176002	0.319091
844.288	868.458	0.983027	-0.033414538	0.961822
33	53	0.955782	-0.067114196	0.451666

1526.5	1587	0.739359	-0.444154914	0.703057
2.5	1.5	0.847091	-0.321928095	0.847091
464	303	0.646258	-0.39241459	0.831248
407	409.5	0.803515	-0.346956889	0.798057
16.3511	25.2306	0.790136	-0.506036167	0.470027
424.5	430.5	0.958004	-0.089375807	0.948143
5.5	6.5	0.466103	-1.459431619	0.36282
1351.5	1369.5	0.900209	0.252947149	0.907094
5	17.5	0.851949	-0.736965594	0.237037
215	217	0.735875	-0.548520505	0.728575
791.34	1966	0.341274	-1.301185161	0.0290033
897.893	883.992	0.509312	-1.914570003	0.517592
13	16.5	0.57466	-0.378511623	0.266931
3	2	0.710482	-0.584962501	1
50	49.5	0.936463	0.163498732	0.931188
278	337.5	0.955472	-0.118941073	0.836734
190.5	185	0.12373	-1.164256251	0.137567
2822	2664	0.429676	-0.902169438	0.481761
14.1672	7.77547	0.775546	0.295819421	0.420886
0.5	1	0.710482	1	1
17	28	0.851941	-0.443606651	0.534273
7.5	15	0.638531	-1.099535674	0.231264
1329.5	1384	0.362985	-0.600235029	0.316569
214	184.5	0.938543	0.088255749	0.806977
1	2	0.806588	-1	0.481309
4	4.5	0.925659	-0.192645078	0.852323
2141	1571.5	0.589493	-0.817328482	0.831567
662	797	0.688162	-1.008743633	0.578166
17	34	0.953378	0.160464672	0.666533
145.5	185.5	0.842182	-0.450165723	0.69009
1.5	1	0.756486	-0.584962501	1
69	45.5	0.892126	0.158262084	0.602247
51.5	46.5	0.962296	0.068386975	0.887414
112	82	0.833262	0.269460675	0.63359
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28.5033	23.0998	0.444151	-1.819548342	0.564043
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947	2171.5	0.847272	-0.616925289	0.395404
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4375.46	4372.42	0.62047	-0.660450037	0.621102
717.515	764.56	0.955186	-0.096238334	0.909881
946.499	986.498	0.743492	-0.507080971	0.70933
702.5	833.5	0.768954	-0.650610543	0.659871
583	675	0.894569	-0.256614736	0.795151
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1249.5	1223	0.781122	-0.490284391	0.796662
264.5	230	0.641892	-0.591796692	0.77301
338.108	317.459	0.771254	-0.359768795	0.832817
888	682	0.753085	-0.325791823	0.962615
641	678	0.675134	-0.534646902	0.621325
1062.99	981.497	0.700653	-0.458649233	0.780949

2872.52	2441.52	0.556154	-1.245510625	0.658318
94.5	221	0.787617	-0.918386234	0.340131
475.5	604.5	0.856743	-0.373665278	0.696061
2667.5	2369	0.609584	-0.553136072	0.736893
1256	1150	0.721568	-0.507534424	0.797601
201	140	0.441826	-1.356430942	0.687262
123.5	162	0.594729	-1.193479729	0.424536
170.5	169	0.820245	-0.326165088	0.827865
662.5	590.5	0.64279	-0.478475113	0.772695
911	932	0.790339	-0.339454147	0.768263
3261.33	3365.4	0.630204	-0.470952977	0.593446
931	879.5	0.818268	-0.317672925	0.868266
151.5	170.5	0.910545	0.178890783	0.995512
843	1047	0.892809	-0.252802483	0.737918
379	337.5	0.779006	-0.494591676	0.86065
114	95.5	0.911714	-0.189033824	0.971541
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369.5	374.999	0.888622	0.196787605	0.899865
1708	1762.5	0.89663	-0.22140731	0.873723
5125	5346	0.773482	-0.491039611	0.741383
726.5	710	0.906972	-0.211347339	0.922392
1147.5	1063.5	0.894377	-0.189863848	0.956915
1007	1119.5	0.915684	-0.225140982	0.851421
6888	6448.5	0.335054	-0.679245305	0.411781
1358.5	1051.5	0.615544	-1.03058832	0.776019
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12	25.5	0.842547	-0.415037499	0.319545
72.5	75.5	0.861406	-0.249171752	0.826061
1044	1351	0.760207	-0.603739708	0.578211
3331.13	4667.32	0.519665	-1.985833952	0.345191
613.501	566.499	0.502062	-1.725646509	0.54675
1021	1219	0.925954	-0.188412229	0.811073
625.498	655.004	0.855105	-0.274846572	0.816679
462327	411798	0.519764	-0.58964148	0.657581
26137.3	18583.4	0.373078	-0.97245105	0.696981
26457	22497.5	0.612724	-0.494644483	0.802738
1148	1118	0.763727	-0.308481398	0.794596
205663	187847	0.669901	-0.479401046	0.765467
992	787	0.922064	-0.150065289	0.914948
796	737	0.859582	-0.256163555	0.923116
754	843.5	0.553173	-0.861453187	0.461833
102.056	93.7149	0.532296	-0.70775149	0.617348
49	68.5	0.929638	0.153474481	0.822866
32.5	29	0.807633	0.244418728	0.702225
158.5	175	0.92112	0.175476747	0.984571
521.5	440	0.966651	-0.073782195	0.928928
306.5	247	0.232272	-1.744043425	0.359297
194	212.5	0.961725	0.0725125	0.967461
425	177.5	0.940958	-0.087462841	0.525769
524.5	478	0.928231	-0.133932155	1
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106.5	114.5	0.939471	-0.112659265	0.879486
69	82.4999	0.918544	0.176877762	0.959189
922	1146.5	0.651482	-0.53094126	0.436591
1727.5	1749.5	0.408379	-0.446836556	0.389074

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1946	1754.99	0.647257	0.762172888	0.603699
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1493.02	1591.98	0.884594	-0.233427714	0.834378
11381.9	11697.8	0.65511	-0.593934699	0.629878
123.5	240.5	0.642437	-2.14101231	0.335377
870.5	904.5	0.831957	-0.2608815	0.793548
1066.5	774	0.916041	-0.114688336	0.786153
1897	2336.5	0.663362	-0.984116958	0.530804
3588	3368.52	0.996231	-0.009067394	0.966984
1505.01	1520.5	0.891674	-0.207360355	0.883432
55.5	38.5	0.467094	1.293046975	0.388495
363.499	350	0.687421	-0.731020525	0.714548
24.5	14	0.38777	-1.807354922	0.713857
4036.5	4387	0.77566	-0.57934421	0.720207
8709.5	7830	0.774226	-0.456742377	0.856397
292	396	0.977355	-0.055398239	0.768499
8.5	7	0.810062	0.371968777	0.70295
360.5	351.5	0.908018	-0.178705887	0.927632
8372.11	7937.2	0.828114	-0.383137076	0.865749
5299.5	5877.5	0.752295	-0.503203779	0.667902
10366	9180.97	0.503862	-0.744983475	0.625037
4161.53	3543.54	0.563691	-0.612701399	0.736386
1547.5	1589.5	0.833205	-0.352549711	0.812895
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1601.99	1656.03	0.879211	-0.25441658	0.854411
360	439.5	0.953214	-0.114642566	0.820237
918.5	962	0.932474	-0.154011506	0.901103
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2603.5	2700	0.681307	-0.549385896	0.647687
1987	2038	0.714957	-0.547515721	0.693537
4120.22	4336.04	0.857222	-0.345343414	0.822912
479.5	554	0.967782	-0.088403382	0.884158
1307.52	1531.96	0.955874	-0.1150727	0.858155
4274.75	4235.01	0.945221	-0.128992486	0.951163
4736	3970	0.580221	-0.54678499	0.782915
2974.43	3354.52	0.429481	-0.651954058	0.305992
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12839	10042	0.695159	-0.361615266	0.994483
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11613.5	10267.5	0.475343	-0.611826421	0.626144
1920.5	1895	0.703739	-0.477336507	0.716751
23681.8	22900	0.582203	-0.524165952	0.62175
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32446.1	25558.2	0.629927	-0.463979145	0.910638
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3266.5	3339.5	0.684873	-0.572867585	0.665331
2540	2352	0.560039	-0.646610019	0.639236
215	258.5	0.9557	-0.089981367	0.810199
7113.5	6811.5	0.222844	-0.696996047	0.266166

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1347	1425.5	0.770231	-0.486391088	0.726119
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415	380.5	0.523427	-1.317589159	0.579027
11733	9791	0.422148	-1.858288429	0.526014
585.999	507.499	0.948767	0.092962604	0.846982
2165	2338.5	0.881818	-0.257580479	0.82512
176	192.5	0.980389	0.036423408	0.947753
819.5	355.5	0.517672	0.750283413	0.273317
387	528	0.902212	-0.258567854	0.696145
59	84	0.649971	-1.673189684	0.476012
2720	4067	0.807476	-0.554522553	0.545952
311	371.5	0.874845	-0.352992808	0.766558
1683.5	1797.33	0.879533	-0.263977372	0.831796
135	137.5	0.995255	0.010647244	0.992882
1670	1364.49	0.434989	-1.514570705	0.564376
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2676	2942	0.834788	-0.392570159	0.768472
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1485	1526.5	0.563897	-0.932620871	0.542713
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64	102	0.868565	0.366322214	0.861569
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545.5	537	0.755788	-0.408440803	0.770527
138.5	200.5	0.792236	-0.662531054	0.569021
781.497	1074.49	0.861911	-0.374089511	0.651367
655	701	0.789831	-0.433510159	0.735913
451	375	0.771237	-0.397023445	0.930088
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3117.9	3039.93	0.922453	-0.17222073	0.939627
127.5	209	0.850509	-0.551409941	0.580142
275	294.5	0.776791	-0.64385619	0.735181
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617.922	628.602	0.676933	-0.37877454	0.655077
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758.5	743	0.522297	-1.279292991	0.535825
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36.5	102.5	0.907551	-0.489384841	0.425641
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129.5	239.5	0.738944	-0.983385286	0.393539
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474.499	536	0.80425	-0.396405787	0.704996
56	65.5	0.97056	0.050626073	0.890111
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4.23265	8.24665	0.935903	-0.218701207	0.547372
369	306.5	0.678869	-0.469485283	0.869878
94.5	87.5	0.875041	-0.304854582	0.923327
42	28	0.46	-1.034765418	0.787305
629.5	614	0.377008	-0.7149798	0.403912
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3.47531	0.90184	0.798745	-0.485173622	0.687398
335.292	323.973	0.756269	-0.407067815	0.788402
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62.7964	71.3067	0.993765	-0.014727844	0.910873
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37	28.5	0.511929	-0.924051147	0.728202
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41.9974	80.3937	0.344306	-0.912538371	0.0455838
53.5	55.5	0.933289	-0.156504486	0.909174
98	97	0.937	-0.147104294	0.943613
11.8453	18.1899	0.973167	0.068617577	0.73932
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39.5	37	0.563965	-1.445799753	0.601466
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270.983	265.872	0.91535	-0.193680574	0.928002
2659.5	2424.5	0.98176	0.040122025	0.924774
6972.01	6836.91	0.881154	-0.281114673	0.894033
256.55	247.401	0.893609	-0.111920091	0.94425
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3923.83	4206.03	0.692063	-0.620379838	0.635191
126.032	155.141	0.813038	-0.462173502	0.666885
595.926	608.945	0.904388	-0.232225781	0.890469
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121.5	114	0.929585	-0.150025444	0.973548
1038.28	1102.12	0.849255	-0.27201348	0.796919
105.527	91.0747	0.907541	0.237119152	0.837865
0	0.5	0.450185	#DIV/0!	1
1.5	0.5	0.825659	0.415037499	0.523243
101.5	101	0.602008	-1.325485914	0.604841
34.5	25	0.683158	-0.716207034	0.902344
0.72727	4.64E-34	0.79295	-0.489051271	0.528548
2.75125	3.15336	0.500501	0.835015674	0.578306
25	21.5	0.867787	-0.251538767	0.983355
0.5	0	0.0138468	2.807354922	0.00900735
66	71	0.925208	-0.198904068	0.881628
0.5	0	0.438509	2	0.320255
1.5	0.5	0.252216	-1.584962501	1
2264.5	2101.5	0.172636	-0.819671369	0.2338
90.5	47	0.461288	-0.557331382	0.701875
1501.42	1410.85	0.842484	-0.313456373	0.890554
337.5	241	0.945259	0.079014575	0.68115
0.69326	1.5	0.642826	#NUM!	0.347325
9.05464	8.43543	0.426295	-1.253523741	0.477271
897.155	926.263	0.837072	-0.339602154	0.812552
1040.7	1704.37	0.79943	-0.360317757	0.359932
9.24875	8.84664	0.919225	0.195658349	0.89524
214.68	255.16	0.96274	0.080822244	0.915525
11	9	0.518461	-1	0.674073
0	0	0.308068	#DIV/0!	0.308068
6028	8495.5	0.384407	-1.536483763	0.197344
462.176	472.158	0.888171	0.257631342	0.900417
10	19	0.822846	-0.415037499	0.343136
319.598	305.778	0.934974	-0.138922549	0.96556
45.3999	59.9178	0.532262	-0.950028363	0.326365
922	934.5	0.8534	-0.379998898	0.844982
138.16	138.135	0.826418	-0.369578879	0.826554
91.5	120.5	0.888136	-0.286881148	0.701566
417	432.5	0.979468	-0.027946541	0.939766
797.5	717.5	0.963394	-0.065693521	0.954128

0	0	?	#DIV/0!	?
8.5	9	0.726505	-0.628031223	0.684446
1.94E-38	1.40E-10	0.999372	82.05483801	0.308347
1376.5	1490	0.899171	-0.179454717	0.829447
0	0	?	#DIV/0!	?
516	550	0.943192	-0.133176343	0.901011
1128.49	1091.85	0.929105	-0.132561917	0.955269
2.04899	1.53574	0.522705	-2.004551437	0.66352
56.4239	66.0191	0.657299	-1.179257072	0.567633
9.24E-19	2.55E-32	?	#NUM!	?
3.87184	2.13447	0.0715448	-2.953019336	0.276607
190	182	0.812793	-0.289084838	0.855343
138	93.5	0.814262	-0.36705747	0.918165
6	9.5	0.35594	-1.584962501	0.133887
3918.55	3813.19	0.633267	-0.797550791	0.654094
483	368	0.448009	-0.691877705	0.7655
876.5	790.5	0.811152	-0.480989532	0.875455
1.43163	0.0374	0.475945	1.578930407	0.312668
0	0	?	#DIV/0!	?
0	2	1	#DIV/0!	0.308068
94.4263	117.868	0.129835	-1.193095865	0.0582209
0	0	?	#DIV/0!	?
430.5	511.5	0.781347	-0.600122308	0.669589
278.5	281.5	0.726236	-0.477677328	0.71646
81	84.5	0.679307	-0.785261151	0.649535
89.5	252.5	0.754891	-1.839959587	0.314134
0	1.5	1	#DIV/0!	0.308068
15.5684	13.9626	0.54364	-1.720836079	0.601506
8.5	8	0.584131	-1.087462841	0.624576
45.5	36	0.873356	0.220125814	0.720511
1034.18	983.063	0.922344	0.163857904	0.890695
40.2153	39.0377	0.656048	-1.123990741	0.672956
315.5	309	0.74539	-0.497365174	0.762507
888	754	0.756421	-0.429187017	0.897153
1984.5	2351	0.777701	-0.536707332	0.65627
424.412	379.838	0.479014	-1.065948552	0.565278
72.5	101.5	0.8678	0.319936797	0.918844
2.25E-16	1.30E-20	?	#NUM!	?
13	8.5	0.915097	-0.176877762	0.831687
2	2.5	0.698091	0.807354922	0.794363
58.5	63	0.982128	-0.037474705	0.928652
0	0.5	0.450185	#DIV/0!	1
180.644	248.735	0.935796	0.165128748	0.86542
62.0781	85.152	0.973203	-0.078560251	0.789181
572.784	458.376	0.613712	-0.563281189	0.843906
3	3.5	1	0	0.91071
5.55515	2.57733	0.1233	-57.01450828	0.396382
3784.5	3910.5	0.654254	-0.592415343	0.623953
56.5	55.5	0.894873	-0.250323354	0.906464
411.716	357.624	0.854303	-0.27457954	0.96446
773	915.003	0.890244	-0.21277949	0.748743
4.5	4	0.338658	-2.169925001	0.402178
753.5	859.5	0.915708	-0.204316876	0.827552
1	1	0.785812	0.584962501	0.785812
8.65113	10.8744	0.812031	-0.527926087	0.665866
73.4387	73.1487	0.960439	-0.08574555	0.963143

1419.5	1449.5	0.439927	-2.446027571	0.429446
3652.5	5558.5	0.499297	-1.585555105	0.265349
58.1954	107.93	0.983791	0.044146343	0.599963
9.60108	6.66759	0.540509	-0.959749088	0.814791
226	251.5	0.893643	0.261970079	0.953737
104.5	87	0.479338	1.30106949	0.435408
1	0	0	#NUM!	?
404	406.5	0.794415	-0.465918668	0.789972
25.1663	27.9987	0.667207	-0.963842494	0.599792
11	19	0.910214	0.295455884	0.804945
3315.18	3609.91	0.58019	-0.674648504	0.499753
1.5	1.5	0.513713	-1.584962501	0.513713
63.6108	73.3493	0.966576	0.071817679	0.933258
445.834	342.835	0.436008	-1.290089205	0.622957
0.00927	2.42E-06	0.296545	6.527115602	0.292238
0	0	0.308068	#DIV/0!	0.308068
0	1	0.308068	#DIV/0!	1
413.5	382	0.680795	-0.492071174	0.760247
243.981	190.311	0.880533	0.226994791	0.732914
2	2	0.198892	-2	0.198892
193.5	337.5	0.398842	-1.120456325	0.101839
502.826	485.5	0.573161	-0.683896593	0.60684
767.9	710.714	0.714315	-0.720854766	0.765678
4088.63	3635.2	0.769471	-0.437355619	0.86524
4283	3489	0.57091	-1.047249576	0.711632
6.39458	1.9375	0.325747	-36.67872362	0.745976
0	0	?	#DIV/0!	?
169	156.5	0.901089	-0.2410081	0.94849
326.5	276	0.8229	-0.365097245	0.944765
1168.64	1170.5	0.517555	-0.766666987	0.516058
12.5	6	0.436666	-1.64385619	0.846676
53.5	35.5	0.774515	0.302927133	0.500123
157	211.5	0.95086	-0.134749412	0.76488
5.5	14.5	0.854376	-0.459431619	0.256286
489	420	0.601444	-1.149055809	0.694647
156	130.5	0.835697	-0.354664881	0.958489
1154	1070.5	0.81296	-0.38126462	0.870247
0	0	?	#DIV/0!	?
1.5	1	0.785812	-0.584962501	1
0	0	?	#DIV/0!	?
71.5	43.5	0.624108	0.469485283	0.352274
25	37	0.67854	-0.64385619	0.364203
86.0771	100.811	0.924715	0.179996161	0.978257
5094.5	5771.5	0.540547	-0.683775218	0.420517
269	267.5	0.984234	-0.032543373	0.988175
670	647	0.795747	-0.360111289	0.82663
980.5	959	0.857062	-0.315322001	0.872801
87.681	91.8601	0.546327	-1.168790128	0.514891
0.65621	0.50465	0.906886	-0.247176505	0.956409
1.90546	3.95414	0.644817	1.171662006	0.946861
85.2554	84.3508	0.756775	-0.681539672	0.763307
351	284.5	0.878723	-0.238581362	0.970362
83.5	116	0.959837	0.100111485	0.824758
86.529	107.503	0.32024	-1.963729243	0.213214
3128.82	2772.93	0.618423	-0.552058487	0.745693
1029	820	0.0523228	-1.049925225	0.154162

0	1	1	#DIV/0!	0.308068
177	146.5	0.971835	0.04018909	0.803186
122.791	127.633	0.998377	0.004036071	0.978799
154	211.5	0.974315	-0.062215396	0.753459
90.5528	92.1668	0.8948	-0.277096827	0.884182
92.0678	215.202	0.924273	-0.276156345	0.436283
1259	1319	0.659367	-0.316495286	0.587685
1	0.5	0.651448	-1	1
398	364.5	0.440009	-0.769345881	0.530502
252.5	259.5	0.762393	-0.622587573	0.74458
712.5	638.5	0.509114	-0.918325491	0.601129
89	88	0.89866	-0.227805918	0.906397
87	78.5	0.60464	-0.742503778	0.691946
47	58.5	0.981765	0.045323991	0.879152
5	8	0.866773	-0.514573173	0.622002
1291	1292	0.830286	-0.458523934	0.829815
102.5	73	0.871791	-0.148098639	0.75462
112	75.9999	0.494866	-1.762960803	0.701583
13.5642	20.6964	0.696996	-0.933884585	0.433578
14.5	9.5	0.805675	-0.465663572	0.950694
22.3126	33.0053	0.846975	0.400080742	0.923002
0	0	?	#DIV/0!	?
2045.6	2347.01	0.822015	-0.477650387	0.733537
203.5	149.5	0.620501	-1.145323028	0.795069
73.951	23.8198	0.638475	-0.93582878	0.84073
1301	1305.5	0.897604	-0.205214544	0.894954
543.786	501.343	0.832573	-0.448777908	0.880766
686.498	677.5	0.585257	-0.582340077	0.599379
1.40252	3.00105	0.791889	0.63861458	0.782512
103.305	174.57	0.955408	0.122963622	0.709329
21	18.5	0.7193	-0.584962501	0.815992
0.5	2	0.663808	1.584962501	0.825659
438.398	393.879	0.587367	-1.207495209	0.653104
155.834	139.501	0.40351	-1.292968076	0.482996
59.5	54.5	0.983769	0.035919574	0.929802
245.665	262.005	0.767721	-0.410672928	0.709294
1450.96	1353.77	0.751835	-0.453106816	0.811404
7.20808	0.69063	0.587337	-1.051605996	0.681551
269	330	0.827912	-0.438467165	0.688359
1.5	0.5	0.706667	0.736965594	0.468351
31.5	24	0.968634	0.067114196	0.814419
7.75272	4.99244	0.685112	-0.725677676	0.967382
400	478	0.895227	-0.249393495	0.770617
4	15.5	0.886327	-1	0.371082
3865.5	3929.5	0.799236	-0.480248327	0.787921
395.996	424.152	0.820482	-0.459246738	0.775421
19	12	0.562529	-0.440572591	0.811936
1	0	0.622002	-1	0.622002
2.5	5	0.648139	0.847996907	0.907467
120	120.5	0.932279	0.153805336	0.934778
1	0.5	0.353387	#NUM!	0.622002
3.5	3	0.648139	-1.222392421	0.729943
441.5	446	0.921162	-0.153274431	0.913237
3.41E-24	3.85E-19	?	-3.264508785	?
3354	3224	0.701078	-0.575957687	0.73408
106.5	99	0.847215	-0.308444866	0.90255

195.5	188.5	0.630929	-0.628031223	0.664674
0	0	0.308068	#DIV/0!	0.308068
12751.7	14110.3	0.833908	-0.471808908	0.772812
0	0	0.308068	#DIV/0!	0.308068
1371.5	1224.5	0.585565	-0.816985678	0.678086
104	88	0.922343	-0.153545258	0.959249
79.285	91.7058	0.909674	0.155380196	0.96579
0	0.9648	1	#DIV/0!	0.308068
135.498	126.909	0.589097	-0.970428675	0.635995
286.5	255.5	0.791596	-0.387604269	0.88585
22	26	0.953015	0.125530882	0.953015
135	162.5	0.984856	0.036926569	0.896603
152.5	97	0.807118	0.380329765	0.597834
2721	3591	0.172816	-0.914565849	0.057893
15	11.5	0.680597	0.707819249	0.578356
162	120.5	0.889028	-0.185031894	0.874973
7134.11	7409.95	0.803099	-0.41384958	0.773779
12	21	0.901128	0.222392421	0.668717
0	1.5	1	#DIV/0!	0.308068
10	14	0.839403	-0.415037499	0.606089
12.5911	16.8751	0.898791	-0.326587581	0.735638
1423.02	1476	0.867745	0.309870087	0.888065
2714	2767.5	0.418313	-0.642577654	0.396264
1.5	2.5	0.428263	1.874469118	0.542387
63.5	101	0.473918	-1.207324973	0.194018
13	21.5	0.811995	-0.793549123	0.556009
276	285	0.986056	-0.029039673	0.963257
225	240	0.895631	-0.255360478	0.853391
341.5	437	0.917144	-0.233347415	0.76674
127.5	183	0.780733	-0.51053766	0.508274
0.5	2.5	0.329316	2	0.724378
628.5	479	0.44158	-1.074181813	0.661658
34.5	28	0.748949	-0.436099115	0.928525
744.155	669.357	0.806258	-0.425415126	0.881346
2.5	3.5	1	0	0.821423
4.5	6	0.943021	0.152003093	0.886496
2113.5	2151.5	0.604557	-0.629676629	0.58727
18.3511	25.1687	0.863725	-0.307338218	0.621508
1820.5	1698	0.670001	-0.588135876	0.731898
256.5	220	0.830009	-0.373458396	0.935408
20.0557	26.2026	0.945135	0.15311549	0.90492
376.5	442.5	0.809541	-0.512111935	0.704472
94.5	81	0.752127	-0.485426827	0.873634
49.8109	14.3673	0.120715	-1.061135994	0.48832
776.228	753.786	0.753984	-0.509996608	0.776835
34	43	0.860601	0.38827059	0.979928
14.5	10.5	0.863212	0.311944006	0.71471
2398	2207	0.521152	-1.185272564	0.5783
11.9653	16.8346	0.811807	-0.55699705	0.596699
1.5	1	0.559404	-1.584962501	0.764931
5.5	4.5	0.736134	0.628031223	0.655849
77.5	60	0.804421	-0.345387068	0.987956
34.6202	57.4391	0.965726	0.100722561	0.73023
1.00921	1.44035	0.532811	-35.09579097	0.389749
475.024	526.616	0.926772	-0.107490031	0.818128
13	18	0.308068	-1	0.118807

71	90.4866	0.701155	-0.774707688	0.533522
11.2509	23.178	0.994386	0.009572546	0.313376
0	0	?	#DIV/0!	?
27	31.5	0.564901	-0.896906507	0.445003
4	7.5	0.66704	-1.415037499	0.33681
49	68	0.730615	-0.756728849	0.514512
6.93925	5.31573	0.956146	-0.080624363	0.856206
0.5	0	0.308068	#NUM!	1
15.5	31	0.376441	-0.866733469	0.0447349
7.5	2.5	1	0	0.363033
105.5	113.5	0.991855	0.020367798	0.964723
387.499	509.5	0.583277	-1.473927465	0.427927
86.5	95	0.565082	-1.627273306	0.513862
33.6002	32.6432	0.922318	-0.162147019	0.943067
284	230.5	0.533068	-0.850539101	0.712434
674.5	606.5	0.758117	-0.501342229	0.838956
215.05	263.056	0.923763	-0.190199453	0.789425
315.833	313.41	0.699128	-0.35176837	0.709033
230.155	201.472	0.779244	-0.627642067	0.855531
0	0	?	#DIV/0!	?
1.5	0.5	0.252216	-1.584962501	1
716.5	559	0.766489	-0.49471893	0.942066
1	0	0.308068	#NUM!	1
0	0	?	#DIV/0!	?
470	596.5	0.908431	-0.239892326	0.753129
917.716	962.59	0.710681	-0.467183946	0.664016
175.5	206.5	0.853925	-0.410933101	0.753985
62.9519	110.901	0.461735	-0.630206892	0.076776
131.5	122.591	0.830373	-0.380707507	0.879205
156.5	159	0.84974	-0.240170297	0.834426
5	9	0.871675	-0.514573173	0.565162
30.5	66	0.826854	-0.760812336	0.42728
23	7.5	0.258505	-0.879705766	0.555132
680.5	753	0.789584	-0.45334931	0.711419
245.5	230.5	0.580242	-1.32486937	0.617425
12.8013	8.72561	0.804928	-0.394533662	0.934576
2.5	1.5	0.550362	-1.321928095	0.837425
7.5	8.5	0.743882	-0.447458977	0.628311
27.5	31.5	0.925568	0.149377624	0.975138
17	14	0.825043	-0.387023123	0.955734
300.307	623.356	0.935482	-0.264977518	0.561133
232	242	0.910194	-0.178500896	0.877289
5.5	4	0.538083	-1.459431619	0.718549
269.5	225	0.773493	-0.391146879	0.929621
33	40	0.828175	0.398549376	0.942095
27.5	35.5	0.935377	0.172836597	0.917006
1703.64	1574.84	0.821568	-0.385765151	0.878193
88.3273	78.6878	0.498566	-0.895916304	0.598708
76.5	80.5	0.882871	-0.257387843	0.846035
54.5	73.5	0.866215	-0.393144893	0.682385
2.16995	0	0.00700766	-17.567841	0.999975
2530.5	2555	0.904491	-0.213110344	0.897813
214.314	269.066	0.350186	-0.876896811	0.183308
0	1	0.622002	#DIV/0!	0.622002
64.2373	64.4758	0.784441	-0.467412785	0.781662
22.5	22.5	0.857512	0.315501826	0.857512

438.353	364.028	0.858376	-0.276075527	0.99622
10	19.5	0.635357	-1.321928095	0.267413
16.7548	14.8356	0.779726	-0.416553768	0.87861
1.5	1.5	0.764931	-0.584962501	0.764931
2039.5	1903.5	0.864687	-0.309251171	0.911069
25.9537	24.5238	0.333135	-0.991249364	0.381426
20.5	17.4298	0.815626	-0.357552005	0.940668
1414.6	1591	0.740747	-0.533225559	0.64561
81.4654	47.6406	0.339455	-1.515225528	0.709614
14	16.5	0.483855	-1.222392421	0.372553
1089.47	1051.67	0.803507	-0.294962396	0.839511
207.5	234.5	0.788899	-0.517058436	0.703407
224	241.5	0.920491	-0.18896942	0.870459
49.0817	68.9439	0.888511	-0.309422505	0.669115
385.5	392	0.805485	-0.451035698	0.793687
0	0.5	1	#DIV/0!	0.308068
103	79.5	0.483233	-1.457681837	0.644177
43	46	0.723975	-0.618909833	0.673295
1238.9	1117.74	0.650767	-1.017734378	0.713114
67.33	42.5	0.998086	0.003638037	0.727185
28	18	0.314513	-1.415037499	0.64115
494.5	419.5	0.899773	-0.239020277	0.999334
587.529	488.929	0.541555	-0.782326749	0.708395
472.5	749	0.168083	-1.58954977	0.0426105
0	0	?	#DIV/0!	?
138.056	93.4269	0.917865	-0.148887694	0.813557
2.93961	6.4045	0.654114	1.240198278	0.950929
117.5	114.5	0.604447	-0.76799249	0.625962
389.5	334	0.570817	-0.599854969	0.736804
634	607	0.896676	-0.17006723	0.936073
4.53788	5.21116	0.863223	0.28943436	0.954255
148	157.5	0.527916	-2.121990524	0.496772
0.35865	1.97303	0.851569	0.541260349	0.16781
43.5	58.5	0.876416	-0.355480655	0.692098
1044.26	1062.78	0.748786	-0.584264988	0.736161
193.188	236.919	0.92201	-0.155859985	0.75527
258.5	305	0.649735	-0.70568144	0.514787
6161.43	5908.52	0.777552	-0.421402431	0.812453
458.5	467	0.442402	-1.393694697	0.430315
0	0	?	#DIV/0!	?
147	155	0.386548	-1.060120992	0.345563
5.4343	5.50365	0.362793	-1.606380293	0.355045
8	6	0.105831	-3	0.200228
3	2.5	0.237986	#NUM!	0.308068
21.5854	25.0433	0.447215	-0.80145031	0.316188
314	336	0.769042	-0.384727665	0.704381
0	0.5	0.450185	#DIV/0!	1
0	0	?	#DIV/0!	?
533	451	0.843414	-0.324976401	0.962497
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?

4	2.5	0.918711	-0.192645078	0.838734
16.5	16.5	0.824853	-0.343954401	0.824853
2	3	1	0	0.764931
5.5	2	0.373771	-3.459431619	0.774936
4765	4982	0.795227	-0.436490987	0.761074
1360.5	1241	0.830019	-0.363479293	0.896273
1772.49	1606.03	0.798278	-0.382690725	0.878267
0	0.5	0.329316	#DIV/0!	0.495025
1203.12	1304.86	0.84535	-0.390291495	0.791901
3.5	6	0.524165	1.440572591	0.703192
7	7.5	0.523816	1.237039197	0.544375
0.5	1	0.559404	1.584962501	0.764931
0	0	?	#DIV/0!	?
434.5	411	0.824501	-0.351701379	0.867638
227.71	210.971	0.783725	-0.406660769	0.846935
0	0	?	#DIV/0!	?
277.5	244	0.870763	-0.26459492	0.963638
0	0	?	#DIV/0!	?
189	206	0.814297	-0.464210341	0.756218
1.5	1.5	0.651448	1	0.651448
313.5	289	0.752489	-0.544128783	0.811965
11	20.5	1	0	0.653384
3099.06	3295.48	0.804804	-0.539961631	0.766815
1	4.5	0.749519	#NUM!	0.213405
398.5	474	0.99856	0.003615779	0.89325
1.5	1.01555	0.718119	0.736965594	0.597337
176.315	162.145	0.78445	-0.383198793	0.85714
17	16.5	1	0	0.979419
70.5	60.5	0.72234	-0.554588852	0.842225
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
191.5	135.5	0.320751	-1.515111391	0.560373
93.4999	166.5	0.672731	-1.739537995	0.396778
507.998	523	0.924442	-0.191027207	0.906566
1875.52	1879.51	0.89341	-0.263434458	0.892065
2.5	3	0.860525	-0.321928095	0.72755
1.5	5	0.741917	-1.584962501	0.202587
654.58	728.289	0.882054	-0.260736142	0.80377
186	250	0.90397	-0.305539134	0.737613
0	0.5	1	#DIV/0!	0.308068
0	0	0.308068	#DIV/0!	0.308068
798.759	826.482	0.91745	-0.211895907	0.896641
164.019	149.68	0.916379	-0.163257745	0.984658
0	0	0.308068	#DIV/0!	0.308068
0.5	0.5	0.651448	1	0.651448
211	198.5	0.822598	-0.381249186	0.867083
1262	1167	0.954759	0.099916684	0.907517
10.4793	6.81382	0.331421	-1.688853176	0.608697
9.94537	18.0646	0.599217	-1.242852752	0.252337
0	1.5	1	#DIV/0!	0.308068
767.5	659.5	0.226335	-0.812533471	0.382057
25.5	15	0.305194	-2.350497247	0.589778
127.5	134	0.871665	-0.280107919	0.835328
194	164	0.959884	-0.053018382	0.869045
45.5	35	0.711596	-0.600904045	0.903959
11	5	0.532042	-0.7589919	0.829521

78.5	71	0.562215	-1.124695747	0.629751
0.5	3	1	0	0.393741
284.5	349.5	0.916657	-0.201000127	0.77447
5.5	4.5	0.703664	0.540568381	0.599015
802.72	719.351	0.707596	-0.517973996	0.804277
643.496	720.498	0.785583	-0.624158439	0.716799
1157.5	1405	0.776142	-0.546529353	0.63781
7995.8	7116.33	0.366668	-0.742811377	0.496983
156.5	156	0.913668	-0.145360604	0.916529
2.71685	6.08731	0.990139	-0.025543721	0.407133
0	0	?	#DIV/0!	?
114	115.5	0.934553	0.155794673	0.942082
293	358	0.932738	0.158389971	0.938654
0	1	1	#DIV/0!	0.308068
1	1	0.710482	-1	0.710482
14	20.5	0.563684	-1.807354922	0.363957
249.737	277.078	0.88426	-0.301412286	0.818551
17	8.5	0.340796	1.355480655	0.232524
1.5	0	1	0	0.329316
92.5	68	0.415617	-2.321928095	0.573279
292.5	358	0.974918	0.058005603	0.888719
0	0	0.308068	#DIV/0!	0.308068
0.5	0	0.308068	#NUM!	1
16	13.5	0.959366	0.087462841	0.858856
440	399	0.920973	-0.128514741	0.992605
487	420	0.635607	-0.454072212	0.813269
555.5	360	0.687531	-0.664372467	0.984898
12.1485	1.28732	0.785361	0.408154097	0.347365
113.591	132.304	0.918797	-0.217732627	0.825072
2.5	2	0.622002	-1.321928095	0.739226
130	195	0.627926	-1.530514717	0.412451
6.60328	8.20263	0.955791	-0.081310836	0.765698
17	14	0.606953	-0.839535328	0.753804
104	100.5	0.844442	-0.316735426	0.870597
16951.6	15739.4	0.316149	-0.590329941	0.414501
72.4653	81.3402	0.965722	0.081010523	0.961601
130.5	124.5	0.665728	0.789077627	0.646757
46.5	28	0.82513	-0.389411692	0.879957
170.5	168	0.966155	-0.078237574	0.975551
5	5	1	0	1
549	564.5	0.700859	-0.581026086	0.677509
2	3.5	0.878232	-0.415037499	0.552674
154.5	177	0.837469	-0.382719779	0.740498
0	0.88956	1	#DIV/0!	0.308068
1	0	0.622002	-1	0.622002
500.5	404	0.608708	-0.55359833	0.836399
4	4.5	0.84064	-0.415037499	0.764036
0	0	?	#DIV/0!	?
2	2.5	0.610398	-2	0.504632
176.946	173.433	0.855823	-0.329026677	0.869652
416.005	1033.19	0.523854	-0.81231049	0.0493851
10	8.5	0.60108	-0.862496476	0.723657
27.8657	24.0789	0.545254	-1.567447741	0.626357
77	72	0.311844	-0.68182404	0.38932
4.5	10	0.675463	1	0.92469
3	2	0.673234	0.874469118	0.561007

73.5	67.5	0.736024	-0.444784843	0.814439
0	0	?	#DIV/0!	?
243.5	279	0.952052	-0.12042304	0.865644
2	1.5	0.545627	0.584962501	0.3832
1380.5	1078	0.928008	0.151637279	0.789187
330.645	283.568	0.382779	-1.149970755	0.504745
442	443.5	0.569349	-0.523459959	0.565307
432	445	0.75691	-0.648978994	0.737827
0	0	?	#DIV/0!	?
422	442	0.935216	-0.158856764	0.90595
1.61E-05	2.52E-06	0.34013	-3.822753409	0.923515
389.5	376	0.853796	-0.338692977	0.877686
0	0	?	#DIV/0!	?
6.5	14	0.90539	-0.378511623	0.494781
19	20.5	0.832681	-0.293731203	0.763802
224.5	388.5	0.909518	-0.259824849	0.550305
22.5	37	0.74905	-0.906890596	0.465086
324	294.499	0.596225	-0.864116572	0.669516
7618.5	7658.5	0.698168	-0.50485357	0.693218
1	0.5	0.353387	#NUM!	0.622002
3	7	1	0	0.591677
0	0.5	1	#DIV/0!	0.308068
2.5	3	1	0	0.889735
8.34649	1.40531	0.377202	-2.831778581	0.975325
46784.5	31106	0.0949293	-1.189316319	0.402734
0	0	?	#DIV/0!	?
53.0591	27.9457	0.411627	-1.602423334	0.797708
0	1	0.622002	#DIV/0!	0.622002
0	0	?	#DIV/0!	?
9.05E-05	2.89E-28	0.308068	-67.67764148	1
77.5	61	0.99041	-0.018736563	0.85268
80	67.5	0.766346	0.472487771	0.679106
3027	2809.5	0.617834	-0.518595908	0.701033
16.5	10.5	0.292117	-1.137503524	0.699495
2	2.5	0.610398	-2	0.504632
332	302	0.777465	-0.52954938	0.841279
34.5939	50.1232	0.858766	-0.455343153	0.642081
0	0.5	0.353387	#DIV/0!	0.622002
10.5	7	0.774544	-0.485426827	0.961634
3269.52	3108.5	0.673865	-0.589111855	0.718363
1.5	1	1	0	0.764931
10	8	0.50699	-1.514573173	0.638879
0	1.5	1	#DIV/0!	0.034897
3.09194	3.4396	0.956873	-0.05181122	0.821659
8	6	0.514418	-1.415037499	0.6882
234	256	0.365943	-1.089005006	0.299596
3	6.5	0.895809	-0.263034406	0.337423
845	914	0.802423	-0.342346466	0.730045
424	424.5	0.398848	-1.635163314	0.39813
4216.5	3480.1	0.770819	-0.435378757	0.922966
0	0	?	#DIV/0!	?
63	61.5	0.841455	-0.377367081	0.857566
637.001	586	0.95204	-0.082733298	0.979047
0	0	?	#DIV/0!	?
405.043	409.221	0.801722	-0.449478653	0.794343
5	5	0.686187	-1	0.686187

72.5	77.4999	0.895291	-0.237394585	0.848458
113	184	0.838941	-0.43647467	0.505363
0	0	?	#DIV/0!	?
1870.5	2190	0.764617	-0.745733452	0.672646
1498	1401.5	0.770497	-0.347310564	0.837782
32.5	40.5	0.956503	-0.115477217	0.819639
54	68.5	0.660011	-0.94753258	0.503746
0.82162	2.5142	0.7405	-4.330965979	0.333247
364.5	353.5	0.808432	0.413552481	0.791617
0	0	0.308068	#DIV/0!	0.308068
291.174	264.017	0.631308	-0.92316363	0.697903
392.45	427.452	0.909446	-0.201282466	0.848366
226	246	0.86933	0.314247358	0.916496
7.42399	0.15784	0.531236	-1.344715324	0.693893
55.6372	51.5014	0.751551	-0.572294235	0.805946
90	91	0.826111	-0.447458977	0.819058
9.5	10	0.791102	0.506959989	0.816437
1274	1414.5	0.521155	-0.483842318	0.388978
463.735	410.996	0.850861	-0.343709488	0.930368
6	1.5	0.532236	-1	0.748162
23	24	0.966001	0.091147888	0.988662
217	223	0.894153	-0.237989276	0.875137
255.5	234.5	0.650563	-0.842361372	0.710494
7	13.5	1	0	0.644939
114.218	134.37	0.98389	-0.024380714	0.816838
804.758	856.604	0.907757	0.197284753	0.948186
137	67.5	0.835608	0.336596145	0.554844
15.5	33	0.973136	-0.096215315	0.547336
76	128.5	0.980271	0.055853235	0.687825
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
115	122.5	0.859891	-0.337695411	0.817174
4.5	2	0.770925	0.415037499	0.457976
0	0	?	#DIV/0!	?
38415.3	45031.7	0.285494	-0.736507493	0.1606
2099	2017	0.460511	-0.390278369	0.531544
367.5	327	0.972101	-0.056034035	0.947236
14.5	7.5	0.632798	-0.688055994	0.894223
16.5	16	0.44338	-2.044394119	0.459998
1516	1404	0.699838	-0.616956882	0.76014
4	4.5	0.81954	0.459431619	0.878786
411.5	779.5	0.793754	-0.777858025	0.435136
54	56	0.840717	-0.328622747	0.812534
343.661	344.52	0.861262	-0.308129292	0.859488
385.962	406.788	0.126224	-0.956023909	0.101497
0.5	1.5	1	0	0.513713
0	0	?	#DIV/0!	?
4.5	59.5	0.861064	1.637429921	0.428789
59.5	64.5	0.818076	-0.435386145	0.761821
4.5	3	0.562529	-1.169925001	0.811936
32	32	0.564043	-1.04580369	0.564043
2	3	0.680109	1	0.834708
14.5	22.5	0.916157	-0.273018494	0.663781
307.769	233.942	0.697578	-0.42056537	0.983842
0	0.5	1	#DIV/0!	0.308068
32	76.5	0.782197	0.781359714	0.795896

382	305.5	0.97518	0.050105056	0.836325
49.5	49.5	0.887835	-0.254317189	0.887836
397	434.5	0.959267	-0.101613737	0.903005
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0.5	0	0.438509	2	0.320255
51.5	63.5	0.925069	0.208317236	0.962469
127.5	171	0.568502	-1.455194626	0.398709
973	895	0.628614	-0.6043679	0.708587
0	0	?	#DIV/0!	?
0.19436	0.5	0.448558	2.363167066	0.626933
0.5	0.5	0.450185	#NUM!	0.450185
6.26E-18	0.72332	1	#NUM!	0.308068
393.5	473.5	0.959632	-0.108467172	0.847693
0	0.5	1	#DIV/0!	0.308068
0.49999	0	0.308068	-34.55888643	1
1.12E-06	0.56866	0.999998	#NUM!	0.204794
0	1.5	1	#DIV/0!	0.308068
405.999	654.997	0.961642	0.097883323	0.713342
89	128.5	0.904794	-0.227805918	0.635913
0	0	?	#DIV/0!	?
945	914	0.834727	-0.39031507	0.857185
1.5	1	0.3832	#NUM!	0.545627
34	33	0.923088	0.179323699	0.906109
8.95013	9.44662	0.541625	-1.33502462	0.50785
315	331.5	0.845432	-0.356693513	0.809474
235	276	0.832453	-0.345135486	0.702948
59.5	59.5	0.790847	-0.387023123	0.790847
3	0.5	0.758682	-0.584962501	0.648511
191.714	219.703	0.772858	-0.55970072	0.677343
31	43.5	0.913605	-0.253756592	0.707605
0.49528	2.58079	0.840186	1.013255213	0.540478
1303	1458	0.547194	-0.534641897	0.418139
5541	6954.5	0.933575	0.151495288	0.913493
5.23E-19	0	?	#NUM!	?
13.5	15.5	0.955396	0.103093493	0.955396
1	0.5	0.353387	#NUM!	0.622002
7.5	3.5	0.486653	-1.906890596	0.843013
4.5	4.5	0.413414	-3.169925001	0.413414
104.5	107.5	0.830277	-0.385431037	0.81008
197.797	199.021	0.859608	-0.310373673	0.855197
266	325	0.965346	-0.095280503	0.84651
2.5	4.5	0.8566	0.485426827	0.8566
0	1.5	1	#DIV/0!	0.308068
0	0	?	#DIV/0!	?
167.5	116	0.805033	-0.343623166	0.911009
8	11.5	0.925211	-0.192645078	0.677524
0.5	0	0.308068	#NUM!	1
7	15.5	0.79117	-1	0.394325
8	5.5	0.531113	-1.415037499	0.747458
0.5	0	0.308068	#NUM!	1
0.5	0	1	0	0.450185
524.499	617.503	0.875385	-0.330892639	0.77118
0	0	0.308068	#DIV/0!	0.308068
208.5	230.5	0.954496	-0.115188938	0.892352

1481.21	1238.38	0.663842	-0.620563376	0.815151
0	0	?	#DIV/0!	?
1592.76	1389.33	0.72007	-0.536834803	0.831527
83.5	74	0.874742	0.170884559	0.765376
0	0	?	#DIV/0!	?
466	343.5	0.895412	0.155404584	0.668334
1	1	0.567924	1.321928095	0.567924
346	301.5	0.488959	-0.570442083	0.666084
12.8867	12.1608	0.488246	-1.912857378	0.519545
50.5	54	0.740122	-0.570748642	0.689065
6.5	6.5	0.83383	0.387023123	0.83383
4	5	0.806588	-0.678071905	0.686187
264	236.5	0.685371	-0.393342428	0.817523
721	594	0.7527	-0.427766259	0.92064
0.0818	0	0.308068	-78.31559067	1
336.5	482	0.90344	-0.267758222	0.671395
0	0	?	#DIV/0!	?
649	613	0.895029	-0.244042585	0.932264
70.8072	77.7356	0.762164	-0.487686959	0.686849
1	0.5	0.474021	1	0.308068
0	0	?	#DIV/0!	?
181.5	126.5	0.684775	0.71292012	0.556483
3.5	1.5	0.409302	-2.807354922	0.770719
214	181	0.9474	-0.104842366	0.936912
0.5	1	0.622002	#NUM!	0.353387
1.18771	0.82406	0.417419	-1.496019788	0.655788
18	11	0.611386	-0.710493383	1
1.5	2.5	0.706667	0.736965594	1
146.5	104.5	0.526033	-1.075815782	0.766413
19.3801	17.4042	0.341251	-0.982031865	0.436572
631.008	598.482	0.820992	-0.408413217	0.857711
19.5	27	0.811389	0.547487795	0.968107
21	23.5	0.805657	-0.534336428	0.734688
2	0.5	0.450185	-2	1
0	0.5	1	#DIV/0!	0.308068
15	27.5	0.917112	-0.206450877	0.472395
92.5	131.5	0.895459	0.275973462	0.895459
11	15	0.666884	-1.289506617	0.498311
422	524.5	0.81959	-0.538704835	0.687961
188.027	213.384	0.939513	0.158342995	0.990155
0	0	0.308068	#DIV/0!	0.308068
308	306	0.834564	-0.378043292	0.839123
8.58289	1.53E-07	0.439768	-1.988743362	0.784295
45.5	31	0.931945	-0.132755209	0.82333
11.5	15.5	0.871961	0.38332864	0.981587
429	582	0.942503	0.149983926	0.871042
0.5	0	1	0	0.450185
51	18.5	0.557015	-0.672425342	0.671579
5	9	0.924624	0.263034406	0.777997
0	0	?	#DIV/0!	?
1925.5	3291	0.925047	0.197507049	0.721383
52	70.0001	0.852444	-0.452512205	0.674899
621	524	0.618006	-0.812883053	0.747224
10.5	10	0.329796	2.920565533	0.326864
0	0	?	#DIV/0!	?
2.5	4	0.804317	-0.736965594	0.547349

0.5	0.5	0.450185	#NUM!	0.450185
4.5	1.5	0.922417	0.152003093	0.512627
2.5	1.61044	0.850034	0.263034406	0.607205
214.5	237	0.73549	0.565778944	0.790899
10.7112	0.03828	0.318105	0.213382424	0.00323737
0	0	?	#DIV/0!	?
291.55	278.779	0.78624	-0.440991142	0.820757
631.001	660.001	0.800867	-0.421915232	0.766285
0.5	1.5	0.613399	1.584962501	1
0	0.5	0.353387	#DIV/0!	0.622002
262.109	303.691	0.875534	-0.239561726	0.751436
3	51.5	0.876565	1.662965013	0.354734
1.05921	0	0.721966	-0.680827507	0.563034
294.955	292.549	0.862054	-0.266830104	0.868621
0.5	0	0.308068	#NUM!	1
0	0	?	#DIV/0!	?
538.5	575	0.990649	-0.020234484	0.945209
419.567	441.012	0.339096	-0.864992195	0.295858
25.5	22	0.626346	-0.543142325	0.780937
974.124	1029.5	0.494679	-2.044921273	0.465744
398	358	0.668047	-0.875073388	0.736617
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
1.09785	5.72376	0.79929	1.19611262	0.57428
0	0	?	#DIV/0!	?
6446	9373	0.705533	-1.006280399	0.486353
250	283	0.747584	-0.662003536	0.664483
0	0	?	#DIV/0!	?
3695.5	1531	0.835279	-0.274833333	0.627541
5926.5	5310.5	0.53803	-1.58204428	0.59963
10.5	7.5	0.151621	-1.222392421	0.409302
3.5	1.5	0.639236	-0.807354922	0.873517
666	456.5	0.843665	-0.25009535	0.847281
41.5	42	0.881533	-0.28757659	0.873736
0	0	?	#DIV/0!	?
468.5	435.5	0.631192	-0.561292456	0.705207
1798.89	1618.76	0.634688	-0.742327505	0.718729
52	52	0.864513	-0.224706287	0.864513
0	1.5	1	#DIV/0!	0.308068
129.5	175.5	0.75178	-0.590543533	0.527241
180.293	175.081	0.987655	-0.021127045	0.987795
126	116.5	0.549408	-0.682659175	0.62791
414.22	357.423	0.752199	-0.368273424	0.900865
0	0.5	1	#DIV/0!	0.308068
2.85719	3	0.651166	-1.365949163	0.6259
1306.5	1246	0.946006	-0.131113082	0.974763
47	45.5	0.928869	0.173331603	0.91119
1.5	4.5	0.651448	-0.584962501	0.039481
0.96981	0.19562	0.814918	0.436508924	0.466216
4.5498	2.30236	0.316677	-2.133985583	0.694971
0	0	?	#DIV/0!	?
6	6	0.935305	-0.125530882	0.935305
0	0	?	#DIV/0!	?
172	163	0.986535	-0.025385318	0.973076
1011.39	1074.73	0.931438	0.162343356	0.967439
3412.5	3339	0.813218	-0.31717978	0.833105

1.83E-31	0.77367	1	#NUM!	0.308068
969	929.5	0.803489	-0.446647106	0.83282
1322.5	1161	0.809615	0.483087321	0.753763
1	1.5	1	0	0.785812
631.5	533.5	0.78207	-0.389749588	0.923596
17.5	24	0.644138	1.080170349	0.755492
474.5	418.5	0.704861	-0.493659496	0.820818
3910.5	4009	0.643708	-0.945518056	0.627164
2	0.5	0.758682	0.584962501	0.462019
5.22421	5.99E-05	0.930353	0.157216043	0.425657
7	9	0.708007	-1	0.56348
1302.5	1069.5	0.382152	-0.781965579	0.59972
130.5	134	0.742435	0.522840789	0.757455
84.7058	64.9044	0.987634	0.019863114	0.783401
216.469	432.575	0.906143	0.299975098	0.699238
169.5	180.5	0.968433	-0.074224585	0.927709
50.5	52.5	0.465949	-0.570748642	0.419206
3	6.5	0.523243	1.321928095	0.882955
2	1.5	0.680109	-1	0.834708
4235	3667	0.494295	-0.788408874	0.633561
0	0.5	1	#DIV/0!	0.308068
9.5	4	0.185633	#NUM!	0.523358
0	0	?	#DIV/0!	?
896	1042.5	0.989987	-0.024356713	0.892706
46	66	0.922128	-0.219781208	0.69428
0	0	?	#DIV/0!	?
583.679	576.74	0.553319	-0.662762963	0.565407
82	45	0.567191	0.927850214	0.407301
7.19E-15	7.26E-20	?	#NUM!	?
2.5	2	0.834708	-0.321928095	1
0.5	0	0.308068	#NUM!	1
6.42516	15.8153	0.493717	-8.758680897	0.151293
2577.46	1583.19	0.599679	-0.412736957	0.768607
75	99.5	0.839328	-0.447458977	0.656739
3	6.5	0.720345	1	0.951853
335.587	252.553	0.261582	-1.12189342	0.508752
2058.5	2068.5	0.769914	-0.363070772	0.765117
0	0.5	0.450185	#DIV/0!	1
71.8753	108.548	0.824088	-0.548011157	0.571246
2.5	7.5	0.889735	0.263034406	0.267912
15	22	0.305862	-3.321928095	0.15824
4	5.5	0.879601	0.321928095	0.939529
166.718	174.225	0.377026	-0.972440437	0.340885
18	20.5	0.738582	-0.847996907	0.663728
0.5	0	1	0	0.450185
7.5	31	0.929192	0.415037499	0.476833
36.6481	30.7235	0.920137	-0.185943115	0.973034
202.5	206.5	0.757001	-0.713410866	0.745343
8	11.5	0.758248	-0.540568381	0.477703
104.5	91.5	0.803337	-0.376442254	0.908705
2.12346	0.7669	0.762167	-0.588646192	0.783424
0	0.5	0.450185	#DIV/0!	1
822	943.5	0.989449	0.025227146	0.922329
254.5	315	0.959491	-0.108878797	0.828998
0.5	0	0.308068	#NUM!	1
43.3741	50.6191	0.831789	-0.508729544	0.741556

17	24.5	0.680424	-0.387023123	0.282576
10.5	22.5	0.867982	-0.392317423	0.371161
6.06E-24	0	0.308068	76.35756612	0.308068
121.5	157.5	0.931622	-0.176619654	0.761153
0	0	?	#DIV/0!	?
3.41E-18	9.69E-24	?	-9.293558131	?
1146.49	1033.5	0.6777	-0.464305125	0.787677
0	0	?	#DIV/0!	?
90.8496	137.869	0.52806	-1.834749176	0.308528
618.447	674.201	0.774334	-0.368193672	0.690244
137.782	142.157	0.554933	-0.570417708	0.519799
670.169	780.731	0.632611	-0.790790379	0.514153
0.5	0.5	0.450185	#NUM!	0.450185
3.03395	0	0.860962	-0.261774836	0.408587
0.5	0	0.308068	#NUM!	1
1.67E-22	1.18E-08	1	#NUM!	0.308068
0	0	?	#DIV/0!	?
549.497	479.001	0.766534	-0.507639458	0.865438
157.223	142.24	0.336511	-0.908050118	0.43053
209.805	257.42	0.503422	-0.949931969	0.346115
2.05037	1.82191	0.904577	-0.259022281	0.969167
135.376	134.871	0.88187	-0.167759271	0.885839
0	0	?	#DIV/0!	?
0	0	0.308068	#DIV/0!	0.308068
29	16.5	0.860583	-0.334419039	0.849175
32	27.5	0.818602	-0.445411148	0.91372
162.5	97.5	0.941494	-0.07283288	0.609845
18.7615	12.749	0.779692	0.514021719	0.629825
77.1657	68.3928	0.924926	0.16760961	0.856542
23	37	0.755089	0.724365557	0.983255
0	0	?	#DIV/0!	?
0	1.23E-18	?	#DIV/0!	?
0	0	?	#DIV/0!	?
42	27.5	0.778336	0.362570079	0.545376
6	8.5	1	0	0.686187
1.16495	3.5	0.72472	-57.62885259	0.329256
1	1.5	0.550362	1.321928095	0.685038
0.5	1	0.622002	#NUM!	0.353387
0	0	?	#DIV/0!	?
0.5	0.5	0.450185	#NUM!	0.450185
438.5	348.5	0.89303	-0.200893786	0.937875
88.5001	82.0001	0.914477	-0.200822513	0.962725
1111.5	1187.32	0.825074	-0.491546483	0.785177
70.5	37	0.46562	-1.969626351	0.782572
4.69884	0.00299	0.0346117	-2.201799054	0.382509
208	213.5	0.779057	-0.419668948	0.756991
2.5	0	0.308068	#NUM!	1
1	0.5	1	0	0.710482
528.5	519.5	0.803202	-0.36804002	0.817661
2497.31	2099.21	0.0376251	-0.952467137	0.0966969
358.615	436.1	0.997681	-0.006491554	0.886634
11285.5	11518	0.671439	-0.468359781	0.649447
83.5	77.5	0.731452	0.638663521	0.699266
2	1	0.308068	-2	0.710482
4823.49	5106.79	0.826619	-0.376955958	0.783873
2	4.5	0.698562	-1	0.232415

6.0657	5.49635	0.700729	0.603186332	0.651702
529.693	550.238	0.837037	-0.29151928	0.803498
25.0441	14.7553	0.890242	0.235246182	0.652619
172.227	172.214	0.816745	-0.422228645	0.8168
200.221	240.798	0.752614	-0.706857873	0.635251
5160.89	4653.75	0.712688	-0.55386126	0.797602
0	0.5	1	#DIV/0!	0.308068
98.3309	74.5665	0.683011	-0.712600596	0.875021
0	0	?	#DIV/0!	?
564.5	487.5	0.661944	-0.776695116	0.766553
1642.81	1714.52	0.960972	0.094927204	0.986011
9.17285	4.23963	0.602923	1.09619908	0.456189
3.95604	1.97984	0.662853	-0.499759021	0.756049
266.5	215.5	0.428254	-0.731562236	0.66781
0.10424	6.00095	0.556602	5.255793871	0.754089
8	24.0065	0.855589	0.524853531	0.531389
43.5	39	0.743597	-0.610053482	0.817975
494	466	0.514406	-0.651451025	0.577876
586.253	835.185	0.98945	-0.029618358	0.773927
8204.5	7402	0.253968	-0.879533451	0.349456
51.4008	55.6649	0.754442	0.416699544	0.813241
0	1.43028	1	#DIV/0!	0.308068
0.5	0	1	0	0.450185
4	4.26938	1	0	0.952686
164	133.5	0.542205	-1.368867318	0.665626
3289.56	3165.03	0.649223	-0.51208926	0.689866
15.7468	16.5683	0.840512	0.438907071	0.863525
7.10E-09	4.75579	0.403662	29.11960938	0.894464
95.1861	121.94	0.87612	0.329189492	0.987958
501	395	0.347506	-0.878554374	0.593295
100.419	79.222	0.868923	-0.206943299	0.923664
618.5	460.5	0.820187	-0.335991846	0.958189
201.371	246.16	0.845384	-0.434011161	0.719715
748.236	620.455	0.543152	-0.648905384	0.741718
216	238.5	0.797107	-0.530885828	0.732049
0	0	0.308068	#DIV/0!	0.308068
0	0	0.308068	#DIV/0!	0.308068
0	0	?	#DIV/0!	?
116	162	0.9792	0.060882242	0.831419
35	48.5	0.777472	-0.736965594	0.586621
0.51849	0	0.621134	1.003140827	0.353209
6006.94	5312.56	0.969154	-0.048111955	0.922298
383	351.5	0.735103	-0.436542339	0.815682
758.5	659.5	0.784055	-0.412187261	0.895905
46	42	0.901454	-0.166009951	0.980215
75	66	0.900024	-0.141355849	0.971327
0	0	?	#DIV/0!	?
1.5	1	0.459495	1.874469118	0.411236
3995.5	3699	0.308678	-0.806497612	0.386493
18.612	15.4923	0.990666	-0.008879395	0.760134
5.57649	11.5014	0.867438	-0.27843245	0.290161
4748.57	4446.41	0.782746	-0.43449389	0.834515
3551.12	3455.36	0.242004	-0.666470254	0.270493
7.01183	10.562	0.74619	-0.309381555	0.288816
63	57.5	0.860108	-0.319068441	0.921223
1678.5	1549	0.794046	-0.52498623	0.844933

261.635	270.939	0.935398	-0.141932112	0.911017
8.05434	5.75302	0.863651	-0.287276305	0.920171
1466.5	1820	0.859941	-0.353254429	0.71244
0	0	?	#DIV/0!	?
1.52369	2.65398	0.610545	-3.834423768	0.383311
192.5	153.5	0.744176	0.517193873	0.635328
12.5	11	0.774126	-0.556393349	0.85698
31	21.5	0.678213	-0.668794092	0.941554
785.5	712	0.66905	-0.716600657	0.743184
712	695	0.785388	-0.405612486	0.805608
460.545	524.951	0.945785	-0.124906494	0.85545
1417.5	1069.5	0.594339	-0.525881228	0.914551
9.5	10	1	0	0.965235
1.22E-06	5.72E-18	0.308068	-50.64118073	1
121.852	218.58	0.852562	0.480676356	0.851456
0	0	0.308068	#DIV/0!	0.308068
2365.26	2262.68	0.724872	-0.541674482	0.761048
2.87679	0.71531	0.0304151	-60.8593878	0.406313
676.798	772.693	0.886174	-0.311706898	0.805234
365.5	421.499	0.995612	0.00983436	0.906425
3.80E-09	2.07284	0.45169	29.01115666	0.995272
0	0	?	#DIV/0!	?
6.13019	7.64986	0.320574	-3.238523695	0.226676
14993.1	11189.6	0.504174	-0.42654353	0.995058
97.0158	90.515	0.896924	-0.120294816	0.983188
54.5	35	0.823562	-0.428334322	0.92992
6	6.74421	0.485282	-2.141472543	0.424902
489.027	492.619	0.855197	-0.378947424	0.850676
151	140	0.930109	-0.161589142	0.978119
0.99182	0.36248	0.333385	#NUM!	0.702486
53	46.5	0.665508	-0.683526335	0.768276
875.5	820	0.351124	-1.19653454	0.40036
0.5	1	0.198892	2	0.353387
0	0	?	#DIV/0!	?
27.5	37	0.845443	-0.321928095	0.603116
1211.47	1196.5	0.838507	-0.24823196	0.850887
5.5	4	0.785812	-0.459431619	1
647.31	742.904	0.823173	-0.442019938	0.729194
7.21858	4.43238	0.822977	-0.39228607	0.889148
4.86E-08	4.99701	1	1.0644661	0.0782468
348.5	329.5	0.786396	-0.354902426	0.83846
59.5	44	0.96814	0.047696742	0.72966
47.9675	32.9657	0.85708	-0.274816435	0.884866
7.5	7.5	0.93083	0.180572246	0.93083
6.78901	11.4773	0.662536	-2.174866747	0.42979
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
334	349	0.796536	-0.386524812	0.759377
236.5	269.5	0.959389	-0.10433666	0.878822
479	483.5	0.84765	-0.351212748	0.841161
77	60	0.922314	0.159478214	0.77957
15048	14547.7	0.834886	-0.216207516	0.873732
28.5	31	0.97616	-0.051530301	0.916778
1214.11	1094.35	0.660975	-0.555975416	0.759466
2.35E-06	2.14E-19	0.308068	-75.75060504	1
258	270.5	0.915143	-0.207096234	0.884691

105.5	116	0.982849	-0.041619089	0.922999
32	26.5	0.835022	-0.415037499	0.947915
111.722	126.738	0.786537	-0.52418677	0.698444
1	0.5	0.651448	-1	1
648	749	0.978424	0.047090242	0.920413
63.1065	76.2713	0.798218	0.490320628	0.900935
27.6284	44.6927	0.943238	0.170349644	0.781193
33	25.5	0.989943	-0.022026306	0.860337
42.5544	57.0668	0.79276	-0.703148516	0.626213
0.5	0.5	0.450185	#NUM!	0.450185
19	7.5	0.599135	-0.389946518	0.429318
305.502	336.369	0.816688	-0.360347554	0.736966
0	0	?	#DIV/0!	?
38.9626	57.5605	0.795914	-0.765161926	0.584874
5476.24	6919.8	0.608069	-0.575394317	0.379447
341	381	0.689065	-0.847573891	0.616128
631.5	554.5	0.779759	-0.519640715	0.866819
169.5	212.5	0.982587	-0.047589459	0.847897
8661.5	9518.5	0.753873	-0.746686751	0.69775
533.563	624.572	0.928288	-0.18916551	0.830435
10.5872	6.6001	0.217254	-1.966158644	0.497817
88	109.5	0.834643	-0.505235308	0.705599
5.83995	13.0095	0.500822	1.679519444	0.757653
81.3531	82.0137	0.945584	-0.113387923	0.939755
297	241	0.792175	-0.356338126	0.970708
3	2	0.578665	-0.839157239	0.889115
4217.5	3924.5	0.689639	-0.471367915	0.762822
9.03069	29.1565	0.926282	0.340535621	0.512502
20.2733	12.1248	0.176289	-1.27245654	0.618477
4.5	1	0.0280085	-3.169925001	0.651448
107.198	119.845	0.923465	-0.189473195	0.851109
392	314	0.979954	0.041715019	0.845506
1061	741	0.971634	-0.051208941	0.787066
0	0	?	#DIV/0!	?
87.6101	104.257	0.93229	0.179382531	0.970494
16.5	21.5	0.761462	-0.652076697	0.585317
184.5	165.5	0.774618	-0.516249751	0.849978
210.785	211.91	0.795137	-0.500314644	0.791537
4.77E-37	1.07E-24	?	50.49760956	?
0.5	0.5	0.450185	#NUM!	0.450185
511.861	695.095	0.199824	-1.455663942	0.083087
99.5	129.5	0.935915	-0.185413509	0.779859
1.30E-14	1.51E-05	1	#NUM!	0.308068
977.5	872	0.629483	-1.196550961	0.6943
1137.55	1043.59	0.723077	-0.379638902	0.818526
70.388	73.7075	0.95867	0.08859765	0.989437
6.5	8	0.849717	-0.378511623	0.707528
0	0.5	1	#DIV/0!	0.308068
0	0.5	0.353387	#DIV/0!	0.622002
1560	1643.5	0.885519	-0.259155446	0.848871
393.5	463.5	0.636915	-1.077188005	0.534133
0.5	1	0.436998	2.321928095	0.550362
59	79	0.958548	0.117356951	0.876343
22	23	0.750722	-0.652076697	0.721463
1860	1948.5	0.529021	-1.040110213	0.494539
2.5	4	0.804317	-0.736965594	0.547349

403.5	429	0.941918	0.141236663	0.97758
395.5	387	0.936086	-0.131678858	0.951798
0.5	0	0.308068	#NUM!	1
3.5	0.5	0.252216	-2.807354922	1
854	865.5	0.89478	-0.258311996	0.886225
1614.5	1646	0.820799	-0.459040728	0.808347
0	0	?	#DIV/0!	?
2	1.5	0.320255	#NUM!	0.438509
21	17.5	0.679552	-0.932885804	0.786384
3	4.5	0.867136	0.415037499	0.933203
2	0	0.308068	#NUM!	1
79	78.5	0.862949	-0.315096061	0.867305
0	0	?	#DIV/0!	?
0.5	0	0.308068	#NUM!	1
0.5	0.5	1	0	1
3.5	2	0.608871	-1.222392421	0.895809
1369.82	1409.69	0.70736	-0.632298969	0.685268
584.318	748.89	0.940574	-0.177231413	0.798929
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
305.5	354.5	0.74176	-0.688974532	0.642688
1.5	2	1	0	0.847091
0	0	?	#DIV/0!	?
62.5	48.5	0.88932	-0.210896782	0.928173
1	1.5	0.764931	-1	0.559404
534.867	671.615	0.957796	0.110987955	0.907529
75.5	116	0.876504	0.368925574	0.895959
2191.82	2108.64	0.609489	-0.704705511	0.643562
2	0	0.198892	-2	0.622002
78.5	63.5	0.843499	-0.317340825	0.9949
19	25.5	0.647778	-1.247927513	0.479811
37	38	0.744482	-0.594743522	0.725276
958.483	1056.06	0.958622	-0.101916583	0.897241
9	20.5	0.860236	0.530514717	0.743111
629	659.5	0.908667	-0.217431423	0.877354
964.822	1032.85	0.878935	-0.263898348	0.828924
5.67532	9.54855	0.975557	0.064274011	0.673623
0.5	1	0.622002	#NUM!	0.353387
14.5	19.5	0.934225	-0.214124805	0.774275
882.5	896.5	0.938244	-0.129027605	0.926839
2.5	2.5	0.855216	-0.321928095	0.855216
673	990	0.898273	-0.328373504	0.676452
517.5	489	0.618754	-0.570400207	0.676929
26.5	26.5	0.88045	0.202816883	0.88045
117	126	0.8399	-0.362570079	0.78631
459.468	416.517	0.779866	-0.447489806	0.855345
4.5	5	0.806588	0.152003093	1
4	9.5	0.633044	-3	0.266457
0	0	?	#DIV/0!	?
4.95846	3.51837	0.548333	-1.409850356	0.742445
0.5	1.5	0.450185	#NUM!	0.0805096
457.655	416.929	0.742454	-0.462108487	0.823419
34.5	31.5	0.891525	0.266514975	0.845813
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?

0	0	?	#DIV/0!	?
109.082	94.7428	0.890796	-0.207895755	0.997753
178.5	190	0.880328	-0.289955705	0.838773
186.5	198	0.993747	0.011557031	0.958339
0.5	0.5	0.450185	#NUM!	0.450185
0	0	?	#DIV/0!	?
170.5	91	0.411757	-2.109847181	0.733358
62.5312	67.2096	0.793023	-0.479223769	0.740974
6639.97	7262.88	0.908714	-0.230262522	0.851515
0.5	0	0.622002	1	0.353387
292	319.5	0.874098	-0.347474215	0.81996
0	0	?	#DIV/0!	?
740	694	0.837637	-0.328033458	0.886623
1906.4	1983.37	0.814597	-0.417703771	0.785874
2	0	0.622002	-1	0.622002
4.5	9	0.636698	-3.169925001	0.346896
0	0.5	1	#DIV/0!	0.308068
0	0	0.308068	#DIV/0!	0.308068
18.5	22.5	0.65674	-1.121990524	0.540766
1	2	0.450185	#NUM!	0.18169
0	1.5	0.545627	#DIV/0!	0.756486
20	14.5	0.218229	-1.152003093	0.494042
12	15	0.425278	-3	0.321928
13.5	14.5	0.624524	-1.054447784	0.578453
13	13.5	0.736315	0.691877705	0.751928
10.3753	6.07657	0.430528	-1.086303275	0.856405
1.5	2	1	0	0.791627
9.90637	10.0805	0.921617	0.183547885	0.931729
57.5231	73.3869	0.689709	-0.977283999	0.541646
158	101.5	0.292202	-0.803934861	0.84875
0	0.5	1	#DIV/0!	0.308068
30	33	0.967519	0.070389328	0.96752
0.5	0.5	0.450185	#NUM!	0.450185
0	0	?	#DIV/0!	?
707	746	0.882692	-0.293138896	0.848093
301	259.5	0.661946	-0.626289363	0.787857
1470	1316	0.668609	-0.608711103	0.763838
643.5	593	0.608292	-0.750480401	0.676751
127.171	69.5157	0.907529	0.181101338	0.618107
14.5	8	0.945124	-0.103093493	0.708609
6.5	6.5	0.591021	-1.378511623	0.591021
1.5	0	0.308068	#NUM!	1
13.7681	6.19981	0.876646	-0.240083427	0.69189
55	47	0.816754	-0.321928095	0.949371
1.5	2	1	0	0.847091
520	686	0.900756	-0.206984517	0.677234
257	162	0.193326	-1.172734535	0.614046
0	0	?	#DIV/0!	?
34.5	39	0.806332	-0.304563858	0.682562
360.5	366.5	0.948772	-0.114477082	0.937628
7.5	7	0.919847	-0.206450877	0.959844
259.474	276.499	0.682714	-0.605818245	0.628496
481.5	475	0.976166	-0.058082432	0.984318
1575	1641	0.884001	-0.267437904	0.855718
12	11.5	0.383524	-3	0.403695
0	0	?	#DIV/0!	?

0.5	0.5	1	0	1
0	0	?	#DIV/0!	?
208	287	0.960992	-0.119239136	0.778696
0	0	?	#DIV/0!	?
13	18.5	0.738187	0.657112286	0.928271
52.5	40	0.509106	-0.669851398	0.805878
81	60.5	0.689926	0.620151929	0.563803
5.5	2.5	0.415427	1.398549376	0.297779
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
1824.49	1873.02	0.961058	-0.086334997	0.943266
222.5	227	0.901478	-0.227805918	0.887969
45	38.5	0.48293	1.432959407	0.450015
253.611	243.375	0.727053	-0.565351221	0.75929
1	4	0	1	0
417.5	443.5	0.929753	-0.178155381	0.892392
7	14	0.672563	-0.807354922	0.217693
0.5	1	0.481309	2	0.630057
0	0	?	#DIV/0!	?
0.5	2.5	1	0	0.415333
238	269	0.916044	0.197939378	0.990377
8	11	0.710482	-1.192645078	0.545049
5	3.5	0.798692	-0.514573173	1
253.5	244	0.807445	-0.408413109	0.836007
5	8.5	0.909016	-0.321928095	0.615253
0	0.5	1	#DIV/0!	0.308068
5702.5	5568	0.743156	-0.501172736	0.762796
640	496	0.716687	-0.562039912	0.911543
0.5	1	0.710482	1	1
4443	4447	0.456887	-0.733344193	0.45597
28.8904	0.79591	0.526347	-1.26557343	0.667031
3.34414	1.14E-21	0.136882	-75.42724061	1
320	270	0.636452	-0.660149997	0.783008
274.693	229.929	0.809062	-0.345914132	0.954361
21.5	23.5	0.922279	-0.178337241	0.860875
1017.12	938.258	0.600595	-1.22501461	0.648734
0	0	0.308068	#DIV/0!	0.308068
0.85611	2.68883	0.940656	-0.340554814	0.432648
0.5103	5.41E-18	0.308068	-57.35948918	1
3.5	6	0.725092	0.893084796	0.952724
2.23595	4.94E-25	0.308068	#NUM!	1
4.57396	6.87501	0.391586	-1.478499312	0.172746
1.07E-24	0	?	#NUM!	?
1305.5	1102.5	0.651144	-0.560853097	0.81248
8.97E-31	5.49657	1	14.93153285	0.0742745
1.33505	9.51E-26	0.821546	-0.416893774	0.515984
25.6057	14.0767	0.539828	-0.648993217	0.877598
7.5	2.5	0.397364	-1.099535674	0.821423
26.864	41.0242	0.871352	-0.283574432	0.536115
445.624	453.366	0.631841	-0.851981905	0.619212
59.4006	57.5	0.999624	0.00075029	0.976479
120.907	95.4518	0.797601	-0.425654026	0.963784
0.51737	2.28235	0.804135	#NUM!	0.318134
84.9677	53.1378	0.302497	-0.406144587	0.559645
15.3777	18.0104	0.547314	1.005954478	0.613684
501.998	503.496	0.80984	-0.401678401	0.807576

1.10989	2.0146	0.569262	#NUM!	0.331136
13.8021	27.7165	0.224193	-1.744879063	0.0337808
5.75	1	0.382315	-2.201633861	0.958323
0.69045	0.42857	0.207987	#NUM!	0.393946
2.10288	1.95238	0.380513	-18.65400938	0.411205
2.89952	0.84127	0.394512	-1.661346021	0.972293
2.89952	0.84127	0.394512	-1.661346021	0.972293
0.75	0	0.308068	#NUM!	1
0	0	?	#DIV/0!	?
0.1	0.32	0.427124	2.169925001	0.756063
1.04E-24	1.78E-05	0.308068	77.07819833	0.308111
0.16667	0	0.495025	1.584959615	0.329316
0.58333	0.75	0.113502	-2.807354675	0.0598224
0.76466	3.25	0.927706	-0.612894086	0.381167
2.89952	0.84127	0.394512	-1.661346021	0.972293
2.89952	0.84127	0.394512	-1.661346021	0.972293
0.58333	0.75	0.113502	-2.807354675	0.0598224
0.58333	0.75	0.113502	-2.807354675	0.0598224
0.58333	0.75	0.113502	-2.807354675	0.0598224
0	0.25	1	#DIV/0!	0.308068
1.5	0.25	0.200976	-1.584962501	0.710482
0.16667	0.08333	0.353387	0.999995672	0.198892
0.25	0	0.308068	#NUM!	1
0	0	?	#DIV/0!	?
0	0.5	1	#DIV/0!	0.308068
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0.475	0.125	1	0	0.371098
0.5	0	0.308068	-1	0.308068
0.16667	0.08333	0.353387	0.999995672	0.198892
11.5888	4	0.143333	-55.11962409	0.545141
0.0002	3.33E-16	0.308068	#NUM!	1
0.75	1.75	0.770719	-1.584962501	0.409302
0.82953	7.97E-11	0.307978	#NUM!	1
5.33333	1	0.695331	-0.476438397	0.474869
7.04E-36	5.22E-25	?	#NUM!	?
2	2.49998	0.46629	-3.584959615	0.367198
0	0	0.308068	#DIV/0!	0.308068
0	0	?	#DIV/0!	?
2.89952	0.84127	0.394512	-1.661346021	0.972293
2	0	0.308068	#NUM!	1
0.75	0.5	0.3832	#NUM!	0.545627
1	0.5	0.651448	-1	1
2.89952	0.84127	0.394512	-1.661346021	0.972293
3.5	0.5	0.0730972	#NUM!	0.724378
0.475	0.125	1	0	0.371098
0	0	?	#DIV/0!	?
0.75	0.5	0.3832	#NUM!	0.545627
0.25	0	1	0	0.450185
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
1.25	0.25	0.706667	-0.736965594	0.706667
1.25	0.25	0.706667	-0.736965594	0.706667
1.3	0.5	0.75747	-0.378511623	0.612327
0	0	?	#DIV/0!	?

1.25	0.25	0.706667	-0.736965594	0.706667
0	0	?	#DIV/0!	?
1.3	0.5	0.75747	-0.378511623	0.612327
1.25	0.25	0.706667	-0.736965594	0.706667
0	0	?	#DIV/0!	?
0	0	0.308068	#DIV/0!	0.308068
0	0	?	#DIV/0!	?
0.69045	0.42857	0.207987	#NUM!	0.393946
1.08333	1.05E-12	0.36178	-3.08205753	0.894833
0.69045	0.42857	0.207987	#NUM!	0.393946
1	5	0.791627	1	0.450185
1	0	0.308068	#NUM!	1
0.475	0.125	1	0	0.371098
0.69045	0.42857	0.207987	#NUM!	0.393946
0	0	?	#DIV/0!	?
0.69045	0.42857	0.207987	#NUM!	0.393946
0	0	0.308068	#DIV/0!	0.308068
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
12.832	9.99609	0.761531	-0.256375981	0.912966
0.25	0	0.308068	#NUM!	1
1.25	0.75	0.862169	0.263034406	0.610398
1.25	0.75	0.862169	0.263034406	0.610398
0.25	0	0.308068	#NUM!	1
0	0	?	#DIV/0!	?
1.3	0.5	0.75747	-0.378511623	0.612327
1.41667	0	0.416152	-1.502503735	0.643189
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
5.25E-10	0.5	0.825659	27.50501345	0.407544
0	0.5	1	#DIV/0!	0.308068
0	0	?	#DIV/0!	?
1.5	1.7	0.468581	-1.584962501	0.393854
1.5	1.7	0.468581	-1.584962501	0.393854
0	0	0.308068	#DIV/0!	0.308068
7	1.5	0.340116	-3.807354922	0.872889
0	0	?	#DIV/0!	?
0.75	0	0.308068	#NUM!	1
1.5	1.7	0.468581	-1.584962501	0.393854
0.475	0.125	1	0	0.371098
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
15.7857	5.18182	0.416041	-2.477971312	0.875363
0	0	?	#DIV/0!	?
20	3.5	0.138737	-1.862496476	0.800143
36.5	7.5	0.901367	0.132103536	0.299635
3	6	0.209624	1.115477217	0.834708
5.33333	1	0.695331	-0.476438397	0.474869
1.3	0.5	0.75747	-0.378511623	0.612327
0.5	0	0.308068	#NUM!	1
0	0	?	#DIV/0!	?
1.3	0.5	0.75747	-0.378511623	0.612327

1.35	0.32	0.504286	-1.130395857	0.779557
7.37699	1.43939	0.457309	-1.873785448	0.933245
0	0	?	#DIV/0!	?
0.69045	0.42857	0.207987	#NUM!	0.393946
0.69045	0.42857	0.207987	#NUM!	0.393946
1.41667	0	0.416152	-1.502503735	0.643189
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
4.5	5.5	0.593125	-0.584962501	0.393741
0.66667	0	0.308068	#NUM!	1
12.832	9.99609	0.761531	-0.256375981	0.912966
12.832	9.99609	0.761531	-0.256375981	0.912966
0	0	?	#DIV/0!	?
0.58333	0.75	0.113502	-2.807354675	0.0598224
9	1.5	0.457279	-1.847996907	0.904117
7.37699	1.43939	0.457309	-1.873785448	0.933245
7.37699	1.43939	0.457309	-1.873785448	0.933245
0.76466	3.25	0.927706	-0.612894086	0.381167
6	2	0.0605164	-3.584962501	0.481309
4	1	0.604181	-1	0.791627
0.02617	9.25E-11	0.308068	#NUM!	1
0.02617	9.25E-11	0.308068	#NUM!	1
1.75	2.4	0.82454	-0.544320516	0.634367
0.16667	0.08333	0.353387	0.999995672	0.198892
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	0	0.308068	#DIV/0!	0.308068
0.5	0.2	0.999398	0.001416031	0.650792
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0.5	0.2	0.254288	2.999823259	0.224206
5.33333	1	0.695331	-0.476438397	0.474869
0.5	1	0.622002	#NUM!	0.353387
0.25	4.44E-16	1	0	0.450185
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
24	22	0.640477	-0.830074999	0.703395
97	96.5	0.847023	0.276604104	0.843366
14.5	15.5	0.865841	-0.398549376	0.82834
45	47.5	0.796217	-0.514573173	0.760142
83	58.5	0.558994	-0.330645312	0.791304
14	19.5	0.830457	-0.559427409	0.639798
105.5	78.5	0.789586	-0.463711346	0.985218
90.5	98.5	0.659097	0.748081626	0.699886
22297	16245.7	0.666138	-0.516108388	0.965815
219.5	212	0.912594	0.119768326	0.878452
222.5	199.5	0.909341	0.112231558	0.796369
273	259	0.844111	0.290947152	0.809309

292.5	258	0.610513	0.495957495	0.518389
46.5	30.5	0.525229	-0.561878888	0.964886
431.5	184.5	0.502373	-0.736408461	0.764225
199	248	0.791527	-0.608718624	0.654321
140.5	106	0.787474	-0.295222532	0.929334
71759.5	79224	0.903418	-0.249170764	0.841141
33	29	0.848896	-0.289506617	0.949206
30198	25449	0.723952	-0.409093869	0.896917
26	17.5	0.29657	-0.452512205	0.804574
69.1107	46.4452	0.544352	-1.156747919	0.800266
59.3993	54.2608	0.610646	-0.908705449	0.67574
73.3509	57.0601	0.777691	-0.415183708	0.974608
2	1.5	0.116158	#NUM!	0.198892
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
325.501	297.499	0.990347	-0.020088678	0.949652
49	46.5	0.354051	-2.091147888	0.382505
2.5	4.62524	0.749864	0.678071905	0.893436
5.23656	5.47779	0.959567	-0.091812546	0.929456
1843.5	1617.5	0.731394	-0.461291456	0.848545
1	1.5	1	0	0.785812
1.27419	1.38098	0.19084	2.499420013	0.196837
6.15199	20.6616	0.46609	1.781327948	0.980188
0	0	?	#DIV/0!	?
2.69405	4.00057	0.625052	-2.30995833	0.447197
1.99268	0.66746	0.827815	0.409713547	0.524963
1.02441	2.90149	0.710813	-22.21451765	0.331779
87.6041	85.1734	0.867093	-0.322471241	0.885288
1243.5	1152	0.416611	-2.174282284	0.45728
514	523.5	0.630995	-0.72022233	0.615745
577	515.5	0.443107	-2.277609745	0.501051
60.5	52.5	0.866261	-0.289506617	0.963274
1.82227	2.35364	0.493133	-33.07009828	0.388831
16.6694	9.53643	0.54487	-0.972152937	0.936467
0	1.90E-27	?	#DIV/0!	?
2.54456	1.01019	0.318887	-1.293387403	0.983729
0	0	?	#DIV/0!	?
0	0	0.308068	#DIV/0!	0.308068
259.119	174.899	0.0172555	-1.33280652	0.114046
12.0998	14.7092	0.785051	0.409395705	0.92505
70.4532	77.6435	0.822675	-0.33737258	0.739975
3.58E-42	3.92E-41	?	12.82297225	?
48.5	47	0.750688	-0.555518723	0.77374
5.02577	3.67517	0.731395	-0.363608378	0.942941
1	2	0.436998	2.321928095	0.550362
96	75.5	0.499788	-1.227410496	0.664017
1.5	6.07E-30	0.822295	0.415037499	0.399441
60.5	44	0.773299	0.464841055	0.625955
3.03E-18	2.33E-19	?	-7.435115874	?
157.5	165	0.229072	-1.345011708	0.20271
226.251	256.91	0.948899	0.110410767	0.96402
154.512	166.446	0.850292	-0.376260337	0.80136
0	0	?	#DIV/0!	?
1.56E-11	5.13E-08	0.999593	1.312692139	0.308371

565.5	543	0.720606	-0.355480655	0.769018
2.92055	7.35834	0.00355761	-26.93122065	0.000232018
355	336	0.704108	-0.601310495	0.747905
2.90279	2.32359	0.646242	0.718272007	0.553306
45.5699	79.3783	0.900708	0.307033182	0.791649
279.5	258.5	0.979302	-0.033947332	0.95386
70	59.5	0.786271	-0.415037499	0.913122
0	0	?	#DIV/0!	?
5279.87	4709.39	0.781416	-0.387744248	0.879943
8.17095	9.48288	0.74737	0.655582044	0.815527
105.356	92.4061	0.894004	-0.192713938	0.998189
0	0	?	#DIV/0!	?
1.04E-13	1.69584	1	-8.834911083	0.308068
0	0	?	#DIV/0!	?
4.6147	3.78125	0.949403	0.115691233	0.841454
29	23.5	0.418669	-2.273018494	0.528069
8.19808	8.12054	0.811178	0.3638987	0.805145
2442.72	2203.97	0.644548	-0.451522185	0.766403
6.35E-28	0.21329	1	58.77468145	0.308068
663.221	685.522	0.494985	-1.559981526	0.475205
1059.5	1014.5	0.0942221	-0.783552826	0.117994
0.5	1.04661	0.716028	1	0.972608
435.438	410.455	0.796938	-0.320634041	0.854173
62.6517	41.9621	0.844975	-0.289756612	0.873252
11.0781	6.61501	0.655971	-0.699139312	0.982256
724.5	688	0.583661	-0.602996424	0.637794
9.65E-06	0	0.308072	16.66131025	0.308068
39.8925	33.5655	0.994455	0.011917497	0.889001
1.23E-20	0	0.308068	57.73478232	0.308068
0	0	?	#DIV/0!	?
1	0.5	0.353387	#NUM!	0.622002
199.324	231.843	0.922471	0.187341694	0.986279
49.5717	39.2094	0.737854	-0.509364384	0.919969
0	0.5	0.353387	#DIV/0!	0.622002
0	0	?	#DIV/0!	?
1631.75	1704.35	0.851462	-0.299720116	0.817114
5.06E-05	2.2929	0.99992	2.3267049	0.308112
19.6953	42.879	0.909146	0.341176858	0.700682
9888.5	10124.5	0.52925	-0.591616099	0.502674
35	31	0.714107	-0.703018262	0.795285
0.5	2	0.785812	#NUM!	0.320255
3.74E-07	0	0.308068	-55.44791392	1
0	0	?	#DIV/0!	?
344.5	413	0.660105	-0.637197284	0.504062
0.5	1	0.710482	1	1
7	11	0.738539	-1.222392421	0.516992
0	0	?	#DIV/0!	?
1	0.5	0.353387	#NUM!	0.622002
0	0	?	#DIV/0!	?
0.5	0.5	0.450185	#NUM!	0.450185
1009	1225.5	0.97356	0.068413453	0.909895
0	0	?	#DIV/0!	?
588.5	545.5	0.551066	-1.159239453	0.602031
0	0	?	#DIV/0!	?
27.5	27.5	0.789583	-0.571906348	0.789583
20	16.5	0.603133	-0.736965594	0.766012

0.5	0	0.308068	#NUM!	1
1.5	4	0.717686	-1.584962501	0.258505
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
2	12	0.450185	#NUM!	0.0138468
0	0.5	1	#DIV/0!	0.308068
6	7	0.949127	-0.108376025	0.833715
1.5	1	0.3832	#NUM!	0.545627
5	3.5	1	0	0.767557
688.947	687.187	0.838118	-0.313530803	0.84019
0	0	?	#DIV/0!	?
1	0.5	0.651448	-1	1
24	21.5	0.929514	0.142957954	0.859885
0	0.5	0.0733429	#DIV/0!	0.220868
0	0	?	#DIV/0!	?
11	8.5	0.754372	0.447458977	0.616366
132	212.5	0.735749	-1.101879614	0.485628
2.47E-15	0.68973	0.999977	32.71669402	0.308078
1	2	0.806588	-1	0.481309
0.5	1.5	0.513713	1.584962501	1
4	6.5	0.869939	-0.415037499	0.577083
0	0	?	#DIV/0!	?
57.5	62.5	0.576359	1.043253198	0.606389
0	0	?	#DIV/0!	?
255.5	214.5	0.782367	-0.389849167	0.928592
974.5	1190.5	0.997453	0.006646674	0.880991
475	445	0.799156	-0.430304256	0.847245
0	0	?	#DIV/0!	?
87	65.5	0.526929	-1.398549376	0.696513
1.5	0.5	0.0805096	#NUM!	0.450185
29	52.5	0.992112	-0.025090981	0.642042
63	65	0.710206	-0.911190733	0.692063
0.5	0.5	0.513713	1.584962501	0.513713
8.5	9	0.657163	-0.765534746	0.613954
0	0	?	#DIV/0!	?
72	55.5	0.792221	0.407503827	0.657787
2	2	0.651448	-1	0.651448
2	1.5	0.774348	0.584962501	0.670131
0	0	?	#DIV/0!	?
4	3.5	1	0	0.904922
0	0	?	#DIV/0!	?
2	0.5	0.630057	-1	0.806588
0	0	0.308068	#DIV/0!	0.308068
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
47	45	0.874522	0.315775868	0.85306
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0.5	0	0.308068	#NUM!	1
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
94.0001	101.5	0.986336	0.030370611	0.962439
0.00023	0.00393	0.309227	8.606485677	0.326267
0	0	0.308068	#DIV/0!	0.308068

11.5	18	0.978598	0.061400545	0.749855
0.5	0.5	0.450185	#NUM!	0.450185
2	2	0.756486	-0.415037499	0.756486
656.5	383	0.79502	0.446286471	0.584996
41.5	52	0.79747	-0.620151929	0.661985
130.221	135.414	0.456402	-1.365852826	0.43061
0	0	?	#DIV/0!	?
1.5	1	0.3832	#NUM!	0.545627
154.5	154	0.840853	-0.394946081	0.84296
17.5578	14.9367	0.548173	-1.408035154	0.643266
2	3	1	0	0.785812
441.5	442.5	0.53119	-1.034725569	0.529504
0	0	0.308068	#DIV/0!	0.308068
0	0	?	#DIV/0!	?
1	2	0.622002	#NUM!	0.353387
0	0	?	#DIV/0!	?
0	1	0.622002	#DIV/0!	0.622002
7.5	2.5	0.152838	-1.906890596	0.873517
11.5	16	0.851723	-0.353636955	0.608589
9.5	46	0.891044	0.658963082	0.462805
105	111.5	0.359846	-1.206450877	0.317546
1	1	1	0	1
0	0	?	#DIV/0!	?
3	5.5	0.725181	-1.584962501	0.448923
1	1	0.785812	0.584962501	0.785812
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	0.5	1	#DIV/0!	0.308068
32.5	32	0.677556	-0.812914447	0.688123
16.5	3.5	0.659159	-0.289506617	0.202468
0	0	?	#DIV/0!	?
8.5	14.5	0.568955	-1.765534746	0.291911
0	0	?	#DIV/0!	?
104.5	125	0.904585	0.2526428	0.997606
14	12.5	0.734225	-0.347923303	0.864102
24	33	0.977247	-0.061400545	0.77713
316.5	254.5	0.728153	-0.387198452	0.952971
797.5	673.5	0.682884	-0.604541746	0.82162
499	473.5	0.870423	-0.299337901	0.905454
0.74677	2.50638	0.983089	-0.101605544	0.472205
13.0584	13	0.965003	-0.063050044	0.968663
0	0	?	#DIV/0!	?
589	592.5	0.941586	-0.136034633	0.937741
0	0	?	#DIV/0!	?
17.5	21.5	0.69454	-0.544320516	0.509197
312.5	223.5	0.857324	0.196103398	0.603433
219.5	219	0.908883	-0.196876548	0.910499
52.0075	53.6611	0.897341	-0.210738826	0.87361
280	259	0.818111	-0.331621491	0.883588
46.5	13.5	0.705193	0.343484238	0.226952
3.5	8.5	0.912312	0.362570079	0.664901
5	8.5	0.871819	0.378511623	0.829986
132	188.5	0.684041	-0.407769499	0.306713
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
1177.09	1115.01	0.453352	-1.282020493	0.491084

2	3	0.353387	#NUM!	0.198892
312.5	231	0.883432	-0.240588467	0.918412
1	1	0.710482	-1	0.710482
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0.5	3	0.741917	1.584962501	0.625646
0	0.5	1	#DIV/0!	0.308068
69.9196	74.1221	0.915679	-0.190935269	0.875234
9	6.5	0.67623	-0.710493383	0.903569
0	0	?	#DIV/0!	?
3	1.5	0.267367	-1.584962501	0.756486
0.5	0	0.308068	#NUM!	1
4	5	0.904922	-0.192645078	0.722932
0.5	1.5	0.450185	#NUM!	0.0805096
0.5	0.5	0.450185	#NUM!	0.450185
4	2.5	0.914417	-0.192645078	0.830364
2	0.5	0.116158	#NUM!	0.622002
0	0	?	#DIV/0!	?
0	0	0.308068	#DIV/0!	0.308068
263.5	254.5	0.681031	-0.788993719	0.704943
0	2	1	#DIV/0!	0.308068
69	61	0.832272	-0.380604002	0.915397
596	588	0.747854	-0.626711483	0.756981
1.5	4	0.595411	1.584962501	0.927607
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
276.202	262.525	0.917881	0.137037147	0.877494
98	135.5	0.955037	-0.122856748	0.750712
211	274.5	0.993677	-0.017195615	0.834943
1	0	0.622002	-1	0.622002
3	7	0.874747	-0.584962501	0.454215
0.5	1	1	0	0.651448
41	36	0.856514	-0.313157885	0.945796
49	45	0.961788	-0.091147888	0.987256
671	601.5	0.96541	-0.06598841	0.954473
1	0	0.308068	#NUM!	1
1.5	1	0.3832	#NUM!	0.545627
3.5	6	0.815802	-0.807354922	0.546526
1.5	1	0.785812	-0.584962501	1
0.5	0.5	0.450185	#NUM!	0.450185
8.83E-05	2.1895	0.999992	-0.348380738	0.308081
1	0	0.622002	-1	0.622002
0	0	?	#DIV/0!	?
0.5	0.5	0.450185	2	0.450185
3.5	4.5	0.561851	1.099535674	0.659159
53	63.5	0.829306	-0.388070452	0.694598
0.5	0.5	1	0	1
0.35098	0.70206	0.621963	#NUM!	0.353278
0	0	?	#DIV/0!	?
57.5	38.5	0.640818	-0.868210127	0.898105
1624	2822.5	0.883722	0.306207637	0.758047
6	6	0.853306	-0.263034406	0.853306
215.5	193.5	0.80445	-0.342153123	0.897813
7	9	0.960276	0.099535674	0.881442
1	2	0.622002	-1	0.198892

0.5	0	0.308068	#NUM!	1
8.5	10	0.86583	0.371968777	0.945995
0.5	0.5	0.450185	#NUM!	0.450185
32	26.5	0.936533	0.087462841	0.767004
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
4	4.5	0.596819	-1	0.514418
0	0.5	1	#DIV/0!	0.308068
1.5	0	0.495025	-1.584962501	0.724378
481	428	0.411678	-2.466949588	0.470711
0.5	1.5	0.450185	#NUM!	0.0805096
0	0	?	#DIV/0!	?
828.502	695.001	0.852274	-0.30311778	0.97769
1	2	0.834708	0.584962501	0.834708
3	3.5	0.393741	-2.584962501	0.318932
311	358.5	0.868746	-0.30635618	0.767629
8.38464	5.51897	0.908006	-0.167007596	0.806726
24.6154	26.9843	0.800877	-0.529840215	0.741584
3	3.5	0.914417	-0.263034406	0.830364
0	0	?	#DIV/0!	?
4.5	1.5	0.19041	-1.584962501	1
845.5	753	0.619147	-0.968773442	0.696962
512	477	0.675023	-0.766380323	0.725232
5	6	0.522418	0.925999419	0.61358
281.5	293	0.989368	-0.025855442	0.964932
6	9	0.788664	-0.777607579	0.565162
0	0.5	1	#DIV/0!	0.308068
2.08621	0.54612	0.902875	-0.226448229	0.625833
20	44	0.939255	-0.234465254	0.510408
14.5	11.5	0.866733	-0.334419039	1
232	194.5	0.493215	-0.728697978	0.676185
2.5	1.5	0.236154	-2.321928095	0.513713
7.5	18.5	0.556415	-2.906890596	0.173665
167	149.5	0.966195	0.063378934	0.88785
111.5	81.5	0.61898	-0.469983022	0.986895
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
3.5	6	0.943913	0.192645078	0.779894
1	0	0.622002	-1	0.622002
515.002	593.495	0.908201	-0.20915908	0.806887
2	0	0.308068	#NUM!	1
4.5	2.5	0.26366	-3.169925001	0.541977
2412.5	2997.5	0.620548	-0.396715744	0.34983
1	4.5	0.907467	0.584962501	0.503591
398.5	379	0.967211	-0.068580306	0.998227
0	0	?	#DIV/0!	?
348	313	0.920401	-0.19739079	0.982965
2.5	3	0.564258	1.378511623	0.611386
766	723	0.887419	0.254849773	0.855212
0	0	?	#DIV/0!	?
47	37.5	0.723885	-0.532221039	0.902028
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
89	67	0.760925	-0.346450414	0.961352
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?

101	69	0.608234	-0.715696977	0.92057
24.5	29.5	0.900682	-0.292781749	0.793217
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
1	1.5	0.680109	1	0.834708
3	2	0.710482	-0.584962501	1
10	7	0.581926	-0.862496476	0.850639
36.7624	35.5844	0.696432	-0.789804376	0.717921
403.5	379	0.289456	-2.516873511	0.319932
1.5	3	1	0	0.651448
0	0	?	#DIV/0!	?
62	70	0.610198	-0.824913293	0.515392
0	0	?	#DIV/0!	?
48.5	28	0.732617	0.529370175	0.516897
0	0	?	#DIV/0!	?
6.5	10.5	0.592371	-1.115477217	0.290556
0	0	?	#DIV/0!	?
225	277.5	0.665547	-0.628905848	0.485671
108.104	90.7757	0.771493	-0.381276643	0.927787
1146.33	1529.51	0.886007	-0.262214578	0.670739
229.954	207.59	0.75914	-0.408614855	0.851841
4.5	5.5	0.941228	-0.169925001	0.825659
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
126	78	0.691603	-0.593575631	0.958449
0.5	0	1	0	0.450185
0	0	0.308068	#DIV/0!	0.308068
0.5	1.5	0.724378	#NUM!	0.329316
2	9.5	0.862169	-2	0.339254
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
37.5	23	0.816669	-0.421463768	0.902529
0	0.5	1	#DIV/0!	0.308068
0	0	?	#DIV/0!	?
9.5	9	0.836892	-0.440572591	0.868995
0	0.5	1	#DIV/0!	0.308068
0	0	?	#DIV/0!	?
15	19.5	0.686228	-0.819427754	0.505785
1.5	1.5	0.282794	1.415037499	0.282794
0	0	?	#DIV/0!	?
0	2	0.785812	#DIV/0!	0.438509
2	2.5	0.617945	1.169925001	0.687418
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
14.5	8.5	0.0734682	-1.5360529	0.392404
8	9.5	0.584027	-1.415037499	0.484655
57.5	66.5	0.980661	0.049327712	0.932431
31.5	34	0.89992	-0.249359469	0.850648
11	22	1	0	0.626061
370	326	0.642903	-0.898386263	0.727978
268	198.5	0.821313	-0.278186631	0.913577
1.5	6.5	0.814504	1	0.592371
1098.74	994.815	0.83036	-0.340121316	0.905977

21.5	20	0.900622	-0.256339753	0.943057
0.5	0	0.308068	#NUM!	1
4.5	6	0.943913	-0.169925001	0.779894
57.5	66	0.881293	0.24197279	0.977262
659	257.5	0.199651	-1.667167129	0.867505
6	8	0.919687	0.222392421	0.919687
9.5	12.5	0.955787	0.074000581	0.783095
7.5	8	0.186081	-2.321928095	0.161287
19	14.5	0.627649	-0.493040011	0.928185
0	0	0.308068	#DIV/0!	0.308068
70	74	0.662449	-0.669851398	0.616525
397.416	444.284	0.334514	-1.029337795	0.2527
1214.91	1378.1	0.129012	-0.859783991	0.0736501
920.5	967	0.727194	-0.557407837	0.687464
17.471	12.5712	0.963226	-0.048442691	0.732565
0	0	?	#DIV/0!	?
115.329	111.736	0.918493	0.200596297	0.901594
5.5	6	0.747458	-0.874469118	0.700421
0	0	?	#DIV/0!	?
855	802.5	0.834624	-0.244925025	0.898937
1	0	0.18169	1.584962501	0.0805096
0	0	?	#DIV/0!	?
1	1	0.450185	#NUM!	0.450185
0	0	?	#DIV/0!	?
0.00139	0.06822	0.791713	3.698398853	0.447685
0	0	?	#DIV/0!	?
2.5	3.5	0.415333	-2.321928095	0.252216
9	27	1	0	0.318341
0	0	?	#DIV/0!	?
325.5	403.5	0.196511	-0.750323977	0.0781329
39	36	0.657857	-0.793549123	0.715442
0	0.5	0.450185	#DIV/0!	1
1.5	2.5	0.837425	-0.584962501	0.550362
4	3	0.679547	-0.678071905	0.888898
0	0	?	#DIV/0!	?
1.5	3	0.499013	1.736965594	0.69089
7	6	0.675463	0.716207034	0.611696
0	0.5	1	#DIV/0!	0.308068
52.0821	56.1224	0.654226	0.757258451	0.689787
0	0	?	#DIV/0!	?
1	0	0.462019	1.807354922	0.323864
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
300	230	0.937463	-0.089267338	0.82144
2	1	1	0	0.710482
2.5	2.5	0.821423	0.485426827	0.821423
45.5	27.5	0.771506	-0.485426827	0.910458
13	8.5	0.390576	-1.700439718	0.651125
0.5	0	1	0	0.450185
60.6988	47.0734	0.545407	-1.053463207	0.725713
2	19.5	1	0	0.168023
585.738	544.219	0.795445	-0.471314396	0.846288
0	0	?	#DIV/0!	?
6.5	0	0.269128	-2.115477217	0.71213
10.5	10	0.90539	0.192645078	0.874214
0.5	0	0.308068	#NUM!	1

0	0	?	#DIV/0!	?
7	4.5	0.730374	-0.637429921	1
402.366	499.993	0.999061	-0.002436631	0.865013
6.5	2.5	0.82986	-0.378511623	0.722288
1	3	0.764931	1	0.764931
14.5	9.5	0.685776	-0.857980995	0.924506
0.5	0.5	0.450185	#NUM!	0.450185
0	0	?	#DIV/0!	?
68.5	99.4999	0.974701	0.051717069	0.720962
9	27.5	0.958019	0.152003093	0.390946
6.5	7	0.759287	-0.700439718	0.714152
326	320	0.819482	-0.371448231	0.83377
10.5	15	0.953331	-0.144389909	0.749819
95.0348	114.165	0.976106	0.06431091	0.918585
41	20.5	0.887832	-0.228268988	0.735503
4	6	0.84925	-0.415037499	0.578553
390.295	281.642	0.879743	-0.219202857	0.882723
44.5	58	0.732354	-0.983880335	0.587462
0.5	1.5	0.379187	2.807354922	0.541977
7.5	10	0.888898	-0.321928095	0.712563
61.7291	39.2794	0.648364	-0.736523942	0.966469
0	2.5	0.825659	#DIV/0!	0.407544
0.5	2.5	0.825659	#NUM!	0.31594
7.10652	8	0.70666	-0.829143258	0.630907
166	172.5	0.863923	-0.28757659	0.835043
350.796	282.206	0.75618	-0.485176801	0.92135
5	1	0.550362	-1.321928095	0.837425
0	0	?	#DIV/0!	?
2531.5	2342.5	0.536512	-0.930737338	0.598641
434	342	0.727014	-0.444138619	0.943713
17	36.5	0.780697	0.745427173	0.845853
605.612	695.777	0.685126	-0.732914384	0.582529
7.09342	0.75378	0.797459	-0.432623149	0.541627
0	0	?	#DIV/0!	?
79.5	70.5	0.76276	-0.347098671	0.886281
0	0.5	0.450185	#DIV/0!	1
7226.23	7393.88	0.647189	-0.992224775	0.632552
4.5	4	0.629898	0.830074999	0.584276
3	3.5	0.729943	-1	0.648139
1249	1122.5	0.932855	-0.143174548	0.995155
0	0	?	#DIV/0!	?
10.5	21	0.90942	-0.304854582	0.495972
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
3	7.5	0.494791	1.662965013	0.826872
4.5	7.5	0.843013	0.415037499	0.843013
0	0.5	0.450185	#DIV/0!	1
2.5	2	0.834708	0.263034406	0.680109
0	0	0.308068	#DIV/0!	0.308068
0	0	0.308068	#DIV/0!	0.308068
0	0	?	#DIV/0!	?
120.5	231	0.668001	-1.763142217	0.355549
431.875	504.584	0.763876	-0.513192283	0.642818
42.5	50	0.7977	-0.502500341	0.684567

3.20559	0.71295	0.62159	-1.025402975	0.790821
51	30.5	0.547363	-0.86507042	0.946032
0.5	0	1	0	0.450185
0	0.5	1	#DIV/0!	0.308068
0.5	1.5	0.724378	#NUM!	0.329316
3274.61	3199.64	0.856886	-0.2540335	0.876905
0	0	?	#DIV/0!	?
6.5	7.5	0.946067	0.106915204	0.946067
3	1	0.308068	-1	0.710482
1	0	0.18169	1.584962501	0.0805096
0.5	0	0.308068	#NUM!	1
36	45	0.988996	0.019899557	0.815559
109	96.5	0.935914	-0.146132505	0.987773
4696.5	4787.5	0.733134	-0.644701196	0.719699
45.5	65	1	0	0.777535
21	36	0.920878	0.251538767	0.786013
19.5	38.5	0.919542	0.269186633	0.708313
14332.8	10393.8	0.577508	-0.705001395	0.868592
36918.1	27775	0.514246	-0.78804621	0.781314
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0.5	0	0.308068	#NUM!	1
4.5	2	0.15041	-3.169925001	0.523243
3.5	0.5	0.868208	-0.222392421	0.433134
51.5	68.5	0.698449	-0.496675968	0.429904
41.5	28	0.687998	-0.82045058	0.918874
78	98.5	0.95719	-0.09557766	0.785682
1.5	2	0.604181	-1.584962501	0.450185
6.5	7	0.617256	0.823122238	0.651448
0.5	0	0.308068	#NUM!	1
3	6.5	0.728419	0.874469118	0.888473
0	0	?	#DIV/0!	?
3	1	0.710482	-0.584962501	0.710482
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
5	2.5	0.749249	-0.514573173	0.830364
216.17	158.812	0.551549	-0.839963926	0.807002
75.6327	75.5392	0.639777	-0.792308127	0.640718
2	6	0.84925	0.584962501	0.578553
1.5	2	1	0	0.847091
0	0.5	1	#DIV/0!	0.308068
0	1	1	#DIV/0!	0.308068
0	0	?	#DIV/0!	?
201.5	180	0.879686	-0.228371274	0.967191
0.5	0.5	1	0	1
0	0	?	#DIV/0!	?
1675.5	1700.5	0.552742	-1.265361125	0.543308
9.5	15.5	0.873897	0.395928676	0.873897
13.5	12.5	0.813955	-0.362570079	0.874974
4.5	6	0.938976	0.152003093	0.87851
443	388.5	0.393095	-0.711678105	0.544944
0	2	1	#DIV/0!	0.308068
240	289.5	0.904491	0.230100516	0.981522
632.5	600.5	0.819341	-0.334815779	0.862676
18.5	12	0.619717	0.69743723	0.451516

340.5	382	0.838219	-0.397490518	0.759619
394	194	0.955324	-0.040851238	0.372776
77.5	51.5	0.760844	-0.455945443	0.941746
1	0	0.756486	0.584962501	0.3832
33	26.5	0.837103	0.313157885	0.711895
1.5	0.5	0.706667	0.736965594	0.468351
0.5	0.5	0.450185	#NUM!	0.450185
185	181	0.989365	0.023207391	0.975191
23	34	0.902763	0.231325546	0.831187
22.5	12.5	0.676324	-0.684498174	0.940317
1	1.5	0.724378	-1	0.495025
8.5	1.5	0.344065	0.436099115	0.0334494
521	452.5	0.873448	-0.252000356	0.97712
39.5	35.5	0.77254	-0.470890734	0.853376
119.5	32	0.825822	0.365919733	0.45847
1.5	2.5	0.770719	0.736965594	1
14	12.5	0.867064	-0.283792966	0.946497
24	30.5	0.489836	-0.830074999	0.293443
0.5	0	0.308068	#NUM!	1
896.001	751.495	0.740017	-0.417185426	0.904639
0	1.5	1	#DIV/0!	0.308068
4.5	1	0.79813	0.415037499	0.420459
18	25	0.778247	0.584962501	0.949743
11785	10216.5	0.901587	-0.216609579	0.99552
0	0.5	0.353387	#DIV/0!	0.622002
1	0.5	0.353387	#NUM!	0.622002
7	20	0.795875	0.836501268	0.725688
0.5	0	0.622002	1	0.353387
23.5	38.5	0.713969	-1.232660757	0.457439
32.5	38	0.216901	-1.7744403	0.148912
904	722	0.586428	-1.248426319	0.718399
381.5	204.5	0.438164	-0.6990223	0.864539
54.5	61	0.906225	-0.229025514	0.831423
1	1	0.308068	#NUM!	0.308068
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
7	6	0.448923	-1.485426827	0.547675
6.5	3.5	0.82986	-0.378511623	0.82986
10	15	0.896156	-0.321928095	0.653559
359.5	378.5	0.802966	-0.405039573	0.762244
0	0	?	#DIV/0!	?
62	97.5	0.852871	0.438121112	0.90921
0	0	0.308068	#DIV/0!	0.308068
0.5	0.5	0.450185	#NUM!	0.450185
13.5	20.5	0.70767	-0.584962501	0.369191
0	0.5	1	#DIV/0!	0.308068
0	0	?	#DIV/0!	?
445.5	484	0.563153	-0.619372532	0.477996
3.36393	0.73279	0.338283	-1.001961277	0.568268
9	9.5	0.577983	-1	0.539144
3.53289	1.92717	0.87267	-0.225106491	0.733119
5.11E-15	5.16E-20	?	#NUM!	?
4.82E-18	3.57E-35	?	#NUM!	?
0	0	?	#DIV/0!	?
0.00472	0	0.308068	#NUM!	1
1	0.05119	0.000159992	#NUM!	0.308068

0	0	?	#DIV/0!	?
3.27E-19	0.01086	1	-44.03449301	0.308068
2.93697	6.79E-16	0.333252	-4.0705762	0.946533
158.578	199.765	0.39864	-0.965644556	0.22957
2.62755	3.55418	0.645386	1.090409599	0.749101
1.87362	0.94823	0.35667	-7.503528816	0.622432
109.446	138.747	0.907968	-0.244256033	0.755182
0	0	?	#DIV/0!	?
40.5	33.5	0.559483	-1.017921908	0.695546
32.9171	33.0875	0.735339	-0.550323564	0.731276
14.4565	19.2241	0.868775	0.326151245	0.960362
0.13827	3.6511	0.965945	-16.36518774	0.308355
0	0.01465	1	#DIV/0!	0.308068
0	0	?	#DIV/0!	?
2.98E-12	1.28E-24	?	#NUM!	?
55.9093	77.438	0.968494	-0.082339975	0.755939
1.81E-09	4.00E-10	0.308068	28.84698243	0.308068
4.45E-12	1.58E-06	0.960779	13.92162302	0.326429
0	0	?	#DIV/0!	?
0.93521	2.79391	0.817454	0.522703056	0.437043
0.5	0	0.308068	#NUM!	1
5.78E-05	1.18E-06	0.325184	4.613891755	0.308722
3.50E-09	1.40E-15	0.308068	25.49948604	0.308068
1.21E-10	0.30661	0.71401	29.7177415	0.505806
27.9215	25.3953	0.931723	-0.121225712	0.991614
9	10.8748	0.607219	-1.169925001	0.488814
1.0311	1.13167	0.883427	-0.355645788	0.832407
2.10604	2.26605	0.404855	-2.742602952	0.369496
57.4734	50.9253	0.867245	0.33752021	0.811299
3.44764	8.08755	0.602595	-9.425126461	0.266518
7.24084	12.3038	0.771344	-0.686232071	0.432003
549	518.5	0.466173	-1.905905485	0.497647
43.5	50.5	0.664034	-0.9510904	0.567676
1.42E-12	0.66378	1	11.07787503	0.308068
11.3361	20.8955	0.999416	-0.001094899	0.439724
3.08E-15	1.42E-27	?	#NUM!	?
112.5	90	0.715078	0.637429921	0.623195
5.78E-05	1.18E-06	0.325184	4.613891755	0.308722
1.05613	1.0277	0.444694	#NUM!	0.455812
13.4022	7.97106	0.485566	-2.11024614	0.732664
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
6.45E-44	0.50131	0.999997	124.1244655	0.307786
0	4.53E-06	1	#DIV/0!	0.308068
0	3.92E-37	?	#DIV/0!	?
0.00054	0.0094	0.94842	-53.27247389	0.308727
179.5	139.5	0.701538	-0.504846459	0.924117
3.00E-07	1.14547	1	-0.290962289	0.308068
242.495	175.361	0.442315	-1.193400847	0.684187
13.4512	15.3722	0.966107	0.097562281	0.964711
271.5	247	0.544133	-1.002659346	0.615056
6.48995	4.98114	0.604357	-1.397070447	0.742172
8.30605	11.2012	0.895495	0.143891492	0.761869
0.28775	0	0.308068	-135.7155645	1
35	24	0.822726	-0.175086707	0.697783

3.47951	6.85305	0.698079	-0.757984711	0.245365
3.72E-07	1.53E-19	0.308068	#NUM!	1
12.5239	26.563	0.946639	0.202516588	0.67176
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
1.94804	0.03607	0.308137	-30.38645174	0.983333
1560.5	1446.5	0.634592	-0.56271559	0.710708
0	0	0.308068	#DIV/0!	0.308068
3.08844	4.44E-19	0.457728	-1.840012663	0.763454
258	248.5	0.603071	-0.923764414	0.630308
0.79733	2.69723	0.72902	1.207495731	0.775591
23.4141	19.7582	0.608085	-1.356892127	0.699741
0	0	0.308068	#DIV/0!	0.308068
1.40216	2.26628	0.565203	-51.75057367	0.374188
139	127	0.968968	0.075815782	0.9195
1.49E-08	0	0.308068	#NUM!	1
73.6652	86.6161	0.991243	-0.024409808	0.89989
0.35828	8.59E-09	0.308068	-25.31454861	1
2.03E-35	1.88E-34	?	-9.419214455	?
4.34E-36	0.01713	1	37.70418909	0.308068
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
3.87389	0.04257	0.312658	-6.472417908	0.999754
0	0	?	#DIV/0!	?
1.51882	5.31E-16	0.308068	-27.72530169	1
218.05	262.896	0.868085	0.321973085	0.976427
143.091	148.899	0.864054	0.296222313	0.887985
1.39294	0.8438	0.426065	-3.075620484	0.646633
8.15E-07	6.18E-15	0.308192	11.65711862	0.308068
0.00395	1.45E-31	0.308068	#NUM!	1
16.5419	7.8972	0.815264	-0.376272818	0.766274
1266.8	1274.57	0.984924	0.032498411	0.988985
66.032	51.9825	0.390166	-1.183942	0.578465
2.13E-31	0.87401	1	#NUM!	0.00342458
3.40066	1.69036	0.472144	-0.824054888	0.906403
0	9.81E-37	?	#DIV/0!	?
1.27E-19	4.36E-13	?	#NUM!	?
1.27E-19	0.00919	1	#NUM!	0.308068
1.56E-41	0	?	#NUM!	?
194	158.5	0.834866	0.288830407	0.706177
186.821	284.75	0.959331	0.102211812	0.756327
0.56997	3.23952	0.845534	-82.57637047	0.314182
88	103	0.860947	0.341468281	0.949353
1.18748	0.50088	0.90528	-0.227433017	0.726976
2.56E-22	0.63759	1	49.51105075	0.308068
160.547	145.612	0.880928	-0.261678139	0.947453
258.5	245	0.585941	-0.55869325	0.645593
338.806	340.074	0.860854	-0.322395505	0.858297
81354.6	86275.3	0.182976	-1.336334594	0.153959
54.6192	58.3823	0.901183	0.213995646	0.943609
5.51E-07	0.00788	0.308089	20.4123794	0.312217
5.87E-14	5.36E-28	?	-36.26399076	?
2.53E-41	0	?	#NUM!	?

2.34123	1.34341	0.536181	-0.947094256	0.94143
291.5	245.5	0.531118	-1.063230761	0.65629
0	0	0.308068	#DIV/0!	0.308068
7.32113	0.63846	0.31109	-8.037856739	0.925363
3.68E-08	1.25E-22	0.308068	#NUM!	1
0	0	?	#DIV/0!	?
51.7917	49.3279	0.585303	-0.963275666	0.620682
174.763	153.566	0.870504	0.26549784	0.794969
56.1824	49.6192	0.850397	-0.234264067	0.966707
2.5	1.5	0.892901	0.263034406	0.690256
0.49048	1.63E-06	0.311345	-6.945561005	0.992699
1.29E-06	1.18E-11	0.307918	-24.33565763	0.999992
1.45267	0.74858	0.556214	-1.463086755	0.88441
2.09E-09	7.40E-08	0.989624	0.403434303	0.23293
415.742	47.1714	0.324686	-1.091681789	0.488383
3.73E-12	2.05E-37	?	-35.00651016	?
1.31E-16	1.34E-26	?	-9.710718483	?
8.66E-26	0	0.308068	49.77464306	0.308068
2.03416	1.54092	0.400935	#NUM!	0.513193
2.11036	2.08E-11	0.0818245	-93.90614202	1
501.5	443.5	0.236553	-0.510674272	0.433061
0	0.05189	1	#DIV/0!	0.308068
0.21225	0	0.308068	#NUM!	1
3.71151	6.56381	0.979412	0.055820711	0.640467
0	0	?	#DIV/0!	?
11.7525	8.27114	0.950334	-0.106179797	0.843753
0	0	?	#DIV/0!	?
2.8607	3.5	0.864758	0.390391574	0.961752
1.69E-23	0	?	#NUM!	?
5.35E-15	1.26E-13	0.308068	47.40068887	0.308068
353	384.5	0.879599	-0.31886613	0.826558
596.823	645.676	0.789772	-0.363719441	0.717023
0	0	?	#DIV/0!	?
0	0	0.308068	#DIV/0!	0.308068
1.72E-14	0.00367	0.308073	45.29927326	0.310054
79.6009	90.3389	0.755915	-0.658273672	0.673025
1.89022	4.37911	0.584917	-12.28334942	0.252394
11.3465	9.04571	0.354391	-14.78881815	0.447766
3.30E-28	1.85117	1	43.1842992	0.308068
6.53812	12.4973	0.656604	-0.949579383	0.250338
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
1.97641	8.8104	0.679583	1.60480676	0.77264
204.766	197.862	0.977078	-0.059153225	0.996314
632	669	0.170367	-1.179659436	0.141478
53	47	0.859946	-0.236067358	0.964718
58.1827	48.1892	0.585609	-1.164033134	0.702739
1.23972	0.69092	0.363129	-82.73733004	0.593012
0	0	0.308068	#DIV/0!	0.308068
0	0	?	#DIV/0!	?
7	5	0.329316	-0.807354922	0.724378
4.93E-16	5.67E-18	?	-30.29446138	?
2828.08	2789.2	0.811834	-0.379470991	0.822719
47.6271	61.0298	0.795626	-0.618081815	0.644316
3.33E-33	1.21E-16	?	#NUM!	?
1.90248	6.93553	0.0180976	-3.517861541	0.000352036

364.339	340.499	0.702156	-0.574839336	0.758246
47.9308	59.6903	0.872293	0.326030243	0.995834
1	3.95E-26	0.308068	#NUM!	1
6.79E-16	2.28E-33	?	#NUM!	?
8.71E-17	7.50E-37	0.308068	51.40263822	0.308068
555.864	648.497	0.994615	-0.011593437	0.883145
24.9676	18.296	0.638818	-1.07517009	0.814734
2.93E-13	1.80E-06	0.308283	27.48620519	0.32168
3.45911	4.30498	0.598336	1.244946768	0.662533
0.03455	0	0.308068	#NUM!	1
0.5	5	0.545049	2.584962501	0.624065
0.5	0	1	0	0.450185
2151	2060	0.767377	-0.58546562	0.795791
6.92E-36	0	?	#NUM!	?
0	7.15E-20	?	#DIV/0!	?
6.79E-16	0	?	#NUM!	?
539.219	485.046	0.564267	-0.758350945	0.659444
287.193	315.152	0.564145	-0.613983984	0.468499
5.78E-05	1.18E-06	0.325184	4.613891755	0.308722
5	2	1	0	0.622002
1.74E-28	4.17E-14	0.308068	84.97467856	0.308068
7.33851	11.9276	0.901296	0.307533986	0.839977
2.66E-31	2.90E-11	0.308068	100.9698023	0.308068
3120.5	2954	0.480647	-0.967768603	0.525998
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0.5	6.63E-25	0.308068	#NUM!	1
6.53E-19	7.41E-21	0.0132141	54.12114533	0.0132141
192.5	180.5	0.68006	-0.847247649	0.721855
1.53236	0.83498	0.629255	1.00803201	0.493802
207.5	232	0.813897	-0.453793543	0.736476
2.38872	3.7644	0.542422	-1.652762615	0.295575
0.00307	1.95835	0.497079	9.016087216	0.869585
0	0	?	#DIV/0!	?
40.5	42	0.904463	-0.210566986	0.87869
555.31	362.95	0.957456	-0.077092777	0.764709
6.08078	8.33012	0.897559	-0.346741826	0.727716
0	0	?	#DIV/0!	?
6.77973	8.38904	0.595309	-0.729148141	0.413625
3.39456	2.5488	0.934064	0.167781399	0.803696
3.40512	3.29511	0.443594	-34.01527199	0.456973
0	0	?	#DIV/0!	?
1.49E-06	1.83E-28	0.308068	-62.41453227	1
0	0	?	#DIV/0!	?
3.66E-18	7.12E-18	?	#NUM!	?
5.05E-19	0	0.308068	56.53381212	0.308068
3.65E-13	3.92E-37	?	-4.057632096	?
0.58982	1.77E-06	0.308061	#NUM!	0.999997
7.96982	7.95404	0.723245	-0.626382252	0.724703
6.89E-15	6.02E-11	?	5.609415003	?
3.43E-12	0	?	#NUM!	?
0	0.5	1	#DIV/0!	0.308068
15.0357	21.8308	0.476654	-2.955960013	0.305714
1.51377	3	0.778615	0.482545748	0.681634
0	1.65E-16	0.308068	#DIV/0!	0.308068
10.8894	13.8489	0.592216	-0.679459968	0.378787

1.66943	5.78E-15	0.308069	-18.50945566	0.999998
2.05E-33	1.76041	0.657353	108.2096299	0.572498
2.26E-08	4.03E-20	0.308071	16.97506973	0.308068
959.032	884.757	0.679074	-0.669114741	0.741884
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
1.56E-41	0	?	#NUM!	?
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	0	0.308068	#DIV/0!	0.308068
117.351	120.141	0.974143	0.061327292	0.988298
3.88E-07	0.5744	0.999999	-48.00008514	0.308068
0	2.43E-30	?	#DIV/0!	?
0	0	?	#DIV/0!	?
9.14E-21	0	?	-14.39341512	?
9.57E-43	0	?	#NUM!	?
0.5	0	0.308068	#NUM!	1
1	0	0	#NUM!	?
16	7.5	0.606308	-0.830074999	0.909918
807.5	588.5	0.251917	-0.646091194	0.748103
0.66867	2.67E-12	0.308068	-43.69304611	1
247.953	209.887	0.943825	-0.095413399	0.921513
15.4891	20.5404	0.696243	-0.822052927	0.506276
1.45E-09	1.47E-07	0.308068	29.3413703	0.308068
0.65648	4.01559	0.568	2.388605898	0.9027
795	873.5	0.745017	-0.552662009	0.672193
94.4522	78.0736	0.754958	-0.540599208	0.888689
0	0	?	#DIV/0!	?
9.92E-19	1.05E-11	0.308068	33.11056422	0.308526
1.82E-33	6.40E-30	?	#NUM!	?
3.69151	0.07679	0.341313	-3.044909305	0.905634
1.87895	10.404	0.880848	0.624110018	0.315027
17	13	0.767879	-0.387023123	1
0.39071	4.39538	0.490465	3.018792753	0.751623
7.13E-20	5.37E-19	0.308068	53.6194256	0.308068
0.80005	5.99E-24	0.308068	-41.2187426	1
330.217	290.875	0.652862	-0.884954699	0.737033
1575.5	1424	0.581673	-0.841874684	0.662944
2.34807	0.79256	0.329831	-66.59184423	0.721457
0	3.40E-09	1	#DIV/0!	0.308068
2	4.43E-18	0.308128	-12.70558034	0.999865
7.38E-31	5.77E-36	?	48.60998872	?
0	0	?	#DIV/0!	?
0	1.54E-17	0.308068	#DIV/0!	0.308068
4.14214	1.02E-09	0.34481	-3.582191326	0.925262
3.0563	6.5	0.971137	0.115014544	0.655201
45	41.5	0.986111	0.03170886	0.937595
0	3.18E-34	?	#DIV/0!	?
0.37747	1.66207	0.803739	-98.58404485	0.318045
8.43E-11	1.98E-07	0.308068	33.7659676	0.308068
13.5837	22.3304	0.92921	0.225261729	0.803832
2.35079	0.9212	0.336676	-13.73682317	0.68511
0	0	0.308068	#DIV/0!	0.308068
749.5	681.5	0.837726	-0.386134992	0.899742
55.9082	35.2716	0.696908	-0.507249981	0.922883
169	164	0.904896	-0.230954435	0.923815

39.5	36.5	0.959	-0.094327383	0.991794
5.78E-05	1.18E-06	0.325184	4.613891755	0.308722
0.67924	2.47904	0.701428	#NUM!	0.221139
2.04962	5.61102	0.960603	-0.035356459	0.0298682
1.89E-43	0	?	26.72759638	?
2.02E-18	7.39E-19	?	#NUM!	?
0	9.52E-13	0.034897	#DIV/0!	0.034897
1.18442	1.07428	0.786317	-0.646879384	0.83995
0	0.01465	1	#DIV/0!	0.308068
2.07E-34	0.00271	1	-11.61233974	0.308068
0	0	?	#DIV/0!	?
2.57E-24	1.18E-21	?	-10.00322757	?
2.24E-13	5.51E-23	0.308068	22.67021168	0.308068
203.738	164.06	0.289583	-0.889145989	0.512961
502	530.5	0.946653	-0.118233999	0.908373
18.8796	42.7542	0.775878	-1.458563799	0.420778
145.008	92.685	0.854154	-0.193327461	0.732126
0.38574	1.61054	0.931438	0.425715991	0.496856
19.2645	17.0451	0.887102	-0.240851522	0.971557
1.14E-41	0	?	#NUM!	?
0	8.83E-18	?	#DIV/0!	?
1.61E-18	0	?	#NUM!	?
0	4.56E-26	0.308068	#DIV/0!	0.308068
2.02E-15	0	?	-23.05151314	?
0.99796	0	0.308068	#NUM!	1
1746.64	1565.63	0.878866	-0.259632067	0.954849
4.69121	18.4752	0.786744	1.009887011	0.613755
16.4973	5.19478	0.244381	-1.175175006	0.761963
3.62E-14	3.30E-06	1	#NUM!	0.308068
0.50594	0	0.308068	#NUM!	1
0	0.01254	1	#DIV/0!	0.308068
0	0	0.308068	#DIV/0!	0.308068
0	0	?	#DIV/0!	?
0	7.66E-06	1	#DIV/0!	0.308068
0.03771	3.98101	0.657785	4.983888471	0.322351
318	251	0.976573	-0.046096415	0.867403
164.5	145	0.944869	0.109731441	0.86307
90.5	74.5	0.990767	-0.01603011	0.862575
52.8975	71.3532	0.99697	-0.008202569	0.813176
0	0	0.308068	#DIV/0!	0.308068
5.31249	8.28764	0.172125	-1.327585041	0.0409916
0	2	0.622002	#DIV/0!	0.622002
51	44	0.898872	-0.212993723	1
154.196	90.7612	0.956284	-0.075086314	0.700617
39.8343	23.6372	0.655967	-0.765586538	0.995447
1705.87	1519.09	0.545731	-0.52140222	0.693612
15.0388	24.0482	0.753191	-0.643935935	0.426413
5.71E-42	0.0117	0.999999	110.4707057	0.308068
0.5	1.59E-09	0.308068	-28.22946981	1
502.5	442	0.742043	-0.467168232	0.85151
0	0	?	#DIV/0!	?
6.5	8.082	0.95375	-0.115477217	0.810133
1	0.5	0.353387	#NUM!	0.622002
167.503	157.431	0.746738	-0.427809453	0.803917
944.497	823.568	0.628304	-0.491125772	0.784511
28.3362	14.1793	0.873667	-0.132945319	0.47783

0	0	?	#DIV/0!	?
0	0.00676	0.308271	#DIV/0!	0.321312
2.24E-33	8.51E-25	?	#NUM!	?
0.00745	0	0.308068	-95.80458151	1
0	0	?	#DIV/0!	?
0	6.66E-16	0.308068	#DIV/0!	0.308068
0	0	?	#DIV/0!	?
4.02E-32	0	0.308068	100.59811	0.308068
0	0	?	#DIV/0!	?
0	1.56E-36	?	#DIV/0!	?
5.92E-20	0	?	-50.59835729	?
532.115	612.5	0.899909	-0.231278277	0.800351
47.6124	50.467	0.778653	-0.569281001	0.740062
0.5	0	0.622002	1	0.353387
1028	865.5	0.573514	-1.174317305	0.682562
2.4272	6.20E-09	0.0707166	-1.044828458	0.0812763
0.5	0	0.308068	#NUM!	1
0	6.58E-33	?	#DIV/0!	?
0	0.5	0.622002	#DIV/0!	0.622002
0	2.82E-06	1	#DIV/0!	0.308068
0.92983	0.01641	0.496058	-1.573106129	0.735587
22.75	28.75	0.79101	-0.649813645	0.651352
405	446.5	0.782775	-0.491853096	0.710419
320.924	320.597	0.585473	-0.792158604	0.586328
0	0	?	#DIV/0!	?
2.42E-16	0.52954	1	-55.08179866	0.308068
35	53	0.591953	-1.485426827	0.360577
2.44E-16	1.65952	0.449045	52.60105268	0.996429
74.2685	65.7032	0.792969	-0.469785512	0.877444
106.623	110.739	0.811243	-0.527176923	0.788276
40.842	39.6205	0.857139	-0.319977773	0.878335
18544	16201.5	0.257575	-0.807500802	0.397962
3.35E-09	1.97735	1	6.835994584	0.308068
246	244	0.734172	-0.430761852	0.742075
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
9.92049	5.58243	0.694391	-0.857302107	0.992378
0.5	0.02746	0.875989	0.285295677	0.432824
0	1.01E-31	?	#DIV/0!	?
1.03646	0.29346	0.999052	0.002155903	0.580709
0.50087	0	0.308068	#NUM!	1
5.27E-18	0	?	-68.07304946	?
0	1.54E-30	0.308068	#DIV/0!	0.308068
0	2.91E-16	?	#DIV/0!	?
2.27E-11	4.70E-10	0.96092	-3.315138571	0.31049
5.65E-38	0	?	#NUM!	?
4.55E-24	0.01465	1	-24.21691754	0.308068
0	0	?	#DIV/0!	?
3.10E-28	4.58E-28	?	-28.83822258	?
7.40E-18	2.29E-16	0.308068	56.66216573	0.308068
0	0.00579	1	#DIV/0!	0.308068
0	0	?	#DIV/0!	?
0	3.15E-09	1	#DIV/0!	0.308068
1.08E-30	1.14E-22	?	#NUM!	?
1.95E-11	0.00266	1	-3.315144743	0.308068
163.137	107.971	0.571897	-0.739740685	0.927126

118.004	122.031	0.428477	-2.263478516	0.411094
85.4107	109.376	0.683658	-0.64647534	0.482974
220.919	216.936	0.964223	0.083502662	0.953414
284.143	227.496	0.712798	-0.463587703	0.918531
1.74E-19	2.22E-26	?	-67.64722245	?
0.26944	0	0.308068	#NUM!	1
5.31E-25	4.88E-16	?	-21.78980966	?
1.17E-18	0	?	#NUM!	?
1.09E-14	0.00233	1	-36.26398898	0.308068
0	9.60E-23	?	#DIV/0!	?
0.63335	1.06752	0.749753	0.807305784	0.977921
0	0	?	#DIV/0!	?
0	0.22404	1	#DIV/0!	0.308068
0.7353	0.54819	0.561747	1.304144799	0.500896
0	1.40E-34	?	#DIV/0!	?
1.51E-05	0	0.308068	#NUM!	1
0	3.40E-10	1	#DIV/0!	0.308068
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
2.83E-28	5.21E-31	?	#NUM!	?
3.14624	2.47231	0.852082	-0.335977341	0.995367
62.5454	47.3092	0.883881	-0.19962733	0.897098
0	0.86697	0.366785	#DIV/0!	0.684855
10.0976	8.96686	0.533132	-2.12295416	0.59072
0.14172	3.40E-09	0.308068	-25.31454927	1
0	3.40E-09	0.450185	#DIV/0!	1
0	0	0.308068	#DIV/0!	0.308068
822.713	727.658	0.861875	-0.306473117	0.944895
0	0	?	#DIV/0!	?
1.00411	0.5	0.0909106	#NUM!	0.308082
438.231	473.689	0.806518	-0.334192905	0.73463
0	0.07335	1	#DIV/0!	0.308068
40587	40136.5	0.180107	-0.955342005	0.187536
0.93379	2.52192	0.521058	-21.53899316	0.145254
8.21E-05	1.74428	0.493016	14.09497892	0.878081
12.5	15.5	0.95902	-0.058893689	0.722245
0	3.37E-37	?	#DIV/0!	?
691.5	676	0.891083	-0.277502365	0.904923
4.10E-10	1.67E-08	0.979245	-3.940795751	0.307473
4	1	0.844837	0.321928095	0.456444
3.08E-16	0	?	#NUM!	?
25	25.5	0.668091	-0.434402824	0.645157
0.06251	5.71E-16	0.308068	-36.26399349	1
252.589	198.428	0.77381	-0.482540773	0.94328
3.60978	2.15907	0.196956	-2.853004891	0.442805
5.36289	4.62859	0.756188	-0.743244585	0.836826
4.71154	5.94047	0.971145	0.086372701	0.907167
16	10.5	0.834785	-0.299560282	0.861845
0.00601	1.60E-20	0.308068	-22.14205494	1
5.889	2.61334	0.128649	-1.794135237	0.68009
158	173.5	0.946977	-0.138873822	0.890711
170.334	161.606	0.979737	-0.044318687	0.985941
0.1014	0.85264	0.159577	6.63396221	0.183676
0.49532	0	0.308068	#NUM!	1
0	3.30E-06	0.308068	#DIV/0!	0.30807

0	0	?	#DIV/0!	?
0	0.66133	1	#DIV/0!	0.308068
0.23056	0	0.308068	#NUM!	1
0.02565	1.14E-19	0.308068	-95.7932993	1
5.11756	5.27348	0.238884	-6.364612171	0.227888
6.01E-15	5.49E-29	?	-36.26399082	?
2	3.71E-34	0.308068	-72.20507431	1
0	0	?	#DIV/0!	?
6.89E-20	0	?	#NUM!	?
0	2.98E-32	?	#DIV/0!	?
0	0	0.308068	#DIV/0!	0.308068
0.7647	1.55189	0.821061	0.613678382	0.831242
0	0	?	#DIV/0!	?
3.39E-16	4.00E-08	0.308068	50.39043693	0.308068
0	0.00919	1	#DIV/0!	0.308068
1.91E-36	7.51E-31	?	70.03612049	?
0	0	?	#DIV/0!	?
0.5	0.01073	0.30816	-131.1296333	0.980681
2.93E-12	0	?	#NUM!	?
3.99E-13	1.10E-34	?	#NUM!	?
13.1636	18.7588	0.842891	-0.417343808	0.60183
20.5	16	0.802412	-0.313157885	0.974901
158.734	234.534	0.900558	-0.272942378	0.643879
12.1624	11.1906	0.978705	-0.057782556	0.977959
244.934	258.885	0.836968	-0.400250755	0.799792
388.605	402.151	0.992043	0.017960178	0.985813
0	0	?	#DIV/0!	?
41.9098	30.6265	0.907175	0.064239292	0.445507
0	0.5	0.450185	#DIV/0!	1
721.5	682	0.619951	-0.872803765	0.661118
4.18E-10	4.54E-08	0.991712	#NUM!	0.30808
3.48E-05	2.14503	0.377387	15.80891688	0.94316
7.55E-17	0	?	#NUM!	?
0	0	?	#DIV/0!	?
985	952.5	0.680184	-0.532468926	0.711883
1	1	0.308068	#NUM!	0.308068
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	0	0.308068	#DIV/0!	0.308068
665.7	663.612	0.998653	0.002784311	0.996463
9.5	18	0.79404	-0.440572591	0.298368
171.5	191	0.874281	-0.277406523	0.794855
1.41E-22	1.29388	1	24.96961413	0.308068
0	0	?	#DIV/0!	?
0.0006	1.87E-07	0.308228	11.29318487	0.308068
1	1	0.622002	-1	0.622002
0.5	2.5	0.19041	2.807354922	0.613399
0	0.5	0.450185	#DIV/0!	1
2.84E-29	3.05E-31	?	#NUM!	?
0.20063	1.1523	0.847065	-94.21388429	0.314057
3.30502	6.40275	0.868386	-0.518465909	0.512834
0.00091	0.00024	0.309232	8.429449639	0.308381
12.328	19.7031	0.889118	0.358661326	0.876009
5.34156	31.0884	0.985977	-0.040567905	0.0445386
10.4737	7.85916	0.725806	-0.81568111	0.881224
86	110	0.9132	-0.236440196	0.758236

84.5592	12.4634	0.383926	1.277477672	0.202366
7.53275	8.46388	0.15392	-1.575705313	0.109819
0	0	0.308068	#DIV/0!	0.308068
0.71783	1.75862	0.891645	0.443395193	0.684035
0	6.52E-05	1	#DIV/0!	0.0704451
0.04881	0.00065	0.308103	-17.60178507	0.987948
0	1	0.501228	#DIV/0!	0.857194
0	0.00497	1	#DIV/0!	0.308068
9.95584	17.506	0.657215	-0.964720521	0.298611
527	433.5	0.632322	-0.701809149	0.793257
58.8834	37.0672	0.811322	0.214512459	0.451795
119.094	89.2449	0.936589	0.152726113	0.797443
105	116.5	0.918898	0.18662129	0.983177
288.38	274.697	0.930056	0.165562679	0.902946
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
1.54E-32	0.88098	1	36.62482498	0.308068
2.23864	1.28E-11	0.347796	-3.479280015	0.919807
0.00017	2.07E-06	0.308098	#NUM!	0.988918
93.0658	104.444	0.967274	0.066627214	0.948106
5.38074	5.49636	0.996854	-0.008805131	0.985744
416.503	379.307	0.792606	-0.433047045	0.862635
7.82657	9.96021	0.142248	-1.600069995	0.0687883
1.95689	0.0981	0.30857	-105.7157072	0.954959
3.52138	4.6276	0.691402	-1.005780082	0.528323
1.0349	2.36E-06	0.308068	-23.159464	0.999998
1475	1545.5	0.829236	-0.398504918	0.796483
132.245	110.538	0.770656	-0.371267547	0.935254
42.6802	54.067	0.835119	0.319024926	0.986992
6.34E-17	0	?	#NUM!	?
1774.5	1703.5	0.612702	-0.727107669	0.647573
601	620.5	0.673038	-0.506707328	0.640904
1.09E-19	0.00788	1	-45.34866709	0.308068
9.47E-29	3.88E-26	?	#NUM!	?
0.01428	0.92475	0.986099	-22.82620652	0.308116
0	0	?	#DIV/0!	?
0	7.27E-16	?	#DIV/0!	?
1.5	2.5	0.397364	1.874469118	0.513713
2540	2186	0.154876	-0.951412297	0.27104
48.7536	36.4354	0.893745	0.243187578	0.752823
0	3.84E-33	?	#DIV/0!	?
0.7221	0.00962	0.940407	-0.135499214	0.476055
6105.5	4697	0.521216	-0.598971664	0.83107
7	5	0.663517	0.836501268	0.558818
7.53E-11	1.41702	0.242454	34.02806546	0.921004
0.00106	0.44026	0.997175	#NUM!	0.208681
0	1.57E-10	1	#DIV/0!	0.308068
0.01371	0	0.308068	-95.79330964	1
280.037	375.829	0.729376	-0.731294319	0.530777
193.434	256.419	0.935483	-0.146160976	0.725879
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
7.7188	6.34706	0.349253	-106.5061902	0.429966
0	0.00039	1	#DIV/0!	0.308068
1	9.44E-16	0.308068	#NUM!	1
1.09E-19	0	?	#NUM!	?

0.00019	2.59E-25	0.308051	#NUM!	1
187.061	163.003	0.774945	-0.509938843	0.870309
3.43859	2.99746	0.590819	-1.598184504	0.660861
3.34418	5.80E-12	0.308068	-41.08675815	1
256	216.5	0.798806	-0.480363747	0.907185
0.23263	0.82573	0.46227	2.486787872	0.732428
0	4.20E-26	?	#DIV/0!	?
9.36E-09	2.09E-15	0.308068	-27.73918889	1
0	1.94E-05	0.924927	#DIV/0!	0.344992
0.5	2	0.663808	1.584962501	0.825659
4	8.5	1	0	0.213405
3.01959	5.20112	0.859455	0.466241239	0.874187
347.5	285	0.780574	-0.443689687	0.928352
69.3482	61.7244	0.829339	0.388093257	0.770859
0	0	0.308068	#DIV/0!	0.308068
7.31E-13	5.64E-26	?	-6.067247472	?
1.43E-37	1.90E-12	0.308068	104.0917247	0.308068
1.54E-31	0.27151	1	#NUM!	0.308068
1.92E-33	0	?	48.10820292	?
0	3.40E-09	0.450185	#DIV/0!	1
59.6778	82.6488	0.835026	0.42213103	0.977908
5.18E-06	1.02699	0.534976	17.07245218	0.778916
0.5	0.69905	0.527566	#NUM!	0.392594
6513	5633	0.98744	-0.025250322	0.914995
4.50646	4.74622	0.897522	-0.304173222	0.869201
0.63446	0.06569	0.314707	-6.486635727	0.917502
1304.81	1298.55	0.680119	-0.63207269	0.684085
0	2.15E-12	0.308068	#DIV/0!	0.308526
0	0	?	#DIV/0!	?
857.5	789.5	0.607654	-0.589174752	0.692077
270.607	272.294	0.81639	-0.413270358	0.811925
36.9084	52.1577	0.359934	-1.244948625	0.161629
2.13E-31	2.28E-33	?	#NUM!	?
0.45413	3.85E-42	0.308068	#NUM!	1
0.0013	0.02464	0.593001	3.419998103	0.645192
0.39071	0.17224	0.586462	1.092815476	0.431166
18.5	14.5	0.719161	-0.68589141	0.8763
0	0	?	#DIV/0!	?
3.5	3.5	0.379187	-2.807354922	0.379187
138	144	0.794288	-0.436099115	0.761506
3.5	1	0.47668	-1.807354922	1
2.5	5.5	0.844258	-0.736965594	0.454899
749	664.25	0.691635	-0.658557631	0.782308
1703.5	1527.5	0.545386	-0.645497993	0.660823
122.592	143.049	0.424435	-0.694680367	0.277078
51.5	57	0.975867	-0.057143907	0.909784
0	0	?	#DIV/0!	?
22	7	0.884589	0.2410081	0.507782
281.5	298	0.66542	-0.922671991	0.628463
997	953.5	0.692977	-0.702883661	0.725405
2	2.5	1	0	0.866773
316.097	314.245	0.724424	-0.749573291	0.728163
141.944	119.255	0.1128	-1.424514144	0.196263
33	22	0.965805	0.064130337	0.724026
345.5	284	0.862518	0.281703617	0.753478
1104.5	1061	0.678394	-0.623348395	0.711857

5.5	3.5	0.0344509	-3.459431619	0.113502
0	0	?	#DIV/0!	?
1.53307	6.3743	0.910048	-0.817187029	0.383094
2	3.5	0.610398	-2	0.339254
99	93	0.954555	0.112110366	0.92061
118.004	122.031	0.428477	-2.263478516	0.411094
118.004	122.031	0.428477	-2.263478516	0.411094
118.004	122.031	0.428477	-2.263478516	0.411094
1.86414	9.28365	0.324363	5.099152532	0.376585
118.004	122.031	0.428477	-2.263478516	0.411094
118.004	122.031	0.428477	-2.263478516	0.411094
43.1566	8.29221	0.142162	-11.6466978	0.729387
118.004	122.031	0.428477	-2.263478516	0.411094
118.004	122.031	0.428477	-2.263478516	0.411094
118.004	122.031	0.428477	-2.263478516	0.411094
12224.2	12803.1	0.528168	-0.850231803	0.488706
118.004	122.031	0.428477	-2.263478516	0.411094
8.41712	9.72692	0.800587	0.551850271	0.865953
14.0415	18.4816	0.946909	-0.152397003	0.783501
68.1713	52.1893	0.873629	-0.289101054	0.962998
11.616	19.5934	0.720534	0.853657539	0.956957
27.5798	47.2369	0.705532	-1.473837905	0.444211
9.35E-22	2.21288	1	-7.345564602	0.308068
640.495	599.099	0.777876	-0.45221645	0.829754
57.4761	45.5832	0.606071	-0.919056958	0.76858
118.004	122.031	0.428477	-2.263478516	0.411094
118.004	122.031	0.428477	-2.263478516	0.411094
118.004	122.031	0.428477	-2.263478516	0.411094
2.75E-38	6.91E-36	?	-3.833486447	?
3696.96	3877.38	0.765239	-0.463998774	0.725991
3.28E-23	2.45158	0.564168	75.14139173	0.644245
52.5	52.5	0.555353	-1.544320516	0.555353
497	564	0.633156	-1.159440516	0.557126
511.5	613	0.628941	-1.322633397	0.526943
38.7027	13.6845	0.337491	0.451986656	0.0516794
1.94685	6.16E-09	0.308068	-44.89247904	1
87.1526	50.0908	0.508585	-1.082374331	0.89366
63.5901	61.7699	0.801916	-0.454770653	0.822308
0	0	?	#DIV/0!	?
236.5	198	0.603757	-0.771954207	0.748813
0	0	?	#DIV/0!	?
0.141	0	0.308068	#NUM!	1
0.00245	0	0.308068	#NUM!	1
0	0	?	#DIV/0!	?
93.5	80	0.961346	-0.071161029	0.922834
443	521	0.900125	-0.257833156	0.795439
102	110	0.975857	-0.057715498	0.927711
25	26	0.648697	-0.943416472	0.622788
4.5	2	0.377943	-2.169925001	0.787312
5.87317	5.77647	0.972859	0.074351929	0.964417
664	602	0.927519	-0.141419755	1
48.5	55.5	0.884853	0.282730207	0.96143
0.5	0	0.308068	#NUM!	1
0.23465	1.26E-18	0.388958	2.573784815	0.313647
23.5	17.5	0.491563	-1.46712601	0.671151
20.5218	9.33829	0.849738	-0.288936514	0.707204

0	0	?	#DIV/0!	?
86	91.5	0.551218	-1.140862536	0.508967
13	8.5	0.971338	-0.056583528	0.775447
0	0.5	1	#DIV/0!	0.308068
1	0	0	#NUM!	?
864.5	928.501	0.86227	-0.359121653	0.817118
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
36.5	35	0.718484	-0.763559804	0.745037
0	0	?	#DIV/0!	?
191.5	208	0.967861	-0.073405942	0.912282
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
3	1	1	0	0.559404
2.5	1	0.0714215	#NUM!	0.353387
2.10604	2.26605	0.404855	-2.742602952	0.369496
2.10604	2.26605	0.404855	-2.742602952	0.369496
0.0006	1.87E-07	0.308228	11.29318487	0.308068
0.95348	0.01641	0.471829	-1.60935254	0.729768
312.5	353.5	0.885288	-0.279283757	0.801963
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	0	0.308068	#DIV/0!	0.308068
0	0	0.308068	#DIV/0!	0.308068
2.5	2	0.717686	-0.736965594	0.855216
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
497.5	477.5	0.859352	-0.252920328	0.894136
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0.5	0	0.308068	#NUM!	1
1	0.5	0.353387	#NUM!	0.622002
4.5	6	0.663808	-1.584962501	0.523243
207.5	178.5	0.958107	-0.10077777	0.955119
10	5.5	0.787403	0.432959407	0.548751
0	0	?	#DIV/0!	?
205.5	143.5	0.425139	-0.776103988	0.816586
1163.5	1136	0.968684	-0.073772186	0.983527
3.30E-14	0	?	#NUM!	?
0	0	?	#DIV/0!	?
3.41283	5.3999	0.788634	-0.575381575	0.476415
0	0.5	0.622002	#DIV/0!	0.622002
4.10E-10	2.79775	1	5.122890629	0.308068
266	296.001	0.934827	-0.136419198	0.85439
56.5445	24.4963	0.488578	-1.141333712	0.978703
10.5802	2.3134	0.255288	-1.60435694	0.832608
2.5	2	0.743666	0.678071905	0.665262
46	40.5	0.700082	-0.908852112	0.772993
10.168	1	0.0051902	-4.185353577	0.757811
6.02368	8.70085	0.936093	0.200714706	0.87424
16.3255	15.4756	0.720936	-0.891841957	0.750723
15.4632	26.6224	0.934894	0.223040035	0.787757
262.5	246.5	0.974256	-0.050331676	0.979975
165	195.5	0.9616	-0.104227369	0.860797

1439	1217	0.669589	-0.791278423	0.784411
0	0.5	0.450185	#DIV/0!	1
2	2.5	0.610398	-2	0.504632
0	0	0.308068	#DIV/0!	0.308068
32	28	0.758638	-0.573735245	0.848316
0.21551	0	0.308068	#NUM!	1
7	15.5	0.925995	0.280107919	0.669855
0.5	2	0.663808	1.584962501	0.825659
7.91016	19.9601	0.830153	-0.990210033	0.411678
0	0	?	#DIV/0!	?
528.5	594	0.858963	-0.409135041	0.790325
26.9451	42.9153	0.812832	-0.509828746	0.495958
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
70	84.5	0.996028	0.010268335	0.889347
2	3	0.860525	-0.415037499	0.606286
3	6	0.904922	0.222392421	0.562529
88.5	128	0.426503	-1.51340924	0.21939
254.5	242	0.791637	-0.414093018	0.831578
41.867	80.6022	0.81798	-0.349885041	0.275688
1	1.5	0.474021	#NUM!	0.308068
2.83446	5.65752	0.811651	0.660682423	0.864403
2.5	0	0.544016	-1.321928095	0.680109
4.49296	9.49296	0.984743	-0.037615067	0.426177
384.151	213.999	0.718942	0.591034932	0.512205
71.5804	61.378	0.781926	-0.482071718	0.88971
341.5	298	0.834075	-0.301999602	0.945422
1525.5	1387.5	0.871546	-0.271285716	0.939011
319.351	198.681	0.342452	-1.095769701	0.765744
0	0.5	0.450185	#DIV/0!	1
0	0	?	#DIV/0!	?
121	105	0.384995	-1.111508315	0.500007
0.00388	0.01171	0.305521	6.130621852	0.317445
141.426	132.983	0.504393	-0.947605374	0.554944
228	229	0.609273	-0.884522783	0.606019
4	1.5	0.574988	-1	0.885352
471.561	414.253	0.588955	-0.84928794	0.690739
462.556	398.961	0.460319	-0.993421533	0.58417
117.383	126.285	0.197303	-1.611230226	0.163503
8.5	11	0.810247	0.556393349	0.927917
63.5	111	0.991846	-0.022900402	0.627946
42	45.5	0.914204	-0.222392421	0.864773
1.10234	0.50091	0.345864	-86.77286763	0.647082
286	325	0.67008	-0.78049297	0.576814
2.5	5	0.929192	0.263034406	0.725181
0	0	?	#DIV/0!	?
0.16667	0.08333	0.353387	0.999995672	0.198892
192	195.5	0.960096	-0.097122467	0.948945
0.98431	1.99E-20	0.323922	-4.716673284	0.965797
1.5	0	1	0	0.329316
80.3765	81.6839	0.536668	0.773063767	0.545424
59.5	52.5	0.889059	0.254929356	0.822951
5.5	5	0.775228	-0.652076697	0.82986
6	9.00819	0.65588	-0.774548189	0.356246
58	88	0.976255	0.072756342	0.790165

1.5	1.5	0.465798	1.415037499	0.465798
0	0.5	1	#DIV/0!	0.308068
72.9141	78.3181	0.475333	-1.287167364	0.427203
0	0	?	#DIV/0!	?
3	2	0.785812	0.415037499	0.594273
7	5	0.481309	-0.807354922	0.806588
0	0	?	#DIV/0!	?
8.5	13	0.881826	-0.387023123	0.635606
0	0	?	#DIV/0!	?
109.908	78.5581	0.650358	-0.846044235	0.869212
802.588	760.946	0.586146	-1.161250523	0.620067
158.87	166.191	0.955796	0.087810013	0.988247
0	0	?	#DIV/0!	?
27	26	0.665002	-0.625604485	0.69743
559.091	459.252	0.085287	-0.716873861	0.262206
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
170.5	163	0.710353	-0.713188211	0.741093
1.33E-06	4.98E-07	0.965792	-0.080394834	0.656906
1.3491	0.0007	0.781675	0.152945975	0.0571634
0	0	?	#DIV/0!	?
106	131.5	0.776769	0.500898236	0.904511
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
231.5	303.5	0.942188	-0.113401397	0.714103
134.5	96.5	0.947497	-0.11146043	0.854121
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
170	232	0.969941	-0.087462841	0.787564
277	299	0.830307	-0.480746969	0.784383
327.5	393.5	0.838627	-0.433510159	0.719765
0	0.5	1	#DIV/0!	0.308068
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
1.35	0.32	0.504286	-1.130395857	0.779557
1.35	0.32	0.504286	-1.130395857	0.779557
0.5	0	0.308068	#NUM!	1
435	410.5	0.897627	-0.241309635	0.934894
0	0	?	#DIV/0!	?
39.552	39.5354	0.825507	-0.423138398	0.825788
1.81E-41	1.64E-27	0.308068	133.2177758	0.308068
153	163	0.685714	-0.563900885	0.628968
0.5	0	0.308068	#NUM!	1
3619.81	3470.03	0.653743	-0.771509491	0.685334
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?

9.25E-43	5.12E-14	0.308062	128.8685585	0.308062
286.845	254.571	0.754516	-0.351783368	0.879836
0.5	0.5	0.651448	1	0.651448
0	0.5	1	#DIV/0!	0.308068
349.5	294.5	0.559463	-0.714439025	0.722037
0	0	?	#DIV/0!	?
685.5	150	0.936205	0.113290027	0.42623
42	26	0.860618	0.26589406	0.620047
1663.98	1466.3	0.387549	-0.928279387	0.504627
178.527	156.506	0.878448	-0.235672695	0.9778
0	0	?	#DIV/0!	?
7.5	21	1	0	0.286561
4268.44	3906.81	0.546192	-1.00293675	0.612386
16.7256	30.0212	0.944211	-0.214647271	0.643371
24	30	0.500795	-1.584962501	0.370995
12.211	17.5227	0.888477	0.343761057	0.931002
0.16667	0.08333	0.353387	0.999995672	0.198892
0.16667	0.08333	0.353387	0.999995672	0.198892
0.5	0	0.308068	#NUM!	1
2.49E-25	2.13604	1	-18.75162105	0.308068
4.59821	2.43526	0.615509	-1.163324673	0.938443
21	36	0.716663	-0.637429921	0.317369
7.83E-05	7.90657	0.531546	15.91000651	0.682748
0.00686	2.74E-05	0.280989	-10.73629897	0.996713
10	15	0.875421	0.321928095	0.875421
57.0282	47.3599	0.897744	-0.236778743	0.987671
0	0	?	#DIV/0!	?
53	53	0.960826	0.092258508	0.960826
2.5	1.5	0.490574	-1.321928095	0.810902
2.62355	4.3368	0.773081	0.726952406	0.999253
199	180	0.967013	0.074181813	0.907608
0	1	0.622002	#DIV/0!	0.622002
222.5	230	0.871123	-0.297815639	0.848241
125.759	162.009	0.850546	-0.441616502	0.696526
31.5	44.5	0.892601	0.326500825	0.93268
71	57	0.94159	0.135655099	0.826709
11.6183	21.3871	0.59406	0.99877015	0.9312
241.984	273.705	0.702402	0.706725486	0.760829
1.23E-31	6.17E-24	?	36.04226041	?
0	0	?	#DIV/0!	?
44.5	51.5	0.837111	-0.38827059	0.733667
0.5	0.5	0.513713	1.584962501	0.513713
102.5	113.5	0.950878	-0.124891248	0.887783
45	32.5	0.75964	-0.321928095	0.904574
76.9948	97.3182	0.770411	-0.43153306	0.564633
13.1467	18.965	0.919182	0.219962026	0.864328
1	0.5	0.651448	-1	1
12.5	13.5	0.742446	-0.736965594	0.694615
3.60076	3.83987	0.334038	-58.33267576	0.308065
1	0	0.622002	1	0.353387
2.5	0.5	0.513713	-0.736965594	0.513713
160.5	162.5	0.981158	0.04425792	0.988694
0	0.5	1	#DIV/0!	0.308068
52.5	45.5	0.737293	-0.447458977	0.865742
120.5	132.5	0.93714	-0.138102277	0.869281
68.5	62.5	0.947608	0.111421283	0.890868

48.5	42.5	0.643664	-0.818553129	0.738616
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	0.5	1	#DIV/0!	0.308068
0.5	0	0.308068	#NUM!	1
12.1785	9.84711	0.367558	-4.482050242	0.459558
0	0	?	#DIV/0!	?
2083.06	1611.48	0.713903	-0.646703355	0.889931
146.5	143.5	0.973369	0.062630988	0.96109
0	1	0.308068	#DIV/0!	0.308068
0	0	?	#DIV/0!	?
119.5	113	0.787885	-0.491475872	0.826746
3.36162	4.13506	0.955288	-0.127238415	0.835168
0.61826	2.25E-17	0.539445	1.343952916	0.337236
3.48209	6.84001	0.810577	0.431976523	0.676141
0.01133	8.81E-06	0.308069	-19.13247717	0.999301
2	2	1	0	1
0.44307	1.09498	0.719933	1.063252761	0.898975
1.50856	1.50422	0.997043	-0.008209577	0.998543
13.5	10.5	0.944316	0.103093493	0.78142
324.5	254	0.908887	-0.174656522	0.917455
1.5	0.5	0.329316	#NUM!	0.724378
47.5	35.5	0.839451	-0.399930607	0.992944
204	181	0.926094	0.157297393	0.85471
75.5	75	0.917917	-0.19401062	0.922215
0	0	?	#DIV/0!	?
29.119	44.5752	0.942061	-0.157518601	0.661548
297.874	228.321	0.357361	-0.9973193	0.6042
8	13	1	0	0.674091
1138.42	1195.58	0.0789597	-1.021299734	0.0635293
102.5	136	0.687331	-1.171685459	0.53193
153.5	233.5	0.880756	-0.373351596	0.62907
118.5	166	0.838653	-0.479352313	0.628853
3126	2833.5	0.522617	-1.280305725	0.586737
2736.5	2304.5	0.4708	-1.333972131	0.586302
1.5	0	0.308068	#NUM!	1
32.5	36.5	0.856165	0.335184192	0.923381
915.169	1163.59	0.48571	-1.950466585	0.35794
693.422	722.862	0.867414	-0.27402314	0.83553
20.5	8	0.55724	-0.602664502	0.64061
0	0	?	#DIV/0!	?
7.12472	17.9518	0.871733	-0.715134951	0.453623
0	0	?	#DIV/0!	?
395.5	461	0.997101	0.007277166	0.908286
2.5	4.5	0.672563	-1.321928095	0.355889
4	1	1	0	0.398521
143.5	160.5	0.826734	-0.430197306	0.750601
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
23	19	0.897136	0.204358499	0.782955
155.5	152	0.29472	-0.958842675	0.313647
8.022	7.77048	0.979953	-0.050570066	0.998201
7.5	9	0.649459	1	0.714252
2	2.5	0.545627	0.584962501	0.756486
2	8	0.895809	0.584962501	0.527911
16.5	20	0.857272	-0.343954401	0.7215

660.695	664.319	0.95252	-0.09981333	0.948632
8.95713	7.4508	0.876982	0.204614086	0.746589
0.5	1	1	0	0.651448
21.5	30.5	0.968116	-0.10433666	0.781172
878.806	845.472	0.936116	-0.125296592	0.965205
8.5	3	0.890732	0.234465254	0.535903
1	3	0.130218	3.459431619	0.196267
213.336	248.811	0.89243	-0.182655713	0.747682
126	161	0.962167	-0.106915204	0.817489
808	870	0.724585	-0.755836368	0.676932
12.3622	18.6266	0.892121	-0.334313605	0.646002
109.5	105	0.902141	-0.220198208	0.930416
298.629	47.8944	0.0361791	-1.522214719	0.373389
20	17	0.773154	-0.567040593	0.875966
1	0.5	0.353387	#NUM!	0.622002
45.175	67.5444	0.984852	0.03268361	0.69963
223.5	235.5	0.886806	0.261958169	0.917126
129	134.5	0.769719	-0.543621705	0.740097
657.634	598.975	0.584655	-0.840978161	0.659466
31.3519	20.7765	0.946145	0.128965733	0.757676
0	0	?	#DIV/0!	?
113.5	152	0.741657	-0.804180674	0.562853
30.9697	56.5517	0.710111	0.925150112	0.975651
4.5	7.5	0.902586	0.289506617	0.807419
0	0	?	#DIV/0!	?
71	114	0.702236	-1.394859617	0.466439
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
236.5	212	0.921786	-0.178337241	0.991446
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
11.1373	8.57953	0.518313	-1.508941906	0.669501
70	45.5	0.840041	-0.283792966	0.846312
376.184	91.7998	0.512228	-0.863872182	0.649799
1	1.5	0.545627	#NUM!	0.3832
17	22.5	0.897566	-0.280107919	0.718236
4.02643	2.72786	0.17047	-8.422551894	0.311385
1.12236	2.23238	0.64117	-4.039475977	0.366781
54	60	0.849474	0.364053571	0.907199
166	123	0.861189	-0.245756414	0.908823
3.23883	4.8891	0.921583	-0.241802411	0.676762
4.5	5.5	0.886945	-0.362570079	0.777386
4.34E-41	2.38E-13	0.308068	129.3511742	0.308068
1645.72	1215.01	0.463968	-1.171590911	0.687683
5.51E-28	1.32E-13	0.308068	84.97467825	0.308068
1	2	0.834708	0.584962501	0.834708
7.86E-41	9.36E-28	0.308068	129.3508573	0.308068
436.501	329.501	0.864264	-0.284015864	0.949203
73.882	77.9534	0.600722	-0.46654451	0.534608
791	744.5	0.868505	-0.302228429	0.909064
62	81.5	0.909992	-0.226275856	0.723222
9.91E-28	2.38E-13	0.308068	84.97467679	0.308068
0.19297	0.38381	0.641171	-4.039476695	0.366781
1	4	0.663808	1.584962501	0.825659

514.5	436	0.823392	-0.294500266	0.968936
5.51E-28	1.32E-13	0.308068	84.97467825	0.308068
3.09E-28	7.40E-14	0.308068	84.97467445	0.308068
294.5	240	0.576152	-1.093599367	0.710978
76.5	81.5	0.769026	-0.59917636	0.72714
592.691	527.754	0.198074	-1.268352088	0.273096
6.983	9.46134	0.933831	-0.093974082	0.592165
1.5	0	0.034897	#NUM!	1
22.0445	21.4028	0.250401	-1.500262451	0.267825
108.5	103	0.929849	-0.117695043	0.975197
2.5	1.5	0.490574	-1.321928095	0.810902
148.327	106.174	0.986986	-0.02840673	0.825545
21.392	16.0416	0.392662	-1.024444167	0.647694
36.764	35.7444	0.878071	-0.303639974	0.895716
18	18.5	0.91128	-0.169925001	0.889302
431.5	444.5	0.984575	-0.035540326	0.96549
265.5	313.5	0.932536	-0.163824802	0.820984
1106	1128	0.561902	-1.570039055	0.55097
37.4036	38.8877	0.841644	-0.356640691	0.813716
0.5	0.5	0.651448	1	0.651448
11.5	12.5	0.689347	-0.716207034	0.627649
8.5	7.5	0.95952	0.08246216	0.879211
75.4333	57.9521	0.395338	-0.907826611	0.652377
1918.68	1746.64	0.539153	-0.832292361	0.620754
5	11	0.96043	0.137503524	0.595204
606.681	563.713	0.612154	-0.570753922	0.688565
491.026	475.064	0.749659	-0.457614066	0.778301
1.47898	16.2413	0.948958	0.522398562	0.225706
207.5	190	0.922659	-0.127111918	1
408.5	387	0.936371	-0.12537036	0.976573
117	92.5	0.549502	-1.362570079	0.688427
219.915	224.017	0.826009	0.39470244	0.836086
257.5	222	0.695616	-0.45383977	0.846545
2.5	5	0.712334	0.847996907	0.925659
0	1	1	#DIV/0!	0.308068
373.5	307	0.873121	-0.245756414	0.982535
1.65701	4.3398	0.868014	-0.79249357	0.446623
95.0565	57.9983	0.698594	0.786337116	0.558808
24.8252	50.4154	0.775792	-0.767943262	0.355601
0	0	?	#DIV/0!	?
157.451	163.46	0.897031	-0.237641778	0.871475
117.822	94.8519	0.982127	-0.036129704	0.87774
427.5	465.5	0.798411	-0.393266877	0.727336
1125	1241	0.0470818	-1.070966521	0.0298579
1005.5	1118	0.731773	-0.683678519	0.659137
26.5	30.5	0.669976	0.715023041	0.742745
3.16383	5.98864	0.844872	-0.509001897	0.456203
64.5297	143.202	0.735197	-1.617514468	0.373855
161	155.5	0.258641	-0.517135687	0.305512
0	0	?	#DIV/0!	?
163.193	165.829	0.799442	-0.534949595	0.78936
0	0	?	#DIV/0!	?
4.5	8	0.900678	-0.362570079	0.584676
2.30992	3.12737	0.893548	0.181074015	0.826127
319.5	260	0.817531	-0.377157616	0.964775
276.273	426.753	0.360095	-1.301025191	0.130781

2.00704	4.00704	0.92642	-0.306699739	0.577833
817.175	667.926	0.686945	-0.464816397	0.890517
2	1.53613	0.598711	-1	0.773761
3.77E-05	2.35087	0.107347	17.15103092	0.284001
519	334.5	0.546759	-0.91630292	0.879316
92.8039	130.201	0.86054	-0.443523391	0.662502
237	277.5	0.985759	-0.040120308	0.897467
8.43519	8.84653	0.55334	1.191062798	0.567593
51	36.5	0.393678	-1.86507042	0.588352
39.089	20.7371	0.556521	-0.579416681	0.799968
1	1	1	0	1
0.38132	5.469	0.940803	-4.229563754	0.310533
1722.5	1838.5	0.858084	-0.264458959	0.802601
2.42E-41	4.17E-26	0.308068	129.3505841	0.308068
0.12376	0.38381	0.732234	-10.23927109	0.328116
107.843	99.3862	0.898524	-0.217124534	0.955325
354	350	0.824307	-0.37749313	0.832726
168.5	184	0.980658	-0.043457956	0.920889
129.237	77.2896	0.730211	-0.522992398	0.910714
0.5	2	0.663808	1.584962501	0.825659
2	1	1	0	0.710482
0	0	?	#DIV/0!	?
93.3265	121.517	0.938453	-0.168026971	0.773916
0.5	0	0.308068	#NUM!	1
2766.5	2382.5	0.624373	-0.65988284	0.757508
0.5	1.5	1	0	0.252216
1164	1093.5	0.865863	-0.293851153	0.909581
805.826	759.832	0.887334	-0.226077447	0.931443
1148.86	1100.64	0.745734	-0.491072969	0.781137
14.9363	17.2808	0.872823	0.349467914	0.945356
12.3616	15.7852	0.929795	-0.189128127	0.775881
847	690.5	0.68897	-0.621619406	0.848339
70.2922	85.9065	0.899706	-0.236762659	0.75758
85.637	85.5716	0.867699	-0.316154949	0.868205
118.5	152.5	0.921748	0.209288834	0.934388
8	8.5	0.843819	0.321928095	0.882345
2	0	0	#NUM!	?
19.5	12	0.906411	-0.156119202	0.748532
85	86	0.905213	-0.229481846	0.897693
0	1.5	0.399441	#DIV/0!	0.822295
0	0	?	#DIV/0!	?
0	0.5	0.450185	#DIV/0!	1
20.0723	12.8053	0.825324	-0.460661204	0.942671
122	126	0.907636	-0.149377624	0.877184
1	0.5	0.353387	#NUM!	0.622002
1.63E-16	2.25E-11	?	18.47363719	?
760.023	678.021	0.559128	-0.554149717	0.69392
191.5	171	0.401552	-1.603920658	0.472648
15.8475	16.9842	0.803461	-0.306455563	0.733567
63.5	57.5	0.901023	-0.19426882	0.975162
42	36.5	0.560853	-0.966052668	0.665871
0	0	?	#DIV/0!	?
1108.5	1056.5	0.824767	-0.370400194	0.860412
44	57.5	0.555079	-1.289506617	0.388413
81	102.5	0.890239	-0.273760812	0.728912
1	4.5	0.907467	0.584962501	0.503591

1.83211	34.943	0.859591	1.63818708	0.241737
22.1665	51.489	0.943153	0.212629332	0.609996
63.0778	53.3987	0.471835	-0.923231401	0.617931
1202	1190.5	0.485998	-1.210241242	0.492749
51.5	42.5	0.732887	-0.419713986	0.915525
72.6343	74.4211	0.437407	-2.26629354	0.424848
27.5	26	0.780302	-0.611434712	0.813908
0.1	0	0.308068	-77.66315795	1
9.83286	15.8654	0.710459	-1.316701074	0.468991
51.5	56.5	0.794434	-0.419713986	0.719834
0	0	?	#DIV/0!	?
760.428	726.099	0.770564	-0.362306662	0.815733
151.5	151.5	0.858539	-0.366657037	0.858539
38.1504	51.7452	0.549985	-1.985335623	0.394474
1	0	0.622002	-1	0.622002
258.5	325	0.725205	-0.87959415	0.58868
303.5	297	0.710307	-0.641926361	0.726477
3448.63	1372.79	0.997667	-0.003807718	0.52239
27.1764	21.2876	0.690217	-0.783169599	0.845675
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
23.8072	13.4263	0.113123	-1.707957502	0.470001
0	0	?	#DIV/0!	?
0.5	5.5	0.681777	2	0.368766
637.917	596.876	0.811106	-0.337176759	0.868401
857	1243	0.66095	-1.046183868	0.430654
31.5	35	0.536325	-2.276840205	0.485297
6	9	0.924624	-0.263034406	0.708593
76	93.5	0.979151	-0.048255169	0.835058
0	0	?	#DIV/0!	?
64	59.5	0.975163	-0.04580369	0.968958
1	0.5	0.651448	-1	1
585	602	0.995848	0.009831009	0.986508
511.5	637.5	0.874531	-0.335032326	0.731923
210.5	286	0.874278	-0.373380515	0.68781
0	0	?	#DIV/0!	?
142	203.5	0.832027	-0.557290082	0.624442
99.5	146.5	0.852733	-0.497073268	0.632975
18.5	17.5	0.463651	-1.887525271	0.494455
188	232	0.762642	-0.760172985	0.639231
222.796	270.002	0.986805	0.033462348	0.894548
25	30	0.937246	-0.152003093	0.814135
0.65014	13.0681	0.88728	0.825495929	0.0352699
0	0	?	#DIV/0!	?
2	3.5	0.320255	#NUM!	0.129088
234.5	244.5	0.755463	-0.556031499	0.724792
37	33.5	0.667334	-0.654864514	0.748298
34.5	26	0.999999	0	0.835139
33	28	0.528004	-1	0.653937
124.638	107.484	0.604714	-0.942418689	0.70864
0.5	0	0.308068	#NUM!	1
132.629	128.594	0.981868	-0.035001297	0.995121
10	17.5	0.878877	0.378511623	0.819674
0	0	?	#DIV/0!	?
118.673	115.008	0.827055	-0.432183763	0.847265
0	1	0.622002	#DIV/0!	0.622002

6	15	0.561007	-1.263034406	0.102344
0	0	?	#DIV/0!	?
0.5	0	1	0	0.450185
333.263	366.139	0.979941	-0.044800967	0.915459
1.24E-12	1.80221	0.999944	26.43497386	0.308093
13.3432	16.5998	0.608699	-1.248772465	0.477287
1.08E-05	5.77131	0.523351	18.26428506	0.649852
0	0	0.308068	#DIV/0!	0.308068
14.816	1.90657	0.0680123	-9.46911985	0.745062
0	0	0.308068	#DIV/0!	0.308068
6	2	1	0	0.559404
20	20.5	0.554181	-1	0.535868
34.5	53	0.92716	-0.250543462	0.694042
0	0.5	1	#DIV/0!	0.308068
137.5	145.5	0.499591	-1.026472211	0.456257
211.851	257.528	0.112377	-1.063433414	0.0513916
242.816	226.7	0.838329	-0.270494816	0.900418
5.5	3	0.193311	#NUM!	0.429254
1189.5	902.5	0.707256	-0.428236997	0.981611
0.5	1	0.559404	1.584962501	0.764931
0	0.5	1	#DIV/0!	0.308068
15.7767	19.8879	0.909574	-0.245631794	0.763877
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
7	6.5	0.490574	-1.485426827	0.536334
582	535	0.651661	-0.667205955	0.722121
25.4684	17.9835	0.64726	-0.586308482	0.955346
1028.32	893.703	0.720661	-0.626855509	0.820892
1276.67	1248.3	0.63711	-0.8082485	0.653988
8.15119	9.45617	0.754225	-0.737081824	0.66388
216.849	237.544	0.731188	-0.609682712	0.663082
5	3.5	0.638203	-1	0.848182
1.64E-19	0.5	1	#NUM!	0.308068
30	36	0.388454	1.919657892	0.419255
205.5	152.5	0.397989	-2.85010457	0.540423
86	103.5	0.353387	-0.753839413	0.198892
108.627	80.3645	0.0650204	-0.8447382	0.323886
557.379	780.041	0.858394	0.299898993	0.896378
158.5	150.5	0.822207	-0.469135242	0.853902
3.5	1	0.484842	0.652076697	0.171713
56.1807	58.7036	0.73684	-0.64636405	0.706336
2	0.5	0.0162766	#NUM!	0.308068
0	0	?	#DIV/0!	?
40.6113	28.7356	0.125861	-1.462115323	0.337348
156.5	191	0.956208	-0.120093845	0.837027
69.5	65.5	0.818229	-0.418501355	0.858996
3	3.5	0.909362	0.222392421	1
187.324	142.304	0.681212	-0.563948435	0.914583
386.175	354.196	0.666873	-0.622803711	0.740519
17	25	0.9821	-0.043068722	0.70668
218.46	204.949	0.907068	-0.165568039	0.959963
40	54	0.934973	-0.172180975	0.739797
62	105	0.975554	0.079226691	0.732334
90.5	120.5	0.978969	-0.056902391	0.801946
873.718	815.545	0.472952	-1.095236193	0.525583
41.5	63.5	0.931787	0.17954942	0.798432

41.5	30.5	0.793848	-0.352671618	0.953405
162.528	187.199	0.577779	-0.53774355	0.422727
7.5	5	0.958098	0.093109404	0.754736
98.5	149.5	0.935067	0.17884808	0.812636
1.15037	4.02955	0.989955	0.034963973	0.261315
0.5	1	0.559404	1.584962501	0.764931
27	24.5	0.987738	0.026472211	0.926585
176.009	160.606	0.755558	-0.497476998	0.826705
6.69093	14.3069	0.744032	-0.771850029	0.272241
5.59116	3.33884	0.84095	-0.35681237	0.866222
2.39061	1.67992	0.987471	-0.028787871	0.826208
39	27.5	0.837883	0.206450877	0.561854
3	4	1	0	0.847091
5.38036	6.39186	0.922766	-0.188371883	0.806709
24	25.5	0.875766	-0.375509135	0.842505
62.5	83.5	0.805703	0.46048047	0.979005
4.59E-19	0.14143	1	-12.67952783	0.308068
67.4444	113.573	0.964508	0.093923499	0.687867
47.5	33.5	0.695142	0.658963082	0.561246
0	0	?	#DIV/0!	?
1.5	0.5	0.329316	#NUM!	0.724378
21.5	39.5	1	0	0.65199
290.5	309.5	0.795385	-0.47849078	0.750202
4.30E-07	0.00057	0.99932	-11.40083077	0.308068
6.5	11.5	0.870052	0.299560282	0.705789
15.2713	11.1737	0.940036	-0.155320738	0.90257
0	0	?	#DIV/0!	?
14.6675	6.69469	0.513232	-0.901523987	0.908034
138.853	152.74	0.950034	0.116617279	0.990602
443.5	354.5	0.78026	-0.428655639	0.950871
0	0	?	#DIV/0!	?
3.5	8.5	0.901425	0.362570079	0.627595
3.5	4.5	1	0	0.8566
75	87.5	0.912209	0.214124805	0.99633
38.5	33.5	0.858405	0.31817596	0.786222
900.499	767.5	0.647895	-0.561913066	0.801752
1.67E-08	2.02E-24	0.308068	#NUM!	1
13.5	27.5	0.870455	0.332575339	0.631376
175.5	209	0.858297	-0.331205908	0.732428
79.5	55.5	0.927588	-0.153011619	0.856105
18	18.5	0.553892	1.256339753	0.561353
74.1359	81.0569	0.597794	-0.620899753	0.510273
285.5	303	0.889794	-0.29936594	0.8543
0	0	?	#DIV/0!	?
13	8	0.919258	-0.176877762	0.813812
112.238	117.398	0.967389	-0.078256756	0.93906
305	306	0.687204	-0.908369525	0.685189
1383.21	841.159	0.405212	-1.916013077	0.682552
128	122	0.833281	-0.422571172	0.863535
1.72E-06	0.34739	0.999997	-1.456142942	0.308069
34.1885	23.0288	0.655261	-0.744567205	0.931025
36	61	0.843195	-0.584962501	0.553901
38.3778	46.8108	0.363255	-4.746770227	0.280411
113.945	123.986	0.447705	-1.105686799	0.384954
65.5	81	0.859424	0.324129003	0.99141
818.545	869.28	0.410468	-1.287708214	0.369214

35.769	23.0165	0.545552	0.459743254	0.277045
1130.5	993	0.662984	-0.552158227	0.785529
429.535	330.889	0.994794	0.009083597	0.808491
0.5	0.5	0.450185	#NUM!	0.450185
3.08853	1.15367	0.865288	0.319073075	0.560934
0	0	?	#DIV/0!	?
21.5	27	0.538518	-0.782408565	0.345987
24.5	29.5	0.875405	-0.257157839	0.726699
118.5	468	0.722933	-1.259386629	0.0992023
14.3179	38.7922	0.521429	0.79045941	0.402681
1	0.5	0.0917211	#NUM!	0.308068
0.75	1.75	0.770719	-1.584962501	0.409302
15	19.5	0.647779	-1.206450877	0.495493
34.0996	21.3905	0.619904	-1.111483913	0.876721
0.5	2.5	0.236154	2.321928095	1
16	9	0.584676	-1.192645078	0.900678
3	0.5	0.499897	-1.584962501	0.860525
235.983	239.12	0.92858	0.150492867	0.937184
894.5	930.5	0.802515	-0.463974908	0.774753
5.59035	10.3193	0.934537	0.210824872	0.722324
12	13.5	0.614109	-0.777607579	0.518756
0	0	?	#DIV/0!	?
4.86749	1.49663	0.0905797	-2.151641209	0.810272
288.361	198.708	0.377264	-0.557920687	0.976752
35.5	52	0.697308	-1.195550809	0.491418
60.3565	85.6184	0.952089	0.094698072	0.758151
190	216	0.914956	-0.230005605	0.837299
7.19137	3.35239	0.714992	-0.301383169	0.515451
580.5	411	0.868996	-0.199584975	0.835618
2.53593	6.41076	0.860997	0.567434788	0.706831
1	2	0.834708	0.584962501	0.834708
51.5	40.5	0.818631	-0.457681837	0.960622
143	143	0.733911	-0.700439718	0.733911
4.19382	8.79474	0.255243	1.914901974	0.459014
0	0	?	#DIV/0!	?
126.337	175	0.912305	-0.18338111	0.647779
778.5	799	0.474716	-1.199411766	0.4563
223.5	240	0.824573	-0.390503092	0.772036
0.5	0.5	1	0	1
0	0	?	#DIV/0!	?
444.335	371.904	0.725794	-0.542200115	0.865207
183	240.5	0.954824	-0.110558375	0.767568
1080	976.5	0.687527	-0.653699687	0.765327
12	14	0.933018	-0.125530882	0.801965
270.5	226.5	0.908421	-0.166595448	0.954868
47.5	136.5	0.799629	-1.440572591	0.351844
148	124.5	0.561209	-1.090512293	0.679098
0	0.5	1	#DIV/0!	0.308068
724.358	668.656	0.89355	-0.212650515	0.953102
42.4987	41.3825	0.720028	-0.580324344	0.740944
39	35.5	0.79003	-0.530514717	0.849904
0	0	?	#DIV/0!	?
7.5	13.5	0.943666	-0.206450877	0.628455
14.9522	12.09	0.731167	-0.612920575	0.876864
44.5	27	0.535975	-1.049468676	0.878232
1694	1534.5	0.962594	0.083549969	0.903835

46.5	26.5	0.3636	-0.784271309	0.979862
11.4743	12.6255	0.954678	0.128257751	0.996412
1.49882	0.12033	0.948106	-0.118082475	0.504365
981.5	1030	0.945202	-0.141993662	0.916452
675.5	661	0.785116	-0.480948722	0.800831
23	21.5	0.827239	-0.353636955	0.878301
0	0	?	#DIV/0!	?
1.29173	1.15087	0.343295	#NUM!	0.390875
93.5	111	0.911641	0.2278926	0.99169
2	0.5	0.320255	#NUM!	0.785812
6.29441	5.28706	0.888938	0.238354845	0.792699
1605.84	1681.94	0.757964	-0.441268381	0.717118
22.5	25.5	0.652431	-1.032421478	0.574295
484.5	434	0.830072	-0.283728235	0.928572
2074.5	1816.5	0.870062	-0.215224023	0.986575
2.84E-05	0	0.308068	#NUM!	1
3.48043	8.14472	0.241574	-2.609308199	0.0322659
45	44.5	0.838262	-0.302028537	0.847588
0	0	?	#DIV/0!	?
16.5	15.5	0.800892	0.347923303	0.758593
151.428	113.498	0.664092	-0.574298129	0.916542
49.5	63.5	0.931496	-0.203091865	0.787596
24	30.5	0.765457	0.64385619	0.876313
6.5	9.5	0.813955	0.547487795	1
3	4.5	0.914417	0.222392421	0.830364
425.364	326.244	0.55696	-0.767601075	0.792916
1	1.5	0.545627	#NUM!	0.3832
2	1.5	0.267367	#NUM!	0.3832
29.5	36.5	0.858563	-0.390789953	0.723899
297.5	298	0.831826	-0.364996817	0.830591
560	561.5	0.772613	-0.489038081	0.770587
741	622	0.548265	-0.87333384	0.692284
10	9	0.690214	-0.621488377	0.774277
0	1	0.622002	#DIV/0!	0.622002
0	0	?	#DIV/0!	?
0.5	0	0.308068	#NUM!	1
10.5	25.5	0.967286	0.131244533	0.577261
0	0	?	#DIV/0!	?
34.0979	27.9389	0.97949	-0.045805464	0.902336
117.343	98.6686	0.807433	-0.386072962	0.937089
17.5	10.5	0.941071	0.080170349	0.56643
8.5	2	0.852323	-0.180572246	0.34614
1.27289	2.92E-20	0.516935	-1.45938515	0.703696
31.5	28.5	0.664628	-0.584962501	0.754766
0	2.5	0.825659	#DIV/0!	0.407544
4.5	7.5	0.691772	-1.584962501	0.446614
317.16	268.456	0.522549	-0.990524211	0.652265
5	4.5	0.670897	-0.736965594	0.748162
38.6241	125.181	0.780453	0.929771184	0.68327
59.9102	68.5965	0.805154	-0.519954627	0.717036
303.643	412.169	0.880127	0.224272027	0.865347
41	33	0.817166	-0.403355694	0.96294
607	656	0.873845	-0.3045051	0.821526
55	48.5	0.488516	-1.226770862	0.57632
1.51E-09	0	0.308068	27.57267599	0.308068
0	0	?	#DIV/0!	?

440.5	401	0.89931	-0.239966389	0.958087
3.44263	7.68499	0.967196	0.083214889	0.442766
486.125	494.416	0.755519	-0.579121946	0.743579
1208	1184	0.673488	-0.562447706	0.691945
54	70.5	0.96705	-0.096676019	0.814326
100	92	0.93415	-0.120294234	1
116.5	75.5	0.88865	-0.149940627	0.722201
479	484	0.906141	-0.203442128	0.898753
408	396.5	0.872123	-0.265157578	0.89337
548	636.5	0.947529	-0.127926192	0.848933
0	0	?	#DIV/0!	?
56.5706	30.0281	0.433037	-0.805787367	0.936128
426	415	0.859496	-0.256951354	0.881452
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
129.5	131.5	0.720493	-0.797639767	0.711022
1	0.5	0.353387	#NUM!	0.622002
625.5	596	0.81218	-0.433997691	0.845533
13.7263	37.1191	0.927841	0.26559318	0.517672
361.5	327	0.552213	-0.96995264	0.628326
0.5	1	0.622002	#NUM!	0.353387
232.5	223.5	0.894304	-0.153727774	0.934597
11.7369	32.025	0.976871	-0.117684287	0.520414
248.5	212.5	0.827682	-0.295323944	0.962094
117.957	141.335	0.957241	-0.113152204	0.846302
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
1	0.5	0.0917211	#NUM!	0.308068
0	0.42665	1	#DIV/0!	0.308068
1	0.5	0.353387	#NUM!	0.622002
10.5	17.5	0.753004	-0.807354922	0.443121
256.5	227	0.601616	-0.873531999	0.693361
0.00065	1.35289	0.368528	11.79646805	0.692213
12.5	6	0.703202	-0.556393349	0.810231
1.5	2	0.273765	1.415037499	0.363426
3	0.5	0.0877066	-2.584962501	1
0.03394	8.15705	0.330956	8.101072065	0.894087
38	66	0.790831	0.559427409	0.882316
219.891	119.232	0.622119	0.595311287	0.375498
921.923	850.526	0.772082	-0.409010208	0.841776
662.5	658	0.814774	-0.353576466	0.820406
410.5	392.5	0.920659	-0.191390451	0.948585
10.5	14.5	0.793118	0.561878888	0.957904
117.5	95	0.806489	-0.450252192	0.94391
59.3114	42.651	0.855396	-0.291312594	0.92197
114.819	91.1076	0.703912	-0.492677907	0.912301
6	8.5	1	0	0.683094
815.5	830	0.683925	-0.557798901	0.66797
10	18.5	0.899609	-0.415037499	0.588811
235.5	199	0.729166	-0.487265827	0.872528
531	589.5	0.79945	-0.478920863	0.725467
25	21.5	0.85703	-0.286304185	0.967972
410.224	432.815	0.75104	-0.577830409	0.712161
0.02054	24.9194	0.942797	6.111969306	0.282037
141	115	0.741135	-0.680119734	0.865333
542.351	761.088	0.845159	0.437136865	0.978176

34.2145	33.6569	0.489522	-1.994301125	0.498228
123.613	86.0241	0.315257	-0.638352489	0.8687
162.314	128.562	0.470533	-0.738683539	0.718449
6	7.5	0.14491	-1.584962501	0.0741345
536.868	641.922	0.797946	-0.352125426	0.631453
207.752	272.209	0.874262	-0.366538752	0.709155
6	12	0.528557	1.415037499	0.794697
534.482	522.435	0.808982	-0.395734486	0.82646
11.5	14.5	0.979094	-0.064130337	0.854909
127	123	0.978245	0.050234303	0.958929
54.0663	71.4545	0.921192	-0.17231752	0.706354
18	5	0.85427	-0.169925001	0.351683
527.029	467.214	0.641759	-0.774272967	0.732831
307.807	255.828	0.81573	-0.411294312	0.940424
51.4145	46.5849	0.714521	-0.533559953	0.79771
0.5	1	0.622002	#NUM!	0.353387
581	576	0.855234	-0.332207516	0.861193
0	0	?	#DIV/0!	?
0.5	0	0.622002	1	0.353387
334.5	300.5	0.963621	-0.084366206	0.971274
35	42	0.419618	-0.771731012	0.260485
3456.5	3133	0.479607	-0.74037828	0.580629
93.5	78	0.677327	-0.581110175	0.833171
8.58849	13.3935	0.758765	0.732832409	0.961763
14	12.5	0.395629	-1.485426827	0.470312
5.97638	1.88069	0.425779	1.469382819	0.292
477.5	444	0.651531	-0.548417741	0.723264
50	23.5	0.315103	-1.836501268	0.771625
137.348	134.913	0.62869	-0.954692773	0.640798
122.652	211.087	0.908093	-0.329100439	0.609185
0.5	0	0.495025	1.584962501	0.329316
11.7532	12.9936	0.907794	-0.261609747	0.849997
0	0	?	#DIV/0!	?
2.4437	1.28E-06	0.272062	-1.824254655	0.633954
0	0	?	#DIV/0!	?
7	8	0.963891	0.099535674	0.963891
459	423.5	0.699287	-0.623181823	0.762063
4.88206	4.85882	0.686069	-0.7244979	0.68955
7	3	0.573338	-0.807354922	0.847091
6.5	5.5	0.951645	-0.115477217	0.951645
86.5	86.5	0.886577	-0.244803669	0.886577
30.4456	17.6063	0.857387	-0.145821427	0.554961
0.0625	0.125	0.622002	#NUM!	0.353387
2.75E-07	11.6977	0.881541	22.43704896	0.370078
0	0.5	1	#DIV/0!	0.308068
0.0625	0.125	0.622002	#NUM!	0.353387
0.0625	0.125	0.622002	#NUM!	0.353387
0	0.5	1	#DIV/0!	0.308068
0	0.5	1	#DIV/0!	0.308068
0.0625	0.125	0.622002	#NUM!	0.353387
0.0625	0.125	0.622002	#NUM!	0.353387
0.0625	0.125	0.622002	#NUM!	0.353387
0.0625	0.125	0.622002	#NUM!	0.353387
0.0625	0.125	0.622002	#NUM!	0.353387
39	40	0.475134	-1.037474705	0.455422
9.5	9	0.869427	0.275634443	0.837425

2	2	1	0	1
0	0	?	#DIV/0!	?
681.308	479.379	0.681646	-0.579055037	0.965594
24	13.5	0.399431	-1.337034987	0.804462
16	16	0.775196	-0.476438044	0.775196
0	0	?	#DIV/0!	?
6	5.5	1	0	0.955518
2.5	1.5	0.370757	#NUM!	0.573338
62.2619	97.5709	0.871636	0.393274966	0.895821
37.3909	27.6798	0.634145	-0.491949922	0.960783
0.141	0	0.308068	#NUM!	1
0.69656	2.53671	0.568981	1.919803614	0.976095
62.5	75	0.932576	-0.158429363	0.805645
0	1	0.450185	#DIV/0!	1
2	8.5	0.815183	1	0.606286
70.5	47.5	0.869453	0.226770862	0.637983
0	0	?	#DIV/0!	?
1235.5	1031.5	0.906443	0.224975732	0.816821
1	0	0.308068	#NUM!	1
162.756	155.874	0.870529	-0.285536018	0.900735
218.5	189.5	0.635728	-1.064130337	0.721467
38.3469	32.4924	0.847219	-0.305878712	0.969023
317	303.5	0.945357	-0.130919492	0.972156
1.5	1	0.559404	-1.584962501	0.764931
112.5	111.5	0.912129	-0.177156571	0.91885
36	46.5	0.783644	-0.584962501	0.612875
29.5	29.5	0.817575	-0.423211431	0.817575
20.5	20	0.947463	0.101879614	0.930012
580	607.501	0.837626	-0.339131166	0.801957
0	0	?	#DIV/0!	?
19.4504	30.4187	0.975332	0.071898842	0.75841
32	35.5	0.648854	-0.642447995	0.557758
215	206.5	0.933878	-0.166992268	0.957749
154.5	145	0.91848	-0.210767096	0.955272
178.5	235	0.974969	-0.057715498	0.777559
1	0	0.308068	#NUM!	1
8	13.5	0.734617	-1.192645078	0.469041
53.869	27.7842	0.364567	-3.905411674	0.643371
280.5	355.5	0.961353	-0.101189824	0.811502
11.8559	13.7394	0.695935	-0.692000893	0.58502
521	521.5	0.86203	-0.333396043	0.861399
0	0	0.308068	#DIV/0!	0.308068
0.1	0.32	0.409442	-56.51942595	0.0549771
1.16E-08	0	0.308068	28.14427725	0.308068
9.29E-37	1.57E-28	0.308068	107.8839594	0.308068
3.35E-12	1.71E-17	0.308068	35.97321278	0.308068
202	184.5	0.822001	-0.424591806	0.88161
0	0	?	#DIV/0!	?
5.31E-25	0	?	-21.78980966	?
1.27295	0	0.308068	-61.14769655	1
0.5	0	0.308068	#NUM!	1
26	16	0.42916	-2	0.68702
1.60E-17	6.89E-14	?	10.66105741	?
309.39	270.654	0.764999	-0.499167794	0.863481
99.5883	114.629	0.887574	-0.263876902	0.788861
0.58333	0.75	0.113502	-2.807354675	0.0598224

69.2555	44.6516	0.712766	-0.422702285	0.882009
6	4	0.236154	-1.584962501	0.513713
0	0	?	#DIV/0!	?
25.433	36.9373	0.681498	-1.0175436	0.45428
192.5	184.5	0.851264	-0.307943865	0.883011
123	160	0.892158	-0.291462814	0.722698
175.402	178.722	0.989892	0.023180222	0.998295
386.5	385	0.884597	-0.256702702	0.887316
0.5	3.5	0.878232	1	0.465798
396.5	357.5	0.934347	-0.139323959	0.995495
20.5	7	0.613868	0.686842115	0.327453
6.5	6	0.564258	-1.378511623	0.611386
100	96	0.881851	-0.242976753	0.912113
477.5	539.5	0.736381	-0.555061015	0.63928
928.106	1050.34	0.882095	-0.287783415	0.798508
60.5	39	0.400206	-2.060882242	0.638452
94	79	0.860162	-0.316184112	0.973336
151.386	94.6788	0.964013	-0.049913548	0.657427
7	12	0.777429	-1	0.507291
505	499.5	0.766314	-0.452662572	0.775362
1.5	2.5	0.855216	-0.584962501	0.593125
237.509	189.253	0.651838	-0.826836997	0.806916
28.9638	25.1523	0.871322	-0.275454612	0.968545
33.5	28.5	0.627745	-1.208108195	0.718162
1205	1609	0.195116	-1.266150638	0.0792997
21.3775	6.04562	0.433077	-1.04388595	0.746362
3.5	3.5	0.513713	-2.807354922	0.513713
61	80	0.975164	0.069262662	0.868456
512.514	501.734	0.696783	-0.592803668	0.714387
80.8953	99.9111	0.872257	0.214889501	0.940471
4.5	5	0.338084	-1.169925001	0.265726
950.559	1034.79	0.255924	-0.925821248	0.195039
17.1356	25.5311	0.645676	-0.5862428	0.297894
2	3.5	0.873517	-0.415037499	0.538238
27.3853	21.7188	0.514799	-1.074890062	0.685579
6.8002	4.32E-07	0.379597	-2.726101844	0.866452
171.5	137.5	0.814062	-0.405256478	0.964087
10.1643	10.1317	0.919881	-0.141957435	0.922605
372.114	334.57	0.988355	-0.021317522	0.931662
0.01404	5.29578	0.997636	-6.658310621	0.30808
4.5	5	0.946355	0.152003093	1
23.5	33	0.699234	-0.46712601	0.371992
38.5	39	0.834512	-0.336049203	0.824424
543	483.5	0.796513	-0.405328288	0.886188
0.5	0.5	0.651448	1	0.651448
1845.5	1711.5	0.641266	-0.735402967	0.701141
1044.5	1023.5	0.686882	-0.579448132	0.704489
74.5499	63.0534	0.949472	0.100933119	0.843388
1.5	1	0.622002	-0.584962501	1
16.9285	8.36312	0.850881	-0.263216794	0.7051
0	1.5	0.724378	#DIV/0!	0.495025
1	2	0.834708	0.584962501	0.834708
130	158.5	0.60806	-1.164386818	0.483793
144.246	166.563	0.628599	-0.826577781	0.519629
8.5	12.5	0.902586	-0.180572246	0.553498
700.5	657.5	0.826815	-0.335897279	0.87723

1.5	0.5	0.513713	-1.584962501	1
812	898	0.833243	-0.280552167	0.73796
16.5	22	0.829511	-0.40053793	0.616058
351.732	308.427	0.639268	-0.49522863	0.784177
80.5312	89.5551	0.336864	-1.083301657	0.260738
1.91021	2.85489	0.638914	0.888309502	0.841507
0	0	?	#DIV/0!	?
1189	1308	0.843214	-0.410595328	0.782001
3.5	5.5	0.798692	0.514573173	0.931878
0.5	0	0.308068	#NUM!	1
0.5	0.5	1	0	1
124.347	121.063	0.906979	-0.192348424	0.92656
0	0.5	0.450185	#DIV/0!	1
9	11	0.748451	0.688055994	0.837371
40	43.5	0.76325	0.277984747	0.858577
141.023	155.088	0.95207	0.109658675	0.987388
16.5	9.5	0.338594	-3.044394119	0.598191
492.5	555	0.740189	-0.707965722	0.662317
29.3027	22.8876	0.585612	-0.719569778	0.80505
42.0895	55.6613	0.684905	-0.679972779	0.466787
1160.5	995.5	0.548215	-0.604046461	0.719733
236.967	294.85	0.553365	-0.609033914	0.337981
706.5	745	0.808878	-0.482978468	0.7737
12.3752	11.3115	0.998927	-0.002812306	0.953816
491	430.5	0.811912	-0.315697724	0.928934
93.8846	80.4536	0.87468	0.231857477	0.775198
865.115	724.546	0.720044	-0.439907716	0.890036
2.08491	1.98137	0.590079	-1.065709522	0.62423
0.5	0.5	0.415333	2.321928095	0.415333
272	254	0.781969	-0.506262259	0.829385
6.17952	5.89954	0.500637	-2.294048146	0.523447
0.03394	0.01697	0.337662	3.880661355	0.323123
352.5	347.5	0.863017	-0.274127374	0.874092
1095.5	919.5	0.585561	-0.808507695	0.72863
3	2.5	1	0	0.866773
17.5	10.5	0.507776	-1.222392421	0.836459
7	6	0.648139	-1.222392421	0.729943
0.01509	0.03392	0.299719	6.537505567	0.30516
40.5	104	0.80687	-1.169925001	0.382816
43.5	33.5	0.912401	0.186413124	0.770799
7.78E-13	2.14E-07	0.996529	10.05459524	0.309617
39.5	41	0.89952	-0.174497731	0.866458
2030.5	270.311	0.330736	0.916503465	0.106079
3	1	0.764931	-0.584962501	0.764931
22.9475	21.737	0.795918	-0.522936541	0.8304
12.5	14	0.834294	0.443606651	0.888828
635.805	675.946	0.897456	-0.199435546	0.84811
22.75	28.75	0.79101	-0.649813645	0.651352
3.88529	2.97E-10	0.119771	-79.70644517	1
222.43	209.95	0.780637	-0.536589073	0.819078
713.997	819.999	0.71947	-0.560905003	0.604645
6031	5155	0.556611	-0.550453405	0.744341
3.56354	1.96007	0.982397	-0.032057252	0.672677
725.328	552.149	0.597101	-1.054241246	0.771399
0	0	?	#DIV/0!	?
0.5	0.5	0.651448	1	0.651448

0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	1.43134	1	#DIV/0!	0.0540204
1	0	0.308068	#NUM!	1
0	0	?	#DIV/0!	?
6.34E-17	2.07E-22	?	#NUM!	?
6.53E-17	1.16886	1	#NUM!	0.00344578
6.53E-17	1.16886	1	#NUM!	0.00344578
6.53E-17	0.5	1	#NUM!	0.308068
6.34E-17	0	?	#NUM!	?
6.34E-17	0	?	#NUM!	?
6.34E-17	0	?	#NUM!	?
6.34E-17	0	?	#NUM!	?
0.5	0	0.308068	#NUM!	1
1.45554	8.45E-09	0.849057	-0.34951186	0.504501
4.99488	1.87381	0.0857501	-3.320450018	0.496385
0	0	0.308068	#DIV/0!	0.308068
0	0	0.308068	#DIV/0!	0.308068
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
13.471	19.4966	0.307744	-4.043315259	0.16809
88.1845	72.102	0.369763	-0.838630217	0.580775
7024.01	7759.45	0.682437	-0.545451401	0.590029
751.223	668.247	0.502772	-1.302306347	0.580083
1568	1356	0.663055	-0.715352921	0.773382
0.5	2	1	0	0.450185
0	0	?	#DIV/0!	?
5.5	4.5	0.905448	-0.137503524	0.905448
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
28.9559	28.2447	0.343152	-0.684226304	0.370804
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0.00228	3.05E-24	0.308068	#NUM!	1
1	1	0.710482	-1	0.710482
0.00019	2.59E-25	0.308051	#NUM!	1
1	0.5	0.651448	-1	1
0.00228	3.05E-24	0.308068	#NUM!	1
768.5	793	0.895219	-0.269619918	0.875852
0.00103	0.07359	0.987446	-41.01948272	0.308107
1.67E-05	0	0.308068	-66.0576044	1
1.45563	5.62E-19	0.0153797	-106.693186	1
1.01852	0.07359	0.988322	-0.02647431	0.484871
1.40959	0	0.259922	-82.4225687	1
0.50136	0	0.308068	-76.53641105	1
0.04273	0	0.307755	-76.53697375	1
0.0818	0	0.308068	-78.31559067	1
2.00E-05	0.07359	0.999755	-35.34078946	0.308068
0.00103	0.07359	0.987446	-41.01948272	0.308107
0.04271	0	0.308068	-26.91411949	1
1.05E-18	4.01E-32	?	8.778439918	?
1.05E-18	4.01E-32	?	8.778439918	?

4.70E-13	0	?	-40.97449874	?
9.84E-05	4.95E-30	0.308068	-37.63724454	1
0.5	2	0.622002	#NUM!	0.116158
0.0818	0	0.308068	-78.31559067	1
0.04273	1.78E-24	0.307755	-26.91468344	1
5.72E-43	4.01E-32	?	#NUM!	?
0.0818	0	0.308068	#NUM!	1
1.77E-12	4.01E-32	?	-11.91084919	?
2.5	1	0.806588	-0.321928095	0.630057
0.0818	0	0.308068	#NUM!	1
0.0818	0	0.308068	-78.31559067	1
0.04271	0	0.308068	-26.91411949	1
6.20E-32	4.60E-10	1	#NUM!	0.308068
5.72E-43	2.59E-25	?	#NUM!	?
346.5	289	0.866606	-0.271804615	0.995483
6.20E-32	4.60E-10	1	21.7424449	0.308068
0	0	?	#DIV/0!	?
3.5	7	0.648511	-0.807354922	0.191098
5.72E-43	0	?	#NUM!	?
0.57268	2.59E-25	0.308068	#NUM!	1
0	4.01E-32	?	#DIV/0!	?
0	0.5	1	#DIV/0!	0.308068
9.69E-10	0	0.308068	-21.00470692	1
0	0.5	1	#DIV/0!	0.308068
1.92E-08	0	0.308068	-55.44791299	1
3.13E-11	0.07359	1	#NUM!	0.308068
6.20E-32	0.5	1	21.7424449	0.308068
0	0.5	1	#DIV/0!	0.308068
1.49313	1.01753	0.386942	-8.839876223	0.541151
2.5	0.5	0.554284	-1.303123029	0.833541
0	0.4976	1	#DIV/0!	0.308068
1.69509	2.5	0.482162	-31.9301272	0.323052
1.64968	0	0.699698	-0.480943961	0.361788
2.30491	0.98247	0.600704	-1.180078686	0.988429
0	0.0024	1	#DIV/0!	0.308068
725.5	758.5	0.9084	-0.218586054	0.879079
110.5	155.5	0.909121	0.267379876	0.909121
528.45	497.006	0.580889	-0.74112125	0.635523
117.792	94.3334	0.865853	-0.275068704	0.9801
309	342.5	0.700029	-0.516575526	0.604422
0	0	?	#DIV/0!	?
5	10.5	0.926955	0.263034406	0.684441
5.73813	1.13384	0.156504	-36.79817532	0.734798
822.859	692.672	0.726102	-0.608792324	0.848616
853.138	765.329	0.707465	-0.560676653	0.797063
293	260	0.683038	-0.606042219	0.782068
1309.5	1258	0.827277	-0.241058178	0.870711
3.11E-11	1.16853	1	11.25714609	0.308068
130.5	140.5	0.685244	-0.983511877	0.641364
9.60678	12.6487	0.789452	-0.496735031	0.585542
3.5	1	0.234161	-1.807354922	1
3.81E-06	4.57E-08	0.31075	-7.247450413	0.995121
6	10.5	0.922775	-0.263034406	0.603072
227.889	341.591	0.862026	-0.465104771	0.631792
256.5	278.5	0.648979	-0.837908089	0.589595
1080.5	1008	0.562843	-0.603777607	0.638192

8.5	4	0.725977	-0.387023123	0.663339
12.5	7	0.736726	-0.64385619	0.939834
0	0	0.308068	#DIV/0!	0.308068
96.2469	56.416	0.638564	-0.395633728	0.730762
17.5	13.5	0.982089	-0.041820176	0.87541
1.16572	0.72279	0.604088	0.701577861	0.421914
5.5	7	0.852433	-0.459431619	0.712538
267.5	223.5	0.598331	-1.091851527	0.712457
0	0	?	#DIV/0!	?
8.23086	6.54869	0.509373	-0.976325846	0.692027
4.94111	21.1161	0.586034	-2.304835174	0.0531231
42	44.5	0.846495	-0.347923303	0.805051
276.214	157.442	0.460518	-1.292697399	0.832284
1.44E-20	1.66577	0.611231	65.7090518	0.638513
3	21	0.934931	0.584962501	0.401308
3.05624	2.73E-06	0.308068	-36.00712316	0.999999
9.95E-08	1.49E-39	0.587756	1.127378346	0.345725
0.08012	2.93E-11	0.362282	3.076181919	0.310864
0.47141	1.21E-13	0.308068	-29.12221279	1
5.14E-25	6.51E-16	?	5.574089553	?
1	2.5	0.837425	-1	0.436998
3.5	1.5	0.342212	#NUM!	0.662499
6.17084	10.2391	0.739208	0.413462633	0.74254
0	0	?	#DIV/0!	?
7	8	0.900374	-0.222392421	0.803152
15.9548	5.67847	0.0959305	-6.440361583	0.464532
76.7149	66.8798	0.852737	-0.315764004	0.948373
192.755	174.546	0.630205	-0.957389453	0.696072
45.6391	77.2956	0.917115	0.216301701	0.734745
463.379	452.741	0.877389	-0.226597514	0.896569
497	384	0.754084	-0.340553198	0.979482
95.5	99.5	0.65038	-1.117997209	0.626295
61	53.5	0.556784	-1.149377624	0.64414
61.5	33.5	0.257918	-2.418952549	0.583284
1	2	0.806588	-1	0.481309
295.752	269.136	0.328453	-1.053426005	0.406953
578.891	509.677	0.833615	-0.344169319	0.926667
97.91	224.335	0.88093	-0.539223577	0.463768
22.6853	26.095	0.979199	0.054379711	0.939487
597.557	421.786	0.496426	-0.950582676	0.782807
6.92509	7.24662	0.639126	-1.122007804	0.611903
1.08013	2.06E-12	0.308068	-43.80718562	1
40.847	40.6725	0.821811	-0.545066097	0.824169
36.4937	37.3743	0.887468	0.30489769	0.898904
1135.5	1119	0.75754	-0.466117407	0.769726
2039.5	2127.5	0.814784	-0.404816825	0.783297
45.5249	34.1826	0.257051	-1.285006937	0.479109
6	10.5	0.633066	1.222392421	0.83167
2.68894	1.10669	0.800231	0.484351068	0.543117
4.5	4	0.47679	0.91753784	0.428902
20.6871	0.00507	0.421483	-2.159077208	0.8063
3.48E-34	2.26E-20	?	9.31855129	?
0	0.5	1	#DIV/0!	0.308068
92.183	152.525	0.870205	-0.422608094	0.569883
114.69	88.8982	0.451514	-0.542034246	0.823387
212	280	0.752253	-0.689001465	0.568784

0	0	?	#DIV/0!	?
20.5	25.5	0.925659	-0.109624491	0.690208
1.5	3.5	0.513713	-1.584962501	0.113502
0	0	?	#DIV/0!	?
85	90	0.656252	-1.199937571	0.624489
19095	18697	0.414924	-0.902293882	0.433796
70.5	76.5	0.941975	-0.128324097	0.884429
1315.5	1423	0.736852	-0.71934384	0.686206
2174	1965	0.51702	-1.04790309	0.593186
906.5	879.5	0.802716	-0.474329118	0.823114
241.772	215.084	0.465143	-0.808006983	0.579262
237	189	0.583868	-1.113956189	0.728231
10.3024	7.26109	0.725674	-0.766238453	0.919882
48.5	48.5	0.536142	-1.741931847	0.536142
7.44322	9.46897	0.833579	0.356785476	0.994954
666.5	687.5	0.582342	-0.602383936	0.550131
398	393.5	0.564524	-0.673728615	0.575692
1125	1129	0.61972	-0.448333603	0.615282
287.5	240.5	0.572574	-1.012600037	0.698315
3.8852	1.70521	0.222233	-2.531966774	0.655326
1673.61	1259.89	0.4266	-1.799448575	0.591277
782.892	645.597	0.425693	-2.022449243	0.531337
154.171	155.166	0.862457	-0.34813004	0.858383
462.793	464.605	0.869973	-0.306854382	0.867353
0	0	?	#DIV/0!	?
0	0.5	0.353387	#DIV/0!	0.622002
62.2446	19.1897	0.367881	-0.512562077	0.25904
1	0	0.308068	#NUM!	1
0	0	?	#DIV/0!	?
3.30564	3.77668	0.478891	-94.74703838	0.424712
61.8644	53.9689	0.37989	-0.838904591	0.518275
7	11.5	0.39572	1.237039197	0.638785
14.5	22.5	0.751131	0.633872101	1
133.154	95.537	0.88085	-0.207227857	0.867761
152.166	232.775	0.963805	-0.07949708	0.629097
16.609	10.9558	0.77078	-0.398953737	0.904539
18.1415	21.9654	0.811969	0.52160744	0.90191
7.26519	5.13831	0.776561	-0.587839761	0.971432
12.2488	13.3853	0.989999	0.018967322	0.939947
0.78362	4.11753	0.69203	1.6896411	0.717402
151.564	139.528	0.866608	-0.311072486	0.920844
61.9193	89.6519	0.07364	-3.051319103	0.0266126
287.834	560.82	0.761629	-0.762837173	0.351965
12.8042	18.1352	0.691446	-0.924713935	0.471279
0	0	0.308068	#DIV/0!	0.308068
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
15	14.5	0.462867	-1.099535674	0.48876
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
52	31.5	0.0378742	0.547487795	0.00708928
4	2	0.411079	-3	0.710482
0	0	?	#DIV/0!	?

0	0	?	#DIV/0!	?
22.5	24	0.605106	-1.099535674	0.563288
25	19.5	0.589345	0.545968369	0.438738
39	45	0.823178	-0.504042505	0.735391
0.5	0.5	0.450185	#NUM!	0.450185
3	2.5	0.680712	0.874469118	0.623838
0	0	?	#DIV/0!	?
0.5	1	0.622002	#NUM!	0.353387
10.5	9.5	0.709561	-0.584962501	0.788896
12.5	24.5	0.408425	-0.943416472	0.0637282
7.5	5	0.210179	-1.099535674	0.593125
0	0	?	#DIV/0!	?
1	2.5	0.855216	0.584962501	0.717686
0	0	?	#DIV/0!	?
11	8	0.505748	-0.874469118	0.782716
29.5	13.5	0.589988	-0.712718048	0.829105
4.5	5.5	0.327652	-2.169925001	0.230584
1.5	0	0.756486	-0.584962501	0.545627
8	6.5	0.5705	-1.678071905	0.675601
15.5	9	0.147657	-2.36923381	0.42036
0	0	?	#DIV/0!	?
41.5	28	0.582299	-0.948774677	0.854456
0	0	?	#DIV/0!	?
1242.5	1277.5	0.919464	-0.173776357	0.899622
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
8.40E-15	8.79E-16	0.308068	22.00453619	0.308068
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
8	8	0.58535	-1.415037499	0.58535
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	0.5	1	#DIV/0!	0.308068
0.00426	0.00204	0.360154	-5.389923487	0.649253
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0.25	0.25	0.450185	#NUM!	0.450185
0	0	?	#DIV/0!	?

0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
2.30789	2.13839	0.287522	-11.83214288	0.317897
0	0	?	#DIV/0!	?
0	0	0.308068	#DIV/0!	0.308068
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
1	2	1	0	0.651448
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
13.5	13	0.624292	-0.847996907	0.652308
0	0	?	#DIV/0!	?
0.49999	0	0.308068	-34.25292191	1
0	0.5	1	#DIV/0!	0.308068
0	0	?	#DIV/0!	?
5.47657	3.25	0.452588	-2.45327261	0.694441
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	0.25	1	#DIV/0!	0.308068
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0.00426	0.00204	0.360154	-5.389923487	0.649253
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
8.58E-16	8.52E-23	0.308068	45.75446268	0.308068
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?

2631	2124	0.485881	-0.910184421	0.672843
0.5	0	0.999786	0.000484664	0.450116
3.58E-32	4.74E-16	?	#NUM!	?
0	0	?	#DIV/0!	?
4740.5	2277	0.212844	-1.179811611	0.919433
2.73E-06	0.82143	0.999997	-4.738271779	0.308068
0	0	?	#DIV/0!	?
125.008	148.232	0.824311	0.374338469	0.933759
1248.75	942.353	0.606091	-0.656041888	0.862446
1.00067	2.00137	0.583589	#NUM!	0.308068
1248.75	942.353	0.606091	-0.656041888	0.862446
0	0	?	#DIV/0!	?
4.46E-16	8.12E-17	?	-32.13174719	?
1552.51	1313.5	0.717522	-0.667429526	0.831225
977.5	983.5	0.936954	-0.123184763	0.932242
65	74	0.820955	-0.467778961	0.735779
704.5	684	0.854087	-0.29554897	0.876695
484	587	0.962819	0.086761312	0.909779
1000.99	1006.99	0.847469	-0.30275745	0.842741
643.5	700	0.775072	-0.448682378	0.705869
392.745	368.35	0.892869	-0.240963352	0.935935
1322.28	1229.45	0.530623	-0.787189587	0.597364
0	0	0.308068	#DIV/0!	0.308068
8487.74	8277.01	0.890442	-0.275122464	0.905986
4525.94	5336.5	0.905116	-0.259232134	0.804227
1015	1857.5	0.734236	-1.148060224	0.418279
4285	4349	0.680334	-0.830561403	0.670399
3538.02	3232.43	0.621351	-0.989477251	0.681116
1132.5	1061	0.981508	0.035235472	0.934396
2579.06	2500.96	0.507315	-1.418992193	0.526524
596.5	614	0.536956	-1.544421295	0.520244
679.007	646.496	0.814186	-0.386308253	0.85128
1338.5	1393.5	0.975118	-0.056044707	0.948329
41	65	0.905213	-0.291462814	0.624526
1859.5	1992	0.853037	-0.356376584	0.806494
1290	1330	0.840608	-0.352301744	0.81838
11574.5	10499	0.98225	0.025083459	0.888766
359.5	378.5	0.51379	-0.90488546	0.471241
818.5	815.5	0.850003	-0.371916937	0.852379
67.5	55	0.829051	-0.362570079	0.971169
190	194	0.816229	0.372658897	0.829027
1034.5	1001.98	0.601493	-1.407387616	0.6191
317.501	456.503	0.832169	0.437582234	0.960024
7697.86	9751.48	0.760818	-0.707065038	0.61285
13340.1	11255	0.51927	-1.453494402	0.621352
107	89.4999	0.942227	-0.141554144	0.956644
5878	6494	0.907866	-0.239469344	0.845724
30.2387	50.9207	0.635926	-1.738964446	0.375741
2392.49	3003.92	0.797944	-0.564408289	0.651247
7394.74	8613.77	0.941854	-0.146357628	0.843865
7506.27	7517.07	0.979326	-0.042787033	0.978309
2786.5	3217	0.899882	-0.232046066	0.798392
371.5	312.5	0.941058	-0.098426548	0.917117
1312	1125.5	0.595724	-0.54698037	0.766452
37	43	0.591363	-1.121990524	0.492906
229.5	239.5	0.727519	-0.43720888	0.685589

3318.09	3527.49	0.76906	-0.548582561	0.725634
598.689	376.05	0.953296	-0.101321892	0.794124
8988	9575.5	0.798757	-0.463570772	0.753083
3644.11	3484.11	0.724456	-0.606462785	0.757875
821.5	885.5	0.82814	-0.431818347	0.778248
2492.5	2385	0.826251	-0.376111541	0.858303
1400.5	1274	0.993852	0.012308884	0.929187
3.5	3	0.102728	-2.807354922	0.14822
3183	3790	0.736533	-0.626342824	0.609147
687.5	683	0.507444	-0.880251471	0.513074
728	748.5	0.834978	-0.326642383	0.812668
173	204	0.844083	-0.390234108	0.731757
3483.5	3177	0.951053	-0.097441295	0.982992
2374.99	2659.49	0.945513	-0.132215628	0.871699
221	532.003	0.710206	1.033880987	0.897286
1279	1327.5	0.822005	-0.481596761	0.798972
101.5	107.5	0.709579	-0.832445903	0.673704
2324.03	2269.51	0.768845	-0.420861744	0.78945
453.999	460.501	0.830445	-0.358943835	0.819708
538.498	525.499	0.90671	-0.19321699	0.924583
825	954.5	0.938586	-0.151031909	0.842971
442.5	496.5	0.742074	-0.612114107	0.658795
228.5	237	0.9016	-0.199425735	0.873579
2	3.5	1	0	0.648511
100	157	0.954613	-0.120295802	0.650149
4201.5	4648	0.803786	-0.413035861	0.724543
2092.5	2084	0.695264	-0.505491098	0.699134
2374.5	2147	0.7953	-0.339963928	0.887338
7916.5	6761	0.41612	-0.648579347	0.613559
1168.5	1101	0.799302	-0.320077299	0.856379
149	182	0.972181	-0.059297184	0.821507
1505	1448	0.783889	-0.417275971	0.815481
87.5	87	0.767524	-0.451211112	0.772256
1962.91	1932.67	0.801652	-0.331189075	0.81612
4284	4900	0.926742	-0.156537812	0.826116
3250	3583.5	0.762161	-0.488493036	0.683394
85	98	0.608059	-0.455194626	0.437419
387.5	475	0.963381	-0.092240946	0.831778
846	808	0.952194	-0.107965009	0.98196
669.5	669.5	0.96365	-0.065009896	0.96365
352.5	437.5	0.995906	-0.010268335	0.857888
1.5	1	1	0	0.810902
4168.66	3708.1	0.682833	-0.549128088	0.78837
3013	3020.5	0.80084	-0.35577995	0.798648
465	486	0.877528	-0.283658078	0.847079
625	675	0.74574	-0.394410849	0.667608
639.505	737.001	0.925995	-0.164721166	0.823342
682.5	659.5	0.838041	-0.32060755	0.864978
2936.5	2547.5	0.763136	-0.339972832	0.910789
467	423.5	0.735798	-0.522982832	0.813923
3055.5	2942	0.787025	-0.464101782	0.814909
544	702.499	0.661406	-0.504380074	0.406878
63	221	0.564615	-1.362570079	0.045933
5	4.5	0.930262	0.137503524	0.861354
14	10.5	0.957881	0.099535674	0.813078
561	569.5	0.811685	0.37593768	0.821009

3559.5	3252.5	0.86655	0.264587252	0.810811
145.5	189	0.833148	-0.484435625	0.670207
2705.48	1602.02	0.395849	-1.559327947	0.730448
646.5	635	0.962126	-0.092142725	0.973007
799.5	830	0.90168	-0.231443235	0.876659
2308.5	2467	0.772076	-0.492820139	0.721165
8629.53	8131.54	0.531084	-0.709654225	0.590142
2468.52	2670.5	0.839778	-0.337836196	0.779172
726	883.5	0.394763	-0.822587326	0.234061
2183.5	2217	0.951138	-0.11944703	0.941728
165.5	171.5	0.559221	-0.741330787	0.526725
569	749	0.892821	-0.249909728	0.691093
1540.5	2306.98	0.831337	-0.455398558	0.556996
1401.5	1300.5	0.829051	-0.387339894	0.880624
8023.09	10305.5	0.788209	-0.509842223	0.606091
2658.98	3098.95	0.8957	-0.215197766	0.774978
631.398	633.292	0.731134	-0.518000052	0.728623
24.5	27.5	0.765025	0.407657969	0.851055
974.006	1018.98	0.919906	-0.173724457	0.887599
854.001	842.988	0.742354	-0.58074196	0.751859
6.5	6.5	0.949246	0.106915204	0.949246
1320.5	1280	0.837601	-0.349364185	0.860357
1192.5	1082	0.764683	-0.600470595	0.826854
2914.5	2460.5	0.512128	-0.923600635	0.653174
774	331	0.977384	0.039528364	0.553703
0	0	0.308068	#DIV/0!	0.308068
7857.88	7614.49	0.56998	-0.63926013	0.602033
1453	1456.5	0.888163	-0.243899454	0.886449
901	832	0.841359	-0.288884057	0.907669
400	492.5	0.844412	-0.377069649	0.697025
1535.5	1438.5	0.788206	-0.459725261	0.835988
1579.51	1608.5	0.855832	-0.310678111	0.842442
1578	1543	0.792253	-0.40834849	0.810363
2415.5	2505.5	0.691764	-0.697009522	0.664488
15.5	14.5	0.905546	0.175086707	0.858965
4230.39	3837.08	0.836375	-0.318450361	0.912483
3041.5	3090.5	0.814061	-0.430376586	0.802809
464	440	0.814838	-0.354155257	0.857993
581	608	0.816676	-0.481954635	0.787719
3423.6	3182.06	0.839516	-0.279788295	0.903081
1841	1772.5	0.70919	-0.592426426	0.739403
1002	961	0.739996	-0.447066353	0.778153
1259	1411	0.232657	-0.68888383	0.144055
2199	2380.5	0.812361	-0.426674856	0.754532
3323.97	3376.5	0.532595	-0.640699923	0.516015
485	515.5	0.15608	-0.855751747	0.120847
1006.5	841	0.483166	-0.644214579	0.693797
1011	994.443	0.689611	-0.454090276	0.707051
789.002	789.001	0.806949	-0.331565815	0.806951
2441	2317	0.914361	-0.185486122	0.95032
2057	2476.05	0.962652	-0.092299796	0.84146
161.5	165.5	0.90406	-0.216449282	0.887169
4238.5	4448.5	0.831692	-0.422260231	0.79983
5332.5	4768	0.947531	-0.106946421	0.974707
3118.5	3065	0.345451	-2.215392954	0.354522
1574.5	1656	0.831422	-0.37988671	0.794922

3780.5	3142.01	0.989925	0.020273283	0.870573
13.5	18.5	0.582346	-1.754887502	0.417474
682.5	715	0.969871	-0.068171503	0.938857
2114.36	2464.03	0.817368	-0.398825747	0.699845
3893.5	3595	0.98694	0.021697836	0.92106
0	0	?	#DIV/0!	?
106	99.5	0.864422	-0.252185403	0.915867
3.5	1	0.3646	-1.807354922	1
68	149	0.925888	0.234465254	0.602001
450.365	412.022	0.757609	-0.376999135	0.845059
0.5	0.5	1	0	1
0.5	0	1	0	0.450185
333	427.5	0.993076	-0.017434593	0.831501
3224.12	2424.55	0.465009	-1.46858787	0.644742
483.5	527	0.908465	-0.210012947	0.848597
340.5	290	0.574643	-0.753299505	0.716648
272	84.5	0.590162	0.828416538	0.338771
26	31.5	0.339373	-1.612976877	0.23304
0	0	?	#DIV/0!	?
33912.5	27457.1	0.111896	-0.818998648	0.299746
123.5	354	0.847625	-0.91494423	0.374372
8.5	11.5	0.887461	-0.280107919	0.675723
1257.5	1778.5	0.759942	-0.722695497	0.541723
22	29	0.804489	-0.415037499	0.582511
385	342	0.669082	-0.519936358	0.785262
716.501	675	0.983483	-0.029489467	0.969241
0.5	0.5	0.450185	#NUM!	0.450185
247.5	247.5	0.742171	0.593679718	0.742171
241	182.5	0.369366	-1.453457718	0.561548
75.5	69	0.730982	0.562495161	0.686105
6162.5	6057	0.479533	-0.925074985	0.494195
1	0.5	0.651448	-1	1
80	81	0.511196	-1.649502753	0.504087
936.5	1065.5	0.828809	-0.38631229	0.73329
171.5	271	0.723104	-0.539421717	0.34684
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
10.5	17	0.802412	0.465663572	0.875277
852	1015.5	0.932477	-0.157280792	0.809572
210.66	170.74	0.397279	-0.82017725	0.61789
133	133	0.661843	-0.571466658	0.661843
128.5	142.5	0.484991	-1.85587743	0.428107
285	288.5	0.657179	-0.569855608	0.645609
43628.5	42930	0.231943	-0.511173568	0.252229
0	0	?	#DIV/0!	?
161	168	0.852308	-0.286522759	0.817544
0	4	1	#DIV/0!	0.0162766
792.5	1132	0.945775	-0.137412505	0.701376
1	3.5	0.639437	1.584962501	0.904922
83.4041	107.801	0.519711	-0.740965739	0.297778
12.5	16	0.76249	-0.736965594	0.61306
7	13	0.80143	-0.807354922	0.470402
90.5	102.5	0.848315	-0.360294535	0.760827
43.5	4	0.0312746	-0.742503778	0.0170148
210	134	0.479267	-0.559427409	0.92557
50.5	27	0.57292	-0.800230488	0.956894

3.99668	8.90023	0.764437	0.792957838	0.839049
1	3	0.853306	-1	0.388227
1	1.5	0.593125	1.321928095	0.717686
0.5	2	0.710482	1	0.474021
32	20	0.120766	-2	0.361235
80.7507	91.9107	0.763389	-0.409531582	0.642786
1	3.5	0.545627	2	0.917002
12	11	0.171387	-2.263034406	0.207565
1477.5	1478	0.630506	-0.598205078	0.63018
1035.5	804	0.762422	-0.513280034	0.938483
1671	1610	0.939222	-0.143776591	0.962577
782.5	614	0.436915	-0.659205695	0.736379
1673.5	1468.5	0.739221	-0.505304833	0.844426
2204.66	1809.19	0.886203	-0.23345016	0.977048
3.5	1.5	0.493436	-1.807354922	0.88627
3730.6	4063.29	0.788335	-0.48743917	0.726131
7.52761	4.61606	0.78537	-0.267735659	0.727854
2	1.5	0.680109	-1	0.834708
350.5	342	0.715006	-0.601521593	0.734044
0	2.5	0.370757	#DIV/0!	1
1367.16	1300.89	0.772144	-0.418460566	0.81462
931.444	870.752	0.864349	-0.287196162	0.912925
14.5	3	0.276408	-1.157541277	0.602218
3.5	0.5	0.345015	-1.807354922	0.837425
15	37.696	0.995253	-0.020223399	0.529763
634.998	672.506	0.819788	-0.514565383	0.785546
1756	1689	0.550166	-0.69260467	0.588457
56.5	33.5	0.620312	-0.670431843	0.961483
30676	19728	0.310046	-0.614227866	0.973727
41	38.5	0.974875	-0.053771256	0.983247
6588.92	6214.47	0.664444	-0.435356138	0.732739
18.5	10.5	0.963767	-0.080170349	0.75272
644	709	0.862543	-0.298871151	0.790621
6	1.5	0.695649	-0.777607579	0.753076
757.564	824.617	0.860349	-0.343864019	0.803651
220.5	266.5	0.730878	-0.970853654	0.62769
49	40	0.949074	-0.122856748	0.936381
10.5	11	0.893558	0.251538767	0.920005
36.5	40	0.848359	-0.331843564	0.779986
258.5	408.001	0.743825	-0.74723393	0.447862
2	1.5	0.698091	0.807354922	0.608871
74.1212	84.6826	0.769149	-0.431304749	0.652526
164.822	170.48	0.645795	-0.896571093	0.622558
308	369.5	0.822575	-0.371968777	0.677185
91	83	0.697714	-0.577057303	0.774333
4.5	6	0.478585	1.289506617	0.578605
1.5	4.5	0.439843	2	0.786483
13.5	26.5	0.454899	-0.506959989	0.0357864
1412.5	1599	0.650653	-1.071717729	0.574835
1517.18	1454.23	0.477771	-0.710007293	0.522188
1818	1956.5	0.670705	-0.800230488	0.618464
0	0	?	#DIV/0!	?
12	13	1	0	0.942559
59762.1	56407.8	0.715772	-0.390051492	0.780012
0	0	?	#DIV/0!	?
428	517	0.876064	-0.271825169	0.732518

117.5	267	0.50161	1.469996787	0.844091
270.502	305.762	0.26743	-0.688337802	0.165458
68.5	71.5	0.729418	-0.671767328	0.699851
38.5	41	0.68556	-1.137503524	0.651731
261	133	0.935482	-0.121015401	0.684553
0	1	1	#DIV/0!	0.308068
2	0	0.776298	0.53224713	0.387967
4638.51	5191.48	0.907597	-0.263207969	0.842615
584	565	0.60562	-0.618071915	0.638221
4170.98	5010.41	0.900555	-0.270686352	0.786793
260	188.5	0.936938	-0.103504576	0.814927
21	13.5	0.512834	-1.070389328	0.828964
10	13	0.538742	-2	0.404166
14273.5	14483	0.821589	-0.284859043	0.807405
0	0	?	#DIV/0!	?
3.5	6	0.891746	0.362570079	0.83859
0	1.5	0.545627	#DIV/0!	0.756486
2	1	0.785812	-0.415037499	0.785812
0	2	0.622002	#DIV/0!	0.622002
0	0	?	#DIV/0!	?
1	1	1	0	1
250.733	192.152	0.284643	-1.313654725	0.486469
24	30	0.867006	-0.337034987	0.715305
685.5	694.5	0.863684	-0.340195328	0.855307
6.5	5.5	0.594754	1.157541277	0.552249
192	271	0.230497	-2.337034987	0.107922
426.5	522	0.704542	-0.716811203	0.558707
80031.1	86148.8	0.237815	-0.588771153	0.168696
198	207	0.83745	-0.439532061	0.810094
472.408	572.242	0.684554	-0.490108742	0.493982
129	194.5	0.910066	0.25086759	0.850394
457.5	1183.5	0.891883	0.38516697	0.579972
643.462	769.497	0.989228	-0.021558718	0.848428
5	2	0.502754	-1	0.888898
218.5	208	0.776054	-0.476868721	0.813074
521.5	362.5	0.435079	-2.199974955	0.621577
0.5	0.5	0.450185	#NUM!	0.450185
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0.5	0	0.308068	#NUM!	1
7.5	7.5	0.790729	-0.584962501	0.790729
95	207.5	0.819858	-0.493040011	0.295331
4.5	3.5	0.355889	-2.169925001	0.493436
2716.5	2739.5	0.738661	-0.410353851	0.730254
9.5	2.5	0.34614	-1.247927513	0.780937
1033.5	2285	0.974259	-0.092225585	0.52357
19.9724	24.8839	0.697401	0.622456715	0.830752
423.5	257	0.983453	0.036994207	0.740501
0	0	?	#DIV/0!	?
9	10.5	0.739226	-0.169925001	0.428621
3679	3513.5	0.63142	-0.604604737	0.675297
1911.51	1767.49	0.7187	-0.471090291	0.791557
21.5	28	0.965554	0.065588342	0.813203
122.5	219.5	0.688472	-1.264212597	0.37423
329	397	0.917664	-0.227517454	0.80366
160.922	135.385	0.762735	-0.579651453	0.874381
118.5	148	0.902525	-0.252118628	0.7564

39	29.5	0.935607	-0.135655099	0.889975
51.5	36.5	0.406958	-1.194647431	0.673937
356	401	0.907573	-0.220704861	0.826777
14	24	0.762182	-0.900464326	0.462047
2	20.5	0.873517	-0.415037499	0.00713633
40	13.9402	0.352635	-1.113746421	0.831645
12.5	15.5	0.618972	-0.736965594	0.441636
1127.01	1097.51	0.785758	-0.597191859	0.801743
72	75	0.915078	0.187627003	0.940465
852	2103	0.948532	-0.201379888	0.453012
349308	359902	0.178501	-1.500818285	0.164401
315.5	312	0.557424	-1.016093976	0.565576
228.5	162	0.634863	-0.887683123	0.859198
0	0	0.308068	#DIV/0!	0.308068
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441.5	837	0.819513	-0.545478295	0.409142
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2032.5	2066.5	0.20952	-0.877903967	0.19732
4780.09	4578.98	0.688528	-0.399852976	0.739305
65	77	0.791092	-0.452512205	0.659042
142.5	150.5	0.321006	-2.347463187	0.294005
569	611.5	0.998153	-0.00380826	0.945873
42.5	33.512	0.581512	-1.120286854	0.732792
17	50.5	0.615202	-0.765534746	0.0480706
41	47.5	0.765196	0.487938046	0.855598
9615.5	9540.5	0.801306	-0.391056713	0.80763
2	0.5	1	0	0.481309
48	47	0.495115	-0.970252657	0.512179
568.5	503	0.632358	-0.651170652	0.741068
25	168.5	0.7823	1.22650853	0.394319
0.5	5.03019	0.805641	1.006017897	0.121283
102	182.5	0.58902	-2.424497829	0.320342
834.5	829	0.820205	-0.382840144	0.825159
447	488.5	0.930957	-0.171135824	0.874229
76.5	67	0.939285	-0.087462841	0.932563
1475.5	1553.01	0.947426	-0.110718461	0.910241
458.5	489	0.760518	-0.459234972	0.705893
7	11	0.525691	-1.485426827	0.269144
82.5	120.5	0.790579	-0.679821687	0.564353
34	35.5	0.761401	-0.595609745	0.732031
79.5	18.5	0.602293	-0.430239906	0.334605
12076.5	10126.5	0.571298	-0.582098234	0.766185
22	9	0.858603	0.2410081	0.470196
62.5	78.5	0.762959	-0.556393349	0.594106
55	44	0.544655	-0.974004791	0.713531
772	507.5	0.798298	-0.369662134	0.894665
0.5	1.50469	0.97968	0.105128247	0.530385
8565.72	9893.99	0.797112	-0.495459772	0.695812
9.5	14.5	0.822647	-0.662965013	0.594522
1842.5	1579.5	0.471541	-1.409696832	0.571406
1503.5	1981	0.905334	0.246790747	0.93339
119.5	91.5	0.808094	0.351798624	0.657692
1946.5	1853.98	0.889019	-0.24806649	0.92221
3172.96	3362.54	0.85473	-0.285665107	0.807706
611.768	459.058	0.398693	-2.308473603	0.548276

115	152	0.841107	0.36882907	0.983226
5642.5	5569.5	0.808177	-0.380968277	0.818572
1754.47	1635.8	0.764786	-0.467593344	0.820483
91.5	78.5	0.536342	-1.657718843	0.619731
181.5	153	0.431186	-1.323916648	0.550824
11	14.5	0.624576	-0.652076697	0.3832
573.5	454.5	0.990725	-0.016444751	0.841135
118	75	0.509174	-1.282730207	0.794253
1	0	1	0	0.450185
2123	1827.5	0.529994	-0.803368051	0.665822
17.5	7.5	0.444794	1.174497731	0.29165
13222.8	17423.2	0.245911	-1.211563598	0.110704
788.966	691.505	0.677929	-0.449720053	0.82093
8.5	8	0.750854	-0.628031223	0.790729
0	0	?	#DIV/0!	?
75	83.5	0.934129	-0.120294234	0.842172
34	47.5	0.81532	-0.53287399	0.601129
1065	1045.5	0.75914	-0.406483501	0.776328
0	0	?	#DIV/0!	?
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6	5	0.376742	-2.584962501	0.468351
2382	2411	0.571395	-0.934869345	0.562202
62.5	24	0.355858	-1.795859283	0.892589
2372.61	2304.8	0.674484	-0.39742048	0.710257
0.5	0	0.0138468	2.807354922	0.00900735
6.20734	10.7026	0.587486	1.021445357	0.868762
692.5	709.5	0.715993	-0.820960417	0.70109
76.5	76	0.859007	-0.338524605	0.863344
893.502	1224.01	0.921978	0.160291469	0.833929
184.5	206.5	0.852792	-0.210064392	0.72933
670.5	505.5	0.756061	-0.394740085	0.992986
381.499	432.999	0.957305	0.112718341	0.97176
0.5	0.5	1	0	1
17	21	0.340466	-1.765534746	0.22882
51	49.5	0.879571	0.258311996	0.861774
1	8.5	0.837425	-1	0.0373471
243.5	228.5	0.826749	-0.280319536	0.886373
1431.5	1323.47	0.657744	-0.655969251	0.7234
0	1	1	#DIV/0!	0.308068
0	1	0.353387	#DIV/0!	0.622002
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2.5	4	0.0714215	#NUM!	0.022006
1844	1679.5	0.154206	-1.87851705	0.194727
51.5	61.5	0.929982	0.133678435	0.929982
4236.4	4833.48	0.200507	-2.074925733	0.148078
511.5	444.5	0.863602	-0.213955584	0.993176
1899	2347.5	0.686454	-0.785115682	0.536801
3732	4681	0.842247	-0.397363784	0.685916
66.5	50.5	0.455968	-1.124545098	0.66765
1254	1221	0.739207	-0.571222444	0.759145
2575.5	2445.5	0.678027	-0.560798981	0.72504
5.5	5.5	0.758248	0.540568381	0.758248
470.5	414	0.665296	-0.378205026	0.833517
353.5	334.5	0.836662	-0.313281563	0.881016
737	698.5	0.592467	-1.21945912	0.62519
806.628	814.756	0.56228	-0.856015041	0.554062

1566.5	1126.5	0.212573	-1.041576411	0.525567
182.5	315.5	0.971344	-0.085487899	0.631039
492.5	482	0.77958	-0.362779332	0.799981
638.5	665.5	0.925175	-0.177713039	0.898077
279.801	226.927	0.539892	-1.108610986	0.685356
342.5	304.5	0.772122	-0.422780697	0.869733
1452.85	1515.35	0.865704	-0.252702477	0.830512
665.498	657.505	0.965909	0.069819589	0.957663
101	130.5	0.847671	0.353015773	0.991761
11.5	4.5	0.970424	0.061400545	0.588628
193	225.5	0.832006	-0.354052298	0.709217
2681.5	2530	0.711751	-0.430271823	0.771814
1122.5	1008	0.833451	-0.30833652	0.921031
2002.5	1945	0.750356	-0.547099914	0.772045
315.417	344.463	0.614616	-0.680742806	0.535952
1291.58	1223.54	0.755824	-0.523178946	0.796523
948.5	1101.5	0.791179	-0.534152867	0.689616
863.5	513.5	0.968745	0.055715761	0.6638
219.5	258.5	0.654693	-0.685319989	0.519642
309	414.5	0.91654	-0.197321565	0.704082
837	789.5	0.824271	-0.351531808	0.869628
1023	1110	0.89717	-0.213955584	0.83488
1177	1171.5	0.878671	-0.282780754	0.881819
595	545.5	0.998236	-0.003641639	0.943617
439.5	465	0.804024	-0.50359495	0.767029
1101.5	1197	0.839456	-0.24339144	0.753521
6137.98	6985.14	0.876112	-0.31175258	0.790663
306	373.5	0.958153	-0.100040907	0.82258
2878.25	2760.62	0.861353	-0.25397542	0.896092
1700.21	1564.35	0.752371	-0.50522956	0.817164
989	1101.5	0.915555	-0.198282652	0.841935
732.5	756	0.951439	-0.119010316	0.931828
6.5	7.5	0.805178	-0.530514717	0.713348
1681.63	1538.13	0.774826	-0.365534153	0.858842
6145.36	6221.53	0.701562	-0.842917634	0.693846
1906	2041	0.615957	-1.006068127	0.56976
190.5	223	0.948388	-0.13901896	0.853681
977.5	1058	0.905882	-0.193172282	0.845018
1575	2079	0.990828	-0.017046252	0.747828
111	122	0.525419	-1.624490865	0.471517
551.5	476.5	0.958989	-0.091802023	0.950561
214.5	234.5	0.741318	-0.722466024	0.6847
625.499	589.5	0.769254	-0.45597059	0.816723
6189.12	5580.74	0.681182	-0.575524842	0.771494
948.5	761	0.654772	-0.804695576	0.807504
1498	1424	0.768363	-0.444878479	0.810057
2087.48	2015.03	0.993675	0.014776198	0.97236
47	36.5	0.837448	-0.425305835	0.97946
8715.55	8282.93	0.0772266	-0.731804746	0.103435
236.208	298.593	0.950046	-0.130048786	0.800157
21.5	16	0.441867	-1.178337241	0.664843
82.5	86.5	0.734676	-0.63840176	0.701219
1302	1279	0.831097	-0.414298981	0.842797
15	22.5	0.881295	0.30256277	0.864578
1259	1196	0.873863	-0.2286128	0.916624
34.5	25	0.870426	-0.250543462	0.905456

20	19	0.574988	-1.321928095	0.605594
1026	895.5	0.747432	-0.550569656	0.846067
12	14	0.888898	0.115477217	0.888898
157.5	153	0.804047	0.415037499	0.787852
2896.53	2583	0.69359	-0.623984368	0.783606
842.5	917.5	0.870945	-0.311265112	0.813188
76	72	0.946379	-0.118644496	0.982108
231.5	216.5	0.998467	-0.003119342	0.955598
1364.5	1091.5	0.573638	-0.55074472	0.831004
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63	52.5	0.315136	-1.584962501	0.433304
323.5	403.5	0.827819	-0.445838199	0.678259
93.9138	91.9539	0.945083	-0.115023984	0.960015
30.5	29	0.972375	0.046542586	0.931052
0.5	0.5	0.393741	2.584962501	0.393741
99.5	92.5	0.797607	-0.40780593	0.854221
20	21.5	0.891416	0.169925001	0.956388
1255	1202.5	0.8523	-0.325524943	0.882496
1539	1737.5	0.866313	-0.315730992	0.781383
547	517	0.864491	-0.297735497	0.903982
125.5	100.5	0.676568	-0.432384743	0.922097
3197	3458.5	0.899112	-0.231521762	0.844369
1757.5	1818.5	0.647764	-1.032794653	0.626561
1643	1497	0.629258	-0.554767224	0.724791
442	376	0.72284	-0.272202721	0.962338
124.5	123	0.828205	-0.352671618	0.837535
1806.01	2021.49	0.31819	-0.497767057	0.19104
733.839	747.756	0.863271	-0.280466048	0.848858
669.998	630.003	0.816097	-0.357348601	0.865246
55	60	0.861884	0.273922722	0.921514
137.5	209	0.470343	-1.184424571	0.210244
2186.5	1818	0.633693	-0.623240499	0.801421
716	759	0.845359	-0.401666736	0.808191
32.5	18	0.35337	-2.022367813	0.685086
14	14.5	0.803701	-0.415037499	0.776745
1119.98	1125.99	0.925879	-0.176689257	0.922442
0	0.5	1	#DIV/0!	0.308068
574	548	0.434031	-0.997488781	0.472711
79	83	0.627053	-0.384917511	0.558609
342.5	336.5	0.697464	-0.790603558	0.709124
71.5	65.5	0.590179	-0.989946335	0.651777
196.5	161	0.989303	0.018239118	0.839138
0.5	1	0.622002	#NUM!	0.353387
1166	1025.5	0.648513	-0.798258551	0.741628
296.5	323.5	0.800494	-0.477178674	0.739193
26.5	54.5	0.81738	-0.518467089	0.339355
521	475	0.835909	-0.354483313	0.901705
221	457	0.850631	-0.521116019	0.422087
136.5	122	0.452944	-1.337869639	0.529459
4032	3751.5	0.770891	-0.339749372	0.844983
59.5	57.5	0.933682	-0.153350777	0.955743
560.5	571.5	0.673667	-0.983365638	0.661922
2614.5	2427	0.656106	-0.588277138	0.724518
1666.5	1832.5	0.806998	-0.484042366	0.742785
3434	3172	0.695679	-0.582339132	0.761836
8.5	9	0.935389	-0.180572246	0.903291

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273.5	280	0.223197	-0.71169273	0.202674
86.0001	86.9999	0.583437	-1.086416429	0.575658
0.5	0.5	1	0	1
105.5	285.5	0.860581	-0.755314904	0.394512
71.5	79.5	0.679073	-0.950417971	0.613178
465.5	515.5	0.844512	-0.319605537	0.763685
6.5	7	0.559404	0.547487795	0.623326
61.5	66.5	0.548782	-1.387925654	0.501332
129.5	120.5	0.839631	-0.255257055	0.9077
208	304.5	0.508281	-1.200593831	0.265893
34.5	40	0.645227	-0.750972452	0.528753
1148.5	827.5	0.526476	-0.67870012	0.866924
738	626.5	0.625575	-0.469490697	0.820747
1091	1009	0.500249	-0.788796463	0.57456
1502	1717	0.952249	-0.120649251	0.867884
2004.5	2160	0.901301	-0.259512041	0.855467
418	493	0.761039	-0.495470838	0.627575
2712	2578.5	0.901288	-0.219956296	0.935502
1884.5	2061	0.595613	-1.338869464	0.543359
532	579	0.971486	0.059761215	0.968953
97	97.5	0.190301	-1.410088283	0.187622
1046.57	1048.75	0.433732	-1.050402478	0.432083
1694.5	1742.49	0.909979	-0.208974533	0.891241
0.5	0.5	0.450185	#NUM!	0.450185
49.5	68	0.768196	-0.796466606	0.586864
1	2	0.450185	#NUM!	0.18169
4268	3138	0.405825	-0.595564675	0.847456
490.5	487	0.925697	-0.161676294	0.930678
232	226	0.761565	-0.487293588	0.782193
1269.5	1342.99	0.869935	-0.332049311	0.834054
73.4999	55	0.737193	-0.458203396	0.979706
584	608.5	0.917458	-0.15090557	0.882927
1	0.5	0.651448	-1	1
1909	1852.5	0.67364	-0.562652822	0.701223
322.5	253.5	0.853981	0.270470995	0.71042
4288	4920.5	0.793338	-0.296871194	0.643202
998.995	1042	0.770176	-0.472484558	0.736661
1259.5	1043	0.851804	-0.288806789	0.992146
721	638.5	0.883881	-0.196939242	0.987943
64.5	70.5	0.775597	-0.584962501	0.71671
21	30	0.823685	0.465663572	0.977677
1780.02	1812.6	0.849751	-0.322937513	0.836329
1772.5	2262.5	0.937231	-0.14591148	0.762197
1490.5	1332.5	0.61671	-0.665831309	0.717995
1034.51	1099.99	0.945395	-0.112370329	0.899561
337.5	296	0.704908	-0.640520477	0.802013
559	555.5	0.777445	-0.47027961	0.782256
1141.5	1050	0.739283	-0.489603602	0.809312
386.5	431	0.913615	-0.210620311	0.841565
300	380	0.845973	-0.337034987	0.66249
517.5	478	0.770123	0.56578553	0.735563
147.5	198	0.512891	-1.346590149	0.33078
74	159	0.680682	-1.750021747	0.317597
122	111	0.606991	-0.988222832	0.671353
2939.5	3333	0.89701	0.227466732	0.977647

100.5	91	0.867325	0.267811546	0.807432
169	166	0.873148	-0.276758124	0.885902
3957	4148	0.612827	-0.793160276	0.575048
2902	2590.48	0.469324	-2.036247505	0.529554
732	687	0.900062	-0.217637271	0.943779
73.5	96	0.955096	-0.112209504	0.775995
888	793.5	0.870276	-0.241746769	0.959503
864.5	1778.5	0.73988	-0.853347039	0.307494
934	902.5	0.632626	-0.905829045	0.656486
58	163.5	0.782618	-0.975337946	0.251136
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441	465.5	0.562589	-0.726643123	0.512882
279	290	0.893211	-0.241478262	0.866255
884	927.5	0.847655	-0.390227926	0.816825
2281.5	1987	0.991428	-0.015608196	0.90607
777.5	794	0.887934	-0.233101519	0.872195
62.5	75	0.736547	-0.736965594	0.618384
281	240	0.604229	-1.041669179	0.707037
80	86	0.64857	0.727920455	0.685219
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97.5	88.5	0.734545	-0.509298231	0.814061
736.5	754	0.759284	-0.560197959	0.742454
215.5	218	0.722644	-0.532375539	0.712919
6	4.5	0.454021	1.772589504	0.413655
38	35.5	0.737112	0.682809824	0.710436
3.5	3.5	0.821423	-0.485426827	0.821423
252	223	0.725292	-0.453717967	0.839037
78.5	66	0.412558	1.547729595	0.379688
424	371	0.883358	-0.214192859	0.988972
711.5	571	0.940201	0.119604657	0.806362
878.5	833.5	0.926537	0.136980903	0.889074
288.5	238	0.984688	-0.032876156	0.896797
747.002	641.502	0.797073	-0.371288661	0.922237
5178.29	4249.31	0.6662	-0.590906218	0.83843
230	232	0.78923	-0.357650017	0.781207
1320	1468	0.860613	-0.317154342	0.783937
369	335.5	0.770784	-0.377729887	0.859174
1226.5	1135	0.192821	-0.706706064	0.269519
2403.5	2387.5	0.391636	-0.723126448	0.398677
1654.5	1820	0.739647	-0.521002779	0.661001
1571.5	1413	0.689367	-0.535112219	0.785738
1001	1000	0.827692	-0.361741185	0.828445
989.495	817.998	0.73685	-0.53799993	0.880593
89.5	98	0.863328	-0.32394444	0.800575
694.5	720	0.836826	-0.364351734	0.810721
978.999	1173.52	0.84937	-0.370067211	0.723574
419.5	408.5	0.776813	-0.33966194	0.803762
236.5	284.5	0.442146	-0.652076697	0.262488
193	162.5	0.546171	-0.559034036	0.753096
694.552	812.684	0.880498	-0.292156504	0.773229
1103.5	1306.37	0.744655	-0.448956111	0.589285
1530	1585.49	0.905592	-0.220653749	0.881698
86	104	0.802473	0.381090167	0.938317
2399.03	2564.55	0.978539	-0.04830152	0.933672
343.499	349	0.732893	-0.649375029	0.721834
5877.5	5774	0.996919	0.006490088	0.984888

1587.5	1929.5	0.855493	-0.358162723	0.720843
878	912.5	0.637073	-0.648794113	0.602683
3084.5	3123	0.690524	-0.471879858	0.677851
14	19	0.638075	-1.222392421	0.459011
7.20267	4.30277	0.90389	-0.22591298	0.830535
23138.9	26301.3	0.824445	-0.488064119	0.744659
411.5	417.5	0.930763	-0.149473244	0.920555
1137.5	1158	0.769764	-0.41355857	0.753923
344.5	357	0.844801	-0.35421871	0.819581
8121.5	10279	0.841596	0.420334727	0.965667
304	336.5	0.919248	-0.211753901	0.856845
1436.5	1317.47	0.759548	0.608043457	0.723789
3636	3838.5	0.89578	0.266436094	0.924236
5929.39	5269.46	0.774015	-0.413598618	0.873052
649.499	618.999	0.654403	-0.532608646	0.702788
3250	3855.5	0.883059	-0.224058031	0.737849
2350	4464.5	0.988112	0.034575385	0.600372
499.5	691	0.644434	-1.166679342	0.450821
373	361.5	0.764115	-0.398373577	0.793114
2724.49	3423.02	0.843361	-0.47218392	0.707348
61481.6	56852.5	0.968797	-0.073882518	0.984139
420.998	332.5	0.658679	-0.474495586	0.910522
33	16.5	0.486864	-0.796466606	0.896663
2678.5	2724	0.78567	-0.552343542	0.774693
15.3504	18.1109	0.795273	0.423674587	0.901808
1173.01	1068.51	0.744219	-0.516510701	0.817426
700.5	619	0.996866	0.006165373	0.91201
1780.01	1337.51	0.325249	-2.388278695	0.475762
291.5	337.5	0.931018	-0.16498426	0.831939
599.503	650.505	0.81025	-0.487839178	0.756443
1171	1085.5	0.912486	-0.17950489	0.967013
1638	1485	0.768323	-0.481117515	0.842703
373.5	374	0.990203	0.021089605	0.991093
1235	1052.5	0.855341	-0.252095148	0.988577
288	314	0.902361	-0.257035665	0.849182
1747.5	1872.5	0.868821	-0.282734463	0.817344
386	466.5	0.836624	-0.373288517	0.696009
3183.5	3401.5	0.856546	-0.324649734	0.809081
52.5	58	0.660373	0.660793914	0.717123
22	27.5	0.801453	-0.505235308	0.647109
1246	1234	0.983303	-0.036941578	0.989663
337.5	381	0.794589	-0.354349573	0.681464
2224.5	2046.5	0.747321	-0.427958053	0.823621
2638	2666.5	0.772136	-0.492169302	0.764005
389.5	370.5	0.993852	0.011069326	0.954955
741.5	763.5	0.779876	-0.423167212	0.755395
2184	2068.5	0.722404	-0.449802917	0.774635
390	421	0.907436	-0.223626021	0.856907
1448	1451.5	0.69286	-0.675682677	0.691033
866	1118	0.956517	-0.105378242	0.781166
701.5	744	0.878505	-0.236341596	0.83078
1406	1253	0.685211	-0.539263028	0.790011
215	274.5	0.939633	-0.170764022	0.793394
151.5	155.5	0.76148	-0.542734265	0.742458
18.5	30.5	0.968037	0.075948853	0.665011
528.503	385.5	0.454845	-2.115030513	0.617606

2837.5	2663	0.740252	-0.596191742	0.785452
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3234	2978.5	0.638967	-0.631889078	0.713151
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163.5	128	0.306919	-1.013296823	0.534468
258.381	296.925	0.880061	-0.249194499	0.771007
311	300.5	0.779047	-0.335326934	0.81389
1704	1835.02	0.889666	-0.250390197	0.837396
465.5	456.5	0.799209	-0.366782331	0.815996
3149	3162.5	0.723776	-0.554252441	0.720303
3666.57	3498.57	0.797318	-0.418676461	0.833248
1139.5	1222.5	0.857944	-0.289999065	0.802693
1366	1325.5	0.600038	-0.768283342	0.625262
2141.68	2202.6	0.783711	-0.528241144	0.76453
1114.5	1238.5	0.831252	-0.374827072	0.752691
2274.5	1913	0.837809	-0.261829756	0.99305
1605.5	1342	0.51368	-0.632695112	0.717814
52	36.5	0.416808	-1.893084796	0.616838
476	533	0.978227	-0.054036693	0.907612
776.492	702.502	0.65069	-0.526696494	0.752824
1891.5	1591	0.606913	-1.059561228	0.717358
45.5	54.5	0.95301	0.12156198	0.941292
3571.57	3974.55	0.614013	-0.765805007	0.526446
213	187	0.724906	-0.463246592	0.843751
378	407	0.893521	-0.189377364	0.828422
1750	1647	0.674591	-0.607604065	0.726515
761.507	885.989	0.832231	-0.37795171	0.71945
4174	3989	0.750616	-0.548698037	0.784101
3496.01	3564.49	0.814103	-0.376762967	0.798769
230	242.5	1	0	0.963672
5050	5009	0.654332	-0.535331733	0.662514
450.001	470.002	0.964131	-0.07908155	0.934323
310.5	241	0.786962	0.440939363	0.663837
13.5	14.5	0.720999	-0.847996907	0.678239
0.5	0.5	0.450185	#NUM!	0.450185
384	359.5	0.908039	0.17990909	0.864423
78.5	100	0.489733	-0.740031897	0.27828
1	0.5	0.651448	-1	1
8587	6666.5	0.340636	-1.048347748	0.567294
719.502	699.005	0.900917	-0.2019842	0.9224
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22.5	32	0.99008	0.03170886	0.823741
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41	35	0.605665	-0.713695815	0.74318
3881.9	3298.76	0.663023	-0.726258642	0.784662
258	294	0.966694	-0.089386318	0.889842
538.497	796.995	0.775427	-0.764450916	0.547351
1072	1158	0.915173	-0.215902353	0.866799
206.966	206.343	0.842568	-0.199946896	0.846157
273	241.5	0.82005	-0.392317423	0.906333
2166.02	1348.49	0.396182	-1.419058094	0.721134
620.5	634.995	0.427232	-2.153166088	0.415003
86	48	0.622031	-0.725825037	0.952679
54.1105	156	0.394094	1.860548835	0.796062
147.5	56.5	0.739149	0.326810316	0.299412
820.997	630.5	0.335001	-1.23829379	0.542897

102.144	108.5	0.898038	0.220357112	0.936319
135.89	281.5	0.712349	0.607191474	0.699645
72	75	0.114624	-1.103835811	0.0978886
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272.5	279.001	0.938421	-0.104270483	0.917456
3	0.5	0.393741	-2.584962501	1
28	46	0.876869	-0.415037499	0.589637
0.5	3	0.741917	1.584962501	0.625646
5.5	4	0.641229	-0.652076697	0.905448
26.5	156.5	0.263946	3.324647596	0.576138
278	313.999	0.91734	-0.188197822	0.831348
2	0.5	0.0162766	#NUM!	0.308068
15	20	0.594988	1.023846742	0.714859
11527	13048.5	0.92214	-0.158665729	0.825261
406	365.5	0.780245	-0.352452962	0.87967
628.5	602.5	0.861772	-0.290144385	0.89282
5122.63	2878.05	0.96439	0.069597457	0.665221
5154.98	1104	0.905709	0.178241564	0.435329
4329.5	2702.5	0.982121	-0.035419824	0.747703
1	3.5	0.758682	#NUM!	0.323864
466.5	472	0.604936	-0.587283813	0.592918
23.5	42.5	0.990879	-0.031026896	0.661561
4	6	0.329316	-2	0.14822
4111	3646.5	0.546991	-0.79673445	0.65354
73.5	66	0.933338	-0.122856748	0.983306
910.5	1401.5	0.932488	-0.199338151	0.66627
141	102	0.19376	-1	0.510007
29.5	21	0.884657	0.204819792	0.67951
514.5	704	0.496007	-1.783025593	0.32517
1102.5	1414.5	0.668421	-0.672977499	0.466309
13.5	24	0.888201	0.332575339	0.779785
641	573.5	0.814615	-0.328413396	0.909515
480	861.012	0.987213	-0.041154232	0.646194
82	78	0.754868	-0.512061954	0.793342
1424.69	1034.12	0.330408	-0.896303799	0.66896
535	523.5	0.899551	-0.185344169	0.917349
568	582.5	0.960484	0.080273316	0.978104
808.496	631.998	0.734114	0.432325337	0.587508
681	674.5	0.929402	0.144995067	0.923058
40	47.5	0.95539	-0.093109404	0.823714
1331.5	1219.5	0.721583	-0.475703516	0.801688
370	369.5	0.728323	-0.514573173	0.729472
1990.5	2187.5	0.969718	-0.055786479	0.891197
624	690.5	0.871066	-0.228764504	0.780327
1871.5	1968	0.82198	-0.401864447	0.785538
506	458.5	0.443182	-0.861460057	0.535923
2133.03	1918.99	0.629734	-0.538050219	0.740961
7237.49	6598.91	0.622441	-0.553179173	0.718946
2163.01	1850.01	0.79676	-0.312295711	0.947008
43.5	35.5	0.882311	0.186413124	0.732125
1112	1410.5	0.739388	-0.336761879	0.464786
1477	1414.5	0.765155	-0.402394995	0.804563
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1239	1126.5	0.653514	-0.627502046	0.736743
360	346	0.851592	-0.309458743	0.881095

1998	2029	0.827475	-0.354700393	0.815528
375.5	556.001	0.770605	-0.697800714	0.524086
7016.22	6728.43	0.649642	-0.683400786	0.684391
22972.7	25446.1	0.988647	0.024749653	0.940792
4600.37	4548.42	0.683788	-0.635991891	0.693007
735.5	1056	0.987197	0.036795559	0.800194
3049	3556	0.983028	0.037826507	0.91102
281	325.5	0.804692	-0.516040818	0.707919
610.5	728.5	0.779154	-0.701178387	0.676394
1117.5	1082.5	0.707771	-0.740196715	0.729131
346	344.5	0.913262	0.185591598	0.910541
1	0.5	1	0	0.710482
745.996	732.5	0.952533	0.108924526	0.941611
630.5	670	0.497548	-2.028889532	0.4657
35.5	49	0.604851	-0.864344901	0.36599
2495.44	2756.61	0.896871	-0.239312015	0.827639
7.5	12.5	0.624453	-1.906890596	0.375602
23	20.5	0.927796	0.120294234	0.838941
22.5	18	0.821261	-0.321928095	1
2373	2287.5	0.851019	-0.263034406	0.882812
50951.6	61223.1	0.874318	0.324033195	0.974772
26	26.5	0.9774	-0.056583528	0.966108
839.5	779.5	0.679001	-0.552254632	0.746771
1313.5	1293.5	0.805261	-0.463625203	0.815739
3938	4151	0.854103	-0.321882302	0.815633
7202	6402.5	0.705053	-0.600318231	0.797211
129	686.5	0.966174	-0.290128067	0.337713
5488.81	6823.5	0.927829	-0.181635399	0.783324
1878.5	2313	0.941282	0.144225328	0.929583
113.5	134	0.68322	-0.739085646	0.560455
107	69.5	0.412165	-1.474680446	0.696237
237.66	279.317	0.909466	0.211408355	0.989947
7	5.5	0.717963	-0.637429921	0.883931
1881.99	1877.06	0.82579	-0.432035208	0.82751
1256	1473	0.829078	-0.472049918	0.72853
802.5	735.5	0.694453	-0.459768736	0.783541
112	123	0.778084	-0.458626768	0.703167
0.5	1.5	0.724378	#NUM!	0.329316
852	569	0.495648	-0.584962501	0.997998
30.5	19.5	0.561234	1.091630475	0.453452
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1518.13	2039.35	0.652067	-0.971045744	0.458377
739.369	795.88	0.349556	-1.691564488	0.306966
3.00509	11.7346	0.896028	-0.260629272	0.0777112
46	41	1	0	0.923088
4348.86	2971.83	0.502958	-0.974392625	0.804928
1.5	2	0.604181	-1.584962501	0.450185
23.5	17.7808	0.873462	-0.197036847	0.885169
100.5	107.5	0.892625	-0.199840579	0.835871
1334.5	1497	0.977644	-0.052847848	0.902327
1002	967.002	0.764459	-0.544498404	0.789613
1811	1900.5	0.783228	-0.4699756	0.746597
40.126	50.1046	0.86555	-0.300130129	0.697347
44.5	44.5	0.391851	-1.775293713	0.391851
1167.28	1284.67	0.866631	-0.314677438	0.800072
5.5	4	0.455759	-1.137503524	0.698091

522	566.998	0.965256	-0.08685839	0.914216
42.8617	73.3489	0.815631	-0.563636172	0.475298
102	100	0.845823	-0.415037499	0.857705
796.5	687.5	0.770202	-0.563389089	0.865503
886	923	0.953823	-0.115205856	0.928784
3135.07	3101.44	0.740619	-0.713400042	0.747369
436.512	564.445	0.91331	-0.232348463	0.748546
355.216	387.333	0.881188	-0.305280142	0.826045
3542.5	3951	0.948811	0.118403339	0.98216
1351.5	1195.5	0.431834	-0.763721176	0.56124
658.381	575.618	0.79453	-0.449446638	0.889633
162.995	165.298	0.278059	-1.311246764	0.269032
293.5	308.5	0.860621	-0.188788071	0.804122
614	567	0.775844	-0.350702858	0.853571
6402.13	7032.06	0.885038	0.289544311	0.935691
1142.5	1459	0.800793	0.518860157	0.92725
2613	3328	0.54019	1.372809264	0.6082
1045	937	0.724724	-0.466090955	0.824388
4	5.5	0.628487	-1.415037499	0.453341
515	602	0.70611	-0.765254639	0.599552
635.5	397.5	0.471425	-1.281081179	0.784573
4734	5161	0.674163	-0.960619901	0.620478
1296.41	1138.13	0.677047	-0.764844618	0.76773
242	231	0.574019	-0.863580802	0.611284
710.5	869	0.735393	-0.591576879	0.581027
681.5	632	0.481122	-2.127167628	0.520033
4	9.5	0.88504	0.459431619	0.703202
1436	1190	0.578478	-1.30419969	0.688182
314.5	316	0.910503	0.182864057	0.913642
329.5	383.5	0.936908	-0.169377801	0.84487
1205	1031.5	0.811078	-0.41863375	0.918087
1934.52	1794.48	0.58034	-1.419910087	0.622724
2693.5	3512.5	0.979059	-0.058480874	0.821147
4069.32	5016.84	0.672346	-0.695675622	0.507103
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9735.48	9926.06	0.578667	-0.662832266	0.559854
231	215	0.615503	-0.380073827	0.721617
218.5	192	0.754353	-0.562036104	0.844299
3	1	0.391002	-1.584962501	1
1625.5	724	0.16199	-1.496742839	0.811413
2.5	19	0.727013	1.847996907	0.596819
11.5	6	0.881896	0.176877762	0.505581
9558.5	12337.6	0.85764	-0.341733794	0.673912
303.5	450.5	0.242839	-1.308914767	0.0784391
1515	1511.51	0.935714	-0.156262866	0.937152
228	354	0.66829	-1.317190176	0.429803
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38232.8	35551.5	0.281408	-0.729018002	0.359764
573.5	544	0.758298	-0.36923381	0.81151
45	38.5	0.911028	-0.206450877	0.992562
2274.5	2174.51	0.731889	-0.511522742	0.769493
303	369	0.950955	-0.129431817	0.828404
1111.5	1255	0.858701	-0.363404731	0.779479
17643.3	17487.8	0.77063	-0.417773941	0.778335
3031.51	3202.01	0.817603	-0.333669795	0.769872
1246	1345	0.724292	-0.355310391	0.633793

915.5	916.5	0.793314	-0.375913803	0.792365
1515	1435.5	0.717579	-0.407123628	0.774999
2545	2280.5	0.719006	-0.486504291	0.817445
3928.5	3680.5	0.816558	-0.369432744	0.866927
147	130.5	0.82195	-0.317029295	0.922425
959	981.5	0.868511	-0.237388469	0.848537
0.5	1	0.481309	2	0.630057
185.5	133.5	0.632495	-0.827916245	0.861473
3	3	0.764931	-0.584962501	0.764931
3613.58	2400.98	0.913364	0.151805854	0.666747
219.5	176	0.424359	-0.835562624	0.647327
4093.42	4070.35	0.757334	-0.467714398	0.762039
454	369.5	0.545481	-1.129580961	0.685399
13.5	15.5	0.882296	-0.295455884	0.790796
561.001	700.002	0.901319	0.2420866	0.964731
2149.53	2928	0.719549	-0.79251813	0.516838
3826.5	3738.5	0.811067	-0.338851815	0.831306
5917.55	7001.71	0.790398	-0.513662695	0.671638
1255	593	0.852422	0.257275137	0.507726
4449.47	4316.51	0.779657	-0.404781589	0.805673
1760	1389.48	0.983513	0.034799963	0.842969
3480	3043	0.930802	-0.155461966	0.984106
28.0079	16.0016	0.536203	-0.999582827	0.927244
1869.49	1912.01	0.892744	-0.250052714	0.877592
14145.3	13482.7	0.827621	-0.358013907	0.863726
2882.01	2894	0.741062	-0.59729949	0.738065
10.5	8.5	0.191883	-1.392317423	0.329316
831.495	1095.51	0.924951	-0.2117358	0.756026
12666	12378.5	0.750758	-0.433301157	0.771579
3976.34	4003.65	0.678023	-0.646589904	0.672445
144	155.5	0.900199	0.192018772	0.956039
531.5	466	0.862781	-0.285741557	0.95659
987	1106	0.901075	-0.224098743	0.819893
1918.55	1482.02	0.49026	-1.938577272	0.6251
170.5	160	0.523202	-1.699382411	0.558351
501	480	0.868648	-0.269962126	0.900605
2810.5	2462	0.369344	-0.698804427	0.527062
474.5	390.5	0.49195	-1.745606034	0.600397
1813.5	1859.46	0.839517	-0.350348093	0.821124
1700.99	1753.49	0.837468	-0.318012838	0.812796
1004.5	1163	0.572318	-0.592883482	0.421951
47	58	0.981843	-0.046794211	0.850075
58	79.5	0.889817	-0.288125387	0.677384
70	170	0.781789	-0.771731012	0.270647
4	22.5	0.899005	0.700439718	0.44226
55	33.5	0.859098	-0.226770862	0.765751
2.5	2.5	0.770719	-0.736965594	0.770719
63	110	0.981834	-0.058416686	0.658129
96.5	80.5	0.658634	0.626711483	0.569142
0	16	0.965415	#DIV/0!	0.24061
447.5	605	0.688068	0.773572065	0.837852
141	121	0.449718	-1.510194732	0.546657
277	218.5	0.815135	-0.375649906	0.985236
16	8	0.295498	-3	0.625646
0.5	1.33633	0.748476	1	0.828333
0.5	0.66367	0.382251	2.807354922	0.405444

12.5	8	0.927055	-0.184424571	0.855059
50.5	29.5	0.522246	1.272525855	0.418925
3.5	3.5	0.587095	-1.807354922	0.587095
172	216.5	0.731092	-0.281606512	0.422004
1244	1282	0.92426	-0.187987206	0.905446
18	7	0.480862	-0.847996907	0.783067
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3.5	4	0.871602	0.362570079	0.935472
0	2	1	#DIV/0!	0.308068
0	2.5	0.450185	#DIV/0!	0.0405193
126	396.5	0.690532	-0.932885804	0.0944501
0	0.8429	0.418121	#DIV/0!	0.892367
0.5	1.6571	0.7469	-51.78949662	0.325618
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
475	536.5	0.98231	0.038953634	0.934114
3147	3092	0.617829	-0.579814303	0.635713
1795.5	1734	0.636442	-0.485426827	0.675971
720.502	713.496	0.892084	-0.214413813	0.899617
1304.5	1139	0.750125	-0.349281229	0.895284
1806	1801	0.850356	-0.268316371	0.852753
3636.5	4701	0.946521	-0.129196236	0.768764
520.5	523	0.847926	-0.387129733	0.844883
1091	1321	0.82058	-0.385802999	0.670647
228.5	252	0.961555	0.085790582	0.973903
287.5	326	0.770138	-0.624386326	0.688656
25.5	38.5	0.640505	-1.502500341	0.423037
2054	2207.5	0.933268	-0.149741632	0.88313
344	362	0.735966	0.546715031	0.764489
257	366.5	0.877064	-0.25408049	0.583613
3306.5	2793.5	0.887188	0.182931581	0.762193
1234	1203.5	0.961612	0.085673665	0.946136
899.5	743.5	0.554013	-1.393019293	0.665177
568.5	668.5	0.682632	-0.893628696	0.577591
31.5	29.5	0.938211	-0.144389909	0.979375
575.5	774.5	0.998869	0.00250468	0.780532
319	221.5	0.574935	-1.032010395	0.817254
4.5	6.5	0.513713	-1.584962501	0.306059
61	58.5	0.697826	-0.626956589	0.730715
3	4.5	0.84541	-0.584962501	0.632221
114	114	0.572372	-0.673018677	0.572372
184.5	242.5	0.832851	-0.527477006	0.672839
535	551	0.899345	-0.233672346	0.879435
7984.93	7802.59	0.317498	-2.799414369	0.328433
186631	187303	0.736375	-0.343411011	0.732158
1726	1969	0.997701	-0.00586292	0.918121
497	478	0.733131	-0.391048003	0.774119
1890.52	1920.49	0.778663	-0.503024445	0.767265
6938.98	6900.39	0.539172	-0.914147783	0.543667
2607.53	2687.9	0.764219	-0.481946469	0.739995
564.5	579	0.573209	-0.735688308	0.550327

335	447	0.845241	0.343301746	0.961814
7	5.5	0.399441	-2.807354922	0.515664
156.5	213	0.869956	-0.377129511	0.678252
381.5	368.5	0.656656	-0.723790205	0.683733
318	410.5	0.821423	-0.548011365	0.668645
1291	1144.5	0.911581	-0.138285987	0.978579
13560.5	5344.49	0.829278	-0.297062292	0.632645
14352	7127.5	0.531626	-0.89243155	0.952764
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8.5	1	0.486955	-1.410306436	0.764668
12	5.5	0.967052	-0.061400545	0.627871
489.5	431.5	0.709996	-0.473685602	0.828742
3533.5	3372.5	0.823965	-0.377226081	0.858177
2398	2362	0.765042	-0.563168659	0.77549
1059.5	969	0.378328	-0.718250994	0.478942
61.5	76.5	0.454104	-1.855051664	0.334619
950.5	790.5	0.849842	-0.3047653	0.982417
248.021	229.259	0.564853	-0.629004018	0.647116
2256.5	2132	0.623281	-0.635548615	0.676081
4426	4961.5	0.561247	-0.589206205	0.440673
185.5	118	0.207629	1.106776316	0.1258
1404	1085	0.852299	-0.242830835	0.930583
6600.5	7074	0.900869	-0.240630613	0.855252
545.5	503.5	0.775702	-0.452999472	0.838131
1.99199	2.00152	0.288632	-1.380301626	0.285596
97.008	775.499	0.705864	-2.191673207	0.0256918
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3412.5	3223.5	0.517927	-0.738022901	0.573683
912.5	852	0.739897	-0.481637323	0.79831
626	617	0.879744	-0.267651034	0.889848
1352	1412.5	0.88373	-0.285185484	0.855174
409.279	436.93	0.905643	-0.208948172	0.859011
2	1.5	0.593125	0.807354922	0.484842
107	133	0.61005	-0.858823937	0.446009
231	223.5	0.0986374	-1.7642862	0.108974
361	408	0.953082	-0.101392332	0.863999
2980.5	3156	0.855914	-0.253914846	0.80478
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0.5	1	0.559404	1.584962501	0.764931
6515.5	7457	0.897002	-0.264784725	0.810276
468	472.5	0.917035	0.150615219	0.924248
4	2.5	0.753462	-0.678071905	1
28.5	35	0.709146	-0.584962501	0.53924
70	33	0.447993	-1.574694165	0.870148
57.5	58	0.665869	0.73947245	0.669811
392.911	369.346	0.783394	-0.422578266	0.833205
2533.16	2303.77	0.194073	-0.885741202	0.273245
17.5	8.5	0.524625	-0.605721061	0.743377
238.5	274.5	0.652718	-1.009102207	0.563518
804	760.5	0.326696	-1.508944634	0.362337
1115	1080	0.736732	-0.581731379	0.760391
467.459	500.945	0.862996	-0.28373728	0.809445
15.5	56	0.865855	-1.146841388	0.366989
2069.61	2331.87	0.679299	-0.826665635	0.597489
21.5	12.5	0.654586	0.527931556	0.406182
5.5	38	0.868287	-1.137503524	0.122366

25769.7	24201.4	0.488064	-0.893780767	0.542839
20.5	17.5	0.521868	-1.450661409	0.616824
1219.5	1275	0.813381	-0.415234683	0.780673
325.054	343.394	0.901068	0.190669782	0.94042
1280	1337.5	0.475545	-1.500154113	0.448353
5218.97	8625.5	0.786757	-0.680916992	0.477891
2.5	6.5	0.267912	1.485426827	0.889735
5638.74	5545.4	0.68084	-0.552336695	0.696141
3255	3802.5	0.820033	-0.448668277	0.713078
727	690.5	0.568771	-0.50440336	0.63312
606	583.5	0.846028	-0.245994503	0.882012
517.5	557.5	0.856333	-0.353633392	0.806626
2213.5	2139.5	0.68348	-0.591004014	0.712689
6.5	9.5	0.804594	0.469485283	0.960314
253.5	256.5	0.653516	-0.551213709	0.641964
20.5	208	0.707951	1.899835838	0.404588
6.5	7.5	0.758139	-0.530514717	0.647766
2597.7	2608.05	0.734025	-0.490747111	0.730571
656	690.5	0.869761	-0.290117644	0.832931
272.5	234.5	0.705721	-0.772699806	0.800637
4984.62	4698.9	0.683121	-0.616174014	0.731968
8236.76	9221.73	0.888536	-0.270539944	0.81239
1112.5	1114	0.990125	0.018041977	0.991183
512.5	584.499	0.745416	0.640643499	0.807107
628	639	0.688048	-0.849605903	0.676821
18	21	0.610316	-1.263034406	0.518701
442.5	513.999	0.730309	-0.720755367	0.630424
0.5	2.5	0.450185	#NUM!	0.0227138
2737	2726.5	0.826685	-0.373302667	0.82953
573.5	560	0.812782	-0.392160207	0.830837
2505.5	2438.5	0.845623	-0.363845654	0.86384
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48	43	0.933003	0.142957954	0.866744
2	1.5	0.399441	#NUM!	0.515664
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0	0	?	#DIV/0!	?
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0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
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0	0	?	#DIV/0!	?
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1.5	3.5	0.825659	0.415037499	0.523243
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9.5	6.5	0.858275	-0.341036918	0.928694
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0.5	0	0.308068	#NUM!	1
0	0	?	#DIV/0!	?
0	2.5	1	#DIV/0!	0.308068
0.5	0.5	0.450185	#NUM!	0.450185
0	0	?	#DIV/0!	?
18.5	6	0.311009	-1.750021747	0.965642
0	0.5	1	#DIV/0!	0.308068
2	1	0.834708	-0.415037499	0.834708
0	0	?	#DIV/0!	?
0	0	0.308068	#DIV/0!	0.308068
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	0.5	1	#DIV/0!	0.308068
1	0	0.308068	#NUM!	1
0	0	?	#DIV/0!	?
0	0	0.308068	#DIV/0!	0.308068
6	5	0.308068	-0.415037499	0.710482
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	0.5	1	#DIV/0!	0.308068
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
2.5	3.5	0.613399	-0.736965594	0.342872
3	2.5	0.586334	-1.584962501	0.679547
8.92E-20	9.22E-14	?	6.220481209	?
0	0	0	#DIV/0!	0
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	1	0.622002	#DIV/0!	0.622002
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	0.5	1	#DIV/0!	0.308068
1.5	0	0.495025	-1.584962501	0.724378
0	0	0.308068	#DIV/0!	0.308068
0	0	?	#DIV/0!	?
27.5	20	0.742481	0.628031223	0.62641
0.5	1	0.622002	#NUM!	0.353387
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	1	1	#DIV/0!	0.308068
0	0	?	#DIV/0!	?

0.5	0.5	0.450185	#NUM!	0.450185
7	3.5	0.718549	-0.485426827	0.785812
50	38	0.380823	-1.514573173	0.564012
0.5	0	0.308068	#NUM!	1
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
6	5	0.903291	-0.263034406	1
0.5	0	0.308068	#NUM!	1
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	1.5	1	#DIV/0!	0.308068
0.5	0.5	0.450185	#NUM!	0.450185
0	1	0.353387	#DIV/0!	0.622002
2	1	0.834708	-0.415037499	0.834708
2.5	0	0.0405193	-2.321928095	0.450185
0	0	0.308068	#DIV/0!	0.308068
2	1	0.18169	#NUM!	0.450185
0.5	0	0.308068	#NUM!	1
5	6.5	0.636801	-1.321928095	0.489569
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
1	1	0.785812	0.584962501	0.785812
6	3.5	0.564576	-0.777607579	1
0	0	?	#DIV/0!	?
1.5	0.5	0.329316	#NUM!	0.724378
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	3	1	#DIV/0!	0.308068
0.5	0	1	0	0.450185
0	0	?	#DIV/0!	?
0.5	0	0.308068	#NUM!	1
0	0	?	#DIV/0!	?
0	0.5	1	#DIV/0!	0.308068
1.5	1.5	0.513713	-1.584962501	0.513713
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	0.5	1	#DIV/0!	0.308068
6	4	0.794363	0.415037499	0.608871
37	53.5	0.808661	-0.717600269	0.611524
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
2.53E-16	0.5	1	0	0.308068
0.5	0	0.308068	#NUM!	1
0	0	?	#DIV/0!	?
0.5	0	0.308068	#NUM!	1
2.5	1.5	0.0227138	#NUM!	0.0805096
2	3.5	0.895809	0.321928095	0.794363
0	0.5	1	#DIV/0!	0.308068
0	0	?	#DIV/0!	?
6.5	2.5	0.468351	-0.530514717	0.468351
7.77E-06	0	0.308071	16.97335135	0.308068
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?

3.5	2	0.514418	-1.807354922	0.787312
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
1	0	0.308068	#NUM!	1
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	1.5	0.724378	#DIV/0!	0.495025
0.5	0	0.308068	#NUM!	1
0.5	0	0.308068	#NUM!	1
26	18.5	0.465202	-1.056583528	0.735343
1	0.5	0.353387	#NUM!	0.622002
0.5	0.5	0.513713	1.584962501	0.513713
0	0	?	#DIV/0!	?
10	11	0.869939	-0.321928095	0.806588
0	0	?	#DIV/0!	?
6	5	0.717686	0.736965594	0.653517
0.02343	3.25	0.7373	5.415745555	0.458794
1	0	0.308068	#NUM!	1
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0.5	1	0.622002	#NUM!	0.353387
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0.5	0	0.308068	#NUM!	1
0	1	1	#DIV/0!	0.308068
0	0	?	#DIV/0!	?
2.5	2	0.622002	-1.321928095	0.739226
57.5	56.5	0.883379	-0.30633124	0.893878
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
27	39.5	0.914592	-0.231325546	0.663603
0	0	?	#DIV/0!	?
97.5	101.5	0.976408	0.043721377	0.992134
33.5	36.5	0.96004	0.103835811	0.992003
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	0.5	0.450185	#DIV/0!	1
0	0	?	#DIV/0!	?
0.5	1.5	0.724378	#NUM!	0.329316
0	0	?	#DIV/0!	?
0	0	0.308068	#DIV/0!	0.308068
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	0.5	1	#DIV/0!	0.308068
0	0	?	#DIV/0!	?
0.5	0.5	1	0	1
1	0	0.308068	#NUM!	1
0	0	?	#DIV/0!	?

0.5	0	0.308068	#NUM!	1
3.5	3.5	0.852817	0.362570079	0.852817
0.5	2	0.710482	1	0.474021
0	0	?	#DIV/0!	?
0	0.5	1	#DIV/0!	0.308068
0	0	?	#DIV/0!	?
1.5	0.5	0.329316	#NUM!	0.724378
0.5	0	1	0	0.450185
0	0	?	#DIV/0!	?
2.5	3.5	0.729943	0.678071905	0.907467
18.5	25.5	0.958043	-0.121990524	0.767441
0	0.25	1	#DIV/0!	0.308068
1.5	1.5	1	0	1
1	0.5	0.630057	1	0.481309
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
1.5	1	1	0	0.764931
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0.5	1	0.559404	1.584962501	0.764931
22.5	25	0.655078	-1.321928095	0.599203
0	0	0.308068	#DIV/0!	0.308068
5.5	0	0.722932	-0.459431619	0.375355
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
1	1	0.450185	#NUM!	0.450185
0	0	?	#DIV/0!	?
0.5	2	1	0	0.450185
1	0	0.622002	-1	0.622002
0	0.5	0.450185	#DIV/0!	1
0	2	0.622002	#DIV/0!	0.622002
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
1	0.5	0.353387	#NUM!	0.622002
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0.5	0	0.308068	#NUM!	1
33	30.5	0.990336	-0.022026306	0.961365
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	0.5	0.450185	#DIV/0!	1
0.5	0.5	1	0	1
0	0	?	#DIV/0!	?
0	1	0.622002	#DIV/0!	0.622002
160	158	0.853893	-0.261232163	0.864747
0	0	?	#DIV/0!	?
0.25	0.25	0.450185	#NUM!	0.450185
0	0.5	1	#DIV/0!	0.308068
2.5	4.5	0.370457	1.485426827	0.600305
0	0	?	#DIV/0!	?
0	0	0.308068	#DIV/0!	0.308068

0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0.5	0	0.308068	#NUM!	1
0	0	?	#DIV/0!	?
2.5	1.5	0.568955	0.847996907	0.409302
0	0	?	#DIV/0!	?
1.5	0	0.308068	#NUM!	1
0	0.5	0.353387	#DIV/0!	0.622002
0	0	?	#DIV/0!	?
2.5	0.5	0.236154	-2.321928095	1
0	0	0.308068	#DIV/0!	0.308068
2	8.5	0.90287	0.584962501	0.518461
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0.5	0	1	0	0.450185
1.5	2	0.663808	-1.584962501	0.523243
0.5	1.5	0.724378	#NUM!	0.329316
0	0	?	#DIV/0!	?
0	0	0.308068	#DIV/0!	0.308068
0	0.5	1	#DIV/0!	0.308068
0	0	?	#DIV/0!	?
0	0.5	1	#DIV/0!	0.308068
2.5	1.5	0.490574	-1.321928095	0.810902
0	1	0.622002	#DIV/0!	0.622002
0	0	?	#DIV/0!	?
0	0.5	1	#DIV/0!	0.308068
0	0	?	#DIV/0!	?
0	0	0.308068	#DIV/0!	0.308068
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0.5	2.5	0.651448	1	0.230584
2	1	0.353387	#NUM!	0.622002
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	0.5	1	#DIV/0!	0.308068
0	0	?	#DIV/0!	?
0.5	0.5	0.513713	1.584962501	0.513713
0.5	0	0.308068	#NUM!	1
3	1	0.513713	-1.584962501	1
0	0	?	#DIV/0!	?
2	1	0.785812	-0.415037499	0.785812
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
14	16.5	0.776924	-0.719892081	0.682756
0	0	?	#DIV/0!	?
2	0	0.450185	-1	0.450185
0.5	0	0.622002	1	0.353387
0	0	?	#DIV/0!	?
1	0.5	0.353387	#NUM!	0.622002
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?

0	0	?	#DIV/0!	?
29.5	20.5	0.747542	-0.490325627	0.984744
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
2.5	1.5	0.873517	-0.321928095	0.873517
0.5	0	0.308068	#NUM!	1
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	0	0.308068	#DIV/0!	0.308068
0	0	?	#DIV/0!	?
27.5	21.5	0.643058	-0.611434712	0.862037
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
4	4	0.937823	0.169925001	0.937823
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
4	4	0.411079	-3	0.411079
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	0	0.308068	#DIV/0!	0.308068
0.5	0	0.308068	#NUM!	1
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
1	0	0.308068	#NUM!	1
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
2	1	0.806588	-0.415037499	0.806588
3	3	0.908899	0.222392421	0.908899
0.5	0	0.622002	1	0.353387
0	0	?	#DIV/0!	?
0.5	0	0.308068	#NUM!	1
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	1	1	#DIV/0!	0.308068
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	0	0.308068	#DIV/0!	0.308068
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	1	0.308068	#DIV/0!	0.308068
0.5	0	1	0	0.450185
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
1	0	0.308068	#NUM!	1
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?

0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
1	0	0.308068	#NUM!	1
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0.5	0	1	0	0.450185
0.5	0	0.622002	1	0.353387
0	0	?	#DIV/0!	?
39	39	0.339233	-0.927850214	0.339233
2	1	0.18169	#NUM!	0.450185
2.5	2	0.751907	-0.736965594	0.873517
24	17.5	0.783659	-0.337034987	0.933926
0	0	?	#DIV/0!	?
0	0.5	1	#DIV/0!	0.308068
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	0	0.308068	#DIV/0!	0.308068
0	0	?	#DIV/0!	?
0	0.5	0.450185	#DIV/0!	1
0	2	1	#DIV/0!	0.308068
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
2	0.5	0.630057	-1	0.806588
1	0.5	0.764931	0.584962501	0.559404
0.5	1	0.281682	2.321928095	0.398521
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
4	4	0.785812	-0.678071905	0.785812
0	0	?	#DIV/0!	?
0.5	0	0.308068	#NUM!	1
0	0	?	#DIV/0!	?
0.5	0	0.308068	#NUM!	1
0	0	?	#DIV/0!	?
2	1.5	1	0	0.860525
0.5	0	0.308068	#NUM!	1
1.5	0.5	0.329316	#NUM!	0.724378
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?

0	0	?	#DIV/0!	?
0.5	0.5	0.450185	#NUM!	0.450185
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	0.5	1	#DIV/0!	0.308068
1	0.5	0.0917211	#NUM!	0.308068
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
3	1	0.635978	-1	0.87225
0.5	0.5	1	0	1
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
9.14E-06	4.08E-06	0.344391	-13.51649135	0.651499
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
2.5	2	0.751907	0.485426827	0.639236
0	0.5	1	#DIV/0!	0.308068
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
942.5	837.5	0.262715	-1.238297115	0.348176
834	915.5	0.975767	-0.046585124	0.901608
934.996	877	0.786346	-0.403243856	0.839344
63.5	65	0.911704	0.191224403	0.926348
367.5	480.5	0.788622	-0.64201719	0.624376
726.5	637.5	0.666098	-0.7991866	0.756644
84.5	63.5	0.955851	0.074853995	0.755857
638	566.5	0.852042	-0.273018494	0.9478
5619.63	5102.51	0.762202	-0.346409192	0.862524
852.497	823.499	0.891839	-0.228747509	0.916767
106.5	176	0.914283	-0.18781516	0.511773
19	10.5	0.266137	-1.440572591	0.717544
1	4	0.785812	#NUM!	0.320255
12.5	14.5	1	0	0.910128
41.5	34	0.709763	0.519778332	0.602668
71	72	0.883527	-0.242856524	0.873073
765.5	724.498	0.497766	-0.792356008	0.549849
920.5	849.5	0.696889	-0.519844424	0.770232
114.5	60	0.558259	-0.438324352	0.62897
59.5	76.5	0.861222	0.314635602	0.975887
3265	3586.48	0.879224	-0.277622352	0.812905
5236.4	4461.25	0.867285	-0.263234993	0.984971
173.5	180	0.979412	-0.050774567	0.957134
278.5	372.5	0.591647	-1.393613063	0.423312

166	229	0.656478	-1.330645312	0.481231
3.5	1.5	0.733579	-0.485426827	0.733579
149.5	255.988	0.38918	-1.191204343	0.107201
7992.3	4855.53	0.852234	-0.251433903	0.787289
1599	1566	0.806592	-0.327238565	0.82574
29.5	19	0.34019	-2.297680549	0.575807
189.5	210.5	0.779008	-0.54924575	0.70651
293	309	0.973546	-0.052649797	0.933337
177	169.5	0.793363	-0.406909618	0.828032
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0	0	0.308068	#DIV/0!	0.308068
386.5	374.5	0.673577	-0.528235413	0.704098
1492.01	1611.47	0.990906	-0.018979773	0.935307
1172.5	986	0.786363	-0.35380786	0.941582
3626.67	3498.5	0.940814	-0.137307819	0.963821
1808	1823.5	0.969976	-0.06237229	0.963899
2005.45	2081	0.633482	0.813304303	0.649802
57.5	57.5	0.898054	0.187932951	0.898054
1102.5	1111	0.789181	-0.465414343	0.783512
9904.75	10857.9	0.877426	-0.315167274	0.818684
371.5	267	0.916062	0.170140732	0.734701
908.998	1198.01	0.983973	0.039909825	0.836182
949.494	1175.51	0.996906	0.008352424	0.877021
997.993	804.504	0.995262	-0.006511181	0.803926
7	12.5	0.909016	0.192645078	0.615253
217	282.5	0.752787	-0.426160878	0.506457
33	47	0.792138	0.494764692	0.992161
29.5	39.5	0.916884	-0.23878686	0.739079
353	425	0.891336	-0.263852028	0.763223
3680.5	3054	0.938009	0.094994592	0.786742
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1	1.5	0.545627	#NUM!	0.3832
4.5	11	0.923955	-0.362570079	0.493436
21	62	0.752443	-2.392317423	0.323328
877.5	1367	0.629402	-0.958673138	0.333141
214	252	0.57941	-1.428584031	0.48489
10	12	0.395265	-2.321928095	0.304033
372	323	0.736222	-0.394500568	0.878629
2932	2821.5	0.691185	-0.549722682	0.725471
2011.08	2122.92	0.677136	-0.559999911	0.627366
871.001	853	0.717754	-0.752507304	0.731224
430	493.5	0.664598	0.655884287	0.745263
570.5	507.5	0.572262	-0.757339384	0.676089
1224.01	1607.99	0.788022	-0.544858873	0.59849
1413.5	1393	0.828013	-0.278322879	0.841924
52	93.5	0.948233	-0.13058411	0.523199
450.5	518	0.92723	-0.063839237	0.688005
453	442.5	0.522478	-0.730610099	0.545338
1509.5	1495	0.754257	-0.516827758	0.761723
3457.05	3313.31	0.762903	-0.374393969	0.804525
550	473.5	0.793792	-0.473931188	0.89484
3905.51	3783.62	0.718467	-0.577834099	0.743566
148	120	0.637572	-0.791600851	0.791879
1825.5	1554	0.664583	-0.530866004	0.820366

1524	1323.5	0.700085	-0.564518398	0.817475
246	237.5	0.920305	-0.148098639	0.948452
777.002	764.003	0.619923	-0.693384884	0.634687
19	11.5	0.628216	0.818161677	0.474482
706	561	0.62709	-0.582410413	0.85008
4081.47	4928.74	0.0845302	-1.458305359	0.0433587
752	696	0.719555	-0.667368236	0.773255
2126	2344	0.784336	-0.449372652	0.706827
1707	1748.5	0.871836	-0.304705443	0.855736
919	887.5	0.752079	-0.628388052	0.775085
642.5	687.5	0.778928	-0.520197722	0.730583
1.5	0.5	0.613399	0.736965594	0.342872
2728.52	2437.5	0.662246	-0.625600557	0.758671
8868.54	8462.92	0.723123	-0.448938456	0.76816
5865.95	5637.46	0.55766	-0.739238266	0.59441
727.5	648	0.814551	-0.368531638	0.903437
1971.5	1694	0.3846	-1.973534441	0.47043
1286	1178.5	0.885724	-0.255872393	0.944273
1248.5	1251	0.954589	-0.091223252	0.953108
1.5	1	0.785812	-0.584962501	1
396.621	270.952	0.461796	-1.53980108	0.692852
21521.1	20365.6	0.680885	-0.616753594	0.726823
1735.5	1729.5	0.743752	0.563326206	0.742
95503.5	91947.5	0.593633	-0.492205775	0.63992
487.5	327	0.848322	-0.216731408	0.79532
3350.5	3147	0.686723	-0.699982288	0.733031
934.5	876.5	0.737305	-0.438644112	0.797059
2465	2710	0.890608	-0.24986753	0.823659
617.5	549.5	0.218364	-1.27594189	0.296381
388.5	325.5	0.963739	-0.02434196	0.696862
286.5	254	0.822143	-0.288947216	0.932544
188	236.5	0.0125465	-2.214738849	0.0056216
9167	8430.5	0.457952	-1.225228032	0.51804
44.5	35.5	0.425383	-0.861023587	0.647667
1592	1491.5	0.816786	-0.335128426	0.871662
2427.5	2247	0.751944	-0.441931661	0.819612
3390.5	2996.5	0.577096	-0.524852363	0.725262
95.5	88.5	0.495074	-0.719447833	0.573452
2669.96	2723.97	0.730994	-0.595932546	0.71596
1760.5	2014.5	0.850698	-0.293929478	0.739022
1223	1134.5	0.754538	-0.466675044	0.816717
666	721.5	0.915975	-0.135014532	0.838875
2056	2793.5	0.952003	-0.122217563	0.746779
702.5	666.5	0.674202	-0.579837469	0.721107
3.5	11	0.953174	0.192645078	0.437832
2716.5	3243.5	0.983203	-0.037663393	0.857924
502.5	502.5	0.942469	-0.130629443	0.942469
2570.98	2459.5	0.822183	-0.378283255	0.854967
1580.51	1743.52	0.849419	-0.398570537	0.787139
1214.48	1168	0.928437	-0.151359125	0.955881
787	819	0.893638	-0.211890085	0.862415
4922.5	4420.5	0.66505	-0.47340211	0.780986
3231	3592.5	0.93786	-0.154436179	0.870077
2979.5	3068.99	0.904873	-0.193831181	0.882381
1378	1314	0.883712	-0.23114348	0.919959
1781.4	1561.33	0.803928	-0.397980374	0.903226

916.5	975.5	0.965394	-0.026209879	0.843185
103	141	0.918781	-0.235289415	0.727651
16	8	0.400619	-0.830074999	0.897841
2307	2301	0.890191	-0.263034406	0.891888
1142	1018	0.778441	-0.444819935	0.86735
756	675.001	0.777029	-0.388567786	0.876414
1301	1247	0.903202	-0.172977738	0.938618
3470.99	3733.5	0.840425	-0.302437805	0.778833
1295	1201	0.839679	-0.308759036	0.899427
676.502	676.999	0.843564	-0.263681149	0.84289
4373.5	4370.5	0.556668	-0.75750824	0.557289
15788.5	15876	0.652938	-0.563962466	0.647606
42.5	50.5	0.826643	-0.432111013	0.707696
58.5	37	0.597706	-1.089005006	0.868427
1.5	4	0.794363	-1.584962501	0.392404
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941.5	1265.5	0.853295	-0.416315012	0.665441
980	757.5	0.889937	-0.190123618	0.907538
755.499	752.504	0.785395	-0.423016796	0.788619
1308.5	1487	0.885514	-0.271549168	0.796912
367	353.5	0.616299	-0.522456772	0.65793
4416.01	4302.46	0.805117	-0.447863246	0.823385
772	774	0.833837	-0.336248349	0.831814
2002	2036	0.878007	-0.26418787	0.865801
4155	2479.5	0.934724	0.111866968	0.630466
10554.5	8096	0.675245	-0.587596186	0.897198
149	124	0.849084	-0.312277925	0.97899
160.5	345	0.982773	0.061587798	0.594142
1190	1202.5	0.791372	-0.495646669	0.78412
84.5	114	0.723564	-0.846290585	0.53751
1520	1386	0.678364	-0.743307121	0.744466
2467.69	2594.03	0.870464	-0.271907144	0.832649
2	5.5	1	0	0.430476
1209.5	1067.5	0.717354	-0.540624336	0.819859
8240.11	8098.93	0.831898	-0.285435485	0.847619
6.5	7	0.875548	-0.378511623	0.834882
1586.47	2182.31	0.478478	-1.79249839	0.305117
2752.52	3147	0.715207	-0.670831866	0.617178
1148.5	1168	0.643741	-0.481663273	0.624877
0.5	1	1	0	0.651448
1373.49	1299	0.809064	-0.370383565	0.853868
1	2.5	0.855216	0.584962501	0.717686
4	6.5	0.865665	0.321928095	0.800348
54.5	109.5	0.842736	-0.638901308	0.469466
1.5	3	0.598723	1.415037499	0.829606
182.5	272	0.8451	-0.500525398	0.609242
2486	2730	0.816192	-0.462626958	0.753322
2811.01	2739.03	0.753091	0.557845059	0.740428
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20.1007	14.1241	0.382969	1.906530248	0.340696
542	542.999	0.751539	-0.633004524	0.750315
36	34	0.751499	-0.678071905	0.786814
1.5	0	0.495025	-1.584962501	0.724378
210	195	0.698069	-0.610957709	0.757103
71	96	0.728336	-0.641952479	0.504978
5	5.5	0.428902	-3.321928095	0.385414

621	497	0.841714	0.318671971	0.72035
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84.5	125	0.716259	-1.061029433	0.498792
0.5	0.5	1	0	1
670.5	712.5	0.834359	-0.397571676	0.792658
180.5	173.5	0.814442	-0.424392664	0.842049
160.5	128.5	0.759973	-0.378062256	0.966779
1417.5	1289.5	0.510502	-1.973277993	0.559522
42.5	63	0.969813	-0.087462841	0.730632
1000	1089.5	0.855636	-0.334607229	0.795064
3016.5	2880	0.799818	-0.333753776	0.842658
10.5	21.5	0.667279	-2.392317423	0.355618
1	1	0.622002	-1	0.622002
0.5	1.5	1	0	0.513713
239	260.5	0.878481	-0.278814989	0.817697
337	357	0.819441	-0.410762844	0.777793
5	3	0.490574	-1.321928095	0.810902
98	104.5	0.350376	-2.257157839	0.317587
8	2	0.0887543	-2.415037499	0.860525
2494.5	2629	0.738093	-0.552791663	0.696885
11	17	0.881698	0.2410081	0.767395
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548	278	0.963876	-0.06185847	0.634055
557	865.5	0.826024	-0.397019664	0.486475
286.45	341.521	0.61233	-1.326910195	0.51088
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2132.45	2198.96	0.9583	-0.084254521	0.93544
74.5	62.5	0.373015	-1.361187525	0.497882
110.5	128	0.979456	0.051301229	0.93079
548.5	294.5	0.539291	-1.378248622	0.875155
3	5.5	0.855681	-0.584962501	0.538083
0	3.5	0.680109	#DIV/0!	0.338084
645	536	0.658966	-0.813519097	0.786061
5	3	0.35288	-3.321928095	0.58535
10.5	13	0.87266	-0.392317423	0.750291
26	22	0.922513	-0.176877762	0.974114
247	220	0.673277	-0.783460305	0.753496
2	2	0.866773	0.321928095	0.866773
81.5	78	0.834307	-0.326360341	0.86889
880.121	985.519	0.867408	-0.305382983	0.786714
1.5	1	0.559404	-1.584962501	0.764931
479	1102	0.807434	-1.04279494	0.417232
7	9.5	0.689086	-1	0.504632
390	250	0.976593	-0.04699748	0.766628
1359.07	1214.9	0.895264	-0.196576578	0.982407
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289.5	292	0.925135	-0.163399068	0.919129
3351.51	3293.01	0.753365	-0.402262182	0.770256
335.104	446.668	0.745985	-0.688025379	0.552565
4571.25	4762.03	0.979041	0.039924689	0.989783
959.5	1559.5	0.996389	-0.010563714	0.698851
3421	3247	0.284626	-0.735981922	0.339191
414	436.5	0.96346	0.053027364	0.983491
273.5	262.5	0.801708	0.224275098	0.756403
546.5	539	0.685682	-1.011928644	0.693561
1061	984	0.932485	0.119342094	0.876223

556.5	507	0.725635	-0.478186184	0.808949
570	509.5	0.999334	-0.001266077	0.920283
633.5	911.5	0.900828	0.266446378	0.884786
26	20	0.19634	-1.793549123	0.344742
9	12	0.44598	0.830074999	0.651448
818.505	844.501	0.782016	-0.515718056	0.760029
10.5	13.5	0.704145	-0.932885804	0.551595
3315	2973.5	0.723722	-0.524868154	0.813709
340.5	549	0.725179	-1.116890239	0.469953
1344	2001.5	0.895604	0.297243832	0.881333
3.5	2	0.514418	-1.807354922	0.787312
5.5	9	0.562334	1.125530882	0.783936
173	162.5	0.906008	0.191080615	0.866231
792.498	782.511	0.928741	0.162530063	0.921247
447	428.5	0.989023	-0.022771308	0.981968
661.5	710	0.400307	-0.634887726	0.323353
483.569	513.593	0.551357	-1.940298027	0.520774
658.665	644.615	0.515488	-1.896309123	0.526907
330.418	328.27	0.547659	-1.610391793	0.551284
193.851	141.518	0.600137	-1.062003884	0.796634
159.5	241	0.717272	-1.022791865	0.482987
423.5	404	0.721816	-0.709409872	0.753017
255.5	151.5	0.51086	-1.458019119	0.806187
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1121.95	852.891	0.808135	-0.381268228	0.993645
106.552	89.1085	0.564191	1.016859728	0.50796
18.5	69	0.768428	-2.039528364	0.234323
1726.5	1368	0.858784	-0.281451503	0.975576
555.999	672.497	0.503151	-1.919266133	0.401505
84.5	78.5455	0.587013	-1.619519723	0.624801
798.5	758.454	0.548195	-1.916634744	0.574159
621.997	486.498	0.78471	0.459865292	0.669183
1442.5	1496	0.868144	-0.327564853	0.844511
460.5	542.5	0.90299	-0.258342711	0.800212
418	468.5	0.96329	-0.079825248	0.88152
202	254	0.630917	-1.439042962	0.507429
630	621	0.778274	-0.50804513	0.788541
55	44.5	0.864096	-0.273565073	0.985586
178	132.5	0.511726	-1.817521948	0.665688
325.5	566.5	0.752061	-1.051892984	0.461942
2033.5	1306.5	0.589457	-0.857249546	0.910868
13.5	15	0.660903	-1.054447784	0.597333
815	551	0.629505	-0.872994723	0.887827
110.5	118.5	0.608019	-1.296049463	0.567328
0.5	0	0.308068	#NUM!	1
2003.5	1811.5	0.535428	-0.627900304	0.646184
1589.5	1389	0.661195	-0.740297455	0.761563
0.5	6.5	0.445085	3.321928095	0.789102
3135	2874.5	0.699544	-0.513915909	0.778861
144.5	171	0.955693	-0.082168542	0.811592
15	53.5	0.905028	-0.263034406	0.123396
3	17.5	0.651448	0.584962501	0.022669
118.5	121.5	0.527344	-0.659924558	0.501444
11	3.5	0.319051	2.334984248	0.258011
290.5	271	0.717175	-0.545769733	0.774584
0.5	2.5	0.837425	1	0.550362

18.5	19	0.758361	-0.624490865	0.740774
3692.5	3870	0.785957	-0.553752731	0.755179
7103.03	7975.35	0.751224	-0.499557912	0.65572
2652	2859	0.701064	-0.627619323	0.641426
1853.5	1886.5	0.569053	-0.70628928	0.552518
2578	2511	0.552065	-0.663151564	0.57878
1058.02	1445.91	0.677702	-0.742888857	0.445339
328.414	439.805	0.680851	-0.533656141	0.411587
575	501	0.972868	-0.043307176	0.909332
1118.5	982.5	0.616178	-0.698989368	0.728677
1605.5	1472.5	0.55307	-0.513097664	0.663023
107.5	136.5	0.767323	-0.481406309	0.572406
636.5	534	0.565623	-0.598054714	0.757487
620.502	613.003	0.799134	-0.444398872	0.808005
2254.49	2552.5	0.913558	-0.207485951	0.829794
1217	1048.5	0.634039	-0.522043895	0.792626
1472	1072.5	0.554863	-0.523561956	0.947318
1337.5	1250.5	0.755551	-0.413779622	0.81726
1445.5	1476	0.783544	-0.427903126	0.766523
1360	1260	0.680441	-0.457377771	0.762155
874.5	930.5	0.859947	-0.315960159	0.815475
1200	1242.5	0.730454	-0.473931188	0.698796
17256	17816	0.942454	-0.128498123	0.920637
1691.5	1599	0.915242	-0.148075588	0.962669
1205.5	1247.5	0.818263	-0.401735187	0.793077
5788	5186.5	0.921938	-0.157608386	0.999673
916	959.5	0.795073	-0.439391829	0.759649
3427.34	3684.49	0.855664	-0.340964799	0.805615
1090	1074.5	0.799257	-0.415048088	0.81033
1145	1106.51	0.84001	-0.249733903	0.873341
1796	1467.5	0.302972	-0.762766081	0.54091
7466.82	7785.89	0.77611	-0.469863438	0.743449
1036	976	0.703349	-0.457431197	0.763262
1055	1034.5	0.791788	-0.47127464	0.805837
3610.11	3309.13	0.606255	-0.543448928	0.70181
484.5	458	0.675328	-0.602940242	0.723722
223	243	0.858726	-0.277337944	0.788512
608.5	529.5	0.629791	-0.585555348	0.765312
525.048	559.355	0.796606	-0.457974336	0.750038
121.5	115.5	0.26397	-0.994075166	0.304762
1.5	1.5	0.791627	0.415037499	0.791627
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60	90	0.858845	-0.497499659	0.635585
846.5	819.5	0.775409	-0.535541699	0.797685
222.5	208.5	0.672683	-0.758742537	0.719464
1015	1071	0.842201	-0.363382522	0.804218
4.5	7	1	0	0.677453
5.5	3.5	0.940721	-0.137503524	0.824188
345	386	0.846382	-0.337695411	0.762274
835.812	647.472	0.441954	-0.781940177	0.710799
316	291.5	0.948358	0.105610188	0.895991
1683.5	1873	0.82016	-0.372397322	0.735514
1290	1387	0.990473	-0.019705409	0.937763
957.5	942	0.785935	-0.436542339	0.798748
1494.5	1115.5	0.841421	-0.190646837	0.833878

153.5	130	0.714595	-0.596758928	0.83975
3415.43	3096.51	0.985465	0.027057393	0.914027
78	175.5	0.90637	-0.390584456	0.481431
19	14	0.47679	-0.788495895	0.780937
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93	127	0.555406	-1.096215315	0.345639
7	2.5	0.207143	-0.807354922	0.481309
1189.29	1004.13	0.339561	-0.999422693	0.492219
2437.04	2093.53	0.560636	-0.762079909	0.697286
5200.5	5060	0.844539	-0.262618344	0.869387
293.579	209.108	0.0199545	-1.377208976	0.0942959
11830	10183	0.271683	-0.875788228	0.419883
54.7368	41.7682	0.3872	-1.390354836	0.577634
470.448	353.336	0.0802268	-1.021702505	0.276855
50134.6	37165.7	0.511493	-0.49409148	0.941134
1045.34	1198.41	0.385872	-0.892867936	0.274501
1672.48	1428.28	0.00122783	-1.550403569	0.00256375
605.394	775.535	0.511153	-0.439931688	0.221577
546.498	529.997	0.992294	-0.017254137	0.988135
1	1.5	1	0	0.756486
2	5.5	0.62268	1.459431619	1
399.5	396	0.759926	-0.382308429	0.768552
1087.99	1065.01	0.882137	-0.241170968	0.898159
439	447.5	0.814368	-0.368686193	0.798941
2434.5	2453	0.688407	-0.544209407	0.681501
7157	7901.5	0.752816	-0.522774756	0.674779
4406.5	4486.5	0.742293	-0.465624596	0.726355
548.5	487.5	0.594262	-0.757273142	0.694701
2160.5	1925	0.751799	-0.471669998	0.846332
16	19.5	0.934937	0.169925001	0.951166
10.5	4.5	0.486653	-1.070389328	0.947192
8	10	0.687418	0.584962501	0.838734
4	1.5	0.494216	0.906890596	0.275419
284.5	406.5	0.990162	-0.025580369	0.756311
35	21.5	0.744762	-0.456857675	0.890069
286.5	342.5	0.818872	-0.37122844	0.673599
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447	362	0.709146	-0.495791991	0.896067
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717.744	624.108	0.590886	-0.609630377	0.734089
585.503	420	0.709787	-0.564179776	0.961917
45	47.5	0.936228	0.122856748	0.976051
1412	1374	0.77565	-0.397435183	0.799843
379.5	318.5	0.547324	-0.504560994	0.778258
869.5	722.5	0.738095	-0.369579523	0.9322
339.5	380	0.86484	-0.330452167	0.788465
1502.12	1672.02	0.829087	-0.384764166	0.750105
424	466.5	0.879406	-0.250162188	0.805401
20.5	31	0.924595	-0.109624491	0.471051
9101.5	18100.5	0.474735	-0.924423088	0.0862983
3663.32	7076.84	0.66412	-0.906580986	0.245916
1595.2	3083.56	0.662361	-0.729576028	0.204249
25.5	45	0.632818	-0.628031223	0.19186
14311.2	24952.5	0.634381	-0.80659452	0.244642

6403.86	13664.7	0.620333	-0.763979315	0.130418
948	777.5	0.900037	-0.174497731	0.941992
1602.5	1592.99	0.782742	-0.430575642	0.787545
1810	1925.5	0.252537	-0.640000543	0.19457
3712.08	7880.19	0.718804	-0.769535208	0.237811
1358.99	1295.51	0.78895	-0.414673065	0.827336
551	579	0.935834	-0.161928594	0.905312
42	65	0.285265	-1.304854582	0.0884124
49	61.5	0.725853	-0.424885285	0.497288
101.5	107.5	0.483958	-2.239071162	0.454819
4778.5	4679	0.755734	-0.547487795	0.771118
250	198.5	0.655872	-0.873027144	0.805174
19	8	0.346432	-1.440572591	0.931878
5.5	6.5	0.434451	-2.459431619	0.351683
3079	2943.5	0.894565	-0.175411712	0.934909
394.5	371	0.919621	-0.166500611	0.963472
14886.5	12873	0.651852	-0.538099215	0.795995
2823.04	2899.49	0.780588	-0.425459448	0.758397
1765.52	1710.02	0.933998	-0.16203253	0.953488
3086.5	2935	0.731685	-0.605914139	0.768243
3644.5	3683.5	0.696706	-0.391933989	0.684173
462.001	433.999	0.952361	0.10098326	0.91273
4.5	8.5	0.925659	-0.169925001	0.428902
1835.5	1380.5	0.244423	-0.793470525	0.592011
339	352	0.716101	-0.534776744	0.683728
781	645	0.57088	-0.597951483	0.777655
2918.5	3147	0.487526	-0.665521302	0.409328
46355	49001.6	0.846443	-0.329651613	0.80473
540.5	583.5	0.917542	-0.184849277	0.863663
2424.59	2946.31	0.909684	-0.232892092	0.78292
630.5	674.5	0.795606	-0.368137808	0.735527
979.795	1076.58	0.81243	-0.394995525	0.738825
1784.5	1870.5	0.888277	-0.267487797	0.856939
2324	2555.5	0.868779	-0.322471381	0.805232
1476.5	1759.5	0.898797	-0.237946794	0.775097
1395	1458	0.943954	-0.105086642	0.908127
17	33	0.749249	-1.087462841	0.402265
1120	1058	0.835092	-0.401362562	0.872101
4851.53	5390.97	0.878575	-0.297855078	0.807996
139	155	0.86254	0.348664477	0.920003
2243.5	1998	0.742885	-0.473323986	0.840712
888	1432.5	0.901414	-0.301561246	0.607154
1502.5	1557	0.920787	-0.198899894	0.898645
3541	2940.5	0.823842	-0.449812855	0.934641
641	609	0.985843	0.03117055	0.953522
1533.49	1723	0.795768	-0.44241234	0.706017
461.5	430	0.746766	-0.592798995	0.796083
2165.5	2406.5	0.916377	-0.216298312	0.850495
4.5	8.5	0.642995	-0.847996907	0.221048
358.502	403.498	0.824472	-0.374706905	0.732878
113.5	104.5	0.818107	-0.358942937	0.882639
1.5	1	0.391002	-1.584962501	0.651448
15	17	0.630543	-1.099535674	0.552399
1	6	0.748162	1.321928095	0.471729
1109.01	1157.48	0.934205	0.154093402	0.959671
2.5	8	1	0	0.453522

9336	9953.5	0.849092	-0.404772086	0.80939
14071.8	13900.7	0.770065	-0.649205665	0.777456
1706	1707.51	0.86048	-0.306482648	0.859849
1159.99	1303.49	0.790449	-0.538742635	0.712206
1991	2010.5	0.829905	-0.293497477	0.821088
3643.5	3839.5	0.763584	-0.444707852	0.71854
741.5	574.502	0.575149	-0.547047399	0.868963
443.824	720.724	0.685522	-0.900997524	0.372353
249	291	0.683302	-0.629085054	0.553812
39.2354	45.6375	0.759644	-0.554640905	0.647482
4468.5	3921	0.963367	-0.058812977	0.924409
583.5	562.5	0.745288	0.423358096	0.720079
613	597.5	0.892964	-0.204460828	0.913304
11618	8197	0.64342	-0.551969919	0.972194
635.5	331.5	0.324778	-1.221635895	0.860741
851	656.5	0.518414	-1.125685008	0.70157
7	4.5	0.796417	-0.347923303	0.86297
85.5	44	0.359859	2.161467194	0.306674
1	4	1	0	0.230584
5403.5	4861.5	0.587061	-0.668147293	0.68821
777	829.5	0.846626	-0.353843275	0.800366
288.5	283.5	0.939877	-0.106338318	0.954512
786.5	1074.5	0.790834	-0.583129343	0.585544
80	104	0.686643	-0.767339243	0.498316
30	27	0.355369	2.159198595	0.343702
610.5	707.5	0.856504	-0.32015683	0.746715
31.5	27	0.598723	-1.169925001	0.692487
292	245	0.622395	-0.742741333	0.764301
1813	1827	0.839419	-0.295220795	0.832869
781	798	0.790208	-0.351790895	0.769988
2275.5	2186	0.65608	-0.574539043	0.693842
809	785.5	0.882985	-0.295861237	0.901156
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4743	4652	0.0253031	-0.973179414	0.0281012
710	756	0.680877	-0.572318291	0.624618
5233.45	5128.49	0.334425	-0.64811292	0.357778
310.5	226.5	0.298986	-1.318447526	0.541362
8749.96	9188.28	0.368718	-1.18129988	0.333507
16290.8	13885.2	0.475944	-1.455005379	0.577027
2264.56	1962.98	0.764845	-0.406053042	0.890508
5259.5	4984	0.954718	-0.107896697	0.987624
5406.55	5925.52	0.906747	-0.23308383	0.847673
1791.5	2125	0.909975	-0.235199685	0.801217
2432.51	2691.6	0.921763	-0.174777951	0.849764
13.5046	7.04303	0.139915	-1.488958242	0.643759
172.492	238.115	0.295065	-0.478891096	0.0590791
98.8525	75.7091	0.0975804	-2.030496962	0.199029
2097.51	2161.51	0.961245	-0.092314053	0.942209
1404	1314	0.687489	-0.907472569	0.727553
426	328	0.696009	-0.842925917	0.849553
453.5	504.002	0.789808	-0.503035154	0.714954
11424	8593.64	0.677274	-0.597790702	0.909267
4020.53	3622.51	0.942748	-0.093896897	0.967276
37	46.5	0.441766	-0.851901361	0.257876

188	124	0.728257	0.535523568	0.550582
475.5	586.5	0.919077	-0.203303559	0.77932
211.5	243	0.941397	0.133467142	0.968523
7343	7471.5	0.755774	-0.365913978	0.737747
993.5	986.5	0.951577	-0.121905107	0.955781
2393	2240.5	0.627485	-0.489048658	0.703203
5471.5	5992	0.945193	0.142970391	0.995235
2771.51	3052.48	0.802111	-0.43962997	0.729743
45.5	51.5	0.94338	0.12156198	0.971662
11524	11978.3	0.723339	-0.510039467	0.689488
7438.5	6348	0.566214	-0.661583782	0.724922
3411	2702	0.451826	-0.841919193	0.678725
1702.52	1756.02	0.540007	-0.592000248	0.505646
499	280	0.443295	-0.937756443	0.947124
3842.38	3713.49	0.610415	-0.934065601	0.634666
3080.44	3324.05	0.486609	-1.228084607	0.434278
11	9	0.569483	-1.289506617	0.689119
2710.5	2670.5	0.721555	-0.468441609	0.735492
19815	19437.5	0.764579	-0.434855487	0.781104
2600.5	2556.48	0.785191	-0.326720991	0.80253
5979	4455	0.428447	-0.706287847	0.775526
1446.5	1449.5	0.843549	-0.385259624	0.842192
1055.5	1041.5	0.829245	-0.40075664	0.838377
110.5	133	0.962536	-0.073657042	0.811963
662	659.5	0.805257	-0.386268948	0.808292
410	661.001	0.687542	-0.586722959	0.298157
2685	2505	0.609722	-0.533114087	0.686596
187.941	319.584	0.638912	-1.623505115	0.367113
192.336	1087.61	0.652525	1.460233311	0.469406
11678	11246	0.460236	-1.06158318	0.489805
3092.06	3090.49	0.813194	-0.349667672	0.813623
44	50.5	1	0	0.91852
7.25333	6.4456	0.660081	-0.688718486	0.753805
8.24667	11.5544	0.746953	-0.721883583	0.526725
2	6	1	0	0.456444
28	35	0.664544	-1.05246742	0.528608
8880	9353.5	0.637473	-0.588744781	0.58752
28218	24376.5	0.515555	-0.679729364	0.671229
27104.1	21743	0.542974	-0.640302948	0.779191
10128.5	9568.61	0.68502	-0.560975428	0.735626
3855	3672.99	0.562343	-0.655716759	0.611273
42635.7	42869.7	0.519383	-0.618306197	0.513328
22048.5	18015.2	0.396662	-0.707956228	0.638306
12201	11405.8	0.725799	-0.476608942	0.786582
13251.7	11955.1	0.653519	-0.528642061	0.757437
11216.6	10736.1	0.717438	-0.440356707	0.761077
11690.7	11992.5	0.801664	-0.364301614	0.779599
12365.1	11864.5	0.615618	-0.537008258	0.660548
2898.46	2841.86	0.834261	-0.32485407	0.850001
2969.5	2961	0.763006	-0.446222829	0.765439
10.5	12.5	0.664901	-0.691877705	0.524625
187.5	188.5	0.808969	-0.457989644	0.805339
519	645	0.923443	-0.164722345	0.756756
969	959	0.781899	-0.445632909	0.790054
501.5	481	0.935968	-0.137215876	0.964776
438	543.5	0.785232	-0.655845987	0.655027

89	56	0.726077	-0.285906896	0.710118
133.5	119.5	0.946411	0.10922907	0.875612
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2	0.5	0.450185	-2	1
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5.5	6.5	0.786483	-0.459431619	0.65555
7743.5	8223	0.827319	-0.362743092	0.780928
73.5	55.5245	0.0900884	-2.498012401	0.181006
1902	2545.99	0.507572	-1.002297093	0.297546
239.5	164.5	0.549331	-0.723972756	0.898397
165.5	143.5	0.545815	-0.77823037	0.675188
329.5	315.5	0.756952	-0.404132723	0.797644
72	274.999	0.742815	-1.103835811	0.109219
6	13.5	0.320255	-0.584962501	0.0110082
550.999	475.5	0.597161	-0.713592761	0.727722
1470.51	1255.5	0.799696	-0.317517509	0.947127
954.5	1008.5	0.922666	-0.183497378	0.886362
538.5	562.5	0.815865	-0.377574243	0.781522
938	978	0.871871	-0.294128175	0.842794
3182.5	2753	0.746495	-0.598741058	0.844564
137.5	128.5	0.874147	-0.239101664	0.927768
181	118	0.615136	-0.799406169	0.925449
5	7	0.776099	0.485426827	1
19201.7	14977.3	0.110776	-1.431738851	0.240887
779.5	763	0.684746	-0.414112398	0.709532
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58	55.5	0.516526	-1.688055994	0.541212
13.5	23.5	0.891242	0.289506617	0.75157
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553.5	557	0.580445	-0.472194571	0.57239
118.5	127	0.950781	-0.10084069	0.898813
1501.5	1531	0.856372	-0.322168324	0.842548
137.5	200.5	0.36608	1.78545544	0.451459
528.31	195.87	0.428348	-1.372914578	0.983199
269.602	150.901	0.397084	-2.121128797	0.701409
42.5	55.5	0.825782	-0.455194626	0.644369
3403.09	2037.38	0.47036	-0.820833166	0.954571

2848.95	2251.02	0.798511	-0.412940859	0.967875
2288.13	2166.22	0.643635	-0.791490497	0.684626
36.9293	24.2643	0.66265	-0.608304984	0.998885
2255.5	1737	0.363908	-0.632428133	0.731823
227	198	0.777415	-0.291273111	0.931674
1545.5	1468.5	0.33917	-0.848183615	0.388113
0.5	0.5	0.450185	2	0.450185
814	755.999	0.840146	-0.32680587	0.8957
33	31.5	0.405998	-1.237039197	0.439842
2806	2508.5	0.464422	-0.749098916	0.58073
566.999	505	0.924232	-0.147202381	0.990335
1549.5	1961.5	0.980745	-0.034867613	0.771393
1937.49	1727	0.775945	-0.34963356	0.887271
775.5	843.5	0.403641	-1.348684553	0.348
33.444	56.1483	0.793641	-0.740254991	0.497807
0	0.5	1	#DIV/0!	0.308068
470	469	0.901185	-0.145197916	0.903364
2514.5	2283	0.753021	-0.347323598	0.856836
464	420.5	0.843661	-0.342281157	0.912445
2218.98	2372.08	0.751042	-0.518065978	0.698044
143.5	143	0.801674	-0.306925932	0.805166
766.999	757	0.901702	-0.220043447	0.910699
6	10	0.927134	-0.263034406	0.653517
901.185	913.439	0.120554	-1.198296514	0.114828
33960	32533.4	0.659864	-0.645317255	0.696254
27181.5	24485	0.82187	-0.317635303	0.910405
2486.5	2135.5	0.59842	-1.094405792	0.695436
428.5	496.5	0.82861	-0.385599389	0.718772
1360.02	1318.98	0.705323	-0.487563778	0.734414
8522.01	7362.53	0.857222	-0.22638954	0.990907
5925	6178	0.82062	-0.370522868	0.787963
4033	3987	0.709205	-0.634174347	0.717904
32193.5	30992	0.821823	-0.327388827	0.853936
66646.8	66323.3	0.714709	-0.53784345	0.718865
9723.5	9583.5	0.66323	-0.613697097	0.675975
653.5	710.003	0.679422	-0.619031495	0.609219
380	323.5	0.565835	-0.650992371	0.729315
5	7.5	0.734305	0.485426827	0.931682
3.5	2	0.432389	-2.807354922	0.681777
10.5	8.5	0.478913	-0.485426827	0.805463
286	181	0.844604	-0.255989491	0.805628
440.5	393	0.95084	0.09964484	0.877353
12099.5	12016.5	0.522114	-0.813209345	0.528278
4669.02	4057.5	0.412394	-0.877150063	0.547182
17383.5	19230	0.903373	-0.221825419	0.832669
1664.5	1853	0.877246	-0.262081303	0.795868
1051.5	970	0.232169	-0.914111823	0.300952
1436.5	1485.5	0.857957	-0.29297007	0.832159
148	102.5	0.417711	1.401571432	0.346898
49	48	0.908199	0.21818017	0.896819
18	124	0.938571	-0.777607579	0.294707
2	3.5	0.787312	-1	0.514418
6.5	14	0.878923	0.387023123	0.679565
7	6	0.63263	-0.807354922	0.74706
235	109	0.362719	-1.843093945	0.801288
1	1.5	0.545627	#NUM!	0.3832

18.8019	55.8795	0.854829	-0.918128877	0.377313
18	11.5	0.626637	-0.921997488	0.906912
681.5	1230.98	0.86106	-0.402749625	0.471718
1267.5	1218	0.493261	-0.683888542	0.535648
128.5	110.364	0.942768	0.113316524	0.845252
2204.55	2657.49	0.934022	-0.184821738	0.823285
435.5	564	0.824285	-0.47190816	0.652565
396	396.5	0.813293	-0.298439742	0.812068
2738.37	3092.16	0.90583	0.210728477	0.983131
1125.5	940	0.665494	-0.641494757	0.81283
2424	2761.5	0.713992	-0.453640339	0.584455
0	0	?	#DIV/0!	?
150.5	283	0.959732	0.128324097	0.674259
1617.5	1312.5	0.274295	-1.030193377	0.46189
751.533	839.994	0.599757	-0.644306543	0.49436
8414.37	8881.19	0.883053	-0.271818729	0.845922
2131.5	2109.5	0.447621	-0.670713095	0.459073
60.5	25	0.0041288	-2.670935724	0.0941105
4146	4448	0.786831	-0.439603564	0.730896
2371.5	2443.5	0.754346	-0.499057153	0.730311
1251.01	1316	0.796839	-0.396340861	0.754901
0	0	?	#DIV/0!	?
1804	1993	0.913944	-0.20089431	0.845647
727.5	725.5	0.991158	0.015778093	0.988948
1402	1437.5	0.763742	-0.607780583	0.747232
1951.29	1815.32	0.658467	-0.64659162	0.719567
0.5	0	1	0	0.450185
96.5	152.5	0.98741	0.029594782	0.675237
1107.5	927	0.425123	-0.802478202	0.60919
2770	1809.5	0.338732	-0.696311554	0.921501
7995	5184.5	0.610173	-0.411706638	0.828645
3795.93	2064.48	0.433378	-0.830109205	0.971778
11177.5	10241	0.687682	-0.474253903	0.77643
1929.5	2060.47	0.82779	-0.382123064	0.779356
4990.3	5213.84	0.628738	-0.59236507	0.586087
1538.5	1630.5	0.351834	-1.294987096	0.312731
536.5	586.5	0.966546	0.066991959	0.967857
1070.5	1174.5	0.87738	-0.271278786	0.809594
593.585	639.716	0.323172	-0.748597638	0.254372
1506.5	1448	0.862321	-0.260642273	0.894324
598.001	616.999	0.124288	-0.702403647	0.105591
127.5	175	0.309797	-0.746425923	0.100834
628	521.5	0.476249	-0.56840259	0.723167
112	113.5	0.996857	-0.006455022	0.987428
91	85	0.426311	-0.793549123	0.494847
74	83	0.79641	-0.415037499	0.703468
204.758	173.293	0.767593	-0.472667012	0.893519
654.498	743.001	0.822862	-0.358477823	0.719782
1247.01	1260.52	0.79902	-0.391714502	0.790191
2	2	0.710482	-1	0.710482
0	0	?	#DIV/0!	?
262.5	336.5	0.966732	-0.087806381	0.810676
1214.5	1220	0.931038	-0.133707268	0.927525
3014.5	2954.5	0.695295	-0.565472749	0.712675
2754	2980	0.934046	-0.137005948	0.874892
1911	1955	0.922383	-0.176877762	0.906996

3937	3498.5	0.960625	-0.071168234	0.948285
1716.5	1562.5	0.777671	-0.29404303	0.884095
440.5	417	0.69129	-0.658876897	0.733345
271.5	213	0.573597	-0.412383046	0.93838
1069.5	1038.5	0.930966	-0.084010308	0.966288
1283.01	1185.02	0.770398	-0.373315187	0.845421
1255.5	1142.5	0.726535	-0.308204376	0.851153
451.5	425	0.942372	-0.095774646	0.995025
1661	1548.48	0.961166	-0.068944317	0.982452
628	654.5	0.954105	0.097696674	0.981733
1115.5	1034.5	0.776384	-0.393004661	0.842792
2272.42	1895.02	0.370419	-0.836563849	0.559567
1503.5	1179.99	0.860185	-0.299068777	0.978966
2011.5	1970	0.998369	0.003939346	0.98606
0	0	?	#DIV/0!	?
5612.45	5750.67	0.892402	0.272705654	0.905035
193	133	0.591072	-0.864536583	0.864266
3891.5	3956	0.933011	-0.157719523	0.922339
2788.91	2783.43	0.970602	-0.060442963	0.972009
7690	8388	0.918084	-0.18329511	0.856596
2484.49	2446.5	0.889614	-0.269248276	0.899441
20.5	6.5	0.771925	0.500428991	0.462818
3.5	6.5	0.611155	0.652076697	0.795691
4792.53	5683.99	0.76841	-0.333672285	0.583476
120.5	152	0.898356	-0.233409237	0.727999
1583	669.499	0.865573	0.225635846	0.476108
2096	2597.5	0.912147	-0.132556194	0.685393
244	90.9999	0.401456	1.890239355	0.315963
1388	1391	0.778397	-0.420591674	0.776581
10.2143	4.5882	0.917112	-0.152547765	0.646675
2.5	5	1	0	0.606453
313.5	608.5	0.977783	0.076184829	0.655004
97	205	0.973414	-0.084213004	0.509518
294.5	332	0.637867	-0.85339567	0.550461
6007.99	6916.75	0.858442	-0.353709129	0.763608
25.5	17	0.554763	-0.91753784	0.859033
46.5	34.5	0.851328	0.355658952	0.720899
8912.45	9619.88	0.948586	-0.104230717	0.890459
573.5	473.5	0.620875	-1.229959021	0.727557
2	3	0.18169	#NUM!	0.0805096
4772.5	4494.5	0.525065	-0.677014266	0.587507
256.5	235	0.983311	0.027852121	0.911819
1130.01	1254.49	0.775415	-0.43822836	0.687565
1146	1130.01	0.816417	-0.362308433	0.827658
47.5	42.5	0.805994	-0.341036918	0.901847
17.5	25.5	0.721817	-0.807354922	0.47804
552.399	476.5	0.973426	-0.061229886	0.938781
44.1007	25.5	0.614538	0.728169612	0.425486
415.001	416	0.925853	-0.165593441	0.924216
0.5	0	0.308068	1	0.0917211
60.5	58	0.748754	0.438688767	0.721329
275.5	238.5	0.930923	-0.114386662	0.947329
953.5	983	0.599847	-0.747342009	0.573761
2.5	2	1	0	0.889735
1	5	0.91071	-1	0.35288
3	2.5	0.690256	-1	0.78878

1	0	0.308068	#NUM!	1
67.5	73.5	0.927438	0.171111916	0.978616
31.6179	28.6412	0.683792	-0.621933153	0.764199
6.5	3.5	0.466905	-1.378511623	0.848719
184	107	0.689394	-0.575194724	0.911973
4	5	0.764036	-0.678071905	0.622002
37	29	0.66704	-0.750021747	0.838708
0	0.5	1	#DIV/0!	0.308068
554.002	608.497	0.989451	-0.024967084	0.929116
860.499	1580	0.928886	-0.251179864	0.588335
0.5	1	0.0954145	3.321928095	0.122073
9	11	0.814626	-0.469485283	0.676498
10	15.5	0.748813	0.722466024	0.960334
0	0.5	0.450185	#DIV/0!	1
0	0	?	#DIV/0!	?
5.5	4	0.273013	-1.459431619	0.499897
47.5	37.5	0.878292	-0.247927513	0.959209
3	4.5	0.686235	-1.584962501	0.492587
1410	1585.5	0.935691	-0.155417758	0.858257
64	55	0.935011	-0.142019005	0.967463
696.5	429	0.362088	-1.510288888	0.691143
12.5	12.5	0.666479	0.604071324	0.666479
113	83	0.785063	0.455945443	0.644537
0	0	?	#DIV/0!	?
62.5	50	0.95776	-0.058893689	0.832874
0	2.5	0.724378	#DIV/0!	0.219102
0	0	?	#DIV/0!	?
4	8.5	0.647196	-1.415037499	0.250939
0	0.5	0.450185	#DIV/0!	1
227.5	141.5	0.614175	0.674103003	0.426986
1	0	0.0917211	1.584962501	0.034897
12	17.5	0.980001	-0.061400545	0.765486
0	0	?	#DIV/0!	?
0.5	0.5	0.651448	1	0.651448
51	58.5	0.848339	0.349942471	0.929057
0.5	0	1	0	0.450185
6.5	4	0.72386	-0.700439718	1
51.5	86	0.719869	-0.401098308	0.23502
0	0	?	#DIV/0!	?
16	27	0.985667	-0.04580369	0.684215
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2	4	1	0	0.651448
156.5	166	0.979411	-0.046844863	0.94037
0	0	?	#DIV/0!	?
25.5	25.5	0.880598	0.304854582	0.880598
0.5	1.5	0.613399	1.584962501	1
905.5	1219.5	0.913093	-0.249870604	0.731134
0	1	1	#DIV/0!	0.308068
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0.5	0.5	0.651448	1	0.651448
0	0	?	#DIV/0!	?
0	8.5	1	#DIV/0!	0.207565
805.5	742	0.970643	0.061363231	0.917583
771.501	738.501	0.976303	0.046024448	0.945089
15021.5	14219	0.610693	-0.609858883	0.664894
6060	5886.5	0.592491	-0.596795284	0.622651

2495.5	2417.5	0.476593	-0.676396334	0.511096
148	132	0.843657	0.270326898	0.764767
104	98	0.782928	-0.316735426	0.844946
5529.5	5494	0.700124	-0.652803697	0.705028
1770	2200.5	0.219825	-0.820866852	0.0947937
798	637	0.656084	-0.445488082	0.913156
486.5	514	0.924663	-0.143297786	0.88006
191.5	177.5	0.623544	-0.52050465	0.706962
1485.5	1664.5	0.760436	-0.499872443	0.669587
9517.9	10056.7	0.581821	-0.659555152	0.528724
6	13	0.867496	0.415037499	0.680712
159	183.5	0.988137	0.031412953	0.928972
1928.5	1923.5	0.958283	0.093763836	0.956675
3078.44	3529.62	0.770903	-0.559366239	0.67429
3	1	0.409442	-2.584962501	0.860525
197	262.5	0.937181	-0.174968593	0.759837
749	657.5	0.790443	-0.39021222	0.89703
194.5	174.5	0.920715	-0.131951131	0.985973
549	517	0.787219	-0.364260408	0.84145
1820.5	1611.5	0.727579	-0.465634138	0.837635
746.501	778.998	0.798331	-0.452083738	0.767063
34	33	0.648783	-0.878009476	0.66931
31.5	65	0.439552	1.702200176	0.670748
1032.5	1130.5	0.878036	-0.307157827	0.819035
1234.5	1171.5	0.413768	-0.727646579	0.470114
227.5	289.5	0.851473	-0.424581272	0.701518
575.5	538.5	0.918662	-0.211570077	0.956915
1919	1782.5	0.706534	-0.795003326	0.753076
329	366.5	0.86742	-0.334037777	0.796375
577.5	606.5	0.850272	-0.323490299	0.813807
728.5	718	0.882413	-0.237322134	0.893477
108.5	161.5	0.764187	-0.717157113	0.514021
1233.49	1235.39	0.830213	-0.383863706	0.829118
1164	1074.5	0.817107	-0.416691018	0.872246
747	620	0.85584	-0.265353852	0.998262
2386.5	2395	0.842349	-0.356881517	0.83984
25	48.5	0.669064	-1.120294234	0.286297
0	1.5	0.724378	#DIV/0!	0.495025
264.5	332.5	0.750056	-0.583599539	0.579788
189.5	228	0.610319	-1.280651819	0.501034
172.5	187	0.965476	-0.072900547	0.906871
4771.48	4884.52	0.946495	0.128507044	0.96008
5702.5	6318.5	0.886557	-0.283699471	0.819417
1662	1661	0.803521	-0.347765485	0.804055
735	683	0.72368	-0.481310719	0.789669
5586.5	6265.5	0.825256	-0.433534121	0.747093
1444.5	1541.5	0.970469	0.067795001	0.988311
1428.48	1489.5	0.845089	-0.317886382	0.812515
3123.5	3184	0.803137	-0.410195849	0.78828
2593.5	2222.5	0.80426	-0.362331696	0.929354
544	603.5	0.845408	-0.352753221	0.770304
627.259	690.829	0.953038	-0.110103515	0.888737
3277.5	3308.5	0.832267	-0.368051306	0.825395
2921.48	2833.5	0.683013	-0.48252015	0.714187
852	633	0.462513	-0.761729834	0.774298
521	544.5	0.859293	-0.316062644	0.827752

1054.99	1118.51	0.883338	-0.241308483	0.838584
5349.49	5693.43	0.796115	-0.423786594	0.747079
14708	14262	0.917446	-0.149139555	0.942851
8088.5	8420	0.843361	-0.315099573	0.81152
2852	3231	0.879167	-0.288551432	0.793071
4644.5	4758	0.866793	-0.288575045	0.849154
737	717.5	0.690157	-0.518493542	0.715401
539.003	497.997	1	0	0.952572
18	21.5	1	0	0.871616
406	387.5	0.943977	-0.103093493	0.98097
334.5	300	0.780521	-0.411447811	0.870036
452.5	406	0.987501	-0.02249236	0.929608
1088.5	1206.5	0.980111	-0.044414829	0.909288
42.5	35	0.89105	-0.180572246	0.945324
337	415.5	0.938369	0.14255403	0.923466
43.5	55.5	0.262931	-2.742503778	0.166247
4952.5	5453.5	0.958924	-0.090150825	0.890792
791.5	1150	0.962318	0.098624018	0.799729
966	1315	0.896491	-0.310399861	0.712368
407.5	457	0.626009	-1.304334035	0.561124
145.5	137.5	0.828406	-0.403515629	0.866425
443	366.5	0.395755	-0.735880453	0.613786
1853.5	2056.96	0.964152	0.074708329	0.961814
297.5	305.5	0.920377	-0.172357204	0.9015
4460.96	5078.62	0.802478	-0.476534787	0.710933
13	19.5	0.600826	-1.115477217	0.342709
139.5	145.5	0.469145	-1.047305715	0.436589
509.001	443	0.892738	-0.208526472	0.996066
1299	1027	0.565733	-0.833410711	0.758723
4754.5	4256.5	0.634638	-0.776026234	0.719673
8.5	13	0.7746	0.497499659	0.934323
1273.49	1409.5	0.99068	-0.013075721	0.881068
230.5	221	0.867723	-0.241292627	0.902795
931	921.5	0.699849	-0.517232111	0.709288
70.5	64.5	0.652026	-0.872764812	0.712296
807	678.5	0.827987	-0.354928668	0.953042
2125	1632.5	0.707731	-0.68637854	0.883087
1631.02	1508.49	0.973512	-0.05730903	0.975389
2289.51	1852.5	0.489711	-1.227864355	0.636797
2968.83	2712.62	0.414786	-1.694020079	0.469296
1658.5	1221.5	0.62557	-0.644454356	0.893503
1829	1956	0.453941	-0.705625455	0.38603
2435.01	2192.53	0.26273	-0.863849581	0.36254
1157.51	1126.01	0.513202	-0.973456044	0.535138
8.5	14.5	0.408425	-1.765534746	0.151016
920.498	903.999	0.718983	-0.458253491	0.736389
965	840	0.942781	-0.097401509	0.943687
217.5	132.5	0.426563	1.407548417	0.339081
221.5	220	0.832006	0.373744038	0.828251
497.999	360.499	0.305321	-0.945984146	0.635787
207.5	220	0.903524	-0.213151749	0.861776
821	748.5	0.76227	-0.429756001	0.841646
596.5	642	0.919342	-0.193854885	0.870955
5258.32	4941.92	0.686716	-0.574145191	0.740585
1017	979.5	0.799507	-0.396712841	0.829453
1970	1894.5	0.912472	-0.180352563	0.940916

142.5	265.5	0.913898	-0.315614321	0.571352
543	1080.5	0.701657	-1.220622243	0.332514
1517	1680.5	0.823046	-0.45652206	0.755734
6314.07	6690.28	0.637706	-1.048101685	0.601221
1596	1769.5	0.80256	0.465336245	0.857823
1278.5	1343	0.795678	0.506709205	0.819471
1619.51	1890.03	0.971728	-0.07539328	0.879663
11054.5	11830.5	0.877434	-0.25703208	0.825838
414.5	415	0.781367	-0.416778833	0.780358
11	9.5	0.470688	-1.289506617	0.57152
21778.7	21792.2	0.260674	-0.843601074	0.260143
63.5	115.5	0.722306	-0.759865996	0.326071
6517	9870.5	0.983885	-0.035521528	0.660386
142.5	151.5	0.819374	-0.36691555	0.77055
7720	7341.5	0.818015	-0.35345528	0.858299
2564.5	1679.5	0.547809	0.976462635	0.427078
1116.87	1582.41	0.877946	0.316764862	0.91458
42	9	0.884261	0.177538186	0.348618
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37.5	15	0.90176	-0.184424571	0.628726
63.5	69.5	0.589225	-0.944290567	0.522881
1.5	3	1	0	0.625646
17674	16286.5	0.927653	-0.10890076	0.994217
11170.5	10263	0.556498	-0.634727432	0.645686
225.5	196	0.710305	-0.446296216	0.84879
1675.5	1557	0.46566	-0.717437635	0.543543
2081.01	2521.02	0.691607	-0.909977199	0.570766
542.999	622.499	0.86871	-0.32491422	0.776513
611.5	654.5	0.936611	-0.138565587	0.888329
3716.38	1889.63	0.975041	0.049955806	0.646594
778.5	836.5	0.854501	0.356896465	0.892692
4441.05	5129.36	0.766586	-0.658940001	0.675359
73.5	67.5	0.826686	-0.405256478	0.883654
3802.5	4200.5	0.806085	-0.480427328	0.737972
1687.49	1414.5	0.836469	-0.364222272	0.954579
1418.5	1416.5	0.667735	-0.544595995	0.669089
3076	3149.5	0.863973	-0.268861966	0.845211
2671.5	2341	0.77106	-0.415847775	0.88225
74	55.5	0.368687	-2.565597176	0.514009
12987	11868.5	0.800498	-0.466412286	0.861496
1958.51	2692.01	0.815178	-0.558872717	0.619135
3350.62	3574.55	0.846302	-0.351544679	0.800186
398.499	454.001	0.973232	-0.06667965	0.89119
47	40.5	0.397098	-2.306661338	0.474971
2277.5	2470	0.909085	-0.211454096	0.853529
40	33	0.664093	-0.96437609	0.77847
154.5	150	0.931801	-0.121715908	0.956305
1746	2037	0.757304	-0.553698287	0.641798
2626.5	2403	0.898405	0.226975581	0.848467
128.5	117.5	0.658084	-0.729500144	0.726663
353	224	0.79492	-0.21559686	0.674507
608.5	735.5	0.868592	-0.367999492	0.751541
1192	1101.5	0.759769	-0.386278506	0.835271
2881.5	3431.5	0.96699	-0.087728849	0.861242
2454.5	2698	0.769041	-0.592771623	0.70541
459	419	0.519064	-0.741688004	0.60827

2151.86	2270.43	0.87569	-0.286079523	0.838334
281.5	243.464	0.623177	-0.586244327	0.766567
677	696.5	0.928789	-0.177804587	0.911203
873.5	856.5	0.871028	-0.277809273	0.885193
1597	1584	0.850044	-0.301298595	0.856408
2063	1446.5	0.454695	-1.690855985	0.660457
26.5	19	0.575588	-1.142957954	0.782166
6784.96	5550.79	0.407608	-1.211469189	0.56029
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289.5	355.5	0.676889	0.757745512	0.77815
3317.5	3206	0.721371	-0.748243812	0.743192
1705.67	2462.55	0.975555	-0.061674544	0.725258
835	1049.01	0.592857	-0.979410821	0.4314
3279.66	2959.84	0.6672	-0.742633721	0.742761
855	710	0.986958	0.026748299	0.869675
2123	2076.5	0.789185	-0.426179813	0.806656
8064.28	7758.61	0.658078	-0.580853671	0.693949
3702.5	3352.5	0.610458	-0.734694399	0.694538
470	474	0.91098	0.197624516	0.91611
961.5	1170	0.994714	-0.014325284	0.879437
369.5	357	0.987472	0.019391354	0.956184
654	718	0.831557	-0.383040935	0.763664
131.5	117.5	0.718569	-0.507537529	0.816005
1593.5	1538.01	0.843636	-0.310980897	0.871294
5658.5	6932.5	0.73156	-0.389722346	0.515744
737.5	680.5	0.738509	-0.464453101	0.809309
94	108.5	0.921019	0.186878135	0.990864
99	83.5	0.782074	0.484385546	0.70202
1435.5	1615	0.714582	-0.862542159	0.642868
5.5	6	0.533975	-1.137503524	0.473565
640.5	661	0.81584	-0.420679646	0.793314
120	94	0.54583	-1.292180751	0.695983
1079.5	1061.5	0.776142	-0.422406749	0.790295
158.5	202.5	0.391628	-2.401448435	0.27259
481.5	722	0.919814	-0.219648469	0.653839
1149.5	1131.63	0.728771	-0.407699848	0.744944
57	68	0.793472	-0.623436649	0.687543
21.3863	42.1213	0.44718	-2.450067084	0.152462
451.549	428.86	0.646024	-1.135315975	0.675675
190.066	187.018	0.994083	0.012236967	0.982951
56	76	0.874031	0.290677161	0.924101
254	269.5	0.792267	-0.45340931	0.747523
309.5	233	0.758946	0.521724611	0.634834
1652.49	1488.5	0.51584	-1.209637644	0.587234
4732.24	4264.92	0.447705	-1.266893057	0.521371
124	170.5	0.732174	-1.023458973	0.560395
239.001	261	0.615525	-1.433265664	0.56767
296.377	274.521	0.583478	-1.217921009	0.630795
445.623	534.479	0.790732	-0.594683332	0.67609
1067.5	725	0.447586	-1.631660182	0.677649
107	199.5	0.901129	0.280900827	0.710602
143.5	167	0.62425	-1.410019425	0.541495
0	0.5	0.329316	#DIV/0!	0.495025
9.5	4.5	0.545226	-1.440572591	0.916914
11.5	10	0.784836	-0.353636955	0.912519
97.5	35	0.528423	0.924051147	0.310045

81.5	255.5	0.921961	-0.38294387	0.358815
894.5	606.5	0.818536	-0.352696432	0.911146
58	54.5	0.833461	-0.398549376	0.874466
3	9	0.869293	0.584962501	0.628409
12.5	32	0.891079	-0.556393349	0.446082
186.5	111.5	0.571932	-1.003873009	0.908311
255.5	207.5	0.917598	0.197577373	0.814293
274.5	253.5	0.796922	-0.500749497	0.848726
420.5	452	0.572578	-1.491960316	0.531698
0.5	0.5	1	0	1
13.5	21.5	0.88506	0.199308808	0.66936
480.503	322.5	0.346675	-2.127041915	0.568467
345.5	465.006	0.977143	-0.05686817	0.777246
0.5	1.5	0.724378	#NUM!	0.329316
136	114.5	0.742235	-0.636251729	0.853701
113	79	0.757182	0.483601786	0.594007
181	378	0.782918	-0.899933045	0.387849
165	199.5	0.725866	-0.744270395	0.599734
29.5	28.5	0.526143	-1.490325627	0.546648
416	408.5	0.864929	-0.272079545	0.878916
414.5	560.5	0.478332	-2.66180529	0.33503
4.5	17	0.724114	-2.169925001	0.17446
3.5	6.5	0.497208	-2.807354922	0.221048
243.5	275.5	0.532512	-1.633157213	0.462696
207.5	605.5	0.973569	0.120016097	0.502902
85.5	91.5	0.633789	-1.417852515	0.598036
332.499	420	0.706679	-0.997827824	0.572116
1	1.5	1	0	0.710482
13.5	18	0.766045	-0.667424661	0.579838
890	295	0.720988	0.32839759	0.251048
96.5	118.5	0.679362	-0.697639274	0.519731
203	186.5	0.994643	-0.010699889	0.946498
921.992	843.496	0.664246	-1.093729599	0.71405
419	443.5	0.888592	0.275035503	0.919411
78.9999	118.5	0.793072	-0.445797927	0.469517
48.5	106.5	0.743091	-1.512450001	0.382326
110	117.5	0.739198	-0.581687369	0.68956
233	256	0.69733	-0.704314808	0.628089
444	446.5	0.435287	-2.614506776	0.432536
7	9	0.880047	0.280107919	0.959804
417.499	405.501	0.590303	-1.457701418	0.606359
611.501	774.497	0.779925	-0.67312828	0.636541
17.5	21.5	0.485823	-0.881355504	0.319925
20.3364	25.7412	0.620392	-1.003565667	0.461517
0	0	0.308068	#DIV/0!	0.308068
1038	928.5	0.556275	-0.858458845	0.648371
1879.5	1756.5	0.676662	-0.654546079	0.730828
153.5	203	0.997488	-0.004707003	0.755136
29	51	0.955177	-0.076621282	0.409569
490	416	0.854994	-0.303642742	0.970126
151.5	84.5	0.628829	-0.976387443	0.960321
290.5	227.5	0.629178	-0.513509369	0.891839
214	210.5	0.884601	-0.229714333	0.897305
4.5	4.5	0.935472	-0.169925001	0.935472
6798	7031.5	0.841269	-0.320575804	0.814626
1324	1298.5	0.753131	-0.508050049	0.768414

59.5	52	0.849902	-0.355658952	0.936008
5631	5240.5	0.769239	-0.422658365	0.830486
9	9	0.958978	-0.08246216	0.958978
1489	1491	0.825339	-0.357113038	0.824296
400	387.5	0.815894	-0.344648171	0.842366
693.5	670	0.596935	-0.83783923	0.624133
275.322	288.653	0.46125	-1.50573269	0.431841
1185	1186	0.956166	-0.094327383	0.955583
2046	1983	0.926841	-0.128611097	0.953193
632.5	869.5	0.996445	-0.009152735	0.78976
7815.5	7228	0.858311	-0.214124805	0.935103
825.5	999	0.951974	-0.107923823	0.814445
11112	11718	0.813411	-0.42633373	0.775161
175	171.5	0.830342	-0.406816992	0.843861
3305	3134	0.846537	-0.325479178	0.885353
3200	3173.5	0.871558	-0.275349728	0.877603
5076.99	5455.56	0.990243	0.022304028	0.963079
4173	4568	0.905641	-0.2273852	0.845362
4290.5	4232.5	0.824926	-0.376713788	0.834986
3085.5	3061.01	0.994629	0.011883375	0.989474
186	203	0.931187	-0.159780444	0.871821
5486	6029	0.910612	-0.220487093	0.849117
15966.7	15037.7	0.919211	-0.158708042	0.964257
2776.63	2945.66	0.961092	-0.094279638	0.923784
580	804.501	0.768041	-0.837834422	0.587047
883.997	937.989	0.915825	-0.184271318	0.873419
2	9.5	0.68993	1.169925001	0.443971
907.5	1132	0.926447	-0.168435383	0.766244
5013.85	4769.71	0.742899	-0.46796172	0.786207
828.5	676.5	0.577299	-0.906455328	0.730502
2122.5	2878	0.622508	-0.670546729	0.362842
1224.01	1191.99	0.773773	-0.390102354	0.797852
7775	7681	0.818468	-0.389108562	0.827518
5230.99	4901.03	0.798127	-0.480385789	0.842032
224.5	215	0.816884	-0.405430172	0.847847
3514.5	3306.77	0.705654	-0.525421684	0.759609
1673.91	1541.16	0.650887	-0.846159705	0.708419
2378	2558.5	0.946775	-0.130060541	0.900206
1959.5	2016	0.800907	-0.400022642	0.778116
907.005	778.636	0.625792	-0.968292178	0.726087
120.5	132.5	0.923035	-0.184968882	0.860135
1481.5	1821	0.97718	0.060081245	0.900237
525	573	0.984956	-0.038994132	0.93349
1496	1812.5	0.771647	-0.640755464	0.648397
3420	3562.5	0.965499	-0.086935637	0.940972
1666.5	1807.5	0.867259	-0.343954401	0.815591
689.504	834.001	0.824996	-0.483971275	0.703775
3253.99	3452.01	0.892617	-0.255461302	0.852969
1049.26	1154.56	0.883887	-0.294121036	0.822071
2707	3089	0.82702	-0.452287822	0.740533
413.5	476	0.940917	-0.127594029	0.836989
1491.5	1388	0.610023	-1.291065852	0.65084
2442.5	2475	0.746456	-0.477298614	0.735161
2015	2370	0.914787	-0.226275856	0.813532
509.674	614.983	0.915548	-0.195983411	0.781927
1437	1479.53	0.973564	-0.059992192	0.95438

732.5	730	0.858967	-0.345508152	0.861191
1545.48	1634.03	0.986856	-0.030175841	0.950513
2059.5	2194.5	0.794472	-0.494844297	0.750259
483.5	537.5	0.967901	0.079807401	0.969068
1228.5	1316.5	0.928129	-0.152198833	0.877215
322.5	271.5	0.987863	0.024396654	0.876106
5257.5	5417.5	0.740603	-0.680241351	0.720914
1104.5	1144.5	0.709264	-0.723315303	0.684684
745	675.5	0.383994	-1.183544611	0.458937
2300.5	2151.5	0.794015	-0.426686164	0.844917
2181.5	2008	0.83934	-0.364886599	0.895868
1067	1049	0.744709	-0.655267325	0.755911
414	435.5	0.962594	-0.089860613	0.930523
1566	1521.5	0.498292	-1.854645283	0.513979
1065	1273.5	0.931743	-0.172467196	0.815433
70	61.5	0.359865	-2.222392421	0.429158
1350	1225	0.560313	-1.307308306	0.619666
3864.5	4378	0.886342	-0.314991712	0.811161
941.5	971.5	0.887262	-0.220605802	0.862288
328	351	0.878842	-0.307703455	0.835467
480.001	397.88	0.587651	-1.03579539	0.713819
2414.5	2355	0.660848	-0.795083555	0.678829
1029.5	962	0.548589	-1.591986346	0.586193
1522	1326.5	0.620803	-1.020044382	0.709061
3807.5	3129	0.934976	0.12583082	0.810373
1387.5	1397	0.99403	-0.015156146	0.990119
3345.5	3234.5	0.794031	-0.480390185	0.817453
11286.6	13651.8	0.704349	-0.608325735	0.549759
2436.5	2425	0.677106	-0.497377758	0.681889
615.5	607	0.831583	-0.409189518	0.840798
229.5	217	0.806231	-0.374744793	0.851396
3021.5	2951.5	0.931665	-0.152454114	0.947411
5	6	0.749519	0.485426827	0.87225
230	238.5	0.868015	-0.227104549	0.835202
355.5	372.499	0.810594	-0.485021063	0.780053
1475.5	1399	0.939261	-0.151405693	0.970836
2325	2548	0.890288	-0.265269987	0.828878
215.5	195	0.811997	-0.329479293	0.898526
1042.5	1153	0.925085	-0.187415593	0.860706
23	21.5	0.813205	-0.436099115	0.859013
1454.5	1335.5	0.854311	-0.35719559	0.90817
2037.5	1903.01	0.804355	-0.456337128	0.850967
1254.5	1338	0.837595	-0.401872565	0.794522
188.5	162.5	0.516291	-1.803533211	0.595599
2648.5	1837.5	0.521411	-0.798259567	0.852616
987.499	1166	0.819713	-0.425053946	0.699671
4998	7083	0.992354	-0.021373651	0.779987
641.5	523	0.717851	-0.553815986	0.877992
661.001	1070	0.997132	-0.007665948	0.677121
274	242	0.846858	-0.233845938	0.96607
22.5	38	0.732472	0.697971463	0.97046
809.5	713	0.779234	-0.358248347	0.897273
998	835.5	0.71382	-0.559883982	0.854925
633.5	697	0.945105	-0.126048552	0.879904
398.5	481.5	0.911685	-0.241831133	0.79545
278.5	406.5	0.49749	-1.449108175	0.276166

2200.5	2260	0.921487	-0.164036442	0.901875
611.5	455	0.63321	-0.519806757	0.940138
538	533.5	0.798459	-0.462283624	0.80441
443.5	402.5	0.864285	-0.30495026	0.929742
261	274	0.923773	-0.198183261	0.894426
1694.5	1821.51	0.878323	-0.281132394	0.827884
978	1052	0.971902	-0.0733796	0.929154
958	1296.5	0.984438	-0.045123746	0.808801
10653.6	11634	0.816339	-0.470475011	0.758185
2160	2622.5	0.852424	-0.37075133	0.719926
998.506	1128.51	0.9173	-0.213751157	0.840358
109.5	134.5	0.879984	-0.30718151	0.742858
1945.5	2287.5	0.886157	-0.264147167	0.770447
994	1134.5	0.954297	-0.106133891	0.864141
441.5	516	0.948281	-0.110312595	0.831543
1138	1212.5	0.754805	-0.537574998	0.70659
33728.5	30477.5	0.568953	-1.095962382	0.63759
6949	7208	0.790455	-0.568140586	0.767483
3068.51	3472.34	0.782841	-0.514060788	0.693847
4277.38	4866.2	0.95112	-0.11724708	0.865786
2256.97	2988.54	0.95305	-0.125446624	0.774951
1947.5	2099.03	0.773714	-0.475186968	0.714772
305	393.5	0.949752	0.124545098	0.888993
4542	4558	0.825299	-0.390888776	0.822773
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1503.5	1553	0.730442	-0.50698524	0.702589
3467.52	3341.51	0.656702	-0.883562964	0.681548
2842.5	2768.5	0.81246	-0.427526237	0.831023
5902	6483.5	0.768811	-0.552035932	0.701865
4068.5	4358.5	0.791611	-0.480753668	0.741813
6867.75	7406.01	0.536668	-1.447015038	0.491357
3396	3327	0.782514	-0.415037499	0.799577
195.5	162.5	0.706312	0.558900204	0.61308
9107.53	7290.57	0.470639	-1.009177121	0.653375
1104.49	980.488	0.872282	-0.260541701	0.958817
376.5	297	0.699694	-0.490416864	0.916799
2290.5	2538.5	0.899938	-0.199635439	0.817882
955.766	1342.94	0.749485	-0.617853756	0.504103
383	259.5	0.556379	-0.475292073	0.927939
189.5	291	0.78575	0.563228979	0.97346
70.5	98	0.775525	0.539928747	0.96777
1.26535	6	0.860431	-1.069407077	0.216772
5185.88	4571.26	0.465406	-1.538260689	0.543421
6947	6387	0.573019	-0.827746341	0.642571
59	88	0.634382	-0.69281849	0.313807
1513.5	1483.5	0.683993	-0.663560897	0.699674
992.5	955	0.775329	-0.463070196	0.805202
373.5	449	0.804914	-0.561970858	0.690616
57.5	48.5	0.471491	-1.523561956	0.576597
196.5	140.5	0.559179	-1.158953884	0.77205
273.5	293.5	0.691641	-0.652453527	0.635993
396.999	505.497	0.993149	0.016264614	0.843307
306.5	225	0.90702	0.187339963	0.735717
1181	1348	0.806994	-0.470237225	0.714441
226.501	278.499	0.635216	-1.17951742	0.511694
990.5	821.5	0.595474	-0.688743965	0.765881

1862	1590.5	0.889635	-0.22964216	0.998988
927.497	923.504	0.74446	-0.518462423	0.747911
5254.5	5365	0.783136	-0.320075979	0.761247
2309.5	2096.5	0.740913	-0.436117488	0.829733
2265.5	2064.5	0.657714	-0.563471794	0.7457
397.999	375	0.871888	-0.214560436	0.925124
144.5	161.5	0.849212	-0.393565969	0.777463
552.5	831.5	0.60473	-0.91753784	0.317951
127	96.5	0.846404	-0.274439169	0.940159
38	36.5	0.707938	-0.724365557	0.735357
83.5	74	0.838249	-0.350281291	0.92297
1931.5	2015	0.896824	-0.247507427	0.868889
1532	1502.5	0.774642	-0.433995657	0.790717
2675	2561	0.725428	-0.622525914	0.757075
926.5	847.996	0.936086	0.122348203	0.875491
696.5	704.5	0.854813	-0.32503847	0.846702
324.5	283	0.747732	-0.506024313	0.854161
2997.48	2931.06	0.787818	-0.422836392	0.805722
1746.5	1603.5	0.768387	-0.442698283	0.838266
1527.02	1422.49	0.704066	-0.55901276	0.763837
2137	1963	0.732891	-0.547643597	0.799062
604	561.5	0.866208	-0.251140727	0.92475
69	87.5	0.361663	-1.380604002	0.220976
1957.03	1860.52	0.800321	-0.458230506	0.835613
2220	3191.5	0.694268	-0.90202484	0.462295
444	409.5	0.634468	-0.811422292	0.694851
825.5	867	0.728201	-0.572780444	0.689634
994.5	1106	0.786746	-0.497371665	0.709729
1071.5	1042.5	0.925715	-0.137638173	0.94775
8	9.5	0.424386	-2.415037499	0.338798
55	36	0.326763	-1.5334322	0.619326
173.5	165.5	0.753987	0.486020651	0.72733
1.5	0	0.515664	1	0.237986
513.652	803.131	0.552832	-1.691483244	0.312806
1184.5	1570.5	0.696259	-0.943275943	0.522568
11.5	8.5	0.512326	-1.716207034	0.674729
178	242.5	0.751903	-0.707549106	0.550684
1869.5	2018	0.646819	-0.83708016	0.59141
37	59.0001	0.992371	0.019365325	0.685676
2278	1987.5	0.64565	-0.698224811	0.756265
769.5	701.5	0.872098	-0.261348029	0.939996
1.5	2.5	0.523243	#NUM!	0.31594
1280.5	1371.5	0.850568	-0.377047701	0.805668
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2406.99	2644.98	0.839082	-0.404457422	0.776318
5276	5251.5	0.648976	-0.648409388	0.653023
1459.5	1591.5	0.916814	-0.187077949	0.855789
5483.5	6334	0.940503	-0.13273619	0.83709
576	576.5	0.919029	-0.185506543	0.91845
2176	2136	0.738647	-0.489410341	0.754485
3	3.5	1	0	0.888898
12699.5	14196	0.75559	-0.572379257	0.674438
310.512	349.932	0.882724	-0.270508064	0.797964
798.5	780	0.98923	0.023298687	0.973909
955	1160	0.892915	-0.276389978	0.765447

1013.5	1014	0.801269	-0.378725161	0.800858
26.4416	34	0.765291	-0.33242015	0.491899
714.651	584.976	0.453509	-0.702196587	0.680324
5.55797	10.655	0.651582	1.01407264	0.963073
6877.46	5198.32	0.78375	-0.273728658	0.909282
19.5	17.5	0.852442	-0.197939378	0.970231
161.5	141	0.846716	-0.247927513	0.969661
9.5	16	0.661918	0.610053482	0.893897
183.486	120.574	0.570624	-0.619818822	0.991482
20.6976	29.7389	0.920339	0.210122364	0.858522
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294.5	228.5	0.947624	-0.062572471	0.7801
5560.34	5587.34	0.745761	-0.583738361	0.742255
467	608.5	0.918221	-0.210861027	0.742611
284	179.5	0.467231	-1.572318291	0.735935
4829.05	4753.27	0.786246	-0.441358313	0.798533
16	27.5	0.984611	0.044394119	0.676418
8	5	0.175029	-2.415037499	0.411079
577	573.5	0.829958	-0.328506457	0.834908
419	479.5	0.982048	-0.047248329	0.901972
2090.5	2123.5	0.820596	-0.316675506	0.806654
154	215.5	0.958753	-0.117039421	0.753602
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1	3	1	0	0.513713
182.5	182	0.843557	-0.372201301	0.845404
553	582.5	0.835663	-0.367984276	0.797915
525.95	596.596	0.783267	-0.339736943	0.655696
34.4365	8.03993	0.420272	-0.490285528	0.219628
1	0.5	0.651448	-1	1
3982.52	5657	0.938022	-0.187353425	0.731939
291.5	674	0.863389	-0.609923245	0.434417
104	141	0.94247	-0.169058258	0.762751
2814	3077.5	0.537546	-1.755368224	0.489013
10147.5	10039.5	0.964133	0.083950254	0.957771
24830	27808	0.837337	-0.387353454	0.757848
2799.51	2440.01	0.857359	-0.268247701	0.965038
59.5	45	0.945572	-0.11345805	0.879625
52.5	103	0.824861	-0.504792152	0.379764
22109.6	23478.5	0.793896	-0.515209054	0.753367
66	35.5	0.487712	-1.343726917	0.863356
570	322	0.87813	-0.261516578	0.804001
5748.02	5923.42	0.839097	-0.283221041	0.812296
1877.5	2389	0.805943	-0.376246584	0.598779
10.5	14	0.690029	-0.807354922	0.491593
2102	2519.5	0.421968	-0.700482615	0.254177
2954	2893	0.711481	-0.370160007	0.736215
3587	3815.5	0.743552	-0.474847604	0.689565
1546	1632	0.72547	-0.60422064	0.684299
99	99.4999	0.73965	-0.734538857	0.736543
2009.99	2214.54	0.64099	-0.668050939	0.557146
7664.35	7003.35	0.801435	-0.229071359	0.916948
70	77	0.648217	-0.703018262	0.569901
143.5	203	0.698454	-0.557576613	0.400064
1450	1793	0.906403	-0.247399037	0.770231
5832	5972	0.805444	-0.532137314	0.790832

559.5	574	0.885809	-0.273125938	0.868878
4130	4480.5	0.859826	-0.34171243	0.804942
851.5	862	0.869194	-0.320234791	0.861216
187	151	0.827088	-0.357069901	0.978652
1028.5	994.498	0.691773	-0.546896509	0.72188
4074	4123.5	0.74943	-0.520301077	0.739929
1008.5	1037	0.800463	-0.424366075	0.779185
2520	2587.49	0.86962	-0.255148654	0.848458
6039.5	6422	0.622426	-0.491603044	0.552488
1325	1328.5	0.934189	-0.132774887	0.932219
6	6	0.614384	-1	0.614384
1694	1822	0.910423	-0.221399172	0.863453
472.627	475.724	0.822419	-0.425880954	0.81799
4.5	4.5	0.720252	-0.847996907	0.720252
2391.5	2686	0.983157	-0.025869078	0.867398
3571.92	3937.56	0.825807	-0.402410489	0.755654
183.5	198.001	0.984824	0.034952599	0.966289
81	95	0.928513	0.175849835	0.976126
2941	3310	0.872645	-0.295377844	0.788888
973.5	819	0.502202	-0.799042848	0.666103
2073.5	2117	0.770847	-0.467586525	0.75432
13.5	15.5	0.609127	-0.847996907	0.503166
503	544.499	0.882024	-0.334169654	0.835848
429	365	0.837533	-0.371968777	0.943634
335	497	0.791164	-0.496233582	0.49733
11	13.5	0.790247	-0.552541023	0.65253
63.5	83.5	0.950116	0.130256386	0.884131
4311.51	3959.05	0.621351	-0.779333789	0.688863
739.5	747.498	0.668503	-0.739243449	0.660411
382.5	428	0.484292	-2.379643593	0.428562
3677.94	2360	0.359851	1.195946547	0.262083
37836	33622.5	0.390669	-0.870198505	0.50525
590	535.5	0.817033	-0.251829897	0.921661
48	52.5	0.580859	-0.970252657	0.515461
1395.03	1287.53	0.830148	-0.390106645	0.884641
785.5	805	0.993286	-0.01384112	0.975833
1.5	2	0.495025	-1.584962501	0.329316
1691.5	1245.5	0.946577	-0.100663172	0.845768
3.5	7	0.407544	-1.222392421	0.0775154
1900	2071.5	0.66665	-0.691498098	0.597441
2	6	0.897841	0.321928095	0.400619
32	46.5	0.76713	0.584962501	0.977667
1703	1708.5	0.81207	-0.371370914	0.809476
851.496	825.49	0.909945	-0.208323388	0.930307
1455	1327	0.678355	-0.550427281	0.76264
96.9999	93.0001	0.717406	-0.858444368	0.741886
3782	4066.14	0.929644	-0.135491563	0.8713
840.5	445.5	0.975442	-0.040029089	0.626429
1660.5	1519.96	0.956985	-0.086847731	0.98069
3926.5	4147	0.887377	-0.211107727	0.841737
1484	1361	0.743875	-0.367230108	0.835633
1058	1158	0.777833	-0.560288891	0.716467
630	596	0.790797	-0.422691072	0.83411
2698.96	3286.5	0.908681	-0.18235157	0.7473
31.5	27	0.402642	-0.977279923	0.539794
5.5	8.5	0.783893	0.447458977	0.89035

172.876	158.163	0.804097	0.28858531	0.732668
927.497	818.495	0.655143	-0.666137122	0.758257
2533	2228	0.689794	-0.770869984	0.775528
180	141.5	0.993065	-0.012072832	0.830957
636.501	814.498	0.793741	-0.65581463	0.648748
3605	3984	0.715883	-0.524037263	0.627821
1728	1811.5	0.952979	-0.105182237	0.920796
2559	1163	0.846533	0.302974113	0.53271
196.5	159.5	0.905485	-0.196320736	0.954504
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3046	2652.5	0.606499	-0.726034545	0.725165
15.5	22	0.588437	1.04580369	0.738594
698	658	0.757211	-0.420559784	0.810366
282.5	440	0.714801	-1.130879802	0.475305
95.5	229.5	0.925231	-0.310642287	0.462397
824.5	738.001	0.762274	-0.318869222	0.885952
1693	1552	0.473366	-0.618803317	0.577695
25.5	33.5	0.576308	-1.148863386	0.398482
22.5	226.5	0.882407	0.900464326	0.225315
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1.5	0	0.702697	0.736965594	0.370757
33.5	28	0.835593	-0.393663848	0.948099
40	15.5	0.8286	-0.255838904	0.559972
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1001.43	983.062	0.663348	-0.616244035	0.679554
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1803	2214	0.885615	0.302433008	0.997402
2888.46	3187.59	0.670842	-0.550977535	0.577759
3113.5	3129	0.779833	-0.456162791	0.775956
332	334.5	0.856083	-0.28228229	0.850096
2825.5	2685.5	0.699502	-0.557399878	0.743199
1567.5	1949.5	0.786298	-0.5307704	0.63224
1844.57	1977.63	0.978714	-0.038866746	0.921136
4927.14	5503.27	0.550092	-0.812770268	0.456086
2056.99	1809.99	0.772056	-0.39761145	0.883802
1856	1588.5	0.887558	-0.23501405	0.995341
2236.02	2327.02	0.873054	-0.280858859	0.84438
1547.5	1763.5	0.792608	-0.521582231	0.703128
49	18.5	0.991997	-0.014797002	0.560192
183.5	168.5	0.732701	-0.712281331	0.78639
297	272.5	0.550807	-0.956931278	0.616973
485.5	549.5	0.889335	-0.283082549	0.809397
207	148	0.59381	-0.823122238	0.850764
2068.01	1850.99	0.804825	-0.352694694	0.89808
307.5	278.5	0.877096	-0.228268988	0.956062
3890.49	3989	0.641869	-0.925017805	0.624915
554	584.5	0.911093	-0.234158916	0.878766
218.5	258	0.92561	-0.186526969	0.816887
103	108.5	0.910054	0.202242722	0.941857
352	373	0.502963	-1.30461351	0.464869
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567.5	728	0.768154	-0.537451785	0.581473
273	255.5	0.776109	-0.549725321	0.820043
1.5	1	0.198892	#NUM!	0.353387
422	499	0.802596	-0.394669702	0.663382
296	206	0.955956	-0.059706246	0.722739

7.5	14	0.824744	0.485426827	0.796465
6.5	6	0.28719	-2.115477217	0.329316
3591.5	3553.5	0.732723	-0.483660442	0.742093
5513.09	5767.49	0.946133	0.121591505	0.974376
1452.99	1030.01	0.131526	-0.965642491	0.466978
1545.03	1871.97	0.941941	-0.13400801	0.806239
1654.99	1847.01	0.891595	-0.281074612	0.822038
655.5	510.5	0.797411	-0.295756039	0.960162
569.499	591.502	0.871461	-0.315915258	0.846659
298.5	377.5	0.708267	-0.470043062	0.480513
1426	1279	0.805923	-0.396274828	0.888041
2233.5	2195.5	0.74491	-0.544831972	0.75802
476.5	504	0.852882	-0.38457975	0.817499
3428.5	3685.01	0.744351	-0.505524464	0.684495
5952.72	6864.9	0.784006	-0.535291973	0.68467
3040.5	1886	0.329174	-1.195053443	0.730107
697.5	721	0.509101	-1.151428658	0.485635
762	508	0.771122	-0.336437227	0.860155
7974.04	9119.5	0.52896	-0.826027181	0.414873
826.495	781.002	0.923642	0.1530572	0.886424
0.5	0	0.219102	2.321928095	0.14822
13.5	10	0.675463	-0.584962501	0.92469
771	875	0.902044	-0.26753229	0.82551
1456.51	1470	0.797737	0.422430055	0.803067
18.5	19.5	0.86956	-0.255257055	0.827021
468	564	0.979016	0.052962766	0.906195
59.5	68	0.835399	-0.340228912	0.728953
658.5	645.5	0.786156	-0.465194174	0.800952
151	207.5	0.952174	0.105891169	0.815329
0	0	0.308068	#DIV/0!	0.308068
97	108	0.953096	0.086587685	0.960903
466.5	736	0.463624	-0.617805757	0.112275
1.5	1.5	0.810902	-0.584962501	0.810902
5197.46	8743.68	0.656782	-0.937949609	0.318605
4631.78	4636.61	0.731702	-0.496679424	0.730799
63.5	71.4807	0.910332	-0.22123116	0.832473
0	0	?	#DIV/0!	?
0.5	0.5	0.450185	#NUM!	0.450185
0	2	0.785812	#DIV/0!	0.438509
23.5	19.5	0.744968	-0.600392541	0.869832
19	18.5	1	0	0.984889
2.39766	9.99909	0.464998	2.363503096	0.856763
3	0	0.308068	-1	0.308068
2.5	6.5	0.550362	-1.321928095	0.0908938
25.5	37.5	0.935027	-0.164865357	0.667622
883.567	983.309	0.629672	-0.655536797	0.534008
10	15	0.925911	-0.152003093	0.587239
32.5	31.5	0.482264	0.678071905	0.462148
178.5	275.998	0.996084	0.012072832	0.755619
4	1	0.892135	-0.192645078	0.514418
0	0	?	#DIV/0!	?
41.0095	47.0047	0.821787	0.448868284	0.892264
2	9	0.951005	0.321928095	0.449581
211.5	254.5	0.823069	-0.416174823	0.688606
29.5	24.5	0.920517	-0.154722595	0.946935
5.4636	8.07203	0.762867	0.122979609	0.244959

56	159	0.845512	-0.784987109	0.336148
10	3	0.348672	0.963474124	0.149959
311.5	350.5	0.482314	-0.690631316	0.365769
555.732	525.485	0.720163	-0.572103449	0.764345
2	6	0.308068	-0.415037499	0.00159914
149.5	128.5	0.226292	-0.692620214	0.408401
6	5.5	0.872571	-0.263034406	0.935963
1112.5	911	0.831365	-0.301007443	0.993484
829.5	664.5	0.49764	-0.736096239	0.72492
342.5	314	0.743927	-0.638600464	0.801273
31.5	44	0.643103	-0.807354922	0.395689
1037	964	0.667825	-0.507436011	0.741674
0.5	3.5	0.825659	#NUM!	0.191287
16.5	35	0.93087	0.2410081	0.659726
0	0	?	#DIV/0!	?
18.5	31.5	0.839577	-0.624490865	0.555423
0.5	0	0.308068	#NUM!	1
8.5	7.5	0.809378	0.436099115	0.748758
72.5	116.5	0.692782	-0.9510904	0.398319
954.5	2194	0.687027	-1.726173879	0.293416
64	266.5	0.939168	-0.231815675	0.161505
267.5	245	0.661538	-0.645542566	0.735203
44	50.5	0.800004	-0.601450624	0.718221
5968.5	6879	0.898554	-0.235524937	0.798406
306	239.5	0.736378	-0.526068812	0.921787
0	1.5	0.450185	#DIV/0!	1
12.5	12.5	0.763231	-0.736965594	0.763231
481.5	497.999	0.945418	-0.128393779	0.923543
44	30	0.488812	0.84434913	0.3511
11.5	9.5	0.864816	0.231325546	0.735561
3.5	4	0.919687	-0.222392421	0.84064
107.5	160.5	0.959558	0.109788146	0.791948
2600.06	2680.21	0.8538	-0.333822074	0.832453
7.5	8.5	0.809553	0.415037499	0.884622
39	44	0.980812	-0.037474705	0.885481
1	1.5	0.353387	#NUM!	0.198892
13	14	0.951922	0.106915204	1
324	281.5	0.542511	-0.513301516	0.725988
91.5	84.5	0.900144	-0.21191909	0.955917
15.5	20.5	0.980001	-0.047305715	0.784243
71.5	65.5	0.943319	0.116253068	0.887085
19.7991	21.271	0.802648	0.53823248	0.834285
33.4106	41.8853	0.560466	-0.705315499	0.358862
638	400.5	0.812481	-0.314597598	0.830766
8.28217	1.24138	0.601453	-0.584321613	0.432847
5.5	2	0.462019	-0.874469118	0.758682
12.5	14.5	0.627586	-1.058893689	0.532012
0	0.5	0.450185	#DIV/0!	1
59.5	69.5	0.853505	0.371968777	0.936758
200.919	181.074	0.156029	-1.18385612	0.218497
65.3249	127.305	0.239665	-1.333890154	0.0328063
870.761	698.974	0.577005	-0.807197533	0.758606
264.818	234.124	0.300195	-1.167804614	0.395891
0.5	0.5	0.513713	1.584962501	0.513713
13.5	32	0.875905	0.374395515	0.581559
9	19	0.975235	-0.08246216	0.530189

1061	732	0.911266	0.133046554	0.645321
67	111	0.75696	-0.856635825	0.464424
1093	2315.5	0.704862	-1.541408588	0.341776
9.5	13	0.675235	0.706268797	0.85951
2589.15	2392.12	0.753002	-0.390384858	0.829959
10	13.5	0.74075	-0.736965594	0.545049
0.5	2	0.622002	1	0.353387
1.5	3.5	1	0	0.568955
1	2.5	0.680109	#NUM!	0.338084
327	348.5	0.714819	-0.510796482	0.657565
5.1509	2.80957	0.531724	-0.55746961	0.787399
1525.5	1746	0.844315	-0.350461783	0.744515
0	0	?	#DIV/0!	?
0.5	2	1	0	0.0805096
468.334	473.213	0.907631	-0.203108163	0.900362
0.5	0	0.308068	#NUM!	1
304.5	351	0.924803	-0.192306695	0.834302
162.5	146	0.924305	-0.120294234	0.979576
2.5	5	0.866773	-0.321928095	0.353387
0	0	?	#DIV/0!	?
11.5	4.5	0.932408	0.120294234	0.514539
0	0.5	1	#DIV/0!	0.308068
3448.5	3263.5	0.582961	-0.663296248	0.636433
1.5	1	0.264994	2	0.226047
6	7	0.770719	-0.584962501	0.665102
0	0.5	1	#DIV/0!	0.308068
757.5	565.5	0.40754	-0.79857317	0.723981
1712	1675	0.774417	-0.394953253	0.794026
1310	1639.99	0.987159	0.029432654	0.857073
676.5	310.5	0.134323	-1.427531534	0.795648
0.5	1	0.368277	3.169925001	0.423425
307.5	269.5	0.785627	-0.378746227	0.898846
0	0.5	0.0805096	#DIV/0!	0.18169
5.5	10	0.0312746	-1.459431619	0.00312923
7.5	4.5	0.9402	-0.099535674	0.711078
634	227	0.889448	0.195486708	0.472382
2872	2382	0.941011	-0.086693852	0.886862
429.44	754.639	0.787756	-0.712273172	0.45015
1794.5	1863.5	0.771341	-0.369016089	0.734503
40.5	29	0.991312	0.017702002	0.795113
1042.01	1264.51	0.520567	-1.147102495	0.38767
505.5	536	0.138408	-1.148677268	0.112268
1413.5	1267.5	0.479636	-0.88762734	0.576768
52	39.5	0.363018	-1.530514717	0.54711
8	15	0.66849	0.857980995	0.973261
1.5	3	0.391002	-1.584962501	0.0877066
33	66	0.787472	-0.489805268	0.279052
47	10	0.727764	-0.446064395	0.508152
3	2	0.806588	0.415037499	0.630057
0	0.5	1	#DIV/0!	0.308068
106	118.5	0.263868	-1.041419927	0.190431
12.5	13	0.491908	-1.473931188	0.467652
6	6	0.567924	-1	0.567924
0	2	0.622002	#DIV/0!	0.198892
2.5	2.5	0.889735	-0.321928095	0.889735
0	0	?	#DIV/0!	?

40	26.5	0.488584	-1.074000581	0.796855
52	60.5	0.906055	0.206450877	0.994107
110.92	106.229	0.793742	-0.535987869	0.82105
101.58	55.2711	0.461276	-1.399686028	0.837111
482.5	481.5	0.925068	-0.131386923	0.926844
2.5	7.5	0.895809	-0.321928095	0.215301
0	0.5	1	#DIV/0!	0.308068
19.2753	25.8038	0.628003	-0.891182803	0.419556
1	0	1	0	0.450185
0	0	?	#DIV/0!	?
0.5	0	1	0	0.450185
159.5	219	0.711584	-0.549228289	0.441052
276.5	236	0.824109	-0.240770951	0.991615
1786.5	1936	0.490835	-0.820639594	0.419272
0	0	0.308068	#DIV/0!	0.308068
787	897	0.836252	-0.399841498	0.74586
0	1	1	#DIV/0!	0.308068
0	0	0.308068	#DIV/0!	0.308068
317.5	321	0.95954	0.06442665	0.969297
28.5	27	0.888978	-0.21818017	0.930396
2239.5	2265.5	0.873703	-0.278774113	0.865479
262.5	240	0.758837	-0.432547268	0.836447
518.5	564	0.862639	-0.314296605	0.802743
0	0	?	#DIV/0!	?
6.5	8.5	0.413414	-1.378511623	0.250477
68.5	59.5	0.874607	-0.265142069	0.972571
47	29.5	0.917859	-0.111645356	0.684397
0	0.5	0.450185	#DIV/0!	1
0	0	0.308068	#DIV/0!	0.308068
3.5	1.99998	0.245192	-2.807354922	0.523245
3.5	0.5	1	0	0.252216
412.5	322.5	0.624252	-0.58758797	0.861994
0	0	0.308068	#DIV/0!	0.308068
2	2	0.604943	1.169925001	0.604943
1	5.5	1	0	0.403383
1618	1739	0.695181	-0.664935425	0.639628
79.5	78.5	0.856643	-0.268488836	0.867101
40.5	33.5	0.633802	-0.754887502	0.780825
0	1.5	1	#DIV/0!	0.308068
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0.5	0	0.308068	#NUM!	1
408	393.5	0.877968	-0.250360576	0.904959
826.5	793.5	0.0599085	-0.911151654	0.0737454
68	87.5	0.660758	-0.644519345	0.447669
422.001	429.5	0.764849	-0.370163426	0.747326
4080.5	4097	0.981869	-0.040515719	0.979223
43.5	51	0.87959	-0.273018494	0.763394
0	0.5	0.0805096	#DIV/0!	0.18169
2700.5	3007.51	0.609045	-0.866167922	0.527538
27.5	31	0.82817	-0.321928095	0.724417
0.5	0	1	0	0.450185
444.5	464	0.574428	-0.555248277	0.526498
239.5	226.5	0.862567	-0.267257225	0.906288
2509.5	2312.5	0.787012	-0.380669086	0.857598
243	258.5	1	0	0.961557

84.8967	114.297	0.925496	-0.202897204	0.736142
186.5	305	0.592891	-0.654288571	0.200395
803.496	1125	0.781629	-0.54424376	0.540334
1693	1801.5	0.742214	-0.612275274	0.697802
10	7.5	0.533628	-1	0.749033
21.5	17.5	0.694776	-0.381870635	0.936562
168	94.5	0.334105	-2.534336428	0.626032
2	3	0.545627	#NUM!	0.3832
1544.5	2204	0.817881	-0.645287218	0.62145
931	1263	0.977105	0.052495091	0.805627
222.5	328	0.64747	0.727859283	0.897194
327.5	318	0.685815	-0.895919478	0.704036
371.5	412.5	0.897281	-0.27043186	0.832201
314.5	361	0.940865	-0.13200928	0.842284
850.5	593.5	0.728409	-0.28301878	0.807824
5	10.5	0.784624	0.678071905	0.819459
21.5	19.5	0.96771	0.065588342	0.903461
3.5	5	0.432389	-2.807354922	0.267912
74.5	71.5	0.890489	-0.253384236	0.917689
34	35.5	0.867535	-0.306103128	0.83757
0	0	0.308068	#DIV/0!	0.308068
0	1	0.622002	#DIV/0!	0.622002
23.2857	16.9118	0.999023	0.001541887	0.755353
0	1	0.308068	#DIV/0!	0.308068
7.5	6.5	0.62404	-1.321928095	0.700524
3	1.5	0.855216	0.222392421	0.484842
1525.5	1271.5	0.487609	-0.693187757	0.68661
684.996	523.497	0.613698	-0.596578144	0.875389
0.5	0	1	0	0.450185
6.5	4.5	0.941228	-0.115477217	0.825659
1.5	4.5	0.847091	-0.584962501	0.237837
660	573.5	0.698861	-0.410672307	0.853843
106	70.5	0.806356	-0.293292227	0.840303
0.5	1	0.409442	2.584962501	0.499897
778.5	854.5	0.774353	-0.489509579	0.702736
86	96.5	0.828664	-0.403896942	0.746811
65.5	76.5	1	0	0.859712
88.5	96	0.855209	-0.338322533	0.798205
2	2.5	0.265726	1.321928095	0.338084
368.5	379.5	0.773079	-0.343126456	0.742728
20.5	29	1	0	0.805921
0	0	?	#DIV/0!	?
61	57.5	0.893407	-0.258311996	0.930526
34.5	23.5	0.557073	-0.899071091	0.850067
104.5	76	0.695033	-0.652076697	0.920849
901	819.5	0.848781	-0.253140872	0.933266
77.5	72	0.54378	-0.752562449	0.61246
516	734	0.354518	-2.448984831	0.196009
7	7	0.954155	0.099535674	0.954155
0	0	?	#DIV/0!	?
10	5.5	0.598406	0.765534746	0.405947
107.5	139.5	0.981869	-0.040833718	0.792239
607	531	0.761137	-0.569595673	0.850621
385.5	417.999	0.88478	-0.270914929	0.829187
1	0.5642	0.607844	-1.222861854	0.900667
11	10.5	0.939563	-0.137503524	0.969748

0	1	0.450185	#DIV/0!	1
2.5	1	0.888898	0.263034406	0.586334
9701.5	10350	0.565515	-0.666563284	0.50244
42.5	60.5	0.920337	-0.199937571	0.674085
547.5	497	0.559087	-0.502390551	0.683433
3.5	10.5	0.879059	0.362570079	0.393854
312	393.5	0.51123	-1.257496222	0.360359
0.5	4	1	0	0.368766
1227.5	1179.01	0.756204	-0.535290853	0.786014
299.5	288	0.281773	-0.873265367	0.316828
11.5	14.5	1	0	0.849191
5.5	8	0.667494	0.932885804	0.827714
0.5	2.5	1	0	0.415333
434.896	348.17	0.975442	-0.048873453	0.878249
1185.89	1069.87	0.959954	-0.06989002	0.957205
25	48	0.844837	-0.64385619	0.503534
592.5	518	0.291849	-0.765656498	0.440757
114.5	45.5	0.919233	-0.111283334	0.490179
555	607.5	0.898297	-0.236760712	0.835876
0	2.5	1	#DIV/0!	0.308068
348.412	338.371	0.783651	-0.427519178	0.80717
8	6	0.530478	-1	0.74706
1184.49	813.372	0.87985	-0.186406824	0.811266
34.5	34.5	0.760488	-0.553935605	0.760488
1	1	0.710482	-1	0.710482
8	12.5	0.695126	-1.415037499	0.472219
0	0.5	1	#DIV/0!	0.308068
564.933	585.545	0.873253	-0.300833984	0.849107
48.8651	70.7575	0.531876	-0.990216506	0.272666
823.649	688.953	0.505866	-0.34887951	0.868727
647.5	683	0.758618	-0.43937946	0.711412
3.03086	1.93717	0.617998	-1.014764713	0.884276
723.502	815.498	0.980927	-0.039421576	0.891468
0	0	?	#DIV/0!	?
181	149	0.729425	-0.444563452	0.90728
1.07725	0.56062	0.102023	-114.2571813	0.311837
6.5	5	0.829521	-0.378511623	1
13.5	16	0.764066	0.493040011	0.869178
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
107.61	93.2231	0.912274	-0.190510014	0.992893
187.945	240.398	0.80444	0.456495644	0.950335
3	2.5	0.625646	-1	0.741917
9	21.5	0.801769	0.473931188	0.531652
13	25.5	0.662062	-1	0.252733
1.5	1	0.558168	-1.593464781	0.763519
6.53E-17	2.07E-22	?	#NUM!	?
803.999	884.002	0.900758	-0.23740716	0.836824
1	0.5	0.764931	0.584962501	0.559404
92	66.5	0.498249	-0.865350473	0.78639
5.5	4.5	0.556212	-0.874469118	0.718453
2070.5	1533	0.5316	-1.06302224	0.746768
0	0	0.308068	#DIV/0!	0.308068
11.5945	10.5459	0.801058	0.367785288	0.742115
0	0	?	#DIV/0!	?
129	130.5	0.804384	-0.456638404	0.796283

41.5	44.5	0.886157	-0.28757659	0.84143
0	0.5	0.450185	#DIV/0!	1
9	19	0.75577	-1.169925001	0.381924
6.5	11.5	0.855216	-0.378511623	0.45258
273	223	0.182829	-3.883303775	0.259582
6	17	0.924239	-0.415037499	0.452613
2	0	0.438509	-2	0.785812
6.5	16	0.553186	1.428843299	0.933386
197.991	190.851	0.424677	-0.870601442	0.458591
258.425	266.954	0.515134	-1.731872059	0.497071
3.56196	0.26566	0.279346	-5.651930709	0.946032
393.22	467.441	0.685702	-0.365359586	0.471012
60.8865	32.4548	0.216249	-2.19301578	0.574336
0	0.5	0.450185	#DIV/0!	1
2.5	2	0.860525	0.263034406	0.72755
37.5078	39	0.836525	-0.396228726	0.810194
2.5	6.5	0.729943	-1.321928095	0.258834
37	8	0.691231	0.448758117	0.262054
3.5	0	0.184922	#NUM!	1
9	10	0.455985	-1.362570079	0.387299
2	1	0.622002	0.584962501	0.353387
3	0	0.308068	#NUM!	1
29	28.5	0.915595	-0.076621282	0.943638
12.5	40.5	0.988205	0.056583528	0.442485
14	10.5	0.608078	-0.900464326	0.809259
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0.00019	1.5	0.999884	#NUM!	0.308068
2.028	2.59E-25	0.0691897	#NUM!	1
0	0	?	#DIV/0!	?
2.13E-07	4.01E-32	0.308068	-27.12845997	1
1.27E-21	0	?	20.1310387	?
38	28	0.824764	-0.389946518	0.980281
0	0.5	0.450185	#DIV/0!	1
0	0	?	#DIV/0!	?
0	0.5	1	#DIV/0!	0.308068
25.5	59	0.742146	-0.971985624	0.27623
46	40.5	0.920788	-0.131244533	0.970229
1	1	0.430476	2.169925001	0.430476
0	0	0.308068	#DIV/0!	0.308068
2.5	2	1	0	0.825659
37.5	47.5	0.903839	-0.22881869	0.735918
12	19.5	0.711975	-1.125530882	0.446246
1	2	1	0	0.450185
317	473	0.420954	-1.986410935	0.220691
2.5	3.9358	0.56895	-5.126463574	0.384887
0	0.5	1	#DIV/0!	0.308068
116	66.5	0.960628	0.066831508	0.62919
5.5	6.554	0.658839	-1.121652032	0.555632
581	608.5	0.833135	-0.308950241	0.793469
0	0	?	#DIV/0!	?
0.5	0	0.308068	#NUM!	1
0.06142	0.07359	0.484387	-46.92275601	0.410813
6	8.5	0.887388	-0.263034406	0.627321
6.34E-17	2.07E-22	?	#NUM!	?
2.229	0.07359	0.308286	-52.10423923	0.970304

109.5	127.5	0.483696	-1.174874217	0.377906
5	5.5	0.879601	0.263034406	0.939529
0	0	0.308068	#DIV/0!	0.308068
0	0	0.308068	#DIV/0!	0.308068
13	8.5	1	0	0.761184
4.78E-25	0.07359	1	#NUM!	0.308068
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
6.34E-17	2.12E-11	?	#NUM!	?
1.92E-08	4.60E-10	0.308068	26.22264364	0.308068
1.5	1	0.559404	-1.584962501	0.764931
33	72	0.979677	-0.067114196	0.509504
998.495	1167.49	0.995479	0.010817538	0.903283
12	21	0.0210425	-1.415037499	0.00225647
0.5	0.5	0.450185	#NUM!	0.450185
198.5	227	0.768599	-0.438238343	0.652419
131.574	163.395	0.149907	-1.776038885	0.0816031
71588.8	69912.2	0.437036	-1.238959859	0.453974
558.925	565.507	0.0810829	-1.041213722	0.0770463
0.4568	0	0.942654	0.130352811	0.432532
0.00059	0.00927	0.943752	-5.692866524	0.309379
137.018	141.945	0.947469	0.119910497	0.969241
547.5	629.5	0.59232	-0.63114875	0.457816
0.5	0	0.308068	#NUM!	1
2	5.5	0.921239	-0.415037499	0.453341
24.6049	21.6953	0.708205	-0.720287055	0.792215
0	0	?	#DIV/0!	?
0.5	0	0.308068	#NUM!	1
6.01737	2.70683	0.391993	-3.280448343	0.725382
61.5	53	0.751985	-0.533123569	0.860453
2	3	0.18169	#NUM!	0.0805096
1468.5	1410.5	0.983186	-0.036311773	0.990095
943.5	796	0.218024	-0.814444347	0.394827
120.5	109.5	0.599155	-0.693720816	0.685996
1.22E-05	1.15E-05	0.307741	16.75101287	0.307741
5	3.5	0.659329	-0.736965594	0.91071
74.5	84	0.432966	-0.792903766	0.324534
0	0	?	#DIV/0!	?
0	0	?	#DIV/0!	?
0	0	0.308068	#DIV/0!	0.308068
7.48E-16	1.77E-14	?	#NUM!	?
1062.86	823.684	0.161498	-1.328741191	0.330662
1.5051	0.62619	0.340377	#NUM!	0.670117
1.5	0.5	0.513713	-1.584962501	1
29.5	29.5	0.760545	-0.59724083	0.760546
1	2	1	0	0.651448
80	65	0.964108	0.087461144	0.857558
1.5	0.5	1	0	0.513713
20	25.5	0.721174	-0.862496476	0.572419
1567.5	1598	0.106061	-0.986715843	0.0977211
2.40453	4.3608	0.908057	0.319207575	0.792914
203.169	266.1	0.953951	-0.108207611	0.762101
0.5	0	1	0	0.450185
105.548	145.291	0.728806	-0.793228766	0.52378
91.5	95.5	0.951393	-0.123382416	0.925567
4.49147	2.26605	0.236628	-3.835257812	0.540222

4	5	0.680109	-1	0.544016
7.84813	11.7634	0.00210508	-29.11636469	0.000637389
0.5	4.5	0.825659	#NUM!	0.119381
2.5	4	0.900374	-0.321928095	0.624065
576.5	721	0.954286	0.117689277	0.911119
1	1	0.710482	-1	0.710482
9.5	7.5	0.898973	0.144389909	0.706667
36.5	32.5	0.963868	0.058102955	0.868394
0	0	?	#DIV/0!	?
652.5	592	0.792303	-0.347019076	0.880931
134.5	111.5	0.945854	0.10346332	0.823415
1462.93	1469.2	0.276562	-0.881618938	0.272956
17	9	0.477027	-1.087462841	0.933926
2.5	3.5	0.770719	-0.736965594	0.568955
142.408	161.753	0.300133	-0.861975299	0.202281
215.48	238.849	0.873053	-0.148473803	0.738219
0	0	?	#DIV/0!	?
67.5944	134.118	0.282408	-1.294992806	0.0401203
215.48	238.849	0.873053	-0.148473803	0.738219
15	17	0.572482	-2.099535674	0.512179
13	10	0.607715	-1.378511623	0.74463
29.5	23	0.700981	-0.59724083	0.89177
27.6498	44.7635	0.515903	-0.388597733	0.0763793
0.05479	0.07359	0.51747	#NUM!	0.398366
132	109.5	0.400208	-2.489805268	0.494731
93.4678	111.365	0.324005	-1.764885687	0.2314
14	13	0.88766	-0.283792966	0.932371
307	264.5	0.579438	-0.621849909	0.732872
80.3335	117.664	0.38611	-1.284139144	0.168037
5.5	14.5	0.958849	0.125530882	0.411194
93.5	92	0.889947	-0.261492241	0.900505
1	2	0.806588	-1	0.481309
306.5	259	0.980415	0.034877485	0.857561
195	143.5	0.916291	-0.139724764	0.845305
3	3.5	0.878232	-0.263034406	0.76082
34	30	0.508051	-0.958179824	0.609951
0	0	?	#DIV/0!	?
1344.5	1332.5	0.222029	-1.040810614	0.228267
28	30.5	0.681989	-0.853158612	0.625287
5.5	3.5	0.805463	-0.289506617	0.805463
355	324.5	0.940618	-0.094464684	0.97886
0	0	?	#DIV/0!	?
47.5	36.5	0.335562	-0.814968106	0.632686
1.27E-21	0	?	20.1310387	?
104	183.5	0.393678	-0.634350528	0.0521327
2042.99	2146.5	0.7705	-0.485207932	0.73204
0	0	?	#DIV/0!	?
800.53	855.099	0.496894	-0.716278479	0.432072
19	22	0.848139	-0.440572591	0.760556
2.5	3.5	0.397364	1.378511623	0.513713
9	7	0.794897	-0.469485283	0.958279
1389.18	1464.87	0.686356	-0.49754731	0.633863
73.9807	54.3196	0.616857	0.8573351	0.513828
0	0	?	#DIV/0!	?
90	58	0.705375	-0.723668772	0.969861
0	0	?	#DIV/0!	?

7	3	0.29798	-1.485426827	0.897841
2	0.5	0.630057	-1	0.806588
50	45	0.593861	-0.514573173	0.718239
1	3.5	0.878232	-1	0.391002
1	1	0.710482	-1	0.710482
84.5	73.5	0.944613	-0.097098688	0.944613
35.5	31.5	0.767807	-0.449307401	0.863537
162.5	157.5	0.906341	-0.225354835	0.926167
154	209.5	0.940635	-0.122128298	0.689736
2.55269	5.70313	0.603501	0.878485965	0.802544
9.44731	9.29687	0.952188	-0.101249657	0.963408
228.5	242.5	0.309746	-0.959533408	0.263255
0	0	?	#DIV/0!	?
64.298	93.1583	0.697651	-0.580437203	0.387917
0	5.5	0.598767	#DIV/0!	0.658534
89.5	78	0.827931	-0.198413558	1
38	35.5	0.931051	-0.139403057	0.980265
2283	2449.46	0.845017	-0.375740747	0.797207
3.5	5	1	0	0.791627
29	39.5	0.776018	0.351472371	0.92866
27	25.5	0.863069	-0.111031312	0.965517
361.5	363.5	0.748094	-0.526308283	0.74378
28.1951	29.3478	0.534162	-1.046194767	0.504689
1635.71	1501.89	0.79993	-0.435828315	0.86149
2705.5	2783	0.889539	-0.21000338	0.866494
1310	1397.5	0.826908	-0.322616568	0.771402
206.5	216.5	0.864669	-0.297680549	0.830269
1784.5	1729.5	0.911075	-0.219162204	0.930434
491	648.5	0.668044	-1.161502085	0.508486
75	132	0.977455	0.065802058	0.671121
48.5	250.5	0.928501	0.444481277	0.379747
348	463	0.993483	-0.016678741	0.809044
350.5	321	0.767727	-0.487486349	0.834042
15.5	6.5	0.635961	-0.866733469	0.890299
388.5	369.5	0.738902	-0.360979456	0.794291
145.5	60.5	0.928782	-0.124179411	0.596329
584	444.5	0.933831	0.105944376	0.734037
554.5	575	0.927181	-0.169599814	0.903073
348.5	390	0.841843	-0.349617823	0.757842
1629.5	1636.5	0.798034	-0.349977191	0.794146
840	1106.5	0.889342	-0.313366081	0.71782
6977	6216.5	0.819301	-0.433698831	0.894212
564.5	494	0.835522	-0.379278538	0.923704
831.003	1009	0.906916	-0.234162083	0.777699
3.5	4	1	0	0.914417
298.5	458.5	0.880242	0.296086203	0.83877
0	0	0.308068	#DIV/0!	0.308068
764.738	968.929	0.986219	0.038144217	0.877202
389	498.5	0.8879	-0.299845597	0.727096
96.5	106.5	0.556276	-0.850990051	0.475367
26.5	42	0.709115	-0.727920455	0.384425
33.5	34	0.701231	-0.606657572	0.689265
2874.5	3475.5	0.933366	0.165093158	0.95168
194.5	221	0.93999	-0.156543119	0.861381
771	858	0.824537	-0.49123924	0.758784
4	15	0.971028	-0.192645078	0.431363

262	268.5	0.609579	-0.776035159	0.589511
676	860.996	0.639212	-1.292349752	0.502528
74.5	96.5001	0.934931	0.155870911	0.896927
434	437	0.910929	-0.191695624	0.906016
2458.03	6147.73	0.7995	-1.047753809	0.35775
2573.5	2706.5	0.921857	-0.195731658	0.890296
707.5	833	0.990776	-0.021571492	0.881219
16	6	0.669928	0.754887502	0.435036
3	0.5	0.855216	-0.263034406	0.484842
3.5	3.5	0.19041	-2.807354922	0.19041
13.5	13.5	0.801376	-0.432959407	0.801376
3145.5	2324	0.432252	-1.333671428	0.643277
1804.5	1870	0.945304	-0.127822174	0.921988
1116	936.5	0.903705	0.223500057	0.81329
5735.55	6167.5	0.856171	0.350346071	0.895155
232	190	0.931528	-0.113147158	0.904316
536	609.5	0.942217	-0.139793196	0.857429
1067	2154.5	0.82267	0.570012159	0.804871
1106	1228.5	0.967027	0.079935886	0.968871
1261.5	1501.5	0.989163	0.028871847	0.909146
585.496	809.008	0.823061	-0.515795863	0.618457
2253.04	2002.5	0.842881	-0.245114395	0.95427
5476.53	5883.47	0.777774	-0.48998772	0.723706
732.5	721.5	0.678813	-0.526580985	0.69332
666.5	649.5	0.958379	0.083063308	0.940511
0.5	0	0.308068	#NUM!	1
126	124	0.803308	-0.430385464	0.815059
0	0	?	#DIV/0!	?
51	55.5	0.734606	-0.650057529	0.675201
3047.5	2208	0.825332	-0.360306286	0.956431
745.65	646.889	0.924631	-0.108957134	0.938088
0	2	0.515664	#DIV/0!	0.822295
111.5	86.4999	0.852585	-0.238657476	0.930139
0	0.5	1	#DIV/0!	0.308068
592	682.5	0.319711	-0.750021747	0.19986
40	47.5	0.880379	-0.234465254	0.737096
0	0	?	#DIV/0!	?
729.002	717.496	0.883011	-0.20600278	0.896758
0	0	?	#DIV/0!	?
293.5	341.5	0.821191	-0.486410259	0.724326
69	129.5	0.867257	-0.508611615	0.52423
98.5	92	0.889862	0.2483129	0.851776
134	161.5	0.886701	-0.311201688	0.770763
95	89	0.917219	-0.168976172	0.96444
15.8204	17.2573	0.765822	-0.696753205	0.713729
26.5	27.5	0.842936	0.249359469	0.873886
1565.5	1600	0.780807	-0.425674504	0.76275
607.139	550.715	0.779457	-0.436410713	0.856277
1143	1117	0.615665	-0.633088879	0.637487
12.5	19	0.763698	-0.943416472	0.542149
978.874	1050.14	0.851316	0.311784988	0.895697
32.5	37.5	0.804745	0.36994961	0.906362
1597	1578.5	0.603668	-0.809841354	0.612997
101.5	113	0.835799	0.271302022	0.925053
366.5	333	0.801299	-0.440853791	0.869048
344.5	408.999	0.945138	0.131976483	0.947632

100.5	92	0.46098	-0.950611973	0.536764
53.5	48	0.865346	-0.33207605	0.932293
178	175.5	0.926068	-0.149303944	0.936592
262	306.5	0.865512	-0.353942902	0.76431
2282.51	2179.44	0.798165	-0.328634066	0.841854
215	166.5	0.63348	0.591657153	0.500303
378	398.5	0.351895	-1.038680468	0.311067
29	20	0.947223	0.072756342	0.649478
494	584.5	0.600433	-1.626439137	0.512
24	23	0.661348	-0.726981506	0.694066
556.5	1023.01	0.941842	0.106171907	0.487002
2318.5	2738.5	0.898312	-0.268708056	0.792784
626.5	775.5	0.843719	-0.437861144	0.709397
312.5	351	0.969307	0.076422275	0.961191
774.5	812	0.986057	-0.03201935	0.955333
2.5	4.5	0.568955	-2.321928095	0.291911
198.5	216.5	0.833797	-0.389821214	0.772503
6	11	0.622002	1.115477217	0.885583
466	611	0.85944	-0.386427878	0.684483
1060.5	1030.5	0.690795	0.619250839	0.675871
81.5	76.5	0.734955	0.599639077	0.705561
15	15	0.728778	-0.819427754	0.728778
8252	5491.5	0.470704	-1.804429492	0.691406
4625	3969.5	0.730398	-0.650695935	0.832456
1080	824.5	0.498573	-1.699605067	0.64815
120	144	0.524682	-1.678071905	0.422425
412.499	291.5	0.823416	-0.366318717	0.944947
291.5	270	0.664556	-0.613704886	0.73113
63.5	58	0.528565	-1.779231321	0.576975
121.5	248	0.754851	-1.079322453	0.383532
329	206	0.795695	-0.425305835	0.903836
1401	1355	0.653903	-0.737995723	0.679755
3	0.5	0.57998	0.874469118	0.304033
18.5	16	0.667232	-0.817135943	0.765459
2662.47	2735.45	0.838801	-0.33295369	0.817916
1366.5	1807.49	0.590381	-1.550542659	0.436706
2813.59	2946.02	0.751442	-0.467730741	0.711904
800	842.5	0.197359	-0.957355663	0.164417
421.5	459.5	0.433169	-0.551970675	0.330387
469	499.5	0.748257	-0.604317433	0.703645
406.5	503	0.755479	-0.365615347	0.532731
4913.14	4484.99	0.791527	-0.374424662	0.869551
1727	1775.5	0.729557	-0.634462747	0.709655
746.5	613	0.621081	-0.403168679	0.892917
2501	2320	0.392323	-0.791435565	0.469386
587	600.5	0.702994	-0.417497338	0.678065
622.5	559	0.690545	-0.497295181	0.794032
2011.5	1916	0.722226	-0.460821909	0.768093
2850.06	3049.52	0.775366	-0.409705288	0.715596
2505.5	2690	0.568137	-0.956050894	0.514858
3028.5	3490.5	0.740858	-0.475930693	0.614786
9895	15865	0.970519	-0.085518628	0.676373
1046	1452	0.884149	-0.303597578	0.662397
13.5	14.5	0.787885	-0.432959407	0.730541
4367.55	4437.06	0.767819	-0.441130706	0.754473
406.5	656.5	0.786974	-0.821621491	0.526903

1674.5	1833	0.923316	-0.184483316	0.863572
1166.5	1087	0.865136	-0.225074587	0.928378
1557	1397	0.721304	-0.539810464	0.809657
3133	2911	0.789815	-0.40052872	0.849878
5055.48	4492.35	0.863722	-0.262620104	0.954624
224.5	506	0.767074	-0.856375324	0.305613
101.5	119	0.773758	-0.631912916	0.672099
109	137.5	0.765253	-0.670152242	0.616464
120.794	107.95	0.955259	0.064579964	0.852549
2463.5	3011.5	0.636025	-0.500793269	0.424138
1216.51	1258	0.841335	0.394872813	0.858219
65	76	0.630052	-0.546634382	0.471638
6	6	0.756486	-0.584962501	0.756486
786.5	823	0.879103	-0.208851604	0.838258
14.5	17	0.753182	-0.688055994	0.650732
336	331	0.967078	-0.063642495	0.978425
842.551	1013.98	0.536674	-1.187960273	0.413086
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132	96.5	0.934216	-0.078609835	0.739326
438.5	289	0.669579	-0.429919299	0.888663
3397.5	3509	0.645857	-0.669899653	0.618247
275	273.5	0.695785	-0.416787281	0.701905
623	630	0.849312	-0.259334	0.839233
416.683	446.388	0.323609	-0.773429653	0.261228
18	29.5	0.931752	-0.215728691	0.638438
129.488	134.068	0.79418	-0.400833121	0.765456
70.5	63	0.941125	-0.106128351	0.970531
1693	1557.71	0.515739	-0.982214864	0.581592
533	576	0.858661	-0.249027548	0.788948
920.5	691	0.910949	-0.16855427	0.887915
1341	1344.5	0.993084	0.01657981	0.994646
14.5	17.5	0.823359	0.427421224	0.928568
27	27.5	0.81744	-0.328622747	0.801363
3588	3486	0.698352	-0.548338619	0.723672
960.5	866.5	0.971558	0.045099444	0.884503
1736.5	1791	0.736422	-0.567825457	0.712668
640.5	408.5	0.556347	-0.736214972	0.954547
551.5	478.5	0.74671	-0.494348578	0.859626
31	32.4272	0.86179	-0.175856299	0.807798
4641.98	4709.95	0.792859	-0.396924703	0.780738
852.387	758.232	0.369482	-2.127782941	0.433281
99.6137	177.267	0.556766	-1.430129619	0.236267
80	84.5	0.911142	-0.223896012	0.876746
59.5	67	0.877141	0.295006796	0.945122
25484.5	27593.5	0.752352	-0.711870709	0.703261
1131.5	1171	0.725654	-0.514664249	0.696066
2510	2529.5	0.430708	-0.666849996	0.422165
327.5	315	0.730093	-0.448460501	0.766775
1547	1523.5	0.751452	-0.390686337	0.766625
3794.5	3503	0.818078	-0.427703129	0.871656
0.00726	0	0.310998	7.105796852	0.308079
2039.49	1804.51	0.778886	-0.362351819	0.891897
2.5	0.5	0.706667	-0.736965594	0.706667
1607.5	810.5	0.483937	-1.228538256	0.921095
1591	1381	0.487378	-0.680794828	0.643589
348	294	0.717191	-0.557247123	0.850478

276.5	209.5	0.712457	-0.552714957	0.929056
2832.44	4855.73	0.870488	-0.372109604	0.515675
394.999	380.5	0.846196	-0.368317348	0.870875
2445	2503	0.970488	-0.071053297	0.95594
6081.77	4865.28	0.202009	-0.873329744	0.429502
4362.5	5126.5	0.914832	-0.156511375	0.773981
50.5	41.5	0.802099	-0.429392792	0.938197
1237.5	1151	0.671536	-0.532588765	0.741208
5	10.5	0.83759	-0.736965594	0.463708
75	67.5	0.959426	-0.068947354	0.95364
120.5	108.5	0.939637	0.058654218	0.797946
663.5	621	0.735922	-0.456580576	0.795803
491	553.5	0.851563	-0.396547394	0.775661
92	131	0.621385	-1.238159737	0.411101
11.5	14.5	0.914245	-0.201633861	0.748768
1646	1636	0.929047	-0.170527711	0.932898
971	964	0.913587	-0.207365495	0.918214
660.498	619.999	0.898148	-0.230424396	0.940287
167.5	287.5	0.993284	0.021373651	0.696553
1469.5	1518.5	0.932082	-0.158617838	0.910456
1630	1763	0.815402	-0.469144905	0.763382
561.5	467	0.633902	-0.899522536	0.758571
479.5	634.5	0.983344	0.044439706	0.846047
5780	6130	0.831455	-0.339980659	0.784506
5196.5	4383	0.961511	-0.069237631	0.910149
1670.51	1718.01	0.822097	-0.35238572	0.799487
730	671.5	0.962752	0.081638469	0.911715
581	559.5	0.869442	-0.280019239	0.896554
400.5	352	0.549624	-1.178052882	0.635115
5557	5146	0.379928	-0.75096612	0.462606
198.348	229.338	0.891378	-0.240835528	0.784191
267.5	287.501	0.496836	-1.362955363	0.450489
137.5	91	0.682727	-0.710970386	0.956675
8932.5	9805.5	0.625607	-1.380014456	0.574678
13732.2	15628.6	0.603482	-1.489502997	0.532912
1429.5	1316	0.615734	-0.642091117	0.693135
30.5	39	0.837478	-0.258311996	0.588731
3812.98	4032.42	0.585071	-1.387918086	0.552705
2399.5	2554.5	0.785445	-0.419553923	0.733442
2400.5	2965.5	0.645256	-0.675489927	0.466969
1098.51	1121.51	0.730832	-0.559273551	0.714448
784	776	0.746179	-0.493176327	0.75467
3555.01	4115.47	0.622514	-0.584650053	0.479386
1336.5	1670	0.836718	-0.436607184	0.690209
1155.32	1463.98	0.760373	-0.708049285	0.612139
1342	1419.5	0.863926	-0.33761449	0.827094
15	24	0.491936	1.359895945	0.662983
869.504	826.999	0.853378	-0.341984088	0.886929
915.5	1032	0.907714	-0.232012714	0.830113
1047	1227.5	0.875393	-0.317800209	0.770396
626.5	920.5	0.938055	0.161070541	0.818081
5122	5415	0.829394	-0.391938983	0.789728
11	7	0.895104	0.184424571	0.63554
4771	5200.5	0.570971	-0.963867282	0.50697
1820.5	1826.5	0.867025	-0.26216295	0.864427
7571.03	7891.27	0.762395	-0.625128014	0.735388

1262.5	1380.5	0.895521	-0.22792621	0.829986
3083.56	2511.02	0.465317	-1.746460152	0.582846
1054.5	961.487	0.919489	0.167109986	0.862378
3359	2911	0.490751	-0.802798672	0.627748
1555	1469	0.785399	-0.498100111	0.824904
2017	1878	0.690445	-0.724738789	0.741161
24	23.5	0.97068	-0.061400545	0.985336
2082.53	2248.04	0.809806	-0.473394014	0.758108
805.998	719.505	0.42205	-1.799764065	0.488263
700	639.003	0.740171	-0.430222842	0.825213
205.5	178.5	0.524238	-0.982554866	0.634352
338.5	229.5	0.878624	0.180070744	0.609458
1422.01	1453	0.820814	-0.375025798	0.80427
267.5	279.999	0.958159	-0.094728288	0.927503
2263.5	2260.5	0.727508	-0.550948468	0.728576
26751.8	15775.4	0.886838	0.202661895	0.60512
1801.5	1635	0.892906	-0.202114439	0.968486
4750	4000.5	0.614658	-0.635339107	0.775564
10355.1	10686.3	0.76925	-0.598891385	0.748613
616.5	708.5	0.930389	-0.168609274	0.837674
1276	1319	0.840964	-0.324474278	0.815054
3386.5	2846	0.847246	-0.256446261	0.996924
1299.5	1349.5	0.799489	-0.425623067	0.770524
664.503	773.501	0.886305	-0.268906979	0.77997
1237.7	1430.3	0.887438	-0.316695195	0.800843
11821	11738	0.61121	-0.677608208	0.617593
5382.91	5338.43	0.66036	-0.770522253	0.666507
210.5	151.5	0.498683	-1.786939086	0.673873
930	929.5	0.730341	-0.41400368	0.730887
222	246	0.690533	-0.80573118	0.620884
12.5	17.5	0.368766	-2.64385619	0.217157
284	325.5	0.798924	-0.421826665	0.690636
8.5	16	0.108146	-1.765534746	0.0145581
2237	2239.5	0.78325	-0.446111129	0.782375
2144.5	2276	0.844565	-0.336804857	0.80013
261	293	0.950488	-0.118012913	0.873907
23861.5	25424.5	0.49344	-0.79998241	0.435643
7	11	0.450185	-0.807354922	0.13656
1724.5	1716	0.871604	-0.23085277	0.875828
2212.5	2145.5	0.746749	-0.575700362	0.768976
4010	4398	0.857319	-0.349854294	0.795094
649	745	0.804544	-0.359081093	0.682236
665.5	638.5	0.853141	-0.227278317	0.893565
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36.5	30	0.766155	0.551642428	0.68323
9.5	18	0.955161	0.144389909	0.678186
5547.5	6008.5	0.758848	-0.699318636	0.710016
1777	1475.5	0.757134	-0.475555845	0.901838
517	561.5	0.994576	-0.01402047	0.946366
246	269	0.835957	-0.39176772	0.773816
24.5	21.5	0.566589	0.472752997	0.46033
1186	1163.5	0.80339	-0.40131666	0.818314
91	77	0.861267	-0.250406798	0.995178
25.5	29.5	0.962134	-0.087462841	0.862169
80	72.5	0.968191	-0.064540252	0.963652
11.5	11.5	0.971396	0.061400545	0.971396

6642.5	6410	0.610511	0.803206811	0.594685
15456.7	15623.9	0.823484	-0.389078737	0.81563
2213	2303.5	0.85657	-0.324701411	0.828117
1796.5	1883	0.938841	-0.132373081	0.905456
17.5	22	0.394325	-1.669851398	0.265889
279	269.5	0.686533	-0.644341048	0.714051
1582.5	1318	0.48578	-1.145181828	0.62003
5053.49	4966.56	0.797232	-0.405407948	0.811035
41987.5	31130.5	0.379884	-0.603802653	0.81835
2185	2285.5	0.947545	-0.131244533	0.919919
589	524	0.756481	-0.37398734	0.871844
37	53.5	0.658725	-1.402098444	0.463148
248	280.5	0.980993	-0.038316932	0.886547
1901.97	2050.5	0.852511	-0.370697244	0.803102
246.5	243	0.921261	-0.15102797	0.932464
1106.99	1067.48	0.806169	-0.485815772	0.829747
636	458.501	0.871969	-0.237403806	0.892319
801	815.5	0.979778	0.048699455	0.990439
0	0.5	1	#DIV/0!	0.308068
89.5001	109.5	0.805461	-0.506537466	0.669272
1602.5	1752.5	0.970944	-0.070569395	0.914203
4016	3789.5	0.932807	-0.142217218	0.973134
208	214.5	0.782726	-0.500767373	0.760622
25.5	49	0.363957	-1.502500341	0.0811944
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5.5	6	0.532454	-1.874469118	0.486517
17	19	0.798271	-0.387023123	0.703593
6403.15	7032.51	0.913173	-0.167938852	0.836816
1111	1047	0.653543	-0.549687026	0.71173
536	516.5	0.789757	-0.451379346	0.817384
1096.5	1096.5	0.839027	-0.328852253	0.839027
1162	1059	0.768204	-0.439242959	0.844532
218	217	0.760726	-0.450771711	0.764627
513	852	0.957819	0.130327197	0.753585
653.5	706	0.735091	-0.702787248	0.684113
281.5	291.5	0.502877	-1.927537746	0.484245
1819.5	2001	0.989822	-0.019558207	0.914674
0.5	0.5	1	0	1
903.503	911.996	0.731563	-0.471757569	0.723083
768.503	1001.5	0.930382	-0.174400331	0.751121
6051	6795	0.771868	-0.421489314	0.669657
5681	6636.5	0.76321	-0.470696942	0.633373
3920.5	4249	0.871355	-0.324644559	0.819098
3560.01	4045.5	0.803894	-0.44866086	0.7097
8135.5	9222	0.610983	-0.600921778	0.4883
5319.81	5649.5	0.762296	-0.446698851	0.710479
787	818.499	0.884086	-0.249532419	0.855329
3477.4	3609.97	0.706097	-0.503179517	0.671289
3624.5	3274.5	0.766171	-0.499667091	0.841318
35	76.5	0.878474	0.378511623	0.657054
61.5	69	0.743142	-0.533123569	0.650702
247.5	236	0.796717	-0.377637527	0.836714
8874	9214.5	0.525726	-0.724528142	0.489477
209	160	0.874163	-0.211504105	0.9092
27	34	0.768798	0.602664502	0.882436
1824	1948.5	0.575246	-0.648634519	0.510353

944.5	1025	0.828528	-0.331698725	0.760279
1462.5	902	0.898218	0.15952983	0.593832
370.487	371.058	0.90532	-0.178280471	0.904073
3730	4287	0.553346	-2.179335075	0.485709
3597.5	2719.03	0.867936	-0.278252357	0.947899
9006.5	8041	0.609604	-0.606588403	0.722047
50	66.5	0.987431	0.028569152	0.808148
9085.5	8439	0.387254	-0.848997636	0.458887
122168	107887	0.457119	-0.444191557	0.666694
893.499	942.499	0.996598	-0.007289187	0.959611
632.5	705	0.932798	-0.161546109	0.860942
947.5	1122.5	0.973364	0.068394024	0.925451
4441	5081	0.888103	-0.304692162	0.805488
2602.51	2249	0.65886	-0.540371349	0.800516
965.5	954.5	0.670247	-0.6205117	0.680063
2356.99	2229.98	0.67389	-0.557512831	0.724941
701	656.5	0.975704	0.05650437	0.937177
502	593	0.657173	-0.501901737	0.485335
2738	3178.5	0.864281	-0.377589815	0.772699
1412	1275	0.470946	-0.629053323	0.592635
6050.68	6467.98	0.850441	-0.350132905	0.803915
1465.5	1348.5	0.877895	-0.301644253	0.929273
4953	5344.5	0.912335	-0.228497866	0.865609
3310	3330	0.905627	-0.246307571	0.902022
2356.5	2530.5	0.903264	-0.240256935	0.857358
1055.5	1095	0.857546	-0.309848144	0.830564
4083.5	3748	0.748301	-0.442201208	0.824197
2124	2117	0.720262	-0.500379291	0.723207
1034.5	993.5	0.549753	-0.669312683	0.590699
2222.5	2277	0.399951	-0.656999941	0.373131
1816.5	1549	0.221174	-0.987741862	0.358235
1313.01	1244.49	0.692014	-0.561803284	0.738758
3298	3555	0.924174	-0.16626604	0.870486
5443.5	5487.5	0.76332	-0.468904371	0.756759
123	132	0.880558	-0.270089163	0.830404
1722.5	1678.5	0.564404	-0.60818121	0.592066
1143	1190.5	0.549266	-0.717740521	0.510784
650.5	570	0.700795	-0.302377963	0.893068
1631.5	1499	0.751665	-0.420500861	0.829066
906.5	868.5	0.676604	-0.463316126	0.722533
1340.7	1147.03	0.64513	-0.590075378	0.790289
550	461.5	0.674918	-0.527748562	0.840136
723.5	616	0.643257	-0.416700165	0.847685
1673	1516.5	0.669028	-0.429772272	0.783264
1173	1178.5	0.98126	-0.043068722	0.978274
5	5.5	0.398521	-0.514573173	0.281682
1427.5	1245.5	0.384042	-0.672725408	0.551339
407	363	0.882445	-0.276567561	0.955077
399	408	0.84143	-0.385216366	0.826529
578	735	0.787591	0.551292477	0.910169
1185	1082	0.90238	0.198189092	0.845683
648.5	703.5	0.757878	-0.61304231	0.702515
161.5	142	0.868923	-0.318582067	0.948488
160	162.5	0.840163	-0.299560282	0.827158
102.037	260.5	0.923413	-0.313984479	0.41933
694	759.5	0.767194	-0.437383658	0.689083

2617	2770	0.766486	-0.446807613	0.718313
65.5	78.5	0.883635	-0.213244039	0.723162
257	643.999	0.642377	-1.796171184	0.207331
8.5	5	0.506949	-0.91753784	0.931084
15.5	12	0.511926	0.878693704	0.415816
0.5	0	1	0	0.450185
726.001	582.498	0.977396	0.042107834	0.828614
1235.5	1376.5	0.718937	-0.670037181	0.640881
4478	5169	0.827458	-0.366049147	0.715078
269	272.5	0.865525	-0.204183623	0.852494
364.5	806.5	0.811712	-0.855138976	0.405773
1444.5	1437.5	0.816251	-0.344069646	0.820334
123.5	118.5	0.610675	-0.672242826	0.648377
3212.5	2936	0.674831	-0.54520961	0.758703
1715.5	1762.5	0.315706	-1.004632801	0.294485
5391	5137	0.486044	-0.880391015	0.528594
575.5	532	0.648093	-0.58183233	0.722399
1197.5	1065.5	0.468563	-0.650270694	0.604862
5	10.5	0.870052	0.378511623	0.667409
913	853.5	0.736309	-0.527270241	0.790131
1454	1455.5	0.878004	-0.239610641	0.877191
157	147.5	0.986556	0.022791865	0.935575
950.5	902.5	0.8065	-0.301955767	0.857218
396	413.5	0.769956	-0.472009685	0.735499
273.5	297.5	0.898786	-0.179517644	0.824399
549.5	466	0.594422	-0.472619051	0.804105
256	251	0.760423	-0.524266569	0.775116
561	467.5	0.674658	-0.414180538	0.887459
552.501	533.999	0.811139	-0.317039718	0.842474
474	525	0.772861	-0.283263731	0.647463
853	781.5	0.751139	-0.41672981	0.831872
154	161.5	0.912246	-0.158262084	0.871581
968.483	850.513	0.695426	-0.401651779	0.843509
553	485.5	0.885968	-0.208760556	0.989228
345.255	342.811	0.728593	-0.315860955	0.737797
68	72.5	0.946947	0.112209504	0.990343
2121	1956	0.939478	-0.113890967	0.998494
4985.5	4387.5	0.76415	-0.552203455	0.850994
5550.5	5830.5	0.685851	-0.504158293	0.637618
2041	1932.5	0.617022	-0.775347408	0.660977
1324.5	1034.5	0.202608	-0.886409234	0.457792
5437.5	5780	0.824841	-0.386013207	0.779539
81.5	77.5	0.755291	0.48416186	0.726939
37.5	43.5	0.427749	-1.64385619	0.340639
634	579	0.710197	-0.558469603	0.784993
1160.5	1333.5	0.697501	-0.586206203	0.579675
325.001	359.499	0.965647	-0.079857747	0.898313
2668.53	2575.98	0.78602	-0.514960163	0.809957
1995.5	2137	0.826965	-0.422406525	0.780348
10	12.5	0.910295	0.263034406	0.977504
1782	1726.5	0.754126	-0.441718621	0.781944
1107	992	0.793073	-0.379424185	0.884599
956	1015.5	0.90382	-0.216118188	0.861369
757	756	0.853785	-0.205498289	0.855215
2459.5	2471.5	0.649443	-0.584229461	0.644845
6	7.5	0.791975	-0.584962501	0.648754

527.5	641	0.878748	-0.274842959	0.734746
1813.5	1776.14	0.648174	-0.515141521	0.670043
1431	1295.5	0.7367	-0.638886905	0.803778
171	121.5	0.765431	-0.481214576	0.995049
230.5	288	0.948533	-0.130946517	0.80355
536.5	561.5	0.866068	-0.264917996	0.82966
949	1024	0.934907	-0.172587854	0.889646
2778	2601	0.780158	-0.540473961	0.823693
394.5	234.5	0.880624	-0.244503123	0.81054
5974	4613	0.68628	-0.656309073	0.877461
293.5	225	0.647266	-0.619787865	0.877217
995	1424.5	0.990928	0.026577658	0.801738
7071.09	4668.1	0.435265	-1.750156226	0.67434
7152.32	7119.64	0.892907	-0.24089918	0.89606
385	432.5	0.690691	-0.850622376	0.614615
601	633	0.791767	-0.208853368	0.714319
68.5	49	0.711954	-0.120752159	0.377381
5316.25	5352.58	0.664968	-0.58893138	0.658794
1200.5	1177	0.833087	-0.258594787	0.852618
9.5	12	0.521173	0.961525852	0.637009
3365.3	3559.83	0.472875	-0.660254264	0.41319
2546.5	2649.5	0.877999	-0.307623287	0.852722
6303	7739.5	0.881268	-0.29539346	0.74105
1790.99	1848.99	0.879474	-0.261104038	0.856264
338	333.5	0.913617	-0.172060746	0.923793
57.5	63.5	0.848471	0.334419039	0.908527
910.5	1193	0.955671	0.121497958	0.88828
5.5	4	0.943913	0.125530882	0.779894
4891.46	4276.5	0.7434	-0.559755607	0.840968
616	589	0.810313	-0.413476985	0.842928
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2027.05	2562.94	0.916906	-0.215749584	0.763705
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810	826	0.915505	-0.188072348	0.90195
977.5	903	0.850345	-0.334900392	0.904875
285.85	297.68	0.909256	-0.186783694	0.878661
19439	20064.4	0.482664	-0.450352949	0.436759
147.416	159.67	0.828705	-0.344264217	0.764299
126	149.5	0.896013	0.280107919	0.986461
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2416	1694.5	0.0929769	-1.079795051	0.369042
741.002	702.002	0.793636	-0.486201532	0.830601
1135	1077.5	0.852406	-0.28197037	0.894057
1705.5	1667	0.85296	-0.271943887	0.872001
153.5	208.5	0.992807	0.018675925	0.812176
469	488	0.697058	-0.500579052	0.659029
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311	320	0.915446	-0.156649458	0.891869
541.5	698.997	0.983304	-0.040525066	0.810824
25	13.5	0.0869754	-0.888968688	1
2653.5	2997.5	0.714491	-0.433367236	0.588972
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761	556.5	0.758293	-0.405589561	0.976094
5763	5667.5	0.822344	-0.346672159	0.835807
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186.735	191.983	0.914645	-0.15402612	0.891158
8056	7445	0.530177	-0.657870146	0.613916
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1646.5	1954.5	0.887025	-0.304184687	0.779244
1425	1419	0.884573	-0.261213204	0.887476
558.5	726	0.908075	0.212208432	0.917884
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974	1312.5	0.853909	-0.452044531	0.677092
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203.5	205.5	0.952157	-0.095237797	0.944814
198.5	205.5	0.769492	-0.488336954	0.742656
175.5	166	0.819491	-0.38923803	0.860047
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71	201	0.916359	0.293196376	0.475731
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388	386	0.74865	-0.486170676	0.752948
4	2	0.411079	-3	0.710482
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1523.5	1830	0.588778	-1.008071706	0.460212
3096	3885	0.929407	0.140634943	0.895152
26.5	33.5	0.91594	-0.236067358	0.773137
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443	483	0.846778	-0.360710337	0.786266
1241.5	1183	0.772471	-0.348608658	0.820911
740	538.5	0.689759	-0.384176536	0.946787
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763.5	652.5	0.575754	-0.619382305	0.739179
24.5	43	1	0	0.689641
271.5	395	0.337099	-1.119024103	0.126465
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408.5	419	0.891684	-0.264801332	0.87528
26.5	38	0.961948	0.10496956	0.821533
797.499	847.499	0.991102	-0.02003411	0.950696
436	411.5	0.663611	-0.459845295	0.728096
812.5	883	0.506079	-0.551180353	0.408331
161	136	0.778608	-0.424026283	0.912084
9.5	8	0.923682	-0.160464672	0.961772
1313.49	1290.99	0.770829	-0.481138589	0.784122
2236.99	2347.5	0.94865	-0.121732577	0.917443
2787.99	2817	0.852725	-0.318950555	0.845147
1408	1518	0.92605	-0.172296433	0.875253
3442.14	2998.07	0.72528	-0.436507699	0.857684
18	15	0.845931	0.187627003	0.673177
42.5	43.5	0.815593	-0.300866479	0.793312
4307.5	4435	0.566332	-0.574533837	0.534172
276	224	0.996612	-0.002615948	0.667419
4.5	5	0.21517	-1.584962501	0.165029
1532	1321	0.745371	-0.403158253	0.88673
364.5	374	0.974348	-0.054447784	0.956318
401.5	463	0.665157	-0.657734331	0.546191
13.5	104.5	0.653906	2.199311135	0.693147
3321.5	3253	0.521105	-1.027405562	0.536911
2532	2805	0.928933	-0.168109955	0.860118
430.5	364	0.64977	-0.516249751	0.822579
759	672	0.767361	-0.399283957	0.875631
751.5	694.5	0.837945	-0.303330876	0.902086
876	863.5	0.830806	-0.356934545	0.841586
462.5	531.5	0.843458	-0.375551289	0.745963
104	92.9999	0.685147	-0.667016717	0.770429
29.5	26	0.840466	-0.328054198	0.932944
3116.5	3035	0.717937	-0.568164043	0.739265
1445	1043	0.739687	-0.381159825	0.946957
452.5	434.5	0.580725	-1.138779398	0.607184
156.5	127	0.830043	0.37531707	0.727611
543	619.5	0.939685	-0.142293882	0.850384
742.5	711	0.86361	0.291095489	0.838244
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650	662	0.890345	-0.248898885	0.877719
644.5	728.5	0.905525	-0.232688738	0.824477
1429.5	1360.5	0.723481	-0.513348199	0.765849
8515.5	8235.5	0.729119	-0.645291678	0.752502
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793.5	923.5	0.872491	-0.310158318	0.768225
946.5	892.005	0.806262	0.349567459	0.767249
1642.51	1457.02	0.882159	0.19141157	0.791008
279.965	286.17	0.309737	-1.20304393	0.294438
30.5	23.5	0.323758	-1.682809824	0.489593

388	425	0.797032	-0.371094152	0.716575
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210	170.5	0.81154	-0.330541225	0.984432
404	389.5	0.651144	-0.565454342	0.686411
2132	1452.5	0.207714	-0.915246446	0.642273
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3769.5	3484.5	0.484701	-0.642648708	0.574681
6297.5	5948.5	0.168467	-0.831641298	0.212548
954	902.499	0.771625	-0.353858602	0.826674
1390	1340	0.586514	-0.543023712	0.62812
1517	1441.5	0.386245	-0.747624579	0.440374
2642	2505.5	0.450655	-0.643753807	0.512494
4619	5083.5	0.333769	-0.661859235	0.239567
1979	1596	0.283967	-0.956909837	0.491215
1218.39	1014.86	0.571613	-0.720839811	0.739874
4925	5483	0.221698	-0.742346053	0.143308
4278	3582.5	0.147239	-0.849616548	0.305244
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704	805.5	0.820904	-0.310955036	0.695871
2397	2232.52	0.452682	-0.724679613	0.528298
1708	1895.5	0.388219	-0.638087035	0.279712
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4055.11	4117.08	0.216835	-0.846920742	0.205163
2105	2336	0.711669	-0.630744082	0.631363
949	850	0.508926	-0.673518419	0.627572
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1310	1224	0.593128	-0.685580208	0.656102
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697	555	0.646147	-0.533622858	0.873357
2709	2571	0.430756	-0.634946796	0.493187
1648	2124.5	0.410408	-0.67667191	0.189418
3038	2479.5	0.186915	-0.863273767	0.387555
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1982	1767.5	0.750113	-0.433104994	0.851846
1385	1285	0.670882	-0.478568219	0.749982
608	542	0.456382	-0.811215971	0.56903
2840	4027.5	0.319652	-0.755284425	0.094953
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1360	1105	0.20991	-0.89566334	0.414022
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421	306.5	0.384167	-0.949492098	0.687616
1238	1188	0.731207	-0.446452895	0.770055
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2229.92	2160	0.503191	-0.50999987	0.545933
103	160.5	0.828391	0.493408563	0.935994
2107	1032.5	0.350542	-1.322441723	0.878899
2	0	0.308068	0.584962501	0.034897
3461.53	4400.25	0.820043	-0.417049168	0.641361
747.5	775	0.993242	-0.016499215	0.971386
3643	4073.07	0.777969	-0.453971958	0.687617
5332.08	5607.69	0.847654	-0.304365253	0.807388
2408.5	2364.5	0.761523	-0.491609773	0.775963
2740.5	2287.5	0.744898	-0.51446037	0.882942
573.5	641	0.886037	-0.287132729	0.813434
1135.5	1223.5	0.791186	-0.458240981	0.734816
53	77	0.926453	-0.204358499	0.687072
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109	125	0.696966	-0.659659868	0.590577
221.5	209	0.874263	-0.206200388	0.927224
1249	1036.5	0.69484	-0.44264142	0.887493
27	19.5	0.750137	-0.328622747	0.907037
2761.54	2873.5	0.977609	0.044982597	0.993727
39.9229	41.1887	0.763046	0.48782124	0.780948
856.5	848	0.726494	-0.540185612	0.73467
389.04	580.208	0.212386	3.281387821	0.232915
7.56145	24.1681	0.531141	1.490130452	0.889536
3075.53	3370.84	0.932772	-0.156663447	0.870697
1142	1293.5	0.97564	-0.043604769	0.868019
778.5	776	0.972158	-0.037547859	0.975636
326	366	0.92987	-0.158903595	0.848506
644.5	595.5	0.788785	-0.401299211	0.853484
3436.5	3152	0.299021	-0.78527455	0.388625
2206.46	2213.52	0.875349	-0.272225374	0.873059
1124	1056.5	0.663298	-0.59042787	0.719154
36	29.5	0.879168	0.187627003	0.729017
330.5	387	0.975125	-0.064725713	0.878906
2939.5	3163	0.803297	-0.42595804	0.747544
518	464.5	0.62671	-0.676958285	0.72186
331.5	286	0.133367	-1.019718235	0.232669
3212.03	3602.94	0.824967	-0.325359214	0.724879
1841	1992.5	0.870124	-0.276418303	0.810361
756.5	788	0.642664	-1.053421268	0.617353
961.996	963.998	0.53789	-0.575620505	0.535498
172.5	135.5	0.621234	-0.67556505	0.829999
1681	1562.5	0.764936	-0.451834809	0.824728

452	461	0.863308	-0.244639716	0.846179
423	413	0.651501	-0.554588852	0.674957
1324.5	1354.5	0.83165	-0.337120982	0.81385
295.5	312.5	0.820186	-0.270376381	0.762143
449.5	477.5	0.880293	-0.248027816	0.834008
1724	1817.5	0.924341	-0.170343477	0.887816
1093.5	1280.5	0.919187	-0.213623544	0.82071
194	229.5	0.89993	-0.251184688	0.78846
1424	1461.5	0.69458	-0.536154217	0.670921
2307.5	2264.5	0.744921	-0.530966335	0.759597
4377.25	4673.2	0.899296	-0.243267855	0.856053
5664.5	5621.5	0.852487	-0.326583703	0.857921
834.5	866.5	0.846205	-0.33953939	0.818788
402.224	364.7	0.668558	-0.835434847	0.73425
2605	2838	0.851728	-0.374446795	0.795444
4018.5	4315.5	0.845928	-0.379283708	0.798134
302	277.5	0.695962	-0.386655698	0.796369
15	11.5	0.583413	0.9510904	0.499517
36.5	38	0.959154	-0.102361718	0.934716
2316.97	2243.9	0.788536	-0.434476704	0.813393
3626.5	3899.5	0.842907	-0.399408562	0.7955
1314.5	1440.5	0.757343	-0.573212102	0.69142
5787	6358.5	0.835726	-0.358089656	0.764788
877.168	921.869	0.993464	0.015366717	0.975435
838.5	746	0.757857	-0.351917413	0.879017
571.5	538	0.812796	-0.294423544	0.871241
711.5	766	0.888068	-0.24110027	0.833424
997	885.001	0.734626	-0.633903787	0.815584
953	784.5	0.656461	-0.750400258	0.79941
6	9	0.881442	0.321928095	0.881442
623.622	566.628	0.81847	-0.36571247	0.891601
532.5	837	0.824303	-0.568797681	0.552477
660.998	567.002	0.537689	-1.495057984	0.626148
1966	1757	0.622158	-0.631002927	0.727122
564.501	529	0.81417	-0.356197481	0.866649
129.5	124.5	0.973834	-0.056806356	1
0	9	0.943913	#DIV/0!	0.284842
21.8325	24.3053	0.697767	-0.677766647	0.616495
34.5	27	0.163997	-1.649092838	0.300325
27	52.5	0.760408	-1	0.405856
1.5	0.5	0.0805096	#NUM!	0.450185
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1540	1541.5	0.574279	-0.732289107	0.573396
718	688	0.707912	-0.423097269	0.753276
1647.5	1632.5	0.864381	-0.271906071	0.871469
621.5	450	0.414838	-1.568804147	0.620005
16	24.5	0.903368	-0.299560282	0.64779
15	15.5	0.256796	-1.321928095	0.236749
1426.5	1399	0.805824	-0.369739575	0.821928
1087.5	1150.5	0.808487	-0.382896112	0.762893
691.504	740.494	0.708402	-0.507303723	0.645381
2774.97	3150.3	0.299464	-0.786720362	0.196667
2444.46	2669.52	0.927318	-0.131172307	0.851366
3.5	8	0.643345	1.280107919	0.962312
1804.49	1807.5	0.83243	-0.3754791	0.831238
1075	1085.5	0.928379	0.138723046	0.935285

1396	1124	0.823755	-0.310732885	0.999012
3393.5	3771.5	0.896001	0.270913275	0.951912
515.5	462.5	0.447275	-0.901304161	0.545714
1031	890.506	0.979985	-0.036848831	0.912146
463.5	469.5	0.569261	-0.6940342	0.557042
44.5	43.5	0.751956	-0.453365618	0.771695
119.5	161.5	0.997211	-0.006049045	0.768283
2393	2468	0.775186	-0.485245974	0.751718
134	138	0.918628	-0.195724471	0.899626
3574.41	3442.4	0.720757	-0.592172956	0.749707
6	6.5	0.553099	-2	0.513004
0.5	2	1	0	0.450185
59	73.5	0.915797	-0.114458725	0.660851
1641	1335.5	0.572773	-0.741710574	0.757074
325	252	0.682643	-0.498805857	0.923422
8019	7801	0.808645	-0.514393274	0.825533
574.5	407	0.941739	-0.113595032	0.835553
1484	1431	0.900379	-0.14510642	0.937406
552.001	679.5	0.761651	-0.559189043	0.608054
30	43.5	0.684759	-1	0.457529
692.499	703.503	0.889423	-0.21287086	0.876767
3545.41	3500.71	0.826903	-0.323800119	0.837513
2350.5	1933.5	0.129555	-0.754772423	0.325935
7.5	5.5	0.821423	-0.206450877	0.821423
7.5	8.5	0.0867407	1.30256277	0.106527
5.7243	7.8518	0.659105	-0.510198093	0.353
25052.4	27451.6	0.845757	-0.371177003	0.782813
579.828	526.258	0.833753	0.399625397	0.787233
53.4948	48.4415	0.411998	-3.248358406	0.457724
99.5	104.5	0.683035	-0.936184902	0.652879
22.815	19.4289	0.311977	-3.76077271	0.383418
12.8145	17.0616	0.866375	-0.457461776	0.711647
22.138	24.9729	0.438982	-3.883490486	0.385917
122.469	104.891	0.959931	-0.085198426	0.939838
11.5307	13.109	0.772541	0.379482403	0.874115
15.2314	15.254	0.211231	-4.155586214	0.21069
8076.62	9365.71	0.871792	-0.297968091	0.76598
49.5	19.5	0.458708	-0.606988807	0.562867
13	6	0.35031	-0.793549123	0.783067
8393.57	7473.28	0.602291	-0.535559257	0.732417
11.5	10	0.637318	0.38332864	0.509416
0.5	0	0.18169	1.584962501	0.0805096
3552.47	4487.47	0.270346	-1.307269136	0.147179
2919.02	2794.52	0.647914	-0.490267613	0.695693
1246	1330.5	0.988451	0.022973336	0.962772
4032.94	2535.5	0.712944	0.615641826	0.541577
43	25.5	0.425898	-0.934411658	0.90154
195	195	0.849454	-0.3594028	0.849454
17.5	21.5	0.676715	-0.807354922	0.531318
653	740	0.889387	-0.258182041	0.801726
3685.45	3784.54	0.920666	-0.188289152	0.903354
326.5	322.5	0.611646	-1.29024325	0.618705
54.5	34.5	0.993969	0.013175389	0.758748
846.5	761	0.953232	0.10752692	0.892602
15898.8	13679.5	0.69015	-0.62478959	0.808281
49.3499	110.932	0.836686	-0.522825265	0.334638

790.504	905.5	0.892321	-0.270168179	0.802875
182.5	303.5	0.582307	-1.102361718	0.2622
849	1021.5	0.640089	-1.194345367	0.531477
1089.49	1174.98	0.866812	-0.301541208	0.812772
1255	1380.5	0.991152	0.017709011	0.937305
580	590.501	0.878888	0.234776146	0.891168
64	103.5	0.645462	-0.714597781	0.280073
32.5	25.5	0.589908	-0.893084796	0.769401
157	130.5	0.721461	0.535101986	0.627376
145	180.5	0.728987	-0.796204798	0.590816
57	75	0.590989	-1.078002512	0.408095
4655.96	4717	0.758102	-0.669946754	0.75
19	12.5	0.762231	-0.604071324	1
113	78.5	0.822639	0.379493382	0.656144
3364.07	4686.36	0.848562	-0.412496634	0.628711
952	1936	0.891638	0.359620385	0.720768
56	36	0.703544	-0.637429921	1
4410.5	4108	0.713006	-0.783108739	0.757493
2058.53	2327.41	0.940858	-0.145931838	0.861467
134.681	116.892	0.547139	-0.62387912	0.701392
15.5	16.5	0.53649	1.293731203	0.553554
11.2083	10.8491	0.528959	-1.486495571	0.548291
303	348	0.917975	0.176786194	0.988548
0	2.5	0.825659	#DIV/0!	0.407544
82.5156	92.5	0.744514	-0.54737133	0.655056
18	18	0.797405	-0.469485283	0.797405
6	5.5	0.811566	0.502500341	0.775326
5.5	5.5	0.805083	-0.459431619	0.805083
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26.5	30.5	0.810625	-0.442518236	0.708703
2	2	0.866773	0.321928095	0.866773
60.5	81.5	0.851509	0.329064276	0.946886
604	654.999	0.90722	-0.2257802	0.853921
3476	3681.5	0.791606	-0.437906912	0.746823
612.5	606	0.897121	-0.245941495	0.904032
3760	3418.5	0.449722	-2.334452404	0.497997
509.5	404	0.40643	-2.104195087	0.532467
653	652.5	0.876326	-0.216512861	0.876997
913.505	959.499	0.902232	-0.215954854	0.867271
111.5	167.5	0.956774	0.129837438	0.815199
93	81	0.801941	-0.420217738	0.901862
514.5	464.5	0.846877	-0.306594485	0.924046
1225.49	1144.5	0.599325	-0.78746575	0.655509
898.5	788	0.708698	-0.344788356	0.873519
921.5	846.5	0.777386	-0.349988519	0.859726
2253	2845.5	0.861674	-0.381909445	0.713196
685	803.5	0.940502	-0.147330393	0.836084
3059	2544.5	0.256171	-0.780777671	0.46439
1260	1460	0.870483	-0.311944006	0.768415
861	861	0.785662	-0.466781074	0.785662
1701	1456	0.773431	-0.358758465	0.92015
743	667	0.558922	-0.495559249	0.699564
4656.5	4139.5	0.540737	-0.561605973	0.682418
143.5	158	0.573577	-0.916979413	0.499954
21.5	24.5	0.971802	-0.06871275	0.887757

843	1049.5	0.86744	-0.325998363	0.714844
2585.5	2162	0.543687	-0.680249727	0.725675
27305	22044.5	0.131933	-0.792348477	0.344665
3183.46	2541.54	0.410096	-1.484107757	0.559101
1166	1196	0.775838	-0.512277153	0.757446
1982	2128.5	0.980736	0.04161219	0.970612
356.5	404.001	0.854795	0.337621827	0.927696
920	910	0.819215	-0.352635431	0.82805
1639.18	1561.24	0.577305	-0.616091763	0.627951
496.001	521.999	0.56793	-0.661877586	0.517855
1596	1477	0.891525	-0.181838323	0.959655
1308	1334.5	0.818385	-0.351035049	0.801878
642.5	658.5	0.790646	-0.435768941	0.771476
2761.5	2970.5	0.903676	-0.18746738	0.844812
612	652	0.823869	-0.454871478	0.782804
740.503	760.496	0.802624	-0.451530921	0.783528
1197.46	1278.6	0.749302	-0.56450561	0.700433
3281.52	3714.96	0.754266	-0.515580934	0.655409
13295.5	14506	0.860129	-0.255642142	0.784196
3392.5	3041	0.762865	-0.424352352	0.857115
644	573.5	0.430644	-1.442173629	0.507175
744	738.5	0.79368	-0.404732491	0.799705
683.602	631.645	0.81058	-0.35523661	0.875478
3624.97	3708.86	0.667208	-0.5234065	0.644482
1545.5	1352.5	0.851781	0.298305371	0.774019
520	424.5	0.707201	-0.454411738	0.903085
530.5	608.5	0.919088	-0.202586	0.829881
3511	3350	0.713723	-0.487071393	0.757094
694	690	0.835884	-0.334193099	0.840361
8168.41	6863.87	0.495288	-0.749689822	0.671024
27	10.5	0.431524	0.79970135	0.196649
1625.5	1763.5	0.774651	-0.516920721	0.714955
5406.5	6025	0.824317	-0.364133873	0.738487
866	776	0.374528	-0.689444937	0.504603
336	297.5	0.934127	-0.13965199	0.984036
1204.5	1174	0.753201	-0.414837887	0.777125
6800.7	6445.98	0.61656	-1.063047869	0.650813
3361.17	2982.5	0.889554	-0.265021364	0.963537
2383	2085	0.616139	-1.223502769	0.692635
1830	2036.5	0.918507	-0.198739551	0.848093
2536.51	2872.5	0.68814	-0.920611848	0.610572
959	941	0.941292	-0.148830682	0.95251
5298.96	14108.4	0.824624	0.417962688	0.410511
620.5	593	0.761012	-0.481247791	0.796967
3721.5	3954	0.890085	-0.241448695	0.846269
2049.5	1667.47	0.963935	-0.066628234	0.88765
13557.6	13398.5	0.633494	-1.09487551	0.640698
275.5	299	0.603189	-1.279360021	0.554715
10850.3	8245.77	0.586885	-1.06992855	0.764067
1595	2022	0.834633	-0.420777472	0.671482
1306.5	1379.5	0.814057	-0.385707125	0.771505
400	498.5	0.908279	-0.230228261	0.760202
1993.01	2215.55	0.671898	-0.576510701	0.575598
3208	3375	0.768312	-0.471285277	0.727498
7688.5	7463.5	0.440382	-0.625253367	0.47562
2075	2036	0.843442	-0.315857232	0.858146

387.526	443.874	0.816588	-0.463933492	0.724688
43.5	70.5	0.959749	-0.103093493	0.621883
4	6.5	1	0	0.627217
15.5	13	0.917158	-0.146841388	0.944686
1931.5	2208	0.838557	-0.346599808	0.7354
7505	8017.5	0.907447	-0.204529845	0.86027
1235.5	1498	0.821685	-0.489519582	0.697961
2224	1941	0.650105	-0.705842088	0.758316
17931.6	16896.5	0.761245	-0.44910999	0.811041
2027	2081.5	0.790955	-0.430541522	0.770081
6203.01	5445.76	0.647953	-0.890255083	0.734916
2832.97	2540.53	0.840205	-0.386243395	0.909781
1475	1639	0.71421	-0.821731	0.647888
4791.5	4984.5	0.791293	-0.459318713	0.76182
2108	2023	0.754163	-0.502500341	0.786497
3395	3672	0.95186	-0.124411002	0.904588
867.495	785.508	0.872982	-0.30025164	0.936555
4039	4385	0.88321	-0.301182292	0.831165
3038	2569.5	0.440909	-1.6352155	0.542831
2988	2897.5	0.881258	-0.227834506	0.905673
721.5	751.5	0.763615	-0.482231046	0.730972
1683.5	1279.99	0.901611	-0.149748191	0.85979
779.5	639.5	0.613121	-0.818502653	0.763706
6460.5	6735	0.490337	-0.809394067	0.452376
1059.5	1152	0.942093	-0.134027952	0.885572
417.5	450.5	0.63805	-1.005192669	0.588644
1241	1132.5	0.682375	-0.519897391	0.769324
37	56	0.975673	-0.039528364	0.555268
561.5	569	0.66126	0.716262889	0.667643
2015	2083.5	0.7495	-0.493252168	0.721886
2804.5	2335.5	0.436741	-1.500058905	0.554462
3368.5	3549.5	0.881896	-0.307439232	0.849382
5510.5	5965.5	0.653932	-1.071240456	0.606066
348.326	586.42	0.825362	-0.646879241	0.536629
257.174	356.58	0.693014	-0.98936942	0.495519
4803.67	4816.31	0.0500435	-1.071280087	0.0494348
8472	7935	0.602371	-0.70363619	0.660835
3781.5	3677.5	0.348133	-0.642461953	0.380935
3392.5	2929	0.0578623	-0.948003481	0.121163
2987.78	2390.3	0.0242595	-1.047046279	0.0812651
3888	4065.5	0.507166	-0.703829653	0.46264
2559.5	2106.5	0.469375	-0.827790842	0.657005
2678.5	2895.5	0.178256	-0.699833897	0.124182
934.5	1169	0.280685	-0.806004716	0.12873
4625.5	5179.5	0.217198	-0.708042794	0.134223
2846.98	2447.57	0.668137	-0.488656383	0.824151
4963	4670.5	0.0135623	-1.121229801	0.0186011
1945	1928.5	0.756922	-0.450834493	0.764247
851	680.5	0.398788	-0.791967715	0.641523
179.5	168	0.578428	-0.499155347	0.660768
8673	6762	0.199741	-0.793016922	0.489747
6461.03	7216.76	0.0597893	-0.968144455	0.0351978
2152	2010.5	0.384037	-0.774546156	0.454913
7232.08	8363.4	0.113734	-1.042775206	0.0632026
4780.5	4154	0.215832	-0.822866902	0.354578
3265	2948	0.255943	-0.976334362	0.342922

4533.54	4462.98	0.326116	-0.870879743	0.340342
7579	8068	0.0325595	-1.067413355	0.0240118
5861.5	5810	0.683018	-0.629262401	0.69026
2151.47	2109.95	0.634335	-0.589317665	0.653207
2245.5	2144	0.674588	-0.566766969	0.716613
1337.5	1275.5	0.414466	-0.61135816	0.473282
3121	4088.5	0.264275	-0.870545299	0.104315
1348	1046.5	0.34888	-0.755456184	0.65154
2489.5	2790	0.20698	-0.960275868	0.138953
6358	6858	0.159814	-0.888262917	0.117538
2608	2363	0.415231	-0.822718047	0.513366
1176.5	1618.5	0.405264	-0.867130255	0.174955
676.504	750.5	0.827035	-0.414696328	0.754526
706.5	661.5	0.581717	-0.887116922	0.632696
53	72	0.538842	-1.40599236	0.355444
1737	2121	0.484658	-0.845756116	0.319183
1656	1526	0.685036	-0.61533615	0.752114
1856	1893	0.821869	-0.282441748	0.802509
1619	1890.5	0.93155	-0.162038064	0.825397
858.004	929.506	0.871459	-0.290539213	0.814148
3898	2976	0.840047	-0.298934075	0.957372
285	390.999	0.950532	0.11897749	0.837094
12010.6	10380.5	0.49097	-0.991690158	0.609218
23454.8	19148	0.417811	-1.430301813	0.554412
446.5	782	0.70057	-0.871779028	0.342581
172	170	0.720534	-0.483750249	0.731243
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135.5	160	0.956007	-0.093464355	0.831089
1639.02	1580	0.831395	-0.368004962	0.857869
2.5	4	0.820539	-0.736965594	0.57998
48.5	41.5	0.937171	0.141554144	0.850364
652.5	745.5	0.682861	-0.578344622	0.564836
387	348.5	0.697622	-0.506077336	0.794897
2020.49	2017.45	0.826901	-0.329428833	0.828148
34	32	0.770421	0.46712601	0.736998
5929.5	5951	0.873459	-0.224644778	0.870321
490.999	519.501	0.829298	-0.313860128	0.780411
804	793.5	0.966074	-0.064211903	0.976246
5254	5605	0.854719	-0.339783502	0.809686
460	395.5	0.622528	-1.012600037	0.719371
2124.5	1928.5	0.637318	-0.76231274	0.712476
6061.94	8579.05	0.691613	-0.889999298	0.466802
650.5	726	0.88603	-0.218700774	0.794541
18742.7	18907.2	0.792646	-0.545515065	0.78708
13879.9	14031.1	0.651319	-0.663302862	0.642102
2715.5	2695.5	0.903914	-0.176981712	0.910002
186.5	102.5	0.934025	0.108019871	0.584517
1332.5	1424.5	0.934584	0.133807778	0.981026
7	3	0.523243	-0.807354922	0.825659
665	574	0.82281	-0.349304534	0.934831
326	338.5	0.939879	-0.086633309	0.900584
229.5	430.153	0.938713	-0.198494154	0.561205
466	638	0.538171	-1.945322907	0.375423
5	11	0.942559	-0.152003093	0.383951
1711	2709.5	0.247033	-2.721033316	0.0941276
275.5	418.5	0.377441	-2.662965013	0.193456

1.5	2.5	0.669515	-1.584962501	0.415333
13	7	0.783067	-0.378511623	0.783067
85	137.5	0.915666	0.255944981	0.817995
4399.51	5040.89	0.9029	-0.266698005	0.820745
6095.06	5778.77	0.638856	-0.714072405	0.682542
9	16	0.647196	-1.169925001	0.310831
2083.51	1536.49	0.522267	-1.663957613	0.686281
3830.5	5074	0.920295	0.222096465	0.924215
492.5	450	0.902632	-0.21605946	0.962919
44	55.5	0.924023	-0.192645078	0.769807
1426.5	1637	0.964177	0.089692044	0.953428
6185.12	5553.69	0.827245	-0.363325682	0.905639
856.68	916.592	0.924529	-0.141815075	0.868782
2462.51	3140.49	0.968554	-0.081664572	0.813881
642	828.5	0.838114	-0.460696216	0.677301
453	368.5	0.823598	-0.343586976	0.978596
962.989	840.504	0.968325	0.064458133	0.880799
739	835.5	0.846695	-0.24056448	0.72281
659	713.5	0.799315	-0.334847428	0.723571
380.5	406.5	0.426637	-1.044275637	0.375201
161	161.5	0.986511	0.031026896	0.988438
2655.03	2754.51	0.846586	-0.351811743	0.820677
2034	1967	0.861134	-0.25497108	0.889048
1237.5	1124.5	0.656525	-0.584088405	0.744729
771	927	0.948816	0.122799465	0.934663
921	973.5	0.880587	-0.281955268	0.842931
3864	3940.48	0.862974	-0.275444627	0.847653
958.999	895.999	0.747495	-0.380841827	0.816625
9503	9541	0.519382	-0.667031782	0.515221
41.5	27	0.774277	-0.28757659	0.78875
43	46	0.836381	0.3016557	0.884816
8.5	13.5	0.77552	0.436099115	0.848585
1741	1396.5	0.478873	-1.855807404	0.598973
1139.5	1084.5	0.86594	-0.256335216	0.905337
476	368	0.72848	-0.586478733	0.910425
144	130	0.701364	-0.533300381	0.791181
469	740.499	0.400435	-2.229589365	0.188338
489	477	0.527649	-0.771299326	0.550739
743.996	855.008	0.862287	-0.354275712	0.771189
336	340.5	0.920901	-0.16590523	0.911209
3134.5	3522	0.0790101	-0.942478548	0.045902
3335.82	3535.71	0.675894	-0.551242996	0.621538
1032.99	1230.01	0.965436	0.088051766	0.929919
10642.4	8560.18	0.976879	-0.045625285	0.878522
5754	6934	0.580895	-1.306404034	0.467695
1267	1247	0.688179	-0.464064898	0.704739
17	14.5	0.721924	-0.628031223	0.834251
2870	2901.5	0.72578	-0.616085018	0.717685
219.5	193.5	0.772454	-0.411754915	0.879115
93	129	0.569148	-0.681177816	0.286545
250.5	275.5	0.8172	-0.445104837	0.751528
3912.5	4255	0.412295	-0.519454055	0.308065
969.498	1063	0.765221	-0.604814843	0.703426
1499.48	1637.5	0.761582	-0.49022621	0.690769
11.5	17.5	0.88491	0.334419039	0.88491
117	84	0.771169	0.410406051	0.59608

2047.5	2086	0.84123	-0.372113852	0.828406
6	5.5	0.735995	-0.777607579	0.786566
3110.25	3533.45	0.989757	-0.025957342	0.911865
1872	1750.5	0.271382	-0.951501482	0.328624
2445.5	2000	0.417465	-0.684635131	0.66043
1751.5	1906	0.827195	-0.453574724	0.772815
550	531	0.834265	-0.286304185	0.865543
1403.5	1274	0.451703	-1.43383341	0.51484
260	391.5	0.941275	-0.148923701	0.656123
315	257.5	0.721052	-0.517848305	0.88677
789	913.004	0.452796	-1.829465624	0.371359
904.498	765.503	0.731262	-0.38321935	0.905776
615	536.5	0.98721	-0.026037861	0.921711
205	159	0.56217	-0.474908955	0.90483
6307.5	6069	0.617016	-0.483301233	0.662719
1042	1119	0.811665	-0.428949806	0.759858
2914.57	2984.43	0.961225	-0.098552385	0.947176
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165.5	307.5	0.958945	-0.141868716	0.609827
1872	2333.5	0.674045	-0.946294534	0.533097
149	237.5	0.804151	-0.71137388	0.543154
1370	1308.5	0.831862	-0.370792305	0.8646
550	614.5	0.788775	-0.529640621	0.712946
14	19	0.657905	-0.900464326	0.449992
158	195	0.0460925	-1.326500825	0.0196473
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1051	1171	0.840548	-0.314739423	0.751561
1136.19	1027.62	0.364468	-0.619154873	0.495155
35244.7	32282.8	0.369209	-0.669754463	0.474453
181.5	160.5	0.580634	-0.639639593	0.704083
419.5	366	0.806538	-0.377136646	0.912708
204.5	192.5	0.741228	-0.567432576	0.785966
2957	2521.5	0.3655	-2.298697347	0.449698
2	10.5	0.744998	1.459431619	0.645561
2238	2494	0.688706	-0.619704335	0.598938
3137	3078	0.624317	-0.687021598	0.640908
776.5	787.5	0.802702	-0.418447761	0.791988
1	0.5	0.651448	-1	1
8	7	0.371308	-1.678071905	0.453919
3262	3559	0.838193	-0.364909705	0.77465
1833.5	1906.5	0.702543	-0.538888356	0.667858
2902.5	3272	0.50676	-0.643157379	0.383655
3198	3384	0.713248	-0.509812011	0.662149
884.002	968.503	0.925471	-0.154910626	0.856401
8501	7038.5	0.6031	-0.862511904	0.744219
196	228	0.854068	-0.347923303	0.747516
7	18.5	0.684799	-2.222392421	0.260502
120.5	44	0.39655	1.136959213	0.228428
73.5	87.0001	0.78619	-0.366782331	0.627261
881	772	0.731287	-0.478076539	0.845969
1517	1589	0.819938	-0.34783685	0.781484

882.5	811.5	0.559568	-0.629369392	0.648038
370	382.5	0.481441	-1.916671616	0.46337
1695.47	1738.47	0.733339	-0.528386172	0.712747
1418.98	1212.01	0.157135	-0.913174838	0.286474
656	687	0.971145	-0.06178307	0.938691
3285	3793.5	0.823155	-0.404390255	0.717211
455.5	504	0.788825	-0.42403948	0.705978
24033.5	23897.5	0.705956	-0.518433019	0.711082
999.507	1064	0.8218	-0.382007022	0.774236
1764	1622.5	0.201926	-0.902756138	0.270532
2632.94	2801.56	0.725255	-0.518121928	0.671745
5019.2	4880.25	0.569632	-0.623789693	0.59881
3297.5	3261.5	0.799883	-0.355400232	0.809581
12	8	0.428367	-2.263034406	0.633552
1669	2229	0.772411	-0.311377782	0.451438
642.003	727.499	0.947114	0.131962182	0.979336
26924	30065	0.972136	-0.065200222	0.898967
11261.7	11360.6	0.976579	-0.057617461	0.97133
575	572	0.508449	1.186280063	0.506853
92.5	63	0.89475	-0.165059246	0.797342
928.994	1136	0.748399	-0.682108422	0.614862
8.5	7	0.68405	-0.765534746	0.814202
3.5	170.5	0.98719	-1.222392421	0.237255
209	328.5	0.810545	0.557083468	0.959026
160.5	136	0.768766	-0.480939436	0.891372
269.5	240.5	0.984091	-0.027017551	0.923811
192.5	426.5	0.584791	-1.833827133	0.199252
22	31.5	0.946601	-0.1740294	0.750089
40	37	0.716807	0.620588756	0.680458
897	982.5	0.885727	-0.274661292	0.824218
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1573.72	1452.33	0.846638	-0.312523251	0.906803
2310.01	2124.47	0.733577	-0.34712695	0.830576
1612.5	1439.5	0.60595	-0.719181763	0.704456
2929.5	2812	0.668851	-0.625414544	0.703685
11219.4	10076.6	0.813054	-0.381337439	0.893984
9.5	6	0.249619	-1.662965013	0.557935
4.5	8.5	0.933386	-0.169925001	0.473746
1231.18	1195.92	0.83338	-0.33723507	0.855847
810	832.5	0.855634	0.341036918	0.870452
611	598.5	0.770537	-0.465494925	0.786895
0	0	?	#DIV/0!	?
223	399.999	0.703883	-0.949150859	0.34909
2571.5	2768.5	0.844117	-0.306373469	0.783777
30120.6	25867.7	0.626883	-0.501130331	0.79766
1302	1203.5	0.448092	-0.560244106	0.553132
4086	2369.5	0.954642	0.074821265	0.621154
2.5	1.5	0.733579	0.485426827	0.509235
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4	9.5	0.921613	0.321928095	0.663373
1195.5	949.5	0.548078	-1.351493177	0.685465
1344.5	1354	0.709452	-0.523260197	0.703192
1072.51	973.502	0.800823	-0.389929727	0.87719
0	0.5	1	#DIV/0!	0.308068
4828.52	4949.15	0.604996	-0.678700688	0.582449
90	114	0.346386	-2.633872101	0.23828

147.059	462.884	0.831673	-0.807933847	0.258121
425	388.5	0.62212	-0.979774972	0.681862
0	2.5	0.825659	#DIV/0!	0.407544
32	44.5	0.498462	0.754887502	0.762015
2	9.5	1	0	0.234161
91.5	71	0.663674	-0.527015152	0.905716
18	27	0.550957	1.256339753	0.6971
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16.5	11	0.536547	-0.652076697	0.957401
32.5	35.5	0.62772	-0.63005039	0.545953
411	382	0.803864	-0.345372682	0.867703
63.5	47.5	0.954749	-0.046170181	0.695389
8	8.5	0.956817	0.087462841	1
376.999	416.001	0.840754	-0.423990566	0.778314
1598.48	1685.48	0.89422	-0.227768035	0.855389
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953.49	976.515	0.926958	-0.156463444	0.9099
781.011	887.496	0.955159	-0.117353976	0.877562
4	5.5	0.705361	-0.678071905	0.46642
235.5	84.5	0.987038	0.018262206	0.432074
6750.56	4095.32	0.870292	-0.234672949	0.792189
852.501	911.5	0.944884	-0.136576606	0.902912
824.501	822	0.975576	-0.058018992	0.977454
34.3372	38.0828	0.63335	-0.743902198	0.549465
203.767	263	0.721072	-0.79425967	0.555505
24.5	19.1978	0.488348	-1.527265673	0.634862
11	23	0.916661	0.295455884	0.694881
375.5	374.5	0.815193	-0.481206735	0.81688
5	11.5	1	0	0.512137
857	838	0.778744	-0.386699424	0.798874
492.5	425.5	0.826342	-0.307355294	0.94888
2912.5	3021	0.58486	-0.828122456	0.555157
788	682	0.908509	-0.159549547	0.973856
1364.51	1995.51	0.997045	-0.007972878	0.755573
5193.5	5450	0.825714	-0.404014472	0.791633
1386	1364.5	0.778518	-0.408114765	0.791947
875.497	625.503	0.522471	-1.601525916	0.70635
109	123.5	0.625251	-0.885541275	0.534503
365	299.001	0.56148	-1.372201301	0.67734
329	304.5	0.897508	-0.204596838	0.955076
396	295	0.537704	-0.579508071	0.883853
120	101.5	0.459232	-1.531851164	0.56352
803	1074	0.834715	-0.502051253	0.658635
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2298.5	3095.5	0.941956	-0.164013512	0.760225
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2553.96	2688.48	0.572486	-1.649640547	0.545034
275	422.5	0.951359	-0.143285876	0.688427
3560.02	2865.98	0.549027	-0.434378071	0.876983
6169.5	6373.89	0.909927	-0.239451969	0.89059
466.5	478	0.512876	-0.914448556	0.492779
2602.48	2333.06	0.635251	-0.695068339	0.726831
3788.55	3231.49	0.491648	-0.678579987	0.667169

4955.5	4930.5	0.591125	-0.851436338	0.595112
1036.5	1076	0.665669	-0.568364012	0.630787
884.5	939.5	0.982019	-0.035501584	0.936122
675.5	646	0.65025	-0.524830612	0.696188
229.5	185	0.640556	-0.566225938	0.848276
592	530	0.763877	-0.376563351	0.869386
599.5	459	0.57681	-0.6558633	0.837358
968	905	0.806855	-0.337662655	0.866003
239.5	236	0.925381	-0.125804716	0.938395
932	899	0.480098	-0.680550763	0.519025
913	971	0.59742	-0.623799706	0.536888
205.5	252	0.978052	0.044925871	0.865913
20	18	0.9162	-0.192645078	0.983193
47	63	0.887865	-0.232660757	0.649055
122.5	111	0.83156	-0.181750437	0.964754
3706	3344	0.741808	-0.481966333	0.827886
808.502	796	0.870588	-0.220317759	0.884552
2673.5	2665.5	0.623438	-0.582401543	0.626432
874	811.5	0.913322	-0.148522525	0.976616
7476.5	7852.5	0.541733	-0.751153661	0.496611
153	229.5	0.943704	-0.15935576	0.687556
2	5	0.651448	-1	0.139326
329.5	371.5	0.865998	-0.317010743	0.782156
1008	939	0.631107	-0.571074918	0.701943
96.5	77.5	0.82503	0.308409771	0.689555
915	857	0.520282	-0.58970042	0.597304
2517.2	1523.88	0.356017	-1.77520111	0.663
483.661	952.503	0.70577	-1.012507519	0.311647
62.5	47.5	0.756236	-0.556393349	0.937607
655	585	0.998509	-0.003307671	0.932026
1505.5	982.5	0.451082	-1.921215943	0.679223
800	738.5	0.63892	-0.527512229	0.722867
62.1887	116.341	0.749161	-1.023026516	0.411642
3485.07	2083.55	0.527086	-1.343856008	0.825791
907.489	893.509	0.515645	-2.118384116	0.523457
78.5	73.5	0.868052	-0.165337732	0.945342
12.5	11	0.971997	-0.058893689	0.944048
110114	104254	0.715497	-0.566923166	0.759652
61124.5	58357.5	0.71424	-0.593080981	0.750489
24510	18248	0.428381	-0.704853718	0.777117
21474	20014	0.673051	-0.676218836	0.728436
136050	129858	0.642551	-0.720823052	0.680183
126773	128880	0.744491	-0.632665722	0.733221
38909	21168	0.438929	-0.605369662	0.787769
1376	1822	0.821836	-0.490363072	0.637849
1218.5	1783.5	0.799456	-0.361386572	0.453957
683	597.5	0.817713	-0.315079429	0.933223
1263.5	1253	0.499161	-0.610594447	0.508725
1501	1456	0.482886	-0.708572351	0.514566
1125	928	0.364312	-1.239376882	0.511534
2035.99	2022.47	0.877795	-0.255552639	0.882735
3400.5	3585	0.84051	-0.392237876	0.805195
6431	6113.5	0.679238	-0.563696073	0.724861
1147	1351.5	0.651347	-0.931228749	0.54106
611	623	0.615673	-0.551124996	0.595088
2123.5	2088	0.568105	-0.585132359	0.586575

3617	3770.99	0.286136	-0.995221541	0.25465
176	174.5	0.952761	0.071949842	0.944906
200	184	0.992738	-0.01449957	0.94922
1689	1488	0.65382	-0.616045104	0.765633
540.5	619.5	0.366595	-1.141512869	0.271417
221	213.5	0.730456	-0.521116019	0.75909
3121	3036.5	0.348135	-0.695651786	0.37837
2219.5	1955.5	0.533363	-0.792964233	0.648717
1212.5	1298	0.770519	-0.546801506	0.722221
270.856	265.5	0.82318	-0.339915253	0.839465
233.312	160.081	0.849892	-0.19655838	0.782506
971.5	934	0.739373	-0.484239302	0.773038
1519.01	1467.5	0.655613	-0.656032302	0.684805
731.502	758.006	0.854441	-0.304041785	0.827316
1035	1054.5	0.77814	-0.570400207	0.765905
4068.5	4043	0.861647	-0.310801176	0.866054
3337	3079	0.935094	-0.1437643	0.987983
2890.99	3283.37	0.78448	-0.38882998	0.669952
2087	2178	0.733852	-0.552494939	0.699952
3750.5	4239.5	0.854584	-0.372274281	0.774113
3107.39	3609.21	0.875759	-0.289455547	0.769134
7098	7203.77	0.712836	-0.570054906	0.700683
6176.98	6656	0.901672	-0.218458801	0.848254
6777	7519	0.811902	-0.430518663	0.736028
837	1035.5	0.960904	-0.099905074	0.824481
107	103	0.74362	-0.58159565	0.771179
3003	3411.5	0.859016	-0.364218168	0.775966
672	668	0.774819	-0.420773869	0.779903
1522.5	1478	0.742182	-0.403554395	0.771644
1632	1644	0.69912	-0.419168762	0.691034
2814.5	3341	0.881537	-0.297846083	0.766772
1262.5	1366.5	0.870889	-0.267956526	0.809717
2756	2870	0.634088	-0.681006343	0.599048
3923.5	4109	0.769657	-0.434313385	0.730108
2290	2407.5	0.807445	-0.379772169	0.766513
3303.52	3558.5	0.834002	-0.316624133	0.771408
5838	6148.5	0.843484	-0.34933933	0.805864
1567.5	1722.5	0.834823	-0.363359192	0.764332
729.17	884.19	0.798921	-0.3604989	0.623217
1772	1790.5	0.382259	-0.676119238	0.37089
1174.5	1277.5	0.765445	-0.506087479	0.700541
3662.5	3267	0.494493	-0.62672475	0.627972
1114	1284.5	0.824651	-0.416763549	0.723234
4896.5	5133.5	0.889924	-0.187917578	0.847022
95	71	0.764786	0.288125387	0.533312
295.5	492.5	0.979411	-0.049667385	0.602686
11	6.5	0.580435	-0.874469118	0.954624
42	68.5	0.3528	-1.691877705	0.126631
1222.5	1334.5	0.877405	-0.240203697	0.806033
10.5	6.5	0.707394	-0.691877705	1
419.451	341.437	0.521906	-1.64141107	0.635818
501	590.5	0.856893	-0.323008361	0.735162
0	0	?	#DIV/0!	?
662.501	535.999	0.409793	-2.067998074	0.525718
63.5	67.5	0.897047	-0.233797185	0.854345
8.5	6	0.664538	-0.91753784	0.868831

1.5	4	0.756486	-0.584962501	0.134292
1479	2184	0.961806	-0.087981144	0.669855
209.5	175.5	0.63744	-0.448711588	0.850495
2661.98	2720.32	0.631749	-0.658895196	0.612435
8231.53	7466	0.522155	-0.813277859	0.610571
244	277.5	0.912473	-0.199418307	0.821219
692.501	834	0.779664	-0.414692405	0.616904
121	81	0.49572	-1.543823806	0.726454
60.5	72.5	0.80292	-0.492598483	0.677222
62907.2	46455.9	0.969246	-0.04779245	0.787893
242	300.5	0.832119	-0.375831417	0.667454
1037.5	1011.5	0.785058	-0.397759508	0.806683
64.5	873	0.936205	-1.229867542	0.141168
2602.01	2466.5	0.774867	-0.507010474	0.813176
12012.5	11998.6	0.686348	-0.509378796	0.687476
1102.5	1011.5	0.698107	-0.640996536	0.763904
154	123.5	0.638405	0.799297267	0.556211
1290.51	999.49	0.582957	-1.373717879	0.723789
2774.1	2309.83	0.630659	-1.153176592	0.735089
4036.18	3848.21	0.924637	-0.187587487	0.953355
11387.4	16689.9	0.781659	0.592812913	0.981358
1.5	3.5	0.878232	-0.584962501	0.465798
682	698.5	0.892121	-0.218871075	0.873805
1.5	2	0.495025	-1.584962501	0.329316
6651.5	6476.5	0.588943	-0.813195856	0.610759
946	944.5	0.628214	-1.192209416	0.629142
2308.5	2409.5	0.628269	-0.687917123	0.591128
515.5	465.5	0.772042	-0.451407904	0.852451
320.5	323.501	0.755224	-0.507196923	0.747895
120.5	121.5	0.866196	-0.327926836	0.860821
499.5	522.5	0.408601	-0.63566594	0.358412
100	138	0.494185	-1.888968688	0.322938
16746.6	15592.1	0.990842	-0.021043752	0.965577
605.498	612.498	0.572386	-0.488761635	0.55797
164.5	207.5	0.88259	-0.295854583	0.724511
2457.5	2541.5	0.686836	-0.62680426	0.659282
5	8	0.847821	-0.514573173	0.575098
0.25	0.94038	1	0	0.461792
4888.87	5155.47	0.567258	-0.986760872	0.528212
701.5	582	0.711594	-0.487073035	0.879544
59.5	4.5	0.288367	1.870053827	0.181116
12	11	0.730374	0.502500341	0.680668
2729	2940	0.646364	-0.724595425	0.586335
1331.5	2104	0.518982	-1.708180464	0.273363
3795	4814	0.461356	-0.869598669	0.272047
0	0.5	0.450185	#DIV/0!	1
771	734	0.947487	-0.093733273	0.987535
10.5	27.5	0.961798	-0.144389909	0.418327
2075	2008	0.72383	-0.644399475	0.74721
228.311	164.125	0.522023	-1.211444708	0.739204
2571.5	2928.5	0.796431	-0.527494538	0.709642
0.5	0	0.308068	#NUM!	1
15	14	0.401045	-2.099535674	0.438509
1	2.5	0.855216	0.584962501	0.717686
2.5	20	0.97767	-0.321928095	0.354021
1.5	3.5	0.88627	-0.584962501	0.493436

13	8.5	0.889735	-0.176877762	0.782716
1.5	0	0.308068	#NUM!	1
323	282.5	0.766401	-0.583846296	0.852358
844	1207	0.575286	-0.838456139	0.303671
1539	1467	0.717084	-0.580049402	0.754917
0	0	?	#DIV/0!	?
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1	1	0.450185	#NUM!	0.450185
2.09547	0.6392	0.137537	-73.67808827	0.58255
0.25	0.05962	1	0	0.561847
0	1.49519	0.741541	#DIV/0!	0.478021
1	1.5	0.553716	-5.54816802	0.389162
0	0	?	#DIV/0!	?
304	228.5	0.591939	-0.685685089	0.850393
2030.5	1909.5	0.952985	-0.087507249	0.999409
597.502	490.499	0.309221	-0.84993032	0.518246
383.5	434.5	0.74993	-0.469340601	0.641103
401.5	430	0.897786	-0.222991423	0.847931
1111.99	1049.49	0.707411	-0.56337841	0.755503
1583	1738.5	0.741037	-0.440474948	0.652835
664	710	0.810313	-0.37785995	0.755784
901	1012.5	0.654265	-0.519614361	0.535273
2389.98	2196.99	0.713345	-0.357026365	0.815104
1021	1073	0.97078	-0.065769088	0.937465
1298.5	1276.5	0.509719	-0.708726889	0.526985
1898	1654.5	0.675118	-0.74815722	0.772744
1314	1414.5	0.836572	-0.347125021	0.780159
1527	1600	0.686138	-0.784507526	0.653776
1222.5	1274	0.827299	-0.362317219	0.795583
950	1034	0.799116	-0.465518949	0.737948
280.5	309.499	0.941985	-0.131851325	0.87397
1163.5	1442	0.872541	-0.323168589	0.727406
622.007	811	0.659137	-1.410422287	0.520694
1655	2438.5	0.751302	-0.799313971	0.516206
1623	1480.5	0.769459	-0.450128164	0.843081
905	767	0.620629	-0.39236724	0.855852
958.143	883.761	0.820161	-0.325420696	0.888369
10.5	11	0.866223	-0.304854582	0.833468
498	722	0.91156	-0.235488079	0.6633
198	400.5	0.729446	0.788495895	0.8872
76.5	75	0.897141	-0.223964841	0.911069
24	21.5	0.817689	0.36923381	0.755393
14.5	17	0.245904	-1.688055994	0.170022
2390.48	2379.53	0.668968	-0.533086649	0.673441
1116.5	1150.99	0.730857	-0.464782343	0.702785
1613	1457	0.735799	-0.399911973	0.838331
2	7	1	0	0.133887
2	1.5	1	0	0.834708
2004.5	2293.5	0.628579	1.005567138	0.676731
1974.5	2917.5	0.725564	-0.981487368	0.503259
16651.8	23841.6	0.630513	1.034931054	0.774036
122.5	1330.5	0.849169	-2.936637939	0.0834621
315.5	3839	0.382281	3.653245386	0.973194
0.5	1	0.198892	2	0.353387
6977.5	7264	0.571509	-0.781763606	0.536787
37.5	34.5	1	0	0.943592

697.5	620	0.608107	-0.724950218	0.709188
721	685	0.647278	-0.701065155	0.689097
2045.5	2132.5	0.847729	-0.366151409	0.819552
1969.5	2231.5	0.772551	-0.524180151	0.680454
219	221.5	0.886921	-0.266992419	0.879369
962	884	0.915665	-0.189648825	0.971102
228.5	185	0.920904	0.138364235	0.775536
46	35.5	0.979931	-0.047828525	0.880277
184	136.5	0.974324	0.046293652	0.775797
578.5	537.5	0.45541	-0.854245054	0.523888
1348.51	1653.5	0.70156	-0.796302816	0.56388
0.5	0.5	0.450185	#NUM!	0.450185
426.5	347.5	0.627708	-0.488474418	0.860597
931	904.5	0.851489	-0.334183247	0.871634
214.5	213	0.836517	-0.289506617	0.842674
1358.5	1368.5	0.88132	-0.254880274	0.875992
3	4.5	0.493436	-2.584962501	0.301733
6	16	1	0	0.535489
87.9999	85	0.0382822	0.928587306	0.0348379
0	0.5	1	#DIV/0!	0.308068
928.5	745.5	0.456149	-0.947366112	0.648924
504.632	450.004	0.938636	-0.107472138	0.968792
355	422	0.93659	-0.172467196	0.832083
17.5	17	0.767983	-0.544320516	0.788255
209	272.5	0.7067	-0.684991319	0.509411
0	1.51344	1	#DIV/0!	0.308068
6	11.5	0.825863	-0.584962501	0.434615
8	25	0.857945	-0.415037499	0.16122
1	1.5	0.724378	0.584962501	1
54.5	58	0.638763	-1.067744607	0.600061
58	52	0.54041	-1.050626073	0.619964
51	75.5	0.866588	-0.405638801	0.625986
3439	3799.92	0.833389	0.362164962	0.893934
542	508.5	0.812554	0.317662918	0.767418
418.5	535	0.655474	0.458334333	0.907589
12862	12626.5	0.909941	-0.166382066	0.925002
587.5	517.5	0.812097	-0.299088119	0.930792
7.5	12	0.967463	0.093109404	0.746591
1047	1127	0.504464	-0.498715995	0.410479
34860.6	34547.1	0.879628	-0.251874022	0.886311
186	189	0.844034	-0.32483969	0.831838
1430	1426	0.740819	-0.500945825	0.743155
3	4	0.906975	0.222392421	0.906975
62.5	48	0.802959	0.319617934	0.634491
245.5	245.995	0.950953	-0.098153246	0.949452
2435.5	2578	0.679662	-0.702625704	0.636104
1697.55	1884.55	0.844395	-0.39704512	0.775661
3272	2516	0.457143	-1.003973761	0.677441
1276	1431	0.976398	-0.053556594	0.898133
2099.5	2033.5	0.815335	-0.250786358	0.85097
38.6991	31.8208	0.698512	-0.518496611	0.871936
34.5	42.5	0.916664	-0.177787119	0.755537
3095.8	2891.68	0.490849	-0.846662851	0.552745
10963.5	10711	0.703658	-0.615382347	0.722009
13591	12731.6	0.670978	-0.658032049	0.723829
124	114.5	0.935213	-0.114992522	1

344.5	345.5	0.674682	-1.040342887	0.673008
0	1	0.3832	#DIV/0!	0.756486
2617	2885.5	0.853917	-0.260610819	0.766552
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3943.42	3725	0.725816	-0.521065371	0.773558
1597	1654.5	0.995352	-0.008607721	0.967234
1189.5	1101	0.698615	-0.408784634	0.785309
2197.5	2336	0.951404	-0.114383438	0.911422
1444.5	1790.5	0.86852	-0.388483574	0.74072
2972.47	2655.5	0.469275	-0.6829677	0.595168
24	31.5	0.641142	-0.941106311	0.456154
846.527	848.995	0.646373	-0.953919503	0.644466
455.5	476	0.971059	-0.058168037	0.938174
5276.97	4814.1	0.92975	0.148736708	0.873591
14594.9	11331.7	0.408857	-1.439341173	0.580024
10	17	0.976055	0.070389328	0.700418
667.5	819	0.851632	0.312604265	0.990729
760.652	574.937	0.280324	-0.621587006	0.717617
1444.5	1407.5	0.972354	-0.064856884	0.98846
554.5	605.5	0.821343	-0.388825491	0.754782
687.5	671.5	0.832903	-0.32718382	0.851698
1994.56	2466.92	0.854161	-0.415490848	0.722857
747.5	712	0.787278	-0.425691892	0.825713
507.5	525	0.61605	-1.065423075	0.594106
375.5	321.5	0.625689	-0.994248384	0.725744
288	283	0.849565	-0.340202266	0.861793
694	690.5	0.781436	-0.363312703	0.786198
467.5	490.5	0.932578	-0.144308702	0.897979
602.5	687	0.93791	-0.148681206	0.850149
255.001	288	0.888972	-0.276682671	0.808609
466.5	780	0.924863	0.228344415	0.784436
3214.13	3922.71	0.911637	-0.213084722	0.773944
1	0.5	0.353387	#NUM!	0.622002
1094	1095.5	0.545039	-1.878651165	0.544332
26	178	0.940291	-0.842458723	0.331208
18780	18386.5	0.960141	0.063091212	0.941502
774.5	882.5	0.939562	0.120554994	0.963702
674	652.5	0.781655	-0.429378522	0.80783
28.5	26	0.541348	-0.662965013	0.636814
69	47.5	0.787455	-0.263034406	0.814331
410	422.5	0.826197	-0.401030641	0.805011
240.5	184.5	0.634462	-1.045706939	0.791268
1866.5	2044	0.9859	-0.032439045	0.925758
345	473.5	0.987006	-0.035989857	0.794234
173	147	0.433544	-0.790772038	0.602169
253	266	0.895939	-0.221442342	0.858897
680	755.5	0.860039	-0.306103128	0.781389
3122.05	3433.92	0.88208	-0.287460459	0.818344
81.5	77.5	0.534285	-0.9224634	0.574936
4365	3325	0.439376	-0.670227032	0.770594
1937	1843	0.583569	-0.670494786	0.631328
82	91.5	0.84616	-0.280736408	0.749595
867	910.5	0.859389	-0.284154752	0.820861
9494.46	10436	0.762028	-0.481498163	0.684891
282	290	0.928606	-0.145197916	0.907584
535	578	0.993053	0.014755726	0.952674

94.5	141.5	0.815894	-0.517848305	0.549186
1094.5	891	0.682246	-0.492429894	0.88217
359	326	0.821035	-0.302964691	0.906978
1374	1496	0.884955	0.245161716	0.939865
2380	2148	0.528782	-1.020143732	0.606372
347	385.5	0.636347	-1.195617869	0.574821
228.5	224.5	0.804477	-0.456671988	0.816729
200.5	255	0.969855	0.080462028	0.887829
2091.5	2024.5	0.6377	-0.874239206	0.660698
19	21	0.729252	-0.662965013	0.658631
506	512	1	0	0.99192
91	95.0001	0.817576	-0.388853567	0.784836
2554.5	2606.5	0.909401	-0.201831543	0.895393
681.501	687.496	0.896658	0.210394981	0.902401
1682.99	4026.82	0.87233	0.414711718	0.61678
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4.5	3	0.912416	0.152003093	0.665262
2.5	3.5	0.672563	-1.321928095	0.493436
22.5	19	0.887907	0.236067358	0.792515
596	701	0.936239	-0.146365986	0.82188
1894.5	2045.5	0.703769	-0.502817674	0.631735
157	141	0.581032	-0.533069516	0.707153
4615	5081	0.857829	-0.359536488	0.794667
5749.67	4908.04	0.801472	-0.422868113	0.914711
1675	1575.5	0.757422	-0.536268244	0.802164
1728	1445	0.6357	-0.648978994	0.792204
522.5	493.5	0.511191	-0.654247796	0.573302
2558.51	1747.98	0.326541	-1.887498543	0.555287
1345.5	1475.5	0.687532	-0.556300319	0.604245
2303	2289.5	0.778837	-0.376915081	0.784256
1810.01	1968.53	0.639192	-1.144051742	0.589154
2133.48	2031.48	0.899234	-0.216257546	0.933682
720.5	953	0.761251	-0.766636461	0.594824
76.5	245	0.970674	0.143491594	0.481877
6434.96	3759.98	0.847792	-0.338979963	0.850005
1327	1676.5	0.772794	-0.676985129	0.62792
319	297.5	0.997916	-0.004529658	0.957313
1954	1251	0.906266	-0.201744615	0.836552
1314	1288	0.665485	-0.8699016	0.678819
426.5	513	0.882602	-0.316441753	0.765832
1479	1405.5	0.532339	-1.660038535	0.560613
7.5	10.5	0.614917	0.900464326	0.78291
1746.32	1808.06	0.917498	-0.206982243	0.895846
474.001	453.499	0.599511	-0.605662571	0.644343
550	576.5	0.967484	-0.08230787	0.939297
62.5	84	0.85006	0.38294387	0.980089
605.5	577.5	0.774891	-0.437852129	0.813395
1736.51	1744.5	0.792923	-0.385849614	0.789013
3463.5	3468.5	0.774688	-0.469725616	0.773567
6.5	2.5	0.215301	0.884522783	0.0734682
1235	1275.5	0.778866	-0.456514135	0.753409
1446.49	1388.99	0.59486	-1.535438847	0.616324
4315.01	4928.51	0.911957	-0.214899219	0.823252
2823.48	2511.51	0.717867	-0.545871698	0.813227
1043	913	0.923965	0.142148676	0.83396
749.5	682	0.954759	-0.081160625	0.970745

10337.3	10611.7	0.529891	-0.55585039	0.498916
2956.5	3081	0.820676	-0.342013196	0.786141
2483.5	2589	0.940247	-0.138287968	0.912624
1986	1808	0.795275	-0.501864852	0.856437
29.5	37.5	0.769637	0.346175641	1
873.5	1021.5	0.941685	-0.101778909	0.799744
1163	1306	0.642013	-1.152968245	0.573276
866.998	1044.5	0.954952	-0.108845725	0.829956
476.5	438.5	0.923504	-0.146462977	0.986664
1581.03	1603.16	0.770529	-0.472653743	0.759571
2	1.5	0.680109	-1	0.834708
607.5	574.5	0.878442	-0.250973448	0.919519
242	210.5	0.993735	0.008914725	0.863237
1114.39	1081.93	0.862326	-0.234293919	0.888772
2661.93	2219.74	0.624175	-0.582777294	0.803164
1153.5	1042	0.687644	-0.452413468	0.794857
337	337.5	0.768726	-0.498759325	0.767605
3245.14	2934.85	0.596625	-0.76765691	0.681073
3704.5	3370	0.678866	-0.470279368	0.777872
1	1	0.530478	1	0.530478
7.5	5.5	0.22629	-2.906890596	0.370457
791.5	753	0.887342	-0.20532963	0.928425
2668.5	2993.5	0.893948	-0.258015205	0.816803
18.5	18	0.82264	-0.454565863	0.839981
467	380.5	0.472163	-0.699860594	0.699483
651.998	628.999	0.720408	-0.417986391	0.757559
4304	4415	0.887816	-0.176834041	0.863088
2642	2641	0.644643	-0.578696419	0.645007
1162	1095	0.765832	-0.346343998	0.827255
4656.98	4968.44	0.842044	-0.34719238	0.79418
845	781.5	0.650088	-0.579424317	0.723854
1265	1177	0.676473	-0.672835257	0.732892
26	23.5	0.986899	-0.028014376	0.947652
2720	2280.5	0.60145	-0.501749132	0.810394
1367.4	1303	0.529427	-0.79699979	0.573194
687.5	692	0.908364	-0.2218679	0.904187
215	158.5	0.552319	-1.272459419	0.737254
1058.5	1191.5	0.687518	-0.613177326	0.588298
42	43.5	0.547838	-1.584962501	0.528083
300	631	0.916977	-0.321928095	0.513956
635.5	524.001	0.916475	-0.199308808	0.969877
651.501	957.501	0.941215	-0.16151182	0.692811
851	834.998	0.634042	-0.917632026	0.647113
488	377.999	0.634305	-0.886343218	0.805711
1052.48	1363.01	0.765406	-0.725569466	0.608293
2	2	1	0	1
11.5	14.5	0.897964	0.231325546	0.948817
508.5	496.5	0.757095	-0.47835131	0.776531
64	53	0.796488	-0.37064338	0.950067
7.5	7	1	0	0.964596
1140.5	1071.5	0.798481	-0.451547158	0.842791
172.5	117.5	0.573276	-1.154328146	0.807921
375.5	437.5	0.756261	-0.691582192	0.659351
32	26	0.613921	-1.093109404	0.740638
107.5	220	0.873332	-0.347313413	0.382037
1219.01	993.496	0.916695	-0.153462163	0.930526

138	173	0.788609	-0.486472637	0.619011
235	361.5	0.958347	-0.098439817	0.639321
217.5	373	0.916853	-0.241309635	0.567719
744.002	856.002	0.989603	0.026883736	0.927338
931	1067	0.822412	-0.53620787	0.742715
473	769.5	0.991545	0.018185472	0.616453
2242.5	1960	0.537838	-0.73803823	0.666992
5435	5131.5	0.6609	-0.566106921	0.714917
260.542	254.684	0.801518	-0.378784637	0.820303
30410	28285.5	0.756817	-0.382112176	0.827666
7617	8398	0.832666	-0.293352444	0.743615
1331.5	1314	0.848859	-0.279488903	0.859949
14429.1	13129.5	0.760669	-0.369623388	0.85382
362.5	387.5	0.919405	-0.193498155	0.875588
1651	1870.5	0.817863	-0.401989219	0.723527
1653.5	1934	0.89744	-0.242674762	0.788161
68	83	0.742615	-0.71242341	0.612186
850	881.5	0.332265	-1.736965594	0.311412
2.5	90.5	0.98759	0.485426827	0.238211
2017.99	1488	0.939658	0.102773471	0.732847
1238.5	1355.5	0.856067	-0.336996976	0.792756
453.5	473.5	0.800348	-0.476230586	0.770308
4555.44	4668.96	0.847269	-0.358540537	0.830364
12.5	11.5	0.827755	0.35614381	0.780294
1389.5	1416	0.888245	-0.2499081	0.875008
2350.5	2341.5	0.330008	-0.949638512	0.333251
2684.5	2820	0.921091	-0.180984324	0.887607
2045.48	2311.5	0.810348	-0.466871499	0.725838
962.5	888.5	0.548911	-0.663902132	0.630957
800.504	798.006	0.778563	-0.488689312	0.780873
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1053.5	1124	0.929928	-0.151470635	0.883301
324.5	289	0.813997	-0.384972626	0.899852
839.866	854.526	0.247689	-1.190982746	0.236438
3064.04	2853.98	0.700848	-0.457421325	0.772574
608.544	591	0.991491	0.017233822	0.971088
1223	935	0.843159	-0.231761564	0.907352
1141	1051.5	0.808325	-0.470458237	0.861334
42.8785	68.9823	0.948019	-0.163561854	0.668579
5	1.5	0.873517	-0.152003093	0.375097
1123.5	1563	0.835058	-0.4455341	0.613931
464	445.001	0.932269	-0.119898872	0.966998
27253	25390.5	0.460486	-0.685981175	0.538763
560	640.5	0.746921	-0.367731785	0.602741
3346	3472	0.641687	-0.553403621	0.604622
4830.59	4533.88	0.767524	-0.440703154	0.820106
565.5	574.5	0.798876	-0.427421224	0.786848
1680.51	1667.48	0.433836	-0.827444516	0.441179
3509.01	3263.46	0.814035	-0.351621948	0.873214
262	319.5	0.288752	-1.396798381	0.180078
1592	1789	0.652981	-0.631000071	0.55007
1003.5	1235.51	0.985495	-0.037876437	0.857285
495	522.001	0.927213	0.165061846	0.959906
283	321.5	0.923387	-0.113991107	0.789625
5607	5698	0.744749	-0.450549916	0.730212
624.5	648.5	0.872905	-0.279530495	0.845672

583	662	0.984719	-0.035067231	0.898908
1032.5	1080	0.734189	-0.431667499	0.690403
93.5	96	0.996173	-0.007735649	0.977041
735.5	634	0.772035	-0.311910187	0.932503
363	364	0.813859	-0.338918811	0.811481
847.5	800.5	0.817356	-0.346608493	0.863934
1010.5	928	0.703537	-0.507147857	0.781381
1549.86	1421.43	0.784765	-0.305358974	0.876653
1135.5	1206	0.872299	-0.264178343	0.825942
1024.5	1020	0.788481	-0.352346687	0.792614
1640.47	1690.47	0.865477	-0.261503234	0.841218
11	12	1	0	0.946545
3003.5	2948	0.905256	-0.179291913	0.920151
374	338.5	0.671877	-0.595609745	0.758692
3729	3538	0.145954	-0.786088664	0.185004
1189	966.5	0.613264	-0.57167681	0.825354
1929	1945.5	0.584599	-0.495784913	0.574222
452.5	439	0.5112	-0.517993234	0.55092
346	382	0.920683	-0.196223488	0.856642
1524.5	1028	0.937447	-0.123424663	0.816398
989	1091.5	0.783906	-0.559657755	0.718305
7469.38	6950.13	0.537172	-0.671914375	0.611534
126.5	120	0.519915	-0.853710558	0.565876
5456.98	4746	0.725894	-0.495403902	0.845391
18772.4	17546.2	0.740102	-0.506218356	0.795208
3.5	4.5	0.393741	-1.807354922	0.258505
53.5	71	0.656471	0.684797768	0.834958
2.5	2	0.885352	0.263034406	0.774348
30058.2	26760.8	0.820339	-0.210496021	0.965061
1355.08	1294.47	0.723702	-0.489533511	0.764499
478	647.5	0.992075	-0.022815895	0.815605
873.5	778.5	0.639267	-0.579604678	0.750302
686	719.5	0.530488	-2.164676923	0.506918
73.5	55.5	0.830093	-0.292781749	0.942756
4290	4323	0.620123	-0.636048047	0.612946
343.5	357	0.819757	-0.289739969	0.78222
16964	12937.5	0.893374	-0.109645752	0.765215
2441.99	3001.96	0.957196	-0.075512855	0.769753
1103.7	1102.61	0.662553	-0.607256636	0.663428
811.001	954.997	0.575058	-1.516354958	0.483038
1259	1240	0.930133	-0.132527426	0.94211
146	207.5	0.932809	0.141092319	0.794969
696.5	799.5	0.595313	-0.79832111	0.482982
343.5	471	0.92288	-0.176238775	0.686705
8.5	7.5	0.683522	-0.91753784	0.758199
157.5	180	0.739723	-0.662583398	0.647837
5140.56	5182.4	0.848081	-0.254569085	0.840594
1286.5	1314.49	0.667954	-0.624467502	0.649443
2219.02	2285.75	0.893784	-0.218179109	0.87131
244.5	222	0.567236	-1.441837559	0.622144
882	1167	0.816661	-0.523715312	0.638126
1286	1332	0.670479	-0.824849189	0.646144
2335.5	2193.5	0.912772	-0.160228503	0.963131
1229.5	1195	0.791911	-0.412887869	0.814665
5582.85	5076.49	0.392211	-0.787026494	0.49126
9555.02	8852.94	0.634841	-0.595467152	0.70782

2737.77	2828.5	0.874971	-0.292352077	0.852755
336.5	333.5	0.860958	-0.352803543	0.866587
14	38.5	0.7725	0.777607579	0.677676
798.5	863.5	0.891838	-0.239202473	0.835279
372.5	396.5	0.804595	-0.411813598	0.756144
4504.5	4238	0.893213	-0.240629638	0.934146
940	834.5	0.7497	-0.50582954	0.842153
2416.01	2340.51	0.687147	-0.645486555	0.712305
304.5	257	0.742338	-0.628246598	0.853391
1888	2187	0.922432	-0.202283526	0.830164
402.5	466.5	0.947655	0.130153236	0.964164
72	59.5	0.628215	-0.777607579	0.774393
987	827	0.739855	-0.556737318	0.868767
2218.5	2392.5	0.831201	-0.435888738	0.782198
1589.5	1690.5	0.890427	-0.253355192	0.847907
1478.5	1511.47	0.966054	-0.076647894	0.951443
250.5	221.5	0.532332	-1.240746339	0.613095
2574.5	2690	0.888113	-0.276829429	0.859782
3900	3527.5	0.329376	-0.675115562	0.450754
1226.5	1116.5	0.863268	-0.261036132	0.936975
5935.5	5779.5	0.136112	-2.216046275	0.14537
2154	2384.5	0.946143	-0.139849642	0.884265
4569.58	4225.51	0.856184	-0.309837208	0.911741
1199.5	1040	0.78627	-0.458379599	0.889126
1878.5	2153	0.983689	-0.038920489	0.894617
3604	3339.5	0.606029	-0.550061272	0.688861
790.5	887	0.314296	-1.56862993	0.248608
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1927.5	1923.5	0.802111	-0.423168904	0.803675
1576	1991	0.762877	-0.733308571	0.62146
954.004	1017.51	0.849267	-0.381166556	0.807231
1473.33	1497.49	0.89333	-0.257434432	0.88274
40	51	0.818249	-0.567040593	0.675015
185.5	187.5	0.874641	-0.249873158	0.866263
4.5	2	0.368277	-3.169925001	0.718453
3947	3732.5	0.0760655	-0.851143781	0.101285
760.5	918.5	0.928227	-0.175270302	0.800792
1947.5	2047.5	0.861136	-0.299873728	0.824012
957.505	897.501	0.841887	-0.349518435	0.887361
422.5	524	0.842483	-0.374079377	0.686971
174.5	113	0.547851	-0.712373606	0.952589
674	606.5	0.397048	-1.957812929	0.456551
69.5	82.0001	0.971368	0.070885462	0.926514
2	2.5	0.889735	0.321928095	1
1238	1188	0.634654	-0.743389262	0.66775
655.5	601	0.980627	-0.037909161	0.957291
4725	4975	0.875379	-0.280729622	0.838799
3953	3989	0.729256	-0.556414817	0.722039
1005.49	1118.49	0.825154	-0.413338719	0.749756
1061	1204.49	0.921995	-0.174698133	0.831088
894.492	855.005	0.760221	-0.469534414	0.796905
281	266	0.841075	-0.346523761	0.880259
1189.52	1335.52	0.860753	-0.322862283	0.778341
1775	1722.5	0.934859	-0.130490001	0.957096
201	206.5	0.993589	-0.010806755	0.970092
225	210	0.994326	0.012767296	0.951812

4201	2263.5	0.775633	0.466439013	0.540624
464	540	0.773588	-0.538308874	0.663887
767	808	0.995532	0.00937427	0.967847
631	648.701	0.885373	-0.23582157	0.864348
577	587	0.905934	-0.162598891	0.890778
2228.5	1715.5	0.693843	-0.599275714	0.897556
522.5	500	0.646149	-0.764844627	0.679845
2134.5	2015.5	0.932624	-0.113141643	0.982393
145	146.5	0.786149	-0.392006531	0.777225
436.498	532.5	0.698337	-0.548244112	0.52162
345	347.501	0.922266	-0.145054957	0.916407
920.5	973.5	0.997101	-0.007070123	0.962979
147.5	149.5	0.853423	-0.244569212	0.840933
580.5	527	0.799764	-0.372188082	0.879626
1.5	1	0.3832	#NUM!	0.545627
3371.5	3536	0.764954	-0.471840704	0.726218
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710	753	0.839632	-0.359235708	0.796912
346.5	339.5	0.844633	-0.373316461	0.85816
435.5	441	0.755969	-0.483440556	0.745714
1616	1571	0.373064	-0.610405929	0.407849
611	655	0.514821	-0.683275926	0.445036
519	451.5	0.695988	-0.329592757	0.885719
404.001	480.497	0.895213	-0.240366757	0.770054
2661	3112.5	0.969386	-0.077400235	0.870791
5971.5	6449.5	0.719038	-0.648491717	0.662326
43	70	0.993882	-0.016873819	0.678263
933.997	918.998	0.788356	-0.396613198	0.802022
1031.49	1158	0.876363	-0.326629973	0.803461
364.5	515.5	0.977323	0.060080604	0.804855
604	594	0.899675	-0.248300775	0.910106
332	406	0.91493	0.211800357	0.965075
2885	2314.5	0.570173	-0.731143237	0.77031
377.5	343.5	0.590114	-1.109121722	0.651301
8492	8345.5	0.801859	-0.46258863	0.813952
938.489	1108	0.795443	-0.550017729	0.686748
2571.45	2614.03	0.936361	-0.145022551	0.925388
91.9999	113	0.911356	0.211149232	0.960159
59	64.5	0.705893	-0.816553859	0.648464
1532	1723	0.853378	-0.406899037	0.781451
458.5	406.5	0.923442	-0.112857469	0.961096
3217.5	2683	0.0627327	-0.901855006	0.159732
2693.5	2625.5	0.790545	-0.401974108	0.811616
400.5	395.5	0.781932	-0.414437252	0.792437
505	568.5	0.877118	-0.279699859	0.791939
2115	2389.5	0.769843	-0.505345333	0.676301
2473	2354	0.670441	-0.846830621	0.703396
8593.33	8615.04	0.440341	-0.702408889	0.437666
421	461.5	0.977497	-0.048794984	0.91266
2686	2286.5	0.825802	-0.347532726	0.946218
70	33.5	0.279992	-2.175086707	0.693402
523	622	0.89195	-0.265795546	0.774189
1507.5	1586	0.426535	-0.557238018	0.364357
1483	1246.5	0.697644	-0.558454914	0.843374
3097.48	2878.46	0.661622	-0.522088856	0.735179
656.5	720.5	0.595995	-1.149197835	0.53644

3267.07	2769.63	0.799851	-0.358411285	0.937442
1486	1838	0.815965	-0.533700488	0.684247
457.5	457.5	0.930834	0.163780261	0.930834
1364.52	1526.95	0.921259	-0.180582114	0.84281
0.5	3	0.648511	2	0.758682
9	11.5	0.477033	-1.847996907	0.343535
148	78.0001	0.650882	0.715359138	0.448324
463	452.5	0.988141	-0.025145648	0.996294
1398	1465.01	0.943267	-0.151659144	0.91615
2209.49	2505.01	0.92078	-0.173227829	0.828791
1.5	0.5	0.439843	2	0.357091
93.5	97.5	0.952169	-0.095683348	0.920415
2638.5	2988.5	0.844803	-0.346259052	0.75231
58.5	70.5	0.897246	0.269186633	1
142	150.5	0.96999	-0.072931522	0.933646
1322.5	1351	0.566891	-1.145050333	0.552683
278.5	236.5	0.360071	-1.746494086	0.459577
609.5	893.5	0.0171466	-1.751636524	0.00408863
66636	63390.2	0.715377	-0.402328575	0.769537
501	507.5	0.932299	-0.146892811	0.923267
423.5	441	0.855438	-0.340355759	0.827654
1256.5	1379.51	0.991251	-0.019640761	0.928069
8	4.5	0.64626	-0.678071905	0.937823
781.5	876.5	0.462358	1.291149513	0.497449
790	631	0.977737	0.03339512	0.790263
2875.13	2821.55	0.938435	-0.131815486	0.951544
20.5	16	0.767174	-0.357552005	1
967.5	907.5	0.812616	-0.365448754	0.8636
1	0	0.756486	0.584962501	0.3832
505	607.5	0.921046	-0.200420222	0.800336
2.5	4.5	0.862169	-0.321928095	0.414414
14.5	23	0.626416	-1.688055994	0.391053
98.5	122	0.625297	-0.97819563	0.47967
198.5	271.499	0.938372	-0.173563579	0.74514
14.5	25	0.5715	-2.5360529	0.320484
24.5	20	0.909709	0.140177658	0.752815
1308.5	1244.5	0.778004	-0.49028625	0.814512
959.505	1017	0.814997	-0.364085842	0.767295
1418.49	1636.52	0.925638	0.173246973	0.984748
1783.5	1745	0.716241	-0.449556319	0.73776
1	2.5	0.724378	-1	0.219102
256.962	250.003	0.933139	0.165089746	0.918278
1469.5	1792	0.998582	0.003432071	0.871657
655	705	0.914858	-0.213244039	0.868114
331	256.5	0.67156	-0.622494557	0.87763
255.5	308.5	0.708223	-0.725716453	0.574728
22.5	24	0.496541	-1.684498174	0.459547
967.5	757.5	0.941652	0.09938655	0.769
272	319	0.984061	-0.040338929	0.884801
74	96	0.894939	0.266280065	0.950796
396	366.5	0.859211	-0.311944006	0.912707
1362.02	1453.47	0.550614	-1.297787403	0.509677
767.5	699	0.703273	-0.666650861	0.77127
819	663	0.989894	0.022720077	0.869539
12443	12074.9	0.662557	-0.750062802	0.685069
473	269	0.752124	-0.48268435	0.869462

1578.5	2479.02	0.925869	0.199840579	0.792772
558.5	654.5	0.868077	0.323735175	0.957945
121.5	176	0.811691	-0.515421567	0.563044
192.5	200	0.918504	0.189362494	0.941065
8.5	8.5	0.956414	-0.087462841	0.956414
26.5	35	0.951005	-0.142957954	0.788238
67	82	0.776586	-0.656698254	0.651193
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757	882.5	0.990672	-0.023052875	0.893612
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99	122.5	1	0	0.872869
411	336.5	0.537944	-0.49564251	0.810915
84	83	0.930437	0.146841388	0.922744
166	117.5	0.909211	0.140660407	0.665652
669.002	707.501	0.898874	-0.237379963	0.861044
108.5	151.5	0.794942	-0.476149014	0.542968
402.5	443	0.958676	-0.084888898	0.886436
1691	1672.5	0.911789	-0.205007789	0.919033
877	1042.5	0.811414	-0.480664098	0.693733
963	1062	0.943619	0.124781625	0.992213
346	451	0.813234	-0.576647233	0.654429
1182.35	1034.82	0.744152	-0.418635042	0.868214
3355.71	3403.44	0.818246	-0.39362229	0.807743
4910.5	4768	0.706226	-0.567731728	0.730781
310.5	240	0.631287	-1.021061616	0.78782
133	161.5	0.776525	-0.493040011	0.626527
719.5	776	0.870218	-0.278962582	0.813662
1952.01	2014.5	0.932626	-0.165881429	0.912878
623	863	0.904766	-0.271861098	0.70163
2	1.5	0.200976	#NUM!	0.308068
598.5	735.5	0.871544	0.328421857	0.986475
439.5	328	0.995147	0.00981429	0.817332
3862.86	3671.14	0.736961	-0.540560912	0.77686
1360.51	1180.48	0.760121	-0.512860874	0.863972
3734	3706	0.718998	-0.613545176	0.724694
513.498	483	0.685274	-0.924730063	0.722068
9.5	7	0.476285	0.796466606	0.350984
2261	3627.5	0.657067	-1.407189253	0.404675
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24.5	26.5	0.801117	-0.570315725	0.753654
2066	2054	0.709399	-0.55524366	0.714321
7.5	3.5	0.256038	-1.321928095	0.88627
1944	2083	0.494262	-0.582182205	0.415155
5802	6676.5	0.641663	-0.712189753	0.52612
1675.5	1270.5	0.906218	0.164228905	0.726087
1094.5	1535.5	0.919959	-0.18017686	0.661619
783.5	802	0.63346	-0.769868413	0.615066
1007.5	1190.5	0.876135	-0.30060709	0.760822
59.5	67.5	0.633093	-0.745070644	0.531021
2	3	0.822295	-0.415037499	0.515664
3868	4765	0.950938	-0.121535339	0.81269
3197.97	2767.5	0.934632	0.119648976	0.834476
99.5	202	0.683094	-1.244307198	0.299041
2444	2464	0.736335	-0.471621028	0.729062
109	142.5	0.555738	0.952914864	0.687096
6838	6879	0.89705	-0.19354957	0.89218

844.5	808.003	0.553911	-0.845436666	0.590979
187	233.5	0.660968	-1.015512999	0.521706
566.5	594	0.749842	-0.533063649	0.713047
162	147	0.760175	-0.513301516	0.832249
485.5	531.5	0.933725	-0.161776253	0.875111
10807	10780.5	0.819758	-0.483950312	0.82127
1836.63	1692.54	0.572586	-1.56604857	0.616601
977.482	1157.01	0.891492	-0.315484574	0.792776
1465	1677	0.94982	-0.138390093	0.871186
4098.72	5360.61	0.88321	-0.339540343	0.719691
1258	1303.5	0.851951	-0.396049399	0.830143
2467.5	3298.5	0.76439	-0.786026413	0.595987
1436	1450.5	0.773307	-0.488544647	0.765694
281.5	299	0.808473	-0.358913983	0.756779
5581	5544.5	0.843145	-0.332240284	0.848035
149.5	136	0.58146	-0.654146066	0.674604
391.501	391.501	0.738049	-0.549471708	0.73805
10.5	14	0.950072	-0.144389909	0.779645
213.5	207	0.762628	-0.538419915	0.784895
814.998	738.01	0.72155	-0.546528811	0.801692
11.5	7.5	0.157757	-2.938599455	0.342872
810.5	808	0.817805	-0.346386844	0.820367
3523	3647.5	0.741286	-0.519319559	0.713009
1874.5	1716	0.626068	-0.588622943	0.712963
787.5	739.5	0.822805	-0.363748271	0.870474
995.005	1103.5	0.858423	-0.308414729	0.780836
51.5	39	0.656516	0.653349476	0.534124
64.8328	34.2245	0.59976	0.710751242	0.383442
3772.97	3489.64	0.940726	-0.128748864	0.992853
608	554.5	0.606257	-0.798778868	0.679954
34	35.5	0.635218	-0.91753784	0.605315
1.5	0	0.18169	-1.584962501	0.450185
3145	2937	0.784817	-0.399070751	0.842278
1101	1118.99	0.694482	-0.446392627	0.677305
22.5	12	0.626158	-0.906890596	1
0.5	5.5	1	0	0.0344509
0	2	0.438509	#DIV/0!	0.785812
266	293.5	0.923905	-0.181838323	0.858318
1176.5	1017	0.744506	-0.539398335	0.852817
40	52.5	0.954248	0.121015401	0.882918
1988.49	1644.48	0.650275	-0.804526344	0.784626
3167.07	3247.98	0.890474	-0.235247637	0.87211
917.5	843	0.898775	-0.193206766	0.964219
586.5	652	0.835208	-0.399947689	0.762206
4080.47	3865.68	0.952706	-0.089666767	0.994012
3707	3507.5	0.815601	-0.306492362	0.866543
555.709	519.867	0.88547	-0.190807815	0.944866
339	350	0.792545	-0.355292914	0.763051
49	57	0.869177	-0.385891154	0.781052
613.999	599.503	0.599197	-1.187951033	0.613912
2423.53	3277.31	0.641876	-1.300606992	0.471822
482.5	768.5	0.890471	0.276674082	0.804586
4202.34	4523.08	0.901865	-0.180326001	0.839212
2278.52	2357.55	0.819205	-0.356649423	0.791531
1925	2160.01	0.990287	-0.021138767	0.909058
1248	1299.5	0.892352	-0.238278307	0.863574

2131	2490.5	0.908614	-0.218898802	0.801703
1441	1268	0.663886	-0.500624355	0.795156
2432.5	2460	0.893058	-0.191586375	0.883441
3802	3662	0.818357	-0.337714175	0.849746
2790.48	3018.41	0.797745	-0.444551634	0.738577
1596.49	1894	0.899026	-0.204486393	0.761424
3674.5	3101.61	0.517944	-0.569828002	0.72826
961	955	0.913401	0.194239268	0.909674
1628.49	1623	0.718402	-0.57458164	0.721102
195	211	0.97126	0.065095028	0.977641
1030.51	999.992	0.798811	-0.442127909	0.820746
9	2.5	0.82986	0.222392421	0.300123
122	133.5	0.838605	-0.471305719	0.78583
2570.51	2642.98	0.76794	-0.425079429	0.743634
1665	1611	0.539952	-0.500407857	0.583004
603	537	0.319936	-0.724261538	0.453329
1132	1061	0.707836	-0.432131242	0.775218
4305.62	4605.82	0.820626	-0.37758645	0.768454
4966.5	4727	0.6055	-0.527725529	0.661137
1405.5	1224.5	0.598666	-0.592681594	0.741084
4338.5	4730.5	0.305849	-0.711748485	0.226469
4869.51	3274.99	0.187253	-0.769528077	0.746831
2925	2966	0.402639	-0.560388227	0.385016
2387.5	2675	0.302773	-0.658565591	0.197732
1132.03	1112.05	0.72316	-0.383570802	0.742893
252.969	253.79	0.147141	-0.781751495	0.144986
1679	1286	0.216526	-0.772338909	0.545604
976	1033	0.853332	-0.342022702	0.813788
1943.5	2115.5	0.775617	-0.490334464	0.710945
323	350.5	0.709782	-0.413549418	0.621145
1145	1118.5	0.764534	-0.428116561	0.784906
1321.5	1162	0.494045	-0.564636791	0.659536
8.5	9.5	0.770719	-0.628031223	0.69935
633.5	532	0.638259	-0.537362966	0.816853
1810.61	1833.66	0.795114	-0.452979038	0.785793
4	51	0.991191	-0.192645078	0.337616
1618	1615	0.833053	-0.391453892	0.834326
1705	1597	0.784848	-0.355636206	0.845758
1713.02	1693.49	0.902705	0.178004242	0.894333
1111.5	1218	0.866788	-0.326315412	0.805395
189.5	251.5	0.961899	0.070570582	0.793063
327	341	0.824073	-0.44625623	0.796665
524	510	0.837654	-0.240632707	0.865423
2013	1982.5	0.123147	-0.738519257	0.132978
239.5	164.5	0.702027	-0.572964968	0.986198
74.5	238.5	0.737502	0.889355936	0.601439
4115	3970	0.769959	-0.439671345	0.799715
1172.01	2044.46	0.782883	-0.719035733	0.447072
481.5	525.5	0.910138	-0.195429998	0.84632
85549.9	91690.7	0.493901	-0.842531937	0.433151
3.5	5.5	0.82986	0.514573173	0.942676
4.5	6.5	0.562066	0.830074999	0.798692
967.982	1025.5	0.860694	-0.390401835	0.82656
3.5	6	0.700651	-1.222392421	0.411236
544.732	1256.44	0.826452	-0.519547201	0.293036
104	118	0.601776	-1.550692599	0.534206

6	2.5	0.223462	-1.584962501	0.860525
4988	4750	0.368435	-0.707525225	0.422687
1261.5	1288.5	0.636734	-0.609180972	0.616863
431.255	356.645	0.666882	-0.492616454	0.860633
1872.5	2146	0.883581	-0.274094336	0.788134
693.5	374.5	0.511394	-0.951922764	0.973922
1785.5	1878.5	0.582035	-0.722627635	0.536314
898.5	967	0.701776	-0.491702573	0.631144
39	40.5	0.25405	-1.378511623	0.231724
152.533	211.534	0.94624	-0.15650488	0.750333
1165	1272.5	0.913443	-0.167218618	0.841632
16.5	24.5	0.893621	-0.237039197	0.584587
49	73.5	0.801168	0.504231229	0.96058
598	550	0.682014	-0.806149159	0.737865
590.5	665	0.822294	-0.379244762	0.730162
527.5	459	0.654501	-0.515550278	0.796873
1056.5	1089.5	0.311726	-1.018553609	0.287957
401.5	394	0.63353	-0.504597935	0.654337
67	72	0.884005	-0.284729477	0.836584
2265.83	2380.38	0.903179	-0.23775409	0.871348
2240.5	1126	0.876102	0.254639111	0.586879
584	449.5	0.541607	-1.415037499	0.693843
3917.37	4008.6	0.902561	-0.222283169	0.886826
338.563	420.783	0.932413	-0.156563656	0.777095
1229	1095	0.665809	-0.63391258	0.762489
34570.8	34171	0.376537	-0.698091098	0.389191
922.5	747.5	0.741311	-0.285255611	0.984724
1324.47	1178.5	0.5704	-0.711478214	0.679748
3313.46	3213	0.264064	-0.817214525	0.292262
557.5	658	0.625969	-0.686116453	0.482705
1937.5	1507.5	0.605626	-0.600308474	0.854221
2429	2369	0.42056	-0.621808229	0.450548
1625.5	1625.5	0.811568	-0.376648994	0.811568
524	386.5	0.470422	-0.72281022	0.800975
921	741.5	0.736405	-0.384555073	0.954683
0.5	0.5	0.651448	1	0.651448
520.596	494.612	0.775087	-0.569564831	0.808367
964.506	1139.98	0.868484	-0.335262389	0.757435
2651.51	2526	0.924754	-0.152220146	0.960257
2004.5	1946	0.788588	-0.411084415	0.812705
1243.5	1163	0.827866	-0.354636352	0.878243
1425.5	1386	0.813152	-0.358311251	0.836136
1246.98	1084.01	0.69188	-0.794376657	0.782467
345.5	429	0.791619	-0.596491545	0.654762
924.5	695.5	0.846268	-0.314340577	0.958857
206	197	0.893336	-0.151225151	0.939971
906.001	948.003	0.882165	-0.2880954	0.852473
462.5	676	0.86406	0.374306388	0.923691
1440	1416	0.807902	-0.326317955	0.823292
5711.6	5887.62	0.803053	-0.442276417	0.780931
4464	4923.5	0.755501	-0.514250025	0.677938
8298	7705	0.732877	-0.494985986	0.795986
2837.5	2929.47	0.839997	-0.327027841	0.815103
2306.5	2338.49	0.912878	-0.191357141	0.903221
1355.5	1333.5	0.981948	-0.039380549	0.992828
779	405	0.14148	-1.998149204	0.527037

20	39	0.937306	-0.234465254	0.575451
367.5	359	0.851587	-0.324383747	0.868376
473	478.5	0.873794	-0.323453949	0.866592
1472.5	1850.5	0.445536	-2.344142829	0.331398
2914	2674.99	0.054115	-2.149035602	0.0704889
2638	2452.52	0.75565	-0.42968807	0.820242
1358.99	1260.5	0.812291	-0.390800805	0.868627
436	496.5	0.937023	-0.162704807	0.856093
6.5	8.5	0.92534	-0.2410081	0.780031
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50	60	0.777727	0.454175893	0.896191
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15	11.5	0.870023	-0.206450877	0.902219
3578.5	3159.5	0.558396	-0.682958363	0.681544
1959.5	2170	0.867109	-0.291962896	0.791481
1054	1350.5	0.970852	0.07598395	0.878233
1491	1593.01	0.936783	-0.144389909	0.891719
7341	6808	0.513418	-0.657505391	0.595209
6122	6160.5	0.690434	-0.562630943	0.6849
2914.56	3096.99	0.797181	-0.434271991	0.750622
671	681	0.512373	-1.030419396	0.501112
649.5	692.5	0.425457	-1.921120949	0.389897
1269.99	1246.5	0.762111	-0.451049553	0.777805
1498	1696.5	0.936569	-0.159728387	0.857345
566	603.5	0.94223	-0.101630959	0.886411
590	461.5	0.543376	-0.686901756	0.790355
7025.47	6903.64	0.662051	-0.64235559	0.676908
926	1075.5	0.867416	-0.303160122	0.758695
1840.51	2057.51	0.908116	-0.211078823	0.829988
1637.5	1726.5	0.747344	-0.668150402	0.712685
896.493	1046.5	0.900107	-0.263186007	0.802309
2247.52	2159.48	0.771172	-0.460782659	0.80282
3577.5	3275.5	0.672975	-0.618312254	0.747346
2461	2550.5	0.787435	-0.45928507	0.760354
1374	1483	0.902248	-0.225107465	0.849398
2792.5	2892	0.824702	-0.382935603	0.798748
118.5	112.5	0.808164	0.437686238	0.781773
2137.52	2213.01	0.637895	-0.532301411	0.601708
1459	1397	0.81897	-0.376337848	0.851799
2289.5	2198.5	0.788465	-0.423983696	0.820526
1944	2049.5	0.851111	-0.332355466	0.812861
1659.5	1668	0.63531	-0.85182715	0.631595
1038.5	1022	0.689318	-0.647420441	0.701939
1651	1751	0.650935	-0.656389876	0.600347
1129	953.5	0.852993	-0.324646089	0.966111
1281.5	1158	0.636118	-0.490727749	0.749943
2.5	0	0.198892	-1.321928095	0.353387
644.5	721.5	0.827734	-0.390988942	0.744953
364.975	498.383	0.864733	-0.256238081	0.589699
203	209	0.822246	-0.277318632	0.79319
1444	1416.5	0.466681	-0.709585399	0.486835
26.5	25	0.230213	-1.027480736	0.274227
2646.48	2629.42	0.69105	-0.583646594	0.696575
3902	3542	0.732583	-0.569974043	0.805359
944.006	1033.51	0.823687	-0.35713141	0.750798
1533.5	1647	0.851457	-0.387855597	0.806097

875.51	823.005	0.951354	-0.113973255	0.98975
2.5	23.5	0.642995	0.847996907	0.0164616
11.5	18.5	0.481044	-2.201633861	0.249029
1153	1089.5	0.786924	-0.47768984	0.82741
1930	1859	0.978693	0.047787899	0.955448
1665	1883	0.897924	-0.269286615	0.82106
1502.5	1437	0.875508	-0.28226998	0.905789
133	136.5	0.794811	-0.470319935	0.776172
14.5	6	0.508305	-1.273018494	1
15797	15309.5	0.685648	-0.542886632	0.714376
2881.5	3122.5	0.603753	-0.686860432	0.531234
5043	6017.5	0.842959	-0.216254803	0.641816
6920.71	7356.68	0.684403	-0.478983961	0.621753
2559	2298.5	0.7341	-0.386199382	0.846269
648	732	0.926358	-0.17368692	0.843446
4245.5	4374	0.688095	-0.579535641	0.662169
165.5	184	0.937132	-0.146685733	0.86524
1922.48	2541.47	0.7318	-0.873953912	0.566116
133.5	279.5	0.831609	-0.756915184	0.456469
0.5	2.5	0.825659	1	0.523243
115	100.5	0.683743	-0.636036685	0.790464
806	810.5	0.950872	-0.121306296	0.947479
754.5	544	0.971076	0.054412374	0.766486
537	650	0.760759	-0.611397399	0.628825
790.003	884.499	0.855954	-0.291441036	0.765224
10.5	15.5	0.93205	-0.222392421	0.715063
777	676.998	0.657193	-0.568347787	0.785956
545.002	549.5	0.93798	-0.149070108	0.932785
2286	2234	0.856511	-0.269486032	0.875403
1143.5	952.501	0.549788	-0.827204102	0.706237
1675	1729.5	0.848387	-0.339802901	0.825432
966.498	1144.99	0.892639	-0.215316475	0.754757
363	334.5	0.878189	-0.258273032	0.936251
8377.21	8462.84	0.888684	-0.222516136	0.880813
1579	1565.5	0.634899	-0.776172515	0.641588
5692	5691.25	0.784418	-0.431692663	0.784523
569.5	589.5	0.675507	-0.772009081	0.650708
1063	1328	0.877265	-0.306572052	0.724716
2377.47	2020.5	0.383883	-1.646297669	0.485754
921.996	1187.49	0.851696	-0.313327695	0.649
1260	901	0.468552	-1.646363045	0.663319
275	302.5	0.981335	-0.03450953	0.902735
3250	3073.42	0.912704	-0.189756241	0.951082
593.5	589	0.925985	-0.155112497	0.931468
1023.5	956.508	0.933725	0.128041255	0.887372
555	889.5	0.936684	-0.203454625	0.663037
2714.5	3007.38	0.940347	-0.154946936	0.877722
1968.98	2238.51	0.541854	-1.611191716	0.469431
258.5	288.5	0.987519	-0.028178533	0.912902
1102.5	1012	0.679684	-0.501083422	0.764411
380.5	402	0.857291	-0.350165522	0.820764
523.5	492	0.922782	-0.163223172	0.96615
6	7.5	0.75096	-0.777607579	0.616694
12.5	12	0.833297	0.310340121	0.806314
80	76.5	0.872746	-0.321928095	0.900323
1543.5	1544.5	0.777378	-0.426454626	0.776838

1259.5	1241	0.76202	-0.438324352	0.774785
1002.5	921.5	0.765649	-0.404284443	0.841126
515.492	525.5	0.968586	-0.076115573	0.956733
1768.5	1994.83	0.63824	-0.786719345	0.545319
11.6148	7.29479	0.720331	-0.76637864	0.971823
157	120	0.363333	-0.910916456	0.632214
260.5	265.5	0.630735	-0.749015157	0.61536
4	7.5	0.610398	-0.678071905	0.155182
38.5	56	0.845158	-0.20069735	0.409006
1456.5	1938	0.781302	0.52890689	0.943511
97.5	69	0.934493	0.113768875	0.711111
752	775	0.914432	-0.193741767	0.89378
1590	1538.5	0.844357	-0.401191373	0.864786
1759.5	1812	0.658235	-0.552131108	0.629701
1874	1969.5	0.867726	-0.341498901	0.836384
1356	702.498	0.826873	0.362215391	0.567029
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3.5	1	0.0576689	-2.807354922	0.651448
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4219.96	4136.99	0.692224	-0.478673551	0.712126
6205.5	6346.93	0.851227	-0.333558489	0.835151
1634.5	1510.5	0.634735	-0.49099828	0.723686
1327.34	1102.68	0.617698	-0.691619044	0.778057
2628.5	2788.5	0.880698	-0.261662892	0.837743
1965	1780.5	0.631745	-0.565817451	0.730679
3827.67	3925.71	0.826274	-0.387028922	0.80791
2225.49	2515.01	0.916417	-0.192129341	0.830751
5773.5	5813	0.804556	-0.42863668	0.799524
27308.5	30086.2	0.876429	-0.306315902	0.812307
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7888.5	7916	0.632965	-0.61657992	0.629706
350.5	278.5	0.828465	-0.246251432	0.946386
2024.5	1649	0.564107	-0.763576377	0.746335
2717	2514.5	0.768369	-0.398320104	0.838038
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313	314	0.875214	-0.307025272	0.873162
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846	875	0.801135	0.322610059	0.827619
93.5	145.5	0.740514	-0.888682977	0.480952
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1665	1815	0.937757	-0.108382306	0.861168
13350.5	14164.5	0.890731	-0.299464691	0.855724
184	233	0.904153	0.214530304	0.936508
256.5	284.5	0.892651	-0.234630691	0.816302
36.5	36	0.913655	-0.123735368	0.927979
531.725	329.201	0.726244	0.427186266	0.477489
128	171.5	0.851382	0.335390355	0.955264
574	609	0.68645	-0.734454375	0.643309
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462.5	542	0.906528	-0.187973638	0.778798
135.5	199.5	0.784967	-0.778368293	0.569909
1390.5	1331.5	0.495348	-0.783176547	0.536737
931	892	0.822957	-0.404230744	0.852709
20702.7	21441	0.877515	-0.253370689	0.85085

413.5	406	0.565579	-0.749229014	0.582113
5	11.5	0.812729	0.378511623	0.452211
279.5	296	0.688976	-0.827496454	0.650954
400.5	294.5	0.45639	-1.787677437	0.629683
464	614	0.931456	-0.201556132	0.766488
1267	1378.52	0.892954	-0.249899471	0.83481
1042	1183.01	0.922277	-0.188309668	0.837704
1346.5	1398.5	0.859263	-0.276057442	0.828741
545	564	0.905694	-0.215131072	0.882205
7220.48	6349.04	0.441818	-0.667976348	0.593093
3212.96	2801.46	0.636055	-0.497117248	0.787797
6706	6201	0.314507	-0.835295479	0.39152
4245.5	3730	0.581211	-0.5689108	0.724733
4336.41	4431	0.55151	-0.627446406	0.528854
4946.5	4583	0.281675	-0.86465903	0.353215
4534.5	4212.5	0.357343	-0.736276413	0.438015
7715	8004.5	0.153774	-0.766563606	0.13
6224.5	6033.5	0.329535	-0.772434994	0.361017
5806.5	5378	0.288137	-0.879571603	0.359352
11175.5	12216	0.215057	-0.760785442	0.150158
8895.85	8822.8	0.388912	-0.706574489	0.397774
5067.57	4618.93	0.552773	-0.708821142	0.642416
6657.91	6340.67	0.59279	-0.639847062	0.6407
5514.94	5081.86	0.621653	-0.543848737	0.708536
817	672	0.432628	-0.724365557	0.652981
10145.5	9470.5	0.287765	-0.808332882	0.355752
6991.89	6410.91	0.596518	-0.604334058	0.685204
8834.67	9196.48	0.70406	-0.597333872	0.671368
1459.5	1600	0.320752	-0.724988868	0.236441
1588.5	1575.5	0.404735	-0.838221409	0.412476
2859	2991	0.577468	-0.612858149	0.531054
6117.83	5518.93	0.582197	-0.572281857	0.695579
2272.03	2230.03	0.599997	-0.620823754	0.618499
12547.5	11956.2	0.572663	-0.657206793	0.620627
9402.18	9774.88	0.520863	-0.7770382	0.485175
2001	2038.5	0.852037	-0.266932999	0.835968
3915	2949.5	0.326424	-0.871738629	0.630464
3338	3055	0.630554	-0.54395139	0.722805
2933	2848.5	0.463293	-0.727812859	0.493526
9237.92	9414.36	0.725697	-0.499793705	0.709026
1780.49	2025	0.901929	-0.250200112	0.819109
5943.5	5500	0.74316	-0.430043469	0.814995
1759.5	1816	0.794863	-0.360989621	0.766368
1061.5	1093	0.629321	-0.543103494	0.59881
3802	3824	0.693078	-0.384005221	0.686095
1251	1367.5	0.171037	-0.918178667	0.121107
4817.47	4196.48	0.614405	-0.722801472	0.731253
238	224.5	0.356758	-1.272765944	0.398784
518.499	409.499	0.405555	-0.767898978	0.668066
11.5	12.5	0.845296	0.283792966	0.906586
3.5	6.5	0.939665	-0.222392421	0.605345
9	16.5	0.817364	-0.710493383	0.48631
175.5	180.5	0.938199	-0.151546472	0.920623
17223.7	17951.3	0.921057	-0.164493835	0.890373
915.5	836	0.616702	-0.789929202	0.6885
178.5	229.5	0.962276	0.093866923	0.878081

715.5	733	0.830163	-0.325461021	0.810175
267.5	275.499	0.791476	-0.349149564	0.763729
1445	1493.5	0.803868	-0.410054092	0.77828
596	529.5	0.815367	0.428289906	0.758307
621	717	0.982152	0.042351091	0.925395
1686	2327	0.995142	0.013626501	0.812985
10.5	14	0.606977	-1.392317423	0.443179
3912	3095.5	0.754096	-0.51241475	0.924033
1034.5	1070.5	0.830246	-0.39083644	0.806078
1940.5	2152.5	0.90148	-0.240974306	0.832793
397	430.5	0.833752	-0.282056016	0.757986
40	64.5	0.767479	-0.767339243	0.480142
50.5	55.3586	0.898691	-0.231946728	0.83426
38.5	24	0.594664	0.755581272	0.42626
2110	1948.5	0.608777	-0.662566219	0.682433
103	91	0.964825	0.068386975	0.881045
2586	2548.5	0.824567	-0.419507511	0.834415
1705.5	1756.5	0.675841	-0.619635078	0.650803
867.5	866	0.895737	-0.198477523	0.897127
264	269.999	0.961138	-0.084392187	0.945626
22	50	0.86424	0.471305719	0.698214
1	1.5	1	0	0.785812
14.5	24.5	0.894117	-0.398549376	0.615686
75	110	0.694848	0.532732542	0.985778
8801.56	7451.73	0.888421	-0.227951592	0.994468
104.5	84	0.702736	0.605523823	0.603785
25286	28880.5	0.756655	-0.529418408	0.653628
2831	1857.5	0.179337	-1.042929745	0.603166
8019.2	8630.93	0.375653	-2.151859177	0.337066
12150.5	11063	0.76453	-0.465522228	0.838927
3355.5	3207.5	0.795575	-0.373854199	0.83407
685.5	621.5	0.750545	-0.494716861	0.828371
298.5	311.5	0.975248	-0.05166212	0.944659
117	86	0.768176	-0.386548942	0.969829
2819.98	3067	0.891115	-0.226023361	0.82667
26	17	0.691394	-0.415037499	0.877103
2624.98	3025.96	0.864992	-0.308562044	0.761831
643.996	705.5	0.804839	-0.486990006	0.742914
1295.16	1357.38	0.858371	-0.339168241	0.826628
1176	1358	0.863642	-0.33936129	0.766562
3338.85	3604.84	0.758226	-0.630325104	0.707346
692.5	962.5	0.949785	0.140814086	0.860248
1525.5	1499.5	0.729696	-0.458722503	0.745676
410.5	518.495	0.901595	-0.26337746	0.751979
44.5	42	0.984482	-0.032789935	0.976726
952.5	1055.5	0.963454	0.087418292	0.973275
483.5	543	0.609069	-1.288015459	0.540996
130.5	166	0.889182	-0.253118937	0.710871
52	40.5	0.787185	-0.360589715	1
3683	3650.5	0.506733	-0.908556356	0.514167
5700.37	5269.74	0.793859	-0.440693717	0.851737
287	321	0.939243	-0.17055349	0.875303
26	42.5	0.887443	0.299560282	0.805114
785.005	969.999	0.839217	-0.480848747	0.71269
385	430.5	0.618291	-1.192109854	0.550683
42282.5	36994	0.747928	-0.581988565	0.840317

1761	2398	0.851535	-0.455749707	0.666581
645.5	574	0.992065	-0.017991754	0.937115
2676	3325.5	0.965812	0.082761642	0.894089
482.503	851.005	0.888925	-0.390832146	0.56733
382	437.5	0.622037	-1.228700674	0.541722
1718.51	1738.99	0.571678	-1.515702147	0.565072
50	196.5	0.716691	1.286881148	0.707542
2098	1865.5	0.392357	-2.092284457	0.456619
17817.4	18630.6	0.86026	-0.370051512	0.832671
814.495	1125.49	0.668865	0.924534576	0.803569
4054.57	3146	0.528195	-1.324437024	0.685836
4142.52	2125.53	0.688025	-0.600852212	0.861407
486.501	499.5	0.640591	-0.766427623	0.620028
1863.5	1526	0.302071	-0.860281192	0.511919
926	898.5	0.281892	-0.766080145	0.311508
1237.49	1037.01	0.623295	-0.396681136	0.870124
1078	927.5	0.551352	-0.587306441	0.722755
2799	2456.5	0.902913	-0.091495286	0.903749
444.5	664	0.908322	-0.197987109	0.586664
7208.93	6681.13	0.583979	-0.614162228	0.662459
8010.88	8082.8	0.846939	-0.326960075	0.840302
5599.75	6039.49	0.908985	-0.223864701	0.859924
181	171	0.822941	-0.360294535	0.866448
621.505	549.497	0.670667	-0.659398696	0.769073
24.5	23.5	0.863968	-0.292781749	0.893877
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490	532.5	0.841666	-0.342313335	0.778904
978.5	974.5	0.84051	-0.347588253	0.843493
363	320	0.826216	-0.361718681	0.918244
247	205	0.911815	-0.160464672	0.945624
110	49.5	0.875605	0.172836597	0.431596
4885.5	5154.5	0.695185	-0.844634392	0.66076
836	1124	0.938796	-0.148938419	0.731758
2190.55	2240.46	0.779324	-0.421984862	0.760403
711.556	698.311	0.781812	-0.427371445	0.797093
449	487.5	0.801559	-0.484142148	0.744735
766.5	705.5	0.729959	-0.496005757	0.800967
3248.5	3790.5	0.946574	-0.143712215	0.853692
144.5	131.5	0.661814	-1.119643247	0.713986
331.5	294.5	0.736266	-0.57196516	0.823302
1710.5	1850	0.601066	-0.647445248	0.526769
2640.5	2641	0.721652	-0.506284371	0.721485
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12	32	0.9708	-0.125530882	0.465255
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11856.2	10837.6	0.873248	-0.315590197	0.92835
355	452	0.711698	-0.785174687	0.550273
30	16	0.340116	-2.906890596	0.637618
53	60.5	0.800564	-0.499101764	0.709758
885	627	0.176535	-0.95348329	0.534712

717.497	773.996	0.700925	-0.782921956	0.65002
2477.44	2505.45	0.704854	-0.542899596	0.695023
1066	892.5	0.718031	-0.39176772	0.908258
2051.5	2070	0.833819	-0.340685341	0.826867
3061.5	3047.43	0.801384	-0.448172436	0.804694
1340.5	1377	0.896607	-0.196879358	0.874798
68.5	110.5	0.962659	-0.109347396	0.665474
1263.5	1443.5	0.890153	-0.218401561	0.782047
1936.5	1969.5	0.812811	-0.362729731	0.798925
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1887.9	1841.23	0.765388	-0.422110737	0.787352
29768.2	27494.8	0.717449	-0.480908314	0.790311
7008	7029.5	0.770724	-0.400019246	0.767948
946.497	810.997	0.442043	-1.055143712	0.567891
1207.5	1188	0.967939	-0.062257923	0.980192
3299.5	2935	0.341612	-0.921088762	0.451399
297.5	362.499	0.976611	0.057049741	0.897128
5109	5802	0.876011	-0.265408376	0.77908
2168.5	2083	0.352036	-0.735414071	0.39493
4766.24	5087.36	0.742646	-0.428535868	0.680352
124.104	87.3076	0.506827	-0.627499324	0.912221
171	178	0.754056	-0.669659665	0.728524
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372.5	305	0.816027	-0.409239655	0.950359
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7027.46	6860.98	0.58044	-1.306350621	0.594783
46	104.5	0.950856	0.176877762	0.599314
108	218.5	0.889591	-0.478763097	0.535495
13684.2	13457.6	0.249231	-1.865730022	0.257887
1670.5	1785	0.862797	-0.340288632	0.819103
4182.04	3484.98	0.549673	-0.828467549	0.705609
306.5	490.5	0.981468	0.05766935	0.752235
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24	40.5	0.909203	-0.299560282	0.603574
4750	4877	0.500499	-0.803260447	0.476355
218.5	270	0.470594	-0.864598874	0.29865
2017.52	2360.03	0.889042	-0.272302993	0.782755
1997	2271.5	0.72948	-0.604418132	0.631521
2422.5	2203.5	0.501979	-0.684817249	0.6032
20	24	0.774905	-0.678071905	0.664272
4366	4373	0.806711	-0.448465664	0.805587
34	18.5	0.482615	-0.91753784	0.981644
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2280	2773.5	0.966826	-0.091423028	0.851195
2295	1885	0.911096	-0.153400715	0.931359
1187	1267.5	0.81863	-0.44161475	0.773763
2487.5	2593.5	0.716316	-0.466298926	0.67613
4051.99	3970.48	0.821394	-0.341257683	0.838062
2666.5	2821.5	0.722483	-0.609242143	0.679389
2954.5	2504	0.49707	-1.094070056	0.620892

1627	1643	0.741656	-0.422445829	0.732232
38	39.5	0.229768	-1.389946518	0.20804
3545.49	3651.94	0.654264	-0.776005824	0.63205
4801	4604.5	0.636763	-0.505458276	0.682524
12870.5	12685	0.672619	-0.586364346	0.685559
695.5	718.5	0.978258	-0.04744401	0.956059
1282	1294.5	0.958575	-0.101385644	0.952633
845.5	740	0.762152	-0.496045001	0.861964
983.5	1124	0.971138	0.072936688	0.949386
384	395.5	0.862525	-0.332297068	0.842895
5665.5	5922.5	0.782845	-0.387003535	0.74309
0.5	6.5	0.568955	2.321928095	0.291911
3464.5	3078.5	0.635991	-0.554777555	0.75512
223	281.5	0.949921	0.093917863	0.855871
7120.55	7492.92	0.707936	-0.5306937	0.662699
329.5	361	0.764119	-0.350114185	0.667696
1198	1126	0.644393	-0.522508619	0.709217
898	1122.5	0.885491	-0.322731601	0.74814
464.5	415.5	0.722753	-0.567213154	0.809392
1409.5	1272	0.259941	-0.903504061	0.353521
233.5	408.499	0.730772	-0.577259893	0.30435
471.5	408	0.882399	-0.182409294	0.984161
379.5	334	0.738984	-0.415671233	0.861117
3766	3848.56	0.773558	-0.444194269	0.755719
1077.5	1150	0.695192	-0.77083323	0.650372
131	160.5	0.943778	0.131483925	0.923622
252.5	207.5	0.79512	-0.321928095	0.977295
1809.5	1934.5	0.732594	-0.570484857	0.68045
1892.91	1773.76	0.760294	-0.488886593	0.811029
103	228	0.972207	-0.09404349	0.49987
2.5	4.5	0.670622	1	0.931084
83	73	0.713093	-0.674599713	0.801954
971.5	941.5	0.706859	-0.715835827	0.728528
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1879	2070.5	0.886378	-0.272586672	0.820577
1742.5	1799	0.718975	-0.595766143	0.694052
2868	2385.5	0.992966	-0.011362845	0.857402
48	52.5	0.797837	-0.395137942	0.723082
715	659.5	0.79616	-0.47337081	0.851503
448	511	0.949266	-0.120854395	0.861442
1025	898.5	0.819376	-0.304440668	0.935788
1968.5	2262	0.818498	-0.397916564	0.712517
5344.23	5329.6	0.473661	-0.725996883	0.47645
3510.05	3107.5	0.545711	-0.886244079	0.645514
5076.5	4624.5	0.591531	-0.675034263	0.679317
232	257	0.855267	-0.288125387	0.772142
7046.5	6765	0.604237	-0.553722169	0.648379
818	748	0.615768	-0.622031151	0.701651
889	905	0.799119	-0.38241168	0.78417
2318.53	2352.47	0.771525	-0.524349701	0.761057
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1109	908.5	0.642947	-0.575884839	0.831828

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559	496	0.549053	-0.609035085	0.681392
910.999	885.995	0.826683	-0.327483897	0.849637
354	361.5	0.899673	-0.154722595	0.879002
4889.45	4917.6	0.718469	-0.524994829	0.713515
39.5	63	0.255431	-1.216317907	0.0642281
3454.97	3007.41	0.615436	-0.608512589	0.750618
1942.5	2052	0.641165	-0.711202498	0.595909
348.5	295	0.714438	-0.422647033	0.883708
453	501.5	0.838503	-0.347633809	0.760955
1010.5	999	0.684567	-0.517329233	0.695544
6303	6188	0.775223	-0.411456002	0.791131
139	131	0.646328	-1	0.683433
2384	2530.5	0.765328	-0.478544476	0.717343
1237.01	1328.01	0.891439	-0.241988104	0.840629
1674.07	1957.55	0.689087	-0.599391823	0.556064
288	255	0.859385	-0.230345787	0.968323
58	91	0.881984	0.281570357	0.808306
605.501	525	0.643581	-0.569556654	0.781222
764	724	0.646034	-0.382671974	0.719677
566	572.5	0.723046	-0.49899981	0.7129
528.5	669	0.908164	-0.217623177	0.740413
772.004	927.489	0.839756	-0.358830457	0.701539
3942	3899.5	0.757322	-0.581124815	0.764846
410	365	0.78094	-0.332966366	0.895977
6	8	0.905448	-0.263034406	0.724378
192	226.5	0.638834	-0.992505463	0.52988
951.503	1012.5	0.875958	-0.205824578	0.817534
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1617.5	1425	0.877253	-0.234334094	0.97454
935	802	0.605673	-0.863198006	0.720419
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668	660	0.879063	0.288721049	0.872612
3388	3762	0.862645	-0.33578047	0.791795
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466	434.5	0.238156	-1.564978126	0.278809
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1243.5	1257	0.712497	-0.619303522	0.704196
269	228	0.868354	-0.296675303	0.976138
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34.5	36.5	0.500245	1.350907162	0.51514
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41.5	55	0.260554	-1.517058436	0.129636
1023.5	1508.49	0.768412	-0.611278102	0.500265
295	368.5	0.703207	-0.560714954	0.510996
2372.5	2303	0.442176	-0.534032414	0.482419
4186	4228.5	0.745588	-0.492197785	0.737156
729	749.5	0.853028	-0.261847491	0.828688
773	817	0.953033	-0.103473727	0.914585
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3.5	1	0.622002	-0.807354922	0.739226
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21	29	0.831277	0.362570079	0.943163
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1470	1923.5	0.793698	-0.551494549	0.612682
254.5	241.5	0.634483	0.715837286	0.609022
2955	3231	0.886833	-0.231739533	0.817195
60.5	23.5	0.525901	0.739348245	0.264386
2151.51	2472	0.81677	-0.424998181	0.715707
1360.5	1461	0.936436	-0.156664661	0.891155
16287	17119.5	0.75046	-0.464322848	0.707166
3794	3676.5	0.781548	-0.450192502	0.805951
950.5	1091.5	0.837624	-0.408727039	0.744315
808.5	794.5	0.676597	-0.419505434	0.697037
1761.5	3970	0.90303	0.324628316	0.63558
469.5	463	0.854117	-0.263952861	0.866011
430.196	259.883	0.306611	-2.207601871	0.586063
4045.81	4369.11	0.749733	-0.652214754	0.698544

572.5	509.5	0.968693	-0.044787922	0.918791
1127	1402	0.926733	-0.193559739	0.787912
3214	3444	0.878771	-0.281102207	0.830763
853	861.5	0.879478	-0.233570127	0.871549
1591.5	1545	0.52792	-0.914217829	0.552187
1104.5	1077	0.721871	-0.728716638	0.738309
2478	2450	0.75963	-0.49319096	0.768586
1904.5	1714.5	0.743942	-0.383443919	0.850646
1668.5	1752	0.704119	-0.523805164	0.659869
1771.51	1919.99	0.748496	-0.57281831	0.688854
5747	5503	0.705213	-0.488241156	0.746286
296.5	1301	0.757233	0.959288503	0.44547
1807.5	1817.5	0.810034	-0.443654543	0.806186
4542.42	4726.88	0.853526	-0.325898056	0.824794
1300.5	1455.5	0.900852	-0.231108518	0.822636
1376.5	1391.5	0.544735	-0.660259986	0.53368
511.501	524.5	0.511886	-0.973453688	0.492043
6225	5827	0.768549	-0.442096379	0.822938
550	436.5	0.541871	-0.635682258	0.791521
198	172	0.808165	-0.362570079	0.920512
1	5	0.767557	1.321928095	0.627217
1783	1763.5	0.776632	-0.368071141	0.787063
26.5	24.5	0.675095	0.664396968	0.637534
1021.5	1015	0.998642	0.002821898	0.994227
311.944	307.285	0.868046	-0.240672626	0.880714
18302	17652	0.887335	-0.235318694	0.913733
2248.05	2178.49	0.823531	-0.359234983	0.847794
1945.5	2036	0.440191	-0.752872807	0.395568
1462.01	1536.52	0.817708	-0.420993535	0.782324
735.5	755.5	0.792989	-0.535317519	0.775557
9404.5	8898	0.626656	-0.570234376	0.682599
960	951	0.703636	-0.431157165	0.713645
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2324	2347	0.382735	-0.508202085	0.369191
893	970.5	0.836945	-0.333892322	0.770997
536	508.5	0.841537	0.247927513	0.799466
783	792	0.743536	-0.530719456	0.734509
106	108.5	0.630022	-0.809057217	0.612196
3272	2820.5	0.461823	-0.568086119	0.66102
2979.01	3245.03	0.923585	-0.204668686	0.872543
1638.5	1742	0.849908	-0.403199485	0.812043
249	261	0.900706	-0.221909672	0.867566
604	560	0.653008	-0.966941711	0.700586
2249	2254	0.96356	0.064911062	0.965319
3158.04	2956.76	0.991417	-0.014739357	0.954804
659.47	685.738	0.788392	-0.497702225	0.760794
11663.7	11519.7	0.785416	-0.377524165	0.796521
352.5	307.5	0.617246	-0.417085328	0.802513
4161.83	4111.62	0.657367	-0.582870257	0.668644
631.5	677	0.698981	-0.635527382	0.644048
1192.01	1235	0.941986	-0.117204953	0.9153
8563	6933.5	0.836317	-0.198553965	0.920753
1184	1372	0.950125	-0.127969928	0.857875

2985.06	3346.01	0.861472	-0.336517689	0.783519
116.5	124.5	0.648403	-0.909989834	0.603213
60	93.5	0.979504	-0.0489096	0.654589
1111	1058	0.776092	0.391142061	0.743544
2600.5	2189	0.906374	-0.110654114	0.893082
9	12.5	0.731149	0.784271309	0.872889
17.5	12.5	0.947512	-0.129283017	0.878141
1277	1116.5	0.656062	-0.434372291	0.815567
4875.97	5987.7	0.799954	-0.491177727	0.654335
608.5	703	0.860202	-0.330250215	0.758148
636	728	0.798144	-0.448696811	0.69589
642.501	690.004	0.82821	-0.416156909	0.779338
1394.99	1187.49	0.448187	-1.883796641	0.538299
399.5	360.5	0.770044	-0.578656612	0.836172
414.001	482.499	0.996158	0.008682243	0.898971
2530	2198.5	0.297567	-0.920137919	0.430795
119.5	78.5	0.851882	0.170595555	0.502974
6	8	0.353387	-1.584962501	0.198892
510	455.501	0.690355	-0.612810486	0.781377
467	578.5	0.91694	-0.203720635	0.770819
5847	5586.5	0.632859	-1.214559135	0.658697
67	50	0.781175	-0.271673324	0.893712
1293.5	1343.47	0.796434	-0.475977433	0.769606
1037.5	1132.5	0.94281	0.13655511	0.995552
2060	1870.48	0.792974	-0.313618059	0.889037
5255.5	5043.5	0.871795	-0.295037938	0.899493
81	99.5	0.841485	-0.397335498	0.699719
165.5	215	0.897012	-0.200762405	0.673802
2233	2219	0.942332	-0.130060541	0.946516
623.505	473.502	0.77151	-0.551238607	0.94345
1086	1124.5	0.758295	-0.437349961	0.727434
786	744.5	0.948822	-0.114559764	0.984205
2157	2181.5	0.902408	-0.249851721	0.895498
2388.5	2651.5	0.929221	-0.170000506	0.859962
1892.05	1776.26	0.452102	-0.732777908	0.518489
374.032	365.283	0.658293	-0.728314299	0.676648
1204.26	1269.59	0.826509	-0.401439869	0.78906
1785.5	1939.5	0.679297	-0.557154025	0.603245
742	761	0.732675	-0.492248093	0.710581
1667.49	1914.03	0.688467	-0.484281771	0.550239
2	4	0.791627	0.584962501	0.791627
1131.5	1183	0.953475	-0.098943817	0.921657
476.5	479	0.807732	-0.436900785	0.803993
1870.5	1846.5	0.991089	-0.019021413	0.999818
1009.5	1068	0.873557	-0.282457669	0.83318
372	529.5	0.817021	0.422290883	0.954566
451.997	673	0.862479	-0.377234182	0.597139
1130.5	1126.5	0.781921	-0.435386145	0.784769
816	1005.5	0.874136	-0.293046975	0.722525
490	424.498	0.866712	-0.281994751	0.966838
561	601.5	0.984497	0.039319837	0.974999
2	6.5	0.865665	-1	0.385812
675.5	784.5	0.828972	-0.25006484	0.667663
5.5	1	0.409442	-0.874469118	0.499897
495.001	487	0.628975	-0.609212962	0.644504
791.5	707	0.410745	-0.947207128	0.511946

597.5	528	0.743937	-0.415439981	0.860246
371.5	295	0.741463	-0.413097089	0.954032
4914.77	6136.99	0.691439	-0.966599922	0.556365
2044.5	2139.5	0.624341	-1.074947945	0.59551
938.5	1113	0.677713	-0.964319851	0.571405
731.495	747.502	0.644607	-0.489561862	0.620732
1212.5	1250	0.804424	-0.30786735	0.774186
286	79.5	0.196658	1.113924262	0.0750477
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44	49	0.718326	-0.7589919	0.647382
31	15	0.670737	0.521537121	0.380423
801	956.5	0.858859	-0.382389232	0.746073
1069.55	967.494	0.569573	-0.84037486	0.652012
1	1.5	1	0	0.756486
150	123.5	0.481967	-1.251538767	0.616598
16.5	41	0.859885	-0.520832163	0.339296
146	107	0.368659	-1.019899557	0.651916
570.5	727.993	0.427443	-1.640383238	0.288231
48	34.5	0.497151	-1.337034987	0.708149
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3	1.5	0.534406	-1.584962501	0.87225
981.5	1337.5	0.596568	-0.863365308	0.364772
64	143.5	0.640016	-1.607682577	0.23625
26	50.5	0.679493	-1.308122295	0.324318
139	100	0.43009	-2.286051059	0.597526
84.5	108	0.6163	-1.567989422	0.486742
379.5	316	0.531822	-1.329551336	0.645947
16.5	8	0.718656	0.570315725	0.474001
590.5	612	0.792838	-0.521044629	0.768998
490	512.5	0.639585	-1.075551033	0.611923
5	10	0.755048	-1	0.380641
141	136	0.88744	-0.214738849	0.916105
401.5	381	0.757698	-0.461904104	0.801215
1034	1025	0.978819	0.043294407	0.972768
1065	1045	0.75163	-0.52428179	0.766223
13	12	0.753525	-0.452512205	0.821739
309.5	331	0.83616	-0.259775129	0.769685
283.162	251.21	0.941209	-0.127806875	0.980517
3.5	9	0.586031	-2.807354922	0.183338
192.837	204.289	0.880309	-0.243882467	0.835487
1250	1208	0.702904	-0.51622291	0.734025
65.5	81	0.766277	-0.607158247	0.620921
20152.9	17454.2	0.684219	-0.424967368	0.844916
5661.5	5648	0.579822	-0.886710059	0.581682
1269.5	1096.5	0.736749	-0.600960867	0.839069
4678.5	4282.95	0.793401	-0.383670565	0.866804
62	79.5	0.665696	-1.071553261	0.515861
230.5	252.5	0.806804	0.190296049	0.936703
196	143.5	0.847536	-0.270413936	0.91296
1059.5	1184	0.884467	-0.277678403	0.808803
26	26.5	0.313217	-1.308122295	0.300527
448.5	664	0.844988	-0.50746798	0.615722
442	409	0.857818	-0.270233171	0.919505
1382.5	1378	0.854294	-0.311530248	0.856695
1571.49	1446	0.678376	-0.619341049	0.747523
144	79.5	0.98822	-0.020177882	0.650944

1257.5	1004	0.823961	-0.363389792	0.983124
670	556.5	0.813166	0.327944705	0.696816
29.5	25	0.63485	0.593090382	0.542668
600	552	0.539718	-1.467267458	0.58868
3840.5	3567.46	0.792754	-0.398540839	0.852476
1227	1389.5	0.751009	-0.600032263	0.662103
1070.5	1251	0.958113	0.104603038	0.947987
3741.57	4362.48	0.920381	-0.201819725	0.821102
243	150	0.307778	-0.95326895	0.814812
1539	1594.5	0.749452	-0.510961919	0.721014
1928.5	1923.97	0.523341	-0.409934574	0.527006
435.498	448.5	0.891693	-0.282702476	0.873743
998	978	0.685701	-0.662543445	0.701504
1265.5	1112	0.879129	-0.275514446	0.963263
614.5	620	0.577147	-1.43990196	0.572072
195.5	158	0.528321	-1.253472793	0.666489
433	444	0.986355	-0.035415684	0.972067
1194	1266.5	0.848882	-0.37845121	0.810177
121.5	164	0.764743	-0.630191755	0.56124
900	1005.5	0.755918	-0.514573173	0.668136
993.105	929.089	0.706481	-0.450761068	0.773542
1030.5	939.501	0.74259	-0.392579946	0.835254
842.5	882	0.940651	-0.114906531	0.904526
706.496	706.999	0.88858	-0.235718892	0.88806
237	269.5	0.888345	-0.198745277	0.773151
449.5	474	0.992367	0.015959179	0.97024
218	196.5	0.200268	-2.260389685	0.247432
4066.46	4305.98	0.820179	-0.380378969	0.776188
21	20	0.774169	0.389042291	0.741231
1454	2161.5	0.857856	-0.205458994	0.430003
1452	1465	0.97964	0.047401866	0.985096
2311	2426.5	0.829905	-0.333523621	0.790076
14.5	10.5	0.852694	-0.214124805	0.852694
1	2.5	0.698562	1	0.844837
420	433.5	0.834571	-0.334867151	0.809619
780.501	819	0.305925	-0.733275323	0.260417
785	761.5	0.870523	-0.25460507	0.894236
1458.51	1608.49	0.847314	-0.311233012	0.769363
26	13	0.337083	-1.700439718	0.772264
1145	1101	0.623324	-0.585592636	0.662335
1704.48	1790.16	0.393508	-0.768307721	0.34614
350.499	382.5	0.914596	-0.160940283	0.841901
68	43	0.434965	-0.61172941	0.957854
897.498	961.002	0.934396	-0.136450537	0.88341
134.124	116.037	0.522019	-0.699381674	0.670971
617.876	728.963	0.539632	-0.814194934	0.400188
6416	7052	0.826206	-0.436634908	0.762895
1350	1321	0.69776	-0.666576266	0.714081
2787.5	2816.5	0.757885	-0.42273512	0.748478
1917.55	2013	0.915159	-0.191206631	0.881472
975.5	822	0.482777	-0.68920673	0.671764
1470	1576	0.80857	-0.327459201	0.743821
1389	1383	0.743578	-0.394071223	0.747966
767.5	902.5	0.150873	-0.650332285	0.0651979
4277.03	3969.26	0.65738	-0.710537847	0.716075
1721.5	1706.5	0.572532	-0.693490231	0.580834

453	405	0.69973	0.528676186	0.635129
2772.57	2702.43	0.847476	-0.284374739	0.868712
5019	3736.5	0.593512	-0.989118168	0.79155
282.999	255.5	1	0	0.926077
1389.98	1587.97	0.881257	-0.272815681	0.785985
2687.5	2528.5	0.839644	-0.289417151	0.891207
524.5	561.5	0.748288	-0.627531198	0.701383
143.5	97.5	0.565313	-1.258016331	0.791186
2802.46	3069.5	0.900825	-0.228494486	0.837441
1673.5	1423	0.616193	-0.85300567	0.735674
2510.02	3304.5	0.826276	-0.500684718	0.65292
709.5	728	0.659216	-0.828607181	0.641013
149.5	157	0.538184	-1.147186077	0.504441
2334.25	1777.43	0.405044	-1.735320446	0.569382
851	820.5	0.823725	-0.397624967	0.849418
4602.57	4249.59	0.854859	-0.290544872	0.915393
628	581.5	0.819684	-0.36536234	0.878458
416.5	373.5	0.85002	-0.353444531	0.920747
7.5	6	0.506949	-1.099535674	0.670622
258.5	285	0.891089	-0.262476411	0.825341
88	91.5	0.942178	0.125530882	0.967444
143.5	158	0.970424	0.063911764	0.963605
2338.51	2372.51	0.763392	-0.44948561	0.751186
1795	1552.5	0.794459	-0.406756105	0.90617
2731	1319	0.289593	-1.794993773	0.748695
879.5	732	0.640635	-0.669404097	0.795138
5032.5	4554.5	0.735972	-0.50487932	0.818045
1143.5	1036.51	0.814153	-0.401855642	0.884652
722	679	0.717518	-0.554807421	0.767598
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203	211	0.790682	-0.572578776	0.766578
1578.5	1454.5	0.790344	-0.388324353	0.858705
2800.48	2534.98	0.571146	-0.711256021	0.664347
1392	1369	0.785682	-0.450713231	0.798422
336	334.501	0.96626	-0.079434467	0.969068
965	1011.5	0.812962	-0.414539245	0.778226
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2295	2165	0.692073	-0.556023616	0.743326
1308	1339	0.880572	-0.269002815	0.864171
3256.49	3274.47	0.828577	-0.329268776	0.824056
2000	2153	0.708779	-0.472929664	0.636973
147.5	137	0.894329	-0.23878686	0.943456
986.5	957	0.849848	-0.333306743	0.871292
2566	2207	0.587975	-0.536994951	0.761348
707	751.5	0.952091	-0.08510534	0.899772
738	652.5	0.87981	-0.2819243	0.958035
788.5	857.5	0.849803	-0.356180404	0.79158
5971.5	6079	0.580459	-0.715741173	0.56418
212.5	213.5	0.820251	-0.251538767	0.815112
2055.5	2129.5	0.898918	-0.195505528	0.870557
805.5	777	0.432287	-0.801991737	0.467566

701.5	680.5	0.929068	-0.143686512	0.951414
3510.5	3153	0.545368	-0.657547027	0.657291
534	633	0.791027	-0.548943278	0.677352
3714.5	3480.5	0.436182	-0.7293473	0.505667
4523.48	4471.03	0.791177	-0.53522598	0.798721
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7	12.5	1	0	0.543587
88.5	82	0.635485	-1.024662054	0.683396
1130.5	1232.02	0.91658	-0.198758039	0.85913
1104.5	1215.5	0.884468	-0.281041219	0.82031
1297	1162	0.613479	-0.689911073	0.710663
5927.5	5332.5	0.140491	-0.675421389	0.241234
75.5	101.5	0.575484	0.65033851	0.820394
3510	4912	0.913037	0.21497495	0.871272
998	1389	0.995287	0.012235452	0.791755
88	102.5	0.990814	0.024384159	0.920593
490.999	220	0.648963	-0.767153768	0.875484
880.499	264	0.957307	-0.073943753	0.504392
0.5	0.5	1	0	1
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1715	1974	0.934588	-0.151068705	0.836755
200.5	162.5	0.693475	-0.581369236	0.864249
3388.5	3545	0.708529	-0.501223619	0.666641
3197.5	3487	0.477628	-0.629754995	0.38431
671.5	790.5	0.384748	-0.500979312	0.201902
500.5	470	0.575601	-0.536773707	0.649343
1696.5	1919.03	0.925551	-0.171810921	0.839917
378	432	0.890024	-0.249359469	0.793716
774	769	0.834074	-0.331747156	0.839179
4700.5	4526.5	0.380602	-0.82220176	0.4174
53	52	0.902162	0.226275856	0.891392
833.5	918.5	0.813404	-0.338903734	0.727235
1039	1090.5	0.845754	-0.29476178	0.805539
217.5	227.5	0.928975	-0.150161747	0.896187
461.001	459.001	0.839371	-0.356772974	0.842486
30.5	36.5	0.5952	-1.023846742	0.471382
1607	1697.5	0.712117	-0.4437503	0.656424
45321	38338.5	0.46059	-0.505041244	0.713414
25914.9	19191	0.604615	-0.466637339	0.9741
30708.5	27053.5	0.255543	-0.743919754	0.396152
57714.5	51261.5	0.385446	-0.578390756	0.550579
33746.2	27931.4	0.354151	-0.69407581	0.590759
54268.1	48244.4	0.601204	-0.380499925	0.781322
38314.3	40160.1	0.636754	-0.317399758	0.561256
51177.7	43132.4	0.421473	-0.692926968	0.623042
26462.5	21455.5	0.482914	-0.483884779	0.805854
19590.6	16147.6	0.307007	-0.545852166	0.624947
5604.5	5219	0.653304	-0.521632617	0.726337
51049	39838	0.166568	-0.679366839	0.505051
34487	28319	0.437223	-0.580597561	0.708424
23907	18884.5	0.538853	-0.584419488	0.814908
52461.9	47234.6	0.581751	-0.383887952	0.747423
40633.2	42663.1	0.166753	-0.615110444	0.129131
29503	28623.5	0.556233	-0.504659666	0.594552
19017.5	11412	0.505116	-0.522315522	0.826465
22348.8	19784.6	0.597218	-0.435678059	0.763247

35745.5	26751	0.267832	-0.58461948	0.761621
42088.8	35252.7	0.219269	-0.620640655	0.467855
36841.5	37527	0.341154	-0.467060938	0.314734
13140.5	10810	0.593396	-0.404003459	0.880805
41985.5	35295.5	0.511843	-0.380927558	0.831079
41219.6	24161.6	0.353884	-0.620602336	0.853534
29832	17629.5	0.24558	-0.8499859	0.914283
23455.5	20584.8	0.810185	-0.279338399	0.94136
4.50003	6	0.829517	0.415047117	0.99999
79211.2	77877.7	0.688658	-0.43338393	0.707372
46045.8	37509.2	0.720388	-0.267161053	0.972053
37906.8	32655	0.51883	-0.483503846	0.733107
44049.5	39879.4	0.757615	-0.334535099	0.866173
68264.7	65877.8	0.623733	-0.445974992	0.668352
4894.5	4365	0.641336	-0.505820189	0.764889
97098.5	90882	0.61112	-0.416719917	0.701856
27381.5	23968.5	0.699731	-0.356514575	0.866549
82305.5	89135.5	0.37937	-0.58430095	0.28907
76220.5	63742.5	0.189375	-0.637088207	0.427369
17342	14451	0.411091	-0.574311892	0.671048
13292.5	13431.5	0.888272	-0.2094805	0.879726
10094	10643.8	0.777862	-0.451388943	0.735236
251	225	0.747392	-0.331298618	0.872355
13	22	0.746812	-0.793549123	0.419618
635	656	0.736075	-0.4888388	0.707756
312.5	336.5	0.89917	-0.173970214	0.83227
502.5	529.5	0.749691	-0.414559073	0.699543
1209	1263	0.848944	-0.359245129	0.819095
4345.5	4325	0.830172	-0.276945555	0.834654
5.6031	10.5	0.928723	-0.097063211	0.255391
65477.5	51562	0.257235	-0.638516089	0.610853
65371	49650.5	0.427484	-0.46230349	0.917539
19532.7	14798.9	0.381188	-0.622574535	0.772759
52542.3	45370.8	0.599099	-0.381797666	0.824395
48739.7	48743.6	0.499914	-0.419420015	0.499788
37634	29409	0.79729	-0.216577254	0.883543
33715.5	24273.5	0.640398	-0.326181292	0.855139
31698.7	24780.5	0.340517	-0.529880712	0.764605
1668.01	1787.5	0.583409	-0.44652438	0.493517
77473	77537	0.369538	-0.655871241	0.368606
27829	21977	0.540781	-0.499858847	0.858584
13333	11652.5	0.558638	-0.450565831	0.750982
30507.5	23419	0.67808	-0.330049296	0.954166
30642	22184.5	0.427817	-0.523709096	0.937355
49488.4	49136.7	0.247614	-0.669099998	0.254838
39842.6	46141	0.368673	-0.570631443	0.215258
44580.5	40651.5	0.277782	-0.477169179	0.430538
68019.2	63143.3	0.392049	-0.548739245	0.496623
76518.5	61869.5	0.426616	-0.585353778	0.722068
73528.1	72761.1	0.508902	-0.463851637	0.523895
95959.9	72123.8	0.337365	-0.563046599	0.809255
455	457.5	0.561829	-1.353989304	0.558522
1548	1744	0.795595	-0.542263875	0.717699
587.5	628	0.858169	-0.340464046	0.81284
618.5	658	0.903975	-0.247490223	0.865569
1204.5	1247	0.863477	-0.297580739	0.838147

1103	972.5	0.67923	-0.475130663	0.808976
2053.5	1796.5	0.695177	-0.696668423	0.790316
1949.46	1598.49	0.567767	-0.934505401	0.717094
24088	19109	0.744438	-0.328035083	0.995709
84908.5	76777.5	0.552161	-0.470104287	0.691202
86464.8	85985.8	0.583293	-0.49574582	0.5901
2081.5	2257.5	0.811432	-0.479892627	0.757524
344.268	350.573	0.760589	-0.470495253	0.745654
894.5	850.5	0.673992	-0.524166902	0.722972
7158.5	7044.16	0.767259	-0.434923099	0.780957
47.5	62.5	0.607645	-0.788495895	0.390918
2371.03	2080.47	0.837621	-0.275389155	0.951651
1839.5	1978.5	0.827625	-0.417261358	0.777646
502.5	651	0.899848	-0.255303363	0.725189
2273.5	1522	0.958249	-0.0609178	0.717559
1722.51	1603	0.882524	-0.236075734	0.936262
1686.88	1644.05	0.943705	0.13625277	0.929325
9.5	10.5	0.52984	-1.078002512	0.457806
10757	11443	0.839024	-0.301387491	0.786373
3517.5	3840.5	0.682272	-0.571185998	0.603609
692	716.5	0.958498	-0.09033232	0.934359
905	977.5	0.80013	-0.444563452	0.742695
236	246.5	0.574559	-0.5880223	0.528128
5666	6016.5	0.801373	-0.367781067	0.749317
623.5	439	0.491497	-0.697405962	0.869909
1660.98	1967	0.900434	-0.243015917	0.78541
1454.5	1387	0.487911	-0.6901239	0.538491
2180.5	2029.5	0.676898	-0.475273461	0.751917
5	8.5	0.517592	-1.321928095	0.211303
0.5	0.5	0.651448	1	0.651448
853	801.5	0.884273	-0.227616769	0.931897
797	784.5	0.871029	-0.303045559	0.881576
22.8768	35.0711	0.467026	-0.694215379	0.140651
3.62096	10.9222	0.523843	-0.961108401	0.0342223
1222	1203.5	0.886383	-0.223671974	0.898252
1245.5	996.5	0.592873	-0.577741067	0.829262
17	20	0.922385	-0.133266531	0.771654
216	208.5	0.901677	-0.177458674	0.931034
97	94	0.715443	0.508611615	0.696169
181	158	0.739929	0.379737363	0.640383
43.5	86	0.73757	-1.23349013	0.394099
141.5	112	0.946767	-0.089375807	0.869259
211	227.001	0.528026	0.889929298	0.562936
10	14	0.84064	-0.321928095	0.557935
1292.5	1325	0.918862	-0.179865489	0.901583
1048.5	939	0.69081	-0.489146713	0.79829
2549.5	2175	0.721726	-0.479948268	0.862743
1517.5	1467.5	0.732712	-0.422185466	0.765736
10	11.5	0.823528	0.321928095	0.928638
1602	1500	0.749515	-0.411439754	0.81159
47.8792	41.548	0.962716	0.065100523	0.857041
530.498	599.998	0.953738	-0.11015296	0.872049
3810.52	4003.09	0.810929	-0.448936995	0.776561
344	380	0.864106	-0.354802392	0.800677
15383.4	11859.7	0.233801	-1.628449383	0.397941
15158.4	16108.6	0.627407	-0.877126937	0.583218

971	828.5	0.647016	-0.603655364	0.791096
128.5	129.5	0.82616	0.399516914	0.830298
2.5	4	1	0	0.753462
996.5	972.5	0.266644	-1.585686563	0.280841
352.5	430	0.91333	-0.237477773	0.79099
1229.28	1125.58	0.825728	-0.320205384	0.898734
452.999	435.5	0.631161	-0.82054904	0.660709
3577	3066	0.495155	-1.294264732	0.59812
1259.5	1201	0.648837	-0.641316957	0.690407
780.002	751	0.638161	-0.886234824	0.664611
818.49	534.496	0.474833	-1.94211136	0.69448
801.494	1167.52	0.660658	-1.437094545	0.464117
22	15	0.590082	0.966833136	0.481382
9.5	20.5	0.976297	0.074000581	0.546768
1299	1134.5	0.582971	-0.876599378	0.687875
4874	3618.5	0.429196	-2.011888778	0.591179
3018	2942	0.669986	-0.50003263	0.696081
1017	1008.5	0.798633	-0.330108071	0.806603
188.5	205	0.769348	-0.492331523	0.704037
345.942	341.493	0.779084	-0.329179741	0.792499
216	232	0.945361	-0.118262882	0.894296
719.5	685.5	0.699715	-0.489442682	0.746154
84.5	138	0.780231	-0.800966594	0.503289
22	22	0.659835	-0.7589919	0.659835
35.5	49.5	0.950894	-0.14974712	0.760132
1018.24	1209.23	0.364445	-1.402330624	0.259213
472	456	0.813493	-0.421163602	0.837882
2061	2055.5	0.951515	-0.094369951	0.953555
797	692	0.582946	-1.400031175	0.661937
65.4999	77	0.980135	-0.056143165	0.889298
4906.5	2789.5	0.862658	-0.096671653	0.364885
181.5	133	0.565354	-0.318950395	0.837391
2448	1709	0.401345	-0.305010591	0.608745
41	27.5	0.562066	-0.772589504	0.902025
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151	170	0.744552	-0.722704901	0.669555
18	16	0.368573	-1	0.471729
465.5	547.5	0.987493	-0.026587003	0.867791
804	860	0.82431	-0.403124178	0.775971
3986	5266	0.726988	-0.969558489	0.57056
20	21	0.76418	-0.678071905	0.734473
5539.46	4740.51	0.879982	0.253714921	0.792483
8056.75	9577.92	0.889953	-0.306432811	0.784527
1373.02	1205.51	0.970683	0.059691195	0.886582
41.5	38	0.39925	-1.468148836	0.457407
3987.96	2420.99	0.517358	-1.09878237	0.859737
177.5	210	0.983957	-0.041222663	0.880379
307	304	0.945705	-0.107276736	0.953095
40.5	37	0.959288	0.069540933	0.88854
1.5	21	0.978598	-0.584962501	0.328311
1635.5	1873	0.789039	-0.539806758	0.697237
13.5	9.5	0.381954	-3.169925001	0.544496
4.5	2	0.935963	0.152003093	0.636801
302.5	363	0.758873	-0.615082489	0.632899
819	873.5	0.854755	-0.319068441	0.807352
3348	3196.5	0.628521	-0.689840596	0.66844

9	19	1	0	0.428621
5658.14	5455.53	0.784631	-0.455615522	0.812219
11418.5	9787	0.144594	-0.72513758	0.299203
461.236	413.212	0.736668	-0.418908759	0.842475
1143.5	1076	0.556629	-0.63862197	0.620173
517.264	568.288	0.888103	-0.248228069	0.819792
6509	6611	0.632946	-0.471157123	0.614807
1242.5	1254	0.727719	-0.46926683	0.719229
1430	1409.5	0.842206	-0.280900827	0.854759
1215	883.5	0.480032	-1.39031507	0.683538
3818.44	3553.01	0.738412	-0.440571242	0.804961
2881.52	3058.49	0.773348	-0.474421095	0.726497
1422.5	1698	0.887391	-0.310563261	0.778238
26	23	0.461168	-1.2410081	0.548407
871	894.5	0.802179	-0.384985957	0.780256
2194	1814.5	0.632642	-0.43890616	0.868186
799.5	687	0.971631	-0.055176707	0.922153
44.5	43	0.976152	-0.049468676	1
3203	3211.5	0.77902	-0.399655377	0.776695
1412	1430	0.546471	-0.610214818	0.532758
1594	1618.5	0.828159	-0.312568333	0.81497
10927	10755	0.800058	-0.472453939	0.810986
1412.51	1657.51	0.889309	-0.306698431	0.791804
1505.5	1390.5	0.485398	-1.310474286	0.538667
0.5	1	1	0	0.651448
2900.5	2984.5	0.850638	-0.334354163	0.830195
1070.5	1006.5	0.996181	-0.008786645	0.966235
1784	1873.5	0.623523	-0.745617464	0.583221
1805	2039.5	0.919563	-0.19893882	0.839725
1990.05	1960.45	0.76584	-0.534401675	0.776617
1513.5	1741.5	0.910366	-0.227724395	0.819751
579.5	699.5	0.913216	-0.22883814	0.793762
1332.5	1234	0.793964	-0.3700912	0.859928
2764	2799	0.778578	-0.400151732	0.767509
893.5	949.5	0.778017	-0.478018464	0.731383
2500.5	2337	0.576098	-0.820904856	0.632163
7521.73	7237.94	0.709535	-0.698485844	0.736358
4874	3009	0.912164	-0.149899752	0.752931
68	164.5	0.500939	-1.387023123	0.0864565
632.5	650.5	0.531736	-1.076102979	0.511409
1663	1645.5	0.806059	-0.346977222	0.81533
346	390	0.652405	-0.983417116	0.575285
844.5	1105.5	0.896348	-0.250278398	0.70507
0.5	0	1	0	0.450185
6.5	7	0.564258	-1.378511623	0.519918
42	27.5	0.78827	-0.392317423	0.903284
10.5	9	0.288799	-2.807354922	0.362508
10	11	0.535489	-1	0.463813
6.5	2.5	0.57998	-0.700439718	0.735184
1	1.5	0.724378	-1	0.495025
5.5	6	1	0	0.9402
0	0	?	#DIV/0!	?
0	2.5	0.680109	#DIV/0!	0.544016
2.5	0	1	0	0.31594
39	45	0.947701	0.140862536	0.973829
7.5	9	0.922273	-0.206450877	0.808175

5373	5525	0.744577	-0.511737445	0.72187
837.502	899.001	0.573484	-1.379031947	0.531608
9434	9106.5	0.673864	-0.59090055	0.704982
1215	1276.5	0.909958	-0.171261449	0.869722
883.5	696.5	0.5078	-1.281274771	0.663936
9217.5	8866.5	0.44219	-1.831144928	0.464325
1551	1221	0.212971	-1.461991859	0.370827
0	0	?	#DIV/0!	?
217.5	181.5	0.270083	-3.009984089	0.35386
2191	2309.56	0.419539	-1.120093845	0.38008
295.5	403.499	0.980022	-0.042107394	0.73425
380.358	373.193	0.999733	-0.000572856	0.987597
1078.5	1108.5	0.709045	-0.450015005	0.681284
1361	1229	0.595237	-0.88786982	0.672054
437	407.5	0.958685	0.081820086	0.911116
19.5	16.5	0.759841	-0.584962501	0.868438
412.633	356.683	0.606617	-1.28700814	0.688694
897.391	776.376	0.583049	-1.332976296	0.666496
100	90	0.9638	-0.066427362	0.955768
2149.5	1776.5	0.480437	-1.694745964	0.589764
434.5	521	0.997571	0.004971958	0.863441
53.8695	105.245	0.818466	-0.790065158	0.473953
766.996	716.007	0.708086	-0.894824935	0.747679
1157	782.998	0.953024	0.082392885	0.705542
1428.5	1270	0.970335	0.053531068	0.883871
0.5	1	1	0	0.651448
463	547.5	0.892109	-0.238319539	0.767048
425.499	418.501	0.673193	-0.535800153	0.689086
564.5	525	0.430885	-0.552115135	0.529955
358	349	0.903186	-0.207691372	0.921236
1960.5	2112	0.886758	-0.220186465	0.826206
13	13.5	0.654211	-1.115477217	0.632221
4804.96	5098	0.902438	-0.213138397	0.85971
2372.97	2215.52	0.741593	-0.509422448	0.796991
621.5	613	0.7605	-0.354798077	0.774874
618.5	514.474	0.56969	-0.685842528	0.747056
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3	1	0.409442	-2.584962501	0.860525
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415.5	463	0.936572	0.140499121	0.992526
1323	1475.5	0.866919	-0.334110895	0.794843
1796.72	1807.29	0.798304	-0.448438921	0.794014
993	986.5	0.687935	-0.537797393	0.693982
1033	1020	0.942641	-0.118564693	0.951771
2460.47	2304.53	0.687989	-0.620429277	0.741087
2463.5	2482.5	0.771187	-0.551389747	0.765881
913	661	0.821229	0.292233423	0.620972
7061	6926.5	0.835519	-0.268971852	0.853594
398.5	390.5	0.509632	-0.641256433	0.531847
433.5	450.5	0.874342	-0.246160587	0.843499
2829.5	2798	0.121094	-0.825634585	0.127561
2536	2427	0.77686	-0.35414272	0.819595
1979.5	2017	0.974176	-0.048168407	0.959295
3777.49	3670.06	0.622271	-0.631114518	0.649349
2820.5	2593.5	0.504937	-0.708100603	0.591616

6194.5	7018	0.217163	-0.697415199	0.126802
6248	8884	0.836948	-0.539057794	0.634207
7260.46	6982.28	0.961862	-0.087366596	0.986722
593.5	525	0.914196	-0.151058082	0.986143
350.5	357.5	0.920747	-0.170182281	0.906617
105	152.5	0.715743	-1	0.501255
5.5	5	0.679547	-0.459431619	0.781117
4163.43	3382.98	0.354249	-0.610452577	0.651942
429.5	332	0.459932	-0.866931072	0.702377
6264.5	5592.5	0.530097	-0.537170273	0.674515
2583	3121.5	0.703475	-0.871818515	0.584118
1683	1429	0.795156	-0.248704575	0.990222
961	874	0.517194	-1.773966301	0.568662
5445	6205.5	0.953222	-0.118394701	0.871071
95	78	0.979099	-0.046293652	0.902826
1438.5	1493.01	0.797809	-0.372057273	0.765533
1016.96	1264.39	0.521451	-0.76163254	0.332314
485.5	475.5	0.885909	-0.245607844	0.90079
2787	2851	0.802104	-0.392608631	0.783736
4888.5	4666	0.771977	-0.374827329	0.815914
2019.5	2133	0.832908	-0.373839991	0.793085
3141.5	3372.5	0.856262	-0.336844054	0.806867
1570.56	1643.84	0.858071	-0.330101361	0.826422
6051	6516	0.894328	-0.234282942	0.841092
997	1432	0.970064	-0.076516046	0.726013
12727.5	13634.5	0.766951	-0.513318743	0.71488
2855.43	2988.5	0.832587	-0.374913204	0.799534
5010	5511	0.867794	-0.28444416	0.796005
2527	2909	0.256556	-0.662513111	0.143186
1397.5	1212.5	0.597777	-0.637257874	0.735895
2536.5	2506	0.847595	-0.22248722	0.860202
3431	3834	0.884923	-0.241084554	0.799388
768.5	824.5	0.947795	-0.119315112	0.900168
1260	1461	0.882411	-0.32336005	0.791613
1510	1589	0.61958	-0.72902559	0.576582
1757	1882	0.903483	-0.219999495	0.85563
1070	1097	0.872384	-0.300182714	0.855519
8	12.5	0.603383	-2	0.38578
563.5	720	0.782236	-0.343855934	0.535426
2048.5	1540	0.481092	-0.567810277	0.861314
190.5	167	0.727327	-0.637009248	0.818334
11.5	16	0.889436	-0.353636955	0.700608
962.498	918.996	0.493894	-0.557486289	0.552336
2264	1807.5	0.594179	-0.580985283	0.830903
2527.5	2491.5	0.71752	-0.411711674	0.732737
3331.5	3252	0.9298	-0.168626446	0.944943
2123	2177.5	0.663204	-0.821856208	0.645335
1071	1181.5	0.9137	-0.178284069	0.838371
34	49.5	0.922673	-0.180572246	0.642668
1331	1596.5	0.808013	-0.394588663	0.66005
2294.5	2106	0.615343	-0.806961999	0.682217
868.497	1081.5	0.964788	-0.077623176	0.803051
3628.5	4816.5	0.930413	0.187292398	0.905395
5505	5621.5	0.883316	-0.289695902	0.869922
1757.5	2173	0.717076	-0.902792027	0.590387
3877.5	4755.5	0.720083	-0.696306384	0.575345

1487	2079	0.852976	-0.452052707	0.651144
1325.5	1593	0.733399	-0.723963373	0.611562
876.5	922.5	0.832554	-0.36728054	0.794692
487	517.998	0.856911	-0.307561803	0.810707
1177	1299.5	0.835259	-0.380719643	0.764226
2307.47	2762.5	0.978134	-0.05411549	0.862084
409	443.499	0.875982	-0.333882365	0.826428
7753.54	5826.65	0.616092	-0.893604289	0.813496
3568.02	3241.02	0.764112	-0.320622666	0.870471
2367.5	2754.5	0.775852	-0.425331951	0.644688
1757.12	1945.26	0.957554	-0.104822397	0.893131
1208.01	884.498	0.991185	0.013077564	0.739669
1067.5	1148	0.825917	-0.399133084	0.773637
283	275	0.906078	-0.170243653	0.929818
2444.73	2957	0.831923	-0.371113351	0.686414
1313	1005.5	0.916707	-0.13766835	0.869511
11189.8	10826.7	0.679047	-0.563916245	0.70885
1820	1447.5	0.358509	-1.881355504	0.493309
4390.34	4571.34	0.685183	-0.583303991	0.649945
5897.03	6047.5	0.80535	-0.407480585	0.785895
920.199	1161.65	0.82509	-0.407525863	0.652726
11817.3	16145.2	0.772276	-0.511315485	0.531499
672.5	598.5	0.406158	-0.844568549	0.521088
215.5	243	0.989072	-0.027030206	0.914198
10724.1	9669.28	0.686994	-0.471038369	0.792558
6314.5	4969.5	0.368556	-0.651831924	0.691534
1835.5	1809	0.23393	-0.672032398	0.248452
320.5	297.5	0.709719	-0.565957332	0.77074
999.5	872.5	0.856909	-0.235442013	0.977471
25730	20467	0.489061	-1.02802537	0.669949
480	467	0.902258	-0.167109986	0.926335
1935.5	1873	0.536854	-0.933360219	0.563034
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9.5	7.5	0.748273	-0.662965013	0.889735
1217	1732.5	0.97007	-0.069204363	0.709932
456	479.5	0.929662	0.109624491	0.975533
118	49	0.601048	-0.634715536	0.732909
880	810	0.873615	-0.172180975	0.962754
17846.5	17994.5	0.903134	0.202478909	0.908428
2475.5	1563	0.921142	-0.116157299	0.712676

1093.5	801.5	0.860888	-0.290606484	0.935092
579	561	0.849475	0.304379894	0.83
80	103	0.618511	-1.234465254	0.467309
2266.5	1953.5	0.743415	-0.506457553	0.860358
1054.5	901	0.773795	-0.41298676	0.904385
994.5	1280	0.994189	-0.016046319	0.844935
3378	3437.5	0.686928	-0.654183155	0.67312
8923	8639.5	0.786409	-0.403389596	0.813371
1483	1452	0.87676	0.305688188	0.866
1959.99	1928.51	0.949626	-0.124854523	0.95937
9773	9501.5	0.849587	-0.347319528	0.86882
1140.01	1067.49	0.823289	-0.349070773	0.874781
121	124.5	0.942442	-0.124447371	0.922384
3320	3286.5	0.976785	0.05373946	0.970617
523.5	560.5	0.796166	-0.411825901	0.741032
2371	3040.5	0.676408	-0.921261101	0.514944
264	282.5	0.750561	-0.622329353	0.704018
909.503	1009.01	0.928864	-0.165358693	0.857894
1754.5	2089.5	0.918461	-0.221296461	0.811287
285	373.498	0.655333	-1.253951301	0.503627
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1474.5	1331	0.544988	-0.51898284	0.675959
3060.5	2786.5	0.642314	-0.550264426	0.736397
13583	14401	0.886506	-0.250618545	0.844384
2587.5	2545	0.406527	-0.705256734	0.424428
12731.6	13260	0.815719	-0.392009094	0.784715
7078	6494.5	0.600707	-0.575262394	0.691662
2932.5	3624.5	0.390966	-0.64716539	0.196906
781.5	757.5	0.989305	0.023801346	0.96957
201.5	242	0.853341	-0.392541183	0.735192
153.5	162.5	0.74225	-0.770241749	0.708152
15988.9	15480.4	0.757048	-0.45349986	0.784522
10061	10651.5	0.914542	0.18082949	0.952004
3736	2222.5	0.742354	-0.33054585	0.747615
76.191	69.1826	0.397326	-1.205677653	0.469904
33	45.5	0.664982	-0.686842115	0.409139
2721.5	2684.5	0.950469	-0.113270114	0.959374
994.002	797.492	0.5458	-0.607270853	0.791884
787	853.5	0.899405	-0.215078362	0.839097
4	2.5	0.463813	-2	0.703593
1401.09	1384.1	0.639545	-0.659659107	0.650215
1485	1583.5	0.689144	-0.514573173	0.627717
2274	2226	0.61662	-0.630888989	0.636873
620.5	596.5	0.774177	-0.414650043	0.807983
475	514.5	0.801779	-0.405954395	0.737931
1674.49	1655.01	0.689532	-0.626691707	0.699
185.5	270	0.937132	-0.186547222	0.711063
1319.5	1384	0.80719	-0.402157018	0.770006
189	213.5	1	0	0.915874
19	13.5	0.98242	0.037474705	0.792781
631.5	467.5	0.486846	-1.63375394	0.659155
1511.5	1551	0.853155	-0.283896717	0.83214
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909.505	940.996	0.968703	-0.064062852	0.943805

423	397.498	0.958105	-0.091515022	0.999198
109.763	231.209	0.690675	0.966989324	0.948845
381.001	393.001	0.764483	-0.480893833	0.739715
79	99.5	0.929902	-0.195256291	0.78971
5647.5	6274	0.753966	-0.650417179	0.684304
117	117.5	0.873334	-0.308122295	0.870558
291	287.5	0.913013	-0.159735781	0.922943
422.095	409.647	0.78041	-0.409416838	0.80575
670	556.5	0.658281	-0.949225433	0.77185
456	499.5	0.894206	-0.257350767	0.833588
808.5	700.5	0.891222	-0.202749548	0.997938
4043.45	3911.04	0.760361	-0.458544356	0.788041
882.5	924.5	0.681368	-0.697989627	0.645766
733.5	660.5	0.790026	-0.399712083	0.874885
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34	45.5	0.836426	-0.359542387	0.608552
81.5	66.5	0.41113	-1.198981035	0.566631
6.5	16.5	0.79761	-0.700439718	0.255883
8480.52	10113	0.911984	-0.179957681	0.771825
412.5	252	0.807605	0.392567218	0.592837
4277	3946.5	0.548816	-0.715038952	0.626453
2.5	7	0.794363	0.485426827	0.392404
134.5	233	0.925479	0.190632483	0.699382
2960.5	3089.5	0.778856	-0.510992377	0.748143
1360.51	1117.01	0.712809	-0.485886905	0.88927
659.5	680	0.871263	-0.341474496	0.852596
4253.91	4008.49	0.771149	-0.453262626	0.818612
147	129.5	0.647498	-0.833350131	0.73667
199.5	203.5	0.69422	-0.595850817	0.677628
2745.5	2524	0.731327	-0.438790826	0.811017
1673	1593.5	0.734293	-0.605589841	0.769378
1602.5	1851.5	0.818231	-0.453815827	0.719223
2109.5	2299.5	0.657527	-1.023094644	0.60423
1504.5	1464.5	0.964054	-0.081870008	0.98137
24.5	16.5	0.83614	0.316027493	0.635315
1144.5	970.5	0.42324	-2.560588905	0.504814
110.5	108.5	0.876852	-0.264342171	0.890024
173.936	232.803	0.835801	-0.483570077	0.655007
297	284.5	0.980016	0.033608393	0.944392
115.5	232	0.824004	0.549130395	0.793771
148	173.5	0.709012	-0.834413934	0.607666
713.5	623	0.683094	-0.562890241	0.802249
581.5	520	0.793064	-0.363456419	0.889921
3713	3074	0.351983	-1.931332431	0.461227
10.5	13.5	0.918563	-0.222392421	0.760872
525	696.5	0.827884	-0.481584761	0.64527
457.5	480	0.719325	-0.573185333	0.680582
2713	2347.5	0.612906	-0.959623926	0.711499
4541	3786	0.307062	-0.944528865	0.480759
128	121.5	0.64787	-0.901967917	0.682931
19160	19413.5	0.567107	-1.18534897	0.558548
3803.5	3809	0.727763	-0.478426654	0.726455
74.5	81.5	0.950576	0.102759574	0.986508

864.5	994.5	0.52949	-0.992509787	0.423963
673	744.999	0.858525	-0.343253754	0.789236
573	422.5	0.857367	-0.257004324	0.912586
910.5	909.995	0.905001	-0.21764671	0.905375
342.5	333.5	0.650371	-0.722992652	0.671511
33	159.5	0.95356	-0.316473665	0.286343
2032.5	2240.5	0.891476	-0.282111997	0.830166
4104	4279	0.768127	0.523561956	0.789858
81.5001	66.5	0.691961	-0.809571113	0.819121
895.503	947.996	0.726997	-0.55271406	0.680673
551.5	560.5	0.817927	-0.325857362	0.803681
10.5	72.5	0.750833	-2.070389328	0.0556507
288.999	219.499	0.765912	0.463518844	0.63115
2538.85	2332.31	0.840862	-0.321168264	0.905081
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1962.5	1837.5	0.822711	-0.37337486	0.871429
3916.5	4150	0.550419	-0.769820382	0.4987
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1183	1124	0.63628	-0.515618857	0.691415
2919.5	3279	0.935583	0.148713193	0.991349
3031.5	3039	0.842699	-0.40436926	0.84114
1018.5	927.998	0.831873	-0.284878036	0.9145
1720.5	1780	0.837711	-0.341875694	0.811834
1277	1123	0.825881	-0.287875673	0.941305
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3309	3058	0.553581	-0.56741204	0.645262
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6345.6	6011.25	0.662286	-0.605674602	0.710258
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3419.5	3007	0.548002	-0.58696793	0.695271
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907.995	1023	0.936228	-0.168339773	0.863712
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622.5	597.5	0.421183	-0.966780465	0.456312
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12899	12050	0.645412	-0.587873418	0.709701
1956	1978.5	0.867992	-0.237157741	0.858136
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295.501	265.5	0.691203	-0.723203425	0.766538
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92.5	99.5	0.597741	-0.476099025	0.509505
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1.5	0.5	1	0	0.513713
357.5	284	0.216529	-1.282127087	0.384564

1088.5	1169	0.846593	-0.302676494	0.788561
160.5	149	0.986397	0.017866421	0.90849
5.5	7.5	0.863365	0.2410081	0.863365
2876.94	3189.93	0.819107	-0.446574384	0.748511
28.5	33.5	0.955877	0.097847323	0.933882
3196.99	3165.9	0.862859	-0.299895994	0.869862
724	524.087	0.515362	-1.626069593	0.69293
1109.49	1121.01	0.929524	-0.154224019	0.922346
174.5	169	0.842502	0.284235805	0.820277
1653.5	1728	0.727792	-0.62723825	0.695545
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16.5	15.5	0.497003	-2.237039197	0.52814
396	484.5	0.828995	-0.427232796	0.689187
1.5	0.5	0.505748	1.415037499	0.368766
44	52	0.639217	-0.844721775	0.516728
4	4	0.710482	-1	0.710482
10	13.5	0.667267	-1	0.478521
14	24	0.846406	0.402098444	0.81317
738	897.5	0.97802	-0.047696742	0.833837
3	2.5	0.31594	-2.584962501	0.407544
3481.99	3678.32	0.937968	0.123214296	0.977166
204.5	260.5	0.94291	-0.152395077	0.790566
35	25	0.52746	1.313660479	0.457891
35	29	0.805735	-0.485426827	0.921258
256	307.5	0.889374	-0.255166163	0.756983
3873	3517	0.956428	-0.101652497	0.984694
1619	1216.5	0.795972	-0.414146672	0.999229
116.5	111.5	0.783107	-0.454795209	0.816489
55	55.5	0.743568	-0.495957495	0.736011
599	678.5	0.857513	-0.337668944	0.770102
322	385.5	0.705057	-0.973364873	0.600306
99.0001	134.5	0.654343	-0.686843572	0.406009
918.889	795.652	0.869871	-0.236153853	0.985353
1334	1374.5	0.869958	-0.260657108	0.846501
545	612	0.487959	-2.124328135	0.427973
6	95	0.818263	1.624490865	0.222569
61	50.5	0.925989	-0.149377624	0.944437
121	87	0.982935	0.035333073	0.793247
11	20	0.907098	-0.289506617	0.535652
69	37	0.977133	-0.042435266	0.672515
2952.08	2945.19	0.705981	-0.490381014	0.708193
178.5	193	0.945038	-0.11783649	0.888549
21.5	23	0.730615	-0.782408565	0.689086
136.928	134.695	0.803489	-0.440291153	0.81532
1219.48	1755.5	0.825989	-0.593844256	0.619406
855.501	976.503	0.811133	-0.442565455	0.71566
922	1144.5	0.937597	-0.159498536	0.796928
138.5	57.5	0.638776	0.624350094	0.358334
2	7.5	0.266778	1.807354922	0.900374
1217	1297.5	0.771225	-0.490057514	0.721756
1949.02	1989.5	0.857058	-0.310597443	0.842029
424	370.5	0.821875	-0.372569358	0.919784
112.5	139	0.911586	-0.266886731	0.791433
15.5	20.5	0.786857	-0.632268215	0.61204
20.5	18	0.53083	-0.898120386	0.638661
1.5	2	0.663808	-1.584962501	0.523243

1670	1484.5	0.799027	-0.484045266	0.876044
2.5	3.5	0.903291	0.263034406	0.903291
25.7477	25.7691	0.624148	-1.025534292	0.623606
1146.25	1298.23	0.827809	-0.448711277	0.746223
240	273.5	0.575156	-1.018147347	0.482287
1.5	0	1	0	0.450185
1120.99	1506.51	0.969314	-0.084784383	0.788348
4	5.5	0.574202	-3	0.435351
1.5	1	0.559404	-1.584962501	0.764931
34.5	48	0.613014	1.01041454	0.752464
520.5	427	0.982084	-0.039335894	0.898678
161	72.5	0.965769	0.065687903	0.592947
654.622	657.786	0.898608	-0.228216474	0.895288
243.5	212	0.90343	-0.179585112	0.989796
5429	5468	0.523445	-0.807720359	0.517028
764.5	779	0.644568	-0.539453702	0.625431
1716.5	1657.5	0.776937	-0.462165789	0.803958
2387.02	2555.05	0.81037	-0.371175465	0.754134
2645.06	2484.52	0.46108	-0.886307022	0.517366
1130.01	1184.01	0.698939	-0.626412103	0.661767
285	301	0.966977	-0.072669068	0.929351
1541.26	1474.11	0.663274	-0.493495627	0.710082
173.5	153.5	0.930528	-0.153389634	0.990056
64.5	69.5	0.987892	-0.022542569	0.927508
1674.48	1557.48	0.724298	-0.573775319	0.780355
909.5	984	0.756355	-0.601313884	0.701733
647.002	691	0.823676	-0.412807921	0.777262
669	478	0.944966	-0.103932374	0.830797
17140.8	16556.9	0.64489	-0.589768032	0.677654
326	443.5	0.716555	-0.730342652	0.50193
730.497	820.499	0.900185	-0.210095614	0.811478
1110	1043.5	0.630374	-0.53797127	0.695415
1514	1987.5	0.993509	-0.016772926	0.820321
160.5	173.5	0.965767	-0.069041644	0.906721
202	219	0.758117	-0.597515551	0.702097
2580.5	2511	0.641638	-0.502919708	0.671339
130.5	106	0.930863	-0.157541277	0.943629
301	296	0.683256	-0.686725217	0.696057
705.5	698	0.790146	-0.409934222	0.798857
128.5	108	0.741456	-0.570996322	0.864866
10210.5	10188	0.386092	-0.91448752	0.388037
63924.4	57598.8	0.552341	-0.590507004	0.669971
3	3	1	0	1
751.414	635.358	0.633578	-0.682498468	0.775397
126.5	209.5	0.971487	0.088468788	0.740161
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141.5	158.5	0.832644	0.378903713	0.898836
328	325.5	0.86181	-0.288773727	0.86753
2.5	1.5	0.398521	-1.321928095	0.764931
154.5	176	0.967434	-0.086587685	0.89014
84.5	49	0.720576	0.610347819	0.530788
1537.5	1471.5	0.762885	-0.467429622	0.798317
3220.5	2869.5	0.735064	-0.536725015	0.825044
223.5	209.5	0.997054	0.006440614	0.955849
6	6	0.502419	1.36923381	0.502419
107	103	0.760851	-0.493539473	0.790509

1.5	2	0.806588	-0.584962501	0.630057
1139.5	1238	0.802972	-0.428818951	0.739996
255.153	280.437	0.783549	-0.412700425	0.702803
1694.36	1784.44	0.402405	-1.810525869	0.372757
3905.5	3425	0.818195	0.33446999	0.736633
22.5	33	0.794393	0.552541023	1
37.5	43	0.846123	0.341036918	0.93021
4	5.5	0.68993	-1.415037499	0.532454
794.994	712.004	0.596598	-0.969457138	0.674092
6	16	0.947101	-0.125530882	0.227505
1358	1279	0.798835	-0.376600628	0.848648
44.5	83.5	0.438745	1.767440553	0.610965
498	524	0.802226	-0.452207292	0.765462
48.5	45	0.927965	-0.156969346	0.978347
3	6.5	0.698091	-1	0.249709
2032.01	1993.44	0.905516	-0.175680238	0.921069
660.5	639.5	0.933749	-0.121862045	0.959708
791.5	840	0.924642	-0.157786666	0.880498
3	3	0.163506	#NUM!	0.163506
1152	1214	0.935567	-0.137190473	0.897607
741.5	801.5	0.829845	-0.363126085	0.770321
52.5	56	0.534769	-0.524420959	0.456763
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1014	1089.5	0.800401	-0.443777395	0.746938
5	3.5	0.487603	-1.736965594	0.682602
10.5	22.5	0.92318	0.251538767	0.636661
1040.5	1039.5	0.674913	-0.534216903	0.675835
293.5	299	0.921425	-0.16654404	0.908008
935.5	897	0.768421	-0.490215476	0.800325
596.5	571	0.900485	-0.192472331	0.934395
5642.67	5523.43	0.626742	-0.576462078	0.648132
1081	1267	0.885885	-0.271601186	0.775075
508	573	0.972621	-0.057947349	0.884248
2510.5	2462	0.755735	-0.573087223	0.769477
2194.17	1935.66	0.700353	-0.560727447	0.805601
1222.49	1147.51	0.893659	-0.201002631	0.943621
623.5	629.5	0.945105	-0.103093493	0.937468
11.5	8	1	0	0.794308
17	6	0.661148	-0.765534746	0.799835
1683.5	1468	0.677	-0.677643488	0.781892
1888.5	2009	0.692539	-0.783677258	0.650219
2578.5	3486.5	0.919945	0.181657944	0.870527
1991.5	2421	0.866884	-0.36531516	0.743856
182.5	201	0.767772	-0.5402091	0.697467
427	182.5	0.926156	-0.11604044	0.564705
13.5	17	0.945824	0.103093493	0.865411
470.5	482	0.95624	-0.096691199	0.939783
44.5	55.5	0.948855	0.138976413	0.926211
81	77	0.955456	-0.101445264	0.987842
281.5	303	0.832021	-0.378767897	0.778442
281	311	0.610592	-0.790130412	0.528878
2389.51	2337.01	0.792906	-0.440721383	0.809648
2532	2605.5	0.803935	-0.42762754	0.782572
1785	2375	0.998309	0.004841263	0.837241
13329	14112	0.86655	-0.311104478	0.82702
23.5	34.5	0.80906	0.467778961	0.956949

4847.49	5617.91	0.829253	-0.423801103	0.727968
4	18.5	0.918125	-0.415037499	0.181856
33	15.5	0.531448	1.125530882	0.382087
1262.5	1525	0.969224	-0.07385023	0.842563
1336.69	1232.79	0.734678	-0.60326492	0.792576
0.5	3	1	0	0.0877066
192.5	219	0.991615	0.018615678	0.919711
1905.5	2044	0.965416	-0.072586653	0.914405
914.5	963.5	0.833361	-0.317203107	0.789607
91.5	34	0.680787	0.708301836	0.432769
1386	1502	0.992564	-0.016224929	0.937017
523	447	0.736859	-0.542827102	0.855832
1599.5	1809.5	0.900965	-0.26402691	0.82476
70.5	56	0.857682	0.218000652	0.688795
3494	3771	0.840421	-0.377809853	0.787306
65.5	73.5	0.907832	0.223964841	0.974781
1266	1662	0.928057	-0.181940378	0.744728
1116	1057	0.888679	-0.252986128	0.925059
889	1016	0.875787	-0.26954037	0.775045
1037.5	901.5	0.690998	-0.61056588	0.803536
808	568	0.706008	-0.714231568	0.927149
692.999	654.5	0.492152	-1.20789077	0.532264
1113	1271	0.869896	-0.329074989	0.782177
811.5	612.5	0.945083	-0.077607497	0.800862
724	860	0.975248	-0.063134345	0.867592
1505.5	1447	0.89312	-0.262555344	0.917921
440	488	0.595668	-1.09836513	0.527389
98	52.5	0.849714	0.316027493	0.592202
514	479	0.868023	-0.31737424	0.913176
671	560.5	0.809325	-0.351249967	0.953977
127.5	111.5	0.883706	-0.246160587	0.976616
672.499	683.503	0.890053	-0.199860488	0.876312
7	3.5	0.798271	-0.222392421	0.535489
662	564	0.802488	-0.360858789	0.933655
414.5	435.5	0.978641	0.049605546	0.990424
343.5	204.5	0.939269	0.12465562	0.68083
890.506	876.005	0.721008	-0.476560189	0.736197
2936	2784.5	0.715031	-0.674538292	0.752247
1838.5	2317.91	0.861941	-0.403402778	0.721471
75	59.5	0.828437	-0.408639728	0.971844
807	882.5	0.803757	-0.519433751	0.745912
5394.49	4699.54	0.804903	-0.43888852	0.899549
1.5	2	0.670131	1	0.774348
75	63	0.626325	-1.058893689	0.733086
38.5	25.5	0.725159	-0.538866086	0.976352
1.5	0.5	0.513713	-1.584962501	1
3	0	0.877103	0.222392421	0.323864
10	24	0.700402	-2	0.311506
62	69	0.991199	0.023083613	0.947253
75	151.5	0.743256	-1.370837695	0.409383
14	20	0.620147	-1.347923303	0.416754
689.5	760.5	0.701372	-0.933551715	0.643128
3	2	0.308068	-1	0.710482
115.5	142	0.736427	-0.691877705	0.595664
1.5	0	0.756486	-0.584962501	0.545627
10.5	10.5	0.972224	-0.070389328	0.972224

2.5	1.5	0.236154	-2.321928095	0.513713
1269	1690.5	0.742319	-0.865496811	0.575692
13	2.5	0.334871	-1.530514717	0.804892
1937.03	1950.02	0.929373	-0.14319755	0.924383
903.5	1034	0.86278	-0.351775241	0.774288
222.5	219	0.730691	-0.409644241	0.746889
41.5	40	0.496872	1.290296486	0.487083
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745.999	692.496	0.426193	-2.935698093	0.461365
53.5	58.5	0.914737	-0.202308175	0.854676
1176	1239.5	0.732624	-0.599759503	0.693285
6699.99	9392.79	0.841314	-0.447927685	0.62267
771	728	0.799655	-0.388463226	0.845921
1009.5	996.5	0.691506	-0.536481699	0.703343
39	35	0.893552	0.253756592	0.837799
27.5	23.5	0.869178	-0.321928095	0.964086
315.001	364.5	0.715587	-0.932890384	0.631177
321.5	242	0.489095	-1.534259061	0.65816
3335.95	2956.71	0.714432	-0.62419051	0.803223
173	99	0.619184	0.694654789	0.419035
3	7.5	0.713429	-2.584962501	0.340442
1353.5	1221.5	0.784953	-0.284836071	0.900493
2037	2104	0.626759	-0.775484407	0.601048
421.499	165.5	0.917315	-0.153327553	0.610562
2196.5	1997	0.705047	-0.709210178	0.770585
495.5	618	0.887784	-0.292745355	0.742688
1636	1673	0.9366	-0.135828994	0.920716
124.5	181	0.907856	-0.238902743	0.651548
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457	551	0.639644	-1.213998536	0.530762
356	347	0.674988	-0.894532849	0.691322
1351.5	1530	0.972638	-0.070549458	0.897332
3185	3320.62	0.93777	-0.15450664	0.911821
1963.99	3406.98	0.965205	-0.111824282	0.642797
112.5	127	0.620293	-1.473931188	0.555611
980	1114.5	0.938721	-0.152003093	0.855649
288.5	386.5	0.805829	-0.60637347	0.630392
982.5	916	0.951337	-0.106632848	0.997564
2084.5	2373.5	0.989246	-0.026542705	0.907783
1706.02	1832.51	0.970383	-0.06753386	0.922526
800.78	806.089	0.614586	-0.860715618	0.609622
2006.98	2100.5	0.846816	-0.293963105	0.809144
2731.5	2499.5	0.7303	-0.486959332	0.807308
1661	1440.49	0.864588	-0.242005721	0.980854
1478	1615	0.836904	-0.439980073	0.781374
4161.48	3602.5	0.666196	-0.794362891	0.766241
1913.18	1827.26	0.802559	-0.351481472	0.842624
2383.56	2588.06	0.970781	0.065320384	0.975094
2106.51	2496.01	0.851438	-0.350204493	0.729966
2142.52	1265.02	0.844158	-0.252089427	0.761088
420	287.5	0.949577	-0.084888898	0.776557
607.498	360.501	0.541908	-1.2411113	0.852402

3453	3083	0.844603	-0.240894156	0.952452
1213.99	1165.98	0.723826	-0.51761016	0.758172
1792.5	1919.5	0.840599	-0.362225185	0.791349
3053.5	3532.5	0.992665	-0.016393088	0.891353
5241	4947	0.625726	-0.718322272	0.674154
4400.84	5090.19	0.875008	-0.302837184	0.774973
1202	1272	0.897749	-0.222792559	0.856738
677	613.5	0.817374	-0.343667563	0.897209
6343.5	5981	0.646296	-0.563460927	0.703791
19811.5	20912.1	0.750075	-0.523741289	0.707472
4884.5	4791	0.700761	-0.630799538	0.715819
3541	3811	0.724383	-0.582926808	0.666506
748	778.5	0.969242	-0.070148256	0.94287
14627.5	15155.5	0.763648	-0.466321249	0.734465
1.5	1.5	0.450185	#NUM!	0.450185
2897.47	3093.94	0.74552	-0.538773834	0.694095
4295	4554.5	0.90258	-0.202314893	0.858225
1711.49	2097	0.894512	-0.259752335	0.755426
654.001	696.001	0.784865	-0.428345433	0.733937
724	752	0.913972	-0.180173766	0.8859
1068.49	1201.48	0.97357	-0.063472563	0.897565
252.5	285	0.771599	-0.448758117	0.670064
875.5	916.5	0.775772	-0.562075074	0.744878
290	301	0.834898	-0.415037499	0.810543
1451	1650.5	0.899505	-0.253125747	0.815508
3474	3895	0.82061	-0.429506308	0.740172
4034.5	4588	0.902134	-0.267367741	0.824339
1388.5	1387	0.834115	-0.419025961	0.83481
1733.5	1730.5	0.810423	-0.434729011	0.811647
2906.5	3212.5	0.849461	-0.388398337	0.784501
3190.5	3144	0.770081	-0.461213195	0.781832
2255.5	2154	0.66528	-0.514436115	0.711744
964	903.5	0.788195	-0.400148873	0.841746
5190.43	5312.91	0.800345	-0.368658562	0.780247
238	552.5	0.739926	-1.324962155	0.328268
818	1301	0.944023	0.142625145	0.744719
542	576	0.748044	-0.493434406	0.697287
26.6215	31.2926	0.829408	0.380259326	0.927944
748.5	787	0.772321	-0.262456287	0.706388
1503	1546.5	0.560194	-1.596527252	0.544451
762	783	0.923078	-0.15368701	0.902247
499.5	470.5	0.855582	-0.283102456	0.90218
1.5	2	0.860525	0.415037499	1
2572.5	2446	0.637381	-0.71056986	0.679029
755.5	838	0.702198	-0.658909816	0.622936
1020.32	816.796	0.744019	-0.50675297	0.914309
5372	5314	0.802202	-0.314594981	0.812778
2119	1762	0.392492	-0.848269267	0.579867
642	696.5	0.767474	-0.646949388	0.716173
623	676	0.906989	-0.219693272	0.851797
1.5	4.5	0.805463	-1.584962501	0.360959
1264.5	824.5	0.464621	-0.961165606	0.827339
63.5	60.5	0.900644	-0.168505724	0.943069
830.005	782.491	0.71999	-0.530820668	0.769518
2845.5	2578	0.585498	-0.803367738	0.667239
1456.5	1742	0.699309	-0.518186022	0.533509

334.589	375.124	0.744234	-0.522456392	0.651213
833.5	914.5	0.947945	-0.104055418	0.875903
2210.99	1567	0.187688	-1.776207969	0.390719
1503	1739	0.79253	-0.441189787	0.677677
467	416.5	0.719634	-0.538603812	0.813425
5643.2	5003.34	0.438388	-2.027138007	0.503835
942	844.007	0.6936	-0.500207049	0.797733
681.5	563	0.592276	-0.560820805	0.801221
767.997	778.998	0.858912	-0.338216267	0.849417
1640.5	1660.5	0.720985	-0.492567805	0.710031
87.5	84	0.211705	-1.669851398	0.23297
2049.5	2979.5	0.776811	-0.65232812	0.536046
1818.98	1545	0.301108	-1.626790141	0.404155
761.5	622.499	0.00276569	-2.469412418	0.00573329
3201	3036	0.871899	-0.293920219	0.907422
1577.5	1220.5	0.381336	-0.796875803	0.665443
1323.5	1309.5	0.761781	-0.456505051	0.770658
129	144	0.803413	-0.403896942	0.715129
30	10.5	0.132586	-1.099535674	0.68405
0.5	0.5	1	0	1
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13.5	7.5	0.370757	-1.169925001	0.847091
0.5	0	0.308068	#NUM!	1
4	3	0.523243	-2	0.663808
3.5	3	0.502754	-1.807354922	0.586334
3.5	7.5	0.724378	-1.807354922	0.388128
15	17.5	0.753258	-0.658963082	0.650835
13.5	9	0.204691	-1.94753258	0.439799
31	28.5	0.968585	-0.071553261	0.979052
1.5	0.5	1	0	0.613399
2	4.5	0.725181	1	0.929192
21.5	20	0.710939	-0.56828376	0.769807
1	3.5	1	0	0.47668
2.5	3.5	1	0	0.770719
8	15	0.971666	0.087462841	0.650673
24.5	18.5	0.973091	0.057715498	0.814278
3.5	3.5	0.418064	1.280107919	0.418064
9.5	8	0.340442	-1.925999419	0.439799
5.5	7.5	0.951922	0.125530882	0.856852
1.5	5	0.919687	0.415037499	0.557935
24.5	21.5	0.559768	-0.707819249	0.684867
58	91	0.890322	-0.366127899	0.63248
15	12	0.612883	-0.658963082	0.814626
7	4.5	0.633442	-0.637429921	1
2	0.5	1	0	0.567924
9	6.5	1	0	0.810735
17	21.5	1	0	0.843802
25.5	24	0.807455	-0.502500341	0.845108
3	7.5	0.900526	0.415037499	0.666873
14	17	0.812447	-0.485426827	0.681235
1.5	1.5	0.613399	-1.584962501	0.613399
5	2.5	0.918711	-0.152003093	0.687418
20	31	0.865048	-0.415037499	0.595552
16	16	0.970907	-0.04580369	0.970907
3.5	5	0.682602	-1.222392421	0.487603
12.5	13	0.680212	-1.184424571	0.659511

2	1.5	0.545627	-1	0.756486
8.5	10.5	0.72773	0.719892081	0.823484
1	0.5	1	0	0.622002
7	4.5	0.285001	-1.807354922	0.562529
4.5	9	0.689169	0.91753784	0.95952
32	35	0.502544	-0.678071905	0.412219
12	11.5	0.927607	0.169925001	0.903638
34.5	32.5	0.872005	-0.250543462	0.91822
1	3	0.523243	2	0.825659
0.00064	7.10E-22	0.308068	-36.3087837	1
4.5	14.5	1	0	0.472001
42	37.5	0.914082	-0.106915204	0.956943
26	17.5	0.779585	-0.2410081	0.753348
3	2	0.515664	-1	0.822295
52	27	0.370307	-1.145850866	0.905438
0.5	0.5	0.450185	#NUM!	0.450185
8	7.5	0.741592	-0.830074999	0.776864
0.5	0.5	0.450185	#NUM!	0.450185
5.5	3.5	1	0	0.792666
43	44.5	0.921233	0.188445089	0.940858
0	1	1	#DIV/0!	0.308068
62	38	0.729029	-0.267695783	0.658361
1.5	5	0.915554	0.415037499	0.539077
1.5	1	0.756486	-0.584962501	1
8	8	0.966851	-0.093109404	0.966851
1	0	0.308068	#NUM!	1
1	1	1	0	1
25.5	22	0.628759	-0.765534746	0.744212
0.5	0	0.622002	1	0.353387
2	0.5	0.825659	-0.415037499	0.663808
11	12.5	0.683721	-0.7589919	0.591386
9.5	8	0.873378	-0.247927513	1
42	29.5	0.641055	-0.637429921	0.936802
10	8	0.550362	-0.514573173	0.837425
11.5	5	0.252431	-1.938599455	0.761346
63	47	0.365869	-1.422691072	0.572118
0	0.5	1	#DIV/0!	0.308068
0	0	0.308068	#DIV/0!	0.308068
0.5	0	1	0	0.450185
49.5	19.5	0.418064	-0.520832163	0.418064
8	9.5	0.913732	-0.192645078	0.787726
105.5	31	0.32451	-1.633636347	0.963755
2.5	0	0.3832	-1.321928095	0.545627
0	0	?	#DIV/0!	?
62	9	0.567889	-0.976916387	0.66921
11.5	9.5	0.545226	-1.064130337	0.681051
3.5	4.5	0.697501	0.652076697	0.844258
3	3.5	0.811936	0.415037499	0.904922
2.13E-18	4.64E-29	0.308068	39.84560421	0.308068
1	2	0.530478	1	1
0	0	?	#DIV/0!	?
2	1.5	0.545627	-1	0.756486
0.5	1	0.436998	2.321928095	0.550362
8	7	0.963774	-0.093109404	0.963774
6	4	0.3646	-2.584962501	0.567924
1	0.5	0.651448	0.584962501	0.391002

0.5	1.5	0.724378	#NUM!	0.329316
1	0	0	#NUM!	?
3.5	5	0.590801	-2.807354922	0.434451
1.5	0.5	0.724378	-0.584962501	0.724378
1	0	0.320255	2.321928095	0.234161
0	1	0.622002	#DIV/0!	0.622002
0	1	1	#DIV/0!	0.308068
14.5	3	0.307066	-1.688055994	0.865624
0	0	0.308068	#DIV/0!	0.308068
1.5	2	0.438509	#NUM!	0.320255
7	11.5	0.885583	-0.222392421	0.452693
1	0	0.308068	#NUM!	1
0	0	?	#DIV/0!	?
0	0.5	1	#DIV/0!	0.308068
3	4	0.818729	-0.584962501	0.651448
9	4.5	0.544734	-1	1
0	0.5	0.353387	#DIV/0!	0.622002
1	1	0.438509	1.321928095	0.438509
0.5	1.5	0.513713	1.584962501	1
0.5	0	0.438509	2	0.320255
19	28.5	0.932675	0.178337241	0.813853
0.5	0	0.308068	#NUM!	1
2	0	0.198892	-2	0.622002
0	0.5	0.450185	#DIV/0!	1
10.5	8	0.892135	-0.070389328	0.596819
0	0	?	#DIV/0!	?
0.5	0	0.308068	#NUM!	1
5.5	5	0.654665	-0.652076697	0.735184
6.5	6	0.697714	-0.700439718	0.754799
5.5	7	0.821861	0.447458977	0.954909
10.5	0.5	0.333951	-2.070389328	0.792666
94	63.5	0.732643	-0.214738849	0.648492
12	6.5	0.899289	0.115477217	0.437078
1.5	1.5	0.764931	-0.584962501	0.764931
10.5	14	0.577083	-0.584962501	0.300815
5.5	5	1	0	0.923545
215	152	0.728113	-0.334564921	0.883997
80.5	66	0.761992	-0.485426827	0.910208
0.5	0	0.308068	#NUM!	1
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2.5	3	0.78878	-0.736965594	0.690256
14.5	10	0.905708	-0.103093493	0.682853
3	1	0.544016	-1	0.834708
898	943.5	0.71199	-0.686450323	0.676619
2145.5	2073.5	0.534116	-0.578755908	0.573833
271	262	0.749975	-0.406192008	0.782387
3509.48	3409	0.562595	-0.66230366	0.591668
470	388	0.386011	-0.783759806	0.596184
2514	2486	0.511934	-0.679679621	0.523584
9126	11393	0.238909	-0.766135599	0.100318
2416	1901.5	0.609182	-0.483934744	0.894779
3345.5	3228.5	0.574874	-0.676304926	0.60928
4321	4294	0.307718	-0.705917387	0.314247
10141	8351	0.177448	-0.768632302	0.388842
5446	4606.5	0.182936	-0.794432423	0.352729

5317.5	6245.5	0.186992	-0.726602656	0.0912645
2754	3003.46	0.751246	0.533988521	0.799675
124	121	0.904225	-0.172836597	0.924639
141.5	92.5	0.946358	-0.111235241	0.806154
17.5	19	0.865898	0.296981738	0.915806
0.5	0.5	1	0	1
1106.51	1072.5	0.665884	-0.427057413	0.702823
2923.5	2646.5	0.69746	-0.508207219	0.78968
3659.5	3455	0.648585	-0.539368263	0.706573
726.999	851.995	0.517486	-1.519973324	0.423423
491	540	0.684323	-0.425851618	0.577225
7823	7690	0.533594	-0.748321083	0.549769
760.003	886.496	0.975835	-0.061076141	0.879502
1734.49	1850.52	0.873744	-0.279021088	0.826743
286.5	211	0.912909	-0.128968327	0.820569
4765.5	4754	0.705994	-0.505669948	0.708223
864	788.5	0.636235	-0.887608762	0.699653
1270	1148.5	0.837312	-0.377659889	0.9042
1987	2017	0.659781	-0.641792913	0.646938
77.9443	81.2974	0.90975	0.153568501	0.944201
491.279	459.147	0.517147	-0.743565527	0.583127
54.5	55	0.816864	-0.325240829	0.808786
222.5	219	0.78356	-0.405344103	0.79697
931.5	981	0.822535	-0.423581075	0.786747
2872.04	2937.95	0.633615	-0.56157896	0.610752
129.5	134.5	0.921559	-0.1776045	0.895618
74.5	88	0.964398	0.084612228	0.928907
2178.5	2274	0.70439	-0.453854741	0.660686
580.5	617	0.773461	-0.517594153	0.728856
1232	1093.5	0.848973	-0.256258435	0.952896
2220	2125	0.840199	-0.267329888	0.880069
542	479.501	0.686282	-0.586294014	0.789641
2585.5	3071.99	0.867186	-0.241160288	0.712977
915	1018	0.701432	-0.581419245	0.611426
284	322	0.7883	-0.549834277	0.70448
1283	1293.5	0.987283	-0.027242887	0.98172
954	1136	0.982706	-0.043756276	0.873104
967	760	0.835269	-0.376275464	0.988744
261	226.5	0.60773	-0.564381623	0.75756
152	164.5	0.894685	-0.220021517	0.834586
318	534	0.90044	0.164875311	0.575146
73	57.5	0.796513	-0.356934545	0.99353
457.5	381.5	0.609944	-0.755478892	0.758752
581.5	569	0.666588	0.696713427	0.656165
426.5	451.5	0.936271	-0.145814881	0.897683
607	533.5	0.707454	-0.581994602	0.810104
5987.9	5145.05	0.300087	-0.845449582	0.456397
1975.5	1995	0.506837	-0.747716526	0.497361
11	14	0.921239	-0.137503524	0.696428
798.12	1158.4	0.550569	-1.302889021	0.323264
1394.5	1315	0.818804	-0.378097858	0.862802
2502	2590	0.894966	-0.266845105	0.873354
1267.5	1590	0.735551	-0.799975392	0.595415
1791.5	1462.5	0.714299	-0.640789246	0.856862
2704.5	4012.5	0.98938	0.029567704	0.7679
417	436	0.825639	-0.477491381	0.798327

988.5	306.5	0.917419	0.165946494	0.507581
1743.5	1538	0.557692	-0.73503612	0.674558
2522.99	2743.99	0.985889	-0.034132232	0.933137
1411.5	1635.5	0.876619	-0.332442851	0.784358
2198	2243	0.81812	-0.454067597	0.804749
10.5	10	1	0	0.971162
202	245.5	0.677218	-0.453640339	0.469363
178.5	188.5	0.925723	0.145928579	0.964754
25533.3	29102.5	0.911792	-0.188533525	0.813274
7389	7022.5	0.631193	-0.804550944	0.669862
2010.5	1960	0.844118	-0.295618979	0.864909
36	6	0.85147	0.20511443	0.279647
133.5	178.5	0.678854	-0.941754859	0.493287
2881.44	2017.09	0.611786	-0.517170491	0.998227
244.562	212.913	0.23651	-1.332334676	0.330365
1.5	2.5	0.329316	#NUM!	0.14822
889.996	992.997	0.999265	-0.001607319	0.923082
228.5	272	0.829735	0.416615077	0.925828
97.5549	134.085	0.634723	-1.301577598	0.453538
4044	4299	0.910238	-0.174172107	0.861119
3872.22	4213.47	0.72789	-0.611209321	0.664351
213.396	201.545	0.840653	-0.326429249	0.883779
1071	919.5	0.736353	-0.534336428	0.85385
2205	2387	0.888729	-0.250915774	0.832307
1080	1082.5	0.998498	0.003335713	1
201.104	135.955	0.837692	-0.300284473	0.881878
3.5	3	0.481309	-0.807354922	0.630057
128	136	0.99234	-0.017006425	0.951532
135.5	155	0.758136	0.597331058	0.82393
285	309.5	0.816689	0.394003799	0.865989
5930.58	6028.46	0.843984	-0.368472595	0.832814
1	0.5	0.353387	#NUM!	0.622002
41791.5	42521.5	0.865413	-0.223592534	0.849328
264.5	357.5	0.690408	-0.917840895	0.499025
1630.02	1608.52	0.795858	-0.444285843	0.805692
58.5	63	0.951474	0.106915204	1
1717.5	2026	0.972095	-0.069696497	0.866756
0	0.5	1	#DIV/0!	0.308068
92.5	83	0.976901	0.038474148	0.889656
236	246.5	0.753067	-0.560714954	0.721028
467	467	0.789683	-0.464266716	0.789683
1639.5	1594.5	0.744176	-0.479981363	0.767821
125.5	163.5	0.944934	-0.13865354	0.768012
28.3362	24.5114	0.662446	-0.482823425	0.816237
1026.5	983.5	0.76337	-0.472136452	0.797579
681.5	642.5	0.73034	-0.484791885	0.782028
976.495	1003.51	0.908354	-0.226691963	0.891076
95.5	92	0.775932	-0.448145811	0.805652
2124	2027.5	0.669007	-0.625779156	0.708508
992.499	995.5	0.791411	-0.418674623	0.788998
774.5	780	0.627002	-0.693239583	0.620888
1998	2270	0.453441	-0.665705461	0.324575
2917.5	2193	0.328938	-0.688742959	0.714488
984.501	908.003	0.830631	-0.21618441	0.924478
28.5	31.5	0.760055	-0.341036918	0.650396
26.824	46.0192	0.770589	0.51629269	0.845985

2369	1788.5	0.765168	-0.494100493	0.962759
4754.08	5087.22	0.977677	-0.056034726	0.936704
8738.78	8608.95	0.876534	-0.317472157	0.885717
1.5	10	0.814065	#NUM!	0.185644
3175	3398.52	0.896786	-0.259942402	0.853381
226.5	259.5	0.886512	-0.253511632	0.786862
1531.5	1438	0.824861	-0.301119071	0.8808
8231	7634	0.72592	-0.577314492	0.783544
1033	1066	0.468721	-0.852753202	0.440623
32	50	0.622379	-1.830074999	0.401355
39	66.5	0.716258	-0.584962501	0.30164
0	0.5	1	#DIV/0!	0.308068
1149.13	1179.3	0.999162	0.001932125	0.984423
0	0	?	#DIV/0!	?
33.5	20.5	0.948351	-0.088809267	0.72467
0	0	?	#DIV/0!	?
1	0	0.622002	-1	0.622002
4087.5	4183	0.984076	0.031421098	0.999027
2545.28	2591.61	0.753644	-0.442850949	0.737618
1048.49	1696.52	0.817422	-0.590109558	0.525949
4768	3178	0.451566	-0.994563839	0.793995
102.5	66	0.435466	-1.979040381	0.670777
6	12.5	0.912929	-0.263034406	0.438509
9.5	12.5	0.910366	-0.247927513	0.737968
11066	6060.5	0.87917	-0.220210344	0.740648
1468.5	1354	0.547036	-1.269829132	0.598659
643.499	902.499	0.741279	-0.866269723	0.542555
19	22.5	0.702752	0.634715536	0.797674
1794	1680	0.766829	-0.435555215	0.821965
349	422	0.966153	-0.082948571	0.84105
21	43	1	0	0.136713
3.5	7.5	0.831194	-0.807354922	0.456799
5010.12	5394.43	0.95941	-0.078020589	0.900606
3073.5	3652	0.89632	-0.276474663	0.787529
1148.5	1192	0.676179	-0.520777549	0.639865
661.501	812.002	0.88694	-0.279487108	0.746516
1170	1300.5	0.929251	-0.167153252	0.858019
2241.01	2269.98	0.872563	-0.221533244	0.861165
100	78	0.63332	-1.089267338	0.777168
1142.5	961	0.601506	-0.619789518	0.771904
372.5	267.5	0.869108	-0.221424494	0.871544
1361.5	1244.5	0.76004	-0.423006743	0.839015
273.5	341.5	0.479272	-1.611581246	0.350304
28284.1	28244.6	0.7049	-0.756364281	0.705836
1027.5	776	0.67002	-0.680742132	0.879884
28310.5	31744.5	0.703488	-0.80699188	0.628251
97	97.5	0.618194	-1.156969346	0.615067
770.5	760	0.900699	-0.18877171	0.911657
982.5	1023	0.882115	-0.278535499	0.854873
19	16.5	0.559891	-0.925999419	0.66902
544.5	512	0.240928	-0.80338602	0.298618
438	485.5	0.889048	-0.274941173	0.821187
1301	1338	0.572593	-1.144506642	0.554042
211.5	210.5	0.912589	-0.158459815	0.916539
1948	1271.5	0.46373	-0.767906625	0.902737
2008.5	1878	0.364823	-0.637070818	0.44761

1252.5	1226	0.837109	-0.31474692	0.854366
4395.01	3497.5	0.795841	-0.396502204	0.968808
3138	2587	0.820617	-0.401917839	0.949537
209	250.5	0.921031	-0.160464672	0.776249
27.5	32	0.754548	0.447458977	0.862594
2201	2186.5	0.736849	-0.487854116	0.742553
10075.1	10013	0.692245	-0.702496198	0.696787
1066	1264	0.911495	-0.228268988	0.801801
129.5	114.5	0.597571	-0.633103995	0.718193
1787.5	1882.5	0.753823	-0.502803036	0.712199
612	500	0.790616	-0.280107919	0.992101
2859.5	3125.5	0.959678	-0.09676344	0.902179
2530	2144.5	0.869862	-0.321571742	0.968901
6832.83	6255.51	0.721218	-0.647248735	0.783477
54.0608	49.1843	0.235058	-1.439069398	0.293696
2341.5	2135	0.575284	-0.621938704	0.671109
64	70	0.674964	0.665335917	0.723367
1484.78	1423.68	0.652177	-0.747866547	0.684467
2.5	3	1	0	0.892901
3084	2861.5	0.689857	-0.43893622	0.770771
1117.5	1019	0.8006	-0.271190733	0.901926
1415	1427	0.854718	-0.266300732	0.847545
4249.5	4404.5	0.802319	-0.385078851	0.772769
6035.54	5632.61	0.728902	-0.450033924	0.793682
2229.5	2087	0.766703	-0.332970839	0.837121
2857.5	3118.5	0.838005	-0.351576832	0.772104
1504.01	1621	0.921833	-0.180113166	0.870601
7971.5	8755	0.821904	-0.364678763	0.747073
3857.5	4223	0.559799	-0.904321652	0.488727
199.5	176.5	0.93024	-0.132450296	0.978036
510	397	0.660707	-0.434020603	0.947559
922.786	957.541	0.477561	-0.608407736	0.435402
8087.63	7965.7	0.889296	-0.244864699	0.899895
567	506.5	0.400289	-2.252387162	0.459817
489.5	412.5	0.528442	-1.431339312	0.630891
9067.62	8777.78	0.780312	-0.410099944	0.807763
4477.5	4684.5	0.745867	-0.43411983	0.703716
4659.99	4614.93	0.857302	-0.299492411	0.864548
15960.5	14820	0.436478	-0.716814077	0.517102
1913.51	1438.99	0.572197	-0.682244272	0.842765
10571.4	9938.68	0.720055	-0.602746084	0.76668
5489.52	5732.57	0.7892	-0.385607278	0.75129
8486	8278.5	0.839267	-0.313410345	0.859042
7240.23	7092.98	0.642271	-0.551939248	0.662919
6048.11	5693.99	0.855403	-0.255184573	0.907151
397	331.5	0.485081	-1.14917942	0.617226
831.739	708.438	0.181139	-0.775899065	0.345497
15.5	13	0.872456	-0.253756592	1
1747.02	1681.01	0.755105	-0.448898845	0.788325
2122	1802.5	0.396253	-0.628093031	0.610849
586	559	0.998147	0.003688187	0.964804
7139.8	6514.41	0.706728	-0.619900718	0.776752
84.5	81.5	0.936367	-0.162474697	0.957539
846.5	952.5	0.947427	-0.124524144	0.868609
1219.5	1269.5	0.884487	-0.280530489	0.858091
1624.99	1502.5	0.978778	0.045899127	0.929422

251	202	0.738916	-0.397896366	0.948968
25	36	0.970149	0.056583528	0.711819
7.5	6.5	0.96308	0.093109404	0.889735
8292	8623	0.816053	-0.310684655	0.779549
6519	6133.5	0.739854	-0.362238158	0.806618
5647.5	5345	0.665675	-0.414739497	0.732546
10004.2	9589.96	0.655377	-0.593026809	0.6942
15.5	26.5	0.211765	2.480431917	0.273557
89.825	160.456	0.88226	0.276357015	0.690452
656.998	802.502	0.79297	-0.589913935	0.666613
21.5	22	0.522082	-1.178337241	0.506222
320	313.5	0.430375	-1.45774195	0.443677
331.5	245.5	0.666144	0.615819627	0.529468
1848.5	1542	0.541445	-0.631761	0.738819
1092.51	743.998	0.932999	-0.106152544	0.770444
5173	4871.5	0.807686	-0.31754226	0.863367
7385	6246	0.961461	0.070900881	0.844924
498.5	590.5	0.490181	-2.54359718	0.408392
4569.5	4402.5	0.812461	-0.433093596	0.838274
481	479.5	0.759916	-0.477351183	0.762449
775	854	0.798231	-0.523913714	0.734169
2288	2136.01	0.63586	-0.669000409	0.695512
360.267	366.253	0.512699	-1.517212273	0.502841
1260	1435.5	0.99184	-0.016698712	0.893632
2928	3357	0.852187	-0.319097712	0.747612
734.5	917	0.987802	-0.02776406	0.830811
653.499	747.002	0.942755	-0.149914945	0.860704
54	65.5	0.947098	0.127755547	0.931283
2858	4484	0.898801	-0.242684064	0.564143
114	171.5	0.785484	-0.673018677	0.534304
552.998	497.999	0.605426	-0.440481284	0.744177
469	512.5	0.812099	0.385121921	0.868067
557.5	518	0.658597	-0.537865494	0.731005
523.5	537.5	0.606435	-0.952560943	0.587695
1453.02	1515.51	0.899486	-0.206776278	0.867519
1301	1572.99	0.591368	-1.650173475	0.490838
4939	4131	0.462772	-1.448229271	0.577557
57.5859	80.2418	0.617705	-1.53595169	0.439957
101.5	133	0.8776	-0.361555169	0.714542
354.5	244	0.567934	-1.294716135	0.781657
281	163	0.902066	0.209869588	0.656185
639	848	0.882957	-0.352445862	0.714772
73.5	129	0.906779	-0.354182294	0.609327
212	246.5	0.77247	-0.645771413	0.677436
1874.51	2022.51	0.915219	-0.194111434	0.862715
3218.59	3220.52	0.953895	-0.096622187	0.95347
676	761	0.900983	-0.246061327	0.823182
1195	1120	0.811801	-0.425133377	0.857176
744.5	810.009	0.853567	-0.352766067	0.795923
965.5	870	0.826176	-0.333931867	0.908552
317	308	0.677718	-0.686287211	0.70001
5	6.5	0.763415	-0.736965594	0.604571
64.0186	76.5	0.76643	-0.591028286	0.642885
2090	2266	0.298502	-1.636969804	0.253278
685	867.5	0.651914	-1.227667363	0.517489
1166	1134.5	0.749811	-0.456033042	0.773636

849	819.5	0.798298	-0.306504833	0.833991
785	858	0.625367	-0.866679416	0.55986
652.5	608.5	0.839892	-0.188702208	0.927337
1211.5	1619	0.804582	-0.521479501	0.608781
304.5	404.5	0.801591	-0.642968104	0.63592
1067.26	1124.58	0.838751	-0.363328238	0.801004
3307.91	3547.36	0.803939	-0.43957699	0.752361
5.23407	3.93032	0.526985	-1.964451858	0.667476
2457.53	2902.01	0.740667	-0.519429539	0.602512
6098.49	6785.47	0.818106	-0.437248448	0.743392
3024	3506.99	0.775798	-0.511679509	0.665222
78	68.5	0.753536	0.469485283	0.681336
404.498	401.499	0.484645	1.172121166	0.482292
156.5	167	0.956984	-0.105143504	0.916103
59.5	102	0.878812	-0.324962155	0.505999
1	1.5	0.116158	1.584962501	0.198892
375	386	0.881005	-0.279283757	0.861464
1154.5	866	0.879953	-0.197921001	0.885969
717	706.5	0.983369	-0.037713003	0.992808
352.5	607.5	0.809036	-0.650907813	0.487588
874.5	821	0.801901	-0.399449514	0.85094
697.501	685.5	0.94709	-0.11066112	0.9594
2154.5	2286	0.572209	-0.602986948	0.51031
220	348.5	0.474532	1.162620201	0.695611
225.5	277.5	0.977751	-0.048799298	0.825681
625.002	637.996	0.969076	-0.066122625	0.954744
5415.34	5626.97	0.813758	-0.427002563	0.786351
22	17	0.93971	-0.101879614	0.860251
68.5	341.501	0.825052	-1.215389034	0.1494
16.5	37	0.97329	-0.090197809	0.491547
240	148.5	0.552585	-1.024247546	0.878203
863.493	761.998	0.963981	-0.074550016	0.951973
1077.5	1219	0.880828	-0.288019686	0.796695
441.999	552	0.967411	0.077837068	0.886832
820	785	0.961184	-0.080497128	0.991708
4049	3635.5	0.785651	-0.416344557	0.871382
3152.51	3120.96	0.763111	-0.48022286	0.771113
72875.2	48906.8	0.286605	-1.060680466	0.666535
8791.8	5990.54	0.200241	-2.239297747	0.401465
5127.62	4043.36	0.371192	-2.285168359	0.497373
1712.29	1439.27	0.291449	-2.379767574	0.380783
54	85	0.468998	-0.688798312	0.129378
1250	1029	0.498481	-0.877261028	0.670489
2651	2548.5	0.519204	-0.572634594	0.566434
3	7	0.943021	0.222392421	0.62469
1552.5	1616.5	0.874793	0.300111932	0.896897
1214.5	1255	0.896192	-0.276760253	0.87659
4466.5	5394	0.888674	0.214503449	0.966961
11	8	0.645927	-1	0.831967
2343.02	2534.04	0.841348	-0.331911403	0.780572
654	728.5	0.913553	-0.198328716	0.838155
4881.5	4632	0.59726	-0.62147701	0.649568
2560.49	2283.01	0.864944	-0.258809128	0.95376
501.5	610.5	0.957664	-0.110571104	0.834713
2593.48	2659.56	0.848802	-0.329446273	0.830356
125	161.5	0.995559	-0.011587974	0.83533

11060.5	11293	0.748244	-0.425926474	0.728761
9328.91	9144.22	0.925099	-0.144633052	0.940593
2829	2487	0.648585	-0.584580077	0.768941
3.5	2.5	0.639236	-0.807354922	0.873517
1660.5	1550	0.600897	-0.7965352	0.656815
2148	2195	0.791901	-0.471656849	0.776226
696.5	719.5	0.798901	-0.449626106	0.775084
639	575.5	0.829474	-0.276644837	0.925862
2230	1913.5	0.441027	-1.461940725	0.540694
806.899	735.376	0.787793	-0.4079775	0.862641
397	232	0.991103	0.009056496	0.476746
3813	3509	0.738294	-0.480705035	0.809293
1748	1690.99	0.690447	-0.526531076	0.721209
2181	2095.5	0.547172	-0.51381739	0.597832
5280.45	4533.63	0.625178	-0.752420949	0.746957
616.001	616.504	0.917394	0.161577572	0.91796
769	868	0.833494	-0.433287756	0.754331
710	777	0.842621	-0.412330754	0.784858
548.5	594	0.688472	-0.96492149	0.640811
118	151.5	0.838031	-0.406909618	0.664003
267.654	279.595	0.930508	0.127218808	0.964087
197	238	0.994867	-0.011027022	0.855809
145	115	0.427439	-0.493408563	0.810583
6930.51	6994.94	0.81601	-0.357076944	0.808441
1553.5	1492	0.765478	-0.402849206	0.802234
3831	3601	0.715335	-0.495971979	0.771218
1637.5	1683	0.958241	0.071752191	0.980985
6	11.5	0.815407	0.502500341	0.779849
2612	2513	0.832248	-0.33344174	0.862526
2676.52	2980.61	0.950368	-0.116980965	0.878588
1598	1493.5	0.777701	-0.410230514	0.834884
3008.5	3175.5	0.872194	-0.318515414	0.837082
2074	1825.5	0.800587	-0.336083414	0.914401
1995.5	2320	0.991318	-0.019287168	0.885617
1621.5	1488	0.513614	-0.574987616	0.618376
0.5	0	0.034897	2	0.0162766
451	383.5	0.935116	-0.10617719	0.928048
1136.5	762.5	0.534784	-1.008274912	0.824651
27	35	0.671098	-1	0.509384
1117	737.5	0.863161	-0.21477074	0.802423
1224	916	0.587862	-0.471118215	0.956992
3290	3101.5	0.765323	-0.391262646	0.820182
5484	4501.5	0.588964	-0.561089883	0.806226
8192	7486	0.368379	-0.558611971	0.495978
1756.5	1821	0.981662	-0.040395602	0.9573
737.499	797	0.950464	-0.106543423	0.894701
3966.5	3434	0.364576	-0.608245587	0.56201
8423.38	7623.8	0.5886	-0.681650458	0.682233
6803	6690	0.805697	-0.442080573	0.817578
907	867	0.829371	-0.399742837	0.859907
1433.99	1540.01	0.758824	-0.45031905	0.69688
834.5	757	0.785689	-0.287970712	0.89414
770	719.5	0.420037	-0.663902132	0.499242
9989	10209.5	0.972647	-0.052729554	0.955846
1148.08	825.402	0.544951	-0.620676638	0.902259
264	254	0.746388	-0.593183008	0.773601

3	2	0.544016	-1	0.834708
340	221.5	0.246198	-1.520647687	0.551743
105	110	0.643756	-0.959358016	0.613035
34	70	0.451278	1.751740947	0.665669
1063.5	1145.5	0.977894	0.044743492	0.968003
1075	1163	0.837696	-0.362761812	0.780013
813.5	887	0.871754	-0.302769686	0.812048
375	302.499	0.516784	-1.711542997	0.633572
100.5	124.5	0.92793	0.175496796	0.938981
929	971.5	0.936748	0.163526463	0.960818
4670.5	5683.5	0.968357	-0.076758887	0.837624
114.708	71.6721	0.512897	-1.243799486	0.812047
9.5	12.5	0.887771	-0.341036918	0.726798
1583.93	1544.47	0.880633	-0.245977373	0.89943
268.5	287.5	0.968701	-0.065963262	0.919328
708.5	739	0.851401	-0.288714953	0.817014
896.5	879.5	0.381299	-2.66860842	0.390708
41.5	34.5	0.528754	-1.165586066	0.655135
5.5	3	1	0	0.680712
0	0.5	0.450185	#DIV/0!	1
33	37	0.929774	-0.16175107	0.850603
559.5	562	0.712614	-0.755129261	0.709682
1786.5	1477.5	0.415923	-0.672993265	0.648535
6.5	18.5	0.531688	1.509013647	1
56.2852	47.6107	0.731975	-0.620746426	0.84695
662	552.5	0.510864	-1.537797393	0.616827
221.5	155.5	0.631205	-0.646504646	0.93161
6355.53	7058.52	0.736308	-0.476133997	0.642177
32	29.5	0.535014	-1.245112498	0.588278
121.5	89.5	0.612262	-0.725140159	0.862912
915.5	1102	0.950262	-0.134512502	0.838055
8559.5	9836	0.955103	-0.118690246	0.871107
506.5	555	0.842435	-0.397578671	0.781917
1347	1265	0.750614	-0.678714674	0.789446
1294	754.5	0.85734	0.236498533	0.559886
148.5	122	0.613796	-0.394140158	0.895863
721.499	669.5	0.739327	0.603849669	0.705635
190.5	508.5	0.990284	-0.042265727	0.493573
5.5	3	0.327048	-2.459431619	0.639437
1145.5	1718.5	0.597172	-1.319414543	0.358873
2185	2687.92	0.939165	-0.161970879	0.809913
8	7	0.399373	-1.678071905	0.481309
1207.5	1171	0.671063	-0.416830781	0.707691
717.5	565.5	0.476537	-1.588989566	0.618246
332.5	287	0.405783	-2.506845811	0.479882
3043	3206.5	0.731624	-0.705545348	0.697025
173	192.5	0.759813	-0.379345792	0.652685
29	37	0.879631	-0.334419039	0.726333
140.5	147.5	0.725353	-0.821543365	0.69614
151.5	163	0.944674	-0.108747663	0.887286
756	736.5	0.789791	-0.502897963	0.807624
200	135.5	0.691723	-0.530114024	0.984335
187	208	0.640679	-1.189342455	0.578736
77.5	49	0.801024	-0.393481356	0.89118
2123.04	1679.45	0.423699	-1.765362697	0.561813
166	94	0.971492	0.038588498	0.556685

362	404	0.994436	0.013881709	0.938887
294.001	262.501	0.891255	0.216068741	0.820679
26	22	0.89522	0.182203331	0.77904
547	547	0.90082	-0.169101028	0.90082
23	23	0.684799	-0.938599455	0.684799
232.5	253	0.895395	-0.279886324	0.843969
263	307.5	0.72004	-0.735138241	0.614143
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2438.52	2188.5	0.741286	-0.474534774	0.833134
2392.5	2467.5	0.919245	-0.18195983	0.898045
1454	1500	0.803198	-0.52853163	0.78365
1123	742.5	0.151209	-2.605665206	0.337321
724.001	837.505	0.878897	-0.273438095	0.772543
2187	2357.5	0.786836	-0.548807736	0.73704
2723.5	2983.5	0.890901	-0.215566366	0.817508
279.5	228	0.998572	0.002578544	0.852856
3	3	0.635978	-1	0.635978
21.5	6	0.208158	-1.178337241	0.672759
8	7.5	0.879211	-0.299560282	0.919204
1195	1070.5	0.888599	-0.134669211	0.981078
1544.51	1530	0.797805	-0.409298115	0.80525
167.5	179.5	0.686123	-0.708537186	0.634193
3208.5	2906	0.592451	-0.675421419	0.685444
8320.79	8467	0.798733	-0.445073605	0.7859
1944.5	1844.5	0.602499	-0.529113962	0.662154
1477.5	1520.01	0.687504	-0.513555241	0.660258
1968	1492	0.390811	-0.66988472	0.750149
6792	6041	0.567091	-0.640170262	0.687589
672	613.5	0.69998	-0.51887331	0.782393
496	491.5	0.843746	-0.310340121	0.850933
822.006	819.01	0.983377	-0.038236708	0.985693
1900	2103	0.853198	-0.356508327	0.783883
4122.44	3231.01	0.606947	-0.652022204	0.831374
595	643.502	0.841869	-0.352562809	0.784395
145.5	223.5	0.921198	-0.224873411	0.647287
1378.5	1473	0.817007	-0.384489433	0.765557
1107.5	1157.5	0.862783	-0.317863017	0.832117
2585	2341.5	0.618948	-0.583986152	0.718361
771	842.5	0.901481	-0.19934346	0.831994
1397	1511	0.591754	-0.463697847	0.4943
49.5	66	0.475831	-2.541893779	0.337084
9	14.5	1	0	0.518461
7702.5	7202.5	0.139246	-2.441469245	0.162807
31.5	35	0.573231	-0.932885804	0.493604
6	8	0.764931	-0.263034406	0.398521
2164.01	2769.54	0.773156	-0.479578608	0.574923
450	418	0.925709	-0.137824158	0.983657
1766.94	1828.43	0.982029	0.04273296	0.997167
2032	1858.5	0.775361	-0.589940995	0.830936
565.5	565	0.987253	0.026541787	0.986646
3062.55	3424.42	0.867643	-0.357740889	0.798411
2070	1833.5	0.707959	-0.653471279	0.795704
98	90.5	0.559573	-0.376305105	0.692152
76.5	72	0.329738	-0.23502003	0.530802
764	630	0.764147	-0.216581744	0.93775
16	13.5	0.849838	-0.245112498	1

750.5	741.004	0.810906	-0.401968762	0.820476
812.5	899	0.948902	-0.122225553	0.882479
5778	5859.5	0.817415	-0.335695181	0.805385
2302.53	2114.45	0.703644	-0.517064594	0.780227
1331.5	1320	0.746765	-0.524747533	0.753572
309.5	247	0.79055	-0.431445256	0.953372
22	25	0.604446	-1.137503524	0.522946
7	6	0.31594	-1.807354922	0.407544
229.5	228.5	0.99649	-0.006299988	1
9	53	0.88085	-0.710493383	0.113815
663	633.5	0.763973	-0.37286506	0.808522
874	843.5	0.46456	-0.777136033	0.499507
4265.08	3974.57	0.724845	-0.488995117	0.787232
3313	2824.5	0.572814	-0.545445906	0.75935
1539.5	1599.5	0.908791	-0.201844728	0.881841
3285.5	3155.5	0.643363	-0.614799041	0.680363
971.494	1087.01	0.833519	-0.382974343	0.75222
1209	1359	0.850843	-0.376961172	0.773202
1036	1118	0.92872	-0.168185347	0.877943
1252	1272.5	0.924281	-0.140271727	0.91098
2284	2159	0.788822	-0.481389902	0.828453
1080.5	1021	0.742285	-0.476641242	0.790683
432	370	0.845976	-0.301616868	0.962803
613.5	518.5	0.828438	-0.357037688	0.949048
1111.5	1281.01	0.878682	-0.282245035	0.777844
2173.5	2195	0.839729	-0.333841967	0.832228
1450	1484	0.848216	-0.31263035	0.830359
644	844	0.975194	-0.067647678	0.809869
1076	969.5	0.646771	-0.956418712	0.713389
497	624.5	0.96745	0.081816948	0.889947
1060.5	1259.5	0.921227	-0.199560755	0.809237
746	666	0.693255	-0.463547036	0.8082
887.5	881.5	0.995672	-0.008968464	0.999606
613	754.5	0.991748	0.021027506	0.879237
6638	5956	0.678243	-0.856238854	0.747646
5570.5	4786.5	0.6696	-0.827396094	0.77044
1192.5	1142	0.4885	-0.716941747	0.53308
1294	1138.5	0.49215	-1.058011321	0.590901
1256.98	1360.48	0.410889	-0.818238639	0.339108
1044.31	1027	0.683284	-0.539757052	0.698808
4075.16	4266	0.777365	-0.480636379	0.742455
866	805	0.714271	-0.545118995	0.775186
718.5	673	0.958477	-0.09867539	0.99825
1186.5	1224	0.862786	-0.298858957	0.840062
645	671	0.977151	0.049468676	0.996445
2190.5	2518	0.894589	-0.255480152	0.799934
1784	1929.51	0.974604	-0.059432914	0.923444
3594	3425	0.642594	-0.606192367	0.687297
936.5	903.998	0.710355	-0.459615722	0.745078
435	413.5	0.804196	-0.389832159	0.844142
2	2.5	0.200976	#NUM!	0.133887
4.5	9	0.956965	-0.169925001	0.59912
5108	5367.5	0.655042	-0.660554533	0.612994
9.5	8.5	0.841602	0.395928676	0.790485
74.9999	49.5	0.681028	0.782410489	0.552181
1946.96	1655.48	0.855813	-0.333130921	0.96019

7	7	0.748911	0.652076697	0.748911
985.005	1668.5	0.807969	-0.585344827	0.473647
39.5	26.5	0.635118	-0.911463325	0.885604
10	24	0.803104	-1	0.376987
1432.49	2186.99	0.636557	0.920555461	0.843653
7	12.5	0.810553	-0.807354922	0.5123
0.5	1	0.622002	#NUM!	0.353387
12	24	0.772957	0.584962501	0.772957
250	147.5	0.9641	0.067638717	0.672817
1375	1309.01	0.868758	-0.210908926	0.914717
2898.5	2634.5	0.66436	-0.496870304	0.763366
170.5	154	0.848954	-0.279201609	0.931514
746.5	761.5	0.596461	-0.847030924	0.580848
2268	2178	0.728684	-0.516482763	0.762671
1316	1295	0.729436	-0.587980405	0.741603
4221	4353.5	0.826466	-0.394112936	0.804358
101	176	0.980461	0.049147649	0.624828
8221.74	11084.7	0.873016	-0.324508102	0.667526
4189.5	4515.5	0.896219	-0.263757743	0.848656
30.5	13	0.18169	-2.471305719	0.639236
3675	3587.5	0.728742	-0.455780434	0.751306
7956.76	8665.35	0.89803	-0.240740929	0.839966
157.5	137.5	0.326102	-0.889817082	0.458706
1096.51	844.5	0.888291	0.227164327	0.743636
130	108.5	0.888384	-0.221467913	0.981809
994.5	793	0.897182	-0.172375093	0.917708
1428.5	1231.5	0.544557	-0.720397138	0.688235
4382.23	4628.88	0.737914	-0.642728658	0.699759
13116.4	12466.6	0.602506	-0.691674488	0.648512
22.5	28	0.887189	0.263034406	0.974805
624	635	0.894782	-0.245112498	0.883038
1253.5	1307.02	0.94921	-0.105644425	0.918641
377	295.5	0.639135	-0.813586876	0.812326
34.5	41.5	0.793973	-0.493814613	0.660873
168.5	129	0.725796	-0.257053429	0.877216
491.618	434.827	0.954385	-0.086603447	0.955172
2207.5	2175	0.923836	-0.140251017	0.935896
1934.5	1845	0.983767	-0.031286318	0.981225
4701.5	4671.5	0.773903	-0.407538988	0.779526
238.5	524	0.879785	-0.37036845	0.377055
16	20	0.982184	-0.04580369	0.841306
1392	1399	0.844377	-0.276152745	0.839978
1104	1007	0.593125	-0.587905776	0.689987
24.5	26	0.56753	0.861023587	0.595342
3	7.5	0.897344	0.415037499	0.657163
1288.5	1325.5	0.832914	-0.359933268	0.811786
11.5	9	0.710013	-0.61667136	0.88785
304	281	0.935012	-0.142019005	0.987437
43	57.5	0.895284	0.246160587	0.914788
12	14	0.705361	-0.415037499	0.537935
179.5	129.5	0.319233	-2.044896538	0.506022
940	1195.5	0.980387	0.052001429	0.875152
764.502	669.498	0.881609	-0.205522286	0.992371
1385.01	1527	0.970744	0.054177316	0.95091
114.5	127.5	0.997064	-0.006313774	0.920931
1105	1061	0.828744	-0.399024221	0.856439

1663	1714	0.932537	-0.146903356	0.911289
137.5	123	0.955742	0.096384536	0.888672
1.5	3	0.622002	#NUM!	0.353387
53534	39217.6	0.843454	-0.306241702	0.937114
597	78.5	0.536397	0.63016192	0.169663
1096	1074.49	0.872424	-0.288268777	0.886089
168	211.5	0.949228	-0.13492958	0.804912
132	167	0.769127	0.514026594	0.910444
29	40.5	0.628805	-0.770518154	0.370535
1	0.5	0.651448	0.584962501	0.391002
92.5	74.5	0.743523	-0.283453947	0.976029
6	4.5	0.473565	-1.263034406	0.672262
869.5	847.5	0.823469	-0.371724795	0.842707
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93.5	86	0.537492	-0.739539538	0.617381
4.5	9	0.0646968	-2.169925001	0.00729216
981.158	1072.57	0.875622	-0.256792258	0.80636
1900	1998	0.785812	-0.413014084	0.743652
1149.84	1462.4	0.642283	-0.499167445	0.393885
237	202	0.831778	0.291170816	0.726266
3688.97	4524.42	0.611633	-0.641060698	0.424758
987	610.5	0.960807	0.04106825	0.503491
301.5	355	0.933106	-0.172619111	0.829605
923.5	1176	0.954131	-0.13157933	0.812853
939	1150	0.934031	-0.17714499	0.808361
3586.46	2964.94	0.882719	-0.266522204	0.996772
2957.24	3218.17	0.870271	-0.277476617	0.806536
441	438.5	0.811028	-0.47175189	0.814759
36	47	0.920885	0.222392421	0.934018
793	783.5	0.829964	-0.416857935	0.837901
2714	2469.5	0.512734	-0.63018329	0.619447
125.5	122	0.83193	-0.292063454	0.857037
174	161	0.969971	0.060882242	0.918117
2730.46	2505.45	0.580199	-0.596745602	0.671797
494.5	568.5	0.443614	-1.86236387	0.36625
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48.5	44	0.984347	-0.030057234	0.945276
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1	2	1	0	0.651448
417	406.5	0.863241	-0.212050477	0.888145
554	596.5	0.885091	-0.269821115	0.834403
3572.39	3208.52	0.82946	-0.395151164	0.901164
111	128	0.716004	-0.840217229	0.62754
1362	1297	0.831179	-0.302986531	0.873053
510	660	0.96958	-0.079968305	0.80663
935.5	831.5	0.912905	-0.159648463	0.994651
2.5	5	0.660841	-2.321928095	0.354904
1	1	0.710482	-1	0.710482
8033.5	8431.5	0.568545	-0.614123506	0.518355
2700.71	2662.96	0.784916	-0.400017935	0.796898
128	135.5	0.958767	-0.093109404	0.920265
162	243	0.76217	-0.611929548	0.476908
3972.34	3857.15	0.839142	-0.375076715	0.859161
403.5	406	0.842025	-0.272720571	0.836466
64.4999	41.5	0.416669	-1.153244024	0.762484
4163.1	3113	0.998968	0.002008553	0.814807

2530.31	2364.18	0.84184	-0.318573724	0.893642
5756	6124	0.851937	-0.327043984	0.806541
1843.5	2045	0.976306	-0.050164981	0.900904
794.004	933.49	0.810242	-0.514066582	0.705617
430.5	468.5	0.876445	0.294524692	0.9243
357.5	332.5	0.876551	-0.287042577	0.924101
1579.5	1561	0.943764	-0.101690266	0.953423
1162	1067.5	0.668466	-0.668666757	0.73641
115.5	174	0.665248	-0.632580521	0.329874
38.5	41	1	0	0.962412
4.5	12.5	0.737792	-1.169925001	0.220612
39	34.5	0.926399	-0.176877762	1
1017.5	1096	0.82514	-0.403973291	0.772001
1562	1562.99	0.756775	-0.486337804	0.756259
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2811.01	2667	0.78794	-0.330813755	0.839648
1318	1391.5	0.92899	-0.16384905	0.892397
124	119	0.785273	-0.42281485	0.818342
440.5	399.5	0.60913	-0.708856746	0.694504
1574.5	1271	0.666738	-0.55998211	0.860948
1312.5	1329	0.766608	-0.488507864	0.756883
401.5	455.5	0.935972	-0.14543044	0.847392
339	416.5	0.564866	-1.133678435	0.427252
7468.53	12559.9	0.755634	-0.839407536	0.449349
1039.51	963.487	0.758304	0.53338047	0.721165
478.501	523.997	0.840013	-0.347789278	0.771607
1.5	1	0.391002	-1.584962501	0.651448
924.5	930	0.850459	-0.253546538	0.845046
504.5	541.998	0.868682	-0.32586907	0.82151
1095.5	1067.5	0.886878	-0.187480685	0.910427
1847.5	1863	0.65216	-0.501524558	0.643266
2851	3020.5	0.940556	-0.137959024	0.902049
3074.5	3034.5	0.614331	-0.632303409	0.626793
6452	5657.5	0.277549	-0.883216149	0.404707
6469.79	6424.05	0.731885	-0.486900648	0.738121
3165.5	2553	0.543094	-0.733021108	0.748286
422.5	424	0.694906	-0.45602099	0.691224
441.5	380.5	0.786126	-0.370527859	0.915222
11077.4	11291.8	0.793234	-0.428525253	0.778276
44	41.5	0.754576	0.540570636	0.725712
7.5	6.5	0.291911	-1.099535674	0.409302
359.5	527.5	0.830464	-0.582957365	0.613642
736	451.5	0.722566	0.627454583	0.552641
2336.98	2488.01	0.551574	-1.733048793	0.517992
6218	5804.5	0.638048	-0.988675624	0.682194
621	664	0.61267	-0.658229633	0.551036
472.5	421	0.911934	-0.147768588	0.989437
3568	3396.5	0.583793	-0.622546276	0.634016
1486.99	1204.48	0.755404	-0.395433953	0.947995
583.393	545.851	0.539715	-0.911311248	0.593568
6223.5	5792	0.744572	-0.448375988	0.808518
2527.49	2490.54	0.820574	-0.310183273	0.833811
3795	3515.5	0.729554	-0.693589425	0.779395
538.499	587.997	0.941668	-0.139121002	0.883826
247.5	193	0.956477	-0.080919995	0.868658
1047.5	1323.5	0.728809	-0.833062184	0.585365

3	2	0.663808	0.736965594	0.523243
509.5	462.5	0.781265	-0.438349484	0.85662
764.5	562.999	0.510556	-0.717285785	0.82323
40.5	46	0.742468	-0.506959989	0.635603
3470.5	3661.5	0.170691	-0.939552421	0.139276
4290.5	4058.5	0.692462	-0.537011541	0.742735
1509	1523.5	0.519714	-0.643497712	0.50948
1634	1675.5	0.585818	-0.74493386	0.563809
1458.5	1345.5	0.679841	-0.545206914	0.754096
3630.5	3492.5	0.47744	-0.714490798	0.517813
689.5	968.5	0.631576	-1.063084527	0.414396
35.7148	69.3893	0.703163	-0.808249946	0.272341
0.5	0.5	1	0	1
157	214.001	0.728488	-0.553153762	0.474439
340.5	418	0.885392	-0.241585987	0.723804
1176.5	1078	0.78281	-0.368978361	0.86175
1476	1353.5	0.599694	-0.607868767	0.687296
1146	1091	0.729053	-0.488199061	0.772215
896.5	1039	0.960461	-0.093055764	0.860881
5606.72	6830.96	0.927641	-0.182608016	0.797799
6078	5583.5	0.865603	-0.258910182	0.931783
1298	1040.5	0.859034	-0.221849753	0.94438
1870	2016	0.646115	-0.593862083	0.575591
7889	7308	0.605756	-0.625954601	0.68036
3376	3083.5	0.611287	-0.488678262	0.719284
156.5	160	0.70921	-0.476237656	0.687889
2077.95	2274.13	0.843731	-0.361636069	0.77948
2833.53	2288.36	0.640959	-0.850669369	0.788194
955	990	0.966554	0.073622863	0.989962
1477	1464	0.880281	-0.277563575	0.886236
196.5	313	0.765745	-0.890465048	0.509816
9325.12	10787.9	0.81705	-0.42098651	0.710109
3490.18	4181	0.784198	-0.627942917	0.672144
5	8.5	0.855216	-0.514573173	0.555132
356.5	322	0.700036	-0.663977075	0.774869
176.793	244.297	0.738075	-0.809149277	0.538052
21.5	40	0.839728	-0.56828376	0.480814
106	99	0.836724	-0.352881023	0.885767
18.3817	24.1129	0.800209	-0.415359325	0.57869
2.5	5	0.577083	1.263034406	0.869939
9.5	105.5	0.926154	0.796466606	0.290519
27.5	102	0.763279	-0.923378718	0.113106
484.5	520	0.763767	-0.502500341	0.708672
2327.5	2461.5	0.433177	-0.559313231	0.365171
390.41	323.016	0.570157	-0.62013879	0.768851
46.5	58.5	0.670685	0.640750279	0.816724
188.5	278	0.8822	-0.296325868	0.60659
19.5	23	0.821948	-0.427421224	0.704558
64	88.5	0.457137	-1.790546634	0.281546
356	212	0.966301	0.049787378	0.606054
302.5	282	0.978332	0.044610887	0.931693
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5341.5	4942	0.889977	-0.195522493	0.954714
4458.43	4632.59	0.943283	-0.113376773	0.914117
2318	2401	0.862015	-0.319906751	0.837671
2826	2679.5	0.8802	-0.178565644	0.933272

1765	1625.5	0.386742	-0.466909658	0.522731
58	100	0.94728	-0.157541277	0.605943
12.5	227.5	0.953037	-2.321928095	0.245812
137	125.5	0.943064	0.130786608	0.893062
43	53	0.737491	0.596103058	0.853858
1135.99	1034.99	0.852549	-0.317649819	0.918372
323	367.499	0.891094	0.22494248	0.979921
1129	1266.5	0.758561	-0.631054766	0.681716
3813.5	2924.5	0.627667	-0.654619034	0.858344
42.5	44.5	0.663095	0.800062429	0.682634
1628	1551.5	0.439488	-0.521680059	0.507019
648	664.5	0.930562	-0.153733287	0.913168
94	83.5	0.837373	-0.345135486	0.922092
1493.22	1416.2	0.655122	-0.663797925	0.699458
3108.5	3110	0.677437	-0.583107242	0.67701
11709.5	11386	0.819083	-0.343042482	0.84218
7090	6916.5	0.79156	-0.361378742	0.813881
1012	938	0.759453	-0.406509228	0.828998
5535.5	6226	0.871378	-0.259104312	0.776948
1326	1238	0.707435	-0.63308445	0.759183
2767	2603.5	0.526503	-1.317762967	0.565431
4174.5	2906.5	0.392182	-1.354078618	0.651665
66	63.5	0.906181	0.115477217	0.864084
1610	1607.5	0.903449	-0.215092901	0.904523
1095.5	1180.5	0.897683	-0.223929656	0.843388
763	597	0.858344	-0.203762602	0.907235
567	481	0.568798	-0.940190605	0.692335
1057	898.5	0.445706	-0.623694895	0.650499
1990	1792	0.557476	-0.633809605	0.667917
2	6	0.780213	-2	0.344733
2303	2198	0.644898	-0.62965519	0.686674
52.1094	75.3201	0.758344	-0.588413518	0.489695
58	57	0.79049	0.408805546	0.779894
166.5	171.5	0.520456	-0.69287784	0.490774
1131	1079	0.719042	-0.47982511	0.762363
525.502	565.002	0.794298	-0.437639603	0.738203
463.5	863	0.937196	-0.152521955	0.471917
1541.01	2165.52	0.936	0.13869371	0.809553
14.5	8.5	0.280523	-1.5360529	0.661636
491.677	457.487	0.707728	-0.513374408	0.772269
284	304.5	0.459949	-0.878284092	0.399648
893.5	1074.5	0.833292	-0.302482039	0.66714
731.002	774.995	0.885477	-0.222560844	0.838154
4102.55	4715.33	0.863484	-0.374784996	0.777305
166.727	313.5	0.973762	0.086563154	0.668782
287.376	646.82	0.814156	-0.814337368	0.390893
226.5	538	0.814294	0.627843872	0.722479
9162.5	8927.5	0.436663	-2.122949475	0.450499
477.5	455.5	0.844387	-0.270000303	0.885859
81.4999	102.5	0.890094	-0.240199836	0.714148
477.5	381.5	0.449138	-0.524317492	0.786964
21.5	23	0.883724	-0.256339753	0.834847
1448.5	1610	0.219429	-0.742120755	0.14249
292.5	336	0.965163	-0.083768358	0.874086
405	350	0.499761	-0.910234039	0.624741
1360	1370.5	0.825156	-0.296951429	0.818094

118	159	0.667272	-0.634715536	0.417201
332.501	333	0.763068	-0.569859947	0.762028
1268	1092.5	0.595162	-1.290138851	0.680776
6	15.5	1	0	0.171387
1.5	5.5	1	0	0.466905
156.5	192	0.877451	-0.359281509	0.756024
551	475.5	0.364448	-1.757180354	0.453553
1225	1267.5	0.868789	0.310814926	0.88751
1516	1449	0.0959802	-0.878678355	0.118863
484	610	0.904029	-0.25352732	0.754396
737.497	820	0.87986	-0.283319387	0.806375
82	81.5	0.699101	-0.52466199	0.704678
136	117	0.422824	-1.644519345	0.515237
199	160	0.742882	0.394042516	0.600112
156.5	118	0.947239	-0.115093164	0.884001
8	9.5	0.789312	0.523561956	0.878093
1332	1323.5	0.863899	-0.279373143	0.868761
255.5	254.5	0.774834	-0.364184284	0.778622
182.5	132.5	0.487957	-2.119435231	0.646505
633.5	533	0.751053	-0.271027197	0.981159
1706	1572.5	0.808822	-0.352697639	0.876697
462	460.5	0.862961	-0.326228232	0.865126
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1655.48	1563.48	0.566501	-0.667188359	0.623208
326	147.5	0.825716	0.309483329	0.487418
4776.55	5702.48	0.876347	-0.306557298	0.755795
3031	3052	0.762996	-0.471170504	0.757387
982.5	1013	0.780669	-0.458514165	0.756826
557.5	578.5	0.654215	-0.713437059	0.624608
216	230	0.826834	-0.362570079	0.778157
855	798.5	0.805771	-0.360402243	0.862744
148	145.5	0.848441	-0.296564029	0.861992
289	298	0.985395	-0.03026744	0.963504
919.5	1193	0.833733	-0.45024307	0.662363
20.5	12.5	0.461152	-1.450661409	0.767065
2184	2116	0.718137	-0.555053393	0.744046
2157.5	2027.5	0.143958	-0.733070176	0.193721
4262.44	4272.94	0.832617	-0.420816535	0.831025
703	937	0.987257	-0.031116124	0.792259
64	61.5	0.611381	-0.85025288	0.641649
315.5	323.5	0.823229	0.338748741	0.839787
1591.5	1783.5	0.850893	-0.385280906	0.776779
1418.5	1251.5	0.404212	-0.721119053	0.546007
168.5	196	0.608907	-0.74555309	0.482338
678.5	682	0.890735	-0.212679645	0.886665
0	1	1	#DIV/0!	0.308068
1312.5	1429.5	0.871331	-0.281954179	0.808358
184	200.5	0.644496	-0.879705766	0.584067
1	0.5	1	0	0.710482
4477.06	4118.03	0.656974	-0.619714165	0.730326
5	7	0.527858	0.765534746	0.780213
209.5	271.5	0.58214	-0.566148191	0.324606
1582	1610	0.738088	-0.614211211	0.725535
1114.5	1015	0.79271	-0.363957687	0.874273
1983.73	2043.26	0.943628	-0.128468711	0.923857
1450.5	1535	0.760409	-0.3970808	0.706174

161	156	0.904677	-0.126345734	0.939846
705.5	720.5	0.940611	-0.127111918	0.9257
378.5	409	0.859062	-0.242221395	0.787857
620	658	0.805316	-0.253756592	0.735069
7.5	16.5	0.90703	-0.321928095	0.439735
4932.5	5509	0.877412	-0.261601928	0.793444
30.5	46.5	0.820625	0.544996093	0.974036
1253	1413	0.83667	-0.356742659	0.745658
1756	1562	0.461059	-0.954709889	0.561623
35.5	44	0.626217	-1.105353	0.490884
2182.5	1765	0.805837	-0.383958191	0.964247
669.5	563.5	0.911681	-0.143766262	0.940784
1742	1922.5	0.870399	-0.266184939	0.79299
1343.01	1336	0.74621	-0.476891625	0.75067
1139.5	1086	0.751088	-0.346025436	0.80391
1274.5	1230.5	0.74044	-0.562498909	0.766872
876	985	0.815965	-0.39000331	0.724372
77.5	336.5	0.936122	-0.430634354	0.311517
22	25	0.728193	-0.505235308	0.615962
889.5	810.5	0.84568	-0.271329986	0.925056
2045	2384.5	0.812308	-0.388244653	0.688776
367	338	0.719127	-0.559634321	0.785104
2235.5	1927	0.445454	-0.516279768	0.667725
876	780.5	0.733716	-0.450606513	0.838838
495	482	0.741761	-0.4101881	0.767873
58.5	69	0.871622	-0.270451877	0.742386
770.001	748.499	0.519939	-0.795926215	0.545878
1666.5	1507.5	0.520086	-0.992660222	0.598361
169	150	0.901018	-0.220970346	0.979299
2907.5	2824.5	0.800064	-0.409836808	0.822506
4439.5	4879	0.914762	-0.14105003	0.825854
179	154.5	0.445407	-1.217029237	0.553179
376.5	377.5	0.971115	-0.058654218	0.96919
184.5	76	0.753342	-0.201047519	0.312186
524	564	0.989399	-0.023594384	0.939599
290	295	0.922518	0.151007788	0.934578
3755.46	3556.58	0.786864	-0.511115495	0.823626
1755.54	1533.92	0.873557	-0.256226304	0.97147
798	780.5	0.72588	-0.503253824	0.745151
1317.5	1371.99	0.797516	-0.412293788	0.765256
1334.5	1271.01	0.776893	-0.393398903	0.820036
719.5	714	0.97188	0.064696895	0.967198
741	802.5	0.87535	-0.287777026	0.819443
435	423.5	0.716769	-0.562747767	0.738581
785	911	0.7482	-0.543746309	0.631768
17.5	17	0.631683	-1.041820176	0.649994
4.5	9	0.861263	-0.584962501	0.502018
1005.5	1081.5	0.457089	-1.962470111	0.417434
641.5	587	0.861764	-0.231227769	0.940685
120.5	97.5	0.844196	-0.283532716	0.98902
3.5	4	0.3646	-1.807354922	0.290795
165.5	119	0.890228	-0.21081607	0.882989
164	163.5	0.726033	-0.772589504	0.727923
1624	1606.5	0.933623	-0.129574539	0.941925
6.5	4	0.506949	-1.378511623	0.796417
1563.5	1633.5	0.959945	-0.091910348	0.930979

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1175.5	887	0.934698	-0.099053599	0.825682
345.285	311.412	0.0716832	-2.080345918	0.0973578
777	824	0.817087	-0.26973424	0.75502
1518	1496.5	0.588201	-0.489805268	0.605757
1865.5	1858	0.844167	-0.324250029	0.847219
4.5	7	0.555119	#NUM!	0.378691
0.5	2	0.139326	2.321928095	0.651448
2042	2353.5	0.860247	-0.297062484	0.750302
461	397	0.545583	-0.950777484	0.661512
759	858.5	0.698053	-0.902620158	0.622084
1190.5	1549	0.865462	-0.327087628	0.678006
19.5	25.5	0.612533	-0.963474124	0.425772
4666.56	5017.46	0.875384	-0.253151843	0.818496
1	0	0.622002	-1	0.622002
430	418.5	0.790802	-0.330340335	0.817332
175	157.5	0.988003	0.024522319	0.918242
5.5	105.5	0.948576	-2.459431619	0.202366
34.5	30.5	0.735423	-0.275634443	0.909448
10	5	0.83713	0.378511623	0.592331
3296.5	2747.5	0.390394	-2.192863917	0.488225
1902.5	915	0.634157	-0.614070157	0.809914
208.5	135.5	0.192029	-2.311586151	0.415667
1032	1066.5	0.925463	0.174886984	0.944741
604.5	525.5	0.682593	-0.877654756	0.768808
972.5	1137.5	0.944548	-0.136020795	0.841446
1603.5	2086.5	0.990092	0.024974634	0.840676
26.5	14	0.929121	-0.142957954	0.724925
2945.5	2932.5	0.560714	-0.574834858	0.565669
1526	1404	0.87249	-0.241265962	0.938369
392.5	397	0.849683	-0.303665888	0.840788
23339.1	32078.8	0.844318	-0.454255451	0.644889
2342	2851.5	0.934062	-0.15700829	0.798065
48	62.5	0.884836	-0.31817596	0.717287
206.5	185.5	0.811663	-0.399979124	0.889688
274	361	0.751193	-0.528176475	0.530356
173.5	142.5	0.833009	-0.278920516	0.99723
1621.5	1835.5	0.776113	-0.377133203	0.658026
48.5	49	0.51504	-1.173648087	0.507892
259	189	0.951228	0.102137975	0.776099
338.499	285.999	0.700715	0.487253475	0.598786
4	2.5	0.62797	0.906890596	0.498159
1	1	0.710482	-1	0.710482
1.5	4	0.503591	1.584962501	0.907467
1854.5	1639.5	0.922077	-0.152478581	0.987821
483.002	516.999	0.915891	-0.169374391	0.863112
88.9999	85	0.99159	-0.016300191	0.974773
2279.56	2446.98	0.702231	-0.79922161	0.655555
11.5	15	0.948879	0.120294234	0.872914
0	0.5	1	#DIV/0!	0.308068
24.5	23.5	0.854781	-0.366782331	0.880841
839.5	729.5	0.932485	-0.116265086	0.953213
569.501	891.495	0.858762	-0.323828659	0.513718
12.5	11	0.796782	-0.473931188	0.882519
13.5	10.5	0.368662	-1.754887502	0.522364

6.5	5.5	0.502193	-1.700439718	0.595734
3	4	0.58535	-2.584962501	0.456318
1.5	3	0.588437	#NUM!	0.313562
4004.49	4258.46	0.730515	-0.707953755	0.689741
1299	1488.5	0.716817	-0.761039969	0.626376
129.5	135	0.925252	-0.152622143	0.893879
0	0.5	0.329316	#DIV/0!	0.495025
5151	5421	0.879209	-0.306536044	0.846705
2323.44	2398.5	0.883872	-0.273256279	0.862441
72	106.5	0.572975	0.77844223	0.848398
13.5	16	0.893828	-0.295455884	0.790559
229	149	0.796345	-0.191745362	0.645573
2155	1231.5	0.781406	0.174158722	0.279472
62.5	52	0.851068	0.121678557	0.59383
42.5	31.5	0.567522	-1.051838932	0.769854
24.5	6	0.219659	1.385290156	0.107809
64.5	129	0.762202	-0.966833136	0.387005
2696.12	3101.59	0.894342	-0.275718371	0.805207
6636.5	6723	0.745244	-0.510557091	0.734741
52.5	80	0.761537	-0.714245518	0.493274
3133.99	3023.06	0.8464	-0.323529809	0.873067
4433	5003	0.92552	-0.194459409	0.850622
2561	2881.5	0.938767	-0.169572961	0.870369
4987.02	5775.61	0.842941	-0.45027362	0.754107
4384.08	3790.13	0.89172	-0.248704136	0.984288
1375	1575	0.987103	0.031138512	0.927073
72.5906	59.6543	0.675286	-0.850589665	0.799498
622.5	663.5	0.881412	-0.259562214	0.834893
3354	3110	0.834635	-0.318812934	0.894596
957.5	957	0.772182	-0.42840873	0.772625
1675.5	1769.5	0.698354	-0.597936464	0.653155
1308.99	1109	0.752254	-0.406599962	0.904268
300.5	369.5	0.813828	-0.398331167	0.650504
1392.5	1404	0.777324	-0.565410699	0.771894
2986	2767	0.65413	-0.490411906	0.736255
6462.5	5799	0.175163	-0.905496014	0.261764
858.5	952	0.626696	-0.618969851	0.52967
2164	1981.5	0.312203	-0.902688306	0.394165
3091.5	3041.5	0.209836	-0.75685759	0.223972
2386.5	1707	0.196545	-1.101739548	0.496081
2642.5	3074	0.725744	-0.705464451	0.621891
7519.5	7423.5	0.823081	-0.342361363	0.833521
1253.5	1195	0.705401	-0.531026333	0.747487
12957.8	14961.9	0.81679	-0.444307004	0.715785
7963.56	9169.94	0.899557	-0.244447853	0.804272
1256.5	1340	0.863125	-0.32149759	0.818675
1629	1640.5	0.845517	-0.329386653	0.840284
319.5	406.5	0.947817	-0.124915267	0.780732
208.5	210.5	0.881852	-0.2403792	0.874561
2351.5	2334	0.766434	-0.461695754	0.772506
555	560.5	0.879705	-0.252157817	0.872368
99.5	110	0.996859	0.007231569	0.937286
739.497	759.497	0.822928	-0.311227123	0.799023
425	425.5	0.93052	-0.133266531	0.929598
567.5	478	0.991478	0.016430344	0.874948
751	662.502	0.839354	-0.325048341	0.932601

1201	1261.5	0.735174	-0.599753311	0.698732
553.496	487.497	0.926317	-0.158221136	0.989074
4755.5	4924.94	0.776343	-0.532606142	0.75178
7341.5	7199.5	0.867551	-0.273665492	0.882198
4908	6677	0.565594	-1.629742478	0.396631
87.5	98.5	0.679898	-0.406816992	0.540837
4711.5	4902.5	0.933361	-0.140599536	0.904453
440	305.5	0.624735	-1.003282584	0.845784
1159.47	1255.38	0.381348	-0.851872288	0.311764
9	12	0.883689	0.289506617	0.9416
126	136	0.71439	0.584962501	0.757312
143	115.5	0.858751	0.253756592	0.724247
125	135	0.788336	-0.457989644	0.729449
1159	1289.5	0.962283	0.09104627	0.972516
315.5	331	0.874225	-0.312811508	0.843105
2637	2413.48	0.660961	-0.494710232	0.754021
6525	6007	0.771757	-0.38332864	0.847548
320.544	269.276	0.832122	-0.305471849	0.97252
860.5	466.5	0.990777	0.014180985	0.59425
98.4999	123.5	0.955522	0.085308777	0.860178
17386	14284	0.743934	-0.326322362	0.968779
411.5	357	0.690306	-0.517330475	0.821485
5265.51	4839.98	0.6814	-0.52769295	0.760784
1511.49	1348.01	0.439741	-0.557521205	0.597473
16568.1	14379	0.643731	-0.486323996	0.800611
1106.5	1015	0.338102	-0.935614587	0.416545
0.5	1	0.308068	2	0.474021
3818.14	3570.96	0.587388	-0.542427928	0.663616
2465.5	2663.5	0.830434	-0.391915186	0.775286
13.5	13	0.816359	-0.432959407	0.842009
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1961	1507	0.154398	-2.096595897	0.277822
7670	7786.5	0.793998	-0.455604247	0.782882
2431.5	2131	0.941573	-0.111601027	0.961395
4758.5	4306.5	0.578156	-0.467678979	0.710354
504.5	562.5	0.562295	-0.737919127	0.464494
794	746	0.837013	-0.332642637	0.884225
5	11	0.729252	-1.736965594	0.378209
1617.5	1580	0.66509	-0.497158668	0.689502
910	829.5	0.782987	-0.341882701	0.872318
41767.6	32483.7	0.465418	-0.614577623	0.784023
225	300.5	0.935526	-0.155569708	0.731759
3694	4034.5	0.779815	-0.512788901	0.715997
8342.09	8244.04	0.606626	-0.558215778	0.619256
6471	6266	0.691066	-0.467788449	0.724035
1555	1625	0.85393	-0.303490847	0.820108
236	263	0.913536	-0.213758065	0.842839
156.5	161	0.872241	-0.307025272	0.853395
986	1006	0.918662	-0.183892604	0.904971
153	203.5	0.975573	-0.067563284	0.802552
1019.5	871.5	0.718074	-0.440976963	0.870015
479	439	0.980562	-0.036603106	0.954676
6.5	8	0.543813	0.691877705	0.698393
944.5	1143.5	0.516904	-0.940892481	0.36902
365.499	382.999	0.930344	-0.160576823	0.898907
274.5	314.5	0.963427	0.086689734	0.950542

2783.97	2919	0.760789	-0.473555819	0.7218
1233	1181	0.843989	-0.310119369	0.877526
1146	1061	0.726381	-0.591586891	0.784072
994.5	1105.5	0.704719	-0.622437206	0.620729
1945.5	1845.5	0.896087	-0.249527378	0.929546
624	575.5	0.691282	-0.817796669	0.743393
1928.01	2075.48	0.921219	-0.174804559	0.869011
1802	2376	0.961119	0.09675756	0.861363
44	60	0.994463	-0.016488123	0.819736
4806	5121.5	0.720487	-0.574643071	0.66933
1778.99	1823.99	0.809884	-0.428347137	0.791806
1715.5	1623	0.801914	-0.353707038	0.849977
1846	2158.5	0.341634	-0.540142158	0.18053
3191	3147	0.815545	-0.359602101	0.826779
2350.49	2220.52	0.463368	-0.603031456	0.532885
728	876	0.236567	-0.800435508	0.117369
1055	1152.5	0.898235	-0.234867511	0.836752
1800.47	1999.04	0.835242	-0.382670688	0.760378
1.5	2	0.834708	-0.584962501	0.680109
692.499	660.5	0.857087	-0.288460708	0.893125
5	4	0.308068	-3.321928095	0.411079
18.5	35	0.780508	-0.351472371	0.216308
2.5	4	0.877103	-0.321928095	0.549192
1166	942.5	0.970255	0.06176138	0.84151
28	15.5	0.922417	-0.13492958	0.700651
188.5	233.5	0.932356	-0.19647694	0.808134
11.5	29	0.56161	-1.523561956	0.118552
861	842.5	0.761476	-0.337299581	0.785068
82	95.5	0.816083	0.430350555	0.90221
5351.55	5578.37	0.824101	-0.390436781	0.793682
604	632.5	0.928912	-0.156255698	0.896478
140	146	0.898702	0.16073583	0.935375
1166	1134	0.576665	-1.198667386	0.594341
569.5	491.5	0.624426	-0.683910214	0.751863
771	846.5	0.896562	-0.239647868	0.831629
338	293.5	0.996598	0.006388328	0.896133
9	5.5	0.602379	-0.847996907	0.946732
841.5	743	0.841557	-0.246160587	0.959394
7	15	0.670897	-1.222392421	0.253943
7297.5	6566	0.525676	-0.891221997	0.614403
743	787	0.903212	-0.216417852	0.862611
1820.5	1872	0.853719	-0.330273138	0.833928
478.633	478.398	0.372313	-1.163677304	0.372679
636.5	720	0.888701	-0.245238426	0.797748
2340	2364	0.817127	-0.387758411	0.809402
22.0012	16	0.890129	0.213378884	0.711135
553	496.5	0.777929	-0.373043411	0.875735
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1044	1016.5	0.82305	-0.284754602	0.848538
63	57	0.806814	-0.422691072	0.87811
4.01384	3.00786	0.163306	-2.004983109	0.308071
1183	1301	0.973967	-0.055315782	0.90526
369.5	319.5	0.7748	-0.384772311	0.903295
307.986	269.492	0.913931	-0.155585292	0.980788
217	255	0.859688	-0.184122404	0.668055
167	245	0.819475	-0.57634937	0.589637

688.5	500.5	0.53946	-1.493622189	0.717145
610.5	497.5	0.898942	-0.16771126	0.930462
855.504	826.006	0.815494	-0.507015906	0.836458
2938.5	2666.5	0.741652	-0.547525562	0.814797
506	533	0.52094	-1.218121984	0.485838
7544.32	7978.67	0.783478	-0.613896871	0.749254
2597.5	2502	0.797141	-0.392716684	0.827601
989	1095.5	0.966017	-0.080232868	0.898749
7095	8299.5	0.916477	-0.214214278	0.815809
417.5	435	0.699921	-0.578927915	0.665237
1174.5	1081.5	0.624465	-0.527174749	0.71393
1428	1184	0.713858	-0.392980578	0.916255
259.84	265.366	0.854778	-0.299949846	0.83866
689	598	0.705579	-0.487312566	0.837032
947.5	1048.5	0.964642	-0.083851112	0.898275
1265.5	1160.5	0.845906	-0.288683504	0.915823
983.5	959	0.665027	-0.593053088	0.687698
639.5	687.5	0.811026	-0.394504554	0.75436
867.505	806.997	0.69183	-0.509243485	0.760156
749.5	788	0.683996	-0.563942731	0.638947
614.676	580.481	0.667083	-0.603208607	0.717355
819.5	980	0.895673	-0.270270398	0.779612
134	108.5	0.745549	-0.53470773	0.899585
1279	1203.5	0.900775	-0.203806871	0.945081
124.5	127	0.981315	0.039998068	0.994661
23	27.5	0.661978	-0.823122238	0.533921
3893	3946.5	0.89538	-0.237105375	0.88599
130.5	84.5	0.960463	-0.091268058	0.814757
20	25.5	0.961031	0.10433666	0.896478
177	99.5	0.578306	-1.066726114	0.926082
15.5	22	0.793549	-0.784271309	0.607474
286.5	310.5	0.707681	-0.813663175	0.656056
908.501	704.999	0.635863	0.922943975	0.558452
7.5	7	0.281682	-2.321928095	0.316196
96	33.5	0.972072	0.05166212	0.525347
2374.49	2234.57	0.91303	-0.21132536	0.950537
58.5	40	0.231547	-2.700439718	0.41793
511.499	640.003	0.964417	0.094164247	0.903362
44.5	45	0.913425	0.210767096	0.919575
180	250	0.917015	-0.239187664	0.71502
52	64.5	0.856752	0.397592365	0.964994
497	410	0.745521	0.43950274	0.632388
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9204.09	11527.1	0.927453	-0.202493315	0.791039
395.5	384.5	0.829492	-0.303353338	0.854023
493.5	499.5	0.671065	-0.569695744	0.659969
1591.5	1658.5	0.722647	-0.492788228	0.68542
1550	1626	0.805979	-0.522573351	0.775885
4331.5	4533.44	0.877092	-0.313087236	0.848224
2707.96	2649.52	0.738168	-0.588408247	0.754167
369	334.5	0.892008	-0.256013978	0.953922
190.5	139	0.397497	-1.279026439	0.631751
403	412	0.527749	-0.677356105	0.505313
928	829	0.871049	-0.229535455	0.964347
1138.51	1149.51	0.842696	-0.311368473	0.835037
3150	2807.5	0.731857	-0.42207729	0.843634

2.5	4.5	0.539745	1.584962501	0.706667
1325	1277.5	0.774648	-0.326016983	0.813318
0.5	1	0.622002	#NUM!	0.353387
2	5.5	0.703704	#NUM!	0.333145
281	389	0.986904	0.035498681	0.813757
226.5	533.5	0.826557	-0.892629902	0.416199
314.5	487.5	0.971973	-0.082597086	0.705923
4379.97	4546.97	0.766136	-0.404346951	0.731693
203.5	153	0.60148	-0.68589141	0.854083
1122.5	1253	0.891931	-0.213633512	0.802919
39	38	0.942616	-0.135655099	0.958984
39.5	43.5	0.903706	-0.113956189	0.779042
6	6.5	1	0	0.936602
333	303	0.717594	-0.546488353	0.794935
2665	2732	0.914733	0.133561058	0.936747
1142.01	1161.5	0.787407	-0.401637415	0.77309
603	530	0.686604	-0.469485283	0.818065
431.5	335	0.770611	-0.486430208	0.94878
127.5	95	0.75169	-0.526747887	0.957551
11925	10256	0.851235	-0.169856951	0.960973
8	15	0.677728	0.95419631	0.977532
515	603	0.887191	-0.283914769	0.782494
939.5	1229.5	0.813451	-0.547074424	0.645615
7061	7988.5	0.831235	-0.241658351	0.696089
3272.5	2570	0.430368	-1.249912722	0.607202
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547.5	628	0.939969	0.136904522	0.971328
119.5	112	0.841704	-0.346277956	0.887678
1634.5	1353.5	0.798757	-0.217252783	0.953013
119	183.5	0.823236	-0.340228912	0.447311
2673.5	2721	0.710522	-0.532374633	0.695112
1322	1220.49	0.611497	-0.61863871	0.68927
2114.5	1887.5	0.653301	-0.548249008	0.764288
11.5	9	0.735054	-0.523561956	0.9222
0	0	0.308068	#DIV/0!	0.308068
2066.38	2119.1	0.893545	-0.149067541	0.866244
1501.5	1313	0.535152	-0.62663432	0.683503
366	352	0.860298	-0.320942984	0.886774
1291.5	1237.5	0.718566	-0.859098497	0.743287
778.5	886.5	0.683495	-1.084916976	0.610005
1151	1092	0.783897	-0.387312405	0.829665
657	624.5	0.976988	0.043262463	0.939671
396	436	0.904486	-0.219965684	0.837442
1370.5	1331.5	0.96313	-0.085654685	0.981324
1167.5	1138	0.822786	-0.331225839	0.844147
63.5	62	0.949374	-0.093866923	0.968338
1671.52	1804.13	0.865915	-0.318335587	0.813517
485.5	358	0.910222	0.149475049	0.704513
948.12	807.377	0.585894	-0.642581906	0.744636
1235	1448	0.949133	0.117151228	0.947164
1029	967.5	0.949274	-0.088909416	1
1468.5	1493.5	0.722157	-0.532153026	0.707884
5671.5	6002	0.787211	-0.621869992	0.75346
20.5	24.5	0.944775	-0.109624491	0.800605
1246	1425	0.934068	-0.167394401	0.848778
1484	1579	0.858592	-0.274355843	0.807706

247.5	264	0.736258	-0.392864002	0.668558
455.5	368.5	0.700849	-0.478160418	0.900013
17	37	0.988726	0.041820176	0.591892
1263	1032	0.532355	-0.718615984	0.732197
31.5	20.5	0.946784	0.067114196	0.588475
1733	2250.5	0.910553	-0.235984112	0.740218
749.056	864.601	0.966268	-0.071981096	0.860425
252	228	0.924469	0.139064038	0.854326
122	151	0.805515	0.44864103	0.93131
558	549	0.83476	-0.387719381	0.84584
1345	1420.5	0.602921	-0.570819626	0.545823
11.5	15	0.526589	1.231325546	0.618785
484.5	491.5	0.82915	-0.422501018	0.819681
746	726	0.736236	-0.591747105	0.756174
1229.5	1675	0.893624	-0.252628764	0.668286
663.998	399.501	0.340469	-1.438397147	0.704807
1092.49	1201.52	0.871399	-0.282840757	0.801245
1171	1095.5	0.840214	-0.351961013	0.8872
550.5	500	0.630911	-0.506546253	0.737334
964.5	1107	0.871091	-0.297088584	0.772196
3513.5	3991.5	0.759011	-0.65780734	0.676283
257	281	0.71641	-0.845753212	0.661934
272.5	315.5	0.951407	-0.118568866	0.855341
4292	4802	0.909404	-0.167699818	0.813403
3228.88	3425.56	0.881026	-0.281816701	0.840932
633	487.5	0.945865	-0.116237131	0.893755
241.5	246.5	0.933499	-0.131244533	0.917745
3	3	0.87225	-0.263034406	0.87225
41	31.5	0.930228	0.118181426	0.747267
948	964.5	0.96165	-0.086226884	0.950165
0.5	1	0.18169	1.584962501	0.450185
3053	3550.5	0.851881	-0.42341013	0.760626
594.5	633	0.879091	-0.270089163	0.834129
8833.5	9033.74	0.685446	-0.465474677	0.661968
1.50001	0.2312	0.198259	-1.584972119	0.68808
2.99999	0.7688	0.623771	-0.584957692	0.550382
6278.24	6671.06	0.777901	-0.336548392	0.715117
516	556.5	0.93962	-0.119443552	0.880505
89052.4	90753.7	0.0634502	-1.552553984	0.0593034
32230.9	32316.4	0.349315	-0.917767632	0.347009
727.503	830.5	0.513151	-1.068017534	0.416642
380.5	326	0.942287	-0.104147093	0.93903
208.5	207.5	0.946479	-0.122702992	0.94962
4236	4475.5	0.669114	-0.518812312	0.614339
2812.58	2924.43	0.832359	-0.325474326	0.800351
1876.5	1720.5	0.954079	-0.089193729	0.982231
2558.5	2546.5	0.755964	-0.459220178	0.75996
1001	1054	0.898388	-0.229133999	0.86225
795.5	883	0.897208	-0.25416868	0.828571
753	602	0.819812	-0.263034406	0.962909
8	2.5	0.639888	0.584962501	0.305841
648.5	617	0.827221	-0.382410049	0.862631
2050.5	2034	0.750838	-0.688877073	0.755856
465.5	487	0.221894	-0.859822342	0.188631
1201	1088.5	0.677733	-0.479313449	0.779193
944.502	859.501	0.562072	-0.514901397	0.67998

89.5	78	0.558665	-1.35453276	0.640513
594.499	640.498	0.998163	0.003630686	0.945506
5942.34	6811.1	0.795918	-0.407020484	0.682892
239	306.5	0.577162	-0.530179401	0.317592
62	70.5	0.727172	-0.668794092	0.636098
364.5	352.5	0.60387	-0.549773072	0.640339
1798.5	2379.5	0.971238	0.049283896	0.766733
1	1.5	1	0	0.756486
2271.5	2339	0.810427	-0.387878358	0.787376
2	3	0.648511	-2	0.462019
598	644	0.984047	0.03456436	0.965358
10927	12481	0.0837423	-0.8700419	0.0439155
3933.04	3924.08	0.529567	-0.506290226	0.532516
905.5	1027	0.887931	-0.248923643	0.795582
2298	2302.5	0.883616	-0.197496289	0.881855
915	811.5	0.639456	-0.466940526	0.779033
1210	1298	0.898079	-0.240791332	0.850604
2357.5	2069.5	0.434667	-0.548853583	0.619253
0	0.5	0.450185	#DIV/0!	1
6433	7323	0.917727	-0.166453079	0.815398
1205.5	1127.51	0.700445	-0.541928978	0.758982
2266	2420.5	0.567568	-0.650576754	0.50227
1138	1139.5	0.401451	-0.582429234	0.399814
311	230.5	0.486501	-0.714716732	0.806727
886.005	1062.5	0.880119	0.252539833	0.995019
199.5	196	0.835264	-0.368781908	0.847822
3057.5	2702.5	0.846287	-0.280360721	0.946881
479	428.5	0.69757	-0.595542816	0.787561
2245.5	2411.5	0.686059	-0.492124169	0.614805
2	0.5	0.825659	0.321928095	0.407544
6220	5256.5	0.889437	-0.234192404	0.996244
6	3.5	1	0	0.662394
1133.01	1125.5	0.711638	-0.380244392	0.719337
1258.5	1250	0.836957	-0.320209578	0.842374
413.5	357.5	0.577731	-0.6473494	0.723035
342.41	337.681	0.751045	-0.479825525	0.762617
344	133.5	0.902847	-0.166521491	0.583743
6.5	4.5	0.941228	-0.115477217	0.825659
26.5	2	0.318248	-2.920565533	0.94283
114	95.5	0.894178	-0.153409915	0.935399
7674.44	7108.96	0.717593	-0.475578791	0.78848
2882.5	3036.5	0.880797	-0.266090699	0.843658
761.5	438	0.031611	-1.115319347	0.479432
17	20	0.845346	-0.280107919	0.699495
3.5	3	0.198892	-0.807354922	0.353387
10	3	0.908899	-0.074000581	0.204385
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104.5	95.4999	0.971966	0.0541921	0.909169
22.5	5.5	0.675695	-0.537656786	0.556615
0	0.5	1	#DIV/0!	0.308068
2034	2526.5	0.945125	0.126564892	0.910151
2047	2210.5	0.635108	-0.478676706	0.547944
1092	1058.5	0.957224	-0.08644509	0.979778
1828.22	1586.93	0.705733	-0.482724238	0.838109
618	574	0.810584	-0.346650524	0.872671
1476	1527.5	0.834527	-0.372658897	0.809873

1713.5	1796.5	0.538633	-0.744845349	0.494702
923.5	898	0.623679	-0.924672156	0.643235
1400.01	1434.51	0.804739	-0.335527465	0.782414
417.5	440	0.918225	-0.2057865	0.88538
1096.88	1115.05	0.803129	-0.483074935	0.792063
9707.01	9683.72	0.710171	-0.593945752	0.712089
0	1.5	1	#DIV/0!	0.308068
716	836	0.646736	-1.132876596	0.554215
744.16	772.527	0.768081	-0.548426277	0.741593
730	788	0.779038	-0.441631709	0.716415
228.5	259	0.764704	-0.496200352	0.66536
485	481.5	0.696336	-0.581990934	0.702446
1125.07	1148.59	0.816661	-0.377692456	0.800548
7008.94	6313.39	0.756792	-0.334222971	0.87119
2471.02	2071.04	0.633279	-0.546786452	0.813308
2806.5	2543.5	0.739515	-0.531971941	0.815986
2302.5	2081.5	0.479892	-0.660200279	0.594141
1120	973.5	0.778921	-0.369394834	0.905353
2953.13	3019.23	0.904867	-0.211510019	0.8894
2816.48	2673.05	0.770128	-0.382200831	0.818878
713.5	672.5	0.675481	-0.502921651	0.734714
2178.5	2197	0.730088	-0.52306536	0.723025
1566.49	1515.98	0.514771	-0.705691559	0.547961
2486.02	2377.02	0.673516	-0.555534726	0.715058
4929.9	4735.12	0.672498	-0.631842192	0.706209
6326.5	5673	0.684696	-0.703307319	0.764556
1220.51	1277.49	0.965368	-0.069000505	0.930849
1222	883	0.40623	-1.055356225	0.684226
2510.5	2374.5	0.765455	-0.373406154	0.819444
684	595.5	0.698944	-0.383053552	0.861763
1790.5	1626.5	0.614985	-0.594161197	0.710938
485.5	526	0.944089	-0.122427585	0.887211
2256	2414	0.884816	-0.276913995	0.839468
1359.5	1456.51	0.89554	-0.25215793	0.849789
4246.5	4713.3	0.826346	-0.419490395	0.753925
3988.5	4185.5	0.821625	-0.41666613	0.787707
1240.51	1076.99	0.563297	-0.658326641	0.706222
2371	2540.5	0.808363	-0.438140741	0.758324
1363	1548.5	0.996678	-0.007428384	0.908956
2171	2157	0.626873	-0.648994672	0.632759
998	936.499	0.779212	-0.378871185	0.836593
975.5	970.5	0.818313	-0.472617184	0.821558
1351	1481.5	0.993504	0.016985568	0.953553
914	875	0.776498	-0.44158766	0.811505
1861.49	2072.99	0.907408	-0.208940247	0.830811
1319	1405.5	0.784085	-0.417591911	0.730796
10010.1	9541.64	0.717085	-0.548540506	0.756725
1901	2165	0.902571	-0.24508439	0.81779
2060.51	2193.96	0.870381	-0.283402449	0.824354
13792.4	14636.5	0.884037	-0.304825663	0.847405
419	420.5	0.437298	-0.691215705	0.43346
1027.5	1133	0.846203	-0.359264246	0.777056
166.5	158.5	0.817544	-0.357010554	0.856765
17	7	0.912312	0.160464672	0.524625
543	475.5	0.960966	0.063668194	0.854613
525.001	493	0.695522	-0.603630284	0.746614

3124.5	2720	0.69267	-0.493065664	0.825294
800.5	762	0.693974	-0.567941995	0.736379
957	1008.5	0.921928	-0.189848114	0.888152
13665.5	14452.5	0.0387659	-1.398122353	0.0308862
1317	1409.5	0.665205	-0.530149616	0.59822
1824.02	1953.02	0.612674	-0.621625886	0.546971
1780.5	1476.5	0.771141	-0.337098958	0.957778
1364.5	1298.5	0.404762	-0.877909464	0.450843
407	331.5	0.807046	-0.409141721	0.951295
2	0.5	1	0	0.567924
50.5	39.5	0.9869	-0.028854863	0.869908
606.501	570	0.813104	-0.352582511	0.864041
2994.5	2693.5	0.638167	-0.54107215	0.746907
1575.49	1585.01	0.803244	-0.34314704	0.797816
1674	1565.5	0.748592	-0.431796412	0.809391
416.5	427	0.801402	-0.463767946	0.783865
2254.5	2530	0.854623	-0.302146883	0.764105
3806.47	4812.93	0.906652	-0.246132118	0.754711
771.999	965.497	0.947278	-0.126880601	0.79379
1746	1677	0.875475	-0.228741228	0.908767
1.5	1.5	0.513713	-1.584962501	0.513713
7.5	12	0.407938	-1.906890596	0.179294
1094.5	1479	0.995547	-0.011247851	0.797602
776.5	837	0.820609	-0.418447761	0.767297
1707.5	2123.5	0.862251	-0.331996531	0.70754
2469	2628.5	0.947613	-0.129840058	0.908504
964.5	1096	0.864629	-0.341884785	0.779983
1900.5	1898.5	0.869399	-0.292715328	0.870137
1031.01	994.498	0.849676	-0.265025588	0.880977
1084	1065	0.870054	-0.329768395	0.881065
2933.5	3244.5	0.835752	-0.429287879	0.770622
32	26	0.726271	-0.476438044	0.906136
3035	2958.5	0.663341	-0.600975349	0.686129
236	209.5	0.670684	-0.827360614	0.750312
1896.5	1934	0.974407	-0.052284297	0.960205
1714.99	1641.5	0.923779	0.169638021	0.897801
167.5	209.5	0.71763	-0.912283854	0.58491
156	122	0.595149	-0.927850214	0.769737
3797	3677.5	0.709275	-0.543299744	0.736666
0.5	1.5	0.613399	1.584962501	1
1349	1418	0.660699	-0.399789505	0.597949
1837.47	1686.97	0.410529	-1.527218922	0.465367
6732.57	5639.59	0.591627	-1.00789227	0.712433
5233.23	4534.53	0.734777	-0.723250684	0.821645
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488	532.5	0.894052	-0.261852353	0.8369
9.5	10	0.754275	-0.662965013	0.721301
5783.58	6083.42	0.876807	-0.283856088	0.841707
2494.5	2508	0.95699	-0.094401632	0.953321
41.5	34.5	0.597482	-0.883186335	0.734766
2240.82	2034.23	0.707851	-0.519745908	0.793071
1105.5	851	0.940713	-0.08742206	0.829002

7	0.5	0.793009	-0.222392421	0.212937
10	11.5	0.752937	0.584962501	0.824785
4094.5	3578.5	0.831325	-0.199987567	0.995491
749.5	532	0.95906	0.067682797	0.720956
9	10.5	0.617401	-1	0.512728
731.5	600	0.67972	-0.526029367	0.863245
1433.5	1403.5	0.657886	-0.614191005	0.676683
7033.5	6911	0.302831	-0.649456502	0.322605
2506	2315	0.111958	-0.896708005	0.159335
2901.5	1988.5	0.365405	-0.870951408	0.766358
8712	8797	0.56071	-0.731373693	0.551741
9334.5	8393.5	0.515631	-0.765109782	0.617645
6902.5	7268.5	0.44926	-0.730535454	0.397742
10727.5	7928	0.148392	-0.922312502	0.45017
6153.5	5523.5	0.0508059	-1.066327325	0.084523
1412.5	1691.5	0.933458	-0.177477391	0.821952
1218.5	1424	0.872104	-0.324594541	0.768727
2302.5	2209.5	0.814796	-0.362838638	0.847723
5568.5	4610.5	0.554201	-0.59073861	0.767225
49	44	1	0	0.934737
1611	1554	0.463363	-0.569596768	0.509055
479.5	465.5	0.690155	-0.615368158	0.714365
1167.5	1058.5	0.56371	-0.659780185	0.662502
4702.5	4809.33	0.267193	-1.020572273	0.250623
1368.01	1515.99	0.855301	0.268646221	0.931316
189	107.5	0.651495	-0.539874611	0.860972
228	193	0.499304	-1.86710573	0.588344
5703.5	5870	0.816836	-0.371232437	0.794049
1938.49	2063	0.856032	-0.299572304	0.80803
4842.25	5269.06	0.800264	-0.429858367	0.735417
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1500.57	1784.06	0.872501	-0.307180858	0.75176
263.5	280	0.930341	-0.168215039	0.891025
2794.5	2628.5	0.620289	-0.618651725	0.678884
1178	1292.51	0.817282	-0.394781783	0.746485
1367.06	1230.51	0.803978	-0.384636002	0.886429
210	281	0.972615	-0.063193826	0.762254
2584.5	2534.5	0.782193	-0.423903016	0.798164
643.111	438.29	0.900265	-0.170309219	0.816311
2018.5	1886	0.820571	-0.415394912	0.86684
3144	3011.5	0.844167	-0.32118262	0.876604
4802.45	5500.61	0.922408	-0.201583243	0.837302
1058.49	1022.5	0.810904	-0.446015566	0.834495
1953	1700.5	0.797503	-0.44665334	0.89451
1697.5	1951.5	0.863129	-0.306605425	0.760161
244.243	298.079	0.974957	-0.064789633	0.850606
1180	1182	0.798954	-0.518946305	0.797864
1278	1299	0.832593	-0.383034182	0.821098
2913.5	3429	0.988282	-0.031032278	0.891376
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1034.51	1129.99	0.914404	-0.212220357	0.857422
1090	1163	0.91404	-0.204416046	0.870962
3296.95	3379.51	0.785683	-0.483543817	0.767649
374.5	392.5	0.983629	-0.039046904	0.954194
978	1069.5	0.971819	-0.067957384	0.914745
310	326	0.88129	-0.22084197	0.838925

1039.5	930.5	0.973608	0.055141554	0.902927
891.5	994.5	0.962648	-0.084134144	0.887003
2035.5	1738.5	0.651233	-0.803815433	0.763485
2315	2417	0.85225	-0.312610333	0.81965
3164	3394.5	0.831192	-0.375755627	0.779464
8587	8619	0.632193	-0.715067422	0.629088
3167	3083	0.894004	-0.218184818	0.913899
238.501	344.5	0.955254	0.132821148	0.840107
1030	1201.5	0.926727	-0.191444999	0.830225
717.626	698.882	0.656515	-0.819927123	0.675336
4305.06	4780.08	0.891387	-0.246043925	0.816644
1628	1676.5	0.875732	-0.294388839	0.855995
7239	8632.08	0.896134	-0.279638372	0.78589
2676	2901.48	0.970731	-0.074397885	0.921834
344	312	0.971224	0.063583206	0.912067
1206.5	1070	0.648805	-0.524945227	0.771889
1127.5	1206.5	0.743296	-0.480700235	0.684587
1176	1191	0.582716	-0.692868907	0.570894
2544.47	3165.01	0.818288	-0.503751101	0.678085
309	273.5	0.638599	-0.499973558	0.772426
687.5	587.5	0.761554	-0.387668949	0.906857
1242.5	1164.49	0.745717	-0.483795675	0.799635
3930.5	4734.99	0.984279	-0.040762592	0.869681
1	1	0.710482	-1	0.710482
3.5	7.5	0.200228	-1.807354922	0.023793
1.50612	9.53935	0.557531	1.88769768	0.566774
325.499	337.502	0.943239	-0.127335939	0.918578
715	836.5	0.798243	-0.411678487	0.670225
3017.5	2917	0.662918	-0.651496252	0.691246
107	101	0.899498	-0.210085526	0.940924
26.5	32	0.944489	-0.11321061	0.795204
2315	2277	0.523135	-0.547895326	0.54344
1502	1308	0.566324	-0.577537641	0.721981
632.001	595.502	0.77459	-0.398396026	0.827
684	706.5	0.902125	-0.241679366	0.881472
3771.5	3421.5	0.70724	-0.628848668	0.780549
3168.95	2486.35	0.631021	-0.510861083	0.891748
1657.5	1581.18	0.742673	-0.53744622	0.779104
5627.5	6103.5	0.823992	-0.455990818	0.771159
1064	1138	0.70343	-0.790839835	0.658981
1836.5	2446.5	0.854007	-0.298261658	0.616561
3730.5	3820	0.616521	-0.908777136	0.599429
350	288.5	0.707038	-0.59946207	0.854422
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4784.5	6012.5	0.759319	-0.64436512	0.605821
1129.5	940.5	0.939887	-0.116328993	0.930305
12.5	13	0.52037	-1.058893689	0.491355
1110	975	0.601375	-0.626496001	0.728517
33.5	42	0.920433	0.143364175	0.88664
4591	6835.46	0.813846	-0.654817712	0.59009
5560.74	6650.61	0.769235	-0.585803341	0.645446
16150	15520.3	0.629023	-0.611681634	0.666776
834.5	878.5	0.805428	-0.51494368	0.772608
2659.5	2545	0.864518	-0.204511813	0.908272
11561.3	11779	0.719124	-0.55506425	0.703745
4525.5	4069	0.564834	-0.670409393	0.670426

46.5	27.5	0.723668	-0.473069621	0.869168
404.999	459.5	0.963663	0.081376859	0.952087
288	316.5	0.894361	-0.22155777	0.822453
1	0	0.515664	1.321928095	0.308068
140	244.5	0.805567	-0.605721061	0.456
2342.54	2357.47	0.857821	-0.329277148	0.853457
1069.16	1126.61	0.801471	-0.472189675	0.764862
1	2	0.785812	0.584962501	0.785812
17	4	0.316234	-1	0.570355
123.5	194.5	0.649799	-1.065724182	0.368519
3855	4328	0.879907	-0.251405116	0.7904
2475	2330	0.520294	-0.770381006	0.577266
155.5	332	0.889081	-0.344132831	0.40667
3027	3447	0.93265	-0.117623553	0.815588
62261	70084.2	0.533099	-0.566720515	0.401939
343	565.5	0.179946	-2.467868456	0.0524468
1687	1650	0.769409	-0.49082457	0.786257
184.5	245	0.895027	-0.274811574	0.706255
7	12	0.765621	0.716207034	0.973354
2	5	0.920936	0.321928095	0.627217
4.5	5	0.63092	0.736965594	0.686947
506.5	559.5	0.739741	-0.613731052	0.667592
597.5	828.002	0.819394	-0.508549385	0.607084
1446.5	1423.5	0.845032	-0.262336416	0.859599
1.5	2.5	0.651448	-0.584962501	0.230584
1510	1473	0.804112	-0.372362242	0.824644
70	60.5	0.982583	-0.031250934	0.907425
92	87.5	0.634883	-0.795641501	0.67303
2594.5	2733.5	0.889048	-0.256100359	0.853072
3.5	2	0.428621	-1.807354922	0.739226
2828	2772	0.744008	-0.52158649	0.759891
751	845	0.922951	-0.201729916	0.850084
1995	2303.5	0.952287	-0.12572812	0.864783
1497	1605.5	0.875772	-0.337796023	0.833501
2195.59	2460.84	0.973537	-0.069353473	0.90574
7143	7015.5	0.610431	-0.644178121	0.627442
1252.5	1400.5	0.821109	-0.377705552	0.733844
2321.5	1757	0.511862	-0.631538197	0.830697
2497	2210.5	0.482494	-0.663928286	0.620175
871	1007	0.978072	-0.04542972	0.868541
1935.5	2011	0.856772	-0.31023577	0.828539
3456	3441.9	0.691154	-0.444825776	0.695534
2164	2072.5	0.624033	-0.663743016	0.662808
5979.39	5612.97	0.624299	-0.602853963	0.685594
3547.5	3612.5	0.829651	-0.331619206	0.814865
1076	1149	0.836774	-0.348654831	0.786902
399.276	384.3	0.794772	-0.40241748	0.825531
1165	1632.5	0.770603	-0.709368036	0.562759
1159.5	979	0.656141	-0.658668424	0.795339
1051.01	1036.98	0.88001	-0.27184362	0.889234
1953	1714.01	0.804792	-0.316784792	0.924946
3086	3017.9	0.699554	-0.618542561	0.717268
1599.33	1707.77	0.762018	-0.371987349	0.695887
2167	2101	0.778965	-0.429534827	0.804227
3970	3755.5	0.754345	-0.529445104	0.795911
1738.5	1664.5	0.76648	-0.521048662	0.798078

7253	7039.5	0.2681	-0.841012206	0.294961
4293.5	4276.5	0.773473	-0.520561913	0.776311
748	687	0.807316	-0.320482267	0.885048
248.498	303.632	0.983418	-0.040577958	0.852096
1125.5	1089.5	0.907228	-0.192370427	0.930889
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255.5	409	0.943468	-0.111483108	0.534804
930	1178	0.253102	-1.058570541	0.122484
217	247	0.982541	-0.040452044	0.895702
220	234	0.712001	-0.586602859	0.661981
9	14	0.900374	-0.169925001	0.474021
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336.501	270.499	0.975464	-0.054612526	0.895439
642	594.998	0.512162	-0.730239731	0.587979
972.886	813.702	0.807717	-0.299182305	0.975329
1712.97	1181.5	0.61605	-0.522522717	0.991341
132.5	95	0.794877	-0.40599236	0.967894
169	1381.51	0.924695	0.593474001	0.271264
144.043	205.553	0.651519	-1.36300082	0.458198
36.5	46	0.791654	0.424885285	0.949131
478.5	342	0.57132	-1.240597017	0.769775
327.5	283.5	0.961624	-0.088564556	0.951801
168	148.5	0.818431	-0.392317423	0.905999
251.5	234	0.878446	0.220342265	0.828253
140.5	121.5	0.989008	-0.025901863	0.927614
25.5	8	0.31951	3.08246216	0.28455
437	646.504	0.855676	-0.458606514	0.622632
2401	2464	0.874724	-0.277406523	0.856232
2583.44	2818	0.907453	-0.223642005	0.84982
1214	1130	0.881175	-0.201158587	0.944093
2219.5	1981	0.867739	-0.263099408	0.952695
1649.5	1797	0.850072	-0.331361092	0.786832
302.5	319.5	0.861372	-0.301212118	0.820997
1728	1586	0.800733	-0.364718546	0.872781
1294.15	1394.81	0.867214	-0.293968923	0.812579
3428	3394.5	0.712157	-0.525193696	0.720769
694.5	595	0.55547	-0.847373847	0.684363
1755	1828	0.916695	-0.183397376	0.88793
730.5	712	0.729121	-0.580525711	0.748702
1154.5	1940	0.862289	-0.390054249	0.517648
1349.5	1275.5	0.52336	-0.687402828	0.581397
3519.5	3379.5	0.841716	-0.278322967	0.877091
1239.5	1242.5	0.685571	-0.559580566	0.683401
7428.99	7484.02	0.851519	-0.395689117	0.847021
7	8	0.494042	-2.222392421	0.426447
1069.5	1296	0.805905	-0.445253302	0.662682
157	159.5	0.964441	-0.080301628	0.953998
5314.64	5116.47	0.888626	-0.204914207	0.91979
2468.5	2514	0.803261	-0.4608569	0.790466
2430	2292	0.667985	-0.451918625	0.733439

167	192	0.867617	0.245652328	0.974198
81	72	0.663608	0.825056924	0.620668
720.5	698	0.744794	-0.425420259	0.7746
713	843	0.961739	-0.085440844	0.841979
546	553.5	0.845772	-0.341213082	0.83593
3420	3451.5	0.64266	-0.578333762	0.633799
38	38.5	0.854781	0.259867127	0.86431
2091.5	2156.5	0.869466	-0.305382164	0.848575
2.5	3	1	0	0.892901
3746	3386.5	0.679034	-0.648944046	0.759282
293	288	0.856149	-0.249313018	0.871394
3215	3245	0.845663	-0.342263992	0.838987
892	817	0.756419	-0.398953776	0.838904
1561.48	1516.04	0.981062	0.036023172	0.959282
1453.5	1551.5	0.767794	-0.37925624	0.704454
607.5	602.5	0.916302	-0.187396138	0.921928
845	896	0.722112	-0.559157855	0.674186
285	258.5	0.734053	-0.503766418	0.81505
2717.55	2798.04	0.873382	-0.243510717	0.849652
2202.5	2146	0.756176	-0.516680152	0.776052
1446.5	1470	0.816576	-0.391787667	0.804429
2387.5	2407.5	0.634256	-0.921504615	0.628509
1758	1686	0.836907	-0.321825518	0.869788
3224.5	3249	0.774023	-0.440540633	0.767786
993	1099.5	0.889728	-0.232842376	0.812212
70.4999	88	0.827366	0.445413195	0.945231
1017.5	1004.5	0.598503	-0.629965995	0.611131
788.5	807	0.826781	-0.282004181	0.804573
1896	1866.5	0.848133	-0.323641171	0.859693
785.5	720	0.731255	-0.547346521	0.799464
309	334	0.961182	-0.086587685	0.907536
2099.5	1964	0.420095	-0.665687593	0.497764
25.5	25.5	0.956883	-0.087462841	0.956883
0.5	2.5	1	0	0.415333
101.5	109	0.795986	0.422126924	0.839263
96.5	193	0.835608	-0.344529524	0.287256
786	786	0.871355	-0.258635942	0.871355
32	29	0.821823	0.357552005	0.76482
1108	1108.99	0.737692	-0.628931353	0.737066
1486.49	1394.98	0.629065	-0.584217805	0.691639
2.5	3.5	0.770719	-0.736965594	0.568955
1752.08	1595.88	0.747801	-0.380197322	0.842255
2062.53	2273.56	0.828603	-0.317984933	0.743972
2207.96	2037.98	0.750179	-0.347370984	0.837563
3530	4205.5	0.714035	-0.521895697	0.55817
30.5	42	0.722724	0.713118852	0.883113
1052.5	1074.5	0.844169	-0.348733509	0.829349
4429.38	4818.22	0.736291	-0.517412437	0.665866
1937.5	1983.5	0.345659	-0.636892242	0.319456
1169.5	1221.5	0.906227	-0.186753468	0.872287
431	549	0.44425	-1.452336041	0.297452
2.5	2.5	0.733579	-0.736965594	0.733579
595.005	517.68	0.724611	-0.427521057	0.860814
2858	2855.5	0.865701	-0.300570219	0.866317
3620	3523.03	0.612482	-0.778753536	0.634499
1415.49	1281.47	0.691716	-0.474147506	0.791244

737.563	732.07	0.849147	-0.302758321	0.854977
3804.6	3720.84	0.879548	-0.266004302	0.895144
304	295	0.756937	-0.43094389	0.783657
2027	2197.5	0.856585	-0.309173341	0.79588
15.5	16	0.779614	-0.561878888	0.758593
431	1216	0.941525	0.208457873	0.456037
576.5	403.5	0.901155	-0.091692014	0.637194
39	24	0.94932	-0.09557766	0.752814
81	195.5	0.954711	-0.130396637	0.362955
816.998	801.59	0.874079	-0.275064651	0.887608
667	636	0.961669	-0.081190391	0.994221
2483.5	2565	0.969612	-0.072365782	0.949263
3193.5	3438.5	0.874064	-0.34257372	0.829309
4259	3997	0.909844	-0.193467968	0.953922
70.5	192.5	0.759604	0.743091697	0.63554
384	573.5	0.792018	-0.681080655	0.553072
631.503	514.003	0.665129	-0.640864117	0.832756
206	165	0.947662	-0.11285334	0.91406
2527.5	2282.5	0.743032	-0.456046473	0.832226
3290.5	3122	0.72787	-0.511038649	0.772384
79.5	21.5	0.421391	0.59400764	0.108972
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35	39.5	0.926142	-0.198545679	0.85327
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7199.32	6799.55	0.829764	-0.440820671	0.865058
7146.5	7084	0.902345	-0.23364018	0.908017
2356.5	2070.5	0.842936	0.283650837	0.758693
3.5	5	0.767557	0.514573173	1
51.5	91.5	0.486947	1.493408563	0.681733
14.5	74	0.92877	-0.465663572	0.220864
5	4	0.129088	-1.736965594	0.234161
34	236	0.821261	-1.180572246	0.0642509
0.5	57.5	0.972189	2	0.255941
705.002	763.501	0.320893	1.768849186	0.335127
1466.5	1108	0.482502	1.15889756	0.408779
983	535.998	0.98495	0.02183828	0.572886
1651.99	912.996	0.808989	0.258743001	0.450815
514	240	0.997266	-0.004216355	0.547693
703.003	633.002	0.85623	-0.281221368	0.936625
7.5	3.5	0.807419	-0.447458977	0.807419
15	11.5	0.361333	1.359895945	0.304891
355.002	224.5	0.984746	-0.030810023	0.756064
2	0.5	0.474021	-1	0.710482
601.499	575.5	0.869499	-0.231010334	0.907297
2213.51	2055	0.734601	-0.434832174	0.804913
812.5	806.5	0.832191	-0.379666241	0.837427
845	816.998	0.824314	-0.325137176	0.8526
7614.6	8627.07	0.975773	-0.057474589	0.89376
3332.5	3456.5	0.774502	-0.388372456	0.7408
426	463.5	0.87773	-0.252910189	0.812401
2524.5	2194.5	0.58403	-0.852633317	0.694623
30.5	28	0.741608	-0.538419915	0.807155
2480	2555.5	0.814549	-0.372995728	0.790614
189	232.5	0.974557	0.063466419	0.895689
2385.47	2372.99	0.948247	-0.102732907	0.952179

2080	2368	0.993117	0.01620829	0.922718
1159	1359	0.924984	-0.189270351	0.821662
1017	906.5	0.752698	-0.364395121	0.87065
912.491	899.002	0.820006	-0.434922827	0.829978
3229.93	2959.45	0.88167	-0.205282807	0.956164
365.5	385	0.833328	-0.331333243	0.791395
1264.5	1363	0.654363	-0.479392581	0.572358
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74.5	63.5	0.513173	-1.464281018	0.609584
392	365.5	0.92453	-0.190543555	0.965702
89	77.5	0.752603	-0.655554469	0.837734
616.5	589.5	0.364212	-2.256729829	0.387744
771	676	0.605747	-0.61617246	0.73529
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44	60	0.965415	-0.067114196	0.70037
232	227	0.805076	-0.448590059	0.820359
772.5	789.001	0.973941	-0.057143907	0.959623
4020	3864	0.76993	-0.402886912	0.805318
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1402.5	1442.5	0.714755	-0.577268109	0.69196
6100.91	7173.2	0.927893	-0.177179553	0.820284
905	1202.5	0.949894	-0.138779398	0.774918
9067.5	10269	0.856803	-0.352784221	0.772389
4654	4826.5	0.797557	-0.468936943	0.771619
5744.12	5947.44	0.819796	-0.408582073	0.794779
2617.5	2829	0.929382	-0.143606876	0.869807
7183	7525	0.694155	-0.815840573	0.663478
208.5	206	0.867414	-0.252692462	0.877181
1169	1259.5	0.830405	-0.334633686	0.769403
142.5	109.5	0.624813	-0.510961919	0.911049
1778	1747.5	0.921156	-0.157151227	0.934209
1504	1272.98	0.529283	-0.744022037	0.69041
975	814	0.685479	-0.422454971	0.885896
1457.5	1605	0.982559	-0.040656125	0.919249
5614.5	5611	0.853721	-0.293809951	0.854207
5.5	2.5	1	0	0.635149
1865.5	2034	0.916255	-0.140832792	0.836283
496	472	0.856345	-0.297771447	0.893207
2047.52	2294	0.637974	-1.220771564	0.572469
1583.5	1432.5	0.74212	-0.544757141	0.817713
109	15.5	0.34823	-1.790904401	0.833581
404	304.5	0.610546	-0.544469317	0.910095
771.5	747.5	0.767241	-0.481691692	0.791779
3949.15	4186.99	0.927832	0.163659202	0.963956
3711.53	3812.12	0.667345	-0.546549524	0.641712
815	901	0.783912	-0.470983904	0.707113
108533	123443	0.253103	-0.781393361	0.157578
311	330	0.959262	0.089916637	0.997962
3360.05	3271.55	0.852849	-0.347130753	0.870705
1243.01	1172.51	0.481161	-0.581777144	0.553604

1874	2045	0.870354	-0.313006257	0.811204
1612.5	1535.5	0.684808	-0.541992462	0.729704
4154	3968	0.734922	-0.424095745	0.779455
1030.5	1064.5	0.841705	-0.33052865	0.816856
2676.5	2745	0.669815	-0.515767218	0.644561
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4961.52	5343.22	0.848511	-0.333901676	0.793822
4503.5	4420.5	0.819914	-0.395153301	0.833437
896	968.5	0.935972	-0.157200708	0.886205
2252	2171	0.8482	-0.358503251	0.872651
96.5	78	0.452745	-0.746966986	0.681714
3501.5	2575	0.881227	-0.153537547	0.809274
1751.5	2004.5	0.488358	-0.539557842	0.332649
18.5	11.5	0.582444	-0.68589141	1
3644.53	3362.01	0.860637	-0.261903504	0.925282
1307.5	1383	0.873833	-0.288526151	0.834442
3653	3856.5	0.824136	-0.419388331	0.786632
2427.5	2496.5	0.727513	-0.569739536	0.705422
2357.5	2393	0.853679	-0.323527726	0.842927
14674.5	14637.5	0.744532	-0.509197051	0.746582
25201.9	23727.9	0.56706	-0.755888572	0.621122
18828.3	17147.8	0.467294	-1.308167176	0.531104
16078.6	13178	0.303912	-1.514014406	0.437189
34660	35881.9	0.595967	-0.693666733	0.564396
19361.7	17542.1	0.643969	-0.549065464	0.742713
873.997	841.992	0.821688	-0.381326312	0.849225
685	710	0.864514	-0.275301935	0.836624
199	219	0.980181	-0.040434864	0.908417
19	18	0.925532	0.144389909	0.888615
42.5	53	0.644896	-0.681470482	0.45993
1692	1820	0.962591	-0.083817016	0.912677
896.5	893.5	0.935299	-0.136618706	0.937687
895	880.5	0.83273	-0.404864436	0.843573
438	343	0.838871	-0.309220655	0.979764
2091.99	1991.5	0.674081	-0.627658872	0.715247
1337.5	1377.5	0.868633	-0.288608022	0.847351
450	402.5	0.939956	0.149114814	0.882251
325.001	309.001	0.852753	-0.280905266	0.893268
296	262	0.786206	-0.395672174	0.887023
525	597	0.921668	-0.198545679	0.839436
512	514	0.912728	-0.195868979	0.910061
498	460.5	0.929558	-0.173732304	0.976269
602.5	578.5	0.865272	-0.333950623	0.890959
338	350	0.925412	-0.181706075	0.903188
627	673.5	0.929448	-0.164327312	0.881295
390	394	0.848166	-0.312709565	0.840338
285.5	262	0.973052	-0.054059127	0.966642
1210	1278.5	0.959512	-0.101879614	0.926012
610	524	0.661697	-0.647185914	0.787191
1283	1133	0.807008	-0.422176778	0.894792
2364.5	1838.27	0.761969	-0.512526271	0.937764
938	992.5	0.768369	-0.455591598	0.721596
376.5	442	0.976309	-0.052680317	0.862418

868.5	1013.5	0.929013	-0.186842792	0.833048
477	509.5	0.836693	-0.352881023	0.787111
55	50	0.696836	-0.850622376	0.755259
869.5	899	0.674137	-0.586622679	0.644393
702.5	644.5	0.678587	-0.609297069	0.75107
888.5	711	0.528701	-0.653120909	0.769538
2795.5	2878	0.942102	-0.137142315	0.92334
275.5	272	0.900746	-0.223265459	0.909479
705	803	0.970231	-0.078855421	0.892904
242.5	293	0.945352	-0.143763808	0.827311
1.5	2	0.670131	1	0.774348
7246	7249	0.787642	-0.489673951	0.787348
2120.55	2195.98	0.741906	-0.503820237	0.712787
2437	2455.5	0.786324	-0.423547831	0.780198
2824	2701	0.812799	-0.382373852	0.847067
449.5	451.5	0.840225	-0.358906672	0.837067
1888	1999.5	0.876916	-0.304270358	0.839407
2379.5	2450	0.900669	-0.206614122	0.878856
2442.5	2442	0.918265	-0.191084883	0.9184
147.5	170.5	0.940345	-0.122422103	0.827892
1280	1295.5	0.768321	-0.421061287	0.757765
787.5	775.5	0.69771	-0.708246777	0.708731
136	140.5	0.978769	-0.037614292	0.951515
1127	1303	0.942776	-0.145333464	0.850709
1457.87	1494.76	0.805875	-0.518819105	0.790182
1484.5	1245	0.514558	-0.76179801	0.685093
1577	1579.5	0.876855	-0.299912184	0.87583
521.5	850	0.723475	-1.128677987	0.462677
533.5	525	0.851823	-0.348538027	0.862645
998.998	945.991	0.855114	-0.323198416	0.892991
328	322.5	0.737215	-0.441672626	0.753052
774	815	0.901823	-0.216811389	0.865035
566.5	488	0.586766	-0.624331706	0.737644
454	432.5	0.784526	-0.394006587	0.826028
469	430.5	0.974657	-0.056460489	0.971139
367	393	0.990362	-0.021788407	0.944874
282	335	0.947245	-0.097892201	0.799295
909.499	810.494	0.947854	0.078721072	0.847932
526.5	523	0.868514	-0.319190532	0.872858
241	244.5	0.71124	-0.820132195	0.70227
1175.5	1152.5	0.740312	-0.404642957	0.760054
1760.5	2313.5	0.611962	-1.340900344	0.454336
366	348.499	0.782385	-0.493326476	0.817226
127.5	153	0.731682	-0.718229032	0.609573
1366.5	1630	0.825731	-0.440421777	0.705334
126	158.5	0.819461	-0.438121112	0.655117
8	9.5	0.664816	-1.192645078	0.568612
1214.5	1014	0.895051	0.21941963	0.792406
1347.5	1413.5	0.881392	-0.234937675	0.843422
165	138	0.722127	-0.477578965	0.880279
2153.98	2056.04	0.762036	-0.555582353	0.794615
1816	1858.5	0.858061	-0.24723255	0.8374
913.5	879	0.823849	-0.376854305	0.852216
1228	1405	0.967379	-0.085921696	0.886611
7485.5	7149.5	0.714671	-0.51164387	0.755256
1418.5	1487	0.593052	-1.185904685	0.563424

2510	3110.5	0.580989	-1.374608412	0.454418
2289	2314	0.849252	-0.354354944	0.841845
253.5	235	0.92579	-0.118563197	0.994421
270	327.5	0.580427	-0.605140383	0.390232
1919	1903.5	0.779978	-0.41729465	0.786783
734	911	0.877337	-0.32241956	0.735905
1972	1918.5	0.719205	-0.546165912	0.741982
1845.52	1552.5	0.64614	-0.512189755	0.826973
362	352	0.828383	-0.401813804	0.847487
2109.5	2440.5	0.995997	-0.010639645	0.910818
5473.51	5630.96	0.929536	-0.182242362	0.912551
1077.5	1356	0.977882	-0.059451684	0.838022
352	384	0.874525	-0.289506617	0.813297
2249.03	2469.47	0.832069	-0.372696846	0.762646
6074.32	5801.77	0.810208	-0.421563101	0.843061
834.004	861.001	0.842201	-0.322371868	0.817347
7500	4649.5	0.724459	-0.545824107	0.941293
620.5	790	0.537202	-2.112380473	0.415869
3481.44	3419.39	0.742228	-0.584626879	0.755313
1132	1169	0.889394	-0.24831827	0.86684
2057	1893.5	0.74145	-0.575350906	0.801591
2055	1952	0.735652	-0.519596489	0.777495
1378.86	1494.5	0.823627	-0.440461987	0.769588
1003.5	901.5	0.618425	-0.427793081	0.760144
95	120.5	0.900574	-0.275234859	0.752394
1364.5	1112.5	0.715561	-0.507266084	0.889546
258.5	279.5	0.887422	-0.296344047	0.839064
1406.5	1601	0.99729	-0.006682725	0.916433
710	669.5	0.760105	-0.478736878	0.806886
489.5	538	0.96483	-0.091243998	0.908243
592.586	2059.17	0.704775	-2.229381948	0.182359
46	93.5	0.757486	-0.908852112	0.357161
40.4107	159.83	0.937501	-0.353411859	0.30203
3415.01	2892.39	0.672237	-0.487079581	0.84167
616	657.5	0.809163	-0.459431619	0.763986
95.5	95.5	0.754094	-0.611644543	0.754094
1546	1466	0.488014	-0.618476636	0.550043
5011	4994	0.894183	-0.270597322	0.896264
1235.5	1290	0.786271	-0.378336479	0.747395
2070.99	2043.49	0.859212	-0.326106901	0.868317
2948.51	3426.77	0.908256	-0.240934707	0.813575
491	394	0.190237	-0.959439637	0.390698
232	234.5	0.769601	-0.423352767	0.760294
2477	2221.5	0.972631	-0.051281463	0.946574
129.5	109.5	0.938529	-0.128065039	0.949679
48.5	36.5	0.816184	-0.224873411	0.867797
335.999	326.999	0.611372	-0.730527907	0.634548
3827.5	3815.5	0.879213	-0.281966837	0.881322
189.5	206.5	0.78043	-0.516205489	0.718771
1871.5	1833.5	0.822314	-0.393739427	0.837074
1178.5	1080	0.893288	-0.171379447	0.972798
453.5	504	0.904768	-0.241875973	0.837254
337	318	0.69053	0.65460416	0.662903
12006	12111.5	0.677622	-0.534224555	0.669292
3334	3085.5	0.930897	0.143823138	0.88221
848	938.5	0.890507	-0.276709343	0.82493

942	1430	0.857098	-0.392748228	0.577888
262.895	241.927	0.742607	-0.49559732	0.810743
1970	1804.04	0.678952	-0.562458593	0.757976
1021	1018.5	0.867489	-0.266146407	0.869388
363.5	322.5	0.643642	-0.563297049	0.760585
775	874.5	0.791559	-0.526590138	0.70932
1659.5	1699	0.999447	0.001303444	0.985981
560.5	658.5	0.914815	-0.232725107	0.816867
1042.5	1242	0.923284	-0.212852197	0.818332
1380.99	1314.75	0.843287	-0.359904128	0.876851
3919	3891	0.773284	-0.440664626	0.779186
1303	1188.5	0.743333	-0.404373973	0.832897
5168.49	5086.81	0.761304	-0.523959775	0.773148
1008.99	937.002	0.844144	-0.346609748	0.895628
572	621.5	0.877599	-0.235058833	0.80889
301	271.5	0.693667	-0.589763487	0.778801
26	42	0.805732	-0.746243408	0.546605
191	214	0.730847	-0.583075391	0.642472
2925.5	2948.5	0.897853	-0.23137915	0.892484
141.5	231.001	0.652257	0.818237763	0.937306
1460	1535.5	0.785055	-0.481775307	0.747814
199.5	193	0.532273	-1.421076416	0.552384
662	535	0.938247	-0.128704257	0.923013
451	411.5	0.806687	-0.388623451	0.877236
1325	1291.49	0.892219	-0.198724187	0.913254
753	661.5	0.548245	-0.866508083	0.655793
7366.5	7712.5	0.910397	-0.212860199	0.880034
319.5	310.5	0.973381	0.057538409	0.954977
1050.5	1130.5	0.902775	-0.227896272	0.852855
10412.5	11279.5	0.96399	0.090682667	0.989786
272	300.5	0.985296	-0.03489479	0.921021
0	0	?	#DIV/0!	?
29	5.5	0.735156	0.408805546	0.287669
718.124	825.456	0.525725	-1.232442096	0.433436
404.5	412.5	0.933096	-0.146268296	0.919439
322.5	268	0.697611	-0.456638404	0.882062
1419.5	1558	0.853906	-0.322055143	0.784947
3774.03	3331.48	0.854184	-0.330912578	0.937154
3853	3642	0.841799	-0.37382011	0.879225
1409.99	1449.52	0.887124	-0.258133449	0.868068
3654.5	4315	0.804673	-0.501464435	0.692181
3811.5	4520.5	0.764624	-0.72277833	0.662469
487.5	417.5	0.713389	-0.639239562	0.824489
957	994	0.830834	-0.425628911	0.80598
10401.5	9314	0.409231	-0.489830352	0.585337
2075.5	2262	0.85983	-0.313178949	0.797139
1466	1628	0.869241	-0.350878637	0.804081
9927.5	8752	0.735623	-0.60324322	0.824293
1353	1527	0.930921	-0.188841904	0.859393
1767.77	1562.27	0.612815	-0.601959797	0.735219
1625	1573	0.756007	-0.639009118	0.776884
2005	2105	0.931258	-0.146417431	0.895996
1025.5	1138.5	0.918413	-0.197980755	0.849316
1414.01	1427.24	0.93243	-0.152115329	0.926139
188	168.5	0.823645	-0.354916507	0.90665
1513	1296.5	0.795903	-0.379560891	0.920983

656.5	573.5	0.736903	-0.502225672	0.847063
4999.94	4776.03	0.798302	-0.369953783	0.837257
1776	1969	0.900392	-0.251877277	0.834046
5	7	0.550362	-1.321928095	0.345015
954	930.5	0.742784	-0.48845452	0.763779
2075.16	1910.1	0.719563	-0.548480164	0.78702
204.5	258	0.937704	0.147410207	0.910952
144.5	174	0.900251	-0.244188345	0.773473
1158.5	1046	0.572736	-1.406552859	0.631137
140	71.5	0.4751	-1.703018262	0.826322
3326.74	3014.6	0.86299	-0.272716766	0.93724
947.01	1204	0.96645	-0.091994894	0.821383
905.5	787	0.577735	-0.775446919	0.698459
330.5	353	0.947956	-0.13249227	0.907799
705	791	0.90125	0.210061619	0.978021
1468	1579	0.181826	-0.935613313	0.138566
373.5	368.5	0.818093	-0.31855224	0.830081
1450.02	1415.08	0.741532	-0.48471462	0.762293
820.993	774.501	0.978202	-0.051862205	0.986836
0	0	?	#DIV/0!	?
72.5	36	0.790298	-0.398549376	0.773061
8	3	0.719608	-0.540568381	0.719608
90.8489	84.1256	0.596443	-1.013544045	0.649053
5.5	11	0.746504	-1.137503524	0.389326
2.5	6.5	0.937971	-0.321928095	0.502193
17.5	13	0.506369	0.728697978	0.371992
6	7.5	0.928525	-0.125530882	0.722749
1	0	0.308068	-1	0.308068
159	404	0.553614	-2.084064265	0.138533
1685.5	1624.5	0.881305	-0.248302038	0.908258
2420.5	2487	0.859448	-0.312571004	0.840018
273	347	0.996948	-0.007943439	0.847679
884	752	0.608839	-0.544728576	0.784376
354	357	0.88744	-0.210217707	0.880485
319.502	317.999	0.833321	-0.359673426	0.836795
4161	3777	0.723146	-0.610144726	0.794179
892.88	775.623	0.741277	-0.416099995	0.874161
321	317.5	0.854445	-0.301289925	0.862731
2120.99	2397.97	0.802677	-0.4399586	0.710382
1030	1116	0.804284	-0.345760247	0.731564
1334	1252.5	0.80924	-0.429529786	0.853578
969	908	0.728713	-0.5562182	0.779698
4661	4846.5	0.781293	-0.46682107	0.751322
1783.5	2068.5	0.895956	-0.287261387	0.806067
1348.5	1500	0.908788	-0.217865144	0.836929

Log2(Distal vs. Prox)	p-value(Mid vs. Prox)	Log2(Mid vs. Prox)
-0.367266283	0.435784	0.56584
1.689980319	0.308711	3.76672
0.333030548	0.334195	1.91636
-1.227805918	0.435502	-1.28371
-0.356296889	0.976394	-0.04964
#DIV/0!	?	#DIV/0!
-0.32657446	0.970862	-0.02811
-0.545241468	0.694275	-0.63468
-0.217591435	0.99765	-0.00578
-1.280107919	0.556	-1.23947
-0.263034406	0.586334	-1.58496
0.080731272	0.981961	0.04093
-0.54225805	0.953322	-0.09865
-0.858580245	0.689441	0.13852
-0.576770685	0.981057	-0.02463
-1.132125038	0.931193	-0.102
-0.534776744	0.721191	-0.61073
-0.316027493	0.889448	-0.2303
-1.018046157	0.822634	-0.27456
-0.359746047	0.934684	0.10409
-0.592458892	0.9007	-0.18406
-0.492952227	0.953506	-0.1023
-0.524233226	0.824231	0.19461
1.066769012	0.658044	0.68753
-0.747143898	0.982323	-0.02537
-0.507251262	0.9907	0.01416
-0.371098848	0.793929	0.20549
-0.030860964	0.954909	-0.10145
-0.364053571	0.898402	0.13845
-0.214411509	0.96058	0.07879
-0.460352328	0.988261	0.01813
-0.605901838	0.956181	0.08738
-0.532529136	0.972472	0.04967
-0.604821117	0.774688	-0.56431
-2.812292845	0.331252	-3.38576
-0.606756211	0.954551	0.09121
-0.366078348	0.845089	-0.37473
-0.516373416	0.952266	-0.10534
0.109209374	0.757932	0.49994
-2.048759312	0.55604	-1.16331
-1.252607034	0.816926	-0.30705
-0.144389909	0.993418	-0.01265
-0.52971264	0.981329	-0.02918
-0.399607459	0.910977	-0.18398
-1.114419911	0.940998	-0.10529
-0.076940144	0.99244	-0.01724
-0.152003093	0.872867	0.25206
-0.433004046	0.925627	-0.16236
-0.325638414	0.886365	-0.27694
-0.278981525	0.946876	-0.12472
0.111434814	0.990808	-0.02224
0.31567533	0.839241	0.38271
-0.565678004	0.960794	-0.0832
0.049221116	0.802366	0.398
-0.333724522	0.97418	0.04533

-0.445532441	0.921454	-0.1467
-0.581346118	0.955916	-0.074
-0.60348703	0.96539	0.04443
-0.212485464	0.829673	-0.40637
-0.995554095	0.992842	-0.01118
-1.030982473	0.841698	0.30961
-0.145850866	0.74772	-0.53051
#DIV/0!	0.450185	#DIV/0!
-0.501081861	0.963271	-0.05454
-0.346023771	0.768898	0.26651
-0.414626985	0.963442	-0.0716
-1.03495877	0.571363	-0.32363
-0.154086408	0.989341	-0.01981
-0.573761396	0.812024	-0.40644
-1.456453919	0.386353	-1.65378
-0.220292122	0.973759	-0.05396
-0.464668267	0.94768	0.07602
-0.308174493	0.907495	0.155
-0.626317008	0.915648	-0.17495
0.046794211	1	0
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-0.465426798	0.911087	-0.17561
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-0.625612665	0.913328	-0.0818
-0.538999732	0.929294	-0.13932
-0.533337815	0.983303	0.02326
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-0.389259282	0.989365	-0.02296
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-0.193696988	0.832417	0.23156
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-0.184592154	0.964075	0.07074

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-0.306396567	0.804832	0.25529
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-0.012200454	0.884744	-0.24433
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-1.452111335	0.359808	-0.64897
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-0.233199176	0.800582	-0.54253
-1.042228235	0.826295	-0.32251
-0.233672346	0.969746	-0.06904
-0.231325546	0.942588	-0.09668
#DIV/0!	0.308068	#DIV/0!
-0.378509916	0.649117	-0.92514
-0.405932795	0.978422	0.03181
1	0.663808	0.73697
-1.349334252	0.984427	0.02308
-9.735668118	0.182194	3.31324
-1.494496691	0.885719	-0.08084
-0.236700258	0.878799	-0.25924
-0.124545098	0.983392	0.03218
-0.795461243	0.359372	-0.51048

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-0.148732791	0.928582	0.15269
#NUM!	0.308068	#NUM!
-2.185866545	0.774009	0.39428
-1.446104006	0.559703	-0.45626
-1.619139489	0.231093	-0.96508
-0.677096639	0.865301	0.14213
-1.597562538	0.177294	-0.91475
0.032421478	0.00775244	1.42321
0.736965594	0.873517	0.41504
-0.179447776	0.968571	0.04158
0.169058258	0.719824	0.46297
-0.584962501	0.940877	-0.12553
0.334419039	0.754229	0.33442
-0.492663047	0.931999	-0.11255
0.048797775	0.541896	0.48781
0.024662054	0.705961	0.56828
0.556393349	0.925659	0.08246
0.152003093	0.438509	-1
-0.252183381	0.834642	-0.3502
-0.084888898	0.872839	-0.25892
0.373043411	0.791213	0.37304
-0.195175679	0.951781	0.08063
-0.298592277	0.985008	0.02278
1.086414752	0.750862	0.67138
-0.430862466	0.964608	-0.07538
-0.192806228	0.794346	0.25568
-0.55931035	0.99902	-0.00121
-0.524041486	0.975607	0.03796
-0.202660305	0.887399	0.12661
-0.830074999	0.619199	-0.67807
-0.329307625	0.894865	0.17039
-0.734839293	0.948796	0.09271
#NUM!	0.308068	#NUM!
-0.415037499	0.922589	0.16993
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0.111031312	0.958352	0.09761
-0.327309432	0.991045	-0.01359
-0.519780757	0.852612	0.13309
-0.580915668	0.906409	-0.17653
-0.275109504	0.994636	0.00967
-0.279877916	0.870005	0.24249
-0.267399598	0.982503	0.03019
-0.540817903	0.861127	0.11597
-0.218046951	0.973714	0.04499
0	0.0662756	2.32193
-0.847996907	0.55113	0.68806
-0.305439108	0.937477	0.08195
-0.318220465	0.917136	0.15884
-0.698765734	0.90255	-0.09222
-0.499884076	0.975117	0.02355
-1.577730931	0.595559	-0.20061
-0.557660777	0.994155	0.0067
0.034460915	0.986115	-0.02936
0.522298466	0.897516	0.14715

#DIV/0!	?	#DIV/0!
#DIV/0!	0.308068	#DIV/0!
-0.716207034	0.904117	-0.13124
-0.65877374	0.874254	0.13226
-0.638199675	0.943275	-0.07145
0.968365591	0.73837	0.56155
-0.401362562	0.633795	0.31573
-1	0.0805096	1.32193
-0.248312958	0.977231	0.04262
-0.299225044	0.893916	0.13711
-0.412627786	0.967485	-0.06714
-0.433896527	0.962851	-0.07696
-0.098411423	0.757762	0.27476
-0.584962501	0.685948	0.24873
-0.447189692	0.986753	0.02671
-0.456582391	0.926837	-0.16238
-0.331054981	0.954114	-0.10512
-0.321365531	0.946366	-0.11595
-2.087462841	0.777265	0.40118
-0.075218178	0.99961	-0.00074
-0.502756706	0.992552	0.01225
-0.1331342	0.940843	0.09268
-0.228212095	0.803736	0.25488
-0.075771897	0.895309	0.15821
-0.445118839	0.79033	0.22092
-0.352492413	0.901806	0.17767
0	0.785812	0.58496
-0.778414771	0.818404	-0.33057
-0.300774978	0.907564	0.12299
-0.508098087	0.926181	-0.13549
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-1.041499363	0.734689	-0.42874
-0.67379725	0.91742	-0.15611
0.002516601	0.931425	0.12618
-0.443606651	0.645367	0.4975
0	0.567924	-1
0.189884995	0.999334	-0.00147
-1.263034406	0.709926	0.32193
-0.213718878	0.919046	0.11826
0	0.90763	-0.23447
-0.141404961	0.875031	0.16993
-0.281770968	0.976241	0.0458
-0.495546411	0.637001	-0.31169
-0.222392421	0.462495	-1.22239
-0.434908209	0.981531	-0.0385
-1.806127619	0.102266	-1.21831
#DIV/0!	0.450185	#DIV/0!
0.762166148	0.568812	1.07733
0.519028231	0.761371	0.41131
-0.247553419	0.894877	-0.23341
-0.415037499	0.523243	-2
-0.325040707	0.934865	0.12159
0.064130337	0.661362	0.58496
-0.987060944	0.573297	-0.66513
-0.623436649	0.635234	-0.66297
-0.574620556	0.606195	0.26224

-1.925999419	1	0
-0.132435901	0.935501	0.11136
-0.434719865	0.766247	0.25552
-0.930291028	0.618753	-0.23942
-0.638073837	0.860752	-0.30179
-1.114678604	0.947799	-0.08896
0.05081379	0.99856	-0.00272
-0.444607466	0.963642	0.04815
-0.356693513	0.982021	-0.03125
-0.748795229	0.913773	-0.08571
-0.689888898	0.871257	-0.21808
-0.608865259	0.908729	-0.12822
-0.25365317	0.905926	0.16018
-0.459431619	0.83517	-0.28951
0.026231542	0.936701	-0.15347
-0.573107914	0.966675	0.07575
-0.523177083	0.794215	-0.27945
#DIV/0!	?	#DIV/0!
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-0.279436013	0.973717	-0.04297
-0.392597205	0.987824	0.02143
-0.297591628	0.840231	0.15275
-0.254916688	0.95612	-0.08859
-0.002180589	0.931208	0.08947
0.902702799	0.840212	0.38333
-0.187018091	0.917421	-0.16473
-0.207324973	0.952925	-0.08903
-0.287980763	0.873858	-0.27962
-1.425996711	0.927847	-0.10344
-0.812177306	0.769716	-0.488
-0.173482821	0.9865	0.02815
-0.584962501	0.785812	-0.58496
-0.658367528	0.591612	0.17649
-0.20849036	0.984678	-0.02761
-1.399103191	0.717808	-0.65988
-0.736965594	0.804574	-0.51457
-0.564263508	0.926515	-0.1585
-0.603071592	0.959031	-0.04323
-0.295209102	0.960953	-0.08111
-0.169925001	0.865961	0.19841
-0.234338026	0.91614	-0.15513
-0.250514937	0.953239	0.06154
0.243115255	0.923282	0.13916
-0.415037499	0.847091	-0.41504
-0.473931188	0.806223	-0.47393
-0.399344067	0.844841	0.16758
-0.685010037	0.91257	0.06554
-0.048767875	0.847403	0.19692
-0.233162146	0.83056	0.21468
-0.245175288	0.977231	0.05325
0.875780063	0.836299	0.38405
0.080170349	0.753677	0.36257
-0.102569734	0.921306	-0.1913
-1.688055994	0.965939	-0.05063
-0.826999825	0.958202	0.01391
-1.134003955	0.988578	-0.02485

-0.533348197	0.918845	0.12078
-0.451743701	0.949018	-0.08351
-0.454465366	0.605056	0.36453
-0.376115569	0.952583	0.07241
-0.34152202	0.934158	-0.13889
-0.426938313	0.999011	0.00215
-0.386170438	0.915841	-0.14777
-0.296907302	0.967897	-0.0687
-0.208475762	0.978411	0.02562
-0.321928095	0.986088	-0.02318
-0.321643866	0.844189	0.18818
-0.624035738	0.943347	-0.07265
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-0.362844539	0.863029	-0.32385
-0.069332021	0.899694	-0.2792
0.379704426	0.79494	0.35566
-0.683363035	0.816022	0.20606
-0.423906159	0.938423	0.08182
-0.430202489	0.886994	-0.2331
-0.064865554	0.961572	-0.07662
-0.321928095	0.75577	0.26665
-0.212280069	0.85039	0.22579
-0.624692463	0.961156	0.06804
-0.229898956	0.776975	0.32227
-0.03876957	0.953507	0.08489
#NUM!	0.495025	-1.58496
-0.326293287	0.855152	-0.28854
0.008309946	0.959793	-0.09077
-0.404008005	0.880004	-0.2434
-0.441363326	0.955462	0.07996
-0.165644004	0.785526	0.32664
-0.561766131	0.973184	0.03624
-0.517607233	0.922835	-0.13443
-0.301023992	0.901329	0.15871
-0.523440557	0.944495	-0.10025
-0.540985982	0.93061	-0.10476
#DIV/0!	?	#DIV/0!
-0.569000206	0.628599	0.21942
0.149867349	0.715403	0.3673
0.176558094	0.959459	-0.09622
-0.847996907	0.617945	-1.16993
-0.036525876	1	0
-0.959358016	0.978859	0.04064
-1.777607579	0.101516	-2
-0.495479118	0.925033	-0.08599
0.050626073	0.901462	-0.22239
-0.261712651	0.949558	0.09962
-0.12367437	0.923559	0.11768
-0.180572246	0.720437	0.3388
-0.092029138	0.850982	0.21775
#DIV/0!	?	#DIV/0!
-0.161036905	0.981356	0.03839
#DIV/0!	?	#DIV/0!
-0.223276697	0.986731	-0.02677
#NUM!	0.622002	-1
#DIV/0!	0.450185	#DIV/0!

-0.260235772	0.889726	-0.21077
-0.353767638	0.72105	0.26992
-0.627554377	0.977625	0.03626
-0.171480468	0.903737	-0.24327
-0.367484919	0.984265	0.02733
-0.490184276	0.906372	0.09292
1	0.622002	1
-0.341036918	0.563569	-0.926
-1	0.832892	-0.2735
-0.496997591	0.893803	-0.18737
-0.613488199	0.925264	0.07617
-0.30210568	0.928535	-0.16235
-0.584962501	0.805714	0.41504
0.720957718	0.882129	0.2713
0	0.450185	#NUM!
0.130060541	0.931619	-0.14296
-0.352408439	0.950305	0.0736
0.145850866	0.921556	0.12724
-0.373814837	0.901923	0.07635
-0.24081236	0.917072	-0.1544
0.146329885	0.985336	0.03136
-0.231607488	0.741209	0.32646
-0.294156923	0.992672	-0.01326
-0.04186551	0.915723	-0.1707
-0.041579104	0.862037	0.16262
-0.537483791	0.979487	-0.04172
-0.445625819	0.898136	-0.22323
#DIV/0!	?	#DIV/0!
-0.658701274	0.88109	-0.2295
-0.352085594	0.952563	-0.09446
-0.26720584	0.910459	-0.18979
-1.910339074	0.548917	-1.02181
-4.636624621	0.173362	-3.3147
-1.714842783	0.657039	-0.56598
-2.133473647	0.41032	-0.89308
-1.707819249	0.635691	-0.48543
#NUM!	0.308068	-1
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-0.047305715	0.895896	0.17509
-0.530514717	0.779373	0.35845
-0.441899452	0.614195	-0.78159
0.747111481	0.969465	0.05558
-0.451016796	0.927432	-0.14504
-1.393431043	0.870002	-0.22437
-0.31938827	0.933464	-0.15076
-0.654072586	0.855701	-0.29313
-1.347373111	0.942802	-0.10026
-1.697620301	0.751421	-0.25628
0.029146346	0.976794	-0.06012
-0.385383764	0.898193	0.21512
-0.896618288	0.545963	-1.30912
-1.331631947	0.88301	-0.25309
-1.022038663	0.963619	0.07744
0.118533174	0.902665	0.23635
-0.682919596	0.948154	-0.11232
3.586368337	0.901668	1.12234

-0.608075571	0.919212	-0.18195
-0.854412969	0.721217	0.58878
0.465663572	0.577413	1.01707
-0.360316378	0.881809	0.25623
-0.408723725	0.894879	0.23589
0	0.450185	#NUM!
-1.400653581	0.809556	0.38804
-1.993544978	0.620853	-0.40858
-2.058370518	0.741933	0.49987
-0.725234228	0.739841	0.39063
-0.270861624	0.917302	0.13343
-0.473541218	0.932686	-0.12649
-0.805315806	0.939915	0.10302
-0.094921855	0.876791	0.2749
-1.492531214	0.907013	0.05394
-1.339905734	0.790169	0.39329
-0.80679365	0.943258	-0.10564
0.406625259	0.212549	1.48063
-3.42202393	0.0356253	-2.92862
-0.572931126	0.648006	-0.50345
-0.036787843	0.930293	-0.13932
-1	0.499897	-1
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-0.14390764	0.734306	-0.54928
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-1	0.18169	#NUM!
-0.682293903	0.886661	0.05813
-0.883303775	0.829265	-0.33121
-0.584962501	0.919113	-0.152
-2.284070951	0.608525	-0.75735
-0.398549376	0.836886	-0.25807
-2.419538892	0.944948	0.10402
0.014220601	0.947868	-0.11252
-0.322821115	0.934094	0.13126
-0.47925339	0.588925	0.73433
-0.905784658	0.750035	-0.49075
-0.763260683	0.971795	-0.05676
-0.343809151	0.995517	0.00753
-0.660691573	0.991953	0.01282
-2.925999419	0.538474	-0.7885
-0.650184947	0.9875	-0.0259
-0.674221952	0.9125	-0.20008
-0.588255074	0.920325	0.16987
-0.501601136	0.962046	-0.06987
-0.461814205	0.932314	-0.14252
-0.208162985	0.886523	0.17486
-0.243119569	0.949391	0.09324
-0.84925197	0.972749	0.04933
-0.640280478	0.953533	-0.07374
-1.110968096	0.928499	-0.12543
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#DIV/0!	0.450185	#DIV/0!

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-0.131244533	0.994971	0.00962
0.414027562	0.89508	0.23945
0.289506617	0.674351	0.73697
-1.447458977	0.768134	-0.38333
-0.534733979	0.948128	-0.09392
-0.351315643	0.959943	-0.07942
0.126804785	0.854731	-0.32448
2.362570079	0.723842	1.36257
-0.563002068	0.953815	-0.06459
-0.319426392	0.958067	0.04551
#DIV/0!	?	#DIV/0!
-0.712128634	0.900901	-0.09734
0.637801893	0.878956	0.27428
-1.537133976	0.570061	-0.91095
-0.147557188	0.822002	-0.33703
-0.259781428	0.950573	0.10062
-0.085753149	0.828405	0.22256
-0.193405792	0.95303	-0.08874
-0.35135418	0.994359	0.01026
-0.322843801	0.963549	0.05602
0.20967118	0.953807	-0.10878
-0.489783232	0.867203	0.18005
-0.451563375	0.947788	-0.08849
-0.511596468	0.984142	-0.03043
-0.279733469	0.947726	-0.11434
-0.152154828	0.761276	0.52383
-0.183971724	0.978628	-0.04611
-0.088981845	0.866584	0.20106
-0.415037499	0.531526	-1.67807
-0.330148602	0.942155	-0.10269
-0.836772968	0.82661	0.25314
-0.474680446	0.820716	-0.29971
-0.214738849	0.939297	-0.11165
-0.114546575	0.946649	0.0822
-0.227145364	0.916614	0.12758
-2.95419631	0.544269	-1.04731
0.683408254	0.794321	-0.76829
-1.975437918	0.789843	-0.31957
-0.376976552	0.949478	-0.10064
-0.13888848	0.967679	0.06156
-0.569614536	0.635291	-0.60438
-2.459431619	0.38665	-1.87447
-0.486883753	0.997223	0.00445
-1.334416429	0.793885	0.42616
-0.56476957	0.995415	0.00721
-0.644928132	0.968193	-0.06826
-0.417484227	0.86107	-0.30967
-0.44779523	0.966033	0.05508
-0.877068676	0.541986	0.67259
1.127209451	0.537956	1.15197
-0.037082257	0.831494	0.21588
0.022291011	0.933517	0.1174
-0.525902516	0.973541	-0.05006

-0.432304653	0.956754	0.06198
-0.202123623	0.674455	0.39612
-0.359866752	0.994312	0.00879
-1.103003692	0.835214	-0.21675
0.300866479	0.883711	0.30087
-0.564994084	0.965884	0.05426
-0.554548409	0.869503	-0.10465
-0.400614391	0.945414	-0.11277
-0.206728416	0.962253	-0.07828
-0.470282945	0.987615	-0.02308
-0.559427409	0.875468	-0.28379
-0.407221846	0.907714	-0.15795
-0.080170349	0.991692	0.01616
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-0.614108846	0.777054	-0.12029
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-0.324591123	0.957695	-0.08563
-0.158349025	0.9853	-0.03031
-0.361106326	0.992575	-0.01394
-0.526898526	0.947312	-0.07135
0.524420959	0.68736	0.60459
-0.657184539	0.961547	-0.03229
-0.420783661	0.92463	-0.14193
0.30256277	0.906802	0.20163
0.547487795	0.897067	0.26039
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-0.193197729	0.889284	0.13469
0.310046472	0.826857	0.30637
-0.189071352	0.946091	-0.1127
-0.260617541	0.831328	0.18463
0.283665739	0.778181	0.40968
-0.469894849	0.974286	0.04369
-0.310787537	0.528114	0.36091
-3.409390936	0.146239	-1.5025

0.17546015	0.878313	0.25529
0.136682698	0.773302	0.39018
-1.584962501	0.825659	0.41504
0.678071905	0.377662	1.37851
0.704544116	0.840264	0.45457
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-0.553019608	0.978071	-0.04372
-0.69563327	0.848351	0.29618
-0.407769499	0.920785	0.12219
-0.404529841	0.968789	-0.04826
-1.116025823	0.417722	-0.33931
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-0.42641955	0.925236	-0.15682
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0.330148602	0.444153	0.87072
-0.350953116	0.954812	-0.10692
-0.446942206	0.331625	0.63607
-0.212303604	0.954014	0.10257
-0.404028108	0.973102	0.0374
-0.39401597	0.902065	-0.18523
-0.299774953	0.954782	0.07079
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-0.492396382	0.932981	0.13276
-0.625033812	0.877491	-0.25984
-0.290224947	0.987987	-0.02565
0.025610644	0.470846	0.66862
-0.280107919	0.872571	-0.28011
-0.092227292	0.938351	0.08356
-0.173828957	0.792179	-0.44127
0.171111916	0.844517	0.33766
-0.279817258	0.372075	0.55064
-0.915560328	0.855287	-0.31403
-0.239391562	0.890773	-0.24749
0.928446739	0.856181	0.47207
-0.720576634	0.959732	-0.06241
-0.64514102	0.987894	0.01399
0.247092862	0.902433	0.17871
-0.34900233	0.743845	0.41504
-0.271539125	0.863606	0.23137
-0.275044424	0.999013	-0.00187
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-0.762807439	0.866362	-0.24563
-0.735410437	0.89768	-0.12091
-0.234097964	0.980712	-0.0348
-0.025922225	0.944244	0.10052
-0.052245057	0.869747	-0.29115
-0.275278002	0.906098	-0.15445
-0.541872157	0.979111	-0.02896
-0.326009272	0.928903	-0.13669
-0.590676152	0.84818	-0.28024
-0.540779369	0.922617	-0.13832
-0.687700606	0.901212	-0.17674
-0.400279983	0.962787	-0.0775
-0.346717279	0.793366	0.20537
-0.628596906	0.969839	0.04939
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-0.431676441	0.96953	-0.05583
0.393992054	0.992131	0.01749
-0.522526874	0.995336	-0.00808
-0.404432309	0.977723	0.04042
-0.269279461	0.96156	-0.07729
-0.393023197	0.892528	-0.24133
-0.030146963	0.997077	0.00638
-0.54642253	0.866268	-0.25574
-0.846683996	0.953157	-0.09662
0.209730133	0.935334	0.13661
-19.55288766	0.675472	-0.56803
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-0.704082071	0.933894	-0.12894
-0.485426827	0.790729	0.30812
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-0.550856947	0.960603	0.07291
-0.651153827	0.931928	0.07222
-0.558608437	0.905812	0.12343
-0.628083738	0.923495	0.09396
-0.672622376	0.901507	0.10632
-0.622633899	0.978915	0.02611
-0.315742848	0.823397	0.23705
-0.389307224	0.945305	-0.08962
-0.078362263	0.934205	0.15158
0.433460065	0.922399	0.19984
-0.428093652	0.792742	0.21681
-0.268864594	0.917568	-0.15518
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0.278301162	0.976187	-0.06274
-0.933114188	0.831253	-0.22334
-1.584962501	1	0
-0.34680364	0.929755	-0.12587
-0.269866668	0.947631	-0.079
-1.584962501	0.651448	-0.58496
-0.795030728	0.917641	-0.10644
-1.273268463	0.858035	-0.25347
-1.881355504	0.356716	-1.32193
-0.191695624	0.816842	-0.33529
-0.989028882	0.362203	-0.31918
0.268125502	0.993537	0.01301
-0.387023123	0.591021	0.55639
-0.052547214	0.945131	0.09566
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-0.252387162	0.893959	0.17848
-0.547545224	0.834392	0.27321
-0.332575339	0.720062	-0.33258
-0.124447371	0.88732	-0.19094
0.014746585	0.903169	0.15114
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-0.881236084	0.726183	-0.4552
-0.780995273	0.748097	-0.4136
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-1.304928187	0.918165	-0.14465
-0.158157603	0.890194	0.18909
-0.174875705	0.982229	0.03257
-0.424726555	0.896824	-0.23208
-0.433090687	0.983315	-0.02249
0.354414631	0.957271	0.10253
-0.315614321	0.957238	-0.078
-0.38054273	0.946369	-0.09219
-0.85035703	0.884924	-0.14119
-0.465591304	0.938154	-0.10316
-0.686306598	0.963378	-0.06144
-0.497461346	0.233587	0.36467
-0.346263231	0.942392	-0.11442
-0.455464863	0.938732	0.09379
-0.076257732	0.779342	0.24084
-0.169127271	0.814374	0.26551
-0.455739	0.956015	-0.06694
-0.372431479	0.930716	0.09835

-0.35883142	0.911965	-0.21162
-0.489520383	0.909755	-0.19045
-0.603739708	0.903652	-0.19977
-0.522466575	0.869654	0.17298
-0.649959756	0.912134	0.13345
-0.510942037	0.913091	-0.13846
-0.40582482	0.986222	0.02331
-0.493296513	0.922702	-0.12784
-0.34201486	0.938985	0.0919
-0.898572267	0.764085	-0.47102
-0.753972916	0.984653	-0.01747
-0.039866479	0.947493	0.08631
-0.445799335	0.871969	-0.19111
-0.362968732	0.932318	-0.12216
0.367122518	0.97829	0.05164
-1.709035268	0.774295	-0.38236
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-0.009453953	0.739571	0.35141
-1.752072487	0.639874	-0.67207
-0.259149917	0.933792	-0.1321
-1.175039651	0.703038	0.52894
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-0.411784521	0.736892	0.53527
-0.359962696	0.956471	0.08399
-0.412843449	0.989047	-0.02256
-2.064130337	0.879081	-0.25054
-0.852442812	0.879464	0.22556
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-0.663574502	0.708562	0.61117
-1.062255374	0.804456	-0.36313
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-0.974182663	0.895841	-0.22061
0.16196748	0.735669	0.5217
-0.565534587	0.942278	-0.11335
-0.206547634	0.992837	-0.01644
-0.315621012	0.951029	0.06955
1	0.83713	0.51457
-0.322814855	0.967286	0.05906
-0.24603425	0.940132	-0.13164
-0.785759774	0.88289	-0.12949
-0.496415202	0.904366	-0.2214
-0.35451031	0.850104	0.20341
-0.352136042	0.948582	0.07976
-0.556205478	0.989882	-0.01505

-0.327602798	0.984331	-0.025
-0.567838323	0.94385	0.07551
-0.689773122	0.812716	-0.35211
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-1.736965594	0.58535	-0.41504
-0.449995051	0.944384	0.09127
-0.557902547	0.98587	-0.02304
-1.669851398	0.689212	-0.51457
-0.723771378	0.846393	-0.18256
-0.285916929	0.828529	0.17117
0.027324232	0.956509	-0.0946
-0.639318809	0.89018	-0.21032
-0.392971558	0.937273	0.10953
0.230389643	0.951012	0.11072
-0.403588157	0.976141	-0.04868
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-0.328054198	0.815695	-0.15472
-0.259249931	0.853074	0.21813
-0.602022089	0.99095	0.01326
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-0.74377792	0.989072	0.02091
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-0.512884624	0.89402	-0.20333
-0.537147987	0.959975	-0.07345
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-0.292318842	0.930227	0.10799
-0.419839814	0.934525	0.08332
-0.986861531	0.850124	-0.12286
-0.186474894	0.981202	-0.03867
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-0.769864381	0.767749	-0.53698
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-0.392715397	0.915352	-0.20293
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-0.631256153	0.985762	0.02509
-0.315647781	0.945188	-0.10911
-0.398549376	0.776745	-0.46566
-0.407639806	0.960188	0.07035
-0.251105323	0.902342	-0.13554
-0.438592919	0.990896	-0.0147
-0.274863171	0.970779	-0.05231
-0.348664477	0.968205	-0.05821
-0.416981833	0.943834	-0.11366
-0.965706822	0.949258	0.10514
-0.069962558	0.918891	0.14987
-0.270914929	0.960933	0.06262
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-0.637901467	0.903333	-0.16582
-0.294311601	0.988662	-0.02297
-0.036644395	0.878196	-0.27435
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-0.397533752	0.948825	-0.11236
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-0.259079303	0.747473	0.27769
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-0.079089145	0.948411	0.10614
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-0.82564583	0.931534	0.11693
-0.147080833	0.991134	0.02091
-0.634539045	0.906134	-0.21394
-0.31526556	0.943994	-0.1299
-0.199824664	0.911557	-0.16819
-0.851049636	0.888443	-0.10967
-0.357654589	0.970082	-0.06204
-0.513939094	0.953898	-0.08153
-0.576605948	0.988044	0.02257
-2.98486183	0.690235	-0.38308
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-0.508387976	0.841124	-0.29373
-0.304226093	0.991347	-0.01432
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-0.168901916	0.991364	0.0166
-0.282241079	0.879361	0.13798
-0.416815751	0.855919	0.16506
-0.559327502	0.821573	0.13966
-0.208636701	0.998484	0.0027
-0.574557836	0.973481	0.03517
0.205225138	0.850065	0.23155
-0.194612479	0.705343	0.33687
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-0.359690645	0.984787	-0.02662
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-0.250248512	0.95508	-0.08206
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-1.121990524	0.367946	-0.8519
-1.113062664	0.72794	-0.59223
-0.261889864	0.969612	0.05889
-0.587873396	0.907481	0.12974
-0.450349943	0.87366	0.29776
-0.882893262	0.989954	0.02248
0.102623902	0.802339	0.50234
-0.36610982	0.987111	-0.02329
-0.339660403	0.98823	-0.02069
-0.725159222	0.975362	0.03489
-0.61389184	0.981104	-0.02201
-0.436545999	0.934331	0.09729
-0.487409879	0.996605	0.00539
-0.145111815	0.966984	-0.07979
-0.444423853	0.933569	-0.15056
-0.679157863	0.967166	-0.06098
-0.182398938	0.85307	-0.35477
0.071008112	0.965221	0.04479
-1.033954906	0.757398	-0.08576
-0.439027674	0.988359	-0.02335
0.906890596	0.574988	0.58496
-0.603580649	0.970931	-0.01838
-1	0.651448	-1
-1.353636955	0.340442	-1.35364
-0.394899854	0.937972	0.04983
-0.241540263	0.981038	0.02801
-0.555085912	0.987169	-0.01672
-0.281240259	0.967815	0.05506
-0.343501137	0.966959	-0.06756
-0.350909292	0.889329	0.16996
-0.480551962	0.808631	-0.31383
0.021830248	0.913306	0.12865
-0.177396251	0.928506	0.1328
-0.380013704	0.98437	0.02667
-0.044942577	0.957125	0.08517
-0.000684878	0.981742	-0.04027
-0.163690678	0.984243	-0.0299
0.173565415	0.547227	0.77694
-0.698965019	0.934065	-0.07318
-0.63967571	0.838813	0.14981
-0.843467377	0.911132	0.16487
0.462971976	0.832605	0.31411
-0.343434581	0.970501	-0.04232
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-0.083560453	0.941203	-0.10724
-0.333207573	0.955665	-0.07053
-0.443151226	0.876677	0.15122
-0.205939502	0.963522	0.07234
-0.921654258	0.982587	-0.03195
-0.410772953	0.98279	-0.02455
-0.837116486	0.990835	-0.01054
0.235575305	0.97173	-0.05853
-0.225284682	0.97106	0.05005
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-0.584962501	0.756486	-0.58496
-0.607702111	0.926922	-0.09597
-0.238285397	0.936229	0.07296
-0.543956613	0.890265	-0.15809
-0.633897626	0.871833	-0.25771
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-0.318765445	0.927689	-0.0975
0.154738308	0.627558	0.49129
-0.134878054	0.932228	-0.11292
-0.994075166	0.530577	-0.48602
-0.354361266	0.880719	0.09619
-0.404440807	0.968491	0.05419
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-0.299368625	0.951959	-0.09361
-0.396844383	0.965489	-0.05792
-0.465160252	0.967553	-0.05834
-0.496706752	0.896134	-0.23764
-0.391950434	0.907512	-0.20209
-0.23885211	0.878312	0.2294
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-0.37650927	0.880127	0.14644
-0.650979544	0.945951	-0.06535
-0.288464154	0.952617	0.07192
0.959358016	0.557516	1.06848
-1	0.976628	-0.05063
-0.684485886	0.933316	-0.12763
0.140832558	0.961562	0.08788
-1.064130337	0.844258	-0.13124
-1.336414562	0.333472	-1.05136
-0.536743176	0.687021	0.28574
1.321928095	0.534406	1.58496
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0	0.96267	0.08069
-0.152003093	0.746895	-0.65896
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-0.223861711	0.857497	0.24768
0.161589142	0.927704	0.10806
-0.398874648	0.6069	0.19711
-0.573962306	0.85477	0.11345
-0.487917812	0.918703	0.11631
-0.313774459	0.907669	0.12953
-0.757829169	0.906479	0.11682
-0.427463534	0.909411	0.15281
-0.322530347	0.962861	-0.06339
-0.542763262	0.992763	-0.00726
-1.321928095	0.919527	-0.152
-0.530514717	0.874417	-0.21501
-0.94333522	0.995475	-0.00341
-0.471413347	0.905094	-0.17493
-0.730043698	0.981023	-0.04084
-0.853603984	0.797294	0.32228
-0.505401527	0.977353	0.04814
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-0.806430414	0.934191	0.05088
-0.504702854	0.734078	0.42278
-1.384049807	0.283834	-2.4132
-1.777502483	0.949262	0.08707
3.563704969	0.747976	1.82362
0.254702188	0.678979	0.47006
-0.43369362	0.926547	-0.12978
-1.123988717	0.78726	-0.47865
-25.49935911	0.342951	1.3151
-1.450661409	0.564699	-1.27009
-0.267051766	0.969584	-0.05504
-0.518304076	0.806526	-0.52759
-0.029803807	0.930427	0.13893
-0.26101806	0.811665	-0.42291
-0.143124942	0.976399	-0.05722
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-0.695725566	0.972665	0.04531
-0.556393349	0.985433	0.0241

-0.973778185	0.833964	-0.32794
-1.121990524	0.853505	-0.30256
0.91753784	0.215301	1.152
1.937909995	0.843894	0.36257
-0.510796482	0.772703	-0.33356
-0.514573173	0.932567	0.11864
-0.259742582	0.981158	-0.03673
-1.280107919	0.932023	0.16046
-0.391450679	0.951205	0.06774
-0.357426776	0.9545	0.05504
-0.193325434	0.850233	0.22035
-0.346288083	0.932176	0.09714
-0.185485286	0.436378	0.39744
-0.243113712	0.858695	0.21244
-0.566225938	0.906717	-0.16993
0.880947328	0.525255	0.793
-2.584962501	0.450185	-0.26303
-1.266376742	0.989168	-0.02283
-0.311677998	0.932672	-0.11784
-0.829892644	0.995934	0.00328
-0.501144042	0.949757	0.08228
-0.132961642	0.620704	0.37642
-0.45817858	0.937028	0.09427
-0.080449832	0.95379	0.08083
-0.63760398	0.880438	0.19049
-0.362570079	0.886945	0.28951
-0.666873699	0.973097	0.05514
0	0.230584	2
-0.547771684	0.965699	0.06366
-0.424663932	0.768742	-0.59496
-0.13745286	0.946489	-0.11945
-0.259059324	0.957142	0.08136
-0.80434516	0.986853	-0.02708
-0.406517957	0.802457	-0.42981
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-1.111471742	0.859601	-0.27694
-1.527963	0.67925	-0.67997
-0.38581249	0.506734	0.31455
-0.84550628	0.910943	-0.19547
-0.261647548	0.981188	-0.03631
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-0.298581985	0.909999	0.12985
-0.21606354	0.856629	0.28478
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-0.518264359	0.911824	0.09155
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-0.214504512	0.984648	-0.02876
-0.169925001	0.578734	0.54889
0.322463318	0.855867	0.31172
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-0.281057427	0.847573	0.18137
-0.536822587	0.983991	0.02339
-0.240936822	0.971742	-0.05107
-0.232089766	0.969547	-0.04824
-0.322161711	0.958167	-0.08963
-0.342613046	0.970748	-0.05629
-0.313540309	0.923379	0.11023
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-0.220420321	0.936125	-0.1161
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0.24314644	0.601443	0.84756
0.040308393	0.9329	0.15171
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-0.212404177	0.95262	0.10825
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-0.524143123	0.91786	-0.175
-0.510385376	0.922667	-0.14549
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-0.211076294	0.998336	-0.0025
-0.322855575	0.996309	0.0074
-0.555850752	0.991707	0.00805
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-0.5334322	0.591259	0.43458
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-0.452559368	0.965153	-0.06273
-0.151731885	0.986468	-0.02214
-0.679525502	0.851604	-0.2674
-0.3825415	0.917131	0.12335
-0.761389068	0.968591	-0.04992
-1.481100065	0.888629	-0.2363
-0.360605758	0.855276	0.13381
-0.414184446	0.999784	0.00037
-1.045866973	0.922926	0.14189
-0.519954926	0.988122	0.01758
-0.317638659	0.945625	-0.10189
-0.830074999	0.528557	-1.41504
-0.186000631	0.952672	-0.09154
-0.684569049	0.996061	0.0066
-0.790361851	0.898435	-0.2133
-0.96829114	0.723317	-0.24393

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-0.690015425	0.880564	-0.19723
-0.410044805	0.801746	0.22654
-0.659590089	0.875943	-0.15841
-0.205266414	0.84939	0.21457
-0.475997414	0.980684	0.02877
-0.492379588	0.934521	0.10783
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-0.382135388	0.979685	0.03331
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-0.449860645	0.980267	-0.03426
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-0.452276093	0.995534	-0.00735
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-0.577635441	0.992081	-0.0118
-0.485729511	0.944425	0.06664
-0.467558301	0.978361	0.03316
-0.294827802	0.919761	0.13729
-0.34797323	0.907584	0.13965
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-0.276249189	0.995469	-0.00813
-0.421354238	0.927956	-0.15372
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-0.357255128	0.854535	0.16749
-0.507743756	0.990404	-0.01473
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-0.476141103	0.959659	-0.084
-0.657738903	0.846883	-0.35726
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-0.869603363	0.714301	-0.44127
-0.277887534	0.76064	0.43339
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0.025279408	0.969068	0.07628
-0.667117746	0.996327	-0.00753
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0.199308808	0.88314	-0.23133
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-0.403355694	0.849406	-0.31316
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-0.49999521	0.74431	0.23231
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-0.696131877	0.805644	0.34792
-0.316927414	0.971473	-0.06611
-0.755269057	0.967259	-0.06761
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-0.326016434	0.948574	-0.09259
-0.633430518	0.970128	-0.0395
-3.102538162	0.573256	-0.96153
-0.316157705	0.95988	-0.05528
0.347790158	0.708602	0.46248
-1.284746317	0.83614	-0.30063
0.081997631	0.963221	0.09107
-0.222133098	0.991629	-0.01477
1.820676301	0.871922	0.52763
-0.676424052	0.969554	0.0546
-1	0.588047	0.80735
-0.699474024	0.939927	-0.12013
-0.303164786	0.91442	0.15358
-0.4949303	0.789792	-0.43953
0.652076697	0.884936	0.28011
-0.142231317	0.980224	0.03647
-0.306175967	0.961265	0.07696
-0.652550163	0.906177	-0.14935
-0.569842669	0.843783	0.17514
-0.380778696	0.799286	0.23192
-0.391183318	0.97888	-0.03863
-0.543589583	0.959711	-0.05942
-0.302280246	0.974651	-0.04786
-0.402508825	0.865633	-0.28787
-0.220768679	0.968369	-0.06676
-0.716939241	0.900831	-0.09514
-0.623991304	0.984447	-0.01956
-0.601892897	0.96105	-0.05251
-0.5840779	0.976019	-0.03656
-0.419000108	0.964589	-0.07366
-0.296758543	0.915989	-0.20836
-0.343618315	0.901521	-0.22855
-0.115517813	0.994039	0.01347
-0.292254917	0.772059	0.25453
-0.825447177	0.76985	-0.17349
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-0.384526533	0.982493	0.03381
-0.246002468	0.845144	0.20167
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-0.458052392	0.985501	0.01928
-0.475734809	0.951081	0.04843
-0.354490879	0.908756	0.08584
-0.119720302	0.707502	0.34426
-0.635530223	0.946816	0.05327
-0.60475406	0.977574	-0.03189
-0.535669582	0.901952	0.11094
-0.355808988	0.852978	-0.26583
-0.634409012	0.875937	0.06259

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-0.391766766	0.938843	-0.12329
-0.409568755	0.997448	0.00511
-0.591055237	0.933898	-0.13337
-0.40214528	0.947136	-0.11619
-0.292942846	0.89281	0.1648
-0.412610388	0.972189	-0.04708
-0.708666849	0.957656	-0.05704
-0.459743847	0.968624	-0.05629
-0.539592208	0.998648	-0.00159
-0.568109277	0.952203	-0.08172
-0.414361807	0.949844	-0.08308
-1.192374276	0.926658	0.12521
-1.597244609	0.845732	0.26104
0.300455827	0.897222	0.20749
-0.368796882	0.941823	-0.11122
-0.092859609	0.928232	-0.12928
1.955177802	0.58682	1.20489
-0.706772217	0.786155	-0.4482
-2.182864057	0.77678	-0.50967
-1.134880892	0.707493	-0.58036
-0.609440438	0.887682	-0.25645
-0.358368971	0.951042	-0.09439
-0.015824967	0.988137	-0.02647
-1.223084423	0.816634	0.29149
-0.462329584	0.972982	-0.04402
-0.286006436	0.976311	0.04112
-0.119713555	0.987782	0.02385
-0.52928929	0.930415	-0.13672
0.536990019	0.726558	0.55113
-0.099251818	0.945691	0.08763
-1.911943823	0.848637	-0.28335
-1.321928095	0.139326	-2.32193
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-0.461698938	0.988438	0.02159
-0.306103128	0.736027	-0.67243
-0.495651807	0.987585	0.01724
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-0.833429326	0.776304	-0.45934
-0.531429697	0.942145	-0.09792
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0.027605279	0.875941	0.26889
-1.788296586	0.490121	-1.19536
0.182341057	0.69663	0.59829
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-0.742692205	0.955139	-0.09884
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-0.255263542	0.984577	-0.03197

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-0.403496664	0.974708	-0.02472
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0.716874176	0.588948	0.61032
0.053287544	0.836204	0.22769
-0.56945708	0.646189	0.62319
0.206051736	0.93527	-0.15134
-0.842741678	0.90158	-0.11525
-1.249506021	0.981548	0.02979
-0.296965927	0.993024	-0.01334
-1.979040381	0.485553	-1.48966
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-1.870458844	0.574376	-0.88707
0.321928095	0.877389	0.32193
-0.572233741	0.893192	-0.17583
-0.175442006	0.861224	-0.22607
-0.197036847	0.820134	0.42269
-1.180948189	0.59735	-0.96225
-0.201751541	0.798702	0.26773
-0.193823269	0.951137	0.11103
-0.449802917	0.620336	0.58496
-0.679012078	0.952133	0.03597
-0.416598013	0.988231	-0.02517
1.461023046	0.522466	1.9462
-0.357523338	0.965697	0.04954
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-0.105178017	0.930319	0.11991
-0.307428525	0.769947	0.38187
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#DIV/0!	?	#DIV/0!
-0.721917679	0.794434	-0.487
-58.40266987	0.308068	-36.3683
-0.403268594	0.975998	-0.04562
-0.074842925	0.977776	0.04016
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-0.919538883	0.851971	0.34003
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-0.198083629	0.917051	-0.18336
0.1168813	0.855571	0.25591
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-0.547487795	0.742448	0.37656
-0.311585329	0.96338	-0.07408
-1.849320806	0.116866	-0.93678
-0.209453366	0.975703	-0.05295
-0.132307292	0.993358	0.0148
-0.550205297	0.714928	-0.61882
-0.487665299	0.946162	-0.11641
-1.351472371	0.952514	0.09433
-0.030446871	0.879305	0.17914
-1	0.764931	0.58496
1.415037499	0.785812	-0.58496

-0.059378547	0.876501	0.18536
-2.545812632	0.743782	-0.43157
0.31410859	0.760225	-0.81714
-0.492076526	0.88764	-0.24537
-0.240324074	0.334694	-49.1819
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#DIV/0!	0.313562	#DIV/0!
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-0.450312974	0.953326	-0.0957
-0.192643672	0.9555	-0.1085
-0.166210076	0.987253	0.02747
0.173589808	0.942917	0.13347
-0.252884468	0.986918	0.02823
-0.059531397	0.948986	0.05239
-0.356757767	0.596273	-0.41167
-1	0.474021	1
-0.72057644	0.934109	-0.1002
-0.761963422	0.841802	-0.29979
-0.263404518	0.985898	-0.03118
-0.509388847	0.971939	0.03677
-0.058102955	0.955935	0.09192
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2	0.663808	1.58496
-1.31836148	0.996499	0.00712
-0.251538767	0.772192	0.46467
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-0.033947332	0.884118	0.21759
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-0.304257069	0.955939	-0.10535
#DIV/0!	0.785812	#DIV/0!
0	0.252216	1.58496
-0.711898286	0.786489	0.10777
0.387925654	0.295509	0.94526
-0.223693378	0.950888	0.08976
0.56486893	0.730135	0.48585
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-1.072002074	0.481867	-0.71168
0.259787127	0.975762	0.06413
-0.168392147	0.878735	-0.24921
-0.710493383	0.807968	0.28951
#DIV/0!	1	#DIV/0!
-2.031503205	0.570705	-0.49502
0.226803972	0.987584	-0.03083
-1.341036918	0.444114	-0.926
-0.075148781	0.969329	0.06377
-1.350323897	0.672602	-0.4003
-0.399426811	0.99134	-0.01943
-0.3693178	0.999859	0.00026
-0.684070646	0.805477	-0.39719
-0.08059929	0.960238	-0.05265
0.086812166	0.917693	0.15251

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-10.48611018	0.308068	-92.5409
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-0.225236896	0.957525	-0.09206
-0.084942953	0.973734	0.04762
-1.588572483	0.825267	0.41598
-1.405834155	0.890696	-0.22658
#NUM!	?	45.0431
-2.093877886	0.253323	0.85914
-0.22702387	0.955984	0.06206
0.194572527	0.737324	0.56163
-2.247927513	0.411079	-0.66297
-0.758229304	0.975371	0.03932
-0.299560282	0.624168	0.39232
-0.332000903	0.933782	0.14899
6.837515021	0.717143	5.25858
#DIV/0!	?	#DIV/0!
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-0.84884331	0.877415	-0.24872
-0.493134922	0.989198	-0.01546
-0.846290585	0.965502	-0.06103
-3.336283388	0.450979	-1.49632
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-1	0.950111	0.08746
0.557995453	0.840222	0.33787
0.236989433	0.968016	0.07313
-1.081114314	0.980406	0.04288
-0.467332007	0.981512	0.03003
-0.193191864	0.854802	0.236
-0.781206309	0.866068	-0.2445
-0.905867348	0.881503	0.16008
-0.16549003	0.789421	-0.48543
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0.436099115	0.751148	0.61298
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-0.144389909	0.94644	-0.10692
0	0.450185	#NUM!
-0.296331441	0.803306	-0.46146
-0.534516264	0.814692	-0.45596
-0.241821504	0.751556	0.32146
-0.222392421	0.91071	-0.22239
-55.90655969	0.3369	1.10795
-0.639665719	0.964007	-0.04725
-0.224560258	0.988266	0.02576
-0.071373583	0.889135	0.20321
-0.456087549	0.85354	-0.24331
-2	0.881442	0.16993
-0.394207004	0.910237	-0.18989
0.584962501	1	0
-0.857901396	0.84168	-0.32998
-0.080037254	0.997291	0.00571

-2.476200056	0.983104	-0.03017
-2.191366446	0.590997	-0.60581
-0.84697256	0.586999	-0.89112
-0.433717782	0.694203	0.52603
0.107734452	0.93954	-0.15424
1.565485126	0.93238	0.26442
#DIV/0!	0	#DIV/0!
-0.474818728	0.995308	-0.0089
-1.117709213	0.919566	-0.15387
-0.493040011	0.721144	-0.7885
-0.797524169	0.89235	-0.12288
-1.584962501	1	0
-0.133693788	0.900108	-0.20551
-0.911096964	0.749173	0.37899
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-0.377756483	0.912346	0.11431
0.585404642	0.846368	0.35841
-2	1	0
-1.923010261	0.26924	-0.80255
-0.633308638	0.957732	0.05059
-0.609205437	0.94405	0.11165
-0.267772847	0.900432	0.16958
-0.751441496	0.834401	0.29581
-34.95607033	0.473771	1.72265
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-0.12268252	0.876651	0.24241
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-0.584962501	0.542784	1.05889
0.894647	0.682419	0.59172
-0.564642516	0.811344	-0.42989
-1.857980995	0.31656	-1.39855
-0.929610672	0.890606	0.21945
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-0.047955528	0.903168	-0.22795
-0.863780979	0.824079	-0.18001
-0.024476092	0.996058	0.00807
-0.309715905	0.967711	0.0504
-0.283335186	0.983901	0.03199
-1.23596423	0.95724	-0.06717
0.131698139	0.863975	0.37887
0.118437377	0.690844	-1.05322
-0.666150207	0.992972	0.01539
0.064461016	0.84975	0.30304
-0.374165218	0.786442	-0.47428
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-0.722378058	0.307283	0.32755

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0.313037786	0.830193	0.27285
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-0.519942709	0.777416	-0.45773
-0.302584737	0.989221	-0.02549
-1.501079253	0.485842	-1.22492
-0.383661567	0.913583	-0.06717
0	0.651448	1
-0.642496265	0.868039	0.12685
-0.662038724	0.980755	-0.03945
-0.760122096	0.879556	0.1582
-0.211504105	0.992172	0.0163
-0.594181031	0.897512	0.14832
-0.270451877	0.861294	-0.31578
-1.192645078	0.739226	-0.67807
-0.459641003	0.999511	-0.00112
0.341556902	0.640222	0.48966
-1.203531496	0.74735	0.55943
-1.543460465	0.668423	-0.60958
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-0.164758334	0.773259	-0.56484
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-0.700439718	0.807148	0.44488
0.698579577	0.51305	1.63441
-0.210196039	0.997314	-0.00498
-0.331536877	0.950594	0.11724
-0.563305506	0.98232	0.01903
-0.458831432	0.59662	-1.09745
-0.633931947	0.66996	-0.7569
-0.402098444	0.896772	0.18286
-0.415037499	0.523243	-2
-1.053006493	0.920438	0.15449
-1.133233504	0.874535	0.15973
0.162553013	0.945957	0.12663
-0.503574941	0.936307	-0.0929
-0.35308172	0.936801	0.10003
2.332015763	0.367496	3.38362
-0.733327017	0.850642	-0.29486
2.321928095	0.706667	1.58496
0.459431619	0.844673	0.39232
-0.090720204	0.714143	0.63496
-0.506404113	0.871598	-0.25701
-2.95419631	0.43723	-1.9542
-0.503939041	0.988061	-0.02369
-0.558342245	0.952592	-0.0991
0.222392421	0.430476	0.66297
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-0.152003093	0.572485	-1
0.147806595	0.997487	-0.006
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-1	0.907467	0.22239
-0.167904703	0.992007	-0.01463
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-0.518926742	0.963443	0.05703
-0.203091865	0.943632	0.10535

-0.575427139	0.96027	0.0526
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-0.054584838	0.875936	-0.20997
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-0.875951502	0.942704	0.09448
-0.222392421	0.902906	0.16521
-0.115477217	0.906284	-0.24101
-0.230553742	0.881688	-0.26748
1.033082355	0.768899	0.65275
-1.314814545	0.311799	-0.40025
1.091147888	0.877775	0.38333
0.241928773	0.767956	0.42696
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-0.584962501	0.5863	-0.80735
#NUM!	0.308068	#NUM!
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-0.749079305	0.83131	-0.42249
0.257133304	0.979303	-0.05274
-0.67074025	0.962286	-0.02816
1.137503524	0.834007	-0.73697
-1.876851769	0.457429	-0.66953
-1.519374159	0.71518	-0.72583
-0.075333325	0.977186	-0.04629
-0.348469882	0.956948	-0.09311
-0.589095116	0.845939	-0.35575
-1.031884061	0.68676	-0.52135
-0.321928095	0.219102	-2.32193
-0.682294724	0.715476	0.39189
-0.13492958	0.81638	0.30117
-0.272587849	0.922728	0.15283
-0.485426827	0.821423	-0.48543
-0.263034406	0.830864	-0.41504
-0.655385357	0.978452	-0.02571
-0.763102375	0.741537	-0.45576
-0.487637594	0.930603	0.1005
-0.152003093	0.893157	0.22146
-0.232582162	0.851012	-0.3857
-0.745139526	0.887151	-0.23303
-0.263034406	0.873634	0.22239
0.732536518	0.0606202	1.79367
-0.467671134	0.9755	0.04233
0.049468676	0.88026	-0.3388
0.777607579	0.844039	0.46566
-1.065527534	0.924463	0.11975
-1.049569923	0.763002	-0.49257
-1	0.764931	0.58496
0.91753784	0.909705	0.28951
0.023846742	0.792976	0.36923
-0.629696524	0.699356	-0.73042
-35.60898399	0.783597	-0.51319
-0.25624098	0.889545	-0.14875
-1.469485283	0.415638	-0.46949

-1.124592825	0.79834	-0.34989
-1.033143124	0.310847	-1.04272
#DIV/0!	?	#DIV/0!
-1.119298928	0.831341	-0.22239
-2.321928095	0.553375	-0.90689
-1.229481846	0.74333	-0.47275
0.303887553	0.813796	0.38451
#DIV/0!	0.308068	#DIV/0!
-1.866733469	0.105599	-1
1.584962501	0.363033	1.58496
-0.085081501	0.956594	-0.10545
-1.868817024	0.782716	-0.39489
-1.762500686	0.931284	-0.13523
-0.12045969	0.979138	0.04169
-0.549414922	0.785824	0.30112
-0.348031431	0.9151	0.15331
-0.480897279	0.862958	-0.2907
-0.340657662	0.988908	0.01111
-0.435615633	0.920601	0.19203
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0	0.252216	1.58496
-0.136600509	0.821457	0.35812
#DIV/0!	0.308068	#DIV/0!
#DIV/0!	?	#DIV/0!
-0.583753707	0.840266	-0.34386
-0.536057621	0.947053	-0.06887
-0.645603852	0.895447	-0.23467
-1.44715744	0.167728	-0.81695
-0.279497775	0.949905	0.10121
-0.263034406	0.984202	-0.02286
-1.362570079	0.67124	-0.848
-1.874469118	0.546742	-1.11366
0.736965594	0.132379	1.61667
-0.599404013	0.915554	-0.14605
-1.233913096	0.953831	0.09096
0.158428767	0.74352	0.55296
-0.584962501	0.685038	0.73697
-0.628031223	0.869255	-0.18057
-0.046542586	0.900932	-0.19592
-0.106915204	0.868051	0.28011
-1.318595739	0.612366	-1.05362
-0.239383138	0.966643	-0.06088
-1	0.785812	0.45943
-0.130786608	0.840753	0.26036
0.121015401	0.884667	-0.27753
-0.195550809	0.853352	-0.36839
-0.272349904	0.941819	0.11342
-0.729196865	0.867826	0.16672
-0.330916878	0.962327	-0.07353
-0.824632913	0.806089	-0.43149
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-1.205130813	0.579585	-0.32823
-1	0.353387	#NUM!
-0.472759299	0.99705	-0.00535
0.315501826	1	0

-0.008031828	0.862065	0.26804
-2.285402219	0.466119	-0.96347
-0.241042578	0.897756	0.17551
-0.584962501	1	0
-0.209690234	0.95292	0.09956
-0.909491682	0.906537	0.08176
-0.12348411	0.873252	0.23407
-0.702765228	0.89285	-0.16954
-0.741229664	0.521538	0.774
-1.459431619	0.81946	-0.23704
-0.244018003	0.962543	0.05094
-0.693535023	0.907409	-0.17648
-0.297493877	0.949325	-0.10852
-0.799660196	0.770245	-0.49024
-0.475158492	0.98759	-0.02412
#NUM!	0.308068	#NUM!
-1.084064265	0.793295	0.37362
-0.716207034	0.943046	-0.0973
-0.869259274	0.928971	0.14848
0.667424661	0.728926	0.66379
-0.777607579	0.540492	0.63743
-0.001720567	0.900431	0.2373
-0.517291664	0.800924	0.26504
-2.25420116	0.210973	-0.66465
#DIV/0!	?	#DIV/0!
0.414455992	0.736374	0.56334
0.116737099	0.696911	-1.12346
-0.730679331	0.973775	0.03731
-0.378079743	0.807624	0.22178
-0.107280906	0.96028	0.06279
0.089848268	0.908262	-0.19959
-2.211745177	0.956427	-0.08975
-1.918504008	0.137338	-2.45976
-0.782901878	0.806677	-0.42742
-0.609627012	0.98626	-0.02536
-0.450248404	0.82926	-0.29439
-0.944326402	0.830206	-0.23864
-0.360934009	0.963214	0.06047
-1.420195514	0.980582	-0.0265
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-1.136573053	0.922486	-0.07645
-1.624674807	0.985045	-0.01829
-2.584962501	0.559404	0.41504
#NUM!	0.822295	0.26303
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-0.482424339	0.929441	-0.0977
0	0.450185	#NUM!
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-0.083968302	0.88005	0.24101
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!

0.485426827	0.761288	0.67807
-0.343954401	1	0
-0.584962501	0.764931	-0.58496
-2	0.518334	1.45943
-0.500739794	0.963666	-0.06425
-0.230845452	0.932277	0.13263
-0.240412079	0.91752	0.14228
1.584962501	0.724378	#NUM!
-0.507405977	0.944349	-0.11711
0.662965013	0.784095	-0.77761
1.137503524	0.972171	-0.09954
0.584962501	0.764931	-1
#DIV/0!	?	#DIV/0!
-0.271483596	0.955594	0.08022
-0.29650782	0.934109	0.11015
#DIV/0!	?	#DIV/0!
-0.078988296	0.906585	0.18561
#DIV/0!	?	#DIV/0!
-0.588468444	0.938504	-0.12426
1	1	0
-0.426732833	0.936921	0.1174
-0.898120386	0.653384	-0.89812
-0.62861956	0.959763	-0.08866
#NUM!	0.308068	-2.16993
-0.246691556	0.891831	-0.25031
1.299666823	0.85987	0.5627
-0.262328112	0.924451	0.12087
0.043068722	0.979419	0.04307
-0.333900737	0.873311	0.22069
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
-1.016059851	0.630509	0.49905
-2.572023445	0.639144	-0.83249
-0.233015336	0.981967	-0.04199
-0.266500402	0.998636	-0.00307
-0.584962501	0.860525	-0.26303
-3.321928095	0.295498	-1.73697
-0.414677674	0.919423	-0.15394
-0.732164608	0.828337	-0.42663
#NUM!	0.308068	#NUM!
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-0.031276262	0.931613	0.13198
#DIV/0!	1	#DIV/0!
1	1	0
-0.293145194	0.954185	0.0881
0.212824033	0.952513	0.11291
-1.067846567	0.598983	0.62101
-2.103921112	0.468369	-0.86107
#NUM!	0.308068	#NUM!
-0.59373938	0.65395	0.21879
-1.584962501	0.572359	0.76553
-0.351843673	0.962693	-0.07174
0.189342455	0.830028	0.24236
-0.222392421	0.80088	0.37851
0.378511623	0.417023	1.1375

-0.979822118	0.915967	0.14487
-2.584962501	0.393741	-2.58496
-0.49786393	0.854452	-0.29686
0.830074999	0.877672	0.28951
-0.359773043	0.89603	0.1582
-0.787221684	0.925688	-0.16306
-0.82608729	0.846479	-0.27956
-0.574702404	0.790774	0.16811
-0.140743976	0.997113	0.00462
-1.189413644	0.412933	-1.16387
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-0.130668952	0.872043	-0.28906
#NUM!	0.308068	#NUM!
-1	1	0
-2.357552005	0.702361	-0.5502
-0.451294871	0.932548	-0.14988
2.355480655	0.741125	1
#DIV/0!	0.329316	#DIV/0!
-1.878009476	0.775515	0.44392
-0.233517359	0.864104	-0.29152
#DIV/0!	1	#DIV/0!
#DIV/0!	0.308068	#DIV/0!
0.332575339	0.898775	0.24511
0.012600037	0.913641	0.14111
-0.240539768	0.806251	0.21353
-0.038582462	0.700909	0.62579
3.646489663	0.475279	3.23834
-0.437740775	0.904607	-0.22001
-1	0.866773	0.32193
-2.115477217	0.708395	-0.58496
-0.394214568	0.807459	-0.3129
-0.559427409	0.833535	0.28011
-0.267347399	0.973181	0.04939
-0.483289035	0.814765	0.10704
-0.085667689	0.92744	-0.16668
0.856981691	0.977842	0.0679
0.342392197	0.712483	0.7318
-0.056927068	0.990594	0.02131
0	1	0
-0.621193518	0.973533	-0.04017
-1.222392421	0.651448	-0.80735
-0.578862301	0.897737	-0.19614
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-0.244583554	0.753057	0.30901
-0.584962501	0.919687	-0.16993
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-2.321928095	0.862169	-0.32193
-0.300095962	0.985844	0.02893
-2.124743302	0.0893366	-1.31243
-0.628031223	0.858433	0.23447
-1.356726832	0.897915	0.21072
-0.584962501	0.847705	0.09686
-0.152003093	0.611696	-1.152
1.459431619	0.864145	0.58496

-0.321928095	0.916573	0.12286
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-0.31676639	0.912901	-0.19634
1	0.756486	0.41504
0.508470989	0.858539	0.35683
-0.928382406	0.808611	0.22159
-0.528347694	0.994777	-0.00489
-0.691753017	0.9793	-0.04277
#DIV/0!	?	#DIV/0!
-0.225660135	0.970513	-0.0668
-1.145462869	0.37992	2.67729
-0.287802311	0.975572	0.05089
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-1.485426827	0.56435	-1.10692
-0.403355694	0.927607	-0.10962
-1.051024003	0.622186	-0.7912
-1.624490865	0.661401	-0.7176
-0.726385494	0.912526	0.13773
-0.512408448	0.994419	-0.00755
#NUM!	0.622002	1
-1.222392421	0.591677	-1.22239
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-0.263034406	0.889735	-0.26303
-0.261497374	0.390848	2.57028
-0.600478571	0.245745	0.58884
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-0.677449443	0.55006	0.92497
-1	0.353387	#NUM!
#DIV/0!	?	#DIV/0!
10.37268544	0.308068	78.0503
0.326650505	0.843362	0.34539
0.717600269	0.903954	0.24511
-0.411020633	0.903358	0.10758
-0.485426827	0.457806	0.65208
-2.321928095	0.862169	-0.32193
-0.392914688	0.933291	0.13663
-0.990304008	0.769067	-0.53496
1	0.622002	#NUM!
0.099535674	0.738946	0.58496
-0.516251586	0.949879	0.07286
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-1.192645078	0.832033	0.32193
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-0.205539697	0.863494	-0.15373
-1	0.787312	0.41504
-1.218640286	0.862505	-0.12964
-1.378511623	0.392404	-1.11548
-0.45558929	0.922558	-0.11324
-1.636863603	0.998746	-0.0017
-0.158461565	0.84448	0.27692
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-0.342601663	0.983428	0.03477
0.037661674	0.931172	0.12039
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-0.46428376	0.992231	-0.01481
-1	1	0

-0.333608038	0.952234	-0.09621
-1.139857664	0.630963	-0.70338
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-0.973240356	0.898466	-0.22751
-0.251244685	0.929491	0.09607
-0.432959407	0.861802	-0.31748
-1.290677161	0.80379	-0.34314
-5.944527459	0.488494	-1.61356
0.457761081	0.982317	0.04421
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-0.78191292	0.922949	0.14125
-0.324536031	0.93787	-0.12325
0.191911815	0.952191	-0.12234
4.210917256	0.337325	5.55563
-0.460856069	0.942185	0.11144
-0.463400521	0.992663	-0.01594
0.432959407	0.973413	-0.074
-0.634769218	0.797384	-0.15093
-0.169533224	0.919462	0.17418
1	0.368573	2
0.029747343	0.977328	-0.0614
-0.277337944	0.980669	-0.03935
-0.718626003	0.931633	0.12374
-0.94753258	0.644939	-0.94753
-0.258801758	0.83234	-0.23442
0.107211353	0.959331	-0.09007
1.357812631	0.691903	1.02122
-1.186413124	0.567857	-1.0902
-0.701843801	0.670572	-0.7577
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#DIV/0!	?	#DIV/0!
-0.428843299	0.955893	-0.09115
1.584962501	0.632221	1.16993
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-0.965767415	0.615439	-0.22926
-0.332787286	0.89814	0.05749
0.112419579	0.919483	0.16845
0.263034406	0.548254	0.95109
-2	0.974114	0.04439
-0.506230065	0.933872	0.11073
0.289506617	0.939116	-0.16993
-1.699514617	0.58329	-0.92166
-0.381090167	0.970742	-0.05247
-0.31173089	0.998183	-0.0036
-1.031842216	0.829915	-0.07582
-1.584962501	0.513713	-1.58496
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-0.551795637	0.940584	-0.11641
-0.584962501	0.722932	0.58496
-1.04580369	1	0
0.415037499	0.834708	-0.58496
-0.906890596	0.738625	-0.63387
-0.024868341	0.712017	0.3957
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-0.476028129	0.599751	-1.25739

0.372505315	0.860448	0.3224
-0.254317189	1	0
-0.231830906	0.943462	-0.13022
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#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	0.785812	#DIV/0!
-0.093866923	0.887927	-0.30218
-1.878693704	0.754264	-0.4235
-0.483815777	0.90788	0.12055
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-0.757697036	0.719254	-0.52989
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-0.342194906	0.976871	0.04812
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-1.412914208	0.953654	-0.07789
-0.430350555	0.96269	-0.07366
-0.577142996	0.862087	-0.23201
-0.387023123	1	0
2	0.462019	2.58496
-0.756299595	0.895082	-0.1966
-0.742503778	0.787423	-0.48875
-1.368244184	0.430614	-2.3815
-0.696795533	0.81177	-0.16215
-0.17630514	0.848142	-0.3278
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-0.096215315	0.91101	-0.19931
#NUM!	0.622002	1
-0.807354922	0.60537	1.09954
-3.169925001	1	0
-0.426264755	0.97897	-0.04083
-0.319273795	0.995476	-0.0089
-0.384293976	0.880381	-0.28901
-0.362570079	0.720252	-0.848
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0.186413124	0.721954	0.53004
-0.716207034	0.744789	-0.52356
#DIV/0!	0.308068	#DIV/0!
-2.146841388	0.532882	-1.14684
-0.874469118	0.747458	0.54057
#DIV/0!	0.308068	#DIV/0!
#DIV/0!	0.450185	#DIV/0!
-0.566398762	0.892012	-0.23551
#DIV/0!	1	#DIV/0!
-0.259908305	0.937479	-0.14472

-0.362241258	0.836253	0.25832
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-0.339695223	0.881704	0.19714
0.345135486	0.886538	0.17425
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0.59542444	0.762869	0.44002
1.321928095	1	0
-0.371828047	0.777024	0.19861
-1.829212649	0.955609	0.08364
-0.667424661	0.943344	-0.09668
0.387023123	1	0
-1	0.869939	-0.32193
-0.234644682	0.857861	0.1587
-0.14822993	0.827915	0.27954
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-0.786184863	0.758593	-0.51843
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-0.161711181	0.962436	0.08233
-0.622366342	0.917137	-0.13468
2	0.710482	1
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-1.584962501	0.568955	1.22239
0.136778733	0.884783	0.24162
#NUM!	0.622002	-1
-0.968658457	0.686491	0.52736
0	0.611386	0.71049
0	0.706667	-0.73697
-0.588418059	0.722445	0.4874
-0.826891351	0.830748	0.15514
-0.332062778	0.962093	0.07635
0.078002512	0.842114	-0.46949
-0.696607857	0.924241	-0.16227
0	0.450185	2
#NUM!	0.308068	#NUM!
-1.080919995	0.530681	-0.87447
-0.231564067	0.793689	-0.50754
-1.736965594	0.788871	-0.44746
-0.852404609	0.85863	-0.3137
-0.024169166	0.929719	-0.18251
#DIV/0!	1	#DIV/0!
-0.368644594	0.995286	0.0094
23.75032032	0.320441	25.7391
0.420843121	0.758834	0.5536
-0.047305715	0.853971	-0.43063
-0.29005758	0.815231	-0.44004
#DIV/0!	0.450185	#DIV/0!
0.790546634	0.341719	1.46297
-0.584962501	0.708593	-0.848
#DIV/0!	?	#DIV/0!
-0.575785854	0.655218	-0.77329
-0.881357564	0.811389	-0.42885
-0.567856597	0.853552	0.24503
2.99095486	0.993818	0.07039
#DIV/0!	?	#DIV/0!
-1.415037499	0.71213	-0.67807

#NUM!	1	0
1.736965594	0.570656	1.58496
0.897507589	0.73841	0.63447
0.421869533	0.940559	-0.14391
8.34168469	0.00497319	8.1283
#DIV/0!	?	#DIV/0!
-0.376369709	0.963777	0.06462
-0.486741151	0.963322	-0.06483
0	0.613399	-1.58496
1	0.622002	#NUM!
-0.451998988	0.871002	-0.21244
-2.438573014	0.296505	-4.10154
#DIV/0!	0.375133	#DIV/0!
-0.255013525	0.993283	0.01182
#DIV/0!	0.308068	#DIV/0!
#DIV/0!	?	#DIV/0!
-0.114850095	0.954531	-0.09462
-0.936908897	0.905832	-0.07192
-0.330148602	0.828267	0.21299
-2.124687768	0.957271	-0.07977
-0.722264545	0.923231	0.15281
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
-1.186169609	0.431647	-2.38228
#DIV/0!	?	#DIV/0!
-1.546387093	0.731967	-0.54011
-0.840877495	0.907309	-0.17887
#DIV/0!	?	#DIV/0!
0.996461958	0.499811	1.2713
-1.423711634	0.920678	0.15833
-0.736965594	0.409302	0.48543
0.415037499	0.538238	1.22239
0.294811967	0.699727	0.54491
-0.304854582	0.992056	-0.01728
#DIV/0!	?	#DIV/0!
-0.455916127	0.914682	0.10538
-0.590109639	0.903924	0.15222
-0.224706287	1	0
#NUM!	0.308068	#NUM!
-1.029062466	0.738303	-0.43852
0.02119381	0.975454	0.04232
-0.569565396	0.901518	0.11309
-0.155508684	0.846712	0.21276
#NUM!	0.308068	#NUM!
-1.436314687	0.969967	-0.07037
-0.062710025	0.971194	0.0684
0.220125814	0.982182	0.04679
-2.169925001	0.0576689	-1.58496
2.746195539	0.604352	2.30969
-1.151295887	0.498988	0.98269
#DIV/0!	?	#DIV/0!
-0.125530882	1	0
#DIV/0!	?	#DIV/0!
0.052151282	0.959628	0.07754
0.074708513	0.9639	-0.08763
-0.285766827	0.97932	0.03141

#NUM!	0.308068	-101.738
-0.386605305	0.969435	0.06004
0.670987071	0.940738	0.1879
-0.584962501	0.785812	-0.58496
-0.146455125	0.855517	0.24329
0.624490865	0.875416	-0.45568
-0.312479031	0.876011	0.18118
-0.98140739	0.980268	-0.03589
2.584962501	0.648511	2
16.56956398	0.470077	16.4123
-1.362570079	0.829031	-0.36257
-0.497618689	0.691803	0.28435
0.484657595	0.983734	-0.03818
0.404007586	0.795094	0.38414
-0.698814756	0.618493	-0.99879
-0.164938149	0.959161	-0.09071
-0.626782676	0.925942	-0.05603
0.206450877	0.614304	-1.11548
-0.584962501	0.834708	0.41504
-0.580647171	0.820696	0.20776
#NUM!	0.308068	#NUM!
#NUM!	0.394951	1.24793
#DIV/0!	?	#DIV/0!
-0.242833459	0.902589	-0.21848
-0.740613371	0.765316	-0.52083
#DIV/0!	?	#DIV/0!
-0.645508885	0.984212	0.01725
1.793549123	0.769654	0.8657
#NUM!	?	16.5968
0	0.834708	0.32193
#DIV/0!	0.308068	#DIV/0!
-10.05819753	0.337628	-1.29952
0.290378676	0.431316	0.70312
-0.855264907	0.804218	-0.40781
-0.115477217	0.677503	-1.11548
-0.71179277	0.572552	0.4101
-0.370062281	0.994863	-0.00699
0	0.450185	#NUM!
-1.142776324	0.721668	-0.59477
-1.321928095	0.228778	-1.58496
-3.874469118	0.568514	-0.55254
-0.137503524	0.820736	-0.45943
-1.035982216	0.930313	-0.06354
-1.03562391	0.916142	-0.18763
#DIV/0!	0.450185	#DIV/0!
-1.632268215	0.431126	-2.04731
0.068452714	0.893453	0.2544
-0.74163074	0.987385	-0.02822
-1.064130337	0.669174	-0.52356
-0.18478296	0.892253	0.19166
0.880662247	0.572348	1.46931
0	0.450185	#NUM!
-0.173656978	0.911867	-0.19888
-0.416564969	0.868385	-0.30769
#DIV/0!	0.308068	#DIV/0!
-0.731577578	0.904683	-0.22285

-0.914270126	0.456853	-0.52725
-1.491853096	0.449121	-1.09954
#DIV/0!	1	#DIV/0!
-0.551015169	0.826043	-0.3744
#DIV/0!	?	#DIV/0!
9.131152267	?	18.4247
-0.314619743	0.879978	0.14969
#DIV/0!	?	#DIV/0!
-2.43649521	0.644117	-0.60175
-0.492722475	0.908044	-0.12453
-0.615515424	0.952689	-0.0451
-1.011090981	0.849012	-0.2203
#NUM!	1	0
#DIV/0!	0.333852	#DIV/0!
#DIV/0!	0.308068	#DIV/0!
#NUM!	0.308068	-46.0011
#DIV/0!	?	#DIV/0!
-0.309556521	0.897126	0.19808
-0.763565064	0.830824	0.14449
-1.245007055	0.744881	-0.29508
-0.0885897	0.935174	0.17043
-0.162367449	0.995964	0.00539
#DIV/0!	?	#DIV/0!
#DIV/0!	1	#DIV/0!
0.479167837	0.717051	0.81359
-0.226770862	0.903014	0.21864
0.664132714	0.563401	0.73697
1.071412806	0.83358	0.55739
0.341724871	0.930696	0.17412
0.038474148	0.770681	-0.68589
#DIV/0!	?	#DIV/0!
17.89262495	?	#NUM!
#DIV/0!	?	#DIV/0!
0.973527789	0.73463	0.61096
-0.502500341	0.686187	-0.5025
-59.21593947	0.494676	-1.58709
0.736965594	0.837425	-0.58496
#NUM!	0.622002	-1
#DIV/0!	?	#DIV/0!
#NUM!	1	0
0.130524401	0.832278	0.33142
-0.090769097	0.951562	0.11005
-0.58674735	0.958172	-0.0952
-1.039528364	0.631616	0.9301
8.41781483	0.0181497	10.6196
-0.457321489	0.976378	-0.03765
#DIV/0!	0.308068	#DIV/0!
1	0.710482	1
-0.343260297	0.984874	0.02478
-0.701938715	0.324161	0.25053
-0.28871471	0.888917	-0.28222
-0.49777967	0.974419	-0.02942
0.746243408	0.964287	0.10758
-1	0.474021	1
-0.459295316	0.955192	-0.08234
-2.169925001	0.3646	-1.16993

0.745386603	0.943832	0.1422
-0.346418614	0.965087	-0.0549
0.998483696	0.750775	0.76324
-0.422119744	0.999943	0.00011
-0.973087985	0.868122	-0.26623
-0.40463509	0.908572	0.14923
#NUM!	0.308068	#NUM!
-0.313483375	0.798209	0.39912
#DIV/0!	?	#DIV/0!
-0.565123754	0.884227	0.21157
0.033288105	0.974944	-0.06164
2.209630764	0.801957	1.11343
0.498914148	0.471214	0.99867
-0.425114572	0.689965	0.30645
-0.591360785	0.389828	-5.84715
-1.060499647	0.432822	-1.58535
-0.452512205	0.921104	0.15754
-0.567269938	0.91571	0.08418
-0.540190759	0.783844	-0.51057
-0.731033172	0.782633	0.1485
0.301722448	0.937694	-0.11498
#NUM!	0.308068	#NUM!
#DIV/0!	0.450185	#DIV/0!
-0.094026577	0.952686	-0.09403
-1.072011245	0.848505	0.29686
-0.456413807	0.953142	0.05568
0.365540169	0.976354	-0.07337
-0.200015912	0.346471	-29.3196
-0.028159141	0.864327	-0.35735
-0.535596423	0.641782	0.34296
0.135115936	0.795108	0.34206
0.089580593	0.780404	0.42557
-0.723751578	0.86728	-0.28974
-0.378738583	0.768308	0.27017
-0.673843782	0.930296	-0.14296
#DIV/0!	1	#DIV/0!
#DIV/0!	1	#DIV/0!
#DIV/0!	?	#DIV/0!
-0.420986766	0.811432	-0.48187
-1.207595419	0.785111	-0.47063
#DIV/0!	0.622582	#DIV/0!
0.129111068	0.891772	0.17722
-0.312722636	0.914289	0.12382
-0.21041074	0.884971	0.20178
-0.034765418	0.92105	0.13124
0.043068722	0.871803	0.18442
#DIV/0!	?	#DIV/0!
2.459431619	0.922417	0.58496
-0.695256858	0.845755	0.11124
0.255802353	0.751482	0.26468
-1.322812693	0.351826	-1.04438
-0.339641753	0.945839	0.09485
-0.627032168	0.922299	0.03944
-0.900401677	0.420609	-0.59102
-0.187278568	0.938044	0.13179
-0.409150837	0.947034	0.11584

-0.192344639	0.975445	-0.05041
0.198170584	0.786676	0.48545
-0.664815808	0.844841	-0.31156
#DIV/0!	?	#DIV/0!
-4.635011855	0.681901	-0.80059
0.843813663	0.877177	0.32662
-0.371968777	0.913722	0.18442
-0.140862536	0.730465	0.52793
-0.574866623	0.917276	0.14173
-0.370748223	0.978687	0.03486
-0.31374713	0.908784	-0.18884
-0.119468975	0.665711	0.40641
-0.074000581	0.965235	-0.074
-13.00598137	0.308068	37.6352
-0.362355114	0.711754	-0.84303
#DIV/0!	1	#DIV/0!
-0.477708268	0.960655	0.06397
-58.85157243	0.0619034	2.00782
-0.502876921	0.916792	-0.19117
-0.195823442	0.902086	-0.20566
-0.01071633	0.448664	-29.0219
#DIV/0!	?	#DIV/0!
-3.558025251	0.763653	-0.3195
-0.004403287	0.507668	0.42214
-0.020231985	0.913551	0.10006
0.210566986	0.757168	0.6389
-2.310159501	0.906741	-0.16869
-0.389505576	0.995355	-0.01056
-0.05246742	0.951899	0.10912
#NUM!	0.518269	1.45219
-0.494764692	0.886479	0.18876
-1.102051271	0.909247	0.09448
1	0.622002	-1
#DIV/0!	?	#DIV/0!
-0.750021747	0.73812	-0.42809
-0.230293678	0.987242	0.01794
0	0.785812	0.45943
-0.64073894	0.900157	-0.19872
0.311347423	0.718887	0.70363
-25.54984494	0.0782468	-26.6143
-0.274022235	0.945631	0.08088
0.483082887	0.758977	0.43539
0.266275099	0.747055	0.54109
0.180572246	1	0
-2.932376924	0.697594	-0.75751
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
-0.449903745	0.960466	-0.06338
-0.292781749	0.918942	-0.18845
-0.364702982	0.993312	-0.01349
0.519374159	0.854188	0.3599
-0.167426843	0.960131	0.04878
-0.172836597	0.940473	-0.12131
-0.4061505	0.890611	0.14982
-32.43274378	0.308068	43.3179
-0.275353763	0.969175	-0.06826

-0.178500896	0.940052	-0.13688
-0.142957954	0.885901	0.27208
-0.706122619	0.90437	-0.18194
0	0.651448	1
-0.161881663	0.899051	-0.20897
0.216968949	0.894694	-0.27335
-0.523537544	0.728563	-0.69389
0.349942471	0.850538	0.37197
-1.126491873	0.816079	-0.42334
#NUM!	1	0
0.9510904	0.231264	1.34104
-0.499210481	0.915266	-0.13886
#DIV/0!	?	#DIV/0!
-1.328151097	0.764724	-0.56299
-0.912938983	0.678405	-0.33754
-1.007593149	0.914666	-0.16002
-0.332045441	0.909685	0.1876
-0.373767026	0.86487	-0.32618
-0.882804099	0.938256	-0.13612
-0.416374777	0.90066	-0.22721
-1.284397343	0.488104	0.68176
-0.820590749	0.862772	-0.31536
0.523981851	0.699265	-1.15554
-0.125055526	0.994147	-0.01167
-0.054908341	0.820121	0.30143
-0.254194739	0.670887	0.58496
-0.367488706	0.919575	0.10388
-1.350373797	0.461922	-1.69091
-0.530836547	0.313452	0.74162
-1	0.039481	2.16993
-0.350364925	0.926614	-0.16089
0.361804114	0.865038	0.32009
0.466670268	0.760475	0.51788
#DIV/0!	?	#DIV/0!
-0.071592617	0.903023	-0.25098
-1.033947332	0.799773	-0.38187
-0.359460151	0.921373	0.15679
-0.507994109	0.996201	-0.00768
9.472685798	?	-41.0249
#NUM!	1	0
-1.897122021	0.424015	-0.44146
-0.565597176	0.841191	-0.38018
#NUM!	0.308068	-30.1165
-1.031782393	0.924809	0.16477
-0.255263967	0.898284	0.12437
0.022115718	0.969216	-0.06648
-0.678071905	0.849717	-0.29956
#NUM!	0.308068	#NUM!
1	0.622002	#NUM!
-0.334380874	0.962555	-0.07523
-1.313393708	0.870794	-0.23621
1.321928095	0.837425	-1
-0.303780748	0.835927	-0.42114
-0.716207034	0.968022	-0.06413
-1.107171524	0.951718	-0.06706
-1.415037499	0.71213	-0.67807

0.052827688	0.96428	-0.08841
-0.100334729	0.984228	0.03134
#DIV/0!	0.308068	#DIV/0!
0	0.252216	2.80735
-0.277609745	0.991318	-0.0193
-0.486917622	0.986999	-0.02788
#DIV/0!	?	#DIV/0!
#NUM!	0.785812	0.41504
-0.669851398	0.883406	0.26303
-0.169925001	0.802495	-0.58496
#DIV/0!	0.308068	#DIV/0!
-0.305936062	0.995544	0.00916
#DIV/0!	?	#DIV/0!
#DIV/0!	0.308068	#DIV/0!
0	1	0
-0.415037499	0.698091	0.80735
-0.673690579	0.975108	-0.04139
-0.535231506	0.856243	-0.358
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
-0.903587779	0.888359	-0.21461
-0.415037499	0.847091	-0.41504
#DIV/0!	?	#DIV/0!
0.15497466	0.819261	0.36587
-1.584962501	0.764931	-0.58496
-0.217466301	0.865969	-0.32845
-0.250650681	0.776	-0.61958
-0.648888997	0.958992	0.05582
#DIV/0!	0.116158	#DIV/0!
-0.011404763	0.84845	0.30594
-1.672425342	0.78451	-0.4245
-0.633217669	0.978988	-0.03847
-0.241783638	0.938295	-0.13987
-0.657112286	0.619973	-1.18763
-0.285744065	0.968249	-0.06831
-0.362194386	0.94868	-0.0983
-0.686305917	0.652558	-0.75058
#NUM!	0.622002	-1
-0.641546029	0.837079	-0.42742
-0.15173491	0.988531	-0.02271
-0.321928095	1	0
-0.885195525	0.768878	-0.55682
-0.488675809	0.931568	0.08172
0.202816883	1	0
-0.469485283	0.944058	-0.10692
-0.305900798	0.921447	0.14159
0	0.806588	-0.152
-4.247927513	0.466292	-1.24793
#DIV/0!	?	#DIV/0!
-0.914865447	0.774021	0.49498
#NUM!	0.18169	-1.58496
-0.327649769	0.91425	0.13446
0.397759508	0.953326	0.13124
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!

#DIV/0!	?	#DIV/0!
-0.004570912	0.89301	0.20332
-0.380031049	0.957434	-0.09008
-0.074767768	0.952101	-0.08632
#NUM!	1	0
#DIV/0!	?	#DIV/0!
-1.204013892	0.604304	0.90583
-0.583314883	0.944288	-0.10409
-0.359627542	0.94183	-0.12937
#DIV/0!	0.622002	#DIV/0!
-0.477321778	0.944309	-0.12985
#DIV/0!	?	#DIV/0!
-0.23544385	0.949878	0.09259
-0.474806754	0.969804	-0.0571
#DIV/0!	0.353387	#DIV/0!
-4.169925001	0.597162	-1
#NUM!	0.308068	#NUM!
#DIV/0!	1	#DIV/0!
-1.404390255	0.856685	-0.2824
#NUM!	0.450185	-1
-0.584962501	0.3832	#NUM!
-0.688055994	0.494042	0.46395
-3.321928095	0.809615	-0.32193
-1.157541277	0.942992	-0.10309
0.637429921	0.983027	-0.05445
-0.314479333	0.528043	0.77182
-0.415037499	0.791627	-0.41504
0.158409097	0.989821	-0.02514
-1.328665129	0.821129	-0.35138
-0.16549003	0.364244	0.63844
#NUM!	0.308068	#NUM!
-0.067114196	0.935124	-0.1375
#NUM!	1	0
#DIV/0!	?	#DIV/0!
-0.370604312	0.964625	-0.07747
-0.412260415	0.861994	0.21403
-0.449054438	0.8947	0.15966
-0.632572357	0.91908	0.11791
1.052460304	0.697576	0.87136
0.754887502	0.66036	0.85798
-1.378511623	1	0
#DIV/0!	0.308068	#DIV/0!
0.910950146	0.587582	1.15103
-0.095157233	0.865852	0.22677
-0.415037499	0.847091	-0.41504
-0.60668147	0.767366	-0.3997
-0.506959989	0.347945	0.66577
#DIV/0!	?	#DIV/0!
-0.48144162	0.866163	-0.17688
-0.138291021	0.988811	-0.02381
-0.106915204	0.959844	0.09954
-0.697502523	0.936695	-0.09168
-0.038474148	0.991845	0.01961
-0.326661314	0.971122	-0.05922
-2.938599455	0.964375	0.0614
#DIV/0!	?	#DIV/0!

0	1	0
#DIV/0!	?	#DIV/0!
-0.583706345	0.81575	-0.46447
#DIV/0!	?	#DIV/0!
0.148098639	0.805434	-0.50901
-0.277533976	0.664648	0.39232
1.041138695	0.849123	0.42099
2.5360529	0.773953	1.1375
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
-0.124208058	0.982159	-0.03787
-0.256692879	0.986305	-0.02889
1.658025963	0.950174	0.22507
-0.505914879	0.964942	0.05944
-1	0	-2
-0.265313288	0.962287	-0.08716
-1.807354922	0.355889	-1
1	0.806588	-1
#DIV/0!	?	#DIV/0!
-2.321928095	0.415333	-2.32193
0.021294778	0.925593	-0.17664
-1.652076697	0.803152	-0.45943
0	0.798692	0.51457
-0.35330851	0.970285	0.0551
-1.087462841	0.693164	-0.76553
#NUM!	0.308068	#NUM!
-0.466737406	0.978775	0.03444
-0.194308127	0.798971	0.36773
0	0.710482	-1
-0.734642457	0.998585	-0.0013
3.916274887	0.319607	5.18185
-4.110461822	0.136882	71.3168
-0.415037499	0.837835	0.24511
-0.089282424	0.853127	0.25663
-0.306661338	0.937767	-0.12832
-1.108581302	0.941972	0.11643
#DIV/0!	1	#DIV/0!
-1.991663591	0.470772	-1.65111
-0.972289798	0.308068	56.3872
0.115477217	0.768685	-0.77761
#NUM!	0.308068	81.9042
-2.066417375	0.49047	-0.58792
#DIV/0!	?	#DIV/0!
-0.317029295	0.824653	0.24382
-87.34223603	0.0742745	-102.274
83.12107202	0.39925	83.538
0.214162619	0.454231	0.86316
0.485426827	0.306059	1.58496
-0.894375497	0.638689	-0.6108
-0.876831172	0.984778	-0.02485
0.047665838	0.976855	0.04692
-0.084600562	0.832305	0.34105
#NUM!	0.423779	-2.14124
0.271031427	0.154211	0.67718
0.777963995	0.91583	-0.22799
-0.405977102	0.997629	-0.0043

#NUM!	0.639338	-0.86008
-2.750736359	0.11581	-1.00586
0.321928095	0.360002	2.52356
#NUM!	0.586878	0.688
-18.54687673	0.946102	0.10713
0.123827265	0.379083	1.78517
0.123827265	0.379083	1.78517
#DIV/0!	0.308068	#DIV/0!
#DIV/0!	?	#DIV/0!
0.491853096	0.605047	-1.67807
13.18951672	0.999904	-63.8887
#DIV/0!	0.724377	#DIV/0!
-3.169925579	0.513713	-0.36257
-2.700439718	0.422962	-2.08755
0.123827265	0.379083	1.78517
0.123827265	0.379083	1.78517
-3.169925579	0.513713	-0.36257
-3.169925579	0.513713	-0.36257
-3.169925579	0.513713	-0.36257
#NUM!	0.308068	#NUM!
1	0.133887	2.58496
1.999999134	0.622002	1
#DIV/0!	0.308068	#DIV/0!
#DIV/0!	?	#DIV/0!
#NUM!	0.308068	#NUM!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
1.925999419	0.371098	1.926
#DIV/0!	0.0917211	#DIV/0!
1.999999134	0.622002	1
-53.58496481	0.28732	1.53466
#NUM!	0.308068	39.0983
-2.807354922	0.568955	-1.22239
#NUM!	0.307978	33.2769
1.938598201	0.301163	2.41504
#NUM!	?	-36.1113
-3.906876169	0.835021	-0.32192
#DIV/0!	1	#DIV/0!
#DIV/0!	?	#DIV/0!
0.123827265	0.379083	1.78517
#DIV/0!	0.308068	#DIV/0!
#NUM!	0.756486	0.58496
0	0.651448	1
0.123827265	0.379083	1.78517
#NUM!	0.102728	2.80735
1.925999419	0.371098	1.926
#DIV/0!	?	#DIV/0!
#NUM!	0.756486	0.58496
#DIV/0!	0.450185	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
1.584962501	0.468351	2.32193
1.584962501	0.468351	2.32193
1	0.433552	1.37851
#DIV/0!	?	#DIV/0!

1.584962501	0.468351	2.32193
#DIV/0!	?	#DIV/0!
1	0.433552	1.37851
1.584962501	0.468351	2.32193
#DIV/0!	?	#DIV/0!
#DIV/0!	1	#DIV/0!
#DIV/0!	?	#DIV/0!
#NUM!	0.586878	0.688
36.82669902	0.310595	39.9088
#NUM!	0.586878	0.688
-1.321928095	0.331841	-2.32193
#DIV/0!	0.308068	#DIV/0!
1.925999419	0.371098	1.926
#NUM!	0.586878	0.688
#DIV/0!	?	#DIV/0!
#NUM!	0.586878	0.688
#DIV/0!	1	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
0.10393427	0.682555	0.36031
#DIV/0!	0.308068	#DIV/0!
1	0.730615	0.73697
1	0.730615	0.73697
#DIV/0!	0.308068	#DIV/0!
#DIV/0!	?	#DIV/0!
1	0.433552	1.37851
#DIV/0!	0.241875	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
-2.321928095	0.31594	-29.8269
#NUM!	0.308068	#NUM!
#DIV/0!	?	#DIV/0!
-1.765534746	0.87906	-0.18057
-1.765534746	0.87906	-0.18057
#DIV/0!	1	#DIV/0!
-1.584962501	0.408983	2.22239
#DIV/0!	?	#DIV/0!
#DIV/0!	0.308068	#DIV/0!
-1.765534746	0.87906	-0.18057
1.925999419	0.371098	1.926
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
-0.870883882	0.497096	1.60709
#DIV/0!	?	#DIV/0!
0.652076697	0.106853	2.51457
2.415037499	0.345683	2.28293
0.115477217	0.265726	-1
1.938598201	0.301163	2.41504
1	0.433552	1.37851
#DIV/0!	0.308068	#DIV/0!
#DIV/0!	?	#DIV/0!
1	0.433552	1.37851

0.94641974	0.36589	2.07682
0.483789292	0.415702	2.35757
#DIV/0!	?	#DIV/0!
#NUM!	0.586878	0.688
#NUM!	0.586878	0.688
#DIV/0!	0.241875	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
-0.874469118	0.717686	-0.28951
#DIV/0!	0.308068	#DIV/0!
0.10393427	0.682555	0.36031
0.10393427	0.682555	0.36031
#DIV/0!	?	#DIV/0!
-3.169925579	0.513713	-0.36257
0.736965594	0.398521	2.58496
0.483789292	0.415702	2.35757
0.483789292	0.415702	2.35757
-2.700439718	0.422962	-2.08755
-2	0.122073	1.58496
1	0.450185	2
#NUM!	0.308068	28.076
#NUM!	0.308068	28.076
-1	0.793677	-0.45568
1.999999134	0.622002	1
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	1	#DIV/0!
1.323344126	0.651305	1.32193
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
4.3217225	0.911657	1.3219
1.938598201	0.301163	2.41504
#NUM!	0.622002	-1
49.00000068	0.450185	49
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
-0.704544116	0.92768	0.12553
0.284059909	0.996232	0.00746
-0.494764692	0.961405	-0.09622
-0.592575685	0.961622	-0.078
0.1740294	0.414584	0.50467
-1.037474705	0.793985	-0.47805
-0.037232906	0.803618	0.42648
0.625875694	0.953393	-0.12221
-0.059316684	0.696091	0.45679
0.169925001	0.965406	0.05016
0.269648148	0.884405	0.15742
0.366896005	0.963878	0.07595

0.677023054	0.880922	0.18107
0.046542586	0.500122	0.60842
0.489331282	0.355946	1.22574
-0.926290314	0.849549	-0.31757
0.111283334	0.721926	0.40651
-0.39193847	0.936524	-0.14277
-0.103093493	0.898733	0.18641
-0.162249833	0.820782	0.24684
0.118644496	0.223328	0.57116
-0.583368332	0.71237	0.57338
-0.778169838	0.923097	0.13054
-0.052851316	0.801709	0.36233
#NUM!	0.622002	0.41504
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
0.109688478	0.940036	0.12978
-2.015596855	0.946465	0.07555
-0.209528228	0.654544	-0.8876
-0.156787117	0.969782	-0.06497
-0.272609752	0.876697	0.18868
-0.584962501	0.785812	-0.58496
2.383308007	0.977718	-0.11611
0.033501033	0.479322	-1.74783
#DIV/0!	?	#DIV/0!
-2.880387273	0.763317	-0.57043
1.987676796	0.663916	1.57796
-23.71651836	0.509211	-1.502
-0.281875791	0.981456	0.0406
-2.064016493	0.934805	0.11027
-0.746643508	0.981576	-0.02642
-2.115010854	0.913289	0.1626
-0.084888898	0.902396	0.20462
-33.43925521	0.835044	-0.36916
-0.166471954	0.594227	0.80568
#NUM!	?	#NUM!
0.039402142	0.311484	1.33279
#DIV/0!	?	#DIV/0!
#DIV/0!	1	#DIV/0!
-0.765713755	0.0814525	0.56709
0.127660123	0.857173	-0.28174
-0.477572497	0.912341	-0.1402
9.37239332	?	-3.45058
-0.510194732	0.975235	0.04532
0.087925286	0.680323	0.45153
1.321928095	0.837425	-1
-0.880852735	0.794012	0.34656
98.05664791	0.515664	97.6416
0.924272674	0.835664	0.45943
-3.736268061	?	3.69885
-1.412125904	0.913308	-0.06711
-0.072928112	0.913116	-0.18334
-0.483595649	0.949211	-0.10734
#DIV/0!	?	#DIV/0!
-10.36641929	0.30819	-11.6791

-0.296905828	0.947432	0.05857
-28.26436091	0.00104305	-1.33314
-0.521952703	0.951804	0.07936
1.039356686	0.88507	0.32108
-0.493630279	0.699957	-0.80066
0.078736671	0.933241	0.11268
-0.180572246	0.870186	0.23447
#DIV/0!	?	#DIV/0!
-0.222782042	0.89819	0.16496
0.440760588	0.927709	-0.21482
-0.003501457	0.89579	0.18921
#DIV/0!	?	#DIV/0!
-52.72443599	0.308068	-43.8895
#DIV/0!	?	#DIV/0!
0.403064858	0.890975	0.28737
-1.969626351	0.837403	0.30339
0.377609102	0.993682	0.01371
-0.303138269	0.864402	0.14838
-29.34405046	0.308068	-88.1187
-1.607694804	0.971034	-0.04771
-0.720938103	0.822113	0.06261
-0.065723949	0.691568	-1.06572
-0.235390788	0.940603	0.08524
0.288510165	0.724856	0.57827
0.044755912	0.640895	0.7439
-0.528419299	0.933748	0.07458
#DIV/0!	0.999991	#DIV/0!
0.261055901	0.894467	0.24914
#DIV/0!	1	#DIV/0!
#DIV/0!	?	#DIV/0!
#NUM!	0.622002	1
-0.030691043	0.90887	-0.21803
-0.171047214	0.813075	0.33832
1	0.622002	#NUM!
#DIV/0!	?	#DIV/0!
-0.36252171	0.964464	-0.0628
-13.14196703	0.308077	-15.4687
-0.78124301	0.622335	-1.12242
-0.625643163	0.963025	-0.03403
-0.527931556	0.912552	0.17509
#NUM!	0.438509	-2
#DIV/0!	0.308068	#DIV/0!
#DIV/0!	?	#DIV/0!
-0.898835083	0.804114	-0.26164
0	0.710482	-1
-1.874469118	0.738539	-0.65208
#DIV/0!	?	#DIV/0!
#NUM!	0.622002	1
#DIV/0!	?	#DIV/0!
#NUM!	1	0
-0.212030857	0.883796	-0.28044
#DIV/0!	?	#DIV/0!
-1.049776235	0.934992	0.10946
#DIV/0!	?	#DIV/0!
-0.571906348	1	0
-0.459431619	0.816359	0.27753

#DIV/0!	0.308068	#DIV/0!
-3	0.393741	-1.41504
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#NUM!	0.0227138	-2.58496
#NUM!	0.308068	#NUM!
-0.330768446	0.883373	-0.22239
#NUM!	0.756486	0.58496
0.514573173	0.767557	0.51457
-0.309840545	0.99786	0.00369
#DIV/0!	?	#DIV/0!
0	0.651448	1
0.3016557	0.929514	0.1587
1.215591629	0.327997	#NUM!
#DIV/0!	?	#DIV/0!
0.819427754	0.844094	0.37197
-1.788804526	0.700891	-0.68692
-15.27099039	0.308068	-47.9877
-2	0.630057	-1
0	0.513713	-1.58496
-1.115477217	0.686187	-0.70044
#DIV/0!	?	#DIV/0!
0.922958964	0.962371	-0.12029
#DIV/0!	?	#DIV/0!
-0.137503524	0.850928	0.25235
-0.282186856	0.87849	-0.28883
-0.336182079	0.950026	0.09412
#DIV/0!	?	#DIV/0!
-0.989028882	0.794775	0.40952
#NUM!	0.18169	1.58496
-0.881355504	0.648723	-0.85626
-0.956278623	0.979637	-0.04509
1.584962501	1	0
-0.847996907	0.948504	-0.08246
#DIV/0!	?	#DIV/0!
0.783012962	0.852776	0.37551
-1	1	0
1	0.885352	0.41504
#DIV/0!	?	#DIV/0!
0.192645078	0.904922	0.19265
#DIV/0!	?	#DIV/0!
1	0.481309	2
#DIV/0!	1	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
0.378511623	0.978039	0.06274
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	0.308068	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
-0.080374919	0.948807	-0.11075
4.511237024	0.962863	-4.09525
#DIV/0!	1	#DIV/0!

-0.584962501	0.730222	-0.64636
#NUM!	1	0
-0.415037499	1	0
1.22373709	0.765747	0.77745
-0.945552216	0.852145	-0.3254
-1.422267605	0.959178	-0.05641
#DIV/0!	?	#DIV/0!
#NUM!	0.756486	0.58496
-0.390269594	0.997827	0.00468
-1.174784514	0.881857	0.23325
-0.584962501	0.785812	-0.58496
-1.037989586	0.997704	-0.00326
#DIV/0!	1	#DIV/0!
#DIV/0!	?	#DIV/0!
#NUM!	0.622002	-1
#DIV/0!	?	#DIV/0!
-1	0.353387	#NUM!
-0.321928095	0.18169	1.58496
-0.830074999	0.738378	-0.47644
-1.61667136	0.395796	-2.27563
-1.29310526	0.913666	-0.08665
0	1	0
#DIV/0!	?	#DIV/0!
-2.459431619	0.662394	-0.87447
0.584962501	1	0
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#NUM!	0.308068	#NUM!
-0.790546634	0.987955	0.02237
1.94753258	0.124949	2.23704
#DIV/0!	?	#DIV/0!
-2.5360529	0.568955	-0.77052
#DIV/0!	?	#DIV/0!
-0.005782353	0.902218	-0.25843
-0.184424571	0.864102	0.1635
-0.520832163	0.79863	-0.45943
-0.072658609	0.771604	0.31454
-0.360735173	0.850947	0.24381
-0.223662511	0.964433	0.07568
-1.848472899	0.483606	-1.74687
-0.056583528	0.996335	0.00647
#DIV/0!	?	#DIV/0!
-0.144582153	0.996137	-0.00855
#DIV/0!	?	#DIV/0!
-0.841302254	0.77368	-0.29698
0.679684756	0.727333	0.48358
-0.193586478	0.998367	0.00329
-0.255895766	0.975883	-0.04516
-0.219146762	0.932772	0.11247
2.127755547	0.352063	1.78427
-0.91753784	0.591782	-1.28011
-0.387023123	0.709561	-0.76553
-0.921796093	0.492199	-0.51403
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
-1.203852509	0.943492	0.07817

#NUM!	0.622002	-0.58496
0.195374871	0.804135	0.43596
-1	1	0
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
-1	0.433134	-2.58496
#NUM!	0.308068	#NUM!
-0.275142093	0.959024	-0.08421
-0.2410081	0.763639	0.46949
#DIV/0!	?	#DIV/0!
-0.584962501	0.3832	1
#DIV/0!	0.308068	#DIV/0!
-0.514573173	0.811936	-0.32193
#NUM!	0.18169	-1.58496
#NUM!	1	0
0.485426827	0.749249	0.67807
#NUM!	0.198892	2
#DIV/0!	?	#DIV/0!
#DIV/0!	1	#DIV/0!
-0.738856414	0.972983	0.05014
#NUM!	0.308068	#NUM!
-0.202816883	0.915397	0.17779
-0.607215308	0.990132	0.0195
0.169925001	0.65555	-1.41504
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
0.210306098	0.959107	0.07327
-0.590295945	0.792826	-0.46744
-0.396758766	0.841062	-0.37956
#DIV/0!	0.353387	#DIV/0!
-1.807354922	0.541977	-1.22239
-1	0.651448	-1
-0.125530882	0.909854	0.18763
0.03170886	0.949074	0.12286
0.091759619	0.920038	0.15775
#DIV/0!	0.308068	#DIV/0!
#NUM!	0.756486	0.58496
-1.584962501	0.700402	-0.77761
0	0.785812	0.58496
#NUM!	1	0
-14.94677465	0.308084	-14.5984
#DIV/0!	0.353387	#DIV/0!
#DIV/0!	?	#DIV/0!
2	1	0
0.736965594	0.881184	-0.36257
-0.648834684	0.856107	-0.26076
0	1	0
#NUM!	0.621865	-1.00021
#DIV/0!	?	#DIV/0!
-0.289506617	0.73069	0.5787
-0.491214312	0.653667	-0.79742
-0.263034406	1	0
-0.18679882	0.904284	0.15535
-0.263034406	0.84263	-0.36257
-2	0.353387	-1

#DIV/0!	0.308068	#DIV/0!
0.137503524	0.919113	-0.23447
#NUM!	1	0
0.359542387	0.827336	0.27208
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
-1.169925001	0.892135	-0.16993
#NUM!	0.308068	#NUM!
#DIV/0!	0.329316	#DIV/0!
-2.298523491	0.906282	0.16843
#NUM!	0.18169	-1.58496
#DIV/0!	?	#DIV/0!
-0.049627654	0.874073	0.25349
-0.415037499	0.680109	-1
-2.807354922	0.855216	-0.22239
-0.511414719	0.894947	-0.20506
0.436342202	0.720816	0.60335
-0.662399294	0.936713	-0.13256
-0.485426827	0.914417	-0.22239
#DIV/0!	?	#DIV/0!
0	0.19041	1.58496
-0.801618553	0.909464	0.16715
-0.664225779	0.943644	0.10215
0.662965013	0.882707	-0.26303
-0.083621184	0.975552	-0.05777
-1.362570079	0.748435	-0.58496
#NUM!	0.308068	#NUM!
1.707138337	0.548558	1.93359
-1.371968777	0.555234	-1.1375
0	0.866733	0.33442
-0.474343328	0.771899	0.25435
-1.584962501	0.513713	0.73697
-4.209453366	0.345437	-1.30256
0.223081552	0.921287	0.1597
-0.017811276	0.62984	0.45217
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
-0.584962501	0.727923	-0.77761
#DIV/0!	0.353387	#DIV/0!
-0.413816921	0.896428	-0.20466
#DIV/0!	0.308068	#DIV/0!
-2.321928095	0.541977	0.848
-0.709946555	0.617676	-0.31323
-1.584962501	0.441678	-2.16993
0.00380157	0.96544	0.07238
#DIV/0!	?	#DIV/0!
-0.044466141	0.937332	0.15292
1.115477217	0.940721	-0.26303
0.338198518	0.967133	0.08335
#DIV/0!	?	#DIV/0!
-0.206450877	0.815746	0.32577
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
0.063193826	0.725386	0.40964
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!

-0.166009951	0.67538	0.54969
-0.560714954	0.889751	-0.26793
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
0.415037499	0.834708	-0.58496
0	0.710482	0.58496
-0.347923303	0.709227	0.51457
-0.742818331	0.975998	0.04699
-2.426502686	0.930716	0.09037
-1	0.651448	-1
#DIV/0!	?	#DIV/0!
-1	0.87721	-0.17509
#DIV/0!	?	#DIV/0!
1.321928095	0.744364	0.79256
#DIV/0!	?	#DIV/0!
-1.807354922	0.543813	-0.69188
#DIV/0!	?	#DIV/0!
-0.931468618	0.773108	-0.30256
-0.129234793	0.840472	0.25204
-0.678261697	0.774379	-0.41605
-0.26100651	0.903051	0.14761
-0.459431619	0.882955	-0.28951
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
0.098302074	0.655437	0.69188
#DIV/0!	0.450185	#DIV/0!
#DIV/0!	1	#DIV/0!
#NUM!	0.495025	-1.58496
-4.247927513	0.414414	-2.24793
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
0.283792966	0.725218	0.70526
#NUM!	0.308068	#NUM!
#DIV/0!	?	#DIV/0!
-0.362570079	0.96703	0.078
#NUM!	0.308068	#NUM!
#DIV/0!	?	#DIV/0!
-1.197939378	0.777997	-0.37851
1.415037499	1	0
#DIV/0!	?	#DIV/0!
-2	0.320255	#NUM!
0.847996907	0.918711	-0.32193
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
-0.765534746	0.186081	0.77052
-1.662965013	0.86612	-0.24793
-0.160464672	0.913232	-0.20979
-0.359542387	0.949804	-0.11018
-1	0.626061	-1
-0.715732957	0.903489	0.18265
0.154907362	0.739819	0.43309
-1.115477217	0.456197	-2.11548
-0.196771447	0.922868	0.14335

-0.152003093	0.957268	0.10434
#DIV/0!	0.308068	#DIV/0!
-0.584962501	0.833456	-0.41504
0.043068722	0.903711	-0.1989
-0.311461096	0.240938	1.35571
-0.192645078	0.84064	-0.41504
-0.321928095	0.741917	-0.39593
-2.415037499	0.895809	-0.09311
-0.103093493	0.689347	0.38995
#DIV/0!	1	#DIV/0!
-0.750021747	0.945496	-0.08017
-1.190170025	0.808008	-0.16083
-1.041615126	0.577863	-0.18183
-0.628506005	0.955648	-0.0711
0.426397125	0.699406	0.47484
#DIV/0!	?	#DIV/0!
0.246257548	0.982931	0.04566
-1	0.948164	-0.12553
#DIV/0!	?	#DIV/0!
-0.153501998	0.934336	0.09142
#DIV/0!	0.450185	#DIV/0!
#DIV/0!	?	#DIV/0!
#NUM!	1	0
#DIV/0!	?	#DIV/0!
-1.921106873	0.330013	-5.61951
#DIV/0!	?	#DIV/0!
-2.807354922	0.669515	-0.48543
-1.584962501	0.318341	-1.58496
#DIV/0!	?	#DIV/0!
-1.060235107	0.400233	-0.30991
-0.678071905	0.934651	0.11548
0	0.450185	#NUM!
-1.321928095	0.685038	-0.73697
-0.263034406	0.781117	0.41504
#DIV/0!	?	#DIV/0!
0.736965594	0.764036	-1
0.938599455	0.92469	0.22239
#NUM!	0.308068	#NUM!
0.649469367	0.959087	-0.10779
#DIV/0!	?	#DIV/0!
#DIV/0!	0.758682	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
0.294061301	0.762164	0.38333
1	0.710482	1
0.485426827	1	0
0.2410081	0.689731	0.72643
-1.087462841	0.651125	0.61298
#DIV/0!	0.450185	#DIV/0!
-0.686707271	0.7876	0.36676
-3.285402219	0.168023	-3.2854
-0.365246228	0.947112	0.10607
#DIV/0!	?	#DIV/0!
#DIV/0!	0.176946	#DIV/0!
0.263034406	0.96836	0.07039
#DIV/0!	0.308068	#DIV/0!

#DIV/0!	?	#DIV/0!
0	0.730374	0.63743
-0.315836126	0.865931	-0.3134
1	0.576458	1.37851
-0.584962501	0.559404	-1.58496
-0.247927513	0.754137	0.61005
#NUM!	1	0
#DIV/0!	?	#DIV/0!
-0.486874019	0.698267	-0.53859
-1.459431619	0.367986	-1.61143
-0.807354922	0.950712	-0.10692
-0.344648171	0.985164	0.0268
-0.658963082	0.79353	-0.51457
-0.200281712	0.894943	-0.26459
0.771731012	0.636488	1
-1	0.706667	-0.58496
0.251499631	0.766512	0.4707
-1.366127899	0.832641	-0.38225
1.222392421	0.754229	-1.58496
-0.736965594	0.816484	-0.41504
-0.084346078	0.677258	0.65218
-2.321928095	0.31594	#NUM!
#NUM!	0.407544	-2.32193
-1	0.912734	-0.17086
-0.34298971	0.9703	-0.05541
-0.171293165	0.830848	0.31388
1	0.436998	2.32193
#DIV/0!	?	#DIV/0!
-0.818793901	0.919867	0.11194
-0.100439901	0.779142	0.3437
-0.356934545	0.641348	-1.10236
-0.933145581	0.877912	-0.20023
2.801635145	0.404899	3.23426
#DIV/0!	?	#DIV/0!
-0.173767068	0.872246	0.17333
0	0.450185	#NUM!
-1.02531323	0.982622	-0.03309
1	0.943913	0.16993
-1.222392421	0.907467	-0.22239
0.010883484	0.928039	0.15406
#DIV/0!	?	#DIV/0!
-1.304854582	0.562534	-1
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
0.341036918	0.628799	-1.32193
-0.321928095	0.695223	-0.73697
0	0.450185	#NUM!
0.584962501	0.834708	0.32193
#DIV/0!	1	#DIV/0!
#DIV/0!	1	#DIV/0!
#DIV/0!	?	#DIV/0!
-2.702001922	0.581527	-0.93886
-0.737672937	0.865051	-0.22448
-0.736965594	0.877286	-0.23447

1.14332425	0.463427	2.16873
-0.123382416	0.589206	0.74169
#DIV/0!	0.450185	#DIV/0!
#NUM!	0.308068	#NUM!
#NUM!	0.495025	-1.58496
-0.220619998	0.979537	0.03341
#DIV/0!	?	#DIV/0!
-0.099535674	0.89252	-0.20645
0.584962501	0.200976	1.58496
#DIV/0!	0.450185	#DIV/0!
#DIV/0!	0.308068	#DIV/0!
-0.302028537	0.805041	-0.32193
0.029594782	0.923761	0.17573
-0.672387674	0.985211	-0.02769
-0.514573173	0.777535	-0.51457
-0.526068812	0.712847	-0.77761
-0.712197689	0.638206	-0.98138
-0.241404122	0.687876	0.4636
-0.377504815	0.693608	0.41054
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	0.308068	#DIV/0!
-2	0.31594	1.16993
2.584962501	0.357906	2.80735
-0.908207524	0.661866	-0.41153
-0.25276607	0.761747	0.56768
-0.432227261	0.826537	-0.33665
-2	0.791627	-0.41504
0.716207034	0.959189	-0.10692
#DIV/0!	0.308068	#DIV/0!
-0.2410081	0.630533	-1.11548
#DIV/0!	?	#DIV/0!
1	0.474021	1.58496
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
0.485426827	0.600305	1
-0.395117533	0.7146	0.44485
-0.79052351	0.998884	0.00178
-1	0.468351	-1.58496
-0.415037499	0.847091	-0.41504
#NUM!	0.308068	#NUM!
#NUM!	0.308068	#NUM!
#DIV/0!	?	#DIV/0!
-0.065588342	0.912068	0.16278
0	1	0
#DIV/0!	?	#DIV/0!
-1.286728445	0.987482	-0.02137
-0.310340121	0.752623	-0.70627
-0.251538767	0.937183	0.11103
-0.263034406	0.819136	-0.41504
-0.522286005	0.77385	0.18939
#NUM!	0.308068	#NUM!
-0.040428426	0.88626	-0.27053
-0.259914545	0.955301	0.0749
1.321928095	0.775667	0.62449

-0.563408358	0.917458	-0.16592
0.98128774	0.349483	1.02214
0.133678435	0.707578	0.58962
#DIV/0!	0.545627	#DIV/0!
0.62963155	0.867151	0.31647
2.321928095	0.706667	1.58496
#NUM!	1	0
0.054742965	0.985821	0.03154
-0.332575339	0.739203	-0.5639
0.163498732	0.625449	0.848
-1.584962501	0.724378	-0.58496
2.938599455	0.0793556	2.5025
-0.048634775	0.895957	0.20337
-0.316857105	0.915711	0.15403
2.266786541	0.585779	1.90087
0	0.770719	-0.73697
-0.120294234	0.919864	0.1635
-1.175849835	0.66036	-0.34577
#DIV/0!	0.308068	#DIV/0!
-0.163448589	0.830213	0.25374
#NUM!	0.308068	#NUM!
2.584962501	0.561007	2.16993
0.111031312	0.826124	-0.47393
-0.010558858	0.906016	0.20605
1	0.622002	#NUM!
#NUM!	0.622002	1
-0.678071905	0.55198	-1.51457
#DIV/0!	0.622002	#DIV/0!
-1.944858446	0.684695	-0.7122
-2	0.734084	-0.22556
-0.924102383	0.846266	0.32432
0.200559914	0.360156	0.89958
-0.391578526	0.923714	-0.16255
#NUM!	1	0
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
-1.263034406	0.859253	0.22239
0.514573173	0.671354	0.89308
-0.906890596	0.746258	-0.58496
-0.479341102	0.956794	-0.0743
#DIV/0!	?	#DIV/0!
-0.215012891	0.765921	-0.65313
#DIV/0!	1	#DIV/0!
#NUM!	1	0
-1.187627003	0.566737	-0.60266
#NUM!	0.308068	#NUM!
#DIV/0!	?	#DIV/0!
-0.738954147	0.882729	-0.11958
1.196710749	0.173886	2.19867
-1.078002512	0.949246	-0.078
0.649258499	0.621463	0.87436
#NUM!	?	16.5968
#NUM!	?	56.9057
#DIV/0!	?	#DIV/0!
#DIV/0!	0.308068	#DIV/0!
#NUM!	0.000187178	4.28807

#DIV/0!	?	#DIV/0!
-98.91555597	0.308068	-54.8811
47.87152815	0.308467	51.9421
-1.298755758	0.63743	-0.33311
0.654611069	0.883651	-0.4358
-6.5210109	0.626879	0.98252
-0.586493382	0.842867	-0.34224
#DIV/0!	?	#DIV/0!
-0.744161096	0.837506	0.27376
-0.557772614	0.99555	-0.00745
-0.085046503	0.830224	-0.4112
-21.08793797	0.323899	-4.72275
#NUM!	0.308068	#NUM!
#DIV/0!	?	#DIV/0!
#NUM!	?	41.079
-0.552293385	0.78542	-0.46995
31.02695269	1	2.17997
-4.518345056	0.30845	-18.44
#DIV/0!	?	#DIV/0!
-1.05621406	0.334873	-1.57892
#DIV/0!	0.308068	#DIV/0!
10.22572335	0.964031	5.61183
46.75213414	1	21.2526
-1.521340423	0.331182	-31.2391
0.015589219	0.923391	0.13681
-1.442916963	0.84386	-0.27299
-0.489914854	0.947723	-0.13427
-2.848249809	0.936606	-0.10565
0.512032035	0.942275	0.17451
-10.65522005	0.491393	-1.23009
-1.451107051	0.598219	-0.76487
-1.823443324	0.953664	0.08246
-1.166358386	0.88304	-0.21527
-27.68583512	0.308068	-38.7637
-0.88336279	0.44009	-0.88227
#NUM!	?	40.9787
0.959358016	0.894292	0.32193
10.22572335	0.964031	5.61183
#NUM!	0.982631	0.03937
-1.360619791	0.703823	0.74963
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
-18.35575392	0.307785	-142.48
#NUM!	0.308068	#NUM!
#NUM!	?	#NUM!
-57.39406187	0.332623	-4.12159
-0.141127737	0.771074	0.36372
-22.15433049	0.308068	-21.8634
-0.725773777	0.693377	0.46763
-0.095026488	0.93092	-0.19259
-0.86621819	0.909977	0.13644
-1.015339043	0.842645	0.38173
-0.287527345	0.667477	-0.43142
#DIV/0!	0.308068	#DIV/0!
0.36923381	0.549744	0.54432

-1.73584677	0.38552	-0.97786
#NUM!	0.308068	41.1413
-0.88221761	0.626365	-1.08473
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
-24.63151566	0.315639	5.75494
-0.453273556	0.912626	0.10944
#DIV/0!	1	#DIV/0!
60.75303075	0.323187	62.593
-0.8696392	0.96686	0.05413
-0.550730342	0.538594	-1.75823
-1.111966064	0.893026	0.24493
#DIV/0!	1	#DIV/0!
-52.44324881	0.71784	-0.69268
0.206072168	0.950379	0.13026
#DIV/0!	0.308068	#DIV/0!
-0.258061782	0.908549	-0.23365
-1.68031E-06	0.308068	25.3145
-12.62713884	?	-3.20792
-73.90029442	0.308068	-111.604
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
0.035414682	0.312547	6.50783
#DIV/0!	?	#DIV/0!
23.61918655	0.308068	51.3445
0.052139884	0.891242	-0.26983
0.238821182	0.975611	-0.0574
-2.352465489	0.708761	0.72315
38.63046273	0.999721	26.9733
#NUM!	0.308068	94.4539
0.690439001	0.602436	1.06671
0.023676575	0.995939	-0.00882
-0.838802676	0.72871	0.34514
#NUM!	0.00342458	-101.696
0.184429351	0.413023	1.00848
#NUM!	?	#NUM!
#NUM!	?	-21.7051
#NUM!	0.308068	-56.0015
#DIV/0!	?	#DIV/0!
0.580404219	0.863178	0.29157
-0.505827397	0.719067	-0.60804
-85.0832053	0.393493	-2.50683
0.114399373	0.910821	-0.22707
1.017944808	0.643502	1.24538
-21.56340309	0.308068	-71.0745
-0.120811686	0.932959	0.14087
-0.481310719	0.927424	0.07738
-0.327784792	0.997379	-0.00539
-1.421058257	0.873839	-0.08472
0.117872781	0.957281	-0.09612
6.608956292	0.990778	-13.8034
10.37268428	?	46.6367
#DIV/0!	?	#DIV/0!

-0.145727258	0.581014	0.80137
-0.815457902	0.844527	0.24777
#DIV/0!	1	#DIV/0!
-4.51845402	0.346578	3.5194
#NUM!	0.308068	48.0652
#DIV/0!	?	#DIV/0!
-0.892958622	0.956284	0.07032
0.452038782	0.921916	0.18654
-0.055044287	0.882972	0.17922
1	0.78878	0.73697
11.25422819	0.308082	18.1998
-7.604549332	0.307922	16.7311
-0.506606231	0.650059	0.95648
-4.741685344	0.229531	-5.14512
2.048022389	0.144441	3.1397
48.90469709	?	83.9112
23.4788907	?	33.1896
#DIV/0!	1	#DIV/0!
#NUM!	0.828114	0.40064
-57.34386784	0.0818245	36.5623
-0.333358676	0.607118	0.17732
-138.7091046	0.308068	#NUM!
#DIV/0!	0.308068	#DIV/0!
-0.766706512	0.623269	-0.82253
#DIV/0!	?	#DIV/0!
0.400629791	0.796033	0.50681
#DIV/0!	?	#DIV/0!
0.099404863	0.902384	-0.29099
#DIV/0!	?	#DIV/0!
42.84052668	1	-4.56016
-0.442181545	0.94556	-0.12332
-0.477226709	0.921531	-0.11351
#DIV/0!	?	#DIV/0!
#DIV/0!	1	#DIV/0!
7.662970265	0.995558	-37.6363
-0.840836277	0.908151	-0.18256
-13.49543296	0.480474	-1.21208
-14.46187645	0.838857	0.32694
-48.99710662	0.308068	-92.1814
-1.88424806	0.421172	-0.93467
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
-0.551518499	0.496465	-2.15633
-0.009671604	0.980762	0.04948
-1.261741089	0.862698	-0.08208
-0.062735755	0.894586	0.17333
-0.892152738	0.862251	0.27188
-81.89391257	0.668128	0.84342
#DIV/0!	1	#DIV/0!
#DIV/0!	?	#DIV/0!
-0.321928095	0.495025	0.48543
-23.85126777	?	6.44319
-0.359499446	0.988649	0.01997
-0.975812971	0.833954	-0.35773
#NUM!	?	-55.0056
-5.383986389	0.000849274	-1.86612

-0.477208463	0.93849	0.09763
0.009486758	0.876378	-0.31654
#NUM!	0.308068	84.3889
#NUM!	?	58.0484
118.0568205	1	66.6542
-0.233961387	0.888443	-0.22237
-0.626641212	0.80844	0.44853
4.93225177	0.970539	-22.554
0.929341125	0.923146	-0.31561
#DIV/0!	0.308068	#DIV/0!
-0.736965594	0.308068	-3.32193
#DIV/0!	0.450185	#DIV/0!
-0.523102433	0.969826	0.06236
#DIV/0!	?	#DIV/0!
#NUM!	?	#NUM!
#DIV/0!	?	#DIV/0!
-0.605601187	0.883945	0.15275
-0.748011216	0.867532	-0.13403
10.22572335	0.964031	5.61183
1.321928095	0.622002	1.32193
37.205892	1	-47.7688
-0.39321072	0.746193	-0.70074
34.40836052	1	-66.5614
-0.888661217	0.935653	0.07911
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#NUM!	0.308068	79.3188
60.58268426	1	6.46154
-0.75438804	0.953106	0.09286
1.883966824	0.824972	0.87593
-0.614807012	0.917624	-0.16101
-2.308944795	0.603425	-0.65618
-0.300312467	0.412526	-9.3164
#DIV/0!	?	#DIV/0!
-0.263034406	0.973853	-0.05247
0.536429783	0.725531	0.61352
-0.800822711	0.824142	-0.45408
#DIV/0!	?	#DIV/0!
-1.036426046	0.746491	-0.30728
0.581187813	0.867524	0.41341
-33.96789298	0.979101	0.04738
#DIV/0!	?	#DIV/0!
10.37268366	0.308068	72.7872
#DIV/0!	?	#DIV/0!
#NUM!	?	-0.95791
#DIV/0!	1	#DIV/0!
75.56727953	?	79.6249
#NUM!	0.308063	18.3468
-0.623522929	0.998392	0.00286
-7.482928258	?	-13.0923
#DIV/0!	?	#DIV/0!
#NUM!	0.308068	#NUM!
-3.493932978	0.702215	-0.53797
-0.504270732	0.50256	-0.98682
51.43041344	1	#NUM!
-1.026306893	0.694648	-0.34685

29.52712551	0.308068	48.0366
-1.193700775	0.343496	-109.403
56.00391355	0.999993	39.0288
-0.552817058	0.930113	0.1163
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	1	#DIV/0!
0.02742885	0.985839	-0.0339
-68.49818583	0.308068	-20.4981
#NUM!	?	#NUM!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	0.308068	#DIV/0!
#DIV/0!	0	#DIV/0!
0.263034406	0.536102	1.09311
-0.18967135	0.365636	0.45642
-5.826909001	0.308068	37.8661
0.145040471	0.866066	0.24045
-1.229263886	0.768028	-0.40721
22.67672583	1	-6.66464
-0.224180915	0.496174	-2.61279
-0.688514852	0.918892	-0.13585
-0.265849602	0.861635	0.27475
#DIV/0!	?	#DIV/0!
9.771881975	0.99897	-23.3387
#NUM!	?	-11.777
2.542156841	0.297701	5.58707
-1.845029705	0.265124	-2.46914
0	0.767879	0.38702
-0.473021367	0.340518	-3.49181
50.70681748	1	-2.91261
35.60198394	0.308068	76.8207
-0.701939611	0.905273	0.18302
-0.696014076	0.901947	0.14586
-65.02495177	0.498022	1.56689
#NUM!	0.308068	#NUM!
45.94342836	0.308068	58.649
65.57277205	?	16.9628
#DIV/0!	?	#DIV/0!
25.34830981	1	#NUM!
28.33198445	0.309459	31.9142
-0.973639012	0.630808	-1.08865
0.148522525	0.951432	0.11681
#NUM!	?	#NUM!
-100.7225959	0.423914	-2.13855
22.56973642	1	-11.1962
-0.491870863	0.737513	-0.71713
-12.38526226	0.537606	1.35156
#DIV/0!	1	#DIV/0!
-0.248920171	0.936716	0.13721
0.157302895	0.630318	0.66455
-0.187627003	0.980911	0.04333

0.019628807	0.950815	0.11396
10.22572335	0.964031	5.61183
#NUM!	0.344939	-1.86779
-1.488263055	0.0309607	-1.45291
#DIV/0!	?	#DIV/0!
#NUM!	?	1.45219
40.51961637	1	#NUM!
-0.506068692	0.944014	0.14081
#NUM!	0.308068	#NUM!
-114.982852	0.308068	-103.371
#DIV/0!	?	#DIV/0!
-18.84048722	?	-8.83726
54.59137357	1	31.9212
-0.576654434	0.624771	0.31249
-0.197899386	0.961488	-0.07967
-2.637801752	0.579725	-1.17924
0.452397254	0.605062	0.64572
-1.63612784	0.450919	-2.06184
-0.064263844	0.915209	0.17659
#DIV/0!	?	#DIV/0!
#NUM!	?	#NUM!
#DIV/0!	?	#DIV/0!
74.67420995	1	#NUM!
#DIV/0!	?	#DIV/0!
#DIV/0!	0.308068	#DIV/0!
-0.101793087	0.923501	0.15784
-0.967670982	0.454419	-1.97756
0.491920365	0.173817	1.6671
#NUM!	0.308068	-26.4446
#DIV/0!	0.308068	#DIV/0!
#NUM!	0.308068	#NUM!
#DIV/0!	1	#DIV/0!
#DIV/0!	?	#DIV/0!
#NUM!	0.308068	#NUM!
-1.738334886	0.193128	-6.72222
0.295242987	0.84457	0.34134
0.291766124	0.917433	0.18203
0.264647257	0.85357	0.28068
-0.439981161	0.816078	-0.43178
#DIV/0!	1	#DIV/0!
-1.969158157	0.195013	-0.64157
-1	0.353387	#NUM!
0	0.898872	0.21299
0.689531438	0.662295	0.76462
-0.012634463	0.65987	0.75295
-0.35410186	0.822126	0.1673
-1.321175394	0.606617	-0.67724
-20.11914454	0.308068	-130.59
0	0.308068	28.2295
-0.282091005	0.885134	0.18508
#DIV/0!	?	#DIV/0!
-0.429749851	0.854814	-0.31427
#NUM!	0.622002	1
-0.33834217	0.939112	0.08947
-0.293467333	0.826882	0.19766
0.865914669	0.398605	0.99886

#DIV/0!	?	#DIV/0!
4.970379208	0.971306	#NUM!
#NUM!	?	-28.5012
#DIV/0!	0.308068	#DIV/0!
#DIV/0!	?	#DIV/0!
50.11330725	1	#NUM!
#DIV/0!	?	#DIV/0!
#DIV/0!	1	#DIV/0!
#DIV/0!	?	#DIV/0!
#NUM!	?	#NUM!
#DIV/0!	?	#DIV/0!
-0.434250048	0.897934	-0.20297
-0.653283977	0.958479	-0.084
#DIV/0!	0.622002	#DIV/0!
-0.926082766	0.86951	0.24823
27.50047559	0.0128563	28.5453
#DIV/0!	0.308068	#DIV/0!
#NUM!	?	#NUM!
-1	0.353387	#NUM!
#NUM!	0.308068	#NUM!
4.251420059	0.335943	5.82453
-0.987509056	0.846699	-0.3377
-0.632591364	0.921604	-0.14074
-0.790687845	0.998921	0.00147
#DIV/0!	?	#DIV/0!
-106.0381993	0.308068	-50.9564
-2.084064265	0.665048	-0.59864
0.008096916	0.45133	-52.593
-0.292998708	0.912805	0.17679
-0.581821642	0.975847	-0.05464
-0.276171344	0.978341	0.04381
-0.61267572	0.708746	0.19483
-22.29933636	0.308068	-29.1353
-0.418984684	0.991372	0.01178
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
-0.027783982	0.701163	0.82952
4.471914813	0.516217	4.18662
60.64825795	?	#NUM!
1.822579651	0.581455	1.82042
#DIV/0!	0.308068	#DIV/0!
#DIV/0!	?	#DIV/0!
99.03828898	1	#NUM!
4.789750064	?	#NUM!
-7.685693893	0.328524	-4.37056
#DIV/0!	?	#DIV/0!
-95.6637586	0.308068	-71.4468
#DIV/0!	?	#DIV/0!
-29.40113321	?	-0.56291
51.70738256	1	-4.95478
#NUM!	0.308068	#NUM!
#DIV/0!	?	#DIV/0!
#NUM!	0.308068	#NUM!
#NUM!	?	-26.6518
-30.34421344	0.308068	-27.0291
-0.144300528	0.630812	0.59544

-2.31189044	0.971079	-0.04841
-1.003282824	0.75008	-0.35681
0.10975068	0.989169	0.02625
-0.142811707	0.788196	0.32078
-44.74440466	?	22.9028
#DIV/0!	0.308068	#DIV/0!
-51.5652379	?	-29.7754
#DIV/0!	?	#DIV/0!
-73.90029424	0.308068	-37.6363
#NUM!	?	#NUM!
0.054124402	0.770276	-0.75318
#DIV/0!	?	#DIV/0!
#NUM!	0.308068	#NUM!
1.7278123	0.917419	0.42367
#NUM!	?	#NUM!
#DIV/0!	0.308068	#DIV/0!
#NUM!	0.308068	#NUM!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#NUM!	?	9.0843
0.011791733	0.847577	0.34777
0.203155688	0.784149	0.40278
0.790906859	0.583292	#NUM!
-1.951616505	0.925146	0.17134
0	0.308068	25.3145
0	0.450185	#NUM!
#DIV/0!	1	#DIV/0!
-0.129344419	0.916194	0.17713
#DIV/0!	?	#DIV/0!
#NUM!	0.304813	1.00592
-0.446441532	0.923281	-0.11225
#NUM!	0.308068	#NUM!
-0.939239114	0.970682	0.0161
-22.97235335	0.305549	-1.43336
-0.280164045	0.414194	-14.3751
-0.36923381	0.759877	-0.31034
#NUM!	?	#NUM!
-0.24479636	0.98598	0.03271
-9.286718892	0.316823	-5.34592
2.321928095	0.567924	2
#DIV/0!	?	#DIV/0!
-0.462971976	0.973225	-0.02857
10.37268205	0.308068	46.6367
-0.134364578	0.827816	0.34818
-2.111503996	0.496914	0.7415
-0.530806698	0.915221	0.21244
-0.248005686	0.878712	-0.33438
0.308122295	0.704882	0.60768
36.23925898	0.308068	58.3813
-0.622007397	0.202011	1.17213
-0.273884926	0.943329	-0.13501
0.031566987	0.965689	0.07589
3.562038748	0.897323	-3.07192
#DIV/0!	0.308068	#DIV/0!
17.69296946	0.999996	#NUM!

#DIV/0!	?	#DIV/0!
#NUM!	0.308068	#NUM!
#DIV/0!	0.308068	#DIV/0!
-38.1552332	0.308068	57.6381
-6.407911378	0.966776	-0.0433
10.37268368	?	46.6367
39.8493534	0.308068	112.054
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#NUM!	?	#NUM!
#DIV/0!	1	#DIV/0!
-0.40738214	0.664681	-1.02106
#DIV/0!	?	#DIV/0!
23.57698732	1	-26.8134
#NUM!	0.308068	#NUM!
51.45112018	?	-18.585
#DIV/0!	?	#DIV/0!
-125.5878573	0.316874	5.54178
#DIV/0!	?	#DIV/0!
#NUM!	?	71.622
-0.928357256	0.739073	-0.51101
0.044394119	0.778661	0.35755
-0.836128282	0.73173	-0.56319
0.062357997	0.956689	0.12014
-0.480169079	0.96127	-0.07992
-0.031472666	0.977859	-0.04943
#DIV/0!	?	#DIV/0!
0.516746424	0.508085	0.45251
0	0.450185	#NUM!
-0.79157611	0.951186	0.08123
#NUM!	0.311787	-6.76325
-0.104218628	0.347634	-15.9131
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
-0.484064294	0.964281	0.0484
#NUM!	1	0
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	1	#DIV/0!
0.007316505	0.99781	0.00453
-1.362570079	0.403716	-0.922
-0.432770585	0.917974	-0.15536
-47.98405242	0.308068	-72.9537
#DIV/0!	?	#DIV/0!
22.93733058	0.999641	11.6441
-1	1	0
0.485426827	0.342872	-2.32193
0	0.450185	#NUM!
#NUM!	?	6.54462
-96.73582736	0.392446	-2.52194
-1.472498587	0.614642	-0.95403
10.32551727	0.99809	1.89607
-0.317822542	0.769028	-0.67648
-2.581611227	0.0451769	-2.54104
-0.401356951	0.838117	0.41432
-0.591535155	0.840938	-0.35509

4.039741712	0.585537	2.76226
-1.743847837	0.747385	-0.16814
#DIV/0!	1	#DIV/0!
-0.849338485	0.59263	-1.29273
#NUM!	0.0704451	#NUM!
-11.37940199	0.313508	6.22238
-0.329913832	0.408553	#NUM!
#NUM!	0.308068	#NUM!
-1.778955046	0.5008	-0.81423
-0.42003818	0.822615	0.28177
0.882230295	0.589578	0.66772
0.568985213	0.858621	0.41626
0.036680663	0.935613	-0.14994
0.235692637	0.972661	0.07013
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
-68.87226825	0.308068	-105.497
33.87219982	0.309671	37.3515
#NUM!	0.313065	6.34403
-0.099779397	0.915557	-0.16641
-0.039477035	0.988889	-0.03067
-0.298086154	0.927429	0.13496
-1.947865971	0.479754	-0.3478
-101.3975974	0.329319	4.31811
-1.399903328	0.802068	-0.39412
-4.415980017	0.308069	18.7435
-0.465863618	0.965786	-0.06736
-0.112596784	0.832344	0.25867
-0.022156445	0.822579	-0.34118
#DIV/0!	?	#DIV/0!
-0.668197042	0.958194	0.05891
-0.552773547	0.962503	-0.04607
-101.3501171	0.308068	-56.0015
#NUM!	?	-8.67927
-28.84313517	0.314359	-6.01693
#DIV/0!	?	#DIV/0!
#NUM!	?	#NUM!
1.137503524	0.821423	-0.73697
-0.734877201	0.623033	0.21654
0.663355501	0.854383	0.42017
#NUM!	?	#NUM!
6.094308281	0.437396	6.22981
-0.22060181	0.656583	0.37837
1.321928095	0.872331	0.48543
-0.103273372	0.216747	-34.1313
#NUM!	0.209509	-8.69841
#NUM!	0.308068	#NUM!
#DIV/0!	0.308068	#DIV/0!
-1.155753256	0.765335	-0.42446
-0.552822742	0.785752	-0.40666
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
-106.2239021	0.856672	0.28229
#NUM!	0.308068	#NUM!
#NUM!	0.308068	49.9125
#DIV/0!	?	#DIV/0!

#NUM!	0.308051	69.3398
-0.311328554	0.901089	0.19861
-1.400107899	0.915762	0.19808
-2.019115451	0.308068	39.0676
-0.238586962	0.889074	0.24178
0.659174474	0.673362	-1.82761
#NUM!	?	#NUM!
-5.647231594	0.308068	22.092
-3.575647861	0.309471	#NUM!
-0.415037499	0.523243	-2
-1.087462841	0.213405	-1.08746
-0.318228411	0.739298	-0.78447
-0.157638628	0.849311	0.28605
0.556110786	0.938569	0.16802
#DIV/0!	1	#DIV/0!
37.48991456	?	43.5572
20.63469506	0.999999	-83.457
#NUM!	0.308068	-100.472
#DIV/0!	?	#DIV/0!
0	0.450185	#NUM!
-0.04766849	0.813769	-0.4698
-0.525394338	0.388607	-17.5978
#NUM!	0.795129	-0.48347
0.184168434	0.902564	0.20942
-0.378957612	0.971203	-0.07478
-3.214797668	0.354643	3.27184
-0.625134512	0.995476	0.00694
9.77188749	0.99897	#NUM!
#DIV/0!	?	#DIV/0!
-0.469977347	0.90103	0.1192
-0.422236392	0.995337	-0.00897
-1.74387968	0.49708	-0.49893
#NUM!	?	6.54462
#NUM!	0.308068	136.436
-0.828186456	0.349351	-4.24818
2.274505501	0.783897	1.18169
-0.334419039	0.835871	0.35147
#DIV/0!	?	#DIV/0!
-2.807354922	1	0
-0.497499659	0.965118	-0.0614
0	0.47668	1.80735
-1.874469118	0.566538	-1.1375
-0.485318235	0.901211	0.17324
-0.488168426	0.858064	0.15733
-0.917324943	0.714147	-0.22264
-0.203533394	0.933739	-0.14639
#DIV/0!	?	#DIV/0!
1.893084796	0.595501	1.65208
-1.0048494	0.956456	-0.08218
-0.638523094	0.963845	0.06436
-0.321928095	0.866773	-0.32193
-0.741095738	0.995883	0.00848
-1.173242032	0.610881	0.25127
0.649092838	0.755393	0.58496
0.564498398	0.886226	0.28279
-0.565379632	0.962266	0.05797

-2.807354922	0.236154	0.65208
#DIV/0!	?	#DIV/0!
-2.873030377	0.436032	-2.05584
-2.807354922	0.610398	-0.80735
0.202308175	0.965904	0.0902
-2.31189044	0.971079	-0.04841
-2.31189044	0.971079	-0.04841
-2.31189044	0.971079	-0.04841
2.782970612	0.897038	-2.31618
-2.31189044	0.971079	-0.04841
-2.31189044	0.971079	-0.04841
-9.266945151	0.208023	2.37975
-2.31189044	0.971079	-0.04841
-2.31189044	0.971079	-0.04841
-2.31189044	0.971079	-0.04841
-0.916984921	0.944458	-0.06675
-2.31189044	0.971079	-0.04841
0.343193904	0.932412	-0.20866
-0.548789602	0.834252	-0.39639
0.096309389	0.837562	0.38541
0.09940313	0.760042	-0.75425
-2.250140199	0.674862	-0.7763
-78.34959129	0.308068	-71.004
-0.355823567	0.945594	0.09639
-0.584596993	0.817199	0.33446
-2.31189044	0.971079	-0.04841
-2.31189044	0.971079	-0.04841
-2.31189044	0.971079	-0.04841
-11.80664197	?	-7.97316
-0.532741472	0.957394	-0.06874
-0.841242917	0.330766	-75.9826
-1.544320516	1	0
-1.341889827	0.90535	-0.18245
-1.583786231	0.870549	-0.26115
1.951878149	0.139218	1.49989
-16.65657751	0.308068	28.2359
-0.28337628	0.589048	0.799
-0.41287247	0.978686	0.0419
#DIV/0!	?	#DIV/0!
-0.515614454	0.834945	0.25634
#DIV/0!	?	#DIV/0!
#DIV/0!	0.308068	#DIV/0!
#DIV/0!	0.308068	#DIV/0!
#DIV/0!	?	#DIV/0!
0.153805336	0.884605	0.22497
-0.49180983	0.892617	-0.23398
-0.166649869	0.95175	-0.10893
-1	0.969113	-0.05658
-1	0.514418	1.16993
0.098303195	0.991548	0.02395
0	0.927519	0.14142
0.088227183	0.923001	-0.1945
#DIV/0!	0.308068	#DIV/0!
59.94626826	0.852217	57.3725
-1.041820176	0.775082	0.42531
0.846990467	0.579419	1.13593

#DIV/0!	?	#DIV/0!
-1.230297619	0.942505	-0.08944
0.556393349	0.748768	0.61298
#NUM!	0.308068	#NUM!
#DIV/0!	0	#DIV/0!
-0.462159154	0.953404	-0.10304
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
-0.703018262	0.970888	0.06054
#DIV/0!	?	#DIV/0!
-0.192645078	0.944227	-0.11924
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
1.584962501	0.559404	1.58496
#NUM!	0.198892	1.32193
-2.848249809	0.936606	-0.10565
-2.848249809	0.936606	-0.10565
22.93733058	0.999641	11.6441
4.251420059	0.316198	5.86077
-0.457137783	0.91428	-0.17785
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	1	#DIV/0!
#DIV/0!	1	#DIV/0!
-0.415037499	0.855216	0.32193
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
-0.193724536	0.964566	0.0592
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	0.308068	#DIV/0!
#NUM!	0.622002	1
-2	0.825659	-0.41504
0.116409492	0.913427	0.21719
1.295455884	0.729943	0.8625
#DIV/0!	?	#DIV/0!
-0.258016331	0.552158	0.51809
-0.03926381	0.985147	0.03451
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
-1.237345713	0.639826	-0.66196
-1	0.353387	#NUM!
-27.54485753	0.308068	-32.6677
-0.290595002	0.918612	-0.15418
0.065489134	0.474132	1.20682
0.588923316	0.200962	2.19328
1	0.912416	0.32193
-0.725140159	0.92046	0.18371
-0.839389547	0.00593899	3.34596
-0.32979651	0.81219	-0.53051
-0.814710124	0.96744	0.07713
-0.560761695	0.72727	-0.7838
0.040398101	0.954261	0.09073
-0.348929952	0.898528	-0.2447

-0.549540999	0.874225	0.24174
0	0.450185	#NUM!
-2.321928095	0.862169	-0.32193
#DIV/0!	1	#DIV/0!
-0.381090167	0.906101	0.19265
#DIV/0!	0.308068	#DIV/0!
-0.866733469	0.607509	-1.14684
-0.415037499	0.523243	-2
-2.325550199	0.524968	-1.33534
#DIV/0!	?	#DIV/0!
-0.5776945	0.928773	-0.16856
-1.181297889	0.642468	-0.67147
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
-0.261328084	0.885437	-0.2716
-1	0.72755	-0.58496
-0.777607579	0.492814	-1
-2.04580369	0.573214	-0.53239
-0.341434409	0.958259	0.07266
-1.294890713	0.359757	-0.94501
#NUM!	0.710482	-0.58496
-0.336413446	0.685872	-0.9971
#DIV/0!	0.338084	#DIV/0!
-1.116806854	0.435566	-1.07919
1.435104386	0.75222	0.84407
-0.260228748	0.888932	0.22184
-0.105426354	0.887398	0.19657
-0.134491308	0.931877	0.13679
-0.411080646	0.482741	0.68469
0	0.450185	#NUM!
#DIV/0!	?	#DIV/0!
-0.906890596	0.818901	0.20462
4.534977842	0.973477	-1.59564
-0.858799831	0.931192	0.08881
-0.890836557	0.995999	-0.00631
0.415037499	0.490213	1.41504
-0.662355679	0.879621	0.18693
-0.78004122	0.830518	0.21338
-1.716690029	0.864217	-0.10546
0.184424571	0.880316	-0.37197
-0.828631582	0.634753	-0.80573
-0.337869639	0.949852	-0.11548
-85.63491304	0.5857	1.13795
-0.964917541	0.887706	-0.18442
-0.736965594	0.662394	-1
#DIV/0!	?	#DIV/0!
1.999999134	0.622002	1
-0.123184763	0.98882	-0.02606
60.70726644	0.308311	65.4239
#DIV/0!	0.329316	#DIV/0!
0.749785774	0.988266	-0.02328
0.435501602	0.932255	0.18057
-0.514573173	0.942676	0.1375
-1.360822946	0.593788	-0.58627
-0.528694281	0.767841	-0.60145

1.415037499	1	0
#NUM!	0.308068	#NUM!
-1.390315302	0.925054	-0.10315
#DIV/0!	?	#DIV/0!
1	0.785812	0.58496
-0.321928095	0.630057	0.48543
#DIV/0!	?	#DIV/0!
-1	0.740132	-0.61298
#DIV/0!	?	#DIV/0!
-0.361579776	0.768203	0.48446
-1.084385015	0.958089	0.07687
0.022814479	0.967528	-0.065
#DIV/0!	?	#DIV/0!
-0.571156701	0.962995	0.05445
-0.433076743	0.33188	0.2838
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
-0.648288436	0.966153	0.0649
1.339242617	0.62801	1.41964
11.05768078	0.0732853	10.9047
#DIV/0!	?	#DIV/0!
0.189899701	0.868822	-0.311
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
-0.50408572	0.767203	-0.39068
0.367544895	0.803469	0.47901
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
-0.5360529	0.816181	-0.44859
-0.591006477	0.951914	-0.11026
-0.698378888	0.874161	-0.26487
#NUM!	0.308068	#NUM!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
0.94641974	0.36589	2.07682
0.94641974	0.36589	2.07682
#DIV/0!	0.308068	#DIV/0!
-0.157676456	0.962425	0.08363
#DIV/0!	?	#DIV/0!
-0.422532771	0.999708	0.00061
86.85496741	1	-46.3628
-0.655241197	0.933861	-0.09134
#DIV/0!	0.308068	#DIV/0!
-0.710543653	0.963571	0.06097
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!

33.38713139	1	-95.4814
-0.179580078	0.869971	0.1722
1	1	0
#NUM!	0.308068	#NUM!
-0.467414204	0.80906	0.24702
#DIV/0!	?	#DIV/0!
2.305484192	0.466802	2.19219
0.957771765	0.742834	0.69188
-0.745821598	0.817002	0.18246
-0.045748382	0.900317	0.18992
#DIV/0!	?	#DIV/0!
-1.485426827	0.286561	-1.48543
-0.875218945	0.915922	0.12772
-1.05857095	0.691684	-0.84392
-1.906890596	0.793312	-0.32193
-0.177282682	0.821172	-0.52104
1.999999134	0.622002	1
1.999999134	0.622002	1
#DIV/0!	0.308068	#DIV/0!
-101.5798742	0.308068	-82.8283
-0.246328128	0.667494	0.917
-1.415037499	0.483296	-0.77761
-0.713034411	0.331422	-16.623
-2.767962776	0.28232	7.96834
-0.263034406	0.7555	-0.58496
0.03123072	0.885593	0.26801
#DIV/0!	?	#DIV/0!
0.092258508	1	0
-0.584962501	0.637618	0.73697
0.00184178	0.773781	-0.72511
0.218953337	0.940371	0.14477
-1	0.353387	#NUM!
-0.345644164	0.976553	-0.04783
-0.807028812	0.836923	-0.36541
-0.171952683	0.826822	-0.49845
0.452512205	0.88367	0.31686
0.118428265	0.651025	-0.88034
0.529015356	0.935997	-0.17771
10.46067147	?	-25.5816
#DIV/0!	?	#DIV/0!
-0.599037686	0.890742	-0.21077
1.584962501	1	0
-0.271959636	0.936473	-0.14707
0.147557188	0.673371	0.46949
-0.769481682	0.765805	-0.33795
-0.308676637	0.786389	-0.52864
0	0.651448	1
-0.847996907	0.947078	-0.11103
-58.42543178	0.944007	-0.09276
#DIV/0!	0.622002	#DIV/0!
1.584962501	0.236154	2.32193
0.026391499	0.992462	-0.01787
#NUM!	0.308068	#NUM!
-0.2410081	0.865742	0.20645
-0.27506149	0.931447	-0.13696
0.243669081	0.942857	0.13225

-0.628031223	0.892874	0.19052
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#NUM!	0.308068	#NUM!
#DIV/0!	0.308068	#DIV/0!
-4.175486071	0.845621	0.30656
#DIV/0!	?	#DIV/0!
-0.276385244	0.816906	0.37032
0.092480916	0.987706	0.02985
-1	0.0917211	#NUM!
#DIV/0!	?	#DIV/0!
-0.410788026	0.959301	0.08069
-0.425990027	0.87878	-0.29875
55.95072002	0.683949	54.6068
-0.542068419	0.522154	-0.97404
-8.804163909	0.30838	10.3283
0	1	0
-0.242035438	0.631613	-1.30529
-0.004053083	0.9985	0.00416
0.465663572	0.83463	0.36257
0.178733459	0.827935	0.35339
#NUM!	0.495025	1.58496
0.020177882	0.832628	0.42011
0.329876848	0.927659	0.17258
-0.184424571	0.995668	0.00959
#DIV/0!	?	#DIV/0!
-0.77179906	0.712608	-0.61428
-0.613680656	0.646705	0.38364
-0.700439718	0.674091	-0.70044
-1.09197749	0.812122	-0.07068
-1.579668201	0.811158	-0.40798
-0.978535491	0.73397	-0.60518
-0.965648495	0.773671	-0.4863
-1.138573149	0.915858	0.14173
-1.086094042	0.843296	0.24788
#DIV/0!	0.308068	#DIV/0!
0.167727446	0.931859	-0.16746
-2.2969393	0.790433	-0.34647
-0.334009783	0.967237	-0.05999
0.754887502	0.324456	1.35755
#DIV/0!	?	#DIV/0!
-2.048358236	0.543591	-1.33322
#DIV/0!	?	#DIV/0!
-0.21381189	0.905418	-0.22109
-2.169925001	0.577912	-0.848
2	0.398521	2
-0.591719867	0.919603	-0.16152
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
0.479992941	0.882598	0.27563
-0.925999419	0.956872	0.03284
-0.00461182	0.981752	0.04596
0.736965594	0.926188	-0.26303
0.263034406	0.756486	-0.32193
-1.415037499	0.455759	-2
-0.621488377	0.857272	-0.27753

-0.10770508	0.9961	-0.00789
0.470255293	0.86442	0.26564
-1	0.651448	-1
-0.608809243	0.81144	-0.50447
-0.069508849	0.970831	0.05579
1.736965594	0.622002	1.5025
1.874469118	0.706667	-1.58496
-0.404578543	0.850263	-0.22192
-0.460552159	0.854082	-0.35364
-0.862496476	0.946535	-0.10666
-0.925742451	0.74185	-0.59143
-0.159656666	0.971486	0.06054
1.118210668	0.0185805	2.64043
-0.332575339	0.893506	0.23447
#NUM!	0.622002	1
-0.547627951	0.686226	-0.58031
0.186505941	0.969325	-0.07545
-0.603856812	0.968033	-0.06024
-0.706189062	0.909681	0.13479
0.722565971	0.808463	0.5936
#DIV/0!	?	#DIV/0!
-1.2255597	0.792795	-0.42138
0.056437127	0.732146	-0.86871
-0.447458977	0.716522	-0.73697
#DIV/0!	?	#DIV/0!
-2.078002512	0.70852	-0.68314
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
-0.020561322	0.930282	0.15778
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
-1.132512903	0.812802	0.37643
0.337695411	0.695518	0.62149
1.171003391	0.30184	2.03488
#NUM!	0.756486	-0.58496
-0.684498174	0.814094	-0.40439
-7.860820246	0.60218	0.56173
-5.031523105	0.624335	-0.99205
0.212050477	0.941264	-0.152
0.186768512	0.773534	0.43252
-0.835898579	0.747351	-0.5941
-0.652076697	0.886945	-0.28951
37.20620283	1	-92.145
-0.7338402	0.719922	0.43775
37.20588751	1	-47.7688
-0.415037499	0.680109	-1
85.91422479	1	-43.4366
0.121686251	0.815036	0.4057
-0.543933537	0.914755	-0.07739
-0.214822583	0.958835	0.08741
-0.6208077	0.807346	-0.39453
37.2058933	1	-47.7688
-5.031522366	0.624334	-0.99205
-0.415037499	0.523243	-2

-0.055657324	0.853467	0.23884
37.20588751	1	-47.7688
37.20588723	1	-47.7688
-0.798366139	0.841608	0.29523
-0.690516671	0.954609	-0.09134
-1.100937546	0.777837	0.16741
-0.532171635	0.646761	-0.4382
#DIV/0!	0.034897	#DIV/0!
-1.457643245	0.953006	0.04262
-0.042644337	0.954555	0.07505
-0.584962501	0.637618	0.73697
0.453943985	0.813053	0.48235
-0.609190841	0.657737	0.41525
-0.263063466	0.982075	0.04058
-0.209453366	0.977752	-0.03953
-0.078363186	0.980903	-0.04282
-0.403578384	0.886765	-0.23975
-1.598454737	0.985665	-0.02842
-0.412777468	0.971021	-0.05614
1	1	0
-0.836501268	0.928185	-0.12029
0.263034406	0.919204	0.18057
-0.527486011	0.657069	0.38034
-0.696760529	0.896539	0.13553
-1	0.564081	-1.1375
-0.464776631	0.910424	0.10598
-0.409936532	0.969266	0.04768
-2.934594105	0.210042	-3.45699
0	0.922659	0.12711
-0.047367848	0.959724	0.078
-1.02358682	0.832604	0.33898
0.368040233	0.989556	-0.02666
-0.239827015	0.839915	0.21401
-0.152003093	0.647196	-1
#NUM!	0.308068	#NUM!
0.037113173	0.856049	0.28287
-2.181539819	0.538263	-1.38905
1.499111784	0.833336	0.71277
-1.790002411	0.493275	-1.02206
#DIV/0!	?	#DIV/0!
-0.291676498	0.97402	-0.05403
0.276730665	0.860244	0.31286
-0.516123624	0.92379	-0.12286
-1.212544635	0.566692	-0.14158
-0.836685626	0.918238	-0.15301
0.512206158	0.918809	-0.20282
-1.429558223	0.567609	-0.92056
-2.767530887	0.550137	-1.15002
-0.466989579	0.88474	0.05015
#DIV/0!	?	#DIV/0!
-0.558066746	0.989366	-0.02312
#DIV/0!	?	#DIV/0!
-1.192645078	0.667337	-0.83007
-0.256033013	0.725896	-0.43711
-0.079853308	0.851582	0.2973
-1.928331911	0.396009	-0.62731

-1.30416728	0.637769	-0.99747
-0.173859603	0.787517	0.29096
-0.619300314	0.803205	0.3807
1.223976613	0.401778	-15.9271
-0.282574592	0.643865	0.63373
-0.932006581	0.789875	-0.48848
-0.267721021	0.911548	-0.2276
1.122371685	0.981412	-0.06869
-1.382469637	0.723001	0.4826
0.335131843	0.4181	0.91455
0	1	0
-8.071785627	0.338286	-3.84222
-0.358484153	0.942538	-0.09403
78.73289135	1	-50.6177
-11.87213746	0.487322	-1.63287
-0.099309448	0.94288	0.11782
-0.361098692	0.991266	0.01639
-0.170415131	0.940118	-0.12696
0.218680564	0.65118	0.74167
-0.415037499	0.523243	-2
1	0.710482	1
#DIV/0!	?	#DIV/0!
-0.548826432	0.832602	-0.3808
#DIV/0!	0.308068	#DIV/0!
-0.44429713	0.850235	0.21559
-1.584962501	0.252216	-1.58496
-0.203713315	0.955619	0.09014
-0.141289564	0.955467	0.08479
-0.429212633	0.962004	0.06186
0.139120716	0.92684	-0.21035
-0.541835179	0.843052	-0.35271
-0.326898851	0.830865	0.29472
-0.526165346	0.8535	-0.2894
-0.315052758	0.999483	0.0011
-0.154633349	0.85704	-0.36392
0.234465254	0.960582	-0.08746
#DIV/0!	0	#DIV/0!
0.544320516	0.664586	0.70044
-0.246355665	0.992389	-0.01687
0.415037499	0.515664	#NUM!
#DIV/0!	?	#DIV/0!
0	0.450185	#NUM!
0.187803682	0.770813	0.64846
-0.19592021	0.969116	-0.04654
#NUM!	0.622002	1
1.400237503	?	-17.0734
-0.389436596	0.838834	0.16471
-1.440572591	0.886291	0.16335
-0.40639356	0.92531	-0.09994
-0.051074185	0.925636	0.14319
-0.763559804	0.872261	0.20249
#DIV/0!	?	#DIV/0!
-0.301084191	0.963249	0.06932
-1.67556505	0.753601	-0.38606
-0.613390909	0.832564	-0.33963
-1.584962501	0.441678	-2.16993

-2.615238364	0.198053	-4.25343
-1.003253927	0.564828	-1.21588
-0.682903677	0.807116	0.24033
-1.196371966	0.990185	0.01387
-0.142604395	0.812164	0.27711
-2.301354263	0.979606	-0.03506
-0.530514717	0.964617	0.08092
#DIV/0!	0.308068	#DIV/0!
-2.006901962	0.703746	-0.6902
-0.553392422	0.919735	-0.13368
#DIV/0!	?	#DIV/0!
-0.295661273	0.952357	0.06665
-0.366657037	1	0
-2.42506248	0.769863	-0.43973
#DIV/0!	0.353387	#DIV/0!
-1.209869588	0.841725	-0.33028
-0.610692776	0.982095	0.03123
1.325104685	0.520699	1.32891
-0.430828548	0.834879	0.35234
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
-0.881621333	0.25748	0.82634
#DIV/0!	?	#DIV/0!
-1.459431619	0.228778	-3.45943
-0.241239278	0.940898	0.09594
-1.582643055	0.700482	-0.53646
-2.428843299	0.928489	-0.152
-0.847996907	0.777997	-0.58496
-0.347222115	0.855295	-0.29897
#DIV/0!	?	#DIV/0!
0.059378547	0.944174	0.10518
0	0.651448	1
-0.031495853	0.982357	-0.04133
-0.652723428	0.851255	-0.31769
-0.815575429	0.804124	-0.44219
#DIV/0!	?	#DIV/0!
-1.076427947	0.775118	-0.51914
-1.055205502	0.764731	-0.55813
-1.807354922	0.95442	0.08017
-1.063565129	0.862189	-0.30339
-0.243784415	0.881557	-0.27725
-0.415037499	0.875097	-0.26303
-3.503661461	0.0317204	-4.32916
#DIV/0!	?	#DIV/0!
#NUM!	0.438509	-0.80735
-0.616278041	0.966574	-0.06025
-0.511500339	0.909809	0.14336
0.408084739	0.83514	0.40808
-0.762960803	0.843079	0.23704
-0.728796617	0.879136	0.21362
#DIV/0!	0.308068	#DIV/0!
0.009571635	0.976991	0.04457
-0.428843299	0.706407	-0.80735
#DIV/0!	?	#DIV/0!
-0.386926246	0.979111	0.04526
-1	0.353387	#NUM!

-2.584962501	0.192316	-1.32193
#DIV/0!	?	#DIV/0!
#DIV/0!	0.450185	#DIV/0!
-0.180531267	0.935383	-0.13573
-13.9696977	0.308068	-40.4047
-1.563833626	0.825726	-0.31506
-0.763516844	0.308664	-19.0278
#DIV/0!	1	#DIV/0!
-6.511015252	0.0924451	2.9581
#DIV/0!	1	#DIV/0!
1.584962501	0.559404	1.58496
-1.03562391	0.975602	-0.03562
-0.869939459	0.760347	-0.6194
#NUM!	0.308068	#NUM!
-1.108059746	0.935782	-0.08159
-1.345112775	0.425213	-0.28168
-0.171415718	0.936655	0.09908
#NUM!	0.502754	0.87447
-0.029880562	0.723827	0.39836
0.584962501	0.764931	-1
#NUM!	0.308068	#NUM!
-0.579727272	0.85038	-0.3341
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
-1.378511623	0.936125	0.10692
-0.545725693	0.920103	0.12148
-0.084273984	0.685884	0.50203
-0.424433598	0.89322	0.20242
-0.775827536	0.980078	0.03242
-0.9513271	0.899514	-0.21425
-0.741186689	0.923425	-0.1315
-0.485426827	0.774936	0.51457
#NUM!	0.308068	-61.4028
1.656623486	0.946913	-0.26303
-2.419775418	0.787635	0.43033
-1.021061616	0.622002	-0.26722
-0.409985715	0.192704	0.43475
-0.184992315	0.759112	-0.48489
-0.394415889	0.967259	0.07472
2.459431619	0.393741	1.80735
-0.709738429	0.966311	-0.06337
#NUM!	0.034897	2
#DIV/0!	?	#DIV/0!
-0.963073286	0.405016	0.49904
-0.407503827	0.879763	-0.28741
-0.332983283	0.957906	0.08552
0	0.909362	-0.22239
-0.1673889	0.758591	0.39656
-0.49809686	0.917659	0.12471
-0.59946207	0.722801	-0.55639
-0.073463843	0.946861	0.0921
-0.605140383	0.800688	-0.43296
-0.680822516	0.710208	-0.76005
-0.46994584	0.822066	-0.41304
-0.995832965	0.924849	0.0994
-0.434095835	0.734693	-0.61365

0.091630475	0.750197	0.4443
-0.741627994	0.781242	-0.20388
0.678071905	0.79404	0.58496
-0.423101774	0.751414	-0.60195
-1.773556804	0.257587	-1.80852
0.584962501	0.764931	-1
0.166649869	0.938779	0.14018
-0.365353588	0.92495	0.13212
-1.868282477	0.397853	-1.09643
0.386988301	0.714615	0.7438
0.480198387	0.814176	0.50899
0.710493383	0.697945	0.50404
-0.415037499	0.847091	-0.41504
-0.436904985	0.881772	-0.24853
-0.462971976	0.965917	-0.08746
0.042560462	0.825825	-0.41792
-70.77740541	0.308068	-58.0979
-0.657925837	0.657009	-0.75185
1.1627295	0.840173	0.50377
#DIV/0!	?	#DIV/0!
#NUM!	0.495025	1.58496
-0.877515993	0.65199	-0.87752
-0.569892026	0.951795	-0.0914
-21.77150095	0.308371	-10.3707
-0.523561956	0.594683	-0.82312
0.29539515	0.843731	0.45072
#DIV/0!	?	#DIV/0!
0.230009847	0.450665	1.13153
-0.020902302	0.94067	-0.13752
-0.105507162	0.827096	0.32315
#DIV/0!	?	#DIV/0!
-0.91753784	0.549051	-1.28011
-0.362570079	0.8566	-0.36257
-0.008267616	0.908575	-0.22239
0.51887331	0.925027	0.2007
-0.331355143	0.831806	0.23056
#NUM!	0.308068	52.8712
-0.693896872	0.52901	-1.02647
-0.58323782	0.867991	-0.25203
0.36545547	0.786428	0.51847
1.216811389	0.990231	-0.03953
-0.749662423	0.885227	-0.12876
-0.385192988	0.963789	-0.08583
#DIV/0!	?	#DIV/0!
0.523561956	0.737903	0.70044
-0.14310338	0.971602	-0.06485
-0.913091935	0.99771	-0.00472
-1.19844331	0.642007	0.71757
-0.35330851	0.968875	0.06926
-19.08021629	0.30807	-17.6241
-0.174495315	0.715995	0.57007
-1.345774837	0.683907	-0.76081
-5.033339637	0.822896	-0.28657
-1.227526406	0.895047	-0.12184
0.017702002	0.867817	-0.30643
-1.374467434	0.92654	-0.08676

1.095784572	0.564564	0.63604
-0.365062858	0.865581	0.1871
0.385511957	0.813469	0.37643
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1.73976281	0.672135	1.42069
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-1.111031312	0.700736	-0.32862
-0.525091045	0.844814	-0.26793
-3.2410081	0.143066	-1.98162
-0.647487278	0.188432	-1.43795
#NUM!	0.308068	1
-2.807354922	0.568955	-1.22239
-1.584962501	0.806201	-0.37851
-0.438699302	0.727635	0.67278
0	0.236154	-2.32193
-0.362570079	0.667337	0.83007
1	0.409442	2.58496
0.131440997	0.991348	-0.01905
-0.520899576	0.970634	-0.05692
-0.673509723	0.664312	-0.88433
-0.94753258	0.877103	-0.16993
#DIV/0!	?	#DIV/0!
-0.450180793	0.115004	1.70146
-0.020694586	0.39011	0.53723
-1.746243408	0.747188	-0.55069
-0.409713655	0.714293	-0.50441
-0.415037499	0.920998	-0.18503
0.799693475	0.338254	1.10108
0.298572698	0.712209	0.49816
-0.770545689	0.588224	-1.33798
-0.415037499	0.680109	-1
-0.111031312	0.85675	0.34665
-0.700439718	1	0
0.846525988	0.617333	-1.06838
#DIV/0!	?	#DIV/0!
-0.653458813	0.725114	-0.47008
-1.23691023	0.972061	-0.0375
-0.493262667	0.944749	-0.10276
0	1	0
#DIV/0!	?	#DIV/0!
-0.285482594	0.853968	0.25672
-0.504751621	0.810299	-0.39419
-0.508360324	0.914533	0.14534
-0.347923303	0.866773	-0.22239
0.089522096	0.863982	0.25612
-2.963474124	0.471141	-1.5229
-0.841060859	0.857838	0.24945
#NUM!	0.308068	#NUM!
-0.097211803	0.940079	0.11544
-0.541926437	0.977046	0.0384
-0.394859617	0.937714	0.13566
#DIV/0!	?	#DIV/0!
-1.054447784	0.676547	-0.848
-0.306377048	0.848137	0.30654
-0.328622747	0.632646	0.72085
0.226215198	0.940979	0.14267

0.026967048	0.353182	0.81124
-0.009676628	0.9511	-0.13793
3.520676382	0.468821	3.63876
-0.211577827	0.971086	-0.06958
-0.449643224	0.983412	0.03131
-0.256339753	0.947582	0.0973
#DIV/0!	?	#DIV/0!
#NUM!	0.910298	0.16658
-0.019628807	0.903418	-0.24752
#NUM!	0.438509	2
0.489960301	0.900957	0.25161
-0.508066467	0.955416	-0.0668
-1.212993723	0.904775	-0.18057
-0.124926612	0.900006	0.1588
-0.023621731	0.883237	0.1916
#DIV/0!	0.308068	#DIV/0!
-3.835907743	0.101898	-1.2266
-0.285908872	0.990382	0.01612
#DIV/0!	?	#DIV/0!
0.438121112	0.95505	0.0902
-0.15833301	0.7386	0.41597
-0.562419932	0.85348	-0.35933
0.298081353	0.885048	-0.34577
0	0.813955	-0.54749
-0.362570079	0.749249	-0.58496
-0.384854506	0.734494	0.38275
#NUM!	0.756486	-0.58496
#NUM!	0.756486	0.41504
-0.697971463	0.858563	-0.30718
-0.367419479	0.998721	-0.00242
-0.492897276	0.997835	-0.00386
-0.620774878	0.82681	0.25256
-0.469485283	0.908072	0.152
-1	0.353387	#NUM!
#DIV/0!	?	#DIV/0!
#DIV/0!	0.308068	#DIV/0!
-1.148863386	0.55203	-1.28011
#DIV/0!	?	#DIV/0!
0.241602206	0.882117	0.28741
-0.136004125	0.868382	0.25007
0.817135943	0.613399	0.73697
1.906890596	0.279199	2.08746
63.77997781	0.333147	65.2394
-0.440572591	0.899793	0.14439
-2.321928095	0.31594	#NUM!
-2.321928095	0.691772	-0.73697
-0.74999903	0.837729	0.24053
-0.584962501	0.914028	0.152
-0.766671201	0.505252	-1.69644
-0.715287945	0.905497	-0.19533
-0.216587863	0.75042	-0.44086
-0.090197809	0.853001	0.31316
-0.416504398	0.94619	-0.112
-1.045323991	0.881253	0.18145
#DIV/0!	1	#DIV/0!
#DIV/0!	?	#DIV/0!

-0.104426606	0.940916	0.13554
-1.07531736	0.422499	-1.15853
-0.603520048	0.987066	-0.0244
-0.533496333	0.97896	0.02895
-0.48133987	0.846118	-0.38466
0	0.93415	0.12029
0.475840778	0.624986	0.62578
-0.218423519	0.992524	-0.01498
-0.223909291	0.97839	0.04125
-0.343910813	0.900432	-0.21598
#DIV/0!	?	#DIV/0!
0.107951913	0.395099	0.91374
-0.21920926	0.977584	0.03774
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#DIV/0!	?	#DIV/0!
-0.819750469	0.989492	-0.02211
#NUM!	0.622002	1
-0.364300137	0.965414	0.0697
-1.169625759	0.467698	-1.43522
-0.825247629	0.904688	0.14471
#NUM!	0.622002	-1
-0.096771889	0.959361	0.05696
-1.56583145	0.537369	-1.44815
-0.069540933	0.864499	0.22578
-0.374009945	0.888156	-0.26086
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#NUM!	0.308068	1
#NUM!	0.308068	#NUM!
#NUM!	0.622002	1
-1.544320516	0.628938	-0.73697
-0.69726547	0.892246	0.17627
0.768415486	0.579305	-11.0281
0.502500341	0.544514	1.05889
1	0.806588	-0.41504
0	0.0877066	2.58496
0.192031669	0.385879	-7.90904
-0.237039197	0.682702	-0.79647
1.478328359	0.657295	0.88302
-0.292719287	0.927076	0.11629
-0.343743595	0.994128	0.00983
-0.126700883	0.971934	0.06469
0.096215315	0.833431	-0.46566
-0.143590854	0.86072	0.30666
0.184417265	0.780411	0.47573
-0.158959822	0.784767	0.33372
-0.502500341	0.683094	-0.5025
-0.58322536	0.981703	-0.02543
-1.30256277	0.672795	-0.88753
-0.244307198	0.850299	0.24296
-0.629700815	0.920662	-0.15078
-0.06871275	0.888429	0.21759
-0.65516901	0.957383	-0.07734
-4.132971262	0.259792	-10.2449
-0.386058432	0.870251	0.29406
-0.051699568	0.824066	-0.48884

-1.970595563	0.987438	0.02371
-0.115334812	0.381558	0.52302
-0.402360376	0.69791	0.33632
-1.906890596	0.515664	-0.32193
-0.609956016	0.816871	-0.25783
-0.756391154	0.827147	-0.38985
0.415037499	0.698562	-1
-0.362844676	0.981779	0.03289
-0.398549376	0.875349	-0.33442
0.096404484	0.980662	0.04617
-0.574612762	0.778896	-0.4023
1.678071905	0.284468	1.848
-0.600474123	0.896889	0.1738
-0.144442445	0.873599	0.26685
-0.391247061	0.910476	0.14231
#NUM!	0.622002	-1
-0.319738164	0.99389	0.01247
#DIV/0!	?	#DIV/0!
#DIV/0!	0.622002	#DIV/0!
0.070275014	0.934978	0.15464
-1.034765418	0.682953	-0.26303
-0.598611125	0.863064	0.14177
-0.319617934	0.833171	0.26149
0.091775802	0.794677	-0.64106
-1.321928095	0.879571	0.1635
3.137392637	0.745339	1.66801
-0.443476685	0.9187	0.10494
-0.74723393	0.44093	1.08927
-0.928886241	0.985548	0.02581
-1.112367412	0.687434	-0.78327
#DIV/0!	0.724378	#DIV/0!
-0.406357338	0.941201	-0.14475
#DIV/0!	?	#DIV/0!
19.04097009	0.158191	20.8652
#DIV/0!	?	#DIV/0!
-0.093109404	0.927898	-0.19265
-0.507049639	0.9312	0.11613
-0.717613862	0.996049	0.00688
0.415037499	0.462495	1.22239
0.125530882	0.903569	0.24101
-0.244803669	1	0
0.644320562	0.45387	0.79014
#NUM!	0.622002	-1
-2.904980223	0.311591	-25.342
#NUM!	0.308068	#NUM!
#NUM!	0.622002	-1
#NUM!	0.622002	-1
#NUM!	0.308068	#NUM!
#NUM!	0.308068	#NUM!
#NUM!	0.622002	-1
#NUM!	0.622002	-1
#NUM!	0.622002	-1
#NUM!	0.622002	-1
#NUM!	0.622002	-1
-1.074000581	0.970083	-0.03653
0.353636955	0.96714	0.078

0	1	0
#DIV/0!	?	#DIV/0!
-0.0719146	0.712201	0.50714
-0.506959989	0.529173	0.83007
-0.476438044	1	0
#DIV/0!	?	#DIV/0!
0.125530882	0.955518	0.12553
#NUM!	0.702697	0.73697
-0.254826366	0.771216	-0.6481
-0.058096243	0.667555	0.43385
#DIV/0!	0.308068	#DIV/0!
0.055172834	0.587747	-1.86463
-0.421463768	0.870989	-0.26303
0	0.450185	#NUM!
-1.087462841	0.467976	-2.08746
0.796466606	0.754367	0.5697
#DIV/0!	?	#DIV/0!
0.485326921	0.908448	0.26035
#DIV/0!	0.308068	#DIV/0!
-0.223205594	0.969309	0.06233
-0.858694906	0.902157	0.20544
-0.066871068	0.877482	0.23901
-0.068133168	0.97315	0.06279
-1	0.764931	0.58496
-0.164275279	0.993219	0.01288
-0.95419631	0.809824	-0.36923
-0.423211431	1	0
0.137503524	0.98247	0.03562
-0.40596505	0.962862	-0.06683
#DIV/0!	?	#DIV/0!
-0.573259831	0.735672	-0.64516
-0.792195115	0.887794	-0.14975
-0.108797389	0.976046	0.05819
-0.119213158	0.963041	0.09155
-0.45445218	0.801231	-0.39674
#DIV/0!	0.308068	#DIV/0!
-1.94753258	0.680234	-0.75489
-2.950221091	0.618716	0.95519
-0.443038613	0.848795	-0.34185
-0.904714712	0.869002	-0.21271
-0.334779923	0.999353	-0.00138
#DIV/0!	1	#DIV/0!
-58.19749785	0.126084	-1.67807
#DIV/0!	1	#DIV/0!
80.55245132	1	-27.3315
53.54883163	1	17.5756
-0.293857329	0.938804	0.13073
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	0.308068	#DIV/0!
#DIV/0!	0.308068	#DIV/0!
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-1.412335887	?	-12.0734
-0.306190937	0.897478	0.19298
-0.466800816	0.89832	-0.20292
-3.169925579	0.513713	-0.36257

0.210514491	0.61083	0.63322
-1	0.513713	0.58496
#DIV/0!	?	#DIV/0!
-1.555920365	0.712854	-0.53838
-0.246706236	0.967558	0.06124
-0.670876404	0.824091	-0.37941
-0.003871816	0.988188	-0.02705
-0.251092734	0.997237	0.00561
-1.807354922	0.391002	-2.80735
0.010053665	0.929868	0.14938
2.237039197	0.587254	1.5502
-1.263034406	0.940721	0.11548
-0.184083064	0.969345	0.05889
-0.731183242	0.890158	-0.17612
-0.466278334	0.913898	-0.17849
-1.427421224	0.678667	0.63346
-0.065376009	0.886303	0.25081
0.627204919	0.627033	0.67712
-1.777607579	0.688635	-0.77761
-0.436863862	0.990329	0.0158
-1.321928095	0.717686	-0.73697
-0.499170983	0.831049	0.32767
-0.071894049	0.90229	0.20356
-0.974909019	0.896328	0.2332
-1.683281818	0.410589	-0.41713
0.77824499	0.297523	1.82213
-2.807354922	1	0
-0.321928095	0.844246	-0.39119
-0.562134959	0.980311	0.03067
-0.089699583	0.814464	-0.30459
-1.321928095	0.834708	-0.152
-1.048311184	0.810289	-0.12249
-1.161501789	0.509183	-0.57526
-1.222392421	0.639236	-0.80735
-0.740432771	0.790628	0.33446
21.1820342	0.312595	23.9081
-0.086479521	0.848733	0.31878
-0.137322837	0.997256	0.00463
0.132119059	0.920095	0.15344
-15.21710746	0.309132	-8.5588
0	0.946355	-0.152
-0.956931278	0.578184	-0.48981
-0.354664881	0.989539	-0.01862
-0.23789198	0.907697	0.16744
1	1	0
-0.626652522	0.931123	0.10875
-0.550146742	0.980149	0.0293
0.34256537	0.892872	0.24163
0	0.622002	0.58496
0.754124181	0.578495	1.01734
-1.584962501	0.329316	#NUM!
-0.415037499	0.680109	-1
-1.450358035	0.835751	-0.28597
-1.034114427	0.86111	-0.20754
-0.736965594	0.631511	-0.55639
-0.244503123	0.948231	0.09139

0	0.513713	1.58496
-0.425787885	0.89932	-0.14524
-0.815575429	0.768046	-0.41504
-0.305681101	0.839876	0.18955
-1.236529419	0.824359	-0.15323
0.308605593	0.782195	-0.5797
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-0.548209153	0.936103	-0.13761
-0.137503524	0.735025	-0.65208
#DIV/0!	0.308068	#DIV/0!
0	1	0
-0.15373473	0.980253	0.03861
0	0.450185	#NUM!
0.398549376	0.906379	-0.28951
0.156969346	0.900585	-0.12102
-0.02749791	0.939503	-0.13716
-2.247927513	0.621662	0.79647
-0.880329769	0.912783	-0.17236
-0.363102364	0.75666	0.35647
-1.083187012	0.726661	-0.40321
-0.382793159	0.797387	0.22125
-0.924328944	0.669133	-0.3153
-0.559529333	0.962849	-0.07655
0.12684928	0.952746	0.12966
-0.125987937	0.881022	0.18971
0.45458903	0.896951	0.22273
-0.184093079	0.823341	0.25581
-0.992222728	0.958002	0.07349
2.321928095	1	0
-0.407484105	0.950313	0.09878
-2.227155835	0.968065	0.06689
4.880657104	0.969538	1
-0.253517094	0.988685	0.02061
-0.55583969	0.834274	0.25267
0.263034406	0.866773	0.26303
-0.485426827	0.635961	0.73697
-1	0.907467	0.22239
5.36934467	0.987522	-1.16816
-2.530514717	0.506081	-1.36059
0.56326743	0.854816	0.37685
-8.017546158	0.30807	-18.0721
-0.228268988	0.966382	-0.05377
3.825646365	0.340335	2.90914
1	0.559404	1.58496
-0.444752395	0.963986	0.07818
0.280107919	0.944201	-0.1635
-0.287759181	0.949689	-0.08832
-0.987509056	0.846699	-0.3377
-46.10153203	0.119771	33.6049
-0.453283478	0.959589	0.08331
-0.760609141	0.867258	-0.1997
-0.324028598	0.782339	0.22642
0.830348688	0.657479	0.86241
-0.660665341	0.803699	0.39358
#DIV/0!	?	#DIV/0!
1	1	0

#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#NUM!	0.0540204	#NUM!
#DIV/0!	0.308068	#DIV/0!
#DIV/0!	?	#DIV/0!
#NUM!	?	18.2235
#NUM!	0.00344578	-53.9909
#NUM!	0.00344578	-53.9909
#NUM!	0.308068	-52.7658
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#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	0.308068	#DIV/0!
27.00998323	0.406384	27.3595
-1.905974674	0.177757	1.41448
#DIV/0!	1	#DIV/0!
#DIV/0!	1	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
-4.576680863	0.600428	-0.53337
-0.548144397	0.692611	0.29049
-0.689110898	0.890228	-0.14366
-1.133446569	0.896726	0.16886
-0.50578454	0.878319	0.20957
-2	0.450185	-2
#DIV/0!	?	#DIV/0!
0.152003093	0.812953	0.28951
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
-0.648349142	0.946371	0.03588
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#NUM!	0.308068	69.3398
-1	1	0
#NUM!	0.308051	69.3398
0	0.651448	1
#NUM!	0.308068	69.3398
-0.314895524	0.980318	-0.04528
-47.18343342	0.31374	-6.16395
#DIV/0!	0.308068	#DIV/0!
-45.52436412	0.0153797	61.1688
3.764409191	0.476956	3.79088
#DIV/0!	0.259922	#DIV/0!
#DIV/0!	0.308068	#DIV/0!
#DIV/0!	0.307755	#DIV/0!
#DIV/0!	0.308068	#DIV/0!
-47.18343342	0.308177	-11.8426
-47.18343342	0.31374	-6.16395
#DIV/0!	0.308068	#DIV/0!
53.34932627	?	44.5709
53.34932627	?	44.5709

#DIV/0!	?	#DIV/0!
46.40282821	0.308068	84.0401
#NUM!	0.198892	-2
#DIV/0!	0.308068	#DIV/0!
47.43067181	0.307755	74.3454
#NUM!	?	-36.0304
#DIV/0!	0.308068	#DIV/0!
53.34932627	?	65.2602
1	0.481309	1.32193
#DIV/0!	0.308068	#DIV/0!
#DIV/0!	0.308068	#DIV/0!
#DIV/0!	0.308068	#DIV/0!
#NUM!	0.308068	-72.6521
#NUM!	?	-58.6549
-0.010018756	0.871027	0.26179
-50.90965229	0.308068	-72.6521
#DIV/0!	?	#DIV/0!
-1.807354922	0.323864	-1
#DIV/0!	?	#DIV/0!
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#NUM!	?	#NUM!
#NUM!	0.308068	#NUM!
#DIV/0!	0.308068	#DIV/0!
#NUM!	0.308068	#NUM!
#DIV/0!	0.308068	#DIV/0!
#NUM!	0.308068	-31.1286
-80.9272931	0.308068	-102.67
#NUM!	0.308068	#NUM!
-8.286607773	0.768333	0.55327
1.018805066	0.437718	2.32193
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-32.49069342	0.729312	-0.56057
#DIV/0!	0.231073	#DIV/0!
0.050150878	0.59142	1.23023
#NUM!	0.308068	#NUM!
-0.28275962	0.970273	-0.06417
-0.225488335	0.82007	-0.49287
-0.652617543	0.932942	0.0885
0.045332284	0.846458	0.3204
-0.665072676	0.888263	-0.1485
#DIV/0!	?	#DIV/0!
-0.807354922	0.622002	-1.07039
-34.45881174	0.228315	2.33936
-0.36031944	0.870923	0.24847
-0.403977596	0.903376	0.1567
-0.433653177	0.891829	0.17239
-0.183174041	0.955339	0.05788
-23.87215862	0.308068	-35.1293
-1.090032201	0.949122	-0.10652
-0.893599293	0.771885	-0.39686
0	0.234161	1.80735
-0.866723996	0.312946	6.38073
-1.070389328	0.667924	-0.80735
-1.049043447	0.754559	-0.58394
-0.956626591	0.92803	-0.11872
-0.503574174	0.90679	0.1002

0.700439718	0.450185	1.08746
0.192645078	0.682704	0.8365
#DIV/0!	1	#DIV/0!
0.375001966	0.435159	0.77064
0.332575339	0.857889	0.3744
1.391154704	0.749221	0.68958
-0.807354922	0.852433	-0.34792
-0.832587467	0.86722	0.25926
#DIV/0!	?	#DIV/0!
-0.646489007	0.776574	0.32984
-4.400271498	0.088017	-2.09544
-0.431339312	0.956973	-0.08342
-0.481731406	0.582964	0.81097
-0.941725936	0.356817	-66.6508
-2.222392421	0.365356	-2.80735
-15.91029121	0.308068	20.0968
106.846336	0.64465	105.719
34.42705263	0.894478	31.3509
12.6984293	0.308068	41.8206
-24.66469356	?	-30.2388
-2.321928095	0.550362	-1.32193
#NUM!	0.56584	1.22239
-0.317087484	0.520666	-0.73055
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-0.415037499	0.900374	-0.19265
-4.949945229	0.215905	1.49042
-0.117827724	0.90346	0.19794
-0.814228465	0.923684	0.14316
-0.543814249	0.660962	-0.76012
-0.193090813	0.980516	0.03351
0.031586343	0.735203	0.37214
-1.177193002	0.971364	-0.0592
-0.960107273	0.892014	0.18927
-1.542527234	0.492254	0.87643
-2	0.630057	-1
-0.917373461	0.852681	0.13605
-0.160460843	0.905529	0.18371
-1.735350178	0.548264	-1.19613
-0.147635952	0.918812	-0.20202
-0.44801755	0.670107	0.50257
-1.187483227	0.967195	-0.06548
-4.876649953	0.308068	38.9305
-0.538889644	0.997548	0.00618
0.270498561	0.988401	-0.0344
-0.444999737	0.986918	0.02112
-0.46576045	0.96688	-0.06094
-0.871613225	0.596728	0.41339
0.415037499	0.785211	-0.80735
1.765137473	0.710922	1.28079
1.087462841	0.925659	0.16993
9.836784381	0.317433	11.9959
-36.56605978	?	-45.8846
#NUM!	0.308068	#NUM!
-1.1490812	0.677858	-0.72647
-0.174520753	0.579281	0.36751
-1.090364028	0.789183	-0.40136

#DIV/0!	?	#DIV/0!
-0.424497829	0.757723	-0.31487
-2.807354922	0.236154	-1.22239
#DIV/0!	?	#DIV/0!
-1.282399731	0.962321	-0.08246
-0.871905765	0.968913	0.03039
-0.246160587	0.941975	-0.11784
-0.832668254	0.943667	-0.11332
-0.902080462	0.900184	0.14582
-0.430705676	0.978688	0.04362
-0.639260017	0.843658	0.16875
-0.787455365	0.83263	0.3265
-0.261516033	0.800415	0.50472
-1.741931847	1	0
0.009504852	0.838458	-0.34728
-0.647138774	0.958332	-0.04475
-0.65732382	0.98562	0.0164
-0.453454087	0.994604	-0.00512
-0.755074975	0.850922	0.25753
-1.343927328	0.374123	1.18804
-1.389782976	0.771211	0.40967
-1.744269816	0.844354	0.27818
-0.357411092	0.995826	-0.00928
-0.312492019	0.997323	-0.00564
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-0.641923427	0.785613	0.19698
0.520832163	0.671489	-0.71621
0	0.751131	-0.63387
0.271736431	0.753382	0.47896
-0.692787162	0.659733	-0.61329
0.201316641	0.683783	0.60027
0.245668416	0.907971	-0.27594
-0.088133165	0.80359	0.49971
-0.109041735	0.929997	-0.12801
-0.703908254	0.465373	-2.39355
-0.191700032	0.94505	0.11937
-3.5852641	0.262449	-0.53394
-1.725137954	0.498867	-0.9623
-1.426889474	0.72607	-0.50218
#DIV/0!	1	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
-1.050626073	0.961458	0.04891
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
1.27064759	0.0559061	0.72316
-2	0.624065	1
#DIV/0!	?	#DIV/0!

#DIV/0!	?	#DIV/0!
-1.192645078	0.947152	-0.09311
0.90442234	0.791995	0.35845
-0.710493383	0.906867	-0.20645
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1.137503524	0.933386	0.26303
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-0.440572591	0.914223	0.14439
-1.914270126	0.151016	-0.97085
-0.514573173	0.393741	0.58496
#DIV/0!	?	#DIV/0!
-0.736965594	0.593125	-1.32193
#DIV/0!	?	#DIV/0!
-0.415037499	0.681777	0.45943
0.415037499	0.464162	1.12776
-2.459431619	0.76082	-0.28951
#DIV/0!	0.3832	#DIV/0!
-1.378511623	0.873517	0.29956
-1.584962501	0.387299	0.78427
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-0.381090167	0.706137	0.56768
#DIV/0!	?	#DIV/0!
-0.213853796	0.979958	-0.04008
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
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#NUM!	0.308068	#NUM!
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#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
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#DIV/0!	?	#DIV/0!

#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
-11.72209341	0.930481	0.11005
#DIV/0!	?	#DIV/0!
#DIV/0!	1	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
-1	0.651448	-1
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
-0.793549123	0.966693	0.05445
#DIV/0!	?	#DIV/0!
#DIV/0!	0.308068	#DIV/0!
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#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
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#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
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#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
-4.330932138	0.606142	1.05899
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
69.01852502	1	23.2641
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!

-0.601356939	0.765525	0.30883
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-22.93552398	0.308069	-18.1973
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0.128501966	0.888962	-0.24584
-0.249896701	0.725544	0.40615
#NUM!	0.583577	-1.00002
-0.249896701	0.725544	0.40615
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-0.426243165	0.87924	0.24119
-0.132013114	0.995264	-0.00883
-0.654864514	0.909577	-0.18709
-0.252945588	0.97688	0.0426
-0.191592144	0.873122	-0.27835
-0.311379245	0.995129	-0.00862
-0.570097151	0.924698	-0.12141
-0.148447686	0.956567	0.09252
-0.682174943	0.91353	0.10501
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-0.496908521	0.896752	-0.23768
-2.019942707	0.612449	-0.87188
-0.851949908	0.988599	-0.02139
-0.859154175	0.929938	0.13032
0.129321866	0.952817	0.09409
-1.37462884	0.97331	0.04436
-1.586137812	0.977191	-0.04172
-0.315523249	0.9616	0.07079
-0.11414057	0.973168	-0.0581
-0.956278623	0.706592	-0.66482
-0.455679484	0.951771	-0.0993
-0.396356924	0.976952	-0.04406
0.16578141	0.906288	0.1407
-0.979186989	0.938524	-0.0743
-0.366619397	0.997558	0.0053
-0.067114196	0.857015	0.29546
0.342601663	0.986688	-0.03006
-1.361307683	0.978418	0.04608
-0.086280971	0.793893	-0.52386
-1.0482288	0.833218	-0.34116
-1.208290978	0.86917	0.2452
0.116098677	0.899182	0.25765
-0.383251369	0.936752	-0.14378
-2.49082058	0.643564	-0.75186
-0.892741786	0.839488	-0.32833
-0.366503007	0.900903	-0.22015
-0.044861286	0.998982	-0.00207
-0.439307849	0.895927	-0.20726
0.151079473	0.859023	0.24951
-0.325778707	0.80711	0.2212
-1.338801913	0.868831	-0.21681
-0.498740383	0.953167	-0.06153

-0.636871535	0.952919	-0.08829
0.569560374	0.750364	0.67088
-0.55491847	0.951361	-0.09135
-0.54168645	0.963607	0.06478
-0.540050079	0.947657	-0.10823
-0.312507302	0.966947	0.0636
0.14888559	0.935301	0.13658
-2.584962501	0.724378	0.22239
-0.878153516	0.854352	-0.25181
-0.870777336	0.992094	0.00947
-0.366706249	0.976808	-0.04006
-0.628031223	0.8816	-0.2378
0.035431179	0.934113	0.13287
-0.295443801	0.925545	-0.16323
-0.233507024	0.621224	-1.26739
-0.535292358	0.975907	-0.0537
-0.915302835	0.95943	-0.08286
-0.386613897	0.978086	0.03425
-0.379459004	0.988844	-0.02052
-0.157964022	0.981971	0.03525
-0.361382987	0.903235	-0.21035
-0.77823037	0.906694	-0.16612
-0.252118628	0.971543	-0.05269
-0.807354922	0.648511	-0.80735
-0.771060361	0.689525	-0.65076
-0.558741445	0.915134	-0.14571
-0.499618753	0.995641	0.00587
-0.194662363	0.905276	0.1453
-0.420953259	0.729703	0.22763
-0.234234034	0.940826	0.08584
-0.347923303	0.8484	-0.28863
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-0.442943496	0.99494	0.00827
-0.30879037	0.984853	0.0224
-0.350361081	0.897771	-0.19382
-0.629422672	0.913244	-0.14093
-0.660513534	0.768135	-0.20532
-0.385972149	0.867391	-0.29373
-0.041662639	0.970202	0.0663
-0.065009896	1	0
-0.321928095	0.861884	-0.31166
0.584962501	0.810902	0.58496
-0.380224529	0.885021	0.1689
-0.359366664	0.997694	-0.00359
-0.347383676	0.968832	-0.06373
-0.505442161	0.912872	-0.11103
-0.369432104	0.895668	-0.20471
-0.271151164	0.972318	0.04946
-0.134957341	0.848413	0.20502
-0.381922251	0.916863	0.14106
-0.409490548	0.970697	0.05461
-0.873269594	0.665229	-0.36889
-3.173192715	0.077075	-1.81062
0.289506617	0.930262	0.152
0.514573173	0.853781	0.41504
0.354242608	0.990272	-0.0217

0.394712796	0.942475	0.13013
-0.861802706	0.825305	-0.37737
-0.803335529	0.584884	0.75599
-0.066248947	0.989105	0.02589
-0.285456538	0.9746	-0.05401
-0.588622122	0.944791	-0.0958
-0.623900843	0.923106	0.08575
-0.451299747	0.936639	-0.11346
-1.105847913	0.654781	-0.28326
-0.141413269	0.990557	-0.02197
-0.792708146	0.956592	-0.05138
-0.646446794	0.789752	-0.39654
-1.038005372	0.698326	-0.58261
-0.279434549	0.947099	0.10791
-0.87102684	0.797287	-0.36118
-0.436104318	0.875694	-0.22091
-0.522321216	0.997243	-0.00432
0.2410081	0.910106	-0.16665
-0.238847628	0.96733	-0.06512
-0.562016296	0.989687	0.01873
0.106915204	1	0
-0.304423694	0.976591	0.04494
-0.460181828	0.934554	0.14029
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-0.173940479	0.932473	0.11494
-0.677193374	0.843584	-0.30012
-0.36558197	0.950087	0.09414
-0.336916976	0.986225	-0.02624
-0.375989347	0.980969	0.03236
-0.749786207	0.968785	-0.05278
0.271302022	0.952642	0.09622
-0.177668534	0.922526	0.14078
-0.453433847	0.988218	-0.02306
-0.277533976	0.955402	0.07662
-0.547487795	0.969589	-0.06553
-0.174235181	0.935194	0.10555
-0.537722427	0.966699	0.0547
-0.386792181	0.958939	0.06027
-0.853323534	0.6677	-0.16444
-0.541091881	0.938706	-0.11442
-0.663321119	0.977223	-0.02262
-0.943739427	0.808316	-0.08799
-0.385045112	0.739758	0.25917
-0.430267864	0.98038	0.02382
-0.331563987	0.999998	1.8E-06
-0.110271871	0.963851	0.07521
-0.35979845	0.877918	-0.2675
-0.251746334	0.982881	-0.0353
-0.492025397	0.966761	-0.06977
0.054481403	0.922365	0.16143
-2.190427769	0.982053	0.02497
-0.452695625	0.96188	-0.07281

0.287162565	0.880456	0.26689
-2.209453366	0.767609	-0.45457
-0.135285699	0.968915	-0.06711
-0.619624531	0.87402	-0.2208
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-0.248625794	0.908322	0.12837
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-1.057399435	0.767061	0.41119
-0.33430002	0.939092	-0.12429
-0.521697607	0.833644	0.2316
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-1.889817082	0.745226	-0.27684
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-0.716207034	0.778371	-0.4361
-1.222798072	0.748222	-0.5001
-0.813586876	0.753572	-0.39855
-0.349074237	0.872768	0.17086
0.056591749	0.952754	0.08608
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0.593679718	1	0
-1.052321035	0.71401	0.40114
0.692375443	0.949958	0.12988
-0.900162655	0.978592	0.02491
0	0.651448	1
-1.667424661	0.989974	-0.01792
-0.572491984	0.898814	-0.18618
-1.199505992	0.521494	-0.66008
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#DIV/0!	?	#DIV/0!
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-0.410545696	0.875119	-0.25326
-0.517061933	0.695934	0.30312
-0.571466658	1	0
-2.00507099	0.912367	-0.14919
-0.587465008	0.986421	-0.01761
-0.487888868	0.941135	0.02328
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-0.222392421	0.562529	-1.80735
-1.111146089	0.633085	-0.37018
-1.093109404	0.83173	-0.35614
-1.700439718	0.621075	-0.89308
-0.539928747	0.908432	-0.17963
2.700439718	0.00324583	3.44294
0.088728919	0.431104	0.64816
0.103093493	0.540033	0.90332

-0.362082715	0.621001	-1.15504
-2.584962501	0.479515	-1.58496
0.736965594	0.855216	-0.58496
-1	0.308068	-2
-1.321928095	0.361235	0.67807
-0.596289642	0.865525	-0.18676
0.192645078	0.610883	-1.80735
-2.137503524	0.862571	0.12553
-0.598693217	0.999609	-0.00049
-0.148219887	0.820723	0.36506
-0.090125546	0.976579	0.05365
-0.309353598	0.635768	0.34985
-0.316779547	0.889283	0.18853
0.051762095	0.863689	0.28521
-0.584962501	0.577912	1.22239
-0.610679824	0.933038	-0.12324
0.43779425	0.545403	0.70553
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-0.566103473	0.979015	0.03542
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-0.346777449	0.9552	0.07168
-0.189989009	0.950707	0.09721
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1	0.272228	2.80735
-1.349672342	0.533256	-1.32945
-0.597360475	0.964051	-0.0828
-0.636481154	0.950674	0.05612
0.083657929	0.589082	0.75409
0.022637804	0.298515	0.63687
0.036994207	0.958144	0.09077
-0.350945484	0.923305	0.08441
0.736965594	0.719564	0.81714
-0.43759609	0.92544	-0.13872
1.222392421	0.494536	2
-0.466220448	0.941324	-0.12236
-1.244210532	0.882457	-0.27336
0.169925001	0.88591	0.29278
0.184424571	0.973272	-0.06711
-0.4639471	0.928704	-0.1321
-1.405642337	0.643561	-0.65841
1.222392421	0.895809	0.41504
-0.623484075	0.870712	-0.19218
-0.945264769	0.972253	-0.04869
-0.634612791	0.843656	-0.26264
-0.444302094	0.9164	0.13276
0.874469118	0.864102	-0.41504
0.415037499	0.595411	-1.58496
-1.479992941	0.0688662	-0.97303
-1.250636801	0.907521	-0.17892
-0.648870497	0.936628	0.06114
-0.906153398	0.938334	-0.10592
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-0.306715318	0.930431	0.08334
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-0.544378653	0.850369	-0.27255

0.285817801	0.622125	-1.18418
-0.865107662	0.672517	-0.17677
-0.733606582	0.967173	-0.06184
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0.85160816	0.629224	0.97262
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-0.570354414	0.960565	0.04772
-0.535228621	0.883193	-0.26454
0.360442524	0.755369	0.46395
-0.432959407	0.648511	0.63743
-2.378511623	0.799938	-0.37851
-0.305880374	0.985191	-0.02102
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-0.415037499	0.735995	-0.77761
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-0.359013356	0.991415	-0.01882
1.398549376	0.945552	0.24101
-2.834221528	0.497547	-0.49719
-1.008315268	0.826771	-0.2915
-0.695041115	0.759391	-0.10627
-0.503662399	0.971565	-0.06413
-0.766700735	0.764005	-0.27659
-0.3415315	0.764354	-0.5924
-0.986049088	0.499228	-1.37122
-0.279619468	0.858917	-0.25806
0.321928095	0.429254	1.32193
-0.405818969	0.960973	0.07105
-1.675288698	0.749335	0.52469
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#DIV/0!	0.308068	#DIV/0!
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-1.620151929	0.384364	-1.12711
-1.807354922	0.776099	0.36257
-0.422517407	0.990799	-0.01216
0.678071905	0.250939	1.926
-1.236881362	0.542558	-1.14466
0.305251808	0.857726	-0.3172
0.757587818	0.755763	0.72059
#DIV/0!	?	#DIV/0!
-0.392317423	0.622002	-0.22239
-0.538199959	0.948639	0.0664
-0.358079596	0.921502	0.11301
-0.315501826	0.780492	-0.38109
-2.105651788	0.591089	-0.84144
-0.498568877	0.883684	-0.27105
-0.330357784	0.884112	0.24929
-0.572828745	0.849487	-0.32071

0.26710407	0.827089	0.40276
-0.697971463	0.652918	0.49668
-0.392429857	0.91758	-0.17172
-1.678071905	0.645355	-0.77761
-3.772589504	0.00769782	-3.35755
0.407002319	0.275827	1.52075
-1.047305715	0.761984	-0.31034
-0.558925627	0.983135	0.03827
0.128733314	0.974454	-0.05889
-1.504903402	0.487243	-1.30352
-1.54392272	0.939768	-0.0431
-1	0.989384	0.01609
-0.391482771	0.760654	0.4962
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#DIV/0!	?	#DIV/0!
-1.46829248	0.529904	-0.92281
0.192645078	0.610883	-1.80735
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-0.901837978	0.957073	-0.02393
-0.337841458	0.943626	0.06201
-0.696930932	0.855362	-0.24442
-2.426264755	0.93918	-0.0788
-0.107732106	0.947714	-0.10392
-0.777501802	0.824928	0.34279
-2.336283388	0.0753681	-1.57075
0.275634443	0.905669	-0.2123
-0.379759711	0.993364	0.0113
2	0.481309	2
-0.939879008	0.975781	0.03037
-0.474568703	0.877014	0.1766
-1.526240062	0.286241	-2.75275
-2.324594998	0.0947128	-3.33061
-3.26382514	0.59971	-0.83933
-0.373300197	0.994847	0.00954
-0.299219555	0.942659	-0.12808
0.103835811	0.872492	0.1913
-0.18458166	0.962597	-0.07386
-0.552147704	0.94022	-0.09291
-2.137503524	0.569723	-0.65208
-1.226388809	0.745601	-0.54657
-0.657894023	0.968134	-0.06228
1.673189684	0.182544	2.10343
-0.328031464	0.778096	0.25407
1.530514717	0.573212	1.28951
-0.885229813	0.80876	-0.32884
-0.652076697	0.799423	0.32193
0.235530891	0.700748	0.60519
-1.484338043	0.515623	-1.58947
-0.703437695	0.89042	-0.20798
-1.273018494	0.750002	-0.61005
-1.187500149	0.86284	0.2222
-0.151113265	0.839966	-0.3979
0.736965594	0.836473	0.38517
-0.177809826	0.966452	0.07026
-0.369387203	0.951303	-0.08372
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-0.033608393	0.824907	-0.40244
-0.362181579	0.989141	0.01879
-0.366554434	0.941258	0.10104
-1.436639754	0.894028	0.22108
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-1.050626073	0.666873	-0.39855
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-0.587135086	0.832319	0.21623
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-1.609545509	0.480134	-0.39798
-0.259496607	0.846144	0.19022
-0.540568381	0.957401	0.08746
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-0.275179836	0.906851	-0.15489
-1.015266757	0.764711	-0.48239
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-0.952327583	0.988112	-0.01746
-0.415037499	0.415659	1.38082
-0.35558707	0.959571	0.04183
#DIV/0!	0.450185	#DIV/0!
0.235531116	0.698916	-0.78591
-0.85594903	0.983371	-0.03499
-0.329064276	0.995557	0.00946
-0.293781012	0.759729	-0.45407
-0.372585358	0.870195	-0.16252
0.012786155	0.749573	0.40753
-0.069966076	0.92917	-0.18268
0	1	0
-2.070389328	0.731365	-0.30485
0.301380717	0.98183	0.04307
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-1.74371019	0.831216	0.13481
-0.122335543	0.860804	-0.25601
-2.26514919	0.78224	-0.19022
-0.011404763	0.870277	0.20255
-1.091000934	0.818426	-0.30589
-0.724231563	0.833577	-0.32687
-0.727474145	0.729609	0.39707
-0.532748296	0.978399	0.03847
-0.486075906	0.947285	0.07472
0.540568381	1	0
-0.19364107	0.819482	0.18456
-0.233577558	0.954559	0.0797
-1.142054616	0.959835	0.0774
-0.870479627	0.989249	-0.01446

-0.565878955	0.451977	0.4757
-0.87523144	0.65526	-0.78974
-0.331688754	0.978431	0.03109
-0.237465085	0.972644	-0.05975
-0.80643814	0.823619	0.30217
-0.253118937	0.898694	0.16966
-0.313467769	0.963794	-0.06077
0.087252054	0.991739	0.01743
-0.016678741	0.839679	-0.36969
1.415037499	0.612488	1.35364
-0.578578884	0.869393	-0.22453
-0.346368954	0.934675	0.0839
-0.153116714	0.910979	0.15522
-0.505067827	0.976684	0.04203
-0.807831413	0.899649	-0.12709
-0.445103206	0.956658	0.07808
-0.749902683	0.889687	-0.21575
0.805547662	0.691096	0.74983
-0.921263329	0.831102	-0.23594
-0.621086829	0.780917	-0.42377
-0.267243451	0.953327	0.08429
-0.331709116	0.93638	-0.11775
-0.276023388	0.996795	0.00676
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-0.363345097	0.909677	-0.11995
-0.498277666	0.911737	-0.18653
-0.387617497	0.863177	-0.28758
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-0.736965594	0.901425	-0.20645
-0.236851284	0.91257	0.12868
-0.860689518	0.991315	-0.01777
-1.10479619	0.942246	-0.09873
-0.366271672	0.904405	-0.22725
-0.307343302	0.938022	-0.11417
-0.417584181	0.756309	-0.40054
-1.760812336	0.922938	-0.13632
0.119082648	0.909776	0.21088
-0.851076299	0.93711	-0.12861
-0.370454825	0.949932	0.08552
-0.426246982	0.900854	0.14928
-0.486944256	0.833772	0.31775
-0.371790001	0.955925	0.07309
0.065737255	0.97868	0.05096
-0.060541542	0.857402	0.36476
-0.658354233	0.762972	0.07345
-0.468171303	0.848248	-0.33812
-0.752072487	0.712561	0.42626
-0.706707773	0.962951	-0.06831
-0.388585797	0.987905	0.02571
-0.282399731	0.750791	-0.58496
-0.154551907	0.956677	0.07406
0.214124805	0.779207	0.46467

-1.247927513	0.961599	0.074
-0.354304263	0.896422	0.19627
-0.106915204	0.781117	-0.22239
0.456857675	0.982934	0.04182
-0.458706404	0.902033	0.16528
-0.434296583	0.940477	-0.12303
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-0.76464116	0.839567	-0.3188
-0.084597581	0.985028	0.03043
0.119298928	0.958579	0.07276
2.584962501	1	0
-0.30256277	0.941255	0.10524
0.065588342	0.934646	-0.10434
-0.263874473	0.969145	0.06165
-0.490750738	0.911905	-0.17502
-0.216358944	0.959866	0.08138
-0.11189288	0.746668	0.32049
-0.344949474	0.944178	-0.11343
-1.082018889	0.974759	-0.04922
-0.420508965	0.890899	0.13426
-0.038889013	0.757401	0.23331
-0.335184192	0.990338	0.01749
-0.660380243	0.658778	-0.16261
-0.307570051	0.985211	-0.0271
-0.268550511	0.949306	0.0888
0.14839184	0.939563	-0.12553
-1.788495895	0.499873	-0.60407
-0.35696935	0.815936	0.26627
-0.485807034	0.961426	-0.08414
-1.169925001	0.56296	0.85244
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-0.184410303	0.996539	-0.00772
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-0.765106075	0.986934	0.0255
-0.863498	0.925493	0.12645
0.305707742	0.849516	0.28747
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-0.613018255	0.895278	0.18524
-0.602912282	0.93452	-0.12573
-1.558730959	0.442865	-1.04026
-0.221127454	0.932871	0.13336
-1.569263814	0.522271	-1.04815
-1.175849835	0.889426	0.16202
-0.235721291	0.922528	0.10403
-0.104023065	0.977858	0.04933
-1.011404763	0.98643	-0.02804
-0.480916176	0.922643	0.10736
-0.621034247	0.931623	-0.13699
-0.467841864	0.927405	0.1145
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-2.191562651	0.482023	-1.43625
-1.10342959	0.922384	-0.15301
-0.466796797	0.915353	-0.14719
0.440572591	0.920005	-0.10692
-1.500693584	0.934954	-0.11277
-0.151338104	0.930668	0.10392
-1.750452531	0.58202	-0.54986
-0.96437609	0.854025	-0.2134
-0.20578048	0.631497	0.47292
-0.23318439	0.78743	0.23631
-0.676071535	0.900135	0.11272
-0.313654477	0.914974	-0.19301
-0.367300936	0.953346	-0.10779
-0.733555542	0.85029	-0.23808
-0.147131163	0.965516	0.07283
-1.468032174	0.93274	-0.12916
-0.062375888	0.940504	-0.12214
-1.417505755	0.989755	-0.00742
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-0.039892727	0.755892	0.41831
-0.210194463	0.965053	-0.05929
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-0.519309262	0.96869	0.04334
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-0.495371212	0.835012	-0.1985
-0.533290473	0.963799	-0.06081
-0.016694825	0.859456	0.27211
-0.021626603	0.895758	0.17531
-0.713286598	0.93614	-0.12832
-0.0489096	0.802319	-0.51457
-0.349104651	0.98616	-0.02617
-0.498043644	0.821698	-0.35213
-0.504170466	0.883361	0.16166
-0.200913146	0.953854	-0.08854
-0.451230151	0.89541	0.18929
-0.461218238	0.994885	0.00906
-0.36906207	0.925422	0.12054
-0.367839767	0.926715	-0.15722
-0.678071905	0.804067	-0.34104
0.680333774	0.962658	0.11455
-1.771375625	0.704323	-0.42479
-2.853451337	0.511866	-1.10343
-0.851901361	0.923647	0.13632
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-0.25091812	0.987014	0.02584
-0.861169104	0.952816	-0.06801
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-0.126103721	0.955978	0.09153
-0.497499659	0.818658	-0.38529
-0.079417315	0.910192	0.16233
-1.894070145	0.451928	-1.04072
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-0.459528839	0.968074	-0.0693
0.183782585	0.8976	0.19939
-0.263397851	0.983978	-0.0303
-1	0.865343	-0.26303
-0.814133455	0.880307	0.22754
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-0.594076957	0.981787	-0.03388
-0.549015804	0.989225	-0.01664
2.187627003	0.934874	0.41504
0.780990218	0.970583	0.09818
-0.485426827	1	0
-0.277337944	0.879734	0.17638
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0.436977669	0.864227	0.31737
0.21284099	0.962157	0.07586
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-0.151630318	0.872359	0.21966
-0.305659052	0.815613	0.28525
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-0.594851128	0.768324	0.11185
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-0.381731413	0.895083	0.15338
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-0.263404828	0.850494	0.2746
-0.454838507	0.935071	-0.13089
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-0.63153035	0.867436	-0.26146
-0.301327208	0.97152	0.03833
-0.918665166	0.655857	-0.26659
-0.310872906	0.760556	0.24816
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-0.692433047	0.821917	-0.24348
-0.272050874	0.975773	-0.0514
0.106915204	0.862089	-0.27417
-0.14455602	0.955054	-0.09625
-0.672296167	0.987835	-0.02292
0.032121614	0.987968	0.02563

-0.639633175	0.858343	-0.28147
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-0.489775781	0.985571	-0.0179
-1.662965013	0.765887	-0.44057
0.517353102	0.739628	0.74327
-0.672877947	0.915571	-0.18481
-0.170357011	0.989723	-0.02088
-0.439327278	0.982977	-0.02577
-0.405638801	0.97388	-0.05142
0.080452925	0.875093	-0.33988
-0.358289082	0.936695	-0.14654
0.732831339	0.961074	0.12479
0.188245646	0.971265	-0.07819
-0.243370052	0.897345	0.17023
-0.463218421	0.944684	0.06939
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-0.891262468	0.59084	-0.92584
-1.634880375	0.747139	-0.4682
-0.353193594	0.969154	0.04518
-0.801467446	0.855893	-0.32928
0.039048402	0.952965	0.11293
-0.134036547	0.738401	0.34046
0.203533394	0.420134	1
-0.57664495	0.988331	-0.0243
0.185092596	0.890765	-0.23858
-0.381895798	0.922343	0.13461
0.184611014	0.915115	0.17845
-1.975943027	0.74227	0.41234
-0.376375879	0.899487	-0.21139
-0.605632351	0.942958	-0.11779
-0.07012354	0.945278	0.10938
-0.339645089	0.922135	0.14147
0.019159578	0.999109	-0.00193
-0.021404339	0.866492	0.23069
-0.381731413	0.945839	-0.1247
-0.382407726	0.946959	-0.09967
-0.64656475	0.850279	-0.27328
-0.420207059	0.950881	-0.09556
0.517058436	0.93571	-0.14374
-0.827163403	0.831216	-0.32193
-0.022979905	0.993639	0.01396
-0.529253068	0.877031	-0.1749
-0.307635621	0.919286	0.12032
-0.507672065	0.991295	-0.0155
0.083219111	0.961089	0.07215
-0.465348677	0.973787	-0.04218
-0.371415019	0.943434	0.07839
-0.333972131	0.948633	-0.11035
-0.679165647	0.997932	-0.00348
-0.4738595	0.822574	-0.36848
-0.321201113	0.951037	-0.08486
-0.373052848	0.885978	0.16621
-0.523233511	0.851484	-0.35247
-0.580331052	0.979429	-0.0376
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-0.285777344	0.963304	0.04955
-0.357260648	0.946549	-0.10687
-0.338616023	0.982414	0.02817
-0.560424164	0.996165	-0.00617
-0.351010735	0.962513	0.06767
-0.391432605	0.942777	-0.10143
-0.724862528	0.969167	0.04342
-0.568705729	0.97954	-0.04046
-0.527024324	0.917197	-0.1522
-0.012117195	0.844543	0.24971
-0.374057118	0.755285	0.25864
-1.382469637	0.727117	0.51062
-0.217210653	0.92921	-0.16317
-0.382227766	0.885831	0.14447
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-0.138827705	0.89466	-0.26039
-0.920038136	0.88763	-0.15423
-0.275431432	0.874542	0.18782
-0.296019924	0.933403	-0.10664
-0.520089698	0.941742	0.08751
-0.596383199	0.880313	-0.21843
-0.48329456	0.964148	0.0654
-0.404749329	0.983928	-0.02799
-0.076350886	0.963672	-0.07635
-0.523570957	0.990463	0.01176
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-0.491419507	0.866525	0.23484
-0.277831408	0.922799	-0.18845
-1.330083282	0.739873	-0.56563
-0.3272327	0.950943	-0.11133
-0.195597609	0.996301	0.00435
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-0.735356353	0.593512	0.6837
-2.18648011	0.979712	-0.03331
0.115477217	0.583737	0.8413
0.332983283	0.528787	-1.52757
1.711202498	0.440704	1.38439
-0.85741321	0.675873	0.38088

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-1	0.433134	-2.58496
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-0.363872904	0.912507	-0.17568
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-0.200844641	0.897235	0.15161
-0.229192882	0.968375	0.06095
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0.032421478	0.916758	0.15528
-0.821578973	0.726249	-0.62224
-0.53287399	0.424021	0.46713
0.695145418	0.785138	0.49033
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-1.03249102	0.743268	-0.35951
-0.497499659	0.677691	-0.83007
-0.167882525	0.9031	0.16053
-0.884153171	0.657092	-0.843
-0.439912168	0.958976	0.07215
-0.43405937	0.541699	0.46224
-0.153994814	0.982018	0.03135
0.043906196	0.982361	-0.03637
0.78764598	0.830837	0.35532
0.158831422	0.993614	0.01384
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-0.348940846	0.914081	0.12676
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-0.374859889	0.905989	-0.1461
-0.474399619	0.961764	-0.07254
-0.719244406	0.865786	0.14222
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-0.155958822	0.871519	-0.30018
-0.978626349	0.852295	-0.23954
-0.852154532	0.638927	0.62253
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-0.42510695	0.658027	0.54929
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0.205303674	0.762863	0.40234
-0.296981738	0.941987	-0.09714
-0.218622764	0.924479	-0.16577
-0.493206675	0.973217	0.05129
-0.539568079	0.960723	-0.06959
-0.620535842	0.822976	-0.32041
-1.775293713	1	0
-0.452924585	0.931185	-0.13825
-0.678071905	0.698091	0.45943

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-1.33872243	0.614869	-0.77509
-0.386468347	0.987788	0.02857
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-0.697840601	0.992662	0.01556
-0.603160159	0.830707	-0.37081
-0.430157997	0.943417	-0.12488
-0.039046654	0.931048	-0.15745
-0.586773794	0.815654	0.17695
-0.255635643	0.902169	0.19381
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-0.260698057	0.941538	-0.07191
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0	0.391002	1.58496
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-0.329359165	0.937733	0.07776
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-0.459560552	0.994936	0.00815
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-0.418276318	0.597935	-1.41828
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-0.50576067	0.732434	0.52625
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-0.566583971	0.963476	0.06037
-1.169925001	0.770925	-0.58496
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-0.921840937	0.82852	-0.39436
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-0.348596376	0.995383	-0.00519
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-0.309946615	0.964704	0.06728
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-0.038844136	0.866993	0.26592
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0.111484357	0.96036	-0.07919
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-1.405759972	0.643352	-0.72484
0.106915204	0.31424	-1.37851
-0.528255401	0.982645	0.02408
-0.672958982	0.88582	-0.22429
-0.43008941	0.920388	0.07431
-0.191409365	0.963192	0.05459
-0.461046335	0.948534	-0.10741
-0.54194832	0.96714	0.04906
-0.078002512	0.767125	-0.54749
-0.568186788	0.986394	-0.01697
-1.443051875	0.261513	-3.34289
-0.736965594	0.876816	-0.20645
-0.496483811	0.996214	-0.00574
-0.364063244	0.962157	-0.07395
-0.556031499	0.897736	0.21667
-0.531013553	0.945495	0.08516
-0.433500418	0.921843	-0.16296
0.016098081	0.998942	-0.00194
0.450994947	0.934354	-0.18965
-0.874657275	0.987197	-0.02505
-1.485426827	0.881585	-0.22239
-0.936843464	0.8863	-0.21609
#NUM!	0.0405193	-2.32193
-0.367757388	0.997047	0.00555
-0.357793547	0.981213	0.03437
-0.324741088	0.981298	0.0391
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
-1.584962501	1	0
#DIV/0!	?	#DIV/0!
0.3016557	0.933003	0.1587
#NUM!	0.822295	0.41504
#DIV/0!	?	#DIV/0!
-0.893084796	0.368766	0.62149
#DIV/0!	0.308068	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	1	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	0.622002	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	0.308068	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
0	0.450185	#NUM!
#DIV/0!	?	#DIV/0!
#NUM!	1	0

-0.807354922	0.407544	-1.22239
#DIV/0!	1	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
8.376102785	0.308068	25.5292
#DIV/0!	?	#DIV/0!
0.206450877	0.789583	0.54749
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#NUM!	0.308068	#NUM!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	0.308068	#DIV/0!
#DIV/0!	?	#DIV/0!
#NUM!	0.308068	#NUM!
#NUM!	1	0
#DIV/0!	?	#DIV/0!
-0.125530882	0.326833	1.62449
#NUM!	0.308068	#NUM!
0.584962501	0.680109	1
#DIV/0!	?	#DIV/0!
#DIV/0!	1	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#NUM!	0.308068	#NUM!
#DIV/0!	0.308068	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	1	#DIV/0!
-0.152003093	0.474021	0.26303
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#NUM!	0.308068	#NUM!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
-1.222392421	0.613399	-0.48543
-1.321928095	0.888898	0.26303
-13.7585859	?	-19.9791
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
-1	0.353387	#NUM!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#NUM!	0.308068	#NUM!
#DIV/0!	0.329316	#DIV/0!
#DIV/0!	1	#DIV/0!
#DIV/0!	?	#DIV/0!
1.087462841	0.868508	0.45943
#NUM!	0.622002	-1
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#NUM!	0.308068	#NUM!
#DIV/0!	?	#DIV/0!

#NUM!	1	0
0.514573173	0.538083	1
-1.118644496	0.730301	0.39593
#DIV/0!	0.308068	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
0	0.903291	0.26303
#DIV/0!	0.308068	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#NUM!	0.308068	#NUM!
#NUM!	1	0
1	0.622002	#NUM!
0.584962501	0.680109	1
#DIV/0!	0.0227138	#DIV/0!
#DIV/0!	1	#DIV/0!
#NUM!	0.450185	1
#DIV/0!	0.308068	#DIV/0!
-1.700439718	0.810437	-0.37851
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
0.584962501	1	0
0	0.564576	0.77761
#DIV/0!	?	#DIV/0!
#NUM!	0.495025	1.58496
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#NUM!	0.308068	#NUM!
#DIV/0!	0.450185	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	0.308068	#DIV/0!
#DIV/0!	?	#DIV/0!
#NUM!	0.308068	#NUM!
-1.584962501	1	0
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#NUM!	0.308068	#NUM!
1	0.794363	0.58496
-1.24961389	0.783235	-0.53201
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
-50.80904021	0.308068	-50.809
#DIV/0!	0.308068	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	0.308068	#DIV/0!
#NUM!	0.18169	0.73697
-0.485426827	0.698091	-0.80735
#NUM!	0.308068	#NUM!
#DIV/0!	?	#DIV/0!
0.847996907	0.196267	1.37851
#DIV/0!	0.999993	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!

-1	0.6882	0.80735
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	0.308068	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
-1.584962501	0.329316	#NUM!
#DIV/0!	0.308068	#DIV/0!
#DIV/0!	0.308068	#DIV/0!
-0.565597176	0.67447	0.49099
#NUM!	0.622002	1
1.584962501	1	0
#DIV/0!	?	#DIV/0!
-0.459431619	0.934627	-0.1375
#DIV/0!	?	#DIV/0!
1	0.927134	0.26303
-1.700439718	0.310977	-7.11619
#DIV/0!	0.308068	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#NUM!	0.622002	-1
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	0.308068	#DIV/0!
#NUM!	0.308068	#NUM!
#DIV/0!	?	#DIV/0!
-1	0.866773	0.32193
-0.281020151	0.989339	0.02531
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
-0.780218792	0.739884	-0.54889
#DIV/0!	?	#DIV/0!
-0.014284226	0.968549	-0.05801
-0.019899557	0.952062	-0.12374
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
0	0.450185	#NUM!
#DIV/0!	?	#DIV/0!
#NUM!	0.495025	-1.58496
#DIV/0!	?	#DIV/0!
#DIV/0!	1	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#NUM!	0.308068	#NUM!
#DIV/0!	?	#DIV/0!
0	1	0
#DIV/0!	0.308068	#DIV/0!
#DIV/0!	?	#DIV/0!

#DIV/0!	0.308068	#DIV/0!
0.362570079	1	0
-1	0.308068	-2
#DIV/0!	?	#DIV/0!
#NUM!	0.308068	#NUM!
#DIV/0!	?	#DIV/0!
#NUM!	0.495025	1.58496
#DIV/0!	0.450185	#DIV/0!
#DIV/0!	?	#DIV/0!
0.192645078	0.816864	-0.48543
-0.584962501	0.807087	-0.46297
#NUM!	0.308068	#NUM!
0	1	0
2	0.806588	1
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
0.584962501	0.764931	0.58496
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
0.584962501	0.764931	-1
-1.473931188	0.932847	-0.152
#DIV/0!	1	#DIV/0!
#DIV/0!	0.248582	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#NUM!	1	0
#DIV/0!	?	#DIV/0!
-2	0.450185	-2
#DIV/0!	0.353387	#DIV/0!
0	0.450185	#NUM!
-1	0.353387	#NUM!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#NUM!	0.622002	1
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	0.308068	#DIV/0!
0.091630475	0.951723	0.11366
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
0	0.450185	#NUM!
0	1	0
#DIV/0!	?	#DIV/0!
-1	0.353387	#NUM!
-0.243084816	0.988875	0.01815
#DIV/0!	?	#DIV/0!
#NUM!	1	0
#NUM!	0.308068	#NUM!
0.637429921	0.672262	-0.848
#DIV/0!	?	#DIV/0!
#DIV/0!	1	#DIV/0!

#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	0.308068	#DIV/0!
#DIV/0!	?	#DIV/0!
1.584962501	0.770719	0.73697
#DIV/0!	?	#DIV/0!
#DIV/0!	0.308068	#DIV/0!
1	0.622002	#NUM!
#DIV/0!	?	#DIV/0!
0	0.236154	2.32193
#DIV/0!	1	#DIV/0!
-1.502500341	0.451984	-2.08746
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	0.450185	#DIV/0!
-2	0.825659	-0.41504
#NUM!	0.495025	-1.58496
#DIV/0!	?	#DIV/0!
#DIV/0!	1	#DIV/0!
#NUM!	0.308068	#NUM!
#DIV/0!	?	#DIV/0!
#NUM!	0.308068	#NUM!
-0.584962501	0.637618	0.73697
-1	0.353387	#NUM!
#DIV/0!	?	#DIV/0!
#NUM!	0.308068	#NUM!
#DIV/0!	?	#DIV/0!
#DIV/0!	1	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
-1.321928095	0.139326	-2.32193
#NUM!	0.622002	1
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#NUM!	0.308068	#NUM!
#DIV/0!	?	#DIV/0!
1.584962501	1	0
#DIV/0!	0.308068	#DIV/0!
0	0.513713	1.58496
#DIV/0!	?	#DIV/0!
0.584962501	0.594273	1
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
-0.956931278	0.896908	-0.23704
#DIV/0!	?	#DIV/0!
#DIV/0!	0.18169	#DIV/0!
#DIV/0!	0.622002	#DIV/0!
#DIV/0!	?	#DIV/0!
#NUM!	0.622002	1
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!

#DIV/0!	?	#DIV/0!
0.034765418	0.733543	0.52509
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
0.415037499	0.751907	0.73697
#DIV/0!	0.308068	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	1	#DIV/0!
#DIV/0!	?	#DIV/0!
-0.256339753	0.767017	0.35509
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
0.169925001	1	0
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
-3	1	0
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	1	#DIV/0!
#DIV/0!	0.308068	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	0.308068	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
0.584962501	0.630057	1
0.222392421	1	0
#DIV/0!	0.622002	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	0.308068	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#NUM!	0.308068	#NUM!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	1	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
-1	0.0917211	#NUM!
#DIV/0!	0.450185	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	0.308068	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!

#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	0.308068	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	0.450185	#DIV/0!
#DIV/0!	0.622002	#DIV/0!
#DIV/0!	?	#DIV/0!
-0.927850214	1	0
#NUM!	0.450185	1
-0.415037499	0.873517	0.32193
0.118644496	0.722447	0.45568
#DIV/0!	?	#DIV/0!
#NUM!	0.308068	#NUM!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	1	#DIV/0!
#DIV/0!	?	#DIV/0!
0	0.450185	#NUM!
#NUM!	0.308068	#NUM!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
1	0.481309	2
1.584962501	0.764931	1
1.321928095	0.764931	-1
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
-0.678071905	1	0
#DIV/0!	?	#DIV/0!
#DIV/0!	0.308068	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	0.308068	#DIV/0!
#DIV/0!	?	#DIV/0!
0.415037499	0.860525	0.41504
#DIV/0!	0.308068	#DIV/0!
#NUM!	0.495025	1.58496
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!

#DIV/0!	?	#DIV/0!
#NUM!	1	0
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#NUM!	0.308068	#NUM!
#NUM!	0.308068	1
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
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#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
0.584962501	0.534406	1.58496
0	1	0
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
-12.35324933	0.579269	1.16324
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
0.807354922	0.873517	0.32193
#NUM!	0.308068	#NUM!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
-1.067893687	0.807499	0.1704
-0.181097626	0.925623	-0.13451
-0.310860506	0.944668	0.09238
0.157541277	0.985238	-0.03368
-1.028809371	0.818148	-0.38679
-0.610649144	0.899473	0.18854
0.487048744	0.797326	0.41219
-0.101538026	0.903323	0.17148
-0.207141151	0.895481	0.13927
-0.17881965	0.974793	0.04993
-0.912537159	0.57612	-0.72472
-0.584962501	0.4055	0.85561
#NUM!	0.438509	-2
-0.214124805	0.910128	-0.21412
0.807354922	0.875426	0.28758
-0.263034406	0.989352	-0.02018
-0.712935338	0.928481	0.07942
-0.40404065	0.919823	0.1158
0.493988841	0.318625	0.93231
-0.047934477	0.837777	-0.36257
-0.413107945	0.931784	-0.13549
-0.032107683	0.882025	0.23113
-0.103835811	0.977697	-0.05306
-1.813176161	0.765724	-0.41956

-1.794809669	0.77688	-0.46416
0.736965594	0.509235	1.22239
-1.967135041	0.292747	-0.77593
0.467548055	0.65285	0.71898
-0.297152839	0.980024	0.03009
-1.662965013	0.648025	0.63472
-0.700868135	0.921248	-0.15162
-0.129355971	0.959704	-0.07671
-0.344445531	0.963748	0.06246
#DIV/0!	?	#DIV/0!
#DIV/0!	1	#DIV/0!
-0.482732718	0.965399	0.0455
-0.130099899	0.94436	-0.11112
-0.103879489	0.842364	0.24993
-0.085398834	0.976932	0.05191
-0.074687812	0.993915	-0.01232
0.759953335	0.98066	-0.05335
0.187932951	1	0
-0.476494504	0.993994	-0.01108
-0.44771991	0.939606	-0.13255
0.6466632	0.813547	0.47652
-0.358381101	0.820733	-0.39829
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-1.836741031	0.933799	0.13654
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-0.458273425	0.937142	-0.12367
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-1.10780329	0.800841	0.25338
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-0.468564788	0.9164	-0.16318
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-0.711292555	0.702066	-0.70073
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-0.991992421	0.991071	0.01994
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-0.380103709	0.975756	-0.05254
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-1.851311397	0.6545	-0.79942
-0.21899168	0.663642	0.63826
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0.222038863	0.947284	0.11643
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-0.357031896	0.867414	0.23973
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-0.53089922	0.92169	-0.1359
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0.105052679	0.967653	0.07388
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-0.497171442	0.958841	-0.0924
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-0.707009782	0.915515	-0.16827
-0.307558592	0.99084	-0.01406
-0.520301309	0.950959	-0.07559
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-0.048776087	0.667207	0.50319
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3.119888091	0.889791	0.95842
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-0.55763027	0.832147	-0.36774
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-0.944934299	0.798988	0.14607
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-0.863365308	0.611051	0.45508
-1.25181828	0.930617	-0.07052
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-0.944020149	0.186867	-0.46513
-1.645686227	0.514038	0.38481
-0.135675875	0.980911	-0.04336
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-0.465768301	0.837347	0.37716
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-0.187064064	0.759393	0.41073
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-0.39094229	0.980437	-0.02503
-0.111704191	0.995785	0.0102
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-0.578939599	0.922554	-0.13931
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-0.432874184	0.814411	0.22871
-0.505752113	0.712275	0.33617
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-0.88484109	0.97068	0.04922
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-0.348934955	0.999552	0.00073
-0.198779864	0.91852	-0.19878
-0.518389659	0.895604	0.17033
-1.208442345	0.742453	-0.48656
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-0.663691415	0.938976	-0.07495
-0.468604623	0.807236	0.21112
-0.322342856	0.730877	0.31796
-0.478936166	0.943658	0.08204
-0.585940867	0.938382	0.06978
-0.626202575	0.991578	-0.0079
-0.416490386	0.673421	0.29147
-0.379377186	0.93452	0.09723
-0.38009081	0.884198	0.14855
-0.377191292	0.952428	0.06317
-0.401072737	0.976684	-0.03677
-0.477385653	0.946597	0.05962
-0.296402978	0.983763	0.02845
-0.442087287	0.997389	0.00414
-0.943416472	0.826268	-0.25154
-0.465663572	0.996197	-0.00767
-0.478286967	0.829413	-0.31356
-0.430667058	0.991359	0.01497
-0.07700307	0.971112	0.06021
-0.967195152	0.856838	-0.31135

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#DIV/0!	?	#DIV/0!
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0	0.230584	2
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#DIV/0!	0.308068	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
-0.584962501	0.710482	-0.58496
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-0.700439718	0.856143	-0.24101
-0.449422121	0.951348	-0.08668
-2.093392647	0.516154	0.40462
-1.4230066	0.646914	-0.42071
-0.182034684	0.630457	0.54194
-0.572449889	0.842484	0.20578
-0.341494263	0.956694	0.06264
-3.037193372	0.154046	-1.93336
-1.754887502	0.0210425	-1.16993
-0.500988402	0.849335	0.2126
-0.089462943	0.850624	0.22805
-0.262891359	0.963298	-0.07939
-0.440480995	0.963872	-0.06291
-0.354374717	0.970183	-0.06025
-0.389585153	0.896948	0.20916
-0.141438405	0.945772	0.09766
-0.182203331	0.678463	0.6172
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-1.073282375	0.490392	0.35846
-0.383246432	0.972092	0.03087
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-0.510194732	0.65422	-0.7997
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-0.200782127	0.94771	-0.09994
-0.350238132	0.98578	-0.02807
1.241284822	0.855084	-0.54417
0.058573693	0.418175	1.43149
-1.283899965	0.612558	0.83723
-0.840219556	0.803741	-0.38502
-0.080702948	0.501434	0.74013

-0.073089432	0.829277	0.33985
-0.712501245	0.952504	0.07899
-0.002374308	0.663611	0.60593
-0.255578601	0.538888	0.37685
-0.094081243	0.842804	0.19719
-0.774453226	0.906891	0.07373
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-0.220161402	0.943282	0.10664
-1.169925001	0.944105	0.06711
-0.587408845	0.840785	0.16169
0.019860422	0.914644	0.16706
-0.375022193	0.789511	-0.34015
-0.183712778	0.885108	0.16592
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-1.487749926	0.661912	-0.74749
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-0.207982904	0.891474	0.13934
-0.200262152	0.930037	0.14202
-0.61432198	0.941633	-0.09626
-0.301890342	0.996334	0.00504
-0.201112051	0.990905	0.01893
-1	0.717686	-0.73697
-1.217781601	0.961909	-0.01949
-0.583402399	0.958362	0.06191
-0.166908426	0.909691	0.15073
-0.874863258	0.886035	0.21954
-0.598097903	0.883265	-0.2125
-0.4433586	0.967829	0.04421
-0.015397404	0.866102	0.21099
-0.430847585	0.965742	-0.06032
-0.617624546	0.990331	0.01655
-0.272515254	0.966824	0.05487
-0.530823635	0.995391	0.00702
-0.592774028	0.985299	0.02092
-0.738669379	0.917177	-0.11964
-0.418758665	0.809318	0.23223
-0.099535674	0.673234	-0.58496
-2	0.681777	0.80735
-0.180572246	0.628092	0.30485
0.404035959	0.662684	0.66003
0.264257547	0.925963	0.16461
-0.803278663	0.991543	0.00993
-0.674621389	0.802571	0.20253
-0.367465598	0.92786	-0.14564
-0.416855313	0.916035	-0.15477
-0.797719625	0.821105	0.11639
-0.341360682	0.973422	-0.04839
1.931544698	0.87185	0.52997
0.247927513	0.988486	0.02975
-3.561878888	0.322058	-2.78427
-1.807354922	0.6882	-0.80735
-0.719892081	0.578348	-1.10692
-0.584962501	0.870945	0.22239
-0.734761323	0.484173	1.10833
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-0.626416928	0.940917	0.05747
0.332815232	0.901409	0.2195
-0.454401803	0.887651	-0.26958
-0.844930604	0.814442	-0.37302
-0.300260178	0.99872	-0.00182
0.035430898	0.922548	-0.1753
-0.381661362	0.840452	0.25983
-0.641702767	0.848595	-0.18806
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-0.804849111	0.860648	-0.16054
-0.349716469	0.962027	-0.0779
-0.655745127	0.982218	0.01497
-1.395928676	0.0115691	1.27501
-0.541040236	0.939834	-0.10144
-0.542206389	0.973842	-0.04315
-0.469407028	0.955333	-0.07307
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-0.542387299	0.930812	0.1042
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-0.545812747	0.748313	0.25667
-0.082016685	0.37947	0.61429
0.213186536	0.480555	0.62489
0.048565741	0.41623	0.87867
-0.348012954	0.902962	0.12624
-0.476869479	0.949194	-0.09475
-0.655584833	0.94758	-0.06322
-1.378777093	0.918637	-0.08379
-0.061560978	0.934489	-0.12855
-0.405040704	0.93021	-0.13376
-0.85657457	0.835392	-0.10798
-0.203503202	0.967412	0.05714
-0.747523901	0.872466	-0.04512
-1.203283598	0.342562	-0.45686
-0.300305283	0.700875	0.2681
-0.025648587	0.990571	-0.01919
-0.695145418	0.895306	0.0984
-0.580623565	0.899638	-0.16559
-0.231960571	0.870125	0.24071
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-0.407260477	0.99069	-0.01555
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-0.140225926	0.996465	-0.00652
-0.536468019	0.980537	0.029
-0.250789719	0.940239	-0.11378
-0.209718591	0.984475	-0.03284

0.099191987	0.909138	0.17036
-0.158429363	0.890095	0.13561
-0.579782262	0.953238	0.07909
-0.062284278	0.623222	0.3501
-0.041575042	0.964576	0.04244
-0.25869418	0.921557	0.11462
-0.172136513	0.868835	0.13607
-0.0085115	0.947328	0.08726
0.032255007	0.943665	0.1012
0.038068041	0.972343	-0.05963
-0.284247793	0.930595	0.10876
-0.574547418	0.718119	0.26202
0.050481458	0.839731	0.34955
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-0.327361981	0.707038	0.53717
-0.181435592	0.989259	-0.02372
-0.057605386	0.998592	0.00284
-0.308638373	0.937609	-0.12534
-0.247017823	0.990036	0.02223
2.157541277	0.637543	1.65711
-0.2410081	0.458483	-0.89308
-0.579788839	0.790497	-0.24612
-0.568447414	0.823665	-0.33504
1.467143295	0.574546	1.24151
-0.442041226	0.765312	-0.30949
3.313183638	0.835824	1.42294
-0.423706526	0.998066	-0.00311
1.002042387	0.578752	1.15459
-1	0.606453	-1
-0.880606991	0.636181	-0.95679
-1.163780261	0.528718	-1.07957
-1.026311277	0.891143	-0.17292
-0.556921029	0.901101	-0.20321
-0.332575339	0.670683	0.58496
0.786293307	0.86258	0.43063
-0.214427537	0.941467	-0.1102
-0.953529961	0.877959	0.27643
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-0.590429698	0.918234	0.08658
0.15415019	0.928379	0.1263
-0.588993791	0.9039	-0.15077
-0.342036928	0.988304	0.02027
-0.180572246	0.901847	0.16046
-1.350497247	0.704578	-0.54314
0.152004607	0.912382	0.21323
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-0.169062157	0.998351	-0.00347
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0.09367639	0.878795	0.20806
-0.791300487	0.967126	-0.04396
0.321928095	0.889735	0.32193
-3.321928095	0.401498	-2.32193
-0.736965594	0.892901	0.26303

#DIV/0!	0.308068	#DIV/0!
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-0.479283543	0.911524	0.14265
-0.485426827	0.577267	0.89308
0.206900245	0.614203	0.78209
-1	0.84064	-0.32193
-0.398549376	0.816269	0.35147
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-0.16032605	0.939609	-0.13536
-1.127859002	0.646903	-0.87668
2.321928095	0.806588	-1
-0.7589919	0.850938	-0.28951
0.090197809	0.785863	-0.63227
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0.093109404	0.838487	0.34104
-2.169925001	0.76035	-0.58496
-0.324660473	0.921687	-0.16924
0.076621282	0.902728	0.21864
-0.811143183	0.5707	0.69915
0.604071324	1	0
0.901084974	0.845019	0.44514
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0.263034406	0.792435	0.32193
-2.321928095	0.14822	#NUM!
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0	0.450185	#NUM!
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#DIV/0!	0.308068	#DIV/0!
-0.605721061	0.784243	-0.54432
#DIV/0!	?	#DIV/0!
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0.152003093	0.918198	-0.19794
#DIV/0!	0.450185	#DIV/0!
0	0.72386	0.70044
-1.140862536	0.356327	-0.73976
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-0.800691192	0.696873	-0.75489
#DIV/0!	0.308068	#DIV/0!
-1	0.651448	-1
-0.131865448	0.9609	-0.08502
#DIV/0!	?	#DIV/0!
0.304854582	1	0
0	0.613399	-1.58496
-0.679373816	0.812673	-0.4295
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0.1090926	0.968736	0.06307
-0.530650006	0.935581	0.07921
-0.55488758	0.962925	0.04191

-0.63058332	0.950246	0.04581
0.435386145	0.917379	0.16506
-0.231005552	0.935306	0.08573
-0.643511575	0.994502	0.00929
-1.134948863	0.449909	-0.31408
-0.120392708	0.7332	0.3251
-0.22262634	0.954894	-0.07933
-0.410979283	0.903633	0.10953
-0.664012708	0.899421	-0.16414
-0.738996927	0.930342	-0.07944
-0.700439718	0.570269	-1.11548
-0.175340345	0.917195	-0.20675
0.097509153	0.998388	0.00375
-0.75667966	0.893688	-0.19731
-1	0.499897	1.58496
-0.589090386	0.81931	-0.41412
-0.202237396	0.890508	0.18797
0.024591988	0.906816	0.15654
-0.277618539	0.943423	0.08664
-0.289703586	0.883631	0.17593
-0.513559169	0.966819	-0.06148
-0.834940754	0.976091	0.04307
0.657112286	0.703149	-1.04509
-0.437977037	0.939353	-0.13082
-0.652076697	0.910665	0.07557
-0.772278075	0.841435	-0.3477
-0.115700493	0.961581	0.09587
-0.688550691	0.948929	0.10645
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-0.674994702	0.757571	0.48396
-0.754273197	0.935536	-0.10182
-0.332302542	0.836672	-0.34857
0.633302035	0.823374	0.44596
-0.661048757	0.900744	-0.19081
-1.477672147	0.842652	-0.29815
-0.418847565	0.807398	0.2699

-0.002269459	0.890632	0.22737
-0.512238017	0.996254	0.00622
-0.350100661	0.976627	-0.03002
-0.296519772	0.906098	0.1396
-0.429434722	0.901549	0.13404
-0.128686225	0.946127	0.08587
-0.554030641	0.925166	-0.16046
-1.507279639	0.580001	-0.58974
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-0.176030364	0.91396	0.17425
-0.308565588	0.971592	-0.06106
-0.405944351	0.982937	0.02805
-0.559694275	0.965538	0.06283
0.250081719	0.938805	0.12773
-0.341514824	0.991661	-0.01648
-0.308607888	0.888537	0.19742
-0.390508765	0.981141	0.03233
-0.319455994	0.926751	0.12324
-0.456712313	0.934637	0.1023
-0.425116862	0.929168	0.12253
-0.1458782	0.940723	0.10526
-1.723290657	0.672105	-0.34269
-0.385270533	0.963224	0.07296
-1.425699812	0.710909	-0.52367
-0.694726067	0.93012	0.1167
-0.643544222	0.956999	-0.07076
-0.650679774	0.916664	-0.15331
-0.098053706	0.977859	0.03958
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-0.921997488	0.580847	0.61143
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-1.280107919	0.79911	0.4361
-1.153656612	0.767333	-0.44611
-0.947353863	0.932822	-0.11027
-0.653826804	0.678987	-0.67319
-0.501411925	0.87635	0.19681
-0.127869806	0.931455	0.13348
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-0.47609507	0.953437	-0.09905
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-0.355271864	0.821223	-0.40745
-0.540484088	0.934332	-0.13603
-0.641694386	0.995248	0.00672
-0.311990895	0.93806	-0.12491
-0.340756029	0.895338	-0.20802
-0.186758339	0.999416	-0.00125
-0.462643432	0.98281	0.02677
-0.222392421	0.888898	-0.22239
-0.73309204	0.910104	-0.16071
-0.44293364	0.912696	-0.17243
0.057116971	0.984674	0.03382
-0.556942145	0.868474	-0.28055

-0.379436724	0.999568	-0.00071
-0.695145418	0.680703	-0.36273
-0.41333515	0.712984	0.28886
0.075171999	0.683545	-0.9389
0.130101739	0.700232	0.40383
-0.041820176	0.88157	0.15612
-0.052088511	0.876347	0.19584
-0.142019005	0.57434	-0.75207
-0.014067678	0.577272	0.60575
-0.312765432	0.781882	-0.52289
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-0.59269574	0.819734	-0.38183
-0.910411206	0.676586	0.66191
-0.418539265	0.987027	0.02282
-0.736965594	0.663075	-0.78136
-1.736965594	0.474021	0.67807
-0.319728625	0.994874	0.00878
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-0.442962845	0.960645	-0.07498
-0.521565593	0.859633	-0.18183
1.608398146	0.0893919	2.09868
0	0.651448	1
-0.693708989	0.789633	-0.50636
-1.819175953	0.527414	-1.20925
-0.608169892	0.817219	-0.43911
-1.884504752	0.932244	-0.12914
0.099387174	0.993626	0.01544
-0.550769179	0.916471	-0.16342
-0.069960428	0.891656	0.19829
0.289506617	0.826595	0.40296
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-0.449079917	0.589816	0.89465
0.562384653	0.691161	0.8239
-0.326586343	0.972165	-0.04337
-0.723840531	0.771149	-0.34759
-1.222392421	0.755019	-0.41504
-0.961857402	0.664635	-0.26137
-0.340056504	0.972726	0.0301
-0.563941985	0.94019	-0.08909
-0.682321378	0.953951	-0.0781
-0.741805407	0.996608	-0.00727
-0.807869671	0.89616	-0.13982
-0.098953103	0.882096	0.13012
-0.840521786	0.904089	-0.1375
-1.058005603	0.619556	-0.50043
-0.553721625	0.860133	-0.30632
-0.56636076	0.984619	-0.03422

-0.310038543	0.982751	-0.03691
-0.459230386	0.943206	-0.11752
-0.33791613	0.991839	-0.01768
-0.04858018	0.847744	0.30849
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-0.537724505	0.989674	-0.01742
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-0.293278207	0.978311	-0.03813
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-0.136580755	0.998019	-0.00381
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-0.435303715	0.995387	-0.00942
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-0.26476322	0.835419	-0.39502
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-0.049218628	0.982544	-0.03538
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-0.8161745	0.917307	-0.12468
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-0.163574374	0.979479	0.04475
-0.417576498	0.907037	0.13285
-0.797693376	0.973121	0.06075
-0.240002089	0.940998	-0.10451
0.875793299	0.606257	0.91582
0.040736634	0.937738	0.12758
-0.289931877	0.953336	-0.07882
-0.242406083	0.903244	0.12482
-0.690584516	0.933503	-0.1303
-0.342651574	0.954758	0.08004
-0.46649996	0.833915	-0.28415
-0.754887502	0.796095	0.22239
-0.180572246	0.68342	-0.62803

0.416910765	0.923669	0.12833
-0.485768111	0.885198	0.18037
-0.585772139	0.906281	0.1851
0.335122021	0.824275	0.34719
-1.011563005	0.840933	-0.35575
-0.668255651	0.898912	-0.14422
-0.173263825	0.967669	-0.06808
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-0.335420331	0.943661	0.08514
-1.770132458	0.70789	-0.63925
-1.575563803	0.513778	-1.26492
-0.158972499	0.872062	0.1599
-0.493349902	0.85765	0.12545
-1.542527234	0.744648	-0.39366
-2.431049817	0.190942	-3.33151
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-0.13492958	0.8863	0.25873
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-0.589536768	0.98134	0.02671
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-0.693143095	0.888029	-0.14217
-0.46332717	0.995873	-0.00716
-0.29310526	0.993849	-0.01082
-0.484084411	0.951747	0.07332
-0.845409112	0.829606	-0.31464
-0.139354741	0.942303	-0.10049
-0.972308914	0.867007	-0.15954
-0.213058396	0.884496	0.18455
-0.01048243	0.892147	0.22453
-0.338409377	0.970611	-0.05755
-0.710084398	0.903223	-0.1885
1.390459477	0.554083	1.40526
-0.589249859	0.94227	0.12303
-0.832724577	0.916442	0.12421
-0.461730735	0.917933	-0.17865
-0.339088646	0.722595	0.48403
-0.192748633	0.904406	0.15995
-0.085359905	0.920506	0.14291
-0.961093057	0.979736	-0.03608
-0.311475965	0.967237	-0.07732
-0.426264755	0.889424	-0.23974
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-1.388213711	0.94413	-0.0836
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-0.896769843	0.788355	-0.35932
-0.454147661	0.953778	0.09558
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-0.636466518	0.84848	-0.2418
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-0.415037499	0.637009	-0.90046
-2	0.905448	0.11548
-0.468314626	0.989766	0.01535
0.056509061	0.971708	-0.06508
-0.469276061	0.306727	0.49637
-0.410930474	0.862394	-0.27692
-0.439443789	0.928751	-0.15837
0.064928781	0.75995	0.36068
-0.370604996	0.974581	-0.05469
-0.808788775	0.721398	-0.33875
-0.239317111	0.915627	0.15696
-0.520075252	0.985816	0.02476
-0.46552727	0.963408	-0.08095
-0.609615476	0.933595	-0.10409
-0.740981642	0.891635	-0.20569
-0.506074529	0.490458	0.68898
-1.1992347	0.966351	-0.04781
0.248525274	0.645142	0.58496
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-0.450084446	0.921822	-0.18255
0.409129507	0.994396	-0.0133
-0.331205908	0.956247	-0.07595
-0.216223867	0.885488	-0.26919
-0.53287399	0.887393	-0.19265
-0.436427829	0.984388	0.02877
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-0.068386975	0.914193	-0.15497
-1.275634443	0.258847	-0.65783
-0.584962501	1	0
-1.688383461	0.533491	-0.75043
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-0.39202833	0.920673	-0.1708
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-2.700439718	0.171586	-1.37851
-0.721258705	0.725351	-0.55639
-0.809842107	0.87912	-0.15431
-0.736965594	0.648273	-0.58496
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-0.616660906	0.751995	-0.62873
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-1.847996907	0.419192	-2.16993
-0.683182816	0.855814	-0.26701
0.11321061	0.868138	0.26793
-0.440100062	0.174443	-0.56308

-2.290515142	0.420837	-1.50553
2.700439718	0.474021	1.73697
-0.860813597	0.809427	-0.17018
-0.491363716	0.951936	0.08074
-2	0.0022595	-1.58496
-0.474243089	0.615003	0.21838
-0.137503524	0.935963	0.12553
-0.012725066	0.837662	0.28828
-0.416123457	0.727245	0.31997
-0.513261035	0.938836	0.12534
-1.289506617	0.667004	-0.48215
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-1.635367454	0.622324	-0.68428
-2.926920302	0.469077	-1.20075
-2.289807398	0.175462	-2.05799
-0.518785424	0.917283	0.12676
-0.800230488	0.91215	-0.19878
-0.440355393	0.897268	-0.20483
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-0.468448492	0.754045	-0.57824
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-0.450661409	0.803199	-0.40336
0.242701404	0.943319	0.12645
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-1.031453614	0.697394	-0.32614
0.357156583	0.656564	0.67175
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0.147845468	0.915785	-0.22412
-1.033821528	0.761426	0.15003
-2.296474321	0.104915	-0.96258
-0.490159532	0.792675	0.31704
-0.990076259	0.811041	0.17773
1.584962501	1	0
-0.870716983	0.489357	-1.24511
-1.160464672	0.548627	-1.078

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-1.584962501	0.653214	-0.72833
-2.624438944	0.528845	-1.08303
0.253756592	0.804834	-0.45251
-0.276196073	0.91886	0.11419
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-1	0.198892	-2
-1.222392421	0.568955	-1.22239
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0.317005577	0.391184	0.87448
-0.545233162	0.895079	-0.19477
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-2	0.0805096	-2
-0.218060093	0.992648	-0.01495
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-0.397335498	0.908089	-0.20503
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-0.807354922	0.883446	-0.22239
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-0.363431647	0.979205	0.03152
-0.294687552	0.844583	-0.32412
-0.304034868	0.177535	1.1235
2.169925001	0.903291	-1
-0.188445089	0.88368	0.1903
1.584962501	0.450185	#NUM!
-2.321928095	0.0160026	-0.8625
0.637429921	0.658479	0.73697
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-1.525603256	0.607459	-0.81333
-0.423448985	0.960201	-0.05443
0.499571009	0.803371	0.48187
-1.426311818	0.795934	-0.27921
-1.233199176	0.839586	-0.08452
-0.730341204	0.867915	0.15729
-1.133855747	0.720302	0.39666
-0.0489096	0.645577	-0.90689
-2.584962501	0.230584	-1
-1.489805268	0.381386	-1
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-0.321928095	1	0
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-0.011972642	0.90023	-0.21842
-0.473646016	0.971394	0.06234
-0.521666879	0.579943	0.87802
-0.128393779	0.998212	0.00299
-1.906890596	0.249709	-1.58496
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#DIV/0!	?	#DIV/0!
#DIV/0!	0.450185	#DIV/0!
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-0.01227833	0.832189	0.22849
-0.936582633	0.88955	-0.11594
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-0.140177658	0.958184	0.078
-0.295426938	0.9916	-0.01665
-0.303264251	0.91844	0.12928
-0.435647779	0.938039	-0.12135
#DIV/0!	?	#DIV/0!
-1.765534746	0.668115	-0.38702
-0.061927749	0.901619	0.20321
0.560300446	0.614419	0.67195
0	0.450185	#NUM!
#DIV/0!	1	#DIV/0!
-1.999985573	0.523237	0.80737
2.807354922	0.252216	2.80735
-0.232493011	0.746216	0.35509
#DIV/0!	1	#DIV/0!
1.169925001	1	0
-2.459431619	0.403383	-2.45943
-0.76898175	0.935861	-0.10405
-0.25022663	0.98929	0.01826
-0.48112669	0.837018	0.27376
#NUM!	0.308068	#NUM!
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	0.308068	#DIV/0!
-0.198155059	0.972617	0.05221
-0.852367058	0.817491	0.05878
-1.008267616	0.725121	-0.36375
-0.39557514	0.9811	-0.02541
-0.04633767	0.997352	-0.00582
-0.502500341	0.87959	-0.22948
1.584962501	0.450185	#NUM!
-1.021510908	0.895095	-0.15534
-0.494764692	0.889853	-0.17284
#DIV/0!	0.450185	#DIV/0!
-0.617189663	0.936687	-0.06194
-0.18674262	0.955575	0.08051
-0.262722505	0.926681	0.11795
-0.089207967	0.961556	-0.08921

-0.631904359	0.805968	-0.42901
-1.363922184	0.375037	-0.70963
-1.029806014	0.725304	-0.48556
-0.701891953	0.95091	-0.08962
-0.584962501	0.749033	0.41504
-0.084888898	0.752347	0.29698
-1.704261429	0.586597	0.83007
#NUM!	0.756486	-0.58496
-1.158271571	0.785546	-0.51298
-0.387506475	0.783913	-0.44
0.167968804	0.738719	-0.55989
-0.853451337	0.979444	0.04247
-0.421463768	0.933509	-0.15103
-0.3309481	0.900274	-0.19894
0.236044426	0.56386	0.51906
-0.392317423	0.622002	-1.07039
0.206450877	0.935503	0.14086
-3.321928095	0.681777	-0.51457
-0.194087052	0.972495	0.0593
-0.368387406	0.96922	-0.06228
#DIV/0!	1	#DIV/0!
-1	0.353387	#NUM!
0.462955918	0.756259	0.46141
-1	0.0917211	#NUM!
-1.115477217	0.911361	0.20645
1.222392421	0.593125	1
-0.430437039	0.75325	0.26275
-0.20866385	0.722014	0.38791
#DIV/0!	0.450185	#DIV/0!
0.415037499	0.769784	0.53051
-2.169925001	0.296689	-1.58496
-0.207999768	0.836188	0.20267
0.295076875	0.659525	0.58837
1.584962501	0.860525	-1
-0.623893032	0.921977	-0.13438
-0.570089224	0.913544	-0.16619
-0.223964841	0.859712	-0.22396
-0.455679484	0.940873	-0.11736
1	0.834708	-0.32193
-0.385561722	0.967309	-0.04244
-0.500428991	0.805921	-0.50043
#DIV/0!	?	#DIV/0!
-0.173064709	0.962538	0.08525
-0.345135486	0.681352	0.55394
-0.192645078	0.767311	0.45943
-0.116357715	0.914451	0.13678
-0.646363045	0.912648	0.1062
-2.957393829	0.611562	-0.50841
0.099535674	1	0
#DIV/0!	?	#DIV/0!
1.628031223	0.730986	0.8625
-0.41676218	0.809488	-0.37593
-0.376611018	0.906416	0.19298
-0.38768356	0.943028	-0.11677
-0.397130197	0.692609	0.82573
-0.070389328	0.969748	0.06711

0	0.450185	#NUM!
1.584962501	0.679547	1.32193
-0.759914319	0.914748	-0.09335
-0.709409872	0.745678	-0.50947
-0.362777438	0.850323	0.13961
-1.222392421	0.330453	-1.58496
-1.592313829	0.76053	-0.33482
-3	0.368766	-3
-0.477143783	0.968151	0.05815
-0.816778176	0.918854	0.05649
-0.334419039	0.849191	-0.33442
0.392317423	0.827714	-0.54057
-2.321928095	0.415333	-2.32193
0.272005087	0.854228	0.32088
0.07864467	0.917334	0.14853
-1.584962501	0.623752	-0.94111
-0.571793442	0.722888	0.19386
1.220125814	0.437058	1.33141
-0.367157349	0.93627	-0.1304
#NUM!	0.308068	#NUM!
-0.385330792	0.975211	0.04219
-0.584962501	0.74706	0.41504
0.355871962	0.699462	0.54228
-0.553935605	1	0
-1	1	0
-2.058893689	0.723577	-0.64386
#NUM!	0.308068	#NUM!
-0.352534256	0.975272	-0.0517
-1.524295137	0.570206	-0.53408
-0.091255416	0.606362	0.25762
-0.516384845	0.948393	-0.07701
-0.368988065	0.718569	0.64578
-0.21210591	0.910312	-0.17268
#DIV/0!	?	#DIV/0!
-0.163886085	0.8165	0.28068
-113.314931	0.345005	0.94225
0	0.829521	0.37851
0.247927513	0.890746	-0.24511
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
0.016542744	0.90524	0.20705
0.101381286	0.852342	-0.35511
-0.736965594	0.868208	0.26303
-0.782408565	0.399745	-1.25634
-1.971985624	0.421362	-0.97199
-1.00850228	0.764837	0.58496
#NUM!	?	18.265
-0.374263087	0.934766	-0.13686
1.584962501	0.764931	1
-0.397070953	0.66908	0.46828
-0.584962501	0.808782	0.28951
-0.629400734	0.74876	0.43362
#DIV/0!	1	#DIV/0!
0.504543673	0.937098	0.13676
#DIV/0!	?	#DIV/0!
-0.473317145	0.991481	-0.01668

-0.38827059	0.954257	-0.10069
0	0.450185	#NUM!
-2.247927513	0.544469	-1.078
-1.201633861	0.555132	-0.82312
-3.591446534	0.756903	0.29186
-1.91753784	0.503781	-1.5025
#DIV/0!	0.320255	#DIV/0!
0.129283017	0.605602	-1.29956
-0.817613336	0.946134	0.05299
-1.778717582	0.974465	-0.04685
-1.906901457	0.301943	3.74503
-0.614807164	0.731635	-0.24945
-1.285325263	0.419435	0.90769
0	0.450185	#NUM!
0.584962501	0.860525	0.32193
-0.452512205	0.972624	-0.05628
-2.700439718	0.38665	-1.37851
2.658211483	0.416501	2.20945
#DIV/0!	0.184922	#DIV/0!
-1.514573173	0.886496	-0.152
1.584962501	0.622002	1
#DIV/0!	0.308068	#DIV/0!
-0.051530301	0.971792	0.02509
-1.639410285	0.435107	-1.69599
-0.485426827	0.778668	0.41504
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#NUM!	0.30812	-12.9179
#NUM!	0.0691897	82.6927
#DIV/0!	?	#DIV/0!
55.00839379	0.308068	82.1369
#DIV/0!	?	#DIV/0!
0.050626073	0.80587	0.44057
0	0.450185	#NUM!
#DIV/0!	?	#DIV/0!
#NUM!	0.308068	#NUM!
-2.182203331	0.404876	-1.21022
0.05246742	0.891333	0.18371
2.169925001	1	0
#DIV/0!	1	#DIV/0!
0.321928095	0.825659	0.32193
-0.569855608	0.82668	-0.34104
-1.8259706	0.671402	-0.70044
-1	0.450185	-1
-2.563768278	0.583696	-0.57736
-5.78119239	0.731196	-0.65473
#NUM!	0.308068	#NUM!
0.869530068	0.662567	0.8027
-1.374596086	0.873571	-0.25294
-0.37566934	0.95858	-0.06672
#DIV/0!	?	#DIV/0!
#DIV/0!	0.308068	#DIV/0!
-47.18343342	0.884806	-0.26068
-0.765534746	0.725914	-0.5025
#NUM!	?	18.2235
-47.18343342	0.321792	4.92081

-1.394440595	0.829207	-0.21957
0.125530882	0.939529	-0.1375
#DIV/0!	1	#DIV/0!
#DIV/0!	1	#DIV/0!
0.612976877	0.761184	0.61298
#NUM!	0.308068	-77.0281
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#NUM!	?	-18.3507
31.60260332	1	5.37996
-1	0.764931	0.58496
-1.192645078	0.524127	-1.12553
-0.214765547	0.898816	-0.22558
-2.222392421	0.0127949	-0.80735
#NUM!	1	0
-0.631791633	0.871165	-0.19355
-2.088528292	0.55778	-0.31249
-1.204770197	0.973292	0.03419
-1.058103898	0.95642	-0.01689
#DIV/0!	0.469315	#DIV/0!
-9.660449714	0.335589	-3.96758
0.068943898	0.978184	-0.05097
-0.832496163	0.816957	-0.20135
#DIV/0!	0.308068	#DIV/0!
-1.874469118	0.506714	-1.45943
-0.538723938	0.909251	0.18156
#DIV/0!	?	#DIV/0!
#DIV/0!	0.308068	#DIV/0!
-2.127919557	0.583908	1.15253
-0.318529518	0.886719	0.21459
#NUM!	0.450185	-0.58496
0.021824827	0.973287	0.05814
-0.56919026	0.612668	0.24525
-0.555618539	0.897468	0.1381
16.83681729	1	0.0858
-0.222392421	0.738921	0.51457
-0.966052668	0.802979	-0.17315
#DIV/0!	?	#DIV/0!
#DIV/0!	?	#DIV/0!
#DIV/0!	1	#DIV/0!
#NUM!	?	-4.56709
-0.960952483	0.538964	0.36779
#NUM!	0.556222	1.26518
0	0.513713	1.58496
-0.59724083	1	0
-1	0.651448	-1
0.387021426	0.892775	0.29956
1.584962501	0.513713	1.58496
-1.212993723	0.826062	-0.3505
-1.014517808	0.934028	-0.0278
-0.539630325	0.707786	-0.85884
-0.497495832	0.805535	-0.38929
#DIV/0!	0.450185	#DIV/0!
-1.254274863	0.757017	-0.46105
-0.185111405	0.974058	-0.06173
-2.848249809	0.489242	0.98701

-1.321928095	0.834708	-0.32193
-29.70024895	0.0153282	-0.58388
#NUM!	0.15041	-3.16993
-1	0.710482	-0.67807
-0.204989375	0.866076	-0.32268
-1	1	0
0.485426827	0.800451	0.34104
0.2255597	0.903964	0.16746
#DIV/0!	?	#DIV/0!
-0.20663835	0.908593	0.14038
0.374025783	0.876104	0.27056
-0.887789	0.990858	-0.00617
-0.169925001	0.523358	0.91754
-1.222392421	0.770719	-0.48543
-1.045737575	0.731044	-0.18376
-0.29701867	0.859434	-0.14854
#DIV/0!	?	#DIV/0!
-2.283520047	0.118358	-0.98853
-0.29701867	0.859434	-0.14854
-2.280107919	0.919467	-0.18057
-1	0.844063	0.37851
-0.238159737	0.801338	0.35908
-1.083651531	0.149902	-0.69505
#NUM!	0.818083	-0.42551
-2.220198208	0.852262	0.26961
-2.017640237	0.770377	-0.25275
-0.176877762	0.954867	0.10692
-0.406878976	0.822309	0.21497
-1.834738492	0.483288	-0.5506
-1.273018494	0.387571	-1.39855
-0.238159737	0.989297	0.02333
-2	0.630057	-1
0.277812461	0.876722	0.24293
0.302698623	0.765328	0.44242
-0.485426827	0.878232	-0.22239
-0.777607579	0.867429	0.18057
#DIV/0!	?	#DIV/0!
-1.027876392	0.98039	0.01293
-0.976541027	0.933676	-0.12338
0.362570079	0.628092	0.65208
0.035135862	0.919602	0.1296
#DIV/0!	?	#DIV/0!
-0.434937057	0.582661	0.38003
#DIV/0!	?	#DIV/0!
-1.453547062	0.122455	-0.8192
-0.556511962	0.958405	-0.0713
#DIV/0!	?	#DIV/0!
-0.811414469	0.901676	-0.09514
-0.652076697	0.908324	-0.2115
0.893084796	0.821423	-0.48543
-0.106915204	0.834882	0.36257
-0.574086403	0.93897	-0.07654
1.303011195	0.867105	0.44568
#DIV/0!	?	#DIV/0!
-0.08979667	0.732609	0.63387
#DIV/0!	?	#DIV/0!

-0.263034406	0.345547	1.22239
1	0.481309	2
-0.362570079	0.855514	0.152
-2.807354922	0.465798	-1.80735
-1	1	0
0.104108403	0.889642	0.20121
-0.276840205	0.900393	0.17247
-0.180266946	0.980004	0.04509
-0.566148191	0.743319	-0.44402
-0.281249607	0.457052	-1.15974
-0.07809114	0.988756	0.02316
-1.045323991	0.887511	-0.08579
#DIV/0!	?	#DIV/0!
-1.115347653	0.602787	-0.53491
-0.874469118	0.361062	#NUM!
0	0.827931	0.19841
-0.041222663	0.950703	0.09818
-0.47727362	0.950269	-0.10153
-0.514573173	0.791627	-0.51457
-0.094327383	0.710346	-0.4458
-0.028569152	0.896953	0.08246
-0.534268	0.995316	-0.00796
-1.104002666	0.95922	-0.05781
-0.312690476	0.936268	0.12314
-0.250749047	0.976529	-0.04075
-0.415898039	0.941659	-0.09328
-0.365905792	0.964599	-0.06823
-0.173997317	0.980493	0.04516
-1.562885635	0.801303	-0.40138
-0.74977337	0.651723	-0.81558
-1.924272674	0.342448	-2.36875
-0.428603629	0.815279	-0.41192
-0.360645202	0.930389	0.12684
0.387023123	0.548101	1.25376
-0.288639222	0.940705	0.07234
1.141832694	0.541051	1.26601
0.499729326	0.7958	0.39378
-0.221974309	0.97568	-0.05237
-0.511933291	0.911854	-0.16232
-0.356161442	0.995903	-0.00618
-0.7109083	0.821652	-0.39754
-0.267194543	0.923284	0.1665
-0.186815999	0.910434	0.19246
-0.514162667	0.867411	-0.28
-0.192645078	0.914417	-0.19265
-0.323104599	0.72551	-0.61919
#DIV/0!	1	#DIV/0!
-0.303281173	0.863705	-0.34143
-0.657668946	0.832928	-0.35782
-0.993242634	0.887719	-0.14225
-1.392317423	0.587461	-0.6644
-0.628031223	0.986503	-0.02137
-0.108816357	0.885501	-0.27391
-0.340819333	0.920577	-0.18428
-0.645486027	0.930643	-0.15425
-2.099535674	0.449552	-1.90689

-0.811390435	0.975093	-0.03536
-1.641333041	0.825557	-0.34898
-0.217419101	0.833235	-0.37329
-0.201633861	0.995035	-0.00994
-2.37030509	0.478964	-1.32255
-0.268428264	0.968102	-0.0727
-0.257157839	0.890295	-0.23559
2.169925001	0.697543	1.41504
2.321928095	0.393741	2.58496
-2.807354922	1	0
-0.432959407	1	0
-0.896992135	0.721421	0.43668
-0.1792613	0.976561	-0.05144
0.476486184	0.90754	0.25299
0.245592098	0.960278	-0.10475
0.174978229	0.837157	0.28813
-0.325186416	0.914343	-0.18539
-0.443780763	0.642637	-1.01379
-0.071610587	0.935979	-0.15155
-0.222392421	0.898432	-0.25126
-0.982290517	0.777051	-0.46649
-0.075043711	0.887617	0.17007
-0.593392938	0.941534	-0.10341
-0.504751621	0.983509	0.02183
0.120338658	0.982077	0.03728
#DIV/0!	0.308068	#DIV/0!
-0.40730185	0.987699	0.02308
#DIV/0!	?	#DIV/0!
-0.772048053	0.933601	-0.12199
0.104579763	0.783785	0.46489
0.096023289	0.863504	0.20498
-0.415037499	0.399441	#NUM!
0.127615864	0.78544	0.36627
#NUM!	0.308068	#NUM!
-0.955253617	0.684113	-0.20523
-0.482392767	0.850967	-0.24793
#DIV/0!	?	#DIV/0!
-0.183050796	0.986045	0.02295
#DIV/0!	?	#DIV/0!
-0.704935335	0.896904	-0.21853
-1.416895445	0.628644	-0.90828
0.346802764	0.961132	0.09849
-0.580502853	0.88024	-0.2693
-0.074853995	0.952606	0.09412
-0.822173893	0.943247	-0.12542
0.19592021	0.968276	-0.05344
-0.457122901	0.980711	-0.03145
-0.295689768	0.920067	0.14072
-0.599892661	0.97373	0.0332
-1.547487795	0.745028	-0.60407
0.210398387	0.954754	-0.10139
0.163498732	0.896045	-0.20645
-0.793031302	0.988538	0.01681
0.116458977	0.909373	-0.15484
-0.30256277	0.930011	0.13829
-0.11561685	0.893148	-0.24759

-0.823122238	0.891877	0.12749
-0.175571565	0.932293	0.1565
-0.128897733	0.989415	0.02041
-0.580263164	0.894698	-0.22632
-0.261970372	0.954527	0.06666
0.960471636	0.829083	0.36881
-1.114873958	0.914853	-0.07619
0.608809243	0.695385	0.53605
-1.86913112	0.884386	-0.24269
-0.665580961	0.962549	0.0614
-0.772194748	0.448483	-0.87837
-0.508902209	0.891665	-0.24019
-0.745673416	0.857763	-0.30781
-0.091192565	0.930599	-0.16761
-0.100233839	0.969252	-0.06821
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-0.680760993	0.856475	-0.20483
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-0.09224236	0.908401	0.17038
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0.226765516	0.896449	0.16219
-0.790566056	0.717221	-0.28977
0.34648907	0.982635	-0.04838
-0.772194082	0.792918	-0.22556
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-0.275453665	0.989612	-0.01612
-0.872777656	0.852528	-0.09935
-0.928446739	0.697591	-0.71272
-0.450979645	0.969466	-0.05015
0.056143078	0.911845	0.16227
-0.862059561	0.912868	0.12016
-0.360960827	0.927633	-0.11193
0.245177741	0.801304	0.41373
0.012819292	0.998438	-0.00376
0.156119202	0.893132	-0.2713
-0.355094959	0.983173	-0.02647
-0.506731298	0.971807	0.04161
0.193685308	0.91259	0.14859
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-0.08735248	0.591849	0.64886
-0.289506617	0.881931	0.20484
-0.24079254	0.944185	-0.06494
-0.41789614	0.987162	-0.02097
-1.958913696	0.889637	0.16887
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-0.302847353	0.965133	-0.07895
0.123735368	0.93145	-0.17127
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-0.56416874	0.967054	-0.0495
-0.678014871	0.985987	-0.01116
-0.392317423	0.960252	0.05614
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-0.312384322	0.944837	0.11532
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-0.240603609	0.540378	0.98793
-0.476574312	0.799715	0.20422
-0.313975971	0.859426	0.24327

-0.15238572	0.77785	0.40033
-1.149752412	0.616132	-0.77764
-0.314364801	0.974702	0.05395
-0.104877123	0.985428	-0.03382
-0.551361321	0.525114	0.32197
-0.389330439	0.855737	-0.23282
-0.146220741	0.861824	0.28317
-0.428048074	0.922253	0.10454
-1.807354922	0.582476	-1.07039
0.08305574	0.913267	0.152
0.209992322	0.856152	0.15134
-0.361077379	0.935879	0.0955
-0.569407687	0.92086	-0.17286
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-0.5360529	0.830028	-0.33442
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-0.75802721	0.690607	-0.7794
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-0.225619206	0.972429	0.0544
-0.991826069	0.893283	0.18623
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-1.466983446	0.930798	-0.10403
-0.115477217	0.721372	0.59549
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-0.612976877	0.729249	-0.35466
-1.468645034	0.958276	-0.08073
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-0.589168032	0.981915	-0.02989
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-0.779340546	0.860588	0.20321
0.740732424	0.714352	0.56066
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-0.160611071	0.969229	-0.06588
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-0.369276233	0.905977	-0.20067
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-0.891517074	0.9123	-0.09153
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-0.133142212	0.951773	-0.11912
-0.520715577	0.934891	-0.12895
0.661198087	0.852323	0.18845
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-0.297680549	0.899388	-0.21022
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-0.200217146	0.966375	-0.06784
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-0.380374814	0.985516	0.02503
-0.172171511	0.493941	0.43163
-0.196121072	0.972231	-0.06488
-0.205286517	0.88004	0.1687
-1.934112064	0.749204	-0.53201
-0.215977582	0.905302	-0.17766
-0.479178497	0.948761	-0.10848
-0.130396637	0.988723	0.02063
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-0.298302257	0.918345	0.1222
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0.002947284	0.93798	0.11684
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0.191224403	0.938901	-0.14319
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-0.893084796	0.899149	0.15754
-0.971618199	0.743815	-0.56598
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0.409707995	0.952311	0.09205
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-0.624932935	0.72103	0.37904
-0.218951937	0.921502	-0.1654
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-0.370239698	0.904595	0.16649
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-0.438573014	0.9684	0.05497

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-0.549014527	0.912349	-0.13631
-1.885256826	0.946885	-0.07473
0.523873263	0.913349	0.1894
0	0.794393	-0.55254
0.143590854	0.914786	-0.19745
-1.874469118	0.809021	-0.45943
-0.810398512	0.907771	0.15906
-1.540568381	0.245265	-1.41504
-0.290133413	0.948249	0.08647
0.859469691	0.766788	-0.90797
-0.525628361	0.961016	-0.07342
-0.0489096	0.94952	0.10806
-2.115477217	0.392404	-1.11548
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-0.617530363	0.888148	-0.09311
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-0.547385939	0.943006	-0.10361
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-0.193329021	0.986462	-0.02678
-0.429585808	0.966176	0.06063
-0.129440939	0.965815	0.06303
-0.545648545	0.974543	0.03081
-0.500651187	0.885581	-0.22905
-0.231653991	0.911281	-0.17371
-0.54494326	0.985238	0.02814
-0.379877705	0.886667	0.18085
-0.109686693	0.949666	0.09132
-0.116910311	0.992331	-0.01382
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0.736965594	0.501752	1.5025
-0.480031735	0.885218	0.19761
-0.872914038	0.951293	-0.08924
-0.253589493	0.793108	-0.43525
-0.64706276	0.871599	-0.28175
-0.679508137	0.92308	-0.1393
1.110299166	0.50983	1.22634
-0.229481846	0.812912	-0.33258
-0.131529623	0.983489	-0.03484
-0.179706022	0.875644	-0.31868
-0.028381801	0.967592	0.07306
-0.484950769	0.943853	-0.10618
-0.936474862	0.895029	-0.14634
-0.408670485	0.982405	0.03205
-0.46891039	0.977457	-0.04128
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-0.086156644	0.768348	-0.55394

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-0.486527065	0.937913	0.11674
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-0.173812241	0.948802	-0.10123
-0.392504603	0.954276	-0.0753
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-0.132182485	0.944421	-0.11596
-0.316290987	0.875219	0.22654
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0.550197083	0.821433	0.3322
-0.487877395	0.944574	-0.11007
0.057715498	0.932858	-0.16625
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-0.462185448	0.895677	-0.19265
-0.407853941	0.878428	0.20271
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0.328273754	0.749308	0.40588
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1.21649182	0.721751	0.90046
-0.215631537	0.9542	0.10174
-0.091651574	0.85377	0.2596
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0.777607579	0.400619	1
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-0.648461356	0.938386	-0.12903
-0.239921498	0.903017	0.19897
0.584962501	0.885352	-0.41504
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-0.152840173	0.994977	-0.00964
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-0.935322497	0.76414	-0.48739
-0.305670816	0.951908	0.08279
-0.517782499	0.986673	0.0187
0.409875794	0.943037	0.15612
-0.095157233	0.904539	0.22677
-1.14345279	0.903216	-0.21056
-1.124447371	0.785876	0.40981
-0.450085593	0.904643	0.1741
1.499926397	0.727907	0.80527
-3.906890596	0.519918	-1.32193
-0.136795047	0.881339	0.14804
-0.822173131	0.968617	-0.04669
1.195370438	0.545569	1.3487
-0.571838011	0.928542	0.13737
-0.611467135	0.849573	-0.31872
-0.168093691	0.984017	-0.03226
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-0.249519599	0.924433	-0.17897
-0.214665903	0.973875	-0.06016
-0.906530176	0.672635	-0.79471
-1.648834684	0.918719	-0.1749
-0.337546056	0.916013	-0.18554
-1.028270566	0.807731	-0.4219
-0.005523039	0.953766	0.10111
-0.213857383	0.918437	-0.18731
-0.170720372	0.952008	-0.10319
-0.87024881	0.993927	-0.00953
-0.359669651	0.960924	-0.06571
-0.358905436	0.917751	0.12805
-0.036513293	0.883362	0.20549
-0.567867968	0.941926	-0.12789
-0.586264617	0.88941	0.2081
-0.285190786	0.958344	0.06629
-0.053432738	0.945924	-0.11875
-0.594973442	0.872242	-0.24477
0.508059051	0.622384	0.76015
0.461938474	0.729864	0.54683
-0.488234902	0.661829	0.75288

-0.077378711	0.891161	0.16352
-0.459396665	0.962593	0.05821
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-0.635034062	0.94313	0.08329
-0.512777771	0.896385	-0.20994
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-0.602915463	0.983195	0.02788
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-0.552826334	0.856364	-0.29307
-0.518141971	0.945229	-0.0898
-0.234916731	0.971584	-0.05474
-0.23271179	0.923741	-0.16924
-0.623436649	0.888163	-0.17468
-0.628102776	0.966776	-0.06603
-0.468748086	0.974671	-0.05371
-0.438981366	0.914042	-0.18586
-0.594531882	0.914683	-0.16503
-0.452843242	0.920524	-0.18548
-0.417466571	0.999281	0.00156
-0.432230116	0.99872	0.0025
-0.532811883	0.932342	-0.14441
-0.440031879	0.987478	0.02118
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-0.526823069	0.694089	-0.66945
-0.581210366	0.94402	-0.08778
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-0.334817607	0.92819	-0.07236
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-0.192908319	0.978974	-0.03922
-0.196812501	0.952577	0.08629
0	0.860525	-0.41504
-0.637823186	0.951472	0.07275
-0.808428304	0.908181	-0.14952
-0.185778984	0.825001	0.32097
-0.298933904	0.98892	0.01566
-0.582099604	0.730848	0.26617
-0.764499443	0.944187	-0.11755
-0.337484355	0.943855	-0.11779
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-0.344189968	0.592006	0.61698
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-0.776424945	0.800295	-0.25824

-0.687433944	0.895611	-0.16498
-0.237856389	0.92738	-0.1338
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-0.373497758	0.899783	0.16511
-1.853516019	0.901937	0.17362
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-0.285242071	0.768201	0.27558
-0.358735216	0.99025	-0.02052
-0.510049934	0.987843	-0.01748
-1.610957709	0.932272	0.05889
-1.192126378	0.724719	-0.5398
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-0.217569333	0.96395	0.07635
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0.415037499	0.0876961	1.51457
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-1.584962501	0.888898	0.22239
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-0.881355504	0.885537	-0.22239
-1.362570079	0.519918	0.58496
0.049753035	0.94768	0.12131
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-0.4639471	0.935909	0.10434
-1.807354922	0.47668	-1.80735
-0.485426827	0.770719	-0.48543
-0.819427754	0.626832	-0.90689
0.462971976	0.840205	0.40526
1.280107919	1	0
-1.678071905	0.824188	0.24793
-0.321928095	0.810378	-0.44746
-1.321928095	0.499013	-1.73697
-0.519374159	0.849601	0.18845
-1.015941544	0.728832	-0.64981
-0.337034987	0.778929	0.32193
0	0.633442	0.63743
2	0.567924	2
0.469485283	0.810735	0.46949
-0.338801913	0.843802	-0.3388
-0.415037499	0.960913	0.08746
-0.906890596	0.584131	-1.32193
-0.765534746	0.858433	-0.28011
-1.584962501	1	0
0.847996907	0.617945	1
-1.047305715	0.711344	-0.63227
-0.04580369	1	0
-1.736965594	0.75747	-0.51457
-1.2410081	0.97613	-0.05658

-0.584962501	0.756486	0.41504
0.415037499	0.89825	-0.30485
1	0.622002	1
-1.169925001	0.562529	0.63743
-0.08246216	0.653997	-1
-0.807354922	0.861446	-0.12928
0.231325546	0.975823	0.0614
-0.164386818	0.953182	0.08616
0.415037499	0.663808	-1.58496
23.32864384	0.308068	59.6374
-1.688055994	0.472001	-1.68806
0.056583528	0.871611	0.1635
0.330148602	0.561843	0.57116
-0.415037499	0.657795	0.58496
-0.20029865	0.424419	0.94555
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-0.736965594	0.962045	0.09311
#NUM!	1	0
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0.138976413	0.980261	-0.04947
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0.438573014	0.448631	0.70627
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0	0.756486	0.58496
-0.093109404	1	0
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0	1	0
-0.552541023	0.86943	0.21299
#DIV/0!	0.622002	#DIV/0!
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-0.943416472	0.890462	-0.18442
0	0.873378	0.24793
-0.127755547	0.695844	0.50967
-0.192645078	0.685038	0.32193
-0.736965594	0.358909	1.20163
-1	0.695905	0.42269
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0.823122238	0.157757	1.34395
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0.133266531	0.30796	1.7669
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0.289506617	0.844258	-0.36257
0.192645078	0.904922	-0.22239
75.26506409	1	35.4195
0	0.530478	-1
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-0.584962501	0.756486	0.41504
1.321928095	0.837425	-1
0.099535674	0.927665	0.19265
-2	0.698562	0.58496
1.584962501	0.651448	1

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-1	0.353387	#NUM!
#NUM!	0.308068	#NUM!
0.584962501	0.252804	2.27302
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#DIV/0!	?	#DIV/0!
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-0.584962501	0.937221	0.11548
0.099535674	0.865624	-0.34792
2.321928095	0.246542	4.39232
0.351165316	0.443808	0.5659
1	0.504245	0.88452
-0.584962501	1	0
-1	0.577083	-0.41504
0.137503524	0.923545	0.1375
0.165700416	0.626468	0.50027
-0.198904068	0.847789	0.28652
#DIV/0!	0.308068	#DIV/0!
0	0.308068	#NUM!
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0.432959407	0.602997	0.53605
0.584962501	0.430042	1.58496
-0.757757396	0.96009	-0.07131
-0.529510054	0.947774	0.04925
-0.357465969	0.965271	0.04873
-0.620394977	0.962917	0.04191
-0.507155701	0.701901	0.2766
-0.663521267	0.983833	0.01616
-1.086228727	0.441853	-0.32009
-0.138452228	0.699359	0.34548
-0.624947109	0.95693	0.05136
-0.696874347	0.98545	0.00904
-0.48845325	0.507606	0.28018
-0.552906454	0.574503	0.24153

-0.958671603	0.50697	-0.23207
0.408891631	0.948417	-0.1251
-0.137503524	0.979402	0.03533
0.502041541	0.75563	0.61328
0.178337241	0.949389	-0.11864
0	1	0
-0.382018571	0.957968	0.04504
-0.364596282	0.899989	0.14361
-0.456407428	0.93367	0.08296
-1.748864908	0.85923	-0.22889
-0.563088001	0.872194	-0.13724
-0.723582716	0.978346	0.02474
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-0.372440293	0.951699	-0.09342
0.312323813	0.73849	0.44129
-0.502184261	0.99751	0.00349
-0.755688205	0.92684	0.13192
-0.232582249	0.931804	0.14508
-0.663412124	0.984957	-0.02162
0.092802811	0.965333	-0.06077
-0.645979075	0.912881	0.09759
-0.338416218	0.991558	-0.01318
-0.382469637	0.985825	0.02287
-0.498278442	0.962466	-0.0747
-0.594312961	0.972347	-0.03273
-0.232258574	0.973794	-0.05465
-0.15565087	0.893636	-0.24026
-0.515751882	0.950201	-0.0619
-0.605568575	0.951763	-0.08797
-0.084209399	0.895158	0.17205
-0.204233052	0.959167	0.0631
-0.409534987	0.887562	0.17676
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-0.43870383	0.976929	-0.04459
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-0.298023758	0.980588	-0.03989
-0.741150961	0.878571	-0.23969
-0.968901808	0.886864	-0.24612
-0.41561354	0.881601	0.22363
-0.480355838	0.9741	-0.05473
-0.330511545	0.75117	0.15932
-0.437318947	0.935037	-0.12414
-0.502094234	0.932721	-0.15122
-0.421425502	0.905972	0.18182
-0.363380127	0.927606	-0.17454
-0.423673025	0.860132	0.17829
-0.59208807	0.977629	0.04692
-0.216635428	0.964424	-0.07022
-0.348787555	0.929841	-0.15081
-0.16555096	0.99367	-0.01344
-0.196932436	0.915279	0.15798
-0.156771109	0.87239	0.22279

-0.307224147	0.88412	0.195
-0.303854899	0.959407	0.0661
-0.400708806	0.932276	-0.14883
-1.807354922	0.685038	-0.48543
-0.452471404	0.977316	0.03598
-0.428905758	0.927216	0.11957
-0.187860015	0.849683	-0.33527
-0.512206158	0.869602	-0.26802
-1.259177667	0.927809	0.14738
-0.733606582	0.605551	0.96941
-0.130574236	0.924955	0.14214
-0.438378721	0.853856	-0.34638
-0.573095913	0.857193	0.20235
-0.227510181	0.959603	-0.09502
0.044007182	0.923023	-0.16605
-1.040772516	0.80163	-0.10516
-0.299108616	0.987539	0.01944
-0.449525437	0.977548	0.03519
0.032240615	0.965051	0.0841
#DIV/0!	?	#DIV/0!
0.611434712	0.587247	1.00998
0.874469118	0.487755	1.41504
-0.902619888	0.936463	0.11092
-2.137503524	0.562205	-1
-1.700439718	0.54742	-1.37851
1.157541277	0.787586	0.42884
-0.447458977	0.789102	-0.32193
#DIV/0!	0.0917211	#DIV/0!
-3.429392792	0.272438	-1.34533
-0.195121154	0.972681	0.05318
-0.351672417	0.980017	-0.0391
-0.353978151	0.850646	-0.34603
-0.311414868	0.804365	0.23331
-0.222392421	0.992928	-0.01217
-0.352870692	0.996407	0.0068
-0.470455222	0.923635	0.13969
-0.212989285	0.861586	0.20311
-0.285473219	0.991505	0.01582
-0.617034391	0.900757	-0.17708
-0.461452936	0.922272	-0.11569
-0.338581723	0.954085	0.09095
-0.462413832	0.944985	0.0938
-0.523124808	0.967887	-0.0563
-0.501135128	0.907823	-0.21387
-0.371472123	0.926801	-0.15361

Transcript_id	Gene description	Gene symbol
ENSGALT0000	chemokine (C-C motif) receptor 2	CCR2
ENSGALT0000	NADPH oxidase 3	NOX3
ENSGALT0000	transmembrane protease, serine 3	TMPRSS3
ENSGALT0000	transmembrane channel-like 2	TMC2
ENSGALT0000	Olfactory receptor OR24	ENSGALG000000224
ENSGALT0000	otolin 1	OTOL1
ENSGALT0000	gastrulation brain homeobox 2	GBX2
ENSGALT0000	oncomodulin 2	OCM2
ENSGALT0000	seven in absentia homolog 3 (Drosophila)	SIAH3
ENSGALT0000	cholinergic receptor, nicotinic, alpha 9	CHRNA9
ENSGALT0000	carboxypeptidase B1 (tissue)	CPB1
ENSGALT0000	carbonic anhydrase XII	CA12
ENSGALT0000	RAP2B, member of RAS oncogene family	RAP2B
ENSGALT0000	doublecortin domain containing 2	DCDC2
ENSGALT0000	alkylglycerol monooxygenase	AGMO
ENSGALT0000	Rh family, C glycoprotein	RHCG
ENSGALT0000	coagulation factor IX	F9
ENSGALT0000	potassium channel, subfamily K, member 13	KCNK13
ENSGALT0000	myosin, heavy chain 4, skeletal muscle	MYH4
ENSGALT0000	Zic family member 1	ZIC1
ENSGALT0000	aldehyde dehydrogenase 1 family, member A3	ALDH1A3
ENSGALT0000	wingless-type MMTV integration site family, member 2B	WNT2B
ENSGALT0000	glycine receptor, alpha 3	GLRA3
ENSGALT0000	glutamate receptor, ionotropic, kainate 3	GRIK3
ENSGALT0000	growth differentiation factor 9	GDF9
ENSGALT0000	solute carrier family 9 (sodium/hydrogen exchanger), mer	SLC9A3
ENSGALT0000	proopiomelanocortin	POMC
ENSGALT0000	ankyrin repeat and SOCS box containing 2	ASB2
ENSGALT0000	Protein Wnt	F1NVM5_CHICK
ENSGALT0000	Agouti signaling proteinUncharacterized protein	ASIP
ENSGALT0000	potassium channel, subfamily K, member 17	KCNK17
ENSGALT0000	nodal homolog (mouse)	NODAL
ENSGALT0000	pappalysin 2	PAPPA2
ENSGALT0000	dopamine beta-hydroxylase (dopamine beta-monooxyger	DBH
ENSGALT0000	transmembrane protein 114	TMEM114
ENSGALT0000	5-hydroxytryptamine (serotonin) receptor 1E	HTR1E
ENSGALT0000	serine/threonine kinase 32A	STK32A
ENSGALT0000	myosin, heavy chain 2, skeletal muscle, adult	MYH2
ENSGALT0000	collagen-like tail subunit (single strand of homotrimer) of a	COLQ
ENSGALT0000	G protein-coupled receptor 144	GPR144
ENSGALT0000	solute carrier family 23 (nucleobase transporters), membe	SLC23A3
ENSGALT0000	zona pellucida-like domain containing 1	ZPLD1
ENSGALT0000	Potassium voltage-gated channel subfamily A member 10	KCNA10
ENSGALT0000	G protein-coupled receptor 17	GPR17
ENSGALT0000	calbindin 2	CALB2
ENSGALT0000	bone morphogenetic protein 3	BMP3
ENSGALT0000	coiled-coil domain containing 3	CCDC3

ENSGALT0000	neurogenic differentiation 1	NEUROD1
ENSGALT0000	interleukin 12B (natural killer cell stimulatory factor 2, cyto	IL12B
ENSGALT0000	viral interleukin-8 homolog	LOC422509
ENSGALT0000	photopigment melanopsin-like	OPN4-1
ENSGALT0000	phospholipase A2, group IVE	PLA2G4E
ENSGALT0000	transcription factor EC	TFEC
ENSGALT0000	klotho	KL
ENSGALT0000	tyrosine aminotransferase	TAT
ENSGALT0000	NeuroM protein	NEUROD4
ENSGALT0000	solute carrier family 5 (iodide transporter), member 8	SLC5A8
ENSGALT0000	SKI family transcriptional corepressor 1	SKOR1
ENSGALT0000	vasoactive intestinal peptide	VIP
ENSGALT0000	espin-like	ESPNL
ENSGALT0000	arginine vasopressin receptor 1B	AVPR1B
ENSGALT0000	TENP protein	TENP
ENSGALT0000	chromosome 14 open reading frame, human C16orf79	C14H16orf79
ENSGALT0000	membrane-associated ring finger (C3HC4) 11	MARCH11
ENSGALT0000	mesenchyme homeobox 2	MEOX2
ENSGALT0000	epidermal growth factor	EGF
ENSGALT0000	potassium channel, subfamily K, member 10	KCNK10
ENSGALT0000	IQ motif containing J	IQCJ
ENSGALT0000	hydroxyprostaglandin dehydrogenase 15-(NAD)	HPGD
ENSGALT0000	ADAM metallopeptidase domain 19	ADAM19
ENSGALT0000	opsin 5-like 2	COPN5L2
ENSGALT0000	growth differentiation factor 2	GDF2
ENSGALT0000	chromogranin A (parathyroid secretory protein 1)	CHGA
ENSGALT0000	NADPH oxidase organizer 1	NOXO1
ENSGALT0000	neuronal pentraxin I	NPTX1
ENSGALT0000	protein NDNF-like	LOC423605
ENSGALT0000	T-cell activation RhoGTPase activating protein	TAGAP
ENSGALT0000	calsequestrin 2 (cardiac muscle)	CASQ2
ENSGALT0000	neuron-specific protein family member 2-like	LOC416212
ENSGALT0000	cathelicidin antimicrobial peptide	CAMP
ENSGALT0000	urotensin 2 domain containing	UTS2D
ENSGALT0000	nescient helix loop helix 1	NHLH1
ENSGALT0000	PR domain containing 14	PRDM14
ENSGALT0000	tetra-peptide repeat homeobox-like	TPRXL
ENSGALT0000	thyrotropin-releasing hormone receptor	TRHR
ENSGALT0000	family with sequence similarity 5, member B	FAM5B
ENSGALT0000	solute carrier family 7 (orphan transporter), member 14	SLC7A14
ENSGALT0000	wingless-type MMTV integration site family, member 16	WNT16
ENSGALT0000	T-cell leukemia homeobox 3	TLX3
ENSGALT0000	suppression of tumorigenicity 18 (breast carcinoma) (zinc	ST18
ENSGALT0000	carboxypeptidase A6	CPA6
ENSGALT0000	regulator of G-protein signaling 4	RGS4
ENSGALT0000	kelch repeat and BTB (POZ) domain containing 5	KBTBD5
ENSGALT0000	secretagogin, EF-hand calcium binding protein	SCGN
ENSGALT0000	anoctamin 4	ANO4

ENSGALT0000	fibronectin type III domain containing 1	FNDC1
ENSGALT0000	hypocretin (orexin) receptor 2	HCRTR2
ENSGALT0000	ovostatin	LOC396151
ENSGALT0000	regucalcin-like	LOC428008
ENSGALT0000	regulatory factor X, 4 (influences HLA class II expression)	RFX4
ENSGALT0000	serpin peptidase inhibitor, clade B (ovalbumin), member 1	SERPINB10
ENSGALT0000	dachsous 2 (Drosophila)	DCHS2
ENSGALT0000	membrane-associated ring finger (C3HC4) 3	MARCH3
ENSGALT0000	protein phosphatase 1, regulatory subunit 17	PPP1R17
ENSGALT0000	carboxymethylenebutenolidase homolog (Pseudomonas)	CMBL
ENSGALT0000	kelch-like 30 (Drosophila)	KLHL30
ENSGALT0000	scavenger receptor class A, member 5 (putative)	SCARA5
ENSGALT0000	potassium voltage-gated channel, KQT-like subfamily, me	KCNQ5
ENSGALT0000	flavin containing monooxygenase 4	FMO4
ENSGALT0000	selectin E (endothelial adhesion molecule 1)	SELE
ENSGALT0000	transglutaminase 4 (prostate)	TGM4
ENSGALT0000	solute carrier family 38, member 4	SLC38A4
ENSGALT0000	cystine/glutamate transporter-like	LOC418109
ENSGALT0000	potassium voltage-gated channel, delayed-rectifier, subfa	KCNS2
ENSGALT0000	cholinergic receptor, nicotinic, alpha 4	CHRNA4
ENSGALT0000	crumbs homolog 1 (Drosophila)	CRB1
ENSGALT0000	cholinergic receptor, nicotinic, alpha 10	CHRNA10
ENSGALT0000	shroom family member 1	SHROOM1
ENSGALT0000	Gal 5	GAL5
ENSGALT0000	ankyrin repeat and kinase domain containing 1	ANKK1
ENSGALT0000	chromosome Z open reading frame, human C9orf24	CZH9orf24
ENSGALT0000	fibrinogen-like 2	FGL2
ENSGALT0000	glutaredoxin	GLRX
ENSGALT0000	UDP glucuronosyltransferase 2 family, polypeptide A3	UGT2A3
ENSGALT0000	2-hydroxyacylsphingosine 1-beta-galactosyltransferase-lil	LOC428949
ENSGALT0000	Angiogenin	RSFR_CHICK
ENSGALT0000	aldo-keto reductase family 1, member D1 (delta 4-3-ketos	AKR1D1
ENSGALT0000	transmembrane protein 45A	TMEM45A
ENSGALT0000	collagen, type XX, alpha 1	COL20A1
ENSGALT0000	guanine nucleotide binding protein (G protein), gamma 13	GNG13
ENSGALT0000	glycoprotein hormones, alpha polypeptide	CGA
ENSGALT0000	LIM domain binding 3	LDB3
ENSGALT0000	SPARC related modular calcium binding 1	SMOC1
ENSGALT0000	ISG12-2 protein-like	ISG12-2
ENSGALT0000	interleukin 21 receptor	IL21R
ENSGALT0000	EPH receptor A8	EPHA8
ENSGALT0000	5-hydroxytryptamine (serotonin) receptor 6, G protein-cou	HTR6
ENSGALT0000	SPHK1 interactor, AKAP domain containing	SPHKAP
ENSGALT0000	endothelin receptor type B	EDNRB
ENSGALT0000	family with sequence similarity 70, member B	FAM70B
ENSGALT0000	neuronal pentraxin II	NPTX2
ENSGALT0000	zinc finger protein, multitype 2	ZFPM2
ENSGALT0000	caveolin 3	CAV3

ENSGALT0000	xanthine dehydrogenase	XDH
ENSGALT0000	melanocortin 1 receptor	MC1R
ENSGALT0000	BPI fold containing family B, member 3	BPIFB3
ENSGALT0000	WDFY family member 4	WDFY4
ENSGALT0000	neuralized homolog 1B (Drosophila)	NEURL1B
ENSGALT0000	neurexophilin 3	NXPH3
ENSGALT0000	neuritin 1	NRN1
ENSGALT0000	H6 family homeobox 1	HMX1
ENSGALT0000	solute carrier family 6 (neurotransmitter transporter, GAB/	SLC6A1
ENSGALT0000	MAM domain containing glycosylphosphatidylinositol ancl	MDGA1
ENSGALT0000	amylase, alpha 2A; pancreatic	AMY2A
ENSGALT0000	leucine-rich repeats and immunoglobulin-like domains 1	LRIG1
ENSGALT0000	olfactomedin-like 2B	OLFML2B
ENSGALT0000	actin, alpha 2, smooth muscle, aorta	ACTA2
ENSGALT0000	osteoglycin	OGN
ENSGALT0000	phospholipase A2, group IIA (platelets, synovial fluid)	PLA2G2A
ENSGALT0000	G protein-coupled receptor 22	GPR22
ENSGALT0000	Zic family member 5	ZIC5
ENSGALT0000	kelch-like 35 (Drosophila)	KLHL35
ENSGALT0000	Rap guanine nucleotide exchange factor (GEF) 5	RAPGEF5
ENSGALT0000	adhesion molecule with Ig-like domain 2	AMIGO2
ENSGALT0000	cellular retinoic acid binding protein 1	CRABP1
ENSGALT0000	BCL2-like 14 (apoptosis facilitator)	BCL2L14
ENSGALT0000	hyperpolarization activated cyclic nucleotide-gated potass	HCN1
ENSGALT0000	bactericidal permeability-increasing protein-like	LOC419276
ENSGALT0000	5'-nucleotidase, ecto (CD73)	NT5E
ENSGALT0000	RASD family, member 2	RASD2
ENSGALT0000	tripartite motif containing 29	TRIM29
ENSGALT0000	collagen, type XV, alpha 1	COL15A1
ENSGALT0000	aldolase B, fructose-bisphosphate	ALDOB
ENSGALT0000	protein kinase (cAMP-dependent, catalytic) inhibitor gamr	PKIG
ENSGALT0000	histone H3.2-like	LOC417953
ENSGALT0000	solute carrier family 17 (sodium-dependent inorganic pho:	SLC17A6
ENSGALT0000	receptor-interacting serine-threonine kinase 2-like	LOC415708
ENSGALT0000	ovoinhibitor	LOC416235
ENSGALT0000	calcium/calmodulin-dependent protein kinase ID	CAMK1D
ENSGALT0000	BAI1-associated protein 2-like 2	BAIAP2L2
ENSGALT0000	proteolipid protein 1	PLP1
ENSGALT0000	regulator of G-protein signaling 5	RGS5
ENSGALT0000	fatty acid binding protein 7, brain	FABP7
ENSGALT0000	Type-1 angiotensin II receptor	AGTR1
ENSGALT0000	T-box 22	TBX22
ENSGALT0000	matrix metallopeptidase 28	MMP28
ENSGALT0000	\N	MAB21L2
ENSGALT0000	transmembrane 4 L six family member 4	TM4SF4
ENSGALT0000	pleiotrophin	PTN
ENSGALT0000	membrane metallo-endopeptidase-like 1	MMEL1
ENSGALT0000	glycoprotein M6A	GPM6A

ENSGALT0000	Putative uncharacterized protein	ENSGALG000000226
ENSGALT0000	forkhead box protein L1-like	LOC427656
ENSGALT0000	G protein-coupled receptor 98	GPR98
ENSGALT0000	doublesex and mab-3 related transcription factor 1	DMRT1
ENSGALT0000	matrix metallopeptidase 9 (gelatinase B, 92kDa gelatinas	MMP9
ENSGALT0000	aspartate beta-hydroxylase domain containing 2	ASPHD2
ENSGALT0000	chromosome 11 open reading frame 87	C11orf87
ENSGALT0000	four and a half LIM domains 2	FHL2
ENSGALT0000	piggyBac transposable element derived 5	PGBD5
ENSGALT0000	forkhead box E3	FOXE3
ENSGALT0000	B and T lymphocyte associated	BTLA
ENSGALT0000	leukocyte cell-derived chemotaxin 2	LECT2
ENSGALT0000	avidin-like	LOC431660
ENSGALT0000	R-spondin 1	RSPO1
ENSGALT0000	integrin, alpha 11	ITGA11
ENSGALT0000	eyes shut homolog (Drosophila)	EYS
ENSGALT0000	angiotensinogen (serpin peptidase inhibitor, clade A, mem	AGT
ENSGALT0000	paired-like homeodomain 3	PITX3
ENSGALT0000	glutamate receptor, ionotropic, N-methyl D-aspartate 1	GRIN1
ENSGALT0000	family with sequence similarity 198, member A	FAM198A
ENSGALT0000	fibroblast growth factor 13	FGF13
ENSGALT0000	extracellular leucine-rich repeat and fibronectin type III do	ELFN2
ENSGALT0000	Cytokine-inducible SH2-containing protein	CISH
ENSGALT0000	glycine amidinotransferase (L-arginine:glycine amidinotra	GATM
ENSGALT0000	adenomatosis polyposis coli down-regulated 1-like	APCDD1L
ENSGALT0000	ectodermal-neural cortex 1 (with BTB-like domain)	ENC1
ENSGALT0000	adenylate cyclase activating polypeptide 1 (pituitary)	ADCYAP1
ENSGALT0000	solute carrier family 13 (sodium-dependent dicarboxylate	SLC13A2
ENSGALT0000	early B-cell factor 2	EBF2
ENSGALT0000	zona pellucida glycoprotein 4	ZP4
ENSGALT0000	carbonic anhydrase II	CA2
ENSGALT0000	teashirt zinc finger homeobox 2	TSHZ2
ENSGALT0000	unc-5 homolog D (C. elegans)	UNC5D
ENSGALT0000	carboxypeptidase Z	CPZ
ENSGALT0000	BET3 like (S. cerevisiae)	BET3L
ENSGALT0000	formin 2	FMN2
ENSGALT0000	galanin receptor 1	GALR1
ENSGALT0000	myosin binding protein C, slow type	MYBPC1
ENSGALT0000	solute carrier family 30 (zinc transporter), member 2	SLC30A2
ENSGALT0000	ripply2 homolog (zebrafish)	RIPPLY2
ENSGALT0000	leucine rich repeat transmembrane neuronal 3	LRRTM3
ENSGALT0000	CD8a molecule	CD8A
ENSGALT0000	catenin (cadherin-associated protein), alpha 3	CTNNA3
ENSGALT0000	leucine rich repeat and fibronectin type III domain contain	LRFN2
ENSGALT0000	glutaredoxin, cysteine rich 1	GRXCR1
ENSGALT0000	UDP-N-acetyl-alpha-D-galactosamine:polypeptide N-acet	GALNT14
ENSGALT0000	cannabinoid receptor interacting protein 1	CNRIP1
ENSGALT0000	ATPase, Na+/K+ transporting, beta 1 polypeptide	ATP1B1

ENSGALT0000	janus kinase and microtubule interacting protein 1	JAKMIP1
ENSGALT0000	pleckstrin homology domain containing, family O member	PLEKHO1
ENSGALT0000	retinoschisin 1	RS1
ENSGALT0000	dopamine receptor D1	DRD1
ENSGALT0000	inositol polyphosphate phosphatase-like 1	INPPL1
ENSGALT0000	aquaporin 4	AQP4
ENSGALT0000	tumor protein p53 inducible protein 11	TP53I11
ENSGALT0000	coagulation factor VII (serum prothrombin conversion acc	F7
ENSGALT0000	transmembrane protein 74	TMEM74
ENSGALT0000	cadherin 20, type 2	CDH20
ENSGALT0000	transcription factor AP-2 alpha (activating enhancer bindir	TFAP2A
ENSGALT0000	cytochrome P450 2J2-like	LOC424944
ENSGALT0000	purinergic receptor P2Y, G-protein coupled, 13	P2RY13
ENSGALT0000	gamma-aminobutyric acid (GABA) A receptor, alpha 3	GABRA3
ENSGALT0000	ATP-binding cassette, sub-family A (ABC1), member 8	ABCA8
ENSGALT0000	heme binding protein 2	HEBP2
ENSGALT0000	SH3 domain binding glutamic acid-rich protein	SH3BGR
ENSGALT0000	ceramide kinase-like	CERKL
ENSGALT0000	Na+/K+ transporting ATPase interacting 4	NKAIN4
ENSGALT0000	KIAA1045	KIAA1045
ENSGALT0000	potassium voltage-gated channel, subfamily G, member 1	KCNG1
ENSGALT0000	lumican	LUM
ENSGALT0000	glutamate receptor, ionotropic, AMPA 1	GRIA1
ENSGALT0000	endothelial PAS domain protein 1	EPAS1
ENSGALT0000	ST8 alpha-N-acetyl-neuraminide alpha-2,8-sialyltransfera	ST8SIA3
ENSGALT0000	protein phosphatase 2, regulatory subunit B, gamma	PPP2R2C
ENSGALT0000	ADP-ribosylhydrolase like 1	ADPRHL1
ENSGALT0000	met proto-oncogene (hepatocyte growth factor receptor)	MET
ENSGALT0000	myoglobin	MB
ENSGALT0000	melanocortin 4 receptor	MC4R
ENSGALT0000	NFAT activating protein with ITAM motif 1	NFAM1
ENSGALT0000	POU class 2 homeobox 3	POU2F3
ENSGALT0000	regenerating islet-derived family, member 4	REG4
ENSGALT0000	Rh-associated glycoprotein	RHAG
ENSGALT0000	serpin peptidase inhibitor, clade B (ovalbumin), member 1	SERPINB12
ENSGALT0000	KIAA1755 ortholog	KIAA1755
ENSGALT0000	calcium channel, voltage-dependent, gamma subunit 3	CACNG3
ENSGALT0000	regulator of G-protein signaling 2, 24kDa	RGS2
ENSGALT0000	netrin 1	NTN1
ENSGALT0000	transmembrane protein 132C	TMEM132C
ENSGALT0000	Rap guanine nucleotide exchange factor (GEF) 4	RAPGEF4
ENSGALT0000	runt-related transcription factor 1; translocated to, 1 (cyclir	RUNX1T1
ENSGALT0000	glutamyl aminopeptidase (aminopeptidase A)	ENPEP
ENSGALT0000	MCF.2 cell line derived transforming sequence-like 2	MCF2L2
ENSGALT0000	Cas scaffolding protein family member 4	CASS4
ENSGALT0000	gap junction protein, beta 1, 32kDa	GJB1
ENSGALT0000	troponin T type 3 (skeletal, fast)	TNNT3
ENSGALT0000	nucleolar protein 4	NOL4

ENSGALT0000	potassium inwardly-rectifying channel, subfamily J, memb	KCNJ2
ENSGALT0000	bone morphogenetic protein receptor, type IB	BMPR1B
ENSGALT0000	ovomucin alpha-subunit	MUC5B
ENSGALT0000	mab-21-like 1 (C. elegans)	MAB21L1
ENSGALT0000	limbic system-associated membrane protein	LSAMP
ENSGALT0000	collagen, type XIV, alpha 1	COL14A1
ENSGALT0000	follistatin-like 5	FSTL5
ENSGALT0000	leucine rich repeat neuronal 3	LRRN3
ENSGALT0000	hemopoietic cell kinase	HCK
ENSGALT0000	mannose-binding lectin (protein C) 2, soluble	MBL2
ENSGALT0000	Zic family member 3 heterotaxy 1 (odd-paired homolog, D	ZIC3
ENSGALT0000	splA/ryanodine receptor domain and SOCS box containin	SPSB4
ENSGALT0000	neurotrophic tyrosine kinase, receptor, type 1	NTRK1
ENSGALT0000	ST8 alpha-N-acetyl-neuraminide alpha-2,8-sialyltransfera	ST8SIA1
ENSGALT0000	receptor-associated protein of the synapse	RAPSN
ENSGALT0000	regulator of G-protein signaling 7	RGS7
ENSGALT0000	corticotropin releasing hormone receptor 1	CRHR1
ENSGALT0000	ectonucleoside triphosphate diphosphohydrolase 2-like	LOC427773
ENSGALT0000	organic solute transporter beta	OSTBETA
ENSGALT0000	hemoglobin, alpha 1	HBAA
ENSGALT0000	potassium voltage-gated channel, subfamily H (eag-relate	KCNH1
ENSGALT0000	ELOVL fatty acid elongase 2	ELOVL2
ENSGALT0000	carbonic anhydrase X	CA10
ENSGALT0000	clavesin 2	CLVS2
ENSGALT0000	multidrug resistance protein 1-like	LOC420606
ENSGALT0000	secreted phosphoprotein 2, 24kDa	SPP2
ENSGALT0000	synaptoporin	SYNPR
ENSGALT0000	family with sequence similarity 69, member C	FAM69C
ENSGALT0000	clusterin-like 1 (retinal)	CLUL1
ENSGALT0000	cholinergic receptor, nicotinic, alpha polypeptide 2 (neuro	F1N9F1_CHICK
ENSGALT0000	ras-related C3 botulinum toxin substrate 2 (rho family, sm	RAC2
ENSGALT0000	Cbp/p300-interacting transactivator, with Glu/Asp-rich car	CITED4
ENSGALT0000	solute carrier family 29 (nucleoside transporters), membe	SLC29A4
ENSGALT0000	laminin, alpha 4	LAMA4
ENSGALT0000	CD36 antigen	CD36
ENSGALT0000	pregnancy-associated plasma protein A, pappalysin 1	PAPPA
ENSGALT0000	D4, zinc and double PHD fingers, family 3	DPF3
ENSGALT0000	follistatin-like 3 (secreted glycoprotein)	FSTL3
ENSGALT0000	von Willebrand factor A domain containing 3A	VWA3A
ENSGALT0000	fyn-related kinase	FRK
ENSGALT0000	RAS-like, family 10, member B	RASL10B
ENSGALT0000	solute carrier family 2 (facilitated glucose transporter), me	SLC2A2
ENSGALT0000	ectonucleotide pyrophosphatase/phosphodiesterase 2	ENPP2
ENSGALT0000	leucine rich repeat containing 7	LRRC7
ENSGALT0000	ATPase, H+ transporting, lysosomal accessory protein 1-l	ATP6AP1L
ENSGALT0000	solute carrier family 6 (neurotransmitter transporter, GAB/	SLC6A11
ENSGALT0000	anoctamin 6	ANO6
ENSGALT0000	microfibrillar associated protein 5	MFAP5

ENSGALT0000	hemoglobin, mu	HBM
ENSGALT0000	hemoglobin, beta	HBE
ENSGALT0000	hemoglobin, zeta	HBZ
ENSGALT0000	angiopoietin-like 6	ANGPTL6
ENSGALT0000	glutamate receptor, metabotropic 3	GRM3
ENSGALT0000	RAS guanyl releasing protein 3 (calcium and DAG-regula	RASGRP3
ENSGALT0000	N-terminal EF-hand calcium binding protein 2	NECAB2
ENSGALT0000	cannabinoid receptor 1 (brain)	CNR1
ENSGALT0000	sensory organ homeobox protein SOHo	SOHO-1
ENSGALT0000	CUGBP, Elav-like family member 4	CELF4
ENSGALT0000	adenylate cyclase 1 (brain)	ADCY1
ENSGALT0000	myosin IA	MYO1A
ENSGALT0000	complexin 2	CPLX2
ENSGALT0000	regulator of G-protein signaling 18	RGS18
ENSGALT0000	zinc finger, CCHC domain containing 24	ZCCHC24
ENSGALT0000	\N	LOC428834
ENSGALT0000	thrombospondin, type I, domain containing 7A	THSD7A
ENSGALT0000	phosphatidylinositol-3,4,5-trisphosphate-dependent Rac e	PREX2
ENSGALT0000	coactosin-like 1 (Dictyostelium)	COTL1
ENSGALT0000	laminin, alpha 2	LAMA2
ENSGALT0000	connexin 39	GJA4
ENSGALT0000	potassium channel, subfamily K, member 2	KCNK2
ENSGALT0000	ephrin-A5	EFNA5
ENSGALT0000	mal, T-cell differentiation protein	MAL
ENSGALT0000	patched domain containing 4	PTCHD4
ENSGALT0000	zinc finger protein 750	ZNF750
ENSGALT0000	chromosome 2 open reading frame 40	C2orf40
ENSGALT0000	growth regulation by estrogen in breast cancer 1	GREB1
ENSGALT0000	WD repeat domain 86	WDR86
ENSGALT0000	Forkhead box protein D3	FOXD3
ENSGALT0000	protein kinase, cGMP-dependent, type I	PRKG1
ENSGALT0000	gap junction protein, alpha 5, 40kDa	GJA5
ENSGALT0000	oxysterol binding protein-like 6	OSBPL6
ENSGALT0000	N-acetylneuraminate pyruvate lyase (dihydrodipicolinate s	NPL
ENSGALT0000	RAP1 GTPase activating protein 2	RAP1GAP2
ENSGALT0000	PDZ and LIM domain 1	PDLIM1
ENSGALT0000	family with sequence similarity 176, member B	FAM176B
ENSGALT0000	elastin microfibril interfacer 3	EMILIN3
ENSGALT0000	DEP domain containing 6	DEPDC6
ENSGALT0000	phospholipase B1	PLB1
ENSGALT0000	cholinergic receptor, nicotinic, alpha 1 (muscle)	CHRNA1
ENSGALT0000	forkhead box L2	FOXL2
ENSGALT0000	ATPase, aminophospholipid transporter, class I, type 8A,	ATP8A2
ENSGALT0000	family with sequence similarity 59, member B	FAM59B
ENSGALT0000	lipoma HMGIC fusion partner-like 2	LHFPL2
ENSGALT0000	G protein-coupled receptor kinase 5	GRK5
ENSGALT0000	TIMP metallopeptidase inhibitor 4	TIMP4
ENSGALT0000	hemogen	HEMGN

ENSGALT0000	family with sequence similarity 131, member A	FAM131A
ENSGALT0000	SRY (sex determining region Y)-box 7	SOX7
ENSGALT0000	ADAM metallopeptidase with thrombospondin type 1 moti	ADAMTS10
ENSGALT0000	sodium channel, voltage-gated, type V, alpha subunit	SCN5A
ENSGALT0000	hematopoietic prostaglandin D synthase	HPGDS
ENSGALT0000	StAR-related lipid transfer (START) domain containing 10	STARD10
ENSGALT0000	argininosuccinate synthase 1	ASS1
ENSGALT0000	phosphoglucomutase 2-like 1	PGM2L1
ENSGALT0000	cadherin 10, type 2 (T2-cadherin)	CDH10
ENSGALT0000	family with sequence similarity 19 (chemokine (C-C motif)	FAM19A4
ENSGALT0000	sorting nexin 10	SNX10
ENSGALT0000	MAM domain containing 2	MAMDC2
ENSGALT0000	doublecortin-like kinase 3	DCLK3
ENSGALT0000	ALX homeobox 4	ALX4
ENSGALT0000	Antimicrobial peptide CHP1	AMP1_CHICK
ENSGALT0000	ATPase, class V, type 10B	ATP10B
ENSGALT0000	cyclin-dependent kinase inhibitor 1A (p21, Cip1)	CDKN1A
ENSGALT0000	v-mos Moloney murine sarcoma viral oncogene homolog	MOS
ENSGALT0000	podocalyxin-like 2	PODXL2
ENSGALT0000	zinc finger, DHHC-type containing 17	ZDHHC17
ENSGALT0000	pleckstrin homology-like domain, family A, member 2	PHLDA2
ENSGALT0000	Rho GTPase activating protein 31	ARHGAP31
ENSGALT0000	POU class 6 homeobox 2	POU6F2
ENSGALT0000	GDP-mannose pyrophosphorylase B	GMPPB
ENSGALT0000	Brain-specific homeobox/POU domain protein 3	POU4F3
ENSGALT0000	neurexin 1	NRXN1
ENSGALT0000	kelch-like 23 (Drosophila)	KLHL23
ENSGALT0000	cholinergic receptor, muscarinic 2	CHRM2
ENSGALT0000	vestigial like 3 (Drosophila)	VGLL3
ENSGALT0000	GTP cyclohydrolase I feedback regulator	GCHFR
ENSGALT0000	carbonic anhydrase XIII	CA13
ENSGALT0000	CUB domain containing protein 2	CDCP2
ENSGALT0000	carbonic anhydrase III, muscle specific	CA3
ENSGALT0000	interferon regulatory factor 1	IRF1
ENSGALT0000	zona pellucida protein	ZPAX
ENSGALT0000	calcium binding protein 7	CABP7
ENSGALT0000	Dkk-1Uncharacterized protein	DKK1
ENSGALT0000	myosin XVIIIB	MYO18B
ENSGALT0000	RAS-like, family 12	RASL12
ENSGALT0000	otokeratin	LOC395772
ENSGALT0000	complement component 5a receptor 1	C5AR1
ENSGALT0000	B lymphoid tyrosine kinase	BLK
ENSGALT0000	zinc finger E-box binding homeobox 2	ZEB2
ENSGALT0000	cadherin-related 23	CDH23
ENSGALT0000	proenkephalin	PENK
ENSGALT0000	multimerin 1	MMRN1
ENSGALT0000	hemoglobin, epsilon 1	HBE1
ENSGALT0000	neuronal growth regulator 1	NEGR1

ENSGALT0000	Src-like-adaptor	SLA
ENSGALT0000	monocyte to macrophage differentiation-associated 2	MMD2
ENSGALT0000	microtubule-associated protein 1B	MAP1B
ENSGALT0000	basonuclin 2	BNC2
ENSGALT0000	cyclin-dependent kinase inhibitor 2C (p18, inhibits CDK4)	CDKN2C
ENSGALT0000	Meis homeobox 2	MEIS2
ENSGALT0000	glycine receptor, beta	GLRB
ENSGALT0000	Fas (TNF receptor superfamily, member 6)	FAS
ENSGALT0000	collagen, type XII, alpha 1	COL12A1
ENSGALT0000	MOB kinase activator 3C	MOB3C
ENSGALT0000	glycine receptor, alpha 2	GLRA2
ENSGALT0000	homeobox A3	HOXA3
ENSGALT0000	retinoid X receptor, gamma	RXRG
ENSGALT0000	copine VIII	CPNE8
ENSGALT0000	SLIT and NTRK-like family, member 1	SLITRK1
ENSGALT0000	G protein-coupled receptor 116	GPR116
ENSGALT0000	myosin, light chain 4, alkali; atrial, embryonic	MYL4
ENSGALT0000	seizure related 6 homolog (mouse)-like	SEZ6L
ENSGALT0000	beta-carotene oxygenase 2	BCO2
ENSGALT0000	T-box 4	TBX4
ENSGALT0000	leucine rich repeat and fibronectin type III domain contain	LRFN5
ENSGALT0000	sphingomyelin phosphodiesterase 3, neutral membrane (	SMPD3
ENSGALT0000	phosphodiesterase 1A, calmodulin-dependent	PDE1A
ENSGALT0000	fibulin 5	FBLN5
ENSGALT0000	neuromedin B	NMB
ENSGALT0000	potassium voltage-gated channel, Shal-related subfamily,	KCND3
ENSGALT0000	ADAM metallopeptidase domain 12	ADAM12
ENSGALT0000	G protein-coupled receptor 149	GPR149
ENSGALT0000	integrin, beta 2 (complement component 3 receptor 3 and	ITGB2
ENSGALT0000	complement component 1, q subcomponent, B chain	C1QB
ENSGALT0000	glutamate receptor, ionotropic, delta 1	GRID1
ENSGALT0000	collapsin response mediator protein 1	CRMP1
ENSGALT0000	DnaJ (Hsp40) homolog, subfamily C, member 5 beta	DNAJC5B
ENSGALT0000	endothelin receptor B subtype 2	EDNRB2
ENSGALT0000	hemoglobin, gamma A	HBG1
ENSGALT0000	GRB2-associated binding protein 3	GAB3
ENSGALT0000	UDP-Gal:betaGlcNAc beta 1,3-galactosyltransferase, poly	B3GALT2
ENSGALT0000	asparaginase homolog (S. cerevisiae)	ASPG
ENSGALT0000	activating transcription factor 3	ATF3
ENSGALT0000	hairy and enhancer of split 5 (Drosophila)	HES5
ENSGALT0000	serine-rich and transmembrane domain containing 1	SERTM1
ENSGALT0000	glycine receptor, alpha 4	GLRA4
ENSGALT0000	ATPase, H+ transporting, lysosomal V0 subunit a4	ATP6V0A4
ENSGALT0000	complement component 1, q subcomponent, C chain	C1QC
ENSGALT0000	potassium voltage-gated channel, subfamily H (eag-relate	KCNH7
ENSGALT0000	adenylate cyclase activating polypeptide 1 (pituitary) rece	ADCYAP1R1
ENSGALT0000	transforming growth factor, beta receptor II-like	LOC424261
ENSGALT0000	KIAA1486	KIAA1486

ENSGALT0000	thrombospondin 1	THBS1
ENSGALT0000	erythrocyte membrane protein band 4.1 like 4A	EPB41L4A
ENSGALT0000	DPY30 domain containing 1	DYDC1
ENSGALT0000	endothelin converting enzyme-like 1	ECEL1
ENSGALT0000	poly [ADP-ribose] polymerase 12-like	LOC418108
ENSGALT0000	FRAS1-related extracellular matrix protein 1-like	LOC424679
ENSGALT0000	prokineticin 1	PROK1
ENSGALT0000	platelet-activating factor receptor	PTAFR
ENSGALT0000	transmembrane protein 72	TMEM72
ENSGALT0000	BARX homeobox 2	BARX2
ENSGALT0000	G protein-coupled receptor 39	GPR39
ENSGALT0000	tubulin, beta 2B class IIb	TUBB2B
ENSGALT0000	chromosome 22 open reading frame 39	C22orf39
ENSGALT0000	lipoma HMGIC fusion partner-like 3	LHFPL3
ENSGALT0000	nidogen 2 (osteonidogen)	NID2
ENSGALT0000	potassium channel tetramerisation domain containing 8	KCTD8
ENSGALT0000	family with sequence similarity 189, member A2	FAM189A2
ENSGALT0000	StAR-related lipid transfer (START) domain containing 13	STARD13
ENSGALT0000	glycerophosphodiester phosphodiesterase domain contai	GDPD4
ENSGALT0000	actin filament associated protein 1-like 2	AFAP1L2
ENSGALT0000	LON peptidase N-terminal domain and ring finger 3	LONRF3
ENSGALT0000	tolloid-like 1	TLL1
ENSGALT0000	cytochrome P450, family 51, subfamily A, polypeptide 1	CYP51A1
ENSGALT0000	glycophorin C	GYPC
ENSGALT0000	potassium voltage-gated channel, Shab-related subfamily	KCNB2
ENSGALT0000	family with sequence similarity 188, member B2	FAM188B2
ENSGALT0000	kinesin family member 5C	KIF5C
ENSGALT0000	cholinergic receptor, nicotinic, alpha 3	CHRNA3
ENSGALT0000	TIMP metallopeptidase inhibitor 3	TIMP3
ENSGALT0000	ribonuclease P/MRP 25kDa subunit	RPP25
ENSGALT0000	insulin induced gene 1	INSIG1
ENSGALT0000	leucine rich repeat containing 43	LRRC43
ENSGALT0000	H1 histone family, member 0	H1F0
ENSGALT0000	otoferlin	OTOF
ENSGALT0000	transmembrane protein 163	TMEM163
ENSGALT0000	solute carrier organic anion transporter family, member 2E	SLCO2B1
ENSGALT0000	Rho GTPase activating protein 28	ARHGAP28
ENSGALT0000	LIM homeobox 1	LHX1
ENSGALT0000	neuropilin 2	NRP2
ENSGALT0000	ST3 beta-galactoside alpha-2,3-sialyltransferase 5	ST3GAL5
ENSGALT0000	solute carrier family 2 (facilitated glucose/fructose transpo	SLC2A5
ENSGALT0000	short chain dehydrogenase/reductase family 42E, membe	SDR42E2
ENSGALT0000	caspase recruitment domain family, member 11	CARD11
ENSGALT0000	myc target 1	MYCT1
ENSGALT0000	oligodendrocyte myelin glycoprotein	OMG
ENSGALT0000	protein tyrosine phosphatase, receptor type, O	PTPRO
ENSGALT0000	cathepsin L1-like	LOC420160
ENSGALT0000	dapper, antagonist of beta-catenin, homolog 2 (Xenopus l	DACT2

ENSGALT0000	proline rich 5 like	PRR5L
ENSGALT0000	hairy and enhancer of split 5-like	LOC419390
ENSGALT0000	hypothetical protein LOC425113	LOC425113
ENSGALT0000	purinergic receptor P2Y, G-protein coupled, 12	P2RY12
ENSGALT0000	periostin, osteoblast specific factor	POSTN
ENSGALT0000	DIX domain containing 1	DIXDC1
ENSGALT0000	potassium channel, subfamily K, member 9	KCNK9
ENSGALT0000	apolipoprotein L domain containing 1	APOLD1
ENSGALT0000	olfactory receptor 52B2-like	LOC428111
ENSGALT0000	microtubule-associated protein 1A	MAP1A
ENSGALT0000	leukocyte receptor tyrosine kinase	LTK
ENSGALT0000	aldehyde dehydrogenase 1 family, member A2	ALDH1A2
ENSGALT0000	relaxin/insulin-like family peptide receptor 1	RXFP1
ENSGALT0000	kelch domain containing 8A	KLHDC8A
ENSGALT0000	L-threonine dehydrogenase	TDH
ENSGALT0000	dehydrogenase/reductase (SDR family) member 3	DHRS3
ENSGALT0000	endothelin 2	EDN2
ENSGALT0000	family with sequence similarity 19 (chemokine (C-C motif)	FAM19A2
ENSGALT0000	TenascinUncharacterized protein	Q90996_CHICK
ENSGALT0000	chromosome 1 open reading frame 216	C1orf216
ENSGALT0000	Ras association (RalGDS/AF-6) domain family member 2	RASSF2
ENSGALT0000	hydroxy-delta-5-steroid dehydrogenase, 3 beta- and stero	HSD3B1
ENSGALT0000	aspartoacylase	ASPA
ENSGALT0000	GDNF family receptor alpha 3	GFRA3
ENSGALT0000	Small Cajal body specific RNA 11	SCARNA11
ENSGALT0000	solute carrier organic anion transporter family, member 3A	SLCO3A1
ENSGALT0000	potassium voltage-gated channel, Shab-related subfamily	KCNB1
ENSGALT0000	stearoyl-CoA desaturase (delta-9-desaturase)	SCD
ENSGALT0000	doublecortin	DCX
ENSGALT0000	ubiquitin carboxyl-terminal esterase L1 (ubiquitin thioleste	UCHL1
ENSGALT0000	Kruppel-like factor 7 (ubiquitous)	KLF7
ENSGALT0000	laminin, beta 4	LAMB4
ENSGALT0000	myosin IIIB	MYO3B
ENSGALT0000	hydroxysteroid (17-beta) dehydrogenase 7	HSD17B7
ENSGALT0000	IQ motif and Sec7 domain 3	IQSEC3
ENSGALT0000	ADAM metallopeptidase with thrombospondin type 1 moti	ADAMTS2
ENSGALT0000	microtubule-associated protein 2	MAP2
ENSGALT0000	family with sequence similarity 20, member C	FAM20C
ENSGALT0000	monoamine oxidase A	MAOA
ENSGALT0000	receptor (G protein-coupled) activity modifying protein 1	RAMP1
ENSGALT0000	toll-like receptor 4	TLR4
ENSGALT0000	BTB (POZ) domain containing 17	BTBD17
ENSGALT0000	myosin IB	MYO1B
ENSGALT0000	N-deacetylase/N-sulfotransferase (heparan glucosaminyl)	NDST4
ENSGALT0000	G protein-coupled receptor 65	GPR65
ENSGALT0000	macrophage receptor with collagenous structure	MARCO
ENSGALT0000	transmembrane protein 27	TMEM27
ENSGALT0000	carbohydrate (N-acetylgalactosamine 4-sulfate 6-O) sulfo	CHST15

ENSGALT0000	synaptopodin 2	SYNPO2
ENSGALT0000	prostaglandin E receptor 3, subtype EP3	PTGER3
ENSGALT0000	protein tyrosine phosphatase, non-receptor type 5 (striatu	PTPN5
ENSGALT0000	LY6/PLAUR domain containing 1	LYPD1
ENSGALT0000	trypsin inhibitor CITI-1-like	LOC770729
ENSGALT0000	regulating synaptic membrane exocytosis 2	RIMS2
ENSGALT0000	chromosome 1 open reading frame, human C7orf55	C1H7orf55
ENSGALT0000	cytochrome P-450 2C45	CYP2C45
ENSGALT0000	complement factor H	CFH
ENSGALT0000	calpain 9	CAPN9
ENSGALT0000	heparin-binding EGF-like growth factor	HBEGF
ENSGALT0000	complement component 1, q subcomponent, A chain	C1QA
ENSGALT0000	R3H domain containing-like	R3HDML
ENSGALT0000	adrenomedullin	ADM
ENSGALT0000	G protein-coupled receptor, family C, group 5, member A	GPRC5A
ENSGALT0000	potassium inwardly-rectifying channel, subfamily J, memb	KCNJ6
ENSGALT0000	zinc finger, DHHC-type containing 22	ZDHHC22
ENSGALT0000	villin 1	VIL1
ENSGALT0000	zinc finger protein 366	ZNF366
ENSGALT0000	serine/threonine kinase 10	STK10
ENSGALT0000	zinc finger protein 503	ZNF503
ENSGALT0000	collagen, type XXVIII, alpha 1	COL28A1
ENSGALT0000	phosphatidic acid phosphatase type 2 domain containing	PPAPDC3
ENSGALT0000	solute carrier family 15 (oligopeptide transporter), membe	SLC15A1
ENSGALT0000	creatine kinase, mitochondrial 1A	CKMT1A
ENSGALT0000	thrombomodulin	THBD
ENSGALT0000	Rho-related BTB domain containing 3	RHOBTB3
ENSGALT0000	protein tyrosine phosphatase, non-receptor type 11-like	LOC419429
ENSGALT0000	chromosome 3 open reading frame 55	C3orf55
ENSGALT0000	kelch-like 25 (Drosophila)	KLHL25
ENSGALT0000	protein tyrosine phosphatase, receptor type, N polypeptid	PTPRN2
ENSGALT0000	acyl-CoA thioesterase 11	ACOT11
ENSGALT0000	hippocalcin-like 1	HPCAL1
ENSGALT0000	family with sequence similarity 212, member B	FAM212B
ENSGALT0000	leucine rich repeat containing 32	LRRC32
ENSGALT0000	calpain 3, (p94)	CAPN3
ENSGALT0000	transmembrane protein 37	TMEM37
ENSGALT0000	CD93 molecule	CD93
ENSGALT0000	ventricular zone expressed PH domain homolog 1 (zebra	VEPH1
ENSGALT0000	myosin IF	MYO1F
ENSGALT0000	glycerophosphodiester phosphodiesterase domain contai	GDPD5
ENSGALT0000	WAP, follistatin/kazal, immunoglobulin, kunitz and netrin d	WFIKKN2
ENSGALT0000	V-set and transmembrane domain containing 2 like	VSTM2L
ENSGALT0000	chromosome 4 open reading frame, human C20orf194	C4H20orf194
ENSGALT0000	N-deacetylase/N-sulfotransferase (heparan glucosaminyl	NDST3
ENSGALT0000	neural cell adhesion molecule 2	NCAM2
ENSGALT0000	glutamate receptor, metabotropic 8	GRM8
ENSGALT0000	forkhead box C2 (MFH-1, mesenchyme forkhead 1)	FOXC2

ENSGALT0000	phosphodiesterase 1C, calmodulin-dependent 70kDa	PDE1C
ENSGALT0000	G protein-activated inward rectifier potassium channel 1-l	LOC429785
ENSGALT0000	calcium binding protein 39-like	CAB39L
ENSGALT0000	rho GTPase-activating protein 7-like	LOC416169
ENSGALT0000	leupaxin	LPXN
ENSGALT0000	phospholipase C, delta 1	PLCD1
ENSGALT0000	NEL-like 2 (chicken)	NELL2
ENSGALT0000	lipase A, lysosomal acid, cholesterol esterase (Wolman di	LIPA
ENSGALT0000	MID1 interacting protein 1 (gastrulation specific G12 home	MID1IP1
ENSGALT0000	xylosyltransferase I	XYLT1
ENSGALT0000	RAB26, member RAS oncogene family	RAB26
ENSGALT0000	neuroligin 4, X-linked	NLGN4X
ENSGALT0000	branched chain amino-acid transaminase 1, cytosolic	BCAT1
ENSGALT0000	phosphodiesterase 9A	PDE9A
ENSGALT0000	delta-like 4 (Drosophila)	DLL4
ENSGALT0000	isopentenyl-diphosphate delta isomerase 1	IDI1
ENSGALT0000	UDP-Gal:betaGlcNAc beta 1,3-galactosyltransferase, poly	B3GALT4
ENSGALT0000	fatty-acid amide hydrolase 1-like	LOC429098
ENSGALT0000	histamine N-methyltransferase	HNMT
ENSGALT0000	sulfotransferase family, cytosolic, 6B, member 1	SULT6B1
ENSGALT0000	ADAM metallopeptidase with thrombospondin type 1 moti	ADAMTS9
ENSGALT0000	spastic ataxia of Charlevoix-Saguenay (sacsin)	SACS
ENSGALT0000	musculoskeletal, embryonic nuclear protein 1	MUSTN1
ENSGALT0000	cytochrome c oxidase subunit VIa polypeptide 1	COX6A1
ENSGALT0000	response gene to complement 32 protein-like	LOC422284
ENSGALT0000	bradykinin receptor B2	BDKRB2
ENSGALT0000	ribosomal protein S6 kinase, 90kDa, polypeptide 2	RPS6KA2
ENSGALT0000	\N	SOX18
ENSGALT0000	oxysterol binding protein-like 8	OSBPL8
ENSGALT0000	ubiquitin associated and SH3 domain containing B	UBASH3B
ENSGALT0000	spleen focus forming virus (SFFV) proviral integration onc	SPI1
ENSGALT0000	opticin	OPTC
ENSGALT0000	spondin 1, extracellular matrix protein	SPON1
ENSGALT0000	protein tyrosine phosphatase, receptor type, E	PTPRE
ENSGALT0000	SPARC-like 1 (hevin)	SPARCL1
ENSGALT0000	IKAROS family zinc finger 1 (Ikaros)	IKZF1
ENSGALT0000	tropomodulin 4 (muscle)	TMOD4
ENSGALT0000	kelch-like 36 (Drosophila)	KLHL36
ENSGALT0000	chromosome 1 open reading frame 190	C1orf190
ENSGALT0000	poly (ADP-ribose) polymerase family, member 8	PARP8
ENSGALT0000	contactin associated protein-like 5	CNTNAP5
ENSGALT0000	RAP1, GTP-GDP dissociation stimulator 1	RAP1GDS1
ENSGALT0000	calcium binding protein 1	CABP1
ENSGALT0000	ADAM metallopeptidase with thrombospondin type 1 moti	ADAMTS15
ENSGALT0000	T-box 2	TBX2
ENSGALT0000	WD repeat domain 66	WDR66
ENSGALT0000	potassium channel, subfamily V, member 1	KCNV1
ENSGALT0000	stomatin	STOM

ENSGALT0000 synaptotagmin IV		SYT4
ENSGALT0000 NLR family, CARD domain containing 3		NLRC3
ENSGALT0000 sterile alpha motif domain containing 10		SAMD10
ENSGALT0000 deiodinase, iodothyronine, type II		DIO2
ENSGALT0000 epoxide hydrolase 4		EPHX4
ENSGALT0000 forkhead box N4		FOXN4
ENSGALT0000 nudix (nucleoside diphosphate linked moiety X)-type moti		NUDT15
ENSGALT0000 3-hydroxy-3-methylglutaryl-CoA synthase 1 (soluble)		HMGCS1
ENSGALT0000 protogenin		PRTG
ENSGALT0000 chemokine (C-X-C motif) ligand 14		CXCL14
ENSGALT0000 phospholipid scramblase family, member 5		PLSCR5
ENSGALT0000 ras homolog gene family, member H		RHOH
ENSGALT0000 coiled-coil domain containing 109B		CCDC109B
ENSGALT0000 potassium large conductance calcium-activated channel,		KCNMA1
ENSGALT0000 p21 protein (Cdc42/Rac)-activated kinase 6		PAK6
ENSGALT0000 calcium channel, voltage-dependent, L type, alpha 1D sul		CACNA1D
ENSGALT0000 forkhead box S1		FOXS1
ENSGALT0000 FYVE, RhoGEF and PH domain containing 5		FGD5
ENSGALT0000 formin-like 1		FMNL1
ENSGALT0000 NADH dehydrogenase (ubiquinone) flavoprotein 3, 10kDa		NDUFV3
ENSGALT0000 calpain 2, (m/II) large subunit		CAPN2
ENSGALT0000 ankyrin 1, erythrocytic		ANK1
ENSGALT0000 cartilage intermediate layer protein, nucleotide pyrophosp		CILP
ENSGALT0000 cytochrome b-245, beta polypeptide		CYBB
ENSGALT0000 family with sequence similarity 163, member A		FAM163A
ENSGALT0000 V-set domain containing T cell activation inhibitor 1-like		LOC418554
ENSGALT0000 microsomal triglyceride transfer protein large subunit-like		LOC769580
ENSGALT0000 melanophilin		MLPH
ENSGALT0000 spinster homolog 3 (Drosophila)		SPNS3
ENSGALT0000 taste receptor, type 1, member 3		TAS1R3
ENSGALT0000 tenascin R (restrictin, janusin)		TNR
ENSGALT0000 proprotein convertase subtilisin/kexin type 2		PCSK2
ENSGALT0000 Cdc42 guanine nucleotide exchange factor (GEF) 9		ARHGEF9
ENSGALT0000 nucleoporin-like protein 2-like		LOC420615
ENSGALT0000 chemokine		CCLI7
ENSGALT0000 chordin-like 1		CHRDL1
ENSGALT0000 leukocyte ribonuclease A-2		RSFR
ENSGALT0000 kinase insert domain receptor (a type III receptor tyrosine		KDR
ENSGALT0000 regulator of G-protein signaling 3		RGS3
ENSGALT0000 chromosome 17 open reading frame, human C9orf91		C17H9orf91
ENSGALT0000 KN motif and ankyrin repeat domains 3		KANK3
ENSGALT0000 adenomatosis polyposis coli down-regulated 1		APCDD1
ENSGALT0000 cholinergic receptor, nicotinic, beta 3		CHRNB3
ENSGALT0000 DENN/MADD domain containing 5B		DENND5B
ENSGALT0000 CD99 molecule-like 2		CD99L2
ENSGALT0000 dipeptidyl-peptidase 10 (non-functional)		DPP10
ENSGALT0000 creatine kinase, brain		CKB
ENSGALT0000 chromosome 20 open reading frame 160		C20orf160

ENSGALT0000	multimerin 2	MMRN2
ENSGALT0000	Rho GTPase activating protein 40	ARHGAP40
ENSGALT0000	DEP domain containing MTOR-interacting protein	DEPTOR
ENSGALT0000	growth factor receptor-bound protein 14	GRB14
ENSGALT0000	tripartite motif containing 9	TRIM9
ENSGALT0000	inositol polyphosphate-5-phosphatase, 145kDa	INPP5D
ENSGALT0000	neuralized homolog 2 (Drosophila)	NEURL2
ENSGALT0000	transient receptor potential cation channel, subfamily M, r	TRPM1
ENSGALT0000	calcium and integrin binding family member 2	CIB2
ENSGALT0000	dynamin 1	DNM1
ENSGALT0000	ral guanine nucleotide dissociation stimulator-like 1	RGL1
ENSGALT0000	phospholipase A2, group IIE	PLA2G2E
ENSGALT0000	EGF-like, fibronectin type III and laminin G domains	EGFLAM
ENSGALT0000	spire homolog 1 (Drosophila)	SPIRE1
ENSGALT0000	phosphatidylinositol transfer protein, cytoplasmic 1	PITPNC1
ENSGALT0000	rabphilin 3A homolog (mouse)	RPH3A
ENSGALT0000	alpha 1,4-galactosyltransferase	A4GALT
ENSGALT0000	chromosome Z open reading frame, human C20orf134	CZH20orf134
ENSGALT0000	hepatic and glial cell adhesion molecule	HEPACAM
ENSGALT0000	toll-like receptor 15	TLR15
ENSGALT0000	SET domain containing (lysine methyltransferase) 7	SETD7
ENSGALT0000	solute carrier family 6 (neurotransmitter transporter, taurir	SLC6A6
ENSGALT0000	glycerol-3-phosphate dehydrogenase 1 (soluble)	GPD1
ENSGALT0000	synapsin III	SYN3
ENSGALT0000	anthrax toxin receptor 1	ANTXR1
ENSGALT0000	phosphatidylinositol-3,4,5-trisphosphate-dependent Rac ε	PREX1
ENSGALT0000	heme oxygenase (decycling) 1	HMOX1
ENSGALT0000	toll-like receptor 2 type1	TLR2-1
ENSGALT0000	Schwann cell-specific EGF-like repeat autocrine factor	LOC395159
ENSGALT0000	CD34 molecule	CD34
ENSGALT0000	prolactin-like protein	LOC417800
ENSGALT0000	matrix metallopeptidase 17 (membrane-inserted)	MMP17
ENSGALT0000	tau tubulin kinase 2	TTBK2
ENSGALT0000	triggering receptor expressed on myeloid cells 2	TREM2
ENSGALT0000	Kruppel-like factor 1 (erythroid)	KLF1
ENSGALT0000	chromosome Z open reading frame, human C9orf25	CZH9orf25
ENSGALT0000	protocadherin 1	PCDH1
ENSGALT0000	echinoderm microtubule associated protein like 5	EML5
ENSGALT0000	neuroligin 3	NLGN3
ENSGALT0000	Friend leukemia virus integration 1	FLI1
ENSGALT0000	RNA binding protein, autoantigenic (hnRNP-associated w	RALY
ENSGALT0000	chromosome 1 open reading frame, human C13orf15	C1H13orf15
ENSGALT0000	actin filament associated protein 1	AFAP1
ENSGALT0000	kelch repeat and BTB (POZ) domain containing 13	KBTBD13
ENSGALT0000	ST6 (alpha-N-acetyl-neuraminyl-2,3-beta-galactosyl-1,3)-	ST6GALNAC3
ENSGALT0000	NADH dehydrogenase (ubiquinone) Fe-S protein 5, 15kD	NDUFS5
ENSGALT0000	WAS/WASL interacting protein family, member 1	WIPF1
ENSGALT0000	mitochondrial ribosomal protein S21	MRPS21

ENSGALT0000	tubulin, beta 6 class V	TUBB6
ENSGALT0000	HtrA serine peptidase 1	HTRA1
ENSGALT0000	cytochrome P450, family 4, subfamily V, polypeptide 2	CYP4V2
ENSGALT0000	serine/threonine kinase 32B	STK32B
ENSGALT0000	family with sequence similarity 26, member E	FAM26E
ENSGALT0000	C-type lectin domain family 2 member D-like	LOC769384
ENSGALT0000	zinc finger E-box binding homeobox 1	ZEB1
ENSGALT0000	ATP-binding cassette, sub-family B (MDR/TAP), member	ABCB1
ENSGALT0000	NADH dehydrogenase (ubiquinone) 1 beta subcomplex, 4	NDUFB4
ENSGALT0000	tektin 2 (testicular)	TEKT2
ENSGALT0000	coronin, actin binding protein, 1C	CORO1C
ENSGALT0000	HINTW	HINTW
ENSGALT0000	centrosomal protein 170kDa	CEP170
ENSGALT0000	deleted in liver cancer 1	DLC1
ENSGALT0000	ATPase, H+ transporting, lysosomal 42kDa, V1 subunit C	ATP6V1C2
ENSGALT0000	solute carrier family 45, member 2	SLC45A2
ENSGALT0000	cyclic nucleotide gated channel beta 1	CNGB1
ENSGALT0000	dihydropyrimidinase-like 2	DPYSL2
ENSGALT0000	RAB36, member RAS oncogene family	RAB36
ENSGALT0000	FYN oncogene related to SRC, FGR, YES	FYN
ENSGALT0000	DnaJ (Hsp40) homolog, subfamily C, member 22	DNAJC22
ENSGALT0000	unc-13 homolog C (C. elegans)	UNC13C
ENSGALT0000	major histocompatibility complex, class I-related	MR1
ENSGALT0000	discs, large (Drosophila) homolog-associated protein 1	DLGAP1
ENSGALT0000	solute carrier family 16, member 7 (monocarboxylic acid t	SLC16A7
ENSGALT0000	Ras association and DIL domains	RADIL
ENSGALT0000	versican	VCAN
ENSGALT0000	collagen, type XXII, alpha 1	COL22A1
ENSGALT0000	acyl-CoA synthetase long-chain family member 6	ACSL6
ENSGALT0000	transglutaminase 2 (C polypeptide, protein-glutamine-gan	TGM2
ENSGALT0000	lysosomal-associated membrane protein 3	LAMP3
ENSGALT0000	retinal pigment epithelium-derived rhodopsin homolog	RRH
ENSGALT0000	uridine phosphorylase 2	UPP2
ENSGALT0000	microtubule associated tumor suppressor 1	MTUS1
ENSGALT0000	ATP/GTP binding protein-like 1	AGBL1
ENSGALT0000	monocyte to macrophage differentiation-associated	MMD
ENSGALT0000	ring finger protein 152	RNF152
ENSGALT0000	\N	HSP25
ENSGALT0000	TNF receptor-associated factor 4	TRAF4
ENSGALT0000	pyridoxal (pyridoxine, vitamin B6) phosphatase	PDXP
ENSGALT0000	cholecystokinin	CCK
ENSGALT0000	bactericidal/permeability-increasing protein	BPI
ENSGALT0000	integrin, alpha 1	ITGA1
ENSGALT0000	olfactomedin-like 3	OLFML3
ENSGALT0000	ganglioside-induced differentiation-associated protein 1	GDAP1
ENSGALT0000	somatostatin receptor 3	SSTR3
ENSGALT0000	RGM domain family, member B	RGMB
ENSGALT0000	protein tyrosine phosphatase, receptor type, M	PTPRM

ENSGALT0000	sema domain, transmembrane domain (TM), and cytopla	SEMA6A
ENSGALT0000	hepatic nuclear factor 4beta	HNF4beta
ENSGALT0000	solute carrier family 22 (organic anion transporter), memb	SLC22A7
ENSGALT0000	glutamate receptor, metabotropic 5	GRM5
ENSGALT0000	plexin D1	PLXND1
ENSGALT0000	shisa homolog 2 (Xenopus laevis)	SHISA2
ENSGALT0000	interferon, gamma-inducible protein 30	IFI30
ENSGALT0000	ATPase, Ca++ transporting, ubiquitous	ATP2A3
ENSGALT0000	chemokine-like receptor 1-like	LOC427665
ENSGALT0000	LIM domain only 2 (rhombotin-like 1)	LMO2
ENSGALT0000	protein phosphatase 1, regulatory (inhibitor) subunit 14D	PPP1R14D
ENSGALT0000	DEAD (Asp-Glu-Ala-Asp) box polypeptide 28	DDX28
ENSGALT0000	tissue factor pathway inhibitor 2	TFPI2
ENSGALT0000	EGF, latrophilin and seven transmembrane domain contai	ELTD1
ENSGALT0000	schwannomin interacting protein 1	SCHIP1
ENSGALT0000	vacuolar protein sorting 37 homolog B (S. cerevisiae)	VPS37B
ENSGALT0000	cysteine-rich protein 2	CRIP2
ENSGALT0000	serine hydroxymethyltransferase 1 (soluble)	SHMT1
ENSGALT0000	glutathione S-transferase class-alpha	GSTA
ENSGALT0000	aminopeptidase Q-like	LOC431649
ENSGALT0000	oleoyl-ACP hydrolase	OLAH
ENSGALT0000	synuclein, alpha interacting protein	SNCAIP
ENSGALT0000	dachshund homolog 2 (Drosophila)	DACH2
ENSGALT0000	tumor necrosis factor, alpha-induced protein 8-like 3	TNFAIP8L3
ENSGALT0000	cadherin 7, type 2	CDH7
ENSGALT0000	inositol-tetrakisphosphate 1-kinase	ITPK1
ENSGALT0000	N-deacetylase/N-sulfotransferase (heparan glucosaminyl	NDST2
ENSGALT0000	cytoplasmic polyadenylation element binding protein 4	CPEB4
ENSGALT0000	squalene monooxygenase	SQLE
ENSGALT0000	Ras-related associated with diabetes	RRAD
ENSGALT0000	actin related protein 2/3 complex subunit 1B	ARPC1B
ENSGALT0000	hexokinase 3 (white cell)	HK3
ENSGALT0000	actin, alpha, cardiac muscle 1	ACTC1
ENSGALT0000	potassium channel, subfamily U, member 1	KCNU1
ENSGALT0000	dehydrogenase/reductase (SDR family) member 13	DHRS13
ENSGALT0000	cAMP-dependent protein kinase inhibitor alpha	PKIA
ENSGALT0000	solute carrier family 25, member 30	SLC25A30
ENSGALT0000	GTP cyclohydrolase 1	GCH1
ENSGALT0000	brain expressed, associated with NEDD4, 1	BEAN1
ENSGALT0000	retinoic acid receptor, beta	RARB
ENSGALT0000	tyrosine kinase with immunoglobulin-like and EGF-like do	TIE1
ENSGALT0000	protocadherin 12	PCDH12
ENSGALT0000	solute carrier organic anion transporter family member 10	LOC418189
ENSGALT0000	quinoid dihydropteridine reductase	QDPR
ENSGALT0000	stimulator of chondrogenesis 1	SCRG1
ENSGALT0000	T-box, brain, 1	TBR1
ENSGALT0000	NudC domain containing 1	NUDCD1
ENSGALT0000	stabilin 2	STAB2

ENSGALT0000	spectrin, beta, non-erythrocytic 5	SPTBN5
ENSGALT0000	adenylate kinase 5	AK5
ENSGALT0000	immunoglobulin superfamily, member 11	IGSF11
ENSGALT0000	fibroblast growth factor 22	FGF22
ENSGALT0000	nuclear receptor subfamily 4, group A, member 3	NR4A3
ENSGALT0000	BR serine/threonine kinase 2	BRSK2
ENSGALT0000	family with sequence similarity 20, member C-like	LOC418020
ENSGALT0000	B-cell linker	BLNK
ENSGALT0000	vascular endothelial growth factor receptor kdr-like	LOC422316
ENSGALT0000	NADH dehydrogenase (ubiquinone) 1 beta subcomplex, 9	NDUFB9
ENSGALT0000	purinergic receptor P2Y, G-protein coupled, 2	P2RY2
ENSGALT0000	scavenger receptor class F, member 1	SCARF1
ENSGALT0000	parathyroid hormone 1 receptor	PTH1R
ENSGALT0000	Rho GTPase activating protein 25	ARHGAP25
ENSGALT0000	kelch-like 4 (Drosophila)	KLHL4
ENSGALT0000	ninjurin 2	NINJ2
ENSGALT0000	solute carrier family 18 (vesicular monoamine), member 2	SLC18A2
ENSGALT0000	secreted frizzled-related protein 5	SFRP5
ENSGALT0000	membrane associated guanylate kinase, WW and PDZ do	MAGI1
ENSGALT0000	SH3 and PX domains 2B	SH3PXD2B
ENSGALT0000	brain protein 44-like	BRP44L
ENSGALT0000	hematopoietically expressed homeobox	HHEX
ENSGALT0000	SEC14-like 1 (S. cerevisiae)	SEC14L1
ENSGALT0000	solute carrier family 8 (sodium/calcium exchanger), memb	SLC8A1
ENSGALT0000	chromosome X open reading frame 69	CXorf69
ENSGALT0000	interleukin 2 receptor, gamma (severe combined immuno	IL2RG
ENSGALT0000	RGM domain family, member A	RGMA
ENSGALT0000	regulator of G protein signaling 9 binding protein	RGS9BP
ENSGALT0000	nuclear factor of kappa light polypeptide gene enhancer i	NFKBIE
ENSGALT0000	Williams-Beuren syndrome chromosome region 17	WBSCR17
ENSGALT0000	cofilin 2 (muscle)	CFL2
ENSGALT0000	nuclear receptor subfamily 2, group E, member 1	NR2E1
ENSGALT0000	Small Cajal body specific RNA 15	SCARNA15
ENSGALT0000	thrombospondin, type I, domain containing 1	THSD1
ENSGALT0000	IMP3, U3 small nucleolar ribonucleoprotein, homolog (yea	IMP3
ENSGALT0000	ELK3, ETS-domain protein (SRF accessory protein 2)	ELK3
ENSGALT0000	chromosome 5 open reading frame, human C11orf41	C5H11orf41
ENSGALT0000	N-terminal EF-hand calcium binding protein 3	NECAB3
ENSGALT0000	acetoacetyl-CoA synthetase	AACS
ENSGALT0000	integrin, alpha 6	ITGA6
ENSGALT0000	fibroblast growth factor 5	FGF5
ENSGALT0000	Rho guanine nucleotide exchange factor (GEF) 10	ARHGEF10
ENSGALT0000	tripartite motif containing 66	TRIM66
ENSGALT0000	NADH dehydrogenase (ubiquinone) 1 alpha subcomplex,	NDUFA7
ENSGALT0000	solute carrier family 16, member 8 (monocarboxylic acid t	SLC16A8
ENSGALT0000	ankyrin repeat domain 44	ANKRD44
ENSGALT0000	interleukin 17 receptor D	IL17RD
ENSGALT0000	NADH dehydrogenase (ubiquinone) 1 beta subcomplex, 2	NDUFB2

ENSGALT0000	UDP-N-acetyl-alpha-D-galactosamine:polypeptide N-acet	GALNTL1
ENSGALT0000	sorbin and SH3 domain containing 1	SORBS1
ENSGALT0000	NADH dehydrogenase (ubiquinone) Fe-S protein 7, 20kD	NDUFS7
ENSGALT0000	cytochrome P450, family 2, subfamily A, polypeptide 13	CYP2A13
ENSGALT0000	hypothetical protein LOC419620	CSF3R
ENSGALT0000	cytohesin 4	CYTH4
ENSGALT0000	transmembrane protein 116	TMEM116
ENSGALT0000	solute carrier family 1 (glial high affinity glutamate transpc	SLC1A2
ENSGALT0000	24-dehydrocholesterol reductase	DHCR24
ENSGALT0000	scavenger receptor class B, member 1	SCARB1
ENSGALT0000	coiled-coil domain containing 56	CCDC56
ENSGALT0000	proline-serine-threonine phosphatase interacting protein 2	PSTPIP2
ENSGALT0000	signal transducing adaptor family member 1	STAP1
ENSGALT0000	ventral anterior homeobox 1	VAX1
ENSGALT0000	complement receptor type 2-like	LOC771877
ENSGALT0000	neuron-derived neurotrophic factor	NDNF
ENSGALT0000	leucine rich repeat containing 61	LRRC61
ENSGALT0000	chromosome 3 open reading frame, human C20orf103	C3H20orf103
ENSGALT0000	ATPase, aminophospholipid transporter (APLT), class I, ty	ATP8A1
ENSGALT0000	ATP-binding cassette, sub-family B (MDR/TAP), member	ABCB9
ENSGALT0000	pannexin 1	PANX1
ENSGALT0000	bicaudal D homolog 1 (Drosophila)	BICD1
ENSGALT0000	chondroitin sulfate N-acetylgalactosaminyltransferase 1	CSGALNACT1
ENSGALT0000	methylenetetrahydrofolate dehydrogenase (NADP+ deper	MTHFD1L
ENSGALT0000	myosin IIIA	MYO3A
ENSGALT0000	dapper, antagonist of beta-catenin, homolog 1 (Xenopus I	DACT1
ENSGALT0000	calpain 10	CAPN10
ENSGALT0000	NHP2 ribonucleoprotein homolog (yeast)	NHP2
ENSGALT0000	KH domain containing, RNA binding, signal transduction a	KHDRBS3
ENSGALT0000	kin of IRRE like 3 (Drosophila)	KIRREL3
ENSGALT0000	interferon regulatory factor 10	IRF10
ENSGALT0000	mitochondrial ribosomal protein S16	MRPS16
ENSGALT0000	ethylmalonic encephalopathy 1	ETHE1
ENSGALT0000	neuralized homolog (Drosophila)	NEURL
ENSGALT0000	family with sequence similarity 126, member A	FAM126A
ENSGALT0000	myosin light chain kinase family, member 4	MYLK4
ENSGALT0000	SUN domain-containing protein 3-like	LOC776146
ENSGALT0000	family with sequence similarity 198, member B	FAM198B
ENSGALT0000	family with sequence similarity 196, member A	FAM196A
ENSGALT0000	chromobox homolog 4 (Pc class homolog, Drosophila)	CBX4
ENSGALT0000	G-protein signaling modulator 1	GPSM1
ENSGALT0000	STEAP family member 3	STEAP3
ENSGALT0000	poly (ADP-ribose) polymerase family, member 14	PARP14
ENSGALT0000	neurobeachin	NBEA
ENSGALT0000	low density lipoprotein receptor class A domain containing	LDLRAD1
ENSGALT0000	prolactin	PRL
ENSGALT0000	phosphodiesterase 5A, cGMP-specific	PDE5A
ENSGALT0000	ADAM metallopeptidase with thrombospondin type 1 moti	ADAMTS7

ENSGALT0000	acyl-CoA synthetase long-chain family member 5	ACSL5
ENSGALT0000	fatty acid desaturase 1	FADS1
ENSGALT0000	ATPase, Na+/K+ transporting, alpha 1 polypeptide	ATP1A1
ENSGALT0000	3-oxoacid CoA transferase 1	OXCT1
ENSGALT0000	H3 histone, family 3A	H3-VIII
ENSGALT0000	feline sarcoma oncogene	FES
ENSGALT0000	microtubule-associated protein 4	MAP4
ENSGALT0000	calpain 13	CAPN13
ENSGALT0000	contactin associated protein-like 2	CNTNAP2
ENSGALT0000	collectin sub-family member 10 (C-type lectin)	COLEC10
ENSGALT0000	histidine decarboxylase	HDC
ENSGALT0000	neuropeptide FF receptor 2	NPFFR2
ENSGALT0000	colony stimulating factor 1 receptor	CSF1R
ENSGALT0000	small nuclear ribonucleoprotein polypeptides B and B1	SNRPB
ENSGALT0000	solute carrier family 13 (sodium-dependent citrate transpc	SLC13A5
ENSGALT0000	FERM domain containing 4A	FRMD4A
ENSGALT0000	\N	TAL1
ENSGALT0000	guanylate cyclase 1, soluble, alpha 2	GUCY1A2
ENSGALT0000	potassium large conductance calcium-activated channel,	KCNMB2
ENSGALT0000	BRCA1 interacting protein C-terminal helicase 1	BRIP1
ENSGALT0000	family with sequence similarity 171, member B	FAM171B
ENSGALT0000	transient receptor potential cation channel, subfamily C, n	TRPC4
ENSGALT0000	tropomodulin 2 (neuronal)	TMOD2
ENSGALT0000	tetratricopeptide repeat domain 34	TTC34
ENSGALT0000	syntaxin binding protein 5-like	STXBP5L
ENSGALT0000	G protein-coupled receptor 143	GPR143
ENSGALT0000	G protein-coupled receptor 123	GPR123
ENSGALT0000	CKLF-like MARVEL transmembrane domain containing 8	CMTM8
ENSGALT0000	Vesicle-trafficking protein SEC22b	SEC22B
ENSGALT0000	NADH dehydrogenase (ubiquinone) 1 alpha subcomplex,	NDUFA1
ENSGALT0000	solute carrier family 6 (neutral amino acid transporter), me	SLC6A15
ENSGALT0000	inter-alpha-trypsin inhibitor heavy chain family, member 6	ITIH6
ENSGALT0000	dual specificity phosphatase 6	DUSP6
ENSGALT0000	ras homolog gene family, member J	RHOJ
ENSGALT0000	pleckstrin homology-like domain, family B, member 2	PHLDB2
ENSGALT0000	baculoviral IAP repeat containing 7	BIRC7
ENSGALT0000	purinergic receptor P2Y, G-protein coupled, 1	P2RY1
ENSGALT0000	trafficking protein particle complex 6B	TRAPPC6B
ENSGALT0000	acyl-CoA synthetase long-chain family member 3	ACSL3
ENSGALT0000	neuregulin 2	NRG2
ENSGALT0000	lymphocyte cytosolic protein 1 (L-plastin)	LCP1
ENSGALT0000	transmembrane protein 150A	TMEM150A
ENSGALT0000	chemokine	CXCL13L2
ENSGALT0000	SH3 and multiple ankyrin repeat domains 3	SHANK3
ENSGALT0000	olfactomedin 1	OLFM1
ENSGALT0000	Ras and Rab interactor 3	RIN3
ENSGALT0000	phosphopantothenoylcysteine synthetase	PPCS
ENSGALT0000	cadherin 5, type 2 (vascular endothelium)	CDH5

ENSGALT0000	thioredoxin	TXN
ENSGALT0000	collagen, type IV, alpha 1	COL4A1
ENSGALT0000	lanosterol synthase (2,3-oxidosqualene-lanosterol cyclase	LSS
ENSGALT0000	MHC-like class I Y	LOC768350
ENSGALT0000	lysosomal protein transmembrane 5	LAPTM5
ENSGALT0000	N-acylethanolamine acid amidase	NAAA
ENSGALT0000	nudix (nucleoside diphosphate linked moiety X)-type moti	NUDT1
ENSGALT0000	Insulin receptor related tyrosine kinase	Q9YI41_CHICK
ENSGALT0000	family with sequence similarity 213, member A	FAM213A
ENSGALT0000	upstream stimulatory factor 1	USF1
ENSGALT0000	Rho family GTPase 3	RND3
ENSGALT0000	StAR-related lipid transfer (START) domain containing 9	STARD9
ENSGALT0000	Ras association (RalGDS/AF-6) domain family member 3	RASSF3
ENSGALT0000	protein phosphatase 2, regulatory subunit B, beta	PPP2R2B
ENSGALT0000	chromosome 10 open reading frame 90	C10orf90
ENSGALT0000	phospholipase C-like 1	PLCL1
ENSGALT0000	mitogen-activated protein kinase kinase kinase 13	MAP3K13
ENSGALT0000	transmembrane protein 121	TMEM121
ENSGALT0000	EPH receptor A4	EPHA4
ENSGALT0000	lipocalin 15	LCN15
ENSGALT0000	calmin (calponin-like, transmembrane)	CLMN
ENSGALT0000	sidekick homolog 1, cell adhesion molecule (chicken)	SDK1
ENSGALT0000	proteasome (prosome, macropain) assembly chaperone 4	PSMG4
ENSGALT0000	\N	ACTG2
ENSGALT0000	transcription factor CP2-like 1	TFCP2L1
ENSGALT0000	chemokine-like factor superfamily 7	CMTM7
ENSGALT0000	C-type lectin domain family 19 member A-like	LOC771758
ENSGALT0000	phosphoprotein associated with glycosphingolipid microd	PAG1
ENSGALT0000	meteorin, glial cell differentiation regulator	METRN
ENSGALT0000	mitochondrial ribosomal protein S12	MRPS12
ENSGALT0000	glypican 6	GPC6
ENSGALT0000	chromosome 1 open reading frame, human CXorf36	C1HXorf36
ENSGALT0000	chromosome 2 open reading frame, human C6orf145	C2H6orf145
ENSGALT0000	zinc finger, HIT-type containing 3	ZNHIT3
ENSGALT0000	ATP synthase subunit beta, mitochondrial	ATPB_CHICK
ENSGALT0000	angiomotin like 1	AMOTL1
ENSGALT0000	ets variant 1	ETV1
ENSGALT0000	chromosome 18 open reading frame, human C17orf67	C18H17orf67
ENSGALT0000	neuroligin 1	NLGN1
ENSGALT0000	solute carrier family 22 (organic cation/carnitine transport	SLC22A16
ENSGALT0000	abhydrolase domain containing 12B	ABHD12B
ENSGALT0000	sushi-repeat containing protein, X-linked	SRPX
ENSGALT0000	cysteine and glycine-rich protein 2	CSRP2
ENSGALT0000	hedgehog acyltransferase-like	HHATL
ENSGALT0000	G protein-coupled receptor 37 like 1	GPR37L1
ENSGALT0000	kelch repeat and BTB (POZ) domain containing 11	KBTBD11
ENSGALT0000	four and a half LIM domains 3	FHL3
ENSGALT0000	LSM1 homolog, U6 small nuclear RNA associated (S. cer	LSM1

ENSGALT0000	chemokine ah221	LOC417536
ENSGALT0000	neuron navigator 3	NAV3
ENSGALT0000	potassium voltage-gated channel, KQT-like subfamily, me	KCNQ4
ENSGALT0000	gamma-glutamyltransferase 5	GGT5
ENSGALT0000	ceramide synthase 1	CERS1
ENSGALT0000	SLIT and NTRK-like family, member 4	SLITRK4
ENSGALT0000	dihydropyrimidine dehydrogenase	DPYD
ENSGALT0000	mitochondrial import receptor subunit TOM40B-like	LOC770490
ENSGALT0000	deoxyribonuclease I-like 3	DNASE1L3
ENSGALT0000	solute carrier family 22 (organic cation transporter), meml	SLC22A4
ENSGALT0000	sushi domain containing 4	SUSD4
ENSGALT0000	immunoglobin superfamily, member 21	IGSF21
ENSGALT0000	RAB interacting factor	RABIF
ENSGALT0000	von Willebrand factor	VWF
ENSGALT0000	endonuclease/exonuclease/phosphatase family domain c	EEPD1
ENSGALT0000	hypothetical protein LOC422173	LOC422173
ENSGALT0000	LIM domain only 4	LMO4
ENSGALT0000	platelet derived growth factor D	PDGFD
ENSGALT0000	monoglyceride lipase	MGLL
ENSGALT0000	potassium inwardly-rectifying channel, subfamily J, memt	KCNJ3
ENSGALT0000	arylacetamide deacetylase-like 4	AADACL4
ENSGALT0000	jagged 2	JAG2
ENSGALT0000	translocase of inner mitochondrial membrane 10 homolog	TIMM10
ENSGALT0000	neuropeptide B-like	LOC769277
ENSGALT0000	protocadherin 18	PCDH18
ENSGALT0000	potassium channel, subfamily T, member 2	KCNT2
ENSGALT0000	mitochondrial ribosomal protein S26	MRPS26
ENSGALT0000	leucine-rich repeat LGI family, member 2	LGI2
ENSGALT0000	family with sequence similarity 190, member B	FAM190B
ENSGALT0000	RNA binding motif protein 38	RBM38
ENSGALT0000	alpha-N-acetylgalactosaminide alpha-2,6-sialyltransferase	LOC422075
ENSGALT0000	myosin, heavy chain 15	MYH15
ENSGALT0000	RCSD domain containing 1	RCSD1
ENSGALT0000	leucine zipper protein 2	LUZP2
ENSGALT0000	transmembrane protein 211	TMEM211
ENSGALT0000	cytosolic iron-sulfur protein assembly 1	CIAO1
ENSGALT0000	tubulointerstitial nephritis antigen-like 1	TINAGL1
ENSGALT0000	chromosome 8 open reading frame, human C1orf21	C8H1orf21
ENSGALT0000	chemokine (C-X3-C motif) ligand 1	CX3CL1
ENSGALT0000	family with sequence similarity 78, member A	FAM78A
ENSGALT0000	heat shock transcription factor 4	HSF4
ENSGALT0000	interleukin 17B	IL17B
ENSGALT0000	pyruvate dehydrogenase kinase, isozyme 4	PDK4
ENSGALT0000	zygote arrest 1-like	ZAR1L
ENSGALT0000	CD247 molecule	CD247
ENSGALT0000	cyclin-dependent kinase 3	CDK3
ENSGALT0000	potassium inwardly-rectifying channel, subfamily J, memt	KCNJ16
ENSGALT0000	synaptojanin 2	SYNJ2

ENSGALT0000	ATPase, class V, type 10A	ATP10A
ENSGALT0000	inositol 1,4,5-trisphosphate receptor, type 1	ITPR1
ENSGALT0000	somatostatin receptor 5	SSTR5
ENSGALT0000	N-acetyltransferase, pineal gland isozyme NAT-10	PNAT10
ENSGALT0000	cellular repressor of E1A-stimulated genes 1	CREG1
ENSGALT0000	aralkylamine N-acetyltransferase	AANAT
ENSGALT0000	chromosome 20 open reading frame, human C20orf151	C20H20orf151
ENSGALT0000	SH3 domain binding glutamic acid-rich protein like 2	SH3BGRL2
ENSGALT0000	A kinase (PRKA) anchor protein 14	AKAP14
ENSGALT0000	wingless-type MMTV integration site family, member 6	WNT6
ENSGALT0000	follistatin	FST
ENSGALT0000	outer dense fiber of sperm tails 2-like	ODF2L
ENSGALT0000	paired related homeobox 1	PRRX1
ENSGALT0000	chloride channel, calcium activated, family member 2	CLCA2
ENSGALT0000	hexokinase domain containing 1	HKDC1
ENSGALT0000	lysophosphatidic acid receptor 3	LPAR3
ENSGALT0000	zona pellucida binding protein	ZPBP
ENSGALT0000	BCL2-like 15	BCL2L15
ENSGALT0000	EGF containing fibulin-like extracellular matrix protein 1	EFEMP1
ENSGALT0000	stanniocalcin 2	STC2
ENSGALT0000	chromosome 11 open reading frame 16	C11orf16
ENSGALT0000	notum pectinacetylesterase homolog (Drosophila)	NOTUM
ENSGALT0000	solute carrier family 45, member 3	SLC45A3
ENSGALT0000	solute carrier family 24 (sodium/potassium/calcium excha	SLC24A4
ENSGALT0000	pleckstrin homology domain containing, family N member	PLEKHN1
ENSGALT0000	protein tyrosine phosphatase, receptor type, f polypeptide	PPFIA2
ENSGALT0000	meprin A, beta	MEP1B
ENSGALT0000	envoplakin	EVPL
ENSGALT0000	glutamate receptor, ionotropic, kainate 2	GRIK2
ENSGALT0000	myosin light chain kinase	MYLK
ENSGALT0000	transient receptor potential cation channel, subfamily M, r	TRPM3
ENSGALT0000	serine/threonine-protein kinase SRPK3-like	LOC770936
ENSGALT0000	growth differentiation factor 5	GDF5
ENSGALT0000	prospero-related homeobox 1	PROX1
ENSGALT0000	coiled-coil domain containing 60	CCDC60
ENSGALT0000	BMP and activin membrane-bound inhibitor homolog (Xer	BAMBI
ENSGALT0000	sterile alpha motif domain containing 7	SAMD7
ENSGALT0000	TRAF-interacting protein with forkhead-associated domai	TIFA
ENSGALT0000	parvalbumin	PVALB
ENSGALT0000	thrombospondin, type I, domain containing 4	THSD4
ENSGALT0000	melatonin receptor 1A	MTNR1A
ENSGALT0000	frizzled family receptor 10	FZD10
ENSGALT0000	solute carrier family 7 (anionic amino acid transporter ligh	SLC7A11
ENSGALT0000	piezo-type mechanosensitive ion channel component 2	PIEZO2
ENSGALT0000	interleukin 22 receptor, alpha 1	IL22RA1
ENSGALT0000	transmembrane protease, serine 6	TMPRSS6
ENSGALT0000	T-box 15	TBX15
ENSGALT0000	ATPase, Cu++ transporting, beta polypeptide	ATP7B

ENSGALT0000	angiopoietin 2	ANGPT2
ENSGALT0000	solute carrier family 26, member 9	SLC26A9
ENSGALT0000	RPE-spondin-like	LOC416923
ENSGALT0000	androgen receptor	AR
ENSGALT0000	family with sequence similarity 107, member A	FAM107A
ENSGALT0000	adenylate cyclase 7	ADCY7
ENSGALT0000	amyloid beta (A4) precursor protein-binding, family B, me	APBB1IP
ENSGALT0000	desmocollin 2	DSC2
ENSGALT0000	prostaglandin E synthase	PTGES
ENSGALT0000	UBX domain protein 11	UBXN11
ENSGALT0000	leucine-rich repeat containing G protein-coupled receptor	LGR5
ENSGALT0000	contactin 5	CNTN5
ENSGALT0000	transmembrane protein 184A	TMEM184A
ENSGALT0000	degenerative spermatocyte homolog 2, lipid desaturase (I	DEGS2
ENSGALT0000	insulin-like growth factor binding protein 5	IGFBP5
ENSGALT0000	DNA-binding protein RFX8-like	LOC418713
ENSGALT0000	nuclear receptor subfamily 2, group E, member 3	NR2E3
ENSGALT0000	solute carrier family 9 (sodium/hydrogen exchanger), mer	SLC9A2
ENSGALT0000	lymphoid transcription factor	IKZF3
ENSGALT0000	runt-related transcription factor 2	RUNX2
ENSGALT0000	beta-carotene 15,15'-monooxygenase 1	BCMO1
ENSGALT0000	geminin coiled-coil domain containing	GMNC
ENSGALT0000	wingless-type MMTV integration site family, member 5A	WNT5A
ENSGALT0000	regulator of G-protein signaling 11	RGS11
ENSGALT0000	transient receptor potential cation channel, subfamily M, r	TRPM6
ENSGALT0000	asporin	ASPN
ENSGALT0000	tumor necrosis factor receptor superfamily, member 13B	TNFRSF13B
ENSGALT0000	integrin, beta 6	ITGB6
ENSGALT0000	regulator of G-protein signaling 8	RGS8
ENSGALT0000	phenylserine dehydratase-like	LOC423635
ENSGALT0000	Arylamine N-acetyltransferase, pineal gland isozyme NAT	PNAT3
ENSGALT0000	piwi-like 1 (Drosophila)	PIWIL1
ENSGALT0000	delta-like 1 homolog (Drosophila)	DLK1
ENSGALT0000	fibroblast growth factor 18	FGF18
ENSGALT0000	FOS-like antigen 2	FOSL2
ENSGALT0000	wingless-type MMTV integration site family, member 8B	WNT8B
ENSGALT0000	eye-globin	GBE
ENSGALT0000	anoctamin 9	ANO9
ENSGALT0000	family with sequence similarity 83, member F	FAM83F
ENSGALT0000	solute carrier family 16, member 12 (monocarboxylic acid	SLC16A12
ENSGALT0000	egl nine homolog 3 (C. elegans)	EGLN3
ENSGALT0000	lactate dehydrogenase A	LDHA
ENSGALT0000	ADAM metallopeptidase with thrombospondin type 1 moti	ADAMTS1
ENSGALT0000	cytidine deaminase	CDD
ENSGALT0000	sortilin-related VPS10 domain containing receptor 3	SORCS3
ENSGALT0000	solute carrier organic anion transporter family, member 2/	SLCO2A1
ENSGALT0000	solute carrier family 1 (high affinity aspartate/glutamate tr	SLC1A6
ENSGALT0000	potassium large conductance calcium-activated channel,	KCNMB4

ENSGALT0000	5-hydroxytryptamine (serotonin) receptor 1A	HTR1A
ENSGALT0000	cytokine-like 1	CYTL1
ENSGALT0000	E74-like factor 5 (ets domain transcription factor)	ELF5
ENSGALT0000	aquaporin 5	AQP5
ENSGALT0000	doublesex and mab-3 related transcription factor 3	DMRT3
ENSGALT0000	glutamate decarboxylase 1 (brain, 67kDa)	GAD1
ENSGALT0000	polymerase (DNA directed) nu	POLN
ENSGALT0000	Retinal homeobox protein Rx1	RAX
ENSGALT0000	isthmin 1 homolog (zebrafish)	ISM1
ENSGALT0000	solute carrier family 39 (zinc transporter), member 12	SLC39A12
ENSGALT0000	cadherin 13, H-cadherin (heart)	CDH13
ENSGALT0000	insulin-like growth factor binding protein, acid labile subur	IGFALS
ENSGALT0000	coiled-coil domain containing 78	CCDC78
ENSGALT0000	N-acetyltransferase, liver isozyme	NAT
ENSGALT0000	leucine-rich repeat, immunoglobulin-like and transmembra	LRIT1
ENSGALT0000	family with sequence similarity 83, member A	FAM83A
ENSGALT0000	solute carrier family 38, member 5	SLC38A5
ENSGALT0000	phosphoenolpyruvate carboxykinase 1 (soluble)	PCK1
ENSGALT0000	tubby like protein 1	TULP1
ENSGALT0000	hedgehog interacting protein	HHIP
ENSGALT0000	hydroxyacid oxidase 2 (long chain)	HAO2
ENSGALT0000	ADAMTS-like 5	ADAMTSL5
ENSGALT0000	calcyphosine-like	CAPSL
ENSGALT0000	integrin, beta-like 1 (with EGF-like repeat domains)	ITGBL1
ENSGALT0000	fibroblast growth factor receptor 3	FGFR3
ENSGALT0000	potassium voltage-gated channel, subfamily F, member 1	KCNF1
ENSGALT0000	G protein-coupled receptor 133	GPR133
ENSGALT0000	WNT1 inducible signaling pathway protein 1	WISP1
ENSGALT0000	mannose receptor, C type 2-like	LOC418836
ENSGALT0000	noggin	NOG
ENSGALT0000	fibrinogen-like protein 1-like	LOC428073
ENSGALT0000	galanin receptor type 1-like	LOC415713
ENSGALT0000	SRY (sex determining region Y)-box 14	SOX14
ENSGALT0000	zinc finger protein 488	ZNF488
ENSGALT0000	retinal G protein coupled receptor	RGR
ENSGALT0000	hepatocyte growth factor (hepapoietin A; scatter factor)	HGF
ENSGALT0000	immunoglobulin-like and fibronectin type III domain contai	IGFN1
ENSGALT0000	serpin peptidase inhibitor, clade A (alpha-1 antiproteinase	SERPINA3
ENSGALT0000	troponin T type 2 (cardiac)	TNNT2
ENSGALT0000	leucine-rich repeats and transmembrane domains 1	LRTM1
ENSGALT0000	tectorin beta	TECTB
ENSGALT0000	cytochrome P450, family 26, subfamily C, polypeptide 1	CYP26C1
ENSGALT0000	polycystic kidney disease 2-like 1	PKD2L1
ENSGALT0000	calcium channel, voltage-dependent, T type, alpha 1I sub	CACNA1I
ENSGALT0000	choline O-acetyltransferase	CHAT
ENSGALT0000	ABI family, member 3 (NESH) binding protein	ABI3BP
ENSGALT0000	goosecoid homeobox 2	GSC2
ENSGALT0000	apolipoprotein A-I	APOA1

ENSGALT0000 von Willebrand factor D and EGF domains   VWDE
ENSGALT0000 olfactomedin 4   OLFM4
ENSGALT0000 adrenergic, alpha-1B-, receptor   ADRA1B
ENSGALT0000 matrix metallopeptidase 27   MMP27
ENSGALT0000 spermatid associated   SPERT
ENSGALT0000 transmembrane inner ear   TMIE
ENSGALT0000 thyroid stimulating hormone receptor   TSHR

Function?	abundance class dist...	Distal PMMR	Mid PMMR	Prox PMMR
CHEMOKINE	very low	1.12497E-05	5.83652	8.6526
	very low	1.5	3.5	170.5
	very low	1	5.5	105.5
CHANNEL	very low	2.5	12.5	227.5
65	very low	0.0621046	5.11756	5.27348
	medium	16	122.5	1330.5
TF	medium	21.2348	97.008	775.499
	medium	27.5	64.5	873
	very low	2.5	10.5	72.5
CHOLINERGIC RECEPT	very low	1	2.5	27
	low	7	36.5	187
	very low	4	10	99.5
	very low	0.5	2.5	11
	low	9	16	163
	very low	0.5	3	9
	very low	0.5	3.5	9
	very low	0.5	1	8.5
CHANNEL	very low	1	4.5	17
MYOSIN/WNT	very low	1.5	22.138	24.9729
TF	high	126.369	592.586	2059.17
RA	very high	725	741	11619
WNT	medium	15	34	236
	very low	4	21	62
	very low	4.5	18.5	69
TGFB/BMP	very low	2.5	5.5	38
SOLUTE CARRIER	very low	0.5	3	7.5
	very low	3.5	4	51
	very low	1	11.5	14.5
WNT	very low	1.5	2	20.5
	low	6	51	81.5
CHANNEL	very low	0.5	3.5	6.5
TGFB/BMP	very low	1.5	7	18.5
	medium	14.5	26	178
	very low	0.5	5.5	6
TRANSMEMB PROT	very low	0.5	2	6
	medium	10.5	18	124
	medium	29.5	68.5	341.501
MYOSIN	very low	1.68312	22.815	19.4289
	very low	1	3	11.5
	very low	0.5	5	5.5
SOLUTE CARRIER	very low	0.5	4	5.5
	medium-high	37.5	159	404
	very low	3.91374	21.3863	42.1213
	very low	2	10.5	21.5
	high	103	145	1104
TGFB/BMP	low	5	11.649	53.298
	very low	4	15	42.5

TF/WNT	high	259.5	1711	2709.5
CYTOKINE	very low	0.5	1	5
	very low	0.5	3.5	5
	very low	2	2.5	20
	very low	2.5	14.5	25
TF	very low	0.5	2.5	5
	very low	0.602958	1.26535	6
	low	5.5	9	53
TF	medium-high	43.5	275.5	418.5
SOLUTE CARRIER	very low	2.5	10	24
TF	medium	15.5	17.5	144.5
	high	62	343	565.5
	medium	24.5	63	221
	very low	1	6	9
	very low	1	4.5	9
	high	126.5	351.5	1136
	very low	2	12.5	17.5
TF	high	74	257	643.999
EMT	medium	28	123.5	240.5
CHANNEL	high	65.5	414.5	560.5
	low	6.5	43.5	55.5
	medium-high	33.5	72	274.999
METALLOPEPTIDASE	high	148.5	843.5	1218
	very low	1	6	8
TGFB/BMP	low	7	15.5	56
	very high	4612.66	28000.5	36516.1
	high	54	192.5	426.5
	medium	14.5	90	114
	high	94.5	516	734
	low	8.5	49.5	66
	very low	2	7.5	15.5
	high	288.5	954.5	2194
	very low	2.5	11	19
	very low	1	3.5	7.5
TF	high	99.9999	469	740.499
TF	very low	2.5	11.5	18.5
TF	very low	1.5	5	11
RECEPTOR	very low	4	11.5	29
	medium	22	74	159
SOLUTE CARRIER	high	97.5001	745.999	692.496
WNT	medium	10.5	14.5	74
TF	medium	14.5	27.5	102
TF	high	85.5	498.5	590.5
	very low	3	6	20.5
	medium	21	64	143.5
TF	medium-high	30	158.5	202.5
	medium	27	217.5	181.5
	medium-high	47	187	310.5

	high	105.5	129	686.5
	very low	1	5.5	6.5
	very low	1	2.5	6.5
	very low	1	2.5	6.5
TF	very low	1	2	6.5
	very low	1	2.5	6.5
	very low	2.5	7	16
	very low	2.5	8.5	16
	high	290	1472.5	1850.5
	very low	3	14	19
	very low	1.5	8	9.5
	medium	26	68	164.5
CHANNEL	medium	17	48.5	106.5
	very low	2	7.5	12.5
	very low	2	8	12.5
	very low	2	4.5	12.5
SOLUTE CARRIER	very low	3	4	18.5
	high	375.5	1093	2315.5
CHANNEL	high	72.5	444	446.5
CHOLINERGIC RECEPT	high	312	682.5	1899
	medium	13	28	79
CHOLINERGIC RECEPT	high	91.8804	204.653	554.986
	medium	26.5	33	159.5
	high	66	126	396.5
	very low	3.5	13.5	21
	very low	1	5	6
	very low	1	4	6
	very low	2	10	12
	very low	2	7.5	12
	high	80	317	473
	very low	1.85995	3.62096	10.9222
	very high	1243.5	3702.5	7290
TRANSMEMB PROT	high	57.5	77.5	336.5
COLLAGEN	medium	10	48	58.5
WNT	medium-high	40.5	188	236.5
	low	6	11.5	35
	high	73.5	382.5	428
	high	95	238	552.5
	very low	2.5	8.5	14.5
CYTOKINE	very low	1.5	4	8.5
	low	9.05905	30.2387	50.9207
	low	9.94987	18.8019	55.8795
	low	9	32	50
	very high	841	3331.13	4667.32
	medium	29.5	58	163.5
	high	84	147.059	462.884
TF	high	143.5	620.5	790
	very low	1	1.5	5.5

	very low	1	2	5.5
RECEPTOR	low	9	25.5	49
	medium	10	25.5	53.5
	very low	1.5	7	8
NOTCH	high	121	466	638
	medium	13	42	68.5
	high	248.5	1254.5	1302.5
TF	high	60.9955	187.941	319.584
SOLUTE CARRIER	medium	29	75	151.5
	very high	823.5	3730	4287
	medium	23.5609	34.9135	122.57
	very high	1189	2458.03	6147.73
	high	407.5	1331.5	2104
EMT/WNT	high	165.014	381.521	848.006
	medium	27	100	138
	very low	4.5	14.5	23
	medium	20.5	98	104.5
TF	medium-high	31.6307	40.4107	159.83
	high	159.031	513.652	803.131
	high	223	1045.5	1123
	high	96.5	360.5	485
RA	high	279.501	1034.5	1400.51
	very low	1	1.5	5
	medium	21.5	101.5	107.5
	very low	2	5.5	10
	very low	1	2	5
	very low	1	2.5	5
TF	very low	3	7	15
COLLAGEN	high	237.5	328	1178.5
	medium-high	41	88.0001	203
	high	181	609.5	893.5
	medium	25.9142	65.3249	127.305
SOLUTE CARRIER	high	125	545	612
KINASE	medium-high	32.5	56	159
	high	54.5	64	266.5
KINASE	high	139	400.5	677
	high	91.5	253	443.5
	medium-high	42	99.5	202
	medium	10.5	26	50.5
	very high	1005.5	4236.4	4833.48
RECEPTOR	low	5	17.5	24
TF	low	5	10	24
	high	57	130.5	273.5
	medium-high	36.9664	99.6137	177.267
	medium	18.5	64	88.5
	very high	1804.5	8019.2	8630.93
	medium-high	35.5	155	169.5
	high	457.969	1586.47	2182.31

681	low	9.92937	27.5798	47.2369
TF	very low	4	9	19
	high	232.5	479	1102
TF	medium	11	36	52
EMT	low	9	38	42.5
	medium-high	37.5	150.5	177
	medium	22.5	101	106
TF/WNT	high	149.5	514.5	704
	high	153	686	719.5
TF	very low	2.50842	3.00509	11.7346
	very low	1.5	5.5	7
	very low	1.5	3.5	7
	very low	4.5	12	21
WNT	medium	18.5	43.5	86
	high	233	543	1080.5
	very low	4	13.5	18.5
	very low	2.5	9	11.5
TF	very low	2.5	9	11.5
	high	147	555.999	672.497
	high	62.5	105.5	285.5
FGF	high	139.5	620.5	634.995
	medium	18.5	59	84
	medium-high	30.6299	78.4669	138.126
	medium	17	61.5	76.5
	high	65.5	248	292
TF/WNT	high	462	1318.5	2053
	medium-high	45.5	195	201.5
SOLUTE CARRIER	very low	3.5	16.5	15.5
TF	high	50	94.5	221
	very low	2.5	5.5	11
	high	358.5	847	1573
TF	high	122	226.5	533.5
	high	116.5	285.5	509
	high	158.5	301.5	689.005
	high	75.5	297	328
	high	154.5	630.5	670
	very low	1.5	4.5	6.5
	very low	1.5	6	6.5
SOLUTE CARRIER	very low	1.5	3	6.5
	medium-high	45.5	218	196.5
	high	57.5	121.5	248
	low	6.5	14	28
WNT	medium	10.5	23.5	45
	very low	3.5	4	15
	medium	12.5	15	53.5
	low	9	25.5	38.5
RECEPTOR	high	114	549	487
	very high	1755.49	4059.01	7492.95

Category	Level	A	B	C
	low	9.5	47	40.5
	very high	852.5	2261	3627.5
	very low	2	5	8.5
	very low	4.5	13.5	19
	medium	11.5	25	48.5
	medium-high	44	88.5	185.5
	very high	1586	4908	6677
	low	5	17	21
TRANSMEMB PROT	high	258	1005.5	1081.5
CADHERIN/WNT	medium	16.5	58	69
TF/WNT	high	136	494.5	568.5
	very low	3	8	12.5
	low	6	8	25
	medium-high	41	70	170
	medium-high	40	73.8935	165.5
	low	8	17	33
	very low	4	6.5	16.5
	high	158.5	406	652
	high	222	789	913.004
	medium	15	70	61.5
CHANNEL	high	62.5	81.5	255.5
	high	124	224.5	506
	high	126	483.569	513.593
TF	high	458	1015	1857.5
	medium	19.8586	57.5859	80.2418
FGF?	high	171.5	649.5	692.5
	high	58.5	216	236
RECEPTOR	high	201.5	364.5	806.5
	low	5.5	17.5	22
RECEPTOR	very low	1.5	5.5	6
	very low	4	9	16
TF	very low	1.5	3.5	6
	very low	2	6	8
	very low	2.5	5	10
	very low	1.5	3.5	6
	high	102	278.5	406.5
CHANNEL	medium	28	84	111.5
	high	183	570.5	727.993
	high	239.743	483.661	952.503
TRANSMEMB PROT	high	163.422	287.376	646.82
	high	261.5	732	1034
TF	high	296	801.494	1167.52
	medium	26	36.5	102.5
	high	74	281.5	291.5
	high	155.5	490	611.5
	high	65.4716	149.5	255.988
	medium-high	33	64.5	129
	high	98	370	382.5

Category	Level			
CHANNEL	high	97	181	378
TGFB/BMP/WNT	high	203.5	369.998	792.009
	medium	13.5	27	52.5
	high	195.034	852.387	758.232
	high	466.498	1366.5	1807.49
COLLAGEN	very high	978.004	1532.5	3786.98
	high	91.5	228	354
	medium-high	37.5	120	144
	medium	17	42	65
	medium	14	37	53.5
TF	medium	24.5	46	93.5
	high	89.5	273.5	341.5
	medium-high	30.602	62.1887	116.341
	high	414.501	1301	1572.99
	medium	14.5	41.5	55
	medium	28.5	84.5	108
	medium-high	39	146.5	147.5
	very low	4.5	6	17
	very low	4.5	14.5	17
	very high	4795.5	9101.5	18100.5
CHANNEL	low	8.5	12.5	32
	medium-high	38	117.5	143
	high	97.5	180.5	366.5
	high	126.5	494	474.5
	very low	2	2.5	7.5
	very low	2	3.5	7.5
	high	458.999	1145.5	1718.5
	high	478.5	864.5	1778.5
	very low	3.5	9.5	13
	low	8.5	26	31.5
	medium	17	39.5	63
TF	high	348	1071.5	1285.98
SOLUTE CARRIER	high	483.04	1694.36	1784.44
	very high	833.5	2814	3077.5
	low	9.5	14	35
	high	297.5	1094	1095.5
TF	high	82.5	289	303.5
	high	122.5	303.5	450.5
	high	56	144.043	205.553
KINASE	very low	1.5	4	5.5
	medium	24	71	88
SOLUTE CARRIER	very low	1.5	4	5.5
	high	65.5	129.5	239.5
	high	160	494	584.5
	medium	14	35	51
SOLUTE CARRIER	low	5.5	14	20
	high	108	146	392
NOTCH	medium	12	37.5	43.5

		Value 1	Value 2	Value 3
	very high	3771.04	6403.86	13664.7
	very high	1954.19	3663.32	7076.84
	very high	2177.53	3712.08	7880.19
	low	7.49221	20.1103	27.0748
	high	157	325.5	566.5
	high	70	134	252.501
	medium	20	53	72
RECEPTOR	very high	698.505	2569.53	2507.5
TF	high	323.489	798.12	1158.4
	medium-high	46.5	158	166.5
	medium	10.5	28	37.5
MYOSIN	high	85	182.5	303.5
	medium	11.5	29.5	41
	medium	11.5	16.5	41
	high	238.5	521.5	850
	low	5.5	12	19.5
	very high	703	2336.98	2488.01
	high	79	133.5	279.5
	very high	4562.5	14290.5	16122
	high	191	291.5	674
	high	106	278.5	372.5
CHANNEL	high	78.5	243.5	275.5
	high	62	157.5	217
	very low	3	5	10.5
	very low	4	10.5	14
TF	very low	2	5	7
	high	168	252.5	587.5
TF	high	157	340.5	549
	high	157.5	431	549
TF	high	228.902	739.369	795.88
	very high	644.502	1968.98	2238.51
	high	66	166	229
	high	234	622.007	811
	high	115.5	223	399.999
	high	147	399.5	508.5
	high	255	850	881.5
	high	60.5	137.5	209
	very high	571.5	862	1974
	medium-high	36.5	56.5	125.5
	low	7	22.5	24
CHOLINERGIC RECEPT	high	158	229.5	541.5
TF	medium	13	44.5	44.5
	very high	806.5	2178	2754.5
	high	58	147.5	198
	high	129	282.5	440
KINASE	high	74.5	202	254
METALLOPEPTIDASE	medium	20.3958	35.7148	69.3893
	very low	2.5	4.5	8.5

Label	Category	Col1	Col2	Col3
	medium-high	36	111	122
TF	medium-high	39.5763	97.5549	134.085
METALLOPEPTIDASE	high	303	639	1026.5
	medium-high	31.1537	53.8695	105.245
	very low	4	6	13.5
	very high	672	2090	2266
	medium-high	38	85.4908	128.06
	high	283.5	811.001	954.997
CADHERIN/WNT	high	57	120.5	192
	high	90.5	208	304.5
	high	253.499	726.999	851.995
	medium-high	39	92	131
	medium	17.5	50	58.5
TF	medium	10.5	13	35
	very low	4.5	6	15
	very low	1.5	3.5	5
KINASE INHIB	very low	3	7.5	10
	very low	1.5	4.5	5
	very high	983.845	2423.53	3277.31
	very high	695	1760.5	2313.5
	high	266.5	790.5	887
	very high	531.5	1032	1769
TF	medium-high	35.5	104	118
	very high	1485.33	4081.47	4928.74
TF	high	380	544.732	1256.44
	very high	813.997	2553.96	2688.48
	medium	26.5	69	87.5
CHOLINERGIC RECEPT	medium	20	62	66
TF	high	59	123.5	194.5
	high	68	231	223.5
	medium	23	51	75.5
	high	75.4213	189.175	246.584
	medium	22.5	52.5	73.5
TF	low	6	13	19.5
	very low	2	2.5	6.5
	high	98.5	267.5	319.5
WNT	high	144.5	470.5	467.5
MYOSIN	medium-high	34.3479	49.3499	110.932
	medium-high	42.5	90	137
	very high	2712.94	5197.46	8743.68
	very low	4.5	14	14.5
KINASE	medium	11.5	18	37
TF/EMT	very high	968	2510	3110.5
CADHERIN/WNT	high	122	147.5	392
	high	99.5	262	319.5
	medium-high	41	76	131.5
	very high	962.035	1595.2	3083.56
	high	244	446.5	782

	very low	2.5	6.5	8
	very high	1582	3839.5	5056.5
WNT	very high	4890.52	13732.2	15628.6
TF	medium-high	48.5	73.5	154.5
KINASE INHIB	medium	11	24.5	35
TF	high	82.0803	102.037	260.5
	high	79.5	214	252
	low	6	14	19
COLLAGEN	very high	1442.99	2224.94	4567.25
	high	125	271.5	395
	very low	3.5	4.5	11
TF	very low	3.5	10	11
TF/RA	high	385.218	1018.24	1209.23
	medium	14.5	26.5	45.5
	medium-high	40.5	112.5	127
	medium-high	35	54.5	109.5
MYOSIN	very high	1435.5	3552.47	4487.47
	high	119.5	285	373.498
	high	168	353.5	525
TF	very low	4	7	12.5
	high	276.001	676	860.996
	high	497	1503	1546.5
	medium	14	42	43.5
	high	222.5	499.5	691
	high	63	158	195
CHANNEL	high	54	143.5	167
METALLOPEPTIDASE/I	high	203.5	409	628.5
	medium-high	40.5	84.5	125
	medium-high	37.5	63.5	115.5
	medium	24.1179	37.9517	74.0882
	high	78.5	159.5	241
	very high	4185.47	11525.9	12825.9
	medium-high	37	64	113
	high	185.5	613.501	566.499
	very high	8182.14	14311.2	24952.5
	high	52.5	170.5	160
	high	59	147	179.5
	high	200	510	607
TF	medium	15	37	45.5
TF/NOTCH	high	237.675	443.824	720.724
	medium-high	34	80	103
	high	451.5	877.5	1367
	high	75.5	109.5	228.5
	medium	19	30.5	57.5
CHANNEL	high	149.5	420.5	452
	high	56.5	148	170.5
TGFB/BMP	high	130.5	312	393.5
	high	54	188.5	162.5

	very high	4173.96	7468.53	12559.9
	high	204.5	596.5	614
	very low	2.5	3.5	7.5
	high	54	123.5	162
	medium-high	37	67	111
	medium	16	25	48
	very low	2.5	4	7.5
	low	5.5	9	16.5
TRANSMEMB PROT	very low	3	4.5	9
TF	high	87.5	265.5	262
	high	114.185	286.45	341.521
	very high	30358.5	89052.4	90753.7
	high	200	519.5	597
	high	77	95.5	229.5
	very high	2326.5	5754	6934
CHANNEL	high	96.955	275.322	288.653
	high	154	221	457
	high	292.5	685	867.5
	high	452.5	1280	1337.5
	high	346	740	1022.5
	high	219.5	491	648.5
	high	106	196.5	313
	very high	1087	2734	3208.5
	high	59.5	78	175.5
CHANNEL	high	88.5001	239.001	261
	medium	18.5	26.5	54.5
	very high	2518.95	6867.75	7406.01
CHOLINERGIC RECEPT	low	8	15	23.5
METALLOPEPTIDASE	high	330	689.5	968.5
	low	7.5	13	22
	high	78	189.5	228
	low	6.5	12.5	19
	medium-high	43.5	93	127
	very high	1000	1974.5	2917.5
TRANSMEMB PROT	high	163	551	475.5
SOLUTE CARRIER	medium-high	47	103.5	137
	high	345.5	711	1007
TF	medium	11.5	25.5	33.5
	very high	1749.02	3520.01	5093.85
	high	125.863	360.267	366.253
SOLUTE CARRIER	low	5.5	6	16
	high	52.5	105	152.5
	medium-high	46	71	133.5
MYC	medium	15	30	43.5
	low	9.5	10.5	27.5
	very high	601.008	1718.51	1738.99
	very low	4.5	12.5	13
	high	185	333	533.5

	high	50.5	93.5	145.5
TF	high	262.112	429.44	754.639
	medium	24.5988	48.8651	70.7575
	very low	4	6	11.5
	very high	712	1172.01	2044.46
	very high	869	2027	2489
CHANNEL	medium-high	32	85.5	91.5
	medium	10.5	19.5	30
	very low	3.5	9	10
	very high	3432	8932.5	9805.5
	high	230	406.5	656.5
	high	447	962	1274
	medium-high	48.5	84.5	138
	high	292.5	552.5	831.5
	high	184.5	238.5	524
	very high	515	641	1460
	low	9	12	25.5
	medium	23.5	61.5	66.5
	high	77.5	108	218.5
	high	260.5	694	734
	high	484.5	1025.5	1363
	medium	20.0207	33.444	56.1483
	low	5	13	14
	low	7.5	18	21
	very low	2.5	6.5	7
SOLUTE CARRIER	high	197	457	551
CHANNEL	high	61	124	170.5
	high	322	837.502	899.001
	very high	1294	3066.59	3612.35
	very high	5185	13665.5	14452.5
TF	high	100	226.501	278.499
	medium-high	37	52.5	103
MYOSIN	medium	27	57	75
	high	304.5	775.5	843.5
	high	165	407.5	457
METALLOPEPTIDASE	high	84.5	195	234
	very high	1457	3812.98	4032.42
	very high	745	1884.5	2061
	high	104	267.5	287.501
	high	157.5	466	434.5
RECEPTOR	medium	14.5	21.5	40
	very high	694	1723	1911
MYOSIN	high	371	849	1021.5
	high	129.538	257.174	356.58
	very low	2	3	5.5
	very low	4	7	11
TRANSMEMB PROT	low	6	7.5	16.5
	high	105.5	140	290

	high	185	190.5	508.5
	medium	23.5	40	64.5
	high	198	483.5	543
	high	369.815	842.551	1013.98
	high	67	104	183.5
	high	226.5	614.5	620
	very high	1419	2476	3882.5
	low	7.5	8.5	20.5
	medium-high	48.5	96.5	132.5
	low	5.5	11.5	15
	medium	16.5	25.5	45
	medium	15.3821	30.5483	41.9118
	medium	14.5	38	39.5
	medium	21.5	29.5	58.5
RA	very low	3.5	7	9.5
CHANNEL	medium	10.5	29.5	28.5
	very low	3.5	8	9.5
	high	122.5	155.5	332
TF	medium	15.5	26	42
	high	224.5	352.5	607.5
TF	high	305.631	718.124	825.456
COLLAGEN	low	5	6	13.5
	medium	15	39	40.5
SOLUTE CARRIER	low	5	10	13.5
KINASE	high	92.5	293.5	249.5
	high	154.5	339	416.5
	medium	29.5	62	79.5
	high	470.5	1042.01	1264.51
	very high	688.5	1722	1850
	very high	1188	2220	3191.5
	high	163	382	437.5
	high	208	483.5	558
	very high	949.487	1902	2545.99
	medium-high	36.5	97	97.5
	medium-high	48.5	69	129.5
	very low	3	7.5	8
TRANSMEMB PROT	medium	16.5	35.5	44
	high	328	713	874
	high	92	140	244.5
MYOSIN	medium-high	39	64	103.5
	very high	3255.43	5218.97	8625.5
	high	74	81	195.5
	high	446.5	930	1178
	very high	1661.5	2773.5	4382
	high	222.462	348.326	586.42
	high	113.5	275.5	299
	medium-high	45	110.5	118.5
TF/EMT	very high	774.453	1518.13	2039.35

CHANNEL	high	240	300	631
	medium-high	48.5	109.5	127.5
	high	92.5	208	243
	medium	12	18.5	31.5
	medium	16	26.5	42
	very high	554.001	1362.02	1453.47
	very high	3271.11	6061.94	8579.05
	high	142.5	352	373
	very high	1159.5	2305.5	3029.98
	very high	878.495	2047.52	2294
	high	156.5	233.5	408.499
	high	91	149	237.5
	high	256	476.5	667
	high	84.5	107.5	220
NOTCH	high	70.5	139.5	183.5
	very high	627	1538.5	1630.5
	medium	16	17	41.5
	very low	2.52762	5.5	6.554
	medium	13.5	28	35
	medium	13.5	27	35
METALLOPEPTIDASE	very high	1432	2261	3706
	very high	2035.5	3986	5266
	low	6	15	15.5
	very high	5519	11629.5	14235
	high	118.5	186.5	305
RECEPTOR	very low	3.5	8	9
	high	178	455	457.5
TF	high	69.5	133.5	178.5
	very high	951	1655	2438.5
	high	326.5	716	836
TF	medium	26	39	66.5
	high	472	844	1207
	high	353	643.499	902.499
	high	168.5	385	430.5
	high	140	264.5	357.5
TF	medium	10	17.5	25.5
	medium	10	19.5	25.5
	very high	616	1184.5	1570.5
	medium-high	36.5	94.5	93
	high	151.5	347	385.5
	high	398.5	732.5	1014
	very high	1978	4645	5033
	high	140.5	333.5	357.5
METALLOPEPTIDASE	high	358.5	723	912
TF	very high	656.496	985.005	1668.5
	high	76	96.5	193
CHANNEL	medium	10.1431	20.3364	25.7412
	medium-high	33.5	54	85

Category	Level			
	high	82	187	208
	low	7.5	14	19
	medium	15	41.5	38
	very high	1326	2753	3357.5
	medium	17	37	43
TF	medium	29	42.8617	73.3489
	high	245	540.5	619.5
	very high	1314.99	3080.44	3324.05
	high	79	135.5	199.5
	very high	990.999	1207.49	2502.5
	high	92.5	187	233.5
	medium	10.5	26	26.5
	high	223.5	351	564
CHANNEL	high	166.5	332.499	420
	medium	12.5	24	31.5
CHANNEL	high	281.499	594.499	708.497
TF	high	65.6825	162.995	165.298
	high	317.001	538.497	796.995
	medium	19.5	35.5	49
	very high	645	1176.5	1618.5
	high	289.5	554.997	725.5
	high	82.5	122.5	206.5
	medium	15	23.5	37.5
	low	8	18	20
	medium	21	63	52.5
	very low	2	2.5	5
	very low	2	4	5
	very low	2	3	5
	low	5	6	12.5
	medium	10	22	25
	medium-high	32	52.5	80
	very high	523	1163	1306
	high	112	229	278.5
	medium	10.3927	19.2753	25.8038
CHEMOKINE	low	9.2897	12.2805	23.0624
TGFB/BMP	very high	3374	4984	8372.5
	medium	14.1389	22.8768	35.0711
	high	324.5	580	804.501
	very high	539.5	981.5	1337.5
	medium	22	35.5	54.5
	high	423.501	835	1049.01
	very high	1843	2357.5	4562.5
CHOLINERGIC RECEPT	high	78	225	193
	high	338.5	771.498	837.506
	very high	700	1564.5	1729.5
	very high	1169	2419.52	2888
KINASE	very high	3970.51	8329.67	9805.7
	high	73	154.5	180

	high	89.5	156.5	220
	high	99.5001	213	244.5
	low	5.5	12.5	13.5
	low	5.5	10.5	13.5
	high	217.5	506	533
	high	66	108.5	161.5
NOTCH	very low	4.5	5	11
CHANNEL	low	9	15.5	22
	high	182.5	353.5	446
	very high	1332.49	3108.91	3255.11
	very high	2514.94	4914.77	6136.99
	high	50	98.5	122
	very high	959	1897	2336.5
	very high	696.504	1048.49	1696.52
	high	296	656.5	720.5
	medium	15	30.5	36.5
	medium	17.5	18	42.5
	very low	3.5	9.5	8.5
	low	7	15	17
RECEPTOR	very low	3.5	5	8.5
	very high	1252	2371	3040.5
SOLUTE CARRIER	very high	696.5	1269	1690.5
	medium-high	47	84.5	114
	high	228	662	552.5
RECEPTOR	high	78	90.5	189
	very high	1049	1922.48	2541.47
	high	273	410	661.001
RECEPTOR	high	100.899	176.793	244.297
	high	304	466.5	736
	high	199	403.5	481
	low	6	12.5	14.5
	very high	757.5	1523.5	1830
WNT	high	367	778.5	886.5
	medium	14.5	18.5	35
TF	medium-high	36.5	59	88
	high	251.5	595.5	605
	very high	819.006	1810.01	1968.53
	high	87	127.5	209
	very high	971.5	1872	2333.5
TF	high	231.5	375.5	556.001
	high	365.999	827.003	878.999
	high	116	200	278.5
	very high	2732.51	5742.09	6558.22
	very low	2.5	5.5	6
	high	71.5	114	171.5
	very high	1707	3121	4088.5
	high	239.5	384	573.5
	very high	1682.5	2840	4027.5

Category	Level			
	high	347	727.503	830.5
	very high	515.497	681.5	1230.98
	medium	15.5	21.5	37
	medium	15.5	16.5	37
	medium	28.5	49.5	68
	high	60.9066	105.548	145.291
TF/EMT	very high	623.5	1418.5	1487
	medium-high	40.5	78	96.5
	very high	3510.4	7232.08	8363.4
	medium	17	29	40.5
	very high	3038.52	6252.59	7237.16
	very high	3858.33	8749.96	9188.28
	very high	1734.02	3903.61	4125.5
	very high	556.5	953	1323.5
	medium	28	75.5	66.5
SOLUTE CARRIER	high	205.5	440	488
CHANNEL	medium-high	37.5	81	89
	very high	11876.2	27585.6	28091.5
	high	96.5	103	228
KINASE	very high	1241	2149.53	2928
	low	7	14.5	16.5
	high	89	167.5	209.5
	high	121.605	279.965	286.17
	high	64	104	150.5
SOLUTE CARRIER	high	164	322	385.5
	high	96.5	192	226.5
EMT	very high	2916	4591	6835.46
COLLAGEN	medium-high	46.5	79.5	109
	high	254.5	408.999	595.003
	high	74.5	115.5	174
	low	6	10.5	14
	very low	4.5	9.5	10.5
	very low	4.5	9	10.5
	high	359	532.5	837
	high	112	138.5	261
	very high	3156.5	6319.5	7348
	high	67.5	149.5	157
	high	392.727	901.185	913.439
TF	high	492	944.5	1143.5
	high	367.865	839.866	854.526
	medium	28	44.5	65
	high	90.5	176.5	210
	high	114.5	142.5	265.5
	very high	2077	3795	4814
	high	118.5	238.5	274.5
RECEPTOR	low	9.5	21.5	22
	high	481	938.5	1113
	high	368	482.503	851.005

	very high	940	1757.5	2173
	low	5	8.24667	11.5544
SOLUTE CARRIER	high	118.5	240	273.5
	low	6.5	13.5	15
	very high	1431	2467.5	3298.5
	very high	8425	19160	19413.5
	high	76	127.5	175
	high	141.5	199.5	325.499
CHEMOKINE	low	5	6.5	11.5
TF	high	314	697.5	721
	medium	17	20	39
	high	193	428.5	442.5
	high	106	162	243
	high	87.5	138.5	200.5
	very high	1008	2191	2309.56
	very high	712.5	1165	1632.5
	very high	786	1663.5	1799.5
	high	434.5	864.5	994.5
	very high	632.211	1058.02	1445.91
	medium-high	31.5	33	72
	very low	3.5	5	8
	very high	1304	2049.5	2979.5
TF	high	365	464.5	833
	medium	21.5	48.5	49
CADHERIN/WNT	high	474.5	818	1080.51
KINASE	very high	1107.5	2081.01	2521.02
	very high	2622.5	5510.5	5965.5
	high	315	660	716.327
	very high	588.5	1301	1338
	medium	27.5	47.5	62.5
	high	332	676	754.5
KINASE	medium	20.5	37	46.5
WNT	high	61.2788	80.3103	138.897
CHANNEL	low	9.5	17.5	21.5
	high	50	90.5	113
	very high	598	1322.5	1351
SOLUTE CARRIER	high	196.5	326	443.5
	high	59	107	133
	very high	760	1469	1712
TF/RA	very high	670	1023.5	1508.49
	very high	588	1047.5	1323.5
WNT	high	423.5	720.5	953
	low	6	10	13.5
	high	120	218.5	270
	low	6	13	13.5
TF	very low	4	4.5	9
	very high	601.5	1147	1351.5
	high	57.5	73.5	129

	medium-high	43.5	97	97.5
KINASE	high	83	149.5	186
	high	91.5	97	205
FGF	medium-high	33.5	72	75
TF	high	117.5	203.767	263
KINASE	high	356	724.5	796.5
	low	8.5	9	19
	high	71	73	158.5
	very high	987.5	1544.5	2204
	very high	3616.5	7579	8068
	medium	26	54.5	58
	high	175	346	390
	medium	11	14.5	24.5
	medium	26.5	47.5	59
TF	high	109	178	242.5
	high	58	93	129
SOLUTE CARRIER	low	9	11	20
WNT	medium	20.5	33	45.5
	very high	2188.49	2832.44	4855.73
	very high	1038	2109.5	2299.5
	very high	1411.5	2551.5	3126.5
TF	medium-high	47	80	104
	very high	1411.5	2583	3121.5
SOLUTE CARRIER	high	165	315.001	364.5
	medium-high	45.5	94	100.5
CYTOKINE	medium-high	39	51.5	86
	very high	970.5	2044.5	2139.5
	high	232.5	490	512.5
TF	high	184.5	380.5	406.5
	very high	881	1154.5	1940
	very high	1699.5	3451.5	3742
TF	very low	2.5	4	5.5
	low	5	10	11
	high	240	359.5	527.5
	very high	1002	1770	2200.5
TF	very high	1852	2720	4067
	high	413.5	892	907.496
	very high	966.5	1737	2121
	very high	888.999	1815.51	1948.52
	very high	3053.51	6314.07	6690.28
FGF	medium	21	28	46
	very high	845.782	1521.98	1851.61
TF	high	112	167	245
	very high	534.5	934.5	1169
SOLUTE CARRIER	high	61.5	99.0001	134.5
	very high	1384.99	2218.04	3028.4
CYTOKINE	very high	722.999	860.499	1580
	very high	3302.64	6461.03	7216.76

	high	306	568.5	668.5
	very high	728	1267.5	1590
	very high	1279.5	2489.5	2790
	medium	19.5	30.5	42.5
	medium	17	20.5	37
	low	8.5	15	18.5
TRANSMEMB PROT	medium-high	34.6566	52.1094	75.3201
SOLUTE CARRIER	very high	807.997	1219.48	1755.5
	very high	1306.5	2480.5	2835
	high	300	632.5	650.5
	very high	1618	2772	3507
	very low	3	3.5	6.5
	very low	3	5	6.5
TF	low	6	12.5	13
	medium-high	43	64.298	93.1583
	high	208	417.5	450.5
	high	184	378	398.5
	high	69.5	141.5	150.5
	very high	538.5	970	1166
	high	157.5	317	341
	high	242.5	507.5	525
GOLGI/ER TRANSPORT	high	474.5	974.5	1026.5
	medium-high	46	66	99.5
	high	364.5	756.5	788
MYOSIN	high	83.5	145	180.5
WNT	very high	1815.89	3238.23	3923.52
	very high	625.495	1238.51	1351.01
	very high	1631	3134.5	3522
	very high	1333.5	2122.5	2878
NEPHRIN-LIKE	very high	622.815	955.766	1342.94
TF	high	67.5	139.5	145.5
	very high	745.5	1460	1605.5
	high	410.5	726	883.5
NOTCH	high	200	229.5	430.153
	very high	949	1906	2041
MYOSIN	medium	10	17.5	21.5
	medium	13.6533	28.1951	29.3478
	medium-high	37	71.5	79.5
	medium-high	40.5	86.0001	86.9999
TF	high	138.5	256	297.5
	high	208	335.104	446.668
	medium-high	47.5	59.5	102
	high	66	94.5	141.5
	very high	1340	2536.51	2872.5
	medium	24.5	48	52.5
	very low	3.5	6	7.5
	very high	636.496	1052.48	1363.01
METALLOPEPTIDASE	very high	1629.87	3348.31	3486.67

	low	7.5	10	16
	very high	1102	1899	2347.5
	very high	9513.46	13653	20263.8
	very high	776.503	1348.51	1653.5
	very high	562.96	1045.34	1198.41
KINASE	medium-high	47	78.5	100
	very high	2446	4771	5200.5
	medium	12	18.5	25.5
	medium	20	39	42.5
	very low	4	6	8.5
	very low	4	4.5	8.5
	very low	4	4.5	8.5
	high	194	254	412
TF	very high	5366	9126	11393
SOLUTE CARRIER	medium	24.5	44	52
	very high	2432.5	4734	5161
TF	medium	16.5	31.5	35
	medium-high	42.5	60	90
CHANNEL	low	8.5	13.5	18
TF	high	450.998	566.004	955.005
TF	very high	859	1757.5	1818.5
CHANNEL	medium	13	23	27.5
	high	406	759	858.5
	medium	17.5	17	37
	high	281	548.5	594
	medium-high	45.5	71	96
	high	129	182.5	272
	high	235.5	439	496.5
	very high	599.832	1016.96	1264.39
	very high	2286.05	4803.67	4816.31
SOLUTE CARRIER	high	361	689.5	760.5
	medium-high	33	63.5	69.5
	very high	1106	1366	2329
	high	315.5	448.5	664
	very high	948	1576	1991
	medium	15.5	29	32.5
	high	130	209	272.5
	high	418	728	876
	very high	1137.5	2118	2383
	high	59	109	123.5
	high	237.5	335	497
TRANSMEMB PROT	high	76	118	159
	medium	11	21	23
	high	83	148	173.5
	very high	2466.97	4888.87	5155.47
	high	78.5	121.5	164
	very high	521.5	1056.5	1089.5
CADHERIN	very high	1054.5	1712	2202

Category	Level	Value 1	Value 2	Value 3
COLLAGEN	very high	5978.5	10927	12481
	very high	6143.03	11510.9	12804.9
	very high	1291.5	2505.5	2690
	high	271.592	558.925	565.507
	high	97.5	143.5	203
	high	76	143.5	158
	very high	1814.5	3617	3770.99
	medium	19.5	24	40.5
	very high	505.319	1046.57	1048.75
TF	very high	2317.96	4702.5	4809.33
	high	351.402	617.876	728.963
	high	195	304.5	404.5
	very high	928.5	1629	1925.5
FGF?	high	328.5	671	681
	medium	21	25.5	43.5
	high	85	121.5	176
	very high	707.226	1155.32	1463.98
TRANSMEMB PROT	high	417	463.5	863
	very high	4715.44	7697.86	9751.48
	low	7.5	13.5	15.5
	high	143	280	295.5
	very high	4300	6248	8884
	very high	662	1251	1367.5
WNT	very high	5777.77	10520.5	11929.3
TF	high	62.0001	111	128
CHEMOKINE	high	171.5	272.5	354
	high	117.5	228.5	242.5
	high	167.5	344.5	345.5
	very high	855	1715.5	1762.5
	very high	1031	1648	2124.5
	high	167.5	160.5	345
	high	151.5	249.5	312
	high	128.5	196.5	264.5
TF	very high	767.5	1468	1579
	very high	11203	20247	23042.5
	high	390.5	678.5	802.5
TF	very high	1123.5	1540.5	2306.98
	high	58	79	119
	high	150	165.5	307.5
SOLUTE CARRIER	medium	10	15.5	20.5
	very high	1243.5	2036	2548
	very high	2061	3857.5	4223
	very high	4430	8547.5	9071
HH	very high	525	786.5	1074.5
	high	423	557	865.5
	very high	789.5	1435.5	1615
TF	very high	691.5	1102.5	1414.5
	high	412	800	842.5

CHEMOKINE	medium	20.491	33.4106	41.8853
	very high	1020.5	2383	2085
CHANNEL	high	58	78.9999	118.5
	high	235.5	367.5	480.5
	very high	935	1665	1907.5
	high	189.5	288.5	386.5
	high	422	648.5	860.5
	very high	653.5	1344.5	1332.5
	medium	26	41	53
SOLUTE CARRIER	medium	12.648	25.7477	25.7691
	high	54	105	110
	high	163	294.5	332
	very high	521.5	1026	1062
	high	318	437	646.504
	high	415	754	843.5
	very high	1481.5	2700.5	3007.51
TF	very high	4498	7974.04	9119.5
	high	184	217.5	373
	high	213.5	385	432.5
CHANNEL	high	98.5	165	199.5
	medium-high	38.6742	64.7491	78.322
NOTCH/EMT	very high	1329.5	1958.51	2692.01
	very high	1809.5	3470.5	3661.5
	very high	791	1567.5	1598
WNT	very high	830	1327	1676.5
CHANNEL	high	383.5	611.501	774.497
	very high	1316.73	2390.85	2656.62
	high	403.998	636.501	814.498
	high	283.5	560.5	571.5
	high	260.5	511.501	524.5
	medium-high	43.5	68	87.5
MYOSIN	high	52	99.5	104.5
	high	62	116.5	124.5
	high	68.5	109	137.5
TRANSMEMB PROT	high	100	184	200.5
	very high	1262	2311	2529
	high	107	157	214.001
	high	124.5	206	249
	medium	14.5	28	29
	medium-high	37.5	62.5	75
TF	low	5	6	10
CYTOKINE	very low	2.5	4	5
	medium-high	41.5	68	83
	medium	26.5	42.5	53
	high	81	65.5	40.5
KINASE	low	7	5	3.5
CHANNEL	high	158	113	79
	very high	1524.5	1294	754.5

	very high	662	549	326
WNT	very high	3847.32	3716.38	1889.63
RECEPTOR	very high	508	331.5	245.5
	high	81	51.5	39
TF	very high	775.495	591.501	370.5
	high	99.5	76.5	47.5
	very high	516	387	243
	very high	541.5	412.5	252
	medium	14	10.5	6.5
WNT	very high	1976.5	1651.99	912.996
	medium	13	11.5	6
	high	267.999	154	123.5
TF	very high	714.962	531.725	329.201
CHANNEL	very high	3300	2039	1508
KINASE	high	272.5	188	124
	high	133.5	145.5	60.5
	medium	29	17.5	13
	medium-high	48	44.5	21.5
	high	400	425	177.5
	very high	911.507	404.498	401.499
	medium	12.5	11	5.5
	very high	1308.5	575	572
SOLUTE CARRIER	high	122	98	52.5
SOLUTE CARRIER	high	168.5	161	72.5
	medium	16.5	9.5	7
	very high	2673	2240.5	1126
	medium	28.5	15.5	12
	very high	795.5	774	331
	high	215.609	106.552	89.1085
MYOSIN	very high	6179.43	4032.94	2535.5
CHANNEL	very high	1722.5	908.501	704.999
	high	134.03	73.9807	54.3196
TGFB/BMP	medium-high	31	21.5	12.5
TF	very high	1743	1356	702.498
	high	71	35.5	28.5
TGFB/BMP	very high	4160	3275.5	1667
TF	low	5	4.5	2
	low	5	3	2
	high	124	110	49.5
	very high	1137	736	451.5
	medium	29	15	11.5
WNT	very high	1500	1255	593
SOLUTE CARRIER	high	101.5	41.5	40
	very high	5804.5	4201	2263.5
CYTOKINE	high	363	227.5	141.5
	medium	13	10	5
TF	high	129	74.9999	49.5
	medium-high	34	18.5	13

	very high	551.501	415.999	210.5
SOLUTE CARRIER	high	129	84.5	49
	high	79	44	30
TF	very high	1171.5	882	443
	medium	12	11.5	4.5
	high	479	284.5	179.5
	high	434.5	274.5	162.5
EMT	high	187.5	120.5	69.5
	high	65	38.5	24
	medium	19	17	7
	very high	3157	2559	1163
	high	405.498	187	148.5
TRANSMEMB PROT	high	404	326	147.5
	low	5.5	4.5	2
IGF	very high	1850.99	1583	669.499
	medium	12.5	11.5	4.5
TF	high	238.5	235.5	84.5
SOLUTE CARRIER	high	280	173	99
TF	high	73.0544	44.1007	25.5
TF	medium-high	43	22	15
	high	116.5	67	40.5
	medium-high	33.5	19	11.5
WNT/EMT	very high	3274.5	1466.5	1108
	medium-high	44.5	31	15
CHANNEL	high	99.5	96	33.5
	low	6	4	2
	low	7.5	4	2.5
	very high	5046	2564.5	1679.5
	medium	24.5	16.5	8
	medium	17	10	5.5
	high	106.109	64.8328	34.2245
	high	243	148	78.0001
NOTCH	very high	571.5	259.5	181
FGF	high	185	147.5	56.5
TF	high	65	30.5	19.5
WNT	medium-high	38.5	15	11.5
	high	399.5	185.5	118
	medium	12	8	3.5
	high	229.5	78.5	66
SOLUTE CARRIER	high	87	35	25
	high	136	55.5	38.5
	very high	8425.98	3677.94	2360
METALLOPEPTIDASE	very high	12126.8	5989.34	3395.01
	low	9.00216	4.38801	2.50771
	very high	1109	988.5	306.5
SOLUTE CARRIER	high	147.5	90.5	40.5
SOLUTE CARRIER	high	213.5	138.5	57.5
CHANNEL	very high	1117.5	890	295

	high	391	148	102.5
	very high	523	175.5	136.5
TF	very high	1378.5	819.5	355.5
	medium	10	6.5	2.5
TF	medium	10	8.5	2.5
	high	122	50.5	29.5
	medium	10.5	9	2.5
TF	high	101	60.5	23.5
	very high	576.997	217.5	132.5
SOLUTE CARRIER	high	149.5	91.5	34
CADHERIN/WNT	very high	1299.01	611.999	293.5
IGF	medium	29	20.5	6.5
	high	96	77.5	21.5
	medium-high	47	27	10.5
	medium	27	16	6
	medium	20.5	6	4.5
SOLUTE CARRIER	high	72	33	15.5
	medium	12	6.5	2.5
TF	medium	12	8	2.5
HH	high	134	30	27
	low	7.5	4	1.5
METALLOPEPTIDASE	high	200	107.5	39
	medium	18	9	3.5
	medium-high	47.5	42	9
FGF	very high	5832.88	5154.98	1104
CHANNEL	high	185	97.5	35
	high	75.3588	20.1007	14.1241
WNT	high	120	79.5	21.5
	low	6	1.5	1
TGFB/BMP/EMT	high	265	120.5	44
	high	50.5	37	8
RECEPTOR	medium	19.5	10	3
TF	medium-high	41.5	36	6
TF	medium-high	38.5	29	5.5
	very high	619	286	79.5
EMT	high	382.501	85.5	44
IGF	very high	904.5	244	90.9999
	medium-high	31.5	12	3
	high	64	24.5	6
	low	5.5	3	0.5
	very high	924	597	78.5
RA	very high	1880.53	562.941	159.037
	low	6	1.5	0.5
CHANNEL	very high	678.661	123	56.5
	high	69.5	46	5.5
	very high	563	254.5	36.5
TF/EMT	high	55.5	11	3.5
	very high	2350.46	1645.79	114.65

	high		216	25.5	8
	high		217.5	59.5	4.5
RECEPTOR	very low		0	1	9.5
	very low		0	6.5	7.5
	very low		0	1.5	10
TRANSMEMB PROT	very low		0	4.5	7
RECEPTOR	very low		0	2	5.5

Log2(Distal vs. Prox)	Log2(Mid)	Log2(Distal vs. Mid)
-19.55288766	-0.56803	-18.9849
-6.828665428	-5.60627	-1.22239
-6.721099189	-4.26167	-2.45943
-6.50779464	-4.18587	-2.32193
-6.407911378	-0.0433	-6.36461
-6.377752795	-3.44111	-2.93664
-5.190622495	-2.99895	-2.19167
-4.98847813	-3.75861	-1.22987
-4.857980995	-2.78759	-2.07039
-4.754887502	-3.43296	-1.32193
-4.739539538	-2.35707	-2.38247
-4.636624621	-3.3147	-1.32193
-4.459431619	-2.1375	-2.32193
-4.178803153	-3.34873	-0.83007
-4.169925001	-1.58496	-2.58496
-4.169925001	-1.36257	-2.80735
-4.087462841	-3.08746	-1
-4.087462841	-1.91754	-2.16993
-4.057328959	-0.17384	-3.88349
-4.026348441	-1.79697	-2.22938
-4.002361102	-3.97087	-0.03149
-3.975752454	-2.79518	-1.18057
-3.95419631	-1.56188	-2.39232
-3.938599455	-1.89907	-2.03953
-3.925999419	-2.7885	-1.1375
-3.906890596	-1.32193	-2.58496
-3.86507042	-3.67243	-0.19265
-3.857980995	-0.33442	-3.52356
-3.772589504	-3.35755	-0.41504
-3.763765654	-0.6763	-3.08746
-3.700439718	-0.89308	-2.80735
-3.624490865	-1.4021	-2.22239
-3.617752436	-2.77529	-0.84246
-3.584962501	-0.12553	-3.45943
-3.584962501	-1.58496	-2
-3.561878888	-2.78427	-0.77761
-3.533102944	-2.31771	-1.21539
-3.528994279	0.231778	-3.76077
-3.523561956	-1.9386	-1.58496
-3.459431619	-0.1375	-3.32193
-3.459431619	-0.45943	-3
-3.429392792	-1.34533	-2.08406
-3.427930141	-0.97786	-2.45007
-3.426264755	-1.03395	-2.39232
-3.42202393	-2.92862	-0.49341
-3.414081397	-2.19388	-1.22021
-3.409390936	-1.5025	-1.90689

-3.384220203	-0.66319	-2.72103
-3.321928095	-2.32193	-1
-3.321928095	-0.51457	-2.80735
-3.321928095	-3	-0.32193
-3.321928095	-0.78588	-2.53605
-3.321928095	-1	-2.32193
-3.314833083	-2.24543	-1.06941
-3.268488836	-2.558	-0.71049
-3.266140317	-0.60318	-2.66297
-3.263034406	-1.26303	-2
-3.220729372	-3.04564	-0.17509
-3.189186904	-0.72132	-2.46787
-3.173192715	-1.81062	-1.36257
-3.169925001	-0.58496	-2.58496
-3.169925001	-1	-2.16993
-3.166753545	-1.69237	-1.47439
-3.129283017	-0.48543	-2.64386
-3.121461272	-1.32529	-1.79617
-3.102538162	-0.96153	-2.14101
-3.097147561	-0.43534	-2.66181
-3.093976148	-0.35147	-2.7425
-3.037193372	-1.93336	-1.10384
-3.035979297	-0.53005	-2.50593
-3	-0.41504	-2.58496
-3	-1.85316	-1.14684
-2.98486183	-0.38308	-2.60178
-2.981514429	-1.14769	-1.83383
-2.974909019	-0.34104	-2.63387
-2.957393829	-0.50841	-2.44898
-2.956931278	-0.41504	-2.54189
-2.95419631	-1.04731	-1.90689
-2.926920302	-1.20075	-1.72617
-2.925999419	-0.7885	-2.1375
-2.906890596	-1.09954	-1.80735
-2.88849923	-0.65891	-2.22959
-2.887525271	-0.68589	-2.20163
-2.874469118	-1.1375	-1.73697
-2.857980995	-1.33442	-1.52356
-2.853451337	-1.10343	-1.75002
-2.828330134	0.107368	-2.9357
-2.817135943	-2.35147	-0.46566
-2.814444347	-1.89107	-0.92338
-2.787940735	-0.24434	-2.5436
-2.772589504	-1.77259	-1
-2.772589504	-1.16491	-1.60768
-2.754887502	-0.35344	-2.40145
-2.748938236	0.261046	-3.00998
-2.723860607	-0.73155	-1.99231

-2.702016721	-2.41189	-0.29013
-2.700439718	-0.24101	-2.45943
-2.700439718	-1.37851	-1.32193
-2.700439718	-1.37851	-1.32193
-2.700439718	-1.70044	-1
-2.700439718	-1.37851	-1.32193
-2.678071905	-1.19265	-1.48543
-2.678071905	-0.91254	-1.76553
-2.67379033	-0.32965	-2.34414
-2.662965013	-0.44057	-2.22239
-2.662965013	-0.24793	-2.41504
-2.661504056	-1.27448	-1.38702
-2.647246779	-1.1348	-1.51245
-2.64385619	-0.73697	-1.90689
-2.64385619	-0.64386	-2
-2.64385619	-1.47393	-1.16993
-2.624490865	-2.20945	-0.41504
-2.624438944	-1.08303	-1.54141
-2.622607275	-0.0081	-2.61451
-2.605621971	-1.47634	-1.12928
-2.60334103	-1.49643	-1.10692
-2.594622336	-1.43927	-1.15535
-2.589492159	-2.27302	-0.31647
-2.586782936	-1.6539	-0.93289
-2.584962501	-0.63743	-1.94753
-2.584962501	-0.26303	-2.32193
-2.584962501	-0.58496	-2
-2.584962501	-0.26303	-2.32193
-2.584962501	-0.67807	-1.90689
-2.563768278	-0.57736	-1.98641
-2.553927736	-1.59282	-0.96111
-2.551512307	-0.97742	-1.57409
-2.548972644	-2.11834	-0.43063
-2.548436625	-0.2854	-2.26303
-2.54584637	-0.33111	-2.21474
-2.544320516	-1.60572	-0.9386
-2.541794642	-0.16215	-2.37964
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Transcript_id	Gene description
ENSGALT00	gastrulation brain homeobox 2
ENSGALT00	Zic family member 1
ENSGALT00	neurogenic differentiation 1
ENSGALT00	transcription factor EC
ENSGALT00	NeuroM protein
ENSGALT00	SKI family transcriptional corepressor 1
ENSGALT00	mesenchyme homeobox 2
ENSGALT00	nescient helix loop helix 1
ENSGALT00	PR domain containing 14
ENSGALT00	T-cell leukemia homeobox 3
ENSGALT00	suppression of tumorigenicity 18 (breast carcinoma) (zinc finger protein)
ENSGALT00	kelch repeat and BTB (POZ) domain containing 5
ENSGALT00	regulatory factor X, 4 (influences HLA class II expression)
ENSGALT00	zinc finger protein, multitype 2
ENSGALT00	H6 family homeobox 1
ENSGALT00	Zic family member 5
ENSGALT00	tripartite motif containing 29
ENSGALT00	T-box 22
ENSGALT00	forkhead box protein L1-like
ENSGALT00	doublesex and mab-3 related transcription factor 1
ENSGALT00	four and a half LIM domains 2
ENSGALT00	forkhead box E3
ENSGALT00	paired-like homeodomain 3
ENSGALT00	ectodermal-neural cortex 1 (with BTB-like domain)
ENSGALT00	early B-cell factor 2
ENSGALT00	teashirt zinc finger homeobox 2
ENSGALT00	transcription factor AP-2 alpha (activating enhancer binding protein 2 alpha)
ENSGALT00	endothelial PAS domain protein 1
ENSGALT00	POU class 2 homeobox 3
ENSGALT00	runt-related transcription factor 1; translocated to, 1 (cyclin D-related)
ENSGALT00	Zic family member 3 heterotaxy 1 (odd-paired homolog, Drosophila)
ENSGALT00	Cbp/p300-interacting transactivator, with Glu/Asp-rich carboxy-terminal doma
ENSGALT00	D4, zinc and double PHD fingers, family 3
ENSGALT00	sensory organ homeobox protein SOHo
ENSGALT00	zinc finger protein 750
ENSGALT00	growth regulation by estrogen in breast cancer 1
ENSGALT00	Forkhead box protein D3
ENSGALT00	forkhead box L2
ENSGALT00	SRY (sex determining region Y)-box 7
ENSGALT00	ALX homeobox 4
ENSGALT00	POU class 6 homeobox 2
ENSGALT00	Brain-specific homeobox/POU domain protein 3
ENSGALT00	vestigial like 3 (Drosophila)
ENSGALT00	interferon regulatory factor 1
ENSGALT00	zinc finger E-box binding homeobox 2

ENSGALT00 basonuclin 2
ENSGALT00 Meis homeobox 2
ENSGALT00 homeobox A3
ENSGALT00 retinoid X receptor, gamma
ENSGALT00 T-box 4
ENSGALT00 activating transcription factor 3
ENSGALT00 hairy and enhancer of split 5 (Drosophila)
ENSGALT00 BARX homeobox 2
ENSGALT00 LIM homeobox 1
ENSGALT00 hairy and enhancer of split 5-like
ENSGALT00 Kruppel-like factor 7 (ubiquitous)
ENSGALT00 zinc finger protein 366
ENSGALT00 zinc finger protein 503
ENSGALT00 forkhead box C2 (MFH-1, mesenchyme forkhead 1)
ENSGALT00 \N
ENSGALT00 spleen focus forming virus (SFFV) proviral integration oncogene spi1
ENSGALT00 IKAROS family zinc finger 1 (Ikaros)
ENSGALT00 T-box 2
ENSGALT00 forkhead box N4
ENSGALT00 forkhead box S1
ENSGALT00 Kruppel-like factor 1 (erythroid)
ENSGALT00 Friend leukemia virus integration 1
ENSGALT00 zinc finger E-box binding homeobox 1
ENSGALT00 TNF receptor-associated factor 4
ENSGALT00 LIM domain only 2 (rhombotin-like 1)
ENSGALT00 dachshund homolog 2 (Drosophila)
ENSGALT00 retinoic acid receptor, beta
ENSGALT00 T-box, brain, 1
ENSGALT00 nuclear receptor subfamily 4, group A, member 3
ENSGALT00 kelch-like 4 (Drosophila)
ENSGALT00 hematopoietically expressed homeobox
ENSGALT00 nuclear factor of kappa light polypeptide gene enhancer in B-cells inhibitor, e
ENSGALT00 nuclear receptor subfamily 2, group E, member 1
ENSGALT00 ELK3, ETS-domain protein (SRF accessory protein 2)
ENSGALT00 tripartite motif containing 66
ENSGALT00 ventral anterior homeobox 1
ENSGALT00 interferon regulatory factor 10
ENSGALT00 chromobox homolog 4 (Pc class homolog, Drosophila)
ENSGALT00 small nuclear ribonucleoprotein polypeptides B and B1
ENSGALT00 \N
ENSGALT00 BRCA1 interacting protein C-terminal helicase 1
ENSGALT00 family with sequence similarity 171, member B
ENSGALT00 upstream stimulatory factor 1
ENSGALT00 transcription factor CP2-like 1
ENSGALT00 zinc finger, HIT-type containing 3
ENSGALT00 ets variant 1

ENSGALT00 four and a half LIM domains 3
ENSGALT00 solute carrier family 22 (organic cation transporter), member 4
ENSGALT00 LIM domain only 4
ENSGALT00 heat shock transcription factor 4
ENSGALT00 cellular repressor of E1A-stimulated genes 1
ENSGALT00 paired related homeobox 1
ENSGALT00 prospero-related homeobox 1
ENSGALT00 sterile alpha motif domain containing 7
ENSGALT00 T-box 15
ENSGALT00 androgen receptor
ENSGALT00 nuclear receptor subfamily 2, group E, member 3
ENSGALT00 lymphoid transcription factor
ENSGALT00 runt-related transcription factor 2
ENSGALT00 FOS-like antigen 2
ENSGALT00 E74-like factor 5 (ets domain transcription factor)
ENSGALT00 doublesex and mab-3 related transcription factor 3
ENSGALT00 Retinal homeobox protein Rx1
ENSGALT00 tubby like protein 1
ENSGALT00 SRY (sex determining region Y)-box 14
ENSGALT00 zinc finger protein 488
ENSGALT00 goosecoid homeobox 2

Gene symbo	Function?	Distal	Mid	Prox	Log2(Distal v	Log2(Mid vs.
GBX2	TF	21.2348	97.008	775.499	-5.1906225	-2.9989493
ZIC1	TF	126.369	592.586	2059.17	-4.0263484	-1.7969665
NEUROD1	TF	259.5	1711	2709.5	-3.3842202	-0.6631869
TFEC	TF	0.5	2.5	5	-3.3219281	-1
NEUROD4	TF	43.5	275.5	418.5	-3.2661403	-0.6031753
SKOR1	TF	15.5	17.5	144.5	-3.2207294	-3.0456427
MEOX2	TF	74	257	643.999	-3.1214613	-1.3252901
NHLH1	TF	99.9999	469	740.499	-2.8884992	-0.6589099
PRDM14	TF	2.5	11.5	18.5	-2.8875253	-0.6858914
TLX3	TF	14.5	27.5	102	-2.8144443	-1.8910656
ST18	TF	85.5	498.5	590.5	-2.7879407	-0.2443436
KBTBD5	TF	30	158.5	202.5	-2.7548875	-0.3534391
RFX4	TF	1	2	6.5	-2.7004397	-1.7004397
ZFPM2	TF	143.5	620.5	790	-2.4608019	-0.3484214
HMX1	TF	60.9955	187.941	319.584	-2.3894205	-0.7659154
ZIC5	TF	31.6307	40.4107	159.83	-2.3371408	-1.983729
TRIM29	TF	3	7	15	-2.3219281	-1.0995357
TBX22	TF	5	10	24	-2.2630344	-1.2630344
LOC427656	TF	4	9	19	-2.2479275	-1.0780025
DMRT1	TF	11	36	52	-2.2410081	-0.5305147
FHL2	TF	149.5	514.5	704	-2.2354299	-0.4524044
FOXE3	TF	2.50842	3.00509	11.7346	-2.2259178	-1.9652886
PITX3	TF	2.5	9	11.5	-2.2016339	-0.353637
ENC1	TF	462	1318.5	2053	-2.1517689	-0.6388361
EBF2	TF	50	94.5	221	-2.1440464	-1.2256601
TSHZ2	TF	122	226.5	533.5	-2.1286071	-1.2359772
TFAP2A	TF	136	494.5	568.5	-2.0635537	-0.2011898
EPAS1	TF	458	1015	1857.5	-2.0199427	-0.8718825
POU2F3	TF	1.5	3.5	6	-2	-0.7776076
RUNX1T1	TF	296	801.494	1167.52	-1.9797782	-0.5426836
ZIC3	TF	24.5	46	93.5	-1.9321846	-1.0233325
CITED4	TF	348	1071.5	1285.98	-1.885709	-0.2632364
DPF3	TF	82.5	289	303.5	-1.8792305	-0.070627
SOHO-1	TF	323.489	798.12	1158.4	-1.8403449	-0.5374559
ZNF750	TF	2	5	7	-1.8073549	-0.4854268
GREB1	TF	157	340.5	549	-1.8060416	-0.6891514
FOXD3	TF	228.902	739.369	795.88	-1.7978209	-0.1062564
FOXL2	TF	13	44.5	44.5	-1.7752937	0
SOX7	TF	39.5763	97.5549	134.085	-1.7604392	-0.4588616
ALX4	TF	10.5	13	35	-1.7369656	-1.4288433
POU6F2	TF	35.5	104	118	-1.7328959	-0.1822033
POU4F3	TF	380	544.732	1256.44	-1.7252705	-1.2057233
VGLL3	TF	59	123.5	194.5	-1.7209833	-0.6552591
IRF1	TF	6	13	19.5	-1.7004397	-0.5849625
ZEB2	TF	968	2510	3110.5	-1.6840676	-0.3094591

Gene	Type					
BNC2	TF	48.5	73.5	154.5	-1.6715502	-1.0717907
MEIS2	TF	82.0803	102.037	260.5	-1.6661755	-1.352191
HOXA3	TF	3.5	10	11	-1.6520767	-0.1375035
RXRG	TF	385.218	1018.24	1209.23	-1.6503417	-0.248011
TBX4	TF	4	7	12.5	-1.6438562	-0.8365013
ATF3	TF	15	37	45.5	-1.600904	-0.2983413
HES5	TF	237.675	443.824	720.724	-1.6004567	-0.6994592
BARX2	TF	87.5	265.5	262	-1.5822119	0.01914505
LHX1	TF	11.5	25.5	33.5	-1.5425272	-0.3936638
LOC419390	TF	262.112	429.44	754.639	-1.5256033	-0.8133301
KLF7	TF	100	226.501	278.499	-1.4776721	-0.2981547
ZNF366	TF	15.5	26	42	-1.4381211	-0.6918777
ZNF503	TF	305.631	718.124	825.456	-1.4334004	-0.2009583
FOXC2	TF	774.453	1518.13	2039.35	-1.3968598	-0.4258141
SOX18	TF	69.5	133.5	178.5	-1.3608392	-0.4190843
SPI1	TF	26	39	66.5	-1.3548427	-0.7698802
IKZF1	TF	10	17.5	25.5	-1.3504972	-0.5431423
TBX2	TF	656.496	985.005	1668.5	-1.3456936	-0.7603487
FOXN4	TF	29	42.8617	73.3489	-1.3387224	-0.7750863
FOXS1	TF	65.6825	162.995	165.298	-1.3314883	-0.0202416
KLF1	TF	36.5	59	88	-1.2696071	-0.5767886
FLI1	TF	231.5	375.5	556.001	-1.2640753	-0.5662746
ZEB1	TF	623.5	1418.5	1487	-1.2539432	-0.0680385
TRAF4	TF	492	944.5	1143.5	-1.2167261	-0.2758337
LMO2	TF	314	697.5	721	-1.1992347	-0.047806
DACH2	TF	365	464.5	833	-1.19042	-0.8426379
RARB	TF	670	1023.5	1508.49	-1.1708721	-0.559594
TBR1	TF	4	4.5	9	-1.169925	-1
NR4A3	TF	117.5	203.767	263	-1.162402	-0.3681424
KLHL4	TF	109	178	242.5	-1.1536566	-0.4461075
HHEX	TF	47	80	104	-1.1458509	-0.3785116
NFKBIE	TF	184.5	380.5	406.5	-1.1396345	-0.0953589
NR2E1	TF	2.5	4	5.5	-1.1375035	-0.4594316
ELK3	TF	1852	2720	4067	-1.1348809	-0.5803583
TRIM66	TF	112	167	245	-1.129283	-0.5529336
VAX1	TF	6	12.5	13	-1.1154772	-0.0565835
IRF10	TF	67.5	139.5	145.5	-1.1080597	-0.060754
CBX4	TF	138.5	256	297.5	-1.1030037	-0.2167459
SNRPB	TF	5366	9126	11393	-1.0862287	-0.3200931
TAL1	TF	16.5	31.5	35	-1.0848889	-0.1520031
BRIP1	TF	450.998	566.004	955.005	-1.0823873	-0.754696
FAM171B	TF	859	1757.5	1818.5	-1.0820189	-0.0492242
USF1	TF	2317.96	4702.5	4809.33	-1.0529803	-0.032408
TFCP2L1	TF	62.0001	111	128	-1.0458014	-0.2055841
ZNHIT3	TF	767.5	1468	1579	-1.0407725	-0.1051592
ETV1	TF	1123.5	1540.5	2306.98	-1.0380054	-0.5826068

Gene	Type				
FHL3	TF	691.5	1102.5	1414.5	-1.032491	-0.3595135
SLC22A4	TF	12.648	25.7477	25.7691	-1.0267329	-0.0011986
LMO4	TF	4498	7974.04	9119.5	-1.0196711	-0.1936439
HSF4	TF	5	6	10	-1	-0.7369656
CREG1	TF	775.495	591.501	370.5	1.06564394	0.67490707
PRRX1	TF	714.962	531.725	329.201	1.11889785	0.69171158
PROX1	TF	1743	1356	702.498	1.31100655	0.94879116
SAMD7	TF	5	4.5	2	1.32192809	1.169925
TBX15	TF	129	74.9999	49.5	1.38187064	0.59946015
AR	TF	1171.5	882	443	1.40297835	0.99347196
NR2E3	TF	238.5	235.5	84.5	1.49696602	1.47870381
IKZF3	TF	73.0544	44.1007	25.5	1.51847392	0.79030431
RUNX2	TF	43	22	15	1.51937416	0.55254102
FOSL2	TF	65	30.5	19.5	1.73696559	0.64533512
ELF5	TF	1378.5	819.5	355.5	1.9551778	1.20489439
DMRT3	TF	10	8.5	2.5	2	1.76553475
RAX	TF	101	60.5	23.5	2.10362263	1.36427439
TULP1	TF	12	8	2.5	2.26303441	1.67807191
SOX14	TF	41.5	36	6	2.79007693	2.5849625
ZNF488	TF	38.5	29	5.5	2.80735492	2.39854938
GSC2	TF	55.5	11	3.5	3.98706094	1.6520767

Log2(Distal vs. Mid)
-2.1916732
-2.2293819
-2.7210333
-2.3219281
-2.662965
-0.1750867
-1.7961712
-2.2295894
-2.2016339
-0.9233787
-2.5435972
-2.4014484
-1
-2.1123805
-1.6235051
-0.3534119
-1.2223924
-1
-1.169925
-1.7104934
-1.7830256
-0.2606293
-1.8479969
-1.5129328
-0.9183862
-0.8926299
-1.8623639
-1.1480602
-1.2223924
-1.4370945
-0.9088521
-1.6224726
-1.8086035
-1.302889
-1.3219281
-1.1168902
-1.6915645
-1.7752937
-1.3015776
-0.3081223
-1.5506926
-0.5195472
-1.0657242
-1.1154772
-1.3746084

-0.5997595
-0.3139845
-1.5145732
-1.4023306
-0.8073549
-1.3025628
-0.9009975
-1.6013569
-1.1488634
-0.7122732
-1.1795174
-0.7462434
-1.2324421
-0.9710457
-0.9417549
-0.5849625
-0.8073549
-0.5853448
-0.5636362
-1.3112468
-0.6928185
-0.6978007
-1.1859047
-0.9408925
-1.1514287
-0.3477821
-0.6112781
-0.169925
-0.7942597
-0.7075491
-0.7673392
-1.0442756
-0.6780719
-0.5545226
-0.5763494
-1.0588937
-1.0473057
-0.8862578
-0.7661356
-0.9328858
-0.3276912
-1.0327947
-1.0205723
-0.8402172
-0.9356133
-0.4553986

-0.6729775
-1.0255343
-0.8260272
-0.2630344
0.3907369
0.4271863
0.3622154
0.1520031
0.7824105
0.4095064
0.0182622
0.7281696
0.9668331
1.0916305
0.7502834
0.2344653
0.7393482
0.5849625
0.2051144
0.4088055
2.3349842