Supplemental Figure Legend, Table legends and Methods

Supplemental Figure 1: Multiple sequence alignment of *NRBP1* protein orthologs from human (NP_037524), mouse (NP_671734) and *C. elegans* (NP_492022) are shown. Blue box: BC box sequence, green box: Cul5 binding site sequence.

Supplemental Figure 2: A, Table showing number of embryos (E) or live mice, number of litters and number reabsorbed embryos (R) from *Nrbp1*$^{+/-}$ intercrosses. **B**, *Nrbp1*$^{-/-}$ embryos at ~7.5 days post fertilisation appear small and developmentally delayed when compared to wild type (*Nrbp1*$^{+/+}$) littermate embryos.

Supplemental Figure 3: A, *In situ* hybridisation and immunohistochemical analysis of serial sectioned wild type small intestine tissue using probes specific to *Olfm4*, *Lgr5* and anti-Chromogranin A (CA) (left panels), a probe specific to the conditionally deleted region of *Nrbp1* (shown in positive and negative colours; middle panels) and an overlay/merge of both images showing any co-localisations (right panel; black arrows indicate positive staining enteroendocrine cells). **B** Immunohistochemical analysis ofenteroendocrine cells (anti-chromogranin A antibody; CA) in C (control; *Nrbp1*^{flox} *Rosa*$^{CreERT2/+}$) and cKO (*Nrbp1*^{flox} *Rosa*$^{CreERT2/+}$) mice at 4-5 post tamoxifen treatment (x20 magnification; images 4-5 days). **C & D**, cKO mice had more mitotic cells and unchanged apoptotic cells than C intestines at 4-5 days post dosing. Data are represented as mean ± SD; * P<0.05.

Supplemental Figure 4: A, I*n situ* analysis (left panel) of small intestines from C and cKO mice at 7-9 days post tamoxifen treatment indicating loss of *Nrbp1* causes an increase in *Hes1* expression (x20 magnification). **B**, Quantitative RT-PCR analysis of the *Notch* genes, *Notch1*, *Notch2, Notch3* and *Notch4* in the intestine of C and cKO mice at 4-5 days post tamoxifen treatment. * $P<0.05$, ** $P<0.01$.

Supplemental Figure 5: Analysis of the gene express following somatic deletion of *Nrbp1*. Venn diagrams showing the overlap of the 500 most downregulated or upregulated genes in intestinal tissue between *Nrbp1*^{flox} *C Rosa*$^{CreERT2/+}$ and *Nrbp1*^{flox} *Rosa*$^{CreERT2/+}$ mice at 4-5 days post tamoxifen treatment as established by microarray analysis and either the top 88 down-regulated and the top 139 up-regulated genes following *Apc* loss at day 4 or the top 405 down-regulated and the top 93 up-regulated genes following *Apc* loss at day 5 , (Sansom et al. 2004) and corresponding *P* values, computed by the Molecular signatures database MSigDB version 2.5 (http://www.broadinstitute.org/gsea/msigdb/index.jsp).

Supplemental Figure 6: *In vitro* analysis of crypts in culture from C and cKO mice. Crypts were treated with Adenoviral cre for 3-4 hours and re-plated in Matrigel, pictures were taken on crypts 1, 3, 6 and 9 days post viral infection. Cre infection was performed on 3 separate occasions with two cKO mice. Adeno-GFP infection was also performed alongside to investigate viral infection efficiency.

Supplemental Figure 7: I*n situ* analysis of small intestines from C and cKO cKO mice at 7-9 days post tamoxifen treatment showing localisation patterns of *Tsc22d1, Tsc22d2 and Tsc22d4* (x20 magnification).

Supplemental Table 1. Microarray expression profiling results (*P* <0.01 to 2dp) comparing small intestinal epithelial cells from *Nrbp1*$^{flox/flox}$ *Rosa*$^{CreERT2/+}$ mice and *Nrbp1*$^{flox/flox}$ *Rosa*$^{CreERT2/+}$ mice 4-5 days post tamoxifen treatment. Data displayed as gene name, log fold change (logFC), average expression (AveExpr) and P value (adj.P.Val).

Supplemental Table 2. List of proteins identified with MASCOT search from Nrbp1 protein and Phactr2 control protein purification. Each purification was done twice and table shows; gene name, accession, number of peptides above homology for each repeated sample and description.

Supplemental Table 3. List of 715 bacterial clones used in RNAi screen targeting all know kinases from the Ahringer library (Kamath et al. 2003).

Supplemental Methods

Mouse shRNA sequences (Sigma)

shRNA1 (TRCN0000026689)

CCGGCCATCTAACACTTCTGCTGAACTCGAGTTCAGCAGAAGTGTTAGAT

GGTTTTT

shRNA2 (TRCN0000026706)

CCGGGACTCATTACAGAGGGAGTTTCTCGAGAAACTCCCTCTGTAATGA

GTCTTTTT

shRNA3 (TRCN0000026749)

CCGGCAAAGGTAGAATCCTCATCTTCTCGAGAAGATGAGGATTCTACCTT

TGTTTTT

shRNA4 (TRCN0000026730)

CCGGCAGCGTAATGTACCAGGCATTCTCGAGAATGCCTGGTACATTACG

CTGTTTTT

Human shRNA sequences (Origene)

shRNA1 (TI201442) ACAATCATGTGAAGACTTGTC

shRNA2 (TI201443) GCCCTCGCTCAAACTCCTTGC

shRNA3 (TI201444) GAGAATATCCCCGAGTTGGCG

shRNA4 (TI201446) TTAGTGAGGCTGACCAGAGCC

shRNA5 (TI201447) ACAGTACCCTCAACTCAGCCG

shRNA6 (TI201448) GGTGGCCCTGGGGGGCCATTC

Antibodies

Immunohistochemistry primary antibodies: anti-Ki67 (DCS - Innovative Diagnostik-Systeme: SP6), anti-chromogranin A (Abcam: ab15160), anti-lysozyme (Millipore: A0099), Anti-Ctnnb1 (Cell Signaling Technology: 9587), anti-c-Myc (A14) (Santa Cruz biotechnology, inc: sc-789), anti-Sox9 (Millipore: AB5535) and anti-phospho-Thr202/Tyr204 p44/42 Erk1/2 MAPK (Cell Signalling Technology: 20G11), anti-Sall4 (Sigma: HPA015791), anti-cleaved-caspase 3 antibody (Cell Signalling Technology: 9961). Western blot primary antibodies: anti-NRBP1 (Abnova: H00029959-D01P) and anti β-ACTIN (C11), anti-c-MYC (A-14) (Santa Cruz biotechnology), anti-phospho-Thr202/Tyr204 p44/42 ERK1/2 MAPK (Cell Signalling Technology), anti-Sall4 (Abcam: Ab29112 and Sigma: HPA015791), anti-Elongin C (Abcam) and anti-Flag (Sigma: F1804).

Riboprobe primers

Lgr5	GGGATTGTTCGATGGTGAAG
	TAATACGACTCACTATAGGGAGCTCCTGCTCTAAGGCACCAC
Mmp7	GGCATTCCAGAATTGTCACC
	TAATACGACTCACTATAGGGAGGCACAAGGAAGAGGGAAACA
Nrbp1	AATGAAAAGGCTTGGAAACG
	TAATACGACTCACTATAGGGAGAGTAGCTGGATGGCACTGCT
Olfm4	ATGTGAGGCCTCCAAAAGTG
	TAATACGACTCACTATAGGGAGCTCATCCACAGCAAGGTCAA
Hes1	AAAGATAGCTCCCGGCATTC
	TAATACGACTCACTATAGGGAGTGGAAGGTGACACTGCGTTA
Tsc22d1	GTCAGCAGCCTTCTGTTTCC

	TAATACGACTCACTATAGGGAGGCAATGACCAATTGTTGTGG
Tsc22d2	CGGAAGAGACGCTCAACAAT
	TAATACGACTCACTATAGGGAGGCTAGCGCTGGTAGACAAGG
Tsc22d4	AGCTGGCTAGTTTGGGCATA
	TAATACGACTCACTATAGGGAGGCAAACATGAGGTGGGACTT

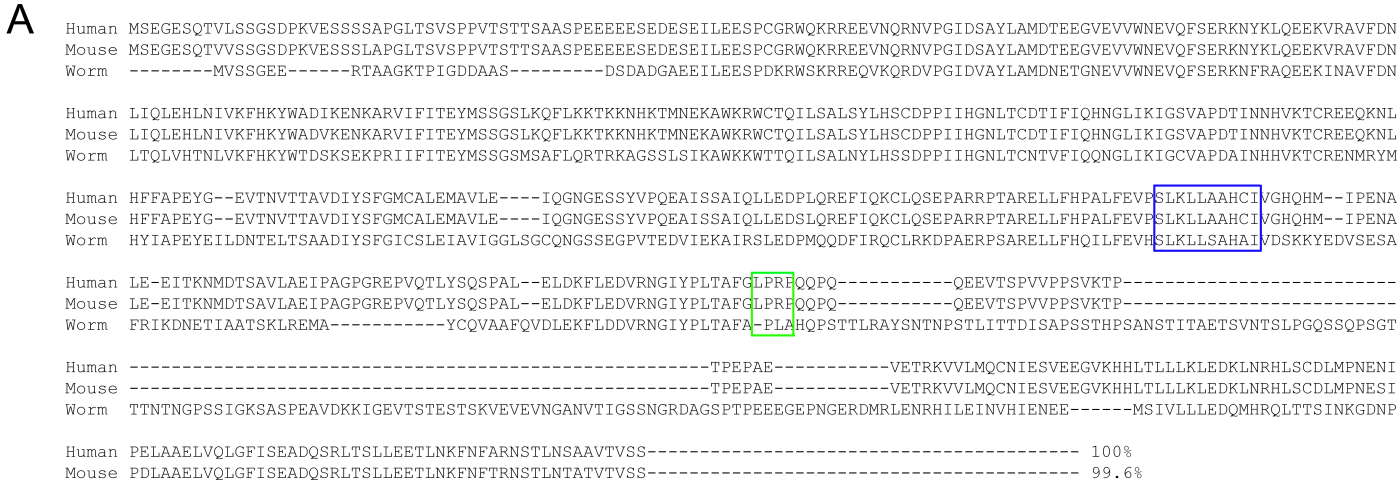
qRT-PCR primers

Gene	Forward: 5' to 3'	Reverse: 5' to 3'	Concentration (nM)
Actb	GACGATATCGCTGCGCTGGT	CCACGATGGAGGGGAATA	125
Ccnd1	CAGAAGTGCGAAGAGGAGGTC	TCATCTTAGAGGCCACGAACAT	125
CD44	CTCCTGGCACTGGCTCTGA	CTGCCCACACCTTCTCCTACTATT	250
Gapdh	AGGTCGGTGTGAACGGATTTG	TGTAGACCATGTAGTTGAGGTCA	250
Myc	TGAAGGCTGGATTTCCTTTG	AGGGCTGTACGGAGTCGTAG	125
Notch1	CCCTTGCTCTGCCTAACGC	GGAGTCCTGGCATCGTTGG	500
Notch2	CCTGAACGGGCAGTACATTTG	CACAGTGGAAGGCACCATCT	500
Notch3	TGCCAGAGTTCAGTGGTGG	CACAGGCAAATCGGCCATC	125
Notch4	CTCTTGCCACTCAATTTCCCT	TTGCAGAGTTGGGTATCCCTG	125

Kamath RS, Fraser AG, Dong Y, Poulin G, Durbin R, Gotta M, Kanapin A, Le Bot N, Moreno S, Sohrmann M et al. 2003. Systematic functional analysis of the Caenorhabditis elegans genome using RNAi. *Nature* **421**: 231-237.

Wilson_SupplFig1

A

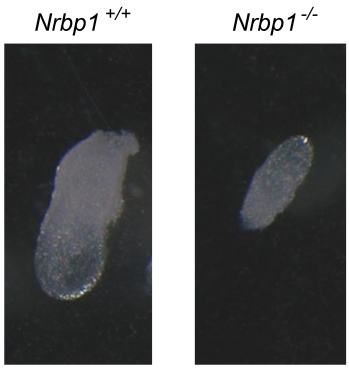


Wilson_SupplFig2

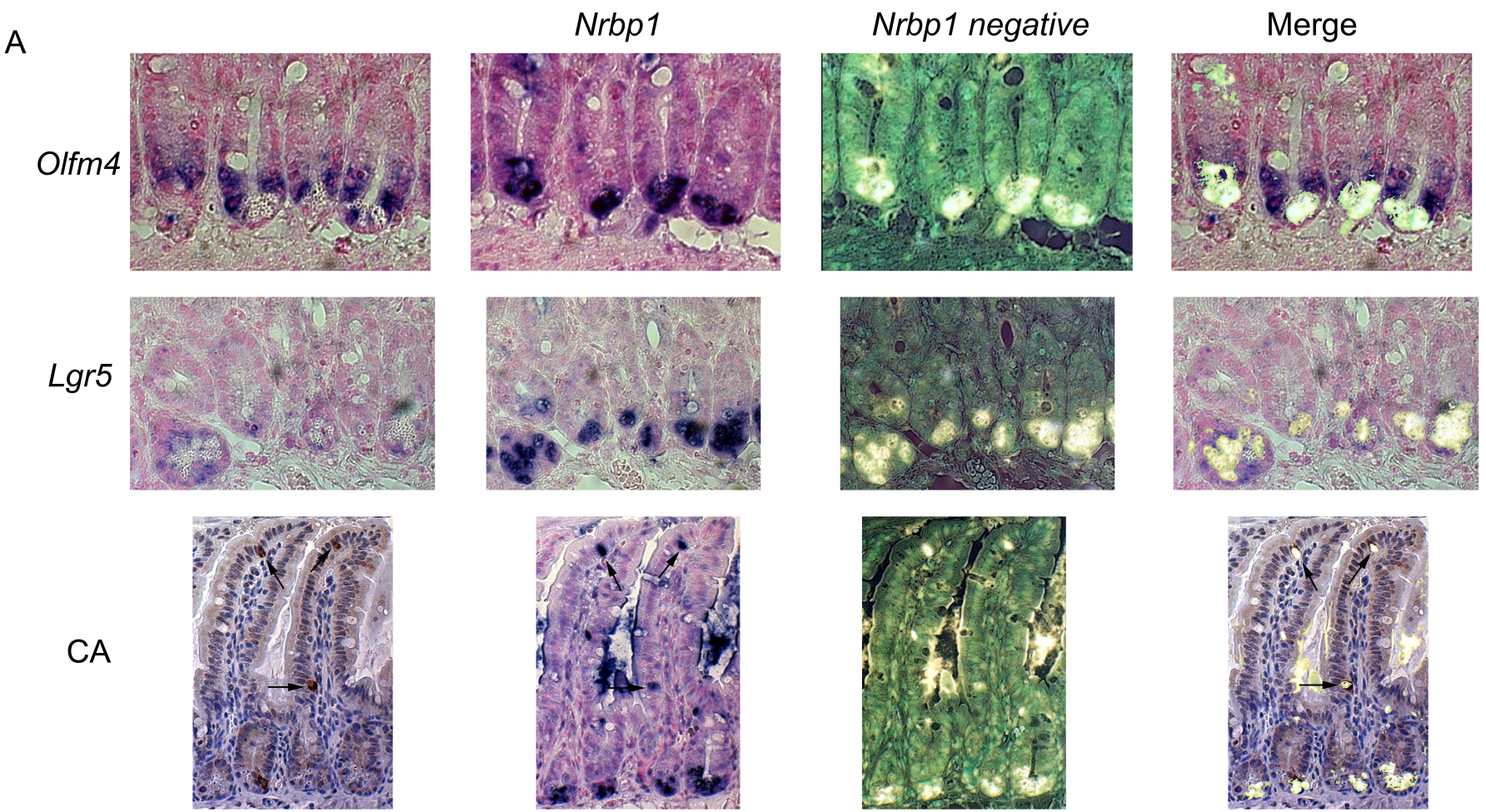
A

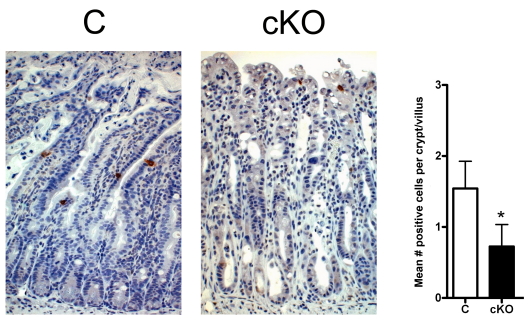
Age	*Nrbp1*$^{+/+}$	*Nrbp1*$^{+/-}$	*Nrbp1*$^{-/-}$	Resorbed	No. litters	P-value
E7.5	9	15	8	0	3	0.9110
E8.5	7	12	0	5	3	0.0001
E9.5	8	10	0	7	3	0.0001
E10.5	5	6	0	10	3	0.0001
3 wks	14	22	0	N/A	10	0.0010

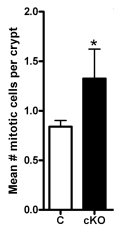
B

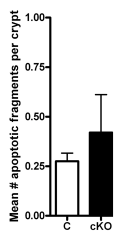


Wilson_SupplFig3





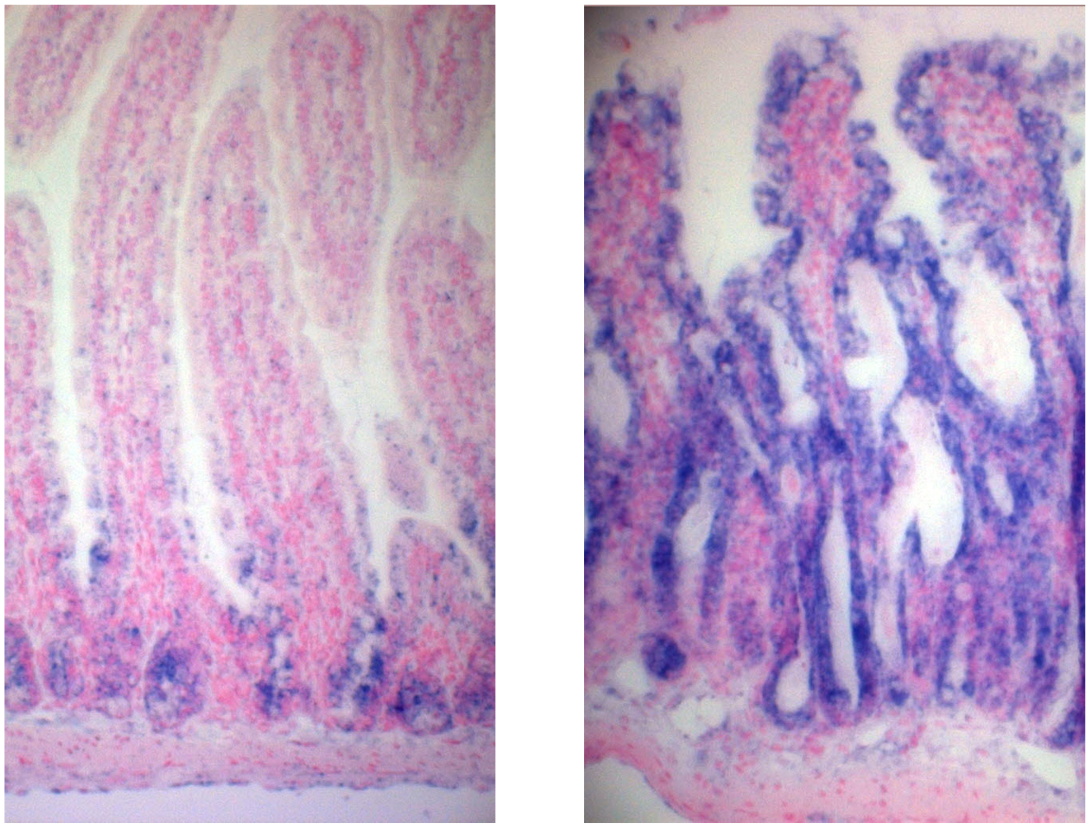




Wilson_SupplFig4

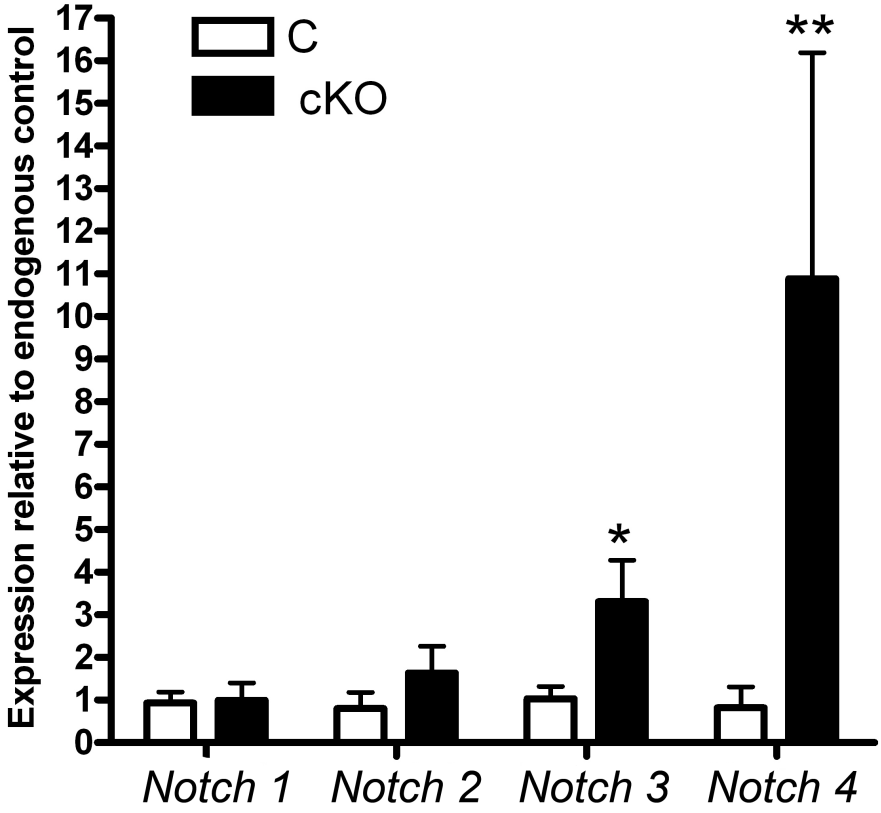
A

Hes1



C cKO

B



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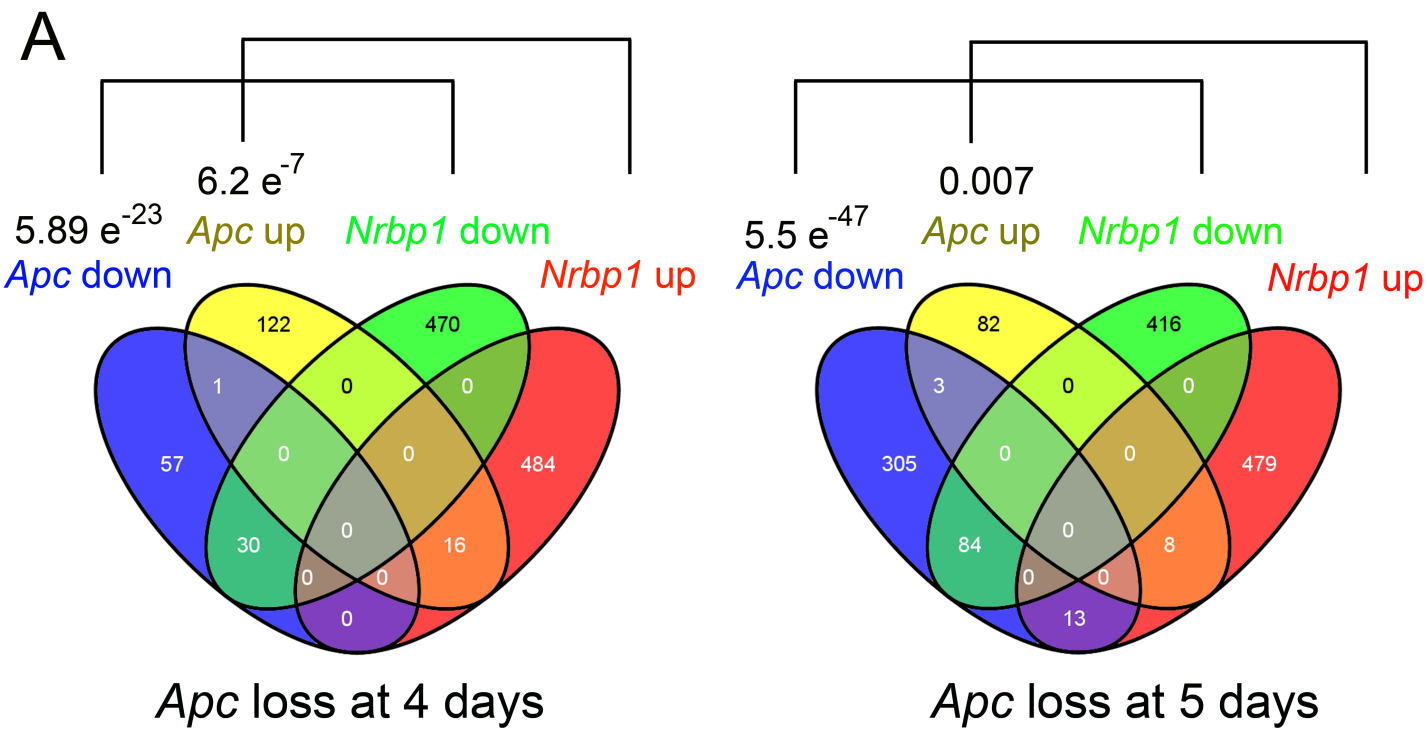
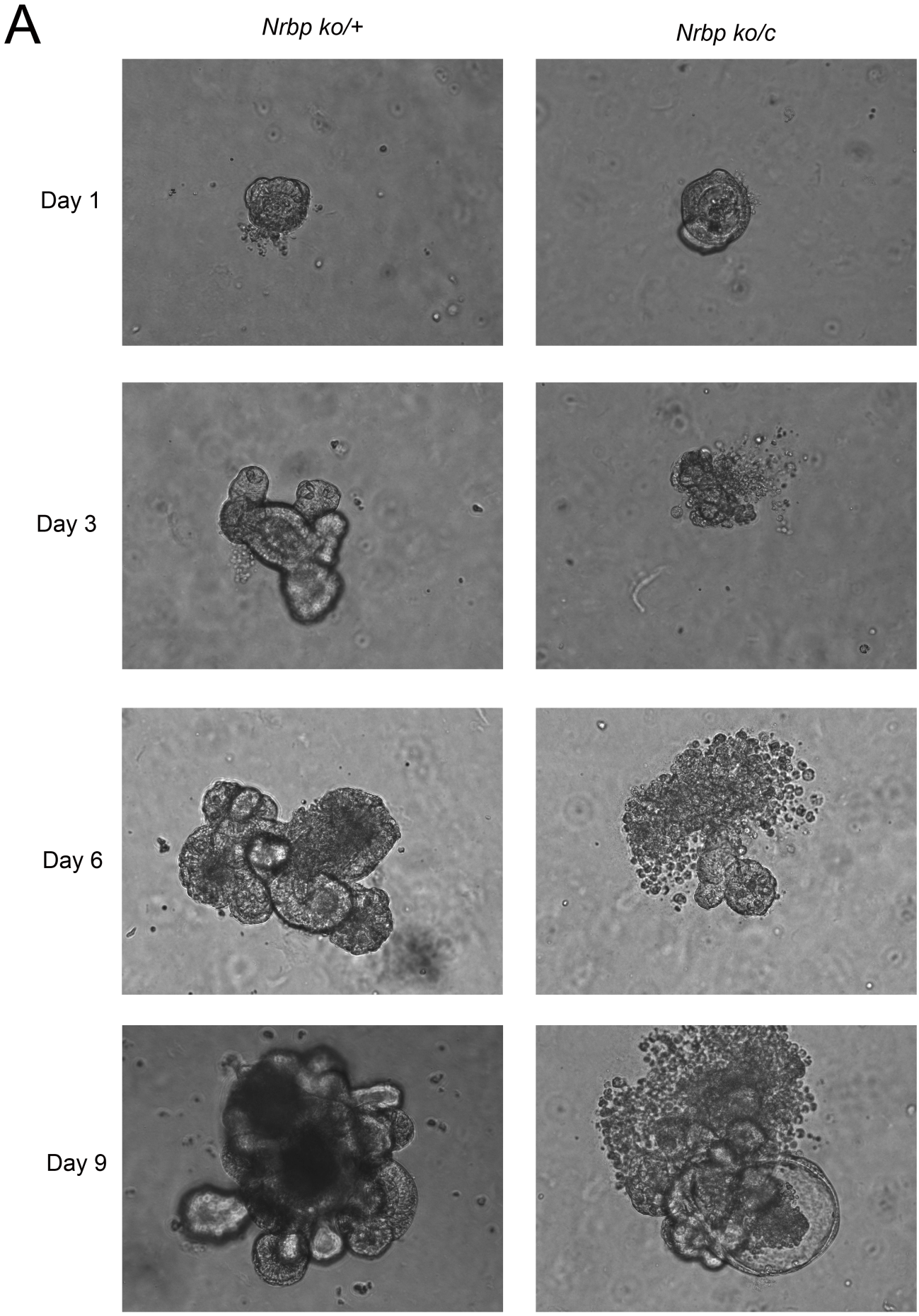
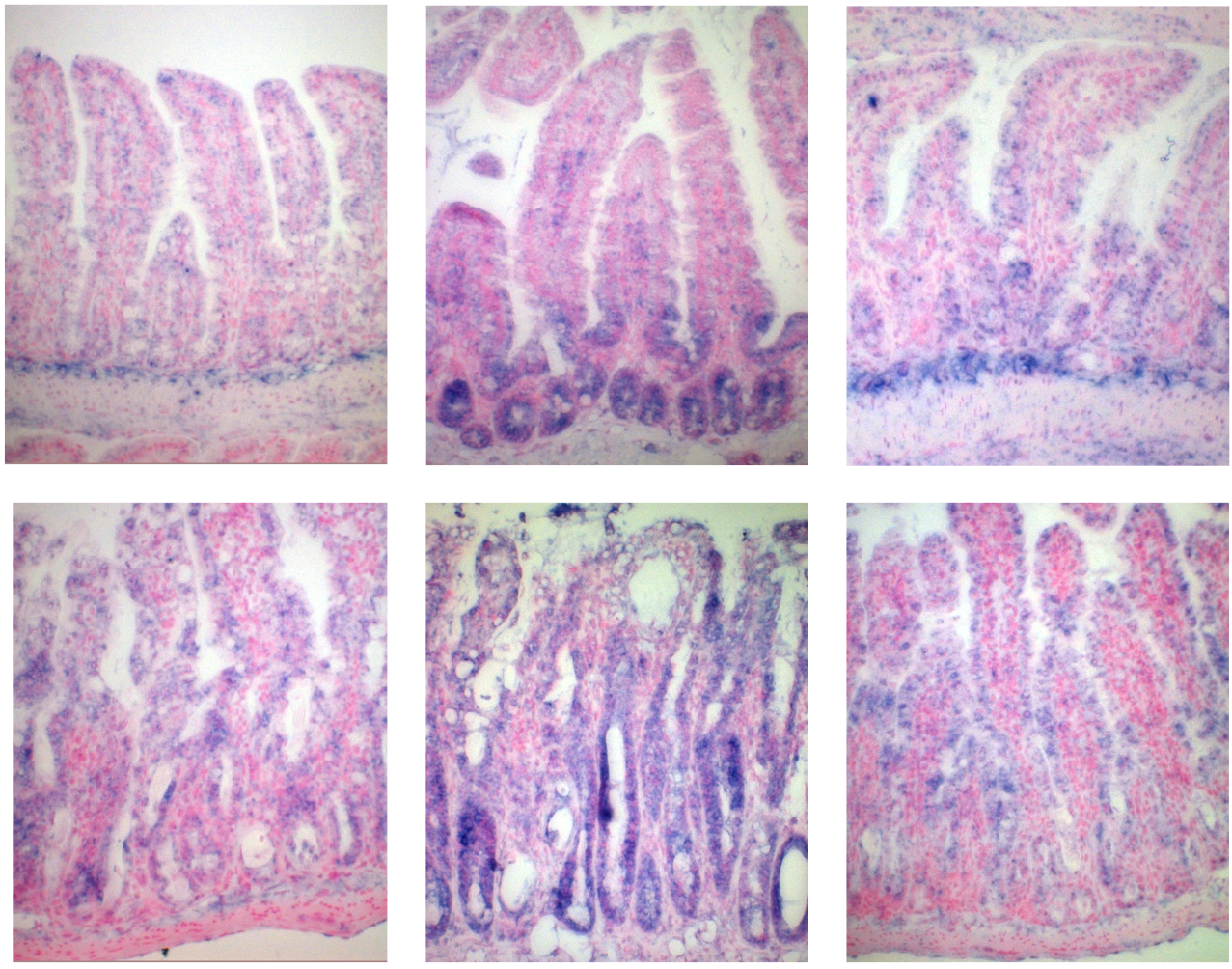


Wilson_SupplFig6



Wilson_SupplFig7

A



Supplemental Table 1

Gene ID	logFC	AveExpr	adj.P.Val
LAMC2	1.323354786	8.010682506	1.61E-08
CAPG	2.784937155	8.954766406	1.96E-08
ABP1	-5.733541699	11.90740087	3.30E-08
AMN	-3.284098637	11.34185566	4.19E-08
ASAH2	-3.695021699	10.94595842	4.40E-08
PDZK1	-4.210502506	11.0961101	4.94E-08
PLAUR	1.750124321	8.409317175	7.31E-08
SLC16A10	-1.403435456	8.611332656	7.31E-08
ACTN1	2.571845117	10.35010596	1.28E-07
E130012A19RIK	2.162074749	8.228511223	1.28E-07
LOC226413	-4.809037343	10.89324467	1.57E-07
LY6D	3.567149252	8.840171308	1.57E-07
MID1IP1	1.69583901	8.91213485	1.57E-07
POLD4	1.297777105	9.091618238	1.57E-07
ABCG5	-2.867946487	11.2959446	1.60E-07
ANXA3	3.948260421	10.16359346	1.69E-07
ILVBL	-1.136303992	9.837206824	1.69E-07
IQGAP2	-1.685743182	10.99223399	1.69E-07
CDS1	-1.503546997	10.79818256	1.73E-07
RBP1	2.429495814	8.908527369	1.80E-07
ST3GAL6	1.414641468	10.5691054	2.10E-07
SAMD5	1.028796082	7.888000154	2.82E-07
IGFBP3	1.074571012	8.14465356	4.00E-07
PDZD3	-1.43417142	8.795895398	4.09E-07
KHK	-2.759343256	10.62159316	4.41E-07
SLC2A1	2.973564881	10.06565049	4.41E-07
4933421H10RIK	1.244765347	8.185887373	4.87E-07
LOC226685	0.767718999	7.875115392	4.87E-07
ENC1	0.80895177	8.341659288	5.11E-07
TNFAIP8	1.030610549	8.414027337	5.11E-07
OSTA	-2.208267385	12.77669109	5.12E-07
QSOX1	0.771092549	8.050189805	5.12E-07
NAGS	-1.16590464	8.511828375	5.71E-07
REEP6	-2.020677027	9.882725795	5.82E-07
ABCG8	-2.571243291	10.02831572	7.65E-07
SLC45A3	0.998904812	7.836317282	8.89E-07
CCK	1.853087672	9.012632174	9.16E-07
COX7A1	-3.398350886	11.41784993	9.16E-07
NAALADL1	-3.084679528	10.19049145	9.16E-07
SLC39A5	-1.36238448	8.682452625	9.16E-07
2210404O07RIK	-3.829157075	12.69531598	9.46E-07
AP2A2	-0.695363408	9.081080913	9.83E-07
CARHSP1	0.952553012	9.386787859	9.83E-07
CTSL	0.733143095	7.793707344	9.83E-07
CYP4V3	-4.273510796	11.5647446	9.83E-07
DSCR1L2	1.375665588	9.072016234	9.83E-07
TTYH2	-0.74267226	8.511260633	9.83E-07
ME2	-2.283388223	9.523221237	1.08E-06
DAB2	0.479001298	7.963942384	1.11E-06
NAPRT1	-2.219953221	10.48124559	1.11E-06
MRC1	1.433543488	8.395876957	1.27E-06
ERCC1	0.834547427	8.523484488	1.33E-06
IL1R2	1.745272913	8.261047498	1.33E-06
ZFYVE21	-1.626121277	11.17126718	1.33E-06

MOGAT2	-1.399925231	10.57311963	1.40E-06
ARRB2	0.675038852	8.23143344	1.43E-06
MARCKSL1	1.059933619	8.071517293	1.43E-06
ARG2	-3.793082664	10.17917768	1.44E-06
SLC22A1	-1.96459457	9.796690953	1.54E-06
IL1RN	1.614773146	8.095399629	1.64E-06
KRT7	2.402731093	10.03397773	1.72E-06
SPRR1A	2.574692503	8.934815034	1.72E-06
BC003236	0.525597474	7.965875481	1.79E-06
FAM162A	2.902662151	10.7706551	1.93E-06
FAM129B	1.711905364	9.535243483	2.06E-06
LOC100046883	0.685049197	8.271699989	2.09E-06
CHIC2	0.742968572	8.738734494	2.14E-06
LOC100045457	-0.500999252	7.96289648	2.14E-06
COL18A1	2.18286596	8.982261527	2.17E-06
SLC39A6	0.587096361	8.180668341	2.28E-06
ETV4	0.81618752	7.973370017	2.32E-06
LIMK1	0.50502153	7.855594858	2.33E-06
ADAMTS4	2.223674185	8.585618303	2.36E-06
CTTNBP2NL	0.742180628	8.146446517	2.36E-06
ANXA5	2.07372511	9.387112261	2.40E-06
FXYD3	1.62675175	8.79371015	2.40E-06
MMP3	1.100585242	7.9302066	2.40E-06
NEK3	-0.982190673	9.075594143	2.40E-06
THOP1	0.989476189	8.629218799	2.40E-06
CYP4F14	-2.730282969	13.3683725	2.46E-06
MTAP1S	0.51841271	8.204084393	2.69E-06
PLCB3	-1.121276439	10.29297213	2.69E-06
SGSM3	1.03391791	8.34988962	2.69E-06
SECTM1B	-3.88729502	10.26521368	2.73E-06
ACBD4	-1.64820042	10.43211765	2.74E-06
TNK2	0.471104153	7.751043312	2.75E-06
ECM1	1.792511661	8.864275428	2.76E-06
MYO1A	-1.613432886	10.78993177	2.76E-06
RETNLB	3.139522064	8.403536766	2.76E-06
AKR7A5	-1.386802492	10.41301861	2.95E-06
CYP3A25	-2.22536309	9.009764964	2.95E-06
ECH1	-0.710081877	12.11293219	2.95E-06
NR1H3	-1.576801327	9.165350838	2.95E-06
NUPR1	2.762606372	11.1056752	2.95E-06
SNX10	1.379452367	8.688036609	2.95E-06
ACY1	-1.480974529	10.55114163	3.01E-06
ANO1	0.396925937	7.795653914	3.01E-06
HS3ST1	2.849931719	9.704500524	3.01E-06
KRT23	4.415130949	11.05788322	3.01E-06
PAPPA	0.896869862	7.909092422	3.01E-06
SCRN2	-0.832016762	8.361049896	3.09E-06
ADAMTSL4	2.147939502	8.496482963	3.26E-06
ABCC4	1.656330231	8.168048648	3.43E-06
FMNL2	1.419888485	8.02864532	3.43E-06
GPR171	1.088771058	8.21301813	3.49E-06
KCNK1	1.711095061	9.833956048	3.49E-06
SHF	0.540282762	7.980035613	3.49E-06
SLC7A11	1.40000156	7.996452851	3.49E-06
TMEM86B	-1.802936902	8.761768563	3.49E-06
TUBB2B	1.760609295	8.675182147	3.49E-06
HDHD3	-1.555407174	9.417456808	3.56E-06
GPR89	-1.230529836	9.139111262	3.60E-06

2010204N08RIK	-3.209457567	11.69343263	3.68E-06
S100A11	2.333501647	13.53707013	3.68E-06
3110049J23RIK	-3.205198918	10.58053526	3.69E-06
2010003K15RIK	-1.445928399	8.845181638	3.93E-06
BMP8B	1.729378061	8.30926913	3.93E-06
EG667410	-0.953835374	8.351033443	3.93E-06
PPARGC1A	-1.061961256	8.80479283	3.93E-06
SULT2B1	-1.121184255	10.30941811	3.93E-06
TLE6	0.795833654	8.097585963	3.93E-06
YWHAG	0.79067443	9.154180746	3.93E-06
SLC5A11	-1.920451893	8.78262507	3.96E-06
KRT18	2.219876136	11.7348309	4.08E-06
ANK	-1.16765486	8.955249626	4.09E-06
CTGF	2.774779677	9.351854337	4.09E-06
NALP6	-3.120666997	10.00237425	4.40E-06
CHDH	-0.555088527	8.092376464	4.42E-06
ERGIC3	-0.689901832	10.15646693	4.42E-06
ITFG3	-1.14492817	10.24583516	4.42E-06
HTRA3	0.368636937	7.868197954	4.46E-06
HSD17B11	-1.132492587	8.918081592	4.55E-06
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DPEP1	-2.428691392	9.966846515	4.60E-06
EBPL	-1.678863751	9.587695167	4.60E-06
ERLIN1	-1.282959814	8.997173614	4.60E-06
GDF15	3.105163612	8.900358953	4.60E-06
TMEM120A	-1.338250371	12.25294373	4.60E-06
AGPAT4	1.747169051	9.251525698	4.68E-06
GCNT1	0.668533733	7.88676643	4.85E-06
MPND	-1.151890871	9.95455165	4.85E-06
IGFBP4	1.762938859	9.117560191	4.92E-06
IGSF9	-2.16375577	9.469676735	4.97E-06
MOCS2	-1.041600024	11.03785447	4.99E-06
BCDO2	-2.278603713	9.950662809	5.06E-06
FBP1	-1.354808683	8.516679853	5.13E-06
FMO4	-1.000711971	8.355142461	5.13E-06
1810023F06RIK	-1.54069148	9.11387744	5.15E-06
ABCD1	-1.228807268	8.932846682	5.19E-06
GNPDA1	-1.386292589	8.8937286	5.25E-06
PTPLA	1.003962614	8.833002828	5.25E-06
3110013H01RIK	-1.194443557	10.55028596	5.37E-06
RETSAT	-2.314990805	10.35078035	5.41E-06
AKP2	0.826374301	7.862026622	5.43E-06
CLTB	0.599851917	8.442910696	5.45E-06
GOLGA1	-0.872556835	9.146315933	5.64E-06
BPNT1	-0.987638282	9.03012869	5.71E-06
CYP2D22	-1.578219992	9.148994159	5.71E-06
SOAT1	0.886194896	8.333751076	5.71E-06
TUBAL3	-2.043157496	10.71349871	5.71E-06
DOLPP1	-0.552760388	8.793825818	5.79E-06
FXYD5	0.767981029	8.090071844	5.79E-06
AI427122	-1.631014484	11.48488665	5.80E-06
BCMO1	0.389232628	7.624252029	5.80E-06
GPRC5B	0.620912347	7.839559234	5.80E-06
SEPP1	-2.844457181	10.36757442	5.80E-06
SLC46A3	-2.277606791	10.80714915	5.80E-06
IL11	0.333325981	7.708268505	5.81E-06
RWDD2B	-0.536520717	8.27171738	5.81E-06
TNFRSF12A	2.082881406	9.037331211	5.81E-06

TNFAIP2	1.108561874	8.124033259	6.04E-06
MLLT3	0.39767359	7.972112186	6.07E-06
CSNK1E	0.689929192	8.527897586	6.08E-06
SQRDL	1.068391875	8.561328086	6.28E-06
DGAT1	-2.190923231	10.79940959	6.38E-06
COL4A1	2.096561635	9.456475279	6.44E-06
SH3KBP1	0.827900785	7.937598562	6.45E-06
GDPD2	-0.580949038	7.998512308	6.75E-06
SELP	0.639856851	7.830393423	6.75E-06
VDR	-2.137902591	10.15784069	6.78E-06
ATP5G3	-0.739342547	14.41943167	6.95E-06
GLRX	-1.243896769	13.50036485	6.95E-06
STK39	0.923996099	8.304518842	6.95E-06
VLDLR	1.292424466	8.136340334	6.96E-06
CBR3	0.944829864	7.98377792	7.07E-06
NR5A2	-0.826833859	8.175669477	7.07E-06
CHRNB1	1.208269205	8.600638265	7.41E-06
HSD17B4	-1.322913152	11.17183211	7.41E-06
PRPSAP1	-0.901247212	8.850726301	7.42E-06
TCN2	-0.933949583	8.521526443	7.42E-06
ADAM9	0.478096659	7.918004985	7.43E-06
TMEM86A	-3.064590254	11.17384703	7.44E-06
CHGB	2.021060104	9.871054287	7.47E-06
FAAH	-1.948713051	9.057607619	7.54E-06
GNA11	-1.610489981	10.42733491	7.54E-06
IRF5	0.4477098	7.963753535	7.54E-06
KCNK5	-1.451418806	9.463009079	7.54E-06
MME	-1.281079415	8.543516313	7.54E-06
RABAC1	1.142811261	9.470528059	7.54E-06
TMEM98	-1.290390914	9.804039683	7.54E-06
TPH1	1.608319094	8.241678412	7.54E-06
PRLR	-1.166510324	8.501037969	7.65E-06
SLC5A4B	-3.978050696	10.20716611	7.65E-06
TINAGL1	1.297239035	8.734565653	7.65E-06
XPNPEP2	-3.426389723	10.75085471	7.65E-06
CD93	0.417540993	7.825712287	7.88E-06
5031436O03RIK	1.572211465	9.603593847	7.90E-06
C530008M17RIK	-1.002003371	8.905403171	7.90E-06
AGPS	0.848549185	8.803805444	8.06E-06
FGD2	0.553671637	7.994745163	8.07E-06
CCL25	-1.975272467	10.32836322	8.52E-06
CRYL1	-1.768658465	10.64789676	8.52E-06
5730494J16RIK	0.816319847	9.13613366	8.53E-06
PLEKHG3	1.688087991	9.519685771	8.61E-06
PPAP2A	-1.074217555	9.377446129	8.61E-06
CHCHD7	-1.629357385	10.44087717	8.69E-06
EFHA1	-0.617737692	9.699898026	8.73E-06
WARS	0.817156469	8.792160229	8.75E-06
5430437P03RIK	-0.536387498	9.762717486	8.83E-06
BTC	1.944011992	8.922040401	8.83E-06
OS9	-0.897046898	10.3403852	8.83E-06
ITGA2	0.909952641	8.059353266	8.88E-06
DDIT4	2.196792287	9.403396123	8.98E-06
PEPD	-1.976331507	9.561334005	9.19E-06
SFN	0.999572926	8.347279899	9.20E-06
EDNRA	1.023975522	8.30500181	9.61E-06
FST	1.33549257	8.083131064	9.71E-06
LHFP	0.722414008	8.176922205	9.71E-06

SMOX	1.139094999	8.252603428	9.84E-06
LOC100041004	4.081995406	8.637178574	9.90E-06
S100A9	2.076948411	8.076103075	1.02E-05
GPR172B	-1.583280885	9.847767548	1.05E-05
RAB3GAP2	-1.265552505	9.418157875	1.07E-05
SLC13A2	-3.209965385	11.3731085	1.07E-05
1110038D17RIK	-0.851703248	10.25334505	1.09E-05
RDH9	-1.702316523	9.691959434	1.09E-05
TNIK	-0.600260967	8.38024834	1.10E-05
D630036H09RIK	-1.105691961	8.578954479	1.12E-05
DUSP4	0.617965101	7.788180331	1.12E-05
LOC381105	-0.720812068	8.586768435	1.12E-05
NRG1	0.4718131	7.734120407	1.13E-05
TTR	1.937368377	8.80100853	1.14E-05
CTSK	0.364885602	7.945102177	1.16E-05
AU018778	-2.439421199	9.434095103	1.17E-05
SCP2	-1.955603953	10.71564756	1.19E-05
CDK3	0.268319401	7.633484182	1.20E-05
MEP1B	-1.221148429	10.98596542	1.20E-05
H2AFV	-1.56265194	9.898322596	1.21E-05
MMP14	0.981806735	8.681918459	1.21E-05
CRISPLD2	0.337233306	7.717490819	1.23E-05
H2-Q2	-1.499777041	9.003963435	1.23E-05
LY6A	4.072370877	12.44858161	1.23E-05
MOBKL2B	-0.668611904	8.615659024	1.23E-05
TMEM119	1.020037249	8.07613415	1.23E-05
ZFHX3	0.466448498	8.062203033	1.23E-05
BC022224	-1.597732028	10.75111497	1.24E-05
OAT	-2.156703274	12.08677688	1.24E-05
2810405K02RIK	-2.091297956	9.711550785	1.26E-05
4930477M19	0.763954895	8.161050212	1.26E-05
ACY3	-1.458214068	9.330142584	1.26E-05
HECTD3	-0.792824703	9.147060087	1.26E-05
IGFBP5	3.332769999	10.30687961	1.26E-05
2410006H16RIK	0.893938575	8.787018222	1.30E-05
5730525O22RIK	0.520549604	8.254738568	1.30E-05
4931406C07RIK	-1.400217022	9.404440801	1.33E-05
BMPER	0.657798841	7.896415764	1.33E-05
S100A6	0.94584971	11.10972901	1.33E-05
1110021L09RIK	-1.150219486	8.714710208	1.35E-05
GOLT1A	-0.811973433	8.933293527	1.35E-05
SESN1	-1.345029642	9.303325048	1.35E-05
LAMC1	1.215203611	8.857283969	1.40E-05
IER3	2.595843935	10.16339866	1.42E-05
RENBP	1.046865097	8.347715535	1.42E-05
PLA2G12B	-1.161699816	10.12082364	1.46E-05
RMND1	-0.623007254	8.659230781	1.49E-05
SUOX	1.367245178	8.265850262	1.49E-05
2310016C08RIK	1.864178522	8.429506471	1.52E-05
LOC100047937	-0.678195239	8.143661008	1.52E-05
MAPK11	0.368425651	7.723536529	1.52E-05
SLC27A2	-2.080696882	9.168385029	1.52E-05
5730472N09RIK	-1.337513131	9.04999029	1.56E-05
ABCB7	-0.770194559	9.065752193	1.56E-05
DUSP1	2.107152058	10.40844349	1.56E-05
ALS2	-0.667937191	8.854196424	1.57E-05
MEP1A	-1.722401705	8.841751175	1.57E-05
ARL6IP1	-1.170383764	11.79301671	1.58E-05

EG665509	1.425987915	8.451316047	1.60E-05
UGT2B36	-1.553400137	8.475043371	1.60E-05
ANPEP	-2.012667798	14.13686653	1.61E-05
CDH16	0.826254433	7.831863006	1.61E-05
CH25H	1.266292421	8.283855389	1.61E-05
PREPL	-1.635787394	11.16839815	1.61E-05
CD44	0.520049792	7.97242914	1.72E-05
CNDP2	-1.045462565	8.591710663	1.72E-05
DUSP3	0.46008968	7.800782997	1.72E-05
ACAA1A	-1.736367127	12.68203863	1.73E-05
CLDN15	-1.790590905	10.09999651	1.73E-05
CXCL14	1.685042661	8.385390497	1.73E-05
GRASP	0.63975717	8.028952989	1.73E-05
RILP	-0.5911753	8.478377085	1.73E-05
TNFRSF11B	1.055440978	8.077067406	1.73E-05
4931406P16RIK	0.444396821	8.598251801	1.74E-05
ALDH1L1	-0.569732647	8.083405338	1.74E-05
H2-BL	-3.328363116	13.31955827	1.74E-05
GJA1	1.858254982	10.6104361	1.75E-05
GLRX1	-0.976019921	8.847562158	1.75E-05
WFDC2	3.250150258	8.631597023	1.75E-05
GMPPA	-0.631588799	9.19262018	1.76E-05
PLAT	2.400275454	8.465199007	1.76E-05
PLK3	1.616339438	9.061821327	1.76E-05
4932441K18RIK	-0.298266797	8.016967025	1.77E-05
PGAM5	1.103276833	9.248270245	1.77E-05
FBLN1	-1.453069485	9.328194941	1.79E-05
PM20D1	-0.665380562	8.049864339	1.79E-05
ILDR1	1.01112676	8.090921189	1.81E-05
TXNRD2	-0.417615057	8.477786206	1.81E-05
RASL11A	0.386970755	7.759158946	1.82E-05
DGCR6	-0.827445802	8.699032894	1.83E-05
NPC1L1	-1.923629766	10.65694835	1.93E-05
AKR1B8	3.516857988	9.507090261	1.95E-05
DYRK3	0.353280139	7.701100727	1.97E-05
SLK	1.309444626	9.0691062	1.97E-05
2010001M06RIK	-1.023191552	8.785495404	1.99E-05
BC014795	0.61495807	8.562870717	1.99E-05
FHL2	0.62688901	9.182231785	1.99E-05
LOC100047419	-1.465987176	10.01644076	1.99E-05
MDH2	-1.122985755	11.58604866	1.99E-05
NUS1	1.2090533	9.593650463	1.99E-05
TBC1D2	0.874439149	8.172463104	1.99E-05
H2-Q6	-0.881871032	8.375950789	2.03E-05
TSPAN12	0.782616085	8.007710957	2.06E-05
SLC7A8	-2.846736314	9.5167082	2.08E-05
PERLD1	-0.3973456	7.908741889	2.10E-05
PDLIM7	1.44856249	8.741286105	2.12E-05
CFB	-0.72172957	8.805309795	2.13E-05
EDN2	-1.626458491	8.505370282	2.13E-05
ESRRA	-0.994524148	10.57013344	2.13E-05
HTRA1	0.700678387	8.051439006	2.13E-05
THNSL2	-1.013033096	8.622156547	2.13E-05
ACE	-2.516663228	9.885608681	2.18E-05
AY761184	2.755160937	11.57759212	2.18E-05
H2-T23	-1.868388866	11.99644427	2.18E-05
NID1	0.863876096	8.094773562	2.18E-05
CTSH	1.575726281	9.658831918	2.22E-05

LCN13	0.391782084	7.722823138	2.22E-05
FCHO1	1.113638681	7.987275009	2.23E-05
CYP4F13	-1.754941975	10.63384548	2.26E-05
PPP1R1B	-1.458515809	9.752802671	2.26E-05
1190009E20RIK	0.501437866	8.598387383	2.28E-05
ACSF3	-0.858831433	8.768118156	2.28E-05
KLHDC10	0.49182284	9.972756597	2.28E-05
4732474O15RIK	0.424001718	7.699643689	2.29E-05
LAMA5	0.927952815	8.069282224	2.29E-05
MAN2A1	0.521931383	9.476632459	2.29E-05
PLCD3	0.686819796	7.788537203	2.29E-05
SDC1	0.254073739	7.768475261	2.29E-05
FARS2	-0.683212082	9.985930471	2.32E-05
CES5	-2.067021785	9.002523688	2.33E-05
TK2	0.659417948	8.491681122	2.33E-05
FAHD1	-2.714854242	11.06672949	2.35E-05
FADD	-0.442044614	8.872071712	2.37E-05
1110031I02RIK	-0.645028884	8.344618239	2.44E-05
ALDH1B1	-2.254973035	9.335181769	2.44E-05
E430039I23RIK	-0.55177287	11.44887159	2.56E-05
CASP6	-1.204562791	9.279805227	2.57E-05
SERPINE2	0.705967454	8.01967567	2.57E-05
SLC25A15	-1.474815675	9.233509267	2.57E-05
ST6GALNAC2	-0.892492239	9.790484873	2.57E-05
2610307O08RIK	0.376234402	7.679180664	2.58E-05
SRPX2	0.627456522	7.894486435	2.58E-05
BC046404	-0.879391178	9.552423792	2.63E-05
EMP1	0.995805077	13.12040741	2.63E-05
PPP2CB	0.863911497	10.28447212	2.66E-05
DGKZ	-0.471905049	8.684990718	2.77E-05
LCN2	2.928536368	8.785777241	2.79E-05
CTPS	0.842699794	8.693738531	2.80E-05
MGST2	-1.295271598	12.56133854	2.80E-05
ARF2	2.187435972	9.857440894	2.81E-05
KRT84	1.146397519	7.897124824	2.81E-05
MERTK	-1.054587575	8.577435208	2.81E-05
MLXIPL	-1.669895221	9.457402535	2.81E-05
FIS1	-0.448543232	10.6474503	2.84E-05
IFITM2	1.498601295	10.11289435	2.84E-05
SLC6A4	-1.379139291	9.230762429	2.84E-05
TTYH3	-0.546646002	8.057721188	2.84E-05
EG630499	-1.320700248	12.48663861	2.86E-05
LOC100045343	-1.123567608	11.47914102	2.87E-05
MAOB	-2.147594121	9.020398708	2.89E-05
CLIC5	-0.717185306	8.134077484	2.92E-05
LONP2	-0.90517913	9.729387421	2.92E-05
BTNL2	-0.858205118	8.371398874	2.95E-05
PPP2R2D	0.498667003	9.120629408	2.95E-05
IMPACT	0.776974824	8.427975641	2.96E-05
B230342M21RIK	1.147593566	9.052922935	2.98E-05
COL4A2	1.446054461	8.701235704	2.98E-05
PAOX	2.139172516	9.639332752	2.98E-05
BC057627	-0.665146516	9.405745526	2.99E-05
MYADM	1.513463045	9.746795166	2.99E-05
OBFC1	0.608264294	7.953963268	3.01E-05
ENG	0.476341076	7.783625127	3.04E-05
CD63	0.678675909	10.67035297	3.08E-05
ATG9B	2.718451982	8.468318575	3.10E-05

CGEF2-PENDING	0.429402255	7.712674294	3.10E-05
F8A	0.857094195	9.305460081	3.10E-05
PLVAP	1.861558029	9.231664815	3.10E-05
RAB15	2.276192315	9.613875015	3.10E-05
SOAT2	-1.662116752	10.67687054	3.10E-05
KLRG2	0.31688913	7.672566881	3.11E-05
RAB8A	-0.747519358	11.35007767	3.12E-05
TCF21	1.067984884	8.108025192	3.12E-05
2010107E04RIK	-0.523125518	13.42031033	3.13E-05
TUBB6	1.32506459	9.140631031	3.13E-05
2410002I01RIK	-0.25200064	7.868969709	3.16E-05
NPY	2.457324839	8.389169628	3.16E-05
SERPINA3F	1.154523773	7.993185226	3.17E-05
C030003H22RIK	-0.574415661	7.915282131	3.18E-05
COL6A1	0.899218718	8.920489097	3.18E-05
LRG1	2.828172195	8.685908686	3.18E-05
NDUFV2	-0.555673991	12.18506674	3.18E-05
BC039210	0.273732356	7.847758802	3.19E-05
ITCH	-0.371132046	8.064547935	3.19E-05
TPST2	1.403186261	9.759024964	3.19E-05
ACE2	-1.921583996	9.947879728	3.21E-05
MFGE8	1.857023073	10.1345887	3.25E-05
EPB4.1L2	0.657078563	8.158547402	3.31E-05
GMCL1	-0.553731188	8.403535887	3.31E-05
SGPL1	-1.617945924	10.02811951	3.31E-05
ZDHHC7	-0.791106428	11.10026217	3.33E-05
SLA	0.557782929	8.035365451	3.36E-05
ABCD3	-1.055633544	9.389783751	3.37E-05
KRT36	1.020529594	7.914317549	3.43E-05
MBOAT1	2.809967972	9.525777178	3.43E-05
PLS3	0.352237514	7.930004612	3.43E-05
TGFB1	0.516067157	7.806313052	3.43E-05
UNC13B	0.702297369	9.050728364	3.43E-05
S100A14	1.586915932	8.626707642	3.44E-05
SFXN1	-1.351075767	12.1986851	3.45E-05
SDCBP2	1.229451253	10.78991412	3.55E-05
WTIP	1.383807187	8.921264964	3.55E-05
PYCRL	-0.779540483	8.626698767	3.61E-05
RBKS	-0.472613577	8.303889856	3.61E-05
H2-Q7	-0.872642706	9.059833777	3.63E-05
FLYWCH2	0.613149518	8.176079806	3.72E-05
SERPINA3G	1.866281711	9.116431348	3.73E-05
HINT2	-0.956789167	11.17415906	3.74E-05
SLC43A2	-0.264786935	7.78179281	3.75E-05
ANKRD22	1.139143889	8.124305425	3.77E-05
AW112037	-1.467968998	10.67442346	3.79E-05
UBFD1	-0.576735555	8.528959305	3.80E-05
SEC14L2	-1.137739918	8.554486725	3.83E-05
LCMT1	-0.771861972	8.892287733	3.84E-05
PYCR2	1.195781987	9.146557655	3.84E-05
ZFP809	0.525189785	8.003480333	3.84E-05
BST1	-0.775969426	8.051287812	3.85E-05
CTDSPL	-0.728492784	8.758347132	3.85E-05
DPYD	-0.449247504	7.780991672	3.85E-05
LOC632667	0.62221588	11.23384666	3.85E-05
SCARB2	0.800152176	8.862143471	3.85E-05
SLC35C2	-1.804099629	9.848580227	3.85E-05
TMEM63A	0.442103939	8.384356614	3.85E-05

APOBEC1	1.105523016	10.85702902	3.86E-05
BOK	1.105382354	8.759867	3.86E-05
ADSSL1	0.259091213	7.709375208	3.92E-05
PRKCDBP	1.203697182	8.402452649	3.92E-05
INSL6	-0.981930377	9.552667226	3.94E-05
SERPING1	1.242365523	9.379168578	3.97E-05
TIMP1	1.573584718	8.575443011	3.97E-05
FURIN	1.080743708	10.39769231	4.00E-05
RIN3	0.799762452	8.417347545	4.01E-05
LY6F	0.423082938	7.65954664	4.03E-05
MRPS6	1.494094739	9.792245054	4.03E-05
SLC41A2	-0.653566067	8.349629166	4.04E-05
SMOC1	1.276722838	8.172400826	4.06E-05
POLG2	-0.684786391	8.278360745	4.07E-05
ANKRD46	-0.486629712	8.217762962	4.08E-05
CNRIP1	0.428484341	7.936709635	4.08E-05
LMNA	1.225034888	9.544569185	4.11E-05
ERGIC1	0.861915354	9.026764659	4.12E-05
CENPT	0.634309091	8.385814638	4.14E-05
VWF	0.698277107	8.034689742	4.19E-05
ATP5O	-0.892682217	11.33078695	4.20E-05
HDGF	0.829644245	10.56767646	4.20E-05
MSC	1.197748824	8.58383802	4.23E-05
SLC5A12	-2.398411518	9.305222721	4.23E-05
MANEA	-0.360104805	8.433856644	4.24E-05
A630084D02RIK	1.448888691	9.844063997	4.30E-05
CCNG1	1.241966275	9.024324934	4.30E-05
LRIG3	-1.264708428	10.10358011	4.32E-05
SLC22A4	-0.946180698	8.289098095	4.32E-05
9130213B05RIK	0.70791597	9.042295499	4.34E-05
CS	-0.773471177	11.55723121	4.34E-05
FAM158A	-1.084048417	8.838759078	4.34E-05
SLC5A1	-2.215295971	11.63322145	4.34E-05
DHCR7	-0.333866134	7.877152977	4.36E-05
ATPAF2	-0.487635016	8.562038584	4.37E-05
DHH	0.706519616	7.785679653	4.41E-05
RDH7	-1.914498762	8.824301412	4.49E-05
PSCA	2.671104887	8.580127107	4.52E-05
FBXO25	-1.354022084	9.696095033	4.55E-05
RFC5	-0.23070947	7.9797785	4.55E-05
TXNIP	1.08165598	11.72888345	4.55E-05
2010305C02RIK	-1.257820108	9.438935629	4.56E-05
TMEM176A	1.029198049	8.805527061	4.56E-05
3110043O21RIK	0.364365754	8.040741212	4.57E-05
BCL10	0.471902765	10.01331157	4.60E-05
DNM1L	0.438816715	8.794307127	4.60E-05
VIL1	-1.376984311	11.60984818	4.61E-05
RNF5	-0.643697888	8.912078114	4.66E-05
ANXA1	0.505023481	7.694364646	4.67E-05
SLC25A11	-0.606014976	9.267893797	4.67E-05
AXL	1.148189151	8.736735645	4.68E-05
LRP12	-1.148690631	9.156628766	4.68E-05
A530082C11RIK	-0.500278162	8.084959534	4.77E-05
A130092J06RIK	-1.697529137	9.337015602	4.80E-05
LY6C1	3.185340165	8.888798041	4.82E-05
6330406I15RIK	0.923617587	8.03748866	4.83E-05
BAIAP2L2	-0.698672116	8.307957641	4.84E-05
DHRS4	-0.518710204	8.10404478	4.84E-05

SLC25A45	-2.648688098	11.29069778	4.84E-05
CDX2	-0.598383852	10.87549815	4.93E-05
NOTCH4	0.909514798	8.316053846	4.93E-05
RAMP2	1.308849911	8.87980702	4.93E-05
SNX25	-0.515269437	8.153786672	4.93E-05
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SUSD2	-2.380283069	9.430820232	4.96E-05
ZMAT3	0.780928659	8.299529293	4.98E-05
TPST1	0.482446957	8.048049432	5.02E-05
ITPKA	-0.899916914	8.24935233	5.03E-05
LOC639715	-0.984070674	8.954427813	5.03E-05
CCAR1	-0.406401497	9.321989551	5.06E-05
AW146242	0.709837908	8.502516303	5.10E-05
C1GALT1	0.818485199	8.319764938	5.10E-05
CFP	1.497916063	9.26985327	5.10E-05
ENTPD2	-0.775207441	9.309915209	5.10E-05
LOC100044101	-0.339501141	8.320847508	5.10E-05
FPR2	1.072761685	7.972770893	5.11E-05
LOC100046144	1.661102241	9.643834979	5.15E-05
LOC382092	0.808832013	11.30510968	5.16E-05
LMAN1	-0.840859619	9.515007573	5.17E-05
LOC665181	-0.571405978	9.148578537	5.17E-05
LOC100040525	1.623326924	10.29342231	5.28E-05
NDRG3	-0.453220092	8.219033662	5.30E-05
FA2H	1.005575083	7.912495652	5.33E-05
NDUFS7	-0.826290654	11.82234791	5.43E-05
SEC31A	-1.010554722	9.82771113	5.43E-05
AES	-0.677314157	10.315045	5.44E-05
2310047D13RIK	1.019398379	8.404331528	5.49E-05
ENO1	1.063855554	11.20864601	5.50E-05
CML4	-1.924967475	10.07113703	5.52E-05
SMARCC2	-0.337314516	8.274962694	5.52E-05
AGPAT9	-0.696688236	9.080170528	5.57E-05
CSTB	1.217024986	12.21134585	5.57E-05
SDHB	-0.823585021	9.461154921	5.61E-05
4930546H06RIK	0.218876447	7.620625785	5.69E-05
LOC676389	-2.136787281	9.535934491	5.69E-05
F2RL3	0.79494471	8.020052055	5.72E-05
ZDHHC13	1.208737721	9.30883468	5.78E-05
1190003J15RIK	1.88295035	9.972463814	5.81E-05
GJA4	0.467141651	7.832092324	5.81E-05
ADM	0.319012145	7.705014707	5.84E-05
ERLIN2	-0.448381065	8.626511159	5.84E-05
RAI3	0.538034584	7.988901328	5.84E-05
LRRC50	-0.62165842	8.411049542	5.87E-05
LYZ1	1.727977336	12.37239892	5.88E-05
GLTPD2	-0.410841886	7.827331028	5.91E-05
ARPC1B	0.567340304	10.73705428	5.95E-05
CCND3	0.562050429	8.542820025	5.95E-05
LOC100038926	2.082120464	11.84384338	5.95E-05
TMEM135	-0.599678087	8.090011585	5.95E-05
IMMP2L	-0.808236049	8.476168847	5.98E-05
PRKACA	-0.534733316	9.194736588	6.01E-05
DLG5	0.625066337	9.151739711	6.09E-05
1110008P14RIK	0.614316669	9.339649121	6.12E-05
IDH3B	-0.961815418	10.71466698	6.14E-05
SLC11A1	0.603697469	8.178114885	6.14E-05
OSBPL6	-1.095018045	8.894145604	6.15E-05

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ST6GALNAC4	0.272937581	7.628726288	6.20E-05
ADD3	-1.046082911	9.01423217	6.27E-05
DPYSL3	0.496630849	7.831596066	6.29E-05
HEXB	-1.416429145	9.17626337	6.29E-05
EIF4EBP1	1.688176369	10.74587027	6.36E-05
ANXA11	0.745524642	10.03283073	6.40E-05
EPHX2	-2.403825232	10.31803745	6.40E-05
PTGES	0.441381448	7.742258562	6.43E-05
9530027K23RIK	0.440594146	8.524354969	6.48E-05
PPP2R5D	-0.52012928	9.362935391	6.52E-05
APOL7A	-1.680095796	10.68814361	6.55E-05
ATP1B1	-0.978683168	13.25701572	6.64E-05
TMBIM6	-0.988885334	14.26665651	6.68E-05
AU040320	-0.712730485	10.50869466	6.70E-05
NADSYN1	-0.326642144	7.909127672	6.75E-05
RER1	-0.495541809	8.638682208	6.75E-05
TRIP10	0.333185317	8.359529683	6.75E-05
9130204K15RIK	0.293773348	7.627083824	6.82E-05
ALS2CR4	0.233904963	7.780770652	6.82E-05
BAX	0.825048211	8.701438066	6.84E-05
GOLPH3L	-0.54395567	8.42029072	6.84E-05
ABR	-0.559872625	8.448979757	6.92E-05
COBL	-0.686858624	8.422347359	6.92E-05
ETFA	-0.747766098	10.83780939	6.92E-05
CD9	1.870544547	9.031461458	6.98E-05
COL6A2	0.324823237	7.87508641	7.05E-05
CYP2S1	-1.496215807	9.770360801	7.05E-05
GPRC5A	2.554978165	10.35175566	7.05E-05
S100A13	1.091912149	10.05280509	7.05E-05
SLC7A7	-0.852573509	8.700765983	7.05E-05
SOLH	-0.640198626	8.62835529	7.23E-05
EG632778	-1.411194985	10.38011294	7.28E-05
SLC25A17	0.556705277	8.765870307	7.28E-05
2010001J22RIK	-1.475853327	8.853938993	7.30E-05
LY6G6C	1.78096226	8.557833225	7.34E-05
GALNT10	-0.579555301	8.927180406	7.40E-05
APOC3	-3.614004991	13.16816731	7.41E-05
4631426J05RIK	0.379963423	7.872663026	7.46E-05
WIPF3	-0.992953806	8.429305384	7.46E-05
EG433224	-0.581052838	8.764205377	7.49E-05
PLOD3	0.816923531	9.698921289	7.52E-05
THBD	0.571203394	7.963985756	7.53E-05
CYP2D26	-1.858082555	9.406192131	7.68E-05
TIRAP	0.371773531	8.057071769	7.69E-05
ATP5J2	-0.964454976	13.48401842	7.76E-05
LOC674135	-1.279366204	11.89168127	7.76E-05
RNU6	1.380494232	12.55557874	7.76E-05
CMBL	-1.065678992	8.624883371	7.79E-05
ATG12	-0.446752131	9.674581416	7.87E-05
AMOTL1	0.704503693	8.08114074	7.93E-05
LOC100046953	0.399583435	7.965675497	7.95E-05
CLIC1	0.972726744	9.925826035	7.98E-05
PRKX	1.004557288	9.567157712	7.98E-05
SBK	-1.034409364	8.621415492	7.98E-05
AA407270	0.346537535	8.982605244	8.05E-05
PPP1R14B	0.345002609	8.434426706	8.05E-05
NAIP5	-1.448281796	8.781372677	8.07E-05

PJA1	-0.675858569	9.500041057	8.14E-05
HISPPD2A	-0.618168226	8.423315535	8.17E-05
EHD4	0.879592503	9.357042955	8.20E-05
AVPI1	0.593742259	8.00100107	8.26E-05
IPAS	0.774802371	8.139685527	8.31E-05
ANKRD50	1.308732368	9.104253675	8.44E-05
YIPF1	-0.656314532	9.325289873	8.44E-05
SURF4	-0.557702883	11.63553374	8.53E-05
2810025M15RIK	1.045352812	9.305505541	8.57E-05
WASL	0.787297004	10.99489948	8.57E-05
ZFP35	-0.23122909	8.164613884	8.57E-05
2210008N01RIK	0.614550071	7.994113734	8.58E-05
GUCY2C	-0.444005376	8.178135106	8.58E-05
GM239	-0.486477214	8.500855333	8.61E-05
AW555464	0.561499206	10.60900736	8.64E-05
2210410E06RIK	1.289034961	10.65151419	8.66E-05
PLA2G2E	0.418467869	7.66961061	8.66E-05
SPRED1	0.603747817	8.681551448	8.66E-05
A530026H04RIK	0.294196978	7.850110171	8.68E-05
DUSP11	0.605237841	10.44619552	8.68E-05
LOC385644	0.547510161	7.684804475	8.68E-05
4833421E05RIK	-0.270324417	7.925369637	8.78E-05
EGFR	1.120011562	8.530482353	8.79E-05
C79267	0.466067178	7.898924463	8.84E-05
WBSCR14	-0.783940814	8.320678027	8.85E-05
PEA15	0.706905106	8.385610547	8.87E-05
MMP10	2.702366803	8.922653417	8.96E-05
GALM	-1.111574209	8.669206926	9.01E-05
LMCD1	0.429629681	7.831036726	9.01E-05
EIF3S4	1.233242967	10.54951881	9.03E-05
MSI2	0.378346407	7.892809364	9.03E-05
ATP1B3	0.880263788	10.09207836	9.04E-05
IPPK	1.528756204	9.404233906	9.04E-05
ACP6	-1.001293334	9.587876496	9.06E-05
LOC100046457	0.56587908	8.364685907	9.06E-05
SPRY3	-1.085503707	8.464826004	9.06E-05
8430408G22RIK	0.449804802	7.741632295	9.09E-05
DNTTIP1	0.547094137	11.05289032	9.09E-05
DDHD2	-1.020174189	9.011895958	9.10E-05
HEPH	-0.533463883	8.723892377	9.11E-05
AREG	3.516757936	11.60263046	9.40E-05
HSD3B7	0.785198804	9.983267643	9.40E-05
NLGN2	0.410940699	7.890112817	9.40E-05
2200002D01RIK	-1.116537896	11.49668866	9.59E-05
RPS12	-0.381215436	14.27037197	9.60E-05
BBS7	0.189191444	7.777924186	9.63E-05
LOC100047261	0.894127044	12.30377319	9.63E-05
EMILIN2	0.246380665	7.656823428	9.65E-05
ACADVL	-0.783585718	10.205671	9.76E-05
AL022832	0.58949978	11.40774557	9.82E-05
GPX3	1.665218264	9.543537543	9.91E-05
D17H6S56E-5	0.754615476	8.211869478	9.93E-05
PLD1	-1.072034291	9.593157927	9.95E-05
P2RY5	0.885813299	9.447415134	9.99E-05
PQLC1	1.254964451	9.080554786	1.00E-04
SCL0015365.1_6	1.351219634	7.936837294	0.000100084
GLUD1	-1.80973403	11.7448188	0.000100291
LAMA1	0.507697314	7.776494468	0.000100291

FCGR4	1.690721499	9.290479622	0.0001016
KCNJ8	0.688676029	8.108542308	0.000101619
ADCK5	-1.134134532	8.81187796	0.000101784
NUMB	-0.442548452	8.293295128	0.000101831
1810020D17RIK	-1.828560297	9.402512598	0.000101988
CKMT1	-0.842893756	12.50426125	0.000101988
LOC383942	0.700304868	9.290364757	0.000102414
SLC7A9	-1.385882234	11.26751738	0.000102414
NME7	-0.632044487	11.20922497	0.000103783
CLPP	0.504392531	10.2891625	0.000104384
BAHCC1	-0.43097043	7.966880628	0.00010654
CRAT	-0.76022792	8.34494401	0.00010654
MTMR12	-0.446950571	8.658864018	0.00010654
NOS3	0.244371775	7.642396537	0.00010654
PDGFRA	0.870127442	8.627934848	0.00010654
WBP5	1.186651603	10.04434296	0.00010654
CLDN4	2.31592882	11.8378861	0.000107144
LGMN	2.352434167	10.563633	0.000107948
AA960436	0.599259209	8.801622632	0.000108246
POLE3	-0.286167909	8.717982404	0.00010881
C130027E04RIK	0.607409716	8.295067905	0.000109117
2810423O19RIK	0.773566034	8.664837131	0.000112943
DGKA	-0.957498018	9.899440501	0.000113734
2210016F16RIK	-1.023093814	8.839911004	0.000114441
FNDC3B	0.727971981	8.681341624	0.000114867
ITGA5	0.346580753	7.764456247	0.000114867
LMAN2	-0.789112896	9.246424351	0.000114867
PVRL3	-0.44055579	9.938997317	0.000114867
APEH	-1.015468029	11.3475845	0.000115049
CLRN3	-1.04047469	10.57442196	0.000115049
GM484	1.48876459	8.293421128	0.000115468
CD8B	-0.888438877	9.950380735	0.000116784
AU022508	0.808843937	8.578742717	0.000117922
B4GALNT2	-1.672591281	10.77059699	0.000118163
CYP11A1	0.324407738	7.727581656	0.000118566
NDEL1	0.536703199	9.452374025	0.000118566
SCL0002507.1_236	-1.986402971	10.37956143	0.000118566
TNNI2	1.240520315	8.053609161	0.000118577
SYPL2	-0.371350049	7.787423494	0.000119005
RAB17	-0.414667808	7.987756947	0.000119157
1200002N14RIK	0.432380013	7.839293644	0.000119231
GSTK1	-1.853680104	10.2834068	0.000119231
IHH	-0.559214357	8.305366485	0.000119231
TMEM184A	-0.860827541	9.788043796	0.000119231
FMNL3	0.482143192	7.90021206	0.00011953
LOC100045300	0.436587614	11.28403558	0.00011953
COQ4	-0.34465964	8.057135443	0.000120619
MTCH2	-1.210101512	9.615760349	0.000120619
PRR15	-1.920418058	11.26684092	0.000120619
RASGRP4	-0.831503754	9.638767295	0.000120619
TMEM199	0.913434991	9.179304507	0.000120983
DHX32	0.772946737	9.838491841	0.000121059
H2-Q8	-0.674106703	8.422697016	0.000121059
NAIP2	-0.507263778	8.341468186	0.000121059
UBXN1	0.632788553	11.45151827	0.000121059
GNPTG	-0.511916434	10.32921115	0.000121155
OSR2	-2.529065268	10.09200172	0.000121155
1110012O05RIK	1.032491265	10.338379	0.000121169

FKBP1A	1.096676674	10.68566062	0.000121357
SLC24A6	0.453828835	8.377723031	0.000121842
CRTAP	0.335873616	7.938391646	0.000123023
GADD45G	0.785355867	9.695342433	0.000124885
MLYCD	-0.541386836	8.779324936	0.000124885
NSF	0.875006074	9.25664397	0.000124885
CYP1B1	0.58031514	7.972055099	0.000125047
MLP	0.259220063	7.679867643	0.000125645
ASPRV1	0.179586981	7.635801866	0.000126286
P2RY6	1.37342	8.977740605	0.000126642
HK1	0.325168655	7.65089482	0.000127204
2400010C15RIK	-0.529132942	12.39060059	0.000127956
IFITM1	1.675527828	9.270161451	0.000128956
RBL1	-0.25519349	7.846787769	0.000128956
KCNE4	0.345114845	7.746408426	0.000129212
PLA2G7	0.217947655	7.651140902	0.00012954
1110020P15RIK	-0.360221661	13.42387585	0.00012955
2310033P09RIK	-0.351302309	8.338195967	0.00012955
UBE2H	0.534047557	8.617183353	0.000130515
TMEM205	-0.820069077	9.934052852	0.000131016
2610027C15RIK	0.69554062	8.0748963	0.000131213
VPS37B	0.904261802	9.787604385	0.000134088
CALM3	-0.521403184	11.72536628	0.000134436
LOC100047093	0.720096414	8.899965333	0.000134436
PLK2	1.009893448	8.249019986	0.000134436
ASS1	0.496501884	8.129120865	0.000134946
GREM1	1.328747396	8.592550986	0.000134946
LOC622404	-0.625670262	9.438474018	0.000134946
2310007H09RIK	-0.237984973	7.754175632	0.000136431
ASPA	-0.487975027	7.90730092	0.000136431
GPBP1	-0.620386452	9.023362121	0.000140095
ANXA4	-0.634289012	10.00280333	0.000140227
TRIM10	1.173166257	7.985437612	0.000140333
CYP7B1	0.32271478	7.892045035	0.000140706
SCT	1.208270461	12.85469274	0.000140706
GGTA1	0.364815199	7.883706823	0.000141277
5730406M06RIK	0.316701366	8.346205254	0.000141411
BC025546	0.411108807	8.785702856	0.000141411
EIF2B4	0.578450975	10.08385635	0.000143542
BCL11B	-0.34501261	8.268173962	0.000144453
METTL7B	-1.812743919	8.813299352	0.000144492
SLC25A5	-0.741265172	13.62410194	0.000144518
PHLDA2	1.710469031	8.677535554	0.000144797
CNPY2	-0.596964116	9.192882101	0.000145357
NDE1	0.416608236	8.192717936	0.000145424
SFRS3	-0.336743879	8.201822801	0.000145424
CYTH4	0.413356967	8.028049404	0.000146566
PPL	0.69188057	7.956794707	0.00014714
ACSL5	-1.132954415	12.77843155	0.000147755
CYGB	0.956582035	9.008260081	0.000149861
SEPN1	0.585062591	8.218355073	0.000150294
AQP3	-1.088417912	8.593868078	0.000150651
TMEM14C	-0.510381328	10.42456893	0.000150651
LOC240672	1.3395081	9.029499487	0.000151723
5830411I20	0.981435625	8.907710247	0.000153629
CDKN1A	1.06144674	11.53683841	0.000153891
9530008L14RIK	-0.201085386	7.706926771	0.000155148
MGC18837	-0.780733843	9.409513388	0.000155148

TMEM22	0.552119245	7.768990447	0.000155148
EAR2	0.874048729	7.942029964	0.000157265
MYD116	1.865867055	8.700014175	0.00015733
TMCC1	-0.444809207	8.313331439	0.00015733
HPGD	-2.124043387	9.425713327	0.000157563
TXNDC13	0.414340158	8.347986568	0.000158039
HAGH	-1.029573643	9.481475653	0.000158202
NCDN	0.276226194	8.022430444	0.000158202
SLAIN2	-0.526426219	8.949510507	0.000158331
ARHGEF11	-0.642986027	9.847439989	0.000158352
DEFA1	1.263392316	12.23918464	0.000158429
1110002B05RIK	-1.052133649	9.813965706	0.000158983
DNAJC4	-0.492842756	8.527730398	0.000159169
PTPN12	0.22974148	7.908969323	0.000159169
AHNAK	1.075455082	10.86968878	0.000160415
DORZ1	-0.480470172	8.094953302	0.000160442
EFCAB4A	0.202473486	8.018802167	0.000160442
EIF2AK1	-0.589298162	9.651534189	0.000160442
HPRT1	0.500234369	9.793258066	0.000160442
ITGB4	0.878635587	11.34180315	0.000160442
MIF	0.913551087	11.99353939	0.000160442
RAB31	1.6915668	9.939728304	0.000160442
TTLL2	-0.937967664	8.542280201	0.000160442
FSCN1	0.255181975	7.761869649	0.000161397
2810439F02RIK	-0.551160685	7.989955194	0.000162114
EIF3G	1.216981021	10.22955874	0.0001629
1810022C23RIK	-2.107845516	9.116511117	0.000163574
ARC	0.531576207	7.747021301	0.000164428
CLIC4	1.929015611	9.960509549	0.000164566
UGT1A1	-0.637735207	7.919982507	0.000164643
PIK3R2	-0.355504054	8.054468117	0.000164936
EGFL7	0.730883136	8.188416996	0.000166074
IFNGR2	-0.81124059	8.955726224	0.000166074
LOC100039496	-0.333635006	7.671684116	0.000166074
LOX	0.230250798	7.61853771	0.000166107
B4GALNT1	-0.936485514	9.859828156	0.000166217
DBNDD2	0.78042322	10.31335028	0.000166874
PLA2G15	0.594790793	8.284580462	0.000166874
BGN	1.843485661	10.13628275	0.000166997
TBL1XR1	-0.385545807	8.136024224	0.000166997
TM6SF2	-0.989193837	10.3906302	0.000166997
TRIM8	1.051571682	11.19944456	0.000166997
DAB1	-0.569481229	7.935248162	0.000167365
C730029F17RIK	0.663971395	8.952168839	0.000168251
EAR11	0.433887929	7.7213683	0.000168754
INHBA	0.298423433	7.657248712	0.000168754
1110003E01RIK	0.497767597	11.83448843	0.000169621
PHLDA1	2.433663548	10.45355996	0.000169965
FMO5	-1.549231158	8.849806729	0.000172056
RAG1AP1	0.336923752	9.002300877	0.000172056
CUTA	-0.533931066	10.0877627	0.000173734
6430548M08RIK	0.662801794	8.68312085	0.000174383
2310002J15RIK	0.599000962	7.705219689	0.000176251
ALDH3B1	-0.939245964	9.140551132	0.000176251
LOC100045882	1.509880099	10.18855355	0.000176251
VPS28	-0.606869024	12.7806143	0.000176251
FOXQ1	1.580085786	9.35802728	0.000177877
MORF4L1	0.607259722	9.904953463	0.000177969

PRSS22	1.681414283	8.129964839	0.000177969
DDX47	0.337071396	9.470216015	0.00017861
ASAH3	-1.038827787	8.257690769	0.000179041
SIVA1	0.829046172	9.817116988	0.000179041
TMEM176B	1.074767818	10.7127211	0.000180763
ANGEL2	-0.477115805	8.925216333	0.000181051
9530018I07RIK	-0.692079996	11.93762022	0.000182358
ENPEP	-0.387067991	7.811430267	0.000182358
HKDC1	-1.009015774	11.46435087	0.000182475
SOX9	1.079818707	9.413954111	0.000183596
CIRH1A	1.055387317	9.497096872	0.000184017
RFFL	0.255860538	7.816153115	0.000184017
UBE2D3	-0.215322038	8.024284924	0.000184298
CMAS	0.651842837	10.86208634	0.000184704
CREB3L2	-0.618424133	8.311914451	0.000186034
9430038I01RIK	-0.866063426	8.587973218	0.000186313
CSNK1D	0.589581968	9.499699502	0.000186313
D15MGI27	0.435913735	9.150588124	0.000186313
NDUFS6	-0.546405371	12.01028161	0.000186313
DARC	0.803349756	7.98625161	0.000186828
ACP2	-0.359671641	8.433015092	0.000187559
TTC19	-0.357303255	8.239913792	0.000187559
LOC100046741	0.8637449	8.890148505	0.000187623
AGPAT1	-0.317084749	8.170300532	0.000188918
GCH1	1.899484835	9.926736307	0.000188918
KLF2	0.745230607	8.207046935	0.000188918
2210015K02RIK	-0.93466735	9.634025676	0.000189344
NACC2	-0.464360481	9.233766975	0.000189344
TMSB10	1.875674313	11.6294056	0.000189344
SLC5A6	-1.571553403	9.322633394	0.00019012
EMCN	0.873166917	8.435503307	0.000190242
C1QA	0.865156232	8.230800394	0.000192113
MS4A10	-1.525103123	13.79121044	0.000194769
CTSW	-0.465297253	8.065126413	0.000196035
ALKBH7	-0.565168788	8.790198538	0.000196816
LOC100045981	0.535833336	8.27275685	0.000197831
1700088E04RIK	0.203856976	7.842989298	0.000198243
TTC22	-0.724158785	9.453848106	0.000199969
GTSE1	0.518006531	8.074882213	0.000201669
2410018C17RIK	0.532556532	9.962174802	0.000203306
PLD4	0.460073828	7.855643392	0.000203476
TNC	0.540448062	7.93693057	0.000203725
LRP4	-0.630018085	8.304527323	0.000203847
SPP1	0.759035545	7.75836068	0.000203847
SEC16B	-0.801777124	8.866278701	0.000203979
H2-TW3	-0.547293853	7.978240748	0.000205326
MTMR11	-0.323171297	8.359622319	0.000208186
LOC100044696	-0.311514052	8.040894939	0.000210527
4930570C03RIK	0.500638665	8.368242814	0.000211622
SH3GL2	-0.667479364	8.526224546	0.000217173
2600005C20RIK	0.676701002	8.905760948	0.000218474
CX3CL1	-1.062724437	9.643642487	0.000218474
GALT	-0.452761179	9.344722241	0.000218474
RALGPS2	0.337599891	8.58527939	0.000218474
AK3	-0.997032171	10.40685086	0.000220227
AKR1E1	-0.451981135	7.94809052	0.000220227
NBL1	0.868083534	8.966316599	0.000220227
UQCRH	-0.632676434	13.31540861	0.00022126

AI481316	0.642193963	10.26233798	0.000222249
AP1S1	0.415052138	8.614896679	0.000222249
STX1A	0.525583295	7.98176445	0.000222249
A730017D01RIK	0.557218344	7.820716259	0.000222276
PCBD2	-0.707019864	9.299240314	0.000222276
TPM4	0.865254328	9.401150175	0.000222276
SYNPO	-1.185248711	10.28544557	0.000223368
D430028G21RIK	-0.735258183	8.389482283	0.000224745
1700007E06RIK	-0.693128886	8.05646498	0.000224912
ITPRIP	0.349047082	7.852105168	0.000224973
PLXND1	0.385414557	7.839182762	0.000224973
ADRB2	0.319460429	7.806577869	0.000229072
EDG5	0.347253369	8.014802945	0.000229471
CLEC2E	-1.788112399	11.11136167	0.000229548
LOC381019	-1.928648001	9.497446553	0.000230551
ICAM1	0.352549441	7.954826729	0.000230935
TREH	-3.260426803	11.39021341	0.000231611
SERTAD1	0.433279169	9.327716048	0.00023319
RAP1B	0.681867947	11.66047592	0.000234879
RRP9	0.357905879	8.356316691	0.000234879
2600011E07RIK	0.331359996	7.654536318	0.000235922
MCOLN2	-0.395217272	7.948972361	0.000236869
ZCCHC8	-0.3586122	8.622497094	0.000237935
CXCL1	1.789823795	8.568321058	0.00023851
DLST	-0.792498315	11.05035036	0.000238909
IGSF11	0.369038624	7.667490321	0.000239094
GSTZ1	-0.819141138	9.353806908	0.000241395
NOL14	0.274563387	8.106047982	0.000242415
RHOT2	-0.429652325	8.781832418	0.000242604
ZFAND2A	1.597979535	10.48607598	0.000243119
TSPAN1	0.603411909	7.915149785	0.000243736
NAV1	0.612356747	8.157881203	0.000243837
TCEA3	-1.821224321	9.362384245	0.000243837
CACNA1D	-0.996339193	8.560999141	0.000244641
COVA1	-0.326943989	8.085077461	0.000244641
MFSD7A	-0.276965374	7.919430907	0.000245067
EDNRB	1.357869121	8.946234602	0.000246046
LYPD6B	0.253913167	7.693232713	0.000246908
SLC30A5	-0.789350081	10.29033978	0.000250631
TNFSF12-TNFSF13	-0.943028933	9.480753856	0.000251502
LUZP1	-0.709653937	9.953606761	0.000252375
3110057O12RIK	-0.298573311	7.828034036	0.000254371
ATP5L	-0.31377549	12.61407392	0.000254371
BTD	-0.317344705	7.846943581	0.000254371
D330008I21RIK	-0.288622768	8.184872091	0.000254371
FARP2	-0.952263237	9.702322254	0.000254371
PKD2	0.214699312	7.763498724	0.000254371
SLC5A9	-0.981588009	8.349381879	0.000254371
6230425C21RIK	0.201197359	7.73322025	0.000257434
A230106J09RIK	-1.301226466	8.612882067	0.000257434
IGSF3	-0.795875508	9.296790523	0.000257434
KCTD17	0.365074038	7.828588394	0.000257434
LOC100038894	0.246664886	7.644474463	0.000257434
S100A1	0.830593386	9.611411294	0.000257434
TMEM180	0.345351897	8.062486079	0.00025751
SFRS9	0.473048211	9.766998186	0.000258248
CARKD	-0.444442596	9.829437681	0.000259921
SPRR2I	0.180348182	7.532295312	0.000259921

STARD4	-1.006254879	10.92862245	0.000259921
TRIM31	-0.959638492	11.0984392	0.000259921
CYP2D10	-1.056406183	8.509156539	0.000260948
ALDH16A1	-0.53014763	8.947013763	0.000261318
SYT8	0.650726615	7.772752796	0.000261318
NGFRAP1	0.749862051	9.394992605	0.000262112
NFYB	0.393762067	9.177724415	0.000266461
EMP2	0.886043639	8.098985469	0.000266597
SLC31A1	-1.233966327	9.631181992	0.00026701
CCDC25	-0.325113837	7.971352278	0.00026866
SLC15A3	0.597587286	7.92562835	0.00026866
CD200	0.871217452	8.173850927	0.000274933
GPLD1	-0.305221683	8.179289214	0.000274933
GTF2F1	0.346362408	9.020522466	0.000274933
LOC677448	0.617889091	9.155389864	0.000277905
ANXA10	0.802748291	7.721349029	0.000278605
LOC100047934	2.69919524	10.95061566	0.000278729
SNX2	0.432419664	9.850078363	0.000278729
9930020B22RIK	0.465917752	7.640344739	0.000280251
ACOT11	-0.743349489	8.68826084	0.000280251
ETFB	-0.651573705	11.05107357	0.000280251
TM4SF5	-1.526900554	11.55974505	0.000280602
NFKBIL2	-0.516220305	8.20055183	0.000283382
TMEM16J	-0.965283644	10.30007278	0.000283382
CRHBP	0.194566966	7.567106265	0.000285089
UGT2B34	-0.603968466	7.996963028	0.000285157
2310014H01RIK	0.966964449	9.1713328	0.000285346
ANKMY2	-0.665511528	9.35473997	0.000285346
ZWINT	0.918172479	9.233626026	0.000285346
RORC	-0.864440404	8.209396126	0.000286457
THSD4	0.289982497	7.842193175	0.000286769
ATP5C1	-0.906947049	12.93678232	0.000287906
DUSP10	0.297655878	7.867962147	0.000287906
BC017158	-0.408015852	8.153873495	0.000289317
2010001F03RIK	-0.229007013	7.864880485	0.000291742
1200016B10RIK	-0.405626463	8.660213722	0.000294785
FIBP	-0.538732606	10.2879977	0.000296367
PTER	-0.458145597	8.582887729	0.000299199
TFAM	-0.373767868	8.407366711	0.000299429
GATA5	-0.861089099	8.729332426	0.000301443
DQX1	-0.427646609	8.108593148	0.000303071
DNAJB12	-0.38087211	8.364837013	0.000303861
CPS1	-1.828776356	9.186986159	0.000304394
AQP11	-0.88168677	9.109720573	0.000304799
DERA	-0.505798026	8.46035948	0.000304922
SEC24C	-0.472630514	10.48403859	0.000305414
PSG25	0.232531673	7.633721873	0.00030599
SPATA2L	-0.207231714	7.821531687	0.000306121
OLFML3	0.494384873	7.995186313	0.000306279
RRAGD	-0.956436767	8.683414571	0.000306353
ZFP260	-0.397712202	8.66089039	0.000306353
9430023L20RIK	0.47637968	9.338451043	0.000307423
ETL4	-0.602078329	9.039912402	0.00030846
CHN2	-0.361128718	8.917934333	0.000309129
2010308M01RIK	-0.269628313	8.006970529	0.000309511
LGALS1	1.155364458	9.403886829	0.000311501
TNFSF9	0.1778189	7.657171314	0.000311991
8430410A17RIK	0.33562917	7.956000718	0.000312239

ETS1	0.343923092	7.876958167	0.000312239
POLD1	-0.417320575	8.568766756	0.000312517
NKX2-3	0.810002034	8.567467645	0.000313884
TMEM167	-0.452751524	8.336646855	0.000314602
HP	0.192191175	7.658024454	0.000314944
BET1	-0.413246542	7.963568442	0.000320393
OXCT2A	0.210137961	7.623029891	0.000322586
ESAM	1.245428027	9.060364818	0.00032362
SENP3	0.537231159	9.419182044	0.00032362
TRMT2B	-0.195919653	7.793023542	0.00032362
LOC100048613	-0.448407016	13.16339268	0.000324647
SYTL3	-0.199239629	7.709135456	0.000327529
SNX13	-0.504260314	8.851523509	0.00032813
AKAP12	0.196579037	7.689850505	0.000328306
SCL0001379.1_70	0.365641204	7.819685945	0.000328924
1300001I01RIK	-0.450982126	8.627207913	0.000330768
APOA1	-0.860649367	15.73014914	0.000330768
MAML2	0.367804577	7.941788665	0.000330768
SERF2	-0.772677946	12.41230855	0.000330768
RNF144A	0.292667309	7.762330651	0.000331719
EXTL3	0.270075362	8.537629608	0.000333061
2010003J03RIK	-0.28638412	8.196104834	0.000334433
TPBG	0.489608772	8.164081628	0.000335151
ALDOA	0.918144403	11.32486756	0.000335547
ENO3	-0.632967043	8.085169334	0.000335547
LY6G6E	0.243269064	7.595535416	0.000335547
NQO2	-0.627864099	8.707262018	0.000337867
1110006G06RIK	-0.442827243	8.294429172	0.000338833
PIGQ	-0.399381918	8.698668198	0.000338833
ASAH3L	1.077179704	8.630025346	0.000342662
B230112P13RIK	0.386826612	7.874742444	0.000343376
SLC37A4	-0.521545437	7.917935277	0.000343376
GSDMA1	0.306252152	7.61387303	0.000344601
GUCA2B	-1.242388281	15.14338789	0.000347414
TTC7B	0.285546749	8.062564133	0.000347697
5530400K22RIK	-0.276738967	8.342650048	0.000347771
PSCD3	0.562928865	8.314669818	0.000347771
PTRH1	0.933392012	8.591819746	0.000349664
SPOP	0.522955743	11.03283001	0.000349762
2900026A02RIK	-0.700731969	8.940823353	0.000350273
RASA3	0.452853399	8.497124867	0.000350329
PANK3	-0.475196043	8.051544833	0.000353405
5830468K18RIK	-0.308062171	7.990832106	0.00035343
ARHGEF3	0.783949135	10.75628801	0.00035343
C130090K23RIK	1.606601358	8.094350405	0.00035343
TSPAN3	-0.792785255	8.763903577	0.0003563
2310002L13RIK	0.210597111	7.542554735	0.00035829
LOC100044204	-0.93653456	8.364390511	0.000360033
TYMP	-0.304179642	7.858676006	0.000361331
NFATC3	-0.255127478	8.546133929	0.000361497
SCL000490.1_983	-0.31296095	8.508670073	0.000361497
PECAM1	0.341287873	7.793818259	0.00036319
5033428B15RIK	-0.587445342	8.114765681	0.000363745
GAB1	-0.976495221	8.725586052	0.000364083
PTPRE	0.507162487	9.313419	0.000365193
MAP3K3	0.411098471	8.592573004	0.000365658
FGD6	1.361420123	9.112777278	0.000365918
NCOR1	-0.522648754	9.005983201	0.000365918

TSC22D2	0.955887823	9.477028863	0.000365918
GHRL	1.96664661	9.162312016	0.000366566
RCSD1	0.3900669	8.033600199	0.00036684
ARL2BP	0.427466986	8.317251884	0.000367029
MBC2	0.498147417	8.184498217	0.000367534
OLFM1	0.254668924	7.871093351	0.000367534
SLC1A4	0.717139402	8.257161603	0.000367534
SUPT3H	0.340785188	8.657064657	0.000368267
UCHL3	0.754177147	8.538630642	0.000368267
SH3BGRL3	1.158268868	10.72803447	0.000369867
PEX5	-0.289960185	8.321654237	0.000370597
WBP1	-0.374532197	8.387529367	0.000370597
AI450540	-0.935415654	9.63257202	0.000370767
C630002C17RIK	0.311090412	7.654915589	0.000370877
ATP10D	0.673705986	8.107317131	0.000371353
4833426J09RIK	-0.970835129	8.992726182	0.00037835
MRPS7	0.4110158	9.736258461	0.00037835
PRIM2	0.915996014	8.01612485	0.000382422
ATG9A	-0.23912712	7.890719513	0.000382562
HADHB	-0.480857197	10.18994849	0.000391746
ARHGEF19	-0.714616339	8.279091221	0.00039311
KRT19	0.955746065	11.30850045	0.000393878
XPNPEP1	-1.073730232	10.85185365	0.000396052
PEX11A	-0.777732685	9.941007798	0.000396086
KLF9	0.896219503	10.13524201	0.000396218
LOC100047619	1.059151272	9.082519604	0.000396218
PRRG2	-0.391418594	9.045874883	0.000396334
EPHA2	0.987098333	8.626683605	0.000398171
NRARP	-0.645728717	8.276108274	0.000398171
TRIP6	0.285714963	7.792343202	0.000400338
UBE4B	-0.714723382	9.795806346	0.000405032
RNF167	-0.765014668	8.372608431	0.000407262
TYK2	-0.274483395	8.392219346	0.0004073
CD97	0.54789782	7.945797503	0.000409945
MFSD7B	-2.127884607	10.78581564	0.000409945
MFSD9	-0.476323751	8.466801303	0.000409945
APG5L	-0.345167045	8.458051385	0.000410179
MRPS15	-0.206577904	7.861800174	0.000410179
GANC	-0.593221474	8.590513182	0.00041133
STARD8	0.228718923	7.803793348	0.000411683
CBX8	-0.278927853	7.806301854	0.000414835
1500005N04RIK	0.578753396	8.365000454	0.000416127
APOC1	0.226053994	7.622453384	0.000416127
ARPC3	0.511406926	10.7221405	0.000416127
JDP2	0.370529355	7.875343459	0.000416127
LOC384206	-0.8444169	12.80953351	0.000416127
SLC17A4	-0.650139647	8.039896032	0.000416127
TINAGL	0.510076417	8.07595605	0.000416127
CTNNBIP1	-0.616878489	8.564683954	0.000416815
1110029I05RIK	-0.674130484	8.335102349	0.000419749
DICER1	-0.223890261	8.043050245	0.000419749
RFC2	-0.269017084	8.975540213	0.000421079
AI875142	-0.816304866	10.15575226	0.000425335
CD160	-0.3660839	7.95422769	0.000425335
SPRR2G	1.153113484	7.811691852	0.000425335
OBFC2B	-0.195041735	8.556246471	0.000425404
DHRS7	0.550260187	8.803458469	0.000429447
ATXN10	0.265123569	7.818508953	0.000434729

AAAS	0.265526528	8.062146809	0.000435397
MYH9	0.32561924	9.822378215	0.000438662
DNAJB6	0.206179976	8.4712529	0.000439558
CBWD1	0.536452569	8.3026311	0.000441995
PAPSS1	-0.972287482	9.225621298	0.000442016
HSPB1	0.475505022	8.277417473	0.000443376
MRPL14	-0.395963222	10.54914298	0.000452485
SULT1A1	1.034834213	8.339335399	0.000452485
THRA	-0.337036128	7.878525478	0.000452485
TMCO4	-0.583038358	8.559421579	0.000452485
LOC381212	-0.260916369	8.082144551	0.000454401
PPAP2B	1.815115326	10.41405386	0.000456493
CLDN2	2.033705399	10.14744151	0.000460363
AP3S2	-0.169481207	7.88196148	0.000461313
MGL2	0.265160879	7.732814444	0.000461313
MMP7	0.544150342	7.776107274	0.000461313
SLCO2B1	-0.902880536	9.070783407	0.000462044
PDGFRB	0.379194079	7.807696737	0.000462422
KBTBD2	0.209117788	8.539294721	0.000462758
ZFP12	0.411207745	8.247200254	0.00046486
LOC100045697	-0.380507821	11.12142118	0.000465564
TMED9	0.793353275	10.10774339	0.000465828
IL24	0.204663967	7.60886469	0.000465839
PYCARD	-0.709578946	8.004716387	0.000465839
RRP1B	0.490459778	8.288542186	0.000468947
RBX1	0.482721017	10.8334808	0.000469766
ENPP7	-1.26084191	8.296503737	0.000472973
E230027M02RIK	-0.245805232	7.607581704	0.000474096
EPN2	0.309094724	7.868085908	0.000475096
NDUFA11	-0.512712761	10.74889857	0.000475525
4930572J05RIK	0.767082607	8.57781735	0.000475623
CCDC86	0.956102968	9.514986916	0.000475623
MAGED1	0.735899988	9.623917688	0.000475623
RIN2	0.344337737	8.244911624	0.000475732
TBK1	-0.649729218	11.29054602	0.000475882
MUPCDH	-1.255121719	14.90620253	0.000478099
GPR160	-1.236391229	9.052034773	0.000478398
CASP7	-1.117720763	9.602684447	0.000479649
CGREF1	-0.320889284	7.976593959	0.00048
S100A16	0.421711881	8.066414873	0.000480074
LOC234987	0.548238242	9.23460273	0.000480434
KLRA17	0.548658811	7.922719033	0.000480551
ANAPC13	-1.066394443	10.58583845	0.000482575
BICD2	0.381114893	8.314811709	0.000484613
FCGR3	1.161892367	8.182944507	0.000486094
2610024E20RIK	-0.838795889	10.23534074	0.000486153
CLIC6	-0.92759974	8.786047172	0.000486153
NDOR1	-0.221396079	8.003658135	0.000486153
ALDH18A1	-0.943500779	9.086525486	0.000487021
EHHADH	-0.294376329	7.786722506	0.000487299
TAF9B	0.230766874	7.972497299	0.000487299
WDR51B	0.382108707	8.321924425	0.000487299
GPR155	-0.736889806	8.093644695	0.000490363
DDRGK1	-0.373259703	10.46864581	0.000491923
PRODH2	-1.27573933	8.423512883	0.000493911
SOCS6	0.357216837	7.972879363	0.000495399
1810008A18RIK	-0.397165859	8.995021473	0.000495449
OSBPL2	0.351645271	8.864777248	0.000497034

1700029G01RIK	-1.079103688	9.361435391	0.000497435
BOLA2	0.460570529	9.872519791	0.000497435
CHUK	-0.431762946	9.102952113	0.00049763
TOX	0.355611854	8.065250534	0.000497779
PPP1R9B	0.43169587	8.459877792	0.000498198
SCG5	0.52399309	8.158364765	0.000500022
MAFG	0.716153402	9.239114921	0.000501085
2810403A07RIK	0.570617215	9.824786342	0.000501912
MRPL52	0.647116781	10.31906974	0.000503311
GGT1	-1.201461964	8.805826615	0.000504467
APOB48R	0.189617796	7.688241017	0.000505011
PLA2G2A	2.293157754	9.401863998	0.000505011
SLC1A1	-1.00463187	8.321938052	0.000505011
1810031K17RIK	0.192006892	7.783636901	0.000508187
1700108L22RIK	-0.655074041	8.99653453	0.000508717
PIGR	-1.88835918	9.823969705	0.000509496
APPBP2	0.815137456	10.36798102	0.000511032
OMP	0.271831815	7.747974121	0.00051334
B230343A10RIK	0.327586123	7.921566721	0.00051337
SLC40A1	1.400062472	8.575184686	0.000515739
SNHG10	0.424873224	8.434773018	0.000515739
EPHB2	0.253685498	7.983652973	0.000518123
FBXO42	-0.207340454	8.027659486	0.000518123
SQSTM1	1.02669532	10.06947898	0.000518123
PLEKHG6	-0.757746915	8.553949346	0.000521498
IL10RB	-0.464856561	8.431230758	0.000523702
FOXA1	0.84033143	8.413135314	0.000525039
UNC13D	0.201160461	7.697460996	0.000528862
ZFP655	-0.254687307	8.021194633	0.000529682
LRBA	-0.405803084	8.879100209	0.000532654
9530081N05RIK	0.235681603	7.586606734	0.000533912
2210013O21RIK	0.762633661	9.514593338	0.000537439
CDX1	-0.700143302	9.151431587	0.000537439
CRIP2	1.802597868	9.391406534	0.000538598
B4GALT3	0.875939065	9.468190062	0.000539662
TMEM41A	-0.803194076	11.47683028	0.000539662
TUBA6	0.572950955	11.37497642	0.000540371
0610030P10RIK	1.273771423	8.199611372	0.000540632
6030400N17RIK	-0.57654484	8.227330246	0.000540632
ZZEF1	-0.658652002	9.454640528	0.000540632
FGF10	0.248591087	7.65145643	0.000541709
4732456N10RIK	1.141054423	7.83802623	0.000542516
LYNX1	0.473810896	7.804854165	0.000543458
PRKCZ	-0.841456201	8.510998811	0.000543458
NT5C	-0.525915234	10.65183375	0.000544303
TINAG	-0.737891003	8.479474823	0.000544303
PHLDA3	0.714895531	7.879117423	0.000544593
PLCL2	-0.599284463	8.822354687	0.000544795
EIF5	0.72251732	11.05452212	0.000545928
RIOK3	0.751200439	10.87198784	0.000546656
SPRR2F	1.816968933	7.987808296	0.000546656
ADH4	-0.858131436	8.034394714	0.000548056
ARHGAP27	0.604003574	8.752430571	0.000548056
USH1C	-0.784939984	11.20751459	0.000556075
WWTR1	0.210410524	7.900406543	0.000557043
ICK	1.058153143	9.839030036	0.000559816
ESPN	-1.651747541	10.64458279	0.000563412
C730026J16	0.459115974	9.281009153	0.000566399

POLR2J		-0.624205692	10.23912021	0.000566399
LOC100041797		0.429455278	8.311486363	0.000567709
LYZ		0.79895539	15.32142413	0.000567863
NR2F6		-0.430390365	9.322144372	0.000567863
LPCAT4		0.893501971	8.363697636	0.000571958
GPATCH2		-0.687183927	8.86187242	0.000572089
LOC100044566		-0.49906999	8.71783943	0.000572089
FBP2		-0.364560202	12.54189518	0.00057253
ALDH1A1		-1.872983663	9.51740374	0.000572543
KRT1-5		0.226101228	7.642870181	0.000572543
SUV39H1		1.234376341	8.126193113	0.000576306
LOC621823		-0.647731765	8.964399175	0.00057631
UBE2O		0.780592933	9.477150923	0.000582719
QRSL1		-0.353923037	8.747910229	0.000582859
LOC100047579		-1.249434853	10.55608517	0.000586622
1190002H23RIK		0.984409044	8.530891664	0.000587336
ASXL1		0.1873601	8.016174471	0.000587336
PLAU		0.984342014	8.326194837	0.000587336
SLC17A6		0.257164612	7.68005401	0.000587998
	Mar-08	-0.43757683	8.215865862	0.00059195
ACO1		-0.463435674	8.187346039	0.000599028
ZFAND6		-0.396456498	8.889962655	0.000599028
BET1L		0.404711125	9.501764743	0.000602803
PREP		0.326913842	8.548037548	0.000607884
GOLGA4		-0.221730102	8.130842688	0.000611221
HIC1		0.275826823	7.727804863	0.000611445
ACAA1B		-1.003168787	8.227658873	0.000614494
2210419D22RIK		-0.455222512	9.367328988	0.000614579
1110012D08RIK		0.330693269	8.125976848	0.000615292
1190008K20RIK		-0.427566128	8.164789555	0.000615292
AU014645		0.360547009	8.752038484	0.000615292
EG433865		0.539890091	8.434388186	0.000615292
GBF1		-0.554918765	9.034024769	0.000615292
HDC		0.771878466	8.00746021	0.000615292
RUNX1		0.303960313	7.736964898	0.000615292
MDH1		-0.525596821	8.019318805	0.000618074
TMEM59		-0.826559892	10.38580329	0.000618074
FAM132A		-1.268983888	8.464411917	0.000620405
ITGB6		1.207154242	9.339827403	0.000621616
PRKAR1A		0.742453776	10.03441122	0.000621616
NDUFB7		-0.336340913	8.664563273	0.000626738
PRL2C2		1.60660858	7.973591138	0.000629195
1810019J16RIK		-0.235949578	8.103517104	0.000631572
MICAL1		-0.957331108	8.93582276	0.000631572
PIGO		-0.243943346	8.419805077	0.000634648
DEFCR21		1.508134906	8.760910246	0.000634958
DEFCR-RS1		1.129964668	14.7545888	0.000634958
E030027L17		-0.198955368	7.836339572	0.000634958
UNC93A		-0.786984629	8.17983948	0.000634958
ATPIF1		-0.767927077	13.87272865	0.000637767
4632401N01RIK		0.319705125	7.833995759	0.000640889
GPR128		-0.854545333	8.676297114	0.000640889
POLR1A		0.363308476	8.582830065	0.000640889
RALGPS1		-0.290613934	7.814532784	0.000640889
SERPINB1A		1.162656634	11.70437177	0.000640889
DDX28		0.364530756	8.131462074	0.000646418
LRP11		0.284112894	7.781202551	0.000646418
TH1L		-0.291840126	8.685137699	0.000646418

SLC35C1	0.76212078	11.43015315	0.000647288
SAT2	-0.281097402	7.822383566	0.000648909
B130018F13RIK	-0.257682254	7.813800902	0.000649669
2310014D11RIK	0.517270547	7.960976267	0.000654686
BC024659	0.20223723	7.901187446	0.000654686
GUSB	0.909961437	8.767940541	0.000655566
ECSIT	-0.40635978	9.275621155	0.000655651
2700084L06RIK	0.322547136	8.185077611	0.000658043
GNAI2	0.750098948	11.02582571	0.000664423
HEXDC	-0.525081601	8.083380287	0.000664423
RABL3	-0.355635035	8.353435277	0.000664423
SH3PXD2B	0.734962962	8.032240798	0.000664423
TMEM185B	0.279385699	9.630958197	0.000664423
CSNK2A2	0.45055071	9.680300548	0.000666781
3300005D01RIK	0.79984716	8.275128063	0.000670264
9030024J15RIK	1.205557002	8.972625104	0.000670524
CIDEB	-0.79772778	11.36679076	0.000672372
PAK2	0.272061134	7.951666338	0.000677258
STX5A	-0.399527345	10.87532808	0.000677364
YBX3	1.851962575	11.15016285	0.000678495
IVD	-0.212819686	7.814481475	0.000678544
KLF6	1.121847348	11.99859235	0.000683009
GLP2R	0.491990475	7.763620419	0.000694063
A730027E01RIK	-0.316390512	7.837861584	0.000694737
TACR1	0.371703087	7.783735077	0.000694737
TAOK1	0.22076357	8.878987716	0.000696671
PTPRF	-0.260456403	7.845494838	0.000696817
CCNO	0.197109482	7.594778956	0.000697817
HBEGF	0.869395926	8.864320589	0.000697817
RGS2	0.155068719	7.642932579	0.000699054
ARHGAP18	-0.557447277	9.396674767	0.000699875
ACADM	-1.181915936	10.90721801	0.000702837
MALL	-0.604617281	10.97009817	0.000703152
C030027H14RIK	0.590853501	7.943530852	0.000703322
6430590I03RIK	0.263182438	7.853711308	0.000703352
A630098G22RIK	-0.284941821	7.759580282	0.000703352
D630032F02	-0.532866742	7.995298882	0.000703474
CXCL2	0.25376588	7.560600426	0.000704917
TMEM139	-0.901083822	8.669843707	0.000705662
SLC2A9	-0.328726368	7.908288779	0.000709216
COQ7	-0.459550344	8.536607782	0.000713462
CPT2	-0.669392938	11.17254482	0.000713462
GOSR1	-0.339895162	8.293264969	0.000713947
IL6RA	0.147833215	7.726334321	0.00071402
IGBP1	-0.278248566	8.372688319	0.000714754
CD177	0.444951935	7.743406773	0.000715323
ENSMUSG00000074075	0.884517322	10.99724826	0.000715323
ARPP19	-0.395019736	8.554124794	0.00072124
MEOX1	0.189196243	7.583582706	0.000723518
TFG	-1.008164359	10.51366736	0.00072529
1700052O22RIK	0.789579085	8.91074985	0.00072678
C1QC	1.162574468	8.289691317	0.00072678
SEC15L1	-0.47033872	8.429494906	0.000728095
0610030E20RIK	-0.213855813	8.091777783	0.000728771
TRMT2A	0.172037307	8.395924123	0.000728771
MAK16	0.406663812	8.375829943	0.000732127
RAB11FIP5	0.40503669	7.771052609	0.000737482
TOPORS	0.316626989	8.778013676	0.000738254

9630058J23RIK	-0.270447341	8.545632734	0.00073845
LPCAT3	-0.589687873	10.66412167	0.000740476
MYO7B	-0.208716612	7.882195625	0.000741917
LOC100046895	0.293224983	7.828058441	0.000742086
SLC5A4A	-1.087785996	8.156844098	0.000742561
TNFRSF1B	0.121363066	7.615599104	0.000742561
COX7B	-0.333510801	8.028615113	0.000744861
GALNTL4	0.136271048	7.581931693	0.000744861
NPTX2	0.454065343	7.876490629	0.000744861
SKZ1-PENDING	-0.230410622	7.812554527	0.000744861
PIM3	1.093637635	10.20160747	0.000745387
E430003H02RIK	-0.197039933	7.801822815	0.000752717
E2F4	-0.264964942	8.405689718	0.000760269
IL10RA	0.195877826	7.692038204	0.0007621
MMRN2	0.380333471	7.841793634	0.0007621
SLC25A44	-0.51094774	9.103330641	0.000767724
HHEX	0.23614162	7.726004438	0.000768154
4732418C07RIK	-0.557816541	9.000721368	0.00076985
EG269105	-0.683369123	12.83527138	0.000770817
MBOAT2	0.26147422	7.690687863	0.000770817
TMEM181	0.326297339	8.152052433	0.00077413
ARL11	0.422621925	7.728669095	0.000774255
CAPN2	0.183274627	7.657739572	0.000778543
BRE	0.201880109	8.446033499	0.000782392
IER5L	0.409829018	7.904270939	0.000782596
LOC100047863	-0.35053989	8.435273857	0.000783268
GSS	0.29534472	8.312419274	0.00078729
SCML4	-0.31450301	7.869459002	0.000788195
C130074G19RIK	-0.473879653	9.090674007	0.000794006
TBC1D15	0.741824967	9.922810116	0.000794006
ITGA3	0.531523858	10.84937283	0.000798354
PGRMC1	-0.667540066	8.740876364	0.000800383
2310008H09RIK	0.380652354	8.237327397	0.000801227
PRKCBP1	0.433138497	9.187450048	0.000801227
CTSE	1.071476768	7.967915543	0.000801669
BC002199	-0.553656606	10.14728931	0.000802859
4833439L19RIK	-0.27545156	8.56529044	0.000803166
RHOJ	0.721327051	8.399408322	0.000804657
SLC26A4	0.384062783	7.774189973	0.000805219
LOC100039623	-0.151021457	7.810334098	0.000807817
NDUFA2	-0.574877999	12.13908917	0.000809704
TTC39B	0.576711976	8.492967132	0.000812129
9530048O09RIK	0.191149189	7.637888639	0.000814868
HMOX1	0.471221565	7.740196305	0.000814868
CASKIN2	-0.413217379	8.919653063	0.000814934
TMEM141	0.371819825	8.342832094	0.000814934
CDC42BPB	0.390271425	9.886349901	0.000816459
BCL2A1B	1.337900289	8.744661171	0.000818755
STEAP2	0.316435308	7.874668521	0.000822648
RGS1	0.61175952	7.949784919	0.000824222
MAF1	-0.513356045	11.38256613	0.000825967
PPIC	0.477769217	8.417833407	0.000831232
D630014A15RIK	-0.598749154	8.690429263	0.000831952
F2R	1.421143583	10.36504372	0.000833856
LOC100046802	0.19104167	7.61494545	0.000836012
2810402K13RIK	0.142284045	7.979624537	0.000838626
SAP30L	-0.846746312	11.26862501	0.000839502
P2RY13	0.4821183	7.803926584	0.000839614

PLA1A	0.241075507	7.741422279	0.000839697
ZNRF1	0.213502461	7.700740635	0.000843652
ELTD1	0.226223496	7.667100903	0.000846865
P2RX1	0.376335958	7.833364963	0.000850832
C330005L02RIK	-0.172301426	7.655234561	0.000852061
CTLA4	0.14752305	7.648027787	0.000852992
BACH2	-0.520074975	8.165278481	0.000856468
NT5C2	0.164069924	7.702542548	0.000856468
D19BWG1357E	0.746094129	10.94168862	0.000859646
CAMK2D	0.191815826	7.80740984	0.000859697
ARAF	-0.211457108	8.810663443	0.000860554
GRK5	0.173849322	7.664997044	0.000860554
B930004C15RIK	-0.337188211	8.048341461	0.000864469
EG667977	-0.620132021	9.054760283	0.000864469
SPINK3	-1.978971039	14.03530351	0.000864469
2610200G18RIK	0.204402969	7.649490353	0.000870096
LAPTM5	1.33855508	10.7960264	0.000874153
GPR107	-0.636336471	9.189682478	0.000874476
HABP4	-0.198519033	7.721288021	0.000875941
PRODH	-0.680881591	8.670456349	0.000880083
2010004A03RIK	0.197973453	7.658637909	0.000880094
NT5M	-0.368264817	9.044556515	0.000884559
ENSA	-0.421513218	8.401305635	0.000885422
COL5A1	0.936019308	8.600515198	0.000888928
GCAP27	0.610771942	9.210410921	0.000889005
6430510M02RIK	-0.525216778	8.376498518	0.000889964
EG627299	-0.560279363	9.34374597	0.000890592
BTBD12	-0.644679099	9.02992499	0.000891737
DAK	-1.436514631	10.71570965	0.000891737
WAS	0.225611469	7.77288131	0.000891737
PGAM2	0.38755229	7.764707183	0.00089518
9530068E07RIK	0.202499482	8.411587474	0.000900844
ECHDC2	-0.398843368	8.160591273	0.000905385
SEMA3F	0.929661368	8.198149127	0.00091017
STX12	-0.959742029	9.259717568	0.000912554
GLOD5	-0.273694109	7.831793653	0.000915466
PCDH7	0.156260364	7.642777415	0.000916499
LOC100045005	0.456415651	8.138955398	0.000918333
5730453I16RIK	0.208083112	8.747726669	0.000922827
SCL0001978.1_6	0.348930666	7.897873674	0.000922827
LOC381302	-1.154250956	10.14181531	0.000925755
THYN1	0.468108047	10.49746334	0.000925755
EPGN	0.879850636	8.136262062	0.000926349
5033413D16RIK	0.228285654	8.250914435	0.000926616
LOC100045019	0.264219569	7.940243063	0.000926616
ANKZF1	-0.308895443	8.254547235	0.000927924
SNX24	0.776079354	8.785767702	0.000928972
MAP2K3	0.584886085	11.24215193	0.000930682
ASH2L	-0.491058459	8.216435552	0.000933708
MTPN	0.212691259	9.027827412	0.000933708
TBX3	-0.631384007	8.75611293	0.000939181
IHPK1	-0.670789988	9.758189712	0.000941265
CYP2C65	-1.325228786	8.637514345	0.000944029
1810013B01RIK	-0.451538527	8.804119945	0.000944163
CCDC56	-0.6251193	10.66069468	0.000944163
LOC100048056	-0.173611237	7.743915804	0.000944163
CSF1R	0.296590929	7.811907033	0.000946768
ATL3	0.33970942	8.164265586	0.000946829

CYP4F16	-1.159712461	9.422283109	0.000946829
MPP3	0.215262377	7.671903913	0.000946829
TMEM38B	0.298319818	8.536273142	0.000946829
VKORC1L1	1.133892908	9.283983893	0.000946829
ZSWIM5	-0.21356348	7.850157459	0.000948663
DNMT3L	0.260004531	7.679132633	0.000950475
POLR2F	0.637259659	10.36969477	0.000950475
ACAD10	-0.296417606	7.886285882	0.000954735
CD151	0.343696054	10.84327975	0.00095489
PCYT2	-0.812829908	10.06004096	0.00095489
ACCN2	-0.231899578	7.747410583	0.00095524
ARMC10	0.375125775	9.183931765	0.00095524
C630022N07RIK	0.492571433	8.767560399	0.00095524
LDHD	0.504845108	7.698226291	0.00095524
BCL2A1D	0.970903978	8.287579657	0.000957187
A830007P12RIK	0.204356665	8.482203767	0.000957241
LCN7	0.206095634	7.599264202	0.000958927
PGLYRP1	2.179753202	11.75904452	0.000958927
SCIN	-1.721383669	11.39803583	0.000959215
DOCK4	0.138784978	7.620549404	0.000960564
A330049M08RIK	0.478224791	7.67943895	0.000960889
4933411K20RIK	-0.348289431	8.627447547	0.0009633
ALKBH4	-0.230700578	8.084033365	0.00096504
LRRK1	0.408771172	8.241210954	0.000970139
MLX	-0.216762587	7.882830779	0.000970759
RASEF	0.137637141	7.701371114	0.000971016
SH3BGRL	-0.319539687	8.237768469	0.000971016
KRT27	0.526041714	7.773888085	0.000971464
LGALS8	-0.503505201	9.392557035	0.000972371
ASNS	1.188577495	9.60537528	0.000972412
FAHD2A	-0.18961153	7.917949225	0.000972412
PNPLA6	-0.4054266	9.221319075	0.000972543
SERPINA3N	2.697765881	9.80907085	0.00097396
1700072I22RIK	-0.365254418	7.902130045	0.000974328
EPS8L2	-0.610211093	10.22820594	0.000977889
GLDC	0.129962554	7.567715059	0.000977889
LOC100046898	0.468542414	9.707658998	0.00097864
OVOL1	-0.610252828	8.672593213	0.000978983
2810008M24RIK	0.529676644	9.548670757	0.000981951
SH3RF2	-0.256607341	7.70077608	0.000982458
HMHA1	0.270837445	7.748577794	0.000984584
DSCR6	0.198772236	7.674549915	0.000986759
MORC2A	0.358317093	8.985216161	0.000988263
CLCN2	-0.650585904	9.130874157	0.000990813
KRBA1	-0.588641284	8.032208059	0.000990813
SNX8	0.607790312	8.628001365	0.000993598
HOOK2	-0.546497655	8.906148278	0.000994749
NUDT7	-0.50394494	8.32985608	0.000995892
2410018G20RIK	-0.461595998	9.237790918	0.000997756
2610035D17RIK	0.186038776	7.806794793	0.000997756
NR1I3	-0.896439826	8.459342106	0.00100014
BC020002	0.221269843	8.139276691	0.001002184
LOC212399	0.627475261	8.343571561	0.001004023
RET	0.266239984	7.82896101	0.001007287
TRABD	-0.221848662	8.355082009	0.001008241
1500005K14RIK	0.506642135	8.442608166	0.0010113
HOMER2	-0.822068292	8.943611725	0.0010113
DKFZP434J1813	0.452414505	7.955211875	0.00101531

GSTA4	1.726731347	10.45390552	0.00101531
LOC100047268	0.156169999	7.586001181	0.001022435
CD276	0.239877964	7.728402353	0.001025063
CHCHD10	-0.699079399	12.45809355	0.001025466
PHF13	0.250631694	8.295138086	0.001033487
B230339M05RIK	0.338681442	8.846718018	0.001034275
TGM1	0.538945666	7.749942494	0.001038295
NRP1	0.544387775	8.366732662	0.001038735
SST	1.475465863	10.75096749	0.001038735
TRIO	0.287598779	8.534665937	0.001039026
POLK	0.251375858	7.882178511	0.001043128
RNPEPL1	-0.573374719	12.05477377	0.001048448
GM527	0.128587737	7.708794146	0.001048552
RHBDF1	0.540569696	8.345428689	0.001050721
NXT2	-0.686158137	9.093078914	0.00105152
2310007B03RIK	-0.833808154	8.504408741	0.001054339
9630015D15RIK	-0.452400923	8.162692367	0.001054339
CDC42EP5	0.546176111	9.966667408	0.001054339
ERGIC2	-0.280650737	8.352701642	0.001054339
LOC669658	-0.983899097	8.27491887	0.001054339
MAP3K7IP1	-0.374536337	8.605998636	0.001054339
TMEM53	-0.366098144	7.930124694	0.001054339
TRIM15	1.600925603	10.00980995	0.001054339
GCNT3	1.469794304	11.49752952	0.001057674
LOC385019	-0.316945172	7.871388666	0.001057674
HCLS1	0.326329348	7.763801901	0.001063282
HSP90AB1	0.546902833	10.61878737	0.001066878
NDFIP1	-0.380923814	10.25422641	0.00106751
ZSWIM4	0.508287486	8.485370667	0.001069418
PANK1	-0.501065172	8.233485406	0.001069541
PDK3	-0.348862056	8.345630913	0.001069664
TRIM41	0.306593236	8.99411501	0.001069664
CHST4	1.118349981	8.84337032	0.001071839
UNC45A	0.364956887	9.55901823	0.001076637
BRIP1	-0.246323844	7.883502598	0.001078585
LOC100039011	-0.191010165	7.840745349	0.001078733
FKBP10	0.17899593	7.6849305	0.001079616
ATP6V0D1	0.450702737	9.661591808	0.001083826
MSLN	1.495053977	8.380084896	0.001084123
ERBB2	-0.67938351	9.178891262	0.001089254
2310079P03RIK	0.30538167	8.931781614	0.001091073
DCUN1D5	0.518165839	8.930286705	0.001103813
ARRDC4	1.3770279	9.685439324	0.001104118
ITSN2	0.260068869	8.276848445	0.001104439
TCEA2	0.201146733	7.838291305	0.001104964
DNAJA2	-0.179013179	7.843715172	0.001110556
UACA	-0.887610946	10.60612612	0.001111367
CD14	1.053509367	8.367728723	0.001118312
PNPO	-0.493178332	8.364024904	0.001118611
PRPS1	0.281916042	8.917538988	0.001119687
ITGP	0.174175732	7.592862626	0.001121251
SOX5	0.160843438	7.656312239	0.001124878
RIMS3	0.215587382	7.712092546	0.001126874
MAPKAP1	-0.361986137	9.861110268	0.001137747
TFDP2	-0.281945339	7.931078785	0.001140785
SCL0002069.1_48	0.154748239	7.625198559	0.001143958
BDKRB1	0.154661085	7.628662091	0.00114869
RXRA	-0.170161803	7.841495326	0.001150146

SERHL	-0.3787963	8.049616705	0.001150923
ABI2	0.230280992	7.914726698	0.001157851
DMKN	0.790878976	8.386281423	0.001157851
ZKSCAN14	-0.402584685	8.139057408	0.001158317
ZFP787	-0.299166711	8.663847668	0.001159281
BTBD6	-0.506927512	8.776858466	0.001162682
5033414D02RIK	-1.23650093	10.38466484	0.001166945
SLC41A3	-0.219520241	7.797039042	0.00116883
LOC100046003	0.323217163	9.14970327	0.001169289
SF3B5	0.446482717	10.43055365	0.001172603
SLC35B1	-0.344568079	11.60399012	0.001172709
NOL3	0.122137495	7.650727248	0.001174515
WDR75	0.492429513	8.891877827	0.001176072
EARS2	-0.51346518	8.672084743	0.001179018
ZCRB1	0.302008868	11.05453331	0.001179285
PTK2	0.548700521	10.22642844	0.001179985
IBTK	0.46378391	8.772757231	0.001180012
USP52	-0.385613573	8.311292605	0.001188401
2410014A08RIK	-0.210577721	7.862091849	0.001189074
PI4KA	-0.715467651	9.869193272	0.001189144
RPRD1B	-0.233427427	8.203779875	0.001189675
SRPK2	0.15125913	7.653477908	0.001189675
SPP2	0.203174972	7.667292116	0.001191343
BC031781	0.389432206	8.945340625	0.001195252
LOC100045967	0.860401227	10.57590793	0.001197565
TIMP3	0.82379184	8.433561464	0.001197565
NEO1	0.467619928	8.688373008	0.001202536
X99384	0.269193513	7.688427593	0.001202536
1190005F20RIK	-0.789382411	8.827789646	0.001203139
PABPC4	0.325000532	9.060665668	0.001203226
BCAS1	-0.874930283	9.802197324	0.001204652
CITED4	0.336966823	7.8267442	0.001204652
2310035K24RIK	-0.581736827	9.523009258	0.001206052
RAC3	0.167463604	7.624669054	0.001207173
MST1R	0.489082937	8.826409911	0.001209147
TMEM131	0.408596036	8.413549921	0.001209546
STK25	0.246771777	8.686439801	0.001210118
GUS-S	0.320613679	7.881702914	0.001210452
1810043H04RIK	-0.335841175	8.32699765	0.001211409
NDUFA8	-0.571379883	11.02147078	0.001211409
1300013J15RIK	-2.305882069	9.737132779	0.001213587
GSTM7	-0.273107833	7.806515514	0.00121999
SERPINA3M	0.475147101	7.777574657	0.00122095
NSBP1	-0.517925162	9.346396275	0.001228474
AP3M1	-0.208624085	7.873113963	0.001229578
SSSCA1	0.440280266	9.537404401	0.001233183
WIPI1	0.290595935	7.970839921	0.001236796
PRCP	0.505147072	9.392744003	0.001256794
DNASE1	-2.870019711	9.286360768	0.001257979
3110001P07RIK	-0.516727467	10.82779661	0.001260592
KELCHL	-0.158811753	7.923449466	0.001266585
MGST3	-1.026623646	11.42419915	0.001279223
NDFIP2	-0.609598324	9.397082244	0.001287604
ACSBG1	0.123074051	7.60533254	0.001287802
TMEM183A	-0.40681128	9.823659241	0.001294974
CLPS	1.756445582	10.58345239	0.001302068
FADS2	-0.240920332	7.781047469	0.001302068
PTPLAD1	-0.418061423	10.93277795	0.001308966

AI448196		0.163751995	7.609701699	0.001312075
C030046K23RIK		0.121344412	7.641258923	0.001312075
MARCKS		1.330301917	10.07176214	0.001315897
2410008K03RIK		0.217690692	7.831729458	0.001318075
ATP5S		-0.26291383	7.961765089	0.001318111
OPTN		-1.006576985	9.514832319	0.001318111
STK32C		0.17877304	7.572055583	0.001321974
EG667190		0.833896485	9.569320426	0.001329125
APPL2		-0.441490199	8.69294283	0.001329811
ATG5		-0.451411512	9.845439755	0.001329811
TUBA1A		0.326836232	8.112681518	0.00133355
9830002I17RIK		-0.465015616	7.816141708	0.001337597
ANTXR1		0.226436102	7.785702285	0.001337597
RAB35		0.397281091	10.19044757	0.001341273
	Sep-11	0.616892568	10.65887957	0.001351619
AI846148		0.328123595	8.151229597	0.001353008
GADD45A		-0.61410206	9.129982577	0.001353185
PEX16		-0.458251498	9.322086467	0.001355318
PRNP		1.180807359	9.954205426	0.001362994
PPP1R11		0.381089764	9.912224235	0.001368013
CD40		0.318523807	7.829739711	0.001369212
PDK2		-0.272501819	7.753315941	0.001373768
MMP13		0.886809708	8.140454735	0.001376129
SEPHS2		-0.536707325	9.208157169	0.001378239
LOC381221		-0.608795395	8.043229528	0.001380131
0610042C05RIK		-0.169107967	7.726401239	0.001387252
CLN3		0.276991	8.496468265	0.001387704
LOC100047214		-0.449077584	8.374284554	0.001387704
CCDC134		-0.602771587	8.711247866	0.001391861
PGBPLL		0.278953023	8.296012287	0.001391861
LOC100045780		0.373864061	7.976789411	0.001395721
D430042O09RIK		-0.31364125	8.214759935	0.001398183
2810021B07RIK		-0.184293568	8.068296449	0.001401147
2310014G06RIK		-0.425870981	10.01758118	0.001403095
1110028F11RIK		0.354779164	7.737950822	0.001405083
CHTF18		-0.208061496	7.84206058	0.001409409
0610005C13RIK		-0.250119295	7.631120577	0.001412309
HISPPD1		-0.252551972	7.970380414	0.001413411
NCKAP1L		0.512362063	8.028675788	0.001418306
AMIGO2		0.442827146	8.082597549	0.001421463
CCDC41		0.526148701	8.638330201	0.001421463
PIAS3		0.204819946	8.043376837	0.001421463
TMEM106A		-0.509371112	8.64829836	0.001421463
TMEM128		0.258829269	9.989459819	0.001421463
COL4A3BP		0.255473428	8.064568258	0.00142191
LDB3		-0.193443287	7.7120089	0.001422518
AMDHD2		-0.599086782	8.719011967	0.0014226
LOC100044842		-0.214849691	8.036100475	0.00142298
RNF130		0.474948329	8.4569795	0.001425462
SPATA6		0.354340659	7.705477932	0.001426544
LOC210540		-0.28941417	7.743625895	0.001427452
LOC626152		-1.01123913	9.836678187	0.001430577
SH3BGRL2		0.716228206	8.552856104	0.001430577
CASP1		-1.222497081	11.78879288	0.001431904
MYL7		0.397338778	7.86799869	0.001433804
RERG		0.378658927	7.97623254	0.001439217
H2-Q5		-0.862914266	10.28402803	0.001441027
TMPRSS7		0.201063487	7.77240632	0.001451713

LRRC48	-0.262907298	7.753995753	0.00145451
TBCEL	-0.612886562	9.307360236	0.00145451
3110009E18RIK	-0.294334883	8.485675938	0.001461323
DEFCR5	2.435207053	13.45396316	0.001461323
RIN1	0.858432075	8.53528059	0.001461323
TICAM1	-0.163943433	8.020774686	0.001461323
LIMD1	-0.505350265	8.710875628	0.001462574
VASN	0.49447247	8.257082348	0.001464011
D6WSU176E	-0.777426693	9.376323776	0.001466002
LOC100041103	0.188347422	7.69349902	0.001470005
PODN	-0.317301925	7.70435528	0.001470005
PTGES2	-0.209207297	7.985320977	0.001470005
ITGB1	0.277121269	8.101820603	0.001480379
LOC223653	-0.495216783	8.041978557	0.001481255
TTC39A	0.871356653	8.727842644	0.001487213
BCL2L14	-0.1929087	7.761046132	0.001488513
PLEKHF1	-0.800313863	8.259691686	0.001490733
TLCD2	-0.482291229	8.025875538	0.001492696
PDCD10	-0.386023896	9.876591355	0.001497421
D1ERTD396E	-0.375391825	8.50509447	0.001503796
MS4A6D	0.897483455	8.05888005	0.001509319
HIGD2A	-0.465327075	12.55116037	0.001510646
LOC98434	0.511887623	8.242089531	0.001517203
ACO2	-0.954491988	11.83037685	0.001518215
ARHGDIG	0.164846588	7.639923501	0.001518215
LOC100046025	1.211392988	9.20933209	0.00152018
C030002B11RIK	-0.771563164	10.11395008	0.001520874
ZFYVE1	-0.151194204	7.772153053	0.00152649
WWP1	0.178991555	7.884345577	0.001528121
ACSS1	-1.559856217	10.33146318	0.001547989
ZFP768	-0.270934643	8.028675472	0.001547989
2310066E14RIK	0.145293989	7.667846036	0.001551589
PLCD1	-0.484658637	8.403510676	0.001551589
IPMK	-0.5735106	9.565324005	0.00155342
PXMP4	-0.269492387	8.366989008	0.00155342
LOC547150	-0.325946415	8.061299281	0.001554592
5730405I09RIK	-0.281748383	8.127065384	0.001554781
NDUFB10	-0.559193957	8.920181027	0.001557894
NUPL1	0.189386243	8.04382423	0.001557894
6330503K22RIK	0.319206005	7.769474644	0.001559986
SIRT1	-0.232489792	8.123064502	0.001561463
GTF2E2	0.268155631	8.322502369	0.001565968
IAH1	-0.373056984	8.177418686	0.001568176
DYNLL1	1.004226426	10.76260357	0.001575847
GNG10	0.678631657	9.337195391	0.001575847
CYB5	-1.692843764	11.48949799	0.001577578
CCND1	1.719766519	10.38912266	0.001578955
ACOT7	0.949530776	9.160855534	0.001579764
2610103N14RIK	-0.262705663	7.719775852	0.001580365
YRDC	0.439256387	8.096070774	0.001587662
LOC100048299	-0.983238054	11.4493055	0.001590099
DHX36	-0.364496576	9.146638221	0.001591064
NDUFB3	-0.539200047	10.46399881	0.001595436
BAD	-0.591065868	9.497880048	0.001602574
LIG1	-0.192016179	8.03052498	0.001602574
ARHGEF1	0.163793534	8.104466553	0.001604381
SLC22A5	-0.676620249	9.22031821	0.001604381
SPSB4	-0.390059361	7.794446816	0.001608997

BLOC1S1	-0.504679922	9.147555377	0.001611503
PIGL	-0.553895893	8.473213859	0.001611503
IL33	2.433356746	9.897703595	0.001613485
ZDHHC4	0.285443997	9.614418741	0.00161491
UVRAG	0.448919896	8.924313935	0.001617075
4833409A17RIK	-0.167901622	7.686591944	0.001627451
1110012J17RIK	0.141507111	7.679474397	0.001627623
1700066B19RIK	0.360844311	7.924880845	0.001628403
LOC100042540	-0.254558111	7.744977143	0.001639507
MAN1B1	-0.435793451	9.716792918	0.001642098
GSTT3	-0.754619304	9.791600331	0.001654829
SCLY	-0.310911344	7.970049583	0.001656538
TGIF1	0.243555656	7.716262725	0.001666644
CYP3A11	-3.048214457	9.8173158	0.001669555
ELOVL5	0.534696367	9.444270735	0.001669909
AI507611	0.13172976	7.546496976	0.001674557
DEFCR3	0.599446208	13.64943243	0.001675686
H19	0.634992006	7.940907245	0.001679515
SRP68	-0.153287967	7.925636428	0.001681432
LOC626309	0.639352213	10.22545025	0.001685341
LLGL1	0.537578028	9.259962768	0.001690958
MRPL27	-0.458683473	10.23927371	0.001697094
MED10	0.820498794	8.640212897	0.001698525
1200009I06RIK	-0.760462859	9.011125486	0.001711002
NR1I2	-0.618707146	9.26196124	0.001711002
2010004M13RIK	0.416678366	8.393119234	0.001715065
TIMP2	0.625020272	9.051670069	0.001715065
DDX46	0.328348931	8.243205327	0.001724511
4930487N19RIK	0.223576942	8.398596962	0.001730444
HNF1B	0.198929744	7.745639656	0.001730643
LOC381873	-0.286878499	7.68500168	0.001737175
UBE2A	-0.420890741	8.358808861	0.001737175
2310079P12RIK	-0.428266639	8.256306096	0.001741885
MMP2	1.122947237	8.512990203	0.001748431
OLFML2B	0.989562331	8.218934315	0.001760122
ABHD3	-1.020453267	8.444300359	0.001763617
OSGIN1	-0.553437641	9.471741573	0.001774414
DECR1	-0.664858401	8.052285727	0.00178202
GTPBP6	0.271802107	8.150491578	0.001782867
NOC4L	0.39242265	8.62663332	0.001790288
RABGGTB	0.288360074	9.452310078	0.001796973
PRL2C3	1.743828648	8.002986721	0.001798942
PPAP2C	-0.330317455	11.66696152	0.001809418
PGPEP1	-0.837581557	8.880276145	0.001810125
SHKBP1	-0.130400288	8.008953181	0.001820989
COPB2	-0.366229988	12.36836166	0.00182557
LOC384348	0.140532717	7.706595208	0.001829996
TMEM82	-0.84132936	10.472012	0.001834933
CHGA	0.538723837	8.346721631	0.001835589
DEM1	-0.160600012	7.947083356	0.00183927
EXOSC7	-0.482584853	10.17555537	0.00183927
TXNRD3	0.214096798	7.897034437	0.00183927
MANBAL	0.581505344	10.74916444	0.001839392
9845300_5100	0.138828023	7.592715788	0.001843716
GAS8	0.143662147	7.740262749	0.001847131
1700016K19RIK	0.125492264	7.616401806	0.001870136
ACLY	0.658629593	10.23193256	0.001870136
ADAP1	-0.200181787	8.373889562	0.001870136

EFEMP2	0.676963065	8.27790938	0.001870136
GRB7	-0.945502763	11.00274543	0.001870136
ABCF3	-0.16594784	8.500437841	0.001875398
2900016G23RIK	-0.249690369	7.901695197	0.001878754
TIAM1	0.210035207	8.281596887	0.001881641
E230008N13RIK	0.183280995	7.626800566	0.001886409
APBB3	-0.155051545	7.800957656	0.001896612
AI597468	-0.327607559	8.404343157	0.001901265
EBI3	0.151221393	7.71052356	0.001902692
CYB5B	-0.66404288	12.60405532	0.001907587
MAST3	-0.657386777	8.973487733	0.001909227
BSPRY	0.47403167	8.381668401	0.001925849
RILPL2	0.718904385	9.100726697	0.001925849
EPHA1	-0.478003555	7.986670193	0.001940461
1700021K19RIK	-0.324735967	8.302649683	0.001942577
SLC10A6	0.234099541	7.673662616	0.001943735
2310011J03RIK	-0.153368611	7.892813607	0.001957657
TRF	0.519099619	7.907020075	0.001957657
MPP1	-0.661059025	10.07905975	0.001958897
ACOT4	-0.842877324	8.643149385	0.001958972
A230050P20RIK	0.619701991	8.551792441	0.00196289
OPN3	0.270345472	7.661066278	0.00196289
ANTXR2	0.685277207	8.446453234	0.001976705
CCDC28A	-0.170916169	7.756266923	0.001976725
GPT1	-1.742178694	11.38705282	0.001977876
SERINC1	0.388523194	10.18436573	0.001987372
RQCD1	-0.179345609	8.219016599	0.001993418
PGS1	1.122831334	11.13764582	0.001998827
SDHD	-0.444411583	8.38457443	0.00200263
IL17RC	-1.320288217	10.05618587	0.002004481
MAL	0.11798046	7.590854806	0.002004481
4732458O05RIK	-0.919973628	9.164581175	0.002004897
CML1	-0.357086511	8.133334798	0.002019674
GANAB	-0.355958075	9.172349656	0.002019674
SCL0002540.1_6	0.127210142	7.631485693	0.002019674
SNUPN	0.18753286	8.148888682	0.002021376
LOC381150	0.770156102	10.39052794	0.002023375
LOC385825	0.35812723	9.10607028	0.002023375
ZFP747	-0.609017201	10.09356663	0.002023375
RAP1GAP	0.279023464	8.186754312	0.002025391
D16H22S680E	-0.519692533	9.812436557	0.002026169
TSPYL3	0.223341998	7.860555134	0.002026169
TRIM38	-0.320700452	7.780635935	0.002034813
CAPN8	0.180718131	7.700071071	0.002036411
SPR	-0.330861655	8.548782729	0.002036411
GORASP1	-0.255417816	8.467919897	0.002039605
ANKRD47	0.631682297	8.064550844	0.002043547
ODZ4	0.192637874	7.743565597	0.002043547
9130022E12RIK	-0.161292533	7.57420847	0.002050151
DHRS7B	-0.861594581	10.15130447	0.002053701
PPP5C	-0.172741149	8.151764118	0.002053701
UCK2	0.557402534	8.851104904	0.002053701
LOC100041681	-0.218061341	7.967866824	0.002057155
GM379	0.245770793	7.752257789	0.002061209
1700019H03RIK	0.292170111	7.723619599	0.002061212
PLAC8	-0.482396805	13.44952978	0.002061271
ABCF2	0.350402701	8.935596699	0.00206315
GPAA1	-0.234551478	8.028803919	0.002066967

STARD3	-0.323254891	8.475850773	0.002070818
4930432O21RIK	-0.3056456	8.217232318	0.002100208
CRYBA2	0.337308679	7.907758078	0.002100208
TMEM19	-0.557652955	8.448041929	0.002100208
UQCR	-0.516243293	13.07926378	0.002101361
2510010F15RIK	0.32671378	8.3780512	0.002110782
FRMD6	0.369501336	8.191469163	0.002119327
RNF12	0.17657052	7.659421998	0.002120107
CALCB	0.191889813	7.607693472	0.002121051
TCF23	0.498432614	8.022423635	0.002139418
ALCAM	0.267493848	7.780209987	0.002148443
RGS10	0.524946469	8.937839604	0.002148443
UCK1	-0.144472788	7.804070298	0.00216328
TMEM43	0.787047695	9.41753299	0.002164031
D0KIST3	-0.68844994	9.017938793	0.002164078
CCDC111	-0.25362838	7.959021845	0.002165808
2310057J16RIK	-0.167717122	8.176498167	0.002166824
CUL7	0.530032905	8.364966207	0.002166824
SLC9A3R2	0.2697358	7.894732821	0.002170703
EGR1	1.642433733	10.62812459	0.002173839
TLR1	0.131839017	7.625908934	0.002173839
CLEC4N	0.604264463	8.107217386	0.002177309
FAM110B	0.30958959	7.935499627	0.002184642
SPARC	0.537219998	8.235463711	0.002184642
MXRA8	0.245048529	7.813555714	0.002185527
RTN4IP1	-0.250239485	7.91802375	0.002185527
ADK	-0.566372156	10.08120405	0.00218633
JMJD6	0.526532749	10.44601429	0.00218633
C230082I21RIK	-0.469331672	8.410308919	0.002187661
SDC4	0.35791167	9.414345857	0.002187661
HRAS1	0.33144131	9.331670685	0.002191048
LOC100044221	0.306423997	7.968896915	0.002191048
GUCA2A	-1.24043271	13.98817522	0.002192528
TPD52L2	0.245799313	8.225238706	0.002192528
AIF1	0.653846625	8.119186073	0.002192647
SCL0004176.1_1597	-0.182434981	8.096843521	0.0021935
PITX2	-0.291079274	8.133231258	0.002199262
LOC100048313	-0.387322421	8.429422509	0.002201539
AIM2	0.322135165	7.912992954	0.002207863
LOC100044692	-0.382480071	12.61680821	0.002207863
LOC639931	0.288437654	9.743492721	0.002207863
MAD2L1BP	0.288068994	9.319905861	0.002207863
MRPL17	0.427164375	11.31921717	0.002207863
SCL0002315.1_12	0.847103528	9.024751185	0.002207863
ZHX1	-0.140642557	7.897310654	0.002207863
CCDC5	-0.231799481	8.00690249	0.002215643
BC031353	0.294637854	7.96383949	0.002222575
GPR146	0.193753474	7.692070711	0.002222575
SPEN	-0.169108615	7.896538877	0.002234187
COPZ1	-0.600737386	10.29646298	0.002248742
ENPP5	-0.222319356	8.159930213	0.002251472
LBH	0.719554494	9.015887682	0.002257654
SLC27A4	-0.957007759	9.692633016	0.002257654
AFTPH	-0.376534274	10.13294368	0.002261311
TSPO	0.795117611	9.078337797	0.002262332
PLEKHM2	0.775810628	9.211723083	0.002268435
SLC28A1	-2.055475076	8.745094287	0.002281462
BC003940	0.627729133	9.3823955	0.002288929

PRPF38B	-0.253209323	8.066915646	0.002295613
BRWD2	-0.147317822	7.865122397	0.002302484
D630002J18RIK	-0.163059447	7.785332926	0.002302484
ACOT8	-0.441964272	9.131272289	0.002302571
5730469M10RIK	-1.62203896	11.47595587	0.002303206
ADPRH	0.384566488	9.999334949	0.002303206
RNF121	-0.151210705	7.783120881	0.002303206
VARS	0.531171926	8.855680192	0.002303206
PRKAB1	0.665386028	9.359906419	0.00232921
2810422J05RIK	-0.160014241	7.822938097	0.002352162
MOCOS	-0.906594793	9.316292647	0.002352162
2010305A19RIK	-0.398975462	8.073207159	0.002358235
TMEM167B	-0.188176133	8.624559723	0.002358235
FPGT	-0.193048711	8.138427995	0.002364255
PDE1A	0.131786202	7.647164548	0.002383481
EG666231	-0.353716933	7.973723186	0.002389153
KLC4	-0.656782248	10.69153211	0.002389153
LOC217328	-0.827038439	12.16526374	0.002389153
MAPK1	-0.704235059	9.82928638	0.002390197
TMEM125	0.712148182	9.746547103	0.002391501
BRP17	-0.272708826	7.929541036	0.002397632
SNAI3	0.322527503	7.693566487	0.002400103
B430201A12RIK	0.575974567	8.960760801	0.002406675
ZMAT5	-0.234683165	8.487749401	0.002406675
LOC100048733	0.594201668	7.693333055	0.002408861
UFSP1	1.236553382	8.424614508	0.002408861
AHI1	0.308262122	7.900886278	0.002412637
MRO	-0.218204598	7.625284357	0.002412637
TUBA1B	0.66357443	12.82671501	0.002429761
CDH5	0.164761583	7.651222923	0.002445557
XKR9	-0.53216909	8.497467716	0.002445557
BGLAP-RS1	0.480586527	7.800383462	0.00244976
LOC100047184	0.327311132	12.33445859	0.002459481
DLG3	-0.600277525	9.883517066	0.002466585
ENTPD5	-0.62860135	8.832467311	0.002470334
AIFM1	-0.224409469	8.025801167	0.002471064
PRL2C4	1.408450434	7.909632928	0.002473415
CARTPT	0.204685393	7.66881845	0.002483551
LOC100048480	-0.592863077	9.821787223	0.002488211
CRK	0.345482966	9.690818243	0.002490275
ARL2	-0.247052903	8.258557778	0.002490783
RIT1	0.441849767	9.527970456	0.002490783
6330548G22RIK	0.240397726	8.418958984	0.002495845
OTTMUSG00000002196	0.190497785	7.581279572	0.002498102
LOC668492	0.344344276	9.137371623	0.002509831
AQP1	-1.860696018	10.59571746	0.002512109
BAG4	-0.362258358	8.767651889	0.002512109
RHOB	0.751842689	9.452621746	0.002512109
SLC19A2	0.869819953	9.212509997	0.002514166
1110021J02RIK	-0.318647726	8.267758158	0.002544411
TIMM44	-0.262478284	8.981644549	0.002546237
LOC100041567	-0.431550923	8.545662706	0.002547385
AGPAT6	0.557389714	9.769736544	0.002548977
DGKQ	-0.845897347	9.691014757	0.002548977
DTX3L	-1.145916065	10.10952017	0.002549054
ABHD11	0.330110824	9.830256832	0.002552401
NFE2L1	0.385396313	10.4087891	0.002552401
CD86	0.19614116	7.789177464	0.002571538

GPR182	0.172865295	7.640559027	0.00257318
LOC433749	0.488820594	10.37819453	0.00257318
ABCC3	1.260780289	9.411616993	0.002576959
ADORA2B	-1.057663117	8.225332744	0.002576959
STARD7	-0.353121491	8.498474176	0.002576959
LIPE	-0.112295767	7.721681423	0.002585408
RAPGEF3	0.194748945	7.622054029	0.002591046
TMEM127	-0.417254141	9.942643842	0.002599561
S100A5	0.206813945	7.804895968	0.002608141
VPS53	0.364716368	10.90539768	0.002608141
NTE	-0.414752527	9.880081978	0.002615738
ABCB1B	0.465898187	7.771840569	0.002621908
1500004F05RIK	0.200190239	7.639369388	0.002625922
EML4	-0.471732431	9.547184501	0.002630162
9430095K15RIK	-0.226177321	7.729575688	0.002637822
A830094I09RIK	0.194528456	7.564111232	0.002639411
LOC386218	0.350763099	9.154089241	0.002639685
SLC6A8	-0.909732737	12.55835398	0.002639685
TWF2	0.430175174	8.252590453	0.002639685
ADAMTS1	0.11249757	7.622069441	0.002642183
AKR1A4	-0.352008683	12.92174173	0.002642183
RALB	0.724525746	10.14874118	0.002642183
COL16A1	0.532074346	8.300738036	0.002649338
2310036O22RIK	0.359433983	10.80191824	0.002652525
SLC25A3	-0.435416891	10.88028072	0.002653297
MTAP7D1	0.965715656	8.717015006	0.002668616
UBAC2	-0.26753963	9.198500348	0.002670879
KCTD2	-0.565274596	9.465936102	0.002675616
BC023744	-0.212197227	7.795159561	0.00268563
CYHR1	-0.323774364	8.230657819	0.00268563
UQCRC2	-0.436156147	12.10451418	0.00269221
RAB27A	0.779687216	9.868273228	0.002701791
BCKDK	-0.267410118	8.696127424	0.002702248
RPP21	0.451759908	10.71494922	0.002702856
RAB34	0.16303383	7.751233385	0.002704015
WWP2	-0.298726386	8.193001606	0.002713423
CWF19L2	-0.182916545	8.272859661	0.002718449
RHPN2	0.850407177	10.25889194	0.002723302
WBP4	0.228154048	8.131661196	0.002726491
2610024H22RIK	0.81179436	10.43131001	0.002727728
COMMD3	0.328797415	9.599325498	0.002727861
E130319B15RIK	-0.150303116	7.597675605	0.002738036
PTPN1	0.298365872	8.1103535	0.002738036
ACVR1C	-0.260333628	7.728833838	0.002748522
ATP5SL	-0.689677458	8.744112584	0.002748522
ANGPTL4	1.629940231	9.833431389	0.002756005
5830434P21RIK	0.335270728	8.514236433	0.002757548
CDK5RAP3	-0.302565595	10.39728447	0.002757548
GM1673	0.123851935	7.598697797	0.002757548
GOLIM4	-0.29769891	8.21281035	0.002757548
PGLS	-0.24676787	8.3138616	0.002757548
E030007H10RIK	-0.207624889	7.894194594	0.002759966
IPO4	0.335237639	8.247408506	0.002759966
NSEP1	0.599927212	12.88068358	0.002759966
5930434B04RIK	0.261992476	8.273255672	0.002764121
LOC100046393	0.250037996	8.959092552	0.002764121
PSMD1	0.441242039	11.40330652	0.002764121
CDC2L1	-0.297361802	9.171904802	0.00276871

GRIT	-0.742397526	9.885511462	0.00276871
PTGR2	-0.299574935	7.996364314	0.00276871
ZSWIM3	-0.193990351	7.962739392	0.00276871
ARID3A	0.551491835	8.342855273	0.002772768
DEGS2	0.463508328	10.7847416	0.002772768
ITLN1	0.727962014	11.82864281	0.002775735
2010001P20RIK	-1.727423279	9.961505351	0.002784857
IFITM6	0.212937724	7.620355645	0.002786734
EG622339	0.823893206	12.10688039	0.002795892
3110056O03RIK	-0.319557088	8.951003725	0.002801212
9130211I03RIK	0.13296105	7.614198659	0.002812114
LOC381947	0.38765713	8.510697833	0.002812114
D130043K22RIK	-0.928189051	8.643546441	0.002825181
MOBKL2A	0.280457029	8.499133873	0.002825181
TAF12	-0.171873355	8.784223133	0.002827096
ABCD4	-0.234359959	7.907746083	0.002830516
IMPDH1	0.143557412	7.670506774	0.002830516
ITGB4BP	0.517159036	8.351153205	0.002830516
STAT6	-0.182253152	7.963465433	0.002830516
TBX2	0.156170305	7.61595232	0.002830516
AI317223	0.160162686	7.678375697	0.00283066
C920006O11RIK	0.239307466	7.820896395	0.00283066
STXBP5	-0.247863093	8.576449403	0.00283066
GSPT2	0.186241409	7.677631872	0.00284372
ORC3L	-0.194385632	7.83556218	0.00284372
9130008F23RIK	0.309256033	7.798041526	0.002847901
CCDC85B	0.282713002	8.088245212	0.002847901
SOX18	0.301640533	7.746295469	0.002847901
NEUROG3	-0.198933121	7.757524147	0.002851441
PA2G4	0.496595633	8.810041042	0.002854714
SLC11A2	-0.263811923	8.032595568	0.002854714
D130071O13RIK	0.121707622	7.620337366	0.002855573
1200016E24RIK	1.252971202	10.10404558	0.002864772
2310001H17RIK	-0.48147967	8.405952272	0.002864772
WDR24	-0.178748694	8.02919818	0.002864772
PVRL2	0.665825317	9.910692574	0.002865803
EIF2S2	0.747340196	9.631999088	0.002869686
RASSF1	0.290553313	9.009906265	0.002883318
5133401N09RIK	-0.623858424	9.419416862	0.002883923
5033430I15RIK	-0.305269595	8.441741787	0.002887263
GSTT2	-0.273113096	8.235459007	0.002890717
C130065N10RIK	-0.811535558	8.808272735	0.002890922
LOC100047200	-0.872268346	10.36514466	0.002890922
LOC630936	1.018607177	11.72802911	0.002890922
PAF1	-0.10472567	7.936050866	0.002890922
MYO7A	-0.40294085	7.809063631	0.002893126
BC024997	-1.143666761	10.12268648	0.002895086
C1QB	1.336513086	8.520815439	0.002895086
S100A10	0.721761624	11.5623504	0.002895086
GOLGA7	0.276928474	7.929391382	0.002911007
ARPC5	0.293672875	11.78064435	0.002913013
CENTD3	0.730850253	8.357749533	0.002913013
LOC386021	0.320394101	8.748154954	0.002923509
8030451K01RIK	-0.193855409	7.865461958	0.002930328
2010300C02RIK	-0.389727946	8.343567936	0.002931147
0610009D07RIK	-0.121025659	7.924525094	0.002938369
H6PD	1.026155514	9.617698358	0.002938369
ARG1	0.198534358	7.603635833	0.00294308

ZSWIM6	0.222056298	8.132746759	0.00294308
CDO1	-0.467406815	8.108553029	0.002956871
IFT81	0.120363639	7.854338906	0.002966742
ADAMTS2	0.296498539	8.053861877	0.002968082
IGF1	0.185842876	7.704621219	0.002973863
PRPF4	0.22503024	8.006167652	0.002979125
2310061F22RIK	0.343397383	9.309757145	0.00297998
ATP6V1B2	0.52488008	10.96927964	0.002986962
AGMAT	-0.90755937	9.003052274	0.002992947
EG432448	0.551890667	10.24690323	0.002995999
1810009K13RIK	0.158765379	7.978110597	0.003012352
OTUD7B	0.165755721	7.824538351	0.003016008
KLHL22	-0.180717669	8.005873321	0.003017427
TNF	0.202541051	7.609218038	0.003039771
1810015C11RIK	-1.172518712	9.454024615	0.003047891
ATP1A1	-0.726539912	13.87258446	0.003047891
MRPS35	-0.435474086	9.009700394	0.00305471
LMO7	0.485158573	8.997635525	0.003057053
WISP1	0.353530956	7.809478662	0.00307804
ISCA1	-0.383090408	8.82228154	0.003093981
9930022F21RIK	0.233103048	7.671927942	0.003105321
MAFF	0.167296149	7.714623783	0.00311584
4632411B12RIK	-0.176755856	8.448579705	0.003123835
D10ERTD641E	0.353185397	10.34458571	0.003135253
MTAP7	-0.449389682	9.366211095	0.003135253
RSN	0.257644587	8.189635546	0.003141498
CLPTM1	-0.367194496	9.060882559	0.003146695
SPON2	1.483199092	10.63237526	0.003153802
BICC1	0.396242927	8.163447348	0.003164557
2210016L21RIK	0.126994338	8.03110715	0.003173956
ABCC10	-0.128831234	7.740967364	0.003175738
CYC1	-0.737268408	11.15752242	0.003177803
CHKB	-0.454707553	9.533820621	0.003181408
B930041F14RIK	1.2690681	9.297438308	0.00318267
RNF11	0.311433115	8.551166188	0.00318267
1500011B03RIK	0.125378975	7.606689413	0.0031953
MATR3	0.200376883	11.39680546	0.003196161
OCRL	0.212161883	8.144794303	0.003197144
EMP3	0.755348838	8.994857397	0.003197857
IGSF4A	0.216329154	7.783617274	0.003211267
EPN1	-0.155784452	7.761787207	0.003216197
PPAPDC2	-0.307550519	9.072670201	0.003216197
TM9SF2	-0.275079779	8.167988984	0.003223497
GDPD1	-1.299921832	10.70137175	0.003235829
B930044G13RIK	-0.192465162	7.903021161	0.003236495
BTNL7-PENDING	-0.220101943	7.731119295	0.003236866
UBE2E2	0.779511318	8.936810753	0.003236866
ACADS	-0.434936216	8.649477726	0.003253461
HEXA	-0.564651864	9.751692853	0.003253552
GM2A	0.870121906	8.90459909	0.003264346
CBFB	0.358512128	9.29973299	0.003269932
ALDH5A1	-0.266125626	8.283814079	0.003271156
LOC333331	-0.686568611	8.678285694	0.003280936
DPM2	0.428443786	9.249575408	0.003283785
NUDT1	-0.286548452	8.392040956	0.003283785
CCDC90B	-0.302879021	8.94212375	0.003286998
B230107H12RIK	-0.176422351	7.889794514	0.003288892
MFSD8	-0.48729064	8.409323062	0.003309936

LOC100047167	0.301609634	8.043589963	0.003310057
CRBN	-0.312161071	7.892847375	0.003314197
OXCT2B	0.216224333	7.595323042	0.003314197
PDLIM4	0.586034325	8.392776522	0.003314197
PFDN2	0.402356214	9.733262773	0.003314197
2010007H12RIK	-0.340278747	8.9199317	0.003318118
CART	0.352850065	7.738836385	0.003320387
LYSMD4	-0.521413284	8.593368687	0.003321973
TMEM109	0.488720145	9.442387457	0.003321973
PCNX	-0.182366059	7.751666154	0.003331903
LOC674308	-0.34412486	8.865597869	0.003334201
TRIM40	0.581583704	8.853248341	0.003334201
RBM9	0.226045519	7.998910913	0.003339679
LRRC20	0.134960195	7.813858454	0.003339848
ZFP294	-0.132197565	7.773337453	0.003347316
GSTT1	-0.551774552	8.200853009	0.003349955
RPS6KA3	0.289990417	8.180789817	0.003349955
LOC100048020	-0.472568671	8.953635795	0.003352794
MAPK3	-0.284674236	8.351820625	0.003352794
C030048B08RIK	0.128116455	8.168689061	0.003375005
CTDSP1	-0.285997095	8.31022789	0.00337927
TREX2	0.626045344	7.8021253	0.003389056
5730494N06RIK	-0.340751159	9.070499734	0.003393661
BMI1	0.112116316	7.657733247	0.003394412
CAR13	-0.84140132	10.77471554	0.003432998
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PUM1	-0.290730928	8.825330303	0.003432998
2510049J12RIK	-0.509523848	10.49473231	0.003441951
MRPL49	-0.353189756	8.562484865	0.003441955
STAP2	-0.542702821	8.764655369	0.0034484
TYSND1	-0.187660262	7.839347273	0.003449498
LOC100047712	0.402167649	8.707264659	0.003465511
PIGA	0.264050707	8.375513036	0.003468643
GSTM5	0.362381429	8.984055506	0.003471369
TBC1D5	-0.432932192	8.457875422	0.003471369
C4A	0.46258508	8.440663464	0.0034718
DUS2L	-0.240959921	7.878507587	0.003473274
GPR120	1.039479055	9.137181148	0.003473274
2610037P13RIK	-0.153894722	7.814330418	0.003483392
WWC2	0.893430269	8.838087885	0.003504305
WNK1	0.153610879	8.208705837	0.003529451
N6AMT1	0.243479996	8.626595157	0.003536748
LUC7L	0.207334724	8.154355929	0.003539962
2900057K09RIK	0.259964641	8.336354622	0.003546065
CYP2D40	-0.212327435	7.732700258	0.003546065
PLSCR1	1.602855308	11.09362338	0.003546065
UBTD1	0.153109621	7.654052323	0.00355625
TTYH1	0.2490324	7.667199597	0.003561904
LOC100045403	0.906389258	9.377459691	0.003567458
TPI1	-0.472982481	11.97130521	0.003574812
CBARA1	-0.288481627	9.165639105	0.003580117
CYP2B10	-3.317107058	9.725987429	0.00358289
HIST2H3B	0.353986775	10.11923265	0.003596759
GPR133	-0.507009764	8.035227027	0.00359758
GPSM1	0.257610617	7.755885746	0.003611802
UBE2F	0.260975893	9.685906458	0.003611802
PARD6G	0.167973134	7.781478017	0.00361816
LOC100044756	-0.167548003	8.110609273	0.00363618

CD68		0.302768728	7.680822297	0.003637087
D2WSU81E		-0.139234851	7.68797242	0.00363844
SNURF		-0.588401137	8.949333026	0.003646903
BBC3		0.209310136	7.895721209	0.00367252
A830026B15RIK		-0.109178647	7.616717928	0.003676702
NPAL1		0.518275496	9.271886369	0.003676702
SKP2		-0.148863243	7.839020326	0.003707784
EXPI		0.142015033	7.547537209	0.003708048
SNAPIN		0.204832148	8.144048745	0.003708048
MFSD10		0.405549871	8.834853431	0.003710203
OPLAH		-0.431502359	8.125985155	0.003712152
TRP53INP1		0.430755673	8.222296324	0.003728157
	Mar-02	-0.164054271	8.299078029	0.00372947
IL1B		0.493235649	7.743511508	0.003730396
1810049H13RIK		-0.286170341	8.109877946	0.003735143
GSG2		-0.285898808	8.109953777	0.003740353
RABL4		0.220309183	8.095068264	0.003740353
APOM		0.153754872	7.628828178	0.003745742
IVNS1ABP		-0.631282208	9.183324373	0.003745742
PPP1R16A		-0.55066583	8.741780809	0.003745742
SLU7		-0.107041112	7.826938285	0.003745742
ZFP238		-0.174822503	7.929670825	0.003745742
LOC277856		-0.72743968	11.76973216	0.00376342
NOTCH3		0.175664436	7.643042995	0.003772756
C130078N17RIK		0.420512892	8.065166362	0.003779778
9130024O20RIK		-1.230168326	10.46101291	0.003786412
SCL0003131.1_3		0.157224709	7.686571814	0.003793351
ACSL4		0.101677119	7.623328584	0.003794743
VILL		0.126841354	7.581805223	0.003794743
6330549D23RIK		0.119428216	7.699525762	0.003812364
SEC14L1		-0.215924556	7.949248643	0.003815809
SLC35A3		-0.13465159	7.782067856	0.003819679
EAR4		0.26939833	7.593298753	0.003830144
MAP3K7IP2		0.743019202	10.7157239	0.003830144
PEX7		-0.217787529	7.982090797	0.003830144
ADH1		-2.361195503	10.0019731	0.003831794
LOC100048615		0.141534371	7.574594695	0.003834588
LST1		0.376700696	8.002424196	0.003844482
ARL6IP5		0.458167638	8.743898002	0.003845483
LOC100045737		0.347859997	8.199374577	0.003845483
LITAF		0.57229239	11.69555843	0.003847302
CYP27A1		-1.476484077	9.409910085	0.003847994
DIDO1		-0.160903429	7.872572327	0.003847994
CALU		0.271476995	9.0439885	0.003849089
CTNNAL1		0.462443806	8.686866587	0.003849089
SLC26A6		-1.63509362	10.58514392	0.003859348
VEZF1		-0.304010525	8.959759892	0.003862512
SIDT1		0.397690484	8.369158935	0.003863971
QDPR		-0.625566094	9.086499028	0.003874488
2010110P09RIK		-0.646532003	8.6723571	0.003890496
CCDC92		0.403399558	7.88491533	0.003890496
FSTL1		0.345203037	7.870296547	0.003890496
MGAT1		-0.134704546	7.903927406	0.003893199
H2-K1		-0.833445101	10.16148428	0.003936228
9330186A19RIK		0.337754328	8.075241272	0.003936912
LYVE1		0.510770353	7.989047368	0.003937472
CPE		0.885983775	9.261456499	0.003941286
WDR7		-0.154710236	7.905491794	0.003941753

RASSF5	0.285162595	8.103700513	0.003970917
TCEB3	0.301460247	8.327026538	0.003970917
LAS1L	0.204662671	7.644314955	0.003978226
UBL4	0.456254322	9.422177091	0.003999444
OBFC2A	0.247478283	7.800907028	0.004003586
PCCA	-0.207395451	7.934821145	0.004003586
AW124722	-0.134114099	7.649974034	0.00400929
CCR5	0.149360022	7.583837599	0.004018955
LOC675228	0.283177283	12.14352047	0.004032622
TROVE2	0.209523795	8.037380923	0.004032622
ALDH4A1	-1.585986677	9.853754596	0.004062763
RRAD	0.128669601	7.591776568	0.004066643
CCBP2	0.437277273	7.872967326	0.004083709
LOC100048721	0.721971989	9.726825696	0.004083709
2610304F08RIK	0.195524162	7.594429182	0.004093374
OSGEP	-0.335712902	9.256740331	0.004118285
PSAT1	0.937671377	8.562447289	0.004123396
9530058B02RIK	-0.264582288	8.402917173	0.004126816
FEZ2	-0.441992571	9.323901896	0.004130742
NDUFS3	-0.427331872	10.57648206	0.004130742
PRKD3	0.205428831	8.304211994	0.004133992
LOC668837	-0.416559081	8.499800404	0.004140587
TRAPPC6A	-0.298683215	8.319213354	0.004140587
SLC38A2	0.368079764	9.158197756	0.004142431
SLC47A1	-0.228494549	7.723159039	0.004149758
PRSS8	0.751388947	8.798474555	0.004153193
SCARA5	0.216532926	7.622900915	0.004154842
RIPK3	0.507793389	8.45618209	0.004158831
HSP90AA1	0.229955171	8.16537354	0.004161246
CXCL9	1.041892478	8.153557127	0.004177151
0910001L09RIK	-0.302669467	11.31956562	0.004181756
EEF1G	0.243284117	13.20614575	0.004188613
TBC1D9	0.182044205	7.744410068	0.004193319
AK3L1	0.245689157	7.68656733	0.00421365
PDK1	-0.233411526	7.958214181	0.00421365
PIPOX	-0.357833334	7.792256925	0.00421365
B430105G09RIK	0.140082847	7.720180816	0.004223892
6030495B01RIK	-0.422330509	8.36119186	0.004224384
A130052C08RIK	0.259237916	8.009610909	0.004224384
FOXA3	0.596477999	10.11578638	0.004224384
SCL0003300.1_40	0.179767551	7.610021333	0.004224384
TTC3	-0.329041378	8.625679476	0.004224384
BIRC2	-0.271042791	8.495776443	0.004226936
AKAP9	-0.786466087	9.620924346	0.004234624
EIF3D	0.454356063	11.50094702	0.004236395
5430417L22RIK	0.721904149	9.504551803	0.004236797
LOC100043986	0.254347063	8.192795033	0.00424534
DOLK	-0.273191074	9.035645335	0.00424663
COX7A2	-0.60863527	8.5264783	0.004250413
GNA14	0.266250248	7.703835921	0.004261587
HIPK3	0.132834957	7.625398434	0.004261587
LYPLA2	0.419397233	12.29874539	0.004261587
TMEM100	0.176608868	7.725691497	0.00426547
2010003K11RIK	-1.044428693	9.814700313	0.004266734
REL	0.111046107	7.573028854	0.004266734
ACD	0.363830342	9.094070154	0.004270666
RDM1	0.970530807	9.181225981	0.00427083
BAG3	0.614433419	10.57498103	0.004275024

PTGS1	0.144382522	7.696905115	0.004275616
LOC382691	0.096347437	7.982978855	0.004285949
TTC7	-0.318688215	8.032943386	0.004295799
SCAMP3	-0.182723027	8.174015041	0.004298111
B3GNT8	0.155396607	7.735709595	0.004325855
BRD7	-0.233867209	8.453823644	0.004334128
A330042I21RIK	-0.487119785	7.953547743	0.004343862
1190002F15RIK	-0.16642963	7.705036644	0.004348157
NDUFV1	-0.478197866	12.32045892	0.004359265
UBE1L	-1.185220149	11.07358377	0.004370238
SEMA4A	-0.737918632	12.47001569	0.004374887
IRAK1	0.15503417	8.018070467	0.004384097
DAG1	-0.442240358	9.497158339	0.004389951
TUBA8	0.174727489	7.678620086	0.004389951
ZFP385A	-0.23130788	7.767880508	0.004389951
CNOT10	-0.25223863	8.605953935	0.00439018
SLC34A2	-1.137754899	8.332129812	0.004398531
CYB561D1	-0.255754332	8.182753201	0.004399584
PABPN1	0.415859386	10.92639794	0.004404398
LOC632684	-0.297091156	9.561175379	0.00442356
HLX	0.164981812	7.777987071	0.004426307
CCDC80	0.48796031	8.080603725	0.004435126
CALML4	-0.31876208	11.83310645	0.004447824
GDA	-0.168289043	7.748395959	0.004447824
SNX11	0.376751482	9.372238399	0.004450215
DDAH2	0.139255059	7.748869189	0.004458211
2310006M14RIK	0.452083217	7.990772196	0.004467908
OXSR1	0.179353261	8.243009416	0.004501163
BBS5	0.232735637	8.015534986	0.004504192
IFT140	-0.143524282	7.9747321	0.004504192
UGT2B35	-0.383468842	7.924459647	0.004505602
NEK8	0.135764717	7.880461203	0.004506906
DHRS9	0.106546132	7.566508211	0.004512796
RASAL2	0.494682404	8.223253803	0.004515056
DOS	0.130067976	7.724919103	0.004524705
WSB1	0.323994595	10.02156742	0.004524705
2610020O08RIK	-0.187473411	8.501878509	0.004543312
NDUFA5	-0.534089957	9.927864301	0.0045456
SCNM1	-0.179813701	8.116841535	0.004549065
GTF2F2	0.528011406	10.21360927	0.004557833
BC057079	0.213661506	8.143767043	0.004569098
GPR108	0.326384039	8.646333935	0.004595013
TIA1	-0.086758186	7.768228978	0.004599688
TMEM126B	-0.23710779	8.106625785	0.004612601
2610003J06RIK	-0.562952382	8.64064394	0.004616486
LOC100044430	0.197694858	7.743402418	0.004616486
RFTN1	0.161422446	7.653836052	0.004616486
CSRNP2	0.558604008	8.293272558	0.00461958
HAGHL	0.32615658	8.32935084	0.004623652
UBQLN1	-0.27068072	9.593926678	0.004650215
PELI1	-0.253658757	8.575963542	0.004660197
PSME1	-0.765395294	11.88379863	0.004681761
SCL0002617.1_582	-0.534400309	11.02914625	0.004692754
4921531D08RIK	-0.150407297	7.741331071	0.004707184
6030429G01RIK	0.166123681	7.630695153	0.004707184
ILF2	0.230213382	9.226492743	0.004707184
OTUD3	0.298345167	8.226607921	0.004707184
MGP	1.062165741	9.16950774	0.004735093

SERGEF	0.156578792	7.907791451	0.004735421
2810043G13RIK	0.474370887	7.894891095	0.004741527
HSD11B1	0.948233907	8.127803346	0.004747489
MIER3	-0.254800952	8.660581497	0.004747489
CASP9	-0.305427785	8.193705235	0.004765144
IFITM3	1.30998002	11.89826148	0.004765144
R3HDM2	-0.130928238	7.829351393	0.004784763
TAPT1	0.278308115	10.33457794	0.00478661
TUSC4	-0.345677389	8.952673399	0.004791128
DCN	0.523830761	10.44988908	0.004799273
POLR1E	0.280016	8.322515694	0.004818611
SORD	-1.142446589	8.765747599	0.004821954
A930002H24RIK	0.113236528	7.591994678	0.004823675
ZER1	-0.339361357	9.313795218	0.004827693
PUS7L	0.162746127	8.360823631	0.004840658
ATXN1	-0.489047542	8.466753338	0.004842627
BEAN	0.140952503	7.567646565	0.004850379
GATA2	0.433833241	7.809463674	0.004850379
NCF4	0.545753657	8.095725289	0.004851014
RASL2-9	-0.115959897	7.661433608	0.004852266
9430090I01RIK	-0.11791544	7.721663013	0.004859905
MYO5B	-0.273371395	9.737525088	0.004866602
TNNC1	0.178064818	7.699777868	0.004866602
NDUFB9	-0.356299331	8.351665088	0.004888795
0710007G10RIK	-0.14862303	7.831612638	0.004890534
P2RY1	-0.492169232	9.037656432	0.004898512
SYRADB	-0.234521895	8.014260507	0.004903928
FASTKD5	-0.222520677	9.131254847	0.004924019
KLHL6	0.58736688	8.122721469	0.004941418
NAT12	-0.129168612	8.225409709	0.00495439
TEK	0.185549238	7.718216952	0.004964093
THOC7	-0.569333149	10.99561373	0.004977517
HDAC7	0.185702525	7.687044618	0.004979884
2610024B07RIK	0.569784253	8.40967217	0.005000706
FRMD8	-0.170241559	7.984087275	0.005000706
SMPDL3A	-0.896738127	9.560569112	0.005026078
ZEB1	0.247818258	7.970288331	0.005026078
COPA	-0.363630506	11.43736164	0.005036466
LOC100044968	0.405551303	8.400219594	0.005037886
2810026P18RIK	0.629798147	8.138338752	0.005047313
SH3YL1	0.693497151	10.33283727	0.005047368
BC027231	0.131110201	7.793394552	0.005060262
LOC245069	-0.981172913	8.764546207	0.005088609
2310046K01RIK	-0.948088487	11.91239927	0.005092078
CCS	-0.621996257	10.17959667	0.005092078
DYNC1I2	0.286755754	10.74870206	0.005092078
NDUFA3	-0.666880897	12.63726292	0.005092078
NME3	-0.42648817	8.972535271	0.005092078
RPAIN	0.229291951	8.200372857	0.005092078
CAR4	-1.668347027	9.899774134	0.005113807
EPS15-RS	-0.141199779	8.063501948	0.005113807
UBR2	0.108508615	7.69384583	0.005113807
POMP	-0.366014583	12.4085387	0.00511529
SPC24	-0.251606801	8.025310209	0.005117463
FOXF1A	0.149066808	7.784926445	0.005122702
EDN1	0.584188151	8.14074296	0.005123249
RPL3L	0.124558066	7.630668176	0.005123249
KLHL7	0.142480559	7.962137745	0.005140382

A730054J21RIK	0.243795092	7.744159061	0.005145881
PSD4	0.275800805	7.974123006	0.005156044
LOC638892	-0.339232911	8.315702516	0.005161297
MCM10	-0.273798165	8.46731559	0.005161297
HIST1H2AI	-0.886465976	13.10307419	0.005162773
D9WSU20E	-0.371860567	8.361378457	0.005169404
MGAM	-1.245787122	13.10384784	0.005171044
ZHX2	-0.228961166	7.821613219	0.005173991
HSDL1	-0.196964759	8.310357205	0.005188052
D5ERTD579E	-0.378204009	8.602672636	0.005220203
GRINA	-0.882918783	13.29482246	0.005220203
KPTN	-0.158687332	8.098429683	0.005220203
AHCTF1	0.378681947	9.044135799	0.00522782
LOC381222	-0.222435406	7.640966921	0.00522782
APOA1BP	-0.354614994	8.540326404	0.00524397
ALDH1A7	-0.877745816	8.37549348	0.005247252
PPP2CA	0.470206691	12.68091079	0.005251507
ADAM8	0.102947734	7.605161007	0.005267186
JAKMIP1	-0.550426749	9.170091825	0.00528408
SLC9A3R1	-1.138629845	13.19030715	0.005286246
MRPS31	-0.488535754	9.646411854	0.005288743
KDELR3	0.859874436	9.073191492	0.005291189
UBAP1	-0.231176218	9.034672697	0.005294871
GTPBP8	-0.136332996	7.771979448	0.005308257
SLC30A2	-0.921339223	9.852049578	0.005313483
SNF8	-0.330910022	8.56040357	0.005327898
EPB4.1L4A	0.103673499	7.67974416	0.005337115
NSUN4	-0.590403124	9.639091343	0.005347273
PET112L	-0.133808131	7.773500754	0.005351982
LOC270152	0.702724949	8.141284054	0.005354181
CAPN5	0.524596596	8.638861448	0.005356491
KYNU	0.175977025	7.665200522	0.005356491
RAP2A	0.173930125	7.894041933	0.005356491
RPAP1	-0.152843787	7.860467889	0.005356491
RSAD1	0.277021958	7.798281601	0.005356491
ZFP219	0.360129268	8.827605083	0.005410527
LOC100048083	0.204832626	7.898748513	0.005414595
GAA	0.224677064	8.208914563	0.005417554
PLEKHO2	0.367394053	8.177471713	0.005417554
EDF1	-0.427259766	12.11641641	0.005421244
SCHIP1	0.196426832	7.867051953	0.005422128
6720458D17RIK	0.590552112	8.333877625	0.005422876
BCAP31	-0.361130512	9.284560025	0.005422876
DDIT4L	0.459893958	8.076493421	0.005428405
SNAP29	-0.41558411	9.038906579	0.005428405
XRCC6	-0.293333527	8.663699458	0.005448881
APPL1	0.419209679	8.816117275	0.0054707
A930039N10RIK	-0.144799694	7.736780551	0.005495854
TLR2	0.283927336	7.806129398	0.005497319
HMGN3	0.29697009	8.323977901	0.005503699
SEC13	-0.406291543	12.81508347	0.005503699
1600014C10RIK	-0.138227368	7.673879157	0.005506402
LOC233637	0.457277128	10.08217575	0.005506402
SFRS7	-0.433929494	8.144241472	0.005534302
4632417K18RIK	0.47490638	8.296277518	0.005541356
ALDOB	-1.1382987	11.35141857	0.005541632
AVPR1A	0.311723108	7.803323357	0.005556951
DSG2	0.334990401	10.11372401	0.005572241

SDAD1	-0.518278378	8.855866925	0.005572593
5730589K01RIK	0.258652662	8.773302606	0.005573079
NR1D1	-0.40407666	8.011184764	0.005584171
EG237009	0.389397961	7.701857178	0.005590802
UNC84B	0.32897862	8.562634416	0.005598259
GALNT3	0.285462165	7.811006494	0.005609551
C230078M08RIK	-0.367534343	8.092734953	0.005612645
MDM2	0.648854894	9.699218531	0.005629015
SPPL3	-0.592997186	9.744731395	0.005636268
FASTK	-0.292990462	8.361254732	0.005638997
UBE2M	0.342408454	8.966549639	0.005642925
NHLRC1	-0.156828817	8.011251857	0.005646046
SCL0001419.1_32	0.130881565	7.57313119	0.005655356
FUT2	2.296208559	9.025054476	0.005667214
CYB5R3	-0.812780795	10.23102658	0.005678421
SUHW2	-0.103599292	7.795138262	0.005678421
NFIB	-0.143661721	8.006906025	0.005681664
USP24	0.196117324	8.699824294	0.005681664
FLT1	0.76665227	8.317724721	0.005690181
TMEM204	0.458749774	8.427334524	0.005694233
BLVRA	-0.528720118	9.901061651	0.005717121
ANXA8	0.28243463	7.703560575	0.0057219
H1F0	-0.464095753	8.177192022	0.0057219
RAB32	0.618706221	9.413041095	0.0057219
TNFRSF18	0.11120922	7.597802256	0.0057219
CCDC101	0.338957212	8.545831336	0.00572247
SPINK4	1.402101437	13.42899132	0.00572247
ATP5D	-0.420928386	11.49452071	0.005724166
CAMTA2	-0.757407793	10.523661	0.005724166
IMP3	0.389483625	9.712715855	0.005724166
ETHE1	0.530949379	9.214378803	0.005744412
DYSF	0.184062522	7.667384339	0.005746534
MRPL23	-0.495874472	11.38436858	0.005747423
SCARA3	0.191066263	7.63124852	0.005747423
STK17B	-0.670454514	10.96178137	0.005767182
PKN2	0.230693874	8.250761767	0.005777654
LOC624198	-0.415330434	8.358736632	0.005777792
NRAS	0.250167317	8.985262179	0.005784254
AU042651	0.11476418	7.610515678	0.005794667
GAL3ST1	-0.501809299	9.559496699	0.005798399
TBC1D13	-0.566101081	9.669986059	0.00580531
SLC25A37	-0.738628241	9.14992657	0.005809379
DOK2	0.296635374	7.767014772	0.005811876
MTMR4	-0.211740294	7.792874336	0.005815861
ATP5E	-0.238421532	8.052508815	0.005843679
CDC2L6	0.382250168	8.525138079	0.005843679
SELENBP2	-0.514235753	7.971061712	0.005845265
TSPAN6	0.551290059	7.94915503	0.005850974
DPPA3	0.123135677	7.548938897	0.005856647
ACAA2	-0.651697775	8.925091456	0.005867716
FLRT3	0.794636887	10.26526876	0.005870707
E130306D19RIK	-0.271960346	8.042754806	0.005900872
D530030K12RIK	0.163079775	7.62904867	0.005904324
PLAA	0.416709769	9.073128624	0.005904324
UNC5B	0.493547876	8.928146476	0.005908546
POLR2G	0.330260624	8.95556349	0.005918219
BC087945	0.204155489	9.461051678	0.005929186
MGAT3	-0.710729756	8.484559846	0.005929186

IVL	0.465782128	7.64657975	0.005936012
BC031181	-0.293200147	10.96609653	0.005961313
TTC4	-0.331490018	8.233780087	0.006008795
3830406C13RIK	-0.175558678	8.082215229	0.006012025
TARS2	-0.169755122	8.077509379	0.006014801
TCRG-V4	-0.30226417	7.758680701	0.006023446
UHRF1BP1L	0.228024197	8.606826111	0.006030168
DDC	-0.998401778	9.389875582	0.006031954
PRMT5	0.276171721	8.525754229	0.006045037
RAB19	-0.449699933	7.959268092	0.006046294
PRSS12	0.269193652	7.67497502	0.006058694
IDH2	-0.528792219	8.571395174	0.006068358
CDA	-1.028328887	10.15054582	0.006069784
PEF1	-0.34577444	9.818079189	0.006076814
APOA4	-0.895327952	15.21208	0.00608756
FOXP1	0.161162699	7.832137179	0.00608756
SYP	0.281357236	7.997442497	0.00608756
TRAF4	0.191284468	8.199374969	0.006104088
HGF	0.441643615	7.757745003	0.00610915
SLC7A3	0.110560253	7.656681186	0.00611102
ATP5B	-0.517176298	14.63368607	0.006145677
LOC100047427	-0.734967809	8.727102568	0.006145677
RFXAP	0.315595074	8.899459035	0.006145677
LEMD2	0.355251011	10.45255447	0.0061486
ACSM5	-0.210843366	7.648857428	0.006154008
EG244911	1.637072857	8.968296886	0.006154008
XPO6	0.348358453	9.147004659	0.006154513
TMEM201	-0.15140727	7.893398378	0.006160804
PACS1	0.173304907	7.884152041	0.006197767
AI413782	-0.127584787	7.771942534	0.006200528
EG622320	-0.150192727	7.756718036	0.006200528
RAPGEF4	0.135751521	7.615730701	0.006200528
SPIRE2	0.239455868	8.792319048	0.006200528
LOC545481	0.099387633	7.60525142	0.006202662
UBP1	-0.322009039	8.371744161	0.006208357
ADAMTS15	0.259654287	7.860630929	0.006225978
B230205C01RIK	-0.128830777	7.912119446	0.006225978
CCRK	0.147200957	7.694921878	0.006225978
TEX264	-0.291293171	8.702413219	0.006225978
CHMP7	-0.190553663	8.827637928	0.006232639
1500032D16RIK	-0.581242349	11.19013777	0.006252488
ADIPOR2	-0.81071415	11.56432682	0.006295435
TXNL4A	0.433060705	9.445863013	0.006299044
UNC84A	-0.282696905	8.09750992	0.006299044
SREBF2	0.389504128	8.518713803	0.006308343
DNCLC1	0.385863632	8.296167426	0.006312264
DTX4	0.195874983	7.972329252	0.006312264
CNOT3	-0.115294626	7.933205882	0.006327276
2900006A08RIK	0.365126856	9.085967096	0.006349915
CUBN	-0.836519074	7.987810187	0.006357898
KRCC1	-0.389344953	8.613802274	0.006370418
PCBP4	0.428311675	8.478539407	0.006370418
SEMA3B	-0.21356114	7.80515065	0.006370418
CCT8	0.333328251	10.00340085	0.006372062
TMEM178	0.135134002	7.625567683	0.006390312
PXMP2	0.197142852	7.68073978	0.00639553
LYSMD2	0.145272492	7.641495395	0.006397033
ELMOD3	-0.112317763	7.717459429	0.006415698

LOC218963	-0.273438508	14.71022269	0.006428335
ENSMUSG00000074822	-0.118986313	7.747270369	0.006441013
A530050D06RIK	-0.28952147	7.86772725	0.006462595
NIN	0.080914526	7.660664221	0.006462595
MGL1	0.196866693	7.634704237	0.00646735
4933407N01RIK	-0.290755185	9.235694708	0.006472157
EIF2B3	0.445603681	8.76959542	0.006482944
RPL22	-0.419992839	8.417882273	0.006485695
4632413C10RIK	-0.414513796	8.623760862	0.006491717
2900073G15RIK	0.213473572	7.954194808	0.006519925
ENSMUSG00000054212	-0.294721863	8.35674766	0.006519925
HERC2	-0.28692208	8.773017471	0.006519925
LOC381140	0.849516526	9.794953368	0.006519925
SARS	0.324335423	8.716283659	0.006519925
TUBB5	0.666509959	10.33523858	0.006519925
4833431D13RIK	0.141693738	7.529555724	0.006521453
DRBP1	-0.313184107	9.551229183	0.006541066
2510009E07RIK	0.255504713	7.950120698	0.006578713
PMP22	-1.629637547	10.75089301	0.006581207
RAB5A	0.378147367	8.747749905	0.006585309
LOC237877	-0.147848404	7.897616356	0.006589083
SLC3A2	-0.235292543	7.757292335	0.006590021
2010003H20RIK	-0.167181495	7.798643345	0.006591388
5730596K20RIK	0.214942345	7.930225967	0.006591388
HNF4G	-0.304271458	7.879363274	0.006591388
XYLB	-0.118249612	7.701262525	0.006594656
NDUFB8	-0.356482693	11.38731098	0.00665105
9330155C01RIK	-0.287464793	8.599624211	0.00665158
HRMT1L2	0.556953247	10.43722519	0.006654319
IRAK3	0.227608348	7.935577184	0.006665953
BFAR	-0.291863675	8.262028571	0.006671698
2600009E05RIK	-0.321710949	11.0929963	0.006674223
ERCC5	0.328144837	8.748189382	0.006674781
NEU1	0.970745478	11.91697397	0.006706038
TLE4	-0.401791772	9.398223019	0.006708432
PROS1	0.722881109	9.436347709	0.006719076
LYPD3	0.314085376	7.672387025	0.006720504
TAGAP1	0.155875305	7.827942557	0.006730905
ADFP	0.602976387	8.497378512	0.006759096
TXN2	-0.343370145	8.932151572	0.006764321
NFKBIA	0.892854908	9.136281956	0.00676681
SPHK1	0.909469649	9.269717781	0.00676681
SULT1D1	-1.008118541	9.250501451	0.006771622
0610037L13RIK	0.246106579	8.642349692	0.006781233
9030605E16RIK	-0.246256221	7.975570481	0.006781233
LGSN	-0.493618361	8.197692076	0.006804539
1700019G17RIK	-0.546200389	8.654443448	0.006804543
ABHD14A	-0.217538675	7.733970955	0.006804543
PSMC4	0.378996035	10.64600451	0.006815513
GKN2	0.266762356	7.586289567	0.00684094
HIST1H2AO	-0.986768337	13.75262111	0.00684094
PHF5A	-0.165338645	11.46621535	0.00684094
HYI	-0.753400333	9.855765776	0.00686394
UBE2L3	-0.640442658	10.77113317	0.00686394
SCAVENGER RECEPTOR	0.125555903	7.61559749	0.006900418
LOC100048537	0.272620989	7.92356232	0.006907559
SUDS3	-0.529402892	11.02438113	0.006926878
CCL24	0.329234702	7.747199051	0.006952526

LOC100046483	0.172387087	8.701526394	0.00696275
EIF3I	0.224706888	12.18566107	0.006966891
FLII	0.201127101	9.131983316	0.006966891
ABHD6	-0.182398588	7.748184311	0.006968593
B230114H05RIK	0.205031571	7.719539941	0.006968593
BC025458	0.159105959	7.708091795	0.006988389
C330018D20RIK	-0.203470155	7.879310748	0.006997539
HIPK2	-0.19215463	7.97815549	0.007020732
LOC382735	-0.093007704	7.713903826	0.007041349
MCF2L	-0.130480927	7.960516661	0.007048439
LOC381330	0.359163396	11.67629413	0.007055789
ZFP791	0.203966833	7.67043333	0.007059531
E030038D23RIK	-0.394085175	8.397352344	0.007076798
NARF	-0.335090183	7.901156247	0.007085263
MRPL33	0.293523793	11.38367676	0.007094513
A830080H07RIK	0.386614562	8.115790502	0.007108282
HMGCR	0.273255108	7.968838289	0.007108282
PTPRB	0.737571216	8.300272008	0.007108282
9930039L23RIK	0.183838825	7.894441268	0.007141722
A630020I15RIK	-0.105939578	7.749474639	0.007154086
TNRC6C	-0.295480777	8.295746853	0.00716677
3110001O07RIK	-0.239851679	8.211178361	0.007177373
NEDD9	-0.727583186	9.713677603	0.007190942
DPP8	-0.231520531	8.868946908	0.007196451
KIF11	-0.150698507	7.670022076	0.00719885
PMF1	-0.19169541	7.874639971	0.007224024
D230040N21RIK	-0.156490518	7.620158012	0.007239776
BC028528	0.237046821	7.697001708	0.007259932
AADACL1	0.489207657	9.165400594	0.007261375
NUDT8	0.273352175	8.835497772	0.007277678
BC017612	-0.260759944	7.900920772	0.00727838
RAVER1	-0.205056826	7.831495038	0.00727838
LOC100044948	0.874335442	9.478834299	0.007280683
ATP2B1	0.197795048	8.032416044	0.007281643
2310038D14RIK	-0.190813713	8.032162222	0.007286323
ERRFI1	1.308318935	11.27325707	0.007290254
MYO1C	0.114294829	7.681513481	0.007323995
HS6ST1	0.503006628	9.053389304	0.007325712
CUL5	-0.182156278	8.256750363	0.007336075
BCAP29	0.533411639	8.515517794	0.00733903
CTSS	-0.174132198	7.87160263	0.00733903
SLC4A4	-0.75526492	9.431641889	0.00733903
ZFP1	0.146332311	7.754932751	0.00733903
MYO10	0.165445753	7.709832417	0.0073429
9530064J02	0.195632491	10.19158029	0.007351873
SOX4	0.384722837	7.924096013	0.007363394
NDUFA13	-0.563217856	13.36933847	0.007368455
TMED4	-0.564395353	10.18564616	0.007376789
MGRN1	-0.406036303	11.42730852	0.007410582
A930004K21RIK	0.104247713	7.602209215	0.007441445
ITGA9	0.190402166	7.705404808	0.007445912
CXCL16	0.991320749	9.795094801	0.007456717
DSP	0.24499277	8.475466725	0.007456717
SLC38A8	-0.340223131	7.819786824	0.007456717
LRRC45	-0.117110536	7.826473453	0.007459313
TNFRSF21	0.68149988	9.062633597	0.007459313
ZBTB24	-0.469452766	8.737149091	0.007470509
ATP9A	-0.288295508	8.456954548	0.007499526

TYKI		-1.696414755	10.40527546	0.007499526
CMTM6		-0.438684105	9.878075498	0.007508639
RHOX5		0.128867907	7.625242468	0.007524965
DDT		-0.165827734	7.906772606	0.007551407
A230005G17RIK		0.129967219	7.674673783	0.007575018
RASL11B		0.34737228	8.117261229	0.007595547
BAT1A		-0.224938333	10.34251318	0.007622876
1700047I17RIK1		0.844461597	8.305654516	0.007629928
A630078J04RIK		-0.170883786	7.708625955	0.007639125
CCDC23		0.51173148	8.881629144	0.007641603
NDUFA12L		-0.431688406	8.952086844	0.007642995
NID2		0.163512235	7.65687894	0.007675995
	Sep-02	0.329275819	10.44540387	0.007687098
NPEPL1		-0.413982236	9.662035234	0.007687098
ATP2C1		0.337549648	7.847076308	0.007688165
PARD3B		-0.220861576	7.870143288	0.007719565
E030024L06RIK		-0.321310969	8.485359427	0.007738849
LOC639086		-0.172861727	7.946814091	0.007738849
DGCR2		-0.255806589	8.429741276	0.007739128
RHBG		-0.531052612	8.025706015	0.007740724
6230401I02RIK		0.259339891	8.750791389	0.007747964
C530038F07RIK		0.112060721	7.591067742	0.007751782
TAPBP		-0.222473167	7.936809151	0.007771774
EMILIN1		0.138462747	7.679745285	0.007775683
PWWP2B		0.220340474	8.350613603	0.007783133
REEP3		-0.488575246	10.40909561	0.007790086
TSPAN4		0.094890151	7.655182484	0.007794225
ERBB2IP		-0.273127601	8.227294964	0.007797287
9130223C08RIK		-0.168106531	7.889762786	0.007798234
PTPRH		-0.428781676	8.592702759	0.007811812
HDAC10		-0.157730916	7.792204312	0.007825755
KCNV2		0.088520749	7.624544385	0.007825755
B9D2		0.152108514	7.846580951	0.007827244
LOC677180		-0.145085628	7.878944351	0.007827244
MTMR9		0.176287422	8.083457663	0.007829823
1700012H17RIK		0.357344538	8.02290858	0.007832846
GTF2E1		-0.167870042	8.208208977	0.007835973
RPUSD3		-0.124909803	7.795855984	0.00784315
KLF7		0.6052868	8.977694958	0.007887946
4930470O13RIK		-0.235642851	7.928556554	0.00789043
E030040G24RIK		0.483433857	8.680250477	0.007916022
SH3GLB2		-0.31348037	9.094665682	0.007916022
SMURF1		0.198469338	7.762357549	0.007916022
UBE2L6		-0.621517567	8.628116355	0.007916022
AU020206		0.344585448	7.978029284	0.007917533
DISP1		-0.247589945	7.987644671	0.007966942
RABGEF1		0.527424673	9.466456389	0.007992476
GAS7		0.112412626	7.668201606	0.008034042
TEX2		-0.20467623	8.010030733	0.0080347
MRPS25		-0.131006692	7.83423492	0.008037008
FKBP9		0.222584969	7.984468323	0.008072091
BC004728		0.488568515	10.33565506	0.008080722
HSD11B2		-0.12469963	7.642170186	0.008080722
ZBTB45		-0.18828095	7.99736557	0.008108072
POF1B		-0.658750656	9.463436611	0.008130973
2410002F23RIK		0.169571357	7.982190554	0.008148009
2610528A11RIK		0.556515841	7.824174472	0.008148009
RANGAP1		0.464779499	10.12475177	0.008148009

D030022P06RIK	-0.214162305	8.222441102	0.00817912
NDUFC1	-0.590688317	10.50754739	0.00817912
ARPC2	0.208815384	10.67726366	0.008193604
AASDH	-0.125934247	7.928790855	0.008195617
4632417N05RIK	-0.205509599	7.81125953	0.008227784
CRIPT	-0.27242477	8.554059809	0.008227784
LOC383981	0.676920708	13.58149029	0.008227784
LDB1	0.646846681	10.08777957	0.008229532
BC011248	-0.129017601	8.423028378	0.008233633
SERBP1	-0.280654794	10.03211788	0.008243368
MIB1	0.190098181	7.970364185	0.008252095
AU023871	0.151381363	7.723405134	0.008254337
NUMA1	-0.247112858	8.236596644	0.008275017
LOC100047260	0.181934286	8.076541346	0.008279618
PTGFRN	0.121176445	7.658370132	0.008301841
STRBP	-0.161726052	8.026396035	0.008307745
MSN	0.083544486	7.609511366	0.008325665
NDUFAF1	-0.238615983	8.972535205	0.008325665
CRYZL1	-0.216983328	8.248460404	0.008326247
A330057G13RIK	-0.188294834	7.726212725	0.008329832
C730009F21RIK	-0.370419295	8.219759782	0.008331712
EG382161	-0.168285779	8.027550153	0.008331712
PGC	0.766264007	7.732107962	0.008336558
ATP5H	-0.626697475	10.92708005	0.008336634
IRX3	0.135692555	7.647130431	0.008348928
SPINT2	-0.317548629	8.149098314	0.008348928
CCM2	0.145451454	7.682392979	0.008357118
RRM2	0.275929045	7.857711493	0.008361864
4930455C21RIK	-0.215074747	8.54356822	0.00836316
LOC100047749	0.157573434	7.84848778	0.008364569
BLNK	0.308667796	7.88457192	0.008365506
E330016A19RIK	-0.1696985	8.004292028	0.008394154
2200001I15RIK	0.295436329	7.71260601	0.008456962
3632431M01RIK	-0.664984929	8.509072422	0.008474366
NUAK2	-1.091530405	11.04184352	0.008475294
ATL2	-0.320303032	8.276187855	0.008490968
IYD	-1.29612205	8.89304519	0.00849728
SCL0003799.1_2	0.229674203	7.845122623	0.008497978
AW544981	0.38908078	9.243706764	0.008516847
1110014O20RIK	-0.704445309	10.30576351	0.008527574
FBXO4	-0.362491397	9.163379398	0.008527574
MTERFD3	-0.092307364	7.645433404	0.008527574
SLC36A1	-1.042489656	8.723423992	0.008527574
S100A8	0.927209112	7.774849599	0.008534208
IDH3G	-0.418080938	11.07682837	0.008543922
COX19	-0.425480865	9.80539121	0.008545012
CSTF3	0.177291468	8.455749082	0.008552757
THEM2	-0.618759544	11.23671239	0.008552757
BARX2	-0.986887752	8.438608791	0.008556233
COG4	-0.208316741	7.94916945	0.008568819
LYRM5	-0.278834253	8.885551418	0.008596061
USE1	-0.573782032	9.827445007	0.008609609
AGPAT3	-0.143652437	7.74971147	0.00861642
GAPDH	0.540457211	12.86978808	0.008616849
MFSD2	0.921022563	10.61292396	0.008632724
UBE2Q1	-0.324334039	8.768211301	0.008632727
ASB8	0.229541114	10.47154387	0.008676245
D10JHU81E	-0.366552865	8.914000819	0.008686571

SLC25A36	-0.175381295	7.805807227	0.008687431
TAF3	-0.083208636	7.749946815	0.008703308
PDSS1	-0.640358588	8.690639115	0.008715009
D10ERTD516E	-0.171967515	7.888005141	0.008715844
MSCP	-0.706126904	9.11925762	0.008735262
9030611K07RIK	0.17065985	7.614005893	0.008744895
TMEM2	0.3330571	8.481479096	0.008749423
C630024B01RIK	0.341102116	7.759830256	0.008805138
C230081A13RIK	-0.190633717	7.837246804	0.008813549
UBB	-0.467983183	15.24150492	0.008831344
JUN	-0.586337003	8.886510984	0.008834338
CHRD	0.130647302	7.723534444	0.008840794
RELA	0.638272848	10.72838809	0.00884617
P4HB	-0.679303759	14.39561749	0.008872928
SPRR2H	0.269136965	7.579233079	0.008892888
EG433923	-0.978473547	11.15571036	0.008905683
LOC384836	0.14015135	7.637669018	0.008916007
CAR11	0.27977786	7.729019652	0.008955776
LGALS6	1.349708933	11.4846886	0.008955776
XPNPEP3	0.137485821	8.060806187	0.008955776
LOC382163	0.096813258	7.616200928	0.008958248
RDH16	-0.353710916	7.805305047	0.008986701
STIM1	0.17071809	7.847623513	0.008986701
TLR13	0.1164954	7.643151093	0.008990877
ITPK1	-0.521208892	11.52797451	0.009022921
PLA2G4B	0.100715762	7.581835902	0.009078692
2310007F21RIK	-0.272358312	8.365228731	0.009113134
LOC269251	0.854348873	9.289288104	0.009131452
1810046J19RIK	-0.439451292	11.81123661	0.009146384
GZF1	-0.257766186	8.397541085	0.009146384
PLCH2	-0.270187031	7.783775699	0.009160354
PPM1A	-0.42257915	10.620303	0.009194976
SLC9A8	-0.149289308	8.009333779	0.009194976
7530408C15RIK	0.129131074	7.607592045	0.00924133
D2ERTD391E	-0.294890961	8.676089138	0.009253696
PPIL2	-0.207970137	8.162702784	0.009255636
DUSP6	1.060323258	11.20090971	0.009312573
A330023F24RIK	0.240982697	7.643291832	0.009359498
MBTPS1	-0.134135129	7.835629148	0.009419728
HN1	-0.555941705	11.81755649	0.009458012
DUSP16	-0.366947686	8.859209648	0.009465534
EEF1D	0.218338098	9.883354932	0.009499425
ADCK1	-0.085534217	7.856539544	0.009505171
SERINC2	0.859263573	9.953508627	0.009517386
CARD14	0.298132691	7.810503778	0.009544241
COPE	-0.292395249	10.75792551	0.009624629
TEX261	-0.275662556	10.16434847	0.009624629
WNK2	-0.119603828	7.6368226	0.009640566
ABHD1	-0.853204433	9.266247122	0.009643326
PDX1	0.392298936	7.685489405	0.009727974
ENTPD8	-0.219545895	7.851307664	0.009733056
HAVCR2	0.111950761	7.594742795	0.009799977
ETNK1	0.150534173	7.765413847	0.009807621
4631409F12RIK	-0.090126925	7.776512131	0.009828179
TRIM72	-0.369560716	7.776578524	0.009840254
LOC666676	-0.27174449	13.19985133	0.009875591
TNFRSF10B	0.119580259	7.718849763	0.009875591
SPRR2A	1.36135145	9.514079	0.009880842

PCBP3	0.096519953	7.639421986	0.009897271
DNAJC19	-0.568114184	9.371436634	0.009915495
PIP4K2A	0.635371983	8.962562799	0.009915495
ZFP281	0.15273599	8.199013976	0.009915495
DAAM1	0.404263216	8.482389632	0.009928779
DDX58	-0.387898112	8.144186429	0.009934521
SYNGR1	0.115913842	7.62494621	0.009934521
SERPINH1	0.770661729	9.123611359	0.009986261
SNTA1	-0.366856428	8.152447322	0.009989512
ARSG	-0.285427715	7.788972508	0.009996498
ARHGAP9	0.136090305	7.735486357	0.0099992
XDH	-0.840478711	9.140905541	0.010033443
SPINT1	-0.434767676	12.79811965	0.010035864
D130004H04RIK	0.33283482	8.290055803	0.010045736
CYBRD1	0.280812366	7.628689702	0.010069806
ELL3	-0.174188043	7.80124627	0.010078635
A930026I22RIK	-0.111575528	7.649005036	0.010091579
MYD88	0.429036538	9.907788776	0.010091579
REG3A	-1.61677023	11.52230147	0.010091579
TM4SF4	1.751432454	10.74863554	0.010091579
ZFP90	0.305349853	8.219034908	0.010091579
LOC386078	0.360361205	9.120010649	0.010096003
COL7A1	0.283244175	7.681943329	0.010099872
FCGR2B	0.133159096	7.610977907	0.010101288
TOR1A	-0.283843972	8.227072736	0.01010207
USP12	-0.08755755	7.745067961	0.01010207
CHRM3	0.145819238	7.749701058	0.010111216
MTA3	-0.334597661	8.314416859	0.010121439
RB1	-0.659558652	9.287189075	0.010139146
PILRB1	0.118375468	7.561908647	0.010143309
AMBP	1.20836685	8.369780609	0.010143514
2210417D09RIK	-1.092838717	10.29744001	0.010169155
SOCS3	1.754760987	11.30586266	0.010178745
C6	0.400548193	7.834412496	0.010254213
FBXO10	0.244432996	7.850273404	0.010276987
STOML2	-0.147071136	7.723221278	0.010294713
ZFP592	-0.211501708	8.239276306	0.010312461
CDC40	-0.092183844	7.84706143	0.010314503
VWA5A	-0.438515119	8.996292999	0.010324257
PSMC3	0.332749661	10.4216561	0.010326366
PDE1B	0.284302514	8.129747366	0.01033134
LOC100044776	-0.324973032	9.013794076	0.01033613
BC051227	0.337876192	8.373276894	0.010362866
GALNT2	0.394056888	9.370151673	0.010363459
SLC35A5	-0.088302288	7.64823565	0.010368999
HIF1AN	-0.303338818	8.588288398	0.010404219
CPT1B	-0.254090956	7.89455862	0.01040772
SRI	0.391152267	9.978947166	0.010435417
EIF2AK2	-0.983184007	11.07942421	0.010446655
RAB11B	-0.256382382	10.89298243	0.010450059
ATAD1	-0.249846207	9.290982121	0.010459654
FLNB	0.986437208	8.781291283	0.010459654
RAB2A	-0.107691558	11.20304719	0.010459654
C030033M12RIK	-0.141366236	7.861452701	0.0104669
2310051E17RIK	0.206162213	7.932367862	0.010484813
TSPAN2	0.141271089	7.647907602	0.010506279
ES22	-0.521400544	7.850809652	0.010526673
RBM45	-0.354533014	9.18876253	0.010550466

CAP1	0.811009707	11.33949161	0.010558634
SETD4	0.092587479	7.725437449	0.010561397
ANAPC2	-0.209134921	8.072199395	0.010562603
SGCB	0.151685268	7.773999257	0.010571866
CDKL5	0.128903126	7.684512491	0.010590052
TRIM27	0.199510879	8.024710409	0.010591799
SLC25A38	-0.257981232	9.367756583	0.010635397
SAPS3	-0.359898362	9.129280079	0.010641111
APLP1	-0.459113147	8.076671275	0.010652368
AGFG2	0.153129108	7.918002805	0.010655428
GAN	0.141465044	7.744966302	0.010655428
LOC230253	0.713806752	11.7662251	0.010655428
4933401P20RIK	0.101721618	7.606345602	0.010657727
MIER1	-0.09982396	8.082649736	0.010665439
9630027A13RIK	-0.196284906	8.194020039	0.010676851
SFRP1	0.279181576	7.970036089	0.010676851
ELF1	-0.418416512	9.703520317	0.010740238
ALOXE3	0.484605746	7.681654958	0.010750982
PEX10	-0.094473645	7.731988152	0.010750982
TARDBP	-0.113966799	7.807481399	0.010750982
2310011G17RIK	0.134550477	8.513652472	0.010759887
PCBP2	-0.365065812	10.52691088	0.010763685
KCNK13	0.13781732	7.662182654	0.010792838
LOC634731	0.11649182	7.573615114	0.010792838
FAM118A	-0.090659285	7.602838346	0.010839043
KCTD1	0.106172939	7.596926455	0.010839043
LOC383766	-0.111730456	7.655805645	0.010863219
MAF	-0.131280241	7.757240895	0.010863219
AI607873	0.529280693	7.862351774	0.010917817
MRPS9	-0.327653436	9.567319168	0.01092402
PFN2	0.172548925	7.851027215	0.01093436
E130307D12	-0.124277435	7.830771635	0.01094999
GPX2	2.075790033	14.37414813	0.010965603
CCL17	0.369126484	7.887073398	0.010988739
AKP5	-0.107341215	7.690181059	0.010991513
YDJC	-0.241543895	8.120997103	0.0110448
MAP3K11	-0.304832874	10.05890572	0.011052525
BC003314	0.118524786	7.57954141	0.011060308
N4WBP5-PENDING	-0.293804798	10.32527726	0.011090486
GALNT6	-0.159801368	7.791486123	0.011101806
A130026C10RIK	0.474665799	8.02466718	0.011113829
A430107N12RIK	-0.229415891	8.947044132	0.011113829
PPP3CB	-0.223350587	9.694740851	0.011113829
A730004F22RIK	-0.209334293	8.022065368	0.011121294
GIPC1	0.261039667	7.958500408	0.011204651
2310003F16RIK	0.339331146	11.21736174	0.011205273
TRPT1	-0.149465375	7.817056527	0.011232782
RAC1	0.252938962	8.921490165	0.011257514
PTP4A2	0.313392735	11.2688902	0.011281879
LOC100047490	0.503983977	11.9829777	0.011290499
POLR2L	0.467637307	11.58062566	0.011290499
CNNM4	-0.129052509	7.655128801	0.011298881
EPN3	0.132019915	7.582085275	0.011307536
NFATC4	0.285563065	7.816319828	0.011307536
ITLNB	1.4614237	12.57390517	0.011338334
HOXD8	0.096902901	7.655768939	0.011342206
1110058L19RIK	-0.300113013	9.305978316	0.011347705
IFRD1	0.173401511	7.764405283	0.011374007

TMEM50B	-0.28103187	7.967099413	0.011374007
D15ERTD682E	0.131727233	7.831860666	0.011377973
AI850995	-0.603699883	8.766069521	0.01138737
CNOT2	-0.130525632	8.600187687	0.011403427
PNPLA7	0.313116078	8.006819499	0.011418197
2810451K12RIK	-0.119849352	7.613055427	0.011445131
4930573I19RIK	0.1155672	7.793573078	0.011445131
INTS10	-0.279600114	8.317539062	0.011445131
LOC100046278	1.451976623	14.48468476	0.011445131
SPSB1	1.039715293	10.23815911	0.011481875
MTDH	0.55796537	10.29294934	0.011516145
DEFCR6	0.392808406	14.31316358	0.011528122
GMFG	0.36879894	8.316573453	0.011528122
JMJD2B	-0.170262197	8.339289666	0.011557918
ADAP2	-0.134430511	8.183649523	0.01158372
MORF4L2	0.322200845	12.34438341	0.01158372
5730543M03RIK	-0.596886745	8.822478601	0.01162732
HDAC11	-0.427132905	7.847831024	0.01162732
C730009D12	1.844479097	8.880577881	0.011639094
GIMAP6	0.309117428	8.078357734	0.011676684
FAM151A	-1.948446137	8.69511767	0.011677034
1110034O24RIK	0.4078509	9.457305262	0.011677065
A130019A16RIK	0.101212613	7.613727545	0.011677065
LOC629364	0.556562959	9.510306269	0.011677065
MEST	0.165487639	7.565512625	0.011677065
PLA2G2F	0.146567951	7.670106333	0.011677065
CYP2J9	-0.387719085	7.841108629	0.011681067
LOC636952	-0.423685764	9.223674931	0.011681067
UBE2D2	-0.2440055	10.05732793	0.011706453
B230207L18RIK	-0.125048058	7.633253154	0.011732873
PDE6D	-0.262944909	8.199279871	0.011732873
E530004K11RIK	-0.249578539	7.72985767	0.011743322
GPR114	0.682030307	8.605564648	0.011747609
DDX27	0.206185933	8.632110536	0.011751822
PNLIPRP2	1.286149209	9.385004965	0.011753223
LOC100044376	-0.497028146	11.06781515	0.011782605
6430590A07RIK	-0.205286792	7.954119883	0.011784056
RNF44	0.322357146	10.57940151	0.011785829
CGGBP1	-0.372872554	10.34480932	0.011786668
LOC383125	0.539860931	8.250598316	0.011800771
MYAK	0.333905979	8.087812073	0.011800771
PHACTR4	-0.459203753	11.07835271	0.011800771
VTI1B	-0.307362941	10.00361282	0.011800771
GTF2IRD2	-0.113184204	7.826118113	0.011817683
ROCK1	0.169844352	7.876489734	0.011817683
3110001A13RIK	0.15139667	7.811287669	0.011821471
LGALS3	0.759745984	13.6757613	0.011821471
CITED2	-0.382043319	8.872217442	0.011837218
RABGGTA	0.222350961	8.316338798	0.011842181
LOC675377	0.22243171	13.01664408	0.011853378
BC025446	-0.590558929	10.66299657	0.011856822
LINCR	-0.267249963	8.225344457	0.01186365
RBM8A	-0.211133665	7.985174689	0.01186365
ZFP472	-0.120259788	8.038968941	0.01186365
CBR1	-0.629933652	10.34714578	0.01188274
CORO1A	0.6978336	8.513147167	0.011921541
DDAH1	1.251345111	10.43259008	0.011929972
2610019E17RIK	0.343855612	9.605113315	0.01196776

NAPSA	0.271396549	7.816243497	0.011972984
DCLRE1B	0.084919454	7.770975085	0.011998034
GPC1	0.479076937	8.387397052	0.012000321
LOC100046841	-0.120468155	7.7801126	0.012018888
TOMM7	-0.414764615	10.56590224	0.012053221
AMPD1	0.081449573	7.585646401	0.012072096
A130096D14RIK	-0.320896574	8.050242533	0.01208425
BC002163	-0.593572133	10.85356327	0.012087992
RFC4	-0.221553867	7.924838237	0.012116246
TMEM9	0.185215094	7.932746698	0.012116246
UBA2	0.266456429	8.914848942	0.012116246
SHMT1	-0.358003253	8.045355947	0.012120581
DHRS1	-0.734318281	11.99055023	0.01212805
CNP1	0.145944401	7.697058573	0.012194884
DCAKD	-0.182091845	9.884236543	0.012205997
PODXL	0.248486138	8.022257939	0.012223235
PMM1	0.364365915	7.936029453	0.012228071
CD72	0.411906731	7.920949689	0.012236567
MBP	0.195555871	8.004799596	0.012267301
A430088H15RIK	0.184943783	7.902883963	0.012274512
PPFIBP2	-0.136427521	8.05828085	0.012297936
CST3	0.555954566	10.9982335	0.012344487
FRAT1	-0.121138113	7.725140679	0.012353916
LOC100048530	-0.13917447	7.756141147	0.012353916
NMRAL1	-0.261174777	8.051637754	0.012353916
PYGO2	0.358507102	9.759823633	0.012353916
REEP4	0.214640933	8.229616091	0.012353916
DEFCR20	1.361585698	14.26911826	0.01235956
MED4	0.132849683	8.20713928	0.012395803
ARFL4	-0.178767742	7.817089293	0.012419256
SLAMF8	0.278860008	7.880055336	0.012422574
LOC100044298	-0.446690455	9.362555383	0.012426299
ZXDC	-0.114459347	7.839169805	0.012444446
9030624J02RIK	-0.126818916	8.269349334	0.012480218
F13A1	0.280447968	7.716072222	0.012480218
MCEE	-0.510803911	9.618384499	0.012490983
CEACAM20	-1.043400005	9.002079191	0.012511152
GSDMDC1	-0.740026486	11.51945008	0.012511152
ZFP36L1	0.278365537	10.47845824	0.012511152
CAMK1D	-0.09876625	7.663990753	0.012516935
IFI35	-0.672613568	8.776507242	0.012519812
VAMP2	0.358272157	8.969905928	0.012521734
5830406C17RIK	-0.205408396	8.033064377	0.012528618
CDKN2C	-0.115142832	7.780237975	0.012568201
CHST11	0.12871584	7.614779218	0.01257854
SLC6A19	-0.919824753	10.39637787	0.01257854
PSMB10	-1.065900198	11.65899093	0.012588819
MYH14	-0.193202975	8.027556908	0.012660009
RRP12	0.387907186	9.634942662	0.012667132
NRN1	-0.290070875	7.869778666	0.012685285
GLRX2	-0.162924509	8.163919475	0.012744568
CEACAM2	0.859551484	11.2009362	0.012755248
AQP5	0.227710794	7.675288626	0.01276337
DOK3	0.578796236	8.281631383	0.01276337
STT3B	-0.58530206	11.99409833	0.01276337
LOC671523	-0.13737526	7.931451508	0.012764319
ST3GAL5	0.103117677	7.621027747	0.012764668
SAPS1	-0.140487621	8.533544861	0.012765039

TMEM162	-0.220216882	8.079097591	0.012765957
CEBPB	0.800799263	11.0857662	0.012789129
NDUFA1	-0.349095641	12.44578805	0.012789129
PSME3	0.328457952	10.52500599	0.012809413
2010005J08RIK	-0.207914219	8.629225117	0.01284536
LRIG1	0.22987815	8.613829557	0.012862303
EG277333	0.237593005	8.396811923	0.012886956
RDH14	-0.382167243	8.538659281	0.012886956
YIF1A	-0.322818845	9.232439657	0.012894956
WHSC1	-0.096278261	7.894315019	0.012929625
FKBP11	0.829193868	8.724313003	0.012968972
CCL3	0.125461454	7.585803563	0.012975165
HADHSC	-0.104573948	7.697660589	0.012975165
MADCAM1	0.222009904	7.699231765	0.012975165
BC066028	0.084092048	7.632815022	0.012999819
SC4MOL	0.844474993	10.8168114	0.012999819
PSAPL1	0.189151513	7.575701781	0.013023627
TNFSF10	-0.242363007	7.677725808	0.013023627
RFNG	-0.092294346	7.651465872	0.013025834
VPS36	0.361754711	9.938924529	0.013025834
SNX30	0.180502751	7.839178532	0.013032109
CAPNS1	0.733593435	9.814089841	0.013053874
DCI	-0.596349841	8.930597556	0.013053874
LY86	0.524803218	7.977799115	0.013053874
1700081H05RIK	0.083494865	7.59364393	0.013062475
NSMCE1	0.376812149	10.62217443	0.013062475
1810008K04RIK	-0.125628865	7.697252737	0.013099548
BC049806	-0.641925546	8.59311342	0.013113397
HEMK1	-0.231898626	8.07479614	0.013113792
VWCE	-0.125296028	7.610681122	0.013118863
NCAPD2	-0.20578457	7.944819492	0.013132994
A2LD1	-0.483222944	8.681805958	0.013145715
4933427G23RIK	0.276392302	8.760517559	0.013164621
MGAT4B	0.335181675	8.678001705	0.013164621
FBXO18	-0.194803345	8.250919999	0.013254792
SCAMP4	0.462061615	10.05783839	0.013256091
LOC213948	0.092917402	7.577799477	0.013256703
LMBR1L	-0.227786236	8.158183423	0.013286238
EG625054	0.176666463	13.21485898	0.013340915
1110034G24RIK	-0.106444615	7.69590643	0.013349113
LOC666904	-0.298390567	14.83419724	0.013352336
RXRB	-0.224095935	8.184889007	0.013359936
STT3A	-0.230120231	7.900858241	0.013359936
SLC25A10	-0.391187462	9.903149985	0.013377437
WIPI2	-0.172820212	8.147111777	0.013393674
CDC42SE1	0.245291211	9.066657221	0.013416813
SIN3A	-0.23291239	8.592627577	0.013438037
AK2	-0.627151748	9.729162213	0.013441046
EXT2	-0.176050005	8.230442829	0.013450753
HOXA5	0.298236067	7.89954965	0.013450753
ID1	0.609779347	10.23174774	0.013450753
RFC1	0.159860798	8.317397977	0.013461135
NOL10	0.14927547	8.18615753	0.013486822
CTNS	-0.364770936	8.610056355	0.013517652
ORAI1	0.430972669	9.600067865	0.013522064
SPATA13	-0.416580044	9.48968472	0.013539248
EPHB3	0.101595678	7.575084404	0.013540905
5930418K15RIK	0.73596213	11.43404725	0.013558797

NARG2	-0.099273305	7.735765009	0.013558806
ZFP87	-0.129480298	7.922920665	0.013573831
MACROD1	-0.391799419	8.053333983	0.013575464
PMEPA1	0.184145372	7.810714798	0.013577887
MYO9A	0.075817226	7.607161023	0.013605
HGFAC	0.678471105	9.021568798	0.013610923
PIM1	-0.083426626	7.713914264	0.013628884
SLC2A6	0.196312432	7.838876586	0.013632357
LOC100044159	-0.175117292	8.067780267	0.013666325
BLOC1S2	0.370764944	8.926552149	0.013666528
PAPOLG	-0.24927007	8.247912988	0.013666528
F630047D10RIK	-0.127351675	7.651829529	0.013666953
SOCS2	0.380705882	10.14182604	0.013667074
1810055E12RIK	0.23831383	8.932765006	0.013728084
MTERFD2	-0.14660588	8.165819935	0.013728084
SOSTDC1	0.142218392	7.647354832	0.013759359
PARVA	0.314451945	8.767041642	0.013759871
A630082K20RIK	0.231832655	8.78808269	0.013769441
BCL2L13	-0.268228125	8.407203249	0.013769441
A930009M04RIK	-0.392271451	9.26525792	0.013774952
RNF113A2	0.401070423	9.103193339	0.013791535
SPRR2D	0.659050361	7.733853283	0.013791535
CUX1	-0.109584742	7.772633173	0.013793797
PPARA	-0.109857003	7.65002405	0.013804391
MRPS18B	0.484042265	9.008549056	0.013852354
VPS37C	-0.176306293	8.00559749	0.013864168
A430084P05RIK	0.173754542	7.613343442	0.013872187
MYLK	-0.869800573	10.84353529	0.013872187
OLFR165	-0.176482644	7.615989318	0.013884501
SAMD4B	0.3055068	8.712525389	0.013884501
TERF2IP	-0.106521137	8.138687034	0.013884501
SNPH	-0.3964641	7.821931849	0.013885516
GHITM	-0.412974382	9.431825431	0.013930891
9530055J05RIK	0.256695251	8.168208729	0.014006876
1500010J02RIK	0.358842917	8.298897911	0.014042142
A630097K09RIK	0.110172466	7.580261778	0.014042142
CLDND1	-0.337567785	8.772783235	0.014058133
PER2	-0.773392627	8.307438968	0.014058868
4933422H20RIK	-0.466762645	7.936456804	0.014155012
PPT1	0.519062276	8.279455092	0.014160984
NME1	0.469845942	12.70263122	0.014191711
ARL14	1.081608821	10.42664797	0.014237387
COMMD7	-0.157068464	8.9861973	0.01426006
2310004I03RIK	-0.477265273	8.811985433	0.014260732
LXN	0.289600997	10.10305667	0.014271802
MAP3K8	0.079804462	7.594261244	0.014271802
C630004H02RIK	0.183836961	8.030883662	0.014302254
PHF10	0.306318759	9.502978153	0.014306037
SLC25A42	-0.285076825	7.823516494	0.014313617
ZC3HC1	0.176334357	8.121445839	0.014314729
BHLHB9	0.249828474	8.137438758	0.014397163
TXLNA	0.154267195	8.172837051	0.014402972
EDG7	-0.293236423	7.83837066	0.014413796
EG433182	0.184880711	7.827547346	0.014413796
LNX1	-0.223453191	7.893832097	0.014516012
SCAMP5	-0.46088914	9.531228426	0.014516012
8430419L09RIK	-0.120047436	7.627318141	0.01457605
2310047M10RIK	0.410079581	9.294173065	0.014577515

MT3	0.675094999	7.735879341	0.014588305
KLHDC5	0.07288402	7.622153108	0.014607325
WNT6	-0.081441413	7.629123475	0.014627749
RP9	-0.414084315	9.866870842	0.014630359
FAM149B	-0.117182308	7.639051287	0.014641421
5430440L12RIK	-0.285581337	8.195502208	0.01466859
SEPHS1	-0.137643266	7.695124954	0.014673458
GDE1	-0.436348012	8.989992381	0.014673639
HPCAL4	0.145507652	7.706991311	0.014673639
3110078M01RIK	-0.27565624	8.147751859	0.014675856
CARS2	-0.153583665	7.784216785	0.014676865
EVI1	0.106313063	7.658237998	0.014676865
BC034090	0.083867464	7.591996913	0.014695441
2310022A10RIK	0.1656006	8.254945237	0.014713352
GNL2	0.187052078	8.131035831	0.014720817
LRRFIP2	-0.166456051	7.985445818	0.014720817
DYNLT3	0.340587631	8.901834434	0.014779814
NRD1	0.287657827	10.83180063	0.014782537
SEL1L	-0.178777565	8.294700985	0.01478685
YIPF3	-0.243948581	9.799248979	0.01478685
HSD17B12	0.332694713	9.242170833	0.01479686
SSH3	0.111756215	8.033599683	0.014833454
TUG1	-0.108281194	7.93036704	0.01485041
ATP1B2	0.123257026	7.649136288	0.01485134
NDUFA9	-0.435458542	10.74252335	0.014950636
1190017O12RIK	-0.285577864	9.444849341	0.014952468
LOC674611	0.156485875	7.637842802	0.014967884
DOT1L	0.17653598	7.944508121	0.014975314
5730410E15RIK	-0.093071194	7.708803045	0.014996438

Supplemental Table 2

Gene ID	Accession	number of peptides	CLASS
Tceb1	IPI00323130	3	Class A
Tceb2	IPI00131224	4	Class A
Nrbp1	IPI00222739	7	Class A
Tsc22d2	IPI00762599	9	Class A
Tsc22d4	IPI00111328	4	Class A
Tsc22d4	IPI00653463	4	Class A
Sall4	IPI00828722	11	Class A
Sall4	IPI00475164	11	Class A

Supplemental Table 3

Sequence Name (Gene)	Gene Public Name
AC8.2	
AH10.5	
AH6.1	gcy-1
B0001.4	B0001.4
B0024.5	
B0024.6	gcy-6
B0025.1	
B0198.3	B0198.3
B0205.7	kin-3
B0207.4	B0207.4
B0207.4	air-2
B0207.7	B0207.7
B0218.3	pmk-1
B0218.5	
B0222.9	B0222.9
B0240.3	daf-11
B0252.1	B0252.1
B0261.2	
B0285.1	
B0285.1	B0285.1
B0285.10	ckb-3
B0285.2	
B0285.8	ckb-1
B0285.9	ckb-2
B0302.1A	kin-25
B0302.5	B0302.5
B0334.8	age-1
B0414.7	
B0464.5	spk-1
B0478.1	
B0495.2	B0495.2
B0496.3	
B0511.4	tag-344
B0523.1	kin-31
B0545.1	
C01B7.4	tag-117
C01C4.3	C01C4.3
C01C7.1	ark-1
C01G6.8	
C01G6.8A	cam-1
C01H6.9	C01H6.9
C03B1.5	
C03C10.1	kin-19
C03C10.2	C03C10.2
C04A11.3	tag-334
C04G2.10	
C04G2.2	
C04G6.1	mpk-2
C04G6.4	C04G6.4
C04H5.3	C04H5.3
C04H5.4	
C04H5.5	
C05B10.1	lip-1
C05C12.1	C05C12.1

C05D10.2	C05D10.2
C05D10.2	
C05D2.1	
C05H8.1	ckk-1
C05H8.1	ckk-1
C06A12.4	gcy-27
C06B3.6	C06B3.6
C06E2.2	C06E2.2
C06E4.5	C06E4.5
C06E8.3A	prk-1
C07A9.12	
C07A9.3	tlk-1
C07G1.3	
C08F8.6	C08F8.6
C08H9.5	
C08H9.8	C08H9.8
C09B8.7	pak-1
C09B9.4	
C09D1.1	unc-89
C09D4.3	C09D4.4
C09E10.2B	dgk-1
C09F9.4	C09F9.4
C09G4.2	
C09G4.3	dom-6
C09H10.5	C09H10.5
C10C6.1	kin-4
C10G11.5A	pnk-1
C10H11.9	let-502
C12D8.10	akt-1
C12D8.10B	akt-1
C14A4.13	
C14B9.4B	plk-1
C14B9.8	C14B9.8
C15H7.5	C17D12.7
C16A11.3	C16A11.3
C16B8.1	lin-18
C16D9.2	rol-3
C17C3.11	C17C3.11
C17D12.7	
C17E7.9	
C17F4.6	gcy-19
C17F4.6	gcy-19
C18H7.4	
C24A1.3	C24A1.3
C24A1.3	
C24A8.4	
C24G6.2	
C24G7.5	C24G7.5
C25A1.14	
C25A8.5	
C25F6.2	dlg-1
C25F6.4	
C25H3.1	
C26C6.8	C26C6.8
C26D10.4	
C26E6.1	C26E6.1
C27D8.1	C27D8.1
C28A5.6	C28A5.6

C28D4.2	cka-1
C29E4.8	C29E4.8
C29F5.2	sdz-3
C29F7.3	C29F7.3
C29F9.7	pat-4
C29H12.5	C29H12.5
C30G4.3	gcy-11
C31E10.8	C31E10.8
C32D5.2	sma-6
C33F10.2	C33F10.2
C34B2.3	C34B2.3
C34C6.5	tag-274
C34C6.5	
C34F11.5	C34F11.5
C34G6.5	C34G6.5
C35B8.2	vav-1
C36B1.10	C36B1.10
C36B1.11	C36B1.11
C36B7.1	C36B7.1
C36B7.2	C36B7.2
C38C3.4	C38C3.4
C38C6.6	tag-297
C39B10.3	
C39H7.1	
C41C4.4	ire-1
C41C4.4	ire-1
C42C1.3	C42C1.3
C42C1.9	C42C1.9
C44C10.7	
C44C8.6	
C44H4.5	tap-1
C44H4.6	C44H4.6
C45B11.1	tag-66
C45G9.1	C45G9.1
C46C2.1	wnk-1
C46H11.4	
C46H3.2	
C47D12.1	
C48B6.6	
C49C3.10	C49C3.10
C49C3.2	
C49C8.1	
C49H3.1	gcy-8
C49H3.2	C49H3.2
C50D2.7	C50D2.7
C50F2.8	C50F2.9
C50F4.11	
C50F4.2	C50F4.2
C50H2.7	C50H2.7
C52A11.4	mpz-1
C52B9.1A	cka-2
C53A5.4	C53A5.4
C53B4.4	
C53B7.6	C53B7.6
C54G4.1	C54G4.1
C55B6.1	
C55B6.5	C55B6.5
C55B7.10	C55B7.10

C55C3.4	
C56A3.8	C56A3.8
C56C10.6	
C56G2.5	C56G2.5
D1044.1	D1044.1
D1044.8	
D1073.1	D1073.1
D2013.4	
D2024.1	D2024.1
D2045.5	
D2045.7	
D2096.12	
D2096.3	D2096.3
DC2.7	
E01H11.1	pkc-2
E02C12.8	
E02D9.1	E02D9.1
E02H1.6	E02H1.6
E02H4.3	
E02H4.6	
EEED8.9	pink-1
F01D4.3	
F01F1.11	F01F1.11
F02D8.1	F02D8.1
F07A11.5	F07A11.5
F07H5.7	F07H5.7
F08B1.1	
F08B1.2	gcy-12
F08B4.3	F08B4.3
F08F1.1B	kin-9
F09A5.2	
F09C12.2	
F09C12.3	
F09E5.1	pkc-3
F09G2.1	
F09G8.7	F09G8.7
F10C2.1	
F10C2.2	kup-1
F10G7.6	F10G7.6
F10G8.2	F10G8.2
F11A5.13	F11A5.13
F11D5.3	
F11E6.8	F11E6.8
F11F1.5	F11F1.5
F11G11.5	F11G11.5
F12A10.2	F12A10.2
F12F3.2	F12F3.2
F13B9.4	F13B9.4
F13B9.5	ksr-1
F13B9.7	F13B9.7
F13E6.2	F13E6.2
F13E6.6	tag-118
F14B4.2	
F14H12.4	
F14H3.12	F14H3.12
F15A2.6	sad-1
F16B12.5	F16B12.5
F16B12.7	F16B12.7

F17E5.1	lin-2
F18F11.4	F18F11.4
F18F11.5	
F18H3.5	cdk-4
F18H3.5	cdk-4
F19C6.1	grk-1
F19H6.1	F19H6.1
F20B6.8	hpk-1
F20D6.5	F20D6.5
F20H11.1	F20H11.1
F21D5.5	F21D5.5
F21F3.2	F21F3.2
F21H7.9	gcy-20
F22B3.8	
F22D6.1	kin-14
F22D6.5	prp-4
F22E5.3	gcy-21
F22F1.2	
F22F7.5	ckb-4
F22H10.1	F22H10.1
F22H10.5	F22H10.5
F23C8.7	F23C8.7
F23C8.8	F23C8.8
F23H12.6	gcy-13
F25B3.3	
F25F2.1	F25F2.1
F25H2.2	F25H2.2
F25H2.5	F25H2.5
F25H5.3	
F26A1.3	
F26A1.4	F26A1.4
F26D11.1	F26D11.1
F26D11.4	F26D11.4
F26E4.5	F26E4.5
F27E5.3	F27E5.3
F28B12.3	vrk-1
F28C10.3	
F28H6.1	akt-2
F28H6.1A	akt-2
F29C4.1	
F30A10.3	F30A10.3
F31E3.2	
F32A11.5	
F32B6.10	
F32B6.4	
F32D8.1	F32D8.1
F32D8.13	
F32E10.5	F32E10.5
F33D11.7	F33D11.8
F33E2.2	dlk-1
F33E2.2A	dlk-1
F35C11.3	F35C11.3
F35C8.1	
F35C8.2	F35C8.2
F35C8.3	jkk-1
F35G12.3	sel-5
F35H12.4	F35H12.4
F35H8.7	wee-1.1

F36H12.8	F36H12.8
F36H12.9	F36H12.9
F37E3.3	F37E3.3
F38B2.4	F38B2.4
F38E1.3	F38E1.3
F38E11.6	
F38E9.5	F38E9.5
F39B1.1	F39B1.1
F39F10.2	F39F10.2
F39F10.3	F39F10.3
F39H11.3	cdk-8
F39H12.3	
F40A3.5	
F40F8.1	F40F8.1
F40G9.13	F40G9.13
F41G3.5	
F42A10.4	efk-1
F42A10.4A	efk-1
F42A9.1	
F42G10.2	mkk-4
F42G2.3	F42G2.3
F42G8.3	pmk-2
F42G8.4	pmk-3
F42G8.9	F42G8.9
F43C1.2	mpk-1
F43C1.5	
F44D12.1	
F44D12.11	
F44G3.2	F44G3.2
F45G2.7	F45G2.7
F45H7.4	prk-2
F46C3.1	pek-1
F46F2.2	kin-20
F46F5.2	F46F5.2
F46F6.2	F46F6.2
F46G11.3	tag-257
F46H5.3	
F46H6.2	dgk-2
F46H6.3	F46H6.3
F47B10.5	F47B10.5
F47F2.1	
F48G7.10	F48G7.10
F48G7.9	F48G7.9
F49B2.5	src-2
F49C5.4	F49C5.4
F49E11.1	mbk-2
F52B5.2	F52B5.2
F52C9.3	F52C9.3
F52E1.4	gcy-7
F52F12.3	mom-4
F53A3.1	F53A3.1
F53B6.7	F53B6.7
F53C3.1	F53C3.1
F53F4.6	F53F4.6
F53G12.6	spe-8
F53G2.7	mnat-1
F54C1.6	F54C1.6
F54F7.5	mes-1

F54G8.2	
F54H5.2	F54H5.2
F55A12.3	ppk-1
F55A3.6	F55A3.6
F55A8.2	
F55B11.5	
F55C5.7	
F55F3.1	F55F3.1
F55F8.3	F55F8.4
F55G1.8	plk-3
F56B3.1	col-103
F56H11.6	F56H11.6
F57B1.7	F57B1.7
F57B9.8	
F57C9.1	
F57F5.5	pkc-1
F58A3.2	
F58H12.1	kin-29
F59A3.8	F59A3.8
F59A6.1	nsy-1
F59A6.4	F59A6.4
F59A6.5	
F59E12.2	zyg-1
F59E12.3	F59E12.3
F59F3.1	ver-3
F59F3.5	ver-4
F59F5.3	
H01G02.2	H01G02.2
H03E18.2	H03E18.2
H04M03.1	H04M03.1
H05L14.1	H05L14.1
H12I13.1	
H25P06.1	H25P06.1
H25P06.2a	
H25P06.2B	cdk-9
H28G03.6	mtm-5
H37N21.1	H37N21.1
H39E23.1	par-1
H42K12.1	pdk-1
K01A6.2	
K02B2.1	K02B2.1
K02E10.7	K02E10.7
K03E5.3	K03E5.3
K04C1.5	
K04C2.3	
K04G7.4	
K06A1.6	K06A1.6
K06H7.1	
K06H7.8	K06H7.8
K07A9.2	cmk-1
K07A9.2	cmk-1
K07C11.2	air-1
K07F5.4	kin-24
K08A8.1	mek-1
K08B12.5	tag-59
K08E3.6	cyk-4
K08F8.1	K08F8.1
K08H2.5	

K09A9.1	K09A9.1
K09B11.1	pik-1
K09B11.5	
K09C6.1	K09C6.1
K09C6.7	K09C6.7
K09C6.8	K09C6.8
K09E4.1	K09E4.1
K09H11.1	K09H11.1
K10D3.5	K10D3.5
K11C4.1	K11C4.1
K11D12.10A	mlk-1
K11E8.1	
K11H12.9	K11H12.9
K11H12.9	K11H12.9
K12B6.8	K12B6.8
K12C11.4	tag-119
K12D12.4	
M01B12.5	M01B12.5
M01B2.1	kin-30
M01D7.4	M01D7.4
M03A1.1	
M03C11.1	M03C11.1
M04C9.5	M04C9.5
M04F3.3	M04F3.3
M05D6.1	M05D6.1
M176.6	kin-15
M176.9	M176.9
M7.7	
M79.1	abl-1
PAR2.3	aak-1
R01E6.1	odr-1
R02C2.1	R02C2.1
R02C2.2	R02C2.2
R02E12.5	R02E12.5
R03D7.5	R03D7.5
R03G5.2	sek-1
R04A9.5	
R04A9.7	
R05G6.5	R05G6.5
R05H5.4	
R06A10.4	R06A10.4
R06C7.8	bub-1
R07A4.4	
R07E4.6A	kin-2
R07H5.8	R07H5.8
R08D7.7	R08D7.7
R09D1.12	R09D1.12
R09D1.13	R09D1.13
R107.4	R107.4
R10D12.10	R10D12.10
R10H10.6	R10H10.6
R10H10.7	R10H10.7
R11A5.4	
R11E3.1	R11E3.1
R11F4.1	R11F4.1
R11G1.4	
R11G1.6	
R12G8.1	R12G8.1

R134.1	gcy-3
R134.2	gcy-2
R13F6.6	zak-1
R13F6.7	R13F6.7
R13H9.5	R13H9.5
R13H9.6	R13H9.6
R151.2	
R151.4	R151.4
R166.5	
R53.2	R53.2
R53.7	
R90.1	R90.1
T01A4.1	
T01C1.1	T01C1.1
T01C8.1	
T01G5.1	T01G5.1
T01G9.4	npp-2
T01G9.6	kin-10
T01H10.4	T01H10.4
T01H8.1	rskn-1
T02G6.4	T02G6.4
T03D8.5	gcy-22
T03F1.3	T03F1.3
T03F1.6	
T03F1.8	T03F1.8
T04B2.2	frk-1
T04C10.1	mbk-1
T04C9.2	T04C9.2
T04D3.4	gcy-35
T05A6.1	cki-1
T05A6.2B	cki-2
T05A7.6	T05A7.6
T05C12.1	T05C12.1
T05E8.2	hil-8
T05G5.3	cdk-1
T05G5.3	cdk-1
T05G5.5	T05G5.5
T05H10.8	T05H10.8
T06C10.3	
T06C10.6	kin-26
T06E4.3	
T07A9.3	kgb-1
T07F12.4	T07F12.4
T08D2.7	T08D2.7
T08G5.2	T08G5.2
T09B4.5	T09B9.5
T09B4.6	T09B4.6
T09B4.7	
T09B9.5	
T10A3.1	
T10B11.2	T10B11.2
T10H9.2	scd-2
T11F8.4	
T11F9.14	T11F9.14
T13H10.1	kin-5
T14E8.1	
T14G10.1	pps-1
T15B12.2	

T17A3.1	ver-1
T17A3.8	ver-2
T17E9.1	kin-18
T19A5.2	
T19D12.5	T19D12.5
T20F10.1	T20F10.1
T20F7.3	T20F7.3
T20F7.6	T20F7.6
T20G5.5	pxf-2
T21C9.6	T21C9.6
T21G5.1	T21G5.1
T22B11.3	T22B11.3
T22H6.2	
T23F11.3	T23F11.3
T24C12.3	T24C12.3
T24D5.4	
T24F1.3	T24F1.3
T24H10.5	T24H10.5
T25B9.4	
T25B9.5	T25B9.5
T25E12.4	T25E12.4
T27A10.3A	ckc-1
T27A3.7	T27A3.7
T27C10.5	T27C10.5
T27C10.6	lrk-1
T27E9.3	cdk-5
T28D9.5	T28D9.5
T28F2.5	ccb-1
VF11C1L.1	ppk-3
VZC374L.1	VZC374L.1
W01B6.2	
W01B6.5	
W02A2.4	
W02B12.12	W02B12.12
W02B3.2	grk-2
W02B8.2	W02B8.2
W02H3.2	W02H3.2
W02H5.8	
W02H5.a	
W02H5.n	
W03A5.1	W03A5.1
W03D2.7	W03D2.7
W03F11.2	gcy-17
W03F8.2	W03F8.2
W03G1.6	W03G1.6
W03G1.8	W03G1.8
W03G9.5	W03G9.5
W04B5.5	
W04G3.5	W04G3.5
W04G5.3	W04G5.3
W04G5.6	kin-23
W05G11.6	
W06B3.2	sma-5
W06F12.1	W07A12.4
W06F12.3	W06F12.3
W07A12.4	
W07G4.3	W07G4.3
W08D2.8	kin-21

W09C3.1	W09C3.2
W09C5.5	W09C5.5
W10G6.2	sgk-1
Y105C5A.24	
Y105C5A.x	
Y106G6A.1	Y106G6A.1
Y106G6A.a	
Y106G6D.4	Y106G6D.4
Y106G6E.1	Y106G6E.1
Y106G6E.6	
Y110A7A.6	
Y111B2A.1	
Y111B2A.27	
Y111B2A.a	Y111B2A.a
Y116A8C.24	
Y116A8C.38	Y116A8C.38
Y119D3_445.c	
Y119D3_445.d	
Y17G7B.10	
Y18D10A.5	gsk-3
Y18D10A.5	gsk-3
Y18H1A.10	
Y22D7AR.6	
Y38E10A.h	Y38E10A.h
Y38H6C.20	Y38H6C.20
Y38H8A.3	
Y38H8A.4	Y38H8A.4
Y39E4B.6	Y39E4B.6
Y39G8B.5	
Y39G8B.e	
Y39G8C.2	Y39G8C.2
Y39H10A.7	
Y39H10A_224.a	
Y39H10A_224.c	
Y42A5A.4	Y42A5A.4
Y42G9A.4	
Y43C5A.5	thk-1
Y43C5B.2	Y43C5B.2
Y43D4A.6	
Y43D4A.g	
Y45F10A.4	Y45F10A.4
Y47D3A.15	
Y47D3A.R	
Y47G6A.13	
Y47G6A.5	
Y47G6A_245.h	
Y47G6A_246.a	
Y48B6A.10	Y48B6A.10
Y48B6A.13	
Y48G1BL.2	
Y48G1C_55.a	
Y49E10.22	Y49E10.22
Y4C6A.1	
Y4C6A.a	
Y4C6A.b	
Y4C6A.k	
Y51B9A.9	Y51B9A.9
Y51B9A.9	Y51B9A.9

Y52D3.1	Y52D3.1
Y52D5A.2	
Y53C12A.1	wee1.3
Y54E10B_152.c	
Y54E10BL.4	mek-2
Y55B1AR.2	
Y55D5A.5	
Y57A10A.20	
Y57G11C.24	
Y59A8A.c	Y59A8A.c
Y59A8B.23	
Y59A8B.a	Y59A8B.a
Y65B4A.9	
Y65B4A_185.a	
Y65B4A_185.c	
Y67D8A.1	
Y67D8A.2	
Y68A4B.3	Y68A4B.3
Y69E1A.3	Y69E1A.3
Y71F9A_281.a	
Y71F9B_297.b	
Y71G12B.27	
Y71H10A.1	
Y73B6A.1	
Y73B6A.2	
Y73B6A.c	
Y73B6A.f	
Y75B8A.36	
Y77E11A.2	
Y79H2A.11	zyg-8
ZC123.4	ZC123.4
ZC239.7	gcy-15
ZC373.3	ZC373.3
ZC373.4	ZC373.4
ZC404.4	mig-15
ZC404.9	gck-2
ZC412.2	gcy-14
ZC416.4	kgb-2
ZC434.8	ZC434.8
ZC449.3	ZC581.9
ZC504.3	
ZC504.4C	mig-15
ZC581.1	ZC581.1
ZC581.2	ZC581.2
ZC581.7	ZC581.7
ZC581.9	
ZC8.6	ZC8.6
ZK1055.6	
ZK1067.1	let-23
ZK1290.1	ZK1290.1
ZK1307.8	ZK1307.8
ZK177.2	ZK177.2
ZK354.2	
ZK354.6	
ZK370.5	ZK370.5
ZK455.2	gcy-9
ZK507.1	
ZK507.2	

ZK507.3	ZK507.3
ZK524.2	
ZK524.4	ZK524.4
ZK593.1	ZK593.1
ZK593.9	ZK593.9
ZK596.2	ZK596.2
ZK617.1	unc-22
ZK622.1	
ZK632.3	ZK632.3
ZK637.9	
ZK666.8	
ZK669.1	tag-341
ZK673.2	ZK673.2
ZK795.1	ZK795.1
ZK896.8	gcy-18
ZK909.2	kin-1
ZK909.2	kin-1
ZK930.1	ZK930.1
ZK938.5	old-2
ZK970.5	gcy-4
ZK970.5	gcy-4
ZK970.6	gcy-5
ZK970.7	ZK970.7