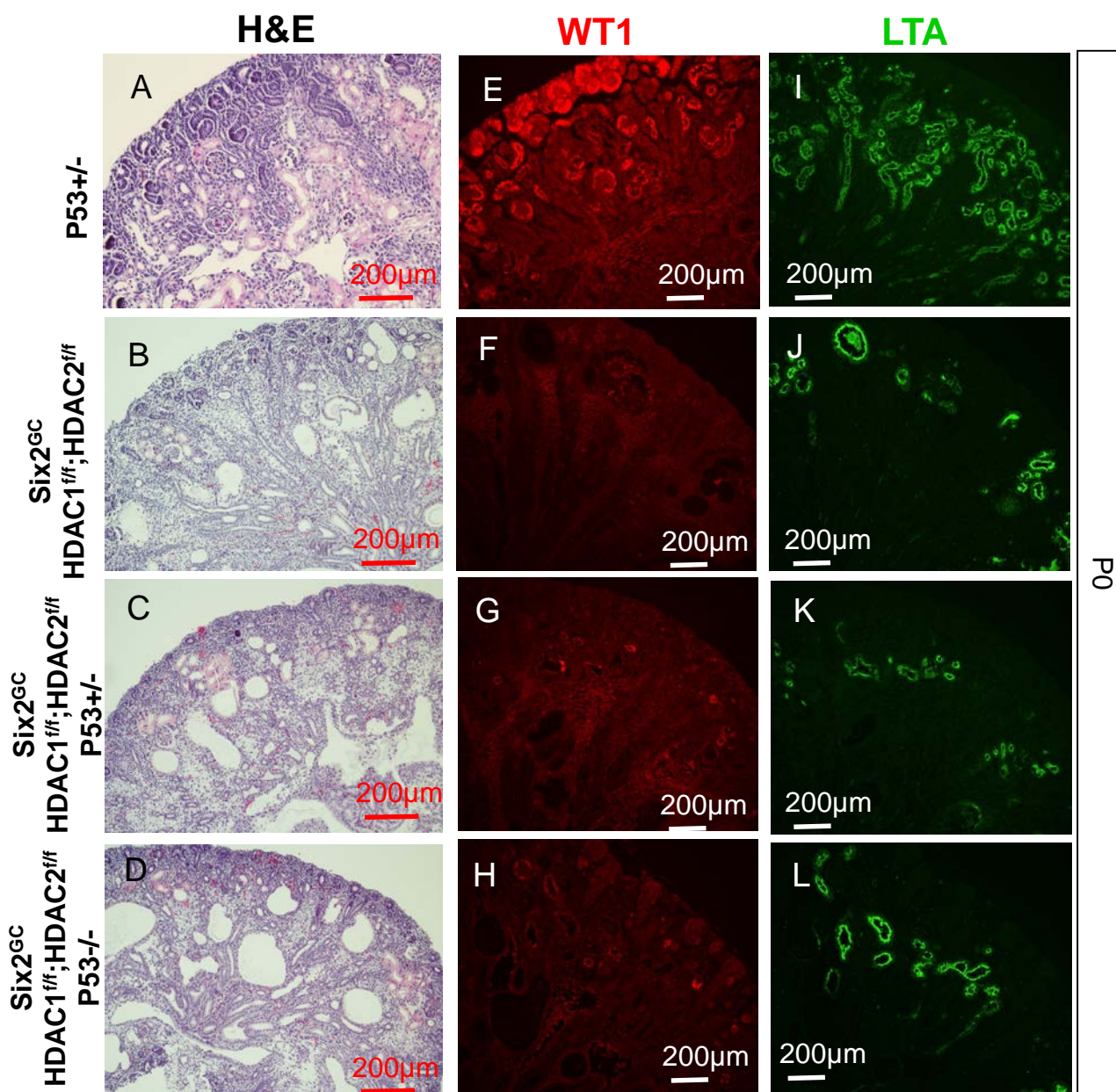
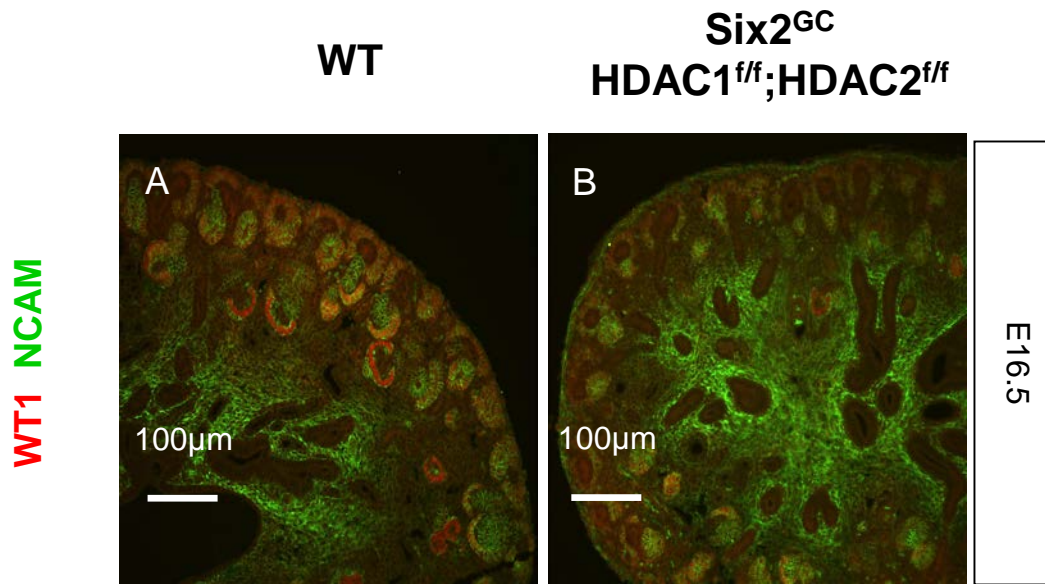


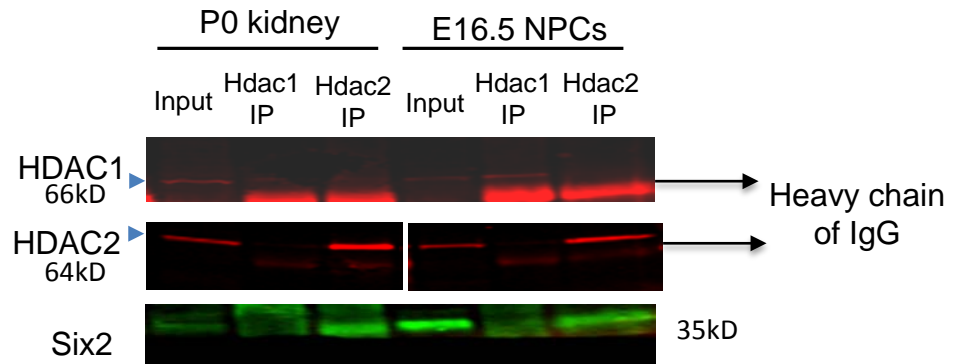
Supplementary Figure 1. NPC-specific deletion of HDAC1 and HDAC2 has no effect on cell apoptosis. Section immunofluorescence for active caspase 3 (A-F) or TUNEL assay (G, H). Although the NPC mass is reduced in size (C-F), there is no evidence of increased apoptosis in the *Six2*⁺ cap mesenchyme. Original Magnification X20 (A-F), X10 (G,H).



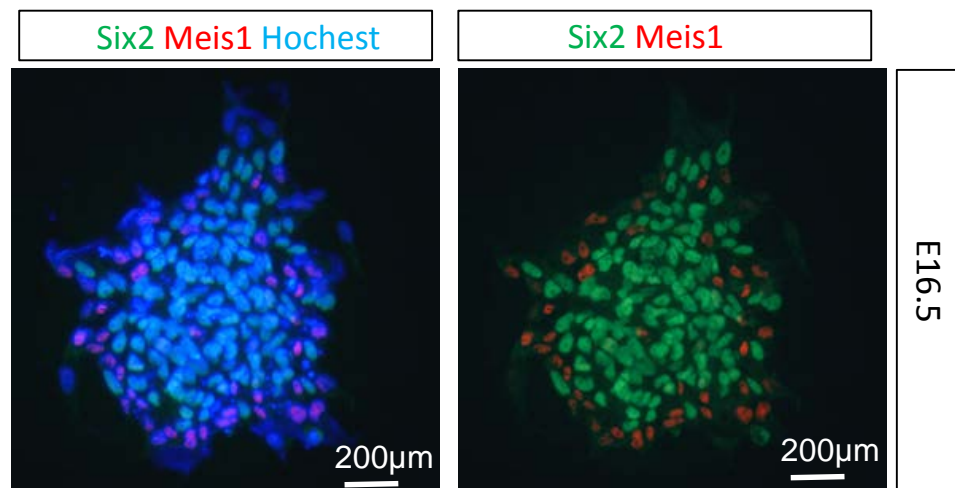
Supplementary Figure 2. p53 gene deletion fails to rescue the renal dysgenesis in mice with NPC-specific deletion of HDAC1/2. H&E staining (A-D) and immunofluorescence for WT1 (marker of CM and glomeruli, and LTA, a marker of differentiating proximal tubules. (B, F, J) NPC-specific deletion of HDAC1/2 causes loss of WT1 and proximal tubules. (C, D, G, H, K, L) Deletion of one or two p53 alleles fails to rescue nephrogenesis or cyst formation. Original Magnification X10



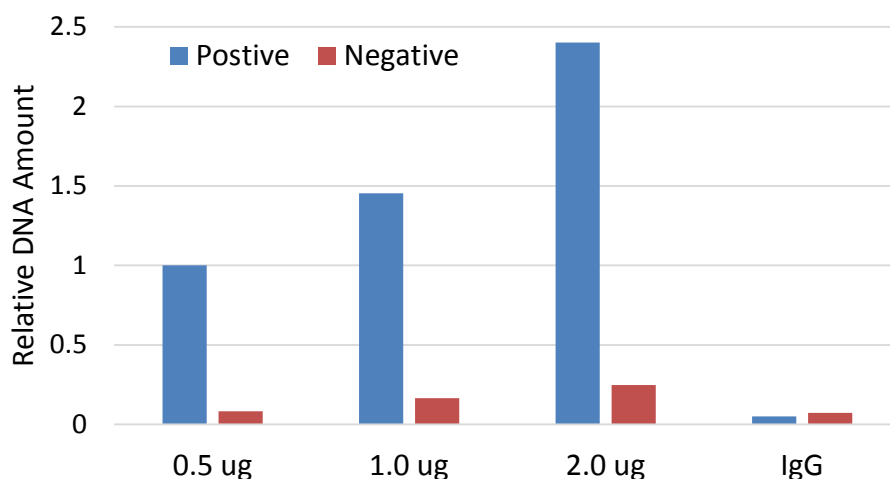
Supplementary Figure 3. NPC-specific deletion of HDAC1 and HDAC2 reduces the expression of WT1 in the cap mesenchyme. NCAM: neural cell adhesion molecule.



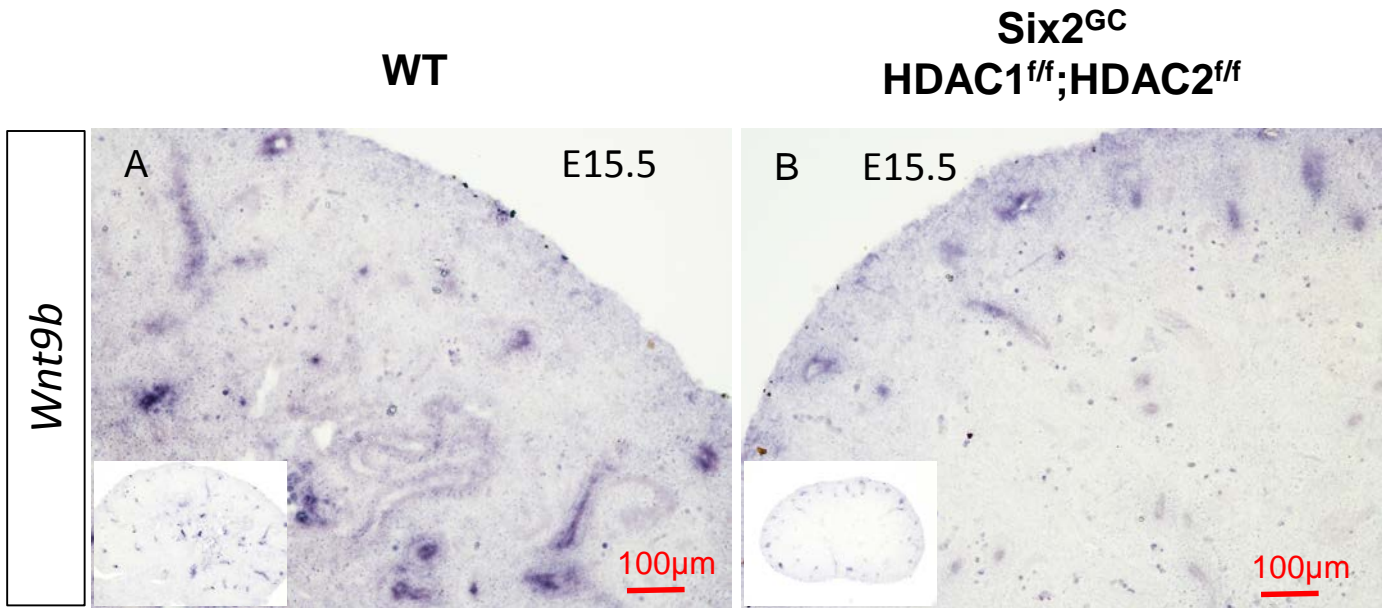
Supplementary Fig 4. Endogenous interaction between Six2 with HDAC1 and HDAC2 was detected in P0 kidneys and E16.5 NPCs



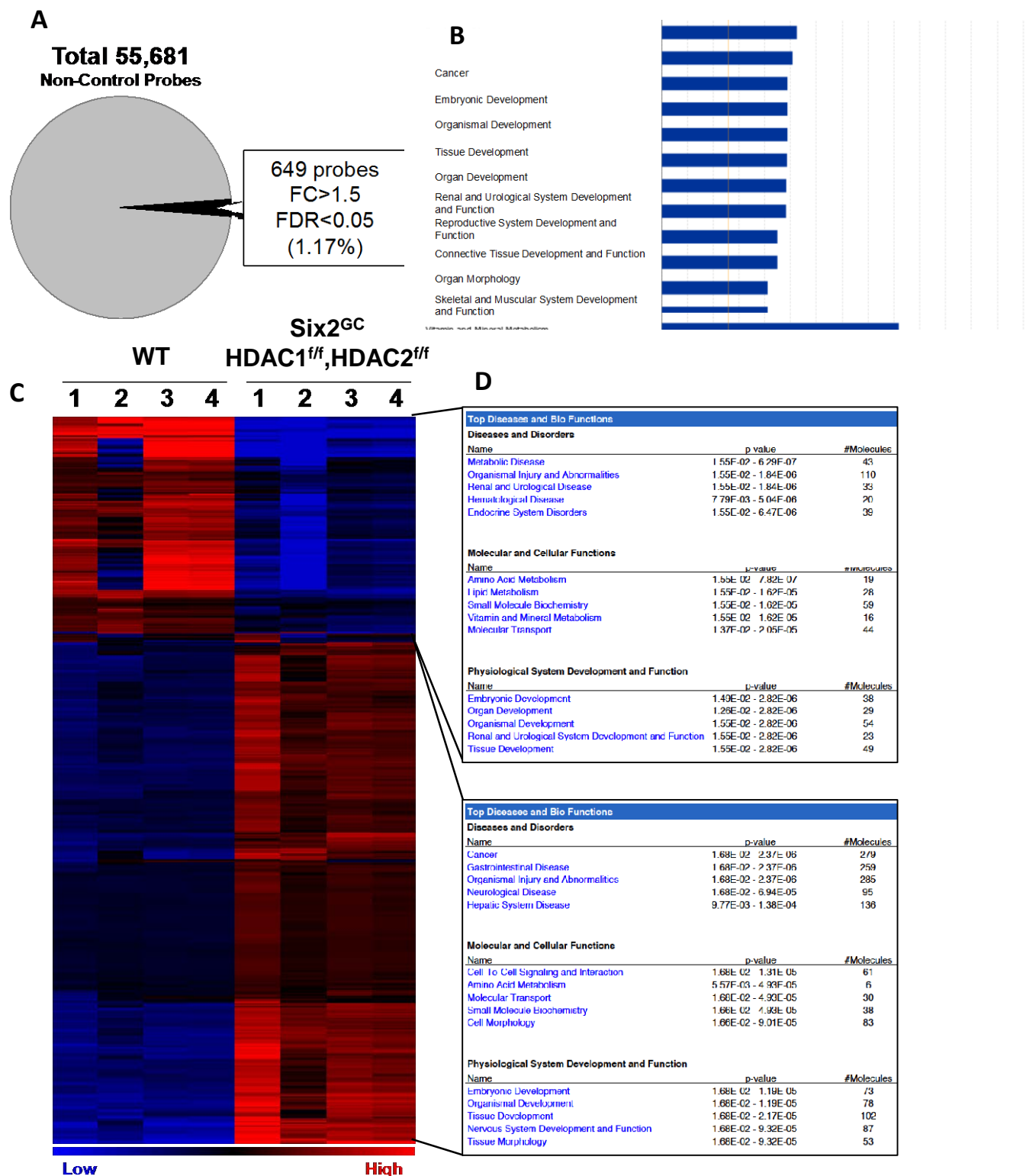
Supplementary Fig 5 Isolated Six2+/Cited1+ NPCs from E16.5 kidneys by magnetic activated cell sorting. The isolated NPCs are highly enriched with Six2 (90%) with minor contamination with stromal cells (Meis1).



Supplementary Fig 6 Validation of HDAC1 ChIP by qPCR. ChIP assays were performed on 3.75 millions cells per IP (immunoprecipitation) using different amount of Hdac1 antibody (0.5 μ g, 1.0 μ g, and 2.0 μ g). An IP with a control isotype (IgG) was also performed in parallel (1 μ g/IP). After the IP, the ChIP DNA was analyzed by qPCR to evaluate the specificity of the reaction. Mouse Positive Control Primer Set Actb-2 (Active Motif 71017) was used to amplify HDAC1-bound DNA as positive control and mouse Negative control Primer Set 1 (Active Motif 71011) was used as a negative control region.



Supplementary Figure 7. Ureteric bud *Wnt9b* expression is not affected by NPC-specific deletion of HDAC1/2. Section in situ hybridization at P0. In wild-type kidneys (A), *Wnt9b* expression is observed in the UB trunks. This spatial pattern and the intensity of staining are unaltered by loss of HDAC1/2 in NPC (B). Original magnification X10.



Supplementary Figure 8. Transcriptome profiling of total kidney RNA from E15.5 wild-type and *Six2^{GC};HDAC^{ff},HDAC2^{ff}* kidneys. (A) About 1% of the total transcriptome is altered in the NPC-specific HDAC1/2 mutant kidneys. (B) Top 10 biological processes affected as identified by Ingenuity Pathway Analysis. (C) Heatmap analysis of the differentially expressed. (D) Top diseases, molecular and cellular functions and physiological functions either up-regulated (red) and down-regulated (blue) in wild-type vs. HDAC1/2 mutant kidneys (N=4 separate experiments per group).

Table S1. A complete list of genes for each category and pathway

© 2000-2015 QIAGEN. All rights reserved.

Symbol	Fold Change	Synonym(s)
1700047117Rik2/Far	1.663	1700047117Rik, 1700047117Rik1, 1700047117Rik2, C14orf24, D730001C10Rik, Fam177a, Fc
1700110101Rik	1.693	1700016F01Rik, Gm2938, RIKEN cDNA 1700110101 gene, RP23-3881I2.4
2310002F09Rik	1.640	RIKEN cDNA 2310002F09 gene
2310015B20Rik	-2.642	RIKEN cDNA 2310015B20 gene
3830612M24	2.094	uncharacterized protein 3830612M24
4732423E21Rik	1.632	AL024288, RIKEN cDNA 4732423E21 gene
4930412013Rik	1.594	ENSMUSG00000075535, Gm10853, RIKEN cDNA 4930412013 gene
4930432E11Rik/493	-2.136	4930432E11Rik, 4932431P20Rik, LOC100504864, RIKEN cDNA 4930432E11 gene, RIKEN c
4933427D06Rik	1.631	proline rich 20E, Pr20e, RIKEN cDNA 4933427D06 gene
6720422M22Rik	1.550	BB143565, RIKEN cDNA 6720422M22 gene
8030425K09Rik	2.257	RIKEN cDNA 8030425K09 gene
9030419F21Rik	1.666	RIKEN cDNA 9030419F21 gene
9030619P08Rik	-2.707	lymphocyte antigen 6 complex pseudogene
9130020K20Rik	1.657	RIKEN cDNA 9130020K20 gene
9530083O12Rik	1.799	RIKEN cDNA 9530083O12 gene
9630010G10Rik	1.907	RIKEN cDNA 9630010G10 gene
A230065H16Rik	-1.651	Gm898, Lbh2, RGD1560608, RIKEN cDNA A230065H16 gene, similar to novel protein
A530006G24Rik	1.652	Gm1003, RIKEN cDNA A530006G24 gene, RP23-18D24.3
ACOT11	1.874	1110020M10Rik, 2010309H15Rik, acyl-CoA thioesterase 11, AW060409, BFIT, BFIT1, mKIAA
ACOX3	1.562	acyl-CoA oxidase 3, pristanoyl, acyl-Coenzyme A oxidase 3, pristanoyl, B1685180, EST-s59, F
ACSM2A	-4.857	A-923A4.1, ACSM2, acyl-CoA synthetase medium-chain family member 2, acyl-CoA synthetase
ACSS2	1.517	1110017C11Rik, ACAS, Acas1, ACAS2, ACECS, AceCS1, Acetyl-coa synthetase 1, amp form
ADAMTS17	1.597	a disintegrin-like and metalloproteinase (reprolysin type) with thrombospondin type 1 motif, 17,
ADAMTS7	1.570	a disintegrin-like and metalloproteinase (reprolysin type) with thrombospondin type 1 motif, 7,
AFP	-3.811	AFPD, Alpha fetoprotein, FETA, Fetoprotein α , HPAPF, α foetoprotein, α -1-fetoprotein, α -fetop
AKR1C3	-12.402	17-beta HSD5, 17-β HSD5, 20-alpha-hydroxysteroid dehydrogenase, 20-α-hydroxysteroid de
ALDH1A2	1.505	aldehyde dehydrogenase 1 family, member A2, aldehyde dehydrogenase family 1, subfamily 1,
ALDH1A3	1.885	aldehyde dehydrogenase 1 family, member A3, aldehyde dehydrogenase family 1, subfamily 1,
ALDOB	-4.673	ALDB, ALDO2, aldolase B, fructose-bisphosphate, BC016435, Fructose Bisphosphatase Aldc
AMN	-2.875	5033428N14Rik, amnion associated transmembrane protein, amnionless, AV002116, PRO10
ANKH	-1.682	ANK, ANKH inorganic pyrophosphate transport regulator, CCAL2, CMDJ, CPPDD, D15Ert22
ANXA13	-4.114	1810034H17Rik, annexin A13, ANX13, AV055219, ISA
APLP1	1.583	amyloid beta (A4) precursor-like protein 1, amyloid β (A4) precursor-like protein 1, APLP, APLP
ARHGAP26	1.591	1810044B20Rik, 2610010G17Rik, 4933432P15RIK, A1853435, GRAF, GRAF1, GTPASE RE
ARHGEF15	1.679	ARGEF15, D130071N09, D530030K12Rik, E5, Ephexin5, Rho guanine nucleotide exchange
ARL6IP6	1.709	2310057C01Rik, 2610529A11Rik, ADP-ribosylation factor-like 6 interacting protein 6, AIP-6, A
ARRB1	1.542	1200006117RIK, ARB1, ARR1, Arr2, ARRBeta1, Arrestin 2, Arrestin β 1, arrestin, beta 1, arres
ART4	-1.632	4432404K01Rik, ADP-ribosyltransferase 4, ADP-ribosyltransferase 4 (Dombrock blood group),
ASB9	-3.489	1700011M07Rik, ankyrin repeat and SOCS box-containing 9, LOC100364446, LOC684606, F
ASIC4	2.312	ACCN4, acid-sensing (proton-gated) ion channel family member 4, BNAC4, Spasic
ASPG	1.769	A530050D06Rik, A1429460, asparaginase, asparaginase homolog (S. cerevisiae), C14orf76,
ASS1	-1.500	AA408052, ARGININOSUCCINATE SYNTHASE, argininosuccinate synthase 1, argininosucci
ATP1B1	-2.041	ATP1B, Atp4b, ATPase, Na ⁺ /K ⁺ transporting, beta 1 polypeptide, ATPase, Na ⁺ /K ⁺ transportin
ATP6V0E2	-1.561	0610006O14Rik, ATP6V0E2L, ATPase, H ⁺ transporting V0 subunit e2, ATPase, H ⁺ transporti
ATXN7	1.714	A430107N12RIK, ADCAII, A1627028, ATAXIN-7, OPCA3, RGD1562692, SCA7
AW011956	1.544	expressed sequence AW011956, W51672
AW549542	1.773	expressed sequence AW549542
BACH2	1.610	BTB and CNC homology 1, basic leucine zipper transcription factor 2, BTB and CNC homolo
BDH1	1.583	2310032J20Rik, 3-HYDROXYBUTYRATE DEHYDROGENASE, 3-hydroxybutyrate dehydrog
BEND4	1.677	BEN domain containing 4, CCDC4, D330027G24Rik, EG666938, LOC100365335, LOC6872
BP1FC	1.726	4732454E24, BPI fold containing family C, BPIL2, RP1-149A16.10-011
BRINP1	1.523	bone morphogenetic protein/retinoic acid inducible neural-specific 1, bone morphogenic prote
BSND	-3.010	BART, Bartter syndrome, infantile, with sensorineural deafness (Barttin), BARTTIN, barttin CL
BTN1A1	1.702	BOS 21855, BT, BTN, BTN1, Butyrophilin, subfamily 1, member a1, RP23-16H24.3
C10orf35	-1.535	2010107G23Rik, AA545165, chromosome 10 open reading frame 35, hypothetical protein LO
C12orf73	-1.687	1190007I07Rik, chromosome 12 open reading frame 73, hypothetical protein LOC691921, LC
C1orf54	1.584	BC028528, cDNA sequence BC028528, chromosome 1 open reading frame 54, L259, RP4-7
C2	-1.806	ARM14, C3/c5 convertase, CFB isoform 1, CO2, complement component 2, complement cc
C230096K16Rik	1.547	RIKEN cDNA C230096K16 gene
C5AR2	1.987	C5L2, complement component 5a receptor 2, E030029A11RIK, GPF77, GPR77
C9orf16	1.690	1110008P14Rik, C79326, chromosome 9 open reading frame 16, EST00098, LOC10036543C
CA4	-2.337	AW456718, CAIV, CAR4, carbonic anhydrase 4, Carbonic anhydrase IV, RP17, RP23-167D6.
CALB1	1.662	Brain-2, Cabp-d28k, CaBP28k, Cad28k, CALB, calbindin 1, calbindin 1, 28kDa, CALBINDIN I
CALML4	-1.519	2010002G05Rik, Calmodulin related, Calmodulin-like 4, LOC686783, MGC4809, NY-BR-20
CALN1	1.558	9630012C17Rik, CABP8, calneuron 1, MNcb-0849
CAMKK1	1.503	4732414G09Rik, A1846603, calcium/calmodulin-dependent protein kinase kinase 1, alpha, ca
CANP6	-1.888	calpain 6, CalpM, CANPX, CAPNX, DJ914P14.1, RP23-462G16.1
CCDC138	1.690	6230424H07Rik, BC042726, coiled-coil domain containing 138, FLJ32745, RGD1566050
CDC42EP5	1.506	1700027J19Rik, 2010007O02Rik, Borg3, C85526, CDC42 effector protein (Rho GTPase bind
CDH6	-1.772	CAD6, cadherin 6, type 2, K-cadherin, cadherin 6, type 2, K-cadherin (fetal kidney), cadherin

CDK5R1	1.515	CDK5P35, CDK5R, CDK5R1 p35, CDK5R1/ p35, cyclin-dependent kinase 5, regulatory subu
CDKL1	-1.771	4933411O17Rik, cyclin-dependent kinase-like 1 (CDC2-related kinase), KKIALLRE, P42
CELF4	1.950	A230070D14Rik, Brui4, BRUNOL-4, C130060B05Rik, CUGBP, Elav-like family member 4, LfI
CEP170B	1.735	AI466840, AW555464, centrosomal protein 170B, CEP170R, FAM68C, KIAA0284, mKIAA028
CGREF1	-1.509	1110004G24Rik, AW045201, cell growth regulator with EF-hand domain 1, CGR11
CHMP4B	1.536	2010012F05RIK, C20orf178, C76846, charged multivesicular body protein 4B, CHMP4A, Chr
CHPF2	1.728	2010209O12Rik, AW060945, chondroitin polymerizing factor 2, CHONDROITIN SULFATE GL
CHST8	-1.514	1500011J21Rik, AI426009, carbohydrate (N-acetylgalactosamine 4-0) sulfotransferase 8, Gal
CIDEA	-10.261	AW212747, cell death-inducing DFFA-like effector a, cell death-inducing DNA fragmentation f
CIDEB	-1.978	1110030C18Rik, AI790179, cell death-inducing DFFA-like effector b, cell death-inducing DNA
CITED1	-6.359	AI316840, AU019144, Cbp/p300-interacting transactivator with Glu/Asp-rich carboxy-terminal
CLCNKA	-3.543	C75963, chloride channel Kb, chloride channel, voltage-sensitive Ka, chloride channel, voltag
CLEC18B	-1.842	C-type lectin domain family 18, member A, C-type lectin domain family 18, member B, Clec18
CLIC6	-1.718	5730466J16RIK, AL022908, AW045520, chloride intracellular channel 6, CLIC1L, CLIC6B
COL1A1	1.551	alpha 1 (I) PROCOLLAGEN, alpha 1 (I) COLLAGEN, Alpha1 type i collagen, Alpha1 Type I Pr
COL26A1	1.567	9430032K24Rik, BC002218, Col26a, Collagen Type26, collagen, type XXVI, alpha 1, collager
COL2A1	2.047	ANFH, AOM, CG2A1A, COL11A3, COL2, Col2a, Collagen type II, Collagen type ii alpha, Collager
COL4A6	1.890	BB116301, collagen, type IV, alpha 6, collagen, type IV, alpha 6, CXDELq22.3, DELXq22.3, DFN
COL5A1	1.504	AI413331, Collagen type v alpha1, collagen, type V, alpha 1, collagen, type V, alpha 1, RP11-263f
COL7A1	1.593	AW209154, Collagen type 7 alpha chain, Collagen type 7 alpha chain, collagen, type VII, alpha 1,
COLQ	2.184	A130034K24RIK, collagen-like tail subunit (single strand of homotrimer) of asymmetric acetyl
COX6B2	1.633	1700067P11Rik, BC048670, COXVIIB2, CT59, cytochrome c oxidase subunit VIb polypeptide
CPA1	2.073	0910001L12Rik, Carboxypeptidase A, Carboxypeptidase a1, carboxypeptidase A1 (pancreati
CPA2	1.593	carboxypeptidase A2 (pancreatic), carboxypeptidase A2, pancreatic
CPB2	-3.408	1110032P04Rik, 4930405E17Rik, AI255929, C5A-INACTIVATING FACTOR, carboxypeptidas
CPN1	-2.597	0610011F20RIK, CARBOXYPEPTIDASE N, carboxypeptidase N, polypeptide 1, CPN, LOC10
CRABP2	1.898	AI893628, cellular retinoic acid binding protein 2, cellular retinoic acid binding protein II, CRAI
CRB2	-1.919	5930402A21, BC043114, crumbs family member 2, crumbs homolog 2 (Drosophila), RGD130
CREB5	1.712	cAMP responsive element binding protein 5, CRE-BPA, D430026C09Rik, LOC100910345, R
CRMP1	1.567	collapsin response mediator protein 1, DPYSL1, DRP-1, Tuc-1a, ULIP-3
CSPG5	1.530	Caleb, chondroitin sulfate proteoglycan 5, chondroitin sulfate proteoglycan 5 (neuroglycan C),
CUBN	-2.534	AA408369, AL022750, cubilin (intrinsic factor-cobalamin receptor), CUBULIN, D2Wsu88e, GF
CYB561	1.548	CYB561A1, Cytochrome b-561, FRRS2, RP23-186E14.2
CYB5R4	-1.530	2810034J18Rik, B5+B5R, b5/b5r, b5b5r, C79736, cb5/cb5R, Cb5cb5r, cytochrome b5 reduct
CYP26B1	2.050	CP26, CYP26A2, cytochrome P450, family 26, subfamily B, polypeptide 1, P450 26A2, P450f
Cyp2d26	-4.223	1300006E06Rik, Cyp2d2, cytochrome P450, family 2, subfamily d, polypeptide 2, cytochrome
CYP2U1	1.707	8430436A10Rik, cytochrome P450, family 2, subfamily U, polypeptide 1, P450TEC, SPG49, C
CYP4A11	-2.563	AI647584, CP4Y, Cyp4a, Cyp4a1, Cyp4a10, CYP4A2, Cyp4a22, Cyp4a31, Cyp4a32, CYP4A
D230019N24Rik	1.563	RIKEN cDNA D230019N24 gene
D230040J21Rik	1.727	RIKEN cDNA D230040J21 gene
D430019H16Rik	1.527	AI852661, LOC100909954, RIKEN cDNA D430019H16 gene, uncharacterized LOC10090995
D8Ert158e	1.960	DNA segment, Chr 8, ERATO Doi 158, expressed
DAO	-2.668	AI987963, D-Amino Acid Oxidase, DAAO, DAMOX, DAO1, DEAMINOACID OXIDASE, OXDA
DAPL1	-2.311	2310032F03RIK, death associated protein-like 1, EEDA, RGD1309610, RP23-151F21.4
DCAF12L2	1.652	A130007F10Rik, DDB1 and CUL4 associated factor 12-like 2, RGD1560768, RP11-13E5.1, F
DCX	-1.584	DBCN, Dbct, DC, doublecortin, Lissencephalin-X, LISX, rCG 23159, RP23-462G16.2, RP5-9'
DCXR	1.601	0610038K04Rik, 1810027P18Rik, DCR, dicarbonyl L-xylulose reductase, dicarbonyl/L-xylulos
DDC	1.802	AAAD, AADC, ADC, aromatic L-amino acid decarboxylase, Dihydroxyphenylalanine decarbox
DENN4A	1.696	AI115600, AI851943, DENN/MADD domain containing 4A, F730015K02Rik, IRLB, mCG 1454
DERA	1.847	2-deoxyribose-5-phosphate aldolase homolog (C. elegans), 2010002D22RIK, 2500002K03Ri
DKK3	1.649	AW061014, C87148, DICKKOPF HOMOLOG 3, dickkopf homolog 3 (Xenopus laevis), dickko
DLGAP3	1.687	BC058433, DAP-3, discs, large (Drosophila) homolog-associated protein 3, PRPL8, RP23-81
DLK1	1.607	AW742678, delta, Delta-like 1 homolog, delta-like 1 homolog (Drosophila), Delta1, DLK, Dlk,
DLL1	-2.180	Delta, delta-like 1 (Drosophila), DELTA1, DL-1, UNQ146/PRO172
DMTN	1.632	AI325486, DEMATIN, dematin actin binding protein, DMT, EPB4.9, Epb4.9 predicted, EPB49,
DNAJA4	1.749	1110021L12Rik, AV358213, Dj4, DnaJ (Hsp40) homolog, subfamily A, member 4, Hsj4, mmDj
DNAJC19	1.570	1810055D05Rik, AA959924, DnaJ (Hsp40) homolog, subfamily C, member 19, DnaJ (Hsp40)
DNAJC22	-2.144	2810451A06Rik, AI506245, DnaJ (Hsp40) homolog, subfamily C, member 22, RGD1311098,
DOCK5	-1.635	1110060D06RIK, AI666732, AI956923, BC016533, dedicator of cytokinesis 5, E130320D18, L
DPF1	1.524	BAF45b, D4, zinc and double PHD fingers family 1, NEUD4, neuro-d4
DPP4	-1.975	ADABP, ADCP2, Adenosine Deaminase Binding Protein, CD26, DDP4, Dipeptidyl Peptidase I
DPYSL5	1.677	CRAM, CRMP-5, dihydropyrimidinase-like 5, dihydropyrimidinase-related protein 5-like, DRP-
Duxbl1 (includes oth	1.807	1110051B16Rik, doubl homeobox B-like 2, double homeobox B-like 1, double homeobox B-li
DYNC111	-2.302	DH IC-1, DIC, DNCI1, DNCIC1, dynein cytoplasmic 1 intermediate chain 1, dynein, cytoplasr
Eda	1.564	ectodysplasin-A, Ed1, EDA1, HED, RGD1563178, RP23-281K21.1, Ta, tabby, XLHED
EGFR	1.658	9030024J15RIK, AI552599, C-ERBB, EGF receptor, EGF-TK, EGFR VIII, EGFR1, epidermal t
EHMT1	1.560	9230102N17Rik, bA188C12.1, D330003E03, euchromatic histone methyltransferase 1, euchr
Eif2s3y	1.647	Eif-2gy, eukaryotic translation initiation factor 2, subunit 3, structural gene Y-linked, Spy, Tfy
Eif5	1.513	E74-like factor 5, ESE-2, ESE-5, ESE-5., RP23-445A5.2
EMILIN2	1.645	elastin microfibril interfacier 2, FOAP-10
ENDOV	1.570	A730011L01Rik, endonuclease V, FLJ35220, RP23-25M3.5
ENO2	1.673	AI837106, D6Ert375e, enolase 2 (gamma, neuronal), enolase 2 (gamma, neuronal), enolase 2, ga

ENPEP	-1.710	6030431M22Rik, AMINOPEPTIDASE A, APA, Bp-1/6C3, CD249, Gamma-Glutamyl Peptidase
EPB41L4B	1.890	6430543G08RIK, AA589614, AU021054, BB007528, CG1, D4Erd346e, EHM2, Epb4.114b, ei
EPHA5	1.670	AI854630, AW125296, bsk, CEK7, EHK-1, EK7, ELS1, Els1., EPH receptor A5, HEK7, Rek7,
EPHB3	1.665	AW456895, Cek10, Efnb3r, EPH receptor B3, ETK2, HEK2, MDK5, Sek4, TYRO6
EPHX1	1.900	AI195553, Ehm, Eph-1, EPHX, EPOX, Epoxide Hydrolase, epoxide hydrolase 1, microsomal,
EPS8	-2.023	AW261790, DFNB102, epidermal growth factor receptor pathway substrate 8
ESPN	-1.651	DFNB36, Espin, ESPN1, Je, LP2654, RP23-284C20.3
ESRRG	-1.897	Err γ, ERR3, Errg, ERRG2, ERRgamma, estrogen-related receptor gamma, estrogen-related
EXOC6	-1.592	4833405E05Rik, AW413330, C430002C19, EXOC6A, exocyst complex component 6, hbd, m
EXOSC9	1.665	exosome component 9, p5, p6, PM/SCL-75, PMSCL1, Polymyositis/scleroderma autoantigen
EYA1	1.709	BOP, BOR, BOS1, EYA transcriptional coactivator and phosphatase 1, eyes absent 1 homolog
FABP3	-1.665	BOS 2157, FABP, FABP11, Fabph-1, Fabph-4, fatty acid binding protein 3, muscle and heart,
FAM160B2	1.637	family with sequence similarity 160, member B2, FLJ11125, FP13191, G430067P06Rik, RAI1
FAM219A	1.606	2310028H24Rik, bA573M23.5, C9orf25, family with sequence similarity 219, member A, LOC
FBN1	1.854	ACMICD, AI536462, B430209H23, BOS 10884, ECTOL1, FBN, Fib-1, Fibrillin-1, fibrillin 1, FN
FBP1	-1.983	F1:6 biphosphatase, FBP, Fbp-2, FBP3, FBPase, Fdp, Fructose biphosphatase, fructose bisp
FBXL16	1.812	BC042620, C16ORF22, c380A1.1, F-box and leucine-rich repeat protein 16, Fbl16, MGC339,
FBXL7	1.600	AL023057, D230018M15RIK, F-box and leucine-rich repeat protein 7, FBL6, FBL7
FCHO1	1.552	3322402E17RIK, FCH domain only 1, N28152
FCHSD1	1.671	A030002D08Rik, FCH and double SH3 domains 1, NWK2, UNQ737/PRO1431
FGF	-3.996	2510049G14Rik, Ab1-181, Ab1-216, Ac1-581, Beta fibrinogen, Fg beta chain, Fg β chain, Fibi
FGF1	-2.318	ACIDIC FGF, AFGF, BOS 8269, Dfrrx, ECGF, ECGF-beta, ECGF-β, ECGFA, ECGFB, Fam, F
FIG4	1.507	A530089I17RIK, AI326867, ALS11, BTOP, CMT4J, dj24914.1, FIG4 homolog (S. cerevisiae), I
FLRT1	2.664	AW742165, D630040I23RIK, fibronectin leucine rich transmembrane protein 1, RGD1565152
FLRT3	1.516	5530600M07RIK, C430047I10RIK, fibronectin leucine rich transmembrane protein 3, HH21, n
FN1	1.632	BOS 2065, cFn, CIG, E330027I09, ED-B, FIBNEC, FIBRONECTIN 1, Fibronectin i, Fibronect
FNBP1	1.582	1110057E06RIK, 2210010H06RIK, FBP1, FBP17, Formin binding, formin binding protein 1, R
FOLR1	-1.562	FBP, FBP1, FOLATE binding, folate receptor 1 (adult), FOLATE receptor alpha, FOLATE rece
FOXD1	1.540	AI385632, BF-2, FKHL8, Forkhead box d1, FREAC-4, Hfh10, Hfhbf2, LOC684320
FOXL1	-1.949	5830401E05Rik, FKHL10, FKHL10, forkhead box l1, FREAC-6, HFH-3, RP23-32J15.1
FOXO6	1.615	forkhead box O6, LOC100131908, RP23-421C7.1
FOXP4	1.546	1200010K03RIK, 2310007G05RIK, FKHLA, forkhead box P4, hFKHLA, mFKHLA, RP11-328M
FREM1	1.777	BC037594, BNAR, C9orf143, C9orf145, C9orf154, crf11, D430009N09, D630008K06, eye<m
FRMPD2	1.712	ENSMUSG00000071536, FERM and PDZ domain containing 2, Gm1582, Gm626, PDZD5C,
FRZB	1.889	BOS 1606, FRE, frezzled, FRITZ, frizzled-related protein, Frp, FRP-3, FRZB-1, FRZB-PEN, F
FST	2.337	AL033346, D2MgJ51, FOL1, follistatin, Follistatin 288, FS, fs315, Fst-288, RATFOL1
Fxyd2	-2.433	Atp1g1, FXYD domain-containing ion transport regulator 2, Na+ K+ Atpase γ Subunit
FZD10	1.721	CD350, frizzled class receptor 10, frizzled homolog 10 (Drosophila), FZ-10, Fzd10-ps1, FzE7,
GABRA3	1.514	GABA A receptor alpha-3, Gaba A receptor subunit α 3, GABA A receptor α-3, gamma-aminot
GAL	1.786	GAL-GMAP, galanin, galanin/GMAP prepropeptide, GALN, GLNN, GMAP
GARNL3	1.552	AW120551, bA356B19.1, GTPase activating RANGAP domain-like 3, GTPase activating Rap
GATSL2	1.626	7530428J21Rik, AW742413, Gats, GATS protein-like 2, GATSL1
GC	-5.400	DBP, DBP/GC, DBP02, GRD3, Group-specific Component, group-specific component (vitami
GCNT1	-5.315	5630400D21Rik, B130048E03, beta-1,6-N-ACETYLGALUCOSAMINYLTRANSFERASE, C2 G
GFRA2	1.525	GDNF family receptor alpha 2, GDNF family receptor α 2, GDNF receptor alpha2, GDNFALP1
GFRA3	1.569	GDNF family receptor alpha 3, GDNF family receptor α 3, GDNFR3, GFRalpha3, glial cell line
GGT1	-2.234	Alpha1-GGT, CD224, D22S672, D22S732, dwg, Gamma-glutamyl transpeptidase, gamma-glt
GIPC2	-1.692	2200002N01Rik, AU021850, GIPC PDZ domain containing family, member 2, SEMCAP-2
GLA	1.633	agalsidase alfa, agalsidase beta, agalsidase β, Ags, alpha D-GALACTOSIDASE A, Alpha Gal
Gm10576	1.666	ENSMUSG000000073788, predicted gene 10576
Gm12258	1.551	LOC100502966, OTTMUSG00000005767, predicted gene 12258, RP23-419P16.7
Gm21596/Hmgb1	-2.005	amphoterin, DEF, Gm21596, high mobility group box 1, high-mobility group (nonhistone chron
Gm266	-2.035	DIRAS family, GTP-binding RAS-like 3, Diras3, predicted gene 266, RGD1565168
Gm5097/Gm8978	1.641	EG329055, EG668106, Gm5097, Gm8978, predicted gene 5097, predicted gene 8978, RGD
Gm5176	-2.006	EG382421, high mobility group box 2 pseudogene
Gm6115	-2.040	EG619937, predicted gene 6115, RGD1563668, similar to High mobility group protein 1 (HMC
Gm6213	1.653	EG621335, predicted gene 6213
Gm6994	1.659	EG629678, predicted gene 6994
Gm9780 (includes of	1.857	ENSMUSG000000043248, ENSMUSG000000072674, Gm10393, MGC41689, Plac9, Plac9a, F
Gm9900	1.722	ENSMUSG000000053218, predicted gene 9900
GNB5	1.638	f1r, G protein beta 5, G protein β 5, GB5, Gbeta5, GBS, Guan nuc b5, guanine nucleotide bind
GNG7	1.551	AI840417, FLJ00058, G protein binding protein, gamma7, G protein gamma 7, G protein γ 7,
GPD1	-1.991	AI747587, Gdc-1, Glycerol-3-phosphate dehydrogenase, glycerol-3-phosphate dehydrogenas
GRASP1	1.522	2210415K24Rik, 3110031O14Rik, C87852, G protein-coupled receptor associated sorting prc
GRIA4	1.780	Glua4, GLUR4, GLUR4C, Gluralpha4, GLURD, glutamate receptor, ionotropic, AMPA 4, gluta
GSTA5	-3.232	ENSMUSG000000074179, glutathione S-transferase alpha 5, glutathione S-transferase α 5, gl
GSTM5	1.703	glutathione S-transferase mu 1, glutathione S-transferase mu 5, glutathione S-transferase, m
Gstm6	1.707	glutathione S-transferase, mu 6, RGD1563391
GULP1	1.702	3110030A04Rik, 5730529O06Rik, CED-6, GULP, GULP, engulfment adaptor PTB domain cor
GXYLT2	1.505	GLT8D4, glucoside xylosyltransferase 2, Gm152, LOC100365223, LOC686935
H2-K2/H2-Q9	1.895	EG630499, Gm7035, H-2K1, H-2K1K, H2-K2, H2-Q9, histocompatibility 2, K region locus 2, h
H2-Q5	1.589	histocompatibility 2, Q region locus 5, LOC100044874, Qa, Qa-5, Qat-5

HAGH	1.605 BC019817, GLO2, Glutathione Hydrolase, GLX2, GLXII, Glyoxalase II, HAGH1, Hydroxyacyl
HAP1	1.621 HAP2, hHLP1, HIP5, HLP, huntingtin-associated protein 1, neuroan 1, RP23-39213.11-001
HAS2	-1.645 hyaluronan synthase 2, Hyaluronan synthase homolog
HDC	-3.550 AW108189, Hdc-a, Hdc-c, Hdc-e, Hdc-s, histidine decarboxylase, RP23-251E2.2
HDDC3	-1.956 (ppGpp)ase, 1110033009Rik, C86475, HD domain containing 3, MESH1, RGD1311839
HECW1	1.656 9330116H24Rik, AV273951, BUL1, E130207119Rik, HECT, C2 and WW domain containing E
HEMGN	1.697 4921524M03Rik, AI317176, CT155, EDAG, EDAG-1, EDAG2, haemogen, hemogen, Hgn, ml
HES5	-2.241 bHLHb38, hairy and enhancer of split 5 (Drosophila), hes family bHLH transcription factor 5, F
HEY1	-1.678 AI316788, AI414254, BHLHb31, CHF2, hairy/enhancer-of-split related with YRPW motif 1, HE
HHIP	1.764 Hedgehog-interacting protein, Hhip1, HIP, HIP1, LOC100366089, RGD1564108, UNQ5825/P
HLA-A	1.923 0610037M15Rik, A-28, Aw-24, Aw-33, Aw-34, Aw-66, Aw-68, Aw-69, Aw-74, Aw-80, BE13676
HLA-E	1.599 37b, 37c, BM1, C920025E04Rik, DAMA-277114.1, EA1.2, EA2.1, H2-Qa1, H2-T11, H2-T23, I
HMP19	1.631 HMP19 protein, neuron specific gene family member 2, Neurospecific gene family membrane
HNF1A	-1.937 AI323641, HNF1, HNF1 homeobox A, HNF1-alpha, HNF1-α, HNF1alpha (MODY3), HNF1α (I
HNF4A	-2.850 FLJ39654, FRTS4, hepatic nuclear factor 4, alpha, hepatic nuclear factor 4, α, hepatocyte nu
HOXC4	2.168 cp19, homeo box C4, Hox-3.5, HOX3, HOX3E, Hox3r3, Hs.567289
HOXD12	1.819 homeo box D12, Hox-4.7, Hox-5.6, HOX4H, RP23-313J15.7
HOXD4	1.939 6030436D05RIK, HHO.C13, homeo box D4, Hox-4.2, HOX-5.1, HOX4, HOX4B
HSD17B14	-1.658 0610039E24RIK, DHRS10, hydroxysteroid (17-beta) dehydrogenase 14, hydroxysteroid (17-β
Hsd3b4 (includes oth	-3.729 3 beta Hsd, 3 Beta hydroxysteroid dehydrogenase, 3 beta-hydroxysteroid dehydrogenase typ
I730030J21Rik	1.736 RIKEN cDNA I730030J21 gene
ifitm7	1.722 4933438K12Rik, interferon induced transmembrane protein 7, Mil4
IGDCC3	2.005 2810401C09RIK, AI851425, HsT18880, immunoglobulin superfamily, DCC subclass, member
IGDCC4	1.920 9330155G14RIK, DDM36, immunoglobulin superfamily, DCC subclass, member 4, NOPE, W
IGFBP1	-2.022 AFBP, BOS 4373, hIGFBP-1, IBP1, IGF-BP25, IGFBPA, IGFBP-RP1, insulin-like growth factor
IL15RA	1.676 AA690181, CD215, IL-15 Receptor Alpha, IL-15 Receptor α, IL-15R, IL-15Ralpha, IL15R α, in
IL33	1.893 9230117N10Rik, C9orf26, DVS27, IL1F11, interleukin 33, NF-HEV, NFEHEV, RGD1311155, F
IPO9	1.762 0710008K06Rik, AI845704, C78347, Imp9, importin 9, KIAA1192, mKIAA1192, Ranbp9, RP1
IRX1	-2.346 iroquois homeobox 1, Iroquois related homeobox 1 (Drosophila), IRX-5, IRXA1, LOC501463
ITIH5	2.274 4631408O11RIK, 5430408M01Rik, AI317339, E130106B02, FLJ14641, inter-alpha (globulin)
ITPKA	1.928 inositol 1,4,5-trisphosphate 3-kinase A, inositol-trisphosphate 3-kinase A, IP3-3KA, IP3KA, RF
ITSN1	1.714 AA517634, AA545208, AI316805, AI839402, AI848451, Ehsh1, Ese1, INTERSECTIN, Interse
JADE2	1.536 1200017K05RIK, AI480685, jade family PHD finger 2, KIAA0239, mKIAA0239, PHF15, RP23-
KANK2	1.567 AI504612, ANKRD25, BC010245, DKFZp434N161, KN motif and ankyrin repeat domains 2, N
KAZALD1	-3.362 AI842353, BONO1, FKSG28, FKSG40, IGFBP-rP10, Kazal-type serine peptidase inhibitor do
KCNA4	1.704 HBK4, HK1, HPCN2, HUKII, K+ CHANNEL A, KCHAN, KCNA4L, KCNA8, KV1.4, Kv1.4 α, Kv
KCNJ2	1.898 AI839615, AW555701, KV4.2, mKIAA1044, MNCb-7013, potassium voltage-gated channel, S
KCNJ1	-7.396 Kcnj, KIR1.1, potassium inwardly-rectifying channel, subfamily J, member 1, ROMK, ROMK1,
KCP	1.703 AW060220, CRIM-2, Gm793, KCP-1, kielin/chordin-like protein, NET67, RGD1561119
KIAA1467	1.650 8430419L09Rik, mKIAA1467, RGD1306151, RIKEN cDNA 8430419L09 gene, similar to hypc
KIF1A	1.705 ATSV, C2orf20, C630002N23Rik, Gm1626, HSN2C, Kin1a, kinesin family member 1A, Kinesi
KIF21B	1.729 2610511N21Rik, KIAA0449, kinesin family member 21B, mKIAA0449
KIF5C	1.518 CDCBM2, Khc, KIAA0531, Kif5c (predicted), kinesin family member 5C, KINN, NKHC, NKHC
KIFC2	1.755 kinesin family member C2
KLC2	1.546 8030455F02RIK, AW212649, kinesin light chain 2, Klc2 predicted
KRT36	-2.646 HA6, hHa6, HRA-1, K36, Ka31, keratin 36, Keratin complex 1, acidic, gene 5, Krt1-22, Krt1-5,
LARGE	1.547 BPFD#36, CTA-282F2.1, ENR, fg, froggy, Gylt1a, like-glycosyltransferase, Mbp-1, MDC1D, M
LDB2	1.686 AI035351, AW146358, CLIM1, CLP-36, LDB1, Ldb3, LIM domain binding 2
LDLRAD3	1.708 6430500P08, AI194318, LOC100909436, low density lipoprotein receptor class A domain con
LHX1	-1.676 LIM homeobox 1, LIM homeobox protein 1, LIM-1, RP23-381C21.1
LIMK1	1.528 LIM domain kinase 1, LIM-domain containing, protein kinase, LIMK
LOC102635467	1.548 uncharacterized LOC102635467
LOC102638978	1.684 uncharacterized LOC102638978
LOC102641046	1.596 h-2 class I histocompatibility antigen, D-37 alpha chain-like, h-2 class I histocompatibility anti
LOC102641638	-1.907 high mobility group protein B1-like
LPIN2	-1.524 2610511G02Rik, AI481352, AW742896, Lipin 2
LRP11	1.711 1700034J19RIK, 6330533B21, 9830160H19RIK, bA350J20.3, low density lipoprotein recepto
LRP2	-1.780 AI315343, AW536255, b2b1625.2Clo, D230004K18Rik, DBS, GP330, HEYMANN NEPHRITI:
Lrrc31	1.579 E230002P03Rik, leucine rich repeat containing 31
LRRC4B	1.812 A830007M12, HSM, leucine rich repeat containing 4B, LRIG4, NGL-3
LUC7L2	1.822 4930471C18Rik, AA522013, AU015269, CGI-59, CGI-74, LOC100504012, LUC7-like 2 (S. ce
Ly6a (includes other:	-2.476 AA682074, AA959465, AI789751, Gr-1, I830127L07Rik, LOC100911104, LOC300024, Ly-6.2
LY86	-1.687 dJ80N2.1, lymphocyte antigen 86, MD-1, MMD-1, RP1-80N2.1
LZTS1	1.605 F37, FEZ1, leucine zipper, putative tumor suppressor 1, leucine zipper, putative tumour suppr
MADD	1.721 9630059K23Rik, IG20, KIAA0358, MAP-kinase activating death domain, RAB3GEP, RP23-20
MAFB	-1.984 b-maf, Basic domain/leucine zipper transcription factor, kr, Kreisler, KRML, Krm1, Maf1, MCT
MALAT1	1.596 2210401K01RIK, 9430072K23RIK, AI647968, HCN, LINC00047, mascRNA, metastasis asso
MARK4	1.518 2410090P21Rik, C79806, LOC686800, MAP/microtubule affinity-regulating kinase 4, MARK4
MB21D1	1.749 C6orf150, cGAS, E330016A19RIK, h-cGAS, Mab-21 domain containing 1, RP11-398K22.2
MBD1	1.650 CXXC3, methyl-CpG binding domain protein 1, PCM1, RFT
MCAM	1.634 1-gicerin, AV025631, CD146, CD149, melanoma cell adhesion molecule, MELCAM, MUC18,
MCTP2	1.804 Gm489, multiple C2 domains, transmembrane 2, RGD1562967, RP11-4F5.2

MDF1	1.697	I-MF, I-mfa, MyoD family inhibitor, RGD1560271, RP4-696P19.1
ME3	-1.925	1700020C08Rik, B230207H15RIK, malic enzyme 3, NADP(+)-dependent, mitochondrial, NAI
MEDAG	1.574	633040615Rik, AWMS3, C13orf33, hAWMS3, mAWMS3, MEDA-4, mesenteric estrogen-dep
MEF2A	1.675	A430079H05Rik, ADCAD1, M-S EF2A, mef2, myocyte enhancer factor 2A, RSRFC4, RSRFC
Meg3	1.643	2900016C05Rik, 3110050O07Rik, 6330408G06Rik, AI425946, AW108224, D12Bwg1266e, G
MEOX2	-3.693	AI528662, GAX, mesenchyme homeobox 2, MOX2, Mox2a
MEP1A	-4.657	AI098089, AW107200, LOC688307, Mep-1, meprin 1 alpha, meprin 1 α , Meprin a subunit alpi
MEP1B	-8.161	Endopeptidase-2, meprin 1 beta, meprin 1 β , Meprin a subunit beta, Meprin a subunit β , mep
MGEA5	1.604	2810009A20Rik, 4833427O07Rik, 5830447M11Rik, AA408215, Hy5, MEA5, meningioma exp
MIB2	1.550	2210008111Rik, FLJ20648, LOC100128968, mindbomb E3 ubiquitin protein ligase 2, mindbor
Milr1	1.551	Allergin-1, Gm885, mast cell immunoglobulin-like receptor 1, Mca32
MLF1	1.673	HLS7, myeloid leukaemia factor 1, myeloid leukemia factor 1
MLXPL	1.744	bHLHd14, CHREBP, MIO, MLX interacting protein-like, MONDOB, WBSCR14, WS-bHLH
MMS22L	1.674	C6orf167, dJ39B17.2, F730047E07Rik, Gm134, MMS22-like, DNA repair protein, RGD13046
NN1	1.575	AA003644, AA009236, CTA-437G10 B.1, dJ353E16.2, meningioma (disrupted in balanced tr
Ms4a4b (includes otl	1.713	2210417J23Rik, 5830413L19Rik, AI449185, AI463180, Chandra, Ly116, membrane-spanning
MTRFR2	1.715	2610016C23Rik, 4933412C16Rik, DUF1, FAM54A, LOC100911069, mitochondrial fission re
MYC	-1.593	AU016757, bHLHe39, BOS 13758, C-MYC-P64, CMYC, mMyc, MRTL, Myc2, MYCC, myeloc
MYH7	1.854	B-MHC, beta cardiac myosin heavy chain, beta MYHC, beta myosin, Beta Myosin Heavy Cha
NAV1	1.556	95300089B19, 9930003A20Rik, BC028801, C230080M11Rik, LOC685707, mKIAA1151, neurc
NCL	-1.545	B530004O11Rik, C23, DONds28, D1Nds28, LOC100289394, NUCL, nucleolin
NDOR1	1.546	4930447P04Rik, bA350O14.9, LOC648245, NADPH dependent diflavin oxidoreductase 1, Nc
NDRG4	1.556	AF045564, BDM1, D8Bwg1337e, N-myc downstream regulated gene 4, Ndr1-rs, NDR4, NDR
NELFCD	1.560	2410003I03Rik, C77797, HSPC130, negative elongation factor complex member C/D, negati
NELL1	1.566	B230343H07RIK, IDH3GL, I7R6, NEL-like 1, NEL-like 1 (chicken), NRP1
NEURL1B	1.719	C230078M08Rik, DKFZp761M1511, EG240055, hNeur2, neur2, neuralized E3 ubiquitin prote
NFIB	1.562	6720429L07Rik, CTF, E030026I10RIK, NF- κ B, NF1-B, NF1-b1, NFI-RED, NFIB2, NFIB3, Nuc
NME5	1.577	1700019D05Rik, NM23-H5, Nm23-M5, NME/NM23 family member 5, RSPH23
NPB	-1.696	LOC653419, neuropeptide B, PPL7, PPNPB, RP23-84C12.7
Npcd	1.668	Cbx6-Nptxr, neuronal pentraxin chromo domain
NPHS2	-5.836	AI790225, nephrosis 2, idiopathic, steroid-resistant, nephrosis 2, idiopathic, steroid-resistant (
NRSN1	3.977	Neurensin-1, Neuro-p24, p24, RP11-176J5.1, RP23-19G4.1, VMP
NT5DC3	1.564	5'-nucleotidase domain containing 3, AU040402, AW540062, C630002B14Rik, LOC687698, N
NTSR1	1.735	Neurotensin Receptor, neurotensin receptor 1, neurotensin receptor 1 (high affinity), NT-1R, N
NXP3	1.566	neurexophilin 3, NPH3, RP23-67E18.5, UNQ687/PRO1327
OCM	1.650	hCG 18255, LOC730297, OCM1, Ocm2, OM, ONCM, oncomodulin, Oncomodulin, oncomoduli
OGFOD1	1.698	2-oxoglutarate and iron-dependent oxygenase domain containing 1, 4930415J21Rik, AA3871
OSR2	-1.704	5430409I15RIK, odd-skipped related 2, odd-skipped related transcription factor 2, Osr2A, Osr2
PAK4	1.678	5730488L07Rik, AW555722, mKIAA1142, p21 protein (Cdc42/Rac)-activated kinase 4
PAPD5	1.543	5730445M16Rik, 5830428A09, PAP associated domain containing 5, TRF4-2
PAQR5	-1.778	0610010I15RIK, AV002411, BB115488, MPRG, Pmrgamma, progesterin and adipoQ receptor fa
PAQR6	1.507	1500001B10RIK, LOC686392, progesterin and adipoQ receptor family member VI, RP11-54H11
PARD3	-2.410	AA960621, AI256638, ASIP, atypical pkc-specific binding, Baz, D8ErtD580e, MPAR3, PAR-3,
PARK2	1.511	AR-JP, KB-152G3.1, LPRS2, Park, Parkin, parkin RBR E3 ubiquitin protein ligase, Parkinson
PBLD	1.613	0610038K03Rik, MAWBP, MAWDBP, Pbl1, Pbl2, phenazine biosynthesis-like protein doma
PBX1	1.544	2310056B04RIK, D230003C07RIK, PBX, pre-B-cell leukaemia homeobox 1, pre-B-cell leuken
PCDH17	1.549	C030033F14RIK, Gm78, LOC144997, PCDH68, PCH68, protocadherin 17
PCDH19	1.565	B530002L05Rik, EFMR, EIEE9, Gm717, LOC279653, mKIAA1313, protocadherin 19, RGD11
PCDH8	2.496	1700080P15Rik, ARCADLIN, PAPC, protocadherin 8
PCLO	1.788	ACZ, aczonin, KIAA0559, Piccolo, piccolo (presynaptic cytomatrix protein), piccolo presynapti
PCP4	-2.400	P16Rimb19, PEP-19, PEPZ19, Purkinje cell protein 4
PCSK2	-2.336	6330411F23Rik, AI839700, NEC-2, PC2, Phpp-2, proprotein convertase subtilisin/kexin type 2
PCSK9	-1.810	AI415265, AI747682, FH3, HCHOLA3, LDLQC1, NARC-1, PC9, proprotein convertase subtili
PDHB	1.914	2610103L06Rik, AL024199, C81408, Odbp, PDHBD, PDHE1-B, PHE1B, Pyruvate dehydroge
PDP1	1.634	Gm1024, PDH, PDP, Pdp1c, PDPC, PPM2C, PYRUVATE DEHYDROGENASE, Pyruvate Del
PDZK1	-3.366	1700023D20Rik, 2610507N21Rik, 4921513F16Rik, AI267131, AI314638, AL022680, CAP70,
PEAK1	1.618	1110049L02Rik, 9530046P14, AA690169, BE132841, C230081A13Rik, KIAA2002, mKIAA20
PERP	-1.597	1110017A08Rik, dJ496H19.1, ineligibleperp, KCP1, KRTCAP1, p53 apoptosis-associated tar
PGM2L1	2.022	4931406N15RIK, AI553438, BM32A, FLJ32029, LOC683619, phosphoglucomutase 2-like 1
PIGT	1.540	2510012P17RIK, 4930534E15RIK, CGI-06, GPI AMIDASE, MCAHS3, NDAP, Ndap7, phosph
PIPOX	-2.896	LPIPOX, Peroxisomal sarcosine oxidase, pipecolic acid oxidase, Pso, SOX
PLEKHG3	1.576	ARHGEF43, BC030417, KIAA0599, pleckstrin homology domain containing, family G (with RI
PNMA2	3.747	A830049P17RIK, MA2, mKIAA0883, MM2, paraneoplastic antigen MA2, paraneoplastic Ma ar
POT1	1.615	1500031H18Rik, AI851169, CMM10, HPOT1, Pot1a, protection of telomeres 1, protection of t
Pou3f1	1.635	Oct-6, Otf-6, POU domain, class 3, transcription factor 1, RP23-230F2.2, Scip, Test1, Tst-1
Ppfi4	1.563	1110008G13RIK, AI448359, AI852265, C81506, protein tyrosine phosphatase, receptor type, f
PPM1K	1.568	2900063A19RIK, A930026L03RIK, BDP, MSUDMV, PP2Ckappa, PP2Cm, protein phosphatase
PPP1R13B	1.505	AI449786, ASPP1, AW545810, p53BP2-like, p85, protein phosphatase 1, regulatory (inhibitor
PPP1R3B	1.764	6430576E21, AW821953, GL, LOC192280, LOC286044, PPP1R4, protein phosphatase 1, re
PRKCA	1.517	AAG6, AI875142, BOS 19579, LOC146784, PKC-alpha, PKC- α , PKCA, PKRCA, PRKACA, pr
PRKCB	1.696	A130082F03RIK, BOS 22739, PKC Type II, PKC Type III, PKC β 1, PKC-Beta, PKC- β , PKCB,
Psg18 (includes oth	-1.599	1600019C01RIK, 1600025N01RIK, 1600026N13RIK, 1620401C02RIK, AA408604, Cea-2, Cea

PSME3	1.724 AA410043, Ab2-371, AU020960, HEL-S-283, Ki, Ki Nuclear Autoantigen, PA28-gamma, PA28
PTPN5	4.853 FLJ1442, protein tyrosine phosphatase, non-receptor type 5, protein tyrosine phosphatase, n
PTPRO	-3.608 D28, GLEPP, GLEPP1, NPHS6, protein tyrosine phosphatase, receptor type, O, PTP PHI, PT
PTPRS	1.571 AC073761.1, AL022616, Lar-ptp2, protein tyrosine phosphatase, receptor type, S, PTP, PTP-I
QPR7	-1.812 2410027J01RIK, AI647766, HEL-S-90n, LOC100912382, Qaprt, QPRTase, QUINOLINATE P
R3HDML	-12.051 dJ881L22.3, LOC100046603, OTTMUSG0000001070, R3H domain containing-like, RP23-3
RAB3B	1.605 2610528C18Rik, RAB3B, member RAS oncogene family, RP23-31C9.4
RAB43	1.577 1810048P08Rik, 2500004H21Rik, AW490415, RAB11B, RAB41, RAB43, member RAS onco
RAD51C	1.597 BROVCA3, FANCO, R51H3, RAD51 homolog C, RAD51 paralog C, RAD51L2, RGD1563765
RALGSP1	1.588 5830418G11Rik, AI853783, AI854138, mKIAA0351, Ral GEF with PH domain and SH3 bindir
RBFOX1	1.550 2BP1, A2bp, A2BP1, FOX-1, HRNBP1, LOC100287538, MNCb-3035, RNA binding protein, fc
RBM47	-1.505 9530077J19Rik, FLJ20273, NET18, RGD1359713, RNA binding motif protein 47
RET	1.722 C-RET, CDHF12, CDHR16, HSCR1, MEN2A, MEN2B, MTC1, PTC, RET PROTO-ONCOGEN
RGS10	1.691 2310010N19Rik, regulator of G-protein signaling 10, Regulator of G-protein signalling 10
RIMKLA	-1.652 AK047164, B93003J024, FAM80A, NAAGS, NAAGS-II, ribosomal modification protein rimK-III
RIMS3	1.874 A730060M23Rik, KIAA0237, mKIAA0237, Nim2, NIM3, regulating synaptic membrane exocyt
RIN2	1.517 2010003K16Rik, 4632403N06Rik, AW821980, MACS, RAB5 interacting protein 2, Ras and R
RIPK3	1.560 2610528K09Rik, AW107945, HCPY2, receptor-interacting serine-threonine kinase 3, RIP3
RIPPLY2	-5.658 C030002E08Rik, C6orf159, dJ237115.1, Gm1122, RGD1308746, ripply transcriptional repres
RNASE4	1.752 C730049F20RIK, RAB1, RIBONUCLEASE 4, ribonuclease, RNase A family 4, ribonuclease, I
RNF213	1.636 6030403J01, ALO17, C17ORF27, D11Erd759e, FRAG-6, hCG 1812857, KIAA1554, KIAA16
ROBO2	-1.657 2600013A04Rik, 9430089E08Rik, BB097918, D230004I22Rik, mKIAA1568, roundabout hom
ROR2	1.603 BDB, BDB1, mRor2, NTRKR2, receptor tyrosine kinase-like orphan receptor 2, RP11-818.2
RPH3AL	-1.538 6530413F01RIK, AI551877, Gm1753, NOC2, rabphilin 3A-like (without C2 domains), RP23-7
RSPH1	1.703 CT79, MCA, radial spoke head 1 homolog (Chlamydomonas), RSP44, RSPH10A, TSA2, TSC
RTP4	1.594 5830458K16Rik, IFRG28, receptor (chemosensory) transporter protein 4, receptor transporte
RUNX1T1	1.608 AML1T1, CBFA2T1, Cbfa2t1h, CDR, ETO, MTG8, RP23-134H12.1, Run1t1, runt-related trans
S100G	-2.846 AU042539, CABP, CaBP-D9K, CABP1, CABP9K, Cad9k, CALB3, Calbindin D-9K, Cbpi, Rnc
SAP25	1.513 LOC100289367, RGD1562406, sin3 associated polypeptide, Sin3A-associated protein 25, Sii
SCN8A	1.674 AI853486, C630029C19Rik, CERIII, CIAT, dmu, EIEE13, FLJ33996, MED, mnd-2, NaCh6, Ne
Sct	1.524 Secr, Secretin
SCUBE1	1.791 7330410C13Rik, A630023E24Rik, AL583887.1, signal peptide, CUB domain, EGF-like 1
SCX	-1.765 BB114693, bHLHa41, bHLHa48, LOC684826, Scl, scleraxis, scleraxis basic helix-loop-helix tr
SEMA4C	1.639 AI426163, M-SEMA-F, mKIAA1739, RGD1562837, sema domain, immunoglobulin domain (Ig
SEMA4G	1.506 AI507908, AW554132, RP11-108L7.1, sema domain, immunoglobulin domain (Ig), transmem
SEMA6C	1.597 m-SemaY, m-SemaY2, mKIAA1869, RP11-68L18.3, sema domain, transmembrane domain (T
SEMA6D	1.669 1110067B02Rik, AA409156, D330011G23, mKIAA1479, RP23-455E2.1, sema domain, trans
SEPT3	1.730 3110018K01RIK, AV154067, B530002E20Rik, bK250D10.3, CTA-250D10.3, SEP3, septin 3
SERPINA1	-2.476 A1-PI, A1A, A1AT, AAT, AAT2, AI118301, alpha 1 antiprotease, Alpha 1 Protease Inhibitor, alpi
SERPINB8	1.717 CAP-2, NK10, ovalbumin, P18, PROTEINASE INHIBITOR 8, serine (or cysteine) peptidase inl
SERPINF2	-2.879 A2AP, AAP, AI747498, alpha 2 PLASMIN INHIBITOR, ALPHA2-P1, alpha2 ANTIPLASMIN, AI
SGK2	-2.496 AI098171, AW146006, dJ138B7.2, H-SGK2, RP1-138B7.2, RP23-335N12.5, Serum/glucocon
SGSH	1.714 4632406A19Rik, HSS, MPS3A, N-sulfoglucosamine sulfohydrolase, N-sulfoglucosamine sulf
SHISA2	-1.908 9430059P22Rik, bA398O19.2, C13orf13, hShisa, LOC387914, MAd2, Mem46, mShisa, PRO
SKAP1	2.127 1700091G21Rik, HEL-S-81p, RP23-196B19.1, SCAP1, SKAP55, src family associated phosph
Skint7/Skint8	1.717 C130057D23Rik, LOC684023, OTTMUSG00000009475, RP23-269E13.1, selection and upk
SLC14A2	1.584 hUT-A6, HUT2, Rut, Slc14a2 v4, Slc14a2T, solute carrier family 14 (urea transporter), membe
SLC14A4	1.741 ASCT-1, AW045657, Neutral amino acid transporter, Neutral amino acid transporter a, RP23-
SLC22A6	-2.819 HOAT1, mOat1, NKT, OAT1, Orct11, PAHT, ROAT1, solute carrier family 22 (organic anion tra
SLC23A3	-3.201 E2BP3, hCG 1811885, solute carrier family 23 (nucleobase transporters), member 3, solute c
SLC26A11	1.549 F630021I08RIK, LOC688294, MGC46523, RP23-25M3.3, solute carrier family 26 (anion exc
SLC29A4	2.504 ENT4, mPMAT, PMAT, PSEC0113, solute carrier family 29 (equilibrative nucleoside transport
Slc2a4rg-ps	1.552 C430010C01, Gm14462, OTTMUSG00000016710, Slc2a4 regulator, pseudogene
SLC32A1	2.326 hVIAAT, LOC100364703, R75019, RP23-392P11.5, solute carrier family 32 (GABA vesicular t
SLC34A1	-5.286 FRTS2, Na/Pi Cotransporter Type 2a, Napi iia, NaPi-2, NAPI-3, NaPi2A, NPHLOP1, NPT2, N
SLC35G1	1.616 AA590464, C10orf60, D330039I19Rik, solute carrier family 35, member G1, TMEM20
SLC37A4	-1.592 G6PT, G6PT1, G6PT2, G6PT3, Glycogen Storage Disease Type Ib, GSD-1b, GSD1c, GSD1c
SLC38A5	2.078 AF276870, C81234, E330031E14, JM24, PP7194, RP23-224M4.2, SN2, SNAT5, solute carri
SLC4A11	2.255 AI503023, BTR1, CDPD1, CHED2, dJ79416.2, NABC1, RP4-79416.3, Slc4a11 predicted, solu
SLC6A13	-1.552 Gabt3, GAT-2, GAT3, solute carrier family 6 (neurotransmitter transporter), member 13, solute
SLC8A2	1.504 NCX2, SLC8A, solute carrier family 8 (sodium/calcium exchanger), member 2
SLIT1	1.544 MEGF4, mKIAA0813, RP11-175O19.2, SLIL1, slit homolog 1 (Drosophila), SLIT3
SLN	8.563 2310045A07Rik, sarcolipin
SMARCA2	1.594 2610209L14RIK, BAF190, brahma, BRM, BRM1, hBRM, hSNF2a, NCBRS, SNF2, SNF2alph
SMIM24	-1.566 2210404O07Rik, C19orf77, HSPC323, small integral membrane protein 24
SNED1	1.633 6720455I24Rik, AI197264, AI642697, D430044C15RIK, DKFZp586B2420, FLJ00133, IRE-BF
SOD3	-1.747 AI314465, EC-SOD, ECSODPT, superoxide dismutase 3, extracellular
SOSTDC1	-2.426 0610006G05Rik, CDA019, ECTODIN, sclerostin domain containing 1, Sostl, USAG-1, Wise
SP110	1.732 5031415C07RIK, 5830484A20RIK, ENSMUSG00000075603, Gm15753, IFI41, IFI75, IPR1, I
SP5	2.185 Sp5 transcription factor, trans-acting transcription factor 5
SPAG7	1.762 5730443G10, ACRP, DN-183N8.18-002, FSA-1, Fsa1l, sperm associated antigen 7
SPINK1	-4.790 LOC266602, p12, PCTT, PSTI, Psti-i, Psti-ii, serine peptidase inhibitor, Kazal type 1, serine p

SPOCK2	-1.776 AA407235, GCAP26, KIAA0275, mKIAA0275, sparc/osteonectin, cwcv and kazal-like domain
SPP2	-7.346 0610038004RIK, LOC94168, pp-24, secreted phosphoprotein 2, secreted phosphoprotein 2,
SREK1	1.648 8430401B01, AI450757, AI462342, SFRS12, splicing regulatory glutamine/lysine-rich protein
ST3GAL6	-1.780 1700023B24RIK, AI930218, alpha-2,3-sialyltransferase VI, AW552396, RP24-293N14.3, Sialy
STAB2	1.786 FEEL-2, FELE-2, FELL, FELL2, FEX2, HARE, MFEEL-2, STABILIN-2
STEAP1	-1.742 2410007B19RIK, PRSS24, six transmembrane epithelial antigen of the prostate 1, STEAP, tce
STEAP2	-1.672 4921538B17RIK, AI930049, AW045895, ENSMUSG00000073232, IPCA-1, PCANAP1, PUMI
STIM1	1.703 D11S4896E, GOK, IMD10, SIM, STRMK, stromal interaction molecule 1, TAM, TAM1
STMN2	2.199 AI159727, SCG10, SCGN10, stathmin 2, stathmin-like 2, Stmb2
STXPB1	1.516 AI317162, AI326233, ANC18HA, MMS10-G, Ms10g, Munc-18a, MUNC18-1, NSEC1, NSEC1
Sult1d1	-7.906 5033411P13RIK, AI987815, Amine n-sulfotransferase, ST1D1, sulfotransferase family 1D, me
SUV39H2	1.600 4930507K23RIK, AA536750, D030054H19RIK, D2Erd544e, KMT1B, RP11-2K17.2, RP23-16
SVOP1	-1.573 9430071P14RIK, RGD1566053, similar to RIKEN cDNA 9430071P14 gene, SV2 related prote
SYNJ1	1.760 A930006D20RIK, AA675315, INPP5G, mKIAA0910, PARK20, synaptotaxin 1
SYNP2L	1.643 1110054M18RIK, Chap, FLJ12921, RGD1565434, synaptopodin 2-like
TBX3	1.547 D5Erd189e, LOC100047200, T-box 3, TBX3-ISO, UMS, XHL
TCEAL5	1.507 6430401A05RIK, LLOXNC01-177E8.1, LOC678833, RP23-132M9.2, transcription elongation f
TCF24	3.384 bHLHa25, ENSMUSG00000073738, Gm10567, Gm2330, LOC100045893, transcription factc
TCP11L2	1.701 E430026E19RIK, RGD1307494, t-complex 11 (mouse) like 2, t-complex 11, testis-specific-like
TENM4	1.612 Doc4, ELM2, I(7)-3Rn, I7Rn3, mKIAA1302, ODZ4, R75022, Ten-4, teneurin transmembrane p
TFEB	1.726 ALPHATFEB, BHLHE35, RP4-696P19.3, TCFEB, transcription factor EB
TGM5	1.534 2310007C07RIK, LOC688031, LOC691932, RP23-263D22.4, similar to transglutaminase 7, T
THNSL2	-1.565 BC051244, FLJ10916, RGD1309144, threonine synthase-like 2 (bacterial), threonine synthas
THY1	1.528 CD7, CD90, LOC94105, T25, Thy-1 cell surface antigen, Thy1.1, Thymus cell antigen 1, thet
TIAM2	1.626 3000002F19RIK, LOC100362710, mKIAA2016, RP3-414L4.2, STEF, T-cell lymphoma invasiv
TINAG	-2.733 AI452335, RP11-12414.1, tubulointerstitial nephritis antigen
TMEM174	-2.675 0610009B10RIK, AA986094, transmembrane protein 174
TMEM213	-1.977 D630002J15RIK, LOC684143, transmembrane protein 213
TMEM239	1.689 4933425O20RIK, LOC100048703, LOC100291033, LOC100291571, RP23-29K12.6, transme
TMEM25	-1.833 0610039J01RIK, AI429491, LOC683488, transmembrane protein 25, UNQ2531/PRO6030
Tmem254a (includes	1.580 0610008K04RIK, 0610010A22RIK, AA960404, D14Erd449e, ENSMUSG00000021867, ENSM
TMEM27	-2.423 0610008J07RIK, collectrin, NX-17, RP23-59N7.2, transmembrane protein 27, UNQ679/PRO1
TMEM59L	1.560 5330410G16RIK, BSMAP, C19orf4, RGD1305557, transmembrane protein 59-like
TMEM8B	1.583 4930500O05RIK, C9orf127, NAG-5, NGX6, RGD1310012, RP11-112J3.10, RP23-191F22.12-
TMPRSS3	1.742 DFNB10, DFNB8, ECHOS1, TADG12, transmembrane protease, serine 3, UNQ323/PRO382
TNFRSF10A	1.589 APO2, CD261, Death receptor 4, DR, DR4, DR5, KILLER, Ly98, MK, Tnfrsf10b, TR1, TRAIL r
TNFRSF9	1.663 4-1BB, A930040I11RIK, AA408498, AI325004, CD137, CDw137, ILA, Ly63, RP23-272N19.6,
TNN1	-1.662 2700018B22RIK, AI472285, Slow tni, SSTNI, TNN1, Troponin I slow, troponin I type 1 (skeletal
TPBG	2.099 5T4, 5T4AG, AW495680, M6P1, trophoblast glycoprotein, WAIF1
TRAF1	-3.625 4732496E14RIK, EBI6, ineligibleraf1, MGC:10353, RP23-9N11.6, TNF receptor-associated fe
TRH	-4.460 Pro-TRH, THR, thyrotropin-releasing hormone, TRF, TRH01
TRIB3	1.744 C20orf97, HTRB-3, Ifld2, LOC246273, NIPK, RP23-396N8.1, RP5-1103G7.7, SINK, SKIP3, T
TRIM25	1.688 AA960166, AL022677, EFP, estrogen-responsive finger, RNF147, RP23-176J13.7, TRIM25 a
TSPAN17	1.738 2210021G21RIK, AI047581, FBX23, FBXO23, GHB-R, MGC14859, tetraspanin 17, TM4SF11
TTYH2	1.573 1110001A03RIK, C17orf29, LOC100505117, RGD1562969, RP23-273C14.1, tweety family m
TUBB2B	1.612 2410129E14RIK, bA506K6.1, Beta-tubulin T beta15, Beta1 Tubulin, brdp, MGC8685, PMGYS
TWIST2	1.503 bHLHa39, Dermo1, FFDD3, SETLSS, twist basic helix-loop-helix transcription factor 2, twist
UBE2I	1.674 5830467E05RIK, C358B7.1, F830028O17RIK, LA16c-358B7.1, P18, SUMO E2, UBC9, UbcE
UBTF	1.705 A930005G04RIK, LOC679205, NOR-90, RP23-461C4.7, TCFUBF, UBF, UBF1, upstream bin
UGT1A6	-1.775 A9', GNT1, HLUGP, HLUGP1, UDP glucuronosyltransferase 1, UDP glucuronosyltransferase
UGT2B10	-2.445 AI788959, UDP glucuronosyltransferase 2 family, polypeptide B10, UDP glucuronosyltransfer-
UGT2B28	-5.634 0610033E06RIK, 9430041C03RIK, AA986709, AI118071, Androsterone UDP-glucuronosyltran
UNCX	-1.701 Chx4, LOC100510018, PHD1, tcag7.1272, UNC homeobox, UNCX4.1
UNG	1.722 DGU, HIGM4, HIGM5, UDG, UNG1, UNG15, UNG2, Uracil hydrolase, uracil-DNA glycosylase
USP51	1.837 AV136873, RGD1562211, RP23-415B4.1, ubiquitin specific peptidase 51, ubiquitin specific pr
VAT1L	-1.586 9430073I07, AI427515, KIAA1576, mKIAA1576, vesicle amine transport 1-like, vesicle amine
VEGFC	1.600 AW228853, Flt4 ligand, Flt4-L, LMPH1D, vascular endothelial growth factor C, VRP
VIL1	-3.708 D2S1471, VIL, Villin, villin 1
WDFY1	1.653 1700013B03RIK, 1700120F24RIK, FENS-1, Jr1, mKIAA1435, SR1, WD repeat and FYVE don
WDFY4	1.666 C10orf64, Gm18810, hCG 1745555, RGD1564142, WD repeat and FYVE domain containing
WDR89	1.646 2600001A11RIK, C14orf150, MSTP050, RGD1307393, WD repeat domain 89
WSCD2	2.008 4933413A10, 4933413A10RIK, C530024P05RIK, Gm450, WSC domain containing 2, Wscd2-1
XPNPEP2	-2.162 9030008G12RIK, AEACEI, APP2, mAmP, mAPP, Membrane-bound aminopeptidase p, Memb
YBX2	1.657 CONTRIN, CSDA3, DBPC, MSY2, RGD1305068, Y box binding protein 2, Y box protein 2
ZCCHC9	1.701 1810019C21RIK, PPP1R41, zinc finger, CCHC domain containing 9
Zfp133-ps	1.679 OTTMUSG00000003825, Zfp133, zinc finger protein 133, pseudogene
Zfp941	1.640 zinc finger protein 941
ZFFM1	1.703 FOG, FOG1, LOC100365064, ZC2HC11A, zinc finger protein, FOG family member 1, zinc fin
ZFFM2	1.536 B330005D23RIK, DIH3, FOG-2, hFOG-2, ZC2HC11B, zinc finger protein, FOG family membe
ZMAT4	2.200 9630048M01RIK, LOC684906, MATRIN-4, zinc finger, matrin-type 4
ZNF512B	1.513 GM632, RP23-138J20.2, Urk11, Zfp512b, zinc finger protein 512B
ZNF536	1.513 9630010P11RIK, KIAA0390, mKIAA0390, RGD1563363, Zfp536, zinc finger protein 536

ZNF703
ZSWIM8

1.687 1110032O19RIK, AI430822, AL022941, Csmn1, End2, FLJ14299, LOC684528, ZEPP01, Zfp
1.506 2310021P13Rik, 4832404P21Rik, KIAA0913, LOC196752, mKIAA0913, RGD1309414, zinc f

Entrez Gene Name	Agilent	Location	Family	Drugs
family with sequence similarity 177, member A	A_55_P2114269	Other	other	
RIKEN cDNA 1700110I01 gene	A_55_P2067463	Other	other	
RIKEN cDNA 2310002F09 gene	A_55_P2292737	Other	other	
RIKEN cDNA 2310015B20 gene	A_51_P199352	Other	other	
uncharacterized protein 3830612M24	A_55_P2345853	Other	other	
RIKEN cDNA 4732423E21 gene	A_55_P2210213	Other	other	
RIKEN cDNA 4930412O13 gene	A_55_P2064776	Other	other	
RIKEN cDNA 4932431P20 gene	A_55_P1976682	Other	other	
RIKEN cDNA 4933427D06 gene	A_55_P2038484	Other	other	
RIKEN cDNA 6720422M22 gene	A_55_P2244677	Other	other	
RIKEN cDNA 8030425K09 gene	A_55_P2258216	Other	other	
RIKEN cDNA 9030419F21 gene	A_55_P2279035	Other	other	
lymphocyte antigen 6 complex pseudogene	A_66_P122086	Other	other	
RIKEN cDNA 9130020K20 gene	A_55_P2402134	Other	other	
RIKEN cDNA 9530083O12 gene	A_55_P2209308	Other	other	
RIKEN cDNA 9630010G10 gene	A_55_P2296118	Other	other	
RIKEN cDNA A230065H16 gene	A_55_P2076916	Other	other	
RIKEN cDNA A530006G24 gene	A_55_P2131820	Other	other	
acyl-CoA thioesterase 11	A_55_P2096043	Cytoplasm	enzyme	
acyl-CoA oxidase 3, pristanoyl	A_55_P1971579	Cytoplasm	enzyme	
acyl-CoA synthetase medium-chain family member 2A	A_55_P2325038	Cytoplasm	enzyme	
acyl-CoA synthetase short-chain family member 2	A_55_P1988789	Cytoplasm	enzyme	
ADAM metallopeptidase with thrombospondin type 1 motif, 17	A_55_P2038422	Extracellular Space	other	
ADAM metallopeptidase with thrombospondin type 1 motif, 7	A_55_P1961451	Extracellular Space	peptidase	
alpha-fetoprotein	A_51_P510891	Extracellular Space	transporter	
aldo-keto reductase family 1, member C3	A_55_P2163098	Cytoplasm	enzyme	
aldehyde dehydrogenase 1 family, member A2	A_52_P58145	Cytoplasm	enzyme	
aldehyde dehydrogenase 1 family, member A3	A_52_P87843	Cytoplasm	enzyme	
aldolase B, fructose-bisphosphate	A_51_P337269	Cytoplasm	enzyme	
amion associated transmembrane protein	A_51_P343350	Plasma Membrane	other	
ANKH inorganic pyrophosphate transport regulator	A_51_P155152	Plasma Membrane	transporter	
annexin A13	A_52_P662711	Plasma Membrane	other	
amyloid beta (A4) precursor-like protein 1	A_55_P1991605	Extracellular Space	other	
Rho GTPase activating protein 26	A_55_P2080562	Cytoplasm	other	
Rho guanine nucleotide exchange factor (GEF) 15	A_55_P2035087	Cytoplasm	other	
ADP-ribosylation factor-like 6 interacting protein 6	A_55_P2042993	Other	other	
arrestin, beta 1	A_51_P436727	Cytoplasm	other	
ADP-ribosyltransferase 4 (Dombrock blood group)	A_55_P2108248	Nucleus	enzyme	
ankyrin repeat and SOCS box containing 9	A_51_P247963	Nucleus	transcription regulator	
acid-sensing (proton-gated) ion channel family member 4	A_55_P2162747	Plasma Membrane	ion channel	amiloride, amiloride
asparaginase	A_52_P338956	Other	enzyme	
argininosuccinate synthase 1	A_55_P2143070	Cytoplasm	enzyme	
ATPase, Na ⁺ /K ⁺ transporting, beta 1 polypeptide	A_51_P151484	Plasma Membrane	transporter	
ATPase, H ⁺ transporting V0 subunit e2	A_51_P212038	Cytoplasm	enzyme	
ataxin 7	A_55_P2099890	Nucleus	other	
expressed sequence AW011956	A_55_P2319035	Other	other	
expressed sequence AW549542	A_55_P2274378	Other	other	
BTB and CNC homology 1, basic leucine zipper transcription factor 2	A_66_P114768	Nucleus	transcription regulator	
3-hydroxybutyrate dehydrogenase, type 1	A_51_P163106	Cytoplasm	enzyme	
BEN domain containing 4	A_55_P2199118	Other	other	
BPI fold containing family C	A_55_P1966583	Extracellular Space	transporter	
bone morphogenetic protein/retinoic acid inducible neural-specific 1	A_55_P2124941	Nucleus	peptidase	
barttin CLCNK-type chloride channel accessory beta subunit	A_55_P2056704	Plasma Membrane	other	
butyrophilin, subfamily 1, member A1	A_55_P2029235	Plasma Membrane	other	
chromosome 10 open reading frame 35	A_51_P308029	Other	other	
chromosome 12 open reading frame 73	A_52_P598634	Other	other	
chromosome 1 open reading frame 54	A_55_P1985519	Other	other	
complement component 2	A_51_P497985	Extracellular Space	peptidase	
RIKEN cDNA C230096K16 gene	A_55_P2270412	Other	other	
complement component 5a receptor 2	A_55_P2106106	Plasma Membrane	G-protein coupled receptor	
chromosome 9 open reading frame 16	A_51_P207153	Other	other	
carbonic anhydrase IV	A_55_P2087182	Plasma Membrane	enzyme	ethoxzolamide, dic
calbindin 1, 28kDa	A_66_P102374	Cytoplasm	other	
calmodulin-like 4	A_52_P367760	Other	other	
calneuron 1	A_55_P2113439	Cytoplasm	other	
calcium/calmodulin-dependent protein kinase kinase 1, alpha	A_55_P2113165	Cytoplasm	kinase	
calpain 6	A_52_P474089	Cytoplasm	peptidase	
coiled-coil domain containing 138	A_55_P2043117	Other	other	
CDC42 effector protein (Rho GTPase binding) 5	A_55_P2057686	Cytoplasm	other	
cadherin 6, type 2, K-cadherin (fetal kidney)	A_55_P2414619	Plasma Membrane	other	

cyclin-dependent kinase 5, regulatory subunit 1 (p35)	A_55_P2173183	Nucleus	kinase	
cyclin-dependent kinase-like 1 (CDC2-related kinase)	A_51_P234140	Nucleus	kinase	
CUGBP, Elav-like family member 4	A_55_P1992572	Nucleus	translation regulator	
centrosomal protein 170B	A_55_P2050488	Other	other	
cell growth regulator with EF-hand domain 1	A_51_P372550	Extracellular Space	other	
charged multivesicular body protein 4B	A_55_P2008538	Cytoplasm	other	
chondroitin polymerizing factor 2	A_55_P1987904	Cytoplasm	enzyme	
carbohydrate (N-acetylgalactosamine 4-0) sulfotransferase 8	A_51_P277006	Cytoplasm	enzyme	
cell death-inducing DFFA-like effector a	A_51_P199168	Cytoplasm	other	
cell death-inducing DFFA-like effector b	A_66_P108685	Cytoplasm	other	
Cbp/p300-interacting transactivator, with Glu/Asp-rich carboxy-terminal domain, 1	A_55_P1979833	Nucleus	transcription regulator	
chloride channel, voltage-sensitive Ka	A_55_P2080880	Plasma Membrane	ion channel	
C-type lectin domain family 18, member B	A_55_P2063980	Other	other	
chloride intracellular channel 6	A_52_P447284	Plasma Membrane	ion channel	
collagen, type I, alpha 1	A_55_P2118520	Extracellular Space	other	collagenase clostric
collagen, type XXVI, alpha 1	A_55_P1954271	Extracellular Space	other	
collagen, type II, alpha 1	A_55_P2004179	Extracellular Space	other	collagenase clostric
collagen, type IV, alpha 6	A_52_P516409	Extracellular Space	other	collagenase clostric
collagen, type V, alpha 1	A_51_P414637	Extracellular Space	other	collagenase clostric
collagen, type VII, alpha 1	A_55_P2064292	Extracellular Space	other	collagenase clostric
collagen-like tail subunit (single strand of homotrimer) of asymmetric acetylcholinesterase	A_55_P2043337	Extracellular Space	other	
cytochrome c oxidase subunit VIb polypeptide 2 (testis)	A_51_P300506	Cytoplasm	enzyme	
carboxypeptidase A1 (pancreatic)	A_52_P161237	Extracellular Space	peptidase	
carboxypeptidase A2 (pancreatic)	A_52_P320261	Extracellular Space	peptidase	
carboxypeptidase B2 (plasma)	A_51_P262701	Extracellular Space	peptidase	
carboxypeptidase N, polypeptide 1	A_52_P308669	Extracellular Space	peptidase	
cellular retinoic acid binding protein 2	A_55_P2059432	Cytoplasm	transporter	
crumbs family member 2	A_51_P300618	Extracellular Space	other	
cAMP responsive element binding protein 5	A_55_P2097474	Nucleus	transcription regulator	
collapsin response mediator protein 1	A_55_P2017600	Cytoplasm	enzyme	
chondroitin sulfate proteoglycan 5 (neuroglycan C)	A_55_P2046744	Extracellular Space	growth factor	
cubilin (intrinsic factor-cobalamin receptor)	A_55_P2047639	Plasma Membrane	transmembrane receptor	
cytochrome b561	A_55_P1954718	Cytoplasm	enzyme	
cytochrome b5 reductase 4	A_52_P505827	Cytoplasm	enzyme	
cytochrome P450, family 26, subfamily B, polypeptide 1	A_51_P501844	Cytoplasm	enzyme	
cytochrome P450, family 2, subfamily d, polypeptide 26	A_51_P120295	Cytoplasm	enzyme	
cytochrome P450, family 2, subfamily U, polypeptide 1	A_55_P1966734	Cytoplasm	enzyme	
cytochrome P450, family 4, subfamily A, polypeptide 11	A_55_P2050628	Cytoplasm	enzyme	
RIKEN cDNA D230019N24 gene	A_55_P2208260	Other	other	
RIKEN cDNA D230040J21 gene	A_55_P2261882	Other	other	
RIKEN cDNA D430019H16 gene	A_52_P97699	Other	other	
DNA segment, Chr 8, ERATO Doi 158, expressed	A_55_P2236382	Other	other	
D-amino-acid oxidase	A_55_P2108933	Cytoplasm	enzyme	
death associated protein-like 1	A_51_P391955	Other	other	
DDB1 and CUL4 associated factor 12-like 2	A_55_P2084980	Other	other	
doublecortin	A_52_P244349	Cytoplasm	other	
dicarbonyl/L-xylulose reductase	A_55_P2077628	Cytoplasm	enzyme	
dopa decarboxylase (aromatic L-amino acid decarboxylase)	A_55_P2110497	Cytoplasm	enzyme	carbidopa/entacapoc
DENN/MADD domain containing 4A	A_55_P2048650	Nucleus	other	
deoxyribose-phosphate aldolase (putative)	A_51_P512820	Cytoplasm	enzyme	
dickkopf WNT signaling pathway inhibitor 3	A_55_P2083609	Extracellular Space	cytokine	
discs, large (Drosophila) homolog-associated protein 3	A_52_P138806	Cytoplasm	other	
delta-like 1 homolog (Drosophila)	A_66_P117477	Extracellular Space	other	
delta-like 1 (Drosophila)	A_51_P306017	Plasma Membrane	enzyme	
dematin actin binding protein	A_55_P1956482	Plasma Membrane	other	
DnaJ (Hsp40) homolog, subfamily A, member 4	A_55_P2085546	Nucleus	other	
DnaJ (Hsp40) homolog, subfamily C, member 19	A_55_P2028243	Cytoplasm	other	
DnaJ (Hsp40) homolog, subfamily C, member 22	A_51_P257743	Other	other	
dedicator of cytokinesis 5	A_52_P88983	Cytoplasm	other	
D4, zinc and double PHD fingers family 1	A_51_P131442	Nucleus	other	
dipeptidyl-peptidase 4	A_51_P467110	Plasma Membrane	peptidase	saxagliptin, talabos
dihydropyrimidinase-like 5	A_55_P2052555	Cytoplasm	enzyme	
double homeobox B-like 1	A_66_P125035	Nucleus	other	
dynein, cytoplasmic 1, intermediate chain 1	A_55_P2090429	Cytoplasm	other	
ectodysplasin-A	A_55_P2030662	Other	other	
epidermal growth factor receptor	A_52_P106259	Plasma Membrane	kinase	cetuximab, AEE 78
euchromatic histone-lysine N-methyltransferase 1	A_55_P2045163	Nucleus	transcription regulator	
eukaryotic translation initiation factor 2, subunit 3, structural gene Y-linked	A_55_P2011877	Other	other	
E74-like factor 5	A_51_P455866	Other	other	
elastin microfibril interfacier 2	A_52_P527800	Extracellular Space	other	
endonuclease V	A_55_P1954925	Other	enzyme	
enolase 2 (gamma, neuronal)	A_55_P2019457	Cytoplasm	enzyme	

glutamyl aminopeptidase (aminopeptidase A)	A_51_P161830	Plasma Membrane	peptidase	
erythrocyte membrane protein band 4.1 like 4B	A_52_P286098	Other	transporter	
EPH receptor A5	A_55_P2062911	Plasma Membrane	kinase	
EPH receptor B3	A_55_P2054332	Plasma Membrane	kinase	
epoxide hydrolase 1, microsomal (xenobiotic)	A_55_P2002578	Cytoplasm	peptidase	
epidermal growth factor receptor pathway substrate 8	A_55_P1982454	Plasma Membrane	peptidase	
espin	A_66_P108003	Cytoplasm	other	
estrogen-related receptor gamma	A_65_P19089	Nucleus	ligand-dependent n	diethylstilbestrol
exocyst complex component 6	A_52_P631499	Plasma Membrane	transporter	
exosome component 9	A_55_P2043187	Nucleus	enzyme	
EYA transcriptional coactivator and phosphatase 1	A_55_P2423586	Nucleus	phosphatase	
fatty acid binding protein 3, muscle and heart (mammary-derived growth inhibitor)	A_55_P2033780	Cytoplasm	transporter	
family with sequence similarity 160, member B2	A_55_P2088296	Other	other	
family with sequence similarity 219, member A	A_55_P1991778	Other	other	
fibrillin 1	A_51_P467224	Extracellular Space	other	
fructose-1,6-bisphosphatase 1	A_51_P474701	Cytoplasm	phosphatase	
F-box and leucine-rich repeat protein 16	A_52_P49457	Cytoplasm	other	
F-box and leucine-rich repeat protein 7	A_52_P423364	Cytoplasm	enzyme	
FCH domain only 1	A_55_P2047461	Plasma Membrane	other	
FCH and double SH3 domains 1	A_52_P456158	Other	other	
fibrinogen beta chain	A_51_P428483	Extracellular Space	other	F2
fibroblast growth factor 1 (acidic)	A_55_P2047188	Extracellular Space	growth factor	pentosan polysulfat
FIG4 phosphoinositide 5-phosphatase	A_51_P405985	Cytoplasm	enzyme	
fibronectin leucine rich transmembrane protein 1	A_55_P2110915	Plasma Membrane	other	
fibronectin leucine rich transmembrane protein 3	A_55_P2110925	Plasma Membrane	other	
fibronectin 1	A_55_P2130178	Extracellular Space	enzyme	ocriplasmin
formin binding protein 1	A_55_P2030775	Nucleus	enzyme	
folate receptor 1 (adult)	A_55_P197792	Plasma Membrane	transporter	
forkhead box D1	A_52_P128134	Nucleus	transcription regulator	
forkhead box I1	A_55_P2166513	Nucleus	transcription regulator	
forkhead box O6	A_52_P589568	Nucleus	transcription regulator	
forkhead box P4	A_55_P2149983	Nucleus	transcription regulator	
FRAS1 related extracellular matrix 1	A_55_P1999641	Extracellular Space	other	
FERM and PDZ domain containing 2	A_55_P2173664	Plasma Membrane	other	
frizzled-related protein	A_51_P286748	Extracellular Space	other	
follistatin	A_55_P2394308	Extracellular Space	other	
FXYD domain-containing ion transport regulator 2	A_55_P2137941	Plasma Membrane	other	
frizzled class receptor 10	A_52_P203560	Plasma Membrane	G-protein coupled receptor	
gamma-aminobutyric acid (GABA) A receptor, alpha 3	A_55_P1963463	Plasma Membrane	ion channel	methohexital, primid
galanin/GMAP prepropeptide	A_51_P258281	Extracellular Space	other	
GTPase activating Rap/RanGAP domain-like 3	A_55_P2114133	Other	other	
GATS protein-like 2	A_55_P2014987	Other	other	
group-specific component (vitamin D binding protein)	A_55_P2022158	Extracellular Space	transporter	
glucosaminyl (N-acetyl) transferase 1, core 2	A_52_P21550	Cytoplasm	enzyme	
GDNF family receptor alpha 2	A_55_P1968703	Plasma Membrane	transmembrane receptor	
GDNF family receptor alpha 3	A_55_P1984103	Plasma Membrane	transmembrane receptor	
gamma-glutamyltransferase 1	A_51_P468073	Plasma Membrane	enzyme	
GIPC PDZ domain containing family, member 2	A_51_P446131	Cytoplasm	other	
galactosidase, alpha	A_55_P2146136	Cytoplasm	enzyme	
predicted gene 10576	A_55_P2090782	Other	other	
predicted gene 12258	A_55_P2115260	Other	other	
high mobility group box 1	A_55_P2025153	Nucleus	transcription regulator	
predicted gene 266	A_55_P2073694	Other	other	
predicted gene 5097	A_55_P2067952	Other	other	
high mobility group box 2 pseudogene	A_52_P30877	Other	other	
predicted gene 6115	A_55_P2176917	Other	other	
predicted gene 6213	A_52_P900300	Other	other	
predicted gene 6994	A_55_P1993640	Other	other	
predicted gene 9780	A_55_P1966332	Other	other	
predicted gene 9900	A_55_P2005315	Other	other	
guanine nucleotide binding protein (G protein), beta 5	A_55_P2000643	Plasma Membrane	enzyme	
guanine nucleotide binding protein (G protein), gamma 7	A_55_P1988018	Plasma Membrane	enzyme	
glycerol-3-phosphate dehydrogenase 1 (soluble)	A_52_P16419	Cytoplasm	enzyme	
G protein-coupled receptor associated sorting protein 1	A_55_P2132902	Cytoplasm	transporter	
glutamate receptor, ionotropic, AMPA 4	A_55_P1987725	Plasma Membrane	ion channel	talampanel, faramp
glutathione S-transferase alpha 5	A_55_P2170454	Cytoplasm	enzyme	
glutathione S-transferase mu 5	A_55_P2062190	Cytoplasm	enzyme	
glutathione S-transferase, mu 6	A_55_P2031692	Cytoplasm	enzyme	
GULP, engulfment adaptor PTB domain containing 1	A_51_P381218	Cytoplasm	other	
glucoside xylosyltransferase 2	A_55_P1974542	Other	other	
histocompatibility 2, K region locus 2	A_51_P502456	Plasma Membrane	other	
histocompatibility 2, Q region locus 5	A_51_P400752	Other	other	

hydroxyacylglutathione hydrolase	A_55_P2154536	Cytoplasm	enzyme	
huntingtin-associated protein 1	A_51_P516728	Cytoplasm	other	
hyaluronan synthase 2	A_51_P213359	Plasma Membrane	enzyme	
histidine decarboxylase	A_51_P254656	Cytoplasm	enzyme	
HD domain containing 3	A_52_P521882	Other	other	
HECT, C2 and WW domain containing E3 ubiquitin protein ligase 1	A_55_P2424767	Cytoplasm	enzyme	
hemogen	A_55_P1975660	Nucleus	other	
hes family bHLH transcription factor 5	A_52_P622850	Nucleus	other	
hes-related family bHLH transcription factor with YRPW motif 1	A_51_P258409	Nucleus	transcription regulator	
hedgehog interacting protein	A_55_P1969276	Plasma Membrane	other	
major histocompatibility complex, class I, A	A_51_P198434	Plasma Membrane	other	
major histocompatibility complex, class I, E	A_51_P237754	Plasma Membrane	transmembrane receptor	
HMP19 protein	A_51_P163953	Cytoplasm	other	
HNF1 homeobox A	A_55_P1970929	Nucleus	transcription regulator	
hepatocyte nuclear factor 4, alpha	A_55_P1959633	Nucleus	transcription regulator	
homeobox C4	A_55_P2074688	Nucleus	transcription regulator	
homeobox D12	A_55_P2160638	Nucleus	transcription regulator	
homeobox D4	A_51_P260265	Nucleus	transcription regulator	
hydroxysteroid (17-beta) dehydrogenase 14	A_55_P2056774	Cytoplasm	enzyme	
hydroxy-delta-5-steroid dehydrogenase, 3 beta- and steroid delta-isomerase 4	A_55_P1969665	Cytoplasm	enzyme	
RIKEN cDNA I730030J21 gene	A_55_P1973399	Other	other	
interferon induced transmembrane protein 7	A_55_P2097161	Other	other	
immunoglobulin superfamily, DCC subclass, member 3	A_51_P179921	Other	other	
immunoglobulin superfamily, DCC subclass, member 4	A_55_P2001553	Plasma Membrane	other	
insulin-like growth factor binding protein 1	A_51_P447545	Extracellular Space	other	
interleukin 15 receptor, alpha	A_55_P2060707	Plasma Membrane	transmembrane receptor	
interleukin 33	A_55_P1964960	Extracellular Space	cytokine	
importin 9	A_65_P15675	Nucleus	transporter	
iroquois homeobox 1	A_52_P1092823	Nucleus	transcription regulator	
inter-alpha-trypsin inhibitor heavy chain family, member 5	A_55_P2077048	Other	other	
inositol-trisphosphate 3-kinase A	A_51_P273609	Cytoplasm	kinase	
intersectin 1 (SH3 domain protein)	A_55_P1994603	Cytoplasm	other	
jade family PHD finger 2	A_55_P2139753	Nucleus	other	
KN motif and ankyrin repeat domains 2	A_55_P2167112	Nucleus	transcription regulator	
Kazal-type serine peptidase inhibitor domain 1	A_55_P2015032	Extracellular Space	other	
potassium voltage-gated channel, shaker-related subfamily, member 4	A_55_P2084251	Plasma Membrane	ion channel	nicorandil, amiodar
potassium voltage-gated channel, Shal-related subfamily, member 2	A_52_P124472	Plasma Membrane	ion channel	dalfampridine
potassium inwardly-rectifying channel, subfamily J, member 1	A_52_P499907	Plasma Membrane	ion channel	glimepiride/rosiglit
kieliiin/chordin-like protein	A_55_P2074499	Extracellular Space	other	
KIAA1467	A_55_P1975947	Other	other	
kinesin family member 1A	A_52_P49378	Cytoplasm	other	
kinesin family member 21B	A_52_P282500	Cytoplasm	other	
kinesin family member 5C	A_55_P2048937	Cytoplasm	other	
kinesin family member C2	A_55_P2149500	Cytoplasm	other	
kinesin light chain 2	A_55_P2002918	Cytoplasm	other	
keratin 36	A_55_P2140036	Cytoplasm	other	
like-glycosyltransferase	A_55_P2069979	Cytoplasm	enzyme	
LIM domain binding 2	A_55_P2013601	Nucleus	transcription regulator	
low density lipoprotein receptor class A domain containing 3	A_55_P2054728	Plasma Membrane	other	
LIM homeobox 1	A_52_P652336	Nucleus	transcription regulator	
LIM domain kinase 1	A_55_P1966987	Cytoplasm	kinase	dabrafenib, dabraf
uncharacterized LOC102635467	A_55_P2068496	Other	other	
uncharacterized LOC102638978	A_55_P1972915	Other	other	
h-2 class I histocompatibility antigen, D-37 alpha chain-like	A_55_P1972481	Other	other	
high mobility group protein B1-like	A_55_P1991911	Other	other	
lipin 2	A_66_P138976	Nucleus	phosphatase	
low density lipoprotein receptor-related protein 11	A_51_P295237	Other	other	
low density lipoprotein receptor-related protein 2	A_52_P285470	Plasma Membrane	transporter	
leucine rich repeat containing 31	A_55_P2078994	Other	other	
leucine rich repeat containing 4B	A_55_P1953503	Plasma Membrane	other	
LUC7-like 2 (S. cerevisiae)	A_55_P1953361	Other	other	
lymphocyte antigen 6 complex, locus A	A_51_P265495	Plasma Membrane	other	
lymphocyte antigen 86	A_51_P465350	Plasma Membrane	other	
leucine zipper, putative tumor suppressor 1	A_55_P2261772	Nucleus	transcription regulator	
MAP-kinase activating death domain	A_55_P2112424	Cytoplasm	other	
v-maf avian musculoaponeurotic fibrosarcoma oncogene homolog B	A_52_P495869	Nucleus	other	
metastasis associated lung adenocarcinoma transcript 1 (non-protein coding)	A_55_P2021187	Nucleus	other	
MAP/microtubule affinity-regulating kinase 4	A_55_P2142580	Cytoplasm	kinase	
Mab-21 domain containing 1	A_66_P137605	Cytoplasm	other	
methyl-CpG binding domain protein 1	A_55_P2105843	Nucleus	transcription regulator	
melanoma cell adhesion molecule	A_55_P1986552	Plasma Membrane	other	
multiple C2 domains, transmembrane 2	A_55_P1965313	Other	other	

MyoD family inhibitor	A_55_P2076777	Cytoplasm	other	
malic enzyme 3, NADP(+)-dependent, mitochondrial	A_55_P1953919	Cytoplasm	enzyme	
mesenteric estrogen-dependent adipogenesis	A_55_P2065731	Cytoplasm	other	
myocyte enhancer factor 2A	A_55_P1985159	Nucleus	transcription regulator	
maternally expressed 3	A_55_P2033407	Other	other	
mesenchyme homeobox 2	A_51_P383001	Nucleus	transcription regulator	
meprin A, alpha (PABA peptide hydrolase)	A_55_P2067707	Plasma Membrane	peptidase	
meprin A, beta	A_55_P2220748	Plasma Membrane	peptidase	
meningioma expressed antigen 5 (hyaluronidase)	A_55_P2333126	Cytoplasm	enzyme	
mindbomb E3 ubiquitin protein ligase 2	A_55_P1963900	Nucleus	transcription regulator	
mast cell immunoglobulin like receptor 1	A_55_P2109485	Plasma Membrane	other	
myeloid leukemia factor 1	A_51_P205106	Nucleus	other	
MLX interacting protein-like	A_55_P2119957	Nucleus	transcription regulator	
MMS22-like, DNA repair protein	A_55_P2044364	Nucleus	other	
meningioma (disrupted in balanced translocation) 1	A_55_P2174935	Nucleus	other	
membrane-spanning 4-domains, subfamily A, member 4B	A_55_P2135980	Plasma Membrane	other	
mitochondrial fission regulator 2	A_55_P1997300	Cytoplasm	other	
v-myc avian myelocytomatosis viral oncogene homolog	A_52_P108346	Nucleus	transcription regulator	
myosin, heavy chain 7, cardiac muscle, beta	A_55_P2093232	Cytoplasm	enzyme	
neuron navigator 1	A_52_P201551	Other	enzyme	
nucleolin	A_52_P620748	Nucleus	other	
NADPH dependent diflavin oxidoreductase 1	A_55_P2082604	Cytoplasm	enzyme	
NDRG family member 4	A_55_P2019483	Other	other	
negative elongation factor complex member C/D	A_55_P1982156	Nucleus	other	
NEL-like 1 (chicken)	A_55_P1967500	Extracellular Space	growth factor	
neutralized E3 ubiquitin protein ligase 1B	A_55_P2011727	Other	other	
nuclear factor I/B	A_55_P2086682	Nucleus	transcription regulator	
NME/NM23 family member 5	A_55_P1966102	Other	kinase	
neuropeptide B	A_55_P1952076	Extracellular Space	other	
neuronal pentraxin chromo domain	A_55_P2147846	Plasma Membrane	other	
nephrosis 2, idiopathic, steroid-resistant (podocin)	A_55_P1996484	Plasma Membrane	other	
neurensin 1	A_51_P448784	Plasma Membrane	other	
5'-nucleotidase domain containing 3	A_51_P507023	Other	other	
neurotensin receptor 1 (high affinity)	A_55_P2005655	Plasma Membrane	G-protein coupled r contulakin-G	
neurexophilin 3	A_51_P254262	Extracellular Space	other	
oncomodulin	A_55_P2073825	Cytoplasm	other	
2-oxoglutarate and iron-dependent oxygenase domain containing 1	A_55_P2063166	Other	other	
odd-skipped related transcription factor 2	A_51_P499599	Nucleus	transcription regulator	
p21 protein (Cdc42/Rac)-activated kinase 4	A_55_P2117731	Cytoplasm	kinase	
PAP associated domain containing 5	A_55_P1996988	Nucleus	enzyme	
progesterin and adipoQ receptor family member V	A_52_P421344	Other	other	
progesterin and adipoQ receptor family member VI	A_55_P1971025	Plasma Membrane	other	
par-3 family cell polarity regulator	A_55_P1985015	Plasma Membrane	other	
parkin RBR E3 ubiquitin protein ligase	A_55_P1978226	Cytoplasm	enzyme	
phenazine biosynthesis-like protein domain containing	A_55_P1956063	Cytoplasm	enzyme	
pre-B-cell leukemia homeobox 1	A_55_P1953998	Nucleus	transcription regulator	
protocadherin 17	A_52_P111031	Other	other	
protocadherin 19	A_52_P432969	Extracellular Space	other	
protocadherin 8	A_51_P274488	Plasma Membrane	other	
piccolo presynaptic cytomatrix protein	A_55_P2014755	Cytoplasm	transporter	
Purkinje cell protein 4	A_51_P253984	Cytoplasm	other	
proprotein convertase subtilisin/kexin type 2	A_51_P229613	Extracellular Space	peptidase	
proprotein convertase subtilisin/kexin type 9	A_51_P397673	Extracellular Space	peptidase	
pyruvate dehydrogenase (lipoamide) beta	A_55_P1953972	Cytoplasm	enzyme	
pyruvate dehydrogenase phosphatase catalytic subunit 1	A_55_P2033055	Cytoplasm	phosphatase	
PDZ domain containing 1	A_65_P16483	Plasma Membrane	transporter	
pseudopodium-enriched atypical kinase 1	A_55_P2154307	Plasma Membrane	kinase	
PERP, TP53 apoptosis effector	A_51_P317941	Plasma Membrane	other	
phosphoglucomutase 2-like 1	A_55_P2150108	Cytoplasm	enzyme	
phosphatidylinositol glycan anchor biosynthesis, class T	A_55_P1987439	Cytoplasm	enzyme	
pipecolic acid oxidase	A_51_P337195	Cytoplasm	enzyme	
pleckstrin homology domain containing, family G (with RhoGef domain) member 3	A_55_P1974961	Other	other	
paraneoplastic Ma antigen 2	A_52_P596595	Nucleus	transporter	
protection of telomeres 1	A_55_P2115458	Nucleus	other	
POU domain, class 3, transcription factor 1	A_55_P1961152	Nucleus	transcription regulator	
protein tyrosine phosphatase, receptor type, f polypeptide (PTPRF), interacting protein (liprin), alpha 4	A_55_P1963002	Plasma Membrane	other	
protein phosphatase, Mg2+/Mn2+ dependent, 1K	A_55_P1968606	Cytoplasm	phosphatase	
protein phosphatase 1, regulatory subunit 13B	A_55_P1973965	Cytoplasm	phosphatase	
protein phosphatase 1, regulatory subunit 3B	A_55_P1967133	Cytoplasm	other	
protein kinase C, alpha	A_66_P105791	Cytoplasm	kinase	L-threo-safingol, inç
protein kinase C, beta	A_65_P20249	Cytoplasm	kinase	enzastaurin, ruboxi
pregnancy specific glycoprotein 18	A_55_P2067741	Extracellular Space	other	

proteasome (prosome, macropain) activator subunit 3 (PA28 gamma; Ki)	A_55_P2020572	Cytoplasm	peptidase	
protein tyrosine phosphatase, non-receptor type 5 (striatum-enriched)	A_55_P1955726	Plasma Membrane	phosphatase	
protein tyrosine phosphatase, receptor type, O	A_55_P2227355	Plasma Membrane	phosphatase	
protein tyrosine phosphatase, receptor type, S	A_55_P1991985	Plasma Membrane	phosphatase	
quinolinate phosphoribosyltransferase	A_51_P394014	Cytoplasm	enzyme	atorvastatin/niacin,
R3H domain containing-like	A_55_P2096545	Other	other	
RAB3B, member RAS oncogene family	A_55_P2125311	Cytoplasm	enzyme	
RAB43, member RAS oncogene family	A_65_P09032	Cytoplasm	enzyme	
RAD51 paralogue C	A_55_P1955891	Nucleus	enzyme	
Ral GEF with PH domain and SH3 binding motif 1	A_55_P2094626	Cytoplasm	other	
RNA binding protein, fox-1 homolog (C. elegans) 1	A_55_P1953400	Cytoplasm	other	
RNA binding motif protein 47	A_55_P1959305	Other	other	
ret proto-oncogene	A_55_P2160676	Plasma Membrane	kinase	sunitinib, motesanil
regulator of G-protein signaling 10	A_51_P218774	Cytoplasm	other	
ribosomal modification protein rimK-like family member A	A_52_P69194	Cytoplasm	other	
regulating synaptic membrane exocytosis 3	A_55_P2143251	Plasma Membrane	other	
Ras and Rab interactor 2	A_55_P2013996	Cytoplasm	other	
receptor-interacting serine-threonine kinase 3	A_51_P491987	Plasma Membrane	kinase	
rippy transcriptional repressor 2	A_66_P125741	Nucleus	other	
ribonuclease, RNase A family, 4	A_51_P237383	Extracellular Space	enzyme	
ring finger protein 213	A_51_P159503	Cytoplasm	enzyme	
roundabout, axon guidance receptor, homolog 2 (Drosophila)	A_55_P2083929	Plasma Membrane	transmembrane receptor	
receptor tyrosine kinase-like orphan receptor 2	A_66_P131398	Plasma Membrane	kinase	
rabphilin 3A-like (without C2 domains)	A_55_P2027157	Plasma Membrane	other	
radial spoke head 1 homolog (Chlamydomonas)	A_55_P2044684	Nucleus	other	
receptor (chemosensory) transporter protein 4	A_51_P304170	Plasma Membrane	other	
run-related transcription factor 1; translocated to, 1 (cyclin D-related)	A_52_P612137	Nucleus	transcription regulator	
S100 calcium binding protein G	A_55_P2013236	Cytoplasm	other	
Sin3A-associated protein, 25kDa	A_52_P38964	Other	other	
sodium channel, voltage gated, type VIII, alpha subunit	A_55_P2057132	Plasma Membrane	ion channel	riluzole
secretin	A_51_P234359	Extracellular Space	other	
signal peptide, CUB domain, EGF-like 1	A_55_P2299524	Plasma Membrane	transmembrane receptor	
scleraxis basic helix-loop-helix transcription factor	A_51_P380432	Nucleus	other	
sema domain, immunoglobulin domain (Ig), transmembrane domain (TM) and short cytoplasmic doma	A_55_P1953866	Plasma Membrane	other	
sema domain, immunoglobulin domain (Ig), transmembrane domain (TM) and short cytoplasmic doma	A_51_P331003	Plasma Membrane	other	
sema domain, transmembrane domain (TM), and cytoplasmic domain, (semaphorin) 6C	A_55_P2156126	Plasma Membrane	other	
sema domain, transmembrane domain (TM), and cytoplasmic domain, (semaphorin) 6D	A_55_P2125351	Plasma Membrane	other	
septa 3	A_55_P2072110	Cytoplasm	enzyme	
serpin peptidase inhibitor, clade A (alpha-1 antiprotease, antitrypsin), member 1	A_55_P2165414	Extracellular Space	other	
serpin peptidase inhibitor, clade B (ovalbumin), member 8	A_55_P2027012	Cytoplasm	other	
serpin peptidase inhibitor, clade F (alpha-2 antiplasmin, pigment epithelium derived factor), member 2	A_55_P1956497	Extracellular Space	other	
serum/glucocorticoid regulated kinase 2	A_55_P2042923	Cytoplasm	kinase	
N-sulfoglucosamine sulfohydrolase	A_55_P2028571	Cytoplasm	enzyme	
shisa family member 2	A_51_P408649	Other	other	
src kinase associated phosphoprotein 1	A_55_P2059110	Cytoplasm	kinase	
selection and upkeep of intraepithelial T cells 8	A_55_P2120388	Other	other	
solute carrier family 14 (urea transporter), member 2	A_55_P1964028	Plasma Membrane	transporter	
solute carrier family 1 (glutamate/neutral amino acid transporter), member 4	A_55_P2109589	Plasma Membrane	transporter	riluzole
solute carrier family 22 (organic anion transporter), member 6	A_51_P360655	Plasma Membrane	transporter	colchicine/probenex
solute carrier family 23, member 3	A_55_P1964752	Other	transporter	
solute carrier family 26 (anion exchanger), member 11	A_51_P113403	Cytoplasm	transporter	
solute carrier family 29 (equilibrative nucleoside transporter), member 4	A_55_P2048119	Plasma Membrane	transporter	
Slc2a4 regulator, pseudogene	A_55_P2293351	Other	other	
solute carrier family 32 (GABA vesicular transporter), member 1	A_52_P138926	Plasma Membrane	transporter	tiagabine
solute carrier family 34 (type II sodium/phosphate cotransporter), member 1	A_51_P498442	Plasma Membrane	transporter	
solute carrier family 35, member G1	A_55_P1959828	Plasma Membrane	other	
solute carrier family 37 (glucose-6-phosphate transporter), member 4	A_51_P385598	Cytoplasm	transporter	
solute carrier family 38, member 5	A_55_P2010641	Plasma Membrane	transporter	
solute carrier family 4, sodium borate transporter, member 11	A_66_P121976	Plasma Membrane	transporter	
solute carrier family 6 (neurotransmitter transporter), member 13	A_51_P438083	Plasma Membrane	transporter	tiagabine
solute carrier family 8 (sodium/calcium exchanger), member 2	A_55_P2095563	Cytoplasm	transporter	
slit homolog 1 (Drosophila)	A_55_P1958379	Extracellular Space	other	
sarcopin	A_52_P413395	Cytoplasm	other	
SWI/SNF related, matrix associated, actin dependent regulator of chromatin, subfamily a, member 2	A_55_P2007802	Nucleus	transcription regulator	
small integral membrane protein 24	A_55_P2031403	Cytoplasm	other	
sushi, nidogen and EGF-like domains 1	A_52_P550147	Plasma Membrane	other	
superoxide dismutase 3, extracellular	A_55_P2077558	Extracellular Space	enzyme	
sclerostin domain containing 1	A_55_P2158121	Extracellular Space	other	
SP110 nuclear body protein	A_55_P2066792	Nucleus	other	
Sp5 transcription factor	A_51_P404193	Nucleus	other	
sperm associated antigen 7	A_55_P2102365	Nucleus	other	
serine peptidase inhibitor, Kazal type 1	A_51_P365516	Extracellular Space	other	

sparc/osteonectin, cwcv and kazal-like domains proteoglycan (testican) 2	A_52_P221756	Extracellular Space	other
secreted phosphoprotein 2, 24kDa	A_55_P2179676	Extracellular Space	other
splicing regulatory glutamine/lysine-rich protein 1	A_55_P1966372	Nucleus	other
ST3 beta-galactoside alpha-2,3-sialyltransferase 6	A_51_P281333	Cytoplasm	enzyme
stabilin 2	A_55_P1974028	Plasma Membrane	transmembrane receptor
six transmembrane epithelial antigen of the prostate 1	A_51_P484158	Plasma Membrane	transporter
STEAP family member 2, metalloreductase	A_55_P2133315	Plasma Membrane	transporter
stromal interaction molecule 1	A_55_P2005982	Plasma Membrane	ion channel
stathmin 2	A_55_P2068673	Plasma Membrane	other
syntaxin binding protein 1	A_55_P2077188	Cytoplasm	transporter
sulfotransferase family 1D, member 1	A_55_P2181542	Cytoplasm	enzyme
suppressor of variegation 3-9 homolog 2 (Drosophila)	A_55_P2072403	Nucleus	transcription regulator
SVOP-like	A_51_P316902	Other	other
synaptotagmin 1	A_55_P1955517	Cytoplasm	phosphatase
synaptopodin 2-like	A_55_P1968863	Cytoplasm	other
T-box 3	A_55_P1969002	Nucleus	transcription regulator
transcription elongation factor A (SII)-like 5	A_66_P104980	Other	other
transcription factor 24	A_55_P2106608	Other	other
t-complex 11, testis-specific-like 2	A_51_P497317	Other	other
teneurin transmembrane protein 4	A_55_P2141088	Plasma Membrane	other
transcription factor EB	A_55_P1997898	Nucleus	transcription regulator
transglutaminase 5	A_55_P1958487	Cytoplasm	enzyme
threonine synthase-like 2 (S. cerevisiae)	A_52_P487599	Other	other
Thy-1 cell surface antigen	A_55_P2072035	Plasma Membrane	other
T-cell lymphoma invasion and metastasis 2	A_51_P256066	Cytoplasm	enzyme
tubulointerstitial nephritis antigen	A_51_P283004	Extracellular Space	peptidase
transmembrane protein 174	A_51_P492346	Other	other
transmembrane protein 213	A_51_P401501	Other	other
transmembrane protein 239	A_55_P2046253	Other	other
transmembrane protein 25	A_55_P2126572	Extracellular Space	other
transmembrane protein 254c	A_55_P1967553	Other	other
transmembrane protein 27	A_55_P2042753	Plasma Membrane	other
transmembrane protein 59-like	A_51_P215038	Cytoplasm	other
transmembrane protein 8B	A_55_P2043932	Plasma Membrane	other
transmembrane protease, serine 3	A_55_P2011151	Plasma Membrane	peptidase
tumor necrosis factor receptor superfamily, member 10a	A_55_P2027836	Plasma Membrane	transmembrane rec trm-1
tumor necrosis factor receptor superfamily, member 9	A_55_P2029061	Plasma Membrane	transmembrane rec urelumab
troponin I type 1 (skeletal, slow)	A_52_P657360	Cytoplasm	other
trophoblast glycoprotein	A_55_P2098200	Plasma Membrane	other
TNF receptor-associated factor 1	A_51_P343833	Cytoplasm	other
thyrotropin-releasing hormone	A_55_P2071349	Extracellular Space	other
tribbles pseudokinase 3	A_55_P2009988	Nucleus	kinase
tripartite motif containing 25	A_55_P2098076	Cytoplasm	transcription regulator
tetraspanin 17	A_55_P2067453	Other	enzyme
tweety family member 2	A_55_P1985768	Other	ion channel
tubulin, beta 2B class IIb	A_55_P2034864	Cytoplasm	other brentuximab vedoti
twist family bHLH transcription factor 2	A_51_P165504	Nucleus	transcription regulator
ubiquitin-conjugating enzyme E2I	A_55_P2326517	Nucleus	enzyme
upstream binding transcription factor, RNA polymerase I	A_55_P1992680	Nucleus	transcription regulator
UDP glucuronosyltransferase 1 family, polypeptide A6	A_55_P1962404	Cytoplasm	enzyme
UDP glucuronosyltransferase 2 family, polypeptide B10	A_55_P1977418	Cytoplasm	enzyme
UDP glucuronosyltransferase 2 family, polypeptide B28	A_66_P131389	Cytoplasm	enzyme
UNC homeobox	A_55_P2022241	Other	transcription regulator
uracil-DNA glycosylase	A_55_P2040878	Nucleus	enzyme
ubiquitin specific peptidase 51	A_55_P2176953	Other	peptidase
vesicle amine transport 1-like	A_52_P577533	Other	enzyme
vascular endothelial growth factor C	A_51_P433870	Extracellular Space	growth factor
villin 1	A_52_P260555	Cytoplasm	other
WD repeat and FYVE domain containing 1	A_55_P2092730	Cytoplasm	other
WDFY family member 4	A_52_P199614	Other	other
WD repeat domain 89	A_55_P2056280	Other	other
WSC domain containing 2	A_52_P173442	Other	other
X-prolyl aminopeptidase (aminopeptidase P) 2, membrane-bound	A_55_P1985950	Plasma Membrane	peptidase
Y box binding protein 2	A_55_P1973447	Cytoplasm	translation regulator
zinc finger, CCHC domain containing 9	A_55_P2146708	Other	other
zinc finger protein 133, pseudogene	A_55_P2161675	Other	other
zinc finger protein 941	A_55_P2109479	Other	other
zinc finger protein, FOG family member 1	A_55_P2048518	Nucleus	transcription regulator
zinc finger protein, FOG family member 2	A_51_P336509	Nucleus	transcription regulator
zinc finger, matrin-type 4	A_51_P422685	Nucleus	other
zinc finger protein 512B	A_55_P2044252	Nucleus	other
zinc finger protein 536	A_51_P218953	Other	other

zinc finger protein 703
zinc finger, SWIM-type containing 8

A_66_P126332 Nucleus other
A_55_P2039180 Extracellular Space other

Entrez Gene ID for Entrez Gene ID for Entrez Gene ID for Rat

	73385 100101807	
	73549	
	100504720	
	69563	
	330635	
	106967	
	381347	
	243900 114675	
	232217	685621
	99946	
	77207	
	71512	
	105892	
	108858	
	319610	
	399612	
	380787	500724
	381384	
26027	329910	100363074
8310	80911	83522
123876	233799	246263
55902	60525	311569
170691	233332	293004
11173	108153	315879
174	11576	24177
8644	105349	171516
8854	19378	116676
220	56847	266603
229	230163	24190
81693	93835	314459
56172	11732	114506
312	69787	362915
333	11803	502317
23092	71302	307459
22899	442801	287418
151188	65103	499798
408	109689	25387
420	109978	312806
140462	69299	367785
55515	241118	63882
374569	104816	246266
445	11898	25698
481	11931	25650
155066	76252	436582
6314	246103	361015
	105332	
	100993	
60468	12014	313125
622	71911	117099
389206	666938	681008
254240	270757	299685
1620	56710	140610
7809	140475	192675
696	12231	306956
219738	69894	685881 294499
728568	544717	691921
79630	229600	
717	12263	24231
	414098	
27202	319430	445269
79095	73737	499780
762	12351	29242
793	12307	83839
91860	75600	691455
83698	140904	363909
84254	55984	60341
827	12338	83685
165055	76138	499442
148170	58804	361505
1004	12563	25409

8851	12569	116671
8814	71091	314198
56853	108013	
283638	217882	500726
10669	68567	245918
128866	75608	679886
54480	100910	296733
64377	68947	308511
1149	12683	291541
27141	12684	364388
4435	12705	64466
1187	56365	79430
497190	353287	307851
54102	209195	304081
1277	12842	29393
136227	140709	685612
1280	12824	25412
1288	94216	363458
1289	12831	85490
1294	12836	301012
8292	382864	29755
125965	333182	654441
1357	109697	24269
1358	232680	296959
1361	56373	113936
1369	93721	365466
1382	12904	
286204	241324	366031
9586	231991	500131
1400	12933	25415
10675	29873	50568
8029	65969	80848
1534	13056	303601
51167	266690	171015
56603	232174	312495
	76279	25053
113612	71519	310848
1579	666168 100040843	50549
	399607	
	320216	
	268595	100909954
	52186	
1610	13142	114027
92196	76747	362136
340578	245403	298159
1641	13193	84394
51181	67880	171408
1644	13195	24311
10260	102442	315756
51071	232449	690945
27122	50781	171548
58512	242667	286923
8788	13386	114587
28514	13388	84010
2039	13829	361069
55466	58233	300721
131118	100503724 67713	
79962	72778	362998
80005	68813	305987
8193	29861	50545
1803	13482	25253
56896	65254	100910964 65208
	100039293 278672 100039227	
1780	13426	29564
	13607	302424
1956	13649	24329
79813	77683	362078
	26908	
	13711	366142
84034	246707	316736
284131	338371	
2026	13807	100911625 24334

2028	13809	64017
54566	54357	500464
2044	13839	79208
2049	13845	287989
2052	13849	25315
2059	13860	312812
83715	56226	56227
2104	26381	360896
54536	107371	50556
5393	50911	294975
2138	14048	502935
2170	14077	79131
64760	239170	306015
203259	71901	691024
2200	14118	83727
2203	14121	24362
146330	214931	494223
23194	448987	361907
23149	74015	
89848	319262	307482
2244	110135	24366
2246	14164	25317
9896	103199	309855
23769	396184	499308
23767	71436	366205
2335	14268	25661
23048	14269	192348
2348	14275	171049
2297	15229	171299
2299	14233	287185
100132074	329934	313558
116113	74123	363185
158326	329872	298185
143162	268729	498583
2487	20378	295691
10468	14313	24373
	11936	
11211	93897	363913
2556	14396	24947
51083	14419	29141
84253	99326	499783
729438	80909	304410
2638	14473	24384
2650	14537	64043
2675	14586	25136
2676	14587	84422
2678	14598	116568
54810	54120	365960
2717	11605	363494
	100038646	
	237769	
	15289 100862258	679571
	212539	366733
	329055 668106	294097
	382421	
	619937	497907
	621335	
	629678	
	100039175 100039246 211623	
	100038519	
10681	14697	83579
2788	14708	58979
2819	14555	60666
9737	67298	171407
2893	14802	29629
221357	100042314 100042	494499
2949	14862	24423
	14867	499688
51454	70676	314543
727936	232313	688618
	630499 110558	
	15016	

3029	14651	24439
9001	15114	29430
3037	15117	25694
3067	15186	24443
374659	68695	308758
23072	94253	291209
55363	93966	113882
388585	15208	79225
23462	15213	155437
64399	15245	291936
3105	667977 15013 150(24973 414779 414783 368153 414793 414819 309607 309603 414792 414790 100364500 24974	
3133	667803 15040	294228
51617	18197	497878
6927	21405	24817
3172	15378	25735
3221	15423	24459
3238	15432	366082
3233	15436	288153
51171	66065	691018
	15495 100043461 24470 100911116	
	619313	
	74482	
9543	19289	315759
57722	56741	363081
3484	16006	25685
3601	16169	690369
90865	77125	361749
55705	226432	304817
79192	16371	306659
80760	209378	
3706	228550	81677
6453	16443	29491
23338	76901	303113
25959	235041	100361376
81621	107250	293997
3739	16492	25469
3751	16508	65180
3758	56379	24521
375616	333088	296952
57613	74525	362455
547	16560	363288
23046	16565	289397
3800	16574	311024
90990	16581	300053
64837	16594	309159
8689	16673	287698
9215	16795	
9079	16826	289664
143458	241576	366138
3975	16869	257634
3984	16885	65172
	102635467	
	102638978	
	102641046	
	102641638	
9663	64898	316737
84918	237253	292462
4036	14725	29216
	320352	
94030	272381	308571
51631	192196	312251
	57248 546644 110(300024 362935 503162 56778 100911104 246138	
9450	17084	291359
11178	211134	266711
8567	228355	94193
9935	16658	54264
378938	72289	
57787	232944	680407
115004	214763	682147
4152	17190	291439
4162	84004	78967
55784	244049	308742

4188	17240	501097
10873	109264	361602
84935	70717	360757
4205	17258	309957
	17263	
4223	17286	29279
4224	17287	25684
4225	17288	25727
10724	76055	154968
142678	76580	474147
	380732	59105
4291	17349	310483
51085	58805	171078
253714	212377	313108
4330	433938	498194
	64380 66607 60361	
113115	71804	100911069
4609	17869	24577
4625	140781	29557
89796	215690	685707
4691	17975	25135
27158	78797	311799
65009	234593	64457
51497	57314	679203
4745	338352	81733
54492	240055	303019
4781	18028	29227
8382	75533	688903
256933	208990	259222
	504193	
7827	170484	170672
140767	22360	291129
51559	103466	691922
4923	18216	366274
11248	104079	59315
654231	18261	25503
55239	270086	307657
116039	107587	315039
10298	70584	292756
64282	214627	307745
54852	74090	315741
79957	68957	681021
56288	93742	81918
5071	50873	56816
64081	68371	171564 100360692
5087	18514	304947
27253	219228	306055
57526	279653	317183
5100	18530	64865
27445	26875	56768
5121	18546	25510
5126	18549	25121
255738	100102	298296
5162	68263	289950
54704	381511	54705
5174	59020	65144
79834	244895	315686
64065	64058	292949
283209	70974	685076
51604	78928	296360
51268	19193	303272
26030	263406	314249
10687	239157	305977
25913	101185	500054
	18991	
	68507	140592
152926	243382	312381
23368	21981	314465
79660	244416	192280
5578	18750	24680
5579	18751	25023

56868|243862|26438|72242|26437|434540|114871|114868|574429|26439|545925

10197	19192	287716
84867	19259	29644
5800	19277	50677
5802	19280	25529
23475	67375	293504
140902	100043899	366245
5865	69908	81755
339122	69834	500249
5889	114714	497976
9649	241308	100361774
54715	268859	302920
54502	245945	305340
5979	19713	24716
6001	67865	54290
284716	194237	
9783	242662	65025
54453	74030	311494
11035	56532	246240
134701	382089	363111
6038	58809	56759
57674	672511	303735
6092	268902	84409
4920	26564	306782
9501	380714	171123
89765	22092	361818
64108	67775	360733
862	12395	362489
795	12309	24249
100316904	751865	288559
6334	20273	29710
	20287	24769
80274	64706	315174
642658	20289	680712
54910	20353	301346
57715	26456	361764
10500	20360	29744
80031	214968	311384
55964	24050	56003
5265	20703 20704 2070;	24648
5271	20725	288937
5345	18816	287527
10110	27219	171497
6448	27029	
387914	219134	498528
8631	78473	286975
	639774 328505	689792
8170	27411	54302
6509	55963	305540
9356	18399	29509
151295	22626	367298
284129	268512	360670
222962	243328	288499
	329584	
140679	22348	83612
6569	20505	25548
159371	240660	294072
2542	14385	29573
92745	209837	192208
83959	269356	311423
6540	14412	171163
6543	110891	140447
6585	20562	65047
6588	66402	
6595	67155	361745
284422	72273	100366121
25992	208777	316638
6649	20657	25352
25928	66042	266803
3431	109032 546061 62;	301570
389058	64406	296510
9552	216873	303260
6690	20730	

9806	94214	361840
6694	75396	94168
140890	218543	56763
10402	54613	304023
55576	192188	282580
26872	70358	297738
261729	74051	312052
6786	20866	361618
11075	20257	84510
6812	20910	25558
	53315	60393
79723	64707	364785
136306	320590	500085
8867	104015	85238
79933	68760	305675
6926	21386	353305
340543	331532	680282
100129654	100039596	680678
255394	216198	314683
26011	23966	308831
7942	21425	316214
9333	74176	691932
55258	232078	297332
7070	21838	24832
26230	24001	100362710
27283	26944	300846
134288	68344	499516
155006	77522	689748
100288797	66766	688109
84866	71687	689172
	100039257 66039 100039192	
57393	57394	57395
25789	67937	306349
51754	242409	313490
64699	140765	309665
8797	21933	364420
3604	21942	500590
7135	21952	29388
7162	21983	83684
7185	22029	687813
7200	22044	25569
57761	228775	246273
7706	217069	494338
26262	74257	306771
94015	117160	287803
347733	73710	291081
117581	13345	59327
7329	22196	25573
7343	21429	25574
54578	94284 394435	113992
7365	100727	305264
54490	22238 100559 1124	24862
340260	22255	29375
7374	22256	304577
158880	635253	317398
57687	270097	361414
7424	22341	114111
7429	22349	316521
57590	69368	
57705	545030	498582
112840	72338	314243
9671	320916	360824
7512	170745	117522
51087	53422	303250
84240	69085	309986
	668917	
	407812	
161882	22761	691504
23414	22762	314930
79698	320158	684961
57473	269401	311721
9745	243937	292820

80139	353310	680717
23053	268721	361004

Table S2. Microarray and nanostring data

Gene Symbol	Microarray Expression FC	Nanostring Expression FC	qRT-PCR Expression FC	IF	ISH
	p<0.05 highlighted in Red font				
Cited1	-6.016	-8.828			
Cox6b2	1.653	1.854			
Pdgfra	1.417	2.352			
Col1a1	1.53	1.612			
Slc16a2	1.452	1.867			
Col6a1	1.418	1.783			
Col6a2	1.408	1.768			
Odc1	1.352	-1.150			
Col1a2	1.376	1.483			
Pck1	-6.002	1.333			
Tbp	1.192	1.356			
Idh1	#N/A	-1.318			
Col6a3	#N/A	1.924			
Meox1	#N/A	-1.907			
Cyp2s1	#N/A	1.418			
Igfbp6	#N/A	1.559			
Pgm1	#N/A	1.466			
Cyp4a10	#N/A	-1.943			
Rras	#N/A	1.540			
Cyp2d26	#N/A	-1.379			
Aldob	#N/A	-1.554			
B2m	#N/A	1.376			
Osr1	#N/A	1.727			
Fbp1	#N/A	-1.879			
Alas1	#N/A	1.170			
Arhgap5	#N/A	1.270			
Tbx2	#N/A	1.357			
Gpd2	#N/A	-1.236			
Pck2	#N/A	1.263			
Ctgf	#N/A	-1.411			
Gpd1	#N/A	-1.395			
Ppp1r14a	#N/A	1.948			
Elf4	#N/A	1.578			
Mef2c	#N/A	1.277			
Ogdh	#N/A	1.128			
Fgfr4	#N/A	-1.280			
Fgf1	#N/A	-1.825			
Ntrk1	#N/A	1.954			

Eno1	#N/A	1.075			
Pdgfrb	#N/A	1.264			
Aldoa	#N/A	1.118			
Socs2	#N/A	1.542			
Trp53	#N/A	1.143			
Bmp2	#N/A	1.262			
Ldha	#N/A	1.100			
Six2	#N/A	1.064			
Mapkapk3	#N/A	1.307			
Atp5j2	#N/A	1.057			
Igfbp3	#N/A	-1.165			
H6pd	#N/A	1.091			
Acta2	#N/A	1.168			
Cdkn1a	#N/A	1.326			
Chrd	#N/A	1.577			
Pax2	#N/A	1.108			
Tpi1	#N/A	1.271			
Cldn5	#N/A	1.072			
Gm5506	#N/A	1.361			
Hprt	#N/A	1.077			
Ndufs5	#N/A	1.061			
Igfbp7	#N/A	-1.030			
Pklr	#N/A	-1.133			
Aldoc	#N/A	1.109			
Rps6ka3	#N/A	1.025			
Pfkl	#N/A	1.065			
Sgk1	#N/A	1.030			
Cldn6	#N/A	1.013			
Atp5j	#N/A	-1.006			
Pgk1	#N/A	1.010			
Gapdh	#N/A	-1.000			