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Mylona, A., Andrieu-Soler, C., Thongjuea, S., Martella, A., Soler, E., Jorna, R., Hou, J., Kockx, C., van Ijcken, W., Lenhard, B. and Grosveld, F. (2013) Genome-wide analysis shows that Ldb1 controls essential hematopoietic genes/pathways in mouse early development and reveals novel players in hematopoiesis. Blood, 121 (15). ISSN 0006-4971.

Link to official URL (if available):

http://dx.doi.org/10.1182/blood-2012-11-467654

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Supplemental Methods

Ldb1$^{-/-}$ mouse generation

A targeting construct (pBluescript SK^{+} backbone) with loxP-*Ldb1* exon 1-intron 1-exon 2-loxP-PMC-Neo cassette-loxP-Mitochondrial Localization Signal (MLS)-CFP reporter flanked by a 2.9 kb 5' homologous sequence and a 2.6 kb 3' homologous sequence (PAC clones from UK HGMP Resource Centre) was linearised at a unique NotI site and transfected into E14 mouse ES cells that were put under G418 selection. To identify homologous recombination genomic DNA isolated from picked clones was digested with either EcoRV or BamHI for genotyping via Southern Blot. At 5' end EcoRV digestion gives a 5 kb fragmented of the *Ldb1* wild type allele and a 6.9 fragment of the targeted allele. At 3' end BamHI digestion gives a 7.2 kb fragment of the wild type allele and a 5.6 kb fragment of the targeted allele. Two targeted ES cell clones with the correct karyotype were injected into blastocysts to generate chimeric mice. Male chimeras crossed with wild type female FvB mice gave *Ldb1*$^{+}$/- offspring that were crossed with CAG-Cre mice expressing Cre recombinase under the ubiquitously expressed cytomegalovirus immediate early enhancer and chicken β-actin hybrid (CAG) promoter[1] to generate *Ldb1*$^{-/-}$ mice. Analysis of the deletion via Southern blot gives a 5.5 kb fragment for the 5' digestion and a 4.2 kb fragment for the 3' digestion. *Ldb1*$^{+/-}$ mice genotype was determined with PCR amplification of the 150 bp MLS. Genomic DNA was isolated from the yolk sac of 9.5 dpc embryos and genotype was determined with PCR amplification of a 400 bp fragment for the wild type allele and a 900 bp fragment for the targeted allele. Nuclear extracts were isolated from the 9.5 dpc embryos and western blot analysis was used to determine Ldb1 protein levels with the Ldb1 N-18 (Santa Cruz®) antibody.

Immunofluoresence

Ldb1$^{+/+}$ and *Ldb1*$^{-/-}$ ES cells grown on glass cover-slips were fixed in 4% PFA/PBS for 15 minutes at RT, permeabilized with 0.1% Triton®X-100/PBS, blocked with PBS/0.5% BSA/0.15% Glycine, incubated overnight at 4^{0}C with the anti-Ldb1 antibody and for 2 hours at RT with rabbit anti-goat IgG FITC. Coverslips were mounted on glass slides with DAPI/Vectashield for nuclei staining.

***Ldb1*$^{-/-}$ rescue**

An *Ldb1* expression vector containing a C-terminally V5-tagged *Ldb1* cDNA under the control of the Ef1alpha promoter was stably introduced in *Ldb1*$^{-/-}$ ES cells. Single clones expressing Ldb1-V5 were used in CFC differentiation assays.

ChIP sequencing analysis

36 bp raw reads were mapped against NCBI build 37.1 of the mouse genome with ELAND (Illumina). Uniquely mapped reads were extended to 200 bp and then transformed into the genome-wide reads density (coverage) with the ShortRead Bioconductor package.[2] The coverage from ChIP and IgG control was visualized on a mirror of the UCSC genome browser. MACS,[3] CCAT[4] and in-house developed software (unpublished) were used to detect Ldb1 binding peaks. Identified binding peaks from all software were combined to get the consensus regions. Negative binomial distribution[5] was performed to assign p-value to each consensus region. This method yielded 4,252 high confidence binding peaks for Ldb1 (adjusted *p*-value <=0.01 and peak height >=20 overlapping reads).

Comparison of Ldb1 binding events

6,364 binding peaks in Lin$^-$ bone marrow hematopoietic progenitor cells were collected from a previous study.[6] To identify overlapping binding events between the Flk1$^+$ and the Lin$^-$ bone marrow cells, binding regions within ±100 bp relative to the peak centre have been selected and functionality in IRanges Bioconductor package[7] was used to perform overlapping interval

with a minimum covering of 50bp. We next classified Ldb1 binding events into 2 sets based on peaks unique for $Flk1^+$ cells and peaks overlapping in both cell types; Set 1 binding events found only in $Flk1^+$ cells and Set 2 binding events found in both $Flk1^+$ cells and Lin^- bone marrow hematopoietic progenitor cells.

Gene expression profiling

Microarray

Affymetrix GeneChip® Expression Arrays were normalized with the standard RMA protocol by the Affy Bioconductor package.[8] Statistical testing of differentially expressed genes was determined with the RankProd Bioconductor package.[9] By using cut off criteria at 5% false discovery rate (FDR) we identified 139 differentially expressed genes.

RNA sequencing

Raw reads were mapped with Bowtie[10] to mouse NCBI m37 Ensembl transcripts. Count number of reads for each transcript and reads per kb of a transcript per million mapped reads (RPKMs) were calculated and assigned to each transcript. The longest transcript was chosen as a representative gene for downstream analysis and the highest expression level from alternative transcripts was assigned to the representative gene. Read counts per representative genes were subjected to DESeq Bioconductor package[11] for statistical testing of differentially expressed genes and *p*-values were adjusted with Benjamini and Hochberg (BH).

Combining differentially expressed genes

Differentially expressed genes from the gene expression arrays (5% FDR) and differentially expressed genes with Read Per Kilobase Per Million Mapped Reads (RPKM) >=1 and adjusted *p*-values <=0.05 from RNA sequencing were combined. The highest log2 fold change for up- and down-regulated genes from both methods was assigned to representative genes. Adjusted *p*-values from both methods were combined with Fisher's method[12] and then were assigned to representative genes.

Identification of Ldb1 target genes in Flk1^{+} cells

To define the Ldb1 target genes situated in the vicinity of the identified Ldb1 binding peaks, a binding score was assigned to each gene differentially expressed in *Ldb1*$^{-/-}$ BL-CFCs. The previously published method[13] has been modified to weight the intensity of the closest binding peaks to the transcription start sites (TSS). The window of 100 kb relative to the TSS was divided into 14 segments. The total number of binding peaks denoted as *Ni*, where *i* referrers to the *i*th segments located in each segment, was counted for all genes. A control number of binding peaks for each segment, denoted as *No*, was also calculated by randomly shuffling the genomic locations of the TSS. The weighting coefficients for each segment, denoted as *SAi*, were calculated by dividing *Ni* to *No*. *SBi* coefficient was defined and it was set to 0 or 0.5 for binding peaks located at the proximal promoter and within the gene body of neighbouring genes respectively. The binding score for each differentially expressed gene was calculated based on the following formula:

$$\text{Binding Score} = \sum_{i=1}^{14} (ChIP - IgG) * SAi * SBi$$

ChIP is the maximum peak height in ChIP and IgG is the maximum peak height in the IgG control. The Ldb1 target gene list was ranked based on the binding score for each gene. Differentially expressed genes were selected as Ldb1 direct targets based on the Ldb1 binding score >=20.

Real Time PCR

RNA was isolated as above and cDNA was synthesized using SuperScript II Reverse Transcriptase and Oligo(dT)$_{12–18}$ primers (Invitrogen^{TM}). Quantitative Real-time PCR was carried out with 1U of Platinum® Taq polymerase (Invitrogen^{TM}), 1x PCR buffer [200 mM Tris-HCl (pH 8.4), 500 mM KCl], 1.5mM $MgCl_2$, 10ng/µl of each primer, 250µM dNTPs and SYBR Green (Sigma®) on the Opticon 2® Real-Time PCR Detection System (Bio-Rad).

Transcript enrichments were calculated using the comparative C_T method. Transcript levels were normalized to *Gapdh*.

Signalling Pathway analysis

Mouse signalling pathway analysis was performed using DAVID Functional Annotation Bioinformatics Microarray analysis version 6.7 online tool (http://david.abcc.ncifcrf.gov/).[14, 15] Direct and indirect target genes were assigned to pathways. An EASE score (modified Fisher Exact *p*-value) was assigned to each enriched pathway.

Motif discovery

Sequences around the Ldb1 peak centre (±100 bp) in Sets 1 and 2 were repeats masked and subjected to derive *de novo* overrepresented motifs by using MEME.[16] Identified motifs were compared with the high quality of existing TF binding profiles found in the JASPAR database [17] based on similarity score with TOMTOM.[18]

References

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Legends to Supplemental Tables and Figures

Table S1: List of genes misregulated in the *Ldb1*$^{-/-}$ Flk1^{+} BL-CFCs.

Table S2: List of hematopoietic specific genes, endothelial specific genes and common hematopoietic/endothelial genes used to generate the bubble plot in Fig. 5, identified through IPA (Ingenuity® Systems, www.ingenuity.com).

Figure S1: Scheme of *in vitro* embryonic stem cell (ESC) differentiation.

Figure S2: Targeting of the *Ldb1* alleles for the generation of an *Ldb1*$^{-/-}$ mouse and an *Ldb1*$^{-/-}$ ES cell line.

(A) Targeting construct showing the localization of the homology regions (grey rectangles), loxP sites, neomycin resistance (PMC-Neo-pA) and CFP (MLS-CFP) markers used for homologous recombination in ES cells. Both *Ldb1* alleles were inactivated through sequential targeting to generate an *Ldb1*$^{-/-}$ ES cell line. **(B)** Successful integration and deletion of the first two exons and neo cassette were identified by Southern blot (one example shown). ES cell DNA was digested with EcoRV before hybridisation with a 5' probe identifying a 5 kb wild type fragment, a 6.9 kb homologous integration fragment, a 5.8 kb fragment resulting from the neo deletion and a 5.5 kb fragment resulting from the exon I/II deletion and BamHI before hybridisation with a 3' probe identifying respective fragments of 7.2 kb, 5.6 kb, 4.5 kb and 4.2 kb. **(C)** Genotyping mouse embryos via PCR. A 400 bp fragment identified the wild type allele and a 900 bp fragment the knockout allele. **(D)** Western blot on *Ldb1*$^{+/+}$ and *Ldb1*$^{-/-}$ embryos confirmed the presence of Ldb1 in the *Ldb1*$^{+/+}$ embryos only. Of note, Ldb1 appears as a double band, at 42.7 kDa and 46.5 kDa, since both *Ldb1* isoforms are translated. Nucleophosmin was used as loading control. **(E)** ES cell DNA was digested with EcoRV for the hybridisation with the 5' probe to identify the 5 kb fragmented of the *Ldb1* wild type allele, the 6.9 fragment of the targeted allele and the 5.5 kb fragment of the targeted allele from the deletion of the neo cassette and the first two exons. **(F)** Western blot analysis of

Ldb1$^{+/+}$ and *Ldb1*$^{-/-}$ ES cells confirmed the presence of Ldb1 in the *Ldb1*$^{+/+}$ ES cells only. **(G)** Immunofluoresence analysis of *Ldb1*$^{+/+}$ and *Ldb1*$^{-/-}$ ES cells confirming the absence of Ldb1 in the Ldb1$^{-/-}$ ES cells.

Figure S3: Changes in gene expression by quantitative real time PCR and western blot.

Changes in gene expression for a selected group of genes as detected with Affymetrix arrays and RNA sequencing between *Ldb1*$^{+/+}$ and *Ldb1*$^{-/-}$ Flk1^{+} BL-CFCs was confirmed by quantitative real time PCR. Gene expression was normalized to *Gapdh*. In addition down-regulation of Scl/Tal1 was detected on protein level by western blot on equal amounts of nuclear extracts from Ldb1$^{+/+}$ and Ldb1$^{-/-}$ Flk1^{+} BL-CFCs (as measured with the Bradford assay).

Figure S4: Focal adhesion pathway enriched with genes misregulated in *Ldb1*$^{-/-}$ Flk1^{+} cells and bound by Ldb1.

The polygon on the left of the affected genes indicates misregulation (green for down-regulation and red for up-regulation), while the blue polygon on the right indicates that Ldb1 binding was detected via ChIP sequencing within or around the gene region.

Figure S5: MAPK signalling pathway enriched with genes misregulated in *Ldb1*$^{-/-}$ Flk1^{+} cells and bound by Ldb1.

The polygon on the left of the affected genes indicates misregulation (green for up-regulation and red for down-regulation), while the blue polygon on the right indicates that Ldb1 binding was detected via ChIP sequencing within or around the gene region.

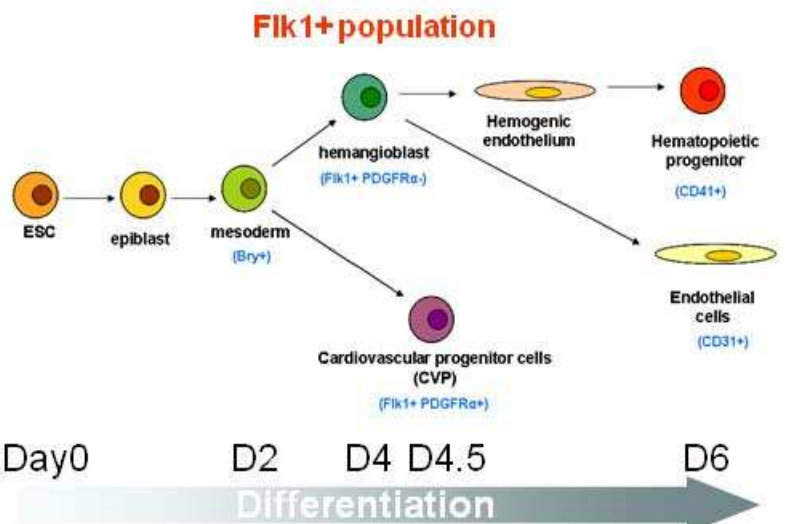
Figure S6: WNT signalling pathway enriched with genes misregulated in *Ldb1*$^{-/-}$ Flk1^{+} cells and bound by Ldb1.

The green polygon on the left of the affected genes indicates down-regulation, while the blue polygon on the right indicates that Ldb1 binding was detected via ChIP sequencing within or around the gene region.

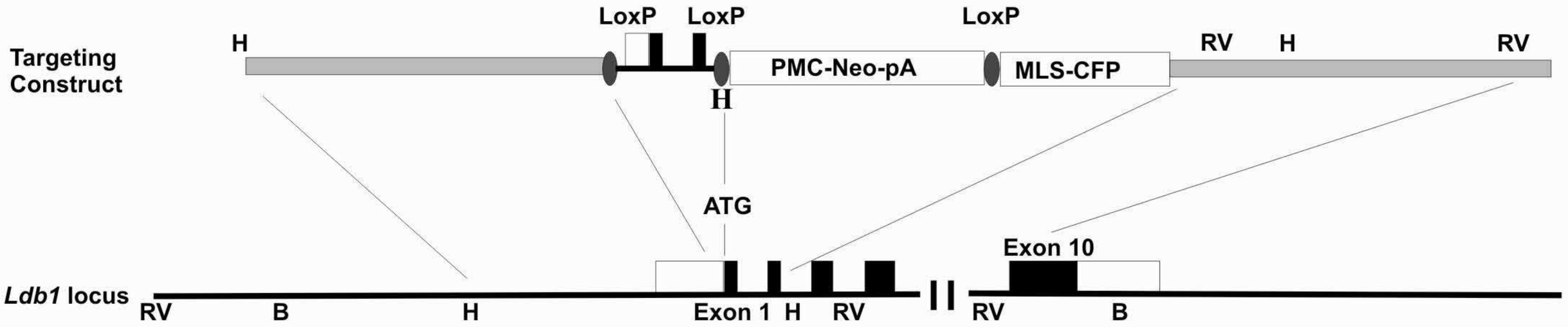
Figure S7: Acute Myeloid Leukemia signalling enriched with genes misregulated in *Ldb1*$^{-/-}$ Flk1^{+} cells and bound by Ldb1.

The green polygon on the left of the affected genes indicates down-regulation, while the blue polygon on the right indicates that Ldb1 binding was detected via ChIP sequencing within or around the gene region.

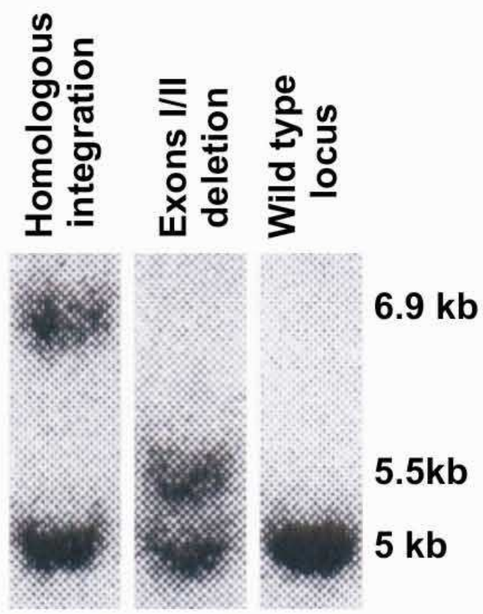
Figure S1

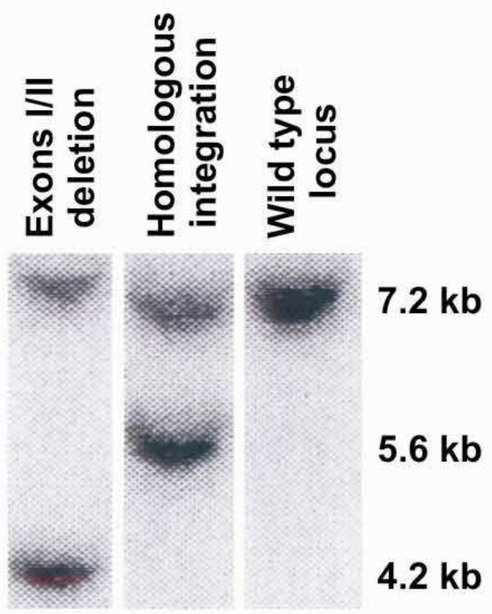

Flk1+population
ESC
epiblast
mesoderm
(Bry+)
hemangioblast
(Flk1+ PDGFRα-)
Hemogenic endothelium
Hematopoietic progenitor
(CD41+)
Endothelial cells
(CD31+)
Cardiovascular progenitor cells (CVP)
(Flk1+ PDGFRα+)
Day0
D2
D4
D4.5
D6
Differentiation

A.

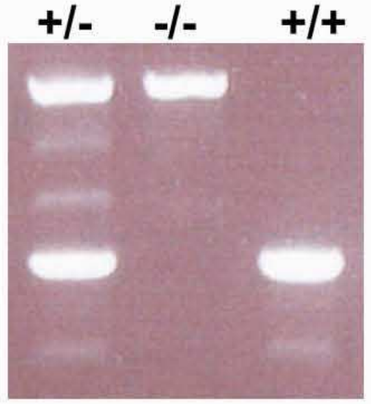

Targeting Construct
H
LoxP
LoxP
LoxP
H
PMC-Neo-pA
MLS-CFP
RV
H
RV
ATG
Ldb1 locus
RV
B
H
Exon 1
H
RV
Exon 10
RV
B

B.

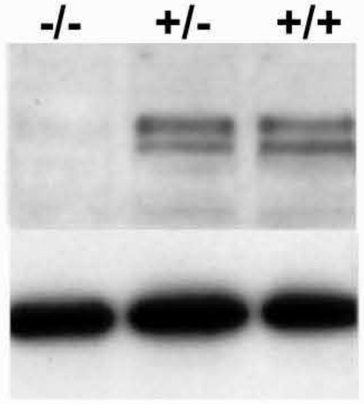

Homologous integration
Exons I/II deletion
Wild type locus
6.9 kb
5.5kb
5 kb


Exons I/II deletion
Homologous integration
Wild type locus
7.2 kb
5.6 kb
4.2 kb

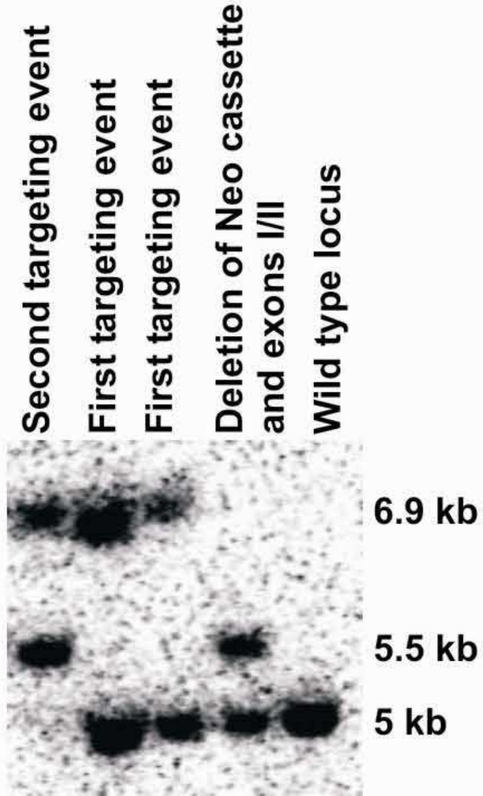
C.


+/-
-/-
+/+
900bp
400bp

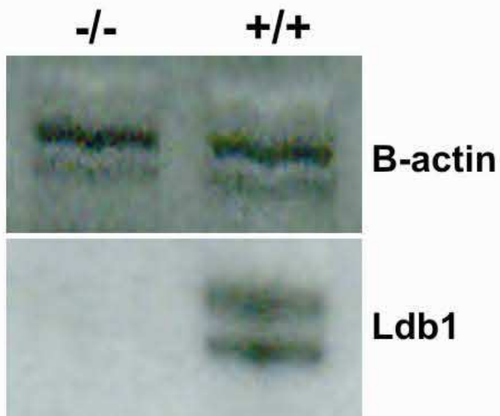
D.


-/-
+/+
+/+
Ldb1
Nucleophosmin

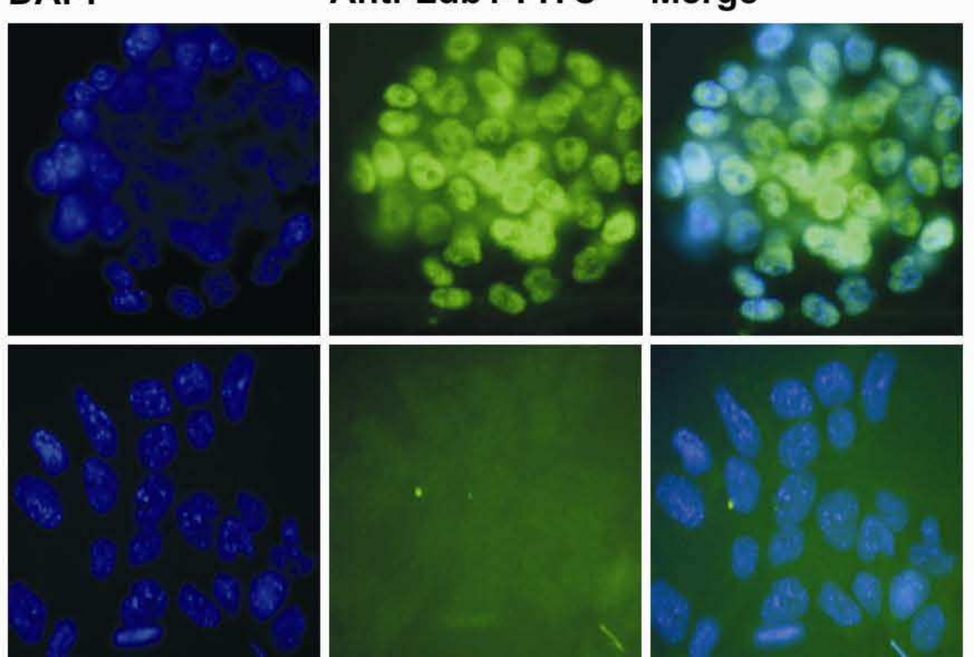
E.

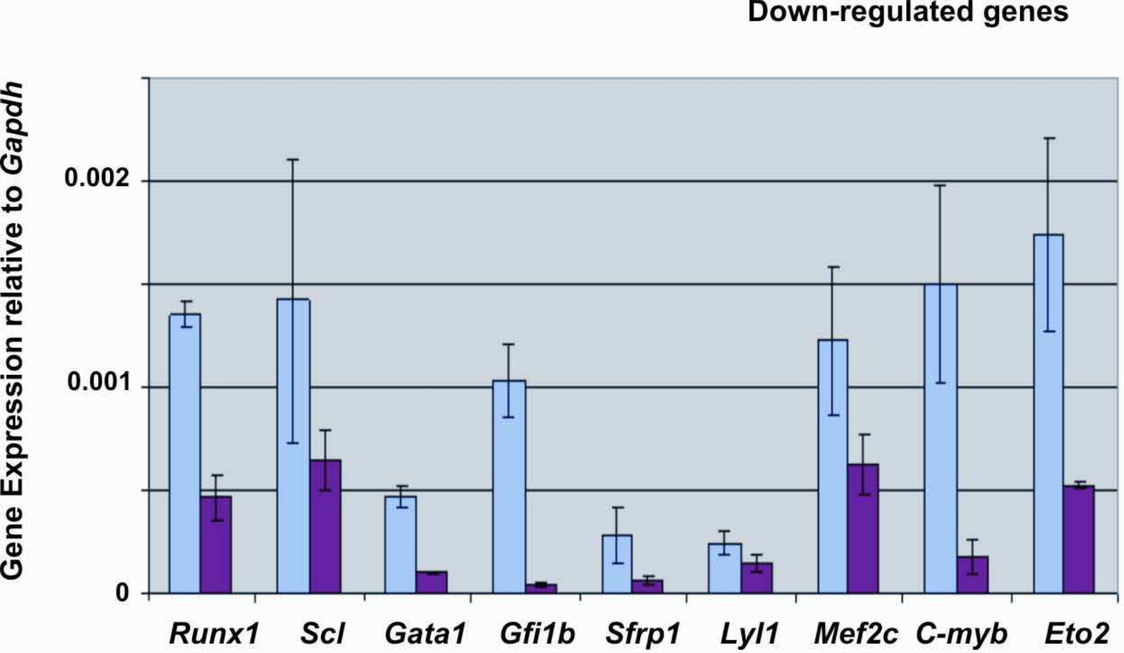

Second targeting event
First targeting event
First targeting event
Deletion of Neo cassette and exons I/II
Wild type locus
6.9 kb
5.5 kb
5 kb

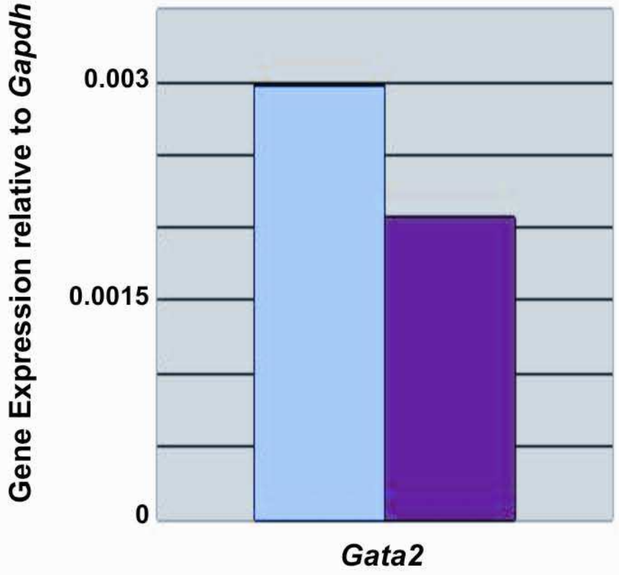
F.


-/-
+/+
B-actin
Ldb1

G.


DAPI
Anti-Ldb1-FITC
Merge
Ldb1+/+ ES cells
Ldb1-/- ES cells


Down-regulated genes
Gene Expression relative to Gapdh
0.002
0.001
0
Runx1
Scl
Gata1
Gfi1b
Sfrp1
Lyl1
Mef2c
C-myb
Eto2


Gene Expression relative to Gapdh
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0.0015
0
Gata2

Ldb1+/+ Flk1+ cells
Ldb1-/- Flk1+ cells
Scl/Tal1

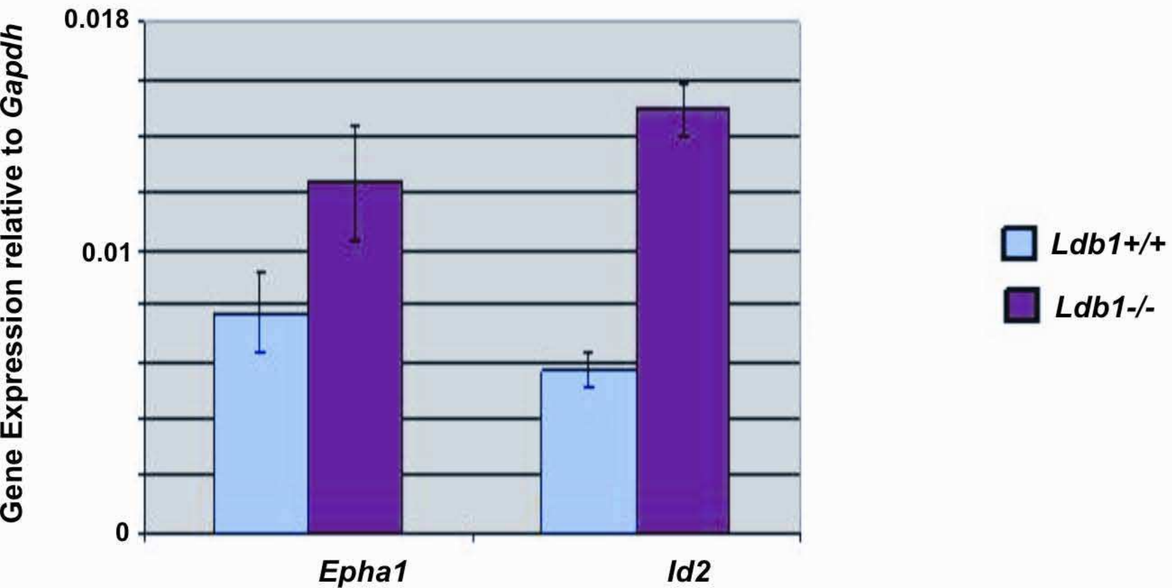
Up-regulated genes
Gene Expression relative to Gapdh
0.018
0.01
0
Epha1
Id2
Ldb1+/+
Ldb1-/-

Figure S4

FOCAL ADHESION

Lama3
Lamb2
Tnc
Reln
ECM
Itga2b
ITGA
ITGB
Itgb1
Itgb1
ECM-receptor interaction
Prkca
PKC
Caveolin
Fyn
Src
RhoGAP
RhoGEF
RhoA
Actn1
Actinin
Filamin
Talin
Paxillin
Calpain
Zyxin
VASP
Vinculin
Parvin
PIP5K
PIP2
ROCK
MLCP
MLCK
MLC
mDia1
Itgb1
Regulation of actin cytoskeleton
Cell motility
Stress fiber / FA formation
Actin polymerization
Actin
Filopodia Lamellipodia formation
FA turnover
PDK1
Akt/PKB
ILK
GSK-3β
β-Catenin
Itgb1
Wnt signaling pathway
Cdc42
PTEN
FAK
PI3K
PIP3
Itgb1
Phosphatidyl inositol signaling system
Vav
Rac
PAK
Apoptosis
DNA
CycD
Itgb1
Cell cycle
Cell proliferation
DOCK1
p130Cas
Crk
GRF2
C3G
Rap1
JNK
c-Jun
Itgb1
MAPK signaling pathway
B-Raf
Itgb1
Cytokine-cytokine receptor interaction
Kdr
GF
RTK
Shc
Grb2
Sos
Ha-Ras
Raf-1
MEK1
ERK1/2
Elk1
DNA
cIAPs
Cell survival
Bad
Bcl-2
+p
-p

Figure S5

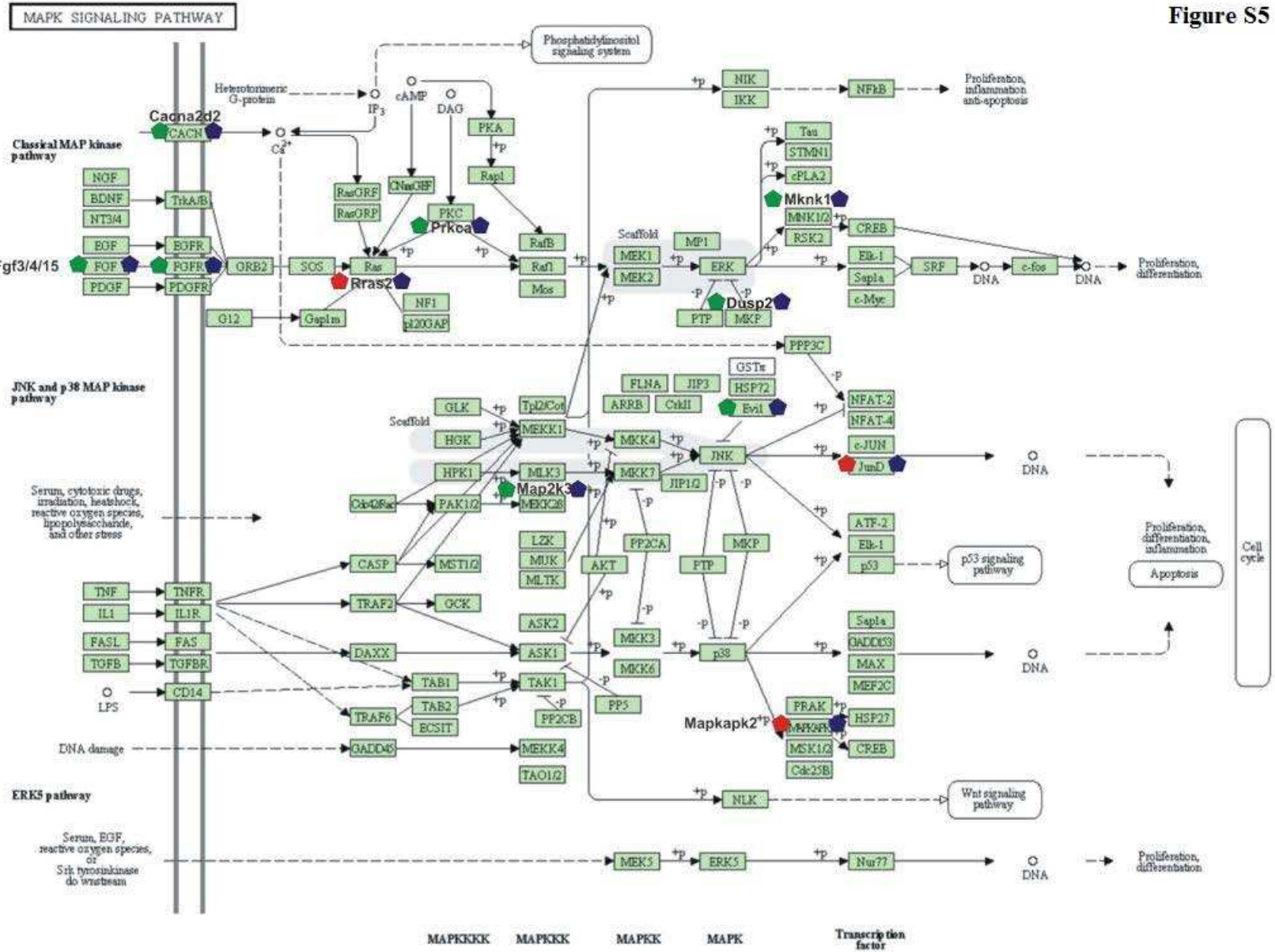
MAPK SIGNALING PATHWAY
Phosphatidylinositol signaling system
Heterotrimeric G-protein
IP3
cAMP
DAG
Ca2+
Cacna2d2
CACN
Classical MAP kinase pathway
NGF
BDNF
NT3/4
TrkA/B
EGF
FGF
PDGF
EGFR
FGFR
PDGFR
Fgf3/4/15
GRB2
SOS
Ras
Rras2
RasGRF
RasGRP
CNmGBF
PKC
Prkca
PKA
Rap1
RafB
Raf1
Mos
MEK1
MEK2
Scaffold
MP1
ERK
PTP
MKP
Dusp2
NF1
p120GAP
G12
Gaplm
NIK
IKK
NFkB
Proliferation, inflammation anti-apoptosis
Tau
STMN1
cPLA2
Mknk1
MNK1/2
RSK2
CREB
Elk-1
Sapla
c-Myc
SRF
DNA
c-fos
Proliferation, differentiation
PPP3C
JNK and p38 MAP kinase pathway
GLK
HGK
Tpl2/Cot
MEKK1
Scaffold
FLNA
JIP3
ARRB
Cdh11
GSTπ
HSP72
Evi1
NFAT-2
NFAT-4
c-JUN
JunD
MKK4
MKK7
JNK
JIP1/2
HPK1
MLK3
Map2k3
MEKK26
Cdc42/Rac
PAK1/2
Serum, cytotoxic drugs, irradiation, heatshock, reactive oxygen species, lipopolysaccharide, and other stress
LZK
MUK
MLTK
AKT
PP2CA
PTP
MKP
ATF-2
Elk-1
p53
p53 signaling pathway
Proliferation, differentiation, inflammation
Apoptosis
Cell cycle
CASP
MST1/2
TRAF2
GCK
TNF
IL1
FASL
TGFB
TNFR
IL1R
FAS
TGFBR
CD14
LPS
DAXX
TAB1
TAB2
ECSIT
TRAF6
ASK2
ASK1
TAK1
PP2CB
PP5
MKK3
MKK6
p38
Sapla
GADD153
MAX
MEF2C
DNA
PRAK
Mapkapk2
HSP27
CREB
MSK1/2
Cdc25B
DNA damage
GADD45
MEKK4
TAO1/2
ERK5 pathway
NLK
Wnt signaling pathway
Serum, EGF, reactive oxygen species, or Src tyrosinkinase do wnstream
MEK5
ERK5
Nur77
DNA
Proliferation, differentiation
MAPKKKK
MAPKKK
MAPKK
MAPK
Transcription factor

Figure S6

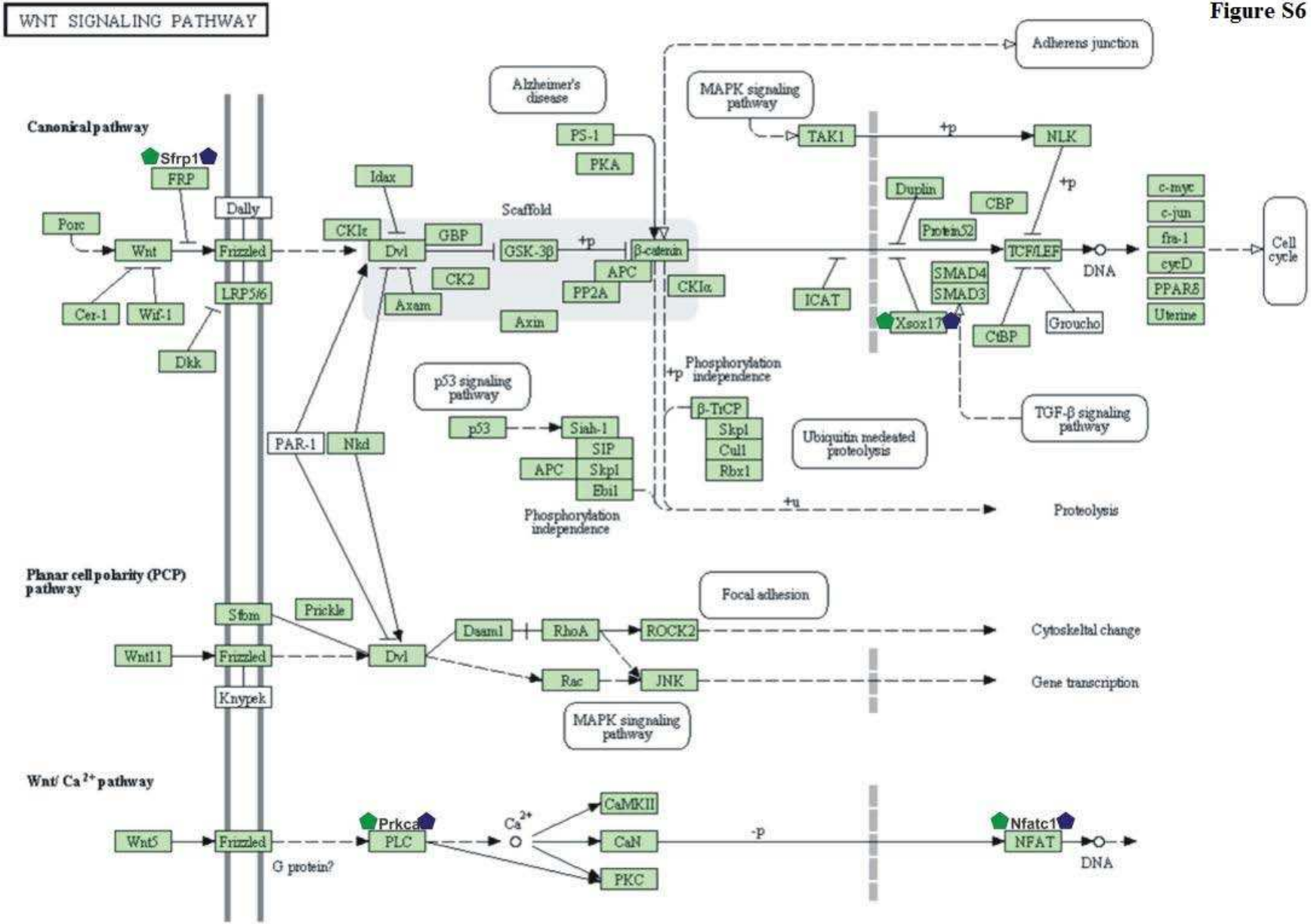
WNT SIGNALING PATHWAY
Canonical pathway
Sfrp1
FRP
Dally
Porc
Wnt
Frizzled
LRP5/6
Cer-1
Wif-1
Dkk
Idax
CKIε
GBP
Dvl
Axam
CK2
Scaffold
GSK-3β
+p
β-catenin
APC
PP2A
CKIα
Axin
ICAT
Alzheimer's disease
PS-1
PKA
MAPK signaling pathway
TAK1
+p
NLK
Adherens junction
Duplin
CBP
+p
ProteinS2
TCF/LEF
DNA
SMAD4
SMAD3
Xsox17
CtBP
Groucho
c-myc
c-jun
fra-1
cycD
PPARδ
Uterine
Cell cycle
TGF-β signaling pathway
p53 signaling pathway
p53
Siah-1
SIP
Skp1
Ebi1
Phosphorylation independence
+p
Phosphorylation independence
β-TrCP
Skp1
Cul1
Rbx1
Ubiquitin medeated proteolysis
+u
Proteolysis
PAR-1
Nkd
Planar cell polarity (PCP) pathway
Sfom
Prickle
Wnt11
Frizzled
Knypek
Dvl
Daam1
RhoA
ROCK2
Focal adhesion
Cytoskeltal change
Rac
JNK
Gene transcription
MAPK singnaling pathway
Wnt/ Ca 2+ pathway
Wnt5
Frizzled
G protein?
Prkca
PLC
Ca2+
CaMKII
CaN
PKC
-p
Nfatc1
NFAT
DNA

Figure S7

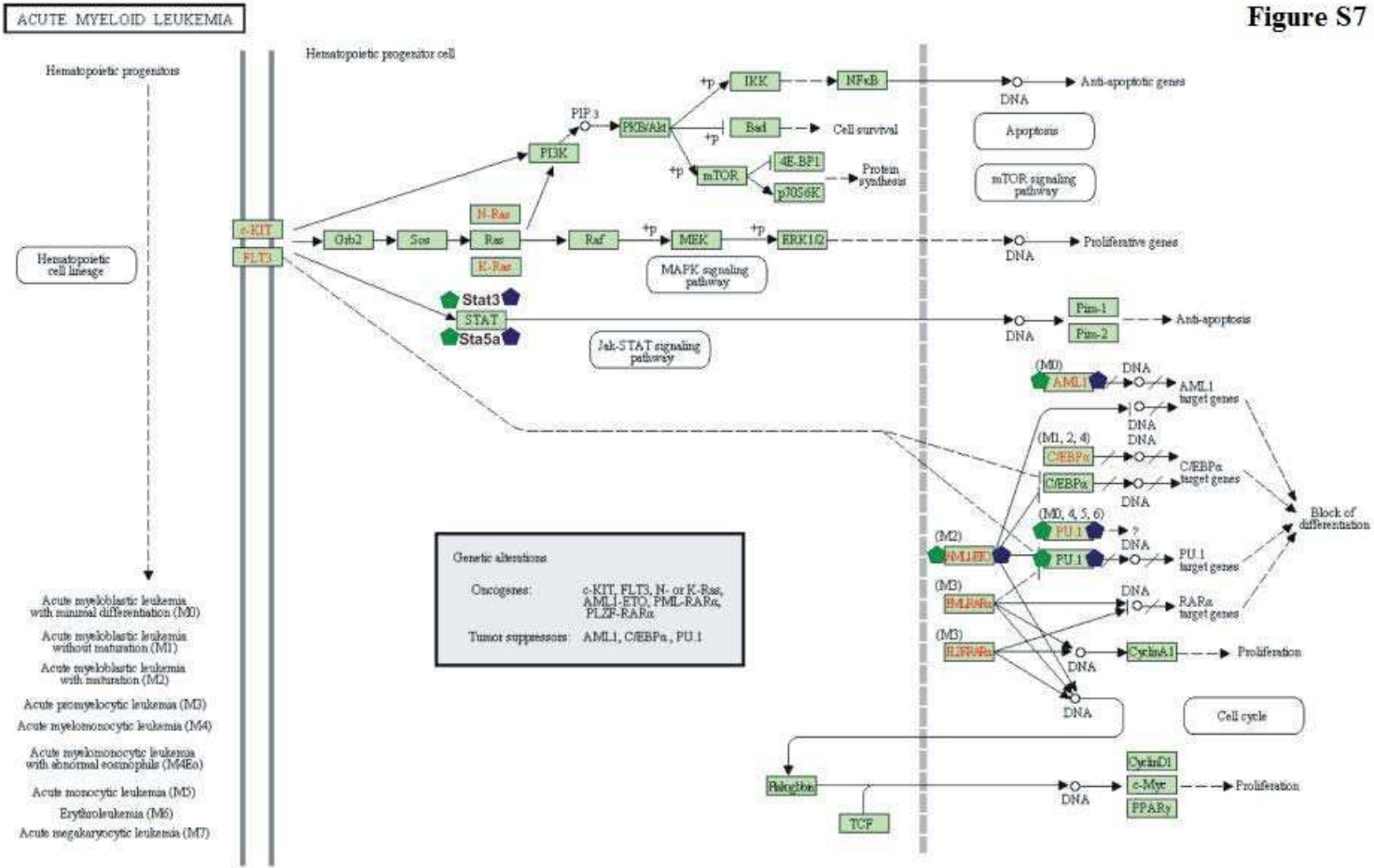
ACUTE MYELOID LEUKEMIA
Hematopoietic progenitors
Hematopoietic cell lineage
Hematopoietic progenitor cell
c-KIT
FLT3
Grb2
Sos
N-Ras
K-Ras
Ras
Raf
MEK
ERK1/2
MAPK signaling pathway
Proliferative genes
PI3K
PIP 3
PKB/Akt
IKK
NFκB
Anti-apoptotic genes
Bad
Cell survival
Apoptosis
mTOR
4E-BP1
p70S6K
Protein synthesis
mTOR signaling pathway
Stat3
STAT
Sta5a
Jak-STAT signaling pathway
Pim-1
Pim-2
Anti-apoptosis
(M0)
AML1
AML1 target genes
(M1, 2, 4)
C/EBPα
C/EBPα target genes
(M0, 4, 5, 6)
PU.1
PU.1 target genes
(M2)
AML1-ETO
(M3)
PML/RARα
RARα target genes
PLZF/RARα
CyclinA1
Proliferation
Block of differentiation
DNA
Cell cycle
Genetic alterations
Oncogenes: c-KIT, FLT3, N- or K-Ras, AML1-ETO, PML-RARα, PLZF-RARα
Tumor suppressors: AML1, C/EBPα, PU.1
Acute myeloblastic leukemia with minimal differentiation (M0)
Acute myeloblastic leukemia without maturation (M1)
Acute myeloblastic leukemia with maturation (M2)
Acute promyelocytic leukemia (M3)
Acute myelomonocytic leukemia (M4)
Acute myelomonocytic leukemia with abnormal eosinophils (M4Eo)
Acute monocytic leukemia (M5)
Erythroleukemia (M6)
Acute megakaryocytic leukemia (M7)
β-catenin
TCF
CyclinD1
c-Myc
PPARγ

Table S1

Gene	log2.foldchange	p-value
Hbb-bh1	-7,544464162	5,82E-96
Sla	-6,097908665	1,39E-70
Plek	-6,02055681	2,76E-214
Hba-x	-5,613747568	9,42E-47
Eif2s3y	-5,489732176	6,96E-160
Hba-a1	-5,377195004	2,08E-47
Hba-a2	-5,289324239	5,89E-45
Hbb-b1	-4,676954294	1,85E-21
Hbb-b2	-4,568392906	4,97E-20
Smtnl1	-4,339428622	1,46E-35
Gfi1b	-4,309447725	5,21E-40
Mest	-4,309269503	1,10E-276
Vav1	-4,296814115	6,18E-35
Mesp1	-4,162586025	6,12E-46
Itga2b	-4,136628516	8,12E-132
Nfe2	-4,085694254	3,52E-38
Sfpi1	-3,975301269	1,51E-37
Ctse	-3,944300384	1,91E-65
Fgf3	-3,934809233	5,25E-65
Bmper	-3,854375922	2,40E-57
Hand2	-3,675407011	2,32E-58
H19	-3,626574305	2,62E-206
Nxf3	-3,602198395	9,23E-78
Gm7903	-3,578561912	1,87E-40
Gm5128	-3,578561912	1,87E-40
Gm15023	-3,520292245	2,00E-40
AV320801	-3,487507164	1,81E-39
Evx1	-3,460209273	8,12E-43
Pramel3	-3,44506543	2,11E-37
Snca	-3,436605832	0,000867098
Gm14511	-3,372552825	9,01E-35
Gm5634	-3,363551377	2,79E-33
Cfc1	-3,358455778	6,82E-75
Hand1	-3,34962787	2,47E-110
Gm14458	-3,319488002	5,10E-30
Slit1	-3,310810453	1,06E-49
Xlr3c	-3,304272352	5,47E-80
Hesx1	-3,276965682	1,56E-20
Mir675	-3,276923644	3,04E-72
Xlr4a	-3,253458155	3,82E-32
Xlr3a	-3,243590297	2,11E-85
Xlr3b	-3,24185065	1,23E-83
Rhox2e	-3,231627136	3,70E-12
Fthl17	-3,211349995	1,47E-26
Fgf15	-3,180846761	4,66E-40
Alox5ap	-3,172173994	1,73E-28
Rhox2a	-3,161371125	1,85E-13
Myl7	-3,153910465	1,64E-64

Fermt3	-3,149603247	2,33E-61
Prdm6	-3,147062245	4,05E-70
Gm5635	-3,088327995	8,19E-23
Vstm2b	-3,059162138	1,64E-46
Xlr4c	-3,058608578	6,97E-27
Alas2	-3,052800597	1,04E-17
Xlr4b	-3,040388698	3,30E-27
Tbx2	-3,030371776	3,42E-47
Capn6	-2,969472688	1,06E-120
Rspo3	-2,963541883	1,79E-68
Cd8a	-2,953062093	3,18E-11
Grap2	-2,91929731	1,94E-29
Myb	-2,916440864	0,000945925
Sprr2a3	-2,882474351	1,57E-14
Hdc	-2,866042782	9,12E-18
Pof1b	-2,85988376	2,23E-29
Slc32a1	-2,846111101	0,001024752
Prss40	-2,842111154	2,24E-24
Rhox2b	-2,822623035	1,05E-09
Cck	-2,812727304	2,39E-10
Plagl1	-2,803092964	3,32E-97
Il16	-2,750575553	5,48E-28
Wfdc15a	-2,742403404	2,51E-07
Gm10439	-2,729451997	6,40E-25
Pdlim4	-2,698715846	5,16E-37
Cygb	-2,697853477	2,00E-14
Uty	-2,689721393	1,57E-38
Rhox2c	-2,688970224	1,13E-08
1700011F14Rik	-2,644161848	1,14E-13
Gm15128	-2,629143095	5,58E-25
Kcnj5	-2,578354063	5,72E-43
Cyp26a1	-2,576069855	1,27E-56
Cubn	-2,572203236	2,72E-48
Gm15107	-2,538333647	1,14E-24
Gm15127	-2,536228186	1,11E-20
Gm15114	-2,534397093	1,84E-23
Cnrip1	-2,521427377	4,15E-29
Luzp4	-2,515573942	6,79E-21
Dazl	-2,506050328	8,23E-47
Crabp1	-2,471393734	1,89E-28
Dpf3	-2,460005172	4,17E-11
Pcsk5	-2,450831319	4,57E-36
Gm15093	-2,430946469	1,91E-23
Gm15085	-2,415993136	9,01E-24
Fam123c	-2,410585201	2,16E-31
Ott	-2,400702801	1,46E-23
Darc	-2,391822831	1,36E-14
Usp26	-2,388025066	5,24E-54
Fgf10	-2,386388577	5,82E-54
Gm15097	-2,386278848	5,99E-23
Gm15080	-2,384478534	3,07E-22

Lyl1	-2,383448763	5,23E-24
Dmrtc1c2	-2,368267682	1,72E-25
Dmrtc1c1	-2,368267682	1,72E-25
Gtsf1	-2,349533556	5,00E-10
Xlr5a	-2,347136351	4,56E-18
Leprel1	-2,343362761	6,08E-31
Mfng	-2,315843393	6,83E-38
Gm15091	-2,301509919	8,66E-21
Coch	-2,291186806	2,78E-28
Daam2	-2,283362647	4,21E-26
Steap4	-2,2741011	1,17E-31
Fxyd5	-2,261823353	4,77E-20
Ikzf1	-2,258040654	0,001655368
Skap1	-2,2512564	1,17E-16
Xlr5b	-2,245238429	3,21E-17
Hs3st3b1	-2,24143362	4,62E-38
Spns2	-2,232774207	2,47E-46
Uba7	-2,229073544	1,04E-23
1700013H16Rik	-2,223281116	3,11E-14
Xlr5c	-2,203569971	1,11E-16
Tspan8	-2,186161681	3,52E-21
Scml2	-2,160267343	7,91E-39
Frem1	-2,154051864	0,001734195
Ptgds	-2,116200773	9,58E-07
Rbm24	-2,114024132	6,03E-24
Klhl6	-2,099032439	2,54E-55
St8sia4	-2,093169386	7,89E-22
Tex19.2	-2,090296541	1,95E-14
Apcdd1	-2,085334342	3,50E-40
AI481877	-2,084965	3,15E-15
Lhx1	-2,081514648	2,36E-48
Smarcd3	-2,080216808	1,72E-15
Atp2a3	-2,046576435	1,36E-56
Gucy1b3	-2,043275477	1,75E-16
U1.93	-2,039714428	0,000560106
Rnd2	-2,033368575	6,60E-32
Pnma5	-2,032658513	2,27E-24
Pecam1	-2,025137406	3,36E-65
Gata4	-2,021610695	2,65E-43
U1.72	-2,002597308	0,000784137
Ptprb	-2,000594333	1,12E-39
Msx2	-1,994415153	1,24E-25
Tnc	-1,988966752	7,84E-52
Gata1	-1,988937941	5,26E-17
Bin2	-1,982381985	5,89E-17
Sult6b1	-1,966582381	1,15E-09
Cyp4f15	-1,96647351	0,002049503
U1.123	-1,95561716	0,001111089
Sohlh2	-1,953947228	3,11E-28
Cxcr4	-1,949189185	1,47E-27
6230427J02Rik	-1,931837546	2,01E-23

Rasgef1b	-1,931232799	3,13E-16
Cbfa2t3	-1,910833184	1,85E-20
Bmp6	-1,906668203	3,05E-17
Wnk4	-1,902290313	1,06E-28
Spink3	-1,892015003	1,13E-16
Plekha6	-1,890189675	1,24E-24
Meis1	-1,889438164	4,95E-18
Asb4	-1,886054799	9,44E-53
Rftn1	-1,878655149	1,81E-34
Cyct	-1,875827687	3,11E-09
Nlrp14	-1,875051704	3,68E-13
Cntnap2	-1,874244917	8,37E-22
Lifr	-1,873250526	8,41E-37
Lcp2	-1,865794803	4,69E-15
Kdm5d	-1,863476677	0,00212833
Zfp711	-1,854306322	1,80E-27
Cdh2	-1,848195201	9,42E-47
Hormad2	-1,845765593	4,11E-15
Gypc	-1,840265953	9,67E-21
Rgs2	-1,832563016	2,39E-12
Ccdc109b	-1,828184245	0,002285985
Naip6	-1,819394025	2,57E-20
Mtap7d2	-1,818628146	7,13E-21
U1.116	-1,81201483	0,001904059
Cacna2d2	-1,809124134	1,37E-19
Fbln2	-1,803602258	8,91E-34
Fam183b	-1,80230447	0,000207831
Slc13a4	-1,801087657	2,40E-14
U1.5	-1,799455128	0,001640181
U1.35	-1,799455128	0,001640181
U1.42	-1,799455128	0,001640181
Chst2	-1,796557634	1,17E-15
Tex19.1	-1,788438711	8,56E-28
Zfpm1	-1,784764642	9,32E-37
Gm4070	-1,776747863	1,18E-18
Eomes	-1,772844682	4,51E-39
Gvin1	-1,769109814	1,95E-18
Ctla2b	-1,766320794	7,83E-36
Ctla2a	-1,76506449	2,43E-43
Lama1	-1,762043944	9,84E-34
Unc5c	-1,755610009	3,73E-26
Foxf1a	-1,754094728	1,01E-05
Rgs10	-1,751912618	6,20E-07
Rgs5	-1,749531951	5,51E-22
Wnt5a	-1,742345921	5,09E-23
Gp1ba	-1,74170674	5,88E-10
Bmp2	-1,734667763	3,64E-35
Msx1	-1,734663489	3,21E-20
Fkbp6	-1,731130217	4,50E-09
Kdr	-1,727592714	1,02E-56
Snord57	-1,726524357	0,002822491

Slc18a2	-1,722304356	5,13E-32
Eltd1	-1,716437545	5,60E-31
Tuba3b	-1,714135464	4,23E-23
Gm10594	-1,710022416	0,001961533
Gm10597	-1,710022416	0,001961533
Hbb-y	-1,707697396	0,002364812
Cxcr7	-1,703565762	3,85E-24
Mecom	-1,701133515	1,29E-18
Pdzk1ip1	-1,68202305	1,53E-10
Gm10590	-1,681734537	0,002565211
Gm10930	-1,681734537	0,002565211
Dkk1	-1,674777056	5,73E-12
Gpc3	-1,673303469	5,82E-49
Vldlr	-1,67293625	1,75E-24
Tekt1	-1,665466993	9,38E-06
Gsbs	-1,665390629	0,002522466
Esm1	-1,660468688	6,42E-07
Ubash3b	-1,659343498	2,59E-18
Gchfr	-1,658085357	5,09E-13
Pdgfra	-1,65771975	6,43E-25
Anpep	-1,650893851	9,20E-28
Frzb	-1,643362331	1,17E-08
Gimap4	-1,643290641	1,01E-18
Cox4i2	-1,636653406	1,82E-05
Rhox4g	-1,635435262	2,21E-05
Mir1903	-1,632336511	0,006144172
Gem	-1,627614279	4,40E-12
Alox5	-1,617461543	9,58E-10
Klhl3	-1,617419021	1,03E-07
Gpat2	-1,614858998	5,95E-21
Vsig2	-1,605798575	9,00E-06
Fmnl1	-1,605415717	1,28E-09
Clec1b	-1,603648773	2,98E-09
Itgb3	-1,592698551	5,85E-26
Tuba3a	-1,589293936	1,13E-24
8430408G22Rik	-1,586377575	7,45E-11
Plxna2	-1,585985793	1,23E-21
Cpn1	-1,583924994	7,82E-09
Copg2	-1,582148734	5,65E-45
Ptpn18	-1,578480741	2,76E-15
Nrip3	-1,576739405	0,002916601
Lama3	-1,575568431	6,63E-15
Has2	-1,573544931	1,89E-27
Scube2	-1,566090283	5,91E-11
Tph1	-1,56594409	1,02E-06
Tmem100	-1,565180684	1,50E-07
Dapk2	-1,558367148	9,73E-11
Gata6	-1,554839902	6,11E-19
St3gal6	-1,554464644	9,37E-12
Amhr2	-1,547331438	1,18E-06
Greb1	-1,546776045	1,15E-24

Sema3g	-1,544220088	2,37E-09
Dusp2	-1,537113597	6,57E-18
Rtp4	-1,534254642	2,01E-05
Gad2	-1,532798398	3,91E-23
Gas7	-1,532547019	3,24E-10
Six1	-1,526732974	1,47E-10
Ddc	-1,524490423	1,37E-09
Gja4	-1,523431981	8,47E-11
Hoxb5	-1,518675368	0,003153082
Prkar2b	-1,516086973	1,72E-18
C630004H02Rik	-1,510116791	1,10E-18
Procr	-1,50806147	1,10E-10
Trim47	-1,504775489	2,66E-12
Plac1	-1,49487379	0,003231909
Bmp5	-1,491882905	1,03E-17
Dgkk	-1,490785526	2,92E-15
Myct1	-1,484770485	7,37E-14
Snord49a	-1,484179056	0,004503704
2200001I15Rik	-1,484091557	5,77E-05
P2ry2	-1,479972683	2,84E-08
Gjb5	-1,47832546	2,02E-07
Galnt6	-1,477642559	2,51E-07
Wnt3	-1,477163639	6,21E-15
Ptpre	-1,462247206	3,73E-12
Slc1a4	-1,461051671	4,98E-24
Ddx3y	-1,460346903	3,60E-23
Cdh4	-1,459342294	2,12E-08
Tbx3	-1,456168885	1,36E-20
Ror1	-1,452366645	0,003626044
Muc13	-1,436956324	1,47E-06
Chga	-1,436372108	3,09E-08
F2rl3	-1,431274353	1,40E-05
1810043H04Rik	-1,416437589	7,90E-07
Ifi27l1	-1,416168111	1,08E-05
Fgfr2	-1,415101032	0,003941353
Stard8	-1,414523505	9,20E-28
Sox17	-1,410950498	1,54E-15
6330403K07Rik	-1,410126449	1,92E-11
Stxbp6	-1,409475259	0,00402018
Clic6	-1,403256466	4,28E-23
Lgals9	-1,401922143	3,00E-13
AU022751	-1,396331807	2,71E-05
Chst7	-1,394612564	6,12E-07
Tnik	-1,39118264	1,57E-09
Lmo2	-1,389211718	4,11E-17
Tnfaip2	-1,387777244	0,004177834
Thbd	-1,387398509	1,90E-13
Erg	-1,386096884	1,64E-18
Csf2rb	-1,384496448	8,61E-16
Gata2	-1,383674955	6,54E-14
Dll3	-1,380324372	5,04E-08

Prss12	-1,380256908	1,25E-09
Gm15284	-1,377886699	0,005126519
Glrb	-1,375853592	0,004335488
Hoxb6	-1,375768246	0,004414315
Pon3	-1,371751247	2,14E-13
Tbx20	-1,370635853	1,44E-19
Bnc1	-1,366308316	0,004493142
Aplnr	-1,365931844	2,25E-23
Ism2	-1,363973348	1,72E-05
Reln	-1,357433732	0,004571969
Csf2rb2	-1,346269953	3,22E-16
Pla2g1b	-1,341420097	0,004650796
Robo4	-1,334630494	9,96E-12
Rhox4e	-1,334192216	0,004185474
Sox21	-1,332003745	4,12E-06
Ncf2	-1,324222291	4,16E-09
Abtb2	-1,322742438	0,004729623
4933437F05Rik	-1,322692448	0,000306755
Sema5b	-1,321236049	2,75E-07
Prkd1	-1,320826298	8,75E-11
Hhex	-1,320196802	8,18E-16
Lgals3bp	-1,317293143	6,60E-13
Prss50	-1,315324618	2,83E-05
Col9a1	-1,314843733	0,004887277
Hist1h4c	-1,311771319	0,005316541
Acer2	-1,311019605	2,74E-16
Arl4d	-1,310871726	4,13E-09
Hey1	-1,306375224	3,08E-12
Lat	-1,30190467	1,34E-08
Ssh2	-1,301577968	3,74E-13
Slc25a31	-1,301213945	0,000400222
L1cam	-1,296435887	2,76E-15
Cd55	-1,295868062	5,82E-17
Olfm1	-1,283115002	3,10E-16
Gpr56	-1,281377701	8,53E-18
Ndn	-1,27990952	5,54E-17
Cd79b	-1,276651615	0,000473526
Atp6v0a4	-1,276613366	5,30E-09
Stat5a	-1,275937387	7,12E-17
Hoxb2	-1,27550822	0,005202586
St6galnac4	-1,272999293	9,48E-09
Pear1	-1,272265083	2,22E-13
Pcdh19	-1,272051386	0,00536024
Mfap4	-1,271743305	2,74E-07
Daf2	-1,266284644	4,06E-08
Snai1	-1,265615861	8,29E-09
Epor	-1,260984303	0,000102796
Etv2	-1,25599451	2,67E-09
Runx1t1	-1,245861438	0,005517894
Fbn2	-1,245320561	1,87E-18
Nnat	-1,244779554	3,95E-16

AL672259.1	-1,24411219	0,000567304
Slc39a8	-1,244060551	0,005596721
Hoxd1	-1,238249763	0,005754375
Ccdc47	-1,236278949	0,005833202
Col23a1	-1,231594391	1,79E-10
D16Ertd472e	-1,23058282	2,73E-08
Rbm44	-1,227851549	3,25E-09
Pde4dip	-1,227845952	0,005912029
Npl	-1,224201418	1,81E-12
Mthfd2	-1,21999203	4,71E-14
Calb2	-1,216045563	0,001432984
Prkca	-1,212927875	5,06E-07
Siah2	-1,212161057	4,48E-06
Phospho1	-1,212055823	0,000255693
Slc46a3	-1,211308921	4,86E-07
Aard	-1,210980447	0,006069683
Vcan	-1,208678822	5,46E-20
Fli1	-1,20789418	3,53E-14
Chac1	-1,201901	0,000211253
She	-1,200721806	1,34E-16
Fkbp11	-1,198248809	1,61E-06
Nav3	-1,19425359	4,28E-08
Ldhc	-1,19361445	0,006306164
Lect1	-1,192617344	0,006384991
Pfkp	-1,192140069	2,46E-19
Cbln1	-1,190227837	8,92E-07
Cadm3	-1,188156092	8,48E-07
Fgf4	-1,187577698	0,006463818
Spp1	-1,18714781	2,74E-15
Stat5b	-1,184145716	1,36E-18
Slco3a1	-1,180543118	0,006542645
Rtn4rl2	-1,176281894	0,003220112
Lrrc33	-1,176278505	4,09E-07
Clstn2	-1,175957194	0,006779127
Sox18	-1,173082173	1,46E-14
Itga1	-1,172119383	4,37E-07
Lhfpl2	-1,170919093	5,66E-14
Hist1h4h	-1,170232164	0,009719068
Psat1	-1,169906829	2,42E-20
Grap	-1,169698303	6,12E-07
Exoc6	-1,164481802	4,61E-15
Phf11	-1,157166184	0,00013585
Prkg1	-1,15077712	5,53E-07
5730469M10Rik	-1,148498912	0,007252089
Acvrl1	-1,146754031	3,91E-13
Hmgcll1	-1,144335159	0,00748857
Pycr1	-1,144248423	5,32E-12
Entpd1	-1,142546855	4,71E-10
Tbkbp1	-1,142360889	3,77E-12
Clgn	-1,142051344	6,92E-06
Fam198b	-1,14155075	0,007567397

Rab3il1	-1,138513511	4,60E-10
Myc	-1,137544546	6,97E-13
Rhof	-1,136684191	0,000708734
Adamts3	-1,13332797	1,02E-06
Rnf130	-1,131940742	9,84E-14
Sfrp1	-1,131425096	2,60E-14
Amot	-1,127208103	6,42E-26
Tex14	-1,124665025	1,44E-09
Tnni1	-1,123398029	0,002703655
Gm11275	-1,123264276	0,00910322
Fgd5	-1,118665224	7,68E-19
Isl1	-1,113993267	0,000127823
4930583H14Rik	-1,113179947	0,000173402
4930528F23Rik	-1,112254686	0,008196695
Rasa4	-1,111376718	2,24E-05
Xbp1	-1,11135732	8,66E-18
Icam2	-1,107640103	2,99E-09
Gm9766	-1,106423677	9,90E-05
Lbh	-1,105810753	0,007803878
Tal1	-1,105438169	1,14E-15
Usp18	-1,104046163	5,47E-06
Fzd4	-1,101731815	6,27E-06
Tspan12	-1,099973606	1,84E-07
Plxnc1	-1,099354127	1,54E-10
Gfi1	-1,098373677	0,007961532
Cer1	-1,097914009	2,60E-08
Efnb3	-1,097653106	2,20E-07
S1pr1	-1,094403974	5,15E-13
Afap1l1	-1,093520816	1,30E-14
Ptprd	-1,091031656	0,008040359
Smc1b	-1,090829522	6,80E-12
Ankrd13b	-1,090340139	2,20E-06
Stac2	-1,088957124	1,53E-06
Tdo2	-1,088333978	0,008119187
Tspyl3	-1,087098778	0,008198014
Azi1	-1,086235416	7,14E-13
2410076I21Rik	-1,08367711	5,08E-05
Gfpt2	-1,08328331	5,36E-16
Myocd	-1,083001627	5,79E-07
Crb2	-1,082835079	1,58E-13
Zscan30	-1,077176955	6,99E-15
Rpl13a	-1,075386784	0,001049084
Cnksr2	-1,074665818	6,56E-07
Igfbp4	-1,074131452	1,81E-21
D14Ertd668e	-1,07246445	1,42E-06
Etv4	-1,072384835	6,61E-07
Phlda2	-1,071603033	5,71E-08
Lix1l	-1,071430264	8,26E-05
Mixl1	-1,070545178	3,26E-06
Ifi35	-1,069846003	2,16E-06
Cep68	-1,068777373	3,58E-16

Nap1l2	-1,067239585	0,008355668
Cenpv	-1,067167405	1,31E-08
Thsd7a	-1,067095535	0,008434495
Lyst	-1,064020595	2,57E-09
Elavl4	-1,063562433	0,000165785
Sec14l2	-1,063158308	6,63E-07
Tmtc2	-1,060744957	3,62E-07
Pemt	-1,05755367	0,002073433
Padi3	-1,054453521	4,02E-09
Adam12	-1,053616505	2,75E-09
Tal2	-1,053408746	0,000104236
Arhgap25	-1,052798696	1,24E-05
Inpp5d	-1,052307754	2,37E-13
Nhsl2	-1,052277128	7,91E-10
Spin2	-1,051991568	0,008749803
Lrrc34	-1,051802819	3,17E-06
Lrmp	-1,051134569	0,000495566
Upp1	-1,050575874	2,41E-14
Rgs9	-1,049658858	0,003204201
Pcdha1	-1,049180138	0,00882863
Syce1	-1,048233899	0,007195787
Samd14	-1,046408208	9,92E-07
Ddx60	-1,045538379	2,00E-05
Slc22a21	-1,044011501	4,39E-05
Stra13	-1,043802773	3,84E-07
Rnmtl1	-1,043393463	3,01E-06
Vav3	-1,039367842	1,09E-08
Stat4	-1,037095015	0,000150685
Gm949	-1,036675653	9,47E-07
Grk5	-1,035725376	1,44E-05
Rhoj	-1,033004671	1,49E-12
Sema6d	-1,031722296	1,60E-09
Cmklr1	-1,03094051	6,24E-05
Rasgrp3	-1,030820898	7,88E-16
Jam2	-1,029776048	2,94E-08
Epb4.1	-1,028017641	2,95E-16
Klf4	-1,027450827	3,94E-09
Kcnq5	-1,026293558	0,009065111
Gcom1	-1,026152954	1,06E-08
Sema7a	-1,025324414	0,000619459
Ppp2r2c	-1,025193692	1,95E-06
Cnp	-1,022001514	4,86E-07
Tmc6	-1,01810151	1,56E-10
Sfi1	-1,016759688	2,06E-14
1810049H13Rik	-1,015531043	0,000510626
Rbp4	-1,01517359	0,001437262
Gmfg	-1,010232586	2,09E-08
Inca1	-1,009398567	0,001903726
Runx1	-1,008801015	2,98E-07
Sox7	-1,007746498	3,50E-12
Capn5	-1,007374196	2,87E-13

Eng	-1,005666999	1,40E-13
Stk10	-1,00349678	3,49E-09
Il2rg	-1,001611176	0,001019734
Shisa2	-1,000129296	2,04E-06
Nefl	-0,999227594	0,009459246
Ddah1	-0,998849764	0,009538073
Laptm5	-0,998418866	8,42E-07
Plekho2	-0,998238665	1,70E-08
Klhl11	-0,995533306	4,81E-08
Car12	-0,995165109	8,08E-05
Gpx3	-0,994833355	6,41E-15
Scarf1	-0,992776018	8,91E-09
Rnf125	-0,99159564	0,000673004
Aqp1	-0,985233459	0,00152155
Thsd1	-0,984908086	1,34E-11
Lef1	-0,97933114	3,70E-09
Ssh2	-0,978233276	0,000402747
Mylip	-0,976826746	4,49E-06
Dnahc17	-0,976356197	0,000261138
Cav1	-0,975594391	9,74E-07
Foxa2	-0,97304361	0,0001297
Gdpd1	-0,972902565	8,10E-06
Copz2	-0,972894064	1,15E-05
Gm1564	-0,972019029	4,96E-05
D6Mm5e	-0,967313211	0,000426155
Cxxc4	-0,96718321	0,000169559
Esam	-0,965779007	8,43E-11
Omd	-0,965677925	1,69E-14
Sh3kbp1	-0,965356329	6,44E-06
Gm9821	-0,958507822	2,94E-05
Prdm14	-0,957368275	0,000242641
Ndel1	-0,956749764	5,62E-13
Ezh1	-0,956726682	9,82E-13
Pold2	-0,955914319	4,07E-14
Ppp1r16b	-0,952158473	2,94E-09
5730455P16Rik	-0,951883177	2,84E-07
Rgl1	-0,951534637	3,24E-11
Gpm6b	-0,950139423	6,59E-07
Gpx2	-0,949909712	0,002773611
Ppp1r3c	-0,945913414	0,000476665
Grin1	-0,945688406	0,002504996
Efna3	-0,944566544	0,000274039
Gm3345	-0,943627545	0,000207756
Ypel2	-0,943519196	6,49E-07
Cdyl2	-0,943508049	1,14E-06
B230314M03Rik	-0,943410703	2,03E-06
Reep6	-0,94327482	0,000289797
Rps6ka6	-0,943226962	1,28E-15
Gemin5	-0,942324579	1,82E-14
Slc7a1	-0,941813614	2,32E-10
Mrpl22	-0,94168839	7,92E-08

Siglec1	-0,941523166	1,88E-13
Homer2	-0,939701627	0,000159575
Pth1r	-0,938648079	9,19E-06
Card6	-0,936615978	0,000321532
Dppa3	-0,935131025	8,04E-07
Stab1	-0,934356248	9,82E-09
Atxn7l1	-0,933446716	0,000234257
Mcts2	-0,929325701	3,62E-06
Acsf2	-0,928771115	3,68E-11
Zeb2	-0,928107696	9,19E-10
Slc43a3	-0,92390496	6,42E-10
AU040829	-0,923758853	1,56E-07
Tdh	-0,923160783	3,07E-10
Mrm1	-0,922603039	3,52E-06
Ng23	-0,91977892	0,003196222
Atp8a1	-0,919666595	9,32E-10
Acap1	-0,918151714	0,000520961
Cdc42ep4	-0,916996157	3,96E-11
Ak4	-0,916589722	2,95E-10
Arrb2	-0,915286432	1,72E-09
Fhod3	-0,913037335	1,54E-05
Fam119b	-0,911306017	3,09E-13
Col8a2	-0,909175137	0,000215135
Bcat1	-0,907570036	4,88E-10
Slc28a1	-0,905517248	0,000851057
Fgfr3	-0,904891756	1,33E-05
Cnpy1	-0,903803166	0,006185878
Myo7a	-0,901432926	8,74E-06
Engase	-0,898785854	4,38E-05
Naip5	-0,898683635	7,91E-10
Ccdc117	-0,898458263	6,65E-11
Arhgap31	-0,898113473	3,28E-11
Pde4b	-0,897891649	5,55E-09
Mfsd2b	-0,897624638	1,15E-08
Morc1	-0,896276162	2,12E-07
Pcyt2	-0,896154176	6,59E-08
Greb1l	-0,895624224	3,02E-12
Smtnl2	-0,895369225	6,63E-11
Gli1	-0,893389495	0,000993002
1300001I01Rik	-0,893337118	6,65E-12
Suz12	-0,893273027	1,14E-13
Cdh13	-0,892447851	0,000321414
Cntrob	-0,892396032	1,08E-09
Fam65c	-0,892252485	0,000226868
Pank3	-0,890317912	3,77E-09
H1fx	-0,889126561	2,62E-07
Id4	-0,887365821	7,46E-05
Mkrn3	-0,887054739	0,006191896
Ube1y1	-0,885490556	2,16E-08
Spag5	-0,884911804	3,82E-12
Susd1	-0,880284145	0,000103891

Adam19	-0,879685805	4,12E-12
Rasip1	-0,87758357	1,47E-10
Bahcc1	-0,87720187	2,85E-12
Tbc1d9b	-0,875847038	1,06E-11
Ormdl3	-0,87367788	4,29E-08
Tmem97	-0,872670116	2,78E-10
Efhc2	-0,870172645	0,003947425
Fam171a2	-0,87013073	3,59E-05
Pvt1	-0,869169601	0,001859248
Ank2	-0,868284245	7,54E-09
Aldoc	-0,868115515	2,94E-08
Mfsd11	-0,865289499	5,40E-12
Phb	-0,862026679	2,08E-11
Peg3	-0,861921403	2,31E-16
Fam189a2	-0,861230793	0,005717844
Ccdc137	-0,860381609	1,03E-05
Elovl4	-0,859031544	0,001469848
Gm11019	-0,85876356	6,65E-10
0610010K14Rik	-0,858650893	4,08E-09
Zcchc10	-0,857480541	4,55E-06
Fam184a	-0,857058641	0,000517038
Snx11	-0,856611224	8,00E-06
Prpsap2	-0,856081073	1,59E-09
Tmem204	-0,855887386	0,003183173
Abca5	-0,854771098	5,38E-05
Nle1	-0,854271737	7,23E-08
Zrsr1	-0,854068505	2,13E-06
Atp1a3	-0,853937683	3,59E-05
Sh2b3	-0,853825929	8,58E-09
Foxr1	-0,853736739	9,83E-07
Msh5	-0,853012081	0,000301978
Nhedc1	-0,852587526	0,000333719
Kif3a	-0,846343499	5,93E-10
Aarsd1	-0,845815144	5,20E-09
Gm10246	-0,842594167	0,000347023
Cpd	-0,840926039	4,00E-10
Six2	-0,840300406	0,006651774
Ldlrad3	-0,839264516	3,50E-08
Tet2	-0,838614507	5,28E-08
Micall2	-0,838528636	0,000592211
Slc22a5	-0,83770541	1,13E-05
Nfatc1	-0,837577663	5,34E-06
Rab6b	-0,83673741	0,000108435
Limd2	-0,836044899	1,97E-11
D630045J12Rik	-0,835113758	2,04E-07
Accn2	-0,834540432	0,002967099
Abca1	-0,834510156	1,14E-05
Pex11a	-0,834388299	0,001912229
Sgk1	-0,83360775	1,06E-08
Gnb4	-0,833227674	1,60E-07
Pla2g10	-0,832832129	0,009871373

Tnip2	-0,832435392	0,001397227
Spag1	-0,831985306	0,002400704
Plxdc1	-0,830121792	0,000810304
Fstl4	-0,829988035	0,006170485
Smad6	-0,829804218	1,10E-05
Eef2k	-0,828939249	2,65E-05
Coro1a	-0,828878092	0,007104103
Slc39a11	-0,826604935	3,09E-06
Rab34	-0,825438873	3,04E-08
Reep1	-0,825045491	7,08E-05
Cd97	-0,824828574	2,65E-09
8030474K03Rik	-0,823970821	0,000887373
Trim25	-0,823038037	4,29E-11
Ephx1	-0,82280267	0,000506611
Pcdh18	-0,822493472	2,57E-05
Snrnp25	-0,820340263	2,50E-05
H2-T24	-0,820265002	1,48E-09
Lgr5	-0,820199421	7,67E-05
Tspan2	-0,820060464	4,04E-08
Akap1	-0,819270088	2,63E-09
Akap5	-0,818889636	0,007220848
Mael	-0,818824342	0,002879304
Gm10035	-0,815603114	7,88E-09
Ppp1r13b	-0,814622947	5,14E-08
Calcrl	-0,814045812	3,09E-07
Map2k3	-0,813760313	1,69E-07
Cyp2e1	-0,811439308	5,31E-09
Zzef1	-0,811300629	4,16E-08
Fam64a	-0,811234186	2,54E-09
Dnahc8	-0,809465866	1,46E-08
Trap1a	-0,808561989	3,36E-05
Parm1	-0,808284966	0,000524276
Ldb2	-0,808056837	1,63E-05
Chpt1	-0,805115268	9,58E-09
Wscd1	-0,804284329	0,004108297
Cyp2s1	-0,803617847	0,000240397
Prkab1	-0,803369466	1,69E-07
Mef2c	-0,802826135	0,000141742
Hapln1	-0,802365401	1,10E-06
Ccdc57	-0,802102766	0,000725652
Acly	-0,802048282	1,81E-12
Pip4k2b	-0,801721714	1,40E-09
Liph	-0,801083949	4,52E-07
Gga3	-0,800586097	5,12E-09
Dusp26	-0,799954107	0,001946316
3010026O09Rik	-0,799549968	0,000141939
Rab27b	-0,799105428	0,000136834
Mpv17l	-0,798454539	6,27E-10
2410002I01Rik	-0,796564179	1,80E-05
Shmt1	-0,796276138	6,63E-09
Rnf167	-0,795356587	1,31E-08

Ccdc45	-0,794801789	2,72E-06
1700020C11Rik	-0,792793142	0,002447307
Ppic	-0,792483131	4,40E-09
Aldh1l1	-0,792241843	0,001163812
Cox10	-0,790541417	6,10E-05
Arhgef4	-0,789575023	0,004298965
Synrg	-0,789541369	1,03E-10
Rapgef6	-0,789147785	1,32E-08
Map4k2	-0,789065516	2,12E-08
Fzd5	-0,788890094	6,54E-05
Tub	-0,788746801	0,002974088
Rab33b	-0,788320427	2,17E-10
Car8	-0,788130488	2,66E-05
Taf15	-0,785218781	1,50E-09
Atf4	-0,784648003	3,52E-09
Elac2	-0,78463765	6,11E-08
Abi3	-0,783243452	0,0001664
Klf8	-0,782307546	9,06E-05
Slc38a10	-0,782069554	2,83E-10
Kit	-0,781335182	9,99E-10
Nrcam	-0,780370088	0,006823986
Slc7a8	-0,779210615	0,000147873
Cnr2	-0,775888133	0,000244725
Gm6685	-0,77555966	0,004925304
Fdxr	-0,775343984	0,000478393
Mrpl38	-0,774383974	1,20E-07
Slc23a1	-0,773933418	6,27E-10
Tgfb1	-0,773313496	1,75E-07
Stat3	-0,771364385	1,17E-09
Map3k3	-0,770442861	2,59E-09
Zkscan17	-0,770311454	1,91E-09
Gimap9	-0,770115543	0,004996053
Pbld	-0,769854738	1,87E-09
Psmc3ip	-0,76734594	6,47E-05
Hus1	-0,766530733	2,83E-07
Lsmd1	-0,7658781	0,000265172
St3gal1	-0,76575465	5,30E-08
Gm4779	-0,765696553	0,009503281
Ly6g6e	-0,764719065	0,005626474
Nin	-0,764502575	3,53E-07
Esrrb	-0,764228451	1,47E-07
Pias2	-0,763634601	9,90E-08
Fignl1	-0,762744644	5,74E-09
Zc3hav1	-0,762441428	4,35E-08
Pilra	-0,762331565	4,64E-07
Fetub	-0,760800581	0,003283164
H2-T23	-0,760719925	1,32E-09
Hsd11b2	-0,759967882	0,006538719
Med12l	-0,758078025	0,000244725
Ppm1k	-0,757799035	1,07E-09
Dnajc7	-0,757370516	2,22E-09

Hspa4l	-0,757344664	4,56E-05
Pgs1	-0,756172145	9,50E-07
Nr5a2	-0,754742037	0,000620678
Slc25a35	-0,754573579	5,74E-05
Inpp4a	-0,7545304	5,40E-05
Slc36a1	-0,753354896	8,19E-06
Ranbp17	-0,752282525	2,25E-06
Xylt2	-0,750708539	1,38E-05
Zyg11a	-0,749000466	0,003753194
Rabep1	-0,748556205	1,80E-08
Crlf3	-0,747763275	2,22E-07
Kalrn	-0,747567437	1,13E-05
Gsg2	-0,747530575	4,20E-05
Mrps24	-0,747336875	0,000112597
Trpv2	-0,747167692	0,004691925
Mov10l1	-0,746531584	0,001224087
Dhx40	-0,745544764	1,82E-07
N4bp3	-0,744791062	4,78E-06
Rassf2	-0,744109658	2,22E-06
Ccdc134	-0,743311802	0,000634558
Nup85	-0,742966538	1,85E-08
1110067D22Rik	-0,742045016	7,22E-07
Ccdc99	-0,741925015	1,40E-06
C1qbp	-0,740539797	2,31E-09
Gm10355	-0,739786335	0,000769573
Rad51l3	-0,738051113	8,92E-06
Ankfy1	-0,737936806	1,15E-07
Ftsj3	-0,737888393	1,90E-09
1700006J14Rik	-0,737801734	0,003386527
Gimap8	-0,737265996	0,006727821
Jmjd6	-0,736113502	6,49E-07
Ints2	-0,736058963	5,43E-08
Slc16a13	-0,733794539	0,000395938
Nxf7	-0,733785925	0,004638782
Stard9	-0,733124224	4,25E-05
Uqcr10	-0,733056019	3,05E-06
Sirt7	-0,732463587	0,003249361
Galk1	-0,730336227	7,17E-08
P2ry1	-0,729101341	0,00337267
Pip4k2a	-0,728759376	9,72E-06
Usp43	-0,728345624	0,000630387
07-sep	-0,72788833	2,36E-09
4930556J24Rik	-0,727714728	0,000652486
Slc26a11	-0,727060216	0,002442521
Cd34	-0,725532871	3,14E-08
BC030867	-0,724110396	2,29E-05
Ddx56	-0,72361918	6,02E-08
AK129341	-0,723245638	0,002921653
Hspa12b	-0,722561468	0,000123336
Gpr146	-0,721155882	0,00613261
Smarca2	-0,721107995	6,55E-06

Tapbpl	-0,720659926	4,94E-08
Gm10785	-0,719475667	1,92E-07
Cyb5d1	-0,719079939	0,001797519
Trib2	-0,718731838	0,000128543
Nrp1	-0,717243157	2,10E-07
Dnaja4	-0,71696331	0,006245766
Robo1	-0,716648283	1,44E-07
1110002N22Rik	-0,71617209	0,000203321
Ramp2	-0,714904226	9,43E-07
Kat2a	-0,712936601	3,68E-08
Jhdm1d	-0,712129547	4,99E-05
Trp53i13	-0,711221566	0,004565963
2010011I20Rik	-0,710829951	0,0031605
Dll4	-0,71071177	0,001384892
Npm1	-0,710372143	2,84E-10
Ccdc104	-0,710157307	3,44E-05
Wnk3-ps	-0,709008756	0,000577326
Nrarp	-0,708319561	0,001035505
Ern1	-0,708160922	0,000701517
Mycn	-0,707852307	2,22E-06
Gaa	-0,707824428	2,67E-07
Stard5	-0,707786293	0,001636235
Usp36	-0,704956554	5,07E-07
Ehbp1l1	-0,704832321	4,71E-05
Angel1	-0,704459764	0,000134652
Atg16l2	-0,704457953	0,00392755
Eftud2	-0,703766211	5,79E-09
Hmga2	-0,703402482	3,85E-08
Strada	-0,702790937	6,04E-06
Kif21b	-0,701869355	4,14E-08
Syt7	-0,701541142	0,003647512
Zfp69	-0,700972831	0,002691973
Dmrt1	-0,700371746	0,001170967
B3gntl1	-0,699368041	0,000158195
Top3a	-0,699157577	1,66E-05
Hint1	-0,69842035	2,34E-07
Nlk	-0,698223549	7,02E-07
F2r	-0,697987946	5,67E-09
Fn3krp	-0,697952855	0,000657301
Smg6	-0,69769799	3,35E-07
Nmnat1	-0,697159491	4,72E-08
Srm	-0,69679204	1,40E-06
BC017643	-0,69348931	5,68E-05
Csgalnact1	-0,692966972	0,000660311
Cars	-0,692752522	9,63E-07
Fat4	-0,692560103	6,82E-05
Brca1	-0,692339916	1,91E-07
Cmas	-0,69155198	4,97E-07
Epn2	-0,690155227	1,70E-07
Tcea3	-0,689923238	0,005423388
Plcl2	-0,689610832	4,91E-05

Nmt1	-0,688934816	1,38E-07
Slc43a1	-0,688176367	0,000114255
Med24	-0,688133866	1,61E-07
4933427D14Rik	-0,687879124	2,72E-05
Syngr2	-0,686887233	8,24E-06
Gatsl3	-0,686648594	0,000227303
D11Wsu47e	-0,685814676	0,000127699
Tcf7	-0,683761431	2,24E-07
BC096441	-0,683314261	0,005605161
Phkg1	-0,683298868	7,85E-06
Dus1l	-0,682847137	3,48E-06
Ank	-0,682839426	0,00035206
Mapk9	-0,682203244	2,13E-06
Utp6	-0,681538483	2,83E-07
Ttc19	-0,680804698	0,000263115
Tmem88	-0,680733397	2,00E-05
Rffl	-0,679392686	1,10E-06
Top2a	-0,678728405	5,03E-09
Dcxr	-0,677063904	0,000744386
Kif26a	-0,676387719	1,95E-05
Aldh18a1	-0,676370414	8,63E-06
Gpr116	-0,675897278	1,23E-05
Nf1	-0,67536598	2,42E-07
Mdm1	-0,674822667	4,03E-05
Dhx33	-0,67264607	1,88E-06
Adck1	-0,671968874	0,000665086
2310003H01Rik	-0,670584006	0,000132275
Aspscr1	-0,669888111	6,44E-06
Gna13	-0,669302178	6,10E-05
Slc16a1	-0,669236362	4,74E-09
Gm4825	-0,669184833	4,14E-05
Sap30l	-0,667724719	0,000887373
Zswim7	-0,667660703	0,003053806
Gstm5	-0,666335365	0,000316296
Aatf	-0,665338215	1,81E-05
Aff3	-0,665211594	4,17E-05
Ly75	-0,665056067	1,34E-05
Rbm20	-0,665038072	0,001994581
Cant1	-0,664820926	5,90E-06
Thoc5	-0,664693571	5,44E-06
Man1a	-0,664344549	0,0003397
Scml4	-0,663122244	0,00235842
Cap2	-0,662987151	0,000103354
Chchd10	-0,662964321	7,87E-05
Sgce	-0,662772769	1,90E-05
Dvl2	-0,662580971	1,35E-06
Nhp2	-0,662011616	1,29E-06
Ksr1	-0,66143629	0,000141495
Creg1	-0,660326009	0,007005502
Fbxo15	-0,66008236	7,71E-05
Mpg	-0,659886855	0,00017914

Uqcrq	-0,659570624	8,66E-05
Lta4h	-0,659398944	5,29E-06
Poldip2	-0,658981695	3,72E-06
Arhgap30	-0,658167922	0,005130193
Fbn1	-0,657977679	2,82E-07
Gm5356	-0,657281523	0,000123889
Ppp1r9b	-0,657025399	4,17E-06
Naip2	-0,655588453	0,000150685
Ddx25	-0,654772892	0,001307129
Rdm1	-0,654753406	0,000121439
Rai12	-0,654307012	1,48E-05
Frmd4b	-0,654175149	9,51E-06
Nanog	-0,652789733	1,05E-06
Tsr1	-0,652136006	5,64E-07
Mrpl12	-0,651277051	3,99E-06
Lig3	-0,649825573	5,03E-07
Fbf1	-0,649694277	8,22E-06
Amigo2	-0,64942551	0,001257542
Ptch1	-0,649261002	6,12E-07
Slc17a9	-0,64832061	0,006384111
Gps2	-0,648265368	0,000313914
Mybbp1a	-0,647212542	3,69E-08
Slc25a11	-0,646942338	3,80E-06
Znrd1as	-0,646856239	0,008982428
Herpud1	-0,646786469	0,002349315
Lrrc2	-0,645406586	2,72E-06
Kctd2	-0,645267084	9,15E-05
Rpain	-0,645126347	0,005963644
6330545A04Rik	-0,644761466	0,003281986
Cct4	-0,644592977	4,68E-08
Rangrf	-0,644500019	0,000793444
Fasn	-0,643843252	2,66E-08
Gm6003	-0,643524191	0,001706664
Clint1	-0,643437917	7,12E-07
Taco1	-0,641695489	0,005714284
Stxbp5	-0,641448652	3,08E-05
Ghdc	-0,641302634	9,42E-06
Bcl6b	-0,641215338	0,000246459
Psmb6	-0,640543246	1,00E-06
Med1	-0,640297812	2,94E-06
Tiam1	-0,640022505	3,13E-06
Cflar	-0,638573166	6,98E-07
Gas2l3	-0,637442695	3,20E-07
Acss1	-0,637147187	0,003852485
Mknk1	-0,637053139	0,002274221
Fbln1	-0,636598103	8,57E-05
Rpl26-ps2	-0,636076455	6,01E-07
Myo19	-0,636062443	0,000404464
Nat9	-0,635933045	0,002480451
Atad5	-0,63589785	7,70E-06
Aftph	-0,635880242	2,19E-05

Pfas	-0,635277967	2,70E-07
Zfp652	-0,633672733	7,48E-07
Vps54	-0,633632299	3,03E-06
Polr2a	-0,633379419	1,13E-07
Gm5116	-0,631388477	0,00222664
Gm6666	-0,631388477	0,00222664
Ube2o	-0,631183324	7,51E-06
Cnot6	-0,631003874	3,17E-06
Hspa4	-0,63047317	1,15E-07
Rhot1	-0,630340681	1,62E-05
Egfl7	-0,629588998	6,43E-06
Rpl26-ps4	-0,629573194	6,54E-07
Ceacam1	-0,627062513	0,009362609
Plvap	-0,626997649	0,001466118
Acadvl	-0,626470029	0,000283425
Zfp354c	-0,625274449	0,000186008
Fam58b	-0,624597482	0,003233887
Gm16181	-0,624420445	0,000460303
Gss	-0,624268065	0,001094295
Psmb8	-0,624052714	0,006538719
Epha4	-0,623590765	0,000414723
Ulk2	-0,623336152	0,000127496
Tanc2	-0,623276758	0,000235365
Psmb3	-0,621942723	5,71E-06
Exosc2	-0,621934358	2,80E-06
BC023829	-0,62171102	0,000164512
Cd59a	-0,621408973	0,000706929
Sord	-0,617760141	0,002710939
Utp18	-0,617567209	1,16E-05
Emb	-0,617538551	1,02E-07
Mapk7	-0,616934711	1,92E-05
Fam114a2	-0,616340227	1,44E-05
Gm10585	-0,616274895	0,00056245
Birc5	-0,615899112	2,15E-05
Gli2	-0,615461782	0,001526568
Prpsap1	-0,615266414	1,78E-05
Tmem93	-0,614412138	0,001203768
Pwwp2a	-0,614398699	0,000258325
Hacl1	-0,614238572	0,003791714
Dppa4	-0,613351794	0,000281597
Pes1	-0,612499158	1,42E-06
Gm5531	-0,612288232	6,78E-05
Tmem30c	-0,611970215	3,84E-05
Napepld	-0,611850095	0,008630326
Pnpt1	-0,611796847	1,40E-05
Unc119	-0,611589446	0,00062818
Tmem38b	-0,611505128	0,006651774
Rpl26	-0,610900811	2,14E-07
Kif18b	-0,610508428	3,64E-05
Ccdc88a	-0,610067859	7,53E-06
Tlcd1	-0,609697135	0,008311046

Eif5a2	-0,609068829	0,000143988
Rfng	-0,608960283	0,000544747
Ict1	-0,60896002	0,000898894
Urb1	-0,608776693	5,34E-05
Hscb	-0,608741011	0,005565816
Lrrc45	-0,60831841	0,001181584
Narf	-0,607534114	0,000178214
Pnkd	-0,606024222	0,002316642
Pigs	-0,605883796	3,33E-05
Srr	-0,604721602	6,70E-05
Jam3	-0,604462025	0,001177331
Pdk2	-0,604226928	0,009381272
Gm10136	-0,602960011	4,78E-07
Wdr92	-0,602830623	0,000126261
Ndrg3	-0,602395678	1,78E-05
Bambi	-0,602247556	0,000668019
Polg2	-0,601130816	0,009267549
Atp5g1	-0,600372087	6,39E-06
H2-Q8	-0,600187401	0,002931304
Cdk5rap3	-0,599846752	2,25E-05
Pnoc	-0,598653504	0,004766096
Klf2	-0,598070942	0,000867706
Ctns	-0,596108424	0,000207831
Gm5058	-0,59595363	0,002126046
Aff4	-0,595868593	3,02E-07
Eea1	-0,593283779	0,000237875
Eif4enif1	-0,59282243	6,07E-06
Gm4950	-0,591878868	0,000132763
Smurf2	-0,591875761	0,000107351
Flt4	-0,591122025	9,04E-05
Srp68	-0,590959208	7,01E-06
Unc13d	-0,590878938	3,34E-05
Eme1	-0,59056473	0,000112886
Nol11	-0,590370806	1,98E-05
Wrap53	-0,590314712	0,001809399
Gps1	-0,590242117	1,19E-05
Pigw	-0,58963944	0,009203912
Srebf1	-0,589586228	2,55E-05
Atox1	-0,58885566	0,000566781
G6pc3	-0,588653955	0,001288182
Acsl1	-0,587609821	0,001109372
Rad50	-0,587377044	1,23E-05
Lrrc59	-0,58693636	3,29E-06
Taok1	-0,586158299	2,24E-06
Prr11	-0,586092581	2,00E-05
Abcd4	-0,585788633	0,000171509
1810032O08Rik	-0,583903307	0,001251737
Prox1	-0,583772749	0,006010568
Tdgf1	-0,5828902	3,34E-05
St6galnac3	-0,582259066	0,003502925
Hspa12a	-0,581928448	0,003655797

Snf8	-0,581772875	0,000486728
Dennd2c	-0,581311087	0,000860898
Smek2	-0,581281357	3,99E-05
Mrps23	-0,581092946	0,000611184
Neurl4	-0,580803641	2,36E-05
Rnasek	-0,579972534	0,002209316
Zeb1	-0,578578955	0,000457736
9430038I01Rik	-0,578219069	0,002392184
Tmem194	-0,57808011	0,000295948
Larp1	-0,577329755	1,88E-06
Mks1	-0,575949251	0,000843547
Sacs	-0,575642795	0,000385099
Fam117a	-0,574844577	0,001167559
Usp34	-0,573967037	1,85E-06
H2-D1	-0,572500122	2,52E-05
Ifrd2	-0,571754121	0,000544575
Gm10569	-0,571027346	0,000894805
Pipox	-0,570767955	0,003120135
Insig1	-0,569686822	3,69E-05
Mmrn2	-0,568495811	0,001266375
Heatr6	-0,568441381	0,000160484
Git1	-0,568344564	1,60E-05
Ttf1	-0,567784623	2,38E-05
Papolg	-0,567408457	0,001293573
Ttc25	-0,566289585	0,005418353
Aurkb	-0,565689149	4,65E-05
Becn1	-0,56551495	9,80E-05
Dock8	-0,565375317	0,005249764
Shmt2	-0,56493935	0,00015574
Nkiras2	-0,564545306	0,000343687
Pctp	-0,564434214	0,00029599
1810027O10Rik	-0,563951687	0,002028186
Rpl19	-0,563078157	2,56E-06
H2-Q7	-0,562886911	0,002521824
Sfxn4	-0,562616736	0,000452033
Trim41	-0,562605224	0,000169336
Pcdh7	-0,561550669	0,003501796
Vps25	-0,560983032	9,37E-05
1810035L17Rik	-0,560788372	0,005294433
7420416P09Rik	-0,56039031	0,000130323
Sipa1	-0,560095571	0,000581323
Tmem11	-0,559610428	0,001553074
Cntd1	-0,559299187	0,002248556
Wdr45l	-0,558560684	5,35E-05
Per1	-0,558209891	0,000897887
Hmmr	-0,557094993	7,66E-06
P4hb	-0,556680758	7,01E-06
Tada2a	-0,556371351	0,000576432
Sec24a	-0,555951689	0,000139592
Sf3a1	-0,555592428	1,43E-05
Ppp1r15a	-0,555483233	5,77E-05

Ptcra	-0,554677918	0,003550083
Rpl27	-0,553627813	6,63E-06
Rpl27-ps3	-0,55360184	6,65E-06
Gm4953	-0,553347825	0,003765074
Parvb	-0,552138781	0,000254573
Sykb	-0,551893478	0,000175422
Sh3pxd2b	-0,551687813	7,59E-05
Fads1	-0,550972815	4,05E-05
Arhgef3	-0,550588824	0,004563977
Rpl27-ps1	-0,549668219	2,85E-05
Casc3	-0,54943575	4,03E-05
Cbx2	-0,549320662	0,000607637
Dcaf7	-0,549015618	0,000825177
Usp32	-0,547978449	0,000181848
4933439F18Rik	-0,547957431	0,000159989
Nprl3	-0,547491059	0,000754111
P4ha2	-0,547003216	0,004487017
Cog1	-0,546467702	0,001185551
Ncor1	-0,54610812	1,13E-05
Mical1	-0,545638794	0,000701517
Senp3	-0,545622601	5,68E-05
Cd93	-0,544276789	0,000121146
Clec1a	-0,543686524	0,00708036
Dusp3	-0,541210807	0,00054566
Hipk2	-0,540366321	0,006908496
D11Wsu99e	-0,540349375	0,001244398
Gpn1	-0,540323785	0,000295452
Foxk2	-0,539295811	6,45E-05
Camta2	-0,539008889	0,003401355
Ahsa2	-0,538957833	0,000178145
Rps27a-ps2	-0,537638861	8,33E-06
Adarb1	-0,537179996	0,00910013
Ifrd1	-0,536960371	0,001019074
Fnip1	-0,535005979	0,000473619
Rps27a	-0,53459006	9,11E-06
Med9	-0,534142573	0,007482998
Flt3	-0,533550355	0,009439873
Mbnl1	-0,531931306	0,004473806
Zfp521	-0,53192321	0,001601135
Pnpo	-0,531441797	0,003553106
Mars	-0,531203782	0,000124388
Nploc4	-0,530885351	8,14E-05
Hgs	-0,530228219	0,00038168
Impdh1	-0,529822885	0,00344433
Abr	-0,528841128	0,000177263
Gm5329	-0,528778865	0,001694465
Nufip2	-0,528413383	0,000143799
Ica1	-0,527450992	0,008268175
Ccdc55	-0,527344463	0,000833766
H2-T22	-0,527235803	0,00235842
Dph1	-0,52720836	0,004030482

Gm8290	-0,525974435	3,52E-05
Rnf187	-0,525851718	0,000122565
Coil	-0,525751419	0,002580715
Pus10	-0,525545161	0,000747422
Gm7367	-0,525499977	0,000205455
Fam100b	-0,52543112	0,000192613
Osbpl7	-0,525335207	0,008121817
Cyp4x1	-0,523354121	3,77E-05
Cox18	-0,523187616	0,009671423
Fabp5	-0,521997497	0,004042971
Recql5	-0,5218243	0,001412764
Ddah2	-0,521568618	0,000151975
Wdr34	-0,520984927	0,003698797
Rab11fip4	-0,520870338	0,000520264
Map3k11	-0,520371656	0,000528086
Npm3	-0,520034179	0,00085868
Dmxl2	-0,519498748	0,006957338
Psmd12	-0,519316848	0,00014229
Rdh11	-0,518808417	0,002195398
Eif1	-0,518526053	6,47E-05
Eral1	-0,518415112	0,002400704
Gm16378	-0,518113031	0,000158769
Mett10d	-0,518098247	0,001270212
Agl	-0,517257394	7,15E-05
Nbeal2	-0,517090024	0,005052687
Atp7a	-0,515319995	0,000985891
Trf	-0,515186156	0,004925304
Rai1	-0,514513498	0,000121555
Pck2	-0,514367669	0,003204317
Gosr2	-0,514267458	0,00043776
Gstp2	-0,514117288	0,000811129
Mink1	-0,513713381	0,000512229
Mtmr3	-0,51341071	0,000205121
Mlx	-0,51252413	0,005408331
Gm8137	-0,512105043	4,56E-05
Gm8264	-0,512105043	4,56E-05
2500004C02Rik	-0,511773498	0,003280313
Gm6177	-0,510926469	7,09E-05
Gm10132	-0,510905253	3,13E-05
Ugdh	-0,510798452	0,000876477
Tmx4	-0,510167052	0,00422089
Dgke	-0,510083814	0,000447531
Gm8158	-0,509779417	5,90E-05
Gm8112	-0,509779417	5,90E-05
Rpl23a-ps3	-0,50977508	3,05E-05
Gnb2l1	-0,509693895	1,73E-05
Nt5c	-0,50959344	0,008816508
Sod2	-0,509018486	0,006022489
Gm5160	-0,508908737	4,67E-05
Lsm12	-0,508767834	0,000521636
Arhgef15	-0,508720163	0,000916023

Psmc5	-0,508555778	0,000258872
Pkn3	-0,507960229	0,008310695
Gm10335	-0,507917602	3,41E-05
Sox2	-0,507734356	0,002261947
Prpf8	-0,507353775	1,90E-05
Dock9	-0,507316112	0,000491143
Ugp2	-0,507230051	0,003002511
Cnot8	-0,507209368	0,000506611
Ankrd26	-0,507084841	0,002474218
Sar1b	-0,506921298	0,004241162
Ppia	-0,506790656	2,22E-05
Gm10123	-0,506708472	2,23E-05
Tnfsf10	-0,506624173	0,004214179
H2-T10	-0,506320649	0,008309901
Rpl23a	-0,506243063	3,45E-05
Pde3b	-0,50611454	0,001997824
Stard3	-0,505744897	0,008016254
Gm3940	-0,50541915	5,93E-05
Rcan1	-0,505410508	0,004430478
Kdm6b	-0,50494575	0,000204436
Guk1	-0,503787738	0,002442605
Psmd3	-0,503521215	0,000145227
Gm10250	-0,502391752	0,000758231
Braf	-0,501458442	0,00029513
Fabp3	-0,501054612	0,001822337
Foxh1	-0,500504382	0,000504407
Smcr8	-0,500166318	0,002838491
Eif4a3	-0,499154257	0,000225789
Akap13	-0,498834674	0,004160759
Gm9234	-0,49875231	5,41E-05
Rpl23	-0,498294872	4,26E-05
Slu7	-0,497916902	0,001261272
Rmnd5b	-0,497326627	0,008026631
Ttc1	-0,496860711	0,00337267
Rpl23a-ps1	-0,496651493	0,000147873
Nbr1	-0,496080748	0,000178145
Supt7l	-0,49606349	0,000549977
Gm12666	-0,495334341	0,005714177
Cdc6	-0,494761252	0,001265
Acvr1b	-0,49441727	0,001186494
Mtif2	-0,493803557	0,001455727
Canx	-0,493698416	7,59E-05
Zfp692-ps	-0,493685973	0,006652054
Ublcp1	-0,493668282	0,002582309
Ptp4a3	-0,493287616	0,003120135
Rpl38	-0,493213241	0,000141707
Rps6kb1	-0,493067204	0,003508847
Alkbh5	-0,493001428	0,000656327
Gm10923	-0,491771107	0,00012654
Atp5h	-0,490705403	0,00073569
Mrpl10	-0,489405989	0,001344493

Amz2	-0,489351276	0,00178995
Tbrg4	-0,488737943	0,000669178
Gm6096	-0,487648305	0,001451835
1700020O03Rik	-0,486661785	0,008730587
Dlg5	-0,486636899	0,00012658
Fxr2	-0,486030721	0,000409031
Gm8994	-0,485470594	0,001758984
Pygl	-0,485095945	0,007815734
Zfp36l2	-0,484896018	0,000506669
Coasy	-0,484656805	0,004565963
Dhx8	-0,483691832	0,000613601
A230046K03Rik	-0,483246497	0,000152234
Ift172	-0,482962239	0,002490734
Ccm2	-0,482156693	0,004362802
1200014J11Rik	-0,482073197	0,001720982
Ppp3r1	-0,481944288	0,000733649
Drg1	-0,481613181	0,000534282
Fam195b	-0,481385151	0,00273992
Gpr157	-0,481253322	0,001228087
Arf2	-0,481104525	0,009752192
Dennd5b	-0,480905494	0,00024383
Acaca	-0,480345739	0,000255693
Exoc7	-0,479646088	0,003360743
Ets1	-0,479618289	0,000267294
Ddx42	-0,478566879	0,00038257
Pif1	-0,477700241	0,007986351
Ddx52	-0,477564404	0,001937367
Atr	-0,477033865	0,000664414
BC017647	-0,477006513	0,005898229
Supt4h1	-0,476849921	0,005413051
Spnb2	-0,476649277	6,72E-05
Sco1	-0,47604564	0,004474042
Plekhg1	-0,475346119	0,003454861
Psme3	-0,475229923	0,000366483
Pcnx	-0,475059712	0,000903014
Trim37	-0,474047162	0,000607677
Rnf144a	-0,473823164	0,003698797
Anapc11	-0,47353182	0,005605161
Cd300a	-0,473530281	0,000785872
Dcakd	-0,472595498	0,000759337
Med13	-0,472310551	0,000322661
Ube2z	-0,470729011	0,000536681
2610028H24Rik	-0,470201026	0,006024832
Cep164	-0,469969568	0,002611936
Cops3	-0,46926277	0,001169248
Mdc1	-0,468842052	0,000322708
Ogdh	-0,468770112	0,000452492
Exo1	-0,467833317	0,005688904
Kpnb1	-0,466340163	9,62E-05
Nf2	-0,465412614	0,00074885
Neu3	-0,465256408	0,002628901

Fbxw11	-0,464305325	0,000947169
Ap1b1	-0,464304094	0,001016791
G3bp1	-0,46415128	0,000205538
Gstp1	-0,462819419	0,002582309
4930422G04Rik	-0,46199873	0,002072208
Wipf2	-0,461412521	0,003412553
Chd3	-0,461284433	0,00498789
Thoc4	-0,461240656	0,001936187
Gldc	-0,460893709	0,001075993
Zmiz2	-0,458904306	0,001450735
Pitpna	-0,458670128	0,00355143
Flii	-0,45861702	0,000743395
Rasa3	-0,458158251	0,004353122
Ascc2	-0,458111693	0,003204201
Ldhb	-0,457761641	0,001632683
Ggnbp2	-0,457636131	0,001789516
Stard4	-0,457426124	0,001829748
Sec61g	-0,457064686	0,004938515
Gjc1	-0,456720277	0,005923857
Rab11fip3	-0,455042024	0,002342632
05-sep	-0,45498522	0,005901394
Prkar1a	-0,453719147	0,000560883
Lama4	-0,453184375	0,003187951
Msi2	-0,45295889	0,001394796
Blmh	-0,452190109	0,001240901
Ppm1f	-0,450995584	0,001328937
Nos3	-0,450455555	0,006385078
Mki67ip	-0,450432298	0,00410654
Snn	-0,450244371	0,002529292
Mrps7	-0,448535357	0,007761428
Mettl2	-0,448497564	0,006294048
Llgl1	-0,44816101	0,001087151
Cpeb4	-0,447725907	0,008578041
Ccdc43	-0,447634263	0,00688482
Akap10	-0,447021636	0,00936922
Gosr1	-0,446491878	0,008304955
Txndc17	-0,44593375	0,003657039
Appbp2	-0,444822145	0,003580834
Cdkn2aipnl	-0,444190909	0,005591729
Tbcd	-0,443040124	0,003009392
Mbtd1	-0,442120869	0,001140761
Unk	-0,441784244	0,005258288
Glod4	-0,440448429	0,003650812
Gm5576	-0,437356514	0,006244942
Scd1	-0,437321318	0,000897887
Rpa1	-0,436927619	0,00174401
Pelp1	-0,435311735	0,001729599
Eif5a	-0,432628685	0,000485799
H2-K1	-0,431541341	0,002594526
Mrpl45	-0,430286703	0,004439017
Atpaf2	-0,430177681	0,007623526

Drg2	-0,429609346	0,004775859
Psmd11	-0,429233007	0,003440561
Lap3	-0,427422916	0,005014002
Fads2	-0,426826562	0,002561616
Zmynd8	-0,425464355	0,001181177
Ablim1	-0,425398716	0,00787459
Notch1	-0,425335689	0,002445912
Smarce1	-0,425137166	0,001800446
Dhcr7	-0,422487102	0,006985072
Birc3	-0,42235134	0,007995354
Rab1	-0,420653516	0,002529292
Eif4a1	-0,419941235	0,000720211
2610507B11Rik	-0,419633213	0,001084965
Spag7	-0,418554804	0,008159826
Leprel2	-0,418012939	0,008309901
Vim	-0,416320001	0,000938888
Rrp12	-0,415165339	0,008575044
Tmem131	-0,414882373	0,003515775
Nek4	-0,414306501	0,007918055
H2afv	-0,41417384	0,008017763
Nme1	-0,411909822	0,006332246
1500010J02Rik	-0,410652371	0,002944238
2310067B10Rik	-0,408932292	0,006600177
Itpr1	-0,408619062	0,003197062
Rptor	-0,4078563	0,005445972
Mdn1	-0,40701271	0,001723198
Fth1	-0,406755738	0,002606783
Impdh2	-0,406364655	0,002606783
H3f3b	-0,405393551	0,001264563
Nme2	-0,404440992	0,003437796
Pttg1	-0,403188268	0,008944715
Pde2a	-0,399706285	0,009282946
Rnf213	-0,390457722	0,005605161
Smtn	-0,385712276	0,009906688
Podxl	-0,384652616	0,000781199
Hdac6	-0,381504212	0,009955613
Tle3	-0,379076888	0,009217234
Iars	-0,374578125	0,007134046
Sqstm1	-0,372270222	0,009420072
Plcg1	-0,372168702	0,006652054
Ppp2ca	-0,371218251	0,006493945
Brd8	-0,370687841	0,00787168
Csnk1d	-0,367983091	0,009032864
Larp7	-0,367617857	0,009955978
Ywhae	-0,366047878	0,004196806
Supt6h	-0,36109876	0,008358275
Ivns1abp	-0,351799855	0,008507744
Arhgdia	-0,349263775	0,008767877
Herc1	-0,334396701	0,007647296
Mid1	-0,328654542	0,006596064
Ptma	0,335144412	0,009627942

Ubc	0,337401113	0,007609405
Ftl1	0,339604536	0,00268526
Gm10116	0,340036322	0,002209472
Tpt1	0,345591589	0,005423388
Tuba1b	0,351451814	0,004016424
Mcl1	0,357020029	0,007798065
Gnas	0,357373921	0,00978487
Tuba1c	0,358811112	0,003220112
Hmgn1	0,363372518	0,008920149
Tagln2	0,364967919	0,006117415
Lamb1	0,367693502	0,006810999
Cdkn1a	0,368479424	0,009586944
Ctsb	0,369846258	0,005556256
Akap12	0,372612605	0,002878105
Wnk1	0,378611226	0,004539179
Ptprs	0,380148397	0,007339811
Coro1b	0,383032061	0,00963026
Clic1	0,383349218	0,006985072
Glt25d1	0,386059684	0,009338957
Slc7a11	0,386875304	0,003064904
Mlec	0,392082597	0,004104271
Lamc1	0,393728262	0,002279343
Plin3	0,394591684	0,006911738
Tuba1a	0,396465389	0,0008244
F11r	0,396989252	0,005611516
Tjp1	0,400638795	0,003054925
Pdlim1	0,401508045	0,00490237
Cdk4	0,402377139	0,005275694
Fyttd1	0,404626484	0,003586519
Stxbp2	0,406104453	0,006170485
Hif1a	0,406225237	0,005431758
Pls3	0,406935081	0,008020842
Tgm2	0,409356238	0,008913851
Colec12	0,409379227	0,007755132
Lgmn	0,409488482	0,00716599
Bex4	0,410145202	0,004999014
Cttn	0,410888981	0,00283025
Ppp1r12a	0,412396362	0,004893891
Zfp462	0,413391218	0,006039852
Bcl2l1	0,414802628	0,008311046
Sorl1	0,415756018	0,003858768
Sall1	0,415974347	0,005857164
Fam60a	0,417038393	0,001744733
Slc38a1	0,418867806	0,007280701
Asah1	0,419775076	0,002597712
Dnaja2	0,420078009	0,00222664
Pcbp4	0,423688264	0,004741085
Cul4a	0,423769685	0,004281283
Utf1	0,426616369	0,002038098
Smad3	0,427167	0,008978655
Calu	0,427891449	0,001061492

Fem1b	0,427995532	0,001902071
Odc1	0,4303012	0,000654666
Mbtps1	0,431983099	0,00136132
5730507C01Rik	0,432339785	0,007393401
Dhx38	0,43313576	0,005397859
Erbb2ip	0,433359396	0,008323765
Esyt2	0,433409791	0,006396813
Arf3	0,434438307	0,002491222
Ptp4a1	0,434610377	0,001743942
Arhgap1	0,435965759	0,00410717
Sft2d2	0,43649833	0,00614
Rbms1	0,436691297	0,002434889
Bmpr1a	0,436738673	0,002921653
Slc25a4	0,438451267	0,000619459
Dbn1	0,438910414	0,003724429
Diap1	0,439405691	0,001085221
Adss	0,439480568	0,001986446
Lass2	0,439914011	0,00383682
Rraga	0,440486214	0,007652143
Aplp2	0,440651122	0,00049552
Lamp1	0,441188553	0,000358677
Nuak1	0,442622866	0,00374802
Arglu1	0,443887449	0,007183475
Hdac1	0,444449826	0,001261272
Rab8a	0,444540695	0,008730353
Zfp219	0,444743613	0,005142208
Erlin2	0,444834559	0,002597712
Glipr2	0,445079724	0,001588237
Cacnb3	0,445498381	0,00934902
Kras	0,445894016	0,002597712
Ctnna1	0,446136803	0,000399596
Arhgap5	0,44769982	0,003166967
Cd164	0,449369615	0,000476665
Flnb	0,450248272	0,00030679
Akt1	0,450293672	0,002394819
2900026A02Rik	0,450598318	0,006727052
Dennd2a	0,451033856	0,00568406
Gm10093	0,451053536	0,001075993
Rbm3	0,451367512	0,000744779
Pik3cb	0,453223585	0,002207067
Oaz2-ps	0,453789674	0,003508847
Scap	0,453799089	0,006684441
Abcb1b	0,454050887	0,007654237
Tmsb10	0,454774126	0,001064539
Sh3d19	0,455018625	0,002033309
Tcf7l1	0,455855345	0,002869973
Fam115a	0,456390177	0,005303981
Pbx2	0,456530279	0,002792902
Pxdn	0,456778193	0,001282336
Frg1	0,457201867	0,006412404
Gabarapl2	0,45769361	0,00580155

Acadl	0,457896935	0,005725907
Zfp808	0,45877904	0,001925477
Nae1	0,459202158	0,002318488
Klhl26	0,459778414	0,005028283
Car4	0,460599666	0,002089124
Sbk1	0,463281953	0,005300538
Cd63	0,463837084	0,00081144
Phlda3	0,464162306	0,003319421
Cdc42se1	0,465095208	0,008112069
Dst	0,465107804	0,001263167
Clcn3	0,465381718	0,001075993
Emd	0,466037558	0,00187431
Itpr3	0,467039109	0,002738893
Hunk	0,468036598	0,003515775
Gls	0,468191633	0,001612416
Plxnb2	0,468576066	0,000682463
Ier2	0,469012959	0,008696067
Mtch1	0,471917133	0,000990686
Hadhb	0,472328429	0,004741974
Rock2	0,472514314	0,000685229
06-sep	0,473958739	0,000514757
Lefty1	0,474847322	0,002974088
Pik3c2a	0,475851841	0,00266275
Etl4	0,476617577	0,000684356
Sumo3	0,476802548	0,001589611
Lrp5	0,477229913	0,000774022
Tmem188	0,47808771	0,009159257
Pea15a	0,479151599	0,001389743
Smyd2	0,479378334	0,007267578
Pcyox1	0,479523843	0,002412641
Strn3	0,479731044	0,001317705
Tmem63a	0,480101818	0,006947817
Eif4g3	0,480337361	0,001867173
Cnot7	0,481830892	0,000802255
Tubb6	0,48196799	0,000205455
6430527G18Rik	0,482033472	0,006913705
Setd7	0,483011603	0,000689989
Wdr35	0,483566924	0,002909045
Asl	0,483890424	0,006039852
Map4k5	0,48440533	0,000825177
Hs2st1	0,48449197	0,006485819
Sox4	0,485365968	0,000847551
Mtss1	0,486452863	0,001994196
Exoc6b	0,487144154	0,004582985
Slc20a1	0,487445466	0,000244702
Lsm6	0,488176642	0,005754254
Ccdc88c	0,488539201	0,003256017
Arpc5	0,489279651	0,000632929
6720457D02Rik	0,489992986	0,008405594
Ripk4	0,490210846	0,003738731
Agpat4	0,49186291	0,001450735

Pou5f1	0,492225485	9,05E-05
Gprc5c	0,492558115	0,000669752
Qsox1	0,493117272	0,003543466
Lrp1	0,493861211	0,001261272
Map3k9	0,49462883	0,009671423
Pcgf5	0,496044052	0,005821545
Sema6a	0,497284994	0,002545285
Fhl1	0,497472655	0,000963554
Bex2	0,498012587	0,000477486
Ezr	0,498200753	0,000196258
Fblim1	0,498314171	0,001191749
Shc1	0,498896901	0,000359012
Myh10	0,499101611	7,80E-05
Stard3nl	0,50092281	0,002640335
Klhl7	0,501077234	0,003082078
Atp6v1b2	0,501213704	0,000149547
Ppp1cb	0,501227567	0,000113093
Ppp1r9a	0,501292467	0,003781394
1700017B05Rik	0,50158184	0,00171442
4632415K11Rik	0,502127928	0,00856969
Tmem184c	0,502524105	0,002761842
Tpd52	0,502528294	0,000141891
Stk17b	0,502770041	0,002324895
Cacng7	0,502823064	0,007404348
S1pr2	0,50288945	0,00568406
Calcoco1	0,503532707	0,001413314
Epb4.9	0,504415776	0,001638729
Ube2e1	0,504488947	0,001002435
Sdc1	0,504972602	0,001061882
C330019L16Rik	0,506250585	0,006229447
C1galt1	0,507140206	0,007738249
Samd1	0,50716931	0,003204317
Mllt4	0,507402	0,000358905
Lrrc42	0,507465649	0,001191749
Gipc1	0,510658442	0,000439636
Cnn3	0,511018695	4,82E-05
Ppp2cb	0,511631175	0,000227303
Def8	0,511960584	0,001317705
Itga5	0,51218076	7,13E-05
Ptprk	0,512303137	0,003418555
2310036O22Rik	0,512330964	0,003548788
Wsb2	0,512364912	0,001406695
Dock11	0,514586105	0,00171442
Tyro3	0,514921701	0,000246991
Cast	0,517119299	0,001373424
Rell1	0,517383199	0,001185989
Gm6055	0,518441234	0,002670628
Dcaf12l1	0,518457172	0,000777343
Myadm	0,518511428	0,000275966
Tmem132a	0,518661983	0,002809369
Plxna1	0,519260931	0,00012658

Prdx2	0,519730213	9,62E-05
Sgpl1	0,520104296	0,000188569
Plekha1	0,520856224	0,000241862
Gdi1	0,521404826	0,000123306
Litaf	0,521562141	0,000316296
Kremen1	0,521830591	0,000233472
Snx12	0,52210174	0,004422085
Ucp2	0,522248265	0,000301491
Glb1	0,522355369	0,00375988
Hk2	0,522565561	5,55E-05
Gm6169	0,522608145	0,000423267
Megf8	0,522759565	0,000282469
Fkbp8	0,523203074	0,000249089
Vcl	0,523636841	3,35E-05
Mex3a	0,524910827	0,000452033
Gramd4	0,525140966	0,002979873
Rhobtb2	0,525498202	0,007853374
Atp6ap1	0,526388304	0,000382443
Gcnt1	0,526688553	0,004874675
Atn1	0,52714058	0,000742042
Vasp	0,528540836	0,000180815
Crebzf	0,529416667	0,002773611
Marcksl1	0,529628237	3,77E-05
Pawr	0,530048156	0,000403938
Cd9	0,531915392	4,19E-05
Ctnnd1	0,533724597	1,68E-05
Smarca1	0,53374196	0,004024075
Sox11	0,534343563	0,000290693
Bahd1	0,535458765	0,001910763
Hmgb2	0,536012581	1,07E-05
Hmox1	0,536098839	0,000711958
Nt5c2	0,536385733	0,002136323
Nfkbia	0,538614675	0,001069143
Dync1li2	0,53900615	0,000497182
Tcf25	0,539347276	3,87E-05
Zbtb1	0,539550202	0,008660395
Acot2	0,540016901	0,002038098
Rab4a	0,540018009	0,004223333
Slc35f2	0,540047788	0,002606783
Irgq	0,540427694	0,002879143
Vdac3	0,540540994	6,61E-05
Pou3f1	0,541166067	0,009955978
Klc3	0,541679137	0,003376645
Adk	0,542463755	0,001771288
Rev3l	0,543231676	0,000402747
Cd81	0,543464456	1,44E-05
01-sep	0,543802027	8,53E-06
Gatsl2	0,543970213	0,001807457
Ngfrap1	0,544033817	2,78E-05
Wdr6	0,544085234	0,00014228
Slc44a2	0,545135961	0,000123336

Prkcz	0,545514352	0,001329285
Mcam	0,545686919	0,000124341
Nudt4	0,546344641	8,08E-05
Cacna1a	0,546687399	0,005524395
Epb4.1l1	0,547405495	0,000877673
Pdcl3	0,547647106	0,000376539
Slc25a24	0,547795628	0,000875419
Sepw1	0,547920163	0,000658203
Itfg1	0,548405406	0,000163228
Maged2	0,550243485	0,000136392
Pkdcc	0,550825548	0,002188283
Itgav	0,551637795	0,000286216
Plp2	0,552103174	2,32E-05
Plekhb2	0,552137907	0,001341529
Sirpa	0,554832855	0,004713756
Src	0,554853196	0,00028125
Irs1	0,555469367	0,00976463
5033414D02Rik	0,555584096	0,008417885
Slc5a4b	0,555918423	0,000439259
Pramef12	0,556821167	0,002670628
Ptprn	0,557520232	0,009056023
Cadm1	0,55789873	0,000135893
Fam125a	0,558029513	0,000879952
Icam1	0,560530512	0,000849321
Arhgap10	0,561755112	0,001000007
Mapk12	0,562061785	0,000820617
Nav1	0,562462294	0,000390058
Frem2	0,56359631	0,001828452
Tnfaip8	0,563716441	0,004997972
Ltbp1	0,563987064	0,00048098
Spnb3	0,564672805	0,000963554
Dact3	0,565327494	0,00119563
Slc4a2	0,565431186	0,00568406
Serf2	0,565497064	3,78E-05
Zic2	0,566431296	0,000840686
Ccdc64	0,566565131	0,004995411
Elf3	0,566600645	0,003205894
Cenpb	0,566774535	0,000815173
Tjp2	0,567031194	1,34E-05
Fam122b	0,567211917	0,00060873
Cacna1h	0,568648567	0,001555096
Casp3	0,568866477	7,03E-05
Acot1	0,569049179	0,004109524
Rab31	0,570129103	0,000640879
Plcd1	0,570900779	0,005275694
Mgl2	0,572252541	0,000660311
Ddit4	0,57235202	2,39E-05
Rab11fip5	0,572372835	0,000485799
Cbfb	0,573382401	9,09E-05
Ppp1r2	0,57360044	3,25E-05
Gm9746	0,573694053	0,003073694

Dusp10	0,573715641	0,004050141
Pacsin2	0,574324083	6,17E-05
Ilk	0,57481978	2,01E-05
Sp6	0,576104057	0,005691646
D14Ertd449e	0,57687211	0,002848485
Ifi30	0,57688808	6,82E-05
Clip3	0,576889927	0,001007448
Bend3	0,577119171	0,000701517
Map1lc3b	0,577748444	4,44E-05
Cd276	0,577767298	3,57E-05
Ap1s2	0,579658292	0,00150524
Otud7b	0,579871897	7,60E-05
Cyb5r3	0,580929232	7,23E-06
Farp1	0,582109939	4,98E-05
Arhgap21	0,582276143	3,52E-05
Afap1	0,582831033	0,000129129
Ankrd28	0,583280724	2,30E-05
C77080	0,583922081	3,45E-05
Ckmt1	0,584290472	0,008891424
Slc38a7	0,584906326	0,000785872
Sfmbt2	0,585952088	0,000189595
Hif3a	0,586089659	0,006332246
Slc26a10	0,587375072	0,00468939
Gys1	0,587718834	0,000242641
Dlg1	0,588901117	9,83E-06
Vwa5a	0,589449967	5,06E-05
Arl2bp	0,589630697	0,000219716
Dab2	0,592617313	0,000246603
Igf1r	0,592628741	1,26E-05
Crip2	0,594448472	0,000114284
Pgrmc1	0,595100102	2,15E-05
Junb	0,59538978	0,000485799
Ppp1r13l	0,595963064	0,003510364
BC049807	0,597962901	0,002902984
Tead1	0,599688268	0,000141707
Ext1	0,599859923	0,000127113
Slc44a1	0,60036516	0,000128658
Gpc1	0,600523835	0,000136424
Cd59b	0,60095716	7,68E-06
Dnmt3a	0,60221975	1,27E-05
Pard6b	0,60224694	7,73E-05
Rusc2	0,603430414	0,000349977
Mfhas1	0,603745548	0,000779095
Ocln	0,603848018	0,000344483
Mapk8ip1	0,604347815	0,001409877
Wls	0,604658589	4,96E-05
Lrp11	0,605495925	0,000102675
Fam164a	0,605916389	0,000234178
Ank3	0,606454384	0,000626289
Mapkapk2	0,606716282	1,35E-05
Adcy1	0,607502713	0,000840686

Ptk7	0,607772668	1,88E-06
Maml3	0,608172461	0,000521162
Tmem59	0,608623713	7,06E-06
Pvr	0,608947966	0,00156219
Ehd2	0,609113904	0,000972231
Casp8	0,609411524	0,006896439
Kdelc2	0,6096891	0,000103698
Dock5	0,610998629	5,99E-05
Zfp827	0,611556902	0,000658376
Jub	0,611594188	3,19E-06
Slc4a3	0,61164151	0,007892979
Ptpn21	0,611887932	0,000118914
Cul4b	0,612839473	3,90E-07
Nat6	0,612999541	0,004816135
Hsbp1	0,613137294	4,72E-05
Timp1	0,614345349	0,005412513
Crtap	0,614654972	0,001125879
Iqsec1	0,614939742	0,000196102
Pcdhga11	0,615768522	1,50E-05
Tia1	0,616391207	0,000171509
Gdpd5	0,616728979	0,001618032
Trib1	0,618840293	0,001704356
Fbxo25	0,619217677	0,000512229
Gcnt2	0,619312861	0,000134652
Nr2c1	0,619571876	0,001755547
Lysmd3	0,619936553	0,001484082
Serping1	0,620412956	0,008751601
Rap2b	0,621563013	7,09E-05
Stap2	0,621660303	0,004620399
Ndrg4	0,621689638	0,001457207
Tmsb4x	0,624032138	2,53E-07
2200002D01Rik	0,625458436	0,002393881
Rnpep	0,625545953	0,000536725
Ptpn14	0,625769297	2,19E-06
Timp2	0,625796676	0,001990113
Cnn2	0,62592796	3,07E-07
Sh3pxd2a	0,626485406	0,000169553
Spint2	0,626781206	3,08E-06
Lrrn4	0,627126569	0,002137717
Gprc5b	0,627541941	0,001774959
Med14	0,627734003	3,72E-05
Zfp358	0,628023226	0,00057631
Ppp2r5b	0,628393334	0,001019734
Pdzk1	0,62867477	0,001807457
Myo5b	0,629878435	0,009627942
Uap1l1	0,629915954	6,24E-05
Large	0,630228071	0,000249862
Cdh3	0,630582038	5,60E-06
Memo1	0,630593016	0,000133425
Nrbp2	0,630861569	0,00029599
Myl6b	0,631426495	0,000362885

Pkd2	0,631704249	0,000214533
Tead1	0,632305561	1,73E-05
Zfhx2	0,633388268	0,003051243
Fam38a	0,633429354	1,37E-06
Bex1	0,634051168	4,06E-07
Fbxw9	0,636087535	0,000103757
Rapgef3	0,636563643	0,007742889
Gria2	0,637819969	0,009497158
Gpc6	0,637958581	0,001420178
Bcl2l11	0,640156732	1,19E-05
Rhpn2	0,640495774	1,17E-05
Calr	0,641006926	3,24E-08
Tmem55a	0,64108387	2,00E-05
Grip1	0,641183003	0,000400419
Tbrg1	0,641804704	2,70E-07
Armcx6	0,642324814	0,004362243
Kif1a	0,64261028	2,74E-06
Plk2	0,642817578	1,40E-06
Fxyd6	0,642995729	1,24E-06
Spats2	0,64328749	1,44E-05
Cd24a	0,643555491	1,82E-06
Nynrin	0,64370978	0,000573801
Plekhh3	0,644937776	0,00279571
Shb	0,645173317	0,000476665
Erap1	0,645577655	0,000765489
Pex26	0,646607856	0,001208283
Ahdc1	0,646663552	6,99E-06
Pcdh1	0,646816815	2,50E-05
Prom1	0,647806696	1,35E-05
Serpinb6a	0,647944748	4,60E-05
Gsto1	0,648471555	0,000302848
Samd10	0,6488096	0,003007891
Actn1	0,648865403	3,69E-08
Capn2	0,648961728	2,81E-06
Met	0,650833378	0,000362751
Armcx3	0,651067146	4,52E-05
Tes	0,651600846	3,47E-05
Ptpn3	0,652059276	0,000141146
2410003K15Rik	0,652139923	6,65E-06
Sox12	0,65455569	4,59E-05
St3gal5	0,655277025	0,000105732
Slc10a7	0,656111809	0,000413911
Usp46	0,656374508	1,87E-05
Zdhhc2	0,657458444	1,42E-05
Cfl2	0,659544327	1,54E-05
Kank1	0,660153377	1,73E-05
Zfp319	0,660436809	0,001055813
F2rl1	0,660756923	9,19E-06
Col6a1	0,6607978	0,002694019
Pik3r3	0,662719447	0,001398289
Fam102a	0,663525849	0,000273616

Tesk1	0,663652283	0,00067307
Dusp27	0,663702482	0,006010376
Fam32a	0,664056469	1,59E-05
Tgfb2	0,66427868	8,47E-05
Stmn2	0,664337036	1,67E-06
Capn1	0,665764941	6,33E-05
Gtf2i	0,667183618	3,10E-07
1600021P15Rik	0,66928844	0,000486768
Fbxo32	0,669587206	0,005294433
Gli3	0,669785251	1,83E-05
Arl6ip5	0,670641723	9,95E-06
Zdbf2	0,670820607	4,01E-06
Cdkn1b	0,671569008	8,70E-06
Rcan2	0,671946417	0,001690826
Hnrnpd	0,673272564	6,72E-07
Adm	0,674469551	0,001768391
Anxa4	0,675094186	1,40E-05
Setbp1	0,676116512	0,000554447
Sox4	0,677805536	0,003366584
Mthfsd	0,680640925	0,000733058
Krt73	0,681214849	0,006687395
Mgst3	0,684077191	0,001858078
Ugt8a	0,684186942	0,004271722
Ssbp3	0,684197542	1,40E-07
C1galt1c1	0,6842562	0,005344371
Lgals3	0,684485552	0,000790118
Rnh1	0,684744957	2,04E-06
6430598A04Rik	0,685300872	0,000479895
Flnc	0,685376086	2,19E-08
Dstn	0,686695656	4,12E-09
Lrig1	0,686996521	0,000200155
Bdnf	0,687220105	0,007085453
5430407P10Rik	0,688508011	0,006786648
Itprip	0,689284812	0,000244689
Fgfr1	0,689807181	2,38E-07
Tsc22d1	0,6907128	1,32E-07
Pak1	0,692448218	3,57E-06
Zfp869	0,69329586	9,82E-05
Sema3e	0,69350448	3,19E-06
2010111I01Rik	0,693809503	0,006214265
Tpm4	0,693987244	7,63E-09
Tpra1	0,694440366	0,000550126
Nfatc4	0,695822319	5,12E-06
Bscl2	0,696450958	0,000330912
St5	0,697000682	8,37E-06
Cpt1b	0,697063312	0,000246991
Crim1	0,697377015	9,95E-05
Chst12	0,697445874	0,000657082
Wwc2	0,697979209	1,18E-07
Chpf	0,699713184	0,000196909
Pgpep1	0,699777238	0,00094563

Zcchc3	0,700455263	1,78E-05
Sh3bgrl	0,70185495	3,96E-07
Gm10775	0,702824167	0,002412641
Svop	0,70447955	0,00083747
AI316807	0,705490926	0,001480814
Fndc3b	0,706963783	7,58E-07
Rdh10	0,706999084	0,001278146
Camk2d	0,707542106	3,92E-05
Ptges	0,708509329	0,000753053
AL845466.1	0,708808141	0,001991474
Zfp532	0,709084808	6,72E-06
Adamtsl4	0,709442206	0,002256952
Slc16a6	0,710782775	0,000457736
B3gnt5	0,711626872	1,42E-06
Efnb1	0,71167204	0,00150524
Zfhx3	0,712206076	2,03E-06
Fam134b	0,712672947	6,54E-06
Dlg3	0,714835845	5,71E-06
Igf2bp3	0,71569208	3,74E-08
Adamts1	0,715834094	0,000351693
Tor2a	0,716002831	1,36E-05
Vamp8	0,716055207	9,10E-05
Slco2a1	0,716142757	0,003655797
Lats2	0,716413735	3,52E-05
Trim6	0,716655895	1,78E-07
Tmem150a	0,716886123	0,000863811
Nek6	0,718397298	8,48E-07
Depdc6	0,7196163	0,007393401
Col2a1	0,721057303	4,50E-05
Myo1e	0,721123144	2,37E-07
Fam107b	0,721492	1,53E-06
Ptprf	0,722378291	9,15E-10
Tmem22	0,722673111	0,005829405
Nexn	0,723146164	0,000602981
Ccrn4l	0,723756966	2,54E-06
Gbp2	0,723841889	1,66E-07
Cdh24	0,723926876	0,00283025
Tceal8	0,723935187	1,88E-06
Hebp1	0,725510975	0,000174294
Gm8894	0,725724496	3,09E-08
Fam160a1	0,725724895	0,005913165
Epcam	0,725809115	7,75E-09
Celsr1	0,726501217	9,62E-05
Loxl2	0,72678712	4,34E-06
Foxj1	0,728876358	0,000736548
Fzd2	0,730570246	4,42E-07
Prune2	0,731157947	0,008309901
Sema4c	0,731740267	1,96E-05
4930572J05Rik	0,732599992	0,005210533
Bhlhe40	0,732967488	5,49E-08
Lamb2	0,733274692	2,63E-07

Cmtm3	0,733413442	2,01E-05
Dock4	0,736589671	1,39E-05
Tulp1	0,736813705	0,004648373
Bcl2	0,738445072	0,001603942
Ier3	0,739445253	0,000260351
Nudt11	0,741611897	0,00051976
Efha2	0,741648237	0,003743194
Mapk13	0,741701076	9,60E-05
Cdc42ep3	0,742185981	0,003827324
Arhgap42	0,742382042	0,000701517
Rab25	0,742902579	0,003166967
Mef2b	0,743098123	0,006856435
Llgl2	0,744092838	2,71E-08
Cpeb1	0,744392088	0,000579646
Bst2	0,744539806	2,91E-07
Esrp1	0,744627065	1,29E-07
Zfpm2	0,746058147	0,008311046
Inadl	0,746478489	5,19E-07
Grhl2	0,746524928	1,54E-05
Inppl1	0,74710458	1,42E-08
Ptms	0,747826764	2,87E-08
Zfp677	0,749606728	0,0003401
Rhoq	0,750211184	9,15E-07
Cd151	0,750274907	8,68E-08
Ankrd56	0,750515798	0,009955978
Klhl4	0,751010679	0,007005502
Pdlim7	0,751086955	2,46E-07
Prmt2	0,751221388	5,35E-05
Capn12	0,752419261	1,35E-05
Prkci	0,753154169	2,97E-09
Gadd45a	0,755049792	1,97E-05
Steap3	0,756952391	0,001514654
Clu	0,758014675	9,02E-09
Tjp3	0,758596444	7,99E-06
Kank4	0,75863851	0,00094007
Gbp1	0,758963325	7,10E-08
Marveld2	0,759373556	2,77E-05
Gbe1	0,759421811	0,000499109
Col1a1	0,759809276	5,33E-09
Basp1	0,760413563	1,32E-07
Lrrk1	0,761549646	0,000363891
Klhdc8b	0,762039837	0,001512068
Actn4	0,762109732	2,77E-11
Mfge8	0,762601493	1,43E-09
Rhoc	0,76281422	1,56E-08
A430110N23Rik	0,763154906	0,008136744
Arhgef18	0,763850176	1,25E-08
Cdc42ep5	0,764546431	0,000833766
Scrn1	0,764629297	0,000294574
Rcn2	0,764687184	4,71E-08
Gab1	0,765009386	1,64E-10

Prnp	0,766835361	1,87E-08
Nog	0,767603117	0,001502779
Laptm4a	0,767804024	2,44E-10
2310022B05Rik	0,768046442	4,35E-07
Rhobtb3	0,770129538	1,02E-07
Enho	0,771274708	0,006871957
Galnt14	0,771299789	0,001282209
Fhod1	0,771941282	7,93E-07
Atf3	0,772785481	1,65E-05
Ppp1r3f	0,778387905	0,007381377
Sipa1l2	0,778429135	0,0099614
Csrnp1	0,778719543	1,36E-05
Stx3	0,779912926	4,18E-08
Ttc39a	0,781313375	0,00073678
Hbegf	0,781920073	1,43E-05
Flna	0,782858316	2,69E-12
Wdr45	0,783180757	0,000257165
Dse	0,78424612	6,34E-08
Slc25a23	0,784320403	6,58E-06
Amotl1	0,784941609	1,60E-09
Tnnt1	0,785360109	1,87E-05
Pcolce	0,78628055	4,11E-06
Usp38	0,787064155	0,009712365
Gm10395	0,787466588	0,000589385
Fat1	0,789122133	1,58E-10
Dlx3	0,789871485	0,006599762
Cachd1	0,7900726	8,16E-07
Baiap2l1	0,790114165	0,000108083
Unc5b	0,791205011	4,52E-10
Tmem123	0,791212173	4,40E-09
Dag1	0,791790245	8,13E-11
Actg2	0,792631414	4,40E-05
Hsd17b11	0,793849617	3,71E-07
P2rx4	0,795688991	4,38E-05
Mt2	0,79611182	1,52E-09
Gm9747	0,79639321	0,000783028
Csrp1	0,798011672	1,97E-10
Rab11fip1	0,798109499	1,69E-09
Ntn3	0,800091484	0,00831088
Cables1	0,800202675	0,000452033
Dpysl3	0,800843471	6,78E-09
Psmb10	0,80159743	0,009338812
Pkp2	0,802338277	4,35E-09
Zcchc18	0,802773217	0,000696226
Myl12b	0,802897473	3,21E-11
Sorbs3	0,803282299	2,70E-07
Stard10	0,803990961	1,19E-05
Inpp5a	0,804188987	1,86E-07
Tln1	0,804241931	3,10E-11
Galnt3	0,805700117	0,00010979
Tox3	0,805843925	0,000214056

1810019J16Rik	0,805933532	0,000703939
Bmi1	0,807401288	0,009214295
Card10	0,807432005	0,009089777
Slc20a2	0,807815061	3,02E-08
Palm3	0,808553309	1,23E-05
Cth	0,808557607	0,000387425
Capns1	0,808997766	4,93E-11
Thy1	0,809212071	0,00896526
Srgap3	0,809648448	0,000472719
Alox15	0,809847304	0,008840742
Fgfbp1	0,812087567	2,16E-06
Dusp1	0,812742697	1,81E-08
Coro6	0,813646614	0,009433984
Ncoa7	0,81397228	0,000113093
Amotl2	0,814937188	4,53E-11
Hdac9	0,815652607	0,001299738
Iglon5	0,817151902	0,002415608
Ano8	0,818513188	3,41E-05
Prmt8	0,819341469	0,008591707
Folr1	0,821359746	0,001356572
Crip1	0,821879888	1,22E-06
Nrip1	0,822030717	2,14E-07
Lamb3	0,822169432	0,000139283
Fam43a	0,82220804	0,00846719
Col5a1	0,822331416	1,15E-09
Chn2	0,823078078	0,003933224
Lmo1	0,824418761	0,008342672
Rras2	0,824475712	1,05E-09
Prnd	0,826850136	8,08E-05
Gm98	0,828507788	1,03E-07
Ccnb1ip1	0,830191292	0,008218155
Ass1	0,83297403	0,007844602
Zfp185	0,834985304	3,21E-08
Lin28b	0,835955309	1,13E-08
Gas6	0,840466242	0,007595567
Hspb8	0,841117728	1,68E-09
Tmem130	0,842240996	0,000558496
Slc12a4	0,842877079	5,22E-10
Plekhg4	0,846766578	0,00747105
Elmo3	0,846817132	1,88E-06
1700029G01Rik	0,847017871	0,001099638
App	0,847668642	9,95E-12
Hs6st1	0,848239036	6,27E-10
Gstt2	0,84847115	2,20E-05
Gm10939	0,852582977	0,007346532
Pdpn	0,852623093	1,12E-07
Zim1	0,854850669	0,005196713
Gabre	0,855228755	0,001220886
Samd4	0,856649293	5,19E-07
Ccdc160	0,857342477	0,00418744
Hmgn5	0,85895967	2,76E-07

Ddx58	0,859029548	5,89E-08
Gpr160	0,859351149	0,00385474
Iffo2	0,860809332	1,99E-05
Agrn	0,861021834	1,70E-13
Emp1	0,861148233	5,92E-07
Tgfbi	0,861970258	4,53E-06
Adamts6	0,863332201	0,00339276
Rnd3	0,863580531	3,18E-09
Sdc2	0,865023154	3,06E-07
Rab13	0,868402023	0,000181184
Dusp5	0,869758716	3,80E-06
Hspg2	0,869885423	9,45E-15
Phyhipl	0,870613652	0,000552865
Ahnak	0,870771096	2,68E-13
Rltpr	0,871198727	4,41E-05
Nr6a1	0,873249615	3,49E-11
Kirrel	0,874288817	3,64E-09
Lsp1	0,87498293	4,38E-05
Cyba	0,87666271	7,01E-09
Pgf	0,878858233	0,001783224
Cyr61	0,879661646	1,04E-12
Suox	0,880457714	1,40E-05
Fam132b	0,880470539	0,000517038
Dsg2	0,880568535	1,93E-09
Fnd3c2	0,880601058	1,44E-06
Rims2	0,881405716	1,49E-06
St14	0,881633738	2,17E-12
4921524J17Rik	0,881676053	3,07E-07
Fam46b	0,88246724	0,000144061
2900073G15Rik	0,882638086	4,01E-14
Dtna	0,88267013	1,63E-05
Mbd2	0,883613404	1,13E-06
Endod1	0,884026957	1,32E-07
Sv2a	0,884045553	1,29E-06
Sall2	0,884138222	1,84E-09
Galnt7	0,884812191	1,08E-10
1190005I06Rik	0,884829152	0,001994581
Chrd	0,884856004	0,003496479
1700021K19Rik	0,884952606	2,59E-08
1810011O10Rik	0,885720983	0,001217739
Cdon	0,88613347	8,34E-09
Rnf128	0,887670436	2,26E-08
Myom1	0,888152111	0,000443103
Arrdc3	0,888642701	3,10E-11
Cpz	0,889311184	0,003396538
Kcnj3	0,890172795	1,52E-05
Kcnb1	0,890737844	0,003550807
Ifih1	0,891382765	0,006599427
Cyp27a1	0,892917038	0,003930324
Atp2b4	0,893712686	1,03E-07
Madcam1	0,893792554	0,000528801

Krt76	0,894634465	0,0043979
Shc4	0,895226539	0,00647491
Dhrs4	0,89550345	0,0008509
Igf2r	0,895611305	8,29E-13
Bcar1	0,895640889	1,21E-12
Rragd	0,896645483	1,41E-10
Camk2a	0,896819076	2,14E-05
Slc39a4	0,897297362	0,006225875
Gng11	0,898556576	0,006101357
Mbp	0,898662035	6,38E-07
Mxra8	0,898894099	1,33E-05
Ptrh1	0,899841296	0,006504499
Egfr	0,900019665	3,28E-09
Cxcl16	0,90087813	2,82E-07
Chrnb1	0,901061724	2,34E-05
Plin2	0,902205187	3,06E-11
Prickle1	0,902509837	5,77E-09
Cdk18	0,903854282	7,18E-07
Gulp1	0,904487615	9,26E-06
Atp1b1	0,904495711	1,47E-12
Lmna	0,904510923	1,21E-09
9930012K11Rik	0,905760886	1,37E-05
Gng3	0,907350533	4,44E-05
Macrod1	0,909136298	0,000464922
Rnf144b	0,909873013	0,003462404
Cblc	0,909874894	0,000113093
Abca3	0,910531329	2,52E-10
1810022C23Rik	0,911202621	0,00597684
Nhsl1	0,911920722	5,77E-09
Prr5l	0,913434159	3,09E-08
4632428N05Rik	0,913683971	5,59E-05
Irf2bp2	0,914310199	9,99E-10
Arhgef10	0,91441319	3,48E-08
Mbnl3	0,91535633	3,19E-06
Ikzf4	0,915571942	3,33E-05
Prrx2	0,916048318	0,000334313
Vsig10	0,917055504	1,70E-08
Sema6c	0,917810002	6,09E-07
Fam83h	0,918170533	9,03E-07
Adamts4	0,918473312	0,000284969
Mal2	0,919687335	0,001142055
Tec	0,919791739	0,000310175
Cnn1	0,920090078	6,63E-09
Irs2	0,920142869	3,00E-11
Ell3	0,921788323	6,14E-06
Gm10977	0,924550548	0,005727805
Pitx2	0,925114645	8,64E-07
Mvp	0,925542373	1,08E-09
Gjb2	0,927258857	0,005603287
Fam55d	0,927874655	0,002599861
Epdr1	0,928655548	2,89E-07

Efna5	0,929016772	5,70E-08
Ocel1	0,932192693	1,08E-05
Itgb1	0,932539271	6,50E-17
Ctgf	0,933403406	7,68E-14
Phldb2	0,937912334	6,60E-11
Adamts15	0,938181178	8,35E-08
Trim67	0,939673316	0,000521555
Vax1	0,940167328	0,005354252
Ccdc68	0,940280125	0,000218152
Ncald	0,940960657	0,003072379
Gabrb3	0,94128479	7,57E-06
Dtx4	0,941513488	4,27E-06
Dgka	0,94237093	9,36E-09
Plxnb1	0,942476494	1,30E-10
Tmem38a	0,945763628	3,36E-07
Matn3	0,946307511	0,000107692
B2m	0,946727189	2,25E-12
BC068157	0,947871055	1,88E-06
3830417A13Rik	0,950744928	0,000506611
Lipg	0,952268965	0,000160507
Lmo4	0,952688181	3,28E-06
Nr2f6	0,954513198	2,77E-08
Parva	0,955386882	9,87E-13
Myh11	0,956532793	6,89E-07
Arrdc1	0,958804167	2,01E-08
Eps8l2	0,959250615	1,94E-10
Gadd45b	0,959452396	8,68E-09
Pla2r1	0,959989517	7,77E-07
Angptl2	0,960298804	3,57E-06
Aif1l	0,960749953	6,49E-09
Rasd2	0,963200395	1,63E-06
Myl9	0,96466938	4,53E-10
Mfap3l	0,965092823	9,12E-07
Trpc3	0,965517662	0,005105217
Anxa2	0,965953865	2,04E-15
Dmpk	0,966740353	7,66E-06
Sox3	0,968721712	0,000651785
Frk	0,969746922	0,000129772
Fndc3c1	0,969755551	1,59E-11
Tceal5	0,971673643	0,007404348
Lrp2	0,971834445	2,18E-15
Tmem119	0,972221807	0,0049807
Gm5454	0,973121589	0,00018359
Nrk	0,97686498	3,21E-10
Zbed3	0,978222689	2,12E-06
St6gal1	0,978256789	1,72E-10
S100a11	0,979549968	3,59E-13
Mmp25	0,980669454	1,66E-06
Adamts5	0,981241391	8,92E-07
Perp	0,981625305	3,44E-11
Sh3rf1	0,981821239	3,77E-11

Gng10	0,981829705	3,11E-07
Mt1	0,982088579	3,77E-13
Npr3	0,982654433	9,75E-06
Lad1	0,982889344	2,58E-08
Fam101a	0,984683761	0,009859652
Col7a1	0,986079983	1,07E-07
Gpc4	0,988905649	2,94E-13
Gm11175	0,989059097	1,49E-09
Pvrl2	0,991352178	8,49E-14
Col9a2	0,992399092	2,09E-05
Art5	0,992474719	0,000293411
B3gnt7	0,993168243	2,94E-10
4631416L12Rik	0,994372451	7,28E-06
Spsb1	0,994896866	1,13E-06
Lfng	0,997556473	0,000124341
Arhgap36	0,997900166	0,004731665
Arhgap8	0,998011054	2,19E-08
Ankrd1	0,99858019	9,57E-08
Olfr1383	1,000095198	0,000610348
Serpinh1	1,002256224	1,55E-16
Slc45a3	1,002684363	0,000288974
Clcn5	1,003204803	1,25E-09
Ap1m2	1,006039992	7,28E-10
Ltbp3	1,00743129	4,78E-05
Bik	1,012234913	0,000534282
Jund	1,013565425	1,79E-14
Palld	1,013631052	2,22E-13
Capg	1,015541479	1,72E-11
Steap2	1,01687116	2,39E-10
Gm7665	1,020353764	4,17E-11
Itga3	1,021633382	3,53E-18
Akr1c14	1,023098731	0,001400168
Dsp	1,025471425	2,90E-11
2810030E01Rik	1,026161732	0,000155667
Entpd2	1,03047913	0,003364668
Trim54	1,033507524	5,98E-08
Car7	1,03522336	0,001565001
Ppp4r4	1,03630933	2,38E-05
Gm10129	1,037064684	0,006651774
Wbp5	1,03805326	7,37E-17
Gm5068	1,040251806	1,92E-07
Foxp4	1,041449604	2,19E-12
Nr2f2	1,047209555	4,28E-08
Hes6	1,047538372	1,94E-07
Lamc2	1,048513537	3,60E-15
Exoc3l	1,048850494	0,004358112
Hmgxb4	1,049549116	2,79E-15
Cnksr1	1,049588533	2,21E-05
Axl	1,050995359	4,74E-13
Scg5	1,052021993	0,00422694
Zfp467	1,054365313	2,49E-07

Paqr4	1,055483	0,000258441
Wt1	1,055652702	3,54E-05
Sfn	1,055913227	3,12E-14
Rab20	1,056850713	0,002928806
Lims2	1,057707892	0,001866914
Ahnak2	1,058031325	5,37E-07
Osbpl5	1,059368425	8,40E-09
9130008F23Rik	1,060069689	9,84E-05
Snai3	1,061975805	0,000239498
03-sep	1,063863967	4,55E-11
Krt83	1,064925709	0,000745776
Acta2	1,065015711	1,79E-21
Mcoln3	1,065272682	6,35E-07
Bcl9l	1,068189338	6,06E-13
Plxdc2	1,069137419	2,99E-08
Pion	1,069770256	1,13E-09
Adam9	1,06995464	7,12E-14
Myof	1,073779831	4,80E-13
Map3k8	1,074085133	2,73E-05
Dusp6	1,074704444	8,17E-14
Creb3	1,075727266	8,58E-11
Lama5	1,077199518	1,71E-20
Ltb	1,079017344	1,57E-08
Ethe1	1,07943818	6,65E-06
Dok2	1,079913641	0,00029326
Klhl9	1,081383724	1,04E-11
Hspb2	1,081953663	2,58E-10
Hpn	1,083336343	2,83E-10
Espn	1,084987368	7,62E-08
Pkp3	1,085563073	2,84E-07
5430421N21Rik	1,085637056	0,000597948
Usp2	1,087195891	1,46E-07
Fam13c	1,0872569	8,00E-07
Rhou	1,087610808	5,89E-17
Arhgef16	1,08922832	4,86E-12
Cmtm7	1,090856845	5,82E-09
Tpm1	1,096687946	2,06E-23
Cdh1	1,096814268	1,84E-23
Inha	1,098223728	0,004571581
Sparcl1	1,099900093	0,000300242
Brp44l	1,100622491	0,003735525
Ap3b2	1,100907264	3,58E-08
Krt81	1,102595632	0,000453541
Sez6l2	1,103185604	7,75E-05
Mtmr11	1,10320814	9,38E-06
Tspan9	1,106264748	6,93E-19
Plau	1,107454254	1,77E-08
Krt86	1,107477307	0,000414939
Serpinf1	1,109032948	1,88E-05
Myl3	1,109356392	2,97E-06
Etv1	1,112148702	1,95E-06

Obsl1	1,112246113	6,16E-16
Slamf9	1,113350241	0,004995411
Steap1	1,113754407	2,93E-07
Thbs2	1,114950467	0,000168348
Epha1	1,114988902	5,90E-10
D8Ertd82e	1,116503524	4,90E-16
Cald1	1,118552971	2,60E-22
Fam110b	1,118920956	3,09E-08
Gap43	1,119076531	2,14E-12
Dusp14	1,121434839	1,28E-09
Hspb1	1,121644241	5,31E-16
Cdkn2a	1,124721349	1,18E-05
Nfasc	1,125429081	1,06E-08
Anxa5	1,126030276	2,89E-16
Krt78	1,126673814	1,19E-05
Rarg	1,126919726	1,42E-12
Ecm1	1,127783669	3,60E-09
D0H4S114	1,129057552	1,75E-16
Metrn	1,130190272	1,10E-08
Rgl3	1,13038333	4,54E-07
Spint1	1,130956566	1,90E-16
Loxl4	1,133376524	0,00017852
Ube2e2	1,13476071	2,91E-08
Tpm2	1,13493522	2,12E-16
Ebf4	1,136375721	2,54E-07
Spnb1	1,136911081	1,14E-13
Speg	1,137175473	5,14E-11
Tead3	1,139164445	3,96E-11
Olfr1384	1,139929789	0,001366549
Mme	1,141381964	3,76E-14
Gm9817	1,141774235	6,52E-16
Cxcl10	1,142699693	6,86E-09
Tnnc1	1,142755721	3,02E-12
Fam84b	1,143432895	0,00348649
Krt74	1,143471518	2,36E-05
Otud1	1,143578526	3,18E-09
Krt8	1,146280206	1,13E-24
Wnt4	1,146531035	2,40E-06
Tbc1d2	1,157245613	3,09E-08
Rnf43	1,161229902	4,16E-05
Eno3	1,163972898	2,59E-17
Mafb	1,166410598	3,35E-05
Col8a1	1,167217303	1,06E-07
Shisa4	1,167791645	2,55E-09
Marveld3	1,17039697	2,80E-07
Cyp1a1	1,171926469	3,45E-05
Serpinb9b	1,172249864	5,03E-07
2310030G06Rik	1,173517791	6,12E-07
Col11a1	1,174943268	1,98E-07
Dact1	1,175588038	3,11E-08
Hoxa1	1,179820221	0,000759951

Sema3c	1,18076268	1,34E-11
5730559C18Rik	1,180882834	1,73E-12
2510009E07Rik	1,181523647	0,003237455
Clic5	1,185847599	1,73E-10
Fos	1,194093221	7,53E-19
Klhl36	1,19511356	1,12E-07
Mmp14	1,195488272	9,11E-17
Gpr4	1,195676395	5,65E-05
Gm5250	1,19569086	0,002739385
Dppa5a	1,19569086	0,002739385
Dmrt3	1,196134419	0,002614867
Arl4c	1,197587639	5,47E-15
Mfsd7c	1,198184607	7,15E-05
Rab3b	1,207071835	1,69E-12
Gstt1	1,207794337	2,13E-05
Krt19	1,20868519	0,002365832
Cdcp1	1,210854516	1,51E-14
Sh3rf2	1,211429001	2,21E-09
Hcfc1r1	1,212050034	1,10E-17
Krt18	1,2122539	7,35E-27
Vwa1	1,215402967	9,91E-05
Celf2	1,217652116	7,26E-14
Mapk4	1,219480357	1,28E-11
Ccdc120	1,220720244	1,36E-12
Rhox8	1,222257528	4,41E-05
Kynu	1,22255819	8,08E-05
Loxl1	1,222741734	7,08E-08
Eya4	1,224473794	1,77E-06
Wfdc2	1,225289691	3,68E-17
Wbscr17	1,226671204	1,73E-06
Ppl	1,22673482	1,18E-09
Wnt9a	1,227614115	3,49E-11
Wdr86	1,229218912	6,30E-11
Hs6st2	1,233778589	2,66E-12
Limch1	1,237072065	4,15E-13
Fbxo2	1,240098498	0,000123306
Apobec2	1,243289609	0,002241315
Pdlim3	1,245412649	0,002116797
Pkia	1,246987654	5,51E-08
Tnfaip3	1,248568425	4,21E-10
Gng2	1,253748826	5,35E-15
Lypd6	1,25447048	3,16E-07
Gm10393	1,261516317	0,006335575
Cacng6	1,26591083	3,29E-05
Tgfa	1,266214366	3,58E-11
Emp2	1,266913828	2,18E-14
Wisp1	1,268555	1,45E-09
Nodal	1,268745425	2,79E-12
Plekha2	1,269708722	1,14E-23
Cspg4	1,274510867	5,24E-10
Igsf9	1,278058996	7,81E-20

Nes	1,278910744	1,16E-23
Syp	1,280723306	9,22E-07
Igdcc4	1,280742499	1,72E-17
Dlk2	1,282328774	7,26E-05
Crh	1,282712	0,00199228
Erbb3	1,282939983	4,32E-18
Cxcl12	1,283565399	3,99E-10
Rab15	1,284045673	4,75E-17
Esrp2	1,286037704	3,77E-09
Scel	1,287087793	4,03E-08
Cgn	1,287458279	4,93E-23
Gria3	1,29122101	1,50E-11
Irak3	1,293074764	1,99E-06
Tgm1	1,294262765	5,18E-11
Metrnl	1,299276152	5,25E-06
Il34	1,299501797	9,82E-05
Anxa3	1,300304515	5,34E-23
Bmp8b	1,302529797	6,61E-07
Gipc2	1,303619108	4,03E-06
Sulf1	1,304641097	6,24E-20
Crb3	1,305097196	2,61E-12
Tmc4	1,305971731	1,20E-14
Serpine1	1,306441482	2,10E-20
Fam20c	1,314859993	1,18E-06
Igfbp5	1,316259628	7,06E-16
Myh14	1,316335777	2,59E-17
Cotl1	1,317406051	3,13E-25
Muc1	1,320810585	0,000124804
Trpm4	1,325303526	4,34E-16
Tmem79	1,325536697	9,91E-07
Rrad	1,326596803	5,03E-07
Mras	1,327153146	0,000474947
Ctnnd2	1,327766587	3,04E-10
Emcn	1,333777181	1,71E-07
Gpm6a	1,341373667	3,47E-08
Tnfrsf12a	1,342108023	1,20E-16
Sel1l3	1,342642995	1,41E-15
Pde4d	1,343737728	0,001743245
Mpzl2	1,348238844	1,86E-16
Plce1	1,349546093	3,83E-08
Id2	1,352952775	2,52E-16
Hpgd	1,353695164	0,001618727
Arhgef5	1,358180379	9,37E-11
Nt5e	1,358184711	5,87E-09
Kcnk1	1,36476318	1,69E-19
Ddr1	1,370863267	2,93E-23
Des	1,370946775	1,58E-24
Unc13a	1,371227264	1,88E-10
H13	1,371664921	1,48E-17
Apob48r	1,376671032	3,96E-09
Bgn	1,38065631	1,60E-18

AI661453	1,38301611	1,94E-08
Wnt7b	1,38320737	3,23E-09
Glis2	1,38397107	1,94E-18
Jph2	1,388952982	1,01E-20
Dsc2	1,390636035	1,72E-20
Bmp1	1,394626324	3,17E-18
Col4a5	1,407361569	5,37E-13
Scnn1a	1,408095246	3,07E-06
Mybpc2	1,408100333	8,78E-07
Bmf	1,414724648	4,90E-23
Spred3	1,419218015	2,59E-10
Msln	1,421595222	1,49E-10
Tmem30b	1,421619143	3,55E-05
Afap1l2	1,424436073	3,44E-16
Dusp9	1,425498728	2,98E-28
Cpe	1,425876342	2,27E-20
Tssk6	1,435786616	0,000190643
Tmem37	1,440178514	1,00E-10
Spsb4	1,442883096	4,96E-05
Mdk	1,455707502	8,54E-31
Slc30a2	1,4578582	1,24E-09
Zscan4c	1,458817659	3,61E-07
Vgf	1,460347754	1,61E-16
Zscan4f	1,469437375	2,98E-07
Cysltr1	1,472010146	5,19E-09
Igf2	1,474566236	1,20E-39
Zscan4-ps2	1,487161818	2,50E-07
Grb10	1,492077268	8,91E-34
Igfbp7	1,493053454	8,17E-07
Arhgef10l	1,496722095	1,19E-14
Myh9	1,497884119	5,28E-43
Scx	1,518730546	0,000420177
S100a6	1,524781339	3,38E-28
Plaur	1,530729325	1,21E-18
Slc40a1	1,534497356	9,07E-26
Cryab	1,53475833	1,50E-26
1700019G06Rik	1,540915751	1,80E-10
Ncrna00085	1,543859327	0,000232995
Ccl20	1,548915279	9,90E-05
Bcam	1,552428499	2,17E-34
Ltbp4	1,554075273	2,00E-27
Csn3	1,554999104	8,11E-05
Prss8	1,559110554	4,04E-21
Cdkn2b	1,566077943	5,87E-10
Lgals1	1,569552224	3,10E-32
Cldn9	1,572488006	1,48E-07
Cldn4	1,579318225	2,09E-25
Crlf1	1,583299735	3,06E-07
Ssbp2	1,585065654	1,87E-20
Pdlim2	1,585163497	1,52E-19
Nkain4	1,586314888	1,24E-05

Gng13	1,594082654	8,47E-05
Igh-6	1,596356851	3,18E-07
Mpzl3	1,601505312	2,45E-10
Tmem54	1,601676441	5,62E-05
Prss23	1,607642794	9,87E-25
Col12a1	1,609581078	7,24E-16
Cxcl1	1,61360923	6,97E-05
Ager	1,615287339	1,26E-07
Fosb	1,618632325	3,21E-27
Acta1	1,621584142	1,06E-49
Cldn6	1,628175017	4,58E-38
Plat	1,629357957	1,44E-13
Gm10562	1,631365476	0,002304937
Ntf3	1,642831308	1,36E-05
Lmod1	1,660323347	1,95E-16
Gprc5a	1,662564607	4,90E-23
Tex15	1,66459159	0,000622587
Errfi1	1,664852048	9,20E-28
Spon2	1,66535403	8,90E-08
Tmem125	1,668119924	2,36E-10
Fras1	1,678849225	2,08E-19
Tagln	1,68073762	1,27E-46
Slc5a5	1,687544988	1,49E-11
Cldn3	1,692188948	3,36E-23
Nox4	1,706570248	6,41E-18
Cd248	1,772849523	2,59E-17
Gdf11	1,773104904	3,11E-08
Il23a	1,782166293	3,85E-09
Cntfr	1,79416989	1,15E-20
Crym	1,815705689	0,000373552
2610528J11Rik	1,816341887	2,61E-14
Sorbs2	1,816904642	1,22E-11
Tacstd2	1,820237358	1,69E-20
Hrc	1,830777569	6,22E-23
Actrt2	1,835365515	1,49E-09
Mmp9	1,836741128	3,48E-24
Sema3b	1,838911183	2,53E-27
Pdgfrl	1,839814642	2,23E-14
Synpo2l	1,84541859	4,29E-31
Gsn	1,854392343	8,69E-38
2210011C24Rik	1,855503519	2,09E-08
Tinagl1	1,857517407	4,57E-24
CT571247.1	1,86057101	0,006513349
Ikbke	1,882434204	9,89E-14
F3	1,89539304	3,33E-29
Crabp2	1,927355474	6,47E-16
Csf1	1,929257139	3,31E-38
Tppp3	1,930344121	4,03E-13
Tmem151a	1,939183269	2,85E-11
Col5a2	1,953311936	1,35E-41
Krt7	1,968509129	4,79E-32

Wnt10b	2,053087545	2,37E-10
Thbs1	2,053237377	2,60E-69
Npnt	2,055460529	1,75E-36
Ccdc80	2,062423677	1,68E-13
Anxa1	2,065112004	7,46E-48
Atp2c2	2,09452448	3,36E-13
Fgf17	2,106055095	1,42E-12
Klhl30	2,118169394	3,43E-18
Krt20	2,118755886	2,43E-16
Col3a1	2,277491277	6,45E-20
Macc1	2,336338862	9,36E-11
Mmp23	2,337631058	2,42E-28
Igdcc3	2,340709898	3,12E-38
Postn	2,359946254	4,72E-32
Tac1	2,444538572	0
Wnt7a	2,599010819	7,13E-20
Tnni2	2,661918065	9,97E-27
Vnn1	2,684390606	2,26E-15
Ctsj	2,694197135	1,64E-12
Scube3	2,804544279	1,77E-54
Mal	2,854336967	1,76E-30
Cdkn1c	2,90682123	9,65E-61
Aldh1a2	3,025486323	6,49E-21
2310007B03Rik	3,138656803	8,53E-18
Col1a2	3,175452341	4,22E-140
Chst5	3,302306869	7,10E-22

Table S2

Hematopoietic Specific Genes	Endothelial Specific Genes	Hematopoietic and Endothelial Common
Alas2	Aldh1a2	Acvrl1
Alox5ap	Amot	Adam9
Anxa1	Anpep	Ager
Anxa5	Anxa3	Alox5
Bgn	Bmp6	Axl
Bmf	Cdh2	Bmp2
Cbfa2t3	Col1a2	Cdkn2a
Ccl20	Col3a1	Cdkn2b
Cd79b	Cryab	Csf1
Cd8a	Cspg4	Cxcl10
Cdh1	Ecm1	Cxcl12
Cdkn1c	Fgfr2	Cxcr4
Chst2	Foxf1a	Cysltr1
Clec1b	Fzd4	Dkk1
Cmklr1	Gata6	Eng
Cnp	Hand1	F2rl3
Crh	Hey1	F3
Csf2rb	Lama1	Fgf10
Ctse	Lect1	Fgf3
Cxcl1	Mme	Fgf4
Cxcr7	Myh9	Gata2
Daf2	Myl7	Gja4
Darc	Myocd	Grap2
Ddr1	Nox4	Gucy1b3
Dok2	Nr2f2	Hhex
Efnb3	Ptprb	Igf2
Entpd1	Rgs5	Itga1
Entpd2	Robo4	Itgb3
Eomes	Ror1	Kdr
Epb4.1	Sema3c	Lama5
Epha1	Smtnl1	Lgals1
Epor	Sox17	Mdk
Erbb3	Tbx3	Meis1
Erg	Tgfa	Mmp14
Fermt3	Tspan12	Mmp9
Fli1	Vldlr	Myb
Fos		Myc
Fosb		P2ry2
Gad2		Pdgfra
Gata1		Plat
Gata4		Plau
Gfi1b		Plaur
Gp1ba		Procr
Gpc3		Runx1

Grap
Gsn
Hba-x
Hdc
Hoxb2
Icam2
Id2
Igh-6
Ikbke
Ikzf1
Il16
Il23a
Il2rg
Inha
Inpp5d
Itga2b
Itga3
Jund
Klf4
L1cam
Lama3
Lat
Lcp2
Lgals9
Lifr
Lmo2
Ltb
Lyl1
Lyst
Mafb
Map3k8
Mecom
Mesp1
Msx2
Muc1
Myct1
Myof
Nfe2
Nt5e
Palld
Pde4dip
Pecam1
Pla2g1b
Plce1
Plek
Prkca
Prkd1
Prkg1
S1pr1
Serpine1
Serpinf1
Sox18
Spp1
Tac1
Tal1
Tbx20
Thbs1
Thbs2
Tnfaip3
Tnfrsf12a
Tph1
Wnt4
Wnt5a
Wt1

Ptpre
Rarg
Rgs10
Rgs2
Runx1t1
Sfpi1
Sfrp1
Skap1
Sla
Snca
Spon2
Stat4
Stat5a
Stat5b
Stra13
Thbd
Tnc
Trpm4
Tspan8
Vav1
Vav3
Vcan
Xbp1
Zfpm1