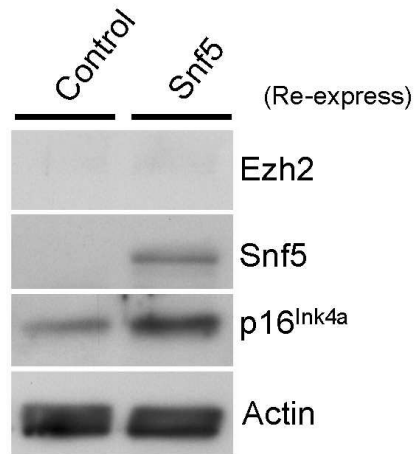


Figure S1, related to Figure 1. PcG gene expression in SNF5-deficient cells. (A-D) Scatter plots of PcG gene expression in primary MRT compared to normal cerebellum. (E) Scatter plot of Actin expression in primary MRT compared to prostate cancer. (F-J) Scatter plots of PcG gene expression in Snf5-deficient lymphomas compared to control CD8+ T-cells. (K-O) Scatter plots of PcG gene expression in Snf5-deficient MEFs compared to control MEFs. Snf5 occupies the *Ezh2* gene in MEFs. (P) Occupancy of Snf5 at the *Ezh2* promoter was determined using chromatin immunoprecipitation. Relative enrichment is calculated by dividing the Snf5 bound, RNA polymerase II or IgG bound DNA to input DNA after normalization to a negative binding region (the *Igx1a* negative control region, SA Biosciences). Data are represented as mean +/- SEM from three biological replicates for Snf5 and IgG and two biological replicates for RNA polymerase II. * p = 0.02 ** p = 0.005. (Q) ChIP analysis at the *Ezh2* promoter in Snf5-deficient MEFs. Occupancy of Snf5 at the *Ezh2* promoter was determined in Snf5-deficient MEFs using chromatin immunoprecipitation. Relative enrichment is calculated by dividing the Snf5 bound, RNA polymerase II or IgG bound DNA to input DNA after normalization to a negative binding region. Data are represented as mean +/- SEM from two biological replicates.

Figure S2, related to Figure 2



Snf5 Ezh2-deficient MEFs

Figure S2, related to Figure 2. Reversal of p16^{Ink4a} downregulation via re-introduction of Snf5 into MEFs lacking Snf5 and Ezh2. Immunoblot analysis of p16^{INK4a} after re-expression of Snf5 into *Snf5^{fl/fl} Ezh2^{fl/fl}* MEFs. Actin was used as a loading control.

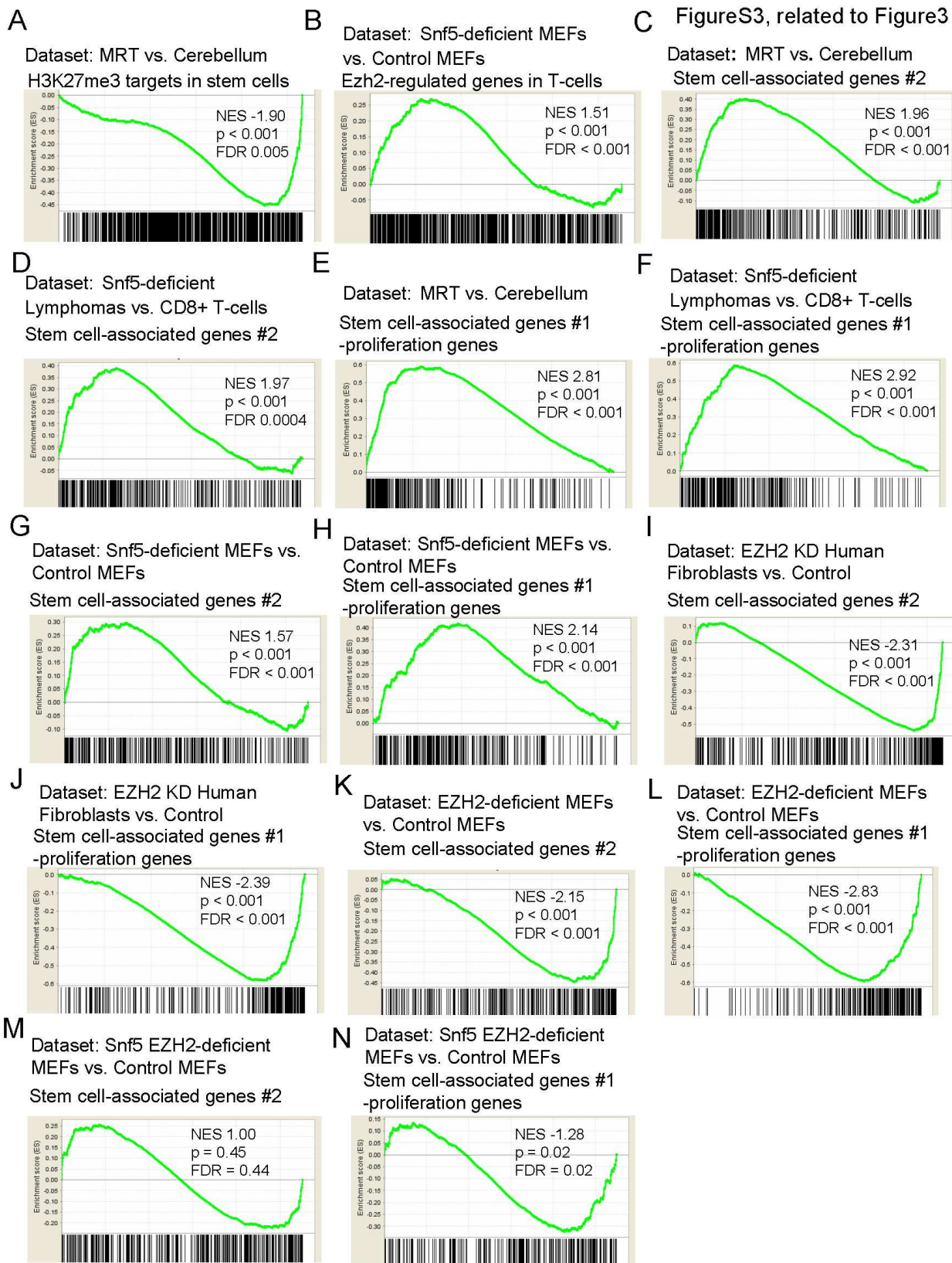


Figure S3, related to Figure 3. The antagonistic effects of EZH2 and SNF5 upon gene expression are broad based. (A) GSEA of H3K27me3 target gene set in stem cells (Ben-Porath et al., 2008) in expression data from human MRT samples compared to normal cerebellum. (B) GSEA of a T-cell specific Ezh2-regulated gene set (Su et al., 2005) in expression data from Snf5-deficient MEFs compared to control MEFs. (C) GSEA of the stem cell-associated program #2 in expression data from human MRT samples compared to normal cerebellum. (D) GSEA of the stem cell-associated program #2 in expression data from purified CD8+ Snf5-deficient lymphomas compared to CD8+ T-cells purified from wild type mice. (E) GSEA of a proliferation-corrected stem cell-associated program in expression data from human MRT samples compared to normal cerebellum. (F) GSEA of a proliferation-corrected stem cell-associated program in expression data from purified CD8+ Snf5-deficient lymphomas compared to CD8+ T-cells purified from wild type mice. (G) GSEA of the stem cell-associated program #2 in expression data from Snf5-deficient MEFs compared to control MEFs. (H) GSEA of a proliferation-corrected stem cell-associated program in expression data from Snf5-deficient MEFs compared to control MEFs. (I) GSEA of the stem cell-associated program #2 in previously published expression data (Bracken et al., 2006) from human fibroblasts where EZH2 levels have been knocked down. (J) GSEA of a proliferation-corrected stem cell-associated program in previously published expression data (Bracken et al., 2006) from human fibroblasts where EZH2 levels have been knocked down. (K) GSEA of the stem cell-associated program #2 in expression data generated from Ezh2-deficient MEFs compared to control MEFs. (L) GSEA of a proliferation-corrected stem cell-associated program in expression data generated from Ezh2-deficient MEFs compared to control MEFs. (M) GSEA of the stem cell-associated program #2 in expression data generated from Snf5 Ezh2-deficient MEFs compared to control MEFs. (N) GSEA of a proliferation-corrected stem cell-associated program in expression data generated from Snf5 Ezh2-deficient MEFs compared to control MEFs. The stem cell-associated gene set #2 used in these analyses was previously published (Ben-

Porath et al., 2008). The proliferation-corrected stem cell gene set was previously published (Somerville et al., 2009). Gene sets are listed in Table S1.

Figure S4, related to Figure 4

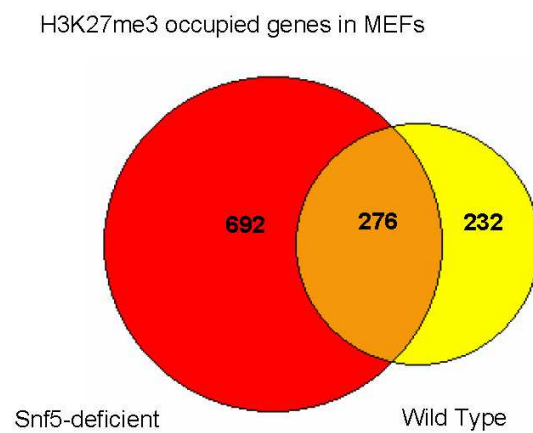


Figure S4, related to Figure 4. Elevated levels of H3K27me3 following Snf5 loss. Venn diagram showing H3K27me3 occupied regions in wild type and Snf5-deficient MEFs.

Figure S5, related to Figure 5

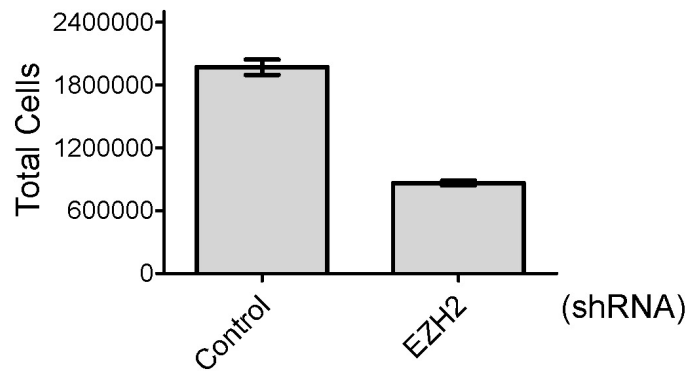


Figure S5, related to Figure 5. Ezh2 is required for growth of SNF5-deficient cells. Slowed proliferation of the MRT cell line, BT16, after EZH2 knock down. Cells were counted following shRNA-mediated knock-down of EZH2. Data are represented as mean \pm SEM.

Supplemental Experimental Procedures

Cell Culture

MEFs were harvested at embryonic day 13.5 and cultured in Dulbecco's modified eagle media (DMEM) supplemented with 10% fetal bovine serum (FBS) and non-essential amino acids. The malignant rhabdoid tumor cell lines, G401 and BT16, were cultured in DMEM supplemented with 10% FBS and 50 μ M β -mercaptoethanol.

Snf5 re-expression

The pBABE-Snf5 construct was generated in two steps: (1) a PCR amplified fragment bearing murine Snf5 was cloned into the pEfrFlag-Bio-puroAV1 plasmid (Kim et al., 2009) that had been digested with *Bam*HI, and (2) the pBABE-Snf5 construct was generated by subcloning a BglIII-Sall fragment from the pEfrFlag-Bio-Snf5-puroAV1 construct into the pBABE-puro vector (Morgenstern and Land, 1990) that had been digested with *Bam*HI and *Sall*. Snf5 was re-expressed using this construct three days following adeno-Cre mediated inactivation of Snf5 and Ezh2 in MEFs. After 2 days of selection in puromycin (2.5 μ g/ml), cells were collected and extracts were analyzed by immunoblotting.

EZH2 knockdown

EZH2 knockdown was achieved in 2 ways: first, siRNAs (100nM) which specifically target EZH2 (ON-Targetplus SMARTpool; L-004218-00-0005) or non-silencing controls (siGENOME Non-Targeting siRNA #2; D001210-02-05) were transfected into the G401 cell line using oligofectamine (Invitrogen; Cat. #12252), second, a doxycycline inducible shRNA targeting EZH2 (pTRIPZ-EZH2; OpenBiosystems #V2THS-63066) or

non-silencing control (pTRIPZ-NS; OpenBiosystems # RHS4743) was transduced into G401 and BT16 MRT cell lines using lentivirus. Expression was initiated by the addition of doxycycline (5 μ g/ml). To achieve greater efficiency, cells expressing the highest levels of shRNA and RFP⁺ were sorted (top 10%) using FACS and used for further analyses.

Cell proliferation, apoptosis, and senescence assays

Cell proliferation was monitored by counting cells and by using the WST-1 cell proliferation reagent (Roche Applied Science, cat# 11644807001). Apoptosis was detected by immunoblotting for the PARP1 cleavage fragment. For a positive control, HeLa cells were treated with doxorubicin (1.5 μ M) for ~24 hours. Senescence associated β -galactosidase activity was measured following doxycycline addition. To stain for Beta-galactosidase cells were fixed using 0.5% glutaraldehyde, washed with PBS pH 6.0 + 1mM MgCl₂, stained overnight at 37°C with SA- β gal solution (PBS (pH 6.0), 2mM MgCl, 5mM K₃Fe(CN)₆, 2mM C₆FeK₄N₆, 1mg/ml X-gal (Promega #V394A)) and photographed.

Immunoblots

Whole cell extracts were prepared by incubating cells on ice in lysis buffer (50 mM Tris-HCL pH 7.4, 5mM EDTA, 12% Glycerol, 50mM NaCl, 1% NP-40) plus protease inhibitors (Complete, Mini, EDTA-free Roche; cat. #11836170001 and 2mM PMSF) for 30 minutes. This was followed by spinning for 10 minutes in a 4°C centrifuge at 18000 r.c.f. to separate cell debris. Supernatants were collected and protein concentrations were then determined using the Bradford reagent (BioRad). Proteins were separated using SDS-polyacrylamide gel electrophoresis and transferred to PVDF membranes (Millipore).

Chromatin immunoprecipitation

For the dual cross-linking Snf5 ChIP procedure, $\sim 1 \times 10^7$ cells were crosslinked for 45 minutes with 2mM Disuccinimidyl glutarate (DSG; Pierce, #20593) in PBS + 1mM MgCl₂ at room temperature and then crosslinked again using formaldehyde (1%)(Sigma,#F8775) for 15 minutes in PBS +1mM MgCl₂ at room temperature. Crosslinked cells were scraped off the plate into PBS + 2×protease inhibitors (Complete, Mini, EDTA-free Roche; cat. #11836170001) and frozen directly as a cell pellet at -80C. These cells were then lysed using 400 µl of lysis buffer (0.5% SDS, 10mM EDTA, 50mM Tris (pH 8.0)) + protease inhibitors for 10 minutes on ice and sonicated 3× for 8 to 10 second pulses on power setting 3 using the sonic dismembrator (Fisher; Model 100). Supernatants were collected after centrifugation for 10 minutes at 18,000 r.c.f. Sonicated extracts were combined with a mixture of protein A (Invitrogen; 100.01D) + protein G (Invitrogen; 100.03D) dynal beads coupled to antibodies which recognize Snf5 (Bethyl, A301-087A) and incubated over night at 4°C. Beads were then washed 1× with buffer1 (0.1% SDS, 1% Triton X-100, 2mM EDTA, 20mM Tris-HCl(pH 8.0), 500mM NaCl), 1× with buffer 2 (0.1% SDS, 1% Triton X-100, 2mM EDTA, 20mM Tris-HCl(pH 8.0), 150 mM NaCl), 1× with LiCl wash buffer (20mM Tris-HCl (pH 8.0), 2mM EDTA, 0.7% NaDOC, 1% NP-40, 0.5M LiCl), and 2× TE (10 mM Tris (pH 8.0), 1mM EDTA). DNA was then eluted 2× for 30 minutes at room temperature in 100µl of 1% SDS + 0.1M NaHCO₃. Eluated DNA was RNase treated, proteinase K treated, and crosslinks were reversed overnight at 65C in 0.2M NaCl. This mixture was then subjected to phenol chloroform extraction and ethanol precipitation before analysis using real time PCR. Primers used in the ChIP analyses are as follows: Ezh2 #1: F-CTTCTTTGTGTGGCTGGGAG, R-AGTCTGTCCTTTGTCTGAGTGC; Ezh2 #2 F-GTCACACGCCTTCCTTCAG, R- TCGGGTTGGTAACGGTCTTA. Upstream p16^{Ink4a}: F- GGCTGTGGAGCCAGGTCAGG, R- GCCCAATCGCCAGTCGTGT; End of Exon 1alpha: F- TCGCCCAACGCCCCGAAC, R- TCCTGAACAAAAGTTACCCGACTGC, Exon 1B ARF:

F- ATGGGTCGCAGGTTCTTG, R- ATGTTACGAAAGCCAGAGC. Actin primer sets were used previously (Shen et al., 2008). All additional primer sequences used for H3K27me3 chip in T-cells and lymphoma cells are available upon request.

Isolation of mouse cerebellar cells

Cerebella were dissected from 7-14 days old mice and the pial layer was peeled away, the tissue was treated with trypsin for 20 minutes and triturated into a single-cell suspension using a fine pipette tip. Cell suspension was then washed twice with N2 medium (DMEM/F12 (1:1) supplemented with: 1X N2 supplement, 24 mM KCl, 6mg/ml glucose, 15 mM glutamine and penicillin-streptomycin) with DNaseI, and then passed through a cell strainer before collecting cells.

ChIP-chip

DNA isolated from ChIP experiments and inputs were amplified using ligation-mediated PCR and hybridized to Affymetrix Mouse Promoter 1.0R arrays. The *MAT* algorithm (Johnson et al., 2006) was used to identify promoters enriched in ChIP experiments with a p-value threshold being set at 1×10^{-4} in MEFs and 1×10^{-6} in cerebellum. See table S1. Individual MAT values were retrieved around transcription start sites using an R package developed in-house (available for download at http://research4.dfci.harvard.edu/dfci/kunlab/files/Wilson_etal_2010/readAffyBar_1.0.tar.gz) and the median MAT score at each position was calculated.

RNA isolation and Microarray analysis

Briefly, total RNA was isolated from MEF samples using RNA Trizol per the manufacturer's protocol. RNA was hybridized to Affymetrix Mouse 430A 2.0 arrays, and CEL files were preprocessed using Robust

Multichip Average (RMA). Gene expression data for Snf5-deficient MEFs were generated previously by our lab (Isakoff et al., 2005) Gene expression data for human MRTs were generated previously (McKenna et al. 2008). Human prostate cancer datasets were downloaded from the GEO data repository <http://www.ncbi.nlm.nih.gov/geo/>. GEO accession # for prostate tumors: GDS2545 (Chandran et al., 2007). These data sets include: 65 primary prostate tumors (Pri. Prostate), 25 metastatic prostate tumors (Met. Prostate), and 15 malignant rhabdoid tumors (MRT).

To analyze MRT datasets with Prostate cancer datasets we collapsed probes that recognize the same gene into a common gene identifier based on the highest expressed probe, and thereby cancel out non-functional probes. These collapsed data sets were then merged and rank-ordered based on expression intensity, allowing a cross-platform comparison. p-values were determined using an unpaired t-test.

The Ezh2-deficient T-cell gene set was derived, using Gene Pattern, from the most significantly upregulated genes (> 1.5 fold change, $p\text{-value} \leq 0.05$, and score < -1) from previously published expression data; GEO accession # GDS2717 (Su et al., 2005). The gene set from EZH2 knock-down human fibroblasts was derived from previously published expression data consisting of genes upregulated following EZH2 knock-down (Bracken et al., 2006). The MEF-specific Ezh2-regulated gene set was derived from significantly upregulated genes ($p\text{-value} \leq 0.05$ and score of < -4) following Ezh2 inactivation in MEFs. A more stringent threshold was used to derive the up in Ezh2-deficient MEFs gene set, using a p-value cut off ≤ 0.05 after multiple hypothesis testing. The gene set of random repressed genes was chosen from a list of genes not expressed in wild type MEFs or showing altered gene expression in Ezh2 or Snf5-deficient MEFs. Lastly, non-occupied, expressed H3K27me3 targets in MEFs were chosen randomly. All gene sets are listed in Table S1.

Supplemental References

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Supplemental Table 1

Gene set name	H3K27.targets	PRC2.targets
Reference	(Nat. Genetics, 40, 499-507)	(Nat. Genetics, 40, 499-507)
# of genes in set	1121	654
	ADARB2	ABCC8
	ADCY8	ABTB2
	ADCYAP1	ADAMTS15
	ADRA1A	ADAMTS18
	ADRA2A	ADARB2
	ADRB1	ADCY4
	ADRB3	ADCY8
	ALOX15	ADCYAP1
	ALX3	ADRA1A
	AQP5	ADRA2A
	PHOX2A	ADRB1
	ASCL1	ADRB3
	ASCL2	ALOX15
	ASTN1	ALX3
	ZFHX3	ALX4
	ATF3	ANKRD19
	ATOH1	ANKRD20A1
	NKX3-2	ANKRD20B
	BCL2	ANKRD27
	BNC1	AQP5
	FOXL2	ARHGAP20
	CACNA1B	ARL9
	CACNA1D	ASCL1
	CACNA1E	ASCL2
	CALCA	ASTN1
	CBLN1	ASTN2
	CBR3	ZFHX3
	CD8A	ATF3
	CD34	ATOH1
	CD70	ATOH8
	CDH7	NKX3-2
	CDKN2C	BARHL1
	CDX2	BARHL2
	CIDEA	BARX1
	CLCN5	BARX2
	CNTFR	BCL2
	COL2A1	BHLHB3
	COL4A5	BHLHB4
	COL4A6	BHLHB5
	COL9A2	BMP8A
	COMP	BNC1

CRHR1	BTG2
CRYBA2	MKX
CTNND2	TMEM59L
CYP24A1	FAM89A
CYP26A1	C1orf32
CYP27B1	C1orf76
DACH1	C1orf92
DGKG	C20orf103
DCC	C21orf63
DIO3	C2orf32
DLX1	C3orf15
DLX2	CA10
DLX3	CACNA1B
DLX4	CACNA1D
DMRT1	CACNA1E
DRD5	CACNA1G
DSC3	CALCA
DUSP4	CAMK2N1
EFNA1	CASZ1
EFNA3	CBLN1
EGR3	CBLN4
EGR4	CBR3
EN1	CBX8
EN2	CD34
EPAS1	CD8A
EPHA5	CDH23
EPHB1	CDH7
EPHB3	CDK5R2
ERBB4	CDKN2C
F2R	CDX2
FBN2	CENTA2
FBP1	CGB7
FGF3	CGB8
FGF5	TPPP3
FGF9	CH25H
GPC5	CHODL
FOXG1	CHRDL2
FOXF1	CHST8
FOXL1	VSX2
FOXJ1	CIDEA
FOXE1	CITED1
FOXD2	CMTM2
FLI1	CLCN5
FUT4	CLEC14A
FZD2	CLSTN2
GABRA2	

GABRA4	CNNM1
GAD2	CNTRF
B4GALNT1	COL24A1
GATA2	COL25A1
GATA3	COL27A1
GATA4	COL2A1
GATA6	COL4A5
GBX2	COL4A6
GDNF	COL9A2
GHR	COLEC12
GHSR	COMP
GJB2	CORO6
GPM6B	CRHR1
PRLHR	CRLF1
GPR12	CRTAC1
GRIA2	CRYBA2
GRID1	CSMD1
GRIK1	CSMD3
GRIK3	CTNND2
GRM7	GJA9
GSC2	CXCL14
GUCY1A3	CXCL16
GUCY2D	CYP24A1
HBA1	CYP26A1
HBA2	CYP26B1
NRG1	CYP26C1
HHEX	CYP27B1
MNX1	DACH1
HLX	DACH2
HMX2	DCLK2
FOXA2	DCC
ONECUT1	DCHS2
TLX1	DDAH1
TLX2	DGKG
HOXB1	DGKI
HOXB2	DHH
HOXB3	DIO3
HOXB6	DKFZP564O0823
HOXB7	DKK1
HOXB8	DKK2
HOXC4	DLL4
HOXC5	DLX1
HOXC6	DLX2
HOXC8	DLX3
HOXC11	DLX4
HOXC12	DMRT1

HOXD1	DMRT2
HOXD3	DMRT3
HOXD4	DOK6
HOXD8	DPF3
HOXD9	DPY19L2
HOXD12	DRD5
HOXD13	DSC3
HSF4	DSCAML1
HSPA6	DUOX1
HTR1A	DUOX2
HTR2C	DUSP4
HTR7	ECEL1
IL7	EFNA1
INSRR	EFNA3
PDX1	EGFL6
ISL1	EGR3
ITGA4	EGR4
ITPKA	ELMOD1
JUN	EN1
KCNA1	EN2
KCNA3	EOMES
KCNC2	EPAS1
KCNC4	EPB41L4A
KCND3	EPHA5
KCNH1	EPHB1
KCNK2	EPHB3
KCNMA1	ERBB4
KCNQ3	ESAM
LGALS3	ESPN
LMX1B	ESX1
LPL	F2R
LRP2	FAM19A4
LTBP2	FAM43B
LTK	FAM5B
MAB21L1	FAM5C
MAL	FAM80A
MAPT	FAM84A
MLLT3	FBN2
CITED1	FBP1
MSX1	FBXL8
MT1A	FBXO3
MT1B	FEV
MT1H	FEZ1
MT1M	FGF20
MYF6	FGF3
MYO5B	FGF5

MYOD1	FGF9
NCAM1	FIGLA
NEFM	FLI1
NELL1	FLJ11235
NEFL	FLJ13236
NEUROD1	KIAA1546
NEUROD2	FLJ32063
NEUROG1	CCDC140
NFIX	FLJ33790
NKX2-2	SLFN11
NKX3-1	FLJ35409
NKX6-1	ANKRD18A
NPAS1	DPY19L2P2
NPR3	FBLN7
NPTX1	C8orf47
NPY1R	FLJ44815
NTRK1	FLJ45455
NTRK2	FLJ45983
OCA2	FLJ46347
OPRD1	FLRT2
SIX6	FOXA2
OTX1	FOXB1
OTX2	FOXD2
PAPPA	FOXD3
PAX1	FOXD4L4
PAX2	FOXD4L1
PAX3	FOXD4L2
PAX6	FOXD4L3
PAX7	FOXE1
PAX9	FOXF1
PCDH8	FOXG1
PDGFRA	FOXJ1
SLC26A4	FOXL1
PENK	FOXL2
PGM5	FRMD3
PGR	FUT4
PITX1	FZD10
PITX2	FZD2
PITX3	GABRA2
PKP1	GABRA4
PLEC1	GAD2
PLXNA2	B4GALNT1
PMP22	B4GALNT2
POLE	GALNTL4
POU3F1	GALR2
POU3F4	GATA2

POU4F1	GATA3
POU4F2	GATA4
POU4F3	GATA6
PRKCE	GBX2
PRKG1	GDF6
MAPK4	GDF7
PYY	GDNF
PTGDR	GHR
PTGER2	GHSR
PTGER3	GIMAP5
PTGER4	GJB2
PTGFR	GLT25D2
PTHLH	GNA14
PXMP2	GPC5
RASGRF1	GPM6B
RBP4	PRLHR
RGS10	GPR101
RYR3	GPR12
SCN4B	GPR120
SCNN1G	GPR88
SCTR	GRIA2
SFRP1	GRID1
SFRP5	GRIK1
SHH	GRIK3
SHOX	GRIN3A
SHOX2	GRM7
SIM2	GSC
SIX1	GSC2
SIX3	GSX1
SLC1A2	GSX2
SLC1A4	GUCY1A3
SLC6A1	GUCY2D
SLC6A3	HAND2
SLC9A2	HBA1
SLC9A3	HBA2
SLCO2A1	HES2
SLIT1	HES7
SRD5A2	HEY1
SSTR1	HHAT
SSTR2	HHEX
ABCC8	HHIP
TAL1	HLX
TBX1	MNX1
TBX2	HMX2
TBX5	HMX3
TCEA3	HOXB1

TBX3	HOXB13
HNF1B	HOXB2
NR2F2	HOXB3
THBD	HOXB6
NKX2-1	HOXB7
ICAM5	HOXB8
TLL1	HOXC11
TP73	HOXC12
TRH	HOXC4
TRPC5	HOXC5
UCN	HOXC6
UCP1	HOXC8
VDR	HOXD1
WNT1	HOXD12
WNT2	HOXD13
WNT6	HOXD3
WNT7A	HOXD4
WNT10B	HOXD8
WNT11	HOXD9
WT1	HPCAL4
ZIC1	HPSE2
ZBTB16	HRK
SLC30A2	HS3ST3B1
SLC30A3	HS6ST1P
SLC30A4	HS6ST3
BTG2	HSF4
PAX8	HSPA6
KCNAB1	HTR1A
NR4A3	HTR2C
DPF3	HTR7
ST8SIA2	ICAM5
EOMES	IGF2AS
PIP5K1B	IGSF21
SOX14	IL1RAPL2
BARX2	IL7
PIR	INA
LGR5	INSM2
RGS20	INSRR
UNC5C	PDX1
CHRD	IRX3
NOL4	IRX4
TRADD	IRX5
HRK	ISL1
GALR2	ISL2
CACNA1G	ITGA4
PHOX2B	ITPKA

CDK5R2	JUN
CH25H	KAZALD1
INA	KCNA1
SLC6A5	KCNA3
DGKI	KCNAB1
REPS2	KCNC2
MSC	KCNC4
CRLF1	KCND3
KLF4	KCNH1
SLIT2	KCNH3
LHX2	KCNK12
KL	KCNK13
NTN1	KCNK2
ECEL1	KCNK4
HAND2	KCNMA1
ONECUT2	KCNQ3
NRG2	KCNV1
CXCL14	VASH1
SPAG6	KIAA1199
GNA14	KIAA1324
FEZ1	KIAA1666
PDE4DIP	KIRREL3
FRMPD4	KL
ZEB2	KLF4
SV2B	KY
MAFB	LBX1
HS3ST3B1	LGALS3
PTPRU	LGR5
OLIG2	LHX2
IRX5	LHX4
SPON1	LHX5
HOXB13	LHX6
MAB21L2	LHX8
RASL10A	LMX1B
DMRT2	TMEM132E
LBX1	C1orf194
TBR1	LAYN
SIX2	C1orf213
SLC27A2	LOC150221
VAX1	LOC153684
RIPK3	NBPF11
STMN2	RBM32A
PTPRT	RPRML
FZD10	C17orf82
IKZF3	C5orf39
PPM1E	LOC400120

VASH1	DUOXA2
SLITRK3	LOC440804
DKK1	LOC441413
SORCS3	ANKRD20A3
PDZD2	LOC441426
GLT25D2	ANKRD20A2
ASTN2	ANKRD18B
LPHN3	NDUFA4L2
KCNH3	TMEM88
OTP	LPHN3
HEY1	LPL
DDAH1	LRCH2
TMEFF2	LRFN5
FLRT2	LRP2
C2orf103	LRRTM1
TMEM59L	LTBP2
VAX2	LTK
ABTB2	LYSMD2
DKFZP564O0823	MAB21L1
CHRD2	MAB21L2
OLFML2B	MAFB
C2orf32	MAL
EGFL6	MAPK4
NKX2-8	MAPT
FBXO3	MCOLN3
IL1RAPL2	MESP1
FGF20	METRNL
LHX6	MAG1
CNNM1	FAM81A
KCNV1	MGC26718
FOXD3	RSPO2
FOXB1	MGC39545
DKK2	MLLT3
PCDH17	MSC
BHLHB5	MSX1
RPS6KA6	MT1A
C13orf15	MT1B
STXBP6	MT1H
TMOD2	MT1M
TBX21	MT1DP
RAX	MYF6
VSX1	MYO5B
WDR8	MYOD1
DUOX2	NAGS
NEUROG3	NAV2
KCNK4	NCAM1

IRX4	NEFM
DHH	NEFL
SPOCK3	NELL1
IGF2AS	NEUROD1
WIT1	NEUROD2
WNT16	NEUROG1
HPCAL4	NEUROG2
TPPP3	NEUROG3
DUOX1	NFIX
GPR88	DUOXA1
FLJ11235	NKX2-2
DLL4	NKX2-3
HES2	NKX2-8
FEV	NKX3-1
KIAA1546	NKX6-1
DCHS2	NKX6-2
SIDT1	NLF1
RP11-35N6.1	NOL4
CASZ1	NPAS1
SUSD4	NPNT
FEZF2	NPR3
CRTAC1	NPTX1
MCOLN3	NPY1R
FBXL8	NR2F2
GIMAP5	NR4A3
STK32B	NRG1
CAMK2N1	NRG2
BATF3	OAF
TRIM36	NT5C1A
ELMOD1	NTN1
HHAT	NTNG2
CENTA2	NTRK1
MESP1	NTRK2
BARX1	NPAS4
CYP26B1	OCA2
KCNK13	OLFML2B
KCNK12	OLIG2
BARHL1	ONECUT1
NDUFA4L2	ONECUT2
CA10	OPRD1
KIAA1199	OSAP
CBX8	OSR1
TTYH1	OTOP1
GJA9	OTOP2
TMEM27	OTOP3
DSCAML1	OTP

KIAA1324	OTX1
ARHGAP20	OTX2
LRCH2	OXCT2
ZFYVE28	PAPPA
FAM5B	PAX1
CXCL16	PAX2
DMRT3	PAX3
C21orf63	PAX6
PRDM12	PAX7
HPSE2	PAX8
ALX4	PAX9
PROK2	PCDH17
PKNOX2	PCDH8
NEUROG2	PDE4DIP
OXCT2	PDGFRA
CDH23	FRMPD4
CLSTN2	PDZD2
EPB41L4A	PENK
LHX5	PGM5
ROBO3	PGR
SOX17	PHOX2A
CHST8	PHOX2B
HHIP	PIP5K1B
CSMD1	PIR
ISL2	PITX1
IRX3	PITX2
BHLHB3	PITX3
RNF128	PKNOX2
LONRF3	PKP1
FLJ13236	PLEC1
SCD5	PLXNA2
SEMA6D	PMP22
PIGZ	PODN
WNT10A	POLE
ESX1	POU3F1
ZNF436	POU3F4
COLEC12	POU4F1
KAZALD1	POU4F2
SLCO5A1	POU4F3
GPR101	PPM1E
RASSF5	PRAC
SOX7	PRDM12
ESPN	RP11-35N6.1
ANKRD27	PRKCE
RAB6C	PRKG1
ZIC4	PROK2

ANKRD20A1	PTF1A
ZMYND15	PTGDR
PRAC	PTGER2
NKX6-2	PTGER3
COL25A1	PTGER4
NT5C1A	PTGFR
KIRREL3	PTHLH
NTNG2	PTPRT
HES7	PTPRU
INSM2	PXMP2
OSAP	PYY
MAG1	RAB6C
ZNF503	SHC4
ATOH8	RASGRF1
CORO6	RASSF5
IGSF21	RAX
COL27A1	RBP4
KIAA1666	REPS2
TSLP	C13orf15
WNT3A	RGS10
NAV2	RGS20
C3orf15	RGS9BP
LHX4	RIPK3
DUOXA1	LONRF3
ESAM	RNF128
SLFN11	ROBO3
SYT12	RPS6KA6
TMEM88	RASL10A
OTOP2	RSPO1
CGB7	RTN4RL2
CGB8	RYR3
TIP39	SCD5
TRIM9	SCN4B
CSMD3	SCNN1G
SLITRK1	SCTR
SORCS1	SEMA6D
GRIN3A	SFRP1
DACH2	SFRP5
SLC24A4	SGPP2
USH1G	SHH
TMEM132E	SHOX
B4GALNT2	SHOX2
C1orf194	SIDT1
PODN	SIM2
BHLHB4	SIX1
FBLN7	SIX2

SGPP2	SIX3
OSR1	SIX6
ARL9	SLC10A4
OTOP1	SLC1A2
ANKRD19	SLC1A4
CHODL	SLC24A4
SLC32A1	SLC26A4
CBLN4	SLC27A2
LAYN	SLC30A2
GSC	SLC30A3
LRFN5	SLC30A4
NLF1	SLC32A1
FAM81A	SLC35F3
CMTM2	SLC6A1
SLC35F3	SLC6A3
C1orf76	SLC6A5
C1orf213	SLC9A2
C1orf92	SLC9A3
LOC150221	SLCO2A1
FLJ32063	SLCO5A1
CCDC140	SLIT1
FAM84A	SLIT2
GDF7	SLITRK1
FAM19A4	SLITRK3
LOC153684	PIGZ
NKX2-3	BATF3
CLEC14A	SORCS1
TMEM30B	SORCS3
NAGS	SOX14
FAM43B	SOX17
DCLK2	SOX7
ADAMTS15	SPAG6
ADAMTS18	SPOCK3
GSX2	SPON1
ADCY4	SRD5A2
NBPF11	SSTR1
FOXD4L1	SSTR2
SLC10A4	ST8SIA2
C8orf47	STK32B
GSX1	STMN2
DOK6	STXBP6
OAF	SUSD4
ANKRD18A	SV2B
COL24A1	SYT12
NPNT	TAL1
PTF1A	TBR1

LYSMD2	TBX1
FRMD3	TBX2
HS6ST3	TBX21
NPAS4	TBX3
MKX	TBX5
FLJ33790	TCEA3
DPY19L2	HNF1B
METRNL	TFAP2E
ZADH2	THBD
RSPO1	TIP39
FAM80A	NKX2-1
FOXD4L2	TLL1
MT1DP	TLX1
GPR120	TLX2
VSX2	TMEFF2
FAM5C	TMEM27
TFAP2E	TMEM30B
KY	TMOD2
RSPO2	CD70
RBM32A	TP73
ZCCHC16	TRADD
CYP26C1	TRH
HMX3	TRIM36
BARHL2	TRIM67
FIGLA	TRIM9
LRRTM1	TRPC5
OTOP3	TSLP
DPY19L2P2	TTYH1
FOXD4L4	UCN
RTN4RL2	UCP1
BMP8A	UNC5C
GALNTL4	UNQ9433
FAM89A	USH1G
FOXD4L3	VAX1
C1orf32	VAX2
FLJ45455	VDR
RPRML	VSX1
C17orf82	WDR8
RGS9BP	WIT1
HS6ST1P	WNT1
ANKRD20B	WNT10A
FLJ46347	WNT10B
C5orf39	WNT11
UNQ9433	WNT16
GDF6	WNT2
SHC4	WNT3A

FLJ45983
LOC400120
FLJ44815
FLJ35409
MGC39545
DUOXA2
LHX8
MGC26718
TRIM67
LOC440804
LOC441413
ANKRD20A3
LOC441426
ANKRD20A2
ANKRD18B
AIM1
ARNTL
BMP6
CALCR
CAMK2B
RUNX2
CHN2
COL12A1
NKX2-5
DLX5
DRD4
EBF1
ELAVL2
EYA4
EVX1
FOXF2
FOXC1
GABRB2
GPR6
GRK5
HIC1
HLA-A
HLA-B
HLA-C
HOXA1
HOXA2
HOXA3
HOXA4
HOXA6
HOXA7
HOXA9

WNT6
WNT7A
WT1
ZADH2
ZBTB16
ZCCHC16
ZEB2
ZFYVE28
ZIC1
ZIC4
ZMYND15
FEZF2
ZNF436
ZNF503
IKZF3

HOXA10
HOXA13
HSPA1A
HSPA1B
HSPA1L
IGFBP3
KCNQ1
LMO1
MEOX2
MICB
MSX2
MYB
P2RX5
PDE8A
POU3F2
PRKCB1
SFRP4
SIM1
SLC22A3
T
TAC1
TAP1
TCF21
TFAP2B
TGFA
NR2E1
TTPA
TWIST1
FZD1
STC2
DLK1
NEURL
DCLK1
GCM2
HAND1
KLK4
YAF2
PLXNC1
HCG9
PDE10A
NXPH4
AATF
ST8SIA5
TLX3
MED31
NRN1

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ETV7
CLIC5
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ELOVL2
KCNQ5
NRIP3
TBX20
LRFN2
PRDM13
TMEM106C
CLIP4
ULBP2
ULBP1
PPP1R14C
TRIM7
TFAP2D
PSD2
FNDC1
RSPO3
SCIN
KCNK17
TCEAL8
FOXQ1
ARID3C
FBXL14
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OLIG3
MMD2
RFXDC1
SCUBE3
FERD3L
VGLL2
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FLJ16165
LOC441189
ACADL
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ACAN
BAI2
BMX

CACNA1A
CACNB4
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CDH6
CRIP1
CRMP1
CSF1
CYP2J2
DPP6
DUSP6
EGR2
ELAVL3
EPHA4
FBN1
FOXE3
GPC3
GRIN2D
HTR6
ICAM4
IHH
IMPDH1
KCNA5
KCNJ3
TACSTD2
MAP6
MDS1
NBL1
NEFH
NFIA
NFIC
NGFB
NGFR
NPAS2
NPY5R
OVOL1
PAX5
POMC
PRKCH
RBBP7
RXRG
SECTM1
SLC6A2
SLC6A11
SOX9
SPTB
TACR1

TNFRSF1B
ST8SIA4
PDE8B
ARHGEF7
CCNA1
TCEAL1
RAB33A
GABBR2
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HS3ST2
HCN4
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SPON2
SEMA4F
RAB40B
RAPGEF4
FRMPD1
PHLDB1
PPP1R13B
COMMD3
MAPK8IP2
GPR124
SLC40A1
LEF1
NIN
RAB9B
SLC6A20
SLC30A10
DPYSL5
ALOXE3
XYLT1
ABCG4
IRX1
C1orf115
FLJ21511
KCNIP4
TMEM163
AMN
PHYHIPL
RCSD1
DNER
TMEM54
OSR2
RBP7
FAM129A
ASCL4

NOXO1
EGFLAM
SYT6
MFSD4
CDC20B
LGI3
FAM123A
UNC5B
EBF3
EPHA10
EIF4E3
CLEC4G
MGC52498
FLJ39739
ARL5C
ACCN2
AMELX
AMPH
APBA1
ATP1A3
AVPR1B
BLVRB
CA7
CACNB3
ENTPD2
ENTPD3
CD47
LRBA
CDH4
CDX1
CHAD
COL8A1
CPM
CR2
CRH
CYP2A6
CYP2A7
CYP2A13
DCX
DYNC111
DTNB
DUSP8
EPHA3
ESR1
FGF8
FGF11

FUCA1
GAST
GABRG3
GNAO1
GPR26
GRB10
GRIN1
GRM6
GSN
HLA-F
IGFBP1
IL10RA
IL11
IRF4
KCNF1
KCNJ4
KCNJ9
KCNJ10
KCNK3
KCNS2
KCNS3
LAMB1
LY6H
MEIS1
MMP2
MT3
NOVA2
NPR1
NRGN
PCSK2
PDE1B
PLP1
PRKD1
PTPRN2
RARA
RARRES2
RFX4
RNF2
RPS6KA2
SFTPC
SH3GL2
SLIT3
SNAI2
SNTB1
STX1A
CNTN2

TBXAS1
THBS2
TLE2
SEMA3B
LHX3
MADCAM1
PRSS12
CBX4
SKAP1
ABCC3
TNFSF9
ADAM15
RGS9
SYT7
LRAT
NRXN1
SLC25A27
SNCAIP
RAB11FIP3
FRAT1
TRIM28
RAMP1
CACNG3
VAV3
FBLN5
FUT9
HPSE
C1QL1
PADI2
GPD1L
WSCD1
SATB2
SYNE1
OSBP2
LMOD1
CHD5
NOC2L
FBXO25
HEYL
SLCO3A1
DDX25
SOX8
KCNIP2
CRYL1
MLXIPL
PLLP

CYP39A1
ACTL6B
PRKAG2
IL17D
ADAM22
FXD7
FLJ20184
CHDH
SMPD3
IL17RB
HR
PCDHGC4
ERO1LB
C14orf132
SLC17A7
SLC17A6
MAN1C1
RNPEPL1
KIAA1191
GALNTL1
KLHL14
KLHL1
SPTBN4
GRHL3
CACNG8
BCAN
SMOC2
REEP1
DLK2
MLPH
GCC1
EFCAB1
PARP8
TTLL7
GKAP1
ITIH5
PRRT1
WNT5B
ELOVL3
RTBDN
C8orf13
ARID5B
POLR3GL
PCGF5
KIAA1853
TMEM185A

KISS1R
GPR174
FLJ14816
C1orf94
LOC89944
KCNH7
KLHL13
EXOC3L2
CHRD1
HTRA3
CAMK2N2
ADC
CSMD2
C1QTNF5
CENTG1
PARD3B
GPR62
SEZ6
COX6B2
DUSP15
CNTNAP5
ANKRD43
C6orf159
GAB3
RIMS4
NOTUM
SAMD11
C1orf51
ANKRD35
CCDC50
LOC154761
PRUNE2
TMEM20
ZFPM1
SLC16A11
TTLL9
MGC42105
SSBP4
ADAMTS17
CADM4
TCTE1
C11orf45
TIGD3
FNDC5
RASGEF1C
TMEM151

NEGR1
CCDC96
PRR10
ARL10
GPR150
PRR18
FAM139A
FAM78A
KLHL17
RGAG4
LOC342897
FAM70B
LGICZ1
CERKL
MAST4
SLC26A5
HES5
C3orf54
FLJ16641
HES3
MXRA7
LOC440863

Stem Cell Associated #2	Peripheral T-cells	Human Fibroblasts
Nat. Genetics, 40, 499-507	(Cell, 121 425-436)	(Genes and Development
380	823	220
ACTA1	TMEM57	EHHADH
ACTC1	SH2D1A	NIN
ACTN3	BMPR2	C9orf5
ADD2	ZFP99	ZCSL3
PARP1	NUP88	LEPR
ALPL	TRAF1	RBP4
AMD1	VPS54	CAV2
BIRC5	LSM14A	LYPDC1
ATP1A2	2700049A03RIK	SEC11L3
BMPR1A	2610301B20RIK	CNTFR
BUB1	CBLB	BMP4
BUB1B	CRTC2	BMI-1
C1QBP	MYD116	FOXC1
CASP3	BTLA	NLK
CBS	SERPINB6A	CDK6
CCNA2	STK4	RARB
CCNB1	DIAP1	RAP1A
CD24	PFN2	SMAD4
CDC2	ARID3B	BIRC3
CDC6	6430601A21RIK	MRAS
CDC20	ADIPOR1	HDAC9
CDC25A	CBR4	MGC15419
CTSC	NGFRAP1	FIP1L1
CHEK1	BZW2	RREB1
CRABP1	TCF7	LYPLA1
CRABP2	NSUN2	JUN
CRMP1	LSM3	HSPC171
CSE1L	RNF138	SPFH2
CXADR	PLSCR4	RRAS
CYP26A1	6230416J20RIK	CD164
COCH	D16BWG1543E	PAPPA
DHFR	KBTBD2	FLJ26260
DIAPH2	HERPUD2	HSA9761
DLG3	ABCG1	SOX5
DNA2L	9130413E14RIK	CBX8
DNMT3A	R3HDM1	C1orf9
DNMT3B	CD69	SATB1
DSG2	PHF6	GCC2
ECT2	NFYC	FOXP1
SLC29A1	A230107N01RIK	LOC113251
EPHA1	ERGIC2	SHFM1

EPRS	APOBEC3	TGFB2
ERBB2	3930401B19RIK	TM9SF2
ETV1	CHN1	MORF4
ETV4	4632417K18RIK	SDCCAG8
FABP5	RNF19	C9orf80
FEN1	FGF13	ATF3
GPC4	TRIM26	HNT
FGF2	ABTB2	KCNN4
FGF13	RNF130	IGSF4
FGFR1	ARFGEF1	SOCS3
FKBP5	6720467C03RIK	IER3
FOXO1	MCL1	WT1
GABRA5	LOH11CR2A	MYCL1
GABRB3	CREBL2	HOXA5
GAD1	KATNB1	TIMP3
GART	XRN1	HES1
GJA1	PDRG1	MT1G
GLDC	1500041B16RIK	SLC17A5
GPM6B	HERC4	TNS
GPR19	9930013L23RIK	STAT3
MSH6	SLC25A36	DPPA4
HAS3	TOP3A	PKD2
HELLS	DCP1A	FLJ32871
HMGB3	9430016H08RIK	C9orf150
HMGA1	1700109G14RIK	HECW2
HMMR	ARHGAP15	D2LIC
HNRPAB	EGR2	RASA4
HSPA4	UVRAG	CYP2W1
HSPA8	MED12	SF3A1
HSPD1	PHC1	TRIM15
ILF3	AW146242	ARHGAP24
INDO	DNM1L	LYRIC
ITPR3	CASP9	TFPI2
JARID2	EI24	CDH8
KAL1	5730499H23RIK	PELI1
KCNS3	LOC670853	CFTR
KIF5C	SEC24B	STATIP1
KLKB1	TRIM13	BTBD3
KPNA2	CARD4	HIC2
KRT8	FNBP1L	JMJD3
LCK	CHIC2	CA11
LGALS8	STK39	TP53I11
TACSTD1	BC023882	MMP1
M6PR	GLYAT	PCTK2
MAN2A1	MSL2L1	TEGT
MARS	SENP6	G0S2

MAT2A	LOC552906	ITCH
MCM2	TSC22D3	KIAA1164
MCM3	GARNL1	ABHD5
MCM4	AP1S2	TRIM10
MCM5	CENTD1	MLN
MCM6	NT5C3	PDHX
MCM7	IFI205	PTHLH
MFGE8	SNRK	FEZ1
MGST1	2210010B09RIK	ATP2A2
MICB	ZFPN1A3	C9orf9
MRE11A	MYEF2	C21orf7
MSH2	DDX5	EEA1
NUDT1	SON	ZNF117
MTHFD1	AU020772	ZNF298
NASP	PFN3	STATIP1
NFYB	2210013O21RIK	CUGBP2
NODAL	SLAMF6	FLJ31265
NPM1	4932433N03RIK	C14orf28
NTHL1	CHD6	BTRC
NTS	RBL1	CENTG1
OAZ2	RNF44	RAP2C
ORC1L	EPC2	UGT2A1
PAK1	ZMAT3	MGC17839
PCDH1	2310042D19RIK	DICER1
PDCD2	TSC1	SYNE1
PDK1	C330002I19RIK	ARK5
PFAS	DGKA	IMP-3
PIK3CB	GABARAPL1	RYBP
PLCB3	4833439L19RIK	RAP80
PMAIP1	KCNS2	CCNT1
EXOSC9	TSGA10	CCND2
PNN	SUMO1	SLC35D2
PODXL	SLC5A3	THPO
POLE2	RAN	ELTD1
POU5F1	ATXN3	ABHD2
PPM1B	DCK	DUSP6
PPP2R1B	SNX13	AGPAT4
PPP2R2B	D230019N24RIK	LOH11CR2A
PRIM1	RPL37	MGC9850
PRIM2	ATPAF1	RBM4
PRKX	APOBEC2	PPP6C
PRPS1	FLIIH	ELISC-1
PTPN2	PIM2	LRRC17
PTPRZ1	PRSS15	CDKN1C
RAB3B	DNAJB6	ASPH
RARRES2	MAP2K6	CXorf12

RBBP8	TEC	VENTX2P1
RFC3	PDIA3	LOC150759
RFC4	MFAP1	ZNF37A
ABCE1	MS4A4C	IGSF4B
ROBO1	E430014L09RIK	EPHB2
RPS24	9530018I07RIK	STAM2
RRM2	RABGAP1L	BG1
SALL2	TRAPPC6B	FGF12
SALL1	INTS7	ZNF596
SCNN1A	SENP2	BNC1
SFRP1	BLR1	TRIB1
SFRP2	A630025C20RIK	KIAA1377
SFRS1	EPB4.1L2	LRAP
SFRS7	CCDC82	SLC19A2
ST6GAL1	EXOC4	DKFZP566E144
SLC6A8	C80998	CHST11
SLC16A1	ZSWIM6	DKFZp762C1112
SMS	PBEF1	CDKAL1
SNRPA	SETD4	ITGB1
SNRPN	CCNG1	SALL1
SORL1	SOD1	KPNA5
SOX2	RHOA	FAM53C
SSB	MALAT1	IGFBP1
TDGF1	TXNIP	OTX2
TEAD4	D6WSU176E	TMEM27
TERF1	HNRPH3	TGFB114
TFAM	RNF14	TRIB1
TIA1	PHIP	IL8
TMPO	HNRPA2B1	ATXN1
TNNT1	CCT4	EDN1
UGP2	ASB13	CDK5R1
UNG	UBE2E3	LOC388272
VSNL1	A1447881	PRO2037
ZIC2	NFKB1	DMD
ZIC3	DGKQ	PRKG2
ZNF195	ATP6V1B2	BPGM
LRP8	B3GNT5	AKR1D1
FZD5	5830411G16RIK	OR7E24P
DEK	NFXL1	SERPINB2
FXR1	B3GNT2	AKAP9
USP9X	DIRC2	AMMECR1
FZD7	MARCKSL1	MGC72104
UTF1	MAP4K3	SUI1
IFITM1	UBE2Q2	PMAIP1
TMEFF1	ATG7	TRPM3
RUVBL1	2610018G03RIK	TCF7

PPAP2A	BRAF	PVRL2
USO1	TRPS1	ZNF542
ADAM23	HRASLS3	ULK4
TRIM24	2810446P07RIK	HBEGF
HESX1	GRAMD3	KCNA1
PROM1	RYR3	NPTX1
FUBP1	ZSWIM4	GNL3L
DDX18	CPEB2	KLF4
MAP7	2310058O09RIK	GPR56
CLDN6	HSPA4L	BMP2
SYNGR3	CHD7	MAD
BUB3	CYP2J6	TDE2L
DDX21	TCP11L2	SLC2A14
DCLK1	PELI1	GPR115
AURKB	SLC12A2	SLC14A1
NOLC1	PLCL1	CENPF
PTTG1	1110014K08RIK	UCP1
MED14	4921505C17RIK	ZBTB1
CER1	EPS15	C9orf16
HOMER1	GFI1	MGC14161
C1orf38	CTLA4	NUPL1
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NFE2L3	IDE	CDKN2B
DLG7	MPP6	SUGT1
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CHAF1A	RAB28	COL24A1
DNAJB6	DNMT3A	LOC387763
AP1M2	POLK	SLC2A3
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AASS	RPL39	AREG
PRMT3	9030605E16RIK	DKK2
ZNF267	PIAS2	IL6R
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NPM3	SERINC5	ITGA2
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LYPLA1	HIST1H4J	KIAA0895
OLFM1	LOC623121	SLC6A15
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NOL5A	LPXN	
PAICS	ARHGEF7	
PAICS	BCKDHB	
POLR3G	9630054F20RIK	

RAD51AP1	2210010L05RIK
LEFTY1	YPEL5
IGF2BP3	C77626
IGF2BP2	D330010C22RIK
MTHFD2	GDAP1
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KIF2C	CNKSR3
PIM2	WDR45L
NUDT21	BCL6
LECT1	C81285
DIDO1	SF11
MYST2	PHF3
HRASLS3	ARNTL
PSIP1	INPP5B
WDHD1	NR1D2
CHEK2	RPS6KA5
GPR176	CDKN2C
OIP5	GIMAP1
RRAS2	SLC35D1
MTF2	TIGD2
SEPHS1	SLC12A4
GARNL4	RAB5A
TTLL12	2410024A21RIK
PASK	D14ERTD24E
MDN1	ATP11C
COBL	ATG4C
BOP1	AXIN1
NCAPH	CLK1
FRAT2	B230334L07RIK
SIRT1	CCDC46
CBX5	5730409G07RIK
TNPO3	9430093I07RIK
PRKD3	H3F3B
KIF4A	ZFP36L2
RAD54B	VT11B
NOL11	RNF38
SFRS18	AU040320
LRIG1	MORF4L2
CNTNAP2	SMC5
AUTS2	2610020C11RIK
SERBP1	RAB32
PITPNC1	HS2ST1
GNL3	SLA
FOXD3	5830436I19RIK
ITGB1BP3	9030425P06RIK
C6orf66	9630037P07RIK

CYP2S1	PECI
PYCR2	USP11
RRP15	ZFYVE27
GMNN	LOC672245
GAL	AU015263
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HSPC111	5330439A09RIK
LARP7	1110019D14RIK
ESF1	NPAL3
AZIN1	MATR3
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GINS2	ACAD9
GPRC5B	LMBR1
CECR1	2610511M17RIK
BRWD1	PLSCR3
C21orf45	C030046G05
FAM64A	AU015680
PUS7	AU018740
EPB41L4B	IGF1R
L1TD1	MTR
ERCC6L	GLT8D1
RBM35A	ABCD3
NCAPG2	D430013B06RIK
ZNF770	ABCC12
PAK1IP1	NKTR
C12orf48	CASP3
FANCL	TFAM
DPPA4	TOR1AIP2
C14orf115	9930031P18RIK
NUDT15	GIMAP6
BXDC2	TAGAP
C14orf106	RAB19
LGR4	4631422O05RIK
MCM10	SLFN5
PRPF40A	USP31
TMEM48	ADRM1
C12orf11	C030018P15RIK
CCAR1	4933407C09RIK
WDR12	D630040G17RIK
RCC2	CDKN1A
KLHL7	ISGF3G
CHST7	PDIK1L
EXOSC5	ANP32A

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SLC39A10	CDADC1
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NLN	BEXL1
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MTA3	DENND2D
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SEMA6A	VDAC3
LRRN1	GAK
CACHD1	4932432N11RIK
FAM60A	USP47
PRDM14	COPB1
NOC3L	TIPARP
ISG20L1	RPL13
SLC13A3	A730098D12RIK
CAPRN2	RAB11A
DBNDD1	RAPGEF6
CAMKV	TRAFD1
NUP37	AU017263
ELOVL6	GGH
DCC1	KLHDC2
GNPTAB	ANKRD11
C1orf108	SNX1
NARG2	TBC1D24
LIN28	1110033J19RIK
NANOG	2900070H08RIK
PHF17	PLEKHB1
NARG1	CTSD
MYO19	PRKAR1A
PUS1	5830434P21RIK
TMEM177	AI314180
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SPRY4	2810482G21RIK
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BCL2L12	PB1
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GINS4	1500011J06RIK
HPS3	TMED8
RBM13	D130073L02RIK
SLC7A3	PRPF39
ZSCAN10	ASF1A

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GYLTL1B
LOC157627
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C11orf82
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TUBB2B
CKMT1A

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DUSP1
HIC2
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2900010J23RIK
SELL
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JAK2
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PCNP
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BC052040
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2610024D14RIK
H2-T24
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SLC45A4
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MAGI3
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NLK
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BIRC4
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PTPRD
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D13ERTD787E
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EPB4.1
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AI428479
IFT57
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AI596198
NCKAP1L
D330050I23RIK
2700019D07RIK
ELA3
TXNL1
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ZFP313
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GALNT11
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MLXIP

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SPATA13
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9330128J19RIK
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1190005F20RIK
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GRHL1
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RSPO4
STXBP5
RGNEF
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GBP2

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PTDSS1
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ZFP46
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CYP3A25
1190003K10RIK
PDE7A
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LLGL2

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LRRC47
2010109N14RIK
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EHD2

RABGGTB
4930546C10RIK
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BLMH
UNC5CL
PPP2R5C
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TRAF6
HEXA
ABL1
SLC6A6

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SMARCA4
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ANKRD13A
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PABPN1
CCNT2
PABPN1
CCNT2

Ezh2-regulated genes**MEFs****This Study****573**

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GUCA1A
PI4K2B
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**Stem Cell Associated (Stem Cell Associated H3K27 Targets in W1
(Cell Stem Cell, 2, 33 (Cell Stem Cell, 4, 12) This Study****335**

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ATP5O
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BCAT1
CCND1
BLM
BTF3
BUB1
BUB1B
SERPINH1
CCNA2
CCNC
CCND2
CCNF
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CDC6
CDC20
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CDK4
CDKN1C
CDKN3
CTSC
RCC1
CHEK1
CKS1B
CKS2
COX5B
CRABP2
CSE1L
CSRP2
CTNNA1

263

ABCB7
ACAD8
ADH5
ADSL
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ALDH7A1
ALDOC
AMOTL2
ANP32E
APEX1
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ATP5O
BANF1
BAX
BTF3
BXDC2
C11orf48
C2orf47
CBX3
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CCND2
CCT5
CDCA3
CDCA7
CHEK2
CKAP2
CKS1B
CKS2
CLPP
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COX5B
CRABP2
CSE1L
CSRP2
CTNNA1
CTSC
CYCS
DAP3
DARS2
DDX18

508

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1700109F18RIK
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ADRA2A
ADRA2C
AJAP1
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AK005877
AK006202
AK006321
AK006752
AK017076
AK017182

ACTN2	DHX9	DEK	AK018772
HYAL1 /// NAT6	TIMM8A	DHX9	AK019375
NEUROD4	DLAT	DLAT	AK020867
SPI16	DNMT1	DNMT1	AK031498
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GRPR	E2F3	DTYMK	AK033378
NELL2	ECHS1	E2F3	AK033508
TH	PHC1	EBNA1BP2	AK036422
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ABCD1	EIF2S3	EEF1E1	AK037113
RBP2	EIF4A1	EEF2	AK039090
CPA2	EIF4B	EIF2S2	AK041096
EPHA5	EIF4EBP1	EIF2S3	AK043747
IER5	ENO1	EIF3S10	AK044313
OLFR71	FBL	EIF3S12	AK046385
V1RA5	ETFA	EIF3S2	AK046737
CRISP1	FARSA	EIF3S6IP	AK053193
CLDN5	FDPS	EIF4A1	AK081588
BB001228	FGFR1	EIF4B	AK085522
ZFAND6	FH	EIF4EBP1	AK132940
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AA589418	GART	ENO1	AK135975
H2AFJ /// LOC632401	GJA1	ERCC6L	AK144266
FCMD	GLDC	ERP29	AK144536
C77815	GLO1	ETFA	AK145180
ZXDC	HADH	EXO1	AK161769
AEBP1	HDAC1	EXOSC7	AK162942
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OTOS	HMGB2	FAM60A	AK210533
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NCALD	HNRPAB	FBL	ALX3
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CYP2D22	HSPA9	FUSIP1	ATP1A3
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C77144	RPSA	GMNN	BARHL2
KLK1B27	LMNB1	GNA14	BC021523
TAL1	MAD2L1	GNL3	BC021891
PVRL4	MCM2	GNPDA1	BC032265

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V2R13	MCM4	HAT1	BC052055
GCLC	MCM5	HDAC1	BC057022
CNR1	MCM7	HN1	BC068157
BC056474	MSH2	HNRNPA1	BC072620
OLFR870	MYBL2	HNRPAB	BC100492
RRAS	MYC	HNRPK	BCL6B
VPREB1	NAP1L1	HNRPL	BHLHB4
TRAPPC2	NASP	HSPA14	BMI1
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GABRB1 /// B230208N1	NDUFA9	HSPE1	BSX
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EFCBP2	NDUFS2	KIF4A	C230078M08RIK
PEX7	RPL10A	KPNA6	C530028O21RIK
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SPAG6	NOL1	LSM2	CBLN1
GJB2	NONO	LSM4	CBX2
PHACTR2	NTHL1	LSM5	CCDC134
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STIM1	OTX2	MAPK13	CDK6
DAK	PA2G4	MID1IP1	CEACAM9
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EMILIN3	PDHA1	MRPL13	CENTA2
GJB1	PHB	MRPL15	CHRNA4
FUT1	PLK1	MRPL16	CILP2
CHST3	POLD1	MRPL37	CLDN5
HTRA3	POLE2	MRPL39	CLDN7
TASP1	POLR2F	MRPL4	CLEC4F
EMP1	PPM1G	MRPS17	CLIC6
STRBP	PPP4C	MRPS18B	CLM3
ASAH2	PRIM1	MRPS2	CN716893
NIN	PRIM2	MRPS28	CNTFR
BC019755	MAPK13	MRPS30	COL2A1
EDN1	PRPS1	MRPS36	CPNE6
PCSK5	PSMA5	MRTO4	CPNE7
PCDHB11	PSMA7	MSH2	CPNE9
ZFP185	PSMB5	MTF2	CPSF6
DEFB15	PSMB6	MTHFD2	CRHR2
FAAH	RAD23B	MYBL2	CRTAC1

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PLXDC1	RPA3	NDUFA11	D630039A03RIK
TRIM26	RPL13	NDUFA9	DBX1
SGCA	RPL22	NDUFAB1	DEFB3
NFATC1	RPL27A	NDUFB10	DES
PHLDB2	MRPL12	NDUFB7	DLL4
TIGD5	RPS3	NDUFB8	DLX4
ADAM1A	RPS5	NDUFS2	DMBX1
ESM1 /// LOC632677	RPS8	NIP7	DMRTC1B
NOTCH1	RPS12	NIPSNAP1	DMRTC1C
H2-EB1	RPS16	NLN	DOCK3
PRUNE	RPS19	NME2	DPP6
DCTN6	RPS23	NME4	DQ545486
CCBL2	RPS27	NOL1	DQ708880
ELAC1	RRM1	NOLA2	DRD5
POP4	RRM2	NOLA3	DSCAML1
5730494N06RIK	SARS	NONO	DUOX2
AVP	SDHC	NSBP1	DUSP9
FOXH1	SDHD	NT5DC2	DXBAY18
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UPK3A	SNRPA1	PA2G4	EEF1A2
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FYN	SOX2	PARP1	EG331529
2210409E12RIK	SQLE	PDCD2	EG434128
PLA2R1	SSB	PDHA1	EG434760
DLX3	SS18	PDIA4	EG434764
TRPD52L3	AURKA	PDPN	EG434797
CD300LF	TCF19	PHC1	EG545758
TAS1R2	TCOF1	PHF5A	EG546325
CXCL13	TERF1	PIPOX	EG630499
ACTN1	TGIF1	PLK4	EG667977
PRKCC	TOP2A	POLR2F	ELOVL2
GFAP	TP53	POLR3K	ELP
AQP4	TRIP6	POP7	EML2
SMR2	TTK	PPM1G	EMX1
PCBD1	U2AF1	PPP4C	EN2
SOX10	UBE2G1	PRDX1	EPHA10
TMEM143	UBE2V2	PRMT1	EPHA8
DEFKR-RS10	SUMO1	PRMT3	ESX1
PROX1	UGDH	PROM1	ETV2
MTAP7	UQCRH	PRPS1	F8A

S100A5	VBP1	PSMA5	FBXL16
BC018285	VRK1	PSMA7	FBXO2
SCRN3	WEE1	PSMB5	FCGR3
C77609	XPO1	PSMB6	FEV
RESP18	XRCC5	PSMD14	FEZF1
C1QL1	YY1	PSME3	FEZF2
CTRB1	ZIC3	PUS1	FGF14
VPS37A	ZNF22	RAB34	FGF21
6330442E10RIK	DAP3	RACGAP1	FGF3
ACTL7A	DEK	RAD18	FNDC5
CLDN16	CLPP	RAD23B	FOXA2
PGA5	CDC7	RCN2	FOXB1
PLK2	TEAD2	RNPS1	FOXB2
PGC	SIP1	RPA2	FOXD1
LOC666466	NIPSNAP1	RPL10A	FOXD3
HOD	HAT1	RPL13	FOXI2
PARD6G	TMEFF1	RPL22	FXYD1
TM6SF2	RUVBL1	RPL27A	FXYD7
SLC6A13	EIF3S10	RPP40	G630014P10RIK
CAMK4	EIF3S2	RPS12	GAD1
IL24	BANF1	RPS16	GALNTL1
C630004H02RIK	PROM1	RPS19	GCGR
DIRAS1	DDX18	RPS23	GDAP2
ACTL7B	EIF2S2	RPS27	GDF10
A2M /// LOC677369	CCNB2	RPS3	GDF6
TCP11	EXO1	RPS5	GDF7
NID1 /// LOC630776	BUB3	RPS8	GFI1
4930429B21RIK	AURKB	RPSA	GFRA4
CLDN13	TRIP13	RUVBL2	GHSR
SCUBE2	WDR57	SARS	GJB1
EVI2B	KIF23	SDHC	GLIS2
C76614	EEF1E1	SDHD	GM996
BC021614	PDIA4	SEPHS2	GPR120
NXPH3	GNA14	SERPINH1	GPR162
FGFR4	DLG7	SIP1	GPR26
GALNTL1	NCAPD2	SLC16A1	GRHL3
CDKN2B	GNPDA1	SLC25A5	GRID1
GPR50	CHAF1A	SLC2A1	GRID2IP
IFNA1	SMC4	SNRPA	GRIN1
MMP2	DPP3	SNRPA1	H2-B2
MUP5	KIF20A	SNRPD1	H2-BL
PDCD1LG2	G3BP1	SNX5	H2-K1
LAPTM5 /// LOC669058	PRMT3	SOX2	H2-Q1
C530044N13RIK	PSME3	SQLE	H2-Q10
NID1	PSMD14	SS18	H2-Q2
EN1	POP7	SSB	H2-Q6

PRAP1	COX4NB	STIP1	H2-Q7
OPN4	NDC80	STOML2	H2-Q8
2210415F13RIK	YAP1	SUMO1	H2-T10
CYP2G1P	LYPLA1	TCF19	H2-T22
YIPF7	TIMM44	TCF7L1	H2-T23
TRP63	SMC2	TCOF1	H2AFZ
CACNB1	SPAG5	TEAD2	HAPLN4
HSD3B3	PDPN	TGIF1	HBA-A2
PRP15	PLK4	TGIF2	HBA-X
RPS6KL1	FUSIP1	THOC3	HFE2
CITED1	MTHFD2	TIMM13	HINT2
TMPRSS13	RPP40	TIMM44	HMX2
MAST1	RUVBL2	TIMM8A	HNF1B
ATXN10	MRPS30	TIMM8B	HOXB1
OLFR544	RNPS1	TMEFF1	HOXB13
ADPRH	DBF4	TP53	HOXB6
4930432F04RIK	ERP29	TRIP13	HOXB8
AHDC1	STIP1	TRIP6	HOXB9
4930544G11RIK	EBNA1BP2	U2AF1	HOXC10
SLC17A3	UQCR	UBE2G1	HOXC11
MLXIPL	WDHD1	UBE2V2	HOXC12
GHRH	CHEK2	UGDH	HOXC8
IL20	CBX3	UQCR	HOXC9
PCX	MTF2	UQCRH	HOXD1
1810022C23RIK	NCBP2	UTP18	HPCAL4
MMP14	SEPHS2	VBP1	HTR5A
PDZX	CCT5	VRK1	HTRA3
AW049829	EXOSC7	WBP11	HUNK
CPE /// LOC677374	NCAPH	WDHD1	IFNA6
TCL1B3	KPNA6	WDR57	IFNK
D11ERTD326E	LSM5	WDR77	IGSF21
CENTG1	GSPT2	XPO1	IL11RA2
PAX4	KIF4A	XRCC5	IL20
ANKRD13A	LSM4	YAP1	INSL3
HIF3A /// LOC641092	GNL3	YY1	INSM1
CAR9	TIMM13	ZCD1	IQSEC3
3110079O15RIK	TIMM8B	ZIC3	IRX4
RAB6A	CKAP2	ZNF22	ISLR2
BC019537	PABPC1		JAG2
RPS6	ACAD8		KAZALD1
SLC8A1	SNX5		KBTBD11
PRDM5	EIF3S12		KCNA5
SLC30A3	MRPS28		KCNC4
6330505N24RIK	MRPS18B		KCNH8
PHF7	MRPL13		KCNIP3
ZFPN1A1	MRPL15		KCNJ12

KCNMA1	RACGAP1	KCNJ4
1810065E05RIK	STOML2	KCNK12
IGH-VJ558 /// LOC238	GMNN	KCNK9
PILRB	MRPL4	KCNQ2
BRWD3	UTP18	KCNQ4
MGC107702	MRPS2	KCNS2
CAMTA2	MRT04	KCTD19
CXCL11	HN1	KIRREL2
4930511J11RIK	HSPA14	KLK1B21
LHX3	NUSAP1	KLK1B24
GPR87	MRPL37	KLK4
C86187	PIPOX	KLRE1
CDKN2A	MRPS17	KNDC1
LCN8	EIF3S6IP	KRT1
AI465270	NIP7	KRT6A
C79709	AMOTL2	KRT6B
MSI1	GTSE1	KRT71
PTPN6	DTL	KRT77
3110003A17RIK	POLR3K	KRT83
NRARP	WBP11	KRT86
TXNIP	COQ3	KRTAP5-1
4930403L05RIK	MRPL39	KRTAP5-2
TMEM45B	CYCS	KRTAP5-4
STX6	ERCC6L	KRTAP5-5
ACOT3	MRPL16	LAD1
SLC2A5	CDCA8	LBX2
EPHA6	DARS2	LBXCOR1
ALLC	BXDC2	LEFTY1
KCNMB2	NOLA3	LHX1
DPYSL5	NOLA2	LHX5
GATM	IPO9	LHX6
EGR4	ZCD1	LINGO4
ICOS	RCC2	LOC100036766
HOXC8	RAD18	LOC100039913
KRTAP12-1	NUP107	LOC100039948
MUC5AC	NLN	LOC100040635
GBP1	LSM2	LOC100042555
ARRDC4	FAM60A	LOC100043125
FOLH1	MID1IP1	LOC621852
ITGB2L	TGIF2	LOC625638
HBB-BH1	NT5DC2	LRFN2
CPE	MRPL11	LRG1
CHIC1	ELOVL6	LY6H
RUSC1	C11orf48	LYRM2
MCPT1	WDR77	MAFB
XPNPEP2	NSBP1	MAPK15

PDE4A
RNF144
CCR1L1
IL18BP
C77681
LOC622147 /// ENV //
BCL7A
MPO
EDA
GUP1
GDF9
YPEL5
ZFP697
BMP10
DNAHC8
ALK
AF366264
PPP1CB
TAT
GIMAP3P
MAGEA1 /// MAGEA5
OLFR65 /// OLFR66
SNCB
PMFBP1
SPNB3
OTT /// LOC434863 //
EDEM1
REG1
1700024D23RIK
CDX2
SLC27A1
CLEC1B
CCNG1
ELOVL3
CYP19A1
CALB2
AA517864
OTOG
ELA3A
ST8SIA2
ANKRD24
PLEK
8430406I07RIK
KRT2-19
GPR23
1700011A15RIK

C2orf47
GEMIN6
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FAM136A
LSM10
MRPS36
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CCDC5
NDUFA11
NUDCD2

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MMP24
MMP9
MRAS
MSI1
NAGS
NCAN
NEFH
NEUROG1
NFASC
NKX-1.2
NKX2-2
NKX2-3
NKX2-5
NKX6-1
NMNAT2
NODAL
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NOVA2
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NR0B1
NRXN2
NR_003248
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NTSR2
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OLFR1087
OLFR12
OLFR1286
OLFR399
OLFR853
OLFR95
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OLIG3
ONECUT3
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OSBP2
OTOP1
OTOP2
OTP
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MRGPRA2 /// LOC66872
CACNB4
GRIN1
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LCN3
HOXC4
B3GAT1
GP1BB
MAL
MEP1B
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SERPINA3A
SLCO1C1
MAN2B1
SYN1
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TAP1
3110001I20RIK
TNRC15
SIM1
MPP3
EXOSC9
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PRKCQ
CASP4
LNX1
ATP2A1
KRTAP5-5
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GCGR
SLC22A17
SCUBE1
OSTA
UTS2R
FUT10
GALR1

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OTTMUSG0000001715
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OXCT2B
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PAX4
PAX6
PAX7
PDE2A
PDX1
PEA15B
PGR
PHOX2A
PITX1
PITX2
PJA1
PKHD1L1
PLCB2
PLD4
PLXNB3
PNMT
POU4F2
POU4F3
PPP1R1B
PPP1R2
PRDM8
PRKCQ
PRLHR
PRPH
PSD
PSD2
PSORS1C2
PTCHD2
PTF1A
PVALB
PYY
QRICH2
RAD9
RAET1E
RASGRP2
RBM28
RBPJL
RFX4
RGS14

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ZP2
SLC37A2
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GATA1
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TXNL6
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LMOD2
BMI1
TPO
DARC
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ITGA2
MYOZ1
HRG
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GALR2
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ART1
GFI1B
SEMA6D
AY026312
CYP2C55
ACTB
D730048I06RIK
SULT5A1
PSKH1
TMEM66
TACR3

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RHOX3
RHOX4A
RHOX4B
RHOX4C
RHOX4D
RHOX4E
RHOX4G
RHOX4H
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RPRML
RRS1
RTBDN
RTN4RL1
RTN4RL2
RUNX3
SALL4
SCNN1A
SCRT1
SEMA6D
SEZ6
SEZ6L
SEZ6L2
SFRP5
SHD
SHE
SHH
SHMT2
SHROOM4
SIM1
SIX3
SLC17A6
SLC17A7
SLC22A12
SLC22A3
SLC30A3
SLC32A1
SLC5A11
SLC6A1
SLC6A11
SLC6A2
SLC6A7
SLC9A7
SMOC1
SMUG1

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RSAD2
CSF2RB1 /// CSF2RB2
GALC
LNX2
AFM
NDRG4
TESP1
ZAN
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PNPO
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CML2
BPIL1
GSTM3
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4931440B09RIK
DEF8
NCAM1
LY9
4921530L21RIK
MYO1G
SELPL
MAGEA7
GPLD1
2310007H09RIK
ATP4A
KCNIP4
C330011F01RIK /// 64
PRLPC3
TNC
CYP2J13
6720475J19RIK /// LO
GTPBP2
BC014805
PTGDR
ESCO1
CD6
SPOCK1
ACOT12
GPR45
LARGE
NR4A3
EDG6

SORCS3
SOX1
SP9
SPEG
SPG7
SPNB1
SRD5A2
STMN3
SUPT4H2
SYTL2
TAL1
TAS2R119
TBX1
TBX21
TCF15
TCF21
TCFAP2D
TFAM
THSD7B
TIFP39
TLX1
TLX3
TMEM35
TMEM91
TNF
TRO
TTC22
TUBB4
TUFM
TYRO3
UCN
UNC5A
UNCX4.1
USP30
USP37
USP44
VAX1
WIZ
WNT3A
X57330
XKR7
XLR3A
XLR3B
XLR3C
XLR4A
XLR4B

VGLL1
FANK1
GFRA2
GUCA1B
HCN3
PLEKHF1
ROS1
1810009J06RIK
IFNA2
ZDHHC14
TMEM144
C130026I21RIK /// LO
SPON1
DKK1
OXT
C78513
OMG
INSL3 /// JAK3
TRIM30 /// AI451617
ADORA2A
KLK1B21
CPZ
AI428795
SEMA6C
CDKN3
PRLR
CD33
PAX8
4930521E07RIK
CFC1
CXCR3
2810402A17RIK
GPR83
MYO9A
INSM1
SCNN1A
PHGDH /// LOC668771
UPK2
AW112010
IDE
D13ERTD608E
1110008H02RIK
MRPL19
PFPL
KCNA7
SPSB3

XLR4C
XLR5A
XLR5C
ZAR1
ZDHHC22
ZIC3
ZIC5

SEMA7A
SCOC
HPD
APOBEC3
PDRG1
LAO1
CRHR2
CTRC
CML4
ABCB4
EYA3
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BC027072
COG1
FPR-RS4
SCN11A
DPF3
TTR
ACSM2
ASAH1
HEBP1
GDF2
C4B /// LOC675521
PAPSS2
EDAR /// LOC669001

H3K27 Targets in Snf5Up in Ezh2-deficient MEFs**This Study****968**

0610012D14RIK
 1110017D15RIK
 1110061O04RIK
 1190003M12RIK
 1190020J12RIK
 1200009O22RIK
 1300007F04RIK
 1700008P20RIK
 1700023F06RIK
 1700031F05RIK
 1700041B01RIK
 1700113I22RIK
 2010001J22RIK
 2010001M09RIK
 2310031A18RIK
 2410004A20RIK
 2810451A06RIK
 2810459M11RIK
 3110035E14RIK
 4632411J06RIK
 4632425D07RIK
 4921530D09RIK
 4930449I24RIK
 4930511J11RIK
 4930558O21RIK
 4930563P21RIK
 5031410I06RIK
 5730508B09RIK
 6330403A02RIK
 6330514A18RIK
 6430550H21RIK
 8430427H17RIK
 9430028L06RIK
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 A230054D04RIK
 A230079K17RIK
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 A530064D06RIK
 A530088E08RIK
 A830053O21RIK
 A930001M12RIK

This Study**85**

2700007P21RIK
 5730494N06RIK
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 ANXA4
 ARAP2
 ARL5A
 ASAH1
 ASAH2
 CD55
 CDH2
 CDKN2A
 CLCA1
 COMMD9
 CRIM1
 CTLA2A
 CXCL12
 CYP1B1
 D0H4S114
 DCTN6
 DES
 EMP1
 ENO2
 ENTPD4
 ERGIC1
 ESCO1
 EXOSC9
 FAM126A
 FHDC1
 GABRB1
 GADD45GIP1
 GALC
 GM7120
 GPR137B
 GREM1
 HEBP1
 HGSNAT
 HIST1H4I
 HMOX1
 IDE
 KIF5B
 KLF9

Random set of ref Non H3K27m**This Study****132**

1600014C10RIK
 1700001F09RIK
 1700019G17RIK
 1700034I23RIK
 2510027J23RIK
 2610034M16RIK
 4933421I07RIK
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 AI118078
 ALDH1A3
 API5
 ASTN2
 ATP1B2
 BHMT
 BIN1
 BST1
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 CABP4
 CAMKV
 CAPZA3
 CATSPERG1
 CBLN1
 CCDC28A
 CCL6
 CD1D2
 CD207
 CD74
 CER1
 CHI3L1
 CHRDL1
 CHRNE
 CPSF3
 CST11
 CTSL3
 CYLC1
 CYP7A1
 DACH1
 DCLRE1B
 DEFB8

This Study**382**

DCN
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 DCPS
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 DCTN2
 DCTN3
 DCTN4
 DCTN5
 DCTN6
 DCTPP1
 DCUN1D1
 DCUN1D5
 DCXR
 DDA1
 DDAH2
 DDB1
 DDC
 DDHD2
 DDI2
 DDIT3
 DDIT4
 DDIT4L
 DDOST
 DDR1
 DDR2
 DDRGK1
 DDT
 DDX1
 DDX10
 DDX18
 DDX19A
 DDX19B
 DDX20
 DDX21
 DDX24
 DDX26B
 DDX27
 DDX39
 DDX3X
 DDX3Y
 DDX41

AAAS	LIMA1	DNM1L	DDX42
AB041550	MAN2B1	DUSP9	DDX46
AB080658	MANBA	EBI3	DDX47
ABCA6	MAOA	EEF1D	DDX5
ABCD2	MCCC1	EPX	DDX50
ABHD7	MEIS2	ERCC2	DDX51
ACCN1	MGLL	F2RL3	DDX52
ACCN4	MMP2	FCHSD1	DDX54
ACOT1	MRPL19	FGF8	DDX56
ACOT4	MT1	FOXD2	DDX59
ACOT5	NAB1	FRAT1	DDX6
ACP1	NCAM1	GABRG1	DEB1
ADAM3	NID1	GDAP1	DECR1
ADCY8	NNAT	GLCC11	DECR2
ADCYAP1	NOTCH1	GRHL1	DEDD
ADD2	NOTCH3	GTPBP5	DEF8
ADRA2A	NUB1	HES2	DEGS1
ADRA2B	ODZ3	HIF1A	DEK
ADRA2C	OLR1	HPCA	DENND4B
ADRB1	PAPSS2	HPGD	DENND4C
ADRB3	PDPN	HPN	DENND5A
AF060570	PLAGL1	IFNG	DENR
AF529169	PLEKHF1	IL12RB2	DEPDC1A
AI464131	POP4	IMP4	DEPDC7
AI593442	PRDX2	IRF4	DERA
AI595406	PRSS23	IRS2	DERL1
AI836003	RIOK3	KCNC1	DERL2
AJAP1	RNF128	KCNC4	DES
AK002860	SCOC	KCNIP1	DEXI
AK003800	SCPEP1	KCNS1	DFFA
AK008705	SDC4	KLRA2	DFFB
AK008755	SEMA3E	LBX1	DGAT1
AK011684	SFN	LENEP	DGAT2
AK012214	SFRS14	MAP2K2	DGCR14
AK012595	SH3RF1	MAPK8IP2	DGCR2
AK014786	SORBS1	MECP2	DGCR6
AK017182	SPSB1	MYCN	DGKA
AK018772	TGFB2	MYH6	DGKQ
AK020867	THBD	NANOS1	DGKZ
AK028383	TM2D2	NEFH	DGUOK
AK029605	TMEM66	NPY2R	DHCR24
AK031498	TTC28	NR0B2	DHCR7
AK033147	TXNIP	NTNG2	DHDDS
AK033378	UPF1	OLIG2	DHFR
AK033508		OLIG3	DHODH
AK035754		PET112L	DHPS

AK036843	PIGQ	DHRS1
AK037113	PLA2G1B	DHRS11
AK039020	PPARGC1B	DHRS3
AK039417	PPP1R3C	DHRS4
AK041755	PRM3	DHRS7B
AK042354	PRSS44	DHX15
AK043747	PTH	DHX16
AK044313	RASAL3	DHX30
AK046385	RHBDD3	DHX32
AK047857	RPTN	DHX36
AK048292	SAPS2	DHX40
AK048672	SCGB1A1	DHX57
AK053193	SEMA6A	DHX8
AK053418	SERPINB6C	DHX9
AK076389	SGCG	DIABLO
AK080352	SH3GL3	DIAP1
AK082731	SIX4	DIAP2
AK086290	SLC13A1	DIAP3
AK087264	SLC22A18	DICER1
AK132077	SLC3A1	DIDO1
AK132490	SLC6A12	DIMT1
AK132940	SLIT1	DIP2B
AK134637	SRGAP1	DIS3
AK138592	SSTR1	DKK2
AK139319	STAM2	DKK3
AK139461	STEAP4	DLAT
AK142058	SUSD2	DLD
AK142074	SVS5	DLG1
AK144266	TLR6	DLG3
AK144536	TMEM45B	DLG4
AK145180	TMPRSS11D	DLG5
AK146255	TMPRSS4	DLGAP4
AK157941	TNNI2	DLGAP5
AK161769	TSHB	DLK1
AK165089	TTL	DLK2
AK172459	UCHL4	DLST
AK205032	UGT2B34	DLX2
AKP2	V1RA1	DMAP1
ALG13	V1RC6	DMD
ALOX12	V1RD3	DMPK
ALOX12B	YPEL1	DMTF1
ALOX15	ZC3H3	DMXL1
ALOX5	ZFP106	DNA2
ALOX8	ZFP287	DNAJA1
ALPK3	ZFYVE27	DNAJA2
ALX3		DNAJA3

ALX4
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ANKRD56
ANKRD58
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APOA4
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ASTN2
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ATP1B3
ATP6V1C2
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AY589791
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B3GAT2
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B4GALNT2
BAAT
BAI2
BARHL1
BARX1
BARX2
BC024997
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BC033915
BC035537
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BC049702
BC050972
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ZIC5
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ZSWIM2
ZSWIM5

Expressed cerebellum H3K27me3 targets

This Study

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