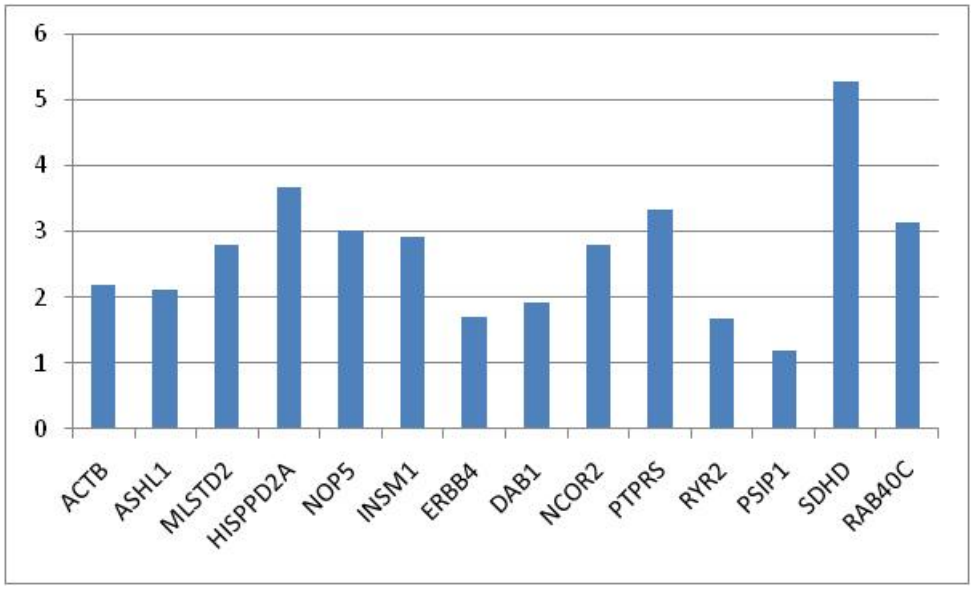
Supplemental Data

Figure S1. A, the relative fold enrichment for 13 H3K4me3 positive regions (also H3K27me3 negative) compared to 14 H3K4me3 negative regions (also H3K27me3 positive). **B**, the same as in A but for H3K27me3 positive regions. The selected Chr 15 (28,2Mb) region did not encompass a known gene (genomic coordinates for PCR primers: chr15:28219094-28219528bp).

A



B

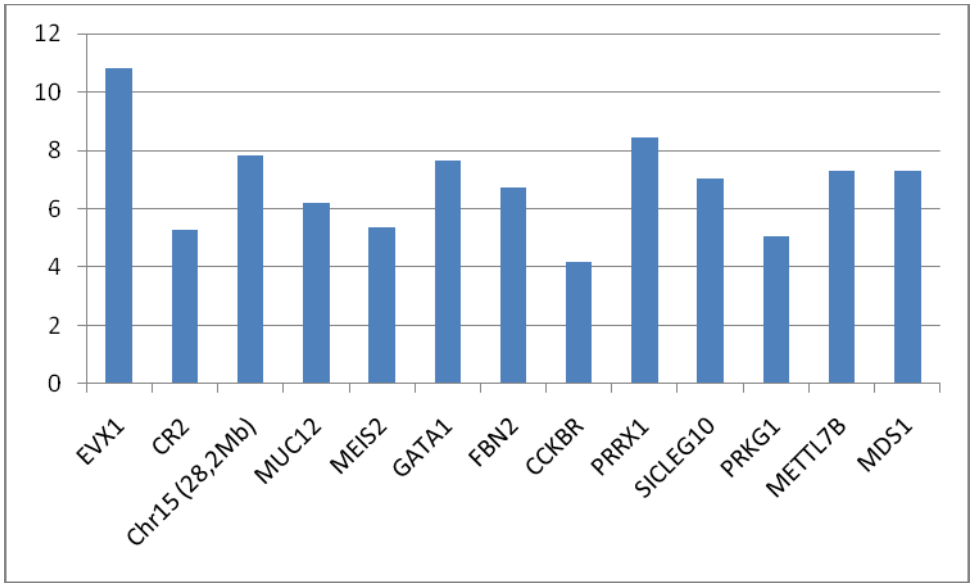


Figure S2.

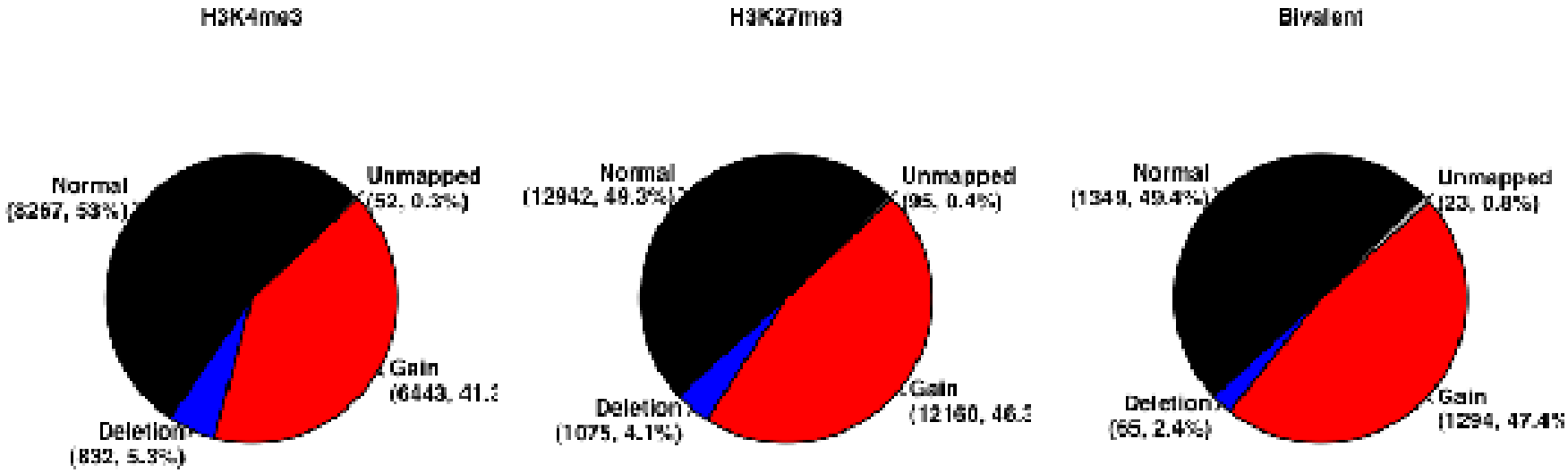

H3K4me3
Normal
(8267, 53%)
Unmapped
(52, 0.3%)
Gain
(6443, 41.3
Deletion
(832, 5.3%)
H3K27me3
Normal
(12942, 49.2%)
Unmapped
(95, 0.4%)
Gain
(12160, 46.2
Deletion
(1075, 4.1%)
Bivalent
Normal
(1349, 49.4%)
Unmapped
(23, 0.8%)
Gain
(1294, 47.4%
Deletion
(65, 2.4%)

Figure S3.

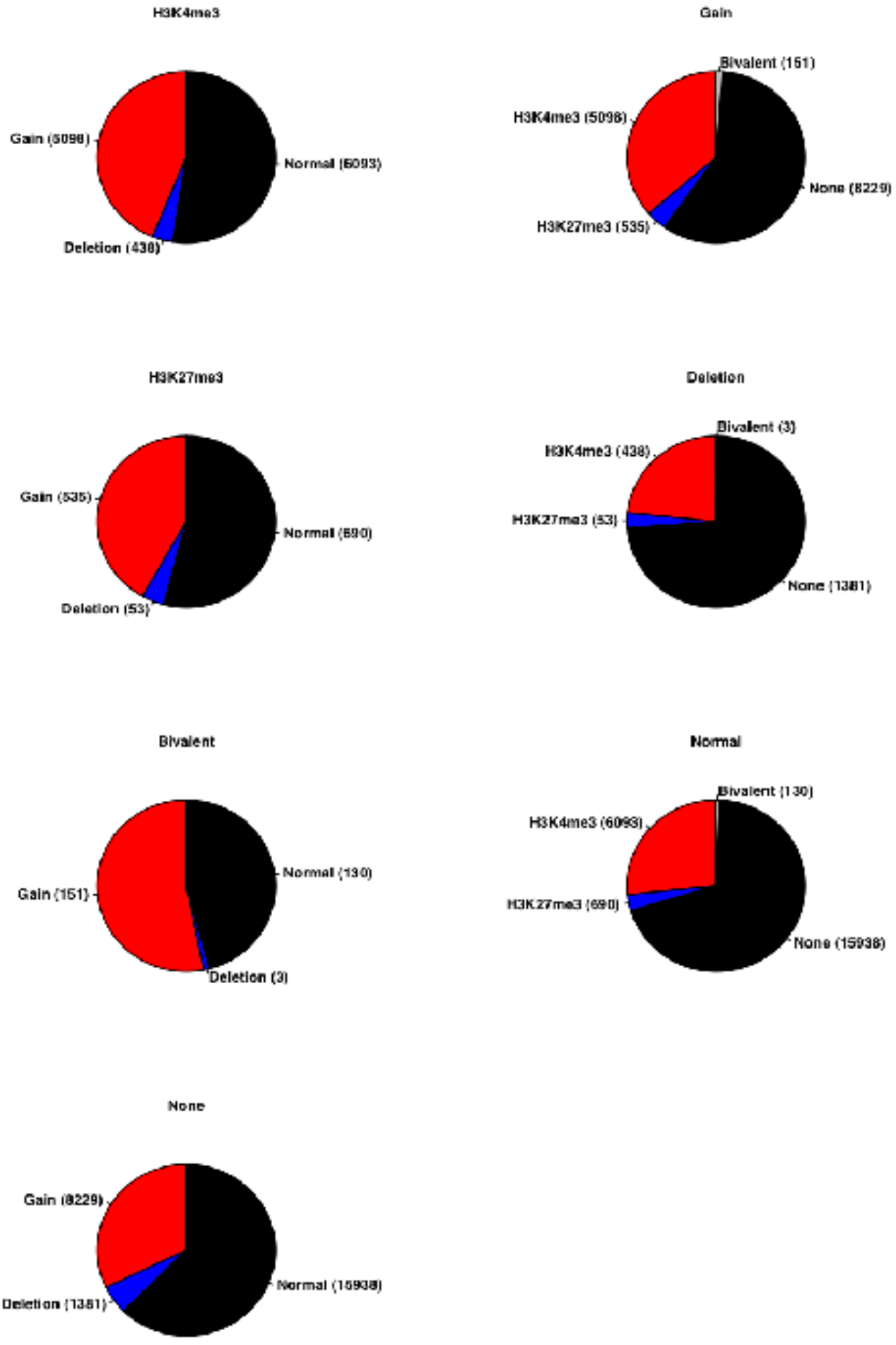

H3K4me3
Gain (5098)
Normal (6093)
Deletion (438)
Gain
Bivalent (151)
H3K4me3 (5098)
None (8229)
H3K27me3 (535)
H3K27me3
Gain (535)
Normal (890)
Deletion (53)
Deletion
Bivalent (3)
H3K4me3 (438)
H3K27me3 (53)
None (1381)
Bivalent
Gain (151)
Normal (130)
Deletion (3)
Normal
Bivalent (130)
H3K4me3 (6093)
H3K27me3 (690)
None (15938)
None
Gain (8229)
Normal (15938)
Deletion (1381)

Table S1: The average and standard deviation of histone modification region lengths.

Histone modification	Number of regions	Average length (bp)	Standard deviation
H3K4me3	16096	352.375	439.335
H3K27me3	27694	459.067	615.935
Bivalent	2806	446.181	1207.689

Table S2: Genes with decreased expression. Average fold change, copy number status (CN status) and histone modifications of UCSC known genes with decreased expression associated to HGNC gene symbols.

Gene	Fold change	CN status	Histone modification
ZBTB7C	-4.9	Loss	H3K27me3
CD3D	-3.4	Loss	H3K27me3
DSC3	-3.1	Loss	H3K27me3
CRYAB	-3	Loss	H3K27me3
ZNF423	-2.5	Loss	H3K27me3
PHLPP	-2	Loss	H3K27me3
ROBO3	-1.9	Loss	H3K27me3
AMICA1	-1.6	Loss	H3K27me3
TGIF1	-3.4	Loss	H3K27me3 and H3K4me3
FDX1	-6.6	Loss	
RAB38	-6.4	Loss	
RRAD	-6	Loss	
NQO1	-5.7	Loss	
MT1E	-5.3	Loss	
LDHD	-5.2	Loss	
MT2A	-5	Loss	
MT1H	-4.7	Loss	
MOCOS	-4.7	Loss	
AGRP	-4.6	Loss	
WFDC1	-4.6	Loss	
ASAM	-4	Loss	
SC5DL	-3.9	Loss	
PDGFD	-3.8	Loss	
MT1X	-3.8	Loss	
CCDC68	-3.6	Loss	
PTPN20B	-3.4	Loss	
BCDO2	-3.4	Loss	
NPC1	-3.4	Loss	
MYO7A	-3.3	Loss	
ZNF521	-3.3	Loss	
PGR	-3.2	Loss	
RDX	-3.2	Loss	

MT1G	-3.2	Loss
C18orf16	-3.1	Loss
L3MBTL4	-3	Loss
ACAT1	-2.8	Loss
MYOM1	-2.8	Loss
NUDT7	-2.8	Loss
AQP11	-2.7	Loss
SLC6A2	-2.7	Loss
PDP2	-2.7	Loss
UCP2	-2.6	Loss
HSPB2	-2.6	Loss
UBASH3B	-2.6	Loss
SLC37A2	-2.6	Loss
VPS35	-2.6	Loss
FLJ35776	-2.6	Loss
YAP1	-2.5	Loss
CASP4	-2.5	Loss
EXOSC6	-2.4	Loss
PLCG2	-2.4	Loss
THRSP	-2.3	Loss
TAGLN	-2.3	Loss
FLJ39051	-2.3	Loss
KCNJ5	-2.3	Loss
MMP2	-2.3	Loss
NOB1	-2.3	Loss
CTRB1	-2.3	Loss
C11orf71	-2.2	Loss
SLCO2B1	-2.1	Loss
TMEM136	-2.1	Loss
GRAMD1B	-2.1	Loss
CDH19	-2.1	Loss
REXO2	-2	Loss
IL10RA	-2	Loss
COQ9	-2	Loss
CKLF	-2	Loss
MAF	-2	Loss
JMJD2D	-1.9	Loss
USP28	-1.9	Loss

HEATR3	-1.9	Loss	
SLC7A6OS	-1.9	Loss	
SYTL2	-1.8	Loss	
PHKB	-1.8	Loss	
LPCAT2	-1.8	Loss	
GFOD2	-1.8	Loss	
FLJ11171	-1.8	Loss	
MRLC2	-1.8	Loss	
DIXDC1	-1.7	Loss	
CES2	-1.7	Loss	
FSCN1	-1.7	Loss	
PSKH1	-1.7	Loss	
WWOX	-1.7	Loss	
CHCHD8	-1.6	Loss	
TMEM135	-1.6	Loss	
KDELC2	-1.6	Loss	
POU2AF1	-1.6	Loss	
ST3GAL4	-1.6	Loss	
TK2	-1.6	Loss	
SNTB2	-1.6	Loss	
COLEC12	-1.6	Loss	
C18orf17	-1.6	Loss	
SPCS2	-1.5	Loss	
RSF1	-1.5	Loss	
CASP12	-1.5	Loss	
NUP93	-1.5	Loss	
CDH11	-1.5	Loss	
LOC730107	-1.5	Loss	
MT1F	-4	Loss	H3K4me3
CALB2	-3.5	Loss	H3K4me3
CYB5B	-3.4	Loss	H3K4me3
GUCY1A2	-3.2	Loss	H3K4me3
GATA6	-3.2	Loss	H3K4me3
ST8SIA5	-3.1	Loss	H3K4me3
SERPINH1	-2.5	Loss	H3K4me3
C11orf67	-2.5	Loss	H3K4me3
C11orf1	-2.1	Loss	H3K4me3
BBS2	-2.1	Loss	H3K4me3

OSBPL1A	-2.1	Loss	H3K4me3
CTSC	-2	Loss	H3K4me3
C11orf54	-2	Loss	H3K4me3
SRPR	-2	Loss	H3K4me3
N4BP1	-2	Loss	H3K4me3
PRKRIR	-1.9	Loss	H3K4me3
TMEM123	-1.8	Loss	H3K4me3
OAF	-1.8	Loss	H3K4me3
CCDC90B	-1.7	Loss	H3K4me3
EXPH5	-1.7	Loss	H3K4me3
LOC219854	-1.7	Loss	H3K4me3
MRCL3	-1.7	Loss	H3K4me3
PAAF1	-1.6	Loss	H3K4me3
PSMD7	-1.6	Loss	H3K4me3
ZBTB44	-1.5	Loss	H3K4me3
CYB5A	-1.5	Loss	H3K4me3
CYP11B1	-8.1	Normal	H3K27me3
RALYL	-7.9	Normal	H3K27me3
PNLIP	-6.3	Normal	H3K27me3
SST	-5.8	Normal	H3K27me3
LOC338579	-5.4	Normal	H3K27me3
RSPO3	-5.4	Normal	H3K27me3
PRKCD	-5.2	Normal	H3K27me3
TCEA3	-5.1	Normal	H3K27me3
SNTB1	-4.9	Normal	H3K27me3
GIPC2	-4.8	Normal	H3K27me3
CIB4	-4.8	Normal	H3K27me3
LMOD1	-4.6	Normal	H3K27me3
KCNQ1	-4.6	Normal	H3K27me3
GJA1	-4.6	Normal	H3K27me3
PGM5	-4.4	Normal	H3K27me3
HHIP	-4.3	Normal	H3K27me3
CD1E	-4.2	Normal	H3K27me3
IL1R2	-4.1	Normal	H3K27me3
C2CD2	-4	Normal	H3K27me3
PEBP4	-4	Normal	H3K27me3
IGHG3	-3.8	Normal	H3K27me3
NGEF	-3.8	Normal	H3K27me3

LOC283587	-3.5	Normal	H3K27me3
PDZRN3	-3.5	Normal	H3K27me3
RFXDC1	-3.5	Normal	H3K27me3
TRIM6	-3.4	Normal	H3K27me3
F11R	-3.2	Normal	H3K27me3
LGALS3	-3.2	Normal	H3K27me3
CIITA	-3.1	Normal	H3K27me3
CYBRD1	-3.1	Normal	H3K27me3
DOCK8	-3.1	Normal	H3K27me3
FCGR2B	-3	Normal	H3K27me3
KIAA1217	-3	Normal	H3K27me3
IL1R1	-3	Normal	H3K27me3
ADFP	-3	Normal	H3K27me3
PLA2G2A	-2.9	Normal	H3K27me3
PROK1	-2.9	Normal	H3K27me3
GRM7	-2.8	Normal	H3K27me3
RPESP	-2.8	Normal	H3K27me3
COL22A1	-2.8	Normal	H3K27me3
CYP11B2	-2.8	Normal	H3K27me3
ITGA8	-2.7	Normal	H3K27me3
MS4A1	-2.7	Normal	H3K27me3
EFEMP1	-2.6	Normal	H3K27me3
FOXL2	-2.6	Normal	H3K27me3
PCOLCE2	-2.6	Normal	H3K27me3
SCGB1D2	-2.5	Normal	H3K27me3
LAMC3	-2.5	Normal	H3K27me3
MRGPRF	-2.4	Normal	H3K27me3
RNASE2	-2.4	Normal	H3K27me3
MAL	-2.4	Normal	H3K27me3
TRIM34	-2.2	Normal	H3K27me3
FBLN5	-2.2	Normal	H3K27me3
P2RX1	-2.2	Normal	H3K27me3
THNSL2	-2.2	Normal	H3K27me3
CFC1	-2.2	Normal	H3K27me3
SPON2	-2.2	Normal	H3K27me3
CSGALNACT1	-2.2	Normal	H3K27me3
FAM129A	-2.1	Normal	H3K27me3
GPR137B	-2.1	Normal	H3K27me3

MKX	-2.1	Normal	H3K27me3
ADRA2A	-2.1	Normal	H3K27me3
AMOTL2	-2.1	Normal	H3K27me3
ALPL	-2	Normal	H3K27me3
CFHR1	-2	Normal	H3K27me3
TNFRSF12A	-2	Normal	H3K27me3
GYPC	-2	Normal	H3K27me3
CD1D	-1.9	Normal	H3K27me3
CR1L	-1.9	Normal	H3K27me3
TLR5	-1.9	Normal	H3K27me3
MPEG1	-1.9	Normal	H3K27me3
USP6	-1.9	Normal	H3K27me3
NFATC1	-1.9	Normal	H3K27me3
STAB1	-1.9	Normal	H3K27me3
TF	-1.9	Normal	H3K27me3
COL12A1	-1.9	Normal	H3K27me3
PTPRE	-1.8	Normal	H3K27me3
PDE9A	-1.8	Normal	H3K27me3
IGLL1	-1.8	Normal	H3K27me3
FGFRL1	-1.8	Normal	H3K27me3
ELA3A	-1.8	Normal	H3K27me3
CYP4X1	-1.7	Normal	H3K27me3
IFITM1	-1.7	Normal	H3K27me3
BCL11B	-1.7	Normal	H3K27me3
BAALC	-1.7	Normal	H3K27me3
SP110	-1.7	Normal	H3K27me3
KIRREL	-1.6	Normal	H3K27me3
TMEM163	-1.6	Normal	H3K27me3
ADAMTS5	-1.6	Normal	H3K27me3
SMTN	-1.6	Normal	H3K27me3
CPLX1	-1.6	Normal	H3K27me3
RHOBTB2	-1.6	Normal	H3K27me3
TNFRSF10B	-1.6	Normal	H3K27me3
CD1C	-1.5	Normal	H3K27me3
TMEM30B	-1.5	Normal	H3K27me3
LOC654433	-5.3	Normal	Bivalent
ACSF2	-3.5	Normal	Bivalent
GPR177	-2.9	Normal	Bivalent

EFS	-2.7	Normal	Bivalent
BMP2	-2	Normal	Bivalent
MS4A7	-1.6	Normal	Bivalent
MOBKL1B	-1.5	Normal	Bivalent
PGA3	-2.7	Normal	H3K27me3 and Bivalent
SULF1	-1.7	Normal	H3K27me3 and Bivalent
TMEM110	-2	Normal	H3K27me3 and H3K4me3
RASSF2	-1.7	Normal	H3K27me3 and H3K4me3
AOX1	-7.2	Normal	H3K4me3
COL4A4	-6.5	Normal	H3K4me3
IGHG1	-6.4	Normal	H3K4me3
FREM1	-6.3	Normal	H3K4me3
EPHX1	-6	Normal	H3K4me3
TMEM158	-5.6	Normal	H3K4me3
SC4MOL	-5.1	Normal	H3K4me3
TMEM97	-5	Normal	H3K4me3
TMEM37	-5	Normal	H3K4me3
QPRT	-4.8	Normal	H3K4me3
AS3MT	-4.7	Normal	H3K4me3
IDH1	-4.7	Normal	H3K4me3
OSTalpha	-4.7	Normal	H3K4me3
RBM47	-4.6	Normal	H3K4me3
C9orf46	-4.5	Normal	H3K4me3
DPP10	-4.4	Normal	H3K4me3
LOC389023	-4.4	Normal	H3K4me3
ALAS1	-4.2	Normal	H3K4me3
PSD3	-4.2	Normal	H3K4me3
DDB2	-4.1	Normal	H3K4me3
IGFBP2	-4.1	Normal	H3K4me3
C1orf203	-4	Normal	H3K4me3
MTAP	-4	Normal	H3K4me3
SLFN5	-3.9	Normal	H3K4me3
CDKN1C	-3.8	Normal	H3K4me3
FADS1	-3.8	Normal	H3K4me3
IL8	-3.8	Normal	H3K4me3
LSS	-3.8	Normal	H3K4me3
PCDH7	-3.8	Normal	H3K4me3
GLIS3	-3.5	Normal	H3K4me3

ARNTL	-3.4	Normal	H3K4me3
SQLE	-3.4	Normal	H3K4me3
CTH	-3.3	Normal	H3K4me3
TGFBR3	-3.3	Normal	H3K4me3
OR2W3	-3.3	Normal	H3K4me3
WDR74	-3.3	Normal	H3K4me3
STK17B	-3.2	Normal	H3K4me3
SLFN12	-3.1	Normal	H3K4me3
THAP9	-3.1	Normal	H3K4me3
CD44	-3	Normal	H3K4me3
LRP5	-3	Normal	H3K4me3
RND3	-3	Normal	H3K4me3
FAM83H	-3	Normal	H3K4me3
CTNNAL1	-3	Normal	H3K4me3
CNN3	-2.9	Normal	H3K4me3
SLC30A1	-2.9	Normal	H3K4me3
C10orf72	-2.9	Normal	H3K4me3
FAS	-2.9	Normal	H3K4me3
PPP1R3C	-2.9	Normal	H3K4me3
ARL4D	-2.9	Normal	H3K4me3
ZNF385B	-2.9	Normal	H3K4me3
SLC16A14	-2.9	Normal	H3K4me3
GPAM	-2.8	Normal	H3K4me3
ALDH3A2	-2.8	Normal	H3K4me3
WNT5A	-2.8	Normal	H3K4me3
HEL308	-2.8	Normal	H3K4me3
PCDH18	-2.8	Normal	H3K4me3
RALGPS2	-2.7	Normal	H3K4me3
N6AMT1	-2.7	Normal	H3K4me3
SH3BP5	-2.7	Normal	H3K4me3
NFIL3	-2.7	Normal	H3K4me3
ALAD	-2.7	Normal	H3K4me3
PTGFR	-2.6	Normal	H3K4me3
FADS2	-2.6	Normal	H3K4me3
ABCC6	-2.6	Normal	H3K4me3
NMI	-2.6	Normal	H3K4me3
ALDH1L1	-2.6	Normal	H3K4me3
MAN1A1	-2.6	Normal	H3K4me3

CALB1	-2.6	Normal	H3K4me3
RNASE4	-2.5	Normal	H3K4me3
TP53I3	-2.5	Normal	H3K4me3
RETSAT	-2.5	Normal	H3K4me3
TXNDC9	-2.5	Normal	H3K4me3
SLC25A37	-2.5	Normal	H3K4me3
HDHD3	-2.5	Normal	H3K4me3
WARS2	-2.4	Normal	H3K4me3
APCDD1	-2.4	Normal	H3K4me3
MTA3	-2.4	Normal	H3K4me3
PDK1	-2.4	Normal	H3K4me3
PKIB	-2.4	Normal	H3K4me3
ATF3	-2.3	Normal	H3K4me3
KLF6	-2.3	Normal	H3K4me3
HTATIP2	-2.3	Normal	H3K4me3
RPL31	-2.3	Normal	H3K4me3
TANC1	-2.3	Normal	H3K4me3
APBB2	-2.3	Normal	H3K4me3
DECR1	-2.3	Normal	H3K4me3
SYNPO2	-2.3	Normal	H3K4me3
FAM91A2	-2.2	Normal	H3K4me3
MS4A4A	-2.2	Normal	H3K4me3
SHMT1	-2.2	Normal	H3K4me3
PDSS2	-2.2	Normal	H3K4me3
HSDL2	-2.2	Normal	H3K4me3
PRKAB2	-2.2	Normal	H3K4me3
ZEB2	-2.1	Normal	H3K4me3
IL17RA	-2.1	Normal	H3K4me3
RPL29	-2.1	Normal	H3K4me3
C1orf97	-2	Normal	H3K4me3
RRAS2	-2	Normal	H3K4me3
NR1H3	-2	Normal	H3K4me3
PELI2	-2	Normal	H3K4me3
SPTBN1	-2	Normal	H3K4me3
AGA	-2	Normal	H3K4me3
SFT2D1	-2	Normal	H3K4me3
RNASET2	-2	Normal	H3K4me3
IL7	-2	Normal	H3K4me3

C9orf16	-2	Normal	H3K4me3
ZMYM6	-1.9	Normal	H3K4me3
HIST2H2AA3	-1.9	Normal	H3K4me3
MCL1	-1.9	Normal	H3K4me3
G0S2	-1.9	Normal	H3K4me3
PRKCDBP	-1.9	Normal	H3K4me3
SPECC1	-1.9	Normal	H3K4me3
SCRN3	-1.9	Normal	H3K4me3
ALS2	-1.9	Normal	H3K4me3
VHL	-1.9	Normal	H3K4me3
SLMAP	-1.9	Normal	H3K4me3
KCNAB1	-1.9	Normal	H3K4me3
FIP1L1	-1.9	Normal	H3K4me3
USP53	-1.9	Normal	H3K4me3
HIATL2	-1.9	Normal	H3K4me3
NBPF1	-1.8	Normal	H3K4me3
EYA3	-1.8	Normal	H3K4me3
CCBL2	-1.8	Normal	H3K4me3
NOTCH2NL	-1.8	Normal	H3K4me3
SLC39A9	-1.8	Normal	H3K4me3
RNFT1	-1.8	Normal	H3K4me3
ZNF559	-1.8	Normal	H3K4me3
HADHB	-1.8	Normal	H3K4me3
FEZ2	-1.8	Normal	H3K4me3
KCTD18	-1.8	Normal	H3K4me3
BMPR2	-1.8	Normal	H3K4me3
CRKL	-1.8	Normal	H3K4me3
ROBO1	-1.8	Normal	H3K4me3
CEBPD	-1.8	Normal	H3K4me3
BNC2	-1.8	Normal	H3K4me3
GDAP2	-1.7	Normal	H3K4me3
PCGF5	-1.7	Normal	H3K4me3
GFRA1	-1.7	Normal	H3K4me3
UGP2	-1.7	Normal	H3K4me3
MCEE	-1.7	Normal	H3K4me3
HIST1H2BK	-1.7	Normal	H3K4me3
UCRC	-1.7	Normal	H3K4me3
TMEM41A	-1.7	Normal	H3K4me3

CASP8AP2	-1.7	Normal	H3K4me3
SOD2	-1.7	Normal	H3K4me3
MTUS1	-1.7	Normal	H3K4me3
C8orf45	-1.7	Normal	H3K4me3
OXR1	-1.7	Normal	H3K4me3
ALDH1B1	-1.7	Normal	H3K4me3
NIPSNAP3B	-1.7	Normal	H3K4me3
C9orf90	-1.7	Normal	H3K4me3
ZMYND12	-1.6	Normal	H3K4me3
YBX1	-1.6	Normal	H3K4me3
LAMC1	-1.6	Normal	H3K4me3
BTG2	-1.6	Normal	H3K4me3
C1orf198	-1.6	Normal	H3K4me3
P4HA1	-1.6	Normal	H3K4me3
HBB	-1.6	Normal	H3K4me3
AHNAK	-1.6	Normal	H3K4me3
SLC3A2	-1.6	Normal	H3K4me3
STARD10	-1.6	Normal	H3K4me3
MVP	-1.6	Normal	H3K4me3
TNFSF13	-1.6	Normal	H3K4me3
SAT2	-1.6	Normal	H3K4me3
TRIM16	-1.6	Normal	H3K4me3
LRRC59	-1.6	Normal	H3K4me3
RBM43	-1.6	Normal	H3K4me3
JAM2	-1.6	Normal	H3K4me3
FBXL4	-1.6	Normal	H3K4me3
AIM1	-1.6	Normal	H3K4me3
SNX9	-1.6	Normal	H3K4me3
WDR40A	-1.6	Normal	H3K4me3
NIT1	-1.5	Normal	H3K4me3
TPP1	-1.5	Normal	H3K4me3
TncRNA	-1.5	Normal	H3K4me3
PPP1CA	-1.5	Normal	H3K4me3
RDH11	-1.5	Normal	H3K4me3
SCO1	-1.5	Normal	H3K4me3
THOC7	-1.5	Normal	H3K4me3
MTFR1	-1.5	Normal	H3K4me3
SGK3	-1.5	Normal	H3K4me3

HAS2	-1.5	Normal	H3K4me3
SAT1	-1.5	Normal	H3K4me3
ESRRG	-2.3	Normal	H3K4me3 and Bivalent
MC2R	-5.2	Normal	H3K4me3 and H3K27me3
PDGFRA	-3	Normal	H3K4me3 and H3K27me3
LIMS3	-2.9	Normal	H3K4me3 and H3K27me3 and Bivalent
KANK1	-2.4	Normal	H3K4me3 and H3K27me3
UGT1A1	-1.6	Normal	H3K4me3 and H3K27me3 and Semi-bivalent
hCG_1645220	-3.7	Normal	Semi-bivalent
ECHDC3	-3.2	Normal	Semi-bivalent
FMO1	-2.6	Normal	Semi-bivalent
SERPING1	-2.3	Normal	Semi-bivalent
FLRT2	-2.3	Normal	Semi-bivalent
TMEM50A	-1.9	Normal	Semi-bivalent
OR2L13	-1.8	Normal	Semi-bivalent
IFITM2	-1.8	Normal	Semi-bivalent
GPR126	-1.8	Normal	Semi-bivalent
ADRA1A	-1.6	Normal	Semi-bivalent
NOTCH2	-2.5	Normal	Semi-bivalent and H3K27me3
CYP17A1	-8.9	Normal	
STAR	-8.7	Normal	
ABCC3	-8.6	Normal	
FAM19A1	-8	Normal	
NOV	-7.8	Normal	
FABP3	-7.5	Normal	
HSD3B2	-7.4	Normal	
DHCR24	-7.3	Normal	
CPB1	-7.3	Normal	
LASS6	-7.2	Normal	
CLRN1	-7.2	Normal	
TM7SF2	-6.8	Normal	
SLC47A1	-6.8	Normal	
FGG	-6.7	Normal	
LOC284576	-6.6	Normal	
MVD	-6.6	Normal	
PNMT	-6.5	Normal	
WDR63	-6	Normal	
PAPSS2	-6	Normal	

LGI1	-5.9	Normal
SCD	-5.8	Normal
MRAP	-5.8	Normal
AADAC	-5.8	Normal
BCHE	-5.7	Normal
LOC572558	-5.7	Normal
KCNK2	-5.6	Normal
PDE5A	-5.6	Normal
TPD52L1	-5.6	Normal
SCFD2	-5.5	Normal
LY6E	-5.5	Normal
LOC439949	-5.4	Normal
ANGPTL1	-5.3	Normal
SEMA3B	-5.2	Normal
FDXR	-5.1	Normal
C1QTNF1	-5.1	Normal
TST	-5.1	Normal
MGC24125	-5.1	Normal
FABP4	-5	Normal
KIAA1522	-4.9	Normal
B3GALNT2	-4.9	Normal
MT1P2	-4.9	Normal
APOD	-4.9	Normal
AGTR1	-4.8	Normal
NDST3	-4.8	Normal
SLC22A3	-4.8	Normal
SDC1	-4.7	Normal
RARRES1	-4.7	Normal
FGFBP2	-4.7	Normal
IGL@	-4.7	Normal
SOAT1	-4.6	Normal
LYVE1	-4.6	Normal
ABCC8	-4.6	Normal
TC2N	-4.6	Normal
KCNK3	-4.6	Normal
TMEM71	-4.6	Normal
LOC730112	-4.6	Normal
DNASE1L3	-4.4	Normal

TMEM98	-4.3	Normal
PCP4	-4.3	Normal
CLDN1	-4.3	Normal
AGXT2L1	-4.3	Normal
SERPINA5	-4.2	Normal
DAPL1	-4.2	Normal
VEPH1	-4.2	Normal
PLN	-4.2	Normal
BAMBI	-4.1	Normal
ABCA8	-4.1	Normal
ACTG2	-4.1	Normal
FBLN1	-4.1	Normal
LEPREL1	-4.1	Normal
C4orf18	-4.1	Normal
ACAT2	-4.1	Normal
NR0B2	-4	Normal
FGGY	-4	Normal
FIBIN	-4	Normal
DHCR7	-4	Normal
INHA	-4	Normal
CEP135	-4	Normal
SULT1E1	-4	Normal
MCOLN3	-3.9	Normal
ALDH3B1	-3.9	Normal
NUPR1	-3.9	Normal
CCL14	-3.9	Normal
GRB14	-3.9	Normal
MMRN1	-3.9	Normal
FDFT1	-3.9	Normal
CDC42	-3.9	Normal
CACHD1	-3.8	Normal
GREM2	-3.8	Normal
SLC16A9	-3.8	Normal
H19	-3.8	Normal
PLEK2	-3.8	Normal
HLA-C	-3.8	Normal
LXN	-3.8	Normal
PLAGL1	-3.8	Normal

EZR	-3.8	Normal
FZD6	-3.8	Normal
S100A10	-3.7	Normal
C10orf33	-3.7	Normal
SOCS3	-3.7	Normal
FNDC4	-3.7	Normal
PTH2R	-3.7	Normal
HTR2B	-3.7	Normal
FLNB	-3.7	Normal
ADIPOQ	-3.7	Normal
ART3	-3.7	Normal
PDGFC	-3.7	Normal
AKAP7	-3.7	Normal
FLJ35700	-3.7	Normal
UST	-3.7	Normal
MPL	-3.6	Normal
MCOLN2	-3.6	Normal
PTGFRN	-3.6	Normal
DDR2	-3.6	Normal
DAK	-3.6	Normal
PPP1R1B	-3.6	Normal
ITGB4	-3.6	Normal
MARCO	-3.6	Normal
ARHGEF10	-3.6	Normal
ASPH	-3.6	Normal
CXCR4	-3.5	Normal
IGJ	-3.5	Normal
SOX13	-3.4	Normal
PNLIPRP2	-3.4	Normal
CYBASC3	-3.4	Normal
SERPINA3	-3.4	Normal
REG3G	-3.4	Normal
GSTT1	-3.4	Normal
CDC42EP1	-3.4	Normal
HYMAI	-3.4	Normal
ALDH1A1	-3.4	Normal
EHD2	-3.4	Normal
HPCA	-3.3	Normal

PLA2G4A	-3.3	Normal
IDI1	-3.3	Normal
KCNG3	-3.3	Normal
LOC150568	-3.3	Normal
CP	-3.3	Normal
GPM6A	-3.3	Normal
ING2	-3.3	Normal
PTGER3	-3.2	Normal
PALMD	-3.2	Normal
SNCG	-3.2	Normal
RNASE1	-3.2	Normal
RNF43	-3.2	Normal
PLB1	-3.2	Normal
TLR3	-3.2	Normal
TMEM16C	-3.1	Normal
CYP27C1	-3.1	Normal
SP100	-3.1	Normal
ITSN1	-3.1	Normal
S100B	-3.1	Normal
NCF4	-3.1	Normal
VGLL3	-3.1	Normal
GRAMD1C	-3.1	Normal
ELOVL6	-3.1	Normal
TMEM200A	-3.1	Normal
OSR2	-3.1	Normal
TMCO4	-3	Normal
PBX1	-3	Normal
CCDC3	-3	Normal
PYGM	-3	Normal
AK7	-3	Normal
BRE	-3	Normal
ST6GAL2	-3	Normal
FERMT1	-3	Normal
CYYR1	-3	Normal
SCD5	-3	Normal
TRIM61	-3	Normal
CTGF	-3	Normal
SUSD3	-3	Normal

SAMD13	-2.9	Normal
AKR1C3	-2.9	Normal
MRC1	-2.9	Normal
PPIF	-2.9	Normal
SPON1	-2.9	Normal
VTN	-2.9	Normal
DES	-2.9	Normal
COL4A3	-2.9	Normal
MGC16703	-2.9	Normal
TSPO	-2.9	Normal
GPR171	-2.9	Normal
TNFSF10	-2.9	Normal
CHMP4C	-2.9	Normal
HRSP12	-2.9	Normal
TPM2	-2.9	Normal
IL23R	-2.8	Normal
ADORA3	-2.8	Normal
PLEKHO1	-2.8	Normal
C1orf21	-2.8	Normal
USH2A	-2.8	Normal
ENAH	-2.8	Normal
CAT	-2.8	Normal
LOC162073	-2.8	Normal
LOC388335	-2.8	Normal
RAB31	-2.8	Normal
COBLL1	-2.8	Normal
C21orf7	-2.8	Normal
PRAME	-2.8	Normal
IGLL3	-2.8	Normal
ABI3BP	-2.8	Normal
CFI	-2.8	Normal
NPY1R	-2.8	Normal
PHACTR2	-2.8	Normal
IL33	-2.8	Normal
SYNE2	-2.8	Normal
SATB2	-2.8	Normal
FCER1A	-2.7	Normal
FMO2	-2.7	Normal

LRP4	-2.7	Normal
ACOT2	-2.7	Normal
APRT	-2.7	Normal
TRAPPC2L	-2.7	Normal
PMP22	-2.7	Normal
MFAP4	-2.7	Normal
HYAL1	-2.7	Normal
SUCLG2	-2.7	Normal
GBE1	-2.7	Normal
SUCNR1	-2.7	Normal
RXFP1	-2.7	Normal
COL15A1	-2.7	Normal
C1QA	-2.6	Normal
SLC16A4	-2.6	Normal
OLFML3	-2.6	Normal
LEFTY2	-2.6	Normal
ACTA2	-2.6	Normal
PRKD1	-2.6	Normal
COCH	-2.6	Normal
DACT1	-2.6	Normal
C14orf181	-2.6	Normal
CLEC10A	-2.6	Normal
IRS1	-2.6	Normal
C21orf34	-2.6	Normal
CNTN6	-2.6	Normal
SLC12A8	-2.6	Normal
SLA	-2.6	Normal
SYK	-2.6	Normal
NEXN	-2.5	Normal
GCLM	-2.5	Normal
LRRC39	-2.5	Normal
DARC	-2.5	Normal
MAP3K8	-2.5	Normal
SORBS1	-2.5	Normal
MRVI1	-2.5	Normal
PACSIN3	-2.5	Normal
COPZ2	-2.5	Normal
ANXA4	-2.5	Normal

PSD4	-2.5	Normal
PDE1A	-2.5	Normal
CASP8	-2.5	Normal
KLHL22	-2.5	Normal
CHEK2	-2.5	Normal
TGFBR2	-2.5	Normal
FILIP1L	-2.5	Normal
MYLK	-2.5	Normal
HOPX	-2.5	Normal
TCF21	-2.5	Normal
MATN2	-2.5	Normal
PTPLAD2	-2.5	Normal
GGTA1	-2.5	Normal
HIPK3	-2.5	Normal
TLR10	-2.5	Normal
C1QB	-2.4	Normal
CREG1	-2.4	Normal
TMEM58	-2.4	Normal
CD55	-2.4	Normal
CXCL12	-2.4	Normal
PBLD	-2.4	Normal
C10orf11	-2.4	Normal
HHEX	-2.4	Normal
SLC22A18	-2.4	Normal
TRA@	-2.4	Normal
SLC25A21	-2.4	Normal
ANKRD9	-2.4	Normal
FLJ25006	-2.4	Normal
KRTCAP3	-2.4	Normal
GALM	-2.4	Normal
CHAC2	-2.4	Normal
SLC40A1	-2.4	Normal
GSTT2	-2.4	Normal
CMTM8	-2.4	Normal
CD200R1	-2.4	Normal
OSAP	-2.4	Normal
STK3	-2.4	Normal
CTHRC1	-2.4	Normal

OGN	-2.4	Normal
SVEP1	-2.4	Normal
RAP1GAP	-2.3	Normal
DDAH1	-2.3	Normal
CYR61	-2.3	Normal
DENND2D	-2.3	Normal
HSD3B1	-2.3	Normal
SRGAP2P1	-2.3	Normal
KCTD3	-2.3	Normal
FH	-2.3	Normal
C10orf56	-2.3	Normal
MRPL49	-2.3	Normal
ESR2	-2.3	Normal
NPC2	-2.3	Normal
POLE4	-2.3	Normal
MGC13057	-2.3	Normal
FZD7	-2.3	Normal
IL15	-2.3	Normal
VNN1	-2.3	Normal
RBPMS	-2.3	Normal
ANXA1	-2.3	Normal
PAPPA	-2.3	Normal
CYP4B1	-2.2	Normal
ST6GALNAC5	-2.2	Normal
GBP2	-2.2	Normal
PTGS2	-2.2	Normal
SUV39H2	-2.2	Normal
LOC255512	-2.2	Normal
LSP1	-2.2	Normal
AOC3	-2.2	Normal
MERTK	-2.2	Normal
DBI	-2.2	Normal
CYP20A1	-2.2	Normal
CHL1	-2.2	Normal
CSTA	-2.2	Normal
LPHN3	-2.2	Normal
TDO2	-2.2	Normal
AKAP12	-2.2	Normal

DOK2	-2.2	Normal
TG	-2.2	Normal
ST3GAL1	-2.2	Normal
PSAT1	-2.2	Normal
OMD	-2.2	Normal
PGM1	-2.1	Normal
ROR1	-2.1	Normal
DIRAS3	-2.1	Normal
CTBS	-2.1	Normal
FMO5	-2.1	Normal
SLAMF7	-2.1	Normal
FCGR2A	-2.1	Normal
VIM	-2.1	Normal
C10orf116	-2.1	Normal
PLCE1	-2.1	Normal
PRDX3	-2.1	Normal
MS4A6A	-2.1	Normal
DNAJC4	-2.1	Normal
YME1L1	-2.1	Normal
C14orf147	-2.1	Normal
RDH12	-2.1	Normal
SULT1A1	-2.1	Normal
ASPA	-2.1	Normal
TAX1BP3	-2.1	Normal
XYLT2	-2.1	Normal
ANTXR1	-2.1	Normal
FHL2	-2.1	Normal
ACVR1C	-2.1	Normal
SLC23A2	-2.1	Normal
LOC389203	-2.1	Normal
ARHGAP18	-2.1	Normal
NHSL1	-2.1	Normal
LACTB2	-2.1	Normal
NFIB	-2.1	Normal
FBP1	-2.1	Normal
KLF4	-2.1	Normal
ASS1	-2.1	Normal
C1QC	-2	Normal

LDLRAP1	-2	Normal
SYNC1	-2	Normal
JUN	-2	Normal
LEPR	-2	Normal
VANGL1	-2	Normal
GCUD2	-2	Normal
PRDX6	-2	Normal
ARMETL1	-2	Normal
CREM	-2	Normal
GLUD1	-2	Normal
ELOVL3	-2	Normal
POLR2G	-2	Normal
FERMT3	-2	Normal
POLD4	-2	Normal
CHKA	-2	Normal
ZNF469	-2	Normal
MYO1D	-2	Normal
RHOB	-2	Normal
IWS1	-2	Normal
IFIH1	-2	Normal
SCN7A	-2	Normal
HIBCH	-2	Normal
COMT	-2	Normal
LOC91316	-2	Normal
LGALS2	-2	Normal
ZNF501	-2	Normal
MITF	-2	Normal
PPP2R3A	-2	Normal
LPP	-2	Normal
TLR1	-2	Normal
AREG	-2	Normal
LAMA2	-2	Normal
C8orf4	-2	Normal
C8orf40	-2	Normal
RIMS2	-2	Normal
SLC39A4	-2	Normal
CCL21	-2	Normal
GRHPR	-2	Normal

DNM3	-2	Normal
PLEKHH2	-2	Normal
KIAA1524	-2	Normal
KIF17	-1.9	Normal
S100A4	-1.9	Normal
FCER1G	-1.9	Normal
DPT	-1.9	Normal
HSD11B1	-1.9	Normal
OPN3	-1.9	Normal
IFITM3	-1.9	Normal
KCNA4	-1.9	Normal
MACROD1	-1.9	Normal
RNASEH2C	-1.9	Normal
NDUFS8	-1.9	Normal
PCNX	-1.9	Normal
TTLL5	-1.9	Normal
TRIM16L	-1.9	Normal
LOC339260	-1.9	Normal
ERN1	-1.9	Normal
LOC339803	-1.9	Normal
ARHGAP15	-1.9	Normal
CFLAR	-1.9	Normal
PIGP	-1.9	Normal
TPST2	-1.9	Normal
XPNPEP3	-1.9	Normal
CSDC2	-1.9	Normal
CNTN4	-1.9	Normal
ITPR1	-1.9	Normal
FSTL1	-1.9	Normal
PCCB	-1.9	Normal
PLSCR4	-1.9	Normal
SIAH2	-1.9	Normal
SH3D19	-1.9	Normal
ACSL1	-1.9	Normal
FILIP1	-1.9	Normal
PRSS35	-1.9	Normal
MSR1	-1.9	Normal
CHRNB3	-1.9	Normal

LY96	-1.9	Normal
PLEKHF2	-1.9	Normal
MAMDC2	-1.9	Normal
TRPM3	-1.9	Normal
HSPB7	-1.8	Normal
AKR7A2	-1.8	Normal
CLIC4	-1.8	Normal
VCAM1	-1.8	Normal
GLUL	-1.8	Normal
NEK7	-1.8	Normal
CAPN2	-1.8	Normal
ARID5B	-1.8	Normal
ACADSB	-1.8	Normal
CD151	-1.8	Normal
TMEM179B	-1.8	Normal
NUDT22	-1.8	Normal
CDK2AP2	-1.8	Normal
FADD	-1.8	Normal
CBLN3	-1.8	Normal
ZFP36L1	-1.8	Normal
PRKCB1	-1.8	Normal
FAM38A	-1.8	Normal
MED11	-1.8	Normal
POLDIP2	-1.8	Normal
PRKD3	-1.8	Normal
VAMP8	-1.8	Normal
ST3GAL5	-1.8	Normal
CD302	-1.8	Normal
USP18	-1.8	Normal
MPST	-1.8	Normal
SREBF2	-1.8	Normal
ARFGAP3	-1.8	Normal
BHLHB2	-1.8	Normal
ACY1	-1.8	Normal
PDHB	-1.8	Normal
PPP4R2	-1.8	Normal
EHHADH	-1.8	Normal
PROM1	-1.8	Normal

SEPSECS	-1.8	Normal
GAB1	-1.8	Normal
FHL5	-1.8	Normal
VIP	-1.8	Normal
QKI	-1.8	Normal
MGC70857	-1.8	Normal
ASPN	-1.8	Normal
WDR31	-1.8	Normal
IFI35	-1.8	Normal
IGKV1D-13	-1.8	Normal
WNT4	-1.7	Normal
CD84	-1.7	Normal
RGS18	-1.7	Normal
CFH	-1.7	Normal
FAM36A	-1.7	Normal
C10orf110	-1.7	Normal
PRF1	-1.7	Normal
BLNK	-1.7	Normal
FGFR2	-1.7	Normal
TRIM5	-1.7	Normal
SLC43A1	-1.7	Normal
ATL3	-1.7	Normal
FCHSD2	-1.7	Normal
RNASE6	-1.7	Normal
STYX	-1.7	Normal
DHRS7	-1.7	Normal
NMRAL1	-1.7	Normal
C16orf54	-1.7	Normal
CENTA2	-1.7	Normal
CCDC45	-1.7	Normal
WIPI1	-1.7	Normal
SLC9A3R1	-1.7	Normal
EXOC7	-1.7	Normal
OR7D2	-1.7	Normal
ZNF626	-1.7	Normal
TACSTD1	-1.7	Normal
SLC35F5	-1.7	Normal
HSPD1	-1.7	Normal

CBR1	-1.7	Normal
EMID1	-1.7	Normal
RAC2	-1.7	Normal
CCR2	-1.7	Normal
ITIH3	-1.7	Normal
PHLDB2	-1.7	Normal
PLD1	-1.7	Normal
FNDC3B	-1.7	Normal
CCDC50	-1.7	Normal
GRPEL1	-1.7	Normal
LEF1	-1.7	Normal
ME1	-1.7	Normal
FAM26E	-1.7	Normal
FUCA2	-1.7	Normal
ERLIN2	-1.7	Normal
ZFPM2	-1.7	Normal
LYNX1	-1.7	Normal
OPLAH	-1.7	Normal
DGAT1	-1.7	Normal
PCSK5	-1.7	Normal
ABCA1	-1.7	Normal
TNFSF15	-1.7	Normal
ABLIM1	-1.7	Normal
FBXO6	-1.6	Normal
PIGV	-1.6	Normal
RWDD3	-1.6	Normal
HAO2	-1.6	Normal
MNDA	-1.6	Normal
IFI16	-1.6	Normal
RGS2	-1.6	Normal
C1orf218	-1.6	Normal
PTPRC	-1.6	Normal
CCNY	-1.6	Normal
FZD8	-1.6	Normal
TRUB1	-1.6	Normal
LOC221091	-1.6	Normal
RARRES3	-1.6	Normal
EHD1	-1.6	Normal

ARL2	-1.6	Normal
C11orf2	-1.6	Normal
EFEMP2	-1.6	Normal
NID2	-1.6	Normal
GSTZ1	-1.6	Normal
CYBA	-1.6	Normal
FGF11	-1.6	Normal
SLFN11	-1.6	Normal
ACLY	-1.6	Normal
LOC644246	-1.6	Normal
09-sep	-1.6	Normal
LOC391356	-1.6	Normal
ATP6V1E2	-1.6	Normal
LHCGR	-1.6	Normal
HSPC159	-1.6	Normal
TTN	-1.6	Normal
USP25	-1.6	Normal
CBR3	-1.6	Normal
IGSF5	-1.6	Normal
MX1	-1.6	Normal
DKFZP434P211	-1.6	Normal
ZNRF3	-1.6	Normal
MYH9	-1.6	Normal
TRIOBP	-1.6	Normal
PNPLA3	-1.6	Normal
MOBP	-1.6	Normal
LIMD1	-1.6	Normal
CACNA2D3	-1.6	Normal
IL20RB	-1.6	Normal
HPS3	-1.6	Normal
TM4SF1	-1.6	Normal
SERP1	-1.6	Normal
DCUN1D1	-1.6	Normal
RTP4	-1.6	Normal
COQ2	-1.6	Normal
SPARCL1	-1.6	Normal
ETFDH	-1.6	Normal
PDLIM3	-1.6	Normal

LAMA4	-1.6	Normal
NT5DC1	-1.6	Normal
GTF2H5	-1.6	Normal
NAT1	-1.6	Normal
CA3	-1.6	Normal
UBR5	-1.6	Normal
LINGO2	-1.6	Normal
GOLM1	-1.6	Normal
SLC31A2	-1.6	Normal
PACSIN2	-1.6	Normal
CGGBP1	-1.6	Normal
PPM2C	-1.6	Normal
SCP2	-1.5	Normal
IL12RB2	-1.5	Normal
CSF1	-1.5	Normal
TNN	-1.5	Normal
ARPC5	-1.5	Normal
TROVE2	-1.5	Normal
CHML	-1.5	Normal
PHYH	-1.5	Normal
AIFM2	-1.5	Normal
SEMA4G	-1.5	Normal
TRIM22	-1.5	Normal
ISCA2	-1.5	Normal
ZNF597	-1.5	Normal
MKL2	-1.5	Normal
LOC220594	-1.5	Normal
SEC14L1	-1.5	Normal
ZNF681	-1.5	Normal
LOC386597	-1.5	Normal
EMILIN1	-1.5	Normal
PLEK	-1.5	Normal
PSCDBP	-1.5	Normal
NOSTRIN	-1.5	Normal
LGALS1	-1.5	Normal
IRAK2	-1.5	Normal
TIMP4	-1.5	Normal
ZDHHC3	-1.5	Normal

P2RY14	-1.5	Normal	
TBC1D19	-1.5	Normal	
IGFBP7	-1.5	Normal	
HSD17B11	-1.5	Normal	
SLC39A8	-1.5	Normal	
CTSO	-1.5	Normal	
SCRG1	-1.5	Normal	
SYNE1	-1.5	Normal	
PHF10	-1.5	Normal	
BNIP3L	-1.5	Normal	
UNQ338	-1.5	Normal	
FAM129B	-1.5	Normal	
KIT	-1.5	Normal	
MGST1	-9.9	Gain	H3K27me3
CYP11A1	-8.4	Gain	H3K27me3
MEOX2	-8	Gain	H3K27me3
ATP4A	-6	Gain	H3K27me3
SIGLEC11	-5.8	Gain	H3K27me3
ACSBG1	-5.1	Gain	H3K27me3
PAQR5	-4.5	Gain	H3K27me3
GRM3	-4.5	Gain	H3K27me3
LOC100128868	-4.4	Gain	H3K27me3
ABCA13	-4.1	Gain	H3K27me3
HOXA9	-3.9	Gain	H3K27me3
PON3	-3.7	Gain	H3K27me3
KRT85	-3.6	Gain	H3K27me3
CRHBP	-3.5	Gain	H3K27me3
WDR86	-3.4	Gain	H3K27me3
EGFR	-3.2	Gain	H3K27me3
LOC400120	-3	Gain	H3K27me3
SFRP4	-3	Gain	H3K27me3
SIGLEC1	-2.9	Gain	H3K27me3
ALDH1A2	-2.8	Gain	H3K27me3
HFE	-2.7	Gain	H3K27me3
TWIST1	-2.6	Gain	H3K27me3
C1S	-2.5	Gain	H3K27me3
EPDR1	-2.5	Gain	H3K27me3
RAB20	-2.4	Gain	H3K27me3

GPNMB	-2.4	Gain	H3K27me3
LOC493869	-2.3	Gain	H3K27me3
TNXB	-2.3	Gain	H3K27me3
STEAP4	-2.2	Gain	H3K27me3
SLC2A5	-2.1	Gain	H3K27me3
MFGE8	-2.1	Gain	H3K27me3
SHH	-2.1	Gain	H3K27me3
KRT7	-2	Gain	H3K27me3
RGMA	-2	Gain	H3K27me3
VAV1	-2	Gain	H3K27me3
C20orf175	-2	Gain	H3K27me3
NOPE	-1.9	Gain	H3K27me3
FCGRT	-1.9	Gain	H3K27me3
TGFBI	-1.9	Gain	H3K27me3
ATP10A	-1.9	Gain	H3K27me3
AZGP1	-1.8	Gain	H3K27me3
AEBP1	-1.7	Gain	H3K27me3
CALD1	-1.7	Gain	H3K27me3
LOC374491	-1.6	Gain	H3K27me3
GREM1	-1.6	Gain	H3K27me3
CSF1R	-1.6	Gain	H3K27me3
KCNIP1	-1.6	Gain	H3K27me3
EDN1	-1.6	Gain	H3K27me3
CPVL	-1.6	Gain	H3K27me3
FCN2	-1.6	Gain	H3K27me3
KRT8	-1.5	Gain	H3K27me3
MYO10	-1.5	Gain	H3K27me3
TRIM38	-1.5	Gain	H3K27me3
TAC1	-5.8	Gain	Bivalent
LILRB5	-4.8	Gain	Bivalent
MFAP5	-4.6	Gain	Bivalent
KIAA1024	-3.3	Gain	Bivalent
KCNK5	-3.2	Gain	Bivalent
FAM125A	-2.8	Gain	Bivalent
GRAMD3	-2.5	Gain	Bivalent
ENPP5	-2.5	Gain	Bivalent
LILRB2	-2.2	Gain	Bivalent
FBN1	-2.1	Gain	Bivalent

IRF4	-2.1	Gain	Bivalent
LOX	-2	Gain	Bivalent
HIST1H4F	-2	Gain	Bivalent
VCAN	-1.9	Gain	Bivalent
ZNF229	-1.7	Gain	Bivalent
ZNF545	-1.6	Gain	Bivalent
P4HB	-1.5	Gain	Bivalent
CALN1	-2.8	Gain	Bivalent and H3K27me3
IQGAP2	-2.6	Gain	Bivalent and H3K27me3
MEIS2	-2.4	Gain	H3K27me3 and Bivalent
FLJ42709	-2.1	Gain	H3K27me3 and H3K4me3
APOC1	-6.4	Gain	H3K4me3
GPR85	-5	Gain	H3K4me3
NRG4	-4.7	Gain	H3K4me3
FDPS	-4.6	Gain	H3K4me3
CDC25C	-4.6	Gain	H3K4me3
SCNN1A	-4.4	Gain	H3K4me3
GPR98	-4.3	Gain	H3K4me3
ACSS2	-3.7	Gain	H3K4me3
PLA2G1B	-3.4	Gain	H3K4me3
KIAA0241	-3.2	Gain	H3K4me3
TSPAN12	-3.2	Gain	H3K4me3
HMGCS1	-3.1	Gain	H3K4me3
ANXA2	-2.9	Gain	H3K4me3
ODZ2	-2.8	Gain	H3K4me3
PCDH8	-2.7	Gain	H3K4me3
REEP6	-2.7	Gain	H3K4me3
CD97	-2.6	Gain	H3K4me3
HMGCR	-2.6	Gain	H3K4me3
AKR1B1	-2.6	Gain	H3K4me3
TBX3	-2.5	Gain	H3K4me3
SYPL1	-2.5	Gain	H3K4me3
GSTA4	-2.4	Gain	H3K4me3
SQRDL	-2.3	Gain	H3K4me3
ITGA1	-2.3	Gain	H3K4me3
HMMR	-2.2	Gain	H3K4me3
RREB1	-2.2	Gain	H3K4me3
OR7E38P	-2.2	Gain	H3K4me3

NTN4	-2.1	Gain	H3K4me3
MAST4	-2.1	Gain	H3K4me3
GTSF1	-2	Gain	H3K4me3
MMAB	-2	Gain	H3K4me3
SORD	-2	Gain	H3K4me3
FOSB	-2	Gain	H3K4me3
ZNF350	-2	Gain	H3K4me3
B4GALT5	-2	Gain	H3K4me3
ETV7	-2	Gain	H3K4me3
TSPAN8	-1.9	Gain	H3K4me3
RORA	-1.9	Gain	H3K4me3
ZNF677	-1.9	Gain	H3K4me3
ALDH7A1	-1.9	Gain	H3K4me3
PCDHB5	-1.9	Gain	H3K4me3
AHR	-1.9	Gain	H3K4me3
RAG1AP1	-1.8	Gain	H3K4me3
PCCA	-1.8	Gain	H3K4me3
ELAVL1	-1.8	Gain	H3K4me3
FLJ16287	-1.8	Gain	H3K4me3
SAMHD1	-1.8	Gain	H3K4me3
STK19	-1.8	Gain	H3K4me3
STK17A	-1.8	Gain	H3K4me3
A2M	-1.7	Gain	H3K4me3
TBC1D4	-1.7	Gain	H3K4me3
SNAP23	-1.7	Gain	H3K4me3
ZNF345	-1.7	Gain	H3K4me3
FST	-1.7	Gain	H3K4me3
ERAP1	-1.7	Gain	H3K4me3
PRR16	-1.7	Gain	H3K4me3
ZNF608	-1.7	Gain	H3K4me3
BMP6	-1.7	Gain	H3K4me3
HIST1H2AC	-1.7	Gain	H3K4me3
FZD1	-1.7	Gain	H3K4me3
PARP11	-1.6	Gain	H3K4me3
LIMA1	-1.6	Gain	H3K4me3
ZNF610	-1.6	Gain	H3K4me3
FBXL7	-1.6	Gain	H3K4me3
MEF2C	-1.6	Gain	H3K4me3

CAST	-1.6	Gain	H3K4me3
SLC12A2	-1.6	Gain	H3K4me3
TMEM14B	-1.6	Gain	H3K4me3
HLA-DPA1	-1.6	Gain	H3K4me3
PEX6	-1.6	Gain	H3K4me3
ZNF665	-1.6	Gain	H3K4me3
CREBL2	-1.5	Gain	H3K4me3
LMO3	-1.5	Gain	H3K4me3
LRIG3	-1.5	Gain	H3K4me3
NUSAP1	-1.5	Gain	H3K4me3
ZNF570	-1.5	Gain	H3K4me3
ZNF808	-1.5	Gain	H3K4me3
REM1	-1.5	Gain	H3K4me3
CDCA7L	-1.5	Gain	H3K4me3
KLHL7	-1.5	Gain	H3K4me3
MET	-1.5	Gain	H3K4me3
FLJ22536	-5.4	Gain	H3K4me3 and Bivalent
RCAN2	-2.6	Gain	H3K4me3 and H3K27me3
TNFAIP8	-1.8	Gain	H3K4me3 and Semi-bivalent
GABRA1	-7	Gain	Semi-bivalent
DAB2	-3.4	Gain	Semi-bivalent
FBN2	-3.2	Gain	Semi-bivalent
NPR3	-2.7	Gain	Semi-bivalent
ITGAM	-2.5	Gain	Semi-bivalent
CPAMD8	-2.1	Gain	Semi-bivalent
EPHB4	-1.9	Gain	Semi-bivalent
EDIL3	-1.5	Gain	Semi-bivalent
DMKN	-5	Gain	Semi-bivalent and H3K27me3
GALNT10	-2.5	Gain	Semi-bivalent and H3K27me3
GSTA3	-7.8	Gain	
CACNA2D4	-6.1	Gain	
RARRES2	-5.8	Gain	
CYP4F11	-5.7	Gain	
ASB4	-5.5	Gain	
SCARB1	-5.1	Gain	
HIF3A	-5.1	Gain	
HLA-DRB1	-5	Gain	
GPR157	-4.7	Gain	

HSD17B6	-4.6	Gain
CKMT2	-4.5	Gain
CCDC69	-4.5	Gain
APOE	-4.4	Gain
NR1H4	-4.3	Gain
F13A1	-4.3	Gain
DCN	-4.1	Gain
FAM150B	-4.1	Gain
CYP3A5	-4.1	Gain
FCGBP	-4	Gain
NNAT	-3.9	Gain
C5orf17	-3.9	Gain
ANKRD34C	-3.8	Gain
LDLR	-3.8	Gain
IQCA	-3.8	Gain
MYOT	-3.8	Gain
HLA-DQB1	-3.8	Gain
PDZRN4	-3.7	Gain
BST2	-3.7	Gain
CST7	-3.7	Gain
MYL9	-3.7	Gain
MGC29506	-3.7	Gain
C4B	-3.7	Gain
SLC44A4	-3.7	Gain
TMEM52	-3.6	Gain
IGFBP6	-3.6	Gain
CCDC38	-3.6	Gain
STXBP2	-3.6	Gain
CNN1	-3.6	Gain
PQLC3	-3.6	Gain
RHOBTB3	-3.6	Gain
C4A	-3.6	Gain
GPER	-3.6	Gain
CLEC5A	-3.6	Gain
FAH	-3.5	Gain
WISP2	-3.5	Gain
TMEM132C	-3.4	Gain
SERPINF1	-3.4	Gain

HES6	-3.4	Gain
PLTP	-3.4	Gain
FREM2	-3.3	Gain
MCTP2	-3.3	Gain
ANKRD43	-3.3	Gain
C1QTNF2	-3.3	Gain
BAIAP2L1	-3.3	Gain
Gcom1	-3.2	Gain
FAM113B	-3.1	Gain
SNCAIP	-3.1	Gain
DSP	-3.1	Gain
PTGDS	-3.1	Gain
CPM	-3	Gain
ALOX5AP	-3	Gain
TUBB4	-3	Gain
CACNA1A	-3	Gain
PPP1R14A	-3	Gain
SLC1A3	-3	Gain
PRKAR2B	-3	Gain
UTS2	-2.9	Gain
EBI2	-2.9	Gain
MIA	-2.9	Gain
ZNF415	-2.9	Gain
ADI1	-2.9	Gain
IL7R	-2.9	Gain
INSIG1	-2.9	Gain
GPR182	-2.8	Gain
M6PRBP1	-2.8	Gain
HSPB6	-2.8	Gain
C5orf23	-2.8	Gain
AACSL	-2.8	Gain
COLEC11	-2.7	Gain
OSMR	-2.7	Gain
HGF	-2.7	Gain
CD163	-2.6	Gain
AMDHD1	-2.6	Gain
PXMP2	-2.6	Gain
TMTC4	-2.6	Gain

C3	-2.6	Gain
BLVRB	-2.6	Gain
TGIF2	-2.6	Gain
ZNF506	-2.6	Gain
C1RL	-2.5	Gain
BEST3	-2.5	Gain
LUM	-2.5	Gain
ATP8B4	-2.5	Gain
CCDC8	-2.5	Gain
PPIC	-2.5	Gain
HCG4	-2.5	Gain
PTPRZ1	-2.5	Gain
ACSS3	-2.4	Gain
HIP1R	-2.4	Gain
TNNC2	-2.4	Gain
CARD6	-2.4	Gain
GLRX	-2.4	Gain
TMEM173	-2.4	Gain
ID4	-2.4	Gain
ABCB1	-2.4	Gain
PRSS1	-2.4	Gain
C1R	-2.3	Gain
ABCC9	-2.3	Gain
EMP3	-2.3	Gain
RRAS	-2.3	Gain
PTGIS	-2.3	Gain
DNAH11	-2.3	Gain
CYP51A1	-2.3	Gain
FBXO24	-2.3	Gain
MDFIC	-2.3	Gain
CLEC2B	-2.2	Gain
IGF1	-2.2	Gain
ALDH2	-2.2	Gain
LOC145820	-2.2	Gain
ZNF155	-2.2	Gain
FPRL2	-2.2	Gain
ITGA2	-2.2	Gain
AIF1	-2.2	Gain

HIBADH	-2.2	Gain
MLXIPL	-2.2	Gain
PON2	-2.2	Gain
CAV1	-2.2	Gain
C7orf58	-2.2	Gain
PRSS2	-2.2	Gain
MGP	-2.1	Gain
KCNJ8	-2.1	Gain
SSPN	-2.1	Gain
KRT18	-2.1	Gain
STAT6	-2.1	Gain
PTPRR	-2.1	Gain
C12orf51	-2.1	Gain
KLF5	-2.1	Gain
SPG11	-2.1	Gain
LOC283666	-2.1	Gain
NOX5	-2.1	Gain
ZNF442	-2.1	Gain
LSR	-2.1	Gain
BCAT2	-2.1	Gain
SEPP1	-2.1	Gain
ICK	-2.1	Gain
C6orf142	-2.1	Gain
LOC401320	-2.1	Gain
INMT	-2.1	Gain
ABCB4	-2.1	Gain
NADK	-2	Gain
LOC57228	-2	Gain
MSRB3	-2	Gain
KCNMB4	-2	Gain
FLJ20674	-2	Gain
GATM	-2	Gain
CDH12	-2	Gain
FYB	-2	Gain
MGC39372	-2	Gain
LOC144571	-2	Gain
GLIPR1	-2	Gain
GSTA2	-12.5	Gain

CYP21A2	-11.2	Gain
SULT2A1	-10.7	Gain
CD69	-1.9	Gain
NCKAP1L	-1.9	Gain
XRCC6BP1	-1.9	Gain
KITLG	-1.9	Gain
CGNL1	-1.9	Gain
CTSH	-1.9	Gain
LOC126075	-1.9	Gain
FXYD1	-1.9	Gain
ZFP36	-1.9	Gain
GREB1	-1.9	Gain
SNED1	-1.9	Gain
C5orf29	-1.9	Gain
LOC728264	-1.9	Gain
HIST1H1C	-1.9	Gain
HLA-DMA	-1.9	Gain
CHN2	-1.9	Gain
TMEM141	-1.9	Gain
EFNA4	-1.8	Gain
CHPT1	-1.8	Gain
SELPLG	-1.8	Gain
P2RY5	-1.8	Gain
TRAPPC6A	-1.8	Gain
XRCC4	-1.8	Gain
RGS14	-1.8	Gain
HLA-DMB	-1.8	Gain
RUNX2	-1.8	Gain
TRIP6	-1.8	Gain
TES	-1.8	Gain
GIMAP2	-1.8	Gain
C9orf167	-1.8	Gain
SNX5	-1.8	Gain
LOC100049716	-1.7	Gain
KLRK1	-1.7	Gain
ART4	-1.7	Gain
RAB3IP	-1.7	Gain
DUSP6	-1.7	Gain

F10	-1.7	Gain
TGFB1I1	-1.7	Gain
FASN	-1.7	Gain
PNMAL2	-1.7	Gain
KIF16B	-1.7	Gain
CTSA	-1.7	Gain
NR2F1	-1.7	Gain
PDE6A	-1.7	Gain
C6orf218	-1.7	Gain
HIST1H4C	-1.7	Gain
HLA-DRA	-1.7	Gain
C7orf10	-1.7	Gain
RASA4	-1.7	Gain
LOC285965	-1.7	Gain
H6PD	-1.6	Gain
FOXO1	-1.6	Gain
FGF7	-1.6	Gain
MRPL46	-1.6	Gain
TTC23	-1.6	Gain
CFD	-1.6	Gain
KLF2	-1.6	Gain
C5AR1	-1.6	Gain
MAFB	-1.6	Gain
GZMK	-1.6	Gain
BHMT2	-1.6	Gain
CCNG1	-1.6	Gain
MBOAT1	-1.6	Gain
FGL2	-1.6	Gain
GIMAP1	-1.6	Gain
OCC-1	-1.5	Gain
P76	-1.5	Gain
RYR3	-1.5	Gain
TYROBP	-1.5	Gain
HPCAL1	-1.5	Gain
LIFR	-1.5	Gain
TAP2	-1.5	Gain
C7orf31	-1.5	Gain
ZNF107	-1.5	Gain

GNAI1	-1.5	Gain

Table S3: Genes with increased expression. Average fold change, copy number status (CN status) and histone modifications of UCSC known genes with increased expression associated to HGNC gene symbols

Gene	Fold change	CN status	Histone modification
FLJ23834	5.5	Gain	H3K4me3
NPY	5.2	Gain	H3K4me3
SLC6A15	4.9	Gain	H3K4me3
SPTBN5	4.9	Gain	H3K4me3
ISLR2	4.8	Gain	H3K4me3
PCDHAC2	4.7	Gain	H3K4me3
HRK	4.6	Gain	H3K4me3
ACHE	4.5	Gain	H3K4me3
FAM154B	4.4	Gain	H3K4me3
PMS2L2	4.4	Gain	H3K4me3
SYT3	4.3	Gain	H3K4me3
FAM131B	4.3	Gain	H3K4me3
LHFPL3	4.2	Gain	H3K4me3
NDUFA4L2	4.1	Gain	H3K4me3
EHD4	4.1	Gain	H3K4me3
SNCB	4.1	Gain	H3K4me3
LOC387856	4	Gain	H3K4me3
HTR4	4	Gain	H3K4me3
KIAA0319	4	Gain	H3K4me3
CAMK2B	4	Gain	H3K4me3
CPT1C	3.8	Gain	H3K4me3
LRRTM2	3.8	Gain	H3K4me3
SV2B	3.7	Gain	H3K4me3
CCNO	3.7	Gain	H3K4me3
DOK5	3.6	Gain	H3K4me3
GRM8	3.6	Gain	H3K4me3
FAIM2	3.5	Gain	H3K4me3
LRFN1	3.5	Gain	H3K4me3
ASCL1	3.4	Gain	H3K4me3
CTNND2	3.4	Gain	H3K4me3
PCDH9	3.3	Gain	H3K4me3
MCF2L	3.3	Gain	H3K4me3
HCN1	3.3	Gain	H3K4me3

SCAMP5	3.2	Gain	H3K4me3
CNTNAP2	3.2	Gain	H3K4me3
ATCAY	3.1	Gain	H3K4me3
DPP6	3.1	Gain	H3K4me3
BMP7	3.1	Gain	H3K4me3
TRHDE	3	Gain	H3K4me3
DLL4	3	Gain	H3K4me3
MAP1A	3	Gain	H3K4me3
LOC400451	3	Gain	H3K4me3
CPNE8	2.9	Gain	H3K4me3
LOC728215	2.9	Gain	H3K4me3
AP3B2	2.9	Gain	H3K4me3
CDC25B	2.9	Gain	H3K4me3
EEF1A2	2.9	Gain	H3K4me3
MYT1	2.9	Gain	H3K4me3
FLJ25076	2.9	Gain	H3K4me3
RGMB	2.9	Gain	H3K4me3
ATP6V1G2	2.9	Gain	H3K4me3
FLJ14712	2.9	Gain	H3K4me3
DPY19L2	2.8	Gain	H3K4me3
CABP1	2.8	Gain	H3K4me3
PCDHA3	2.8	Gain	H3K4me3
EPHB6	2.8	Gain	H3K4me3
GPR162	2.7	Gain	H3K4me3
SLC38A1	2.7	Gain	H3K4me3
LOC283392	2.7	Gain	H3K4me3
CCDC32	2.7	Gain	H3K4me3
SLC8A2	2.7	Gain	H3K4me3
INSM1	2.7	Gain	H3K4me3
DBN1	2.7	Gain	H3K4me3
HSPH1	2.6	Gain	H3K4me3
TLN2	2.6	Gain	H3K4me3
MEF2B	2.6	Gain	H3K4me3
ZNF792	2.6	Gain	H3K4me3
GNAS	2.6	Gain	H3K4me3
PCDHGC3	2.6	Gain	H3K4me3
GABBR1	2.6	Gain	H3K4me3
C12orf34	2.5	Gain	H3K4me3

N4BP2L2	2.5	Gain	H3K4me3
C19orf30	2.5	Gain	H3K4me3
FAM134B	2.5	Gain	H3K4me3
CDH18	2.5	Gain	H3K4me3
HOMER1	2.5	Gain	H3K4me3
FOXQ1	2.5	Gain	H3K4me3
PRRT1	2.5	Gain	H3K4me3
PHF1	2.5	Gain	H3K4me3
HOXA2	2.5	Gain	H3K4me3
KCNN3	2.4	Gain	H3K4me3
KIF21A	2.4	Gain	H3K4me3
SPATS2	2.4	Gain	H3K4me3
LPHN1	2.4	Gain	H3K4me3
PDE4D	2.4	Gain	H3K4me3
PCDHA12	2.4	Gain	H3K4me3
PACSIN1	2.4	Gain	H3K4me3
C12orf53	2.3	Gain	H3K4me3
LOC256021	2.3	Gain	H3K4me3
SSH1	2.3	Gain	H3K4me3
GABRB3	2.3	Gain	H3K4me3
FLJ11506	2.3	Gain	H3K4me3
AES	2.3	Gain	H3K4me3
CHST8	2.3	Gain	H3K4me3
ZNF540	2.3	Gain	H3K4me3
PLD3	2.3	Gain	H3K4me3
ZNF324	2.3	Gain	H3K4me3
ABLIM3	2.3	Gain	H3K4me3
BTBD9	2.3	Gain	H3K4me3
ETV1	2.3	Gain	H3K4me3
SYT11	2.2	Gain	H3K4me3
CLSTN3	2.2	Gain	H3K4me3
CD163L1	2.2	Gain	H3K4me3
BICD1	2.2	Gain	H3K4me3
NBEA	2.2	Gain	H3K4me3
KBTBD6	2.2	Gain	H3K4me3
FLJ22795	2.2	Gain	H3K4me3
RAB3A	2.2	Gain	H3K4me3
FKBP8	2.2	Gain	H3K4me3

C20orf12	2.2	Gain	H3K4me3
ALCAM	2.2	Gain	H3K4me3
TRIP13	2.2	Gain	H3K4me3
SRD5A1	2.2	Gain	H3K4me3
ANKH	2.2	Gain	H3K4me3
PLCXD3	2.2	Gain	H3K4me3
KCTD16	2.2	Gain	H3K4me3
HMP19	2.2	Gain	H3K4me3
RNF182	2.2	Gain	H3K4me3
BAT1	2.2	Gain	H3K4me3
SCRN1	2.2	Gain	H3K4me3
PEX5	2.1	Gain	H3K4me3
MAP3K12	2.1	Gain	H3K4me3
KIAA1853	2.1	Gain	H3K4me3
ABCC4	2.1	Gain	H3K4me3
EFNB2	2.1	Gain	H3K4me3
SNRPN	2.1	Gain	H3K4me3
TMEM87A	2.1	Gain	H3K4me3
VPS13C	2.1	Gain	H3K4me3
CHRNA5	2.1	Gain	H3K4me3
TTLL13	2.1	Gain	H3K4me3
APC2	2.1	Gain	H3K4me3
SNAP25	2.1	Gain	H3K4me3
CARTPT	2.1	Gain	H3K4me3
PCDH1	2.1	Gain	H3K4me3
TRIM7	2.1	Gain	H3K4me3
ZNF165	2.1	Gain	H3K4me3
HOXA4	2.1	Gain	H3K4me3
ASNS	2.1	Gain	H3K4me3
PILRB	2.1	Gain	H3K4me3
ZSCAN16	2.1	Gain	H3K4me3
NELL2	2	Gain	H3K4me3
SVOP	2	Gain	H3K4me3
RPH3A	2	Gain	H3K4me3
DIABLO	2	Gain	H3K4me3
SEMA6D	2	Gain	H3K4me3
SAFB	2	Gain	H3K4me3
MYT1L	2	Gain	H3K4me3

MAP1B	2	Gain	H3K4me3
HSPA4	2	Gain	H3K4me3
PCDHA6	2	Gain	H3K4me3
LOC51149	2	Gain	H3K4me3
C6orf12	2	Gain	H3K4me3
ABCF2	2	Gain	H3K4me3
CLSTN1	1.9	Gain	H3K4me3
CACNB3	1.9	Gain	H3K4me3
ACVR1B	1.9	Gain	H3K4me3
HSPB8	1.9	Gain	H3K4me3
SFRS8	1.9	Gain	H3K4me3
LOC646278	1.9	Gain	H3K4me3
FSIP1	1.9	Gain	H3K4me3
CKMT1B	1.9	Gain	H3K4me3
MYO9A	1.9	Gain	H3K4me3
ABCA7	1.9	Gain	H3K4me3
STK11	1.9	Gain	H3K4me3
HM13	1.9	Gain	H3K4me3
CXXC5	1.9	Gain	H3K4me3
BAT5	1.9	Gain	H3K4me3
ZNF76	1.9	Gain	H3K4me3
GRB10	1.9	Gain	H3K4me3
SLC4A8	1.8	Gain	H3K4me3
HOXC6	1.8	Gain	H3K4me3
RNF34	1.8	Gain	H3K4me3
DLEU2	1.8	Gain	H3K4me3
HISPPD2A	1.8	Gain	H3K4me3
PIAS4	1.8	Gain	H3K4me3
UNC13A	1.8	Gain	H3K4me3
CEBPG	1.8	Gain	H3K4me3
PRR12	1.8	Gain	H3K4me3
ZIK1	1.8	Gain	H3K4me3
ZNF324B	1.8	Gain	H3K4me3
NCOA5	1.8	Gain	H3K4me3
SPEF2	1.8	Gain	H3K4me3
CCDC100	1.8	Gain	H3K4me3
HARS	1.8	Gain	H3K4me3
TTBK1	1.8	Gain	H3K4me3

GLCCI1	1.8	Gain	H3K4me3
SH2B2	1.8	Gain	H3K4me3
DPY19L2P2	1.8	Gain	H3K4me3
IQUB	1.8	Gain	H3K4me3
KCNH2	1.8	Gain	H3K4me3
IFFO	1.7	Gain	H3K4me3
BCAT1	1.7	Gain	H3K4me3
PPM1H	1.7	Gain	H3K4me3
CAPS2	1.7	Gain	H3K4me3
LRRIQ1	1.7	Gain	H3K4me3
PDS5B	1.7	Gain	H3K4me3
LOC283514	1.7	Gain	H3K4me3
ANP32A	1.7	Gain	H3K4me3
LRRC49	1.7	Gain	H3K4me3
TM2D3	1.7	Gain	H3K4me3
TARSL2	1.7	Gain	H3K4me3
SHC2	1.7	Gain	H3K4me3
DEDD2	1.7	Gain	H3K4me3
UBE2S	1.7	Gain	H3K4me3
CENTG2	1.7	Gain	H3K4me3
SMOX	1.7	Gain	H3K4me3
SEPP1	1.7	Gain	H3K4me3
MGC42105	1.7	Gain	H3K4me3
FLJ13611	1.7	Gain	H3K4me3
CAMLG	1.7	Gain	H3K4me3
SFXN1	1.7	Gain	H3K4me3
C6orf32	1.7	Gain	H3K4me3
GARS	1.7	Gain	H3K4me3
PURB	1.7	Gain	H3K4me3
DYNC1I1	1.7	Gain	H3K4me3
PRKRIP1	1.7	Gain	H3K4me3
DNAJB9	1.7	Gain	H3K4me3
RUSC1	1.6	Gain	H3K4me3
FBXL14	1.6	Gain	H3K4me3
HOXC4	1.6	Gain	H3K4me3
GLS2	1.6	Gain	H3K4me3
LRP1	1.6	Gain	H3K4me3
SLAIN1	1.6	Gain	H3K4me3

DZIP1	1.6	Gain	H3K4me3
SHF	1.6	Gain	H3K4me3
SHD	1.6	Gain	H3K4me3
LPPR2	1.6	Gain	H3K4me3
TRMT1	1.6	Gain	H3K4me3
UPF1	1.6	Gain	H3K4me3
ZNF230	1.6	Gain	H3K4me3
C19orf48	1.6	Gain	H3K4me3
FIZ1	1.6	Gain	H3K4me3
PCSK2	1.6	Gain	H3K4me3
NDUFS6	1.6	Gain	H3K4me3
KIAA0947	1.6	Gain	H3K4me3
NIPBL	1.6	Gain	H3K4me3
BRD8	1.6	Gain	H3K4me3
PCDHB10	1.6	Gain	H3K4me3
PCDHGA1	1.6	Gain	H3K4me3
SLC36A1	1.6	Gain	H3K4me3
LARP1	1.6	Gain	H3K4me3
SLIT3	1.6	Gain	H3K4me3
HOXA5	1.6	Gain	H3K4me3
TPST1	1.6	Gain	H3K4me3
C7orf51	1.6	Gain	H3K4me3
MEST	1.6	Gain	H3K4me3
ZNF786	1.6	Gain	H3K4me3
CENTG3	1.6	Gain	H3K4me3
YTHDC2	1.6	Gain	H3K4me3
KIAA1704	1.5	Gain	H3K4me3
TP53BP1	1.5	Gain	H3K4me3
ARPP-19	1.5	Gain	H3K4me3
MESDC2	1.5	Gain	H3K4me3
CA11	1.5	Gain	H3K4me3
RAPGEF6	1.5	Gain	H3K4me3
PCDHGA10	1.5	Gain	H3K4me3
TCERG1	1.5	Gain	H3K4me3
JAKMIP2	1.5	Gain	H3K4me3
PRELID1	1.5	Gain	H3K4me3
EFHC1	1.5	Gain	H3K4me3
MAGI2	1.5	Gain	H3K4me3

KLHL1	6.4	Gain
APCDD1L	6.2	Gain
LRRC4B	5.9	Gain
AGBL1	5.2	Gain
ATP1A3	5.2	Gain
F12	5.2	Gain
C15orf45	5.1	Gain
LOC254559	4.7	Gain
CXCL14	4.7	Gain
GRIK5	4.6	Gain
GPR98	4.6	Gain
SOHLH2	4.5	Gain
MAST1	4.5	Gain
TMEM132D	4.4	Gain
LOC149773	4.4	Gain
PSPH	4.3	Gain
LOC283480	4.2	Gain
GNG8	4.2	Gain
KRT80	3.9	Gain
C7orf16	3.9	Gain
RHPN2	3.8	Gain
PDLIM4	3.7	Gain
TFPI2	3.7	Gain
RELN	3.7	Gain
KCND2	3.7	Gain
UHRF1	3.6	Gain
ENO2	3.5	Gain
FLJ27505	3.5	Gain
BBS9	3.5	Gain
GPR19	3.4	Gain
FLJ33996	3.4	Gain
CAMTA1	3.3	Gain
ACCN2	3.3	Gain
ELAVL3	3.3	Gain
TMEM130	3.3	Gain
CAPN3	3.2	Gain
PHF15	3.1	Gain
TMEM201	3	Gain

GALNT6	3	Gain
CCNA1	3	Gain
SCG3	3	Gain
CHRNA3	3	Gain
LOC388494	3	Gain
SOX4	3	Gain
TMEM59L	2.9	Gain
SLC29A4	2.9	Gain
IL23A	2.9	Gain
ATP6V0E2	2.9	Gain
C5orf42	2.8	Gain
PCDHA9	2.8	Gain
STX1A	2.8	Gain
OLFM1	2.8	Gain
NELF	2.8	Gain
SLC17A8	2.7	Gain
LOC283731	2.7	Gain
SYT5	2.7	Gain
CALY	2.6	Gain
IQSEC3	2.6	Gain
SLC6A13	2.6	Gain
SYT1	2.6	Gain
SH3GL3	2.6	Gain
EXOC3	2.6	Gain
ENC1	2.6	Gain
LOC441108	2.6	Gain
NME5	2.6	Gain
NRM	2.6	Gain
C7orf46	2.6	Gain
ATG9B	2.6	Gain
TMOD2	2.5	Gain
TMEM145	2.5	Gain
NAT14	2.5	Gain
KIF1A	2.5	Gain
0809	2.5	Gain
ACTL6B	2.5	Gain
LEPREL2	2.4	Gain
GPC5	2.4	Gain

MYEF2	2.4	Gain
FLRT3	2.4	Gain
GPRIN1	2.4	Gain
HIST1H4J	2.4	Gain
PRKAR1B	2.4	Gain
GNG11	2.4	Gain
ACCN3	2.4	Gain
ENOX1	2.3	Gain
ZNF536	2.3	Gain
C6orf125	2.3	Gain
PAQR6	2.2	Gain
FLJ32894	2.2	Gain
DDX11	2.2	Gain
RNFT2	2.2	Gain
DNAJA4	2.2	Gain
CLIP3	2.2	Gain
LIN7B	2.2	Gain
BRSK1	2.2	Gain
FLJ38379	2.2	Gain
ARHGAP26	2.2	Gain
C5orf40	2.2	Gain
AKAP9	2.2	Gain
FAM71F1	2.2	Gain
FLJ33297	2.1	Gain
RACGAP1	2.1	Gain
CKAP2	2.1	Gain
SLC24A5	2.1	Gain
HOMER2	2.1	Gain
MUM1	2.1	Gain
JMJD2B	2.1	Gain
SNORA68	2.1	Gain
APLP1	2.1	Gain
ZNF667	2.1	Gain
C20orf26	2.1	Gain
FLJ34047	2.1	Gain
SUB1	2.1	Gain
RPL37	2.1	Gain
AMPH	2.1	Gain

NACAD	2.1	Gain
AGBL3	2.1	Gain
KLHL17	2	Gain
NECAP1	2	Gain
TBC1D30	2	Gain
WIF1	2	Gain
SACS	2	Gain
NHLRC3	2	Gain
SERP2	2	Gain
ARHGEF7	2	Gain
BAIAP2	2	Gain
BRUNOL5	2	Gain
ZNF71	2	Gain
LOC147670	2	Gain
ZNF530	2	Gain
LOC134145	2	Gain
CENPK	2	Gain
REEP2	2	Gain
PGBD1	2	Gain
TMEM151B	2	Gain
NPDC1	2	Gain
WNK1	2	Gain
NRSN1	2	Gain
LOC643837	1.9	Gain
BCAN	1.9	Gain
KIAA0574	1.9	Gain
NDNL2	1.9	Gain
DIRAS1	1.9	Gain
RAB3D	1.9	Gain
SSBP4	1.9	Gain
C20orf39	1.9	Gain
TOP1	1.9	Gain
L3MBTL	1.9	Gain
PDE8B	1.9	Gain
TMEM157	1.9	Gain
ZNF474	1.9	Gain
ACSL6	1.9	Gain
KIF3A	1.9	Gain

LOC492311	1.9	Gain
LOC285812	1.9	Gain
TDRD6	1.9	Gain
WBSCR17	1.9	Gain
ACTR3B	1.9	Gain
ST8SIA1	1.8	Gain
NTS	1.8	Gain
LOC729697	1.8	Gain
NIPA1	1.8	Gain
LOC100137047-PLA2G4B	1.8	Gain
PRC1	1.8	Gain
RFX2	1.8	Gain
SLC7A9	1.8	Gain
USF2	1.8	Gain
ZNF335	1.8	Gain
RTEL1	1.8	Gain
GUSBP1	1.8	Gain
TNPO1	1.8	Gain
POLR3G	1.8	Gain
FBXL17	1.8	Gain
ZRSR1	1.8	Gain
LEAP2	1.8	Gain
KIAA0194	1.8	Gain
TCOF1	1.8	Gain
RNF44	1.8	Gain
PRR7	1.8	Gain
HIST1H4K	1.8	Gain
C6orf136	1.8	Gain
C6orf1	1.8	Gain
KIAA1702	1.8	Gain
IQCE	1.8	Gain
NPTX2	1.8	Gain
KIAA1549	1.8	Gain
CACNA1B	1.8	Gain
KCNAB2	1.7	Gain
SLC45A1	1.7	Gain
CASZ1	1.7	Gain

TCERG1L	1.7	Gain
C10orf93	1.7	Gain
APOLD1	1.7	Gain
KIAA1467	1.7	Gain
SLCO1C1	1.7	Gain
HELB	1.7	Gain
PPFIA2	1.7	Gain
RAN	1.7	Gain
DLEU1	1.7	Gain
DMXL2	1.7	Gain
FLJ27352	1.7	Gain
DYX1C1	1.7	Gain
COX6A2	1.7	Gain
HCN2	1.7	Gain
SAFB2	1.7	Gain
PPFIA3	1.7	Gain
RDH13	1.7	Gain
C20orf27	1.7	Gain
CDH22	1.7	Gain
DNAJC5	1.7	Gain
DNAH5	1.7	Gain
MARCH11	1.7	Gain
ANKRD32	1.7	Gain
CDKN2AIPNL	1.7	Gain
SQSTM1	1.7	Gain
TUBB2A	1.7	Gain
C6orf206	1.7	Gain
LOC646762	1.7	Gain
LOC401320	1.7	Gain
PRPH	1.6	Gain
DIP2B	1.6	Gain
MGC14436	1.6	Gain
ANAPC7	1.6	Gain
BRAP	1.6	Gain
CHRNB4	1.6	Gain
ATP5D	1.6	Gain
GNA11	1.6	Gain
CC2D1A	1.6	Gain

LMTK3	1.6	Gain
GP6	1.6	Gain
TCEA2	1.6	Gain
JMY	1.6	Gain
APC	1.6	Gain
CCDC112	1.6	Gain
HSPA9	1.6	Gain
PLAC8L1	1.6	Gain
PCYOX1L	1.6	Gain
G3BP1	1.6	Gain
PWWP2A	1.6	Gain
PTTG1	1.6	Gain
CLTB	1.6	Gain
GMNN	1.6	Gain
ZNF204	1.6	Gain
C6orf134	1.6	Gain
TFAP2B	1.6	Gain
FLJ20323	1.6	Gain
PHF14	1.6	Gain
HOXA7	1.6	Gain
CCT6A	1.6	Gain
RCP9	1.6	Gain
AP1S1	1.6	Gain
RABL5	1.6	Gain
NTRK1	1.5	Gain
MYL6B	1.5	Gain
SCG5	1.5	Gain
ULK3	1.5	Gain
C19orf6	1.5	Gain
SAMD1	1.5	Gain
A1BG	1.5	Gain
TNFRSF6B	1.5	Gain
TNFRSF21	1.5	Gain
C7orf30	1.5	Gain
1309	1.5	Gain
POM121	1.5	Gain
STEAP2	1.5	Gain
LCN10	1.5	Gain

C12orf51	1.5	Gain	
		Gain	and
CPLX2	5.2	Loss	H3K4me3
PCDHB16	3.2	Gain	H3K4me3 and Bivalent
LOC645323	1.9	Gain	H3K4me3 and H3K27me3
PTHLH	1.9	Gain	H3K4me3 and Semi-bivalent
EZH2	3.1	Gain	Semi-bivalent
KL	1.6	Gain	Semi-bivalent
ASL	1.6	Gain	Semi-bivalent
WASH3P	1.6	Gain	Semi-bivalent and H3K4me3
PCDHB8	3.6	Gain	Bivalent
DISP2	3.2	Gain	Bivalent
PCDHGA8	2	Gain	Bivalent and H3K4me3
MUC12	6.3	Gain	H3K27me3
ABCA13	5.4	Gain	H3K27me3
GCM2	5.1	Gain	H3K27me3
FLJ31485	3.7	Gain	H3K27me3
UNC5A	3.6	Gain	H3K27me3
DLL3	3.6	Gain	H3K27me3
GLDN	3.3	Gain	H3K27me3
SLC32A1	3.1	Gain	H3K27me3
OVOS2	3	Gain	H3K27me3
ZDHHC11	3	Gain	H3K27me3
CA6	2.7	Gain	H3K27me3
PHACTR3	2.5	Gain	H3K27me3
C20orf112	2.4	Gain	H3K27me3
KCNQ2	2.4	Gain	H3K27me3
CHRNA7	2.3	Gain	H3K27me3
NAPB	2.3	Gain	H3K27me3
NALCN	1.9	Gain	H3K27me3
LOC402665	1.9	Gain	H3K27me3
LOC401431	1.9	Gain	H3K27me3
KIAA0355	1.7	Gain	H3K27me3
KCNB1	1.6	Gain	H3K27me3
DIDO1	1.5	Gain	H3K27me3
FKBP6	1.5	Gain	H3K27me3
KCNJ6	6.6	Normal	H3K4me3
SPAG6	6	Normal	H3K4me3

NEUROD1	4.9	Normal	H3K4me3
PLXNB1	4.8	Normal	H3K4me3
SLC35D3	4.7	Normal	H3K4me3
NLRP1	4.3	Normal	H3K4me3
KIAA0802	4.3	Normal	H3K4me3
PTPRU	4.2	Normal	H3K4me3
CELSR3	4.2	Normal	H3K4me3
SAMD5	4.1	Normal	H3K4me3
RUFY2	3.8	Normal	H3K4me3
RYR2	3.5	Normal	H3K4me3
IGF2	3.5	Normal	H3K4me3
GFRA2	3.5	Normal	H3K4me3
FLJ35409	3.4	Normal	H3K4me3
KIAA1833	3.4	Normal	H3K4me3
SORCS1	3.3	Normal	H3K4me3
TRIM9	3.3	Normal	H3K4me3
CDK5R2	3.3	Normal	H3K4me3
ELAVL4	3.2	Normal	H3K4me3
MMP16	3.2	Normal	H3K4me3
KIF26A	3.1	Normal	H3K4me3
MAPRE3	3.1	Normal	H3K4me3
ASPHD1	2.9	Normal	H3K4me3
INA	2.8	Normal	H3K4me3
LOC90113	2.8	Normal	H3K4me3
PDE4DIP	2.7	Normal	H3K4me3
RPL27A	2.6	Normal	H3K4me3
MAPK8IP1	2.6	Normal	H3K4me3
MEG3	2.6	Normal	H3K4me3
KCNK12	2.6	Normal	H3K4me3
LRRTM4	2.6	Normal	H3K4me3
TRMT6	2.6	Normal	H3K4me3
RASD2	2.6	Normal	H3K4me3
ELOVL4	2.6	Normal	H3K4me3
RGS16	2.5	Normal	H3K4me3
SEC31B	2.5	Normal	H3K4me3
REC8	2.5	Normal	H3K4me3
DLX1	2.5	Normal	H3K4me3
DERL1	2.5	Normal	H3K4me3

BAG1	2.5	Normal	H3K4me3
KIF18A	2.4	Normal	H3K4me3
AHNAK2	2.4	Normal	H3K4me3
TPBG	2.4	Normal	H3K4me3
AHI1	2.4	Normal	H3K4me3
RIMS3	2.3	Normal	H3K4me3
SGIP1	2.3	Normal	H3K4me3
SLC35F3	2.3	Normal	H3K4me3
PSD	2.3	Normal	H3K4me3
RICH2	2.3	Normal	H3K4me3
SPEG	2.3	Normal	H3K4me3
ASPHD2	2.3	Normal	H3K4me3
TMEM108	2.3	Normal	H3K4me3
RUFY3	2.3	Normal	H3K4me3
PKIA	2.3	Normal	H3K4me3
DNM1	2.3	Normal	H3K4me3
TNRC4	2.2	Normal	H3K4me3
PCNXL2	2.2	Normal	H3K4me3
BDNF	2.2	Normal	H3K4me3
C14orf132	2.2	Normal	H3K4me3
TTL	2.2	Normal	H3K4me3
GPR155	2.2	Normal	H3K4me3
FEV	2.2	Normal	H3K4me3
ROBO2	2.2	Normal	H3K4me3
C4orf28	2.2	Normal	H3K4me3
KHDC1	2.2	Normal	H3K4me3
C8orf57	2.2	Normal	H3K4me3
SSBP3	2.1	Normal	H3K4me3
KIAA1324	2.1	Normal	H3K4me3
NOVA1	2.1	Normal	H3K4me3
RTN1	2.1	Normal	H3K4me3
KIAA1409	2.1	Normal	H3K4me3
FKBP1B	2.1	Normal	H3K4me3
ADD2	2.1	Normal	H3K4me3
GAD1	2.1	Normal	H3K4me3
MAP2	2.1	Normal	H3K4me3
SRGAP3	2.1	Normal	H3K4me3
TRIM62	2	Normal	H3K4me3

DNAJC6	2	Normal	H3K4me3
TMEM63C	2	Normal	H3K4me3
PLCD4	2	Normal	H3K4me3
ITM2C	2	Normal	H3K4me3
ABCG1	2	Normal	H3K4me3
FAM131A	2	Normal	H3K4me3
KIAA1244	2	Normal	H3K4me3
FGFR1	2	Normal	H3K4me3
PSIP1	2	Normal	H3K4me3
DUSP10	1.9	Normal	H3K4me3
BSCL2	1.9	Normal	H3K4me3
DPF3	1.9	Normal	H3K4me3
MMD	1.9	Normal	H3K4me3
KCNJ2	1.9	Normal	H3K4me3
SUSD5	1.9	Normal	H3K4me3
NLGN1	1.9	Normal	H3K4me3
UCHL1	1.9	Normal	H3K4me3
MAB21L2	1.9	Normal	H3K4me3
EPB49	1.9	Normal	H3K4me3
NMNAT2	1.8	Normal	H3K4me3
RET	1.8	Normal	H3K4me3
TMEM100	1.8	Normal	H3K4me3
CPNE4	1.8	Normal	H3K4me3
SCHIP1	1.8	Normal	H3K4me3
RGS12	1.8	Normal	H3K4me3
SOX7	1.8	Normal	H3K4me3
PHYHIP	1.8	Normal	H3K4me3
STMN4	1.8	Normal	H3K4me3
FAM27E3	1.8	Normal	H3K4me3
PRUNE2	1.8	Normal	H3K4me3
ASTN2	1.8	Normal	H3K4me3
HABP4	1.8	Normal	H3K4me3
IGSF21	1.7	Normal	H3K4me3
CACNB2	1.7	Normal	H3K4me3
SEZ6L2	1.7	Normal	H3K4me3
ATP6V0A1	1.7	Normal	H3K4me3
KPNA2	1.7	Normal	H3K4me3
UBE2O	1.7	Normal	H3K4me3

NRXN1	1.7	Normal	H3K4me3
CNTNAP5	1.7	Normal	H3K4me3
DLX2	1.7	Normal	H3K4me3
NCKIPSD	1.7	Normal	H3K4me3
DOCK3	1.7	Normal	H3K4me3
FSTL5	1.7	Normal	H3K4me3
FAM46A	1.7	Normal	H3K4me3
STC1	1.7	Normal	H3K4me3
KHDRBS3	1.7	Normal	H3K4me3
VAMP2	1.7	Normal	H3K4me3
IRF6	1.6	Normal	H3K4me3
HK1	1.6	Normal	H3K4me3
PPFIBP2	1.6	Normal	H3K4me3
DKK3	1.6	Normal	H3K4me3
ZBTB1	1.6	Normal	H3K4me3
SCN2A	1.6	Normal	H3K4me3
PGAP1	1.6	Normal	H3K4me3
NT5DC2	1.6	Normal	H3K4me3
CCDC52	1.6	Normal	H3K4me3
ABCC5	1.6	Normal	H3K4me3
TNK2	1.6	Normal	H3K4me3
OCIAD2	1.6	Normal	H3K4me3
TRIM2	1.6	Normal	H3K4me3
GLRA3	1.6	Normal	H3K4me3
ENTPD4	1.6	Normal	H3K4me3
C9orf25	1.6	Normal	H3K4me3
TMOD1	1.6	Normal	H3K4me3
ZNF483	1.6	Normal	H3K4me3
TMCC2	1.5	Normal	H3K4me3
ZDHHC13	1.5	Normal	H3K4me3
SUPT16H	1.5	Normal	H3K4me3
OLA1	1.5	Normal	H3K4me3
CDS2	1.5	Normal	H3K4me3
SYNJ1	1.5	Normal	H3K4me3
FAM44A	1.5	Normal	H3K4me3
JPH4	2.7	Normal	Semi-bivalent
CACNB1	2	Normal	Semi-bivalent
A2BP1	1.8	Normal	Semi-bivalent

JMJD3	1.7	Normal	Semi-bivalent
C17orf51	1.7	Normal	Semi-bivalent and H3K27me3
SEZ6	6.1	Normal	Bivalent
HOXB8	4.3	Normal	Bivalent
CA10	3	Normal	Bivalent
SPAG11A	2.4	Normal	Bivalent
HOXB6	2.1	Normal	Bivalent
SALL2	1.8	Normal	Bivalent
RP13-401N8.2	1.8	Normal	Bivalent
CRMP1	1.6	Normal	Bivalent
GAD2	6	Normal	H3K27me3
RASD1	3.8	Normal	H3K27me3
CRTAC1	3.4	Normal	H3K27me3
LOC157627	3	Normal	H3K27me3
NOS2A	2.6	Normal	H3K27me3
FLJ41170	2.2	Normal	H3K27me3
PDXDC2	2.2	Normal	H3K27me3
CACNA1G	2.1	Normal	H3K27me3
CCL11	2	Normal	H3K27me3
CLASP2	1.8	Normal	H3K27me3
GJA5	1.7	Normal	H3K27me3
EBF2	1.7	Normal	H3K27me3
OVGP1	1.5	Normal	H3K27me3
TCHH	2.9	Normal	H3K27me3 and Bivalent
DLG4	1.6	Normal	H3K27me3 and Semi-bivalent
PTH	6.6	Normal	
ARPP-21	6	Normal	
ST18	5.7	Normal	
LRP2BP	5.4	Normal	
NPY2R	5.3	Normal	
C9orf135	5.2	Normal	
TMEM156	5	Normal	
PPFIA4	4.9	Normal	
POPDC3	4.9	Normal	
SPSB4	4.7	Normal	
GPR20	4.6	Normal	
EFR3B	4.5	Normal	
FAM131C	4.4	Normal	

C3orf21	4.3	Normal
CXCL6	4.3	Normal
SLITRK6	4.2	Normal
MDGA2	4.2	Normal
AK5	4.1	Normal
SYT7	3.8	Normal
CLGN	3.8	Normal
KCNJ16	3.7	Normal
OLIG1	3.7	Normal
STBD1	3.7	Normal
EPHA8	3.6	Normal
FAM13C1	3.6	Normal
MIPOL1	3.6	Normal
PCNX	3.6	Normal
HAP1	3.5	Normal
VAX2	3.5	Normal
PKP4	3.5	Normal
RASL10A	3.4	Normal
ANKRD22	3.3	Normal
PHOSPHO1	3.3	Normal
CADM3	3.2	Normal
RGS11	3.2	Normal
PEX16	3.1	Normal
ZNF804A	3.1	Normal
NEFL	3.1	Normal
RASEF	3.1	Normal
GNG3	3	Normal
BAIAP3	3	Normal
C1QL1	3	Normal
HTR1E	3	Normal
BRSK2	2.9	Normal
SCN3A	2.9	Normal
LL22NC03-75B3.6	2.9	Normal
LOC645513	2.9	Normal
SYT6	2.8	Normal
OGDHL	2.8	Normal
SLC18A2	2.8	Normal
BEGAIN	2.8	Normal

SNIP	2.8	Normal
STH	2.8	Normal
DMC1	2.8	Normal
ALB	2.8	Normal
C9orf11	2.8	Normal
SNORD114-3	2.7	Normal
SYNGR3	2.7	Normal
RAB26	2.7	Normal
MAPT	2.7	Normal
NPTXR	2.7	Normal
SLC10A4	2.7	Normal
C9orf45	2.7	Normal
LOC283270	2.6	Normal
GPR137C	2.6	Normal
RAB37	2.6	Normal
TXNL4A	2.6	Normal
PLCB4	2.6	Normal
0309	2.6	Normal
C1orf114	2.5	Normal
SPOCK2	2.5	Normal
PIPOX	2.5	Normal
REEP1	2.5	Normal
LOC149832	2.5	Normal
LOC152573	2.5	Normal
SLC4A4	2.5	Normal
PNMA2	2.5	Normal
ELAVL2	2.5	Normal
SMYD2	2.5	Normal
NAV2	2.5	Normal
TNNT2	2.4	Normal
STAMBPL1	2.4	Normal
SPN	2.4	Normal
C16orf55	2.4	Normal
PCBP3	2.4	Normal
SULT4A1	2.4	Normal
TSP50	2.4	Normal
STK33	2.3	Normal
INSM2	2.3	Normal

PRRT2	2.3	Normal
EFNB3	2.3	Normal
RHBDL3	2.3	Normal
SHANK3	2.3	Normal
IL12A	2.3	Normal
CORO2A	2.3	Normal
LOC126917	2.2	Normal
SLC22A17	2.2	Normal
RAB15	2.2	Normal
RPAIN	2.2	Normal
CDR2L	2.2	Normal
PRCD	2.2	Normal
TMEM169	2.2	Normal
PTPRN	2.2	Normal
CD200	2.2	Normal
SOX2	2.2	Normal
PRSS12	2.2	Normal
LZTS1	2.2	Normal
INDO	2.2	Normal
ARC	2.2	Normal
GBA2	2.2	Normal
EPHB2	2.2	Normal
FLJ43390	2.2	Normal
SEZ6L	2.2	Normal
CTSE	2.1	Normal
MYH6	2.1	Normal
AKAP6	2.1	Normal
SLC8A3	2.1	Normal
TTC9	2.1	Normal
MAP3K9	2.1	Normal
C14orf65	2.1	Normal
HOXB5	2.1	Normal
LOC100128590	2.1	Normal
QDPR	2.1	Normal
OPRK1	2.1	Normal
FCN3	2	Normal
INADL	2	Normal
DGKZ	2	Normal

FBXL16	2	Normal
LOC399491	2	Normal
CBFA2T3	2	Normal
KCNJ12	2	Normal
SDK2	2	Normal
JMJD6	2	Normal
BCL11A	2	Normal
KIF5C	2	Normal
KBTBD10	2	Normal
ZDBF2	2	Normal
GNAZ	2	Normal
EFHB	2	Normal
KLHL32	2	Normal
LETM2	2	Normal
RIMS2	2	Normal
VLDLR	2	Normal
STRBP	2	Normal
RABEPK	2	Normal
SUSD4	1.9	Normal
DUSP8	1.9	Normal
DCDC5	1.9	Normal
SGSM2	1.9	Normal
CDC6	1.9	Normal
CROP	1.9	Normal
FLJ42562	1.9	Normal
LOC150759	1.9	Normal
KLHL23	1.9	Normal
LOC401022	1.9	Normal
MYO1B	1.9	Normal
C21orf37	1.9	Normal
SLC35E4	1.9	Normal
SYNGR1	1.9	Normal
ERC2	1.9	Normal
STXBP5L	1.9	Normal
HBS1L	1.9	Normal
AGPAT4	1.9	Normal
HEY1	1.9	Normal
LOC203274	1.9	Normal

STXBP1	1.9	Normal
MAN1A2	1.9	Normal
ATP13A2	1.8	Normal
ADC	1.8	Normal
CTPS	1.8	Normal
PIK3R3	1.8	Normal
C1orf34	1.8	Normal
NTNG1	1.8	Normal
DNA2	1.8	Normal
TSPAN15	1.8	Normal
CNNM1	1.8	Normal
CEND1	1.8	Normal
NGB	1.8	Normal
KLC1	1.8	Normal
EME2	1.8	Normal
CAMTA2	1.8	Normal
CPT1B	1.8	Normal
NR2C2	1.8	Normal
CACNA1D	1.8	Normal
LRCH3	1.8	Normal
CXCL11	1.8	Normal
SH3BGRL2	1.8	Normal
GPR63	1.8	Normal
ALDH8A1	1.8	Normal
CROCCL2	1.7	Normal
CAMK2N1	1.7	Normal
GJA4	1.7	Normal
TNNI3K	1.7	Normal
PAP2D	1.7	Normal
WDR47	1.7	Normal
MLLT11	1.7	Normal
S100A16	1.7	Normal
KCNMA1	1.7	Normal
KCNC1	1.7	Normal
TMEM132A	1.7	Normal
B3GAT1	1.7	Normal
RAGE	1.7	Normal
C14orf79	1.7	Normal

NPIP	1.7	Normal
HSPB9	1.7	Normal
CCR10	1.7	Normal
KIF18B	1.7	Normal
ARL17	1.7	Normal
GEN1	1.7	Normal
LRRTM1	1.7	Normal
STK36	1.7	Normal
WNT10A	1.7	Normal
DGKD	1.7	Normal
PDGFB	1.7	Normal
PCBP4	1.7	Normal
SIDT1	1.7	Normal
C3orf15	1.7	Normal
MND1	1.7	Normal
RNF175	1.7	Normal
GRIA2	1.7	Normal
COL10A1	1.7	Normal
DLGAP2	1.7	Normal
KIFC2	1.7	Normal
MUC20	1.7	Normal
UBR4	1.6	Normal
CDC42	1.6	Normal
NCDN	1.6	Normal
KIAA1107	1.6	Normal
FNBP1L	1.6	Normal
PLEKHA1	1.6	Normal
C11orf47	1.6	Normal
GCH1	1.6	Normal
EVL	1.6	Normal
LOC339047	1.6	Normal
CHD3	1.6	Normal
KRT222P	1.6	Normal
RUNDC3A	1.6	Normal
ALS2CR4	1.6	Normal
WNT6	1.6	Normal
YPEL1	1.6	Normal
WBP2NL	1.6	Normal

CLSTN2	1.6	Normal	
ETV5	1.6	Normal	
PBK	1.6	Normal	
RGS22	1.6	Normal	
IGFBPL1	1.6	Normal	
STMN1	1.5	Normal	
LOC388610	1.5	Normal	
DNM3	1.5	Normal	
TARBP1	1.5	Normal	
INPP5F	1.5	Normal	
TH	1.5	Normal	
CCDC34	1.5	Normal	
KCNH5	1.5	Normal	
RHOT2	1.5	Normal	
MPP3	1.5	Normal	
PREPL	1.5	Normal	
GRIK1	1.5	Normal	
C3orf14	1.5	Normal	
SERPINI1	1.5	Normal	
NAP1L5	1.5	Normal	
KLKB1	1.5	Normal	
CNOT7	1.5	Normal	
GDAP1	1.5	Normal	
CNBD1	1.5	Normal	
LOC286208	1.5	Normal	
NTNG2	1.5	Normal	
KATNAL2	3.6	Loss	H3K27me3
ELMOD1	4.4	Loss	H3K4me3
RIT2	3.6	Loss	H3K4me3
PGM2L1	3	Loss	H3K4me3
ENOSF1	2.3	Loss	H3K4me3
SYT4	2	Loss	H3K4me3
MGC13053	1.9	Loss	H3K4me3
TCF4	1.9	Loss	H3K4me3
GALR1	1.9	Loss	H3K4me3
NCAM1	1.8	Loss	H3K4me3
SCN3B	1.8	Loss	H3K4me3
METTL4	1.7	Loss	H3K4me3

RNF165	1.6	Loss	H3K4me3
CAPN5	1.7	Loss	H3K4me3 and H3K27me3
SALL1	5.7	Loss	
GDF10	5	Loss	
CDH7	4.8	Loss	
CNTNAP4	3.2	Loss	
OCLN	3.1	Loss	
AMFR	2.9	Loss	
CDH1	2.8	Loss	
DRD2	2.6	Loss	
CBLN2	2.5	Loss	
DSCAML1	2.3	Loss	
ODZ4	2.2	Loss	
GDPD5	2.1	Loss	
FOXF1	2.1	Loss	
SLC35F2	2	Loss	
CNGB1	1.8	Loss	
NOL4	1.8	Loss	
TYR	1.7	Loss	
KIAA1772	1.7	Loss	
HYDIN	1.6	Loss	
ASXL3	1.6	Loss	
TPPP3	1.5	Loss	
GTF2H2	1.5	Loss and Gain	

Table S4: Quantitative PCR primer sequences for selected genes.

Gene symbol	Forward Primer	Reverse Primer	Product size (bp)
ACTB	AACGGCAGAAGAGAGAACCA	AAGATGACCCAGGTGAGTGG	105
ASHL1	TGGCTATGCCAAGTTTCTCC	GGATTGGGAGCCCCTAGTTA	103
MLSTD2	CTCTGGAGAACTGGGGAC AC	CCGTCCACACCTCACATAAA	92
HISPPD2A	CTGTGCTCCTCTCCCTGTTC	GGGGCAAGAGTCATAGCAAG	77
NOP5	TGAATGTGGGGTTTTGGTTT	GCCCAAACCGGAAATCTTTA	75
INSM1	GGAACCCCCACTTTTACGTT	AACGCGTACAGCTTTTCTCC	94
ERBB4	ACAATGGCACGCTAATCCTC	CTCGCTTCGTCTCTTCTCGT	87
DAB1	GGCGGGAGGGTTAAAATTAC	TCCGCGTTCTCTTCATTTCT	101
NCOR2	CTTCCAGACCACGTTGGATT	GGCCATAAGAATCCCTTGGT	106
PTPRS	GTGGGAAAGGTTCCCTGATT	ACCTCCCCCTACAAATCCTG	114
RYR2	GCATTAAACGGACTGGGAGA	ATGCAATGGTGCATAACCTG	112
PSIP1	GCCTCTGGAGAGGAGGGTAG	TCTTCGCCAAGATGAAAGGT	94
SDHD	TCCAGATGTTTACCCGAAGG	TAACCCTCTTTCCCGACTCA	192
RAB40C	GTCATGGTCCCGGTAGAAGG	TCCCTTAGGCCCATGACA	227
EVX1	ACTCCAGCCCTGCAATACAC	ATGCTGGGCATTCAGAGAGT	100
CR2	TCCATTTTCCTGTCCCTCTT	CAGGAGACTGTGGGGAAGAA	115
Chr 15 (28,2Mb)	AATGTCATGGCCACACAGAA	GGGACCTTTAGGCTCACTCC	107
MUC12	CAACCTCAGTTCGTCGTGA	GTGGTGCTGTCCTCAGTGAA	88

	A		
	GCTTCCTGCTAACGTCCAA		
MEIS2	G	TGACAAGGTTGCTGGATCTG	112
	GCTCCATCCTCTTACCACC		
GATA1	A	TACTGAGCAGGCAGGGAGTT	112
	CCGAGCGAGTAGATTTCAG		
FBN2	G	CATTTCTGACCCTCCTGCAT	120
	CCCCTCCTAGACACCAGTC		
CCKBR	A	CCTTCCCTTCTCTGTTGTGG	107
	TGGACCCACAACAGAAAA		
PRRX1	CA	GGGCAAAGCAGCATCTAGTC	87
	ATCCCCTGAAGCCTTTTCA		
SICLEG10	T	GACAACACGCCAGGTACTGA	110
	TTGGTACCATACAGCGTGG		
PRKG1	A	TTGCTAGCAGAGGGTTGGAT	80
	AACCCCAGCTTCAGTCAAG		
METTL7B	A	CGCACAACCTCTCTCACAAA	109
	CAAGGCTGGCACATAGTA	GGCAAGTTTAGGAAACTCTC	
MDS1	GATG	CTCT	163

Table S5: Genes displayed in gene network for upregulated genes (Figure 4).

Gene	Fold change	CN status	Histone modification
KCNJ16	3.719628	Normal	None
BEGAIN	2.76245	Normal	None
KLHL17	2.036625	Gain	None
LIN7B	2.154971	Gain	None
ACCN3	2.374448	Gain	None
DLG4	1.597831	Normal	Semi-bivalent and H3K27me3
LPHN1	2.351528	Gain	H3K4me3
NLGN1	1.90639	Gain	H3K4me3
SHANK3	2.325675	Normal	None
HOMER2	2.051231	Gain	None
HOMER1	2.27668	Gain	H3K4me3
DLGAP2	1.678513	Normal	None
SDK2	1.983996	Normal	None
KCND2	3.727667	Gain	None
KCNJ12	1.979057	Normal	None
KCNAB2	1.696976	Gain	None
DPP6	3.071932	Gain	H3K4me3
MPP3	1.536536	Normal	None
SCN2A	1.645932	Normal	H3K4me3
INSM1	2.740376	Gain	H3K4me3
CAMK2N1	1.711776	Normal	None
ERK	N/A	N/A	N/A
OVGP1	1.520112	Normal	H3K27me3
HTR4	3.975403	Gain	H3K4me3
CARTPT	2.06356	Gain	H3K4me3
PCSK2	1.580284	Gain	H3K4me3
SCG5	1.544079	Gain	None
ALCAM	1.578251	Normal	None
ATP1A3	5.242018	Gain	None
RASD1	3.84476	Normal	H3K27me3
GFRA2	3.476051	Normal	H3K4me3
DOK5	3.645661	Gain	H3K4me3
RET	1.755963	Normal	H3K4me3
HSPH1	2.54062	Gain	H3K4me3
DUSP8	1.913163	Normal	None

Table S6: Genes displayed in gene network for downregulated genes (Figure 5).

Gene	Fold change	CN status	Histone modification
SSPN	-2.14767	Gain	None
Raf	0.120232	Normal	H3K4me3
KRT8	-1.51385	Gain	H3K27me3
TNFSF10	-3.22098	Normal	None
IFITM1	-1.68333	Normal	H3K27me3
IFITM2	-1.82853	Normal	Semi-bivlent
Casp3	-0.42317	Normal	H3K4me3
Casp7	-0.26298	Normal	H3K4me4
SH3BP5	-2.70782	Normal	H3K4me4
SPTBN1	-1.62788	Normal	H3K4me4
STK3	-2.41004	Normal	None
Casp1	-1.46399	Loss	none
DSP	-3.09617	Gain	None
KRT18	-2.0511	Gain	None
MCL1	-1.86756	Normal	H3K4me4
TNFRSF10B	-1.64121	Normal	H3K27me3
DR5	-1.64121	Normal	H3K27me4
PTGER3	-1.64821	Normal	None
PTGS2	-2.1778	Normal	None
NOX5	-2.08616	Gain	None
FADD	-1.84511	Normal	None
CASP8	-2.47866	Normal	None
CAST	-1.58273	Gain	H3K4me3
P2RX1	-2.2135	Normal	H3K27me3
CAPN2	-1.80296	Normal	None
TNFSF15	-1.67963	Normal	None
Casp8	-2.47866	Normal	None
Casp10	-0.19825	Normal	H3K27me3
CASP4	-2.52798	Loss	None
NUP93	-1.51769	Loss	None
Rb	0.106657	Normal	H3K4me3
ROBO3	-1.8669	Loss	H3K27me3
FAS	-2.87796	Normal	H3K4me3
TNFRSF1B	-1.30745	Normal	H3K27me3
BRE	-3.76557	Normal	None

CFLAR	-1.99065	Normal	None