

Supplementary Table S8. Hyper- and hypomethylated genes in human MDS patients analyzed by MCAM.

Hypermethylation (All pts)		Hypomethylation (All pts)		Hypermethylation (CIMP+)		Hypomethylation (CIMP+)	
Gene name	# of patients	Gene name	# of patients	Gene name	# of patients	Gene name	# of patients
STK16	18	BRD1	18	ART5	7	BRD1	7
TSSK6	18	LOC90834	18	BMI1	7	BRD3	7
TUBA4B	18	KNDC1	17	CACNA1S	7	CHRNA1S	7
AGPAT2	17	MCF2L	17	CALCB	7	GPR123	7
ICAM5	17	NT5C3B	17	CERS1	7	JAKMIP3	7
IBA57	16	RPUSD1	17	CPT1A	7	KNDC1	7
IFNL3	16	ZBTB46	17	CYP26C1	7	LINC00094	7
OLIG2	16	BRD3	16	ESPNL	7	LOC90834	7
TIMM13	16	C14orf79	16	ESRP2	7	RPUSD1	7
ART5	15	CHCHD2	16	EVI5L	7	TMEM160	7
CCDC8	15	CHRNA1S	16	EXOC6	7	C14orf79	6
CYP26C1	15	COL18A1-AS1	16	FAM53A	7	CHRNA1S	6
ESRP2	15	GPR123	16	FOXO1	7	CHTF18	6
EXOC6	15	JAKMIP3	16	FOXO2	7	COL18A1-AS1	6
IRX2	15	LINC00094	16	GALNT8	7	EFNA2	6
KAZALD1	15	PHKG1	16	GBX2	7	ENTPD8	6
PER3	15	ABHD16B	15	IBA57	7	GDF7	6
RTKN	15	ADSSL1	15	ICAM3	7	LOC146336	6
SFXN3	15	CHTF18	15	ICAM5	7	LOC388199	6
TTLL10	15	DECR2	15	IFNL3	7	MAD1L1	6
VAMP3	15	FAM53A	15	IRX1	7	MCF2L	6
ANKRD9	14	LOC146336	15	IRX2	7	NT5C3B	6
BMI1	14	LOC388199	15	ITIH5	7	SLC6A19	6
EVI5L	14	SCNN1D	15	KAZALD1	7	SOX18	6
FGR	14	SOX18	15	KCNA6	7	UNC93B1	6
LOC65998	14	BCCIP	14	KCNAB3	7	ZBTB46	6
PAPSS2	14	C20orf166-AS1	14	KLHL30	7	ABCC10	5
SLC2A4RG	14	CACNA1H	14	LPCAT1	7	ADAMTS2	5
SPAG6	14	CASZ1	14	MTL5	7	ADSSL1	5
TNFAIP2	14	CHMP1A	14	MYO3A	7	ARHGAP8	5
ZADH2	14	CHRNA1S	14	NETO1	7	ARHGEF16	5
ARSI	13	COL18A1	14	NKX2-2	7	ARHGEF18	5
CERS1	13	COX4I1	14	NKX2-4	7	BCCIP	5
EPB41	13	FANK1	14	NKX2-5	7	C20orf166	5
ERICH1	13	GBGT1	14	NPR2	7	C20orf166-AS1	5
ICAM3	13	KLF16	14	OLIG2	7	C9orf169	5
LSP1	13	RARRES3	14	PAX3	7	CACNA1H	5
RAVER1	13	REXO1	14	PCDH10	7	CACTIN	5
SALL1	13	SLC6A19	14	PENK	7	CASZ1	5
SHANK1	13	TMEM160	14	PER3	7	CHCHD2	5
SLC22A18	13	TMEM204	14	RAVER1	7	CHMP1A	5
SLC22A18AS	13	C20orf166	13	SALL1	7	CHRNA1S	5
SNX20	13	C9orf139	13	SECISBP2L	7	COL18A1	5
TDGF1	13	CHRNA1S	13	SFMBT2	7	COL8A2	5
TMEM200B	13	COL8A2	13	SFXN3	7	COX4I1	5
TNNI2	13	LCN15	13	SHANK1	7	DECR2	5
C12orf57	12	MAD1L1	13	SHC4	7	DLK2	5
CACNA1S	12	MYBPHL	13	SLBP	7	EMILIN1	5
CHRNA1S	12	NME4	13	SLC22A18	7	EPS8L2	5
EPS8L1	12	PARP10	13	SLC22A18AS	7	FAM83C	5
GBX2	12	PLEC	13	SLC6A3	7	FANK1	5
HIF3A	12	PPP1R26	13	SLITRK1	7	GBGT1	5
HOXA5	12	SMCR5	13	SOX11	7	GIPC3	5
IL17REL	12	SORT1	13	SPAG6	7	HMG20B	5
IL18BP	12	ALDH3B1	12	SPAG8	7	ISLR2	5
KCNAB3	12	ARID3A	12	STK16	7	LCN15	5
KCNS1	12	C9orf169	12	TIMM13	7	LCN8	5
PANX2	12	CALML4	12	TMEM9	7	MAPK8IP2	5
PKN1	12	CLN6	12	TNFAIP2	7	MSLN	5
RNF121	12	ENTPD8	12	TRAPPC1	7	NAT16	5
TMEM9	12	FASTKD3	12	TSSK6	7	NDN	5
TRAPPC1	12	FUT7	12	TUBA4B	7	NME4	5
TSHR	12	GDF7	12	VAMP3	7	PHKG1	5
WT1-AS	12	GNG13	12	XRN2	7	PMF1	5
ZNF746	12	LCN8	12	ZIC1	7	PPP1R26	5
ZNF777	12	LOC100130274	12	ALOX12	6	PRDM16	5
ADCYAP1	11	MAPK8IP2	12	ANKRD33	6	PRR5	5
AIRE	11	MTRR	12	ANKRD9	6	PRSS22	5
ALOX12	11	NAT16	12	ARSI	6	PSCA	5
ARHGEF1	11	PANK4	12	BARHL2	6	RARRES3	5
ARHGEF4	11	PMF1	12	BHLHA15	6	SGPL1	5
C1orf87	11	PRSS22	12	C1QL2	6	SIVA1	5
CCSAP	11	RAB34	12	C22orf46	6	SLC25A44	5
CDX1	11	SCARF2	12	CCDC8	6	SLC34A3	5
CELSR1	11	SGPL1	12	CELF4	6	SMCR5	5
CHRNA6	11	SLC25A44	12	CITED4	6	TBATA	5
CITED4	11	SLC34A3	12	CNN3	6	TBXA2R	5
CNN2	11	SOX8	12	CPLX1	6	TELO2	5

CYP26B1	11	TBATA	12	DMRT1	6	TMEM204	5
CYP2E1	11	UNC93B1	12	DNASE1L2	6	ZNF219	5
DBP	11	ZG16B	12	E4F1	6	B3GALT6	4
DHTKD1	11	ZNF671	12	EPS8L1	6	BEGAIN	4
ENOSF1	11	ARHGEF16	11	EVA1B	6	BHLHA15	4
F7	11	ARHGEF18	11	FBXO17	6	C19orf24	4
FAM217A	11	BHLHA15	11	FGR	6	C9orf139	4
FBLN1	11	CCDC172	11	FOXA1	6	CACNG1	4
GALNT8	11	CCDC8	11	FZD10	6	CACNG4	4
GRAMD4	11	CRAMP1L	11	GYLTL1B	6	CCDC177	4
HNRNPF	11	EMILIN1	11	HIF3A	6	CCDC8	4
KAT6A	11	GFRA1	11	HOXA5	6	CD22	4
KBTBD11	11	GIPC3	11	HOXC4	6	CDC42EP1	4
KCNA6	11	GNAS-AS1	11	INSRR	6	DPEP1	4
KCNQ4	11	HMG20B	11	KCNH2	6	EIF6	4
KLHL30	11	HN1L	11	KCNQ4	6	ESM1	4
LIME1	11	HNRNPF	11	KCTD1	6	FAM53A	4
LOC388199	11	NR2E3	11	KCTD8	6	FASTKD3	4
LOXL1	11	OBP2B	11	KLHL3	6	FBXO46	4
MFS7	11	OLIG2	11	LBX1	6	FUT7	4
MPO	11	PRDM16	11	LYPD1	6	GDF15	4
MYL5	11	PTGDS	11	MAPK9	6	GGACT	4
NACC2	11	RPL29P2	11	MEI1	6	GLS2	4
NANOS3	11	RUNX1	11	MEOX2	6	GNAS	4
NPR2	11	SNORD1C	11	MFS6L	6	GNAS-AS1	4
OBSCN	11	SSTR5	11	MGC12916	6	GNG13	4
PENK	11	TPSG1	11	MN1	6	GRIN1	4
PRR15	11	ZNF414	11	MTR	6	GRIN2D	4
SEC61A2	11	ADAMTS2	10	MYBBP1A	6	GRWD1	4
SLC12A5	11	ADAMTSL4	10	MYOD1	6	HCN2	4
SPAG8	11	ARHGAP8	10	NCKAP5	6	HES5	4
SPHK2	11	CA2	10	NKX6-1	6	HNRNPF	4
TNFRSF18	11	CA3	10	NPM2	6	IFITM3	4
VSX1	11	EFNA2	10	NR2F2	6	KIAA0247	4
YES1	11	FAM71D	10	ONECUT2	6	KRBA1	4
ZC3H18	11	FAM83C	10	PALM	6	LTBP4	4
ZFPM1	11	FAM83H	10	PAPSS2	6	MTRR	4
ADARB2	10	FNDC1	10	PAX6	6	MUC2	4
ARHGEF16	10	GDF15	10	PDLIM4	6	MYBPHL	4
ASB16	10	GRIN2D	10	PLSCR3	6	NARFL	4
ASB16-AS1	10	GRWD1	10	POLD1	6	NOXA1	4
ATF6B	10	HDDC3	10	PROKR2	6	NPPB	4
CELSR3	10	INF2	10	PRR15	6	OMP	4
CEP170B	10	ISLR2	10	PRX	6	PANK4	4
CHST8	10	KLHL30	10	RASGEF1C	6	PARP10	4
CTU2	10	LOC199800	10	RIPPLY3	6	PLEC	4
EMX2	10	MADCAM1	10	RTKN	6	PLEKHG5	4
ESPNL	10	MBOAT7	10	RYS2	6	POLRMT	4
FAM84A	10	MPP5	10	SALL3	6	PTBP1	4
FBXO17	10	NCAN	10	SH3GLB1	6	SBNO2	4
FLJ40504	10	NOXA1	10	SLC12A5	6	SCML4	4
FZD10	10	PLK1S1	10	SOX14	6	SCNN1D	4
GDF15	10	PRR5	10	SOX8	6	SLC2A4RG	4
GGN	10	PRSS42	10	SPIB	6	SNORD1C	4
HIST1H2BM	10	RFXANK	10	SPOCK1	6	SORT1	4
IFT20	10	SBNO2	10	TDGF1	6	SPRYD4	4
INSRR	10	SGK1	10	TNK1	6	SRMS	4
KCNH2	10	SLC2A9	10	TSHR	6	SSTR5	4
KREMEN2	10	TELO2	10	TSPAN4	6	TH	4
KRTCAP3	10	TH	10	TTLL10	6	TNFRSF25	4
LHX6	10	TMC4	10	WT1-AS	6	TPSG1	4
MADCAM1	10	TTC40	10	YIPF7	6	TRPV1	4
MAPK9	10	UNC45A	10	ZADH2	6	TSSK1B	4
MBD3	10	UTS2R	10	ZNF503-AS2	6	UTS2R	4
MBOAT7	10	WDR1	10	ADAM12	5	WDR24	4
MCF2L	10	WNT1	10	ADAMTS13	5	WNT1	4
MEDAG	10	ZFPM1	10	ADARB2	5	ZFPM1	4
MEX3D	10	ABCA17P	9	ADARB2-AS1	5	ZG16B	4
MN1	10	ABCA3	9	AGPAT2	5	ZNF469	4
NCDN	10	ABCC10	9	AHDC1	5	ABCA17P	3
NCKIPSD	10	AIF1	9	AIRE	5	ABCA3	3
NRBP1	10	AMH	9	ALPK3	5	ABHD16B	3
PALM	10	BCL2L12	9	ANO9	5	ABHD17A	3
PAQR4	10	CACTIN	9	ARHGEF1	5	ACY3	3
PGLYRP1	10	CDC42EP1	9	ARHGEF16	5	ADAM11	3
PGPEP1	10	CENPB	9	ARHGEF4	5	AJAP1	3
PIEZO1	10	CPLX1	9	ARL6IP4	5	AKAP12	3
PLSCR3	10	DCXR	9	ATF6B	5	AKT1	3
PNMAL2	10	DLK2	9	BHLHE23	5	ALDH3B1	3
PRDM16	10	EBF1	9	BIN2	5	ANKRD16	3
PTGIR	10	EIF6	9	BNC1	5	ANO9	3

RASAL2	10	EPS8L2	9	BOLA3	5	ARFGAP3	3
RASGEF1C	10	ERAL1	9	C10orf90	5	ARHGEF4	3
RBM18	10	FAM222B	9	C17orf104	5	ARID3A	3
S100A1	10	GAB4	9	C19orf35	5	ASNA1	3
S100A13	10	GLS2	9	C1orf61	5	ATP4A	3
SDCBP2	10	HCN2	9	C1orf87	5	ATP6V1E2	3
SIDT2	10	IQGAP3	9	C2orf81	5	B4GALNT4	3
TAGLN	10	IRF3	9	C8orf22	5	BAIAP2	3
TBX3	10	KCNT1	9	C9orf96	5	BCL11B	3
TEX35	10	MAPK11	9	CCDC61	5	BCL2L12	3
TFAP2E	10	MAPK12	9	CCSAP	5	BEST2	3
TINAGL1	10	MSLN1	9	CDX1	5	BRSK2	3
TMC4	10	MUC2	9	CELA1	5	C16orf11	3
TNK1	10	NDN	9	CELSR1	5	C19orf10	3
TNXB	10	NFIC	9	CHRND	5	C19orf60	3
ABCA7	9	NOC2L	9	CKS2	5	C1orf216	3
ADARB2-AS1	9	NPPB	9	CPT1C	5	C1QTNF8	3
AHDC1	9	OPCML	9	CTDP1	5	C20orf141	3
AKT1	9	PRMT1	9	CTU2	5	CA2	3
ARAP1	9	PRSS38	9	CYP2E1	5	CA3	3
BHLHA15	9	RFNG	9	DBP	5	CCDC172	3
BIN2	9	RNF145	9	DRD4	5	CCDC40	3
C17orf104	9	SCRN2	9	EFNA1	5	CCNE1	3
C2orf81	9	SIVA1	9	ELN	5	CD164L2	3
CD93	9	SLC9A3	9	ENOSF1	5	CD300A	3
CELA1	9	SNAP47	9	EPB41	5	CENPB	3
CHRNA2	9	SP6	9	EP6	5	CEP170B	3
DNAJB6	9	SPEF1	9	EPPK1	5	CEP19	3
DNASE1L2	9	SPRYD4	9	ERBB4	5	CHST13	3
DPH7	9	TBXA2R	9	ERICH1	5	CLASRP	3
E4F1	9	TIMP4	9	EVC2	5	COL20A1	3
EFNA1	9	TSSK1B	9	F7	5	CPLX1	3
EPHX2	9	TTC24	9	FAM115A	5	CRAMP1L	3
EPPK1	9	UTF1	9	FAM196A	5	CYP2W1	3
FAM53A	9	WDR24	9	FAM217A	5	DMRTB1	3
FANCD2	9	ZNF219	9	FAM84A	5	DPP9	3
FANCD2OS	9	ZNF469	9	FANCD2	5	DUSP22	3
FBXO2	9	ABHD17A	8	FANCD2OS	5	EBF1	3
FBXO44	9	ACBD5	8	FBXO2	5	ERAL1	3
FMNL1	9	ANO9	8	FBXO44	5	EXD3	3
FNDC1	9	ATP4A	8	FERD3L	5	F7	3
FOXC1	9	ATP6V1E2	8	FNDC1	5	FAM222B	3
FOXD1	9	BEGAIN	8	FOXC1	5	FAM43B	3
FOXI2	9	BRSK2	8	FOXJ1	5	FAM71D	3
GABRD	9	C16orf11	8	FUOM	5	FAM83H	3
GNPTAB	9	CACNA2D4	8	GLRB	5	FARP2	3
GPR25	9	CCDC154	8	GPR158	5	FBXO18	3
GRIN1	9	CCER1	8	GPR25	5	FCN3	3
GYLTL1B	9	CD164L2	8	GPR56	5	FLJ16779	3
HPDL	9	CHST13	8	GPR97	5	FNDC1	3
ITIH5	9	CLASRP	8	GRAMD4	5	FOXL1	3
IZUMO2	9	CPT1C	8	GRIA2	5	FTSJ2	3
KCNK15	9	CUX1	8	HIST1H2BM	5	GAA	3
LAMC1	9	DCP1B	8	HOXA6	5	GAB4	3
LAMC2	9	EMILIN3	8	HOXB13	5	GAK	3
LBX1	9	ESPNL	8	HPDL	5	GATA5	3
LOC100133991	9	FCN3	8	IKZF2	5	GFRA1	3
LOC728743	9	FLJ16779	8	IL17REL	5	HBQ1	3
LPCAT1	9	FOXL1	8	ISYNA1	5	HIF3A	3
LRRC3	9	FTCD	8	IZUMO2	5	HLA-F	3
MFSD6L	9	GADD45B	8	KBTD11	5	HN1L	3
MRPL41	9	GAK	8	KCNG2	5	HOXA5	3
MYH14	9	GAS2L1	8	KCNS1	5	IGF2	3
MYL3	9	GNG7	8	KREMEN2	5	INF2	3
NETO1	9	HRAS	8	KRTCAP3	5	INS-IGF2	3
NKX2-2	9	KCNG1	8	LAMC1	5	IRF3	3
NKX2-5	9	KRBA1	8	LAMC2	5	KCNG1	3
NPM2	9	LOC387646	8	LIME1	5	KCNQ1	3
NR2F2	9	LPIN3	8	LIMK1	5	KCNQ1DN	3
NUB1	9	LTBP4	8	LMX1A	5	KDM4B	3
P2RY11	9	MGC45800	8	LOC100128811	5	KDM6B	3
PAX3	9	MIR22HG	8	LOC199800	5	KLF16	3
PCBP2	9	MYL9	8	LOXL1	5	LINC00482	3
PCDH10	9	MYO16	8	LRFN5	5	LOC100130522	3
POU3F1	9	NKAIN4	8	LRTM2	5	LOC388428	3
PPAN	9	NKX6-2	8	LSM14B	5	LY6K	3
PRR13	9	NSMF	8	LTK	5	MADCAM1	3
RIPPLY3	9	OSGIN1	8	MBD3	5	MAP2K3	3
SECISBP2L	9	PALM	8	MBOAT7	5	MBOAT7	3
SFMBT2	9	PLCH2	8	MEDAG	5	MN1	3
SH3GLB1	9	PNPLA7	8	MEX3B	5	MPP5	3

SHC4	9	PRMT7	8	MEX3D	5	NACC2	3
SLC11A1	9	PSCA	8	MFSD7	5	NAT8L	3
SLC6A3	9	PTBP1	8	MMP15	5	NCAN	3
SOX14	9	RAET1L	8	MPO	5	NFIC	3
SOX18	9	RASL10A	8	MPPED2	5	NKAIN4	3
SYCP3	9	SAMD11	8	MYH14	5	NOC2L	3
TRPV1	9	SHROOM3	8	MYL3	5	NR2E3	3
TSPAN4	9	SLC2A4RG	8	MYL5	5	NRBF2	3
TSPYL5	9	SMPD3	8	NANOS3	5	OBP2B	3
WNT5B	9	SOWAHB	8	NFATC1	5	OCA2	3
ZFYVE28	9	SRMS	8	NKX6-2	5	OPCML	3
ZIC1	9	TMEM179	8	NPTX2	5	OSGIN1	3
ZNF503-AS2	9	TRMT1	8	NRBP1	5	PACSIN2	3
ZNF775	9	ZNF296	8	NRG1	5	PARD6G	3
ADAM33	8	ZNF696	8	NRXN1	5	PLCH2	3
ALPK3	8	ACP5	7	OGFOD2	5	PLK1S1	3
ANK1	8	AIRE	7	OTP	5	POM121L12	3
ANKRD33	8	AKT1	7	PANX2	5	PPP3R2	3
ARL6IP4	8	ARFGAP3	7	PAQR4	5	PRMT7	3
ATP6V0A4	8	BCL11B	7	PGLYRP1	5	PRPSAP1	3
B3GNT6	8	BCL2L2	7	PGR	5	PRSS42	3
BAIAP2L2	8	C16orf91	7	PIEZO1	5	PTGDS	3
BARHL2	8	C19orf25	7	PLEC	5	PXDNL	3
BHLHE23	8	CACNG1	7	PNLIPRP1	5	QPCTL	3
BOLA3	8	CACNG4	7	PNLIPRP2	5	RAET1L	3
C17orf70	8	CCDC169	7	PNMAL2	5	REXO1	3
C19orf35	8	CCDC177	7	POLR2L	5	RFXANK	3
C1QTNF4	8	CCNE1	7	PRAC1	5	RNF145	3
C22orf46	8	CD300A	7	PRDM16	5	RPL29P2	3
C9orf139	8	CDCP2	7	RAB11FIP4	5	RUNX1	3
CA10	8	CDSN	7	RAET1L	5	SHANK1	3
CALCB	8	CEBPZ	7	RASAL2	5	SIGLEC8	3
CCDC154	8	CHST8	7	RNF157	5	SLC25A38	3
CELF4	8	CLPTM1	7	RPAP1	5	SLC2A9	3
CPLX1	8	COL20A1	7	RXRA	5	SLC6A6	3
CTSD	8	CPT1A	7	S100A1	5	SLC9A3	3
CTXN1	8	CSF3R	7	S100A13	5	SMPD3	3
DMRT1	8	CTDSP1	7	SCTR	5	SPEF1	3
DOT1L	8	EGR3	7	SHC3	5	TBX3	3
EFCAB4A	8	FAM115A	7	SIDT2	5	TEKT2	3
EMC10	8	FCRLB	7	SLC2A4RG	5	TIMP4	3
EVA1B	8	GABRP	7	SLC38A4	5	TMC4	3
EVC2	8	GNA11	7	SNCA	5	TMEM88	3
FAM213B	8	GNA15	7	SNTG1	5	TPSD1	3
FAM71E1	8	GNAS	7	SPHK2	5	TRIM29	3
FAM83G	8	GRINA	7	SREBF2	5	TRPV3	3
FOXB2	8	GRM4	7	SSTR1	5	TTC40	3
FSCN2	8	HBQ1	7	TAF4	5	UBALD1	3
GPR123	8	HES5	7	TAGLN	5	UTF1	3
GPR144	8	HIF3A	7	TEX35	5	WDR1	3
GPR56	8	HLA-F	7	TINAGL1	5	ZNF296	3
GPR97	8	HMGA1	7	TLX2	5	ZNF414	3
GRAP	8	HOXA6	7	TMC4	5	ZNF671	3
HMGA1	8	HSPA12B	7	TMEM178A	5	ZNF768	3
HOXA6	8	IFITM3	7	TMEM200B	5	ABCA7	2
HOXC4	8	IL1RN	7	TNFRSF13C	5	ABLIM2	2
HSPA12B	8	INTS1	7	TNXB	5	ACER2	2
IRX1	8	KCTD15	7	TRIM67	5	ACP5	2
IRX4	8	KIAA0247	7	UCN	5	ACTG1	2
ISYNA1	8	KIF1A	7	UPB1	5	ADAMTSL4	2
KANK3	8	LBX1	7	USB1	5	ADRM1	2
KCTD1	8	LOC100130522	7	VSX1	5	AFAP1	2
KCTD8	8	LY6K	7	VWC2	5	AIF1	2
KPTN	8	MAP2K3	7	WT1	5	AIRE	2
LHX3	8	MEOX2	7	YES1	5	ALDH3A1	2
LOC100130311	8	MICALL2	7	ZC3H18	5	ALKBH4	2
LOC389333	8	MTL5	7	ZFPM1	5	AMER2	2
LRTM2	8	MYH6	7	ZFYVE28	5	AMH	2
MALL	8	NARFL	7	ZNF232	5	ANKRD9	2
MEI1	8	NCOR2	7	ZNF347	5	APOC4	2
MEOX2	8	PACSIN2	7	ZNF592	5	ARFGAP1	2
MGC12916	8	PARD6G	7	ABHD17C	4	ARSI	2
MIR22HG	8	PARVB	7	ADAM33	4	ASB10	2
MMEL1	8	POLRMT	7	ADAMTS10	4	ATP6V1F	2
MTR	8	PXDNL	7	ADAMTS16	4	ATXN7L3	2
MYBBP1A	8	RANBP17	7	ADCYAP1	4	AVPI1	2
MYL9	8	RELB	7	ADRB2	4	B3GNT9	2
NDUFS8	8	SAMM50	7	ADRB3	4	BARHL1	2
NKX6-1	8	SATB1	7	ANKLE2	4	BDKRB1	2
NPHP1	8	SCYL1	7	ANKRD53	4	BEAN	2
NRG1	8	SHANK1	7	APCDD1L	4	BMP8A	2

OGFOD2	8	SLC6A18	7	ARAP1	4	BPIFB2	2
PCDHGC5	8	SOGA2	7	ASB16	4	BPIFB6	2
PDLIM4	8	SOHLH1	7	ASB16-AS1	4	BRICD5	2
PLEKHJ1	8	SOHLH2	7	ASCC3	4	BSG	2
POLD1	8	SULT6B1	7	ASPDH	4	C14orf39	2
POLR2L	8	TNFRSF25	7	ATP6V0A4	4	C15orf38	2
PRKCZ	8	TRPV1	7	AUTS2	4	C15orf39	2
PRX	8	TYROBP	7	AXDND1	4	C16orf91	2
PSD4	8	UBALD1	7	B3GNT6	4	C17orf70	2
PUF60	8	VENTX	7	BACH1	4	C1orf159	2
PXDNL	8	YBEY	7	BAIAP2L2	4	C1QA	2
QSOX2	8	ZNF232	7	BARX1	4	C1QC	2
RYR2	8	ZNF503-AS2	7	C10orf53	4	C2orf50	2
SBF1P1	8	ZNF768	7	C10orf76	4	C3orf49	2
SCTR	8	ABLIM2	6	C12orf57	4	C4orf6	2
SLC22A3	8	ACY3	6	C16orf91	4	C7orf26	2
SLC6A18	8	ADAM11	6	C19orf25	4	C9orf69	2
SLC8A2	8	AFAP1	6	C1orf200	4	CACNA1A	2
SPIB	8	ALDH3A1	6	C1QL3	4	CACNA1B	2
ST8SIA3	8	ANKRD16	6	C20orf194	4	CACNA2D4	2
TCEA2	8	ARFGAP1	6	C9orf139	4	CALML4	2
TLX2	8	ARHGEF4	6	CA10	4	CAMSAP3	2
TMEM190	8	ASPHD1	6	CACNA1A	4	CAMTA1	2
TMEM213	8	ATP9B	6	CACNA1H	4	CAPN15	2
TMEM91	8	B4GALNT4	6	CAPN1	4	CCDC154	2
TNFRSF25	8	BAIAP2	6	CAPN5	4	CCDC169	2
TRPM2	8	BRICD5	6	CARHSP1	4	CCER1	2
TSSC4	8	BSG	6	CATSPER4	4	CDH5	2
UCN	8	C14orf39	6	CBX8	4	CEBPZ	2
UPB1	8	C19orf24	6	CCDC130	4	CELF5	2
XKR4	8	C19orf60	6	CD93	4	CELSR1	2
YIPF7	8	C1QTNF8	6	CDH3	4	CHAT	2
ZBTB7A	8	C20orf141	6	CDK20	4	CHST15	2
ZNF526	8	C8orf22	6	CEBPB	4	CHUK	2
ZNF541	8	CABP1	6	CELF3	4	CLEC11A	2
ZNF592	8	CACNA1B	6	CEP85	4	CLN6	2
ABCA17P	7	CCDC85B	6	CES4A	4	CLPTM1	2
ABCA2	7	CD22	6	CHAT	4	CNN2	2
ABCA3	7	CDC34	6	CHST13	4	COA6	2
ACER2	7	CLEC11A	6	CHST8	4	COL22A1	2
ALDH3B1	7	CMTM5	6	COL9A1	4	COL7A1	2
AP3M2	7	CTSD	6	CTSD	4	CPNE2	2
APOA5	7	CYP1B1	6	CYGB	4	CPXM2	2
ASCC3	7	CYP2W1	6	CYP26B1	4	CRB3	2
ASTN2	7	DIS3L	6	DENND1C	4	CRIP1	2
ATN1	7	DOHH	6	E2F8	4	CSF3R	2
ATP6V1F	7	DPPA5	6	EBF3	4	CTDSP1	2
BDKRB1	7	DUSP22	6	EFEMP2	4	CTRB1	2
C10orf53	7	EHMT1	6	EGR3	4	CTRB2	2
C10orf55	7	EMC9	6	EMILIN1	4	CTTN	2
C16orf91	7	ESM1	6	EMILIN3	4	CTXN1	2
C1orf210	7	F7	6	EMX2	4	CUX1	2
C1orf61	7	FAM43B	6	EN2	4	CYP1B1	2
C1QA	7	FAM83G	6	EPHX3	4	DALRD3	2
C1QL2	7	FAM92B	6	ERC2	4	DCP1B	2
C22orf26	7	FARP2	6	EVC	4	DCTD	2
CAMK2A	7	FBXO18	6	F10	4	DDX27	2
CAMK2G	7	FBXO46	6	FAM132A	4	DENND1C	2
CBX8	7	FIBP	6	FAM208A	4	DIS3L	2
CCDC61	7	FOXQ1	6	FAM83G	4	DLG5	2
CELF3	7	GGACT	6	FBLN1	4	DLGAP1	2
CHAT	7	GRAP	6	FGF14	4	DLGAP1-AS1	2
CHST15	7	GRIN1	6	FLJ12825	4	DLGAP2	2
CLCN7	7	HOXA7	6	FLJ40504	4	DNAJA4	2
CMYA5	7	HOXA9	6	FOXB2	4	DNMT3A	2
CPT1A	7	IGF2	6	GABRA5	4	DOT1L	2
CPT1C	7	IKZF1	6	GABRD	4	DPP7	2
CPXM2	7	INS-IGF2	6	GABRP	4	DPPA5	2
CRAMP1L	7	ITPKA	6	GAD1	4	DTX2	2
CTC1	7	KCNQ1	6	GDF15	4	EDF1	2
CTDSP1	7	KIAA1024	6	GNMT	4	EDN2	2
CYGB	7	KISS1R	6	GNPTAB	4	EHD2	2
DENND1C	7	LMX1B	6	GOLGA3	4	EHD4	2
DNAJC25	7	LOC338799	6	GPR144	4	EHMT1	2
DNASE2	7	LOC388428	6	GPR39	4	EMC10	2
DTX1	7	LTBP3	6	GRAP	4	EMC9	2
EFEMP2	7	MAU2	6	GRK7	4	EMILIN3	2
EHD2	7	MEGF11	6	GSTM5	4	ENTPD4	2
ELOVL3	7	MPPED2	6	GUCY2C	4	EPS8L1	2
EMILIN1	7	MSLN	6	HAND1	4	ERLIN1	2
EMILIN3	7	MZB1	6	HCN1	4	EVC2	2

ESPN	7	NAT8L	6	HOXC5	4	FAM102A	2
FAM115A	7	NFATC1	6	HR	4	FAM188B	2
FAM65A	7	NOM1	6	HYAL2	4	FAM71E1	2
FGFR4	7	NRBF2	6	IFT20	4	FAM92B	2
FLJ16779	7	NRG1	6	IGFBP3	4	FBN3	2
FOXA1	7	OPLAH	6	IL18BP	4	FBXL16	2
FOXJ1	7	PDE6B	6	INO80B	4	FCRLB	2
FUOM	7	PLXND1	6	IRF9	4	FGFRL1	2
FXYD1	7	POMT1	6	JOSD2	4	FLJ90757	2
GABRA5	7	PPP3R2	6	KANK1	4	FLNC	2
GAD1	7	PRAM1	6	KANK3	4	FOXQ1	2
GLTSCR1	7	PRSS21	6	KAT6A	4	FOXR1	2
GNG10	7	PRSS50	6	KCNAB1	4	FSCN2	2
GNMT	7	PSME1	6	KCNIP2	4	FTCD	2
GSTM5	7	PTGER1	6	KCNV1	4	FTMT	2
GUCY2C	7	RGS3	6	KDM6B	4	GABRP	2
HN1L	7	RHOF	6	KIAA1199	4	GADD45B	2
HYAL2	7	RXRA	6	KIAA1598	4	GALP	2
INO80B	7	SCML4	6	KIF17	4	GAS2L1	2
IRF9	7	SIKE1	6	KPTN	4	GBX1	2
KCNK3	7	SIX6	6	LDOC1L	4	GBX2	2
KIAA1598	7	SLC17A7	6	LHX6	4	GLTSCR1	2
KIF17	7	SNCA	6	LINC00189	4	GNG7	2
KLHL3	7	SNORD114-31	6	LINC00518	4	GOPC	2
KRTAP10-6	7	SNTG1	6	LINGO3	4	GPRC5B	2
LDLOC1L	7	SP9	6	LMNA	4	GPRIN1	2
LIMD2	7	SYCP1	6	LOC100130311	4	GRK7	2
LINC00324	7	TBX3	6	LOC100190940	4	GRM4	2
LOC100128811	7	TF	6	LOC340094	4	GSTM5	2
LOC100130522	7	TLX2	6	LOC388199	4	GTSF1	2
LOC150381	7	TMCC1	6	LOC642852	4	HDDC3	2
LOC199800	7	TMEM190	6	LOC65998	4	HGC6.3	2
LPIN3	7	TNFAIP8	6	LPIN3	4	HMGA1	2
LSM14B	7	TRPV3	6	LRRC3	4	HOXA4	2
LTK	7	UCK1	6	LSP1	4	HOXA6	2
MMP15	7	ZMYM5	6	LTBP4	4	HRAS	2
MTL5	7	ZNF541	6	MALL	4	HRH3	2
MUS81	7	ABCA7	5	MAP4K2	4	HSPA12B	2
MYO3A	7	ADAMTS13	5	MCF2L	4	HSPB8	2
MYOD1	7	ADAMTSL5	5	MEN1	4	IBA57	2
NCLN	7	ADARB2	5	MIR22HG	4	IER2	2
NKAIN4	7	ADARB2-AS1	5	MMP14	4	IL34	2
NKX2-4	7	AHDC1	5	MPDU1	4	ILVBL	2
NKX6-2	7	ARSI	5	MRPL52	4	INF2	2
NPTX2	7	B3GALT6	5	MUS81	4	INMT	2
NSD1	7	BZRAP1	5	MYL9	4	INSIG1	2
NTN5	7	C15orf38	5	MYO7A	4	IQGAP3	2
ONECUT2	7	C19orf35	5	MYO9B	4	ITPKA	2
OR2L13	7	C1orf216	5	NACC2	4	IZUMO2	2
OR2T8	7	C2orf50	5	NCDN	4	JADE2	2
OTP	7	C3orf49	5	NCOR2	4	KANSL3	2
PAPD4	7	C9orf96	5	NDUFS8	4	KCNK15	2
PARD6G	7	CCDC40	5	NOL4	4	KCNK3	2
PAX6	7	CELF5	5	NPHP1	4	KCNMA1	2
PCK2	7	CEP170B	5	NR4A2	4	KCNQ1OT1	2
PEX6	7	CNN2	5	NRIP3	4	KCNT1	2
PGR	7	CNN3	5	NTN5	4	KIF1A	2
PLBD1	7	COL22A1	5	NUB1	4	KISS1R	2
PLEC	7	CTRB2	5	NXPB1	4	KLHDC7A	2
PNPLA2	7	DNAJA4	5	OBSCN	4	KLHDC7B	2
POLR2E	7	DPEP1	5	OLIG3	4	KLHL17	2
PRCD	7	ECE2	5	ONECUT1	4	KLHL30	2
PROKR2	7	ECSIT	5	PACSIN1	4	KLHL40	2
PTGER3	7	EHD4	5	PARP10	4	LAMA5	2
PTPN6	7	EMC10	5	PAX9	4	LAMC3	2
RAB11FIP4	7	EPS8L1	5	PCDHGC5	4	LASP1	2
RAET1L	7	EXD3	5	PEX6	4	LGMN	2
REC8	7	FAM102A	5	PGPEP1	4	LIME1	2
RIIAD1	7	FAM71E1	5	PKN1	4	LMX1B	2
RIN3	7	FAM84A	5	PLBD1	4	LOC100130274	2
RND2	7	FBN3	5	POFUT2	4	LOC199800	2
RNF157	7	FDXR	5	POU3F1	4	LOC221442	2
RPAP1	7	FERMT3	5	PPCS	4	LOC338799	2
RPS6	7	FOXA1	5	PRCD	4	LOC389791	2
RTEL1	7	FOXR1	5	PRDM14	4	LOC619207	2
RXRA	7	FTMT	5	PRKCZ	4	LOC65998	2
SAMD1	7	GAA	5	PROZ	4	LPIN3	2
SCRIB	7	GAMT	5	PRSS57	4	LRRC55	2
SEC1	7	GJA3	5	PSD4	4	LTBP3	2
SEMA6C	7	GJD4	5	PTF1A	4	MACF1	2
SFTA2	7	GLB1L2	5	RAB36	4	MAST3	2

SHPK	7	GLB1L3	5	RAE1	4	MAU2	2
SIM1	7	GLI4	5	RANBP17	4	MEGF11	2
SLBP	7	GNMT	5	RBM18	4	MFSD6L	2
SLC35D3	7	GPRIN1	5	RBM38	4	MGC45800	2
SLC39A14	7	GPX4	5	REC8	4	MIER2	2
SLITRK1	7	GRIN2C	5	REEP4	4	MSLN	2
SNCA	7	GSTM5	5	RIIAD1	4	MTG2	2
SOX11	7	HGC6.3	5	RLN3	4	MYH14	2
SOX8	7	HILPDA	5	RND2	4	NAAA	2
SPOCK1	7	IBA57	5	RNF121	4	NDUFAB1	2
SPPL2B	7	IGFBP4	5	RNF175	4	NFYA	2
SREBF2	7	IRF9	5	RNF7	4	NKPD1	2
SSTR1	7	KCNK15	5	RPS10	4	NKX6-2	2
STRADA	7	KCNQ1DN	5	RTKL1	4	NLRC5	2
TACC2	7	KIAA1683	5	SAMD1	4	NLRP10	2
TAF4	7	KIF17	5	SBF1P1	4	NMRK2	2
TBX4	7	LHX3	5	SBSPON	4	NOM1	2
TFAP2C	7	LINC00319	5	SCNN1D	4	NOS3	2
TINCR	7	LINC00482	5	SCUBE2	4	NPAS1	2
TMEM102	7	LINGO3	5	SDCBP2	4	NXPH1	2
TNFRSF13C	7	LOC100128164	5	SDR16C5	4	OBSN	2
TNFRSF6B	7	LOC284578	5	SEC1	4	ODF3L2	2
TRAK1	7	LOC389333	5	SEMA4A	4	OLFM1	2
TRIM32	7	LRP3	5	SERTAD1	4	OLIG2	2
TRIM67	7	LSM14B	5	SFRP2	4	OPLAH	2
TTYH1	7	LTB4R	5	SHKBP1	4	OPTN	2
TUSC2	7	LTB4R2	5	SHPK	4	OR2Z1	2
USB1	7	MAST3	5	SIGIRR	4	ORAI2	2
USH1C	7	MEIS1	5	SIM1	4	PALB2	2
VENTX	7	MEX3B	5	SLC11A1	4	PALM	2
WT1	7	MFSD4	5	SLC22A20	4	PDE6B	2
XRN2	7	MFSD6L	5	SLC4A11	4	PIK3R2	2
ZBTB3	7	MFSD7	5	SLC6A5	4	PLEKHJ1	2
ZBTB42	7	MN1	5	SLC8A2	4	PLIN3	2
ZNF232	7	MYL10	5	SLC9A3	4	PLXND1	2
ZNF259	7	MYL5	5	SNAP25	4	POLR2E	2
ZNF678	7	NAAA	5	SOX15	4	POMT1	2
ZRANB2	7	NACC2	5	SOX7	4	PPAP2C	2
ADAM12	6	NDUFAB1	5	SOX9	4	PRKAR2B	2
ADAMTS13	6	NDUFS7	5	SPPL2B	4	PRND	2
ADRA1A	6	NKX2-5	5	SSBP4	4	PRSS41	2
ADRB2	6	NR4A2	5	ST8SIA3	4	PRSS50	2
ADSSL1	6	OBSN	5	SYCP3	4	PSME1	2
ALLC	6	PALB2	5	TBX20	4	PWWP2B	2
ANKLE2	6	PDE4C	5	TBX4	4	QRICH2	2
ANO9	6	PEX6	5	TCL1A	4	RAB34	2
APCDD1L	6	PFN2	5	TRDR5	4	RANBP17	2
ARPC1A	6	PIK3R2	5	TFAP2A	4	RASL10A	2
ARPC1B	6	PIP5KL1	5	TFAP2C	4	RBMXL2	2
ASPDH	6	PLEKHG5	5	TFAP2E	4	RELB	2
AXDND1	6	PNLIPRP1	5	TMEM132D	4	RHOF	2
BARX1	6	PNLIPRP2	5	TMEM190	4	RIN3	2
BNC1	6	POLR2E	5	TMEM213	4	RNASE1	2
C10orf90	6	PRPSAP1	5	TMEM88	4	RNF7	2
C17orf76-AS1	6	PSD4	5	TMEM91	4	RPS21	2
C1orf200	6	PWWP2B	5	TNFRSF18	4	RPS6	2
C8orf22	6	QSOX2	5	TNFRSF6B	4	SAMD11	2
C9orf96	6	RAB12	5	TNNI2	4	SATB1	2
CACNA1B	6	RAP1GAP	5	TPSG1	4	SCARF2	2
CACNA1H	6	REC8	5	TRIM36	4	SCRN2	2
CAPN1	6	SDAD1	5	TRPV1	4	SCYL1	2
CAPN15	6	SIGLEC8	5	TSSC4	4	SDAD1	2
CAPN5	6	SLC12A7	5	TST	4	SEPT2	2
CATSPER4	6	SLC22A18	5	TTYH1	4	SERTAD1	2
CCDC40	6	SLC22A18AS	5	TUBA3C	4	SFTA2	2
CEBPB	6	SLC7A10	5	TUSC2	4	SHANK2	2
CEP85	6	SLFN13	5	USE1	4	SHC2	2
CERS3	6	SLITRK1	5	VENTX	4	SHROOM3	2
CES4A	6	SNCB	5	VSX2	4	SIGIRR	2
CHAD	6	SOX11	5	WBSCR17	4	SIX6	2
CLUH	6	SPATA3	5	WNT5B	4	SLC10A1	2
CNN3	6	SPATC1L	5	XKR4	4	SLC18A3	2
COL22A1	6	SPPL2B	5	YJEFN3	4	SLC22A1	2
CRB3	6	SPTBN4	5	ZBTB7A	4	SLC25A45	2
CRMP1	6	SPTBN5	5	ZMYND12	4	SLC35F3	2
DBX1	6	SSTR3	5	ZNF415	4	SLC6A18	2
DRAXIN	6	STIP1	5	ZNF678	4	SLFN13	2
DRD4	6	SUPT4H1	5	ZNF746	4	SMOC1	2
DUOXA1	6	TAF4	5	ZNF777	4	SNCB	2
DUOXA2	6	THOC7	5	ABCA17P	3	SNORA21	2
EHMT1	6	TMEM176A	5	ABCA2	3	SNORD114-31	2

EPO	6	TMEM176B	5	ABCA3	3	SNX20	2
FAM196A	6	TMPRSS9	5	ABCA7	3	SOGA2	2
FARP2	6	TNXB	5	ABLIM2	3	SOHLH1	2
FGF23	6	TPD52L2	5	ACAN	3	SOHLH2	2
FKBP2	6	TRIM29	5	ACER2	3	SOWAHB	2
FLNC	6	TUBA3C	5	ADAM11	3	SOX8	2
FSCN1	6	UCN2	5	ADAMTSL4	3	SP6	2
GAA	6	USP48	5	ADCY1	3	SPTBN5	2
GIGYF1	6	VSX1	5	ADRA1A	3	SRC	2
GLS2	6	WRN	5	ADRA2B	3	STAU1	2
GNAS	6	ZNF343	5	AEN	3	STXBP2	2
GOLGA3	6	ZNF497	5	AFAP1	3	SUGP1	2
GP1BB	6	ZNF653	5	AGMAT	3	SULT6B1	2
GPR158	6	ZNF837	5	AK1	3	SYDE1	2
GPRIN2	6	ACTG1	4	AKT1	3	TES	2
GRK7	6	ADAM33	4	ALDH3A1	3	TEX12	2
HOXB13	6	ADAMTS10	4	ALDH3B1	3	TF	2
HOXC5	6	AEN	4	ALLC	3	TGIF1	2
HOXD4	6	AIPL1	4	ANKRD16	3	THAP3	2
HR	6	AJAP1	4	AP3S1	3	THOC7	2
HSD17B8	6	AKAP12	4	APBA3	3	TM7SF2	2
IGFBP3	6	ALOX12	4	ARL5C	3	TMCC1	2
JAKMIP3	6	ASGR1	4	ARTN	3	TMEM105	2
JOSD2	6	ASNA1	4	ASCL2	3	TMEM179	2
KANK1	6	ATF6B	4	ASCL4	3	TNFAIP8	2
KLHL14	6	ATP6V0B	4	ASGR1	3	TOR4A	2
KNDC1	6	B4GALT2	4	ASTN2	3	TPD52L2	2
KRBA1	6	BEAN	4	ATP6V1F	3	TRAF2	2
LAD1	6	BEST2	4	B3GNT9	3	TRIML2	2
LGMN	6	BNC1	4	BARHL1	3	TRMT1	2
LINGO3	6	BRF2	4	BCCIP	3	TRMU	2
LMNA	6	C15orf27	4	BCL2L10	3	TTC24	2
LMX1A	6	C15orf39	4	BDKRB1	3	TUBA3C	2
LOC100190940	6	C19orf10	4	BRD4	3	TYROBP	2
LOC146336	6	C1orf159	4	BRINP1	3	UBTF	2
LOC148824	6	C9orf69	4	C10orf55	3	UBXN6	2
LOC654433	6	CACNA1A	4	C14orf39	3	UCK1	2
LYPD1	6	CAPN1	4	C17orf70	3	UCN2	2
LZTS1	6	CAPN15	4	C19orf24	3	UNC45A	2
MAST1	6	CAT	4	C1orf210	3	UPK3B	2
MEX3B	6	CCDC125	4	C1QTNF4	3	VENTX	2
MGC16275	6	CDH5	4	C22orf26	3	VPS51	2
MPDU1	6	CEP19	4	C2orf50	3	WDR6	2
MPPED2	6	CHAT	4	C9orf69	3	WDTC1	2
MYO7A	6	CHD5	4	CA12	3	XAB2	2
NCAPG2	6	CHST15	4	CACNA1B	3	ZGPAT	2
NCKAP5	6	COA6	4	CACNB2	3	ZMYM5	2
NFATC1	6	COL7A1	4	CACNG6	3	ZNF343	2
NFIC	6	CPNE2	4	CACNG8	3	ZNF354C	2
NOM1	6	CSTF3	4	CADM1	3	ZNF444	2
NRIP3	6	CTRB1	4	CAMK2A	3	ZNF541	2
NTSR1	6	CTTN	4	CAMK2B	3	ZNF853	2
NXPH1	6	CTXN1	4	CAMK2G	3	ACBD5	1
OBP2B	6	CYBA	4	CAPN10	3	ACPT	1
ODF3L2	6	CYP2S1	4	CAPN15	3	ADAM33	1
OLIG3	6	DALRD3	4	CARD14	3	ADAMTS10	1
OR2C3	6	DDX27	4	CBFA2T3	3	ADAMTS13	1
PACSLN1	6	DMRTB1	4	CBLN1	3	ADAMTS15	1
PARP10	6	DPP9	4	CBLN4	3	ADAMTSL5	1
PAX1	6	EDN2	4	CCDC154	3	ADAP1	1
PAX7	6	EGFL7	4	CDC42EP1	3	ADARB2	1
PAX8	6	EMILIN2	4	CDH1	3	ADARB2-AS1	1
PCDP1	6	ENOSF1	4	CELSR3	3	ADCK5	1
PKP1	6	EPB41L1	4	CEP170B	3	ADCY3	1
PNLIPRP1	6	ERICH1	4	CFD	3	ADRA2A	1
PNLIPRP2	6	ETFA	4	CHAD	3	ADRB2	1
POM121L12	6	EVA1B	4	CHCHD1	3	ADRBK2	1
PTF1A	6	FBXO17	4	CHID1	3	AEN	1
PTPRN2	6	FGR	4	CHP2	3	AGBL5	1
RAE1	6	FIGLA	4	CHRNA2	3	AGPAT2	1
RBM38	6	FLNC	4	CHRNA6	3	AHDC1	1
RBMXL2	6	FTSJ2	4	CHST15	3	AIPL1	1
REEP4	6	GBX2	4	CILP2	3	AK1	1
RGS14	6	GFAP	4	CLUH	3	AKT3	1
RGS7BP	6	GGA1	4	CMYA5	3	ALKBH5	1
RING1	6	GOPC	4	CN5H6.4	3	AMOTL1	1
RNF7	6	GPRC5B	4	CNN2	3	ANK1	1
RPL13	6	HELZ2	4	CNTD2	3	ANKLE2	1
RPS10	6	HHEX	4	CORO6	3	ANKRD26P1	1
SALL3	6	HOXC5	4	CPLX2	3	ANKS3	1
SBN02	6	ICMT	4	CPXM2	3	ANXA11	1

SCARF2	6	IFITM5	4	CRAMP1L	3	APRT	1
SCUBE2	6	INF2	4	CRB3	3	AQP1	1
SDR16C5	6	KANSL3	4	CRIP1	3	ARGLU1	1
SEMA4A	6	KCNJ3	4	CSAD	3	ARHGDIG	1
SERTAD1	6	KCNK3	4	CSNK1G2	3	ARRDC2	1
SH2D5	6	KCNN1	4	CSNK1G2-AS1	3	ASB16	1
SIGLEC7	6	KDM4B	4	CTC1	3	ASB16-AS1	1
SIGLEC9	6	KLF4	4	CTDSP1	3	ASGR1	1
SIKE1	6	KLHDC7B	4	CWH43	3	ASPDH	1
SIM2	6	KLHL17	4	DBX1	3	ASPHD1	1
SLC16A8	6	KLHL22	4	DDB1	3	ATCAY	1
SLC17A7	6	KLHL3	4	DEGS2	3	ATP5L	1
SLC22A20	6	KLHL40	4	DIDO1	3	ATP6V0A4	1
SLC38A4	6	KLK6	4	DIO3	3	ATP6V0B	1
SLC6A5	6	LAMC3	4	DIS3L	3	ATP9B	1
SLCO4A1	6	LBX2	4	DMRT3	3	AUTS2	1
SNAP25	6	LIME1	4	DNAJB6	3	B3GNT6	1
SNTG1	6	LOC151534	4	DNAJC4	3	B4GALT2	1
SOX15	6	LOC255783	4	DNASE2	3	B4GALT3	1
SOX7	6	LOC25845	4	DNM1	3	BARX1	1
SPG7	6	LOC284837	4	DOCK1	3	BASP1	1
SPRYD4	6	LOC619207	4	DPH7	3	BCAS4	1
SSBP4	6	LOC645545	4	DPYSL5	3	BCL11A	1
STX4	6	LOC647979	4	DRAXIN	3	BCL2L10	1
SYCP1	6	LOC727896	4	DRD5	3	BIRC7	1
TAC1	6	LOXL1	4	DTNA	3	BMP6	1
TBX6	6	LRRC3	4	DTX1	3	BRF2	1
TDRD5	6	MESTIT1	4	DUOXA1	3	BTBD2	1
TMEM132D	6	MIER2	4	DUOXA2	3	C10orf91	1
TMEM176A	6	MLST8	4	EBF1	3	C15orf27	1
TMEM176B	6	MVD	4	EFCAB4A	3	C16orf70	1
TMEM204	6	MYO18B	4	EHBP1	3	C16orf71	1
TNNI1	6	NCAPG2	4	EHMT1	3	C16orf92	1
TOR4A	6	NKPD1	4	EIF2AK4	3	C19orf25	1
TPSG1	6	NLRC5	4	EIF3E	3	C19orf35	1
TRMT1	6	NLRP10	4	ELOVL3	3	C19orf38	1
TRPV2	6	NOS3	4	EMC10	3	C1orf200	1
TUBA3C	6	NOTCH1	4	EN1	3	C1orf94	1
TUSC5	6	NPAS1	4	EPHB3	3	C21orf67	1
VAX1	6	NR2F2	4	EPHX2	3	C22orf26	1
VSX2	6	NXPH1	4	ERBB2	3	C22orf46	1
WDTC1	6	OCA2	4	ESPN	3	C3orf22	1
YPEL3	6	OMP	4	ESYT3	3	C9orf129	1
ZNF347	6	PIGG	4	FAM213B	3	C9orf163	1
ZNF469	6	POLR2L	4	FAM65A	3	C9orf96	1
ACAN	5	POM121L12	4	FAM71E1	3	CABLES2	1
ACAP1	5	PON2	4	FANK1	3	CABP1	1
ACD	5	PON3	4	FBXO18	3	CACNA2D1	1
ACPL2	5	PPAP2C	4	FGF23	3	CADPS2	1
ADAMTS16	5	PPP1R11	4	FGFR2	3	CAMK2A	1
ADCY1	5	PRSS57	4	FGFR4	3	CAPN1	1
ADRB3	5	PTF1A	4	FHL2	3	CAPN5	1
AEN	5	QPCTL	4	FOXE1	3	CARKD	1
AGMAT	5	R3HDM4	4	FOXK1	3	CARM1	1
AKAP1	5	RAD51C	4	FOXQ1	3	CCDC114	1
ANKRD53	5	RARA	4	FSCN1	3	CCDC125	1
APBA3	5	RBBP8NL	4	FSCN2	3	CCDC51	1
ARL5C	5	RGS14	4	FTSJ2	3	CCDC85B	1
ATP5A1	5	RNF207	4	FXYD1	3	CD151	1
B3GNT9	5	RNF39	4	FZR1	3	CD93	1
BACH1	5	RPS21	4	GABARAPL1	3	CDC34	1
BAI1	5	RUSC1	4	GATA4	3	CDC42	1
BCKDK	5	RUSC1-AS1	4	GGN	3	CDCP2	1
BRF2	5	SFMBT2	4	GIGYF1	3	CDHR5	1
C14orf39	5	SFTA2	4	GIP	3	CDK5R2	1
C19orf24	5	SH2D5	4	GJD4	3	CDSN	1
C19orf25	5	SH3BP1	4	GLB1L2	3	CEBPD	1
C1orf216	5	SH3TC1	4	GLB1L3	3	CFD	1
C1QC	5	SHANK2	4	GLS2	3	CHADL	1
C1QL3	5	SIGLEC1	4	GMDS	3	CHD5	1
C20orf194	5	SLC10A1	4	GMIP	3	CHDH	1
C20orf26	5	SLC1A1	4	GNA11	3	CHMP6	1
C2orf40	5	SLC22A20	4	GOLGA2	3	CHST3	1
C2orf50	5	SLC25A38	4	GOLT1A	3	CHST6	1
C4orf6	5	SLC35D3	4	GP1BB	3	CHST8	1
CA12	5	SLC35F3	4	GPC5	3	CIRBP	1
CACNA1A	5	SLC6A6	4	GPC6	3	CIZ1	1
CACNG6	5	SMOC1	4	GPR35	3	CLDN9	1
CACNG8	5	SPOCK1	4	GPRIN1	3	CLIP1	1
CAPN10	5	SRC	4	GPRIN2	3	CLTCL1	1
CARHSP1	5	STAU1	4	GPX4	3	CNPY3	1

CASZ1	5	STRA6	4	GRIN1	3	COL9A2	1
CATSPER2	5	SUGP1	4	GRINA	3	COMP	1
CBFA2T3	5	TAF9	4	HAMP	3	CPT1C	1
CBLN1	5	TEKT2	4	HMGA1	3	CRLS1	1
CCDC130	5	TM7SF2	4	HN1L	3	CSAD	1
CDC42EP1	5	TMEM105	4	HOXD4	3	CSNK1G2	1
CDHR5	5	TNFRSF18	4	HSD17B8	3	CSNK1G2-AS1	1
CDK20	5	TOR4A	4	HSPA12B	3	CSTF3	1
CFD	5	TPSD1	4	HSPB9	3	CTBP1-AS2	1
CHID1	5	TSPAN4	4	IFRD2	3	CTSD	1
CKS2	5	TST	4	IGF2BP1	3	CYBA	1
CTDP1	5	TTLL10	4	IGFLR1	3	D2HGDH	1
DDX27	5	VPS51	4	IKZF1	3	DCXR	1
DMRTB1	5	WDR6	4	IL27RA	3	DDX55	1
E2F8	5	WDTC1	4	ILKAP	3	DES	1
EBF1	5	YES1	4	IRS1	3	DHH	1
EBF3	5	ZGPAT	4	IRX4	3	DHRS2	1
ECE2	5	ZNF137P	4	JMJD6	3	DNAAF3	1
EGR3	5	ZNF274	4	KAZN	3	DNAJC27	1
ELL3	5	ZNF503	4	KCND3	3	DNAJC4	1
ELN	5	ZNF544	4	KCNH3	3	DNASE2	1
EMILIN2	5	ZNF721	4	KCNJ3	3	DNLZ	1
EN2	5	ZNF83	4	KCNK15	3	DNMT3B	1
EPHB3	5	ABO	3	KHK	3	DOHH	1
EPHX3	5	ADAMTS15	3	KIF6	3	DOK4	1
ERBB4	5	ADAP1	3	KLF16	3	DPF1	1
ESYT1	5	ADCY3	3	KLF4	3	DYNLL1	1
F10	5	ADCYAP1	3	KLHDC7B	3	ECE2	1
FERD3L	5	ADRA2A	3	KLHL22	3	ECSIT	1
FLJ12825	5	ADRM1	3	KNDC1	3	EFCAB4A	1
FTCD	5	AGBL5	3	KRT8	3	EFNB2	1
FTSJ2	5	AK1	3	KRT82	3	EGFL7	1
GIMAP8	5	ALKBH4	3	KSR2	3	EGR3	1
GJA10	5	ALPP	3	LAMP5	3	EHBP1	1
GJA3	5	ALS2CL	3	LCN12	3	EHBP1L1	1
GLRB	5	ANKLE2	3	LCN15	3	EIF2AK4	1
GNA11	5	APOC4	3	LDHAL6A	3	ELFN1	1
GPR132	5	AQP1	3	LDHC	3	ELL3	1
GPR35	5	AQP10	3	LHX1	3	ELOVL3	1
GPX4	5	ARHGDIG	3	LHX3	3	EMILIN2	1
GRIA2	5	ARL6IP4	3	LIMD2	3	EMX2	1
HCN1	5	ARRDC2	3	LINC00324	3	ENTPD3	1
HOXA4	5	ATP6V1F	3	LINC00473	3	EPB41L1	1
IKZF2	5	ATP8B2	3	LOC100127888	3	ERCC6L2	1
INSM1	5	ATXN7L3	3	LOC100130274	3	ERF	1
ITPRIPL2	5	AVP11	3	LOC100130522	3	ERICH1	1
KCNAB1	5	B3GNT6	3	LOC100132215	3	ESPNL	1
KCNG2	5	B3GNT9	3	LOC148824	3	ETFA	1
KCNV1	5	BACH1	3	LOC150381	3	EXOC2	1
KCTD11	5	BAGE5	3	LOC283731	3	EXOC3L2	1
KDM6B	5	BAIAP2L2	3	LOC389333	3	EZR	1
KLHDC7B	5	BARHL1	3	LOC654433	3	FAM115A	1
KRT82	5	BASP1	3	LOC728743	3	FAM19A5	1
KRTAP10-10	5	BIRC7	3	LONP1	3	FAM20C	1
LHX1	5	BMP8A	3	LPAR2	3	FAM57B	1
LIMK1	5	BPIFB2	3	LVRN	3	FAM69B	1
LINC00189	5	BPIFB6	3	LY6G6E	3	FAM84A	1
LINC00473	5	BTBD2	3	MAD1L1	3	FBXO17	1
LINC00518	5	C17orf70	3	MADCAM1	3	FBXO24	1
LINC00523	5	C1orf200	3	MAG	3	FDXR	1
LOC100128842	5	C7orf26	3	MAP1S	3	FERMT3	1
LOC284578	5	CA10	3	MAP3K6	3	FEZF1	1
LOC284837	5	CABLES2	3	MAST1	3	FIBP	1
LOC340094	5	CADPS2	3	MEGF11	3	FIGLA	1
LOC642852	5	CAMSAP3	3	MESP1	3	FKBP10	1
LOC727896	5	CD151	3	MGC16275	3	FKBP2	1
LRFN5	5	CD248	3	MGLL	3	FOXM1	1
LTBP4	5	CDHR5	3	MKL2	3	FOXS1	1
LY6K	5	CELSR1	3	MMEL1	3	FPGS	1
MAD1L1	5	CERS3	3	MOCS1	3	FRG2	1
MAP3K6	5	CHADL	3	MRAS	3	FZD9	1
MAP4K2	5	CLDN9	3	MRPL41	3	GAL3ST2	1
MEN1	5	CNN1	3	MRPS15	3	GALNS	1
MFSD4	5	COMP	3	MRPS6	3	GALNT9	1
MRC2	5	CPXM2	3	MXRA7	3	GAS2L2	1
MRFAP1	5	CRB3	3	MYO15A	3	GATA2	1
MTNR1B	5	CWH43	3	NAT14	3	GET4	1
MYO9B	5	D2HGDH	3	NAT6	3	GFAP	1
NFATC4	5	DAPL1	3	NCKIPSD	3	GHRH	1
NOTCH1	5	DCTD	3	NCLN	3	GIMAP8	1
NR4A2	5	DENND1C	3	NEUROG1	3	GJA10	1

NRBF2	5	DLGAP1	3	NFATC4	3	GJA3	1
NRXN1	5	DLGAP1-AS1	3	NLRP7	3	GJD4	1
NT5C3B	5	DLGAP2	3	NOS1	3	GLB1L2	1
OPLAH	5	DNAAF3	3	NOTCH1	3	GLB1L3	1
OR10H2	5	DNAJC27	3	NOV	3	GLI4	1
OTX2	5	DNAJC4	3	NPY2R	3	GMEB2	1
OVCA2	5	DNASE2	3	NR2E1	3	GNA11	1
PAX9	5	DOK4	3	NRF1	3	GNA15	1
PDE10A	5	DTX2	3	NSD1	3	GOLGA3	1
PDIA3	5	DYNC1I1	3	NUDCD3	3	GPI	1
PIWIL2	5	EDF1	3	NUDT14	3	GPR135	1
PLA2G6	5	EFCAB4A	3	OBP2A	3	GPSM1	1
PLEKHA6	5	ELFN1	3	OR2C3	3	GPX4	1
PLXND1	5	ELN	3	OSCP1	3	GRIN2C	1
POFUT2	5	ELOVL3	3	OTOP2	3	GRINA	1
PPCS	5	ENTPD4	3	OTOP3	3	GRK6	1
PRAC1	5	ETNK2	3	P2RY11	3	GSE1	1
PRMT1	5	FANCD2	3	P2RY2	3	GUCY2C	1
PROZ	5	FANCD2OS	3	PAPD4	3	HCN1	1
PRSS21	5	FBLN1	3	PARD6G	3	HDGF2	1
PRSS38	5	FBXL16	3	PAX1	3	HELZ2	1
PRSS50	5	FBXL19	3	PAX7	3	HILPDA	1
PRSS57	5	FEZF1	3	PAX8	3	HIST4H4	1
PRTN3	5	FGFRL1	3	PCBP2	3	HMHA1	1
RLN3	5	FKBP10	3	PCDP1	3	HMOX2	1
RNF145	5	FLJ12825	3	PDE10A	3	HN1	1
RUSC1	5	FLJ90757	3	PDE6B	3	HNRNPK	1
RUSC1-AS1	5	FOXI2	3	PGAP3	3	HOXA7	1
SCT	5	FSCN2	3	PIKFYVE	3	HOXA9	1
SDCCAG3	5	FZD10	3	PITPNA	3	HS3ST6	1
SDF2L1	5	FZR1	3	PITX2	3	HUS1B	1
SERPINF2	5	GAL3ST2	3	PLA2G2E	3	HVCN1	1
SHC3	5	GALP	3	PLA2G6	3	ICMT	1
SIGLEC1	5	GAS2L2	3	PLEK2	3	ID2B	1
SIGLEC8	5	GAS6	3	PLEKHA6	3	IFITM1	1
SIX6	5	GATA5	3	PLEKHG4	3	IFITM5	1
SLC26A1	5	GET4	3	PNPLA6	3	IFNL1	1
SLC4A11	5	GJA10	3	POLR2E	3	IFNLR1	1
SLC9A3	5	GOLGA3	3	POU3F3	3	IGFBP4	1
SLFN13	5	GPR39	3	POU4F2	3	IGFLR1	1
SNAP47	5	GRK7	3	PPAN	3	IGSF8	1
SNORD1C	5	HCN1	3	PPP1R11	3	IKZF1	1
SS18L2	5	HN1	3	PRIMA1	3	IL22RA1	1
SSTR5	5	HOXA5	3	PRMT1	3	IL3	1
STAU1	5	HOXB6	3	PRR13	3	ILKAP	1
TCL1A	5	HOXB7	3	PRR5L	3	INPP5A	1
TELO2	5	HOXC4	3	PRSS38	3	INSRR	1
TFAP2A	5	HRH3	3	PRSS50	3	INTS1	1
TIMP4	5	HSPB8	3	PTGER3	3	IQCE	1
TLX3	5	ID2B	3	PTGIR	3	IRF9	1
TMCC1	5	IER2	3	PTH2R	3	ISYNA1	1
TMEM105	5	IL34	3	PTPN6	3	ITGB2	1
TMEM178A	5	ILKAP	3	PUF60	3	JAG2	1
TMEM88	5	ILVBL	3	QSOX2	3	JOSD2	1
TMIE	5	INSRR	3	RARRES1	3	KANK3	1
TNFAIP8	5	IQCE	3	RBMXL2	3	KAZALD1	1
TP73	5	ISYNA1	3	REXQ1	3	KCNJ3	1
TRIM36	5	IZUMO1	3	RGS14	3	KCNN1	1
TRIM54	5	IZUMO2	3	RGS3	3	KCTD15	1
TST	5	JAG1	3	RGS7BP	3	KCTD7	1
TYROBP	5	KCNQ1OT1	3	RIN3	3	KIAA0355	1
UBE2J2	5	KDM2B	3	RING1	3	KIAA1024	1
USE1	5	KDM6B	3	RNF130	3	KIAA1468	1
UTF1	5	KLHDC7A	3	RNF145	3	KIAA1683	1
VWC2	5	KLHL12	3	RNF39	3	KIF17	1
WDR24	5	KLK5	3	RPL36	3	KIF3C	1
WNT6	5	KREMEN2	3	RPLP0P2	3	KLHL12	1
WRAP73	5	KRTCAP3	3	RPS6	3	KLK6	1
WRN	5	L3MBTL2	3	RSPO2	3	KLK7	1
ZC3H10	5	LAMA5	3	RTL1	3	KMT2A	1
ZMYND12	5	LGALS7B	3	RUNX1T1	3	KREMEN2	1
ZNF274	5	LGI2	3	RYBP	3	KRT8	1
ZNF415	5	LGMN	3	SCARF2	3	KRT82	1
ZNF544	5	LILRB2	3	SERPINF2	3	L3MBTL2	1
ZNF653	5	LIN7B	3	SFRP1	3	LBX2	1
ZNF696	5	LINC00189	3	SH2D5	3	LDOC1L	1
ABHD17C	4	LINC01011	3	SIX3	3	LGALS7B	1
ABLM2	4	LINS	3	SIX6	3	LGI2	1
ADAM11	4	LMNA	3	SLC16A8	3	LHX1	1
ADAMTS10	4	LOC100129637	3	SLC17A7	3	LHX3	1
ADAMTS2	4	LOC148824	3	SLC24A2	3	LHX5	1

ADCK5	4	LOC389791	3	SLC25A34	3	LILRB2	1
ADRA2A	4	LOC654433	3	SLC2A10	3	LIN7B	1
ADRA2B	4	LRFN5	3	SLC35D3	3	LINC00319	1
ADRM1	4	LYPD1	3	SLC39A12	3	LINC00339	1
AFAP1	4	MACF1	3	SLC39A14	3	LINC00476	1
AIPL1	4	MAP2K2	3	SLC43A2	3	LINC01011	1
AKT1S1	4	MAST1	3	SLC47A2	3	LINGO3	1
ALDH3A1	4	MB21D1	3	SLC5A3	3	LMBR1L	1
AMER2	4	MICALCL	3	SLC6A18	3	LMNA	1
ANKRD16	4	MIP	3	SLC6A2	3	LOC100128164	1
ARHGAP39	4	MISP	3	SLFN13	3	LOC100129637	1
ASCL4	4	MMP14	3	SNAP47	3	LOC100132215	1
ASPSCR1	4	MPZL1	3	SNCB	3	LOC100271722	1
ATP1A3	4	MRPL52	3	SNX20	3	LOC148824	1
AUTS2	4	MTG2	3	SOX18	3	LOC150786	1
B3GNT7	4	MTNR1B	3	SPATS2	3	LOC151534	1
BBS10	4	MTO1	3	SPRYD4	3	LOC255783	1
BCCIP	4	MYBBP1A	3	SRC	3	LOC25845	1
BCL2L10	4	MYH14	3	SS18L2	3	LOC284422	1
BMP7	4	NMRK2	3	SSTR3	3	LOC284578	1
BRINP1	4	NPY5R	3	SSTR5	3	LOC284837	1
BSG	4	NR3C2	3	ST3GAL3	3	LOC387646	1
C10orf76	4	NRBP1	3	ST6GALNAC6	3	LOC389257	1
C15orf40	4	ODF3L2	3	STMN2	3	LOC389333	1
C15orf61	4	OGFOD2	3	STRADA	3	LOC645545	1
C16orf11	4	OLFM1	3	STX4	3	LOC647979	1
C16orf70	4	ONECUT2	3	SV2C	3	LOC654433	1
C16orf92	4	OPTN	3	SYT7	3	LOC727896	1
C19orf38	4	OR2C3	3	TBX2	3	LOC729956	1
C1orf53	4	ORAI2	3	TBX6	3	LRAT	1
C1orf65	4	OXTR	3	TCEA2	3	LRP3	1
C9orf53	4	PANX2	3	TCFL5	3	LSM14B	1
CACNB2	4	PAQR4	3	TELO2	3	LZTS1	1
CALML4	4	PARVA	3	THNSL2	3	MAFK	1
CAMK2B	4	PAX8	3	TINCR	3	MAP2K2	1
CAMTA1	4	PDIA2	3	TLX3	3	MAP7D1	1
CARM1	4	PDK4	3	TMEM102	3	MAPK11	1
CBLN4	4	PENK	3	TMEM176A	3	MAPK12	1
CCDC85B	4	PGLYRP1	3	TMEM176B	3	MAST1	1
CD37	4	PLIN3	3	TMEM179	3	MB21D1	1
CD79A	4	PLSCR3	3	TMEM204	3	MC1R	1
CDH3	4	POLR2C	3	TMEM82	3	MCM8	1
CEBPE	4	PPFIA3	3	TMIE	3	MEI1	1
CECR6	4	PRND	3	TNFRSF25	3	MESTIT1	1
CELF5	4	PRPF8	3	TOLLIP	3	MFSD4	1
CHP2	4	PRSS41	3	TOR4A	3	MFSD7	1
CHST13	4	PRSS55	3	TP53RK	3	MGC16275	1
CLK3	4	PTPN18	3	TP73	3	MICALCL	1
CLN6	4	PTPRG	3	TRAK1	3	MICALL2	1
CNTD2	4	PTPRN	3	TRIL	3	MIP	1
COL9A1	4	PTPRN2	3	TRIM32	3	MIR22HG	1
CORO6	4	QRICH2	3	TRIM54	3	MISP	1
CRIP1	4	RABIF	3	TRPM2	3	MLST8	1
CSNK1G2	4	RAE1	3	TSSK3	3	MMP14	1
CSNK1G2-AS1	4	RASIP1	3	TTC40	3	MPPED1	1
CWH43	4	RBM38	3	TUSC5	3	MPZL1	1
DECR2	4	RCOR2	3	U2AF1L4	3	MRGBP	1
DEGS2	4	RCSD1	3	USH1C	3	MRPL52	1
DGKQ	4	REN	3	UTF1	3	MTO1	1
DIO3	4	RILP	3	VAX1	3	MVD	1
DIS3L	4	RIN3	3	VEGFB	3	MYH6	1
DMRT3	4	RNASE1	3	VHLL	3	MYH7	1
DNMT3A	4	RNF34	3	VWCE	3	MYL10	1
DPEP1	4	RNF7	3	WDR24	3	MYL3	1
DPP7	4	SCGB3A1	3	WDTC1	3	MYL5	1
DPYS	4	SCT	3	WNT6	3	MYL9	1
DPYSL4	4	SEMA4A	3	WRAP73	3	MYO15A	1
DPYSL5	4	SERTAD1	3	WRN	3	MYO16	1
DTNA	4	SFRP1	3	YBEY	3	MYO18B	1
DUSP4	4	SH2B2	3	YPEL3	3	MYO1B	1
ECSIT	4	SHKBP1	3	YTHDF1	3	MYO7A	1
EEF1A2	4	SIGIRR	3	ZBTB3	3	MZB1	1
EFNA3	4	SLBP	3	ZIC2	3	NANOS3	1
EFNA4	4	SLC16A8	3	ZMAT4	3	NCLN	1
EGFL7	4	SLC18A3	3	ZNF274	3	NCOR2	1
EHBP1	4	SLC25A45	3	ZNF469	3	NEDD4L	1
EIF4G1	4	SLC47A2	3	ZNF503	3	NFATC1	1
ENTPD3	4	SLC06A1	3	ZNF544	3	NFATC4	1
ERBB2	4	SOX14	3	ZNF665	3	NKX2-5	1
ERC2	4	SP8	3	ZNF667	3	NKX6-1	1
ESYT3	4	SPATA31E1	3	ZNF696	3	NKX6-3	1

ETNK2	4	SPATS1	3	ZNF775	3	NLGN2	1
EVC	4	SSBP4	3	ZRANB2	3	NLRP12	1
FAM102A	4	ST6GALNAC6	3	ZSWIM4	3	NMRAL1	1
FAM132A	4	STMN2	3	ZSWIM8	3	NOTCH1	1
FAM188A	4	SUMO2	3	ABCG1	2	NR3C2	1
FAM208A	4	SYDE1	3	ABO	2	NRARP	1
FAM57B	4	TANC1	3	ACAP1	2	NRG1	1
FANK1	4	TBX6	3	ACD	2	NSMF	1
FASTK	4	TCEA2	3	ACKR3	2	NTF3	1
FBXO18	4	TCL1A	3	ACOT12	2	NXPH4	1
FGF14	4	TGIF1	3	ACP5	2	OGFR	1
FHL2	4	TIMM13	3	ACRBP	2	OR10H2	1
FIBP	4	TINCR	3	ACSL1	2	OR2C3	1
FNDC4	4	TLX3	3	ACSS3	2	OR8S1	1
FOXE1	4	TMEM88	3	ADAMTS17	2	OSTCP1	1
FOXM1	4	TMIE	3	ADAMTS2	2	PANX2	1
FXYD7	4	TNK1	3	ADAP1	2	PAQR4	1
GABRP	4	TNNC2	3	ADM	2	PARD6B	1
GAS6	4	TNNI3	3	AGAP1	2	PARK7	1
GATA4	4	TP53BP2	3	AKAP1	2	PARVA	1
GCK	4	TPTF	3	AKT1S1	2	PARVB	1
GDF7	4	TRAF2	3	ALG1	2	PAX8	1
GDPD5	4	TRIML2	3	ALK	2	PCLO	1
GIN54	4	TRMU	3	ALKBH6	2	PCOLCE	1
GJD4	4	TRPM5	3	ALOX15B	2	PCSK4	1
GLI4	4	TTYH3	3	ALPPL2	2	PDE2A	1
GMD5	4	TUSC5	3	ALS2CL	2	PDE4C	1
GOLT1A	4	UBTF	3	ALX3	2	PDIA2	1
GPER1	4	UBXN6	3	AMER2	2	PDIA3	1
GPR39	4	UNC13D	3	ANK1	2	PDRG1	1
GPRIN1	4	UPK3B	3	ANKRD36BP1	2	PFKFB2	1
GRIK5	4	VEGFB	3	ANKS6	2	PFN2	1
GRM4	4	VPS72	3	AP3B2	2	PGAM5	1
HAND1	4	WBP2	3	AP3M2	2	PGLYRP1	1
HCN2	4	WNT2B	3	ARC	2	PGP	1
HLA-F	4	WNT5B	3	ARHGAP39	2	PIGG	1
HNRNPH1	4	XAB2	3	ARL4C	2	PIH1D1	1
HOMER2	4	YPEL3	3	ARPC1A	2	PIP5K1C	1
HOXB1	4	ZBTB7A	3	ARPC1B	2	PIP5K1P1	1
HSD17B1	4	ZFYVE28	3	ARRDC2	2	PLEKHG3	1
HSPB9	4	ZMAT4	3	ASF1B	2	PLEKHG4B	1
HTR6	4	ZNF444	3	ASPSCR1	2	PLXNB1	1
HYPK	4	ZNF561	3	ATP1A3	2	PNPLA7	1
IGFALS	4	ZNF853	3	ATP5A1	2	PODNL1	1
IGFLR1	4	ABCA2	2	ATP9B	2	POLR2C	1
IKZF1	4	ACER2	2	AVP	2	POLR2L	1
IL17RA	4	ADCK5	2	B3GALNT1	2	PON2	1
IL27RA	4	ADCY1	2	B3GNT7	2	PON3	1
IL3	4	ADORA1	2	BACE2	2	POP7	1
INF2	4	ADRB2	2	BAI1	2	POTEE	1
ITGA8	4	ADRBK2	2	BCAS3	2	POU5F1	1
JMJD6	4	AMER2	2	BCKDK	2	PPAP2B	1
KAZN	4	AMOTL1	2	BCL9L	2	PPFIA3	1
KCND3	4	ANKRD9	2	BLMH	2	PPP1CC	1
KCNG1	4	ANKS3	2	BMP2	2	PPP3CC	1
KCNH3	4	ANXA11	2	BRF2	2	PRAM1	1
KCNIP2	4	AP3S1	2	BRICD5	2	PRMT1	1
KCNJ3	4	APRT	2	BTBD3	2	PRPF8	1
KHK	4	ASB10	2	BUB1B	2	PRR12	1
KIAA1199	4	ASCC3	2	BZRAP1	2	PRR5L	1
KIAA1875	4	ASPSCR1	2	C11orf70	2	PRRG2	1
KIF3C	4	ATCAY	2	C15orf40	2	PRRX2	1
KLF4	4	ATP5I	2	C16orf70	2	PRSS21	1
KLHL35	4	ATP6V0A4	2	C16orf92	2	PRSS38	1
KLK5	4	B4GALT3	2	C17orf76-AS1	2	PRSS55	1
KLK6	4	BCL11A	2	C19orf60	2	PRSS57	1
KSR2	4	BDKRB1	2	C1orf216	2	PTCRA	1
LAMP5	4	BHLHE23	2	C1orf53	2	PTF1A	1
LCN12	4	BRIX1	2	C1QTNF1	2	PTGER1	1
LDHAL6A	4	C10orf91	2	C20orf26	2	PTH1R	1
LDHC	4	C16orf70	2	C2orf40	2	PTPN18	1
LDLRAD3	4	C16orf71	2	C4orf50	2	PTPRG	1
LHX9	4	C16orf92	2	C4orf6	2	PTPRH	1
LINC00482	4	C1orf94	2	C7orf50	2	PTPRN	1
LINS	4	C1QA	2	C9orf106	2	PTPRS	1
LMX1B	4	C1QC	2	C9orf171	2	PUS1	1
LOC100130274	4	C2orf81	2	C9orf53	2	QSOX2	1
LOC100130430	4	C3orf36	2	CACNA1G	2	R3HDM4	1
LOC285679	4	C4orf6	2	CACTIN	2	RAB12	1
LRAT	4	CACNB2	2	CADPS2	2	RABIF	1
LRP12	4	CACNG6	2	CALML4	2	RAD51C	1

LRRC37B	4	CACNG8	2	CARD9	2	RAD54L2	1
MAF1	4	CALN1	2	CASC4	2	RAE1	1
MAFK	4	CAMK2N2	2	CASZ1	2	RAP1GAP	1
MAP1S	4	CAMTA1	2	CATSPER2	2	RASGEF1C	1
MAP2K5	4	CAPN10	2	CCDC172	2	RBM38	1
MAPK8IP2	4	CAPN5	2	CCDC51	2	RBM46	1
MEGF11	4	CARHSP1	2	CCND1	2	RCSD1	1
MESP1	4	CARKD	2	CD151	2	REC8	1
MKL2	4	CBS	2	CD164L2	2	RFNG	1
MKNK2	4	CCDC114	2	CD248	2	RFT1	1
MMP14	4	CCDC13	2	CD79A	2	RFX1	1
MRAS	4	CCDC51	2	CDC25B	2	RGS14	1
MRPL52	4	CCKBR	2	CDC42EP5	2	RGS3	1
MT1E	4	CD93	2	CDHR5	2	RHBDF1	1
MXRA7	4	CDK20	2	CDK5R2	2	RHNO1	1
MYADML	4	CEBPD	2	CDKN1C	2	RHOB	1
MYBPC3	4	CFD	2	CDX2	2	RILP	1
MYL7	4	CHAD	2	CEBPD	2	RILPL1	1
NAT14	4	CHCHD6	2	CEBPE	2	RIPPLY3	1
NCOR2	4	CHDH	2	CECR6	2	RLN3	1
NDN	4	CHN2	2	CELF5	2	RMI1	1
NLRP7	4	CHRD	2	CERS3	2	RNF113B	1
NOL4	4	CHUK	2	CGNL1	2	RNF130	1
NPPB	4	CIZ1	2	CHD5	2	RNF207	1
NPY2R	4	CKS2	2	CHMP6	2	RPL13	1
NRF1	4	CLIP1	2	CIDEA	2	RPTOR	1
NUDCD3	4	CNTD2	2	CIRBP	2	RTKN	1
OBP2A	4	COL9A1	2	CLCN7	2	RXRA	1
ONECUT1	4	CPVL	2	CLN6	2	S100A1	1
OR8S1	4	CRIP1	2	CNN1	2	S100A13	1
OSBPL8	4	CRTC1	2	CNTN4	2	SAMM50	1
OXA1L	4	CSAD	2	CNTN6	2	SCAND1	1
OXER1	4	CSNK1G2	2	CNTNAP5	2	SCLY	1
PAPLN	4	CSNK1G2-AS1	2	COL18A1	2	SCT	1
PARK7	4	CTC1	2	COL18A1-AS1	2	SDCCAG3	1
PARVB	4	CTU2	2	COL22A1	2	SDCCAG8	1
PAX5	4	CYGB	2	COL24A1	2	SDS	1
PDE6B	4	CYP26C1	2	COL5A3	2	SELENBP1	1
PGAP3	4	CYP2D6	2	COL6A1	2	SELM	1
PHLPP1	4	DDIT4	2	COMP	2	SEMA4A	1
PITPNA	4	DEGS2	2	CRMP1	2	SEMA6C	1
PITX2	4	DES	2	CRTAC1	2	SFMBT1	1
PLA2G2E	4	DGKQ	2	CRTC1	2	SFMBT2	1
PLEKHG4	4	DGKZ	2	CRYGN	2	SFRP1	1
PNKP	4	DLG5	2	CSNK2A3	2	SFXN3	1
POLR3A	4	DMPK	2	CTBP1-AS2	2	SGK1	1
PPP1R11	4	DMWD	2	CTSA	2	SH2B2	1
PRDM14	4	DNASE1L2	2	CTXN1	2	SH2D5	1
PRIMA1	4	DNLZ	2	CXCR5	2	SHCBP1	1
PRSS22	4	DNMT3A	2	CYB561	2	SHE	1
PRUNE2	4	DOT1L	2	CYP2D7P	2	SHKBP1	1
PSEN1	4	DPP7	2	DAND5	2	SHMT2	1
PSMD2	4	DYNLL1	2	DAPL1	2	SHPK	1
PTPRZ1	4	E4F1	2	DBNDD2	2	SIDT2	1
RAB11FIP3	4	EBF3	2	DDX27	2	SIGLEC1	1
RAB36	4	EHD2	2	DECR2	2	SIGLEC12	1
RANBP17	4	EIF4B	2	DHTKD1	2	SIGLEC15	1
RBBP8NL	4	ELANE	2	DLX4	2	SIGLEC7	1
RBM46	4	ELMO3	2	DMRTB1	2	SIGLEC9	1
REN	4	ERBB4	2	DNAAF3	2	SIPA1L3	1
RGS3	4	ERCC6L2	2	DNAJB4	2	SLC17A7	1
RHNO1	4	ERLIN1	2	DNAJC25	2	SLC1A1	1
RMRP	4	ESPN	2	DNER	2	SLC22A18	1
RNF175	4	EVC2	2	DNMT3A	2	SLC22A18AS	1
RNF39	4	EVPLL	2	DPPA5	2	SLC22A20	1
RPLP0P2	4	EXOC6	2	DPYS	2	SLC25A1	1
RPS21	4	FAM188B	2	DPYSL3	2	SLC2A1	1
RPS24	4	FAM196A	2	DRG2	2	SLC38A10	1
RRP7B	4	FAM213B	2	DSTN	2	SLC39A13	1
RTL1	4	FAM57B	2	DUSP4	2	SLC44A2	1
SAMM50	4	FAM64A	2	DYSF	2	SLC47A2	1
SARDH	4	FBXL19-AS1	2	E2F4	2	SLC52A1	1
SBSPON	4	FBXO2	2	ECE2	2	SLC52A2	1
SCNN1D	4	FBXO44	2	EEF1A2	2	SLC7A10	1
SCRN2	4	FERD3L	2	EFNA3	2	SLCO6A1	1
SERHL2	4	FKBP2	2	EFNA4	2	SMAD7	1
SERINC4	4	FLT4	2	EGFLAM	2	SMTN	1
SERP2	4	GABRA5	2	EGLN3	2	SNAP25	1
SFRP2	4	GALNS	2	EHD2	2	SNAP47	1
SH2B3	4	GALNT8	2	ELL3	2	SNHG7	1
SHKBP1	4	GALNT9	2	ELMO3	2	SNORA45	1

SIGIRR	4	GBX1	2	ELP2	2	SNORA78	1
SIGLEC12	4	GHRH	2	EMILIN2	2	SNRNP25	1
SLC13A5	4	GLRB	2	ENTPD2	2	SNRNP48	1
SLC24A2	4	GLTSCR1	2	ENTPD4	2	SOCS5	1
SLC25A34	4	GMEB2	2	ERCC2	2	SORBS3	1
SLC2A10	4	GPR144	2	ESRRB	2	SOX11	1
SLC39A12	4	GPR35	2	ETNK2	2	SP9	1
SLC43A2	4	GPSM1	2	EVX1	2	SPATA3	1
SLC44A2	4	GRIA2	2	EVX2	2	SPATA31E1	1
SLC47A2	4	GRK1	2	EXOC2	2	SPATC1L	1
SLC52A2	4	GTSF1	2	FAM101A	2	SPEG	1
SNCB	4	H6PD	2	FAM102A	2	SPEM1	1
SOHLH1	4	HHATL	2	FAM109A	2	SPG7	1
SOWAHB	4	HIPK4	2	FAM110A	2	SPHK1	1
SOX9	4	HOXA4	2	FAM168B	2	SPPL2B	1
SP6	4	HVCN1	2	FAM188A	2	SPRED2	1
SP8	4	IFITM1	2	FAM43B	2	SPTB	1
SPATA3	4	IFNLR1	2	FAM57B	2	SPTBN4	1
SPATS2	4	IGSF8	2	FAM96B	2	SRSF9	1
SPI1	4	IKZF2	2	FAR1	2	SSBP4	1
SPO11	4	IL22RA1	2	FARP2	2	SSRP1	1
SSTR3	4	INMT	2	FASTK	2	SSTR3	1
STMN2	4	INPP5A	2	FBXL7	2	ST14	1
STYXL1	4	INSIG1	2	FBXO31	2	ST5	1
SUZ12	4	IRX1	2	FCN1	2	ST6GALNAC6	1
SYT7	4	ITIH5	2	FCN3	2	STIP1	1
TBX2	4	JADE2	2	FDXR	2	STMN3	1
TBX20	4	JMJD6	2	FEZF1	2	STRA6	1
TEAD2	4	KAZALD1	2	FGD3	2	SUMO2	1
TEKT2	4	KAZN	2	FGF12	2	SUPV3L1	1
TEX12	4	KCNA6	2	FGF22	2	SYCE1	1
THAP3	4	KCNAB1	2	FIGN	2	SYNGR3	1
TMED5	4	KCNK16	2	FKBP2	2	SYT3	1
TMEM120A	4	KCNK17	2	FLJ16779	2	TAF4	1
TMEM179	4	KCNMA1	2	FLJ32063	2	TAF9	1
TMEM184A	4	KCNV1	2	FLJ40852	2	TAGLN	1
TMEM82	4	KIAA1875	2	FLJ45983	2	TBC1D22A	1
TMUB1	4	KLK7	2	FLNC	2	TBX5	1
TP53RK	4	KRT8	2	FLRT2	2	TCEA2	1
TRIM44	4	KRT82	2	FMNL1	2	TCF3	1
TRPM5	4	LAMC1	2	FNDC4	2	TDRD10	1
UBE2I	4	LAMC2	2	FOXA2	2	TEAD3	1
USP42	4	LASP1	2	FOXD3	2	TEX101	1
VAV2	4	LHX1	2	FOXM1	2	TEX264	1
VHLL	4	LHX5	2	FRG2	2	TINCR	1
WBSCR17	4	LINC00324	2	FRMD5	2	TJP3	1
YBEY	4	LINC00473	2	FTCD	2	TLE3	1
YJEFN3	4	LINC00476	2	FUT7	2	TLR9	1
ZBTB17	4	LOC100127888	2	GABBR2	2	TLX3	1
ZBTB46	4	LOC221442	2	GABRB3	2	TM6SF2	1
ZCCHC2	4	LOC26102	2	GALNS	2	TMED2	1
ZNF154	4	LOC285370	2	GALNT18	2	TMEM170A	1
ZNF503	4	LOC389257	2	GALR1	2	TMEM171	1
ZSWIM4	4	LOC65998	2	GCK	2	TMEM176A	1
ADAMTS17	3	LOC729956	2	GDPD5	2	TMEM176B	1
ADAMTSL4	3	LRAT	2	GET4	2	TMEM184A	1
ADAP1	3	LRRC55	2	GFRA1	2	TMEM213	1
ADORA2A	3	LVRN	2	GIMAP8	2	TMEM86B	1
AGBL5	3	MAF1	2	GIPC2	2	TMEM89	1
AGRN	3	MAFK	2	GJA10	2	TMEM8A	1
AK1	3	MAP4K2	2	GLTSCR1	2	TMPRSS9	1
AKAP8L	3	MATR3	2	GMEB2	2	TNFRSF11A	1
ALG1	3	MC1R	2	GMPPA	2	TNFRSF18	1
ALK	3	MDK	2	GNA14	2	TNK2	1
ALPPL2	3	MEN1	2	GNA15	2	TNKS1BP1	1
ALS2CL	3	MGC12916	2	GNAQ	2	TNNC2	1
ANKRD36BP1	3	MGC16275	2	GNAS	2	TNNI3	1
AP3S1	3	MIR17HG	2	GNAS-AS1	2	TOLLIP	1
APBA2	3	MMEL1	2	GNG10	2	TP53BP2	1
ARC	3	MPDU1	2	GOLGA7B	2	TRABD	1
ARHGAP9	3	MPO	2	GOPC	2	TRADD	1
ARID3A	3	MPPED1	2	GPED1	2	TSPAN4	1
ARRDC2	3	MSX2	2	GPR123	2	TTLL10	1
ARTN	3	MXRA7	2	GPR132	2	TTYH3	1
ASCL2	3	MYH7	2	GPR146	2	TULP1	1
ASF1B	3	MYL3	2	GPR176	2	TWF2	1
ASGR1	3	MYO15A	2	GPR37	2	UFD1L	1
ATP9B	3	MYO3A	2	GREB1L	2	ULK1	1
BARHL1	3	MYO7A	2	GRIK1	2	UNC13D	1
BCAS3	3	NCLN	2	GRIK1-AS1	2	UQCR11	1
BLMH	3	NEDD4L	2	GRIK5	2	USHBP1	1

BMP2	3	NFATC4	2	GRIN2C	2	USP48	1
BRD4	3	NFYA	2	GRM4	2	VAR5	1
BRICD5	3	NKX2-4	2	GRXCR2	2	VEGFB	1
BRWD1	3	NKX6-1	2	H6PD	2	VHLL	1
C10orf88	3	NKX6-3	2	HBM	2	VPS26A	1
C11orf70	3	NLGN2	2	HIPK4	2	VPS72	1
C19orf60	3	NLRP12	2	HLA-L	2	VSTM2L	1
C21orf67	3	NLRP6	2	HNF1B	2	VWA7	1
C4orf50	3	NPR2	2	HNRNPF	2	WBP2	1
C9orf69	3	NRXN1	2	HOMER2	2	WBSCR17	1
CABLES2	3	NRXN2	2	HOXB1	2	WNK2	1
CACNB1	3	OR2Z1	2	HOXB2	2	WNT2B	1
CACTIN	3	ORAI3	2	HOXB3	2	WNT5A	1
CADM1	3	OTP	2	HOXB6	2	WNT5B	1
CADPS2	3	PARK7	2	HOXB7	2	WRN	1
CARD14	3	PAX6	2	HOXD10	2	XKR7	1
CARD9	3	PAX7	2	HS3ST4	2	YBEY	1
CASC4	3	PCDH10	2	HS3ST6	2	YOD1	1
CCDC172	3	PCDHGC5	2	HTR1E	2	YTHDF1	1
CD151	3	PCOLCE	2	HTR6	2	ZBTB42	1
CDC14B	3	PDE10A	2	HUS1B	2	ZBTB7A	1
CDH1	3	PGAM5	2	ICAM4	2	ZCCHC8	1
CDKN2A	3	PGP	2	IGF2	2	ZDHHC8	1
CEBPD	3	PGR	2	IGFBP4	2	ZFP36L1	1
CELF6	3	PIEZO1	2	IL17RA	2	ZFP82	1
CHADL	3	PIH1D1	2	IL1RN	2	ZIC5	1
CHCHD1	3	PIP5K1P1	2	INF2	2	ZMAT4	1
CHTF18	3	PITPNM3	2	INF2	2	ZNF10	1
CILP2	3	PKP1	2	ING4	2	ZNF137P	1
CLDN23	3	PLEKHG3	2	INPPL1	2	ZNF140	1
CN5H6.4	3	PLEKHG4B	2	INS-IGF2	2	ZNF232	1
CNN1	3	PLEKHJ1	2	INSM1	2	ZNF497	1
COL15A1	3	PLXNA1	2	IRX3	2	ZNF503-AS2	1
COL6A1	3	PLXNB1	2	IRX5	2	ZNF561	1
COMP	3	POLR3A	2	ISL1	2	ZNF598	1
CPLX2	3	POU5F1	2	ISLR2	2	ZNF653	1
CRTC1	3	PPAP2B	2	ITGA8	2	ZNF696	1
CSAD	3	PPP1CC	2	ITPKA	2	ZNF721	1
CTTN	3	PRCD	2	ITPRIPL2	2	ZNF761	1
CUX1	3	PRKAR2B	2	IZUMO1	2	ZNF784	1
CYB561	3	PRKD1	2	JAKMIP3	2	ZNF813	1
CYP1B1	3	PRR15	2	KCNG1	2	ZNF83	1
CYTH3	3	PRR22	2	KCNH6	2	ZNF837	1
DDB1	3	PRR5L	2	KCNK10	2	ZSWIM4	1
DIDO1	3	PRX	2	KCNK16	2		
DIEXF	3	PTGER3	2	KCNK17	2		
DNAAF3	3	PTH1R	2	KCNK3	2		
DNAJC4	3	PUS1	2	KCTD11	2		
DNM1	3	QRF1	2	KCTD19	2		
DOCK1	3	RAB11FIP4	2	KEAP1	2		
DRD5	3	RAB6B	2	KIAA0754	2		
DSTN	3	RAD54L2	2	KIAA1147	2		
DTX2	3	RARRES1	2	KIAA1875	2		
EDAR	3	RASAL2	2	KIF12	2		
EDF1	3	RASGEF1C	2	KIF3C	2		
EFNA2	3	RBM46	2	KITLG	2		
EIF2AK4	3	RBMXL2	2	KLC3	2		
EIF3E	3	RFT1	2	KLHL14	2		
EN1	3	RHBDF1	2	KLHL35	2		
ENTPD2	3	RHOB	2	KLK5	2		
EPB41L1	3	RILPL1	2	KLK6	2		
ESRRB	3	RIN1	2	KRT19	2		
ETFA	3	RIPPLY3	2	KRT5	2		
EVX1	3	RPL13	2	KRTAP10-10	2		
FAHD1	3	RPS24	2	KRTAP10-12	2		
FAIM2	3	RPS6	2	KRTAP10-6	2		
FAM109A	3	RRP7B	2	KY	2		
FAM110A	3	RTKN	2	LAD1	2		
FASN	3	RTN4R	2	LAPTM4B	2		
FBXL16	3	S100A1	2	LASP1	2		
FBXL7	3	S100A13	2	LBX2	2		
FEZF1	3	SALL1	2	LDLRAD3	2		
FGD3	3	SALL3	2	LENG9	2		
FGF17	3	SCLY	2	LETM2	2		
FGF22	3	SDCCAG3	2	LGI2	2		
FGFR2	3	SELENBP1	2	LGMM	2		
FBNP1	3	SELM	2	LHX5	2		
FOXC2	3	SEMA6C	2	LHX9	2		
FOXK1	3	SERHL2	2	LIN28A	2		
FOXQ1	3	SEZ6L	2	LMX1B	2		
FRG2	3	SFMBT1	2	LOC100128842	2		

FRMD5	3	SFXN3	2	LOC100130430	2
FUCA2	3	SHC2	2	LOC100133991	2
FZR1	3	SHC3	2	LOC126075	2
GAB4	3	SHMT1	2	LOC149478	2
GABARAPL1	3	SIGLEC15	2	LOC151534	2
GABRB3	3	SIM1	2	LOC283663	2
GALNT12	3	SIM2	2	LOC284276	2
GALR1	3	SLC22A1	2	LOC284297	2
GAS2L2	3	SLC22A12	2	LOC284578	2
GET4	3	SLC23A1	2	LOC284837	2
GFRA1	3	SLC39A12	2	LOC390748	2
GGACT	3	SLC39A13	2	LOC401463	2
GIP	3	SLC39A4	2	LOC643008	2
GLB1L2	3	SLC44A2	2	LOC727896	2
GLB1L3	3	SLC52A1	2	LPPR4	2
GLI1	3	SLC52A2	2	LRP12	2
GMIP	3	SLC6A11	2	LRRC37B	2
GMPPA	3	SNAP25	2	LRRC4	2
GNA15	3	SNHG4	2	LY6H	2
GNAS-AS1	3	SNORA21	2	LY6K	2
GNG13	3	SNRNP25	2	LYNX1	2
GOLGA2	3	SNX20	2	LYPD2	2
GPC5	3	SOC55	2	LZTS1	2
GPC6	3	SOX15	2	MAF	2
GPR107	3	SOX7	2	MAF1	2
GRIN3B	3	SPACA6P	2	MAFB	2
GRINA	3	SPAG8	2	MAFK	2
GUCY2D	3	SPEG	2	MAL	2
H6PD	3	SPEM1	2	MAP1LC3B	2
HABP4	3	SPG7	2	MAPK8IP2	2
HAMP	3	SPHK1	2	MAPRE3	2
HELZ2	3	SPRED2	2	MC1R	2
HES7	3	SREBF2	2	MEIS1	2
HIPK4	3	SRSF1	2	MFS10	2
HNF1B	3	SRSF9	2	MFS4	2
HOXB2	3	STMN3	2	MGARP	2
HOXB3	3	STXBP2	2	MICALCL	2
HOXB6	3	TEAD3	2	MIP	2
HOXB7	3	TENC1	2	MKNK2	2
HS3ST4	3	TES	2	MLST8	2
HS3ST6	3	TEX101	2	MOCOS	2
HTR1E	3	TEX12	2	MOGAT3	2
ICAM4	3	TEX264	2	MOV10L1	2
IFRD2	3	TEX35	2	MRC2	2
IGF2BP1	3	TFAP2C	2	MRFAP1	2
IL17C	3	THAP3	2	MRPS2	2
ILKAP	3	TINAGL1	2	MSX2	2
INF2	3	TJP3	2	MT1E	2
IRS1	3	TLE3	2	MTDH	2
IRX3	3	TMEM184A	2	MTNR1B	2
ISL1	3	TMEM213	2	MXD4	2
ITGB2	3	TMEM8A	2	MYADML	2
KIAA1211L	3	TNFRSF13C	2	MYL7	2
KIF12	3	TNK2	2	MYO15B	2
KIF6	3	TRABD	2	MYOCD	2
KLF16	3	TRADD	2	NBL1	2
KLHL22	3	TSSC4	2	NCAPG2	2
KRT19	3	TULP1	2	NDN	2
KRT8	3	TYW1B	2	NDUFC1	2
KRTAP10-12	3	U2AF1	2	NELFB	2
L3MBTL2	3	ULK1	2	NEURL2	2
LAMA5	3	USP42	2	NFIC	2
LBH	3	VEZF1	2	NFIX	2
LCN15	3	VHLL	2	NID1	2
LETM2	3	WNT5A	2	NKAIN4	2
LGI2	3	XRN2	2	NKD2	2
LIN28A	3	YBX2	2	NOM1	2
LOC100127888	3	ZADH2	2	NOTCH3	2
LOC100132215	3	ZBTB3	2	NOVA2	2
LOC126075	3	ZCCHC8	2	NP1X	2
LOC149478	3	ZFP82	2	NPW	2
LOC220930	3	ZIC1	2	NPY5R	2
LOC283332	3	ZNF347	2	NRG3	2
LOC283731	3	ZNF354C	2	NSMF	2
LOC284276	3	ZNF415	2	NT5C3B	2
LOC389791	3	ZNF480	2	NTRK2	2
LOC647979	3	ZNF610	2	NTSR1	2
LOC84856	3	ZNF678	2	NUAK1	2
LONP1	3	ZNF761	2	NUP160	2
LPAR2	3	ZNF813	2	OBP2B	2
LPO	3	ZRANB2	2	ODF2L	2

LVRN	3	AARD	1	ODF3L2	2
LY6G6E	3	ABCA1	1	OGDHL	2
MAF	3	ACAN	1	OLFM2	2
MAFB	3	ACD	1	OPLAH	2
MAG	3	ACOT4	1	OPTN	2
MAL	3	ACPT	1	OR10H2	2
MAPRE3	3	ACTL7B	1	OR2L13	2
MFSD10	3	ACTRT2	1	OR2T8	2
MGAT4A	3	ADAM12	1	OSCAR	2
MGLL	3	ADORA2A	1	OTX1	2
MICALCL	3	ADRA2C	1	OVCA2	2
MIP	3	ADRB3	1	OXER1	2
MLST8	3	AGFG1	1	PAPLN	2
MNX1	3	AGMAT	1	PARK7	2
MOCS1	3	AGPAT2	1	PARVA	2
MOV10L1	3	AGRN	1	PARVB	2
MRPS15	3	AGTR1	1	PAX2	2
MRPS6	3	AIFM3	1	PAX5	2
MTA1	3	AKT3	1	PCBP3	2
MXRA8	3	ALG1	1	PCDH1	2
MYO15A	3	ALKBH5	1	PCSK4	2
NAA20	3	ALOX15B	1	PDGFC	2
NAT6	3	ALPI	1	PDIA3	2
NBL1	3	ANK1	1	PDLIM3	2
NCAN	3	ANKRD26P1	1	PDZRN3	2
NDNL2	3	ANKRD33	1	PFKFB2	2
NEDD4L	3	ANKRD39	1	PFKP	2
NEUROG1	3	ANKRD53	1	PHOX2A	2
NFIX	3	ANO6	1	PID1	2
NKD2	3	AP3M2	1	PIH1D1	2
NOL10	3	APCDD1L	1	PIP5KL1	2
NOS1	3	ARAP1	1	PITPNB	2
NOTCH3	3	ARC	1	PITX1	2
NOV	3	ARGLU1	1	PIWIL2	2
NOVA2	3	ARHGEF7	1	PLEKHM2	2
NPW	3	ARID2	1	PLOD3	2
NPY5R	3	ARMC7	1	PLXNA4	2
NR2E1	3	ARTN	1	PLXNB1	2
NR3C2	3	ASB16	1	PLXND1	2
NRARP	3	ASB16-AS1	1	PNKP	2
NTRK2	3	ASCL2	1	PNMT	2
NUAK1	3	ASF1B	1	PNPLA2	2
NUDT14	3	ASPA	1	PNPLA7	2
OGDHL	3	ASPDH	1	POU3F2	2
OLFM2	3	ATP5L	1	PPP1CB	2
OPTN	3	ATP8B3	1	PPP3R2	2
OSCAR	3	ATR	1	PRDX2	2
OSCP1	3	AUTS2	1	PRELID2	2
OTOP2	3	AXDND1	1	PRG-3	2
OTOP3	3	BAALC	1	PRKCH	2
OTX1	3	BAG4	1	PRKD1	2
P2RY2	3	BAG5	1	PROP1	2
PACS2	3	BAI2	1	PRPSAP1	2
PARP6	3	BARX1	1	PRR22	2
PARVA	3	BCAP29	1	PRR5	2
PAX2	3	BCAS4	1	PRSS21	2
PCBP3	3	BCL2L10	1	PRSS41	2
PCSK4	3	BMP6	1	PRSS55	2
PDIA6	3	BRF1	1	PRUNE2	2
PDLIM1	3	BUB1B	1	PSEN1	2
PDLIM3	3	C10orf53	1	PTCRA	2
PFKP	3	C10orf90	1	PTPRH	2
PIAS4	3	C12orf65	1	PTPRN2	2
PIH1D1	3	C16orf3	1	PTPRZ1	2
PIKFYVE	3	C17orf102	1	PUM1	2
PITPNB	3	C18orf21	1	PXDNL	2
PLEK2	3	C19orf38	1	PYGM	2
PNKD	3	C1orf172	1	QPCT	2
PNPLA6	3	C1orf61	1	QRFP	2
POMT1	3	C1QL2	1	RAB11FIP3	2
POU3F3	3	C1QTNF4	1	RAB12	2
POU4F2	3	C1R	1	RAB34	2
PPP1CB	3	C1RL	1	RASIP1	2
PPP1R26	3	C21orf33	1	RBBP8NL	2
PPP3R2	3	C21orf67	1	RBFOX1	2
PRR5L	3	C22orf26	1	RBM24	2
PRSS41	3	C22orf34	1	REN	2
PRSS55	3	C22orf46	1	RET	2
PTH2R	3	C2orf16	1	RGS17	2
PUM1	3	C3orf22	1	RHNO1	2
PYGM	3	C7orf50	1	RHOBTB1	2

RAET1G	3	C8orf56	1	RHOT2	2
RARRES1	3	C9orf106	1	RMRP	2
RASSF7	3	C9orf129	1	RNF126	2
RBFOX1	3	C9orf163	1	RPL13	2
RCOR2	3	CA12	1	RPTOR	2
REXO1	3	CABP2	1	RRBP1	2
RFXANK	3	CACNA1I	1	RTN4RL2	2
RHOBTB1	3	CACNA1S	1	RUSC1	2
RIN2	3	CACNA2D1	1	RUSC1-AS1	2
RNF126	3	CACUL1	1	RXRG	2
RNF130	3	CALCB	1	SAMHD1	2
RPL36	3	CAMK2A	1	SAMM50	2
RRBP1	3	CAMK2B	1	SARDH	2
RSP02	3	CARD10	1	SATB2	2
RTN4RL2	3	CARD14	1	SBNO2	2
RUNX1T1	3	CARM1	1	SCRIB	2
RYBP	3	CAV1	1	SCRN2	2
SCML4	3	CAV2	1	SCT	2
SCYL1	3	CBFA2T3	1	SDC3	2
SDC3	3	CBFB	1	SDF2L1	2
SFRP1	3	CBLN1	1	SEC61A2	2
SGSM3	3	CBLN4	1	SERP2	2
SH2B2	3	CCDC130	1	SERPINA1	2
SH3TC1	3	CCDC136	1	SF1	2
SHANK2	3	CDC16	1	SFPQ	2
SHH	3	CDC42	1	SH3BP4	2
SHROOM3	3	CDH11	1	SH3TC1	2
SIVA1	3	CDH15	1	SHE	2
SIX3	3	CDK5R1	1	SHH	2
SLC1A1	3	CDK5R2	1	SHISA2	2
SLC32A1	3	CDT1	1	SIGLEC1	2
SLC43A1	3	CEACAM4	1	SIGLEC8	2
SLC5A3	3	CECR6	1	SIKE1	2
SLC6A2	3	CELF1	1	SIM2	2
SLC6A4	3	CERS1	1	SKOR1	2
SLC9A5	3	CGRRF1	1	SLC10A1	2
SNAPC4	3	CHID1	1	SLC13A5	2
SORBS1	3	CHMP2A	1	SLC16A11	2
SOWAHA	3	CHMP6	1	SLC1A1	2
SOX17	3	CHP2	1	SLC22A3	2
SPACA6P	3	CHRNA6	1	SLC26A1	2
SPATC1L	3	CHST3	1	SLC32A1	2
SPECC1L	3	CHST6	1	SLC43A1	2
SPEG	3	CIRBP	1	SLC6A4	2
SPTBN4	3	CITED4	1	SLC6A6	2
SRC	3	CLCN7	1	SLC9A5	2
ST3GAL3	3	CLP1	1	SLCO4A1	2
ST6GALNAC6	3	CLPS	1	SLED1	2
STK11	3	CLTCL1	1	SMARCD3	2
STRA6	3	CLUH	1	SMOC1	2
SUGP1	3	CNPY3	1	SNAPC4	2
SUSD3	3	CNTFR	1	SNORA21	2
SUV420H1	3	CNTNAP5	1	SNORD1C	2
SV2C	3	COL24A1	1	SNORD42B	2
SYNGR1	3	COL5A3	1	SOBP	2
SYT1	3	COL6A2	1	SOD1	2
TAB1	3	COL9A2	1	SOGA1	2
TBX19	3	CPAMD8	1	SOGA2	2
TBX5	3	CRB2	1	SOHLH1	2
TCFL5	3	CRKL	1	SOWAHB	2
TEKT4	3	CRLS1	1	SOWAHC	2
TEX101	3	CROCC	1	SOX17	2
TF	3	CSRP1	1	SP6	2
THBS4	3	CTBP1	1	SPATA20	2
THNSL2	3	CTBP1-AS2	1	SPATA7	2
TIMM44	3	CTDP1	1	SPATC1L	2
TLK2	3	CTSA	1	SPATS1	2
TM6SF2	3	CTSZ	1	SPEG	2
TMC6	3	CYB561	1	SPG7	2
TMC8	3	CYP21A2	1	SPHK1	2
TMEM205	3	CYP26B1	1	SPON1	2
TNNI3	3	CYP2E1	1	SSBP2	2
TOLLIP	3	CYP7B1	1	SSU72	2
TRAF2	3	DBNDD1	1	ST6GALNAC4	2
TRIL	3	DDB1	1	ST6GALNAC5	2
TRIM15	3	DDHD2	1	STAU1	2
TSPAN9	3	DDOST	1	STK24	2
TSPEAR	3	DDX55	1	STMN3	2
TSSK3	3	DFNA5	1	STYXL1	2
TSTA3	3	DHH	1	SUPT4H1	2
TTC40	3	DHRS2	1	SURF6	2

TTLL8	3	DIDO1	1	SUSD3	2
U2AF1L4	3	DNAJB6	1	SUV420H1	2
UBALD1	3	DNAJB8	1	SUZ12	2
UCK1	3	DNAJC30	1	SYCP1	2
UNKL	3	DNMT3B	1	SYNE4	2
UPK3A	3	DOCK1	1	SYNGR1	2
UPK3B	3	DOK7	1	SYT9	2
URM1	3	DPF1	1	TAB1	2
UTS2R	3	DPYSL5	1	TAC1	2
VEGFB	3	DRG2	1	TACC2	2
VIL1	3	DSTN	1	TANC1	2
VPS72	3	DTNA	1	TBC1D16	2
VWCE	3	DTX1	1	TBX19	2
WFDC2	3	DUOXA1	1	TBX3	2
WHSC1L1	3	DUOXA2	1	TBX5	2
WIZ	3	DUS3L	1	TCAP	2
YPEL5	3	E2F4	1	TCF21	2
YTHDF1	3	EEF1A2	1	TCF25	2
ZEB1	3	EFHD1	1	TDRD10	2
ZFP41	3	EFNA1	1	TEKT2	2
ZFP64	3	EFNB2	1	TEX12	2
ZIC2	3	EHBP1	1	TF	2
ZMAT4	3	EHBP1L1	1	TGIF1	2
ZMYM5	3	EIF2AK4	1	THBS4	2
ZNF219	3	ELL3	1	THRB	2
ZNF446	3	EMX2	1	TIAM1	2
ZNF516	3	EN1	1	TJP1	2
ZNF563	3	EN2	1	TLE1	2
ZNF665	3	ENO3	1	TLR2	2
ZNF667	3	ENTPD3	1	TMC6	2
ZSWIM8	3	EP400NL	1	TMC8	2
ABCG1	2	EPPK1	1	TMCC1	2
ABO	2	ERCC2	1	TMED5	2
ABRACL	2	ERF	1	TMEM105	2
ACKR3	2	ESRP2	1	TMEM120A	2
ACOT12	2	ESRRB	1	TMEM184A	2
ACOT8	2	ESYT2	1	TMEM205	2
ACP5	2	EXOC2	1	TMEM240	2
ACRBP	2	EXOC3L2	1	TMEM30B	2
ACSL1	2	EZR	1	TMEM37	2
ACSS3	2	F2RL3	1	TMEM86B	2
ACVRL1	2	FAM188A	1	TMUB1	2
ADAMTSL5	2	FAM19A5	1	TNFAIP8	2
ADM	2	FAM200A	1	TNNI1	2
ADRA2C	2	FAM20C	1	TNNI3	2
AGAP1	2	FAM217A	1	TOX2	2
AGFG1	2	FAM57A	1	TP73-AS1	2
ALKBH6	2	FAM69B	1	TPK1	2
ALOX15B	2	FAM83B	1	TRABD	2
ALOXE3	2	FAM96B	1	TREH	2
ALPP	2	FBXL8	1	TRIM44	2
ALX3	2	FBXO24	1	TRPC6	2
AMOTL2	2	FBXO39	1	TRPM5	2
ANKS6	2	FGF12	1	TRPV2	2
AP3B2	2	FGF22	1	TSPEAR	2
APOC4	2	FGGY	1	TSPYL5	2
APPBP2	2	FIGN	1	TTLL8	2
AQP1	2	FKBP7	1	TYROBP	2
AQP10	2	FOXB2	1	UBE2I	2
ARL4C	2	FOXC1	1	UBE2J2	2
ASPG	2	FOXD1	1	UCKL1	2
ATG9B	2	FOXE1	1	UCKL1-AS1	2
ATP6V1G1	2	FO XK2	1	UNKL	2
ATP8B2	2	FOXM1	1	UPK3A	2
ATXN1L	2	FOXS1	1	USP42	2
AVP	2	FPGS	1	USP44	2
B3GALNT1	2	FRG2	1	VAV2	2
BACE2	2	FSCN1	1	VWA3B	2
BAIAP2	2	FUK	1	WDR86	2
BCL11A	2	FZD9	1	WDR90	2
BCL11B	2	GABARAPL1	1	WFDC2	2
BCL3	2	GABRB3	1	WHSC1L1	2
BCL9L	2	GALNTL6	1	YAP1	2
BRD1	2	GALR1	1	YOD1	2
BRF1	2	GATA2	1	YPEL5	2
BTBD3	2	GIMAP8	1	ZBTB17	2
BUB1B	2	GLI3	1	ZBTB42	2
BZRAP1	2	GNPTAB	1	ZFP64	2
C15orf27	2	GPI	1	ZNF154	2
C1QTNF1	2	GPR135	1	ZNF160	2
C1QTNF2	2	GPR146	1	ZNF219	2

C1QTNF8	2	GPR25	1	ZNF223	2
C20orf141	2	GRAMD4	1	ZNF442	2
C7orf50	2	GRIK1	1	ZNF480	2
C8orf82	2	GRIK1-AS1	1	ZNF516	2
C9orf106	2	GRIN3B	1	ZNF541	2
C9orf170	2	GRK6	1	ZNF563	2
C9orf171	2	GSE1	1	ZNF610	2
C9orf57	2	GSX2	1	ZNF638	2
CABP2	2	GUCY2C	1	ZNF653	2
CACNA1G	2	HAMP	1	ZSCAN5A	2
CACUL1	2	HBZ	1	A4GNT	1
CALB2	2	HDGF2	1	AARD	1
CALY	2	HHIPL1	1	ABCB1	1
CAMK2N2	2	HIC2	1	ABCB6	1
CARTPT	2	HIST4H4	1	ABHD16B	1
CBY1	2	HMHA1	1	ABHD8	1
CCDC140	2	HMOX2	1	ABLIM1	1
CCDC51	2	HNRNPK	1	ABLIM3	1
CCDC63	2	HOOK1	1	ABRACL	1
CCKBR	2	HOXA11-AS	1	ACOT8	1
CCND1	2	HOXB1	1	ACPL2	1
CCNJL	2	HOXB13	1	ACR	1
CD164L2	2	HOXB2	1	ACTA1	1
CD248	2	HOXB3	1	ACVRL1	1
CDC25B	2	HOXC10	1	ADAM17	1
CDC34	2	HPCA	1	ADAMTS1	1
CDC42	2	HPDL	1	ADAMTS14	1
CDC42EP5	2	HS3ST6	1	ADAMTS19	1
CDH11	2	HS6ST1	1	ADAMTS9	1
CDK5R2	2	HSF4	1	ADAMTSL5	1
CDK9	2	HSPB9	1	ADCK5	1
CDKN1C	2	HUS1B	1	ADCY2	1
CDX2	2	ICAM5	1	ADCY5	1
CELF1	2	IFNL1	1	ADCY9	1
CERS4	2	IFRD2	1	ADIRF	1
CGNL1	2	IGFALS	1	ADORA1	1
CHD5	2	IGFLR1	1	ADRA1D	1
CHDH	2	IHH	1	ADRA2A	1
CHMP2A	2	IL17RA	1	ADRA2C	1
CHMP6	2	IL17RB	1	ADRB1	1
CHRD	2	IL3	1	ADRM1	1
CHRM1	2	ING2	1	ADSSL1	1
CHST12	2	INHBA	1	AFAP1L1	1
CIDEA	2	INO80B	1	AFAP1L2	1
CIRBP	2	IRS2	1	AGAP11	1
CLEC11A	2	ISG15	1	AGBL5	1
CNTFR	2	ITGA8	1	AGFG2	1
CNTN4	2	ITGB2	1	AGO1	1
CNTN6	2	JAG2	1	AGO3	1
CNTNAP5	2	JOSD2	1	AGTR1	1
COL18A1	2	JPH2	1	AGXT	1
COL18A1-AS1	2	KANK3	1	AHI1	1
COL24A1	2	KAT2A	1	AIF1	1
COL27A1	2	KAT6A	1	AIP1L1	1
COL5A1	2	KBTBD4	1	AK4	1
COL5A3	2	KCNQ4	1	AKAP10	1
CRTAC1	2	KCTD17	1	AKAP13	1
CRYGN	2	KCTD7	1	AKAP8L	1
CSNK2A3	2	KCTD8	1	ALDH1A2	1
CTBP1-AS2	2	KEAP1	1	ALDH1A3	1
CTSA	2	KIAA0355	1	ALDH7A1	1
CXCR5	2	KIAA0408	1	ALKBH5	1
CXXC11	2	KIAA1468	1	ALOXE3	1
CYBA	2	KIF3C	1	ALPP	1
CYP2D7P	2	KLC2	1	AMOTL2	1
CYP7B1	2	KLC3	1	ANGPT2	1
DAND5	2	KLHL14	1	ANKDD1A	1
DAPL1	2	KMT2A	1	ANKRD13D	1
DAZAP2	2	KRT5	1	ANKRD29	1
DBNDD2	2	KSR2	1	ANKRD34B	1
DCAF10	2	LAMP5	1	ANKS3	1
DDOST	2	LAPTM4B	1	ANTXR1	1
DDX55	2	LARP4B	1	ANXA2P1	1
DENND5A	2	LBH	1	APBA2	1
DFNB31	2	LDOC1L	1	APOA5	1
DHX30	2	LGR6	1	APOC4	1
DLGAP2	2	LHPP	1	APP	1
DLX4	2	LIAS	1	APPBP2	1
DMPK	2	LINC00339	1	APRT	1
DMWD	2	LINC00521	1	AQP1	1
DNAJB4	2	LMBR1L	1	AQP10	1

DNER	2	LNK2	1	AREL1	1
DOCK4	2	LOC100129550	1	ARFGAP1	1
DPF1	2	LOC100130430	1	ARHGAP8	1
DPPA5	2	LOC100130872	1	ARHGAP9	1
DPYSL3	2	LOC100132215	1	ARHGDIG	1
DRG2	2	LOC100271722	1	ARHGEF10	1
DSC2	2	LOC126075	1	ARHGEF19	1
DSC3	2	LOC149478	1	ARHGEF37	1
DUS1L	2	LOC150786	1	ARID3A	1
DUSP22	2	LOC220930	1	ARL4A	1
DYSF	2	LOC283867	1	ARMC5	1
E2F4	2	LOC284422	1	ARMS2	1
EFHD1	2	LOC348840	1	ARNT2	1
EGFLAM	2	LOC390748	1	ARRDC5	1
EGLN3	2	LOC401463	1	ASAP3	1
EIF4EBP2	2	LOC415056	1	ASIC2	1
ELMO3	2	LOC728723	1	ASPA	1
ELP2	2	LPPR4	1	ASPG	1
ENTPD4	2	LRIG1	1	ASS1	1
EPHA2	2	LRP5	1	ATF3	1
ERCC2	2	LRPAP1	1	ATF7IP2	1
EVX2	2	LRRC1	1	ATG9A	1
EXOC2	2	LRTM2	1	ATG9B	1
EXOSC3	2	LSR	1	ATN1	1
FAM101A	2	LY6G6E	1	ATOH1	1
FAM168B	2	LY6H	1	ATOH8	1
FAM43B	2	LYNX1	1	ATP13A2	1
FAM71D	2	LZTS1	1	ATP6V0A1	1
FAM96B	2	MAF	1	ATP6V0B	1
FAR1	2	MAFB	1	ATP8B2	1
FBXL19	2	MAG	1	ATRNL1	1
FBXO31	2	MAGI1	1	AVPR1B	1
FBXO39	2	MAP3K6	1	B3GALT4	1
FCN1	2	MAP7D1	1	B3GAT1	1
FCN3	2	MAPK9	1	B4GALNT2	1
FDX1L	2	MAPRE3	1	B4GALT2	1
FDXR	2	MARVELD3	1	B4GALT3	1
FEZF2	2	MATK	1	BAALC	1
FGF12	2	MCM8	1	BAG5	1
FGFRL1	2	MEDAG	1	BAIAP2	1
FIGLA	2	MEI1	1	BAMBI	1
FIGN	2	MFAP2	1	BARX2	1
FLJ32063	2	MGLL	1	BASP1	1
FLJ40852	2	MLLT3	1	BBS10	1
FLJ45983	2	MRGBP	1	BBS5	1
FLJ90757	2	MRPL21	1	BCL11A	1
FLRT2	2	MT1H	1	BCL11B	1
FN3KRP	2	MTDH	1	BCL3	1
FOXA2	2	MXD4	1	BEND4	1
FOXD3	2	MXRA8	1	BIRC5	1
FOXJ2	2	MYADML	1	BIVM	1
FOXS1	2	MYCN	1	BMP6	1
FUT7	2	MYCNOS	1	BMP7	1
FZD9	2	MYL7	1	BMPER	1
GABBR2	2	MYO1B	1	BNIP3	1
GAL	2	MYO1D	1	BRD1	1
GALNS	2	MYOD1	1	BRDT	1
GALNT18	2	NAA20	1	BRF1	1
GALNTL5	2	NAALADL1	1	BRIX1	1
GALP	2	NACC1	1	BSG	1
GAS1	2	NANOS3	1	BTBD11	1
GAS2L1	2	NAT14	1	BTBD2	1
GATA2	2	NAT6	1	BVES	1
GATA6	2	NCKAP5	1	C10orf88	1
GBGT1	2	NDRG3	1	C14orf80	1
GDA	2	NDUFB9	1	C15orf38	1
GIPC2	2	NELFA	1	C15orf39	1
GLIPR2	2	NET1	1	C15orf61	1
GLUD1	2	NETO1	1	C16orf11	1
GMEB2	2	NEURL2	1	C16orf3	1
GMFG	2	NKD1	1	C16orf71	1
GNA14	2	NKD2	1	C17orf102	1
GNAQ	2	NMRAL1	1	C19orf38	1
GOLGA7B	2	NOL10	1	C19orf70	1
GOPC	2	NOL4	1	C1orf106	1
GPR135	2	NPR3	1	C1orf21	1
GPR146	2	NRARP	1	C1orf65	1
GPR162	2	NT5C	1	C1orf95	1
GPR176	2	NT5C1B	1	C1QA	1
GPR179	2	NTF3	1	C1QC	1
GPR37	2	NTHL1	1	C1QL1	1

GRAMD2	2	NTN3	1	C1QTNF2	1
GREB1L	2	NUDCD3	1	C1QTNF8	1
GRIK1	2	NXPH4	1	C20orf166	1
GRIK1-AS1	2	ODF2L	1	C20orf166-AS1	1
GRIN2C	2	OGFR	1	C21orf119	1
GRIN2D	2	OLFM2	1	C21orf67	1
GRWD1	2	ONECUT1	1	C22orf34	1
GRXCR2	2	OR10H2	1	C3orf22	1
H1FO	2	OR8S1	1	C3orf70	1
HAPLN4	2	OSBPL3	1	C5orf45	1
HBM	2	OSER1	1	C6orf141	1
HBQ1	2	OSR2	1	C8orf12	1
HDDC3	2	OSTCP1	1	C8orf34	1
HIRIP3	2	OXER1	1	C8orf56	1
HLA-L	2	P2RY11	1	C8orf82	1
HMHA1	2	PACSLN1	1	C9orf169	1
HOTAIR	2	PAPSS2	1	C9orf170	1
HOXA9	2	PARD6B	1	C9orf57	1
HOXD10	2	PAX9	1	CA7	1
HUS1B	2	PCDH9	1	CA8	1
IDUA	2	PCK2	1	CABLES2	1
IFITM2	2	PCLO	1	CABP1	1
IGF2	2	PCSK4	1	CABP2	1
IGFBP4	2	PDE2A	1	CACNB1	1
IHH	2	PDE8B	1	CACUL1	1
IL1RN	2	PDGFC	1	CADM3	1
IMMP2L	2	PDIA3	1	CALB2	1
ING4	2	PDIA6	1	CALCR	1
INPPL1	2	PDRG1	1	CALN1	1
INS-IGF2	2	PFKFB2	1	CALY	1
IQCE	2	PGPEP1	1	CAMTA1	1
IRX5	2	PHF21B	1	CAMTA2	1
ISG15	2	PIGQ	1	CARM1	1
ISL2	2	PIKFYVE	1	CARTPT	1
ISLR2	2	PIP5K1C	1	CAST	1
ITPKA	2	PLA2G2E	1	CAV2	1
ITSN2	2	PLA2G6	1	CBX4	1
IZUMO1	2	PLEK2	1	CBY1	1
JUND	2	PLEKHA3	1	CCDC106	1
KBTBD4	2	PLEKHA8P1	1	CCDC124	1
KCNA1	2	PLEKHG4	1	CCDC136	1
KCNH6	2	PLEKHN1	1	CCDC140	1
KCNJ4	2	PLK3	1	CCDC170	1
KCNK1	2	PLSCR1	1	CCDC177	1
KCNK10	2	PNKP	1	CCDC3	1
KCNK16	2	PNMAL2	1	CCDC40	1
KCNK17	2	PODNL1	1	CCDC63	1
KCNQ1	2	POLR1D	1	CCDC64B	1
KCTD19	2	POP7	1	CCDC85B	1
KDM4B	2	POTEE	1	CCNA1	1
KEAP1	2	POU3F3	1	CCNE1	1
KHDC3L	2	PPAN	1	CCNJL	1
KIAA0754	2	PPP3CC	1	CD101	1
KIAA1147	2	PPP6R3	1	CD160	1
KIAA1984	2	PRDM14	1	CD19	1
KIF26A	2	PREX1	1	CD300A	1
KIF7	2	PRKACA	1	CD34	1
KIT	2	PROKR2	1	CD37	1
KITLG	2	ProSAP1P1	1	CD4	1
KLC3	2	PRR12	1	CD82	1
KLHDC4	2	PRRG2	1	CD8A	1
KLHDC8A	2	PRRX2	1	CDC14B	1
KPNA7	2	PSMG2	1	CDC34	1
KRT5	2	PTBP3	1	CDC42	1
KY	2	PTCRA	1	CDC42BPB	1
L3MBTL1	2	PTGIR	1	CDCA7	1
LAMA1	2	PTH2R	1	CDH11	1
LAMB1	2	PTPN2	1	CDH15	1
LAMB4	2	PTPRH	1	CDH2	1
LAPTM4B	2	PTPRS	1	CDKN2A	1
LASP1	2	PTPRVP	1	CDO1	1
LBX2	2	PTPRZ1	1	CDR2L	1
LENG9	2	PWP2	1	CEACAM4	1
LHX5	2	RAB1B	1	CELF1	1
LIAS	2	RAB40C	1	CELF6	1
LINC00176	2	RABGGTA	1	CENPA	1
LINC00339	2	RASA3	1	CENPB	1
LINC00982	2	RASL11A	1	CEP152	1
LOC100128003	2	RBFOX1	1	CEP78	1
LOC100129534	2	RBM24	1	CERS4	1
LOC100129550	2	RBPM5	1	CERS6	1

LOC100129637	2	RFC5	1	CH25H	1
LOC100130988	2	RFX1	1	CHADL	1
LOC100131193	2	RGS10	1	CHKA	1
LOC151534	2	RGS12	1	CHL1	1
LOC283663	2	RHNO1	1	CHMP2A	1
LOC283867	2	RIMS4	1	CHN2	1
LOC284297	2	RIN2	1	CHRD	1
LOC388428	2	RLN3	1	CHRM1	1
LOC390748	2	RMI1	1	CHRM2	1
LOC401463	2	RNF113B	1	CHRM3	1
LOC415056	2	RNF126	1	CHST10	1
LOC643008	2	RNF130	1	CHST12	1
LOC728323	2	RPL9	1	CHTF18	1
LOC90834	2	RPS10	1	CHUK	1
LPHN1	2	RPS10P7	1	CIDEC	1
LPPR4	2	RPTOR	1	CISD3	1
LRFN1	2	RRAS	1	CKB	1
LRG1	2	RRBP1	1	CLASRP	1
LRRC20	2	RRP1	1	CLDN10	1
LRRC30	2	RTL1	1	CLDN11	1
LRRC4	2	RUNX1T1	1	CLDN15	1
LTBP3	2	RWDD2B	1	CLDN23	1
LY6H	2	SAC3D1	1	CLDN5	1
LYNX1	2	SAMD4A	1	CLIC6	1
LYPD2	2	SAMHD1	1	CLIP3	1
MAP1LC3B	2	SARDH	1	CLK3	1
MAP7D1	2	SBF1P1	1	CLK4	1
MAPK14	2	SBSPON	1	CLN8	1
MARC1	2	SCAF1	1	CNIH3	1
MARC2	2	SCAND1	1	CNKSR3	1
MC1R	2	SCARNA22	1	CNNM1	1
MEF2D	2	SCTR	1	CNNM3	1
MEGF6	2	SDC4P	1	CNNM4	1
MEIS1	2	SDCBP2	1	CNRIP1	1
MFAP2	2	SDCCAG8	1	CNTFR	1
MGARP	2	SDS	1	CNTLN	1
MISP	2	SEC14L3	1	CNTNAP2	1
MLC1	2	SEMA3B	1	COA6	1
MOCOS	2	SEMA3F	1	COBL	1
MOGAT3	2	SEMA4B	1	COL15A1	1
MPP5	2	SEMA4C	1	COL20A1	1
MRPL38	2	SEMA5B	1	COL23A1	1
MRPS2	2	SETD1A	1	COL27A1	1
MSH3	2	SH2D4B	1	COL2A1	1
MSX2	2	SH3GLB1	1	COL4A1	1
MTDH	2	SHCBP1	1	COL4A3	1
MXD4	2	SHE	1	COL4A4	1
MYBPC2	2	SHMT2	1	COL5A1	1
MYO15B	2	SHPK	1	COL6A2	1
MYO16	2	SIDT2	1	COLGALT2	1
MYOCD	2	SIGLEC12	1	CORO1B	1
NAT16	2	SIGLEC7	1	CORO1C	1
NCS1	2	SIGLEC9	1	COX4I1	1
NDRG4	2	SIPA1L3	1	CPAMD8	1
NDUFC1	2	SIX1	1	CPNE5	1
NELFB	2	SIX3	1	CPVL	1
NELFCD	2	SLA2	1	CRCP	1
NEURL2	2	SLC12A5	1	CREB3L3	1
NID1	2	SLC13A5	1	CREG2	1
NIPSNAP3A	2	SLC1A5	1	CRHR1	1
NIPSNAP3B	2	SLC22A3	1	CRTC3	1
NLRP6	2	SLC25A1	1	CRY1	1
NPTX1	2	SLC25A37	1	CRYBA2	1
NRG3	2	SLC26A1	1	CSF3R	1
NSMF	2	SLC26A4	1	CSMD1	1
NTHL1	2	SLC2A1	1	CSPG5	1
NUP160	2	SLC2A10	1	CTBP1	1
ODF2L	2	SLC38A10	1	CTBP2	1
ORAI3	2	SLC40A1	1	CTNND2	1
PABPC1	2	SLC6A12	1	CTRB1	1
PCDH1	2	SLC6A16	1	CTSV	1
PDGFC	2	SLC6A2	1	CTS2	1
PDZRN3	2	SLC9A3R2	1	CTTN	1
PEX5	2	SLC9A5	1	CUL2	1
PFKFB2	2	SMAD7	1	CUX1	1
PGAM5	2	SMO	1	CUX2	1
PHF13	2	SMTN	1	CWF19L2	1
PHOX2A	2	SNHG7	1	CXCL2	1
PID1	2	SNORA45	1	CXXC11	1
PIGG	2	SNORA78	1	CYHR1	1
PIP5K1C	2	SNRNP48	1	CYP1B1	1

PIP5KL1	2	SOGA1	1	CYP2D6	1
PITX1	2	SORBS3	1	CYP2R1	1
PKM	2	SORCS1	1	CYP2S1	1
PLA2G3	2	SPATA22	1	CYP2W1	1
PLEKHG5	2	SPECC1L	1	CYP7B1	1
PLEKHM2	2	SPTB	1	CYTH3	1
PLK1S1	2	SSRP1	1	D4S234E	1
PLK3	2	ST14	1	DACT2	1
PLOD3	2	ST3GAL3	1	DAD1P1	1
PLXNA4	2	ST3GAL4	1	DAZAP2	1
PLXNB1	2	ST5	1	DBN1	1
PNMT	2	STK24	1	DBNDD1	1
PNPLA7	2	STRA13	1	DCLK2	1
POP7	2	STX11	1	DCXR	1
POU3F2	2	SUPV3L1	1	DDOST	1
POU6F1	2	SUSD1	1	DDX55	1
PPAP2C	2	SYCE1	1	DEFB124	1
PPFIA3	2	SYCP3	1	DGKQ	1
PPP3CC	2	SYNGR3	1	DHH	1
PRAM1	2	SYT13	1	DIEXF	1
PRDX2	2	SYT3	1	DLGAP2	1
PRELID2	2	TACC2	1	DLX1	1
PREX1	2	TAGLN	1	DMPK	1
PRG-3	2	TAL1	1	DMRTA1	1
PRKAG2	2	TATDN1	1	DMWD	1
PRKCH	2	TBC1D22A	1	DMXL1	1
PRKD1	2	TBKBP1	1	DNAH11	1
PRKDC	2	TBX5	1	DNAH8	1
PROP1	2	TCF3	1	DNAJA4	1
PRPSAP1	2	TCFL5	1	DNAJB2	1
PRR19	2	TCTEX1D4	1	DNAJB8	1
PRR22	2	TDRD10	1	DNLZ	1
PRR5	2	TDRD5	1	DNMT3L	1
PRRX1	2	TEAD2	1	DOCK4	1
PTCH1	2	TEX29	1	DOCK5	1
PTCRA	2	TGM1	1	DOT1L	1
PTGDS	2	THBS2	1	DPEP1	1
PTPRCAP	2	THBS4	1	DPF1	1
PTPRE	2	THNSL2	1	DPM2	1
PTPRH	2	THRA	1	DPP3	1
PUS1	2	TIAL1	1	DPP7	1
QPCT	2	TLE1	1	DPYD	1
QRFP	2	TLR2	1	DPYSL4	1
RAB12	2	TLR9	1	DRD2	1
RAB34	2	TM6SF2	1	DSC2	1
RASGRF2	2	TMC2	1	DSC3	1
RASIP1	2	TMED2	1	DTX2	1
RASL10A	2	TMEM117	1	DUS1L	1
RBM24	2	TMEM132E	1	DUS3L	1
RBPMS2	2	TMEM170A	1	DUSP22	1
RECK	2	TMEM171	1	DYNC1I1	1
REPS1	2	TMEM203	1	DZIP1	1
RET	2	TMEM205	1	DZIP1L	1
RFT1	2	TMEM37	1	ECSIT	1
RGS17	2	TMEM54	1	EDAR	1
RHOT2	2	TMEM86B	1	EDARADD	1
RNF185	2	TMEM89	1	EDF1	1
RPL9	2	TMEM9	1	EDIL3	1
RPTOR	2	TMPRSS6	1	EDNRA	1
RUNX3	2	TNFRSF11A	1	EFHD1	1
RXFP3	2	TNKS1BP1	1	EFNA2	1
RXRG	2	TOLLIP	1	EFS	1
S100A11	2	TP53RK	1	EGFL7	1
SAMHD1	2	TPGS1	1	EHD4	1
SATB2	2	TPRN	1	EHHADH	1
SCGB3A1	2	TRIB3	1	EIF4B	1
SEMA5A	2	TSGA10IP	1	EIF4EBP2	1
SEMA5B	2	TSHZ2	1	EIF4G1	1
SEMA6B	2	TSPAN14	1	ELANE	1
SERP1	2	TSPAN33	1	ELAVL3	1
SERPINA1	2	TSPYL5	1	ELMSAN1	1
SF1	2	TUBAL3	1	ELOVL4	1
SFMBT1	2	TWF1	1	EMX1	1
SFPQ	2	TWF2	1	ENPP7	1
SH2D3C	2	UBE2I	1	ENTPD3	1
SH3BP4	2	UBE2M	1	EOGT	1
SHC2	2	UCKL1	1	EPCAM	1
SHE	2	UCKL1-AS1	1	EPHA2	1
SHISA2	2	UFD1L	1	EPHA4	1
SKI	2	UPF1	1	EPHB4	1
SKOR1	2	UQCR11	1	ERAP1	1

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SLC25A33	2	VAR5	1	ESR1	1
SLC34A3	2	VAV2	1	ESRP1	1
SLC35F3	2	VAV3	1	ESYT1	1
SLC38A10	2	VGF	1	EVA1C	1
SLC46A2	2	VIL1	1	EXOC3L4	1
SLC6A12	2	VPS26A	1	EXOSC7	1
SLC6A6	2	VSTM2A	1	F2RL1	1
SLC9A3R2	2	VSTM2L	1	F2RL3	1
SLED1	2	VWA7	1	F3	1
SLX4	2	VWC2	1	FAHD1	1
SMARCD3	2	VWCE	1	FAM150A	1
SMOC1	2	WBSCR17	1	FAM167A	1
SMURF1	2	WBSCR22	1	FAM169B	1
SNORA21	2	WDR45B	1	FAM189A2	1
SNORA45	2	WNK2	1	FAM19A4	1
SNORA78	2	XAF1	1	FAM200A	1
SNORD105B	2	XKR4	1	FAM20A	1
SNORD123	2	XKR7	1	FAM213A	1
SNORD42B	2	XRN1	1	FAM222A	1
SNX21	2	YIPF7	1	FAM3B	1
SNX31	2	YOD1	1	FAM81B	1
SOBP	2	YTHDF1	1	FAM83B	1
SOCS5	2	ZBTB17	1	FAM83H	1
SOCS7	2	ZBTB42	1	FAM84B	1
SOD1	2	ZDHHHC8	1	FAFP1	1
SOGA1	2	ZEB1	1	FASN	1
SOGA2	2	ZFP28	1	FAT1	1
SOWAHC	2	ZFP36L1	1	FBN1	1
SPATA20	2	ZIC5	1	FBXL16	1
SPATA7	2	ZNF10	1	FBXL18	1
SPATS1	2	ZNF140	1	FBXL19	1
SPDYA	2	ZNF236	1	FBXO24	1
SPHK1	2	ZNF471	1	FBXO39	1
SPON1	2	ZNF496	1	FDX1L	1
SSBP2	2	ZNF512	1	FERMT1	1
SSU72	2	ZNF598	1	FERMT3	1
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ST6GALNAC4	2	ZNF784	1	FEZF2	1
ST6GALNAC5	2	ZSCAN18	1	FGF17	1
STK24	2	ZSCAN5A	1	FGF4	1
STMN3	2	ZSWIM4	1	FGF9	1
STRA13	2			FGFR3	1
STRN4	2			FGFRL1	1
SUFU	2			FGGY	1
SUMO3	2			FGL1	1
SUPT4H1	2			FIBP	1
SURF6	2			FIGLA	1
SYCE1	2			FIS1	1
SYNE4	2			FKRP	1
SYT9	2			FLJ23867	1
TAL1	2			FMN2	1
TANC1	2			FN3K	1
TBC1D16	2			FN3KRP	1
TBXA2R	2			FNBP1	1
TCAP	2			FNBP4	1
TCF21	2			FOXC2	1
TCF25	2			FOXD2	1
TCTEX1D4	2			FOXF2	1
TDRD10	2			FOXL1	1
TEAD4	2			FOXN4	1
TGIF1	2			FOXSI	1
TH	2			FRAS1	1
THRB	2			FREM2	1
TIAM1	2			FRMD3	1
TIGD3	2			FRZB	1
TJP1	2			FSD1L	1
TLE1	2			FSTL1	1
TLR2	2			FUBP3	1
TLR9	2			FUCA2	1
TMED2	2			FZD7	1
TMEM145	2			FZD8	1
TMEM201	2			FZD9	1
TMEM240	2			GAA	1
TMEM259	2			GAB1	1
TMEM30B	2			GAB4	1
TMEM37	2			GABRR3	1
TMEM41B	2			GAD2	1
TMEM86B	2			GADD45B	1
TMEM8A	2			GAK	1

TOX2	2	GAL	1
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TPK1	2	GALNTL5	1
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TREH	2	GALP	1
TRIM65	2	GALR2	1
TRIM8	2	GAS1	1
TRPC6	2	GAS2L2	1
TRPV3	2	GAS6	1
TTYH3	2	GAS7	1
TWF2	2	GATA3	1
UBA3	2	GATA5	1
UBE2M	2	GATA6	1
UBXN6	2	GBGT1	1
UCKL1	2	GCM2	1
UCKL1-AS1	2	GDA	1
UHRF1	2	GDF7	1
ULK1	2	GDNF	1
UNC45A	2	GFPT2	1
USP20	2	GGACT	1
USP44	2	GHR	1
VPS37D	2	GJA3	1
VWA3B	2	GKN1	1
WDR86	2	GLI1	1
WDR90	2	GLI4	1
WNT1	2	GLIPR2	1
WNT2B	2	GLIS1	1
XAF1	2	GLP1R	1
YAP1	2	GLT1D1	1
YDJC	2	GLUD1	1
YOD1	2	GMFG	1
ZBED4	2	GNAI1	1
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ZNF223	2	GPR107	1
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AARS2	1	GUCY1A2	1
ABCA1	1	GUCY2D	1
ABCB1	1	GZMM	1
ABCB6	1	H1F0	1
ABHD16B	1	HABP4	1
ABHD8	1	HAND2	1
ABLIM1	1	HAPLN4	1
ABLIM3	1	HBQ1	1
ACADVL	1	HBZ	1
ACBD4	1	HCFC1R1	1
ACOT4	1	HCN2	1
ACR	1	HDDC3	1
ACSF3	1	HDGF2	1
ACTA1	1	HEBP2	1
ACTRT2	1	HELT	1
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ADAMTS1	1	HERC2	1
ADAMTS14	1	HES2	1
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ADAT3	1	HHEX	1
ADCY2	1	HHIP	1
ADCY5	1	HHIPL1	1
ADCY9	1	HILPDA	1
ADIPOQ	1	HIRIP3	1
ADIRF	1	HLA-F	1
ADO	1	HLX	1
ADORA1	1	HMGA2	1
ADRA1D	1	HMOX2	1
ADRB1	1	HMX2	1

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AFAP1L2	1	HN1	1
AGAP11	1	HNRNPH1	1
AGFG2	1	HOOK1	1
AGO1	1	HOTAIR	1
AGO3	1	HOXA11	1
AGTR1	1	HOXA11-AS	1
AGXT	1	HOXA7	1
AHI1	1	HOXA9	1
AIF1	1	HOXB9	1
AIFM3	1	HOXC11	1
AK4	1	HOXC12	1
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AKAP12	1	HOXD12	1
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AKAP8	1	HS3ST1	1
AKT3	1	HS3ST2	1
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ALDH1A3	1	HS3ST3B1	1
ALDH7A1	1	HS6ST1	1
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ANKRD29	1	HTRA1	1
ANKRD34B	1	HUNK	1
ANKS3	1	HVCN1	1
ANKUB1	1	HYPK	1
ANTXR1	1	ICOSLG	1
ANXA11	1	ID2B	1
ANXA2P1	1	ID4	1
AP1B1	1	IDNK	1
APBA1	1	IDUA	1
APP	1	IER5L	1
APRT	1	IFNL1	1
AREL1	1	IGF1R	1
ARF5	1	IGF2BP2	1
ARFGAP1	1	IGFALS	1
ARHGAP8	1	IGSF21	1
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ARHGEF18	1	IL17RD	1
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ARL4A	1	IMP3	1
ARMC5	1	IMPA2	1
ARMS2	1	INO80E	1
ARNT2	1	INPP5K	1
ARRDC5	1	INSM2	1
ASAP2	1	IQGAP1	1
ASAP3	1	IQGAP3	1
ASB13	1	IRAK3	1
ASB2	1	IRX6	1
ASIC2	1	ISL2	1
ASPA	1	ITGA5	1
ASPHD1	1	ITGA6	1
ASS1	1	ITGB2	1
ATF3	1	ITGB6	1
ATF7IP2	1	ITIH2	1
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ATP6V0B	1	KCNIP3	1
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AVPR1B	1	KCNJ4	1
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B3GAT1	1	KCNK2	1
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B4GALT2	1	KCNN2	1
B4GALT3	1	KCNS2	1
BAALC	1	KCNT1	1
BACH2	1	KCTD15	1
BAD	1	KCTD17	1
BAG5	1	KDELC1	1
BAMBI	1	KHDC3L	1

BARX2	1	KHDRBS3	1
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BCLAF1	1	KIAA1984	1
BEAN	1	KIF1A	1
BEND4	1	KIF26A	1
BIRC5	1	KIF7	1
BIVM	1	KIT	1
BMP6	1	KLF2	1
BMP8A	1	KLHDC4	1
BMPER	1	KLHDC8A	1
BNIP3	1	KLK10	1
BPIFB2	1	KLK11	1
BPIFB6	1	KPNA7	1
BRDT	1	KRBA1	1
BRIX1	1	KRTCAP2	1
BRSK2	1	L3MBTL1	1
BTBD11	1	L3MBTL2	1
BTBD2	1	LAMA1	1
BVES	1	LAMA3	1
C14orf80	1	LAMA5	1
C15orf38	1	LAMB1	1
C15orf39	1	LAMB4	1
C16orf3	1	LARP4B	1
C16orf71	1	LARS2	1
C17orf102	1	LBH	1
C17orf82	1	LCNL1	1
C18orf21	1	LEPR	1
C19orf10	1	LHX2	1
C19orf57	1	LHX4	1
C19orf70	1	LIAS	1
C1orf106	1	LIMD1	1
C1orf21	1	LIN7B	1
C1orf95	1	LINC00176	1
C1QL1	1	LINC00303	1
C1R	1	LINC00319	1
C1RL	1	LINC00320	1
C20orf166	1	LINC00339	1
C20orf166-AS1	1	LINC00472	1
C20orf27	1	LINC00482	1
C21orf119	1	LINC00523	1
C22orf34	1	LINC00982	1
C3orf22	1	LINS	1
C3orf36	1	LIPG	1
C3orf70	1	LIPJ	1
C5orf45	1	LLGL2	1
C6orf141	1	LMBR1L	1
C8orf12	1	LMNB2	1
C8orf34	1	LOC100128164	1
C8orf56	1	LOC100129534	1
C9orf163	1	LOC100129550	1
C9orf169	1	LOC100129637	1
CA7	1	LOC100130264	1
CA8	1	LOC100130872	1
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CALHM3	1	LOC254559	1
CALN1	1	LOC26102	1
CALR3	1	LOC283867	1
CAMTA2	1	LOC283999	1
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CCNB1	1	LOX	1
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CCNG1	1	LPHN1	1
CCT6B	1	LPL	1
CD101	1	LPO	1
CD160	1	LRAT	1
CD19	1	LRCH4	1
CD300A	1	LRFN1	1
CD34	1	LRFN4	1
CD4	1	LRIG1	1
CD72	1	LRIG2	1
CD82	1	LRP2	1
CD8A	1	LRP3	1
CDC42BPB	1	LRRC1	1
CDC42EP2	1	LRRC20	1
CDCA7	1	LRRC27	1
CDH15	1	LRRC30	1
CDH2	1	LRRC8E	1
CDH5	1	LRRN1	1
CDIPT	1	LRRN4	1
CDO1	1	LTBP2	1
CDR2L	1	LTBP3	1
CDYL2	1	LTBR	1
CEACAM4	1	LY6D	1
CECR5	1	LYPD3	1
CECR5-AS1	1	LYVE1	1
CELSR2	1	MAFA	1
CENPA	1	MAGI1	1
CENPB	1	MAGI3	1
CENPH	1	MAN2C1	1
CEP152	1	MAP2K5	1
CEP78	1	MAP7D1	1
CERS6	1	MAPK14	1
CETN1	1	MARC1	1
CH25H	1	MARC2	1
CHKA	1	MARVELD2	1
CHL1	1	MARVELD3	1
CHMP1A	1	MATK	1
CHN2	1	MATN4	1
CHRM2	1	MBOAT2	1
CHRM3	1	MCTP1	1
CHST10	1	MDFI	1
CHSY1	1	MED16	1
CHUK	1	MED22	1
CIDEC	1	MED26	1
CISD3	1	MEGF6	1
CKB	1	METAP1D	1
CLASRP	1	MFAP2	1
CLDN10	1	MFSD2B	1
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CLDN7	1	MGC45800	1
CLDN9	1	MINA	1
CLIC6	1	MLC1	1
CLIP1	1	MLLT3	1
CLIP3	1	MLNR	1
CLK4	1	MMP16	1
CLN8	1	MNX1	1
CLUL1	1	MOBP	1
CMC2	1	MOGAT1	1
CNGA4	1	MORN4	1
CNIH3	1	MRAP2	1
CNKSR3	1	MRPL1	1
CNNM1	1	MRPL36	1
CNNM3	1	MRPL46	1
CNNM4	1	MSH3	1
CNRIP1	1	MST150	1
CNTLN	1	MSX1	1
CNTNAP2	1	MTA1	1
COA6	1	MTMR7	1
COBL	1	MTUS1	1
COBLL1	1	MXRA8	1
COL20A1	1	MYBPC2	1
COL23A1	1	MYBPC3	1
COL2A1	1	MYCBPAP	1
COL4A1	1	MYL2	1
COL4A3	1	MYO16	1

COL4A4	1	MYO18B	1
COL6A2	1	MYO1C	1
COL8A2	1	MYOZ3	1
COLGALT2	1	MYRIP	1
COQ5	1	MYT1	1
CORO1B	1	NAA20	1
CORO1C	1	NABP1	1
COX4I1	1	NAT16	1
CPAMD8	1	NCAM2	1
CPNE5	1	NCAN	1
CPVL	1	NDC1	1
CPZ	1	NDNF	1
CRB2	1	NDNL2	1
CRCP	1	NDRG1	1
CREB3L3	1	NDRG3	1
CREG2	1	NDRG4	1
CRHR1	1	NDUFA13	1
CRKL	1	NEDD4L	1
CROCC	1	NEFM	1
CRTC3	1	NELL1	1
CRY1	1	NEUROD1	1
CRYBA2	1	NEUROG2	1
CSF3R	1	NF1	1
CSMD1	1	NFATC2IP	1
CSPG5	1	NFE2L3	1
CST6	1	NGEF	1
CTBP1	1	NGFR	1
CTBP2	1	NIPSNAP3A	1
CTDSP2	1	NIPSNAP3B	1
CTF1	1	NKPD1	1
CTNND2	1	NKX2-3	1
CTRB1	1	NLRP6	1
CTSV	1	NMRAL1	1
CTSW	1	NODAL	1
CTSZ	1	NOG	1
CUL2	1	NOL10	1
CUX2	1	NOS3	1
CWF19L2	1	NOTUM	1
CXCL2	1	NOXO1	1
CYHR1	1	NPAS2	1
CYP2D6	1	NPBWR2	1
CYP2R1	1	NPDC1	1
CYP2S1	1	NPFFR1	1
CYP2W1	1	NPHP3-AS1	1
D4S234E	1	NPHS2	1
DACT2	1	NPNT	1
DAD1P1	1	NPR3	1
DBN1	1	NR2E3	1
DBNDD1	1	NR3C2	1
DCLK2	1	NR5A1	1
DCP1B	1	NR6A1	1
DCXR	1	NRARP	1
DDX19A	1	NRBP2	1
DEFB124	1	NRN1	1
DES	1	NRP1	1
DFNB59	1	NRXN2	1
DHH	1	NSUN7	1
DISP2	1	NT5C1B	1
DLL1	1	NT5E	1
DLX1	1	NTM	1
DMRTA1	1	NTN1	1
DMXL1	1	NTRK1	1
DNAAF2	1	NTRK3	1
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DNAJA4	1	OAF	1
DNAJB2	1	OAT	1
DNAJB8	1	OCA2	1
DNAJC22	1	OCLN	1
DNLZ	1	OR11L1	1
DNMT3L	1	OR2Z1	1
DOCK5	1	OR8S1	1
DPF2	1	ORAI3	1
DPM2	1	OSBPL6	1
DPP3	1	OSBPL8	1
DPP9	1	OSMR	1
DPYD	1	OSR2	1
DRD2	1	OTX2	1
DUS3L	1	OXA1L	1
DUSP18	1	P2RX2	1
DXO	1	P2RX6P	1

DYNC1I1	1	PABPC1	1
DYNC1LI1	1	PACS2	1
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DZIP1L	1	PANK1	1
EDARADD	1	PANK4	1
EDIL3	1	PAP2D	1
EDNRA	1	PARD3	1
EFS	1	PARP6	1
EHBP1L1	1	PARVG	1
EHD4	1	PCDH7	1
EHHADH	1	PCDH8	1
EIF4B	1	PCDHB15	1
EIF4ENIF1	1	PCDHB19P	1
ELANE	1	PCGF2	1
ELAVL3	1	PCOLCE	1
ELMSAN1	1	PCOLCE2	1
ELOVL4	1	PCSK1	1
ELP5	1	PCSK2	1
EMX1	1	PCSK5	1
ENPP7	1	PCSK6	1
EOGT	1	PCYT1A	1
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EPHA4	1	PDE4B	1
EPHB4	1	PDE4DIP	1
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ERI3	1	PDE8B	1
ERLIN1	1	PDGFB	1
ESM1	1	PDIA2	1
ESR1	1	PDIA6	1
ESRP1	1	PDK4	1
EVA1A	1	PDLIM1	1
EVA1C	1	PDX1	1
EXOC3L4	1	PELI3	1
EXOSC7	1	PER1	1
F12	1	PGAM5	1
F2RL1	1	PGM1	1
F2RL3	1	PHAX	1
F3	1	PHF13	1
FAM134B	1	PHF21B	1
FAM150A	1	PHLPP1	1
FAM160A2	1	PIAS2	1
FAM167A	1	PIAS4	1
FAM169B	1	PIGG	1
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