

S2 Table. Cancer-related gene list

Driver genes	KEGG	KEGG TSG_OG	Oncomine	Pan-cancer panel	COSMIC TSG_OG	COSMIC hallmark_gene	Cell article TSG	Cell article OG	Cell article driver genes
ABL1	ABL1	ABL1	ABL1	ABL1	ABI1	AR	TP53	BRAF	ABL1
ACVR1B	ADCY1	AFF1	ACVRL1	ACAD9	ABL1	HNRNPA2B1	PTEN	KRAS	ACVR1
AKT1	ADCY2	AKT1	AKT1	ACVR1B	ABL2	RAP1GDS1	CDKN2A	PIK3CA	ACVR1B
ALK	ADCY3	AKT2	AKT3	ACVR1C	ACKR3	PDCD1LG2	ARID1A	IDH1	ACVR2A
APC	ADCY4	AKT3	ALK	ACVR2A	ACVR1	PAFAH1B2	APC	CTNNB1	AJUBA
AR	ADCY5	ALK	APC	AGK	AFF1	HIST1H3B	PBRM1	AKT1	AKT1
ARID1A	ADCY6	APC	APEX1	AKT1	AFF3	CCNB1IP1	RB1	IDH2	ALB
ARID1B	ADCY7	AR	AR	AKT2	AFF4	ARHGAP26	VHL	NRAS	ALK
ARID2	ADCY8	ASPSR1	ARAF	AKT3	AKAP9	APOBEC3B	NF1	RAC1	AMER1
ASXL1	ADCY9	ATF1	ATM	ALK	AKT1	TNFAIP3	MAP3K1	EGFR	APC
ATM	AFF1	BAX	ATP11B	ALKBH2	AKT2	TMPRSS2	SMAD4	NFE2L2	APOB
ATRX	AGTR1	BCL6	AXL	ALKBH3	ALDH2	TBL1XR1	KDM6A	EZH2	AR
AXIN1	AKT1	BCR	BAP1	AMER1	ALK	SLC45A3	GATA3	U2AF1	ARAF
B2M	AKT2	BRAF	BCL2L1	AMH	AMER1	SLC34A2	ARID2	SF3B1	ARHGAP35
BAP1	AKT3	BRCA1	BCL9	AMMECR1L	APC	RUNX1T1	SETD2	PGM5	ARID1A
BCL2	ALK	BRCA2	BIRC2	ANGPT1	AR	PRKAR1A	KMT2D	PPP6C	ARID2
BCOR	APAF1	CCDC6	BIRC3	APC	ARHGAP26	PPP2R1A	NPM1	PPP2R1A	ARID5B
BRAF	APC	CCND1	BRAF	APH1B	ARHGEF12	POU2AF1	ATRX	MAPK1	ASXL1
BRCA1	APC2	CDK4	BRCA1	AR	ARID1A	MAP3K13	FBXW7	FGFR2	ASXL2
BRCA2	APPL1	CDKN1B	BRCA2	ARID1A	ARID1B	CREB3L2	KMT2C	AQP2	ATF7IP

CARD11	AR	CDKN2A	BTK	ARID1B	ARID2	CREB3L1	PIK3R1	MTOR	ATM
CASP8	ARAF	CEBPA	CBL	ARID2	ARNT	CBFA2T3	CASP8	KRT15	ATR
CBL	ARHGEF1	CTNNB1	CCND1	ARNT2	ASPSCR1	CACNA1D	CDH1	MEF2BNB- MEF2B	ATRX
CDC73	ARHGEF11	DCC	CCNE1	ASXL1	ASXL1	ASPSCR1	CTCF	CHD4	ATXN3
CDH1	ARHGEF12	DDIT3	CD274	ATM	ATM	ZBTB16	ATM	MAP2K1	AXIN1
CDKN2A	ARHGEF6	DDX5	CD44	ATR	ATP1A1	TGFBR2	CIC	TRIM48	AXIN2
CEBPA	ARNT	EGFR	CDH1	ATRX	BAP1	TCF7L2	RUNX1	ERBB2	B2M
CIC	ARNT2	ELK4	CDK4	AXIN1	BCL2	RNF213	RPL22	SPOP	BAP1
CREBBP	ASPSCR1	EML4	CDK6	AXIN2	BCL3	RECQL4	STAG2	KRTAP4-11	BCL2
CRLF2	ATF1	ERBB2	CDKN2A	B2M	BCL5	RANBP2	FAT1	FLT3	BCL2L11
CSF1R	ATF4	ERG	CHEK2	BAD	BCL6	RABEP1	NOTCH1	MYD88	BCOR
CTNNB1	ATM	ETV1	CSF1R	BAIAP3	BCL7A	PTPN13	MAP2K4	RRAS2	BRAF
CYLD	AXIN1	ETV4	CSNK2A1	BAMBI	BCL9	PTPN11	BAP1	MAX	BRCA1
DAXX	AXIN2	ETV6	CTNNB1	BAP1	BCOR	PRKACA	RNF43	MYCN	BRCA2
DNMT1	BAD	ETV7	DCUN1D1	BAX	BCR	PRDM16	ARHGAP35	MEF2B	BRD7
DNMT3A	BAIAP3	EWSR1	DDR2	BCL2	BRAF	POU5F1	ZC3H13	MB21D2	BTG2
EGFR	BAX	FEV	DNMT3A	BCL2A1	BRCA1	PIK3R1	RASA1	HRAS	CACNA1A
EP300	BCL2	FGFR3	EGFR	BCL2L1	BRCA2	PIK3CB	STK11	CARM1	CARD11
ERBB2	BCL2A1	FH	ERBB2	BCOR	CALR	PIK3CA	CDKN1A	DKK2	CASP8
EZH2	BCL2L1	FHIT	ERBB3	BDNF	CASP8	PICALM	EP300	MBOAT2	CBFB
FAM123B	BCL6	FLCN	ERBB4	BID	CBL	PHOX2B	CDKN1B	ERBB3	CBWD3
FBXW7	BCR	FLI1	ERG	BIRC3	CBLB	PDGFRA	ARID1B	EEF1B2	CCND1

FGFR2	BDKRB1	FLT3	ESR1	BIRC7	CCND1	NOTCH2	B2M	GNAS	CD70
FGFR3	BDKRB2	FOXO1	ETV1	BMP2	CDC73	NOTCH1	KDM5C	NUTM2F	CD79B
FLT3	BID	FUS	ETV4	BMP4	CDK4	NFKBIE	IL32	TAF1	CDH1
FOXL2	BIRC2	HRAS	ETV5	BMP5	CDK6	NFE2L2	FUBP1	RHOA	CDK12
FUBP1	BIRC3	IGH	EZH2	BMP6	CDKN1B	MLLT10	TGFBR2	PTN	CDK4
GATA1	BIRC5	KIT	FBXW7	BMP7	CDKN2A	MAP3K1	KANSL1	ALK	CDKN1A
GATA2	BIRC7	KMT2A	FGFR1	BMP8A	CDKN2C	MAP2K4	BCOR	PTPN11	CDKN1B
GATA3	BIRC8	KRAS	FGFR2	BMPR1B	CHD4	MAP2K2	GPS2	ACADS	CDKN2A
GNA11	BMI1	LMO2	FGFR3	BNIP3	CHEK2	MAP2K1	SMARCA4	MED12	CDKN2C
GNAQ	BMP2	MAF	FGFR4	BRAF	CTCF	HOXA11	LARP4B	SULT1C4	CEBPA
GNAS	BMP2K	MDM2	FLT3	BRCA1	CTNNB1	GRIN2A	NSD1	ZNF799	CHD3
H3F3A	BMP4	MECOM	FOXL2	BRCA2	CXCR4	FIP1L1	HLA-A	LHFPL1	CHD4
HIST1H3B	BRAF	MEN1	GAS6	BRIP1	CYLD	FCGR2B	CRIPAK	ARF4	CHD8
HNF1A	BRCA1	MET	GATA2	C10orf76	DICER1	FBXO11	AOAH	KCND3	CHEK2
HRAS	BRCA2	MITF	GATA3	C19orf40	DNMT3A	FANCD2	CREBBP	MYC	CIC
IDH1	BUB1B- PAK6	MLH1	GNA11	CACNA1C	ERBB2	EIF4A2	TNRC6B	CAPRIN2	CNBD1
IDH2	CALM1	MLLT1	GNAQ	CACNA1D	ERBB3	DROSHA	ACVR1B	MFGE8	COL5A1
JAK1	CALM2	MLLT3	GNAS	CACNA1E	ERBB4	DNMT3A	DNMT3A	LUM	CREB3L3
JAK2	CALM3	MSH2	HNF1A	CACNA1G	ERCC2	DICER1	ACVR2A	TBX18	CREBBP
JAK3	CALML3	MSH3	HRAS	CACNA1H	EZH2	CTNNB1	RERE	TRIM23	CSDE1
KDM5C	CALML4	MSH6	IDH1	CACNA2D1	EZR	CREBBP	ASXL1	MS4A8	CTCF
KDM6A	CALML5	MYC	IDH2	CACNA2D2	FAT1	COL2A1	NCOR1	PRKCI	CTNNB1

KIT	CALML6	MYCN	IFITM1	CACNA2D3	FAT4	CLTCL1	USP28	GOT2	CTNND1
KLF4	CAMK2A	NCOA4	IFITM3	CACNA2D4	FLT3	CDKN2C	THRAP3	LZTR1	CUL1
KRAS	CAMK2B	NKX3-1	IGF1R	CACNB2	FOXO1	CDKN2A	MEN1	TOR1A	CUL3
MAP2K1	CAMK2D	NR4A3	IL6	CACNB3	FOXO3	CDKN1B	TBX3	HGF	CYLD
MAP3K1	CAMK2G	NRAS	JAK1	CACNB4	FOXO4	CARD11	ZFP36L2	HIST1H2BF	CYSLTR2
MED12	CASP3	NTRK1	JAK2	CACNG1	FOXP1	CAMTA1	ID3	PDE7B	DACH1
MEN1	CASP8	PAX3	JAK3	CACNG4	FUS	BMPR1A	SMAD2	ZNF117	DAZAP1
MET	CASP9	PAX5	KDR	CACNG6	GATA1	BCORL1	NOTCH2	MAGI2	DDX3X
MLH1	CBL	PAX7	KIT	CALML3	GATA2	BCL11B	TBL1XR1	RIT1	DHX9
MLL2	CBLB	PAX8	KNSTRN	CALML5	GATA3	BCL11A	ZFP36L1	BTBD11	DIAPH2
MLL3	CBLC	PBX1	KRAS	CALML6	HIF1A	ATP2B3	SMARCB1	NSMCE1	DICER1
MPL	CCDC6	PDGFA	MAGOH	CAMK2B	HLF	ATP1A1	RBMX	UBQLN2	DMD
MSH2	CCNA1	PDGFRA	MAP2K1	CAPN2	HMGA2	ARID1B	AJUBA	DCLK1	DNMT3A
MSH6	CCND1	PDGFRB	MAP2K2	CARD11	HOXA11	ARID1A	TET2	MFAP5	EEF1A1
MYD88	CCND2	PIK3CA	MAPK1	CASP10	HOXA13	ACVR2A	CDK12	COL5A2	EEF2
NCOR1	CCNE1	PIK3CB	MAX	CASP12	HOXA9	ZRSR2	ELF3	ABCB1	EGFR
NF1	CCNE2	PIK3CD	MCL1	CASP3	HOXC11	ZFHX3	WT1	TUSC3	EGR3
NF2	CCNT1	PIK3CG	MDM2	CASP7	HOXC13	TRAF7	KEAP1	KCNQ5	EIF1AX
NFE2L2	CCNT2	PIK3R1	MDM4	CASP8	HOXD11	TCL1A	PLEKHA6	SKAP2	ELF3
NOTCH1	CCR7	PIK3R2	MED12	CASP9	HOXD13	SUZ12	HLA-B	INTS7	EP300
NOTCH2	CD14	PIK3R3	MET	CBL	HRAS	STAG2	NF2	METTL14	EPAS1
NPM1	CD40	PIK3R5	MLH1	CBLC	IDH1	SMAD4	RBM10	XYLT1	EPHA2
NRAS	CD86	PIKCCG	MPL	CC2D1B	IDH2	SMAD3	CHD8	FAM8A1	EPHA3

PAX5	CDC42	PML	MSH2	CCNA1	IKZF1	SMAD2	ZC3H18	JAKMIP2	ERBB2
PBRM1	CDH1	PPARG	MTOR	CCNA2	IRF4	SF3B1	CEBPA	SOX17	ERBB3
PDGFRA	CDK14	PRCC	MYC	CCNB1	JAK2	SALL4	DDX3X	LSM11	ERBB4
PHF6	CDK2	PTCH1	MYCL	CCNB3	KIT	RNF43	MYO6	GRXCR1	ERCC2
PIK3CA	CDK4	PTEN	MYCN	CCND1	KLF4	RBM15	ZNF318	GRID1	ESR1
PIK3R1	CDK6	RARA	MYD88	CCND2	KMT2A	RBM10	MBD6	OR5I1	EZH2
PPP2R1A	CDK9	RARB	MYO18A	CCND3	KRAS	RAD21	COL4A2	GRM5	FAM46D
PRDM1	CDKN1A	RASSF1	NF1	CCNE1	LEF1	PTPRT	TRIP12	MYF5	FAT1
PTCH1	CDKN1B	RB1	NF2	CCNE2	LZTR1	PTPRB	KMT2B	MYH2	FBXW7
PTEN	CDKN2A	REL	NFE2L2	CCNO	MDM2	PTCH1	CCAR1	CSMD3	FGFR1
PTPN11	CDKN2B	RET	NKX2-1	CCR7	MDM4	PSIP1	NAA25	PLK2	FGFR2
RB1	CDKN2C	RUNX1	NKX2-8	CD14	MECOM	PREX2	MLLT4	ZNF844	FGFR3
RET	CEBPA	RUNX1T1	NOTCH1	CD19	MEN1	PRDM1	PHF6	EBPL	FLNA
RNF43	CEBPB	RUNXX1T1	NPM1	CD40	MET	PPP6C	TCF12	IFITM1	FLT3
RUNX1	CEBPE	SHH	NRAS	CDC14A	MLLT1	PPM1D	KMT2A	MFF	FOXA1
SETD2	CHKA	SIRT3	NTRK1	CDC14B	MLLT3	PPARG	DNER	GABRG1	FOXA2
SETBP1	CHKB	SIRT6	NTRK3	CDC25A	MPL	POLD1	MGA	CUL1	FOXQ1
SF3B1	CHPT1	SLC45A3	PAX5	CDC25B	MTOR	PLCG1	CYLD	EPHA6	FUBP1
SMAD2	CHUK	SMAD2	PDCD1LG2	CDC25C	MYC	PBRM1	TMCO2	MYOT	GABRA6
SMAD4	CKS1B	SMAD4	PDGFRA	CDC6	MYCN	NTRK3	HS6ST1	KLHL5	GATA3
SMARCA4	CKS2	SMO	PIK3CA	CDC7	MYD88	NTRK1	GIGYF2	PRRX1	GNA11
SMARCB1	COL4A1	SPI1	PIK3R1	CDH1	NAB2	NT5C2	TP53BP1	CPB1	GNA13
SMO	COL4A2	SS18	PNP	CDK2	NCOR2	NDRG1	CCDC88A	NRAP	GNAQ

SOCS1	COL4A3	SSX1	PPARG	CDK4	NFKB2	NCOR2	EIF2AK3	ZNF181	GNAS
SOX9	COL4A4	SSX2	PPP2R1A	CDK6	NOTCH1	NCOR1	USP9X	RGPD3	GPS2
SPOP	COL4A5	SSX2B	PTCH1	CDKN1A	NOTCH2	NCOA2	GSE1	RBM39	GRIN2D
SRSF2	COL4A6	TAF15	PTEN	CDKN1B	NRAS	MYOD1	JMJD1C	GNG4	GTF2I
STAG2	COMMD3- BMI1	TCF3	PTPN11	CDKN1C	PALB2	MYD88	CBFB	HMCN1	H3F3A
STK11	CREB1	TFE3	RAC1	CDKN2A	PBRM1	MED12	FANCM	GRIA3	H3F3C
TET2	CREB3	TFG	RAF1	CDKN2B	PDGFB	MAPK1	IWS1	NSFL1C	HGF
TNFAIP3	CREB3L1	TGFBR2	RB1	CDKN2C	PDGFRA	LZTR1	FOXA1	SEMG2	HIST1H1C
TRAF7	CREB3L2	TLX1	RET	CDKN2D	PIK3CA	LRP1B	ZNF292	CRISPLD1	HIST1H1E
TP53	CREB3L3	TLX3	RHEB	CEBPA	PML	LATS2	ZNRF3	HLF	HLA-A
TSC1	CREB3L4	TMPRSS2	RHOA	CEBPE	PRKACA	LATS1	BRCA1	CMAS	HLA-B
TSHR	CREB5	TP53	ROS1	CHAD	PTEN	KMT2D	TCF7L2	CCDC36	HRAS
U2AF1	CREBBP	TPM3	RPS6KB1	CHEK1	PTK6	KMT2C	CHD2	SMO	HUWE1
VHL	CRK	TPR	SF3B1	CHEK2	PTPN11	KMT2A	SOX9	SEPT14	IDH1
WT1	CRKL	VHL	SMAD4	CHUK	PTPN13	KEAP1	WDR33	EIF1AX	IDH2
CCND1	CSF1R	WHSC1	SMARCB1	CIC	RARA	KDM6A	EMG1	SIAH2	IL6ST
CDKN2C	CSF2	WT1	SMO	CLCF1	RB1	KDM5C	MTFR1L	AK8	IL7R
IKZF1	CSF2RA	ZBTB16	SOX2	CNOT10	RBM10	IL6ST	TRAF3	MRPL32	INPPL1
LMO1	CSF3R		SPOP	CNOT4	REL	IKZF1	AMER1	C16orf45	IRF2
MAP2K4	CSNK1A1		SRC	CNTFR	RET	IKBKB	SIN3A	WBSCR17	IRF6
MDM2	CSNK1A1L		STAT3	COG7	ROS1	HNF1A	SOX21	NRG3	JAK1
MDM4	CTBP1		STK11	COL11A1	RUNX1	HIF1A	CCDC144NL	LIN9	JAK2

MYC	CTBP2	TERT	COL11A2	RUNX1T1	H3F3B	LUC7L3	FMNL3	JAK3
MYCL1	CTNNA1	TET2	COL1A1	SDHA	H3F3A	RPL5	HARS2	KANSL1
MYCN	CTNNA2	TIAF1	COL1A2	SETD2	GNA11	AMBRA1	STXBP6	KDM5C
NCOA3	CTNNA3	TP53	COL24A1	SH2B3	GATA3	CSNK2A1	MDGA2	KDM6A
NKX2-1	CTNNB1	TSC1	COL27A1	SMAD2	GATA2	ZMYM4	CACNG3	KEAP1
SKP2	CUL2	TSC2	COL2A1	SMAD3	GATA1	AXIN1	IRF2	KEL
	CXCL12	U2AF1	COL3A1	SMAD4	FUBP1	FAS	SMARCA2	KIF1A
	CXCL8	VHL	COL4A3	SOCS1	FOXL2	INPPL1	MLLT11	KIT
	CXCR4	WT1	COL4A4	STAT3	FOXA1	EPHA2	BCLAF1	KLF5
	CYCS	XPO1	COL4A5	SYK	FGFR4	HERC1	PRPF8	KMT2A
	DAPK1	ZNF217	COL4A6	TBX3	FGFR3	DACH1	ARHGEF33	KMT2B
	DAPK2		COL5A1	TET1	FGFR2	PTCH1	NBPF10	KMT2C
	DAPK3		COL5A2	TET2	FGFR1	CNOT3	BRWD3	KMT2D
	DCC		COL6A6	TGFBR2	FBXW7	CTDNEP1	GPR141	KRAS
	DDIT3		COMP	TP53	EWSR1	EXO5	MECOM	KRT222
	DDX5		CREB3L1	TRRAP	ETNK1	ATAD2	PTPRF	LATS1
	DEFA3		CREB3L3	TSC1	ERCC5	RGS12	XPOT	LATS2
	DGKA		CREB3L4	TSC2	ERCC4	SPRED1	ALDH1L2	LEMD2
	DGKB		CREB5	USP8	ERCC3	PLAC4	LPA	LZTR1
	DGKD		CREBBP	VHL	ERCC2	AMOT	STAT3	MACF1
	DGKE		CRLF2	XPA	ERBB4	ARHGAP5	PLCL1	
	DGKG		CSF1R	XPC	ERBB3	DENND6A	OR4M2	
	DGKH		CSF2	ZFHX3	ERBB2	RUFY2	TMEM11	

DGKI	CSF3	EPS15	ZMYM3	PIK3CB	
DGKK	CSF3R	EPAS1	MED23	PSPH	MAPK1
DGKQ	CTNNB1	EP300	ASXL2	WNT11	MAX
DGKZ	CUL1	EIF3E	RAD21	STRIP2	
DLL1	CXXC4	DDX3X	GGCT	MAPK8	MED12
DLL3	CYLD	DDX10	HNF1A	POTEG	MEN1
DLL4	DAXX	DDIT3	LIMCH1	MARCO	MET
DOT1L	DDB2	CXCR4	CTNND1	SPPL3	MGA
DUSP6	DDIT3	CSF3R	RBM26	NENF	MGMT
DVL1	DDIT4	CRTC1	HDAC2	DTX1	MLH1
DVL2	DDX50	CRLF2	MBD1	HIST1H3B	MSH2
DVL3	DHX16	CNOT3	STX7	SLC35G3	MSH3
E2F1	DKK1	CLIP1	THUMPD3	TLL1	MSH6
E2F2	DKK2	CIITA	CPEB2	PDYN	MTOR
E2F3	DKK4	CHEK2	MYO1B	ABI1	MUC6
EDNRA	DLL1	CEBPA	PHACTR4	DICER1	MYC
EDNRB	DLL3	CDK12	HMCN1	ZFR	MYCN
EGF	DLL4	CDH11	TBC1D10C	UBE2QL1	MYD88
EGFR	DNAJC14	CDC73	BRCA2	TLL2	MYH9
EGLN1	DNMT1	CD79B	NUP98	FGFR3	NCOR1
EGLN2	DNMT3A	CD79A	SPATA6	STXBP1	NF1
EGLN3	DTX1	CCNE1	AFF4	PSMC3IP	NF2
EIF4EBP1	DTX3	CCND2	IDH2	GTF2I	NFE2L2

ELANE	DTX4	CCND1	EPB41L4A	MICU3	NIPBL
ELK1	DUSP10	CCDC6	ANKRD46	ASCC3	
ELK4	DUSP2	CASP8	ANO3	IL5RA	
EML4	DUSP4	CANT1	RBBP6	GNA15	NPM1
EP300	DUSP5	BUB1B	NEK9	JUN	NRAS
EPAS1	DUSP6	BRIP1	SMARCA1	ITM2C	NSD1
ERBB2	DUSP8	BRCA2	BAX	POLE	
ERG	E2F1	BRCA1	PNISR	TM2D3	NUP93
ESR1	E2F5	BIRC3	WAC	ZNF479	PAX5
ESR2	EDC3	BCL9L	C2CD5	CDH7	PBRM1
ETS1	EFNA1	BCL10	INO80	REXO2	PCBP1
ETV1	EFNA2	BARD1	CUL3	GK2	
ETV4	EFNA3	AXIN2	RIMS2	ZFP2	PDS5B
ETV5	EFNA5	AXIN1	PSIP1	CSNK1E	PGR
ETV6	EGF	ASXL1	DUSP16	KAT8	PHF6
ETV7	EGFR	ARID2	UPF3B	CD163	PIK3CA
EWSR1	EIF2B4	AMER1	ATG5	GRID2	PIK3CB
EYA1	EIF4EBP1	ACVR1	SFPQ	IL21	PIK3CG
F2R	ENDOG	ACSL3	SEC22A	BRSK1	PIK3R1
F2RL3	EP300	ACKR3	CSDE1	SOCS5	PIK3R2
FADD	EPHA2	XPO1	PRRC2C	UGT8	PIM1
FAS	EPO	WIF1	HLA-DRB1	RIMS2	PLCB4
FASLG	EPOR	USP8	SESTD1	CDC73	PLCG1

FCGR1A	ERBB2	UBR5	CD58	TXNRD1	PLXNB2
FEV	ERCC2	TP63	ZNF319	C16orf80	PMS1
FGF1	ERCC3	TP53	PTPRK	CCND3	PMS2
FGF10	ERCC6	TFE3	CHD3	KLK8	POLE
FGF11	ETS2	TET2	RPL18	GRIA2	POLQ
FGF12	ETV1	TET1	PPM1D	SAP30	
FGF13	ETV4	TERT	BRE	SMOC2	PPM1D
FGF14	ETV7	SPOP	SPCS1	MRPL49	
FGF16	EYA1	SIX1	SPSB2	SRC	PPP6C
FGF17	EZH2	SFPQ	TMPO	BZW2	
FGF18	FANCA	SDHA	ZNF750	IREB2	PSIP1
FGF19	FANCB	RPL5	TMEM30A	ENAH	PTCH1
FGF2	FANCC	ROS1	SPRED2	NBPF1	PTEN
FGF20	FANCE	RHOH	RXRB	MAPK8IP2	PTMA
FGF21	FANCF	RHOA	BRWD3	SEC63	PTPDC1
FGF22	FANCG	RAF1	PCDH7	CCDC132	PTPN11
FGF23	FANCL	RAC1	ZBTB18	RHBDL3	PTPRC
FGF3	FAS	PTK6	DEPDC5	SOS1	PTPRD
FGF4	FASLG	PTEN	BTBD7	TKTL2	RAC1
FGF5	FBXW7	POT1	BCL10	NNMT	RAD21
FGF6	FCF1	POLE	GNPTAB	LPHN3	RAF1
FGF7	FEN1	PMS2	PLEKHM3	MYO3A	RARA
FGF8	FGF1	PIM1	TAOK1	OPRM1	RASA1

FGF9	FGF10	PHF6	DIP2C	C3orf27	RB1
FGFR1	FGF11	PER1	NFATC4	TOX	RBM10
FGFR2	FGF12	PBX1	ADAMTS19	PPP1R9A	RET
FGFR3	FGF13	PAX8	TTC18	WDR17	RFC1
FH	FGF14	PAX7	CERK	PTPRU	RHEB
FHIT	FGF16	PAX5	IFNGR2	PIK3R5	RHOA
FLCN	FGF17	PAX3	SRSF11	CADPS	RHOB
FLI1	FGF18	NRAS	MKRN1	KRTAP4-5	RIT1
FLT1	FGF19	NPM1	TYRP1	ZBTB7A	RNF111
FLT3	FGF2	NONO	VPS13A	ZNF559	RNF43
FLT3LG	FGF20	NAB2	PRKRA	GJB3	RPL22
FLT4	FGF21	MTOR	NCOR2	ACBD3	RPL5
FN1	FGF22	MSH6	DAAM1	SBNO1	
FOS	FGF23	MSH2	PUS7	C16orf87	RQCD1
FOXO1	FGF3	MLH1	BTG3	NDUFS5	RRAS2
FOXO3	FGF4	MEN1	PRPF40A	GABRA5	RUNX1
FRAT1	FGF5	LMNA	NIPBL	PCMTD1	RXRA
FRAT2	FGF6	LIFR	SLC23A2	ZNF878	SCAF4
FUS	FGF7	LEF1	CDC27	SCN3A	SETBP1
FUT8	FGF8	KRAS	KCNT2	GABRA2	SETD2
FZD1	FGF9	KNL1	MOAP1	CIZ1	SF1
FZD10	FGFR1	KLF4	GAPVD1	SHB	SF3B1
FZD2	FGFR2	JAK3	RBM15	COL9A1	SIN3A

FZD3	FGFR3	JAK2	SMC4	TES	SMAD2
FZD4	FGFR4	JAK1	SCRN3	TBX15	SMAD4
FZD5	FIGF	IRS4	UBR5	TRPC6	
FZD6	FLNA	IL7R	RNF111	ZNF263	
FZD7	FLNC	IDH2	WDR47	CEP128	
FZD8	FLT1	IDH1	DOPEY1	KCNMB2	SMC1A
FZD9	FLT3	HRAS	WBP1	ADRBK2	SMC3
G6PD	FN1	HIP1	MAGED1	GABRA1	SOS1
GAB1	FOS	HEY1	TCEB3	PANK3	SOX17
GAB2	FOSL1	GPC3	ZNF234	GTPBP1	SOX9
GCK	FOXO4	GNAS	GLTSCR1	FHL3	SPOP
GLI1	FOXO4	GNAQ	FAM58A	OSBPL6	SPTA1
GLI2	FST	GAS7	KIAA0907	NALCN	SPTAN1
GLI3	FTSJ2	FLT4	BRD7	KRTAP5-5	SRSF2
GLS	FUBP1	FLT3	PPP3CC	PNOC	STAG2
GLS2	FUT8	FHIT	FOSL2	VIM	STK11
GNA11	FZD10	FAT4	KBTBD7	STIL	TAF1
GNA12	FZD2	FAT1	HNRNPD	TENM4	
GNA13	FZD3	EZH2	PEX2	CACNA1H	TBX3
GNAI1	FZD7	ETV6	LDB1	GLRA3	TCEB1
GNAI2	FZD8	ESR1	MAP3K4	STK16	TCF12
GNAI3	FZD9	ERC1	HGF	KRTAP19-1	TCF7L2
GNAQ	GADD45A	EML4	COQ9	NDUFA9	TET2

GNAS	GADD45B	ELK4	CLGN	AHCYL2	TGFBR2
GNB1	GADD45G	ELF4	SNRPN	ZNF442	TGIF1
GNB2	GAS1	EGFR	LEMD2	GPC6	THRAP3
GNB3	GATA1	EBF1	BMPR2	FAM154B	TLR4
GNB4	GATA2	DNM2	YLPM1	SPACA3	
GNB5	GATA3	DDX6	ATR	PGS1	
GNG10	GDF6	DDX5	BIRC6	RGS7	TP53
GNG11	GHR	DDR2	HAUS8	TRIO	TRAF3
GNG12	GLI1	DDB2	SIK3	PAN3	TSC1
GNG13	GLI3	DAXX	KDM3B	CNPY1	TSC2
GNG2	GNA11	CYLD	CCDC120	PPT2	TXNIP
GNG3	GNAQ	CUX1	TEX11	HBEGF	U2AF1
GNG4	GNAS	CTCF	B3GNT5	UVRAG	UNCX
GNG5	GNG12	CNBP	COL8A2	RBPJL	USP9X
GNG7	GNG4	CLTC	DYRK1A	SORCS1	VHL
GNG8	GNG7	CHD4	UGT2A2	GNG3	WHSC1
GNGT1	GNGT1	CDK6	PABPC3	DCT	WT1
GNGT2	GPATCH3	CDK4	GPR174	GABRB1	XPO1
GOLPH3	GPC4	CDH1	CCDC38	FGD6	ZBTB20
GOLPH3L	GRB2	CBLB	RAPGEF6	COL11A1	ZBTB7B
GPCPD1	GRIA3	CBFB	SUZ12	SH3GLB2	
GRB2	GRIN1	CARS	WWC2	SEL1L	
GRIA3	GRIN2A	CALR	GGNBP2	CHRD	ZFHX3

GSK3B	GRIN2B	BRD4	TNIK	POSTN	
GSTP1	GSK3B	BRAF	DPY19L4	NICN1	
GZMB	GTF2H3	BCOR	ABCA10	LRP12	ZMYM2
H3F3A	GZMB	BCL9	CACUL1	DYNC1LI2	ZMYM3
H3F3B	H2AFX	BAP1	ERRFI1	SAMSN1	ZNF133
H3F3C	H3F3A	ATRX	MORC4	ODF4	ZNF750
HBEGF	H3F3C	ATIC	APPBP2	HTRA3	
HDAC1	HDAC1	ATF1	SPEN	CEP135	
HDAC2	HDAC10	ARNT	BCL9	TXNL1	
HES1	HDAC11	AKT1	WWP1	RSPO2	
HES5	HDAC2	AFF4	IL25	SLBP	
HEY1	HDAC3	AFF3	CCND3	AR	
HEY2	HDAC4	AFF1	LEPREL2	FBXO22	
HEYL	HDAC5	ABL1	UNC13C	HS3ST2	
HGF	HDAC6	ABI1	NEUROD6	ETV1	
HHEX	HELLS	WAS	MARCKSL1	BCL2	
HHIP	HES1	VHL	PAWR	TJP2	
HIF1A	HES5	RET	BCORL1	PCBP1	
HIST1H3A	HGF	RB1	PHF20L1	TECTB	
HIST1H3B	HHEX	QKI	TAF15	ERAS	
HIST1H3C	HHIP	NF2	MGAT2	PCCA	
HIST1H3D	HIST1H3B	NF1	BTBD11	TINAG	
HIST1H3E	HIST1H3G	MYC	CLSPN	FBN2	

HIST1H3F	HIST1H3H	MPL	MLF1	ENOX2
HIST1H3G	HMGA1	MET	RNF217	LY6D
HIST1H3H	HMGA2	MAX	SENP6	HS3ST6
HIST1H3I	HNF1A	LCK	USP26	TCF7
HIST1H3J	HOXA10	KIT	ATF7IP	BNC2
HIST2H3A	HOXA11	KDR	BAZ2B	SNTG1
HIST2H3C	HOXA9	IGH	ING1	ZNRF2
HIST2H3D	HPGD	FUS	CEP290	RNF148
HIST3H3	HRAS	FES	KBTBD4	RBL2
HK1	HSP90B1	FAS	ZFY	LPAR1
HK2	HSPA1A	EZR	NOTCH3	TRIP13
HK3	HSPA2	ERG	MBNL1	PLN
HKDC1	HSPA6	ELL	NFE2	PDE10A
HMGA2	HSPB1	CIC	OR2T35	RAB7L1
HOXA10	IBSP	CBL	API5	PDHA2
HOXA11	ID1	BTK	JAK1	KIF5A
HOXA9	ID2	BLM	DHX15	KIF1B
HPGD	ID4	B2M	CSMD3	DCX
HRAS	IDH1	ATR	ARID5B	ZKSCAN7
HSP90AA1	IDH2	ATM	ZNF222	MAP2K7
HSP90AB1	IFNA17	APC	TCF4	FAM173B
HSP90B1	IFNA2	ALK	IRF6	CCDC105
ID2	IFNA7	ABI1	SEC63	MGAT4C

IDH1	IFNG	ABL1	TMEM131	RIMS1
IGF1	IGF1	ACKR3	RLTPR	GEN1
IGF1R	IGF1R	ACSL3	BRSK1	RRAD
IGFBP3	IGFBP3	ACVR1	ITSN1	USP25
IGH	IKBKB	ACVR2A	ZFHX3	DHTKD1
IKBKB	IKBKG	AFF1	UTY	EXOC1
IKBKG	IL10	AFF3	SBNO1	ATP9B
IL1R2	IL11	AFF4	ACOT4	PALM2
IL2RB	IL11RA	AKT1	TACR1	ZNF91
IL3	IL12A	ALK	ZNF146	STK32B
IL6	IL12B	AMER1	MAZ	NELL1
IL6	IL12RB2	APC	HECTD1	CNTN6
ILK	IL13	APOBEC3B	PPFIA4	LHCGR
INS	IL13RA2	AR	CHD9	UBR5
INSRR	IL15	ARHGAP26	MSH2	COMMD4
ITGA2	IL19	ARID1A	C10orf88	ZNF528
ITGA2B	IL1A	ARID1B	SHANK1	PRAMEF11
ITGA3	IL1B	ARID2	SENP8	DAAM1
ITGA6	IL1R1	ARNT	LMBRD2	MIB1
ITGAM	IL1R2	ASPSR1	RIMS1	TRA2B
ITGAV	IL1RAP	ASXL1	IRF2BP2	LRP2
ITGB1	IL20RA	ATF1	MAP4K4	MRS2
ITGB7	IL20RB	ATIC	TMEM63A	EIF2S2

JAG1	IL22RA1	ATM	SCAF8	MYO1D
JAG2	IL22RA2	ATP1A1	ZNF225	KLF4
JAK1	IL23A	ATP2B3	MAP4K3	EYA4
JMJD1C	IL23R	ATR	GUSB	KLK2
JMJD7-PLA2G4B	IL24	ATRX	CCPG1	RPL39
JUN	IL2RA	AXIN1	LARP1	SOCS2
JUP	IL2RB	AXIN2	MGAT5	DLG2
KDM6A	IL3	B2M	TOP2B	SHPRH
KIT	IL3RA	BAP1	TFAM	SDHA
KITLG	IL5RA	BARD1	FSIP2	LELP1
KLF3	IL6	BCL10	FXR1	CDH12
KLK3	IL6R	BCL11A	VAMP1	GJC3
KMT2A	IL7	BCL11B	ARPP21	ATRNL1
KRAS	IL7R	BCL9	ZMYM2	AICDA
LAMA1	IL8	BCL9L	PADI2	DCN
LAMA2	INHBA	BCOR	CUX1	COL3A1
LAMA3	INHBB	BCORL1	IVNS1ABP	KCNS2
LAMA4	IRAK2	BIRC3	CTH	CEACAM3
LAMA5	IRAK3	BLM	KIAA0430	ZFHX4
LAMB1	IRS1	BMPR1A	SLC4A4	ZNF471
LAMB2	ITGA2	BRAF	IRF2	RNF2
LAMB3	ITGA3	BRCA1	FTSJD1	KIF20B
LAMB4	ITGA6	BRCA2	TNRC6A	DOK6

LAMC1	ITGA7	BRD4	STIP1	KRTAP12-4
LAMC2	ITGA8	BRIP1	BIN2	PSMA3
LAMC3	ITGA9	BTK	MMP10	KIRREL
LDB1	ITGB3	BUB1B	UBE2T	PTPRM
LDHA	ITGB4	CACNA1D	INPP4B	NUBP2
LEF1	ITGB6	CALR	SF1	SETDB1
LMO2	ITGB7	CAMTA1	CNTLN	TPST2
LPAR1	ITGB8	CANT1	FIP1L1	RAF1
LPAR2	JAG1	CARD11	BRMS1	ERC2
LPAR3	JAG2	CARS	RC3H2	COL22A1
LPAR4	JAK1	CASP8	DNM1L	PSMD6
LPAR5	JAK2	CBFA2T3	KRTAP19-2	BATF3
LPAR6	JAK3	CBFB	MAP4K5	P2RY8
LRP5	JUN	CBL	NAA15	LINGO2
LRP6	KAT2B	CBLB	C15orf39	MCUR1
LYL1	KDM5C	CCDC6	TCEB3CL	CD5L
LYPLA1	KDM6A	CCNB1IP1	PCNX	ZNF136
MAF	KIT	CCND1	KRTAP9-8	PSMC4
MAP2K1	KITLG	CCND2	RASAL2	PPP2CB
MAP2K2	KLF4	CCNE1	YBX2	PTPRA
MAPK1	KMT2C	CD79A	KLRG1	PDHA1
MAPK10	KMT2D	CD79B	SLC35B2	LAT2
MAPK3	KRAS	CDC73	TTK	CDC7

MAPK8	LAMA1	CDH1	TFDP2	XPR1
MAPK9	LAMA3	CDH11	BRCC3	POLR2A
MAX	LAMA5	CDK12	ELF1	ITFG2
MDM2	LAMB3	CDK4	NDUFC2	MMP10
MECOM	LAMB4	CDK6	COL11A1	CDH10
MEF2C	LAMC2	CDKN1B	CXorf58	MGAT5
MEIS1	LAMC3	CDKN2A	LRIG3	GGTLC1
MEN1	LAT	CDKN2C	TRIM59	SRP19
MET	LEF1	CEBPA	ATRNL1	TMEM38A
MITF	LEFTY1	CHD4	SRSF1	RPIA
MLF1	LEFTY2	CHEK2	GCC2	HCRTR2
MLH1	LEP	CIC	FBXL17	SOX6
MLLT1	LEPR	CIITA	PAFAH1B2	TUBA1B
MLLT3	LFNG	CLIP1	MKI67	NCF1
MMP1	LIF	CLTC	PKD2	NTN4
MMP2	LIFR	CLTCL1	MLH1	IQCF2
MMP3	LIG4	CNBP	SNAPC1	TAF1L
MMP9	LRP2	CNOT3	LARP7	ATG16L1
MPO	LTBP1	COL2A1	TSPYL2	TLR9
MSH2	MAD2L2	CREB3L1	ZNF608	IGSF1
MSH3	MAML2	CREB3L2	ADAM33	AVL9
MSH6	MAP2K1	CREBBP	RSRC1	VANGL2
MTOR	MAP2K2	CRLF2	MEDAG	SGCG

MYC	MAP2K4	CRTC1	PSCA	LACTB
MYCN	MAP2K6	CSF3R	CDKN2C	PPFIA2
NCOA1	MAP3K1	CTCF	CFHR4	DPYS
NCOA3	MAP3K12	CTNNB1	OCIAD2	MCM7
NCOA4	MAP3K13	CUX1	FEZ2	HK2
NCOR1	MAP3K14	CXCR4	FAM175A	AMPD1
NFKB1	MAP3K5	CYLD	CEP128	SIPA1L1
NFKB2	MAP3K8	DAXX	OBSL1	CUL3
NFKBIA	MAPK1	DDB2	AAMP	HIST2H2BF
NFKBIZ	MAPK10	DDIT3	SPAG11A	FAM184A
NGFR	MAPK12	DDR2	MCRS1	CAST
NKX3-1	MAPK3	DDX10	MXRA8	TUBB8
NOS2	MAPK8	DDX3X	ETV3	CLEC4M
NOTCH1	MAPK8IP1	DDX5	WNT16	KCNJ5
NOTCH2	MAPK8IP2	DDX6	ASUN	FOXE3
NOTCH3	MAPK9	DICER1	ST8SIA6	GLRA2
NOTCH4	MAPT	DNM2	SENP3	RSRC1
NR4A3	MCM2	DNMT3A	NRXN2	IGF2BP1
NRAS	MCM4	DROSHA	ARID4B	ENOX1
NTRK1	MCM5	EBF1	LUC7L2	KIF23
NTRK3	MCM7	EGFR	ARHGEF25	EIF4ENIF1
NUPR1	MDC1	EIF3E	COPG2	KIF25
PAK1	MDM2	EIF4A2	KRT222	SAMD14

PAK2	MECOM	ELF4	RBM46	ZNF488
PAK3	MED12	ELK4	MPZ	DENND3
PAK4	MEN1	ELL	CLCN5	GNA13
PAK5	MET	EML4	ZNF768	RASGRF2
PAK6	MFNG	EP300	PAN3	GPR107
PAX3	MGMT	EPAS1	ACIN1	LCE2D
PAX5	MLF1	EPS15	HERC4	HHIP
PAX7	MLH1	ERBB2	CR1	ANAPC1
PAX8	MLLT3	ERBB3	TEX26	MLANA
PBX1	MLLT4	ERBB4	PRDM5	CPXM2
PBX3	MMP3	ERC1	TNRC18	PTER
PCYT1A	MMP7	ERCC2	SMAD7	THRA
PCYT1B	MMP9	ERCC3	GNB4	RAP1B
PDGFA	MNAT1	ERCC4	NIT1	GPM6A
PDGFB	MPL	ERCC5	PRKAR1A	DPYD
PDGFC	MPO	ERG	EML5	SYNPO2L
PDGFD	MRPS5	ESR1	MFRP	SPATS2
PDGFRA	MSH2	ETNK1	NFE2L3	ANO4
PDGFRB	MSH6	ETV6	KMT2E	RASGRP3
PDHA1	MTMR14	EWSR1	MYBL1	CPS1
PDHA2	MTOR	EZH2	CCDC18	GABRR2
PDHB	MUTYH	EZR	CYBRD1	EPHA7
PDK1	MYB	FANCD2	KIRREL	FAT4

PDPK1	MYC	FAS	PRPF38B	FAM115C
PER2	MYCN	FAT1	YTHDC1	LPHN2
PFKL	MYD88	FAT4	HEPACAM2	FNBP1L
PFKM	NASP	FBXO11	SMURF2	SMAP1
PFKP	NBN	FBXW7	PLCL1	IKZF5
PGAM1	NCOR1	FCGR2B	EIF3J	COL14A1
PGAM2	NF1	FES	C11orf94	LNX2
PGAM4	NF2	FGFR1	TNPO1	POLR2C
PGF	NFATC1	FGFR2		SLC9A9
PGR	NFE2L2	FGFR3		CPLX3
PIAS2	NFKB1	FGFR4		ZNF146
PIK3CA	NFKBIA	FHIT		SCCPDH
PIK3CB	NFKBIZ	FIP1L1		SPATA17
PIK3CD	NGF	FLT3		HLA-DRA
PIK3CG	NGFR	FLT4		TNRC6A
PIK3R1	NKD1	FOXA1		CSMD1
PIK3R2	NODAL	FOXL2		GABRA3
PIK3R3	NOG	FUBP1		NUFIP1
PIK3R5	NOL7	FUS		
PIM1	NOS3	GAS7		
PIM2	NOTCH1	GATA1		
PIP5K1A	NOTCH2	GATA2		
PIP5K1B	NOTCH3	GATA3		

PIP5K1C	NPM1	GNA11
PKM	NPM2	GNAQ
PLA2G4A	NR4A1	GNAS
PLA2G4B	NR4A3	GPC3
PLA2G4C	NRAS	GRIN2A
PLA2G4D	NSD1	H3F3A
PLA2G4E	NTF3	H3F3B
PLA2G4F	NTHL1	HEY1
PLAT	NTRK1	HIF1A
PLAU	NTRK2	HIP1
PLCB1	NUBP1	HIST1H3B
PLCB2	NUMBL	HNF1A
PLCB3	NUPR1	HNRNPA2B1
PLCB4	OSM	HOXA11
PLCG1	PAK3	HRAS
PLCG2	PAK7	IDH1
PLD1	PAX3	IDH2
PLD2	PAX5	IGH
PLEKHG5	PAX8	IKBKB
PLPP1	PBRM1	IKZF1
PLPP2	PBX1	IL6ST
PLPP3	PBX3	IL7R
PML	PCK1	IRS4

PPARD	PCNA	JAK1
PPARG	PDGFA	JAK2
PRCC	PDGFB	JAK3
PRKACA	PDGFC	KDM5C
PRKACB	PDGFD	KDM6A
PRKACG	PDGFRA	KDR
PRKCA	PDGFRB	KEAP1
PRKCB	PGF	KIT
PRKCG	PHF6	KLF4
PROM1	PIAS1	KMT2A
PTCH1	PIK3CA	KMT2C
PTCH2	PIK3CB	KMT2D
PTCRA	PIK3CD	KNL1
PTEN	PIK3CG	KRAS
PTGER1	PIK3R1	LATS1
PTGER2	PIK3R2	LATS2
PTGER3	PIK3R3	LCK
PTGER4	PIK3R4	LEF1
PTGS2	PIK3R5	LIFR
PTGS2	PIM1	LMNA
PTK2	PITX2	LRP1B
PTPN11	PKMYT1	LZTR1
RAC1	PLA1A	MAP2K1

RAC2	PLA2G10	MAP2K2
RAC3	PLA2G2A	MAP2K4
RAD51	PLA2G3	MAP3K1
RAF1	PLA2G4A	MAP3K13
RALA	PLA2G4C	MAPK1
RALB	PLA2G4E	MAX
RALBP1	PLA2G4F	MED12
RALGDS	PLA2G5	MEN1
RAP1A	PLAT	MET
RAP1B	PLAU	MLH1
RAPGEF1	PLCB1	MLLT10
RARA	PLCB4	MPL
RARB	PLCE1	MSH2
RASGRP1	PLCG2	MSH6
RASGRP2	PLD1	MTOR
RASGRP3	PML	MYC
RASGRP4	POLB	MYD88
RASSF1	POLD1	MYOD1
RASSF5	POLD4	NAB2
RB1	POLE2	NCOA2
RBX1	POLR2D	NCOR1
REL	POLR2H	NCOR2
RELA	POLR2J	NDRG1

RET	PPARG	NF1
RHEB	PPARGC1A	NF2
RHOA	PPP2CB	NFE2L2
ROCK1	PPP2R1A	NFKBIE
ROCK2	PPP2R2B	NONO
RPS6KA5	PPP2R2C	NOTCH1
RPS6KB1	PPP3CA	NOTCH2
RPS6KB2	PPP3CB	NPM1
RUNX1	PPP3CC	NRAS
RUNX1T1	PPP3R1	NT5C2
RUNX2	PPP3R2	NTRK1
RXRA	PRDM1	NTRK3
RXRB	PRKAA2	PAFAH1B2
RXRG	PRKACA	PAX3
SCO2	PRKACB	PAX5
SHC1	PRKACG	PAX7
SHC2	PRKAR1B	PAX8
SHC3	PRKAR2A	PBRM1
SHC4	PRKAR2B	PBX1
SHH	PRKCA	PDCD1LG2
SIN3A	PRKCB	PDGFRA
SIRT3	PRKCG	PER1
SIRT6	PRKDC	PHF6

SIX1	PRKX	PHOX2B
SIX4	PRL	PICALM
SKP2	PRLR	PIK3CA
SKP2	PRMT8	PIK3CB
SLC16A3	PROM1	PIK3R1
SLC1A5	PRPF38A	PIM1
SLC22A1	PTCH1	PLCG1
SLC22A2	PTCRA	PMS2
SLC22A3	PTEN	POLD1
SLC22A4	PTPN11	POLE
SLC22A5	PTPN5	POT1
SLC2A1	PTPRR	POU2AF1
SLC2A2	PTTG2	POU5F1
SLC44A1	RAC1	PPARG
SLC44A2	RAC2	PPM1D
SLC44A3	RAC3	PPP2R1A
SLC44A4	RAD21	PPP6C
SLC44A5	RAD50	PRDM1
SLC45A3	RAD51	PRDM16
SLC5A7	RAD52	PREX2
SLC7A5	RAF1	PRKACA
SMAD1	RASA4	PRKAR1A
SMAD2	RASAL1	PSIP1

SMAD3	RASGRF1	PTCH1
SMAD4	RASGRF2	PTEN
SMO	RASGRP1	PTK6
SOS1	RASGRP2	PTPN11
SOS2	RB1	PTPN13
SP1	RBM45	PTPRB
SPI1	RBX1	PTPRT
SPINT1	RELA	QKI
SRC	RELN	RABEP1
SRD5A2	RET	RAC1
SS18	RFC3	RAD21
SSX1	RFC4	RAF1
SSX2	RHOA	RANBP2
SSX2B	RIN1	RAP1GDS1
STAT1	RNF43	RB1
STAT3	RPA3	RBM10
STAT5A	RPS27A	RBM15
STAT5B	RPS6KA5	RECQL4
STK36	RPS6KA6	RET
STK4	RRAS2	RHOA
SUFU	RUNX1	RHOH
SUPT3H	RUNX1T1	RNF213
TAF15	RXRG	RNF43

TCEB1	SAP130	ROS1
TCEB2	SETBP1	RPL5
TCF3	SETD2	RUNX1T1
TCF7	SF3A3	SALL4
TCF7L1	SF3B1	SDHA
TCF7L2	SFN	SF3B1
TFE3	SFRP1	SFPQ
TFG	SFRP2	SIX1
TGFA	SFRP4	SLC34A2
TGFB1	SGK2	SLC45A3
TGFB2	SHC1	SMAD2
TGFB3	SHC2	SMAD3
TGFBR1	SHC3	SMAD4
TGFBR2	SHC4	SPOP
THBS1	SIN3A	STAG2
TIGAR	SIRT4	SUZ12
TLX1	SIX1	TBL1XR1
TLX3	SKP1	TCF7L2
TMPRSS2	SKP2	TCL1A
TNFSF11	SLC4A1AP	TERT
TP53	SMAD2	TET1
TPM3	SMAD3	TET2
TPR	SMAD4	TFE3

TRAF1	SMAD9	TGFBR2
TRAF2	SMARCA4	TMPRSS2
TRAF3	SMARCB1	TNFAIP3
TRAF4	SMC1A	TP53
TRAF5	SMC1B	TP63
TRAF6	SMC3	TRAF7
TSC1	SMO	UBR5
TSC2	SOCS1	USP8
TSPAN7	SOCS2	VHL
TYMP	SOCS3	WAS
UPK3A	SOS1	WIF1
UTY	SOS2	XPO1
VEGFA	SOST	ZBTB16
VEGFB	SOX17	ZFHX3
VEGFC	SOX9	ZRSR2
VEGFD	SP1	
VHL	SPOP	
WAS	SPP1	
WASF1	SPRY1	
WASF2	SPRY2	
WASF3	SPRY4	
WASL	SRSF2	
WHSC1	SSX1	

WNT1	STAG2
WNT10A	STAT1
WNT10B	STAT3
WNT11	STAT4
WNT16	STK11
WNT2	STMN1
WNT2B	SUV39H2
WNT3	SYK
WNT3A	TBL1XR1
WNT4	TCF3
WNT5A	TCF7L1
WNT5B	TCL1B
WNT6	TET2
WNT7A	TFDP1
WNT7B	TGFB1
WNT8A	TGFB2
WNT8B	TGFB3
WNT9A	TGFBR2
WNT9B	THBS1
WT1	THBS4
XIAP	THEM4
ZBTB16	TIAM1
ZBTB17	TLK2

ZEB1

TLR2

TLR4

TLX1

TMPRSS2

TMUB2

TNC

TNF

TNFAIP3

TNFRSF10A

TNFRSF10B

TNFRSF10C

TNFRSF10D

TNFSF10

TNN

TNR

TP53

TPO

TRAF7

TRIM39

TSC1

TSHR

TSLP

TSPAN7

TTC31

TTK

U2AF1

UBB

UBE2T

USP39

UTY

VEGFA

VEGFC

VHL

VPS33B

WEE1

WHSC1

WHSC1L1

WIF1

WNT10A

WNT10B

WNT11

WNT16

WNT2

WNT2B

WNT3

WNT4

WNT5A

WNT5B

WNT6

WNT7A

WNT7B

WT1

XPA

XRCC4

ZAK

ZBTB16

ZBTB32

ZC3H14

ZIC2

ZKSCAN5

ZNF143

ZNF346

ZNF384
