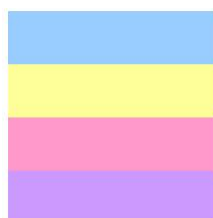


TableS1 .list of 425 genes

ABCB1(MDR1)	CDK12	ERCC2		IDH1	MSH6	PPARD	SMO
ABCC2(MRP2)	CDK4	ERCC3		IDH2	MTHFR	PPP2R1A	SOCS1
ADH1B	CDK6	ERCC4		IFNA6	MTOR	PRDM1	SOS1
AIP	CDK8	ERCC5		IFNB1	MUTYH	PREX2	SOX2
AKT1	CDKN1A	ESR1		IFNE	MYC	PRF1	SPOP
AKT2	CDKN1B	ETV1		IFNG	MYCL	PRKACA	SPRED1
AKT3	CDKN1C	ETV4		IFNGR1	MYCN	PRKAR1A	SPRY4
ALDH2	CDKN2A	ETV5		IFNGR2	MYD88	PRKCI	SRC
ALK	CDKN2B	ETV6		IGF1R	MYH9	PRKDC	SRSF2
AMER1	CDKN2C	EWSR1		IGF2	NAT1	PRSS1	SRY
APC	CEBPA	EXT1		IKBKE	NBN	PRSS3	STAG2
AR	CEP57	EXT2		IKZF1	NCOR1	PTCH1	STAT3
ARAF	CHD4	EZH2		IL7R	NF1	PTEN	STK11
ARID1A	CHD8	EZR		INPP4B	NF2	PTK2	STMN1
ARID1B	CHEK1	FANCA		IRF2	NFE2L2	PTPN11	SUFU
ARID2	CHEK2	FANCC		JAK1	NFKBIA	PTPN13	TACC3
ARID5B	CREBBP	FANCD2		JAK2	NKX2-1	QKI	TAP1
ASCL4	CRKL	FANCE		JAK3	NOTCH1	RAC1	TAP2
ASXL1	CSF1R	FANCF		JARID2	NOTCH2	RAC3	TEK
ATF1	CTCF	FANCG		JUN	NOTCH3	RAD50	TEKT4
ATIC	CTLA4	FANCI		KDM5A	NPM1	RAD51	TERC
ATM	CTNNB1	FANCL	KDR(VEGFR2)	NQO1	RAD51B		TERT
ATR	CUL3	FANCM	KEAP1	NRAS	RAD51C		TET2
ATRX	CUX1	FAT1	KIF1B	NRG1	RAD51D		TGFBR2
AURKA	CXCR4	FBXW7	KIT	NSD1	RAD54L		THADA
AURKB	CYLD	FGF19	KITLG	NTRK1	RAF1		TMEM127
AXIN2	CYP19A1	FGFR1	KLLN	NTRK2	RARA		TMPRSS2
AXL	CYP2A13	FGFR2	KMT2A(MLL)	NTRK3	RARG		TNFAIP3
B2M	CYP2A6	FGFR3	KMT2B	NUTM1	RASGEF1A		TNFRSF11A
BAD	CYP2A7	FGFR4	KMT2C	PAK3	RB1		TNFRSF14
BAI3	CYP2B6*6	FH	KMT2D(MLL2)	PALB2	RECQL4		TNFRSF19
BAK1	CYP2C19*2	FLCN	KRAS	PALLD	RELN		TNFSF11
BAP1	CYP2C9*3	FLT1(VEGFR1)	LHCGR	PARK2	RET		TOP1
BARD1	CYP2D6	FLT3	LMO1	PARP1	RHOA		TOP2A

BAX	CYP3A4*4	FLT4	LRP1B	PARP2	RICTOR	TP53	
BCL2	CYP3A5	FOXA1	LYN	PAX5	RNF43	TP63	
BCL2L11(BIM)	CYSLTR2	FOXL2	LZTR1	PBRM1	ROS1	TPMT	
BCR	DAXX	FOXP1	MAP2K1(MEK1)	PDCD1(PD1)	RPTOR	TSC1	
BIRC3	DDR2	FRG1	MAP2K2(MEK2)	PDCD1LG2(PD-L2)	RRM1	TSC2	
BLM	DENND1A	GATA1	MAP2K4	PDE11A	RUNX1	TSHR	
BMPRI1A	DHFR	GATA2	MAP3K1	PDGFRA	RUNX1T1	TTF1	
BRAF	DICER1	GATA3	MAP3K4	PDGFRB	SBDS	TUBB3	
BRCA1		DLL3	GATA4	MAX	PDK1	SDC4	TYMS
BRCA2		DNMT3A	GATA6	MCL1	PGR	SDHA	U2AF1
BRD4	DOT1L	GNA11	MDM2	PHOX2B	SDHB	UGT1A1	
BRIP1	DPYD	GNAQ	MDM4	PIK3C3	SDHC	VAMP2	
BTG2	DTL(CDT2)	GNAS	MECOM	PIK3CA	SDHD	VEGFA	
BTK	DUSP2	GRIN2A	MED12	PIK3CD	SEPT9	VHL	
BUB1B	EGFR	GRM3	MEF2B	PIK3R1	SETBP1	WAS	
c11orf30	EIF1AX	GRM8	MEN1	PIK3R2	SETD2	WISP3	
CASP8	EP300	GSTM1	MET	PKHD1	SF3B1	WRN	
CBL	EPAS1	GSTM4	MGMT	PLAG1	SGK1	WT1	
CBLB	EPCAM	GSTP1	MITF	PLCB4	SKP2	XPA	
CCND1	EPHA2	GSTT1	MLH1	PLK1	SLC34A2	XPC	
CCNE1	EPHA3	HDAC2	MLH3	PMS1	SLC3A2	XRCC1	
CD274(PD-L1)	EPHA5	HDAC9	MLLT1	PMS2	SMAD2	XRCC2	
CD74	ERBB2(HER2)	HGF	MLLT3	POLD1	SMAD3	YAP1	
CDA	ERBB2IP	HLA-A	MLLT4	POLD3	SMAD4	ZNF217	
CDC73	ERBB3	HNF1A	MPL	POLE	SMAD7	ZNF703	
CDH1	ERBB4	HNF1B	MRE11A	POLH	SMARCA4		
CDK10	ERCC1		HRAS	MSH2	POT1	SMARCB1	



Key genes related to targeted therapy

Key genes related chemotherapy

Genes associated with hereditary risks

Other important cancer-related genes