

GEM CANCER PANEL GENE CONTENT*

Genes With Coding Regions Covered (N=540)

ABL1	BCOR	CREBBP	FAM46C	HIST1H3B	LTF	NFE2L2	PMS1	SEPT4	TET2
ABL2	BCORL1	CRKL	FANCA	HIST1H4E	MAF	NFKB1	PMS2	SEPT12	TFE3
ACO1	BCR	CRLF2	FANCC	HLA-A	MAFB	NFKB2	POLE	SERPINB13	TGFBR2
ACVR1B	BHMT2	CSF1R	FANCD2	HLA-B	MALT1	NFKBIA	POT1	SETBP1	THBS1
ACVR2B	BIRC3	CTCF	FANCE	HLF	MAML2	NIN	POU2AF1	SETD2	TIMM17A
ADNP	BLM	CTNNA1	FANCF	HMGA2	MAP2K1	NKX2-1	POU2F2	SETDB1	TIMP3
AJUBA	BMPR1A	CTNNB1	FANCG	HNF1A	MAP2K2	NOTCH1	POU5F1	SF3B1	TLX1
AKAP9	BRAF	CUL4B	FANCL	HOOK3	MAP2K4	NOTCH2	PPARG	SFRS2	TNF
AKT1	BRD3	CUX1	FAT1	HRS	MAP3K1	NPM1	PPM1D	SGK1	TNFAIP3
AKT2	BRE	CYLD	FGF10	HSP90AB1	MAP4K3	NRAS	PPP2R1A	SIRT4	TNFRSF14
AKT3	BRIPI	DAXX	FGF14	IDH1	MBD1	NSD1	PPP6C	SKP2	TOP1
ALK	BTK	DCC	FGF19	IDH2	MCL1	NTN4	PRDM1	SLC1A3	TP53BP1
ALKBH6	BUB1B	DDB2	FGF23	IGF1R	MDM2	NTRK1	PREX2	SLC26A3	TPR
ALPK2	C3ORF70	DDIT3	FGF3	IGF2R	MDM4	NTRK2	PRKARIA	SLC44A3	TPX2
AMER1	CACNA1D	DDR2	FGF4	IKBKE	MED12	NTRK3	PRKDC	SLC4A5	TRAF7
ANK3	CALR	DDX3X	FGF6	IL2	MED23	NUMA1	PTCH1	SMAD2	TRIM23
APC	CAP2	DDX5	FGFBP1	IL21R	MEF2B	NUP210L	PTCH2	SMAD3	TRIM24
APOL2	CARD11	DEK	FGFR4	IL6ST	MEN1	NUP214	PTPN11	SMARCA4	TRIM33
AR	CASP8	DIAPH1	FH	IL7R	MET	NUP93	QKI	SMARCB1	TRIP11
ARAF	CBFB	DICER1	FHIT	ING1	MGA	NUP98	RAB40A	SMC1A	TRRAP
ARFRP1	CBL	DIS3	FLCN	ING4	MICALCL	ODAM	RAC1	SMC3	TSHR
ARHGAP35	CCDC120	DNAH12	FLG	INHBA	MITF	OMA1	RAD21	SMO	TTL9
ARID1A	CCDC6	DNER	FLI1	INPPL1	MLH1	OR4A16	RAD50	SNX25	TXNDC8
ARID1B	CCND1	DNMT1	FLT1	INTS12	MLL2	OR52N1	RAD51	SOCS1	U2AF1
ARID2	CCND2	DNMT3A	FLT3	IPO7	MLL4	OTUD7A	RAF1	SOS1	UBR5
ARID5B	CCND3	DOT1L	FLT4	IRF4	MLLT10	PAK3	RALGDS	SOX10	WAS
ARNT	CCNE1	EIF2S2	FOXA1	IRF6	MN1	PALB2	RARA	SOX11	WASF3
ASXL1	CD1D	ELF3	FOXL2	IRS2	MORC4	PAPD5	RASA1	SOX17	WHSC1
ASXL2	CD70	EML4	FOXO1	ITGB3	MPL	PAX3	RBM10	SOX2	WISP3
ATF1	CD79A	EMSY	FOXO3	ITGB7	MPO	PAX5	RECQL4	SOX9	WRN
ATM	CD79B	EP300	FOXPI	ITPKB	MRE11A	PAX7	REL	SPEN	XIRP2
ATP1A1	CDC27	EPHA2	FOXQ1	JAK1	MSH2	PAX8	RET	SPOP	XPA
ATP2B3	CDC73	EPHA3	FRMD7	JAK2	MSH6	PBRM1	RHEB	SRC	XPC
ATP5B	CDH1	EPHA5	FUBP1	JAK3	MTOR	PBX1	RHOA	SRSF2	XPO1
ATR	CDH11	EPHB1	GATA1	JUN	MUC1	PCBP1	RICTOR	SSX1	ZFH3
ATRX	CDK12	EPHB4	GATA2	KAT6A	MUC17	PDAP1	RIT1	STAT3	ZNF180
AURKA	CDK4	ERBB2	GATA3	KCNJ5	MUTYH	PDCD2L	RNASEL	STAT4	ZNF217
AURKB	CDK6	ERBB3	GID4	KDM5A	MXRA5	PDE4DIP	RNF43	STAT5B	ZNF384
AXIN1	CDK8	ERBB4	GNA11	KDM5C	MYB	PDGFB	ROS1	STK11	ZNF471
AXIN2	CDKN1A	ERCC2	GNA13	KDM6A	MYC	PDGFRA	RPL5	STK19	ZNF483
AXL	CDKN1B	ERCC3	GNAQ	KDR	MYCL1	PDGFRB	RPS15	STX2	ZNF521
AZGP1	CDKN2B	ERCC4	GNAS	KEAP1	MYCN	PKD1	RPS2	SUFU	ZNF620
B2M	CEBPA	ERCC5	GNB1	KEL	MYD88	PDSS2	RPS6KA2	SYK	ZNF703
BAI3	CEP76	ERG	GNPTAB	KIT	MYH11	PER1	RPTOR	TAL1	ZNF750
BAP1	CHD4	ESR1	GOT1	KLF4	MYH9	PHF6	RSBN1L	TAP1	ZRANB3
BARD1	CHD8	ETS1	GPC3	KLF6	MYOCD	PHLPP2	RUNX1	TBC1D12	
BCL10	CHEK1	ETV1	GPR124	KLHL6	NBPF1	PHOX2B	RXRA	TBL1XR1	
BCL11A	CHEK2	ETV4	GPS2	KLHL8	NBS1	PIK3CA	SACS	TBX3	
BCL11B	CIC	EXT1	GRIN2A	KRAS	NCOA1	PIK3CG	SBDS	TCEB1	
BCL2	CNBD1	EXT2	GSK3B	LCK	NCOA2	PIK3R1	SDH5	TCF12	
BCL2L2	CNKSRI	EZH1	GUSB	LCTL	NCOA3	PIK3R2	SDHA	TCF3	
BCL3	COL1A1	EZH2	H3F3A	LIFR	NCOA4	PIM1	SDHB	TCF7L2	
BCL6	COL5A1	EZR	H3F3B	LMO1	NCOR1	PLAG1	SDHC	TCL1A	
BCL9	COL5A3	FAM123B	HGF	LPP	NF1	PLCG2	SDHD	TCPI1L2	
BCLAF1	CREB1	FAM166A	HIST1H1E	LRP1B	NF2	PML	SELP	TDRD10	

Genes With Coding and Non-Coding Regions Covered For Identification of Structural Events (N=22)

BRCA1	BRCA2	CDKN2A	CDKN2C	EGFR	FBXW7	FGFR1	FGFR2	FGFR3	IKZF1
NF1	PTEN	PTPRD	RB1	SMAD4	STAG2	TP53	TRAF3	TSC1	TSC2
VHL	WT1								

Genes With Specific Structurally Involved Regions Covered For the Identification of Specific Structural Events

ALK	BCR	BRAF	ERG	EWSR1	FUS	HMGA2	JAK2	MAML2	NTRK1
PDGFB	PDGFRA	PLAG1	RARA	RET	ROS1	RSPO2	RSPO3	SS18	TCF3
TFE3	TMPRSS2								