

Intended Use


JAX SOMASEQ™ is a qualitative next generation sequencing based assay that uses targeted selection of DNA from 517 genes of interest, and RNA from 55 known drivers, for a total of 1.94Mb panel size. JAX SOMASEQ™ detects genomic signatures including microsatellite instability (MSI) and tumor mutational burden (TMB) using DNA and RNA isolated from formalin-fixed paraffin embedded (FFPE) tissue specimens in a single, streamlined workflow. Over 1,000 clinical trials are available for the range of variants targeted by the assay. JAX SOMASEQ™ was developed with the Illumina TruSight Oncology 500 Assay and its performance characteristics determined by The Jackson Laboratory. It has not been cleared or approved by the US Food and Drug Administration.

Gene List


Small variants only		Small variants and CNVs		Small variants and Fusions		Small variants, CNVs, and Fusions		
ABL1	CCND3	EPCAM	FOXA1	IKBKE	MLLT3	PIK3C2B	RIT1	TERT
ABL2	CCNE1	EPHA3	FOXL2	IKZF1	MPL	PIK3C2G	RNF43	TET1
ACVR1	CD274	EPHA5	FOXO1	IL10	MRE11A	PIK3C3	ROS1	TET2
ACVR1B	CD276	EPHA7	FOXP1	IL7R	MSH2	PIK3CA	RPS6KA4	TFE3
AKT1	CD74	EPHB1	FRS2	INHA	MSH3	PIK3CB	RPS6KB1	TFRC
AKT2	CD79A	ERBB2	FUBP1	INHBA	MSH6	PIK3CD	RPS6KB2	TGFBF1
AKT3	CD79B	ERBB3	FYN	INPP4A	MST1	PIK3CG	RPTOR	TGFBF2
ALK	CDC73	ERBB4	GABRA6	INPP4B	MST1R	PIK3R1	RUNX1	TMEM127
ALOX12B	CDH1	ERCC1	GATA1	INSR	MTOR	PIK3R2	RUNX1T1	TMPRSS2
ANKRD11	CDK12	ERCC2	GATA2	IRF2	MUTYH	PIK3R3	RYBP	TNFAIP3
ANKRD26	CDK4	ERCC3	GATA3	IRF4	MYB	PIM1	SDHA	TNFRSF14
APC	CDK6	ERCC4	GATA4	IRS1	MYC	PLCG2	SDHAF2	TOP1
AR	CDK8	ERCC5	GATA6	IRS2	MYCL1	PLK2	SDHB	TOP2A
ARAF	CDKN1A	ERG	GEN1	JAK1	MYCN	PMAIP1	SDHC	TP53
ARFRP1	CDKN1B	ERRF1	GID4	JAK2	MYD88	PMS1	SDHD	TP63
ARID1A	CDKN2A	ESR1	GLI1	JAK3	MYO1D	PMS2	SETBP1	TRAF2
ARID1B	CDKN2B	ETS1	GNA11	JUN	NAB2	PNRC1	SETD2	TRAF7
ARID2	CDKN2C	ETV1	GNA13	KAT6A	NBN	POLD1	SF3B1	TSC1
ARID5B	CEBPA	ETV4	GNAQ	KDM5A	NCOA3	POLE	SH2B3	TSC2
ASXL1	CENPA	ETV5	GNAS	KDM5C	NCOR1	PPARG	SH2D1A	TSHR
ASXL2	CHD2	ETV6	GPR124	KDM6A	NEGR1	PPM1D	SHQ1	U2AF1
ATM	CHD4	EWSR1	GPS2	KDR	NF1	PPP2R1A	SLIT2	VEGFA
ATR	CHEK1	EZH2	GREM1	KEAP1	NF2	PPP2R2A	SLX4	VHL
ATRX	CHEK2	FAM123B	GRIN2A	KEL	NFE2L2	PPP6C	SMAD2	VTG1
AURKA	CIC	FAM175A	GRM3	KIF5B	NFKBIA	PRDM1	SMAD3	WISP3
AURKB	CREBBP	FAM46C	GSK3B	KIT	NKX2-1	PREX2	SMAD4	WT1
AXIN1	CRKL	FANCA	H3F3A	KLF4	NKX3-1	PRKARIA	SMARCA4	XIAP
AXIN2	CRLF2	FANCC	H3F3B	KLHL6	NOTCH1	PRKCI	SMARCB1	XPO1
AXL	CSF1R	FANCD2	H3F3C	KRAS	NOTCH2	PRKDC	SMARCD1	XRCC2
B2M	CSF3R	FANCE	HGF	LAMP1	NOTCH3	PRSS8	SMC1A	YAP1
BAP1	CSNK1A1	FANCF	HIST1H1C	LATS1	NOTCH4	PTCH1	SMC3	YES1
BARD1	CTCF	FANCG	HIST1H2BD	LATS2	NPM1	PTEN	SMO	ZBTB2
BBC3	CTLA4	FANCI	HIST1H3A	LMO1	NRAS	PTPN11	SNCAIP	ZBTB7A
BCL10	CTNNA1	FANCL	HIST1H3B	LRP1B	NRG1	PTPRD	SOCS1	ZFHX3
BCL2	CTNNB1	FAS	HIST1H3C	LYN	NSD1	PTPRS	SOX10	ZNF217
BCL2L1	CUL3	FAT1	HIST1H3D	LZTR1	NTRK1	PTPRT	SOX17	ZNF703
BCL2L11	CUX1	FBXW7	HIST1H3E	MAGI2	NTRK2	QKI	SOX2	ZRSR2
BCL2L2	CXCR4	FGF1	HIST1H3F	MALT1	NTRK3	RAB35	SOX9	
BCL6	CYLD	FGF10	HIST1H3G	MAP2K1	NUP93	RAC1	SPEN	
BCOR	DAXX	FGF14	HIST1H3H	MAP2K2	NUTM1	RAD21	SPOP	
BCORL1	DCUN1D1	FGF19	HIST1H3I	MAP2K4	PAK1	RAD50	SPTA1	
BCR	DDR2	FGF2	HIST1H3J	MAP3K1	PAK3	RAD51	SRC	
BIRC3	DDX41	FGF23	HIST2H3A	MAP3K13	PAK7	RAD51B	SRSF2	
BLM	DHX15	FGF3	HIST2H3C	MAP3K14	PALB2	RAD51C	STAG1	
BMPRIA	DICER1	FGF4	HIST2H3D	MAP3K4	PARK2	RAD51D	STAG2	
BRAF	DIS3	FGF5	HIST3H3	MAPK1	PARP1	RAD52	STAT3	
BRCA1	DNAJB1	FGF6	HNF1A	MAPK3	PAX3	RAD54L	STAT4	
BRCA2	DNMT1	FGF7	HNRNPK	MAX	PAX5	RAF1	STAT5A	
BRD4	DNMT3A	FGF8	HOXB13	MCL1	PAX7	RANBP2	STAT5B	
BRIP1	DNMT3B	FGF9	HRAS	MDC1	PAX8	RARA	STK11	
BTG1	DOT1L	FGFR1	HSD3B1	MDM2	PBRM1	RASA1	STK40	
BTK	E2F3	FGFR2	HSP90AA1	MDM4	PDCD1	RB1	SUFU	
C11orf30	EED	FGFR3	ICOSLG	MED12	PDCD1LG2	RBM10	SUZ12	
CALR	EGFL7	FGFR4	ID3	MEF2B	PDGFRA	RECQL4	SYK	
CARD11	EGFR	FH	IDH1	MEN1	PDGFRB	REL	TAF1	
CASP8	EIF1AX	FLCN	IDH2	MET	PDK1	RET	TBX3	
CBFB	EIF4A2	FLI1	IFNGR1	MGA	PDPK1	RFWD2	TCEB1	
CBL	EIF4E	FLT1	IGF1	MITF	PGR	RHEB	TCF3	
CCND1	EML4	FLT3	IGF1R	MLH1	PHF6	RHOA	TCF7L2	
CCND2	EP300	FLT4	IGF2	MLL	PHOX2B	RICTOR	TERC	

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