

Oncomine Assay gene lists for FFPE tissue profiling

Oncomine Comprehensive Assay v3

The Ion Torrent™ Oncomine™ Comprehensive Assay v3 is a targeted, next-generation sequencing (NGS) assay that enables the detection of relevant single-nucleotide variants (SNVs), copy number variations (CNVs), gene fusions, and indels from 161 unique genes to help inform drug discovery

research and clinical trial research programs. The genes in this 161-gene assay can be categorized by relevance as annotated by Oncomine™ Reporter v4.0, released in September 2018. At that time, there were 9 genes linked to 46 targeted therapies, 15 genes in 21 guidelines, and 118 genes used in 1,021 global clinical trials.

Hotspot genes (87)				Copy number variants (43)		Fusion drivers (51)			Full exon coverage (48)		
AKT1	ESR1	KIT	PDGFRB	AKT1	FGFR4	AKT2	KRAS	RB1	ARID1A	NF1	STK11
AKT2	EZH2	KNSTRN	PIK3CA	AKT2	FLT3	ALK	MDM4	RELA	ATM	NF2	TP53
AKT3	FGFR1	KRAS	PIK3CB	AKT3	IGF1R	AR	MET	RET	ATR	NOTCH1	TSC1
ALK	FGFR2	MAGOH	PPP2R1A	ALK	KIT	AXL	MYB	ROS1	ATRX	NOTCH2	TSC2
AR	FGFR3	MAP2K1	PTPN11	AR	KRAS	BRAF	MYBL1	RSPO2	BAP1	NOTCH3	
ARAF	FGFR4	MAP2K2	RAC1	AXL	MDM2	BRCA1	NF1	RSPO3	BRCA1	PALB2	
AXL	FLT3	MAP2K4	RAF1	BRAF	MDM4	BRCA2	NOTCH1	TERT	BRCA2	PIK3R1	
BRAF	FOXL2	MAPK1	RET	CCND1	MET	CDKN2A	NOTCH4		CDK12	PMS2	
BTK	GATA2	MAX	RHEB	CCND2	MYC	EGFR	NRG1		CDKN1B	POLE	
CBL	GNA11	MDM4	RHOA	CCND3	MYCL	ERBB2	NTRK1		CDKN2A	PTCH1	
CCND1	GNAQ	MED12	ROS1	CCNE1	MYCN	ERBB4	NTRK2		CDKN2B	PTEN	
CDK4	GNAS	MET	SF3B1	CDK2	NTRK1	ERG	NTRK3		CHEK1	RAD50	
CDK6	H3F3A	MTOR	SMAD4	CDK4	NTRK2	ESR1	NUTM1		CREBBP	RAD51	
CHEK2	HIST1H3B	MYC	SMO	CDK6	NTRK3	ETV1	PDGFRA		FANCA	RAD51C	
CSF1R	HNF1A	MYCN	SPOP	EGFR	PDGFRA	ETV4	PDGFRB		FANCD2	RAD51D	
CTNNB1	HRAS	MYD88	SRC	ERBB2	PDGFRB	ETV5	PIK3CA		FANCI	RAD51B	
DDR2	IDH1	NFE2L2	STAT3	ESR1	PIK3CA	FGFR1	PPARG		FBXW7	RB1	
EGFR	IDH2	NRAS	TERT	FGF19	PIK3CB	FGFR2	PRKACA		MLH1	RNF43	
ERBB2	JAK1	NTRK1	TOP1	FGF3	PPARG	FGFR3	PRKACB		MRE11	SETD2	
ERBB3	JAK2	NTRK2	U2AF1	FGFR1	RICTOR	FGFR3	PTEN		MSH2	SLX4	
ERBB4	JAK3	NTRK3	XPO1	FGFR2	TERT	FLT3	RAD51B		MSH6	SMARCA4	
ERCC2	KDR	PDGFRA		FGFR3		JAK2	RAF1		NBN	SMARCB1	

Oncomine Focus Assay

The Ion Torrent™ Oncomine™ Focus Assay is a targeted, multibiomarker assay that enables you to target hotspots, SNVs, CNVs, and gene fusions from DNA and RNA in a single workflow. The genes in this 52-gene assay can be

categorized by relevance as annotated by Oncomine Reporter v4.0, released in September 2018. At that time, there were 7 genes linked to 43 targeted therapies, 12 genes in 19 guidelines, and 43 genes used in 941 global clinical trials.

Hotspot genes (35)				Copy number variants (19)			Fusion drivers (23)		
AKT1	ERBB3	IDH2	MTOR	ALK	FGFR2	PIK3CA	ABL1	ETV4	PDGFRA
ALK	ERBB4	JAK1	NRAS	AR	FGFR3		AKT3	ETV5	PPARG
AR	ESR1	JAK2	PDGFRA	BRAF	FGFR4		ALK	FGFR1	RAF1
BRAF	FGFR2	JAK3	PIK3CA	CCND1	KIT		AXL	FGFR2	RET
CDK4	FGFR3	KIT	RAF1	CDK4	KRAS		BRAF	FGFR3	ROS1
CTNNB1	GNA11	KRAS	RET	CDK6	MET		EGFR	MET	
DDR2	GNAQ	MAP2K1	ROS1	EGFR	MYC		ERBB2	NTRK1	
EGFR	HRAS	MAP2K2	SMO	ERBB2	MYCN		ERG	NTRK2	
ERBB2	IDH1	MET		FGFR1	PDGFRA		ETV1	NTRK3	

Oncomine Childhood Cancer Research Assay

The Ion Torrent™ Oncomine™ Childhood Cancer Research Assay is a unique, NGS-based tool designed for comprehensive genomic profiling of cancers affecting children and young adults.

Hotspot genes (86)			Copy number variants (28)		Fusion drivers (91)			Full exon coverage (44)		Gene expression (9)	
ABL1	FGFR1	NPM1	ABL2	GLI2	ABL1	KMT2C	PAX7	APC	SMARCA4	BCL2	MET
ABL2	FGFR2	NRAS	ALK	IGF1R	ABL2	KMT2D	PDGFB	ARID1A	SMARCB1	BCL6	MYC
ALK	FGFR3	NT5C2	BRAF	JAK1	AFF3	LMO2	PDGFRA	ARID1B	SOCS2	FGFR1	MYCN
ACVR1	FLT3	PAX5	CCND1	JAK2	ALK	MAML2	PDGFRB	ATRX	SUFU	FGFR4	TOP2A
AKT1	GATA2	PDGFRA	CDK4	JAK3	BCL11B	MAN2B1	PLG1	CDKN2A	SUZ12	IGF1R	
ASXL1	GNA11	PDGFRB	CDK6	KIT	BCOR	MECOM	RAF1	CDKN2B	TCF3		
ASXL2	GNAQ	PIK3CA	EGFR	KRAS	BCR	MEF2D	RANBP17	CEBPA	TET2		
BRAF	H3F3A	PIK3R1	ERBB2	MDM2	BRAF	MET	RARA	CHD7	TP53		
CALR	HDAC9	PPM1D	ERBB3	MDM4	CAMTA1	MKL1	RECK	CRLF1	TSC1		
CBL	HIST1H3B	PTPN11	FGFR1	MET	CCND1	MLLT10	RELA	DDX3X	TSC2		
CCND1	HRAS	RAF1	FGFR2	MYC	CIC	MN1	RET	DICER1	WHSC1		
CCND3	IDH1	RET	FGFR3	MYCN	CREBBP	MYB	ROS1	EBF1	WT1		
CCR5	IDH2	RHOA	FGFR4	PDGFRA	CRLF2	MYBL1	RUNX1	EED	XIAP		
CDK4	IL7R	SETBP1	GLI1	PIK3CA	CSF1R	MYH11	SS18	FAS			
CIC	JAK1	SETD2			DUSP22	MYH9	SSBP2	GATA1			
CREBBP	JAK2	SH2B3			EGFR	NCOA2	STAG2	GATA3			
CRLF2	JAK3	SH2D1A			ETV6	NCOR1	STAT6	GNA13			
CSF1R	KDM4C	SMO			EWSR1	NOTCH1	TAL1	ID3			
CSF3R	KDR	STAT3			FGFR1	NOTCH2	TCF3	IKZF1			
CTNNB1	KIT	STAT5B			FGFR2	NOTCH4	TFE3	KDM6A			
DAXX	KRAS	TERT			FGFR3	NPM1	TP63	KMT2D			
DNMT3A	MAP2K1	TPMT			FLT3	NR4A3	TSLP	MYOD1			
EGFR	MAP2K2	USP7			FOSB	NTRK1	TSPAN4	NF1			
EP300	MET	ZMYM3			FUS	NTRK2	UBTF	NF2			
ERBB2	MPL				GLI1	NTRK3	USP6	PHF6			
ERBB3	MSH6				GLIS2	NUP214	WHSC1	PRPS1			
ERBB4	MTOR				HMGA2	NUP98	YAP1	PSMB5			
ESR1	MYC				JAK2	NUTM1	ZMYND11	PTCH1			
EZH2	MYCN				KAT6A	NUTM2B	ZNF384	PTEN			
FASLG	NCOR2				KMT2A	PAX3		RB1			
FBXW7	NOTCH1				KMT2B	PAX5		RUNX1			

Oncomine™ NGS assays come to you as part of an integrated end-to-end, sample-to-answer solution. They have been carefully designed for oncology labs, and are easy to implement and simple to use.



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