

# PancancerLight® 800 gDNA Reference Standard



Empower a more comprehensive validation of large oncology gene panels



Product Code	Product Name	Format	Specification	Shelf Life
IB-GW-OGTM800	PancancerLight® 800 gDNA Reference Standard	gDNA	30ng/μL, 1μg/tube	3 years (2-8°C)

## Key Features

- Well-characterised, cell line-derived Reference Standard.
- Covering mutations related to a variety of cancer types. Lung cancer, colorectal cancer, breast cancer, hematological diseases etc.
- 720 variants across 330 oncology genes confirmed by NGS.
- With batch-specific 500x exome NGS data.
- Variants are present between 1-100% allelic frequencies (AF).
- 16 variants are verified by ddPCR, with the allelic frequencies ranging from 1% to 7%.
- More than 700 variants including SNVs, INDELS, Fusion and CNVs.
- A high coverage across the most popular NGS gene panels. Illumina, Foundation One, Guardant Health and Thermo Fisher.

## ddPCR Verified Mutations

Mutation	Variant Type	Expected Allelic Frequency, %
EGFR L858R	SNV	1%
KRAS A146T	SNV	1%
NRAS Q61K	SNV	1%
EGFR T790M	SNV	2%
EGFR E746_A750del	Deletion	2%
FLT3 I836del	Deletion	2%
KIT D816V	SNV	2%
KRAS G12D	SNV	2%
EGFR A767_V769dup	Insertion	3%
EGFR G719S	SNV	4%
KRAS G13D	SNV	4%
ALK EML4(6)-ALK(20)	Fusion	5%
ROS1 CD74(6)-ROS1(34)	Fusion	6%
BRAF V600E	SNV	7%
PIK3CA H1047R	SNV	7%
ERBB2 Amplification	CNV	5 copies

# Genes Overlapped with NGS Gene Panels

Panel Name	Thermo Fisher				Illumina		Foundation Medicine	Guardant Health
	OncoPrint™ Pan-Cancer Cell-Free Assay	OncoPrint™ Comprehensive Assay	OncoPrint™ Tumor Mutation Load Assay	OncoPrint™ Childhood Cancer Research Assay	TruSight™ Oncology 170	TruSight™ Oncology 500	Foundation One® CDx	Guardant 360® Assay
Gene number in Panels	52	162	409	253	170	523	324	75
Genes covered by PancancerLight® 800	25	63	178	113	77	218	130	31
Overlapped proportion%	48%	39%	44%	45%	45%	42%	40%	41%

## WES Verified Genes

ABL1	BUB1B	DHX15	FAT1	HRAS	LTF	NF1	PIK3R2	RRM1	TET2
ACVR1	CAMTA1	DIS3	FGF3	HSD3B1	MAGI2	NFKB1	PKHD1	RSP02	TFRC
ACVR2A	CARD11	DNMT1	FGF6	HSP90AA1	MAML2	NFKB2	PLCG1	RSP03	THBS1
ADAMTS20	CASP8	DNMT3A	FGF9	HSP90AB1	MAP3K1	NFKBIA	PLCG2	SAMD9	TMEM127
AFF1	CCNE1	DNMT3B	FGFR2	ICK	MAP3K14	NIN	PLK2	SDC4	TMPRSS2
AFF3	CD70	DOTIL	FGFR3FGFR4	ID3	MAP3K4	NLRP1	PML	SDHA	TOP2A
AKAP9	CD79B	DPYD	FLT1	IGF1R	MARK4	NOTCH1	PMS2	SDHB	TP53
ALK	CDH1	Dst	FLT3	IGF2R	MBD1	NOTCH2	POLE	SETBP1	TP53BP1
ANKRD11	CDH11	DUSP22	FLT4	IKBKE	MEN1	NOTCH3	PPP6C	SETD2	TPMT
ANKRD26	CDH2	EBF1	FN1	INSR	MERTK	NRG1	PRDM1	SF3B1	TRIM33
APC	CDH20	EGFR	FOXA1	IRF2	MET	NSD1	PREX2	SH2B3	TRIP11
AR	CDH5	EML4	FOXO3	IRS2	MGA	NTRK1	PROC	SHQ1	TRRAP
ASXL1	CDKN1A	EP300	FOXP4	ITGA10	MKL1	NTRK3	PTCH1	SLC34A2	TSC1
ATM	CFH	EP400	FRS2	ITGA9	MLH1	NUP214	PTPRD	SLX4	TSHR
ATR	CHD2	EPCAM	FUS	ITGB2	MLLT10	NUP93	PTPRO	SMAD3	TSPAN4
AURKA	CHD4	EPHA3	GABRA6	ITGB3	MMAB	NUTM1	PTPRS	SMC3	UBR5
AURKB	CHEK1	EPHA5	GATA2	JAK1	MMP2	PARP1	PTPRT	SMO	USP6
AXIN1	CIC	EPHA7	GEN1	KAT6B	MSH2	PARP2	RAD52	SMOX	USP7
AXIN2	COL1A1	EPHB1	GID4	KDM4C	MSH3	PARP3	RAD54L	soX10	WRN
AXL	CRLF1	EPHB4	GLI1	KDM5A	MST1	PAX3	RALGDS	SoX9	WT1
BARD1	CRTC1	ERBB2	GLI2	KDM5C	MSTIR	PAX5	RANBP2	SPEN	XPC
BCL11A	CSF1R	ERBB3	GLIS2	KLF4	MTAP	PBRM1	RECQL4	SPTA1	YES1
BCL2L11	CSF3R	ERBB4	GNA11	KLHL6	MTOR	PBX1	ReT	SRC	ZBTB2
BCL6	CSMD3	ERCC1	GPS2	KMT2C	MTR	PDCD1LG2	RHBDP2	SRSF2	ZFH3
BCL9	CTLA4	ERCC2	GRIN2A	KMT2D	MTRR	PDE4DIP	RICTOR	STAG1	ZMYND11
BCOR	CUL3	ESR1	HDAC9	KRAS	MUC1	PDGFRA	RIT1	STK40	ZNF217
BCORL1	CUX1	ETS1	HIST1H1C	LAMP1	MYCL	PER1	RNASEL	SUFU	ZNF521
BCR	CYP17A1	ETV1	HIST1H3C	LATS1	MYH11	PGAP3	RNF213	SYK	
BIRC5	CYP2D6	FAM46C	HIST1H3G	LATS2	MYH9	PGR	RNF43	SYNE1	
BLNK	DCC	FANCA	HIST1H3J	LDLR	NBN	PHOX2B	ROS1	TAL1	
BRCA1	DCUN1D1	FANCE	HLA-A	LMO1	NCOA1	PIK3C2B	RPS6KA2	TCF3	
BRCA2	DDB2	FANCI	HLA-B	LMO2	NCOA4	PIK3C2G	RPS6KA4	TEK	
BRD3	DDX41	FANCL	HNF1A	LPP	NCOR2	PIK3CG	RPS6KB2	TERT	
BRIP1	DEK	FAS	HOXB13	LRP1B	NEGR1	PIK3R1	RPTOR	TET1	



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