

Solid Tumor Fusion RNA Panel

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PRODUCT OVERVIEW

Target Size: 1.2 Mb

Coverage

All coding regions of transcripts from 298 genes related to solid tumors and the UTR regions of selected genes.

Detection range

Fusion, transcript variation and expression, etc.

Sequencing volume

4 Gb

Applications

Adjuvant diagnosis, medication guidance, prognostic indication

VALIDATION OF FUSION REFERENCE STANDARD

Table 1 Detection results of fusion reference standards

Fusion Gene	50 ng Input		100 ng Input	
	Repeat 1	Repeat 2	Repeat 1	Repeat 1
	(Junction/Spawning reads)		(Junction/Spawning reads)	
TMPRSS2-ERG	112	54	74	184
KIF5B -RET	146	102	149	191
SLC45A3-BRAF	108	77	66	109
FGFR3-TACC3	166	124	137	154
FGFR3-BAIAP2LI	130	107	140	172
LMNA-NTRK1	87	69	59	96
TPM3-NTRK1	130	75	117	122
CD74- ROSI	166	104	187	185
NCOA4-RET	105	58	46	52
ETV6-NTRK3	65	35	35	47
CCDC6-RET	20	31	28	35
TFG-NTRK1	41	44	48	46
EML4-ALK	55	40	51	71
SLC34A2-ROSI	55	45	54	47
EGFR-SEPT14	39	32	42	61
PAX8 -PPARG	136	78	117	106
METexon14 skipping	408	408	351	405
EGFR Variant III	167	106	88	134

Note: Fusion detection results for the positive control standards show that all known fusions were successfully identified under the same data yield (~4 Gb) across different input amounts.

PERFORMANCE

-Capture performance-

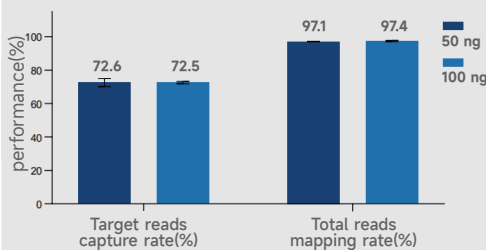


Figure 1

Capture Performance of RNA Reference Standard

Total RNA was extracted from Seraseq® FFPE Fusion RNA Reference Material v4. Libraries were prepared from 50 ng input RNA using an RNA library construction kit, hybrid-capture-enriched, and sequenced on an Illumina NovaSeq6000 (PE150)

-Cover all transcripts of 298 genes

ABL1*†	ABL2	ACKR3	ACTB	AFF1	AFF3	AHRR	AKAP9	AKT3	ALK
ARHGAP26	ASPSR1	ATF1	ATIC	AXL	BAG4	BAIAP2LI	BCAS3	BCAS4	BCL11A
BCL2†	BCL3	BCOR*†	BIRC3	BIRC6	BRAF	BRD3	BRD4*	CL10r95	CAMTA1
CANT1	CARS1	KNL1	CASP7	CCAR2	CCDC6	CCNB1IP1	CCNB3	CCND1	CCND3
CD74	CDH11	CDKN2D	CDX1	CHCHD7	CIC†	CLTC	COL1A1	COL1A2	COL4A5
COL6A3	CREB1	CREB3L1	CREB3L2	CRU2	CRT1	CRT3	CSF1	CSF1R	CTNNB1
CUX1	DDIT3	DDX5	DEK	SLC49A4	DNAJB1	DUX4	EBF1	EGFR	EIF3E
EIF4A2	ELK4	EML4	EP300	EPC1	EPCAM	ERBB2†	ERC1	ERG*	ERLIN2
ESR1	ESRRA	ETS1*	ETV1*	ETV4	ETV5*	ETV6*	EWSR1	EZR	TAF12
FEV	FGF8	FGFR1	FGFR2	FGFR3	FGR*	FHIT	FLI1	FLT3	FOSB
FOXO1	FOXO4	FRYL	FUS	GLI1	GOLGA5	GOPC	GPC3	GRID1	HAS2
HERPUD1	HEY1	HIP1	HJURP	HMGAI	HMG2	HMG2NP46	HNRNP2B1	HOOK3	HPR
INSR	IRF2BP2	JAK2*	JAK3	JAZF1	KAT6B	RELCH	KIAA1549	KIF5B†	KIT†
KLF17	KLK2	KLK4	KLKP1	KMT2A	KRAS	KTN1	LHFPL6	LIFR	LMO1
LPP	LRIG3	LRP1	MAML2	MAST1	MAST2	MBTD1	MEAF6	MET*	OGA
MIPOL1	MRTFB	MLLT1	MLLT3	MNI	MSH2	MSMB	MUSK	MUTYH	MYB
MYC	MYH11	MYH9	NAB2	NCOA1*	NCOA2*	NCOA4	NDRG1	NFATC2	NFIB
NIPBL	NONO	NOTCH1	NOTCH2	NOTCH3†	NR4A3*	NRG1	NSD1	NTRK1	NTRK2
NTRK3	NUMA1	NUMBL	NUP98	NUTM1	NUTM2A	NUTM2B	NUTM2E	OMD	PAFAH1B2
PATZ1	PAX3	PAX5	PAX7	PAX8	PBX1	PBX3	PCML	PCSK7	PDGFB
PDGFRA	PDGFRB†	PHF1	PIK3CA*	PKIN1	PLAG1*	PLPP3	POU5F1	PPARG*	PPFIBP1
PRCC	PRKACA	PRKARIA	PRKCA	PRKCB	PSPC1	PTGFRN	PTPRK	RAD51B	RAF1
RAINBP2	RARA*	RELA	RET	RGS17	RMI2	ROSI	RPS10	RSP02*	RSP03
RUNX1	SDC4	SDHA	SDHB	SDHD	SEC16A	SEC22B	SEC31A	SEPTIN14	SEPTIN9
SFPQ	SLC34A2	SLC45A3	SMARCB1	SMARCE1	SP3	SRGAP3	SS18	SS18L1	SS18L2
SSX1	SSX2	SSX4	STAT6	STRN	SUZ12	TACC1	TACC3	TAF15	TBL1XR1
TCEA1	TCF12†	TCF3	TCF7L2	TEC	TENM4	TERT	TET1	TFE3	TFEB
TFG	TGFBFR3	THADA	THRAP3	TMPRSS2*†	TP53*	TPM3	TPM4	TPR	TRIM24
TRIM27	TRIM33	USP6*	VTG1A	WASF2	WDF2	WDFY2	NSD2	WFI1	WT1
WWTR1	YAP1	YWHAE*	YY1	ZC3H7B	ZDHHC7	ZNF331	ZNF444		

NOTE: *Cover all 5'-UTR, †cover all 3'-UTR

PRODUCT INFORMATION

Product Name	Spec.	Cat.
Solid Tumor Fusion RNA Panel	24/96 rxn	PH2000475/PH2000472
IGT® Fast Stranded RNA Library Prep Kit v2.0	96 rxn	C10032
IGT® Adapter & UDI Primer 1-96*	96*1 rxn	C10042
TargetSeq One® Hyb & Wash Kit v3.0*	24/96 rxn	C11534/C11532
TargetSeq® Eco Universal Blocking Oligo*	24/96 rxn	C80504/C80502
TargetSeq® Cap Beads & Nuclease-Free Water*	5 mL each	C10422

*IGT® can provide kits compatible with Illumina, MGI etc., as well as universal reagents corresponding to each platform.

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