PANCANCER pro

For the screening of solid tumors.

PANCANCER pro

PANCANCER pro is a novel NGS medical device for the molecular profiling of the variants involved in onset and progression of solid tumors.

PANCANCER pro is a kit for the analysis of 95 genes related to several solid tumors, through a molecular protocol based on NGS technologies. The kit is validated for germline analysis (SNPs, indels, CNVs) of DNA extracted from blood or body tissues samples.

PANCANCER pro kit contains all reagents required for the preparation of the capture of specifically designed probes and for the NGS analysis using Thermofisher.

TECHNOLOGY

The HEVA pro kit is part of a DNA-to-variant solution that offers streamlined content, easy-to-perform library preparation, push-button sequencing systems, and simplified data analysis.

WORKFLOW

Library preparation follows a straightforward, capture-based protocol that can be completed in as little as 24 hours, with < 3 hours hands-on time. Resulting libraries can be normalized, pooled, and then loaded on to a chip for sequencing. Prepared libraries are sequenced on any compatible Thermofisher sequencers.

Table 1. List of target genes in **PANCANCER pro**

ABL1	CDKN2A	FGFR3	NRAS	TP53	P13K	CDH1	MLP
ALK	CHEK2	FLT3	PALB2	VHL	EGFR	CSF1R	NPM1
APC	CHEK1	HRAS	PIK3CA	BRCA1	PDL1 (CD274)	DDR2	PDGFRA
ARID1A	CSF3R	IDH1	PTEN	BRCA2	KRAS	ERBB2	PTPN11
ATM	CTNNB1	IDH2	RAD51B	HER2	NOTCH1	ERBB4	STK11
ATR	DNMT3A	JAK2	RAD51C	MET	NOTCH2	EZH2	SMAD4
ATRX	FANCA	JAK3	RAD51D	NTRK1	NOTCH3	FOXL2	SMARCB1
BARD1	FANCL	KIT	RAD54L	NTRK2	NOTCH4	GNA11	SMO
BRAF	FBXW7	KMT2A	RB1	NTRK3	AKT1	GNAQ	SRC
BRIP1	EML4	MAP2K1	RET	HRAS	PIK3CA	GNAS	TSC1
CBL	FGFR1	MLH1	ROS1	KRAS	TSHR	HNF1A	VHL
CDK12	FGFR2	MSH6	TET2	NRAS	TERT	KDR	

VALIDATION

To demonstrate assay capabilities, clinical samples were run in a clinical setting. DNA quality and quantity of the libraries prepared were verified using Qubit and Agilent Bioanalyzer.
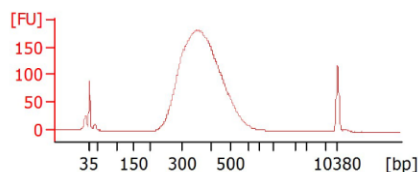

Figure 1: PANCANCER pro final library profile example

SAMPLE PER RUN

Instrument	Samples per run*	
	Germline	Somatic
Ion 318™ Chip/Ion 520™ Chip	8	0
Ion 530™ Chip	32	0
Ion PI™ Chip/Ion 540™ Chip	96	0
Ion 550™ Chip	256	8

*the estimated maximum number of samples per chip assumes a reading depth of 300x for the germline and 5000x for the somatic. The optimal number of samples can be empirically estimated on the local setup.

The volume present in the kit is calculated to allow the subdivision into multiples of 8 analysis sessions. Dividing the kit in different ways decrease the total number of tests that can be performed.

ORDERING INFORMATION

Product	REF
PANCANCER pro	RC3200Y-16 (16 test)
PANCANCER pro	RC3200Y-96 (96 test)
Adapter	
Y ADAPTER	R9001-16 (16 test)
Y ADAPTER	R9001-96 (96 test)

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