

BENKit panel

For the screening of Metastatic Colorectal Cancer and Non-small-cell Lung Carcinoma



BENKit panel

BENKit Panel is a novel NGS Medical Device for the molecular profiling of the Hot Spots relevant for the therapy selection in Metastatic Colorectal Cancer and non-small-cell lung carcinoma. BENKit panel is a kit for the analysis of the KRAS, NRAS, BRAF, EGFR and PIK3CA genes through a molecular protocol based on NGS technologies. The kit is validated for somatic analysis (SNPs, indels) of DNA extracted from cancer tissues (fresh, frozen or FFPE) or other body tissues.

TECHNOLOGY

BENKit panel kit contains all reagents required for the preparation of a specific bidirectional library of amplicons designed for the NGS analysis using Ion Torrent sequencers.

WORKFLOW

The BENKit panel 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.

Library preparation follows a straightforward, PCR-based protocol that can be completed in as little as 5 hours, with < 1.5 hours hands-on time. Resulting libraries can be normalized, pooled, and then loaded on to a flow cell for sequencing.

Prepared libraries are sequenced on any compatible Ion Torrent sequencers.

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.

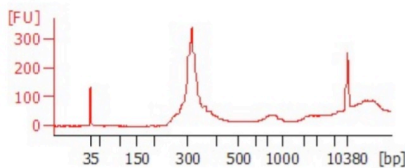


Figure 1. BENKit panel profiles examples

SOFTWARE ANALYSIS

4eVAR is our proprietary analysis software. The analysis is designed based on the characteristics and technologies of the kit, in order to increase accuracy of results, and to have the complete control on the entire process.

Table 1. List of target regions in BENKit panel

Target genes	Exons
KRAS	2, 3, 4
NRAS	2, 3, 4
BRAF	11, 15
EGFR	18, 19, 20, 21
PIK3CA	10, 21

SAMPLE PER RUN

Instrument	Samples per run*
	Somatic
Ion 316™ Chip/Ion 510™ Chip	
Ion 318™ Chip/Ion 520™ Chip	
Ion 530™ Chip	
Ion PI™ Chip/Ion 540™ Chip	

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

ORDERING INFORMATION

Product**	REF
BENKit panel	H1020-16 (16 test)
BENKit panel	H1020-48 (48 test)
Barcode	
Barcode Set 1-16	6001
Barcode Set 17-32	6002
Barcode Set 33-48	R6003
Barcode Set 49-64	R6004

**the kit is also available in its version only for research use (RUO).