

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 solution

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. BENKit panel kit contains all reagents required for the preparation of a specific bidirectional library of amplicons designed for the NGS analysis using Illumina or 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 Illumina or 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 Bioanalyser.

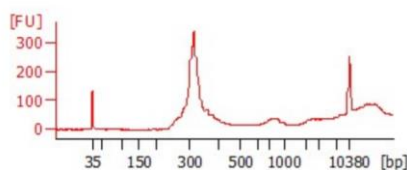


Figure 1. BENKit panel profiles examples

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 | Sample per run |
|--------------------------------------|----------------|
| MiSeq Nano Kit v2 (300-cycles) | 7 |
| MiSeq Nano Kit v2 (500-cycles) | 7 |
| MiSeq Micro Kit v2 (300-cycles) | 30 |
| MiSeq Kit v2 (300-cycles) | 120 |
| MiSeq Kit v2 (500-cycles) | 120 |
| MiSeq Kit v3 (600-cycles) | 200 |
| MiniSeq Mid Output Kit (300-cycles) | 60 |
| MiniSeq High Output Kit (300-cycles) | 200 |
| iSeq 100 i1 kit (300-cycles) | 30 |
| NextSeq 550 Mid-Output Kit | 1000 |
| NextSeq 550High-Output Kit | 3100 |
| Ion 314™ Chip | 8 |
| Ion 316™ Chip | 36 |
| Ion 318™ Chip/Ion 520™ Chip | 80 |
| Ion 530™ Chip | >96 |
| Ion PI™ Chip/Ion 540™ Chip | >96 |

**the maximum number of samples per cartridge/chip estimated assuming an average depth of 5000x for somatic samples. The optimal number of samples must be empirically determined on local setups.*

Ordering Information

| Product | REF |
|-------------------------------------|--------------------|
| BENKit panel | H1020-16 (16 test) |
| BENKit panel | H1020-48 (48 test) |
| <i>For Illumina instrument**</i> | |
| Index Set series RUO - CE | 3000 |
| <i>For Ion Torrent instrument**</i> | |
| Barcode series RUO - CE | 6000 |

***for the complete list of available indexes and barcodes, refer to Flyer_Index-Barcode*