

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 Illumina 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 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.

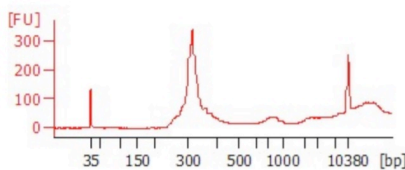


Figure 1. BENKit panel profiles examples

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 |
| iSeq 100 i1 kit (300-cycles) | 30 |
| MiniSeq Mid Output Kit (300-cycles) | 60 |
| MiniSeq High Output Kit (300-cycles) | 200 |
| MiSeq Nano Kit v2 (300-cycles)/(500-cycles) | 7 |
| MiSeq Micro Kit v2 (300-cycles) | 30 |
| MiSeq Kit v2 (300-cycles)/(500-cycles) | 120 |
| MiSeq Kit v3 (600-cycles) | 200 |

*the estimated maximum number of samples per cartridge 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) |
| Index | |
| Index Set 16 | 3006 |
| Index Set 96 | 3007 |
| Index Set 384 | 3009X |

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