CFTR panel

For the diagnosis of hereditary variants in Cystic Fibrosis

CFTR panel

CFTR Panel is a CE-IVD kit for the molecular profiling of CFTR gene.

Mutations in the CFTR gene cause the CFTR protein to malfunction or not produce, leading to a buildup of thick mucus, which in turn leads to persistent lung infections and multi-organ complications.

More than 2200 causative mutations of Cystic Fibrosis have been described and with the CFTR panel kit it is possible to detect all variants, known and unknown, with a single test.

The importance of an NGS test is reflected in the timeliness of diagnosis in newborn screening, in the diagnosis of Cystic Fibrosis in asymptomatic patients, in the diagnosis of CFTR-related diseases and in the possibility of directing the therapeutic path.

CFTR solution

CFTR panel is a kit for the analysis of the CFTR gene through a molecular protocol based on NGS technologies. The kit is validated for germline analysis (SNPs, indels, CNVs) of DNA extracted from body tissues (blood or others).

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

WORKFLOW

The CFTR 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.

Data analysis

CFTR panel is part of an integrated solution with a dedicated and validated CE-IVD software.

The analysis includes a first level filter including all variants of the CFTR2 reference database for cystic fibrosis.

We support the implementation and customization of the analysis based on the needs of the laboratory.

SAMPLE PER RUN

Instrument	Sample per run
MiSeq Nano Kit v2 (300-cycles)	18
MiSeq Nano Kit v2 (500-cycles)	18
MiSeq Micro Kit v2 (300-cycles)	80
MiSeq Kit v2 (300-cycles)	300
MiSeq Kit v2 (500-cycles)	300
MiSeq Kit v3 (600-cycles)	500
MiniSeq Mid Output Kit (300-cycles)	160
MiniSeq High Output Kit (300-cycles)	500
iSeq 100 i1 kit (300-cycles)	80
NextSeq 550 Mid-Output Kit	2600
NextSeq 550High-Output Kit	8100
Ion 314™ Chip	3
Ion 316™ Chip	14
Ion 318™ Chip/Ion 520™ Chip	28
Ion 530™ Chip	>96
Ion PI™ Chip/Ion 540™ Chip	>384

**the maximum number of samples per cartridge/chip estimated assuming an average depth of 300x for germline samples. The optimal number of samples must be empirically determined on local setups.*

Ordering Information

Product	**REF**
CFTR panel	H1060-16 (16 test)
CFTR panel	H1060-48 (48 test)
CFTR panel	H1060-96 (96 test)
*For Illumina instrument***	
Index Set series RUO - CE	3000
*For Ion Torrent instrument***	
Barcode series RUO - CE	6000

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