

THYRO-ID panel

For the screening of Thyroid cancer



THYRO-ID panel

THYRO-ID Panel is a novel NGS Medical Device for the molecular profiling of the variants involved in the development of Thyroid cancer.

THYRO-ID solution

THYRO-ID panel is a kit for the analysis of KRAS, NRAS, BRAF, EGFR, CTNNB, AKT1, PTEN, CDKN2A, HRAS, TSHR, NOTCH, TP53, PIK3CA genes and hTERT promoter through a molecular protocol based on NGS

technologies. The kit is validated for somatic analysis (SNPs, indels) of DNA extracted from tissues (fresh, frozen, FFPE, FNA, etc.).

THYRO-ID 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 THYRO-ID 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 Bioanalyzer.

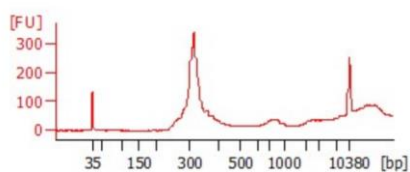


Figure 2: THYRO-ID panel profiles examples

Table 1. List of target genes in THYRO-ID panel

Target genes	Exons	Target genes	Exons
KRAS	2, 3, 4	CDKN2A	1, 2
NRAS	2, 3, 4	PTEN	5, 6, 7, 8
BRAF	15	HRAS	2, 3
EGFR	18, 19, 20, 21	TSHR	6, 8, 9
CTNNB1	1	NOTCH	26, 27
AKT1	1	TP53	4, 5, 6, 7, 8, 9
PIK3CA	10, 21	hTERT	promoter

SAMPLE PER RUN

Instrument	Sample per run
MiSeq Nano Kit v2 (300-cycles)	5
MiSeq Nano Kit v2 (500-cycles)	5
MiSeq Micro Kit v2 (300-cycles)	21
MiSeq Kit v2 (300-cycles)	80
MiSeq Kit v2 (500-cycles)	80
MiSeq Kit v3 (600-cycles)	>96
MiniSeq Mid Output Kit (300-cycles)	42
MiniSeq High Output Kit (300-cycles)	>96
iSeq 100 i1 kit (300-cycles)	21
NextSeq 550 Mid-Output Kit	>384
NextSeq 550High-Output Kit	>384
Ion 314™ Chip	2
Ion 316™ Chip	11
Ion 318™ Chip/Ion 520™ Chip	22
Ion 530™ Chip	83
Ion PI™ Chip/Ion 540™ Chip	>96

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

Ordering Information

Product	REF
THYRO-ID panel	H1030-16 (16 test)
THYRO-ID panel	H1030-48 (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