HRD pro

CE IVD

Variants profiling and HRD score in Breast, Ovary and Prostate Cancer

HRD pro

4bases HRD pro is the kit for the identification of mutations in genes related to the Homologous recombination and repair (HRR) pathway.

HRR deficiency (HRD) is involved in the tumorigenesis and progression of cancer : several studies demonstrated that HRD score is a biomarker of sensitivity to platinum chemotherapy drugs.

HRD pro is a kit for the analysis of 24 genes through a molecular protocol based on Next Generation Sequencing (NGS) technologies. The kit is validated for germline and somatic analysis (SNPs, indels, CNVs) of DNA extracted from blood or body tissues (fresh, frozen, FFPE, FNA) samples.

HRD pro kit contains all reagents required for the preparation of the capture of specifically designed probes and for the NGS analysis using Illumina..

TECHNOLOGY

The HRD pro 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.

WORKFLOW

Library preparation follows a straightforward, capture-based protocol that can be completed in as little as 36 hours, with < 3 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.

REFERENCES

- Kim SJ et al. Determining homologous recombination deficiency scores with whole exome sequencing and their association with responses to neoadjuvant chemotherapy in breast cancer. Transl Oncol. 2021
- Takaya H. et al. Homologous recombination deficiency status-based classification of high-grade serous ovarian carcinoma. Sci Rep 2020.

Table 1: List of genes in **HRD pro**

ATM	BRIP1	RAD51B
BRCA1	BARD1	PTEN
BRCA2	CDK12	MLH1
RAD54L	CHEK1	MSH2
RAD50	CHEK2	MSH6
RAD51C	MRE11A	TP53
RAD51D	NBN	FANCL
RAD50	PALB2	

SAMPLE PER RUN

Instrument	Samples per run	
	Germline	Somatic
MiSeq Nano Kit v2 (300-cycles)	8	0
Nano Kit v2 (500-cycles)	8	0
Micro Kit v2 (300-cycles)	32	2
Kit v2 (300-cycles)	128	6
Kit v2 (500-cycles)	128	6
Kit v3 (600-cycles)	208	12
MiniSeq Mid Output Kit (300-cycles)	64	4
High Output Kit (300-cycles)	208	8
iSeq 100 i1 kit (300-cycles)	32	2
NextSeq 550 Mid-Output Kit	1104	64
High-Output Kit	3408	200

**the estimated maximum number of samples per cartridge / chip assumes a reading depth of 300x for the germline and 5000x for the somatic. The optimal number of samples can be empirically estimated on the local setup*

Ordering Information

Product	REF
HRD pro	C3080-16 (16 test)
HRD pro	C3080-96 (96 test)
For Illumina instruments	
UDI Primers Set A (96 test)	7001
UDI Primers Set B (96 test)	7002
UDI Primers Set C (96 test)	7003
UDI Primers Set D (96 test)	7004
UDI Primers Set 16 (16 test)	7005