INTEGRATED DNA TECHNOLOGIES
ARCHER™

Product Insert

VARIANT*Plex*™-HT HRD Module

VARIANTPlex-HT HRD Module

Description

The VARIANTPlex-HT HRD Module is a balanced pool of gene-specific primer (GSP) oligonucleotides that is optimized for use with VARIANT*Plex* HGC 2.0 reagents and molecular barcode (MBC) adapters to produce targeted NGS libraries. This product insert should be used in conjunction with VARIANT*Plex*-HT protocol for Illumina® (RA-DOC-058).

VARIANTPlex-HT HRD Module contains **5,192** GSPs targeting genome wide information useful for informing upon homologous recombination deficiency (**HRD**) status.

Description	Part number	Storage
VARIANT*Plex*-HT HRD GSP1 - 24 reactions	SA24314241	–20°C ± 10°C
VARIANT*Plex*-HT HRD GSP2 - 24 reactions	SA24314242	
VARIANT*Plex*-HT HRD GSP1 - 96 reactions	SA24314961	
VARIANT*Plex*-HT HRD GSP2 - 96 reactions	SA24314962	

Required reagent volumes

Protocol reference	Protocol step	Reagent	Volume per reaction (µL)
A	Ligation Step 2 Elution	5mM NaOH	20
B	First PCR	VARIANTPlex-HT HRD GSP1	8
C	First PCR	10mM Tris-HCl pH 8.0	18
D	First PCR	Purified PCR1 eluate	16
E	Second PCR	VARIANTPlex-HT HRD GSP2	8

Recommended PCR cycling

	Step	Temperature (°C)	Time	Cycles
First PCR reaction	**1**	95	3 min	1
	2	95	30 sec	15
	3	58	10 sec	
	4	60	10 min (100% ramp rate)	
	5	72	3 min	1
	6	4	Hold	1
Second PCR reaction	**1**	95	3 min	1
	2	95	30 sec	20†
	3	58	10 sec	
	4	65	10 min (100% ramp rate)	
	5	72	3 min	1
	6	4	Hold	1

†The number of PCR2 cycles may be decreased if you regularly experience library yields greater than 200 nM.

Recommended reads and multiplexing

VARIANTPlex-HT HRD Module libraries should be sequenced to a minimum of **12M** reads. Starting read depth recommendations for standard profiling may be adjusted based on user needs.

Archer™ Analysis settings

Sequencing data should be processed using Archer Analysis (v7.4, or greater). The VARIANTPlex-HT HRD Module panel is compatible with the ***SNV/Indel, Copy Number Variation, CNV 2.0, ASCN, and HRD*** pipelines, found under the ***DNA*** Input Type. As with most Analysis settings, these may be adjusted based on user needs. Selection of the DNA

Target Coverage pipeline is also optional and requires a region of interest bed file from supporting. See the Archer Analysis User Guide for more details on setting up your analysis.

Processing of VARIANTPlex-HT HRD Module libraries requires a one-time upload of a Target Region file (a text file, in GTF format, which directs the software on how to analyze data from the panel). For SNV/Indel detection it is recommended analysis is performed using a Targeted Mutations File. Files can be obtained by contacting archer-tech@idtdna.com

Assay targets

Integrative genomic biomarkers

HRD

SNPs may be used in combination to uniquely tag and track samples over time. Contact archer-tech@idtdna.com for further details.

Limitations of use

For research use only. Not for use in diagnostic procedures. Unless otherwise agreed to in writing, IDT does not intend these products to be used in clinical applications and does not warrant their fitness or suitability for any clinical diagnostic use. Purchaser is solely responsible for all decisions regarding the use of these products and any associated regulatory or legal obligations.

Safety data sheets pertaining to this product are available upon request.

Revision History

Document Number	Date	Description of change
RA-DOC-479/REV01	August 2024	Initial release.