RIDS panel

For the screening of susceptibility to respiratory infectious diseases

RIDS panel

RIDS panel (Respiratory Infectious Diseases Susceptibility) is a kit designed for large population screening through a molecular protocol based on NGS technologies. The resulting genetic profile evaluates both genetic variants in the infection pathway (predisposition or protection against infection), and variants of the genes involved in the immune response to infection (predisposition or protection against a worse outcome).

The kit is validated for analysis of DNA extracted from different body tissues (blood, saliva, etc.).

TECHNOLOGY

RIDS 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 RIDS 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 hours hands-on time. Resulting libraries can be normalized, pooled, and then loaded for sequencing.

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.

SAMPLE PER RUN

Instrument	Samples per run*
	Germline
iSeq 100 i1 kit (300-cycles)	8
MiniSeq Mid Output Kit (300-cycles)	16
MiniSeq High Output Kit (300-cycles)	48
MiSeq Nano Kit v2 (300-cycles)/(500-cycles)	2
MiSeq Micro Kit v2 (300-cycles)	8
MiSeq Kit v2 (300-cycles)/(500-cycles)	16
MiSeq Kit v3 (600-cycles)	48

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

ORDERING INFORMATION

Product**	REF
RIDS panel	H1080-16 (16 test)
RIDS panel	H1080-96 (96 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).*

Table 1: List of hotspots in **RIDS panel**

		gene	RSID
susceptibility/resistance	aspecific	ABO (depends on group)	rs657152
		DDP4 (associated with resistance)	rs13015258 rs117888248 rs116302758 rs56179129 rs115450134
		CD147 (BSG)	rs201850688 rs11551906 rs144824657 rs41276870
		CCR5 (associated with resistance)	rs333
	specific for COVID19	ACE1	rs4341
		ACE2 (associated with resistance to infection)	K31R, N33I, H34R, E35K, E37K, D38V, Y50F, N51S, M62V, K68E, F72V, Y83H, G326E, G352V, D355N, Q388L, and D509Y
		TMPRSS2 (associated with increased susceptibility)	rs2070788 rs383510 rs200291871 rs75603675 rs61735791 rs114363287 rs12329760
	GWAS	GLL5, GNAZ, RSPH14, RAB36 and BCR	rs73166864
		IVNS1ABP, SWT1	rs6668622
outcome (associated with worst prognosis)		ApoE	rs429358-C-C (e4e4)
		IFITM3	rs12252 rs6598045
		SLC6A20, LZTFL1, CCR9, FYCO1, CXCR6, XCR1	rs11385942 rs73064425
		OAS3	rs10735079
		TMEM189-UBE2V1	rs6020298-A
		DPP9	rs2109069
		PCSK3 (associate with)	rs16944971 rs780909157 rs201551785 rs769208985 rs1236237792
		SRRM1,IVNS1ABP (hospitalization)	rs111972040