

NEPHRO pro

For the screening of Nephropaties

NEPHRO pro

NEPHRO pro is a novel NGS medical device for the molecular profiling of the variants involved in the Nephropaties.

NEPHRO solution

NEPHRO pro is a kit for the analysis of 92 genes through a molecular protocol based on NGS technologies. The kit is validated for germline analysis (SNPs, indels, CNVs) of DNA extracted from blood or body tissues samples.

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

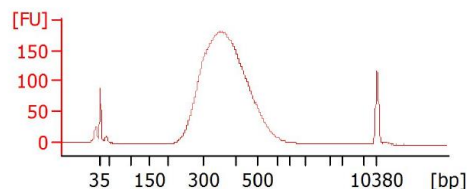
WORKFLOW

Library preparation follows a straightforward, capture-based protocol that can be completed in as little as 24 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.

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 1: NEPHRO pro profiles examples



SAMPLE PER RUN

Instrument	Sample per run
MiSeq Nano Kit v2 (300-cycles)	2
MiSeq Nano Kit v2 (500-cycles)	2
MiSeq Micro Kit v2 (300-cycles)	8
MiSeq Kit v2 (300-cycles)	32
MiSeq Kit v2 (500-cycles)	32
MiSeq Kit v3 (600-cycles)	56
MiniSeq Mid Output Kit (300-cycles)	16
MiniSeq High Output Kit (300-cycles)	56
iSeq 100 i1 kit (300-cycles)	8
NextSeq 550 Mid-Output Kit	320
NextSeq 550High-Output Kit	984

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

Ordering Information

Product	REF
NEPHRO pro	C3170-16 (16 test)
NEPHRO pro	C3170-96 (96 test)
<i>For Illumina instruments</i>	
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

Table 1. List of target genes in NEPHRO pro

ACTN4	CFH	COQ2	HOGA1	MYO1E	PLCE1	SMARCAL1	PKD4
AGXT	CFHR1	COQ6	HPRT1	NPHS1	PODXL	STRADA	PKD5
APRT	CFHR3	COQ8B	INF2	NPHS2	SCARB2	TBC1D8B	PKD6
ARHGDI1	CFI	CRB2	ITGA3	NUP107	SGPL1	TNS2	PKHD1
ATP6V0A4	CLCN5	CUBN	ITSN1	NUP133	SLC12A1	TP53RK	ALG9
ATP6V1B1	CLCNKB	CYP24A1	KCNJ1	NUP85	SLC22A12	TRPC6	CTNS
BSND	CLDN16	DGKE	LAGE3	NUP93	SLC2A9	WDR73	DNAJB11
C3	CLDN19	DLC1	LAMB2	OCRL	SLC34A1	WT1	GANAB
CA2	COL4A1	EMP2	LMX1B	OSGEP	SLC34A3	XDH	
CASR	COL4A3	FAM20A	MAGI2	PAX2	SLC3A1	PKD1	
CD46	COL4A4	FAT1	MMACHC	PDSS2	SLC4A1	PKD2	
CFB	COL4A5	GRHRP	MYH9	PHEX	SLC7A9	PKD3	