



BRaCA screen is a kit for the analysis of the BRCA1, BRCA2 and TP53 genes through a molecular protocol based on Next Generation Sequencing (NGS) technologies. The kit is validated for somatic (SNPs, indels) and germline analysis (SNPs, indels, CNVs) of DNA extracted from cancer tissues (fresh, frozen or FFPE) or body tissues (blood or other). BRaCA screen 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.

## KEY FEATURES

- REF: R2000-16 (16 test)
- REF: R2000-48 (48 test)
- Genes targeted: BRCA1, BRCA2, TP53
- Application: somatic, germline analysis
- Number of pools: 3
- Panel size: 26 kb
- Input DNA: 20ng/reaction
- Coverage: full coding exons plus padding regions (>20bp)

## SAMPLES/RUN\*

	Germline	Somatic
MiSeq Nano Kit v2 (300-cycles)	10	1
Nano Kit v2 (500-cycles)	12	1
Micro Kit v2 (300-cycles)	38	2
Kit v2 (300-cycles)	>96	9
Kit v2 (500-cycles)	>96	9
Kit v3 (600-cycles)	>96	22
MiniSeq Mid Output Kit (300-cycles)	75	5
High Output Kit (300-cycles)	>96	14
iSeq 100 i1 kit (300-cycles)	38	2
NextSeq 550 Mid-Output Kit	>96	7
High-Output Kit	>384	>96
Ion 314™ Chip	4	0
Ion 316™ Chip	18	1
Ion 318™ Chip/Ion 520™ Chip	35	2
Ion 530™ Chip	>96	9
Ion PI™ Chip/Ion 540™ Chip	>384	34

\*the maximum number of samples per cartridge/chip estimated assuming an average depth of 300x for germline and 5000x for somatic analysis. The optimal number of samples must be empirically determined on local setups.

## INDEXES/BARCODES

### For Illumina instruments

HR Index set A (6x4) REF: R5001  
HR Index set B (6x4) REF: R5002

### For Ion Torrent instruments

HR Barcode 1-16 REF: R4001  
HR Barcode 17-32 REF: R4002

For ordering info please contact [info@4bases.ch](mailto:info@4bases.ch)

	Kit ID	Cod	Size (n° test)	CLINICAL APPLICATIONS	TARGETS	SAMPLES TYPE
Profiling of HotSpots somatic mutations (SNPs, indels) in cancer tissues	<b>LUNG panel</b>	<b>R1000-16</b> <b>R1000-48</b>	<b>16</b> <b>48</b>	<b>NSCLC treatment</b>	EGFR (exons 18, 19, 20, 21) KRAS (exons 2, 3, 4)	<b>Tumor DNA tissue (fresh, frozen, FFPE, FNA, etc.)</b> - <b>Somatic analysis (SNPs, indels)</b>
	<b>COLON panel</b>	<b>R1010-16</b> <b>R1010-48</b>	<b>16</b> <b>48</b>	<b>mCRC treatment</b>	KRAS (exons 2, 3, 4) NRAS (exons 2, 3, 4) BRAF (exon 15)	
	<b>BENKit panel</b>	<b>R1020-16</b> <b>R1020-48</b>	<b>16</b> <b>48</b>	<b>MultiCancers treatment</b>	KRAS (exons 2, 3, 4) NRAS (exons 2, 3, 4) BRAF (exon 11, 15) EGFR (exons 18, 19, 20, 21) PIK3CA (exons 10, 21)	
	<b>THYRO-ID panel</b>	<b>R1030-16</b> <b>R1030-48</b>	<b>16</b> <b>48</b>	<b>Mutations profiling of Papillary Thyroid Carcinoma</b>	KRAS (exons 2, 3, 4) NRAS (exons 2, 3, 4) HRAS (exons 2, 3) BRAF (exon 15) TP53 (exons 4, 5, 6, 7, 8, 9) NOTCH1 (exons 26, 27) PTEN (exons 5, 6, 7, 8) CDKN2A (exons 1, 2) EGFR (exons 18, 19, 20, 21) AKT1 (exon 1) CTNNB1 (exon 1) PIK3CA (exons 10, 21) TSHR (exons 6, 8, 9) hTERT (promoter)	
Full-gene sequencing (all CDS + flanking regions) for germline and/or somatic analysis	<b>BRaCA screen</b>	<b>R2000-16</b> <b>R2000-48</b>	<b>16</b> <b>48</b>	<b>Hereditary and Somatic Variants profiling in Breast and Ovary cancer</b>	BRCA1, BRCA2, TP53	<b>Tumor DNA tissue (fresh, frozen, FFPE, FNA, etc.) or other (blood)</b> - <b>Somatic analysis (SNPs, indels)</b> <b>Germline analysis (SNPs, indels, CNVs)</b>
	<b>HECO screen</b>	<b>R2002-16</b> <b>R2002-48</b>	<b>16</b> <b>48</b>	<b>Germline Variants profiling in Hereditary nonpolyposis colorectal cancer (HNPCC)</b>	APC, EPCAM, MLH1, MSH2, MSH6, MUTYH, PMS2, STK11	<b>DNA from body tissues (blood or other)</b> - <b>Somatic analysis* (SNPs, indels)</b> <b>Germline analysis (SNPs, indels, CNVs)</b>
	<b>BRaVO screen</b>	<b>R2001-16</b> <b>R2001-48</b>	<b>16</b> <b>48</b>	<b>Germline Variants profiling in Hereditary Breast and Ovarian Cancer Syndrome (HBOC)</b>	ATM, BRCA1, BRCA2, CDH1, CHEK2, PALB2, PTEN, TP53	
	<b>HEVA screen</b>	<b>R2010-16</b> <b>R2010-48</b>	<b>16</b> <b>48</b>	<b>Hereditary Variants profiling in Breast and Ovary, Lynch Syndrome, and other cancer-related diseases</b>	ATM, APC, BARD1, BRCA1, BRCA2, BRIP1, CDH1, CHEK2, EPCAM, MLH1, MSH2, MSH6, MUTYH, NBN, PALB2, PMS2, PTEN, RAD50, RAD51C, RAD51D, STK11, TP53	
	<b>CFTR screen</b>	<b>R2030-16</b> <b>R2030-48</b>	<b>16</b> <b>48</b>	<b>Cystic fibrosis</b>	CFTR	
	<b>NEPHI screen</b>	<b>R2050-16</b> <b>R2050-48</b>	<b>16</b> <b>48</b>	<b>Neurofibromatosis (type 1, 2*)</b> <b>Noonan syndrome (type 1, 2)*</b> <b>Legius syndrome*</b> <b>Schwannomatosis*</b>	NF1, SPRED1 NF2*, LZTR1*, SMARCB1*	
	<b>IVF screen</b>	<b>R2040-16</b> <b>R2040-48</b>	<b>16</b> <b>48</b>	<b>Hereditary Variants profiling in genetic-related diseases</b>	BDNF, BCHE, ATM, HBB, BLM, ASPA, CHM1, GLA, MEFV, FANCC, G6PC, GALT, GBA, GCDH, GJB2, OTOF, PJKK (DFNB59), HFE2, FPN1, HFE, TFR2, ALDOB, RS1, GALC, GLB1, IDUA, SMPD1, NPC2, NPC1, NBN, FSHR, PAH, PKD2, PKHD1, GAA, M2/ANXA5, ELP1 (IKAP), DHCR7, EPB42, ANK1, HEXA, MPL, MTHFR, F5, F2, ApoE, PAI1, TH, ATP7B, PEX1, AZFa, AZFb, AZFc, MUTYH, BRCA2, BRCA1, APC, SMN2, SMN1, F13A1, CFTR, DMD	
	<b>FUSION screen</b>	<b>R2020-16</b> <b>R2020-48</b>	<b>16</b> <b>48</b>	<b>Fusion transcripts and expression imbalances between the 3' and 5' regions of the genes related with Lung cancers</b>	EML4, ALK, ROS1, RET	
<b>Extended screening of cDNA fusion transcripts</b>					<b>FFPE RNA samples</b>	