

QIAseq Targeted DNA Pro Panels

Human Hereditary Breast and Ovarian Cancer

Cat. nos. 333651 PHS-201Z-12 and 333655 PHS-201Z-96

For ultrasensitive targeted next-generation sequencing (NGS) of DNA

The QIAseq Targeted DNA Pro Human Hereditary Breast and Ovarian Cancer Panel permits the targeted next generation sequencing of the whole coding region of 50 oncogenes and tumor suppressor genes relevant to a predisposition to hereditary breast and ovarian cancer (HBOC), covering 206,234 bases with 2,508 primers. The panel also targets actionable and interpretable cancer-related germline variants relevant for tumor classification of familial breast cancers and familial ovarian cancers. Targeted actionable and interpretable genes and variants were collected from 1) clinical practice guidelines recommended by multiple organizations, including the American College of Medical Genetics (ACMG); 2) the NIH NCBI ClinVar and Online Mendelian Inheritance in Man (OMIM) resources that compile variants with known associations to cancers cited by peer-reviewed publications, 3) the St. Jude Children's Research Hospital's Pediatric Cancer Genome Project list of discovered driver mutations; 4) requests and suggestions from QIAGEN KOLs and SMEs; and 5) other peer-reviewed publications. As a result, this primer pool gives researchers a comprehensive insight into hereditary breast and ovarian cancer genomics with the detection of SNP/indels in a focused panel of relevant genes using digital DNA sequencing.

For further details, consult the *QIAseq Targeted DNA Pro Panels Handbook*.

Shipping and storage

The QIAseq Targeted DNA Pro Kits (except QIAseq Beads and QIAseq Bead Binding Buffer) are shipped on dry ice and should be stored at -30°C to -15°C in a constant-temperature freezer upon arrival. The QIAseq Beads and QIAseq Bead Binding Buffer are shipped on cold packs and should be stored at $2-8^{\circ}\text{C}$ upon arrival. The QIAseq Targeted DNA Pro Index Kits are shipped on dry ice and should be stored at -30°C to -15°C upon arrival. When stored correctly, the QIAseq Targeted DNA Pro Kits are good until the expiration date printed on the kit label.

Note: Open the package and store the products appropriately immediately upon receipt.



Panel Contents

QIAseq Targeted DNA Pro Catalog Number	333651	333655
No. of samples	12	96
One pool of region-specific primers	90 μ L	700 μ L
FFPE repair reagent	15 μ L	80 μ L
FFPE repair enzyme	17 μ L	120 μ L
FX Buffer, 10x	23 μ L	170 μ L
5X WGS FX Mix	42 μ L	330 μ L
FG Solution	170 μ L	170 μ L
UPH Ligation Buffer, 2.5x	288 μ L	1152 μ L
DNA Ligase	75 μ L	330 μ L
Ligation Cleanup Reagent	30 μ L	240 μ L
TEPCR Buffer, 5x	3 x 60 μ L	3 x 500 μ L
TEPCR modifier	30 μ L	230 μ L
TEPCR Cleanup Reagent	80 μ L	600 μ L
UPCR Buffer, 5x	500 μ L	4 x 500 μ L
QN Taq Polymerase	2 x 60 μ L	2 x 450 μ L
Nuclease-free water	1.5 mL	10 mL
One bottle containing QIAseq Bead Binding Buffer	10.2 mL	10.2 mL
One bottle containing QIAseq Beads	10 mL	10 mL

Gene Table

Gene Symbol	Gene Symbol	Gene Symbol	Gene Symbol
ABRAXAS1	APC	ATM	AXIN2
BARD1	BLM	BRCA1	BRCA2
BRIP1	CDH1	CHEK2	DICER1
EPCAM	ERBB2	ESR1	FANCC
FANCM	FGFR2	HMMR	MAP3K1
MLH1	MRE11	MSH2	MSH6
MUTYH	NBN	NF1	NQO2
PALB2	PGR	PHB	PIK3CA
PMS2	PMS2CL	POLD1	PRKARIA
PTEN	RAD50	RAD51	RAD51C
RAD51D	RECQL	RINT1	SDHB
SMARCA4	STK11	TOX3	TP53
TSHR	XRCC2	XRCC3	

Functional Groupings

Familial Breast-Ovarian Cancer Susceptibility: BRCA1, BRCA2, FGFR2, MAP3K1, RAD51C, RAD51D, TOX3.

Breast Cancers:

Breast Cancer Carcinomas: ATM, BARD1, BRCA1, BRCA2, BRIP1, CHEK2, ERBB2, ESR1, MLH1, MSH2, MSH6, PALB2, PIK3CA, PMS2, PMS2CL, RAD51C, RAD51D.

Breast Cancer Ductal Carcinomas: CDH1, FGFR2, MRE11, NBN, STK11, TP53.

Breast Cancer Susceptibility: BARD1, BRCA2, PALB2, RECQL, XRCC3.

Metastatic Breast Cancers: BRCA1, BRCA2, ERBB2, ESR1, NF1, PALB2, PIK3CA, PTEN.

Other Breast Cancer Genes: APC, AXIN2, SDHB, SMARCA4, TSHR.

Ovarian Cancers:

Ovarian Cancer Epithelial Carcinomas: ABRAXAS1, ATM, BARD1, BRCA1, BRCA2, BRIP1, CHEK2, ERBB2, MRE11, NBN, NF1, PALB2, PIK3CA, PTEN, RAD51C, RAD51D, TP53.

Ovarian Cancer Mixed Adenosquamous Carcinomas: BLM, CDH1, DICER1, FANCC, FANCM, FGFR2, RAD50, RAD51, SMARCA4, STK11.

Other Ovarian Cancer Genes: MLH1, RECQL, RINT1, XRCC2.

Uterine Serous Carcinomas: BLM, CDH1, DICER1, FANCC, FANCM, FGFR2, RAD50, RAD51, SMARCA4.

Lynch Syndrome: EPCAM, MLH1, MSH2, MSH6, PMS2, PMS2CL.

Other Hereditary Breast & Ovarian Cancer Genes: HMMR, MUTYH, NQO2, PGR, PHB, POLD1, PRKARIA.

Ordering Information

Product	Contents	Cat. no.
QIAseq Targeted DNA Pro (12)	All reagents (except indexes) for targeted DNA sequencing; fixed panel for 12 samples; less than 200 genes	333651
QIAseq Targeted DNA Pro (96)	All reagents (except indexes) for targeted DNA sequencing; fixed panel for 96 samples; less than 200 genes	333655
QIAseq Targeted DNA Pro HC (12)	All reagents (except indexes) for targeted DNA sequencing; fixed panel for 12 samples; more than 200 genes	333661
QIAseq Targeted DNA Pro HC (96)	All reagents (except indexes) for targeted DNA sequencing; fixed panel for 96 samples; more than 200 genes	333665
QIAseq Targeted DNA Pro Custom (96)	All reagents (except indexes) for targeted DNA sequencing; custom panel for 96 samples	333675
QIAseq Targeted DNA Pro Booster (96)	Pool of primers used in combination with either catalogued or custom panels	333685
QIAseq Targeted DNA Pro Unique Dual Indices		
QIAseq Targeted DNA Pro UDI Set A (96)	Box containing unique molecularly indexed adapters and primers, enough for a total of 96 samples, for indexing up to 96 samples for targeted panel sequencing on Illumina platforms; Set A (of A, B, C, D, E, F, G, and H) required for multiplexing 768 samples in one run	333455
QIAseq Targeted DNA Pro UDI Set B (96)	Box containing unique molecularly indexed adapters and primers, enough for a total of 96 samples, for indexing up to 96 samples for targeted panel sequencing on Illumina platforms; Set B (of A, B, C, D, E, F, G, and H) required for multiplexing 768 samples in one run	333465
QIAseq Targeted DNA Pro UDI Set C (96)	Box containing unique molecularly indexed adapters and primers, enough for a total of 96 samples, for indexing up to 96 samples for targeted panel sequencing on Illumina platforms; Set C (of A, B, C, D, E, F, G, and H) required for multiplexing 768 samples in one run	333475

Product	Contents	Cat. no.
QIAseq Targeted DNA Pro UDI Set D (96)	Box containing unique molecularly indexed adapters and primers, enough for a total of 96 samples, for indexing up to 96 samples for targeted panel sequencing on Illumina platforms; Set D (of A, B, C, D, E, F, G, and H) required for multiplexing 768 samples in one run	333485
QIAseq Targeted DNA Pro UDI Set E (96)	Box containing unique molecularly indexed adapters and primers, enough for a total of 96 samples, for indexing up to 96 samples for targeted panel sequencing on Illumina platforms; Set E (of A, B, C, D, E, F, G, and H) required for multiplexing 768 samples in one run	334015
QIAseq Targeted DNA Pro UDI Set F (96)	Box containing unique molecularly indexed adapters and primers, enough for a total of 96 samples, for indexing up to 96 samples for targeted panel sequencing on Illumina platforms; Set F (of A, B, C, D, E, F, G, and H) required for multiplexing 768 samples in one run	334025
QIAseq Targeted DNA Pro UDI Set G (96)	Box containing unique molecularly indexed adapters and primers, enough for a total of 96 samples, for indexing up to 96 samples for targeted panel sequencing on Illumina platforms; Set G (of A, B, C, D, E, F, G, and H) required for multiplexing 768 samples in one run	334035
QIAseq Targeted DNA Pro UDI Set H (96)	Box containing unique molecularly indexed adapters and primers, enough for a total of 96 samples, for indexing up to 96 samples for targeted panel sequencing on Illumina platforms; Set H (of A, B, C, D, E, F, G, and H) required for multiplexing 768 samples in one run	334045
QIAseq Targeted DNA Pro UDI (12)	Box containing unique molecularly-indexed adapters and primers, enough for a total of 12 samples, for indexing up to 12 samples for targeted panel sequencing on Illumina platforms	333441
QIAseq Targeted DNA Pro Indices for Ion Torrent platforms		
QIAseq Targeted DNA Pro Index L (12)	Box containing molecularly-indexed adapters and primers, enough for a total of 12 samples – for indexing up to 12 samples for targeted panel sequencing on Ion Torrent platforms	333491

Product	Contents	Cat. no.
QIAseq Targeted DNA Pro Index L (24)	Box containing molecularly-indexed adapters and primers, enough for a total of 24 samples – for indexing up to 24 samples for targeted panel sequencing on Ion Torrent platforms	333492
Related products		
QIAseq Library Quant Assay Kit	Reagents for quantification of libraries prepared for Illumina or Ion Torrent platforms; assay format	333314
QIAseq Universal Normalizer Kit (96)	For 96 reactions: Reagents for the normalization of libraries using indexed library amplification primers.	180615
QIAseq Universal Normalizer Kit (24)	For 24 reactions: Reagents for the normalization of libraries using indexed library amplification primers.	180613
QIAamp DNA Mini Kit (50)	For 50 DNA preps: 50 QIAamp Mini Spin Columns, QIAGEN Proteinase K, Collection Tubes (2 mL), reagents and buffers	51304
QIAamp Circulating Nucleic Acid Kit (50)	For 50 DNA preps: QIAamp Mini Columns, Tube Extenders (20 mL), QIAGEN Proteinase K, Carrier RNA, Buffers, VacConnectors, and Collection Tubes (1.5 mL and 2 mL)	55114
QIAamp DNA FFPE Advanced UNG Kit (50)	For 50 preps: Uracil-N-glycosylase, QIAamp UCP MinElute columns, collection tubes, Deparaffinization Solution, Proteinase K, RNase A, RNase-free water and buffers	56704

QIAseq Targeted DNA Pro Panels are intended for molecular biology applications. These products are not intended for the diagnosis, prevention or treatment of a disease.

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