

# QIAseq Targeted DNA Pro Panels Human

## Colorectal Cancer Focus

Cat. nos. 333651 PHS-102Z-12 and 333655 PHS-102Z-96

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

The QIAseq Targeted DNA Pro Human Colorectal Cancer Focus Panel permits the targeted next generation sequencing analysis of actionable and interpretable cancer-related somatic variants in 53 oncogenes and tumor suppressor genes relevant for colorectal tumor classification, covering 38,219 bases with 1,000 primers. Represented brain cancer subtypes include colorectal adenocarcinomas and other colorectal 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), the American Society Of Hematology (ASH), the Association for Molecular Pathology (AMP), the American Society of Clinical Oncology (ASCO), the College of American Pathologists (CAP), the European Society for Medical Oncology (ESMO), and the National Comprehensive Cancer Network (NCCN); 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) clinical trial documents from resources such as Cancer.gov, ClinicalTrials.gov, and the UMIN Clinical Trials Registry; 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 colorectal cancer genomics with the detection of a focused panel of relevant SNP/indels 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  $-30^{\circ}\text{C}$  to  $-15^{\circ}\text{C}$  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  $-30^{\circ}\text{C}$  to  $-15^{\circ}\text{C}$  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 µL     | 700 µL     |
| FFPE repair reagent                              | 15 µL     | 80 µL      |
| FFPE repair enzyme                               | 17 µL     | 120 µL     |
| FX Buffer, 10x                                   | 23 µL     | 170 µL     |
| 5X WGS FX Mix                                    | 42 µL     | 330 µL     |
| FG Solution                                      | 170 µL    | 170 µL     |
| UPH Ligation Buffer, 2.5x                        | 288 µL    | 1152 µL    |
| DNA Ligase                                       | 75 µL     | 330 µL     |
| Ligation Cleanup Reagent                         | 30 µL     | 240 µL     |
| TEPCR Buffer, 5x                                 | 3 x 60 µL | 3 x 500 µL |
| TEPCR modifier                                   | 30 µL     | 230 µL     |
| TEPCR Cleanup Reagent                            | 80 µL     | 600 µL     |
| UPCR Buffer, 5x                                  | 500 µL    | 4 x 500 µL |
| QN Taq Polymerase                                | 2 x 60 µL | 2 x 450 µL |
| 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      |

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## Gene Table

| Gene Symbol | Gene Symbol | Gene Symbol | Gene Symbol |
|-------------|-------------|-------------|-------------|
| AKT1        | APC         | ARID1A      | ATM         |
| BARD1       | BRAF        | BRCA1       | BRCA2       |
| BRIP1       | CDK12       | CDKN2A      | CHEK1       |
| CHEK2       | CTNNB1      | DPYD        | EGFR        |
| ERBB2       | ERBB3       | ERCC1       | FANCL       |
| FBXW7       | GNAS        | KIT         | KRAS        |
| MAP2K1      | MET         | MLH1        | MLH3        |
| MSH2        | MSH3        | MSH6        | MYC         |
| NRAS        | PALB2       | PDGFRA      | PIK3CA      |
| PMS1        | PMS2        | PMS2CL      | POLE        |
| PTEN        | RAD51B      | RAD51C      | RAD51D      |
| RAD54L      | RET         | RNF43       | SMAD4       |
| TCF7L2      | TGFBR2      | TP53        | TYMS        |
| UGT1A1      |             |             |             |

## Functional Groupings

**Adenocarcinomas:** APC, ARID1A, ATM, BARD1, BRAF, BRCA1, BRCA2, BRIP1, CDK12, CDKN2A, CHEK1, CHEK2, CTNNB1, EGFR, ERBB2, ERBB3, FANCL, FBXW7, GNAS, KIT, KRAS, MAP2K1, MET, MLH1, MLH3, MSH2, MSH3, MSH6, MYC, NRAS, PALB2, PDGFRA, PMS1, PMS2, PMS2CL, POLE, PTEN, RAD51B, RAD51C, RAD51D, RAD54L, RET, RNF43, SMAD4, TCF7L2, TGFBR2, TP53.

**Metastatic Colorectal Cancers:** AKT1, ATM, BRAF, ERBB2, KRAS, MET, NRAS, PIK3CA.

**Mismatch Repair (MMR) Genes:** MLH1, MSH2, MSH6, PMS2, PMS2CL.

**Other Colorectal Cancer Genes:** DPYD, ERCC1, TYMS, UGT1A1.

**Promoters:** TYMS.

**Microsatellite Instability (MSI) Loci:** BAT25, BAT26, BAT34C4, BAT40, D10S196, D13S175, D17S250, D17S588, D17S787, D18S35, D18S55, D18S61, D18S64, D18S69, D20S100, D2S123, D3S1029, D5S107, D5S346, D7S519, D8S87, HSP110-T17, MONO-27, NR21, NR22.

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## 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   |
| <b>QIAseq Targeted DNA Pro Indices for Ion Torrent platforms</b> |   |          |
| 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   |
| 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   |

| Product                                  | Contents   | Cat. no. |
|--|--|----------|
| <b>Related products</b>                  |  |          |
| 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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