

QIAseq Targeted Methyl Panels

T Cell Infiltration

Cat. nos. 335501 MHS-202Z-8 and 335511 MHS-202Z-96

For targeted next-generation sequencing of methylated DNA

The QIAseq Targeted Methyl T Cell Infiltration Panel uses 1,415 primers to permit the bisulphite sequencing of approximately 283 kilobases containing a key set of CpG dinucleotides whose relative levels of methylation can determine the relative amounts of epithelial cells, fibroblasts and immune cells in a cell population as well as the relative amounts of seven different specific immune cell types, specifically B cells, CD4+ T cells, CD8+ T cells, eosinophiles, monocytes, natural killer cells, and neutrophils. The targeted CpG dinucleotides were collected from a peer-reviewed publication (Zheng SC, et al. A novel cell-type deconvolution algorithm reveals substantial contamination by immune cells in saliva, buccal and cervix. *Epigenomics*. 2018 Jul;10(7):925-940. PubMed ID: 29693419), from where details about data analysis may be obtained. This team built a classifier based on publicly available HM450K array data from ENCODE for 11 different epithelial cell lines, seven different fibroblast cell lines and 42 purified immune cell samples representing seven types. They then validated it using independent data sets from various purified cell types, in silico mixtures with varying types and relative amounts of cells, and real samples from saliva, buccal swabs and cervix. The Cancer Genome Atlas (TCGA) data from 12 different cancer types were also analyzed, and similar immune cell content was called as scores derived from published RNA-seq-based gene expression signatures. Using digital DNA sequencing, the methylation status a focused panel of CpG dinucleotides can be determined with this primer pool that can then characterize the cellular composition of tumor microenvironment biopsies.

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



Shipping and storage

The QIAseq Methyl DNA Library Kits and QIAseq Methyl DNA 96-Index A, B, C, or D sets, with exception of the QIAseq Beads and Ligase Buffer, are shipped on dry ice. QIAseq Beads and Ligase Buffer are shipped on cooling packs. The kits, including all reagents and buffers, should be stored immediately upon receipt at -30°C to -15°C in a constant-temperature freezer. QIAseq Beads should be stored at $4-8^{\circ}\text{C}$ upon delivery and not frozen. Ligase buffer should be stored at -30°C to -15°C upon delivery. If stored under these conditions, the kits are stable until the date indicated on the kit label.

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

Panel Contents

| QIAseq Targeted Methyl Panels Catalog no. | 335501 | 335511 |
|-----------------------------------------------|-------------------|--------------------|
| No. of preps | 8 | 96 |
| Targeted Methyl Panel Mix | 90 μl | 1000 μl |
| TM-repair Buffer 10x | 400 μl | 400 μl |
| T4 Polynucleotide Kinase | 12 μl | 125 μl |
| Ligase Buffer 2x | 1.6 ml | 3 x 1.6 ml |
| DNA Ligase | 75 μl | 600 μl |
| GeneRead® DNAseq 5x PCR Buffer | 230 μl | 1.8 ml |
| UPCR Buffer 5x | 60 μl | 500 μl |
| dNTP Mix (10 mM each) | 55 μl | 120 μl |
| HotStarTaq® DNA Polymerase 6 U/ μl | 60 μl | 480 μl |
| Nuclease-free water | 4 x 1.5 ml | 50 ml |
| TM Stop Solution | 250 μl | 250 μl |
| QIAseq Beads | 10 ml | 2 x 38.4 ml |

Ordering Information

| Product | Contents | Cat. no. |
|-----------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------|
| QIAseq Targeted Methyl Panel (8) | Enzymes, Buffers, Reagents, and Magnetic Beads for generation of 8 libraries including enrichment primer panel. Generated libraries are for use with Illumina Instruments. | 335501 |
| QIAseq Targeted Methyl Panel (96) | Enzymes, Buffers, Reagents, and Magnetic Beads for generation of 96 libraries including enrichment primer panel. Generated libraries are for use with Illumina Instruments. | 335511 |
| QIAseq Custom Targeted Methyl Panel (96) | Enzymes, Buffers, Reagents, and Magnetic Beads for generation of 96 libraries including enrichment primer panel. Generated libraries are for use with Illumina Instruments. | 335602 |
| QIAseq Custom Targeted Methyl Panel (384) | Enzymes, Buffers, Reagents, and Magnetic Beads for generation of 384 libraries including enrichment primer panel. Generated libraries are for use with Illumina Instruments. | 333603 |
| QIAseq Methyl DNA 8- Index Kit | Contains all required adapters and primers for the library generation and the library amplification including 8 single use tubes of molecularly indexed adapters IL-Me-N7##, IL-S502 Index Primer, IL-Forward Primer, IL- Universal Primer, and QIAseq A Read 1 Primer I (100 μ M). | 335580 |
| QIAseq Methyl DNA 96- Index A, B, C, or D set | Contains all required adapters and primers for the library generation and the library amplification in plate format and allow generation of 96-384 libraries, including IL-Me- N701-N715 (A or C) or IL-Me-N716-N729 (B or D) adapter plate; IL-S502-S511 (A or B set) or IL-S513-S522 (C or D set) Primer Plate, IL- Forward Primer, and QIAseq A Read 1 Primer I (100 μ M). | 335591 335592 335593 335594 |
| Related products | | |
| QIAseq Library Quant Assay Kit | Laboratory-verified forward and reverse primers for 500 x 25 μ l reactions (500 μ l); DNA Standard (100 μ l); Dilution Buffer (30 ml); (1.35 ml x 5) GeneRead™ qPCR SYBR® Green Mastermix | 333314 |
| EpiTect Fast DNA Bisulfite Kit (10) | Trial kit for 10 preps: Bisulfite Solution, DNA Protect Buffer, MinElute DNA Spin Columns, Carrier RNA, and Buffers | 59802 |
| EpiTect Fast DNA Bisulfite Kit (50) | For 50 preps: Bisulfite Solution, DNA Protect Buffer, MinElute DNA Spin Columns, Carrier RNA, and Buffers | 59824 |

| Product | Contents | Cat. no. |
|--------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|
| EpiTect Fast DNA Bisulfite Kit (200) | For 200 preps: Lysis Buffer, Proteinase K, Bisulfite Solution, DNA Protect Buffer, MinElute DNA Spin Columns, Carrier RNA, and Buffers | 59826 |
| 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 |
| GeneRead DNA FFPE Kit (50) | QIAamp MinElute columns, Proteinase K, UNG, collection tubes (2 ml), buffers, Deparaffinization Solution, RNase A | 180134 |
| QIAamp MinElute ccfDNA Midi Kit (50) | For 50 preps (4 or 5 ml sample input volume each): QIAamp UCP MinElute Columns, QIAGEN Proteinase K, Magnetic Bead Suspension, Buffers, Bead Elution Tubes, and Collection Tubes (1.5 ml and 2 ml) | 55284 |
| QIAseq DNA QuantiMIZE Assay Kit | Assay 100 and Assay 200 for 400 x 25 µl reactions (400 µl) each; QuantiMIZE Control gDNA (50 µl); RNase- and DNase-free water (1 ml x 4); GeneRead qPCR SYBR Green Mastermix (1.35 ml x 4) | 333414 |
| QIAseq DNA QuantiMIZE Array Kit | qPCR arrays for optimizing amount of input DNA and PCR cycling conditions for targeted enrichment of FFPE DNA | 333404 |

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

For up-to-date licensing information and product-specific disclaimers, see the respective QIAGEN kit handbook or user manual. QIAGEN kit handbooks and user manuals are available at www.qiagen.com or can be requested from QIAGEN Technical Services or your local distributor.

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Sample to Insight