

QIAseq Targeted Methyl Panels

Immuno-Oncology

Cat. nos. 335501 MHS-201Z-8 and 335511 MHS-201Z-96

For targeted next-generation sequencing of methylated DNA

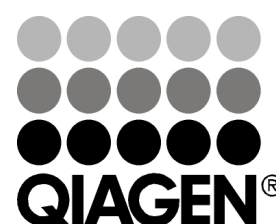
The QIAseq Targeted Methyl Immuno-Oncology Panel permits the bisulphite sequencing of the promoters of 67 immune response-related genes frequently differentially methylated in cancer samples relative to normal tissue, covering approximately 240.8 kilobases with 1,204 primers. Such frequently differentially methylated genes are likely to be relevant or even important to cancer biology and may be used in translational research to classify samples with known phenotypes. The covered genes include the co-stimulatory or co-inhibitory ligands and receptors targeted by current cancer immunotherapy antibodies, both approved and under development. Other covered genes include cytokines, chemokines, and effector enzymes, as well as biomarkers of T-cell infiltration, T-cell exhaustion, and immune hot and/or cold tumors. All genes were further qualified for differential methylation in cancer samples using MethHC, a searchable front end for querying processed data from The Cancer Genome Atlas (TCGA). Using digital bisulphite DNA sequencing, the methylation status a focused panel of gene promoters relevant to immuno-oncology can be detected with this primer pool.

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 μ l	1000 μ l
TM-repair Buffer 10x	400 μ l	400 μ l
T4 Polynucleotide Kinase	12 μ l	125 μ l
Ligase Buffer 2x	1.6 ml	3 x 1.6 ml
DNA Ligase	75 μ l	600 μ l
GeneRead® DNAseq 5x PCR Buffer	230 μ l	1.8 ml
UPCR Buffer 5x	60 μ l	500 μ l
dNTP Mix (10 mM each)	55 μ l	120 μ l
HotStarTaq® DNA Polymerase 6 U/ μ l	60 μ l	480 μ l
Nuclease-free water	4 x 1.5 ml	50 ml
TM Stop Solution	250 μ l	250 μ l
QIAseq Beads	10 ml	2 x 38.4 ml

Gene Table

Gene Symbol	Gene Symbol	Gene Symbol	Gene Symbol
BTLA	CCL19	CCL5	CCR5
CD19	CD2	CD247	CD27
CD274	CD276	CD28	CD3D
CD4	CD40	CD58	CD70
CD79A	CD80	CD86	CD8A
CTLA4	CXCL10	CXCL11	CXCL9
CXCR5	CXCR6	FOXP3	GZMA
GZMB	HAVCR2	HLA2	ICAM1
ICOS	ICOSLG	IDO1	IFNG
IL10	IL12A	IL12B	IL12RB2
IL13	IL17A	IL18	IL2
IL2RA	IL4	INA	KLHL6
LAG3	LGALS9	NCR3LG1	PDCD1
PDCD1LG2	PRF1	PTPRCAP	RASSF1
SEMA3B	STAT1	TNF	TNFRSF14
TNFRSF18	TNFRSF4	TNFRSF9	TNFSF18
TNFSF4	TNFSF9	ZAP70	

Functional Groupings

Immune Synapse Ligands & Receptors: BTLA, CD27, CD274, CD28, CD58, CD70, CD80, CD86, CTLA4, HAVCR2, ICAM1, ICOS, ICOSLG, LAG3, LGALS9, PDCD1, PDCD1LG2, TNFRSF14, TNFRSF18, TNFRSF4, TNFRSF9, TNFSF18, TNFSF4, TNFSF9.

Other Immune Checkpoint Molecules: CD276, HHLA2, NCR3LG1.

B Cell Markers: CD19, CD40, CD79A.

T Cell Markers: CD2, CD247, CD3D, CD4, CD8A, ZAP70.

Tumor Infiltrating Lymphocyte Biomarkers: INA, KLHL6, PTPRCAP, RASSF1, SEMA3B.

Chemokines: CCL19, CCL5, CXCL10, CXCL11, CXCL9.

Chemokine Receptors: CCR5, CXCR5, CXCR6.

Interleukins: IL10, IL12A, IL12B, IL13, IL17A, IL18, IL2, IL4.

Interleukin Receptors: IL12RB2, IL2RA.

Signal Transduction: CD247, FOXP3, IFNG, STAT1, TNF, ZAP70.

Enzymes & Effectors: GZMA, GZMB, IDO1, PRF1.

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.

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Sample to Insight