

QIAseq Targeted DNA Pro Panels

Human Myeloid Neoplasms Focus

Cat. nos. 333651 PHS-I03Z-I2 and 333655 PHS-I03Z-96

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

The QIAseq Targeted DNA Pro Human Myeloid Neoplasms Focus Panel permits the targeted next generation sequencing analysis of actionable and interpretable cancer-related somatic variants in 92 oncogenes and tumor suppressor genes relevant for myeloid neoplasm classification, covering 65,577 bases with 1,680 primers. Represented myeloid neoplasms include leukemia, lymphomas, myelodysplastic syndromes (MDS), myeloproliferative neoplasms (MPN), and other myeloid neoplasms. 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 myeloid neoplasm 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°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 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

Gene Table

Gene Symbol	Gene Symbol	Gene Symbol	Gene Symbol
ABL1	ARID1A	ASXL1	ATM
ATRX	B2M	BARD1	BCL2
BCL6	BCOR	BCORL1	BRAF
BRCA1	BRCA2	BRIPI	BTBK
CALR	CARD11	CBL	CBLB
CBLC	CD79B	CDKN2A	CEBPA
CHEK1	CHEK2	CREBBP	CSF3R
DDX41	DNMT3A	EGFR	ERBB2
ETV6	EZH2	FANCL	FBXW7
FGFR3	FLT3	GATA1	GATA2
GNA13	GNAS	GNB1	HRAS
IDH1	IDH2	JAK1	JAK2
JAK3	KIT	KMT2A	KMT2D
KRAS	MET	MPL	MTOR
MYC	MYD88	NF1	NOTCH1
NPM1	NRAS	PALB2	PDGFRA
PHF6	PIK3CA	PIM1	PPM1D
PTEN	PTPN11	RAD21	RAD51B
RAD51C	RAD51D	RET	RHOA
RUNX1	SETBP1	SF3B1	SMC1A
SMC3	SOC3	SRSF2	STAG2
STAT3	STAT5B	TET2	TNFAIP3
TP53	WT1	XPO1	ZRSR2

Functional Groupings

Leukemia:

Acute Lymphoblastic Leukemia (ALL): ABL1, BRAF, BTK, CDKN2A, CREBBP, ETV6, FBXW7, FLT3, HRAS, JAK1, JAK2, JAK3, KMT2A, KRAS, MYC, NOTCH1, NRAS, PTEN, PTPN11, RUNX1, SF3B1, TP53.

Acute Myeloid Leukemia (AML): ASXL1, ATRX, BRCA1, BRCA2, CBLB, CBLC, CEBPA, DDX41, DNMT3A, ETV6, FLT3, GATA1, GATA2, GNAS, HRAS, IDH1, IDH2, JAK2, KIT, KMT2A, KRAS, MTOR, NPM1, NRAS, PDGFRA, PTPN11, RUNX1, SF3B1, SMC1A, TET2, TP53, WT1.

Acute Promyelocytic Leukemia (APML; APL): CEBPA, NPM1, RUNX1.

Atypical Chronic Myeloid Leukemia (aCML): ASXL1, CBL, CEBPA, EZH2, FLT3, JAK2, KRAS, NPM1, NRAS, RUNX1, SETBP1, SRSF2, TET2.

Chronic Lymphocytic Leukemia (CLL): ATRX, BCL2, BRAF, CBLB, GNAS, GNB1, MYD88, NOTCH1, NRAS, PTPN11, SF3B1, TP53, XPO1.

Chronic Myeloid Leukemia (CML): ABL1, ASXL1, BCOR, BRAF, CBL, CREBBP, DNMT3A, EZH2, IDH1, IDH2, JAK2, KRAS, NPM1, NRAS, RUNX1, TET2, TP53, WT1.

Chronic Myelomonocytic Leukemia (CMML): ASXL1, BCOR, BCORL1, CBL, CEBPA, DNMT3A, EZH2, FLT3, IDH1, IDH2, JAK2, KIT, KRAS, MPL, NF1, NPM1, NRAS, PHF6, PTPN11, RUNX1, SETBP1, SF3B1, SRSF2, STAG2, TET2, TP53, ZRSR2.

Hairy Cell Leukemia: BRAF, TP53.

Juvenile Myelomonocytic Leukemia: CBL, KRAS, NRAS, PTPN11.

Lymphomas:

Acute Lymphocytic Lymphomas: BTK, CDKN2A, MYC, NOTCH1, SF3B1, TP53.

B Cell Lymphomas: BCL6, BRAF, CHEK2, EZH2, MYD88, TP53.

Burkitt Lymphomas: CBLB, GNA13, MTOR, MYC.

Diffuse Large B Cell Lymphomas: B2M, BCL2, CBLB, GNA13, KMT2D, MTOR, PIM1, SOCS1, TNFAIP3.

Follicular Lymphomas: ARID1A, BCL2, CARD11, CREBBP, EZH2, KMT2D.

Mantle Cell Lymphomas: ATM.

Marginal Zone Lymphomas: MYD88, TNFAIP3, TP53.

Mucosa-Associated Lymphoid Tissue (MALT) Lymphomas: TNFAIP3.

Non-Hodgkin Lymphomas: BRAF, NRAS, PIK3CA, TP53.

Primary Cutaneous Lymphomas: CD79B, MYD88.

Small Lymphocytic Lymphomas: ATRX, BCL2, CBLB, GNAS, XPO1.

T Cell Lymphomas: ATM, CBLB, DNMT3A, IDH1, IDH2, JAK1, JAK3, RHOA, STAT3, STAT5B, TET2.

Myelodysplastic Syndromes (MDS) & Myeloproliferative Neoplasms (NPM):

Myelodysplastic Syndromes (MDS): ASXL1, ATRX, BCOR, BCORL1, CALR, CBL, CEBPA, CSF3R, DNMT3A, ETV6, EZH2, FLT3, GATA2, GNAS, GNB1, IDH1, IDH2, JAK2, JAK3, KIT, KRAS, MPL, NF1, NPM1, NRAS, PHF6, PPM1D, PTPN11, RAD21, RUNX1, SETBP1, SF3B1, SMC3, SRSF2, STAG2, STAT3, TET2, TP53, WT1, ZRSR2.

Myeloproliferative Neoplasms (NPM): ASXL1, CALR, CBL, DNMT3A, EZH2, IDH1, IDH2, JAK2, MPL, RUNX1, SF3B1, SRSF2, TP53.

Other Myeloid Neoplasms:

Essential Thrombocythemia: ASXL1, CBL, IDH2, JAK2, MPL, SF3B1, TET2, TP53.

Multiple Myeloma: ATM, BARD1, BRAF, BRCA1, BRCA2, BRIP1, CHEK1, CHEK2, EGFR, ERBB2, FANCL, FGFR3, IDH1, IDH2, KIT, KRAS, MET, NRAS, PALB2, PDGFRA, RAD51B, RAD51C, RAD51D, RET, TP53.

Plasma Cell Myeloma: HRAS, MTOR.

Polycythemia Vera: ASXL1, DNMT3A, EZH2, IDH1, JAK2, NRAS, TET2, TP53.

Primary Myelofibrosis: ASXL1, CBL, DNMT3A, EZH2, IDH1, IDH2, JAK2, MPL, NF1, NRAS, SETBP1, SF3B1, SRSF2, TET2, TP53.

Systemic Mastocytosis: ASXL1, CBL, DNMT3A, ETV6, EZH2, IDH2, JAK2, KIT, KRAS, NPM1, NRAS, RUNX1, SETBP1, SF3B1, SRSF2, TET2.

Waldenstrom Macroglobulinemia: MYD88.

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.

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.

Trademarks: QIAGEN® (QIAGEN Group)

1100784 02/2016 © 2016 QIAGEN, all rights reserved.

www.qiagen.com

Australia ■ 1-800-243-800

Austria ■ 0800/281010

Belgium ■ 0800-79612

Brazil ■ 0800-557779

Canada ■ 800-572-9613

China ■ 8621-3865-3865

Denmark ■ 80-885945

Finland ■ 0800-914416

France ■ 01-60-920-930

Germany ■ 02103-29-12000

Hong Kong ■ 800 933 965

Ireland ■ 1800 555 049

Italy ■ 800-787980

Japan ■ 03-6890-7300

Korea (South) ■ 080-000-7145

Luxembourg ■ 8002 2076

Mexico ■ 01-800-7742-436

The Netherlands ■ 0800 0229592

Norway ■ 800-18859

Singapore ■ 1800-742-4368

Spain ■ 91-630-7050

Sweden ■ 020-790282

Switzerland ■ 055-254-22-11

UK ■ 01293-422-911

USA ■ 800-426-8157



Sample to Insight