

# QIAseq Targeted cfDNA Ultra Panels

## Human Myeloid Neoplasms

Cat. nos. 334051 YHS-003Z-12 and 334055 YHS-003Z-96

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

The QIAseq Targeted cfDNA Ultra Human Myeloid Neoplasms Panel permits the targeted next generation sequencing analysis of actionable and interpretable somatic variants in 81 oncogenes and tumor suppressor genes relevant for myeloid neoplasm identification, covering 32,716 bases with 2,302 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 cfDNA Ultra Panels Handbook*.

### Shipping and storage

The QIAseq Targeted cfDNA Ultra 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 cfDNA Ultra 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 cfDNA Ultra 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 cfDNA Ultra Catalog Number	334051	334055
No. of samples	12	96
One pool of region-specific primers	60 $\mu$ L	480 $\mu$ L
ERA Buffer, 10x	60 $\mu$ L	480 $\mu$ L
ERA Enzyme	60 $\mu$ L	480 $\mu$ L
UPH Ligation Buffer, 2.5x	350 $\mu$ L	2x1250 $\mu$ L
DNA Ligase	75 $\mu$ L	600 $\mu$ L
HiFi Ultra Buffer, 5x	144 $\mu$ L	2x768 $\mu$ L
HiFi Ultra Polymerase	40 $\mu$ L	315 $\mu$ L
Nuclease-free Water	1.5 mL	10 mL
QIAseq Bead Binding Buffer (one bottle)	7 mL	54 mL
QIAseq Beads (one bottle)	10 mL	38.4 mL

## Gene Table

Gene Symbol	Gene Symbol	Gene Symbol	Gene Symbol
ABL1	ALK	ARAF	ARID1A
ASXL1	ATM	ATRAX	B2M
BCL2	BCL6	BRAF	BTK
CALR	CARD11	CBL	CBLB
CBLC	CD79B	CDKN2A	CEBPA
CHEK2	CREBBP	CSF1R	CSF3R
CTNNB1	CXCR4	DDX41	DNMT3A
EGFR	EZH2	FBXW7	FGFR3
FLT3	GATA1	GATA2	GNA13
GNAS	GNB1	HRAS	IDH1
IDH2	JAK1	JAK2	JAK3
KIT	KMT2A	KMT2D	KRAS
MAP2K1	MPL	MTOR	MYC
MYD88	NOTCH1	NPM1	NRAS
PDGFRA	PIK3CA	PIM1	PLCG2
PTEN	PTPN11	RET	RHOA
RRAS	RUNX1	SETBP1	SF3B1
SMC1A	SMC3	SOC51	SRSF2
STAT3	STAT5B	TET2	TNFAIP3
TP53	U2AF1	UBA1	WT1
XPO1			

## Functional Groupings

**Exons:** ABL1, ASXL1, ATRX, CALR, CBL, CBLB, CBLC, CSF3R, EZH2, FBXW7, GATA1, GNAS, HRAS, IDH1, IDH2, JAK3, KIT, KMT2A, MYD88, NOTCH1, NPM1, PDGFRA, PTEN, SF3B1, SMC1A, SMC3, SRSF2, STAT3, U2AF1, WT1.

**Exons & Hotspots:** BRAF, EGFR, FLT3, JAK2, KRAS, MPL, NRAS, PTPN11.

**Hotspots:** ALK, ARAF, ARID1A, ATM, B2M, BCL2, BCL6, BTK, CARD11, CD79B, CDKN2A, CEBPA, CHEK2, CREBBP, CSF1R, CTNNB1, CXCR4, DDX41, DNMT3A, FGFR3, GNA13, GNB1, JAK1, KMT2D, MAP2K1, MTOR, MYC, PIK3CA, PIM1, PLCG2, RET, RHOA, RRAS, RUNX1, SETBP1, SOCS1, STAT5B, TNFAIP3, UBA1, XPO1.

**Whole Coding:** GATA2, TET2, TP53.

**Leukemia:** ABL1, ALK, ARAF, ASXL1, ATRX, BCL2, BRAF, BTK, CBL, CBLB, CBLC, CDKN2A, CEBPA, CREBBP, CSF1R, DDX41, DNMT3A, EZH2, FBXW7, FLT3, GATA1, GATA2, GNAS, GNB1, HRAS, IDH1, IDH2, JAK1, JAK2, JAK3, KIT, KMT2A, KRAS, MAP2K1, MPL, MTOR, MYC, MYD88, NOTCH1, NPM1, NRAS, PDGFRA, PLCG2, PTEN, PTPN11, RRAS, RUNX1, SETBP1, SF3B1, SMC1A, SRSF2, TET2, TP53, U2AF1, UBA1, WT1, XPO1.

**Lymphomas:** ALK, ARAF, ARID1A, ATM, ATRX, B2M, BCL2, BCL6, BRAF, BTK, CARD11, CBLB, CD79B, CDKN2A, CHEK2, CREBBP, CSF1R, CTNNB1, DNMT3A, EZH2, GNA13, GNAS, IDH1, IDH2, JAK1, JAK3, KMT2D, MAP2K1, MTOR, MYC, MYD88, NOTCH1, NRAS, PIK3CA, PIM1, PLCG2, RHOA, SF3B1, SOCS1, STAT3, STAT5B, TET2, TNFAIP3, TP53, UBA1, XPO1.

**Myelodysplastic Syndromes (MDS) & Myeloproliferative Neoplasms (MPN):** ASXL1, ATRX, CALR, CBL, CEBPA, CSF1R, CSF3R, DDX41, DNMT3A, EZH2, FLT3, GATA2, GNAS, GNB1, IDH1, IDH2, JAK2, JAK3, KIT, KRAS, MPL, NOTCH1, NPM1, NRAS, PDGFRA, PTPN11, RUNX1, SETBP1, SF3B1, SMC3, SRSF2, STAT3, STAT5B, TET2, TP53, U2AF1, WT1.

**Other Myeloid Neoplasms:** ALK, CSF1R, CXCR4, EGFR, FGFR3, RET, RRAS, U2AF1, UBA1.

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## Ordering Information

Product	Contents	Cat. no.
QIAseq Targeted cfDNA Ultra (12)	All reagents (except indexes) for targeted DNA sequencing; fixed panel for 12 samples; less than 200 genes	334051
QIAseq Targeted cfDNA Ultra (96)	All reagents (except indexes) for targeted DNA sequencing; fixed panel for 96 samples; less than 200 genes	334055
QIAseq Targeted cfDNA Ultra Custom (96)	All reagents (except indexes) for targeted DNA sequencing; custom panel for 96 samples	334075
QIAseq Targeted cfDNA Ultra Booster (96)	Pool of primers used in combination with either cataloged or custom panels	334085

### QIAseq Targeted cfDNA Ultra Unique Dual Indices

QIAseq Targeted cfDNA Ultra 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, and D) required for multiplexing 384 samples in one run	334165
QIAseq Targeted cfDNA Ultra 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, and D) required for multiplexing 384 samples in one run	334175
QIAseq Targeted cfDNA Ultra 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, and D) required for multiplexing 384 samples in one run	334185
QIAseq Targeted cfDNA Ultra 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, and D) required for multiplexing 384 samples in one run	334195

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Product	Contents	Cat. no.
QIAseq Targeted cfDNA Ultra 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	334151
<b>Related products</b>		
QIAseq Library Quant Assay Kit	Reagents for quantification of libraries prepared for Illumina or Ion Torrent platforms; assay format	333314
QIAamp Circulating Nucleic Acid Kit (50)	For 50 preps: QIAamp Mini Columns, Tube Extenders (20 mL), QIAGEN Proteinase K, Carrier RNA, Buffers, VacConnectors, and Collection Tubes	55114
QIAamp MinElute ccfDNA Mini Kit (50)	For 50 DNA preps: QIAamp UCP MinElute Columns, QIAGEN Proteinase K, Magnetic Bead Suspension, Buffers, Bead Elution Tubes, Collection Tubes	55204
QIAamp MinElute ccfDNA Midi Kit (50)	For 50 preps: QIAamp UCP MinElute Columns, QIAGEN Proteinase K, Magnetic Bead Suspension, Buffers, Bead Elution Tubes, and Collection Tubes	55284
EZ1&2 ccfDNA Kit (48)	For 48 preps: 48 reagent cartridges (EZ1&2 ccfDNA), Magnetic Bead Suspension, Elution Buffer, Large-Volume Tubes, Disposable Tip Holders, Disposable Filter-Tips, Elution Tubes	984854

QIAseq Targeted cfDNA Ultra 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