

QIAseq Targeted DNA Panels

Human Lung Cancer

Cat. Nos. 333502 DHS-005Z-12 and 333505 DHS-005Z-96

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

The QIAseq Targeted DNA Human Lung Cancer Panel permits the sequencing of the whole coding region of 72 genes frequently mutated in lung cancer samples, covering 318,059 bases with 4,149 primers. Such frequently detected mutations are likely to be relevant or even important to lung cancer biology and may be used in translational research to classify samples with known phenotypes. Using the Catalogue of Somatic Mutations in Cancer (COSMIC), frequently mutated genes were collected for non-small cell lung cancers, small cell lung cancers, squamous cell carcinomas, adenocarcinomas and other carcinomas of the lung. Using digital DNA sequencing, SNP/indels in a focused panel of genes relevant to lung cancer can be detected with this primer pool.

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

Shipping and storage

QIAseq Targeted DNA Panels (except Ligation Solution and QIAseq Beads) are shipped on dry ice and should be stored at -30 to -15°C in a constant-temperature freezer upon arrival. The QIAseq Beads and Ligation Solution are shipped on cold packs and should be stored at $2-8^{\circ}\text{C}$ except that the Ligation Solution should be removed immediately upon receipt and stored at -30 to -15°C in a constant-temperature freezer. The QIAseq Index kits are shipped on dry ice and should be stored at -30°C to -15°C upon arrival. When stored correctly, the QIAseq Index 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 Panel Catalog Number	333502	333505
Number of samples	12	96
One pool of region-specific primers	75 µl	600 µl
Fragmentation Buffer, 10x	40 µl	300 µl
Fragmentation Enzyme Mix	75 µl	600 µl
FERA Solution	15 µl	110 µl
FG Solution	170 µl	170 µl
Ligation Buffer, 5x	160 µl	1250 µl
DNA Ligase	75 µl	600 µl
Ligation Solution	125 µl	970 µl
Nuclease-free Water	1.5 ml	10 ml
TEPCR Buffer, 5x	60 µl	500 µl
UPCR Buffer, 5x	60 µl	500 µl
HotStarTaq® DNA Polymerase	30 µl	240 µl
One bottle containing QIAseq Beads	10 ml	55 ml

Gene Table

Gene Symbol	Gene Symbol	Gene Symbol	Gene Symbol
ADGRB3	AKT1	ALK	AMER1
APC	ARID1A	ATM	BAP1
BRAF	CDKN2A	CDKN2B	CREBBP
CTNNB1	DDR2	EGFR	EPHA5
ERBB2	ERBB4	FBXO7	FBXW7
FGFR1	FGFR2	FGFR3	FHIT
GRM8	HRAS	JAK2	KDR
KEAP1	KIT	KMT2D	KRAS
LRP1B	MAP2K1	MDM2	MET
MGA	MLH1	MUC16	MYC
NF1	NFE2L2	NOTCH1	NRAS
NTRK1	NTRK2	NTRK3	PDGFRA
PIK3CA	PIK3CG	PIK3R1	PIK3R2
PKHD1	PTEN	PTPRD	RARB
RASSF1	RB1	RBM10	RET
RIT1	ROS1	RUNX1T1	SETD2
SMAD4	SMARCA4	SOX2	STK11
TNFAIP3	TP53	TSC1	U2AF1

Functional Groupings

Carcinoid-Endocrine Tumor:

Atypical: KRAS, PIK3CA, TP53.

Typical: PIK3CA.

Carcinoma:

Non-Small Cell Lung Cancers (NSCLC): ALK, AMER1, APC, ATM, ADGRB3, BRAF, CDKN2A, CTNNB1, EGFR, ERBB2, FGFR3, GRM8, HRAS, JAK2, KRAS, MET, MUC16, NF1, NFE2L2, NRAS, NTRK2, NTRK3, PDGFRA, PIK3CA, PIK3CG, PKHD1, PTEN, RB1, RET, SMARCA4, STK11, TNFAIP3, TP53.

Small Cell Lung Cancers: ALK, AMER1, ARID1A, ATM, ADGRB3, CDKN2A, CREBBP, CTNNB1, DDR2, EGFR, EPHA5, ERBB4, FBXO7, FBXW7, FGFR1, FHIT, GRM8, HRAS, KDR, KIT, KRAS, LRP1B, MET, KMT2D, MUC16, MYC, NF1, NOTCH1, NTRK1, NTRK2, NTRK3, PIK3CA, PIK3CG, PIK3R1, PKHD1, PTEN, PTPRD, RARB, RB1, RBM10, RET, RIT1, ROS1, RUNX1T1, SETD2, SMARCA4, TNFAIP3, TP53.

Squamous Cell Carcinomas (SCC): AKT1, ALK, AMER1, APC, ARID1A, ATM, ADGRB3, BRAF, CDKN2A, CDKN2B, CREBBP, CTNNB1, DDR2, EGFR, EPHA5, ERBB2, ERBB4, FBXO7, FBXW7, FGFR1, FGFR2, FGFR3, FHIT, GRM8, HRAS, JAK2, KDR, KEAP1, KIT, KRAS, LRP1B, MAP2K1, MDM2, MET, MGA, MLH1, KMT2D, MUC16, MYC, NF1, NFE2L2, NOTCH1, NRAS, NTRK1, NTRK2, NTRK3, PDGFRA, PIK3CA, PIK3CG, PIK3R1, PIK3R2, PKHD1, PTEN, PTPRD, RARB, RB1, RBM10, RET, RIT1, ROS1, RUNX1T1, SETD2, SMAD4, SMARCA4, STK11, TNFAIP3, TP53, TSC1, U2AF1.

Acinar Adenocarcinomas: BRAF, EGFR, KRAS.

Adenocarcinomas: AKT1, ALK, AMER1, APC, ARID1A, ATM, ADGRB3, BAP1, BRAF, CDKN2A, CDKN2B, CREBBP, CTNNB1, DDR2, EGFR, EPHA5, ERBB2, ERBB4, FBXO7, FBXW7, FGFR1, FGFR2, FGFR3, FHIT, GRM8, HRAS, JAK2, KDR, KEAP1, KIT, KRAS, LRP1B, MAP2K1, MDM2, MET, MGA, MLH1, KMT2D, MUC16, MYC, NF1, NFE2L2, NOTCH1, NRAS, NTRK1, NTRK2, NTRK3, PDGFRA, PIK3CA, PIK3CG, PIK3R1, PIK3R2, PKHD1, PTEN, PTPRD, RARB, RASSF1, RB1, RBM10, RET, RIT1, ROS1, RUNX1T1, SETD2, SMAD4, SMARCA4, SOX2, STK11, TNFAIP3, TP53, TSC1, U2AF1.

Blastomas: CTNNB1, TP53.

Bronchioalveolar Adenocarcinomas: CDKN2A, EGFR, ERBB2, KRAS, NF1, STK11, TP53.

Carcinosarcomas: EGFR.

Giant Cell Carcinomas: EGFR.

Large Cell Carcinomas: BRAF, DDR2, CDKN2A, EGFR, EPHA5, FGFR1, FGFR3, HRAS, KEAP1, KRAS, NRAS, NTRK1, NTRK3, PIK3CA, STK11, TP53.

Lymphoepithelioma-Like Carcinomas: EGFR, TP53.

Micropapillary Adenocarcinomas: BRAF, EGFR, KRAS.

Mixed Adenosquamous Carcinomas: EGFR, KRAS, PIK3CA, STK11, TP53.

Mixed Small Cell Carcinoma-Adenocarcinomas: CREBBP, DDR2, EGFR, TP53.

Mucoepidermoid Carcinomas: EGFR.

Oncocytic Adenocarcinomas: EGFR, KRAS.

Pleomorphic Carcinomas: EGFR, KIT, KRAS, TP53.

Sarcomatoid Carcinomas: EGFR, KRAS.

Terminal Respiratory Unit Type Adenocarcinomas: EGFR.

Undifferentiated Carcinoma: EGFR, KRAS, MUC16, PKHD1, TP53.

Other Carcinomas: ARID1A, CTNNB1, HRAS, NRAS.

Other Cancer Subtypes:

Hyperplasia: EGFR, KRAS.

Mucinous Proliferation: KRAS.

Neoplasms: EGFR, KRAS.

Ordering Information

Product	Contents	Cat. no.
QIAseq Targeted DNA Panel (12)	ALL reagents (except indexes) for targeted DNA sequencing; fixed panel for 12 samples; less than 200 genes	333502
QIAseq Targeted DNA Panel (96)	ALL reagents (except indexes) for targeted DNA sequencing; fixed panel for 96 samples; less than 200 genes	333505
QIAseq Targeted DNA HC Panel (12)	ALL reagents (except indexes) for targeted DNA sequencing; fixed panel for 12 samples; more than 200 genes	333512
QIAseq Targeted DNA HC Panel (96)	ALL reagents (except indexes) for targeted DNA sequencing; fixed panel for 96 samples; more than 200 genes	333515
QIAseq Targeted DNA Custom Panel (96)	ALL reagents (except indexes) for targeted DNA sequencing; Custom panel for 96 samples	333525
QIAseq Targeted DNA Extended Panel (96)	ALL reagents (except indexes) for targeted DNA sequencing; Extended panel for 96 samples	333545
QIAseq Targeted DNA Booster Panel (96)	Pool of primers used in combination with either cataloged or custom panels	333535

QIAseq Unique Dual Indices

QIAseq 96-Unique Dual Index Set A (384)	Box containing unique molecularly indexed adapters and primers, enough for a total of 384 samples, for indexing up to 96 samples for targeted panel sequencing on Illumina platforms; Set A (of A and B) required for multiplexing 192 samples in one run	333725
QIAseq 96-Unique Dual Index Set B (384)	Box containing unique molecularly indexed adapters and primers, enough for a total of 384 samples, for indexing up to 96 samples for targeted panel sequencing on Illumina platforms; Set A (of A and B) required for multiplexing 192 samples in one run	333735
QIAseq 8-Unique Dual Index Set A (48)	Box containing unique molecularly-indexed adapters and primers, enough for a total of 48 samples, for indexing up to 8 samples for targeted panel sequencing on Illumina platforms; Set A (of A and B) required for multiplexing 16 samples in one run	333715

Product	Contents	Cat. no.
QIAseq 8-Unique Dual Index Set B (48)	Box containing unique molecularly-indexed adapters and primers, enough for a total of 48 samples, for indexing up to 8 samples for targeted panel sequencing on Illumina platforms; Set A (of A and B) required for multiplexing 16 samples in one run	333716
QIAseq Combinatorial Dual Indices		
QIAseq 12-Index I (48)	Box containing molecularly indexed adapters and primers, enough for a total of 48 samples, for indexing up to 12 samples for targeted panel sequencing on Illumina platforms	333714
QIAseq 96-Index I Set A (384)	Box containing molecularly indexed adapters and primers, enough for a total of 384 samples, for indexing up to 96 samples for targeted panel sequencing on Illumina platforms; one of 4 sets required for multiplexing 384 samples	333727
QIAseq 96-Index I Set B (384)	Box containing molecularly indexed adapters and primers, enough for a total of 384 samples, for indexing up to 96 samples for targeted panel sequencing on Illumina platforms; 2 of 4 sets required for multiplexing 384 samples	333737
QIAseq 96-Index I Set C (384)	Box containing molecularly indexed adapters and primers, enough for a total of 384 samples, for indexing up to 96 samples for targeted panel sequencing on Illumina platforms; 3 of 4 sets required for multiplexing 384 samples	333747
QIAseq 96-Index I Set D (384)	Box containing molecularly indexed adapters and primers, enough for a total of 384 samples, for indexing up to 96 samples for targeted panel sequencing on Illumina platforms; 4 of 4 sets required for multiplexing 384 samples	333757
QIAseq Targeted DNA Indices for Ion Torrent platforms		
QIAseq 12-Index L (48)	Box containing molecularly-indexed adapters and primers, enough for a total of 48 samples – for indexing up to 12 samples for targeted panel sequencing on Ion Torrent platforms	333764
QIAseq 96-Index L (384)	Box containing molecularly-indexed adapters and primers in arrays, enough for a total of 384 samples – for indexing up to 96 samples for targeted panel sequencing on Ion Torrent platforms	333777

Product	Contents	Cat. no.
Related products		
QIAseq Library Quant Array Kit	Reagents for quantification of libraries prepared for Illumina or Ion Torrent platforms; array format	333304
QIAseq Library Quant Assay Kit	Reagents for quantification of libraries prepared for Illumina or Ion Torrent platforms; assay format	333314
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 DNA QuantiMIZE Assay Kit	qPCR assays for optimizing amount of input DNA and PCR cycling conditions for targeted enrichment of FFPE DNA	333414
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 Tissue Kit	For 50 DNA preps: 50 QIAamp MinElute Columns, Proteinase K, Buffers, Collection Tubes (2 ml)	56404
QIAamp DNA FFPE Advanced Kit	For 50 preps: QIAamp UCP MinElute Columns, collection tubes, Deparaffinization Solution, Proteinase K, RNase A, RNase-free water and buffers	56604
QIAamp DNA FFPE UNG Kit	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 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