# **QIAseq Targeted RNAscan Panels**

# **Human Lung Cancer**

Cat. nos. 333602 FHS-003Z-12 and 333605 FHS-003Z-96

For constructing molecularly barcoded libraries from RNA for gene fusion analysis using digital NGS

The QIAseq Targeted RNAscan Human Lung Cancer Panel allows the use of next-generation sequencing using 137 primers to detect fusions to 27 genes frequently observed in lung cancer samples. Such frequently detected fusions 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 detected fusions were collected for adenocarcinomas, non-small cell lung cancers (NSCLC), squamous cell carcinomas (SCC), and other lung carcinomas. For the same cancer subtypes, additional fusions were also collected from the Archer Quiver Database, requests and suggestions by QIAGEN KOLs and SMEs, and other peer-reviewed publications. Using digital DNA sequencing, fusions to a focused panel of genes relevant to lung cancer can be detected with this primer pool.

For further details, consult the QIAseq Targeted RNAscan Panels Handbook.

### Shipping and storage

The QIAseq Targeted RNAscan Panel Kit is shipped with dry ice (Box 1) and must be stored at -30 to  $-15^{\circ}$ C upon arrival. Box 2 (QIAseq Beads) is shipped on cold packs and should be stored at  $4^{\circ}$ C. When stored under these conditions and handled correctly, the product can be kept based on the expiration date on each component without reduction in performance.

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



### **Panel Contents**

QIAseq Targeted RNAscan Panel Catalog Number	333602	333605		
No. of preps	12	96		
Box I of 2				
QIAseq Targeted RNAscan Panel	48 μl	384 <i>μ</i> l		
RP Primer	12 <i>µ</i> l	96 <i>μ</i> l		
EZ Reverse Transcriptase	12 <i>µ</i> l	96 <i>μ</i> l		
BC3 Buffer, 5x	24 µl	192 <i>μ</i> l		
RNase Inhibitor	12 <i>µ</i> l	96 <i>μ</i> l		
RH RNase	12 <i>µ</i> l	96 <i>μ</i> l		
dNTP	12 <i>µ</i> l	96 <i>μ</i> l		
XC Buffer, 10x	24 µl	192 <i>μ</i> l		
BX Enzyme	12 <i>µ</i> l	96 <i>μ</i> l		
ERA Enzyme	120 <i>µ</i> l	960 μl		
ERA Buffer, 10x	60 µl	480 μl		
DNA Ligase	120 µl	960 μl		
Ligation Buffer, 5x	240 μl	$2 \times 960 \mu$ l		
QIAseq RNA Buffer	300 μl	$2 \times 1200 \mu$ l		
Nuclease-Free Water	1.5 ml	$2 \times 1500 \mu$ l		
HotStarTaq® DNA Polymerase	22 µl	180 <i>µ</i> l		
Handbook	1	1		
Box 2 of 2				
QIAseq Beads	10 ml	34 ml		

#### **Gene Table**

Gene Symbol	Gene Symbol	Gene Symbol	Gene Symbol
ALK	BAG4	CCDC6	CD74
CUXI	EML4	EZR	FGFR1
FGFR3	GOPC	HIP1	KIF5B
KLC1	LRIG3	MPRIP	NRG1
NTRK1	RET	ROS1	SDC4
SLC34A2	STRN	TACC3	TFG
TPM3	TPR	TRIM33	

### **Functional Groupings**

Acinar Adenocarcinomas: ALK, CD74, EML4, HIP1, KIF5B, ROS1, SDC4.

Adenocarcinomas: ALK, CCDC6, CD74, CUX1, EML4, EZR, FGFR3, GOPC, HIP1, KIF5B, KLC1, LRIG3, MPRIP, NTRK1, RET, ROS1, SDC4, SLC34A2, STRN, TACC3, TFG, TPM3, TPR, TRIM33.

Bronchioloalveolar Adenocarcinomas: ALK, EML4, KLC1, ROS1, SDC4.

Inflammatory Myofibroblastic Tumors: ALK, CD74, EML4, EZR, GOPC, LRIG3, ROS1, SDC4, SLC34A2, TPM3.

Invasive Mucinous Adenocarcinomas: ALK, CD74, EML4.

Mixed Adenosquamous Carcinomas: ALK, EML4, KIF5B, RET.

Mucoepidermoid Carcinomas: ALK, EML4.

Non-Small Cell Carcinomas: ALK, CCDC6, CD74, CUX1, EML4, EZR, GOPC, HIP1, KIF5B, KLC1, LRIG3, RET, ROS1, SDC4, SLC34A2, STRN, TFG, TPM3, TPR, TRIM33.

Non-Small Cell Lung Cancers (NSCLC): ALK, BAG4, CCDC6, CD74, CUX1, EML4, EZR, FGFR1, FGFR3, GOPC, HIP1, KIF5B, KLC1, LRIG3, MPRIP, NRG1, NTRK1, RET, ROS1, SDC4, SLC34A2, STRN, TACC3, TFG, TPM3, TPR, TRIM33.

Squamous Cell Carcinomas (SCC): ALK, CD74, EML4, FGFR3, HIP1, KIF5B, RET, TACC3.

Other Carcinomas: ALK, EML4.

Other Lung Cancers: BAG4, CCDC6, CD74, CUX1, EZR, FGFR1, FGFR3, GOPC, KIF5B, LRIG3, MPRIP, NTRK1, RET, ROS1, SDC4, SLC34A2, TACC3, TPM3, TPR, TRIM33.

Commercial Control Samples: ALK, CCDC6, CD74, EML4, FGFR3, KIF5B, NTRK1, RET, ROS1, SLC34A2, TACC3, TFG. TPM3.

# **Ordering Information**

Product	Contents	Cat. no.
QIAseq Targeted RNAscan Panel (12)	Kit containing reagents for first strand synthesis, second strand synthesis, end-repair/A-addition, gene specific amplification and QIAseq Beads for targeted RNAscan sequencing, fixed panel for 12 samples	333602
QIAseq Targeted RNAscan HC Panel (12)	Kit containing reagents for first strand synthesis, second strand synthesis, end-repair/A-addition, gene specific amplification and QIAseq Beads for targeted RNAscan sequencing, fixed panel for 12 samples	333612
QIAseq Targeted RNAscan Panel (96)	Kit containing reagents for first strand synthesis, second strand synthesis, end-repair/A-addition, gene specific amplification and QIAseq Beads for targeted RNAscan sequencing, fixed panel for 96 samples	333605
QIAseq Targeted RNAscan HC Panel (96)	Kit containing reagents for first strand synthesis, second strand synthesis, end-repair/A-addition, gene specific amplification and QIAseq Beads for targeted RNAscan sequencing, fixed panel for 96 samples	333615
QIAseq Targeted RNAscan Custom Panel	Kit containing reagents for first strand synthesis, second strand synthesis, end-repair/A-addition, gene specific amplification and QIAseq Beads for targeted RNAscan sequencing, custom panel for 96 samples	333625
QIAseq 12-Index I (48)	Box containing oligos, 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 oligos, enough for a total of 384 samples, for indexing up to 96 samples for targeted panel sequencing on Illumina platforms; one of four sets	333727
QIAseq 96-Index I Set B (384)	Box containing oligos, enough for a total of 384 samples, for indexing up to 96 samples for targeted panel sequencing on Illumina platforms; two of four sets	333737
QlAseq 96-Index I Set C (384)	Box containing oligos, enough for a total of 384 samples, for indexing up to 96 samples for targeted panel sequencing on Illumina platforms; three of four sets required for multiplexing 384 samples	333747

Product	Contents	Cat. no.
QIAseq 96-Index I Set D (384)	Box containing oligos, enough for a total of 384 samples, for indexing up to 96 samples for targeted panel sequencing on Illumina platforms; four of four sets required for multiplexing 384 samples	333757
QIAseq 12-Index L (48)	Box containing oligos, 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)  Related products	Box containing oligos in arrays, enough for a total of 384 samples, for indexing up to 96 samples for targeted panel sequencing on Ion Torrent platforms	333777
Human XpressRef Universal Total RNA	2 tubes each containing 100 $\mu g$ human RNA at 1 mg/ml	338112
RNeasy Mini Kit (50)	50 RNeasy Mini Spin Columns, Collection Tubes (1.5 ml and 2 ml), RNase-free reagents and buffers	74104
RNeasy FFPE Kit (50)	50 RNeasy MinElute® Spin Columns, Collection Tubes, Proteinase K, RNase-Free DNase I, DNase Booster Buffer, RNase-free buffers, Nuclease-free water	73504
PAXgene® Blood RNA Kit (50)	50 PAXgene Spin Columns, 50 PAXgene Shredder Spin Columns, Processing Tubes, RNase-Free DNase I, RNase-free reagents and buffers; to be used in conjunction with PAXgene Blood RNA Tubes	762174
RNeasy Microarray Tissue Mini Kit (50)	RNeasy Mini Spin Columns, Collection Tubes, QIAzol® Lysis Reagent, RNase-free reagents and buffers	73304
RNeasy Micro Kit (50)	50 RNeasy MinElute Spin Columns, Collection Tubes (1.5 ml and 2 ml), RNase-free DNase I, Carrier RNA, RNase-free reagents and buffers	74004
QIAamp® RNA Blood Mini Kit (50)	50 QIAamp Mini Spin Columns, 50 QIAshredder Spin Columns, Collection Tubes (1.5 ml and 2 ml), RNase-free reagents and buffers	52304

QIAseq Targeted RNAscan 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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