

XCeloSeq® Lung Cancer Fusion Kit

SEQ008

Product Description

The XCeloSeq Lung Cancer Fusion Kit contains a pool of targeted RNA enrichment primers located in conserved fusion partners for identification of both known and unknown fusions from RNA. These primers are designed for use only with XCeloSeq Targeted RNA Core Reagents (GF031). Together they allow for the generation of high quality, high-complexity next-generation sequencing libraries that are suitable for use with Illumina® next-generation sequencing instruments.

Kit Contents

Component	Tube Colour	Cap Colour	Storage	Part Code
Lung Cancer Fusion Kit – Outer Pool	Transparent	Orange	-20°C	PC0051
Lung Cancer Fusion Kit – Inner Pool	Transparent	Black	-20°C	PC0052

Kit Specifications and Recommendations

Gene Targets	15
Targeting Primers [%]	159
Recommended Input Quantity [*]	5-200 ng FFPE derived total RNA
	5-100 ng high quality total RNA
Recommended Reads Per Sample [#]	2,000,000 (Dual index, 150 bp paired-end)
Hands on Time	2.0 hours
Total Protocol Time	7.25 hours

[%]An additional 8 QC primers are included

^{*}Higher quantities within this range will improve maximum sensitivity. The product supports capture with down to 1.0 ng of RNA, however this is not recommended as it will lead to reduced sensitivity. Cell-free RNA and total cell-free nucleic acids may be used as alternative starting materials, however fusion detection sensitivity will be lower due to cell-free RNA concentrations typically being very low, when using this material maximising starting input quantity will help ensure the best possible results.

[#]When using cfrRNA up to 10 times as much sequencing may be needed to ensure that enough RNA derived reads are in the final sequencing data. Users are recommended to assess this on the sample-by-sample basis.

Assay Targets

Gene	Accession	Exon(s)	Fusion Direction
ALK	NM_004304.5	2, 4, 6, 10, 16 17, 18, 19 (and intron 19), 20, 21, 22, 23, 26	5'
BRAF	NM_004333.6	2, 7, 8, 9, 10, 11, 12, 15, 16	5'
		1, 3, 7, 8, 10, 13	3'
EGFR	NM_005228.5	7, 8 (Exon 2-7 Skipping), 9, 16, 19, 20	5'
		1 (Exon 2-7 Skipping), 24, 25	3'
ERG	NM_004449.4	2, 3, 4, 5, 6, 7, 8, 9, 10, 11	5'
ETV1	NM_004956.5	3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13	5'
FGFR1	NM_015850.4	2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 17	5'
		12, 17	3'
FGFR2	NM_000141.4	2, 5, 7, 8, 9, 10	5'
		16, 17	3'
FGFR3	NM_000142.4	3, 5, 8, 9, 10	5'
		16, 17 (and intron 17)	3'
MET	NM_000245.4	2, 4, 5, 6, 13, 14, 15 (exon 14 skipping event), 16, 17, 21	5'
		2, 13 (exon 14 skipping event)	3'
NRG1	NM_004495.4	1, 2, 3, 4, 6	5'
	NM_013957.5	1, 8	5'
	NM_013962.2	1	3'
NTRK1	NM_002529.3	2, 4, 6, 8, 10, 11, 12, 13	5'
NTRK2	NM_006180.4	5, 7, 9, 11, 12, 13, 14, 15, 16, 17	5'
NTRK3	NM_002530.4	4, 7, 10, 12, 13, 14, 15, 16	5'
		13, 14, 15	3'
	NM_001007156.2	15	5'
RET	NM_020975.6	2, 4, 6, 8, 9, 10, 11, 12, 13, 14	5'
ROS1	NM_002944.2	2, 4, 7, 31, 32, 33, 34, 35, 36, 37	5'

Additional Information

Please refer to “XCelSeq Targeted RNA Enrichment Protocol with UDIs” for instructions for use.

Limitations of Use

For Research Use Only (RUO)

This product is not intended to be used for therapeutic or diagnostic purposes in humans or animals. SDS sheets relevant to this product are available upon request.

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