

# XCeloSeq® Actionable Fusion Kit

SEQ015

## Product Description

The XCeloSeq Actionable 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
Actionable Fusion Kit – Outer Pool	Transparent	Orange	-20°C	PC0252
Actionable Fusion Kit – Inner Pool	Transparent	Black	-20°C	PC0253

## Kit Specifications and Recommendations

Gene Targets	12
Targeting Primers <sup>%</sup>	144
Recommended Input Quantity <sup>*</sup>	5-200 ng FFPE derived total RNA
	5-100 ng high quality total RNA
Recommended Reads Per Sample <sup>#</sup>	1,500,000 (Dual index, 150 bp paired-end)
Hands on Time	2.0 hours
Total Protocol Time	7.25 hours

<sup>%</sup>An additional 8 QC primers are included

<sup>\*</sup>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.

<sup>#</sup>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 library. Users are recommended to assess this on the sample-by-sample basis.

## Assay Targets

Gene	Accession	Exon(s)	Fusion Direction
<b>ABL1</b>	NM_005157.4	1, 2, 3, 4	5'
<b>ALK</b>	NM_004304.5	2, 4, 6, 10, 16 17, 18, 19 (and intron 19), 20, 21, 22, 23, 26	5'
<b>BRAF</b>	NM_004333.6	2, 7, 8, 9, 10, 11, 12, 15, 16	5'
		1, 3, 7, 8, 10, 13	3'
<b>EWSR1</b>	NM_005243.4	4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14	3'
<b>FGFR1</b>	NM_015850.4	2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 17	5'
		12, 17	3'
<b>FGFR2</b>	NM_000141.4	2, 5, 7, 8, 9, 10	5'
		16, 17	3'
<b>FGFR3</b>	NM_000142.4	3, 5, 8, 9, 10	5'
		16, 17 (and intron 17)	3'
<b>JAK2</b>	NM_004972.3	6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20	5'
		9, 10, 11, 12	3'
<b>NTRK1</b>	NM_002529.3	2, 4, 6, 8, 10, 11, 12, 13	5'
<b>NTRK2</b>	NM_006180.4	5, 7, 9, 11, 12, 13, 14, 15, 16, 17	5'
<b>NTRK3</b>	NM_002530.4	4, 7, 10, 12, 13, 14, 15, 16	5'
		13, 14, 15	3'
	NM_001007156.2	15	5'
<b>RET</b>	NM_020975.6	2, 4, 6, 8, 9, 10, 11, 12, 13, 14	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.