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Product Insert

XCeloSeq® Acute Lymphoblastic Leukaemia Fusion Kit

SEQ019

Product Description

The XCeloSeq Acute Lymphoblastic Leukaemia 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
Acute Lymphoblastic Leukaemia Fusion Kit – Outer Pool	Transparent	**Orange**	-20°C	PC0252
Acute Lymphoblastic Leukaemia Fusion Kit – Inner Pool	Transparent	**Black**	-20°C	PC0253

Kit Specifications and Recommendations

Gene Targets	44
Targeting Primers[%]	317
Recommended Input Quantity[*]	5-200 ng FFPE derived total RNA
	5-100 ng high quality RNA
Recommended Reads Per Sample	2,750,000
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 cfRNA 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.

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Assay Targets

Gene	Accession	Exon(s)	Fusion Direction
ABL1	NM_005157.4	1, 2, 3, 4, 5	5′
ABL2	NM_007314.4	2, 3, 4, 5, 6, 7, 8	5′
BCL11B	NM_138576.4	2, 3	3′
		3, 4	5′
BCL2	NM_000633.2	3	3′
		2	5′
BCL6	NM_001706.5	2,3	5′
BCR	NM_004327.4	1, 2, 3, 8, 12, 13, 14, 15, 16	3′
CHD1	NM_001270.2	1, 2	5′
CREBBP	NM_004380.3	2, 3, 4, 5, 6	5′
CRLF2	NM_022148.4	1	5′
CSF1R	NM_005211.3	9, 10, 11, 12, 13, 14	5′
EBF1	NM_024007.5	10, 11, 12, 13, 14, 15	3′
EPOR	NM_000121.4	7, 8	3′
ETV6	NM_001987.5	1, 2, 3, 4, 5, 6	3′
		2, 3, 4, 5, 6, 7	5′
FGFR1	NM_015850.4	12, 17	3′
		2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 17	5′
IKZF1	NM_006060.6	1, 2, 3	3′
		7, 8	5′
IKZF2	NM_016260.3	3, 4	3′
IKZF3	NM_012481.5	2, 3, 4, 5, 6, 7	3′
JAK2	NM_004972.3	9, 10, 11, 12	3′
		6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20	5′
KLF2	NM_016270.4	2, 3	5′
KMT2A	NM_005933.4	4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35	3′
		2, 3	5′
MLLT4	NM_001040000.3	2	5′
MYC	NM_002467.6	1, 2	5′
NF1	NM_000267.3	14	3′
		36	5′
NOTCH1	NM_017617.5	24	3′
		24, 25, 26, 27, 28, 29	5′
		34 (exon skipping)	
NTRK3	NM_002530.4	4, 7, 10, 12, 13, 14, 15, 16	5′
		13, 14, 15	3′
	NM_001007156.2	15	5′
NUP214	NM_005085.4	17, 18, 19	5′

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Gene	Accession	Exon(s)	Fusion Direction
NUP98	NM_016320.5	8, 9, 10, 11, 12, 13, 14, 15, 16, 17	3′
		12, 13	5′
P2RY8	NM_178129.5	1	3′
PAG1	NM_018440.4	2	5′
PAX5	NM_016734.3	1, 4, 5, 6, 7, 8	3′
		6, 7, 8	5′
PBX1	NM_002585.4	1, 2, 3, 4, 5, 6, 7, 8, 9	5′
PDCD1LG2	NM_025239.4	5, 6	3′
		1, 2, 3	5′
PDGFRA	NM_006206.6	9, 10, 11, 12, 13, 14	5′
PDGFRB	NM_002609.4	8, 9, 10, 11, 12, 13, 14	5′
PICALM	NM_007166.4	16, 17, 18, 19	3′
PTK2B	NM_173176.3	2, 3, 4, 5, 6, 7, 8	5′
RUNX1	NM_001754.4	2, 3, 4, 5, 6, 7, 8	3′
		5, 6, 7, 8, 9	5′
SEMA6A	NM_020796.5	1, 2	3′
SETD2	NM_014159.6	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12	3′
STIL	NM_003035.2	1, 2	3′
TAL1	NM_003189.5	2, 4	5′
	NM_001290404.1	2, 3	5′
TCF3	NM_003200.5	11, 12, 13, 14, 15, 16, 17, 18	3′
TYK2	NM_003331.5	16, 18	5′
ZCCHC7	NM_032226.5	1, 2	3′
		2, 3, 4	5′

Additional Information

Please refer to “XCeloSeq 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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