

FusionPlex Sarcoma

Description

The FusionPlex Sarcoma panel is a balanced pool of gene-specific primer (GSP) oligonucleotides that is optimized for use with FusionPlex reagents and molecular barcode (MBC) adapters to produce targeted NGS libraries. This product insert should be used in conjunction with FusionPlex protocol for Illumina® (RA-DOC-047) or FusionPlex protocol for Ion Torrent[™] (RA-DOC-048).

FusionPlex Sarcoma libraries contain **148** GSPs targeting **26** genes commonly mutated in many solid tumor cancer types.

Description	Part number	Storage
FusionPlex Sarcoma GSP1, 8 reactions	SA0093	
FusionPlex Sarcoma GSP2, 8 reactions	SA0094	-20°C ± 10°C
10X VCP Primer Mix	SA0126	

Recommended PCR cycling

	Step	Temperature (°C)	Time	Cycles
First PCR reaction	1	95	3 min	1
	2	95	30 sec	15
	3	65	5 min (100% ramp rate)	
	4	72	3 min	
	5	4	Hold	1

Recommended PCR cycling (cont.)

	Step	Temperature (°C)	Time	Cycles
Second PCR reaction	1	95	3 min	1
	2	95	30 sec	20†
	3	65	5 min (100% ramp rate)	
	4	72	3 min	1
	5	4	Hold	1

†The number of PCR2 cycles may be decreased if you regularly experience library yields greater than 200 nM.

Recommended reads and multiplexing

FusionPlex Sarcoma libraries should be sequenced to a minimum of **1.5M reads**. Starting read depth recommendations for standard profiling may be adjusted based on user needs.

Archer™ Analysis settings

Sequencing data should be processed using Archer Analysis (v7.0, or greater). The FusionPlex Sarcoma panel requires selection of the **Fusion** and (optional) **SNV/Indel** pipeline(s), found under the **RNA** Input Type (see the Archer Analysis User Guide for more details on setting up your analysis).

Processing of FusionPlex Sarcoma libraries requires a one-time upload of the Panel GTF. Files can be obtained by contacting archer-tech@idtdna.com.

Assay targets

Gene	Accession	Exon	Variant Type	Description
<i>ALK</i>	NM_004304	19, 20, 21, 22	Fusion	5'
<i>CAMTA1</i>	NM_015215	8, 9, 10	Fusion	5'
<i>CCNB3</i>	NM_033031	2, 3, 4, 5, 6	Fusion	5'
<i>CIC</i>	NM_015125	19, 20	Fusion	3'

Gene	Accession	Exon	Variant Type	Description
<i>EPC1</i>	NM_025209	9, 10, 11	Fusion	3'
<i>EWSR1</i>	NM_005243	4, 5, 6, 7, 8, 9, 10, 11, 12, 13	Fusion	3'
<i>FOXO1</i>	NM_002015	1, 2, 3	Fusion	5'
<i>FOXO1</i>	NM_002015	1, 2, 3	Fusion	3'
<i>FUS</i>	NM_004960	4, 5, 6, 7, 8, 9, 10, 11, 14	Fusion	3'
<i>GLI1</i>	NM_005269	4, 5, 6, 7	Fusion	5'
<i>GLI1</i>	NM_005269	4, 5, 6, 7	Fusion	3'
<i>HMGA2</i>	NM_003483	1, 2, 3, 4, 5	Fusion	3'
<i>JAZF1</i>	NM_175061	2, 3, 4	Fusion	3'
<i>MEAF6</i>	NM_001270875	4, 5	Fusion	3'
<i>MKL2</i>	NM_014048	11, 12, 13	Fusion	5'
<i>NCOA2</i>	NM_006540	11, 12, 13, 14	Fusion	5'
<i>NTRK3</i>	NM_002530	13, 14, 15, 16	Fusion	5'
<i>NTRK3</i>	NM_002530	13, 14, 15	Fusion	3'
<i>PDGFB</i>	NM_002608	2, 3	Fusion	5'
<i>PLAG1</i>	NM_002655	1, 2, 3, 4	Fusion	5'
<i>ROS1</i>	NM_002944	31, 32, 33, 34, 35, 36, 37	Fusion	5'
<i>SS18</i>	NM_001007559	10, 11	Fusion	5'
<i>SS18</i>	NM_001007559	4, 5, 6, 8, 9, 10	Fusion	3'

Gene	Accession	Exon	Variant Type	Description
<i>STAT6</i>	NM_001178078	1, 2, 3, 4, 5, 6, 7, 16, 17, 18, 19	Fusion	5'
<i>TAF15</i>	NM_139215	6, 7	Fusion	5'
<i>TAF15</i>	NM_139215	5, 6, 7	Fusion	3'
<i>TCF12</i>	NM_207036	4, 5, 6	Fusion	3'
<i>TFE3</i>	NM_006521	3, 4, 5, 6	Fusion	5'
<i>TFG</i>	NM_006070	4, 5, 6, 7	Fusion	3'
<i>TFG</i>	NM_006070	6	Fusion	5'
<i>USP6</i>	NM_004505	1, 2, 3	Fusion	5'
<i>YWHAE</i>	NM_006761	5	Fusion	3'

Limitations of use

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Safety data sheets pertaining to this product are available upon request.

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