MAYO CLINIC LABORATORIES

Targeted Genes Fusions and Methodology Details for MayoComplete Sarcoma Panel

RNA-based next-generation sequencing is performed to evaluate 138 gene targets for the presence of somatic gene fusions. When appropriate, alterations detected are confirmed by an independent reference method, such as fluorescence in situ hybridization, reverse transcription polymerase chain reaction, or immunohistochemistry staining.

Genomic Build: GRCh37 (hg19) unless otherwise specified

This is a targeted assay and not all exons of each gene are covered by this test. This assay can detect novel fusions if the fusion contains a single gene target from the panel. Refer to gene regions table below for complete gene coverage information. To verify if a specific region/exon/variant is covered by this assay, contact the laboratory at 800-533-1710.

Gene Rearrangement	5' Gene Partner Exons		3' Gene Partner Exons	
5' Gene : 3' Gene	**Reference Transcript**	**Exon/Intron**	**Reference Transcript**	**Exon/Intron**
EWSR1 : FLI1	NM_005243.3	exon 7	NM_002017.4	exon 5
EWSR1 : FLI1	NM_005243.3	exon 7	NM_002017.4	exon 6
EWSR1 : FLI1	NM_005243.3	exon 7	NM_002017.4	exon 7
EWSR1 : FLI1	NM_005243.3	exon 7	NM_002017.4	exon 8
EWSR1 : FLI1	NM_005243.3	exon 7	NM_002017.4	exon 9
EWSR1 : FLI1	NM_005243.3	exon 8	NM_002017.4	exon 5
EWSR1 : FLI1	NM_005243.3	exon 8	NM_002017.4	exon 6
EWSR1 : FLI1	NM_005243.3	exon 9	NM_002017.4	exon 4
EWSR1 : FLI1	NM_005243.3	exon 9	NM_002017.4	exon 7
EWSR1 : FLI1	NM_005243.3	exon 10	NM_002017.4	exon 5
EWSR1 : FLI1	NM_005243.3	exon 10	NM_002017.4	exon 6
EWSR1 : FLI1	NM_005243.3	exon 10	NM_002017.4	exon 7
EWSR1 : FLI1	NM_005243.3	exon 10	NM_002017.4	exon 8
EWSR1 : ERG	NM_005243.3	exon 7	NM_001243429.1	exon 5
EWSR1 : ERG	NM_005243.3	exon 7	NM_001243429.1	exon 6
EWSR1 : ERG	NM_005243.3	exon 7	NM_001243429.1	exon 7
EWSR1 : ERG	NM_005243.3	exon 7	NM_001243429.1	exon 8
EWSR1 : ERG	NM_005243.3	exon 7	NM_001243429.1	exon 9
EWSR1 : ERG	NM_005243.3	exon 10	NM_001243429.1	exon 7
EWSR1 : FEV	NM_005243.3	exon 7	NM_017521.2	exon 2
EWSR1 : FEV	NM_005243.3	exon 10	NM_017521.2	exon 2
EWSR1 : ETV1	NM_005243.3	exon 7	NM_004956.3	exon 12
EWSR1 : ETV1	NM_005243.3	exon 7	NM_004956.3	exon 13
EWSR1 : ETV4	NM_005243.3	exon 7	NM_001986.2	exon 9
EWSR1 : CREB1	NM_005243.3	exon 7	NM_004379.4	exon 6
FUS : FEV	NM_004960.3	exon 10	NM_017521.2	exon 2
FUS : ERG	NM_004960.3	exon 5	NM_001243429.1	exon 6
FUS : ERG	NM_004960.3	exon 6*	NM_001243429.1	exon 9
FUS : ERG	NM_004960.3	exon 7	NM_001243429.1	exon 8

Targeted Genes Fusions and Methodology Details for MayoComplete Sarcoma Panel (continued)

Gene Rearrangement	5' Gene Partner Exons		3' Gene Partner Exons	
5' Gene : 3' Gene	**Reference Transcript**	**Exon/Intron**	**Reference Transcript**	**Exon/Intron**
SS18 : SSX1	NM_001007559.2	exon 10	NM_005635.3	exon 6
SS18 : SSX2	NM_001007559.2	exon 10	NM_003147.5	exon 6
SS18 : SSX4	NM_001007559.2	exon 10	NM_005636.3	exon 6
SS18 : SSX4	NM_001007559.2	exon 10	NM_005636.3	exon 7
SS18L1 : SSX1	NM_198935.2	exon 10	NM_005635.3	exon 6
PAX3 : FOXO1	NM_181457.3	exon 7	NM_002015.3	exon 2
PAX7 : FOXO1	NM_002584.2	exon 7	NM_002015.3	exon 2
PRR12 : FOXO1	NM_020719.2	exon 11	NM_002015.3	exon 2
EWSR1 : WT1	NM_005243.3	exon 7	NM_024424.3	exon 8
EWSR1 : WT1	NM_005243.3	exon 7	NM_024424.3	exon 9
EWSR1 : WT1	NM_005243.3	exon 8	NM_024424.3	exon 8
EWSR1 : WT1	NM_005243.3	exon 9	NM_024424.3	exon 8
EWSR1 : WT1	NM_005243.3	exon 10	NM_024424.3	exon 8
HEY1 : NCOA2	NM_012258.3	exon 4	NM_006540.3	exon 13
HEY1 : NCOA2	NM_012258.3	exon 4	NM_006540.3	exon 14
IRF2BP2 : CDX1	NM_182972.2	exon 1	NM_001804.2	exon 2
NAB2 : STAT6	NM_005967.3	exon 4	NM_001178078.1	exon 2
NAB2 : STAT6	NM_005967.3	exon 6	NM_001178078.1	exon 16
NAB2 : STAT6	NM_005967.3	exon 2	NM_001178078.1	exon 17
CDH11 : USP6	NM_001797.3	exon 1	NM_001304284.1	exon 9
CDH11 : USP6	NM_001797.3	exon 1	NM_001304284.1	exon 10
CDH11 : USP6	NM_001797.3	exon 2	NM_001304284.1	exon 10
CDH11 : USP6	NM_001797.3	intron 1*	NM_001304284.1	intron 8*
CDH11 : USP6	NM_001797.3	intron 1*	NM_001304284.1	intron 9*
CDH11 : USP6	NM_001797.3	intron 2*	NM_001304284.1	intron 8*
CDH11 : USP6	NM_001797.3	intron 2*	NM_001304284.1	intron 9*
CDH11 : USP6	NM_001797.3	intron 2*	NM_001304284.1	exon 5*
MYH9 : USP6	NM_002473.5	exon 1	NM_001304284.1	exon 9
SRSF3 : USP6	NM_003017.4	exon 1	NM_001304284.1	exon 9
SRSF3 : USP6	NM_003017.4	exon 1	NM_001304284.1	exon 10
THRAP3 : USP6	NM_005119.3	exon 1	NM_001304284.1	exon 9
CNBP (ZNF9) : USP6	NM_001127192.1	exon 1	NM_001304284.1	exon 9
CNBP (ZNF9) : USP6	NM_001127192.1	exon 1	NM_001304284.1	exon 10
OMD : USP6	NM_005014.2	exon 1	NM_001304284.1	exon 9
COL1A1 : USP6	NM_000088.3	exon 1	NM_001304284.1	exon 10
EWSR1 : CREB1	NM_005243.3	exon 7	NM_004379.4	exon 6
EWSR1 : ATF1	NM_005243.3	exon 7	NM_005171.4	exon 5
EWSR1 : ATF1	NM_005243.3	exon 8	NM_005171.4	exon 4

Targeted Genes Fusions and Methodology Details for MayoComplete Sarcoma Panel (continued)

Gene Rearrangement	5' Gene Partner Exons		3' Gene Partner Exons	
5' Gene : 3' Gene	**Reference Transcript**	**Exon/Intron**	**Reference Transcript**	**Exon/Intron**
FUS : ATF1	NM_004960.3	exon 5*	NM_005171.4	exon 5
ASPSCR1 : TFE3	NM_024083.3	exon 7	NM_006521.5	exon 5
ASPSCR1 : TFE3	NM_024083.3	exon 7*	NM_006521.5	exon 5
ASPSCR1 : TFE3	NM_024083.3	exon 7*	NM_006521.5	exon 6
EWSR1 : ATF1	NM_005243.3	exon 7	NM_005171.4	exon 5
EWSR1 : ATF1	NM_005243.3	exon 7	NM_005171.4	exon 6
EWSR1 : ATF1	NM_005243.3	exon 7	NM_005171.4	exon 7
EWSR1 : ATF1	NM_005243.3	exon 8	NM_005171.4	exon 4
EWSR1 : ATF1	NM_005243.3	exon 10	NM_005171.4	exon 5
EWSR1 : ATF1	NM_005243.3	exon 11	NM_005171.4	exon 3
EWSR1 : CREB1	NM_005243.3	exon 7	NM_004379.4	exon 6
ETV6 : NTRK3	NM_001987.4	exon 5	NM_001012338.2	exon 15
COL1A1 : PDGFB	NM_000088.3	exon 15	NM_002608.3	exon 2
COL1A1 : PDGFB	NM_000088.3	exon 18	NM_002608.3	exon 2
COL1A1 : PDGFB	NM_000088.3	exon 19	NM_002608.3	exon 2
COL1A1 : PDGFB	NM_000088.3	exon 25	NM_002608.3	exon 2
COL1A1 : PDGFB	NM_000088.3	exon 26	NM_002608.3	exon 2
COL1A1 : PDGFB	NM_000088.3	exon 31	NM_002608.3	exon 2
COL1A1 : PDGFB	NM_000088.3	exon 32	NM_002608.3	exon 2
COL1A1 : PDGFB	NM_000088.3	exon 33	NM_002608.3	exon 2
COL1A1 : PDGFB	NM_000088.3	exon 38	NM_002608.3	exon 2
COL1A1 : PDGFB	NM_000088.3	exon 39	NM_002608.3	exon 2
COL1A1 : PDGFB	NM_000088.3	exon 45	NM_002608.3	exon 2
COL1A1 : PDGFB	NM_000088.3	exon 46	NM_002608.3	exon 2
COL1A1 : PDGFB	NM_000088.3	exon 47	NM_002608.3	exon 2
WWTR1 : CAMTA1	NM_015472.5	exon 2	NM_015215.3	exon 8
WWTR1 : CAMTA1	NM_015472.5	exon 2	NM_015215.3	exon 9
WWTR1 : CAMTA1	NM_015472.5	exon 3	NM_015215.3	exon 8
WWTR1 : CAMTA1	NM_015472.5	exon 3	NM_015215.3	exon 9
WWTR1 : CAMTA1	NM_015472.5	exon 3	NM_015215.3	exon 9*
WWTR1 : CAMTA1	NM_015472.5	exon 3	NM_015215.3	exon 9*
WWTR1 : CAMTA1	NM_015472.5	exon 3	NM_015215.3	exon 9*
WWTR1 : CAMTA1	NM_015472.5	exon 3	NM_015215.3	exon 9*
WWTR1 : CAMTA1	NM_015472.5	exon 3	NM_015215.3	exon 9*
YAP1 : TFE3	NM_001130145.2	exon 1	NM_006521.5	exon 4
YAP1 : TFE3	NM_001130145.2	exon 1	NM_006521.5	exon 6
CIC : DUX4	NM_001304815.1	exon 20*	NM_033178.2	exon 1*
CIC : DUX4	NM_001304815.1	exon 21*	NM_033178.2	exon 1*

Targeted Genes Fusions and Methodology Details for MayoComplete Sarcoma Panel (continued)

Gene Rearrangement	5' Gene Partner Exons		3' Gene Partner Exons	
5' Gene : 3' Gene	**Reference Transcript**	**Exon/Intron**	**Reference Transcript**	**Exon/Intron**
CIC : DUX4	NM_001304815.1	exon 21*	NM_033178.2	exon 1*
CIC : DUX4	NM_001304815.1	exon 21*	NM_033178.2	exon 1*
CIC : DUX4	NM_001304815.1	exon 21*	NM_033178.2	insertion-exon 1*
CIC : FOXO4	NM_001304815.1	exon 20*	NM_005938.3	exon 2*
CITED2 : PRDM10	NM_006079.4	exon 2*	NM_020228.2	exon 14
BCOR : CCNB3	NM_017745.5	exon 15*	NM_033031.2	exon 5
BCOR : CCNB3	NM_017745.5	exon 15*	NM_033031.2	intron 4*
BCOR : MAML3	NM_017745.5	exon 15*	NM_018717.4 (ENST00000509479.3)	exon 2
EWSR1 : SMARCA5	NM_005243.3	exon 7	NM_003601.3	exon 5
EWSR1 : POU5F1	NM_005243.3	exon 7*	NM_002701.5	exon 2
EWSR1 : POU5F1	NM_005243.3	exon 6	NM_002701.5	insertion-exon 1*
EWSR1 : NFATC2	NM_005243.3	exon 8	NM_012340.4	exon 3
EWSR1 : SP3	NM_005243.3	exon 7	NM_003111.4	exon 6*
EWSR1 : SP3	NM_005243.3	exon 8	NM_003111.4	exon 6*
EWSR1 : PATZ1 (ZSG)	NM_005243.3	exon 8	NM_014323.2	exon 1*
EWSR1 : PATZ1 (ZSG)	NM_005243.3	exon 9	NM_014323.2	exon 1*
ZC3H7B : BCOR	NM_017590.5	exon 10	NM_017745.5	exon 7
MED12 : PRDM10	NM_005120.2	exon 43	NM_020228.2	exon 13
MED12 : PRDM10	NM_005120.2	exon 43	NM_020228.2	exon 14
EWSR1 : NR4A3	NM_005243.3	exon 7	NM_006981.3	exon 2
EWSR1 : NR4A3	NM_005243.3	exon 10	NM_006981.3	insertion-exon 3
EWSR1 : NR4A3	NM_005243.3	exon 12	NM_006981.3	exon 3
EWSR1 : NR4A3	NM_005243.3	exon 12*	NM_006981.3	exon 3
EWSR1 : NR4A3	NM_005243.3	exon 13	NM_006981.3	exon 2
TAF15 : NR4A3	NM_139215.2	exon 6	NM_006981.3	exon 3
TCF12 : NR4A3	NM_207036.1	exon 5	NM_006981.3	exon 3
FUS : CREB3L2	NM_004960.3	exon 5*	NM_194071.3	insertion-exon 5*
FUS : CREB3L2	NM_004960.3	exon 5*	NM_194071.3	exon 6
FUS : CREB3L2	NM_004960.3	exon 6	NM_194071.3	exon 5*
FUS : CREB3L2	NM_004960.3	exon 6	NM_194071.3	insertion-exon 5*
FUS : CREB3L2	NM_004960.3	exon 6	NM_194071.3	exon 5*
FUS : CREB3L2	NM_004960.3	exon 6*	NM_194071.3	exon 5*
FUS : CREB3L2	NM_004960.3	exon 6*	NM_194071.3	exon 5*
FUS : CREB3L2	NM_004960.3	exon 6*	NM_194071.3	exon 5*
FUS : CREB3L2	NM_004960.3	exon 7	NM_194071.3	exon 5*
FUS : CREB3L2	NM_004960.3	exon 7*	NM_194071.3	exon 5*
FUS : CREB3L2	NM_004960.3	exon 7*	NM_194071.3	exon 5*

Targeted Genes Fusions and Methodology Details for MayoComplete Sarcoma Panel (continued)

Gene Rearrangement	5' Gene Partner Exons		3' Gene Partner Exons	
5' Gene : 3' Gene	**Reference Transcript**	**Exon/Intron**	**Reference Transcript**	**Exon/Intron**
FUS : CREB3L1	NM_004960.3	exon 6*	NM_052854.3	exon 5*
FUS : CREB3L1	NM_004960.3	exon 9*	NM_052854.3	exon 5*
EWSR1 : CREB3L1	NM_005243.3	exon 8*	NM_052854.3	exon 5*
EWSR1 : CREB3L1	NM_005243.3	exon 8*	NM_052854.3	exon 5*
PAX3 : FOXO1	NM_181457.3	exon 7	NM_018717 (ENST00000509479.3)	exon 2
PAX3 : FOXO1	NM_181457.3	exon 7	NM_002015.3	exon 2
PAX3 : NCOA1	NM_181457.3	exon 6	NM_003743.4	exon 13
PAX3 : NCOA1	NM_181457.3	exon 7	NM_003743.4	exon 12
PAX3 : NCOA1	NM_181457.3	exon 7	NM_003743.4	exon 14
PAX3 : NCOA2	NM_181457.3	exon 7	NM_006540.3	exon 12
COL6A3 : CSF1	NM_004369.3	exon 8*	NM_000757.5	exon 6*
COL6A3 : CSF1	NM_004369.3	exon 9*	NM_000757.5	exon 6*
COL6A3 : CSF1	NM_004369.3	exon 9*	NM_000757.5	exon 6*
COL6A3 : CSF1	NM_004369.3	exon 9*	NM_000757.5	exon 6
COL6A3 : CSF1	NM_004369.3	exon 11*	NM_000757.5	exon 6*
ZFP36 : FOSB	NM_003407.3	exon 1	NM_006732.2	exon 2
FOSB : ZFP36	NM_006732.2	exon 1	NM_003407.3	exon 2
WWTR1 : FOSB	NM_015472.5	exon 2	NM_006732.2	exon 1*
SERPINE1 : FOSB	NM_000602.4	exon 1	NM_006732.2	insertion-exon 2*
SERPINE1 : FOSB	NM_000602.4	exon 1	NM_006732.2	insertion-exon 1*
SFPQ : FOSB	NM_005066.2	exon 9	NM_006732.2	exon 2
FUS : DDIT3	NM_004960.3	exon 3	NM_001195053.1	exon 2
FUS : DDIT3	NM_004960.3	exon 5*	NM_001195053.1	exon 2
FUS : DDIT3	NM_004960.3	exon 5*	NM_001195053.1	insertion-exon 2
FUS : DDIT3	NM_004960.3	exon 5*	NM_001195053.1	exon 3
FUS : DDIT3	NM_004960.3	exon 6*	NM_001195053.1	exon 2
FUS : DDIT3	NM_004960.3	exon 6	NM_001195053.1	exon 2
FUS : DDIT3	NM_004960.3	exon 7	NM_001195053.1	exon 2
FUS : DDIT3	NM_004960.3	exon 8	NM_001195053.1	exon 2
FUS : DDIT3	NM_004960.3	exon 9	NM_001195053.1	exon 3
FUS : DDIT3	NM_004960.3	exon 13	NM_001195053.1	exon 2
EWSR1 : DDIT3	NM_005243.3	exon 7	NM_001195053.1	exon 2
EWSR1 : DDIT3	NM_005243.3	exon 10	NM_001195053.1	exon 2
EWSR1 : DDIT3	NM_005243.3	exon 13	NM_001195053.1	exon 2
EWSR1 : DDIT3	NM_005243.3	exon 13	NM_001195053.1	exon 3*
EP400 : PHF1	NM_015409.4	exon 37*	NM_002636.4	exon 2
EP400 : PHF1	NM_015409.4	exon 38*	NM_002636.4	insertion-exon 2

Targeted Genes Fusions and Methodology Details for MayoComplete Sarcoma Panel (continued)

Gene Rearrangement	5' Gene Partner Exons		3' Gene Partner Exons	
5' Gene : 3' Gene	**Reference Transcript**	**Exon/Intron**	**Reference Transcript**	**Exon/Intron**
MEAF6 : PHF1	NM_022756.5	exon 5	NM_002636.4	exon 2
EPC1 : PHF1	NM_025209.3	exon 10	NM_002636.4	exon 2
ZC3H7B : BCOR	NM_017590.5	exon 10	NM_017745.5	exon 7
JAZF1 : SUZ12	NM_175061.3	exon 3	NM_015355.3	exon 2
JAZF1 : PHF1	NM_175061.3	exon 2	NM_002636.4	insertion-exon 1*
JAZF1 : PHF1	NM_175061.3	exon 3	NM_002636.4	insertion-exon 2
EPC1 : PHF1	NM_025209.3	exon 10	NM_002636.4	exon 2
MEAF6 : PHF1	NM_022756.5	exon 5	NM_002636.4	exon 2
YWHAE : NUTM2B	NM_006761.4	exon 6	NM_001278495	exon 2
MBTD : CXorf67	NM_017643.2	exon 16	NM_203407.2	exon 1*
ZC3H7B : BCOR	NM_017590.5	exon 10	NM_017745.5	exon 7
BCOR : ZC3H7B	NM_017745.5	exon 6	NM_017590.5	exon 11
BCOR : ZC3H7B	NM_017745.5	exon 6	NM_017590.5	exon 13
EML4 : ALK	NM_019063.4	exon 2	NM_004304.4	exon 20
TPM3 : ALK	NM_153649.3	exon 7	NM_004304.4	exon 20
TPM4 : ALK	NM_001145160.1	exon 7	NM_004304.4	exon 20
TPM4 : ALK	NM_001145160.1	exon 8	NM_004304.4	exon 20
CLTC : ALK	NM_004859.3	exon 31	NM_004304.4	exon 20
RANBP2 : ALK	NM_006267.4	exon 18	NM_004304.4	exon 20
CARS : ALK	NM_139273.3	exon 17	NM_004304.4	exon 20
ATIC : ALK	NM_004044.6	exon 7	NM_004304.4	exon 20
SEC31A : ALK	NM_016211.3	exon 19	NM_004304.4	exon 20
SEC31A : ALK	NM_016211.3	exon 20	NM_004304.4	exon 20
FN1 : ALK	NM_212482.2	exon 20	NM_004304.4	exon 19
FN1 : ALK	NM_212482.2	exon 23	NM_004304.4	exon 19
PPFIBP1 : ALK	NM_003622.3	exon 8	NM_004304.4	exon 20
PPFIBP1 : ALK	NM_003622.3	exon 12	NM_004304.4	exon 20
RNF213 (ALO17) : ALK	NM_001256071.2	exon 20	NM_004304.4	exon 20
TRAF3 : ALK	NM_145725.2	exon 11	NM_004304.4	exon 20
IGFBP5 : ALK	NM_000599.3	exon 1	NM_004304.4	exon 19
TFG : ALK	NM_006070.5	exon 4	NM_004304.4	exon 20
TFG : ALK	NM_006070.5	exon 5	NM_004304.4	exon 20
TFG : ALK	NM_006070.5	exon 6	NM_004304.4	exon 20
FN1 : FGFR1	NM_212482.2	exon 22	NM_023110.2	exon 3
FN1 : FGFR1	NM_212482.2	exon 22	NM_023110.2	exon 3
FN1 : FGFR1	NM_212482.2	exon 23	NM_023110.2	exon 3
FN1 : FGFR1	NM_212482.2	exon 23	NM_023110.2	exon 3

Targeted Genes Fusions and Methodology Details for MayoComplete Sarcoma Panel (continued)

Gene Rearrangement	5' Gene Partner Exons		3' Gene Partner Exons	
5' Gene : 3' Gene	**Reference Transcript**	**Exon/Intron**	**Reference Transcript**	**Exon/Intron**
FN1 : FGFR1	NM_212482.2	exon 27	NM_023110.2	exon 3
FN1 : FGFR1	NM_212482.2	exon 28	NM_023110.2	exon 3
SRF : NCOA2	NM_003131.3	exon 6	NM_006540.3	exon 12
TEAD1 : NCOA2	NM_021961.5	exon 8	NM_006540.3	exon 13
VGLL2 : NCOA2	NM_182645.3	exon 2	NM_006540.3	exon 14
VGLL2 : CITED2	NM_182645.3	intron 3*	NM_006079.4	exon 2*
AHRR : NCOA2	NM_020731.4	exon 9	NM_006540.3	exon 11
AHRR : NCOA2	NM_020731.4	exon 9	NM_006540.3	exon 16
AHRR : NCOA2	NM_020731.4	exon 10	NM_006540.3	exon 13
AHRR : NCOA2	NM_020731.4	exon 10	NM_006540.3	exon 14
NCOA2 : AHRR	NM_006540.3	exon 13	NM_020731.4	exon 11
NCOA2 : AHRR	NM_006540.3	exon 15	NM_020731.4	exon 10
EWSR1 : POU5F1	NM_005243.3	exon 6	NM_002701.5	exon 1*
EWSR1 : POU5F1	NM_005243.3	exon 6*	NM_002701.5	exon 2
EWSR1 : POU5F1	NM_005243.3	exon 7*	NM_002701.5	exon 2
EWSR1 : PBX1	NM_005243.3	exon 7	NM_002585.3	exon 5
EWSR1 : PBX1	NM_005243.3	exon 8	NM_002585.3	exon 5
EWSR1 : PBX3	NM_005243.3	exon 8	NM_006195.5	exon 5
EWSR1 : ZNF444	NM_005243.3	exon 8	NM_018337.3	exon 5*
FUS : POU5F1	NM_004960.3	exon 5*	NM_002701.5	exon 2
FUS : KLF17	NM_004960.3	exon 4	NM_173484.3	exon 1*
FUS : KLF17	NM_004960.3	exon 6*	NM_173484.3	exon 1*
PDPN : PRKCB	NM_006474.4	exon 5	NM_002738.6	exon 8
CSF1 : S100A10	NM_000757.5	exon 8	NM_002966.2	exon 3
KIRREL : PRKCA	NM_018240.6	exon 13	NM_002737.2	exon 9
LAMTOR1 : PRKCD	NM_017907.2	exon 1	NM_006254.3	exon 11
NUMA1 : SFMBT1	NM_006185.3	exon 2	NM_016329.3	exon 5
CD63 (RDH5) : PRKCD	NM_001780.5	exon 8	NM_006254.3	exon 9
SQSTM1 : ALK	NM_003900.4	exon 5	NM_004304.4	exon 20
VCL : ALK	NM_014000.2	exon 16	NM_004304.4	exon 20
ACTB : GLI1	NM_001101.3	exon 1	NM_005269.2	insertion-exon 6
ACTB : GLI1	NM_001101.3	exon 2	NM_005269.2	exon 6
ACTB : GLI1	NM_001101.3	exon 2	NM_005269.2	exon 7*
ACTB : GLI1	NM_001101.3	exon 3	NM_005269.2	exon 6
ACTB : GLI1	NM_001101.3	exon 3	NM_005269.2	exon 7
ACTB : GLI1	NM_001101.3	exon 3	NM_005269.2	insertion-exon 6
ACTB : GLI1	NM_001101.3	exon 3	NM_005269.2	insertion-exon 5*

Targeted Genes Fusions and Methodology Details for MayoComplete Sarcoma Panel (continued)

Gene Rearrangement	5' Gene Partner Exons		3' Gene Partner Exons	
5' Gene : 3' Gene	**Reference Transcript**	**Exon/Intron**	**Reference Transcript**	**Exon/Intron**
GLI1 : ACTB	NM_005269.2	exon 6	NM_001101.3	exon 4
GLI1 : ACTB	NM_005269.2	exon 6	NM_001101.3	exon 4
COL1A2 : PLAG1	NM_000089.3	exon 1	NM_002655.2	exon 3
COL1A2 : PLAG1	NM_000089.3	exon 1	NM_002655.2	exon 2
COL3A1 : PLAG1	NM_000090.3	exon 1	NM_002655.2	exon 3
COL3A1 : PLAG1	NM_000090.3	exon 1	NM_002655.2	exon 2
RAB2A : PLAG1	NM_002865.2	exon 1	NM_002655.2	exon 3
HAS2 : PLAG1	NM_005328.2	exon 1	NM_002655.2	exon 3
HMGA2 : LPP	NM_003483.4	exon 3	NM_005578.4	exon 9
LPP : HMGA2	NM_005578.4	exon 7	NM_003483.4	exon 4
LPP : HMGA2	NM_005578.4	exon 8	NM_003483.4	exon 4
HMGA2 : NFIB	NM_003483.4	exon 4	NM_001190737.1	exon 11
HMGA2 : PLPP3	NM_003483.4	exon 5*	NM_003713.4	exon 6
HMGA2 : SETBP1	NM_003483.4	exon 3	NM_015559.2	exon 6*
HMGA2 : SETBP1	NM_003483.4	exon 3	NM_015559.2	exon 6*
C11orf95 (ZFTA) : MKL2	NM_001144936.1	exon 4*	NM_001308142.1	exon 12
C11orf95 (ZFTA) : MKL2	NM_001144936.1	exon 5*	NM_001308142.1	exon 12
TPR : NTRK1	NM_003292.2	exon 10	NM_001012331.1	exon 9
TPM3 : NTRK1	NM_153649.3	exon 7	NM_001012331.1	exon 9
BRD3 : NUTM1	NM_007371.3	exon 10	NM_001284292.1	exon 3
BRD4 : NUTM1	NM_058243.2	exon 11	NM_001284292.1	exon 3
BRD4 : NUTM1	NM_058243.2	exon 14	NM_001284292.1	exon 3*
EWSR1 : CREB3L1	NM_005243.3	exon 7	NM_052854.3	insertion-exon 6*
EWSR1 : CREB3L1	NM_005243.3	exon 11	NM_052854.3	exon 6
EWSR1 : CREB3L1	NM_005243.3	exon 8*	NM_052854.3	exon 6*
EWSR1 : CREB3L2	NM_005243.3	exon 7	NM_194071.3	exon 6*
MIR143HG (CARMN) : NOTCH2	NR_027180 (NR_105059.1)	exon 1	NM_024408.3	exon 27
MIR143HG (CARMN) : NOTCH1	NR_027180 (NR_105059.1)	exon 1	NM_017617.4	exon 27
NOTCH2 : CEP128	NM_024408.3	exon 26	NM_152446.3	exon 7*
RAD51B : OPHN1	NM_002877.5	exon 3	NM_002547.2	exon 17
RAD51B : RRAGB	NM_002877.5	exon 8	NM_016656.3	insertion-exon 2
DVL2 : TFE3	NM_004422.2	exon 4	NM_006521.5	exon 7
CLTC : TFE3	NM_004859.3	exon 17	NM_006521.5	exon 6
HMGA2 : LPP	NM_003483.4	exon 3	NM_005578.4	exon 9

*Out of frame