

How to use this page: Each translocation has 2 partner genes. If you know the 5' partner, look in the alphabetically-sorted left columns, if you know the 3' partner look in the right columns. Each gene may have several intron breakpoints; most are covered in our assay. Contact the Molecular Lab for specifics. Remember, this page covers genes mostly in sarcomas, but not all of them. Check the Custom panel for other targets.

## MDL Sarcoma Fusion Panel—V1, August 2020

Sorted by **5' gene**

5' GENE	3' GENE
ACSL3	ETV1
ATF1	EWSR1
c11orf95	RELA
CANT1	ETV4
ETV6	NTRK3
EWSR1	ATF1
EWSR1	CREB1
EWSR1	CREM
EWSR1	DDIT3
EWSR1	ERG
EWSR1	ETV1
EWSR1	ETV4
EWSR1	FEV
EWSR1	FLI
EWSR1	NFAT2
EWSR1	NR4A3
EWSR1	PBX1
EWSR1	PBX3
EWSR1	POU5F1
EWSR1	SMARCA5
EWSR1	SP3
EWSR1	WT1
EWSR1	YY1
EWSR1	PATZ1/SNF278
EWSR1	ZNF444
FOXO1	PAX3
FUS	ATF1
FUS	CREB3L1
FUS	CREB3L2
FUS	CREM
FUS	DDIT3
FUS	ERG
FUS	FEV
FUS	KLF17
FUS	POU5F1
MEF2C	SS18
MEIS1	NCOA2
MYB	NFIB
NCOA4	RET
NDRG1	ERG
PAX3	FOXO1
PAX3	NCOA1
PAX3	NCOA2
PAX3	INO80D
PAX3	MAML3
PAX3	MLLT7/FOXO4
PAX7	FOXO1
PAX8	GLIS3
PDE9A	TMPRSS2
RBP56	NR4A3
SLC44A1	PRKCA

SLC45A3	ERG
SLC45A3	ETV1
SLC45A3	ELK4
SS18	REPS2 & SSX1
SS18	SSX1
SS18	SSX1/SSX2
SS18	SSX2
SS18	SSX4
SS18	ZBTB7A
SS18L1	SSX1
TAF12	NR4A3
TAF15	NR4A3
TMPRSS2	ERG
TMPRSS2	ETV1
TMPRSS2	ETV4
TMPRSS2	ETV5
TMPRSS2	GUCA2A
TMPRSS2	INPP4B
TMPRSS2	MORC3
TMPRSS2	PDE9A
TMPRSS2	SARS
TMPRSS2	TMEFF2
TMPRSS6	MPST
YAP1	FAM118B
YAP1	MAMLD1
YWHAE	ROS1
YWHAE	FAM22
YWHAE	FAM22B

Sorted by **3' gene**

5' GENE	3' GENE
EWSR1	ATF1
FUS	ATF1
EWSR1	CREB1
FUS	CREB3L1
FUS	CREB3L2
EWSR1	CREM
FUS	CREM
EWSR1	DDIT3
FUS	DDIT3
SLC45A3	ELK4
EWSR1	ERG
FUS	ERG
NDRG1	ERG
SLC45A3	ERG
TMPRSS2	ERG
ACSL3	ETV1
EWSR1	ETV1
SLC45A3	ETV1
TMPRSS2	ETV1
CANT1	ETV4
EWSR1	ETV4
TMPRSS2	ETV4
TMPRSS2	ETV5
ATF1	EWSR1
YAP1	FAM118B
YWHAE	FAM22
YWHAE	FAM22B
EWSR1	FEV
FUS	FEV
EWSR1	FLI
PAX3	FOXO1
PAX7	FOXO1
PAX8	GLIS3
TMPRSS2	GUCA2A
PAX3	INO80D
TMPRSS2	INPP4B
FUS	KLF17
PAX3	MAML3
YAP1	MAMLD1
PAX3	MLLT7/FOXO4
TMPRSS2	MORC3
TMPRSS6	MPST
PAX3	NCOA1
MEIS1	NCOA2
PAX3	NCOA2
EWSR1	NFAT2
MYB	NFIB
EWSR1	NR4A3
RBP56	NR4A3
TAF12	NR4A3
TAF15	NR4A3

ETV6	NTRK3
EWSR1	PATZ1/SNF278
FOXO1	PAX3
EWSR1	PBX1
EWSR1	PBX3
TMPRSS2	PDE9A
EWSR1	POU5F1
FUS	POU5F1
SLC44A1	PRKCA
c11orf95	RELA
SS18	REPS2 & SSX1
NCOA4	RET
YWHAE	ROS1
TMPRSS2	SARS
EWSR1	SMARCA5
EWSR1	SP3
MEF2C	SS18
SS18	SSX1
SS18L1	SSX1
SS18	SSX1/SSX2
SS18	SSX2
SS18	SSX4
TMPRSS2	TMEFF2
PDE9A	TMPRSS2
EWSR1	WT1
EWSR1	YY1
SS18	ZBTB7A
EWSR1	ZNF444