

Gene	Transcript	Targeted Exons	Assay Type	Primer Pointing Toward 5'/3'
ACVR2A	NM_001616	1,2,3	Fusion	5'
AKT1	NM_005163	2,3,4,5,mid-exon5	Fusion	5'
AKT2	NM_001626	2*,5	Fusion	5'
AKT2	NM_001626	11	Fusion	3'
AKT3	NM_005465	1,2,3,8	Fusion	5'
AKT3	NM_005465	5,6,7	Fusion	3'
ALK	NM_004304	2,4,6,8,10,12,14,16,17,18,19,intron19,20,mid-exon20,21,22,23,26	Fusion, Internal Deletion ( $\Delta$ 2-17, $\Delta$ 2-3)	5'
ALK	NM_004304	1,2	Internal Deletion ( $\Delta$ 2-17, $\Delta$ 2-3)	3'
AR	NM_000044	1,2,3,4,5,6,7,8*	Fusion, ARv7	3'
AR	NM_001011645	1	Fusion	3'
ARAF	NM_001654	9	Fusion	5'
ARHGAP26	NM_015071	2,10,11,12	Fusion	5'
ARHGAP6	NM_006125	2	Fusion	5'
AXL	NM_021913	11	Fusion	5'
AXL	NM_021913	18,19,mid-exon20,20	Fusion	3'
BCOR	NM_001123385	mid-exon2,3,4,mid-exon4,5,6,7,8,9,11,15	Fusion, Internal Tandem Duplication	5'
BCOR	NM_001123385	2,4,mid-exon4,6,7,mid-exon7,10,12,14,15	Fusion, Internal Tandem Duplication	3'
BCOR	NM_017745	8	Fusion	5'
BRAF	NM_004333	2,3,4,5,7,8,9,10,11,12,15,16	Fusion, Kinase Domain Duplication, $\Delta$ 2-10, $\Delta$ 4-10, $\Delta$ 2-8, $\Delta$ 3-8, $\Delta$ 4-8	5'
BRAF	NM_004333	1,2,3,7,8,10,13,14,18	Fusion, Kinase Domain Duplication, $\Delta$ 2-10, $\Delta$ 4-10, $\Delta$ 2-8, $\Delta$ 3-8, $\Delta$ 4-8	3'
BRD3	NM_007371	9,10,11,12	Fusion	3'
BRD4	NM_058243	2*	Fusion	5'
BRD4	NM_058243	10,11,12,13,14	Fusion	3'
CAMTA1	NM_015215	8,9,mid-exon9,10	Fusion	5'
CAMTA1	NM_015215	3	Fusion	3'
CCNB3	NM_033031	2*,3,4,5,6,mid-exon 6,7	Fusion	5'
CCND1	NM_053056	1*,2,3,4,5	Fusion	5'
CCND1	NM_053056	1,2,3,4,5*	Fusion	3'
CDX1	NM_001804	1	Fusion	5'
CIC	NM_015125	12	Fusion	5'
CIC	NM_015125	14,15,16,17,18,mid-exon19,19,mid-exon20,20*	Fusion	3'
CRTC1	NM_015321	1,2,3,4	Fusion	3'
CSF1	NM_000757	2,3,4,5,6	Fusion	5'
CSF1	NM_000757	5,6,7,8,mid-exon9*	Fusion	3'
CSF1	NM_172212	9*	Fusion	3'
CSF1R	NM_005211	11,12,13	Fusion	5'
DNAJB1	NM_006145	1,2	Fusion	3'
EGF	NM_001963	16,17,18,19	Fusion	5'
EGFR	NM_005228	7,8,9,14,15,16,17,18,19,20	Fusion, Exon 2-7 Skipping (EGFRvIII), Kinase Domain Duplication	5'
EGFR	NM_005228	1,24,25,mid-exon25,26	Fusion, Exon 2-7 Skipping (EGFRvIII), Kinase Domain Duplication	3'
EPC1	NM_025209	9,10,11	Fusion	3'
ERBB2 (HER2)	NM_004448	4,5,13,15,17	Fusion, Exon 16 skipping ( $\Delta$ 16HER)	5'
ERBB2 (HER2)	NM_004448	15,23,24,25,mid-exon26,26	Fusion, Exon 16 skipping ( $\Delta$ 16HER)	3'
ERBB4	NM_005235	2,3,4,14,15,16,17,18,23	Fusion	5'
ERG	NM_004449	2*,3*,4,5,6,7,8,9,10,11	Fusion	5'
ESR1	NM_000125	5,6,7,8	Fusion	5'
ESR1	NM_000125	1,2,3,4,5,6,7	Fusion	3'
ESRRA	NM_004451	2,3	Fusion	3'
ETV1	NM_004956	3,4,5,6,7,8,9,10,11,12,13	Fusion	5'
ETV4	NM_001986	2,3,4,5,6,7,8,9,10	Fusion	5'
ETV5	NM_004454	2*,3,7,8,9	Fusion	5'
ETV6	NM_001987	2,3,4,5,6,7	Fusion	5'
ETV6	NM_001987	1,2,3,4,5,6	Fusion	3'
EWSR1	NM_005243	8	Fusion	5'
EWSR1	NM_005243	4,5,6,7,8,9,10,11,12,13,14	Fusion	3'
FGF1	NM_00800	mid-exon 2,2	Fusion	5'
FGFR1	NM_015850	2*,3,4,5,6,7,8,9,10,11,17	Fusion, Kinase Domain Duplication	5'
FGFR1	NM_015850	12,17	Fusion, Kinase Domain Duplication	3'
FGFR2	NM_000141	2*,3,5,6,7,8,9,mid-exon9,10,13,15	Fusion	5'
FGFR2	NM_000141	6,7,8,12,14,16,17,18	Fusion	3'
FGFR3	NM_000142	3,5,8,9,10,11,12,13,14	Fusion	5'
FGFR3	NM_000142	16,17,intron17,mid-exon18	Fusion	3'
FGR	NM_005248	2*,3	Fusion	5'
FOS	NM_005252	mid-exon4	Fusion	3'
FOSB	NM_006732	1*,mid-exon1*,1,2	Fusion	5'
FOXO1	NM_002015	1*,2,3*	Fusion	5'
FOXO1	NM_002015	1*,2*,3*	Fusion	3'
FOXO4	NM_005938	2,mid-exon2,3	Fusion	5'
FOXR2	NM_198451	cryptic upstream (chrX:55562068,chrX:55634636),1	Fusion	5'
FOXR2	NM_198451	1,3'UTR	Fusion	3'
FUS	NM_004960	3,4,5,mid-exon6,6,7,8,9,10,11,13,14	Fusion	3'
GLI1	NM_005269	4,5,6,7	Fusion	5'
GLI1	NM_005269	4,5,mid-exon5,6,7	Fusion	3'
GRB7	NM_005310	10,11,12	Fusion	5'
GRM1	NM_001278065	1*,2,3,4,6,8	Fusion	5'
HMGA2	NM_003483	1,2,3,4,mid-exon5*,5*	Fusion	3'
IGF1R	NM_000875	13,14,15	Fusion	5'
INSR	NM_000208	2,12,13,14,15,16,17,18,19	Fusion	5'

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INSR	NM_000208	20,21,22	Fusion	3'
JAK2	NM_004972	6,7,8,9,10,11,12,13,14,15,16,17,18,19,20	Fusion	5'
JAK2	NM_004972	9,10,11,12,22	Fusion	3'
JAK3	NM_000215	10,11,12,17,18,19	Fusion	5'
JAK3	NM_000215	23	Fusion	3'
JAZF1	NM_175061	2,3,4	Fusion	3'
KAT6B	NM_012330	3	Fusion	3'
KIT	NM_000222	8	Fusion	5'
KIT	NM_000222	1	Fusion	3'
MAML2	NM_032427	2,3	Fusion	5'
MAML2	NM_032427	2	Fusion	3'
MAP2K1	NM_002755	2	Fusion	5'
MAP3K3	NM_203351	8,9	Fusion	5'
MAP3K8	NM_005204	8	Fusion	3'
MAST1	NM_014975	7,8,9,18,19,20,21	Fusion	5'
MAST2	NM_015112	2,3,5,6	Fusion	5'
MAST2	NM_015112	15,16,17	Fusion	3'
MBTD1	NM_017643	3*	Fusion	5'
MBTD1	NM_017643	15,16,17	Fusion	3'
MDM2	NM_002392	5,9	Fusion	5'
MDM2	NM_002392	2,4,6,8,10	Fusion	3'
MEAF6	NM_001270875	4,5	Fusion	3'
MERTK	NM_006343	2,11	Fusion	5'
MET	NM_000245	2,4,5,6,13,14,15,16,17,21	Fusion, Exon 14 Skipping ( $\Delta$ ex14)	5'
MET	NM_000245	2,13	Fusion, Exon 14 Skipping ( $\Delta$ ex14)	3'
MITF	NM_198159	5,6	Fusion	3'
MN1	NM_002430	1,2	Fusion	3'
MRTFB (MKL2)	NM_014048	11,12,13	Fusion	5'
MSMB	NM_002443	2,3,4	Fusion	3'
MUSK	NM_005592	7,9,10,12,13,14,15	Fusion	5'
MYB	NM_001130173	7,8,9,11,12,13,14,15,16	Fusion	3'
MYBL1	NM_001080416	8,9,mid-exon10,10,11,12,13,14,15	Fusion	3'
MYC	NM_002467	1*,mid-exon1*,2,3	Fusion	5'
NCOA1	NM_147223	11,12,13,14,15	Fusion	5'
NCOA2	NM_006540	11,12,13,14,intron14,15,16,22	Fusion	5'
NCOA2	NM_006540	14	Fusion	3'
NCOA3	NM_006534	2*,13,14,15,16	Fusion	5'
NCOA3	NM_006534	20	Fusion	3'
NFATC2	NM_012340	2,3,9,10	Fusion	5'
NFE2L2	NM_006164	1,2,3,4,5	Fusion, Exon Skipping ( $\Delta$ 2, $\Delta$ 2-3)	5'
NFIB	NM_005596	9,mid-9	Fusion	5'
NFIB	NM_005596	2	Fusion	3'
NFIB	NM_001282787	10	Fusion	5'
NFIB	NM_001190737	10	Fusion	5'
NOTCH1	NM_017617	2,4,24,29,30,31	Fusion	3'
NOTCH1	NM_017617	5,24,25,26,27,28,29	Fusion, Exon Skipping ( $\Delta$ 2-27, $\Delta$ 21-27, $\Delta$ 3-27, $\Delta$ 3-28)	5'
NOTCH2	NM_024408	24,25,26,27,28,29	Fusion	5'
NOTCH2	NM_024408	5,6,7	Fusion	3'
NPM3	NM_006993	2,3,4	Fusion	5'
NPM3	NM_006993	2,3,4	Fusion	3'
NR4A3	NM_173200	2*,3*,4,5,7,9	Fusion	5'
NR4A3	NM_173200	8	Fusion	3'
NRG1	NM_001159996	1*,3,4,5	Fusion	5'
NRG1	NM_004495	1,2,3,4,5,6	Fusion	5'
NRG1	NM_013958	1*	Fusion	5'
NRG1	NM_013959	1*,3	Fusion	5'
NRG1	NM_013962	1*	Fusion	5'
NRG1	NM_013962	1	Fusion	3'
NTRK1	NM_002529	1,2,3,4,5,6,7,8,9,10,11,12,13,14	Fusion	5'
NTRK1	NM_001007792	1,2	Fusion	5'
NTRK2	NM_006180	4,5,6,7,8,9,10,11,12,13,14,15,16,17,18	Fusion	5'
NTRK2	NM_006180	11,14	Fusion	3'
NTRK3	NM_002530	3,4,5,6,7,8,9,10,11,12,13,14,15,16	Fusion	5'
NTRK3	NM_002530	13,14,15,17	Fusion	3'
NTRK3	NM_001007156	15	Fusion	5'
NUMBL	NM_004756	2,3	Fusion	5'
NUTM1	NM_175741	2*,3,mid-exon3,4,5,mid-exon6,6	Fusion	5'
OGA (MGEA5)	NM_012215	4,5,6,7,8,9,12,13,14,15	Fusion	5'
PAX3	NM_181459	2,4,8	Fusion	5'
PAX3	NM_181459	3,5,6,7,8	Fusion	3'
PAX8	NM_003466	3	Fusion	5'
PAX8	NM_003466	1*,2,6,7,8,9,10	Fusion	3'
PDGFB	NM_002608	2,3	Fusion	5'
PDGFD	NM_025208	5,6,7	Fusion	5'
PDGFRA	NM_006206	10,11,12,mid-exon12,13,14,15	Fusion, PDGFRA $\Delta$ 8,9	5'
PDGFRA	NM_006206	7	Fusion, PDGFRA $\Delta$ 8,9	3'
PDGFRB	NM_002609	8,9,10,11,12,mid-exon12,13,14	Fusion	5'
PHF1	NM_024165	1*,2	Fusion	5'
PHF1	NM_024165	10,11,12	Fusion	3'
PHF21A	NM_001101802	14	Fusion	3'
PHF21A	NM_016621	10	Fusion	3'
PHKB	NM_000293	4	Fusion	3'
PIK3CA	NM_006218	2,15	Fusion	5'

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PKN1	NM_002741	10,11,12,13	Fusion	5'
PLAG1	NM_002655	1,2,3,4	Fusion	5'
PPARG	NM_015869	1,2,3	Fusion	5'
PRDM10	NM_020228	13,14	Fusion	5'
PRKACA	NM_002730	2	Fusion	5'
PRKACB	NM_182948	2,3,4	Fusion	5'
PRKCA	NM_002737	4,5,6,9,15	Fusion	5'
PRKCB	NM_002738	1,3,7,8,9	Fusion	5'
PRKCD	NM_006254	9,10,11,12,15	Fusion	5'
PRKCD	NM_006254	18	Fusion	3'
PRKD1	NM_002742	2,10,11,12,13	Fusion	5'
PRKD2	NM_016457	10,11,12,13	Fusion	5'
PRKD3	NM_005813	10,11,12,13	Fusion	5'
RAD51B	NM_133509	8	Fusion	5'
RAD51B	NM_133509	3,4,5,6,7,8,9	Fusion	3'
RAF1	NM_002880	2*,4,5,6,7,8,9,10,11,12	Fusion	5'
RAF1	NM_002880	4,5,6,7,8,9	Fusion	3'
RELA	NM_021975	1,2,3,4,11	Fusion	5'
RET	NM_020630	2,4,6,8,9,10,11,mid-exon11,12,13,14	Fusion	5'
ROS1	NM_002944	2,4,7,31,32,33,34,35,36,37	Fusion	5'
RSPO2	NM_178565	1,2*,3*	Fusion	5'
RSPO3	NM_032784	2	Fusion	5'
SRF	NM_003131	2,3,intron3,4,5,6	Fusion	3'
SS18	NM_001007559	2,3,4,5,6,10,11	Fusion	5'
SS18	NM_001007559	4,5,6,8,9,10	Fusion	3'
SS18L1	NM_198935	1,2,3,8,9,10	Fusion	3'
STAT6	NM_001178078	1*,2*,3,4,5,6,7,15,16,17,18,19,20	Fusion	5'
TAF15	NM_139215	6,7	Fusion	5'
TAF15	NM_139215	5,6,7,9	Fusion	3'
TCF12	NM_207036	4,5,6	Fusion	3'
TEK	NM_000459	13	Fusion	5'
TERT	NM_198253	2,3,5,7,10,11,12	Fusion	5'
TERT	NM_198253	3,9,15	Fusion	3'
TFE3	NM_006521	2,3,4,5,6,7,8	Fusion	5'
TFE3	NM_006521	2,3,4,5,6	Fusion	3'
TFEB	NM_007162	1*,2*,3,mid-exon3,4,mid-exon4,mid-exon 5,6	Fusion	5'
TFEB	NM_007162	9,mid-exon 10	Fusion	3'
TFG	NM_006070	6	Fusion	5'
TFG	NM_006070	3,4,5,6,7,mid-exon8	Fusion	3'
THADA	NM_022065	24,25,26,27,28,29,30,31,36,37	Fusion	3'
TMPRSS2	NM_005656	1*,2,3,4,5,6	Fusion	3'
TMPRSS2	NM_001135099	1	Fusion	3'
USP6	NM_004505	1*,mid-exon1*,2*,3	Fusion	5'
VEGFD (FIGF)	NM_004469	2	Fusion	5'
VGLL2	NM_182645	1,2,3,intron3,4	Fusion	3'
WWTR1	NM_015472	3,4	Fusion	5'
WWTR1	NM_015472	3,4	Fusion	3'
YAP1	NM_001130145	1,mid-exon1,2,3,4,8,9	Fusion	5'
YAP1	NM_001130145	1,2,3,4,5,6,7	Fusion	3'
YWHAE	NM_006761	5	Fusion	3'

\*Indicates exons that are entirely untranslated region (UTR), or for which the UTR is targeted.