



The following applies to NONCP / Neuro-Oncology Expanded Gene Panel with Rearrangement. Next-generation sequencing (NGS) is performed to test for the presence of somatic gene fusions, known abnormal transcript variants in *MET* (exon 14 skipping) and *EGFR* (splice variants vII, vIII, vIVa, and vIVb), and *BCOR* exon 15 internal tandem duplications. When appropriate, variants detected are confirmed by an independent reference method, such as Sanger sequencing.

Refer to the table below for gene coverage for fusion analysis. Coverage includes the 5'UTR (including associated noncoding exons), coding exons/regions, and partial coverage (first 120 base pairs) of the 3'UTR, based off the associated reference transcript. For specific questions regarding gene regions covered by this assay, contact the laboratory at 800-533-1710.

Genomic Build: GRCh37 (hg19) unless otherwise specified

Gene	Transcript	Gene	Transcript	Gene	Transcript
<i>ABI1</i>	NM_001012750.3	<i>FYN</i>	NM_002037.5	<i>PIK3R3</i>	NM_003629.4
<i>ABL1</i>	NM_005157.6	<i>GAB1</i>	NM_002039.4	<i>PIM1</i>	NM_002648.4
<i>ABL2</i>	NM_007314.4	<i>GAB2</i>	NM_080491.3	<i>PKD1</i>	NM_001009944.3
<i>ABRAXAS1</i>	NM_139076.3	<i>GABBR2</i>	NM_005458.8	<i>PKD1L1</i>	NM_138295.5
<i>ACBD6</i>	NM_032360.4	<i>GABRA6</i>	NM_000811.3	<i>PKN1</i>	NM_002741.5
<i>ACKR3</i>	NM_020311.3	<i>GADD45B</i>	NM_015675.4	<i>PLA2R1</i>	NM_007366.5
<i>ACLY</i>	NM_001096.3	<i>GAS6</i>	NM_000820.4	<i>PLAG1</i>	NM_002655.3
<i>ACSL3</i>	NM_004457.5	<i>GAS7</i>	NM_201433.2	<i>PLCB4</i>	NM_001377142.1
<i>ACSL6</i>	NM_001009185.3	<i>GATA1</i>	NM_002049.4	<i>PLCG1</i>	NM_002660.3
<i>ACTB</i>	NM_001101.5	<i>GATA2</i>	NM_032638.5	<i>PLCG2</i>	NM_002661.5
<i>ACTG1</i>	NM_001614.5	<i>GATA3</i>	NM_001002295.2	<i>PLK2</i>	NM_006622.4
<i>ACTL6A</i>	NM_004301.5	<i>GATA4</i>	NM_001308093.3	<i>PLPP3</i>	NM_003713.5
<i>ACVR1</i>	NM_001111067.4	<i>GATA6</i>	NM_005257.6	<i>PLXND1</i>	NM_015103.3
<i>ACVR1B</i>	NM_004302.5	<i>GEMIN2</i>	NM_003616.3	<i>PMAIP1</i>	NM_021127.3
<i>ACVR2A</i>	NM_001616.5	<i>GEN1</i>	NM_001130009.3	<i>PML</i>	NM_033238.3
<i>ADGRA2</i>	NM_032777.10	<i>GFI1</i>	NM_005263.5	<i>PMS1</i>	NM_000534.5
<i>ADGRF5</i>	NM_001098518.2	<i>GFI1B</i>	NM_001377304.1	<i>PMS2</i>	NM_000535.7
<i>AFAP1</i>	NM_001134647.2	<i>GFPT1</i>	NM_001244710.2	<i>PNRC1</i>	NM_006813.3
<i>AFAP1L2</i>	NM_001001936.3	<i>GID4</i>	NM_024052.5	<i>POLD1</i>	NM_002691.4
<i>AFDN</i>	NM_001386888.1	<i>GLI1</i>	NM_005269.3	<i>POLE</i>	NM_006231.4
<i>AFF1</i>	NM_001166693.3	<i>GLI2</i>	NM_001374353.1	<i>POLG</i>	NM_002693.3
<i>AFF3</i>	NM_001386135.1	<i>GLI3</i>	NM_000168.6	<i>POLQ</i>	NM_199420.4
<i>AFF4</i>	NM_014423.4	<i>GLIS1</i>	NM_001367484.1	<i>POLR2A</i>	NM_000937.5
<i>AGBL4</i>	NM_032785.4	<i>GLIS2</i>	NM_032575.3	<i>POR</i>	NM_001382659.3
<i>AGK</i>	NM_018238.4	<i>GLIS3</i>	NM_001042413.2	<i>POT1</i>	NM_015450.3
<i>AGO1</i>	NM_012199.5	<i>GMDS</i>	NM_001500.4	<i>POU2AF1</i>	NM_006235.3
<i>AGO2</i>	NM_012154.5	<i>GMPS</i>	NM_003875.3	<i>POU5F1</i>	NM_002701.6
<i>AGPAT5</i>	NM_018361.5	<i>GNA11</i>	NM_002067.5	<i>PPARG</i>	NM_138711.6
<i>AGTRAP</i>	NM_020350.5	<i>GNA12</i>	NM_007353.3	<i>PPFIBP1</i>	NM_003622.4
<i>AHRR</i>	NM_001377236.1	<i>GNA13</i>	NM_006572.6	<i>PPFIBP2</i>	NM_003621.5
<i>AJUBA</i>	NM_032876.6	<i>GNA14</i>	NM_004297.4	<i>PPM1D</i>	NM_003620.4
<i>AKAP13</i>	NM_007200.5	<i>GNAI1</i>	NM_002069.6	<i>PPP1CB</i>	NM_002709.3

Targeted Gene Fusions for the Neuro-Oncology Expanded Panel (continued)

Gene	Transcript	Gene	Transcript	Gene	Transcript
AKAP9	NM_005751.5	GNAQ	NM_002072.5	PPP2R1A	NM_014225.6
AKT1	NM_001382430.1	GNAS	NM_000516.7	PPP2R2A	NM_002717.4
AKT2	NM_001626.6	GNB1	NM_002074.5	PPP4R2	NM_174907.4
AKT3	NM_005465.7	GNRHR	NM_000406.3	PPP6C	NM_002721.5
ALB	NM_000477.7	GOLGA5	NM_005113.4	PRAME	NM_206956.3
ALDH2	NM_000690.4	GOPC	NM_020399.4	PRCC	NM_005973.5
ALK	NM_004304.5	GPBP1L1	NM_021639.5	PRDM1	NM_001198.4
ALOX12B	NM_001139.3	GPC3	NM_004484.4	PRDM10	NM_199437.2
AMER1	NM_152424.4	GPHN	NM_020806.5	PRDM14	NM_024504.4
ANK3	NM_020987.5	GPS2	NM_004489.5	PRDM16	NM_022114.4
ANKRD11	NM_013275.6	GRB7	NM_005310.5	PREX2	NM_024870.4
ANKRD26	NM_014915.3	GREM1	NM_013372.7	PRF1	NM_001083116.3
AP3B1	NM_003664.5	GRIN2A	NM_001134407.3	PRKACA	NM_002730.4
APC	NM_000038.6	GRM3	NM_000840.3	PRKACB	NM_182948.4
APH1A	NM_001077628.3	GSK3B	NM_001146156.2	PRKAR1A	NM_002734.5
APLN	NM_005161.6	GTF2I	NM_032999.4	PRKAR2A	NM_004157.4
APOBEC3B	NM_004900.5	GTF2IRD1	NM_005685.4	PRKAR2B	NM_002736.3
AR	NM_000044.6	GTSE1	NM_016426.7	PRKCA	NM_002737.3
ARAF	NM_001654.5	H1-2	NM_005319.4	PRKCB	NM_002738.7
ARFGEF2	NM_006420.3	H1-3	NM_005320.3	PRKCD	NM_006254.4
ARFIP1	NM_001025595.3	H1-4	NM_005321.3	PRKCE	NM_005400.3
ARFRP1	NM_001267547.3	H1-5	NM_005322.3	PRKCI	NM_002740.6
ARHGAP26	NM_001135608.3	H2AC11	NM_021064.5	PRKD1	NM_002742.3
ARHGAP35	NM_004491.5	H2AC16	NM_003511.3	PRKD2	NM_016457.5
ARHGAP6	NM_013427.3	H2AC17	NM_003514.2	PRKD3	NM_005813.6
ARHGEF12	NM_015313.3	H2AC6	NM_003512.4	PRKDC	NM_006904.7
ARHGEF28	NM_001177693.2	H2BC11	NM_021058.4	PRKN	NM_004562.3
ARID1A	NM_006015.6	H2BC12	NM_001312653.2	PRR12	NM_020719.3
ARID1B	NM_001374828.1	H2BC17	NM_003527.4	PRRX1	NM_022716.4
ARID2	NM_152641.4	H2BC4	NM_003526.3	PRSS1	NM_002769.5
ARID3A	NM_005224.3	H2BC5	NM_021063.4	PRSS8	NM_002773.5
ARID3B	NM_006465.4	H2BC8	NM_003518.4	PSEN2	NM_000447.3
ARID3C	NM_001017363.4	H3-3A	NM_002107.7	PSIP1	NM_033222.5
ARID4A	NM_002892.4	H3-3B	NM_005324.5	PTBP3	NM_001163788.4
ARID4B	NM_016374.6	H3-4	NM_003493.3	PTCH1	NM_000264.5
ARID5A	NM_212481.3	H3-5	NM_001013699.3	PTCH2	NM_003738.5
ARID5B	NM_032199.3	H3C1	NM_003529.3	PTEN	NM_000314.8
ARNT	NM_001668.4	H3C10	NM_003536.3	PTK2B	NM_173176.3
ARRDC1	NM_152285.4	H3C11	NM_003533.3	PTK6	NM_005975.4
ASIC2	NM_183377.2	H3C12	NM_003535.3	PTK7	NM_002821.5
ASMTL	NM_004192.4	H3C13	NM_001123375.3	PTP4A1	NM_003463.5

Targeted Gene Fusions for the Neuro-Oncology Expanded Panel (continued)

Gene	Transcript	Gene	Transcript	Gene	Transcript
<i>ASPSCR1</i>	NM_024083.4	<i>H3C14</i>	NM_021059.3	<i>PTPN1</i>	NM_002827.4
<i>ASXL1</i>	NM_015338.6	<i>H3C15</i>	NM_001005464.3	<i>PTPN11</i>	NM_002834.5
<i>ASXL2</i>	NM_018263.6	<i>H3C2</i>	NM_003537.4	<i>PTPN13</i>	NM_080683.3
<i>ATF1</i>	NM_005171.5	<i>H3C3</i>	NM_003531.3	<i>PTPN14</i>	NM_005401.5
<i>ATG4C</i>	NM_032852.4	<i>H3C4</i>	NM_001376937.1	<i>PTPN2</i>	NM_002828.4
<i>ATG5</i>	NM_004849.4	<i>H3C6</i>	NM_003532.3	<i>PTPN6</i>	NM_002831.6
<i>ATG7</i>	NM_001349232.2	<i>H3C7</i>	NM_021018.3	<i>PTPRB</i>	NM_001109754.4
<i>ATIC</i>	NM_004044.7	<i>H3C8</i>	NM_003534.3	<i>PTPRC</i>	NM_002838.5
<i>ATM</i>	NM_000051.4	<i>H3P6</i>	NR_002315.1	<i>PTPRD</i>	NM_002839.4
<i>ATP1A1</i>	NM_000701.8	<i>H4C13</i>	NM_003546.3	<i>PTPRK</i>	NM_002844.4
<i>ATP2B3</i>	NM_001001344.3	<i>H4C9</i>	NM_003495.3	<i>PTPRO</i>	NM_030667.3
<i>ATP6AP1</i>	NM_001183.6	<i>HAS2</i>	NM_005328.3	<i>PTPRS</i>	NM_002850.4
<i>ATP6V1B2</i>	NM_001693.4	<i>HCK</i>	NM_002110.5	<i>PTPRT</i>	NM_007050.6
<i>ATP8B2</i>	NM_001370597.1	<i>HDAC1</i>	NM_004964.3	<i>PTPRZ1</i>	NM_002851.3
<i>ATR</i>	NM_001184.4	<i>HDAC4</i>	NM_001378414.1	<i>PVT1</i>	NR_003367.3
<i>ATRX</i>	NM_000489.6	<i>HDAC7</i>	NM_015401.5	<i>QKI</i>	NM_006775.3
<i>ATXN1</i>	NM_001128164.2	<i>HERPUD1</i>	NM_014685.4	<i>RAB2A</i>	NM_002865.3
<i>ATXN1L</i>	NM_001137675.4	<i>HEY1</i>	NM_012258.4	<i>RAB35</i>	NM_006861.7
<i>ATXN2</i>	NM_001372574.1	<i>HGF</i>	NM_000601.6	<i>RABEP1</i>	NM_004703.6
<i>ATXN7</i>	NM_001377405.1	<i>HIF1A</i>	NM_001530.4	<i>RAC1</i>	NM_006908.5
<i>AURKA</i>	NM_198437.3	<i>HIP1</i>	NM_005338.7	<i>RAC2</i>	NM_002872.5
<i>AURKB</i>	NM_004217.4	<i>HIRA</i>	NM_003325.4	<i>RAD21</i>	NM_006265.3
<i>AXIN1</i>	NM_003502.4	<i>HLA-A</i>	NM_002116.8	<i>RAD50</i>	NM_005732.4
<i>AXIN2</i>	NM_004655.4	<i>HLA-B</i>	NM_005514.8	<i>RAD51</i>	NM_002875.5
<i>AXL</i>	NM_021913.5	<i>HLA-C</i>	NM_002117.6	<i>RAD51B</i>	NM_133510.4
<i>B2M</i>	NM_004048.4	<i>HLF</i>	NM_002126.5	<i>RAD51C</i>	NM_058216.3
<i>BABAM1</i>	NM_014173.4	<i>HMGA1</i>	NM_145899.3	<i>RAD51D</i>	NM_002878.4
<i>BACH2</i>	NM_021813.4	<i>HMGA2</i>	NM_003483.6	<i>RAD52</i>	NM_134424.4
<i>BAIAP2L1</i>	NM_018842.5	<i>HMGN2P46</i>	NR_022014.1	<i>RAD54L</i>	NM_003579.4
<i>BAP1</i>	NM_004656.4	<i>HNF1A</i>	NM_000545.8	<i>RAF1</i>	NM_002880.4
<i>BARD1</i>	NM_000465.4	<i>HNRNPA2B1</i>	NM_002137.4	<i>RALGDS</i>	NM_006266.4
<i>BAX</i>	NM_138761.4	<i>HNRNPK</i>	NM_031263.4	<i>RANBP17</i>	NM_022897.5
<i>BBC3</i>	NM_014417.5	<i>HOOK3</i>	NM_032410.4	<i>RANBP2</i>	NM_006267.5
<i>BBS9</i>	NM_198428.3	<i>HOXA11</i>	NM_005523.6	<i>RAP1GDS1</i>	NM_001100427.2
<i>BCAN</i>	NM_021948.5	<i>HOXA13</i>	NM_000522.5	<i>RARA</i>	NM_000964.4
<i>BCAS3</i>	NM_017679.5	<i>HOXA3</i>	NM_153631.3	<i>RASA1</i>	NM_002890.3
<i>BCAS4</i>	NM_198799.4	<i>HOXA9</i>	NM_152739.4	<i>RASA3</i>	NM_007368.4
<i>BCL10</i>	NM_003921.5	<i>HOXB13</i>	NM_006361.6	<i>RASGEF1A</i>	NM_145313.4
<i>BCL11A</i>	NM_022893.4	<i>HOXC11</i>	NM_014212.4	<i>RB1</i>	NM_000321.3
<i>BCL11B</i>	NM_138576.4	<i>HOXC13</i>	NM_017410.3	<i>RBM10</i>	NM_005676.5
<i>BCL2</i>	NM_000633.3	<i>HOXD11</i>	NM_021192.3	<i>RBM14</i>	NM_006328.4

Targeted Gene Fusions for the Neuro-Oncology Expanded Panel (continued)

Gene	Transcript	Gene	Transcript	Gene	Transcript
<i>BCL2L1</i>	NM_138578.3	<i>HOXD13</i>	NM_000523.4	<i>RBM15</i>	NM_022768.5
<i>BCL2L11</i>	NM_138621.5	<i>HRAS</i>	NM_005343.4	<i>RBMS1</i>	NM_016836.4
<i>BCL2L2</i>	NM_004050.5	<i>HSD3B1</i>	NM_000862.3	<i>RBPMS</i>	NM_001008710.3
<i>BCL3</i>	NM_005178.5	<i>HSP90AA1</i>	NM_005348.4	<i>RECK</i>	NM_021111.3
<i>BCL6</i>	NM_001706.5	<i>HSP90AB1</i>	NM_007355.4	<i>RECQL</i>	NM_002907.4
<i>BCL7A</i>	NM_001024808.3	<i>HTN3</i>	NM_000200.3	<i>RECQL4</i>	NM_004260.4
<i>BCL9</i>	NM_004326.4	<i>ICOSLG</i>	NM_015259.6	<i>REL</i>	NM_001291746.2
<i>BCL9L</i>	NM_001378213.1	<i>ID3</i>	NM_002167.5	<i>RELA</i>	NM_021975.4
<i>BCOR</i>	NM_001123385.2	<i>IDH1</i>	NM_005896.4	<i>RELN</i>	NM_005045.4
<i>BCORL1</i>	NM_001379451.1	<i>IDH2</i>	NM_002168.4	<i>REST</i>	NM_005612.5
<i>BCR</i>	NM_004327.4	<i>IFNGR1</i>	NM_000416.3	<i>RET</i>	NM_020975.6
<i>BEND2</i>	NM_153346.5	<i>IGF1</i>	NM_000618.5	<i>RGS22</i>	NM_015668.5
<i>BIRC3</i>	NM_001165.5	<i>IGF1R</i>	NM_000875.5	<i>RHEB</i>	NM_005614.4
<i>BIRC5</i>	NM_001168.3	<i>IGF2</i>	NM_000612.6	<i>RHEBL1</i>	NM_144593.3
<i>BLM</i>	NM_000057.4	<i>IGF2BP3</i>	NM_006547.3	<i>RHOA</i>	NM_001664.4
<i>BMPRI1A</i>	NM_004329.3	<i>IGFBP5</i>	NM_000599.4	<i>RHOH</i>	NM_004310.5
<i>BRAF</i>	NM_004333.6	<i>IKBKB</i>	NM_001556.3	<i>RICTOR</i>	NM_152756.5
<i>BRCA1</i>	NM_007294.4	<i>IKBKE</i>	NM_014002.4	<i>RIT1</i>	NM_006912.6
<i>BRCA2</i>	NM_000059.4	<i>IKZF1</i>	NM_006060.6	<i>RM12</i>	NM_152308.3
<i>BRD3</i>	NM_007371.4	<i>IKZF2</i>	NM_001387220.1	<i>RNF130</i>	NM_018434.6
<i>BRD4</i>	NM_001379291.1	<i>IKZF3</i>	NM_012481.5	<i>RNF213</i>	NM_001256071.3
<i>BRIP1</i>	NM_032043.3	<i>IL10</i>	NM_000572.3	<i>RNF216</i>	NM_207111.4
<i>BRSK1</i>	NM_032430.2	<i>IL2</i>	NM_000586.4	<i>RNF217-AS1</i>	NR_026876.1
<i>BTBD1</i>	NM_025238.4	<i>IL21R</i>	NM_181078.3	<i>RNF43</i>	NM_017763.6
<i>BTG1</i>	NM_001731.3	<i>IL2RB</i>	NM_000878.5	<i>ROBO1</i>	NM_002941.4
<i>BTG2</i>	NM_006763.3	<i>IL3</i>	NM_000588.4	<i>ROS1</i>	NM_001378902.1
<i>BTK</i>	NM_000061.3	<i>IL6R</i>	NM_000565.4	<i>RPL10</i>	NM_006013.5
<i>BTLA</i>	NM_181780.4	<i>IL6ST</i>	NM_002184.4	<i>RPL22</i>	NM_000983.4
<i>BUB1B</i>	NM_001211.6	<i>IL7R</i>	NM_002185.5	<i>RPL5</i>	NM_000969.5
<i>C8orf34</i>	NM_052958.4	<i>INH1A</i>	NM_002191.4	<i>RPN1</i>	NM_002950.4
<i>CACNA1D</i>	NM_001128840.3	<i>INH1B</i>	NM_002192.4	<i>RPS2P32</i>	NR_026676.1
<i>CAD</i>	NM_004341.5	<i>INPP4A</i>	NM_001134225.2	<i>RPS6KA3</i>	NM_004586.3
<i>CALR</i>	NM_004343.4	<i>INPP4B</i>	NM_001101669.3	<i>RPS6KA4</i>	NM_003942.3
<i>CAMTA1</i>	NM_015215.4	<i>INPP5D</i>	NM_001017915.3	<i>RPS6KB1</i>	NM_003161.4
<i>CANT1</i>	NM_001159773.2	<i>INPPL1</i>	NM_001567.4	<i>RPS6KB2</i>	NM_003952.3
<i>CAPZA2</i>	NM_006136.3	<i>INSR</i>	NM_000208.4	<i>RPS6KC1</i>	NM_012424.6
<i>CARD11</i>	NM_032415.7	<i>INTS4</i>	NM_033547.4	<i>RPTOR</i>	NM_020761.3
<i>CARM1</i>	NM_199141.2	<i>IRF1</i>	NM_002198.3	<i>RRAGB</i>	NM_006064.5
<i>CARMN</i>	NR_105059.1	<i>IRF2</i>	NM_002199.4	<i>RRAGC</i>	NM_022157.4
<i>CARS1</i>	NM_001014437.3	<i>IRF2BP2</i>	NM_182972.3	<i>RRAS</i>	NM_006270.5
<i>CASP8</i>	NM_001372051.1	<i>IRF4</i>	NM_002460.4	<i>RRAS2</i>	NM_012250.6

Targeted Gene Fusions for the Neuro-Oncology Expanded Panel (continued)

Gene	Transcript	Gene	Transcript	Gene	Transcript
<i>CBFA2T3</i>	NM_005187.6	<i>IRF8</i>	NM_002163.4	<i>RRP15</i>	NM_016052.4
<i>CBFB</i>	NM_022845.3	<i>IRS1</i>	NM_005544.3	<i>RSPO2</i>	NM_178565.5
<i>CBL</i>	NM_005188.4	<i>IRS2</i>	NM_003749.3	<i>RSPO3</i>	NM_032784.5
<i>CBLB</i>	NM_170662.5	<i>IRS4</i>	NM_001379150.1	<i>RSU1P2</i>	NR_024472.1
<i>CBLC</i>	NM_012116.4	<i>ITK</i>	NM_005546.4	<i>RTEL1</i>	NM_001283009.2
<i>CCDC149</i>	NM_001395273.1	<i>ITPR2</i>	NM_002223.4	<i>RUNX1</i>	NM_001754.5
<i>CCDC170</i>	NM_025059.4	<i>JAG2</i>	NM_002226.5	<i>RUNX1T1</i>	NM_175634.3
<i>CCDC6</i>	NM_005436.5	<i>JAK1</i>	NM_002227.4	<i>RUNX2</i>	NM_001024630.4
<i>CCER1</i>	NM_152638.4	<i>JAK2</i>	NM_004972.4	<i>RXRA</i>	NM_002957.6
<i>CCN3</i>	NM_002514.4	<i>JAK3</i>	NM_000215.4	<i>RYBP</i>	NM_012234.6
<i>CCN6</i>	NM_198239.2	<i>JARID2</i>	NM_004973.4	<i>S100A10</i>	NM_002966.3
<i>CCNB1IP1</i>	NM_021178.5	<i>JAZF1</i>	NM_175061.4	<i>S1PR2</i>	NM_004230.4
<i>CCNB3</i>	NM_033031.3	<i>JPT1</i>	NM_016185.4	<i>SALL4</i>	NM_020436.5
<i>CCND1</i>	NM_053056.3	<i>JPX</i>	NR_024582.1	<i>SAMHD1</i>	NM_015474.4
<i>CCND2</i>	NM_001759.4	<i>JUN</i>	NM_002228.4	<i>SAV1</i>	NM_021818.4
<i>CCND3</i>	NM_001760.5	<i>KAT2B</i>	NM_003884.5	<i>SBDS</i>	NM_016038.4
<i>CCNE1</i>	NM_001238.4	<i>KAT6A</i>	NM_006766.5	<i>SCG5</i>	NM_001144757.3
<i>CCNQ</i>	NM_152274.5	<i>KAT6B</i>	NM_012330.4	<i>SCRIB</i>	NM_182706.5
<i>CCNY</i>	NM_145012.6	<i>KBTBD4</i>	NM_018095.6	<i>SDC4</i>	NM_002999.4
<i>CCT6B</i>	NM_006584.4	<i>KCNJ5</i>	NM_000890.5	<i>SDHA</i>	NM_004168.4
<i>CD22</i>	NM_001771.4	<i>KDM2B</i>	NM_032590.5	<i>SDHAF2</i>	NM_017841.4
<i>CD274</i>	NM_014143.4	<i>KDM4C</i>	NM_015061.6	<i>SDHB</i>	NM_003000.3
<i>CD276</i>	NM_001024736.2	<i>KDM5A</i>	NM_001042603.3	<i>SDHC</i>	NM_003001.5
<i>CD28</i>	NM_006139.4	<i>KDM5C</i>	NM_004187.5	<i>SDHD</i>	NM_003002.4
<i>CD36</i>	NM_001001548.3	<i>KDM6A</i>	NM_001291415.2	<i>SEC16A</i>	NM_014866.2
<i>CD58</i>	NM_001779.3	<i>KDR</i>	NM_002253.4	<i>SEC31A</i>	NM_001077207.4
<i>CD63</i>	NM_001780.6	<i>KDSR</i>	NM_002035.4	<i>SEMA6A</i>	NM_020796.5
<i>CD70</i>	NM_001252.5	<i>KEAP1</i>	NM_203500.2	<i>SEPTIN14</i>	NM_207366.3
<i>CD74</i>	NM_001025159.3	<i>KEL</i>	NM_000420.3	<i>SEPTIN2</i>	NM_004404.5
<i>CD79A</i>	NM_001783.4	<i>KIAA1549</i>	NM_001164665.2	<i>SEPTIN5</i>	NM_002688.6
<i>CD79B</i>	NM_000626.4	<i>KIF5B</i>	NM_004521.3	<i>SEPTIN6</i>	NM_145799.4
<i>CDC42</i>	NM_001791.4	<i>KIRREL1</i>	NM_018240.7	<i>SEPTIN8</i>	NM_001098811.2
<i>CDC73</i>	NM_024529.5	<i>KIT</i>	NM_000222.3	<i>SEPTIN9</i>	NM_001113491.2
<i>CDH1</i>	NM_004360.5	<i>KITLG</i>	NM_000899.5	<i>SERP2</i>	NM_001010897.3
<i>CDH11</i>	NM_001797.4	<i>KLC1</i>	NM_001394837.1	<i>SERPINB3</i>	NM_006919.3
<i>CDK12</i>	NM_016507.4	<i>KLF17</i>	NM_173484.4	<i>SERPINB4</i>	NM_002974.4
<i>CDK2</i>	NM_001798.5	<i>KLF2</i>	NM_016270.4	<i>SERPINE1</i>	NM_000602.5
<i>CDK4</i>	NM_000075.4	<i>KLF3</i>	NM_016531.6	<i>SESN1</i>	NM_014454.3
<i>CDK6</i>	NM_001145306.2	<i>KLF4</i>	NM_004235.6	<i>SESN2</i>	NM_031459.5
<i>CDK8</i>	NM_001260.3	<i>KLF5</i>	NM_001730.5	<i>SESN3</i>	NM_144665.4
<i>CDKN1A</i>	NM_000389.5	<i>KLF6</i>	NM_001300.6	<i>SET</i>	NM_003011.4

Targeted Gene Fusions for the Neuro-Oncology Expanded Panel (continued)

Gene	Transcript	Gene	Transcript	Gene	Transcript
<i>CDKN1B</i>	NM_004064.5	<i>KLHL6</i>	NM_130446.4	<i>SETBP1</i>	NM_015559.3
<i>CDKN2A</i>	NM_000077.5	<i>KLK2</i>	NM_005551.5	<i>SETD1A</i>	NM_014712.3
<i>CDKN2B</i>	NM_004936.4	<i>KMT2A</i>	NM_001197104.2	<i>SETD1B</i>	NM_001353345.2
<i>CDKN2C</i>	NM_078626.3	<i>KMT2B</i>	NM_014727.3	<i>SETD2</i>	NM_014159.7
<i>CDKN2D</i>	NM_001800.4	<i>KMT2C</i>	NM_170606.3	<i>SETD3</i>	NM_032233.3
<i>CDX1</i>	NM_001804.3	<i>KMT2D</i>	NM_003482.4	<i>SETD4</i>	NM_017438.5
<i>CDX2</i>	NM_001265.6	<i>KMT5A</i>	NM_020382.7	<i>SETD5</i>	NM_001080517.3
<i>CEBPA</i>	NM_004364.5	<i>KNL1</i>	NM_144508.5	<i>SETD6</i>	NM_001160305.4
<i>CENPA</i>	NM_001809.4	<i>KNSTRN</i>	NM_033286.4	<i>SETD7</i>	NM_030648.4
<i>CEP128</i>	NM_152446.5	<i>KRAS</i>	NM_004985.5	<i>SETDB1</i>	NM_001366418.1
<i>CEP170B</i>	NM_001112726.3	<i>KSR2</i>	NM_173598.6	<i>SETDB2</i>	NM_001160308.3
<i>CEP43</i>	NM_007045.4	<i>KTN1</i>	NM_001079521.2	<i>SF3B1</i>	NM_012433.4
<i>CHCHD7</i>	NM_001011671.3	<i>LAMP1</i>	NM_005561.4	<i>SFMBT1</i>	NM_016329.4
<i>CHD1</i>	NM_001270.4	<i>LAMTOR1</i>	NM_017907.3	<i>SFPQ</i>	NM_005066.3
<i>CHD2</i>	NM_001271.4	<i>LARP4B</i>	NM_015155.3	<i>SFRP1</i>	NM_003012.5
<i>CHD4</i>	NM_001273.5	<i>LASP1</i>	NM_006148.4	<i>SFRP2</i>	NM_003013.3
<i>CHEK1</i>	NM_001114122.3	<i>LATS1</i>	NM_004690.4	<i>SFRP4</i>	NM_003014.4
<i>CHEK2</i>	NM_007194.4	<i>LATS2</i>	NM_014572.3	<i>SFRP5</i>	NM_003015.3
<i>CHIC2</i>	NM_012110.4	<i>LCK</i>	NM_005356.5	<i>SGK1</i>	NM_001143676.3
<i>CHN1</i>	NM_001822.7	<i>LCP1</i>	NM_002298.5	<i>SH2B3</i>	NM_005475.3
<i>CHRM1</i>	NM_000738.3	<i>LDB1</i>	NM_001113407.3	<i>SH2D1A</i>	NM_002351.5
<i>CIAO1</i>	NM_004804.3	<i>LEF1</i>	NM_016269.5	<i>SH3GL1</i>	NM_003025.4
<i>CIC</i>	NM_001386298.1	<i>LGR5</i>	NM_003667.4	<i>SHH</i>	NM_000193.4
<i>CIITA</i>	NM_000246.4	<i>LHFPL6</i>	NM_005780.3	<i>SHOC2</i>	NM_007373.4
<i>CILK1</i>	NM_014920.5	<i>LIFR</i>	NM_001127671.2	<i>SHQ1</i>	NM_018130.3
<i>CITED2</i>	NM_006079.5	<i>LMNA</i>	NM_170707.4	<i>SIX1</i>	NM_005982.4
<i>CKS1B</i>	NM_001826.3	<i>LMO1</i>	NM_002315.3	<i>SLC1A2</i>	NM_004171.4
<i>CLCN6</i>	NM_001286.5	<i>LMO2</i>	NM_005574.4	<i>SLC22A1</i>	NM_003057.3
<i>CLIP1</i>	NM_001247997.2	<i>LPP</i>	NM_001375462.1	<i>SLC26A11</i>	NM_001166347.2
<i>CLIP2</i>	NM_003388.5	<i>LRIG3</i>	NM_153377.5	<i>SLC26A6</i>	NM_022911.3
<i>CLP1</i>	NM_006831.3	<i>LRP1B</i>	NM_018557.3	<i>SLC29A1</i>	NM_001372327.1
<i>CLRN3</i>	NM_152311.5	<i>LRP5</i>	NM_002335.4	<i>SLC34A2</i>	NM_006424.3
<i>CLTC</i>	NM_004859.4	<i>LRP6</i>	NM_002336.3	<i>SLC44A1</i>	NM_080546.5
<i>CLTCL1</i>	NM_007098.4	<i>LRRK2</i>	NM_198578.4	<i>SLC45A3</i>	NM_033102.3
<i>CMTR2</i>	NM_018348.6	<i>LTB</i>	NM_002341.2	<i>SLC5A11</i>	NM_001352248.3
<i>CNBP</i>	NM_003418.5	<i>LTK</i>	NM_002344.6	<i>SLFN11</i>	NM_001376007.1
<i>CNOT3</i>	NM_014516.4	<i>LYL1</i>	NM_005583.5	<i>SLIT1</i>	NM_003061.3
<i>CNTN6</i>	NM_001289080.2	<i>LYN</i>	NM_002350.4	<i>SLIT2</i>	NM_004787.4
<i>CNTRL</i>	NM_007018.6	<i>LZTR1</i>	NM_006767.4	<i>SLX4</i>	NM_032444.4
<i>COA5</i>	NM_001008215.3	<i>MACF1</i>	NM_001394062.1	<i>SMAD2</i>	NM_005901.6
<i>COL1A1</i>	NM_000088.4	<i>MAD2L2</i>	NM_006341.4	<i>SMAD3</i>	NM_005902.4

Targeted Gene Fusions for the Neuro-Oncology Expanded Panel (continued)

Gene	Transcript	Gene	Transcript	Gene	Transcript
<i>COL1A2</i>	NM_000089.4	<i>MAF</i>	NM_005360.5	<i>SMAD4</i>	NM_005359.6
<i>COL2A1</i>	NM_001844.5	<i>MAFB</i>	NM_005461.5	<i>SMARCA1</i>	NM_001282874.2
<i>COL3A1</i>	NM_000090.4	<i>MAGED1</i>	NM_006986.4	<i>SMARCA2</i>	NM_003070.5
<i>COL6A3</i>	NM_004369.4	<i>MAGI2</i>	NM_012301.4	<i>SMARCA4</i>	NM_003072.5
<i>COP1</i>	NM_022457.7	<i>MALAT1</i>	NR_002819.4	<i>SMARCA5</i>	NM_003601.4
<i>COPA</i>	NM_004371.4	<i>MALT1</i>	NM_006785.4	<i>SMARCAL1</i>	NM_014140.4
<i>COX6C</i>	NM_004374.4	<i>MAML1</i>	NM_014757.5	<i>SMARCB1</i>	NM_003073.5
<i>CPS1</i>	NM_001875.5	<i>MAML2</i>	NM_032427.4	<i>SMARCD1</i>	NM_003076.5
<i>CRB1</i>	NM_201253.3	<i>MAML3</i>	NM_018717.5	<i>SMARCE1</i>	NM_003079.5
<i>CRB2</i>	NM_173689.7	<i>MAMLD1</i>	NM_005491.5	<i>SMC1A</i>	NM_006306.4
<i>CRBN</i>	NM_016302.4	<i>MAP2K1</i>	NM_002755.4	<i>SMC3</i>	NM_005445.4
<i>CREB1</i>	NM_004379.5	<i>MAP2K2</i>	NM_030662.4	<i>SMG1</i>	NM_015092.5
<i>CREB3L1</i>	NM_052854.4	<i>MAP2K4</i>	NM_003010.4	<i>SMO</i>	NM_005631.5
<i>CREB3L2</i>	NM_194071.4	<i>MAP3K1</i>	NM_005921.2	<i>SMYD3</i>	NM_001167740.2
<i>CREBBP</i>	NM_004380.3	<i>MAP3K13</i>	NM_004721.5	<i>SNCAIP</i>	NM_005460.4
<i>CRKL</i>	NM_005207.4	<i>MAP3K14</i>	NM_003954.5	<i>SND1</i>	NM_014390.4
<i>CRLF2</i>	NM_022148.4	<i>MAP3K3</i>	NM_002401.5	<i>SNURF</i>	NM_001394334.1
<i>CRTC1</i>	NM_015321.3	<i>MAP3K4</i>	NM_005922.4	<i>SNX29</i>	NM_032167.5
<i>CRTC3</i>	NM_022769.5	<i>MAP3K6</i>	NM_004672.5	<i>SOCS1</i>	NM_003745.2
<i>CSDE1</i>	NM_001007553.3	<i>MAP3K7</i>	NM_145331.3	<i>SOCS2</i>	NM_001270471.2
<i>CSF1</i>	NM_000757.6	<i>MAP3K8</i>	NM_005204.4	<i>SOCS3</i>	NM_003955.5
<i>CSF1R</i>	NM_001288705.3	<i>MAP4K5</i>	NM_006575.6	<i>SOS1</i>	NM_005633.4
<i>CSF3R</i>	NM_000760.4	<i>MAPK1</i>	NM_002745.5	<i>SOX10</i>	NM_006941.4
<i>CSNK1A1</i>	NM_001892.6	<i>MAPK3</i>	NM_002746.3	<i>SOX17</i>	NM_022454.4
<i>CSNK1D</i>	NM_001893.6	<i>MAPKAP1</i>	NM_001006617.3	<i>SOX2</i>	NM_003106.4
<i>CSNK1E</i>	NM_152221.3	<i>MAST1</i>	NM_014975.3	<i>SOX9</i>	NM_000346.4
<i>CTCF</i>	NM_006565.4	<i>MAST2</i>	NM_015112.3	<i>SP140</i>	NM_007237.5
<i>CTDNEP1</i>	NM_001143775.2	<i>MAX</i>	NM_002382.5	<i>SP3</i>	NM_003111.5
<i>CTLA4</i>	NM_005214.5	<i>MBD6</i>	NM_052897.4	<i>SPECC1</i>	NM_001243439.2
<i>CTNNA1</i>	NM_001903.5	<i>MBOAT2</i>	NM_138799.4	<i>SPECC1L</i>	NM_015330.6
<i>CTNNB1</i>	NM_001904.4	<i>MBTD1</i>	NM_017643.3	<i>SPEN</i>	NM_015001.3
<i>CTNNB1L1</i>	NM_030877.5	<i>MCL1</i>	NM_021960.5	<i>SPOP</i>	NM_001007228.2
<i>CTR9</i>	NM_014633.5	<i>MCPH1</i>	NM_024596.5	<i>SPRED1</i>	NM_152594.3
<i>CUL1</i>	NM_003592.3	<i>MDC1</i>	NM_014641.3	<i>SPRTN</i>	NM_032018.7
<i>CUL3</i>	NM_003590.5	<i>MDM2</i>	NM_002392.6	<i>SPTA1</i>	NM_003126.4
<i>CUL4A</i>	NM_001008895.4	<i>MDM4</i>	NM_002393.5	<i>SQSTM1</i>	NM_003900.5
<i>CUTA</i>	NM_001014840.2	<i>MDS2</i>	NR_167901.1	<i>SRC</i>	NM_198291.3
<i>CUX1</i>	NM_181552.4	<i>MEAF6</i>	NM_001270875.3	<i>SRF</i>	NM_003131.4
<i>CXCR4</i>	NM_003467.3	<i>MECOM</i>	NM_004991.4	<i>SRGAP3</i>	NM_014850.4
<i>CXXC5</i>	NM_016463.9	<i>MED12</i>	NM_005120.3	<i>SRMS</i>	NM_080823.4
<i>CYLD</i>	NM_001378743.1	<i>MEF2B</i>	NM_001145785.2	<i>SRSF2</i>	NM_001195427.2

Targeted Gene Fusions for the Neuro-Oncology Expanded Panel (continued)

Gene	Transcript	Gene	Transcript	Gene	Transcript
<i>CYP17A1</i>	NM_000102.4	<i>MEF2C</i>	NM_002397.5	<i>SRSF3</i>	NM_003017.5
<i>CYP19A1</i>	NM_000103.4	<i>MEF2D</i>	NM_005920.4	<i>SS18</i>	NM_001007559.3
<i>CYP39A1</i>	NM_016593.5	<i>MEN1</i>	NM_001370259.2	<i>SS18L1</i>	NM_198935.3
<i>CYSLTR2</i>	NM_001308476.3	<i>MERTK</i>	NM_006343.3	<i>SSBP2</i>	NM_001256732.3
<i>DAXX</i>	NM_001141969.2	<i>MET</i>	NM_000245.4	<i>SSH2</i>	NM_001282129.2
<i>DAZAP1</i>	NM_018959.4	<i>MGA</i>	NM_001164273.2	<i>SSX1</i>	NM_005635.4
<i>DAZL</i>	NM_001351.4	<i>MGAM</i>	NM_001365693.1	<i>SSX2</i>	NM_175698.4
<i>DCHS1</i>	NM_003737.4	<i>MIA2</i>	NM_001329214.4	<i>SSX4</i>	NM_005636.4
<i>DCHS2</i>	NM_001358235.2	<i>MIB1</i>	NM_020774.4	<i>SSX4B</i>	NM_001034832.5
<i>DCK</i>	NM_000788.3	<i>MIDEAS</i>	NM_001367710.1	<i>ST6GAL1</i>	NM_173216.2
<i>DCTN1</i>	NM_004082.5	<i>MITF</i>	NM_001354604.2	<i>STAG1</i>	NM_005862.3
<i>DCUN1D1</i>	NM_020640.4	<i>MKI67</i>	NM_002417.5	<i>STAG2</i>	NM_001042750.2
<i>DDB2</i>	NM_000107.3	<i>MKKNK1</i>	NM_001135553.4	<i>STAT1</i>	NM_007315.4
<i>DDIT3</i>	NM_004083.6	<i>MKRN1</i>	NM_013446.4	<i>STAT2</i>	NM_005419.4
<i>DDR1</i>	NM_001297654.2	<i>MLF1</i>	NM_001369783.1	<i>STAT3</i>	NM_139276.3
<i>DDR2</i>	NM_006182.4	<i>MLH1</i>	NM_000249.4	<i>STAT4</i>	NM_003151.4
<i>DDX10</i>	NM_004398.4	<i>MLLT1</i>	NM_005934.4	<i>STAT5A</i>	NM_001288718.2
<i>DDX31</i>	NM_022779.9	<i>MLLT10</i>	NM_001195626.3	<i>STAT5B</i>	NM_012448.4
<i>DDX3X</i>	NM_001356.5	<i>MLLT11</i>	NM_006818.4	<i>STAT6</i>	NM_003153.5
<i>DDX4</i>	NM_024415.3	<i>MLLT3</i>	NM_004529.4	<i>STIL</i>	NM_001048166.1
<i>DDX41</i>	NM_016222.4	<i>MLLT6</i>	NM_005937.4	<i>STK11</i>	NM_000455.5
<i>DDX5</i>	NM_004396.5	<i>MLXIP</i>	NM_014938.6	<i>STK19</i>	NM_004197.2
<i>DDX6</i>	NM_004397.6	<i>MLXIPL</i>	NM_032951.3	<i>STK3</i>	NM_006281.4
<i>DEK</i>	NM_003472.4	<i>MMP16</i>	NM_005941.5	<i>STK4</i>	NM_006282.5
<i>DERL1</i>	NM_024295.6	<i>MN1</i>	NM_002430.3	<i>STK40</i>	NM_001282547.2
<i>DERL2</i>	NM_016041.5	<i>MNT</i>	NM_020310.3	<i>STRN</i>	NM_003162.4
<i>DGCR8</i>	NM_022720.7	<i>MNX1</i>	NM_005515.4	<i>SUFU</i>	NM_016169.4
<i>DHFR</i>	NM_000791.4	<i>MOB1A</i>	NM_018221.5	<i>SULF2</i>	NM_001387048.1
<i>DHH</i>	NM_021044.4	<i>MOB1B</i>	NM_173468.4	<i>SUSD1</i>	NM_022486.5
<i>DHX15</i>	NM_001358.3	<i>MOB3B</i>	NM_024761.5	<i>SUZ12</i>	NM_015355.4
<i>DICER1</i>	NM_177438.3	<i>MPEG1</i>	NM_001039396.2	<i>SVOPL</i>	NM_001139456.2
<i>DIP2C</i>	NM_014974.3	<i>MPL</i>	NM_005373.3	<i>SYCP1</i>	NM_003176.4
<i>DIS3</i>	NM_014953.5	<i>MPRIIP</i>	NM_001364716.4	<i>SYK</i>	NM_003177.7
<i>DKK1</i>	NM_012242.4	<i>MRE11</i>	NM_005591.4	<i>TACC1</i>	NM_006283.3
<i>DKK2</i>	NM_014421.3	<i>MRPS14</i>	NM_022100.3	<i>TACC2</i>	NM_206862.4
<i>DKK3</i>	NM_001018057.2	<i>MRTFA</i>	NM_020831.6	<i>TACC3</i>	NM_006342.3
<i>DKK4</i>	NM_014420.3	<i>MRTFB</i>	NM_001308142.2	<i>TADA2A</i>	NM_001166105.3
<i>DNAJB1</i>	NM_006145.3	<i>MSANTD3</i>	NM_080655.3	<i>TAF1</i>	NM_004606.5
<i>DNER</i>	NM_139072.4	<i>MSH2</i>	NM_000251.3	<i>TAF15</i>	NM_139215.3
<i>DNM2</i>	NM_001005361.3	<i>MSH3</i>	NM_002439.5	<i>TAF3</i>	NM_031923.4
<i>DNMT1</i>	NM_001130823.3	<i>MSH6</i>	NM_000179.3	<i>TAFAZZIN</i>	NM_000116.5

Targeted Gene Fusions for the Neuro-Oncology Expanded Panel (continued)

Gene	Transcript	Gene	Transcript	Gene	Transcript
<i>DNMT3A</i>	NM_022552.5	<i>MSI1</i>	NM_002442.4	<i>TAL1</i>	NM_001290403.2
<i>DNMT3B</i>	NM_006892.4	<i>MSI2</i>	NM_138962.4	<i>TAL2</i>	NM_005421.3
<i>DOT1L</i>	NM_032482.3	<i>MSMB</i>	NM_002443.4	<i>TAOK1</i>	NM_020791.4
<i>DROSHA</i>	NM_001382508.1	<i>MSN</i>	NM_002444.3	<i>TAOK2</i>	NM_016151.4
<i>DTX1</i>	NM_004416.3	<i>MST1</i>	NM_020998.4	<i>TAOK3</i>	NM_016281.4
<i>DUSP2</i>	NM_004418.4	<i>MST1R</i>	NM_002447.4	<i>TAP1</i>	NM_000593.6
<i>DUSP22</i>	NM_001286555.3	<i>MTAP</i>	NM_002451.4	<i>TAP2</i>	NM_001290043.2
<i>DUSP4</i>	NM_001394.7	<i>MTCP1</i>	NM_001018025.4	<i>TBCEL</i>	NM_001363644.2
<i>DUSP9</i>	NM_001318503.2	<i>MTOR</i>	NM_004958.4	<i>TBL1XR1</i>	NM_024665.7
<i>DUX4</i>	NM_001306068.3	<i>MUC1</i>	NM_002456.6	<i>TBX3</i>	NM_005996.4
<i>DVL2</i>	NM_004422.3	<i>MUSK</i>	NM_005592.4	<i>TCEA1</i>	NM_006756.4
<i>E2F1</i>	NM_005225.3	<i>MUTYH</i>	NM_001048174.2	<i>TCF12</i>	NM_207037.2
<i>E2F3</i>	NM_001949.5	<i>MXD1</i>	NM_002357.4	<i>TCF3</i>	NM_003200.5
<i>EBF1</i>	NM_024007.5	<i>MXD3</i>	NM_031300.4	<i>TCF7</i>	NM_003202.5
<i>ECT2L</i>	NM_001077706.3	<i>MXD4</i>	NM_006454.3	<i>TCF7L1</i>	NM_031283.3
<i>EED</i>	NM_003797.5	<i>MYB</i>	NM_001130173.2	<i>TCF7L2</i>	NM_001367943.1
<i>EGF</i>	NM_001963.6	<i>MYBL1</i>	NM_001080416.4	<i>TCL1A</i>	NM_021966.3
<i>EGFL7</i>	NM_016215.5	<i>MYC</i>	NM_002467.6	<i>TCL1B</i>	NM_004918.4
<i>EGFR</i>	NM_005228.5	<i>MYCL</i>	NM_001033081.3	<i>TCL6</i>	NR_028288.2
<i>EGR1</i>	NM_001964.3	<i>MYCN</i>	NM_005378.6	<i>TEAD1</i>	NM_021961.6
<i>EHF</i>	NM_012153.6	<i>MYD88</i>	NM_002468.5	<i>TEAD2</i>	NM_001256660.2
<i>EIF1AX</i>	NM_001412.4	<i>MYH11</i>	NM_002474.3	<i>TEAD3</i>	NM_003214.4
<i>EIF3E</i>	NM_001568.3	<i>MYH13</i>	NM_003802.3	<i>TEC</i>	NM_003215.3
<i>EIF3K</i>	NM_013234.4	<i>MYH9</i>	NM_002473.6	<i>TECTA</i>	NM_005422.4
<i>EIF4A1</i>	NM_001416.4	<i>MYLK</i>	NM_053025.4	<i>TEK</i>	NM_000459.5
<i>EIF4A2</i>	NM_001967.4	<i>MYO18A</i>	NM_078471.4	<i>TENT5C</i>	NM_017709.4
<i>EIF4E</i>	NM_001968.5	<i>MYO5A</i>	NM_001382347.1	<i>TERC</i>	NR_001566.1
<i>ELAVL3</i>	NM_001420.4	<i>MYOD1</i>	NM_002478.5	<i>TERT</i>	NM_198253.3
<i>ELF3</i>	NM_004433.5	<i>NAB2</i>	NM_005967.4	<i>TET1</i>	NM_030625.3
<i>ELF4</i>	NM_001421.4	<i>NACA</i>	NM_001365896.1	<i>TET2</i>	NM_001127208.3
<i>ELK4</i>	NM_001973.4	<i>NACC2</i>	NM_144653.5	<i>TET3</i>	NM_001287491.2
<i>ELL</i>	NM_006532.4	<i>NADK</i>	NM_023018.5	<i>TFE3</i>	NM_006521.6
<i>ELN</i>	NM_000501.4	<i>NAV1</i>	NM_001389617.1	<i>TFEB</i>	NM_001271944.2
<i>ELOC</i>	NM_005648.4	<i>NBDY</i>	NM_001348129.2	<i>TFEC</i>	NM_012252.4
<i>ELP2</i>	NM_018255.4	<i>NBEAP1</i>	NR_027992.1	<i>TFG</i>	NM_006070.6
<i>EML4</i>	NM_019063.5	<i>NBN</i>	NM_002485.5	<i>TFPT</i>	NM_013342.4
<i>EMSY</i>	NM_001300942.2	<i>NCKIPSD</i>	NM_016453.4	<i>TFRC</i>	NM_001128148.3
<i>EP300</i>	NM_001429.4	<i>NCOA1</i>	NM_003743.5	<i>TG</i>	NM_003235.5
<i>EP400</i>	NM_015409.5	<i>NCOA2</i>	NM_006540.4	<i>TGFBR1</i>	NM_004612.4
<i>EPAS1</i>	NM_001430.5	<i>NCOA3</i>	NM_181659.3	<i>TGFBR2</i>	NM_003242.6
<i>EPC1</i>	NM_001272004.3	<i>NCOA4</i>	NM_001145263.2	<i>THADA</i>	NM_022065.5

Targeted Gene Fusions for the Neuro-Oncology Expanded Panel (continued)

Gene	Transcript	Gene	Transcript	Gene	Transcript
<i>EPCAM</i>	NM_002354.3	<i>NCOR1</i>	NM_006311.4	<i>THBS1</i>	NM_003246.4
<i>EPHA2</i>	NM_004431.5	<i>NCOR2</i>	NM_006312.6	<i>THRAP3</i>	NM_005119.4
<i>EPHA3</i>	NM_005233.6	<i>NCSTN</i>	NM_015331.3	<i>TIPARP</i>	NM_015508.5
<i>EPHA5</i>	NM_001281766.3	<i>NDRG1</i>	NM_006096.4	<i>TLE1</i>	NM_005077.5
<i>EPHA7</i>	NM_004440.4	<i>NEGR1</i>	NM_173808.3	<i>TLE2</i>	NM_003260.5
<i>EPHB1</i>	NM_004441.5	<i>NELFE</i>	NM_002904.6	<i>TLE3</i>	NM_001105192.3
<i>EPHB4</i>	NM_004444.5	<i>NF1</i>	NM_001042492.3	<i>TLE4</i>	NM_007005.6
<i>EPOR</i>	NM_000121.4	<i>NF2</i>	NM_000268.4	<i>TLL2</i>	NM_012465.4
<i>EPS15</i>	NM_001981.3	<i>NFASC</i>	NM_001005388.3	<i>TLX1</i>	NM_005521.4
<i>ERBB2</i>	NM_004448.4	<i>NFATC1</i>	NM_001278669.2	<i>TLX3</i>	NM_021025.4
<i>ERBB3</i>	NM_001982.4	<i>NFATC2</i>	NM_012340.5	<i>TMCC1</i>	NM_001017395.5
<i>ERBB4</i>	NM_005235.3	<i>NFE2</i>	NM_001136023.3	<i>TMEM127</i>	NM_017849.4
<i>ERC1</i>	NM_178040.4	<i>NFE2L2</i>	NM_006164.5	<i>TMEM30A</i>	NM_018247.4
<i>ERCC1</i>	NM_001983.4	<i>NFIA</i>	NM_001134673.4	<i>TMPRSS2</i>	NM_005656.4
<i>ERCC2</i>	NM_000400.4	<i>NFIB</i>	NM_001190737.2	<i>TNFAIP3</i>	NM_001270508.2
<i>ERCC3</i>	NM_000122.2	<i>NFIX</i>	NM_001365902.3	<i>TNFRSF11A</i>	NM_003839.4
<i>ERCC4</i>	NM_005236.3	<i>NFKB2</i>	NM_001322934.2	<i>TNFRSF14</i>	NM_003820.4
<i>ERCC5</i>	NM_000123.4	<i>NFKBIA</i>	NM_020529.3	<i>TNFRSF17</i>	NM_001192.3
<i>ERF</i>	NM_006494.4	<i>NFKBIE</i>	NM_004556.3	<i>TNFSF11</i>	NM_003701.4
<i>ERG</i>	NM_182918.4	<i>NIN</i>	NM_020921.4	<i>TOP1</i>	NM_003286.4
<i>ERO1A</i>	NM_014584.3	<i>NKAIN2</i>	NM_001040214.3	<i>TOP2A</i>	NM_001067.4
<i>ERRFI1</i>	NM_018948.4	<i>NKX2-1</i>	NM_001079668.3	<i>TP53</i>	NM_000546.6
<i>ESCO2</i>	NM_001017420.3	<i>NKX3-1</i>	NM_006167.4	<i>TP53BP1</i>	NM_001141980.3
<i>ESR1</i>	NM_000125.4	<i>NOD1</i>	NM_006092.4	<i>TP63</i>	NM_003722.5
<i>ESRP1</i>	NM_017697.4	<i>NONO</i>	NM_007363.5	<i>TPM3</i>	NM_152263.4
<i>ESRRA</i>	NM_004451.5	<i>NOTCH1</i>	NM_017617.5	<i>TPM4</i>	NM_003290.3
<i>ETAA1</i>	NM_019002.4	<i>NOTCH2</i>	NM_024408.4	<i>TPR</i>	NM_003292.3
<i>ETNK1</i>	NM_018638.5	<i>NOTCH3</i>	NM_000435.3	<i>TPTE2</i>	NM_199254.3
<i>ETS1</i>	NM_001143820.2	<i>NOTCH4</i>	NM_004557.4	<i>TRAF1</i>	NM_005658.5
<i>ETV1</i>	NM_004956.5	<i>NPM1</i>	NM_002520.7	<i>TRAF2</i>	NM_021138.4
<i>ETV4</i>	NM_001079675.5	<i>NR4A3</i>	NM_006981.4	<i>TRAF3</i>	NM_145725.3
<i>ETV5</i>	NM_004454.3	<i>NRAS</i>	NM_002524.5	<i>TRAF5</i>	NM_001033910.3
<i>ETV6</i>	NM_001987.5	<i>NRF1</i>	NM_005011.5	<i>TRAF7</i>	NM_032271.3
<i>EWSR1</i>	NM_005243.4	<i>NRG1</i>	NM_013964.5	<i>TRIM11</i>	NM_145214.3
<i>EXOSC6</i>	NM_058219.3	<i>NSD1</i>	NM_022455.5	<i>TRIM24</i>	NM_015905.3
<i>EXT1</i>	NM_000127.3	<i>NSD2</i>	NM_001042424.3	<i>TRIM27</i>	NM_006510.5
<i>EXT2</i>	NM_207122.2	<i>NSD3</i>	NM_023034.2	<i>TRIM33</i>	NM_015906.4
<i>EZH1</i>	NM_001991.5	<i>NT5C2</i>	NM_001351169.2	<i>TRIP11</i>	NM_004239.4
<i>EZH2</i>	NM_004456.5	<i>NTHL1</i>	NM_002528.7	<i>TRIP13</i>	NM_004237.4
<i>EZHIP</i>	NM_203407.3	<i>NTN1</i>	NM_004822.3	<i>TRRAP</i>	NM_001375524.1
<i>EZR</i>	NM_001111077.2	<i>NTRK1</i>	NM_002529.4	<i>TSC1</i>	NM_000368.5

Targeted Gene Fusions for the Neuro-Oncology Expanded Panel (continued)

Gene	Transcript	Gene	Transcript	Gene	Transcript
<i>FAF1</i>	NM_007051.3	<i>NTRK2</i>	NM_006180.6	<i>TSC2</i>	NM_000548.5
<i>FAM114A2</i>	NM_018691.4	<i>NTRK3</i>	NM_001012338.3	<i>TSHR</i>	NM_000369.5
<i>FAM118B</i>	NM_024556.4	<i>NUF2</i>	NM_145697.3	<i>TTL</i>	NM_153712.5
<i>FAM131B</i>	NM_001031690.3	<i>NUMA1</i>	NM_006185.4	<i>TTYH1</i>	NM_020659.4
<i>FANCA</i>	NM_000135.4	<i>NUMBL</i>	NM_004756.5	<i>TUSC3</i>	NM_006765.4
<i>FANCC</i>	NM_000136.3	<i>NUP107</i>	NM_020401.4	<i>TYK2</i>	NM_003331.5
<i>FANCD2</i>	NM_001018115.3	<i>NUP214</i>	NM_005085.4	<i>TYRO3</i>	NM_006293.4
<i>FANCE</i>	NM_021922.3	<i>NUP93</i>	NM_014669.5	<i>U2AF1</i>	NM_006758.3
<i>FANCF</i>	NM_022725.4	<i>NUP98</i>	NM_016320.5	<i>U2AF2</i>	NM_007279.3
<i>FANCG</i>	NM_004629.2	<i>NUTM1</i>	NM_001284292.2	<i>UACA</i>	NM_018003.4
<i>FANCI</i>	NM_001113378.2	<i>NUTM2A</i>	NM_001099338.2	<i>UBE2J2</i>	NM_058167.3
<i>FANCL</i>	NM_018062.4	<i>NUTM2B</i>	NM_001278495.2	<i>UBE2L3</i>	NM_003347.4
<i>FAS</i>	NM_000043.6	<i>OFD1</i>	NM_003611.3	<i>UBE3C</i>	NM_014671.3
<i>FAT1</i>	NM_005245.4	<i>OGA</i>	NM_012215.5	<i>UBR5</i>	NM_015902.6
<i>FAT2</i>	NM_001447.3	<i>OLIG2</i>	NM_005806.4	<i>UBTF</i>	NM_014233.4
<i>FAT3</i>	NM_001367949.2	<i>OMD</i>	NM_005014.3	<i>UEVLD</i>	NM_001040697.4
<i>FAT4</i>	NM_001291303.3	<i>OPHN1</i>	NM_002547.3	<i>UPF1</i>	NM_002911.4
<i>FBXL18</i>	NM_024963.6	<i>OSBPL9</i>	NM_024586.6	<i>USH1G</i>	NM_173477.5
<i>FBXO11</i>	NM_001190274.2	<i>P2RY8</i>	NM_178129.5	<i>USP6</i>	NM_001304284.2
<i>FBXO31</i>	NM_024735.5	<i>PACS1</i>	NM_018026.4	<i>USP8</i>	NM_005154.5
<i>FBXO38</i>	NM_205836.3	<i>PFAFAH1B2</i>	NM_002572.4	<i>VAV1</i>	NM_005428.4
<i>FBXW7</i>	NM_001349798.2	<i>PAG1</i>	NM_018440.4	<i>VAV2</i>	NM_001134398.2
<i>FCGR2B</i>	NM_001394477.1	<i>PAK1</i>	NM_002576.5	<i>VCL</i>	NM_014000.3
<i>FCHSD1</i>	NM_033449.3	<i>PAK3</i>	NM_002578.5	<i>VEGFA</i>	NM_003376.6
<i>FCRL4</i>	NM_031282.3	<i>PAK5</i>	NM_177990.4	<i>VGLL2</i>	NM_182645.3
<i>FERMT2</i>	NM_006832.3	<i>PALB2</i>	NM_024675.4	<i>VHL</i>	NM_000551.4
<i>FES</i>	NM_002005.4	<i>PAN3</i>	NM_175854.8	<i>VTCN1</i>	NM_024626.4
<i>FEV</i>	NM_017521.3	<i>PARP1</i>	NM_001618.4	<i>VTI1A</i>	NM_145206.4
<i>FGF1</i>	NM_000800.5	<i>PARP2</i>	NM_001042618.2	<i>WAS</i>	NM_000377.3
<i>FGF10</i>	NM_004465.2	<i>PARP3</i>	NM_001003931.4	<i>WDCP</i>	NM_025203.3
<i>FGF12</i>	NM_004113.6	<i>PASK</i>	NM_015148.4	<i>WDFY2</i>	NM_052950.4
<i>FGF14</i>	NM_004115.4	<i>PATZ1</i>	NM_014323.3	<i>WDR90</i>	NM_145294.5
<i>FGF19</i>	NM_005117.3	<i>PAX3</i>	NM_181458.4	<i>WIF1</i>	NM_007191.5
<i>FGF2</i>	NM_001361665.2	<i>PAX5</i>	NM_016734.3	<i>WNK1</i>	NM_213655.5
<i>FGF23</i>	NM_020638.3	<i>PAX7</i>	NM_001135254.2	<i>WRN</i>	NM_000553.6
<i>FGF3</i>	NM_005247.4	<i>PAX8</i>	NM_003466.4	<i>WT1</i>	NM_024426.6
<i>FGF4</i>	NM_002007.4	<i>PBRM1</i>	NM_001350074.2	<i>WWC1</i>	NM_015238.3
<i>FGF5</i>	NM_004464.4	<i>PBX1</i>	NM_002585.4	<i>WWP1</i>	NM_007013.4
<i>FGF6</i>	NM_020996.3	<i>PBX3</i>	NM_006195.6	<i>WWTR1</i>	NM_015472.6
<i>FGF7</i>	NM_002009.4	<i>PC</i>	NM_001040716.2	<i>XBP1</i>	NM_005080.4
<i>FGF8</i>	NM_033163.5	<i>PCBP1</i>	NM_006196.4	<i>XIAP</i>	NM_001167.4

Targeted Gene Fusions for the Neuro-Oncology Expanded Panel (continued)

Gene	Transcript	Gene	Transcript	Gene	Transcript
<i>FGF9</i>	NM_002010.3	<i>PCDHGA1</i>	NM_018912.3	<i>XPA</i>	NM_000380.4
<i>FGFR1</i>	NM_023110.3	<i>PCLO</i>	NM_033026.6	<i>XPC</i>	NM_004628.5
<i>FGFR2</i>	NM_000141.5	<i>PCM1</i>	NM_006197.4	<i>XPO1</i>	NM_003400.4
<i>FGFR3</i>	NM_000142.5	<i>PCSK5</i>	NM_001372043.1	<i>XRCC2</i>	NM_005431.2
<i>FGFR4</i>	NM_213647.3	<i>PCSK7</i>	NM_004716.4	<i>YAP1</i>	NM_001130145.3
<i>FGR</i>	NM_005248.3	<i>PDCD1</i>	NM_005018.3	<i>YES1</i>	NM_005433.4
<i>FH</i>	NM_000143.4	<i>PDCD10</i>	NM_007217.4	<i>YPEL5</i>	NM_016061.3
<i>FHDC1</i>	NM_001371116.1	<i>PDCD11</i>	NM_014976.2	<i>YWHAE</i>	NM_006761.5
<i>FHIT</i>	NM_002012.4	<i>PDCD1LG2</i>	NM_025239.4	<i>YY1</i>	NM_003403.5
<i>FIP1L1</i>	NM_030917.4	<i>PDE4DIP</i>	NM_001395426.1	<i>YY1AP1</i>	NM_139119.3
<i>FKBP15</i>	NM_015258.2	<i>PDE8B</i>	NM_003719.5	<i>ZBTB16</i>	NM_006006.6
<i>FKBP1A</i>	NM_000801.5	<i>PDGFA</i>	NM_033023.5	<i>ZBTB2</i>	NM_020861.3
<i>FLCN</i>	NM_144997.7	<i>PDGFB</i>	NM_002608.4	<i>ZBTB20</i>	NM_001348800.3
<i>FLI1</i>	NM_002017.5	<i>PDGFD</i>	NM_025208.5	<i>ZBTB7A</i>	NM_015898.4
<i>FLT1</i>	NM_002019.4	<i>PDGFRA</i>	NM_006206.6	<i>ZC3H7B</i>	NM_017590.6
<i>FLT3</i>	NM_004119.3	<i>PDGFRB</i>	NM_002609.4	<i>ZC3HAV1</i>	NM_020119.4
<i>FLT4</i>	NM_182925.5	<i>PDK1</i>	NM_002610.5	<i>ZCCHC7</i>	NM_032226.3
<i>FLYWCH1</i>	NM_001308068.2	<i>PDPK1</i>	NM_002613.5	<i>ZFHX3</i>	NM_006885.4
<i>FN1</i>	NM_212482.4	<i>PDPN</i>	NM_006474.5	<i>ZFP36</i>	NM_003407.5
<i>FNBP1</i>	NM_015033.3	<i>PDS5B</i>	NM_015032.4	<i>ZFP36L1</i>	NM_004926.4
<i>FOS</i>	NM_005252.4	<i>PER1</i>	NM_002616.3	<i>ZFTA</i>	NM_001144936.2
<i>FOSB</i>	NM_006732.3	<i>PGBD5</i>	NM_001258311.2	<i>ZMYM2</i>	NM_197968.4
<i>FOXA1</i>	NM_004496.5	<i>PGK1</i>	NM_000291.4	<i>ZMYM3</i>	NM_201599.3
<i>FOXF1</i>	NM_001451.3	<i>PGR</i>	NM_000926.4	<i>ZNF217</i>	NM_006526.3
<i>FOXL2</i>	NM_023067.4	<i>PHF1</i>	NM_024165.3	<i>ZNF24</i>	NM_006965.4
<i>FOXO1</i>	NM_002015.4	<i>PHF6</i>	NM_001015877.2	<i>ZNF331</i>	NM_001079906.2
<i>FOXO3</i>	NM_001455.4	<i>PHKB</i>	NM_000293.3	<i>ZNF346</i>	NM_012279.4
<i>FOXO4</i>	NM_005938.4	<i>PHOX2B</i>	NM_003924.4	<i>ZNF384</i>	NM_001385745.1
<i>FOXP1</i>	NM_001349338.3	<i>PICALM</i>	NM_007166.4	<i>ZNF444</i>	NM_018337.4
<i>FOXR1</i>	NM_181721.3	<i>PIERCE2</i>	NM_001198784.2	<i>ZNF521</i>	NM_015461.3
<i>FOXR2</i>	NM_198451.4	<i>PIGA</i>	NM_002641.4	<i>ZNF585B</i>	NM_152279.4
<i>FRK</i>	NM_002031.3	<i>PIK3C2B</i>	NM_001377334.1	<i>ZNF687</i>	NM_020832.3
<i>FRS2</i>	NM_001278356.2	<i>PIK3C2G</i>	NM_001288772.2	<i>ZNF700</i>	NM_144566.3
<i>FRZB</i>	NM_001463.4	<i>PIK3C3</i>	NM_002647.4	<i>ZNF703</i>	NM_025069.3
<i>FSTL3</i>	NM_005860.3	<i>PIK3CA</i>	NM_006218.4	<i>ZNF750</i>	NM_024702.3
<i>FUBP1</i>	NM_003902.5	<i>PIK3CB</i>	NM_006219.3	<i>ZNRF3</i>	NM_001206998.2
<i>FURIN</i>	NM_002569.4	<i>PIK3CD</i>	NM_005026.5	<i>ZRSR2</i>	NM_005089.4
<i>FUS</i>	NM_004960.4	<i>PIK3CG</i>	NM_001282426.2	<i>ZSCAN30</i>	NM_001112734.4
<i>FXR1</i>	NM_005087.4	<i>PIK3R1</i>	NM_181523.3		
<i>FYCO1</i>	NM_024513.4	<i>PIK3R2</i>	NM_005027.4		