

Next-generation sequencing (NGS) is performed to test for the presence of microsatellite instability, single nucleotide variations, deletions and insertions in coding regions, and intron/exon boundaries of the genes listed. When appropriate, alterations detected are confirmed by an independent reference method, such as Sanger sequencing. Default reportable range offset is +/- 2 base pairs around each targeted exon region.

Genomic Build: GRCh37 (hg19) unless otherwise specified.

As a result of technical limitations of the assay (including regions of homology, high GC content, and repetitive sequences), there are regions of some genes that cannot be effectively evaluated. 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 List (Greyed boxes are genes also included in the RNA panel.)

<i>ACVR1</i>	<i>DGCR8</i>	<i>H3-3B</i>	<i>MLH1</i>	<i>PLCB4</i>	<i>SMARCA4</i>
<i>AKT1</i>	<i>DICER1</i>	<i>H3C2</i>	<i>MSH2</i>	<i>PMS2</i>	<i>SMARCA1</i>
<i>APC</i>	<i>DROSHA</i>	<i>H3C3</i>	<i>MSH6</i>	<i>POLD1</i>	<i>SMARCB1</i>
<i>ARID1A</i>	<i>EED</i>	<i>HIST2H3C</i>	<i>MTOR</i>	<i>POLE</i>	<i>SMARCE1</i>
<i>ATRX</i>	<i>EGFR</i>	<i>HRAS</i>	<i>NF1</i>	<i>POLR2A</i>	<i>SMO</i>
<i>BAP1</i>	<i>EIF1AX</i>	<i>IDH1</i>	<i>NF2</i>	<i>PPM1D</i>	<i>SUFU</i>
<i>BCOR</i>	<i>ERBB2</i>	<i>IDH2</i>	<i>NOTCH1</i>	<i>PRKCA</i>	<i>SUZ12</i>
<i>BRAF</i>	<i>FGFR1</i>	<i>KBTBD4</i>	<i>NRAS</i>	<i>PRKAR1A</i>	<i>TCF12</i>
<i>CDKN2A</i>	<i>FGFR2</i>	<i>KDM6A</i>	<i>NTRK1</i>	<i>PTCH1</i>	<i>TERT</i>
<i>CDKN2B</i>	<i>FGFR3</i>	<i>KIT</i>	<i>NTRK2</i>	<i>PTEN</i>	<i>TP53</i>
<i>CIC</i>	<i>FUBP1</i>	<i>KLF4</i>	<i>NTRK3</i>	<i>PTPN11</i>	<i>TRAF7</i>
<i>CTNNB1</i>	<i>GNA11</i>	<i>KRAS</i>	<i>PBRM1</i>	<i>RB1</i>	<i>TSC1</i>
<i>CYSLTR2</i>	<i>GNAQ</i>	<i>LZTR1</i>	<i>PDGFRA</i>	<i>SETD2</i>	<i>TSC2</i>
<i>DAXX</i>	<i>GNAS</i>	<i>MAP2K1</i>	<i>PIK3CA</i>	<i>SF3B1</i>	<i>VHL</i>
<i>DDX3X</i>	<i>H3-3A</i>	<i>MET</i>	<i>PIK3R1</i>	<i>SMARCA2</i>	

Gene	Exon	Chromosome	Genomic Start	Genomic Stop	Reference Transcript
<i>ACVR1</i>	Ex3	chr2	158655937	158656007	NM_001105.5
<i>ACVR1</i>	Ex4	chr2	158636847	158637114	NM_001105.5
<i>ACVR1</i>	Ex5	chr2	158634641	158634856	NM_001105.5
<i>ACVR1</i>	Ex6	chr2	158630598	158630701	NM_001105.5
<i>ACVR1</i>	Ex7	chr2	158626878	158627028	NM_001105.5
<i>ACVR1</i>	Ex8	chr2	158622431	158622710	NM_001105.5
<i>ACVR1</i>	Ex9	chr2	158617390	158617591	NM_001105.5
<i>ACVR1</i>	Ex10	chr2	158594950	158595084	NM_001105.5
<i>ACVR1</i>	Ex11	chr2	158594041	158594179	NM_001105.5
<i>AKT1</i>	Ex2	chr14	105258933	105258982	NM_005163.2
<i>AKT1</i>	Ex3	chr14	105246423	105246555	NM_005163.2
<i>AKT1</i>	Ex4	chr14	105242994	105243109	NM_005163.2
<i>AKT1</i>	Ex5	chr14	105241987	105242138	NM_005163.2
<i>AKT1</i>	Ex6	chr14	105241411	105241546	NM_005163.2
<i>AKT1</i>	Ex7	chr14	105241273	105241342	NM_005163.2
<i>AKT1</i>	Ex8	chr14	105240247	105240319	NM_005163.2
<i>AKT1</i>	Ex9	chr14	105239790	105239919	NM_005163.2
<i>AKT1</i>	Ex10	chr14	105239586	105239718	NM_005163.2

Targeted DNA Gene Regions Interrogated by Neuro-Oncology Panel (continued)

Gene	Exon	Chromosome	Genomic Start	Genomic Stop	Reference Transcript
AKT1	Ex11	chr14	105239213	105239431	NM_005163.2
AKT1	Ex12	chr14	105238700	105238791	NM_005163.2
AKT1	Ex13	chr14	105237080	105237186	NM_005163.2
AKT1	Ex14	chr14	105236676	105236759	NM_005163.2
APC	Ex2	chr5	112090586	112090724	NM_000038.6
APC	Ex3	chr5	112102021	112102109	NM_000038.6
APC	Ex4	chr5	112102884	112103089	NM_000038.6
APC	Ex5	chr5	112111324	112111436	NM_000038.6
APC	Ex6	chr5	112116485	112116602	NM_000038.6
APC	Ex7	chr5	112128141	112128228	NM_000038.6
APC	Ex8	chr5	112136974	112137082	NM_000038.6
APC	Ex9	chr5	112151190	112151292	NM_000038.6
APC	Ex10	chr5	112154661	112155043	NM_000038.6
APC	Ex11	chr5	112157591	112157690	NM_000038.6
APC	Ex12	chr5	112162803	112162946	NM_000038.6
APC	Ex13	chr5	112163624	112163705	NM_000038.6
APC	Ex14	chr5	112164551	112164671	NM_000038.6
APC	Ex15	chr5	112170646	112170864	NM_000038.6
APC	Ex16	chr5	112173248	112179825	NM_000038.6
ARID1A	Ex1	chr1	27022893	27024033	NM_006015.6
ARID1A	Ex2	chr1	27056140	27056356	NM_006015.6
ARID1A	Ex3	chr1	27057641	27058097	NM_006015.6
ARID1A	Ex4	chr1	27059165	27059285	NM_006015.6
ARID1A	Ex5	chr1	27087345	27087589	NM_006015.6
ARID1A	Ex6	chr1	27087873	27087966	NM_006015.6
ARID1A	Ex7	chr1	27088641	27088812	NM_006015.6
ARID1A	Ex8	chr1	27089462	27089778	NM_006015.6
ARID1A	Ex9	chr1	27092710	27092859	NM_006015.6
ARID1A	Ex10	chr1	27092946	27093059	NM_006015.6
ARID1A	Ex11	chr1	27094279	27094492	NM_006015.6
ARID1A	Ex12	chr1	27097608	27097819	NM_006015.6
ARID1A	Ex13	chr1	27098989	27099125	NM_006015.6
ARID1A	Ex14	chr1	27099301	27099480	NM_006015.6
ARID1A	Ex15	chr1	27099835	27099989	NM_006015.6
ARID1A	Ex16	chr1	27100069	27100178	NM_006015.6
ARID1A	Ex17	chr1	27100291	27100391	NM_006015.6
ARID1A	Ex18	chr1	27100818	27101713	NM_006015.6
ARID1A	Ex19	chr1	27102066	27102200	NM_006015.6
ARID1A	Ex20	chr1	27105512	27107249	NM_006015.6
ATRX	Ex1	chrX	77041466	77041489	NM_000489.6
ATRX	Ex2	chrX	76972606	76972722	NM_000489.6
ATRX	Ex3	chrX	76954060	76954119	NM_000489.6
ATRX	Ex4	chrX	76953069	76953125	NM_000489.6
ATRX	Ex5	chrX	76952063	76952194	NM_000489.6
ATRX	Ex6	chrX	76949311	76949428	NM_000489.6
ATRX	Ex7	chrX	76944309	76944422	NM_000489.6

Targeted DNA Gene Regions Interrogated by Neuro-Oncology Panel (continued)

Gene	Exon	Chromosome	Genomic Start	Genomic Stop	Reference Transcript
ATRX	Ex8	chrX	76940429	76940500	NM_000489.6
ATRX	Ex9	chrX	76937010	76940087	NM_000489.6
ATRX	Ex10	chrX	76931719	76931795	NM_000489.6
ATRX	Ex11	chrX	76920132	76920269	NM_000489.6
ATRX	Ex12	chrX	76918869	76919049	NM_000489.6
ATRX	Ex13	chrX	76912048	76912145	NM_000489.6
ATRX	Ex14	chrX	76909586	76909692	NM_000489.6
ATRX	Ex15	chrX	76907602	76907845	NM_000489.6
ATRX	Ex16	chrX	76891404	76891549	NM_000489.6
ATRX	Ex17	chrX	76890083	76890196	NM_000489.6
ATRX	Ex18	chrX	76889052	76889202	NM_000489.6
ATRX	Ex19	chrX	76888693	76888874	NM_000489.6
ATRX	Ex20	chrX	76875861	76876002	NM_000489.6
ATRX	Ex21	chrX	76874272	76874451	NM_000489.6
ATRX	Ex22	chrX	76872079	76872200	NM_000489.6
ATRX	Ex23	chrX	76855901	76856035	NM_000489.6
ATRX	Ex24	chrX	76855199	76855291	NM_000489.6
ATRX	Ex25	chrX	76854878	76855051	NM_000489.6
ATRX	Ex26	chrX	76849164	76849321	NM_000489.6
ATRX	Ex27	chrX	76845302	76845412	NM_000489.6
ATRX	Ex28	chrX	76829713	76829825	NM_000489.6
ATRX	Ex29	chrX	76814138	76814319	NM_000489.6
ATRX	Ex30	chrX	76812920	76813118	NM_000489.6
ATRX	Ex31	chrX	76778728	76778881	NM_000489.6
ATRX	Ex32	chrX	76777739	76777868	NM_000489.6
ATRX	Ex33	chrX	76776879	76776978	NM_000489.6
ATRX	Ex34	chrX	76776264	76776396	NM_000489.6
ATRX	Ex35	chrX	76763827	76764109	NM_000489.6
BAP1	Ex1	chr3	52443856	52443896	NM_004656.4
BAP1	Ex2	chr3	52443728	52443761	NM_004656.4
BAP1	Ex3	chr3	52443568	52443626	NM_004656.4
BAP1	Ex4	chr3	52442488	52442624	NM_004656.4
BAP1	Ex5	chr3	52441972	52442095	NM_004656.4
BAP1	Ex6	chr3	52441413	52441478	NM_004656.4
BAP1	Ex7	chr3	52441188	52441334	NM_004656.4
BAP1	Ex8	chr3	52440843	52440925	NM_004656.4
BAP1	Ex9	chr3	52440267	52440394	NM_004656.4
BAP1	Ex10	chr3	52439779	52439930	NM_004656.4
BAP1	Ex11	chr3	52439124	52439312	NM_004656.4
BAP1	Ex12	chr3	52438467	52438604	NM_004656.4
BAP1	Ex13	chr3	52437430	52437912	NM_004656.4
BAP1	Ex14	chr3	52437152	52437316	NM_004656.4
BAP1	Ex15	chr3	52436793	52436889	NM_004656.4
BAP1	Ex16	chr3	52436616	52436692	NM_004656.4
BAP1	Ex17	chr3	52436302	52436439	NM_004656.4
BCOR	Ex2	chrX	39937095	39937184	NM_001123385.1

Targeted DNA Gene Regions Interrogated by Neuro-Oncology Panel (continued)

Gene	Exon	Chromosome	Genomic Start	Genomic Stop	Reference Transcript
<i>BCOR</i>	Ex3	chrX	39935705	39935787	NM_001123385.1
<i>BCOR</i>	Ex4	chrX	39931600	39934435	NM_001123385.1
<i>BCOR</i>	Ex5	chrX	39930888	39930945	NM_001123385.1
<i>BCOR</i>	Ex6	chrX	39930224	39930414	NM_001123385.1
<i>BCOR</i>	Ex7	chrX	39923587	39923854	NM_001123385.1
<i>BCOR</i>	Ex8	chrX	39922859	39923207	NM_001123385.1
<i>BCOR</i>	Ex9	chrX	39921997	39922326	NM_001123385.1
<i>BCOR</i>	Ex10	chrX	39921390	39921648	NM_001123385.1
<i>BCOR</i>	Ex11	chrX	39916406	39916576	NM_001123385.1
<i>BCOR</i>	Ex12	chrX	39914619	39914768	NM_001123385.1
<i>BCOR</i>	Ex13	chrX	39913507	39913588	NM_001123385.1
<i>BCOR</i>	Ex14	chrX	39913137	39913297	NM_001123385.1
<i>BCOR</i>	Ex15	chrX	39911360	39911655	NM_001123385.1
<i>BRAF</i>	Ex1	chr7	140624364	140624505	NM_004333.6
<i>BRAF</i>	Ex2	chr7	140549909	140550014	NM_004333.6
<i>BRAF</i>	Ex3	chr7	140534407	140534674	NM_004333.6
<i>BRAF</i>	Ex4	chr7	140508690	140508797	NM_004333.6
<i>BRAF</i>	Ex5	chr7	140507758	140507864	NM_004333.6
<i>BRAF</i>	Ex6	chr7	140501210	140501362	NM_004333.6
<i>BRAF</i>	Ex7	chr7	140500160	140500283	NM_004333.6
<i>BRAF</i>	Ex8	chr7	140494106	140494269	NM_004333.6
<i>BRAF</i>	Ex9	chr7	140487346	140487386	NM_004333.6
<i>BRAF</i>	Ex10	chr7	140482819	140482959	NM_004333.6
<i>BRAF</i>	Ex11	chr7	140481374	140481495	NM_004333.6
<i>BRAF</i>	Ex12	chr7	140477789	140477877	NM_004333.6
<i>BRAF</i>	Ex13	chr7	140476710	140476890	NM_004333.6
<i>BRAF</i>	Ex14	chr7	140453985	140454035	NM_004333.6
<i>BRAF</i>	Ex15	chr7	140453073	140453195	NM_004333.6
<i>BRAF</i>	Ex16	chr7	140449085	140449220	NM_004333.6
<i>BRAF</i>	Ex17	chr7	140439610	140439748	NM_004333.6
<i>BRAF</i>	Ex18	chr7	140434395	140434572	NM_004333.6
<i>CDKN2A</i>	Ex1	chr9	21974675	21974828	NM_000077.5
<i>CDKN2A</i>	Ex2	chr9	21970899	21971209	NM_000077.5
<i>CDKN2A</i>	Ex3	chr9	21968226	21968243	NM_000077.5
<i>CDKN2B</i>	Ex1	chr9	22008795	22008954	NM_004936.4
<i>CDKN2B</i>	Ex2	chr9	22005984	22006248	NM_004936.4
<i>CIC</i>	Ex2	chr19	42775934	42778731	NM_001386298.1
<i>CIC</i>	Ex3	chr19	42790921	42791074	NM_001386298.1
<i>CIC</i>	Ex4	chr19	42791156	42791394	NM_001386298.1
<i>CIC</i>	Ex5	chr19	42791470	42791603	NM_001386298.1
<i>CIC</i>	Ex6	chr19	42791695	42791881	NM_001386298.1
<i>CIC</i>	Ex7	chr19	42791960	42792129	NM_001386298.1
<i>CIC</i>	Ex8	chr19	42793038	42793244	NM_001386298.1
<i>CIC</i>	Ex9	chr19	42793331	42793560	NM_001386298.1
<i>CIC</i>	Ex10	chr19	42793998	42794105	NM_001386298.1
<i>CIC</i>	Ex11	chr19	42794383	42795620	NM_001386298.1

Targeted DNA Gene Regions Interrogated by Neuro-Oncology Panel (continued)

Gene	Exon	Chromosome	Genomic Start	Genomic Stop	Reference Transcript
<i>CIC</i>	Ex12	chr19	42795708	42795899	NM_001386298.1
<i>CIC</i>	Ex13	chr19	42796236	42796361	NM_001386298.1
<i>CIC</i>	Ex14	chr19	42796450	42796620	NM_001386298.1
<i>CIC</i>	Ex15	chr19	42796716	42797013	NM_001386298.1
<i>CIC</i>	Ex16	chr19	42797106	42797435	NM_001386298.1
<i>CIC</i>	Ex17	chr19	42797742	42797990	NM_001386298.1
<i>CIC</i>	Ex18	chr19	42798085	42798243	NM_001386298.1
<i>CIC</i>	Ex19	chr19	42798323	42798458	NM_001386298.1
<i>CIC</i>	Ex20	chr19	42798754	42798889	NM_001386298.1
<i>CIC</i>	Ex21	chr19	42798974	42799345	NM_001386298.1
<i>CTNNB1</i>	Ex2	chr3	41265558	41265574	NM_001904.4
<i>CTNNB1</i>	Ex3	chr3	41266015	41266246	NM_001904.4
<i>CTNNB1</i>	Ex4	chr3	41266443	41266700	NM_001904.4
<i>CTNNB1</i>	Ex5	chr3	41266823	41267065	NM_001904.4
<i>CTNNB1</i>	Ex6	chr3	41267149	41267354	NM_001904.4
<i>CTNNB1</i>	Ex7	chr3	41268697	41268845	NM_001904.4
<i>CTNNB1</i>	Ex8	chr3	41274830	41274937	NM_001904.4
<i>CTNNB1</i>	Ex9	chr3	41275018	41275360	NM_001904.4
<i>CTNNB1</i>	Ex10	chr3	41275628	41275790	NM_001904.4
<i>CTNNB1</i>	Ex11	chr3	41277213	41277336	NM_001904.4
<i>CTNNB1</i>	Ex12	chr3	41277838	41277992	NM_001904.4
<i>CTNNB1</i>	Ex13	chr3	41278077	41278202	NM_001904.4
<i>CTNNB1</i>	Ex14	chr3	41279505	41279569	NM_001904.4
<i>CTNNB1</i>	Ex15	chr3	41280623	41280835	NM_001904.4
<i>CYSLTR2</i>	Ex5	chr13	49280952	49281996	NM_001308476.3
<i>DAXX</i>	Ex1	chr6	33290637	33290693	NM_001141970.1
<i>DAXX</i>	Ex2	chr6	33289494	33289687	NM_001141970.1
<i>DAXX</i>	Ex3	chr6	33288511	33289346	NM_001141970.1
<i>DAXX</i>	Ex4	chr6	33288155	33288370	NM_001141970.1
<i>DAXX</i>	Ex5	chr6	33287786	33288003	NM_001141970.1
<i>DAXX</i>	Ex6	chr6	33287155	33287633	NM_001141970.1
<i>DAXX</i>	Ex7	chr6	33286772	33286998	NM_001141970.1
<i>DAXX</i>	Ex8	chr6	33286518	33286581	NM_001141970.1
<i>DDX3X</i>	Ex1	chrX	41193504	41193552	NM_001193416.3
<i>DDX3X</i>	Ex2	chrX	41196659	41196720	NM_001193416.3
<i>DDX3X</i>	Ex3	chrX	41198287	41198338	NM_001193416.3
<i>DDX3X</i>	Ex4	chrX	41200735	41200871	NM_001193416.3
<i>DDX3X</i>	Ex5	chrX	41201746	41201908	NM_001193416.3
<i>DDX3X</i>	Ex6	chrX	41201988	41202091	NM_001193416.3
<i>DDX3X</i>	Ex7	chrX	41202467	41202606	NM_001193416.3
<i>DDX3X</i>	Ex8	chrX	41202988	41203077	NM_001193416.3
<i>DDX3X</i>	Ex9	chrX	41203281	41203383	NM_001193416.3
<i>DDX3X</i>	Ex10	chrX	41203490	41203654	NM_001193416.3
<i>DDX3X</i>	Ex11	chrX	41204431	41204579	NM_001193416.3
<i>DDX3X</i>	Ex12	chrX	41204655	41204803	NM_001193416.3
<i>DDX3X</i>	Ex13	chrX	41205480	41205665	NM_001193416.3

Targeted DNA Gene Regions Interrogated by Neuro-Oncology Panel (continued)

Gene	Exon	Chromosome	Genomic Start	Genomic Stop	Reference Transcript
<i>DDX3X</i>	Ex14	chrX	41205756	41205877	NM_001193416.3
<i>DDX3X</i>	Ex15	chrX	41206110	41206267	NM_001193416.3
<i>DDX3X</i>	Ex16	chrX	41206566	41206706	NM_001193416.3
<i>DDX3X</i>	Ex17	chrX	41206891	41206974	NM_001193416.3
<i>DGCR8</i>	Ex2	chr22	20073485	20074208	NM_022720.7
<i>DGCR8</i>	Ex3	chr22	20074683	20074846	NM_022720.7
<i>DGCR8</i>	Ex4	chr22	20077190	20077336	NM_022720.7
<i>DGCR8</i>	Ex5	chr22	20077497	20077783	NM_022720.7
<i>DGCR8</i>	Ex6	chr22	20078956	20079157	NM_022720.7
<i>DGCR8</i>	Ex7	chr22	20079390	20079495	NM_022720.7
<i>DGCR8</i>	Ex8	chr22	20080330	20080432	NM_022720.7
<i>DGCR8</i>	Ex9	chr22	20082234	20082320	NM_022720.7
<i>DGCR8</i>	Ex10	chr22	20093698	20093802	NM_022720.7
<i>DGCR8</i>	Ex11	chr22	20094113	20094223	NM_022720.7
<i>DGCR8</i>	Ex12	chr22	20094792	20094923	NM_022720.7
<i>DGCR8</i>	Ex13	chr22	20096411	20096528	NM_022720.7
<i>DGCR8</i>	Ex14	chr22	20097546	20097633	NM_022720.7
<i>DICER1</i>	Ex2	chr14	95599650	95599797	NM_177438.3
<i>DICER1</i>	Ex3	chr14	95598850	95599016	NM_177438.3
<i>DICER1</i>	Ex4	chr14	95597844	95597978	NM_177438.3
<i>DICER1</i>	Ex5	chr14	95596393	95596531	NM_177438.3
<i>DICER1</i>	Ex6	chr14	95595807	95595971	NM_177438.3
<i>DICER1</i>	Ex7	chr14	95592915	95593087	NM_177438.3
<i>DICER1</i>	Ex8	chr14	95590531	95591007	NM_177438.3
<i>DICER1</i>	Ex9	chr14	95583957	95584093	NM_177438.3
<i>DICER1</i>	Ex10	chr14	95582788	95583034	NM_177438.3
<i>DICER1</i>	Ex11	chr14	95582002	95582160	NM_177438.3
<i>DICER1</i>	Ex12	chr14	95579427	95579563	NM_177438.3
<i>DICER1</i>	Ex13	chr14	95578507	95578586	NM_177438.3
<i>DICER1</i>	Ex14	chr14	95577652	95577795	NM_177438.3
<i>DICER1</i>	Ex15	chr14	95574659	95574842	NM_177438.3
<i>DICER1</i>	Ex16	chr14	95574215	95574432	NM_177438.3
<i>DICER1</i>	Ex17	chr14	95573943	95574100	NM_177438.3
<i>DICER1</i>	Ex18	chr14	95572376	95572562	NM_177438.3
<i>DICER1</i>	Ex19	chr14	95572013	95572122	NM_177438.3
<i>DICER1</i>	Ex20	chr14	95571406	95571585	NM_177438.3
<i>DICER1</i>	Ex21	chr14	95569681	95570465	NM_177438.3
<i>DICER1</i>	Ex22	chr14	95566115	95566274	NM_177438.3
<i>DICER1</i>	Ex23	chr14	95562160	95563052	NM_177438.3
<i>DICER1</i>	Ex24	chr14	95560223	95560495	NM_177438.3
<i>DICER1</i>	Ex25	chr14	95557538	95557704	NM_177438.3
<i>DICER1</i>	Ex26	chr14	95557369	95557448	NM_177438.3
<i>DICER1</i>	Ex27	chr14	95556833	95557002	NM_177438.3
<i>DROSHA</i>	Ex4	chr5	31529145	31529168	NM_001382508.1
<i>DROSHA</i>	Ex5	chr5	31526184	31527021	NM_001382508.1
<i>DROSHA</i>	Ex6	chr5	31521228	31521324	NM_001382508.1

Targeted DNA Gene Regions Interrogated by Neuro-Oncology Panel (continued)

Gene	Exon	Chromosome	Genomic Start	Genomic Stop	Reference Transcript
<i>DROSHA</i>	Ex7	chr5	31515559	31515673	NM_001382508.1
<i>DROSHA</i>	Ex8	chr5	31515093	31515328	NM_001382508.1
<i>DROSHA</i>	Ex9	chr5	31511140	31511285	NM_001382508.1
<i>DROSHA</i>	Ex10	chr5	31508726	31508884	NM_001382508.1
<i>DROSHA</i>	Ex11	chr5	31504660	31504744	NM_001382508.1
<i>DROSHA</i>	Ex12	chr5	31495391	31495481	NM_001382508.1
<i>DROSHA</i>	Ex13	chr5	31493312	31493402	NM_001382508.1
<i>DROSHA</i>	Ex14	chr5	31486596	31486671	NM_001382508.1
<i>DROSHA</i>	Ex15	chr5	31484986	31485071	NM_001382508.1
<i>DROSHA</i>	Ex16	chr5	31483659	31483737	NM_001382508.1
<i>DROSHA</i>	Ex17	chr5	31472168	31472341	NM_001382508.1
<i>DROSHA</i>	Ex18	chr5	31468044	31468172	NM_001382508.1
<i>DROSHA</i>	Ex19	chr5	31466287	31466390	NM_001382508.1
<i>DROSHA</i>	Ex20	chr5	31464341	31464452	NM_001382508.1
<i>DROSHA</i>	Ex21	chr5	31451638	31451749	NM_001382508.1
<i>DROSHA</i>	Ex22	chr5	31449386	31449528	NM_001382508.1
<i>DROSHA</i>	Ex23	chr5	31448652	31448716	NM_001382508.1
<i>DROSHA</i>	Ex24	chr5	31437344	31437407	NM_001382508.1
<i>DROSHA</i>	Ex25	chr5	31435870	31435973	NM_001382508.1
<i>DROSHA</i>	Ex26	chr5	31431681	31431787	NM_001382508.1
<i>DROSHA</i>	Ex27	chr5	31429580	31429654	NM_001382508.1
<i>DROSHA</i>	Ex28	chr5	31424532	31424580	NM_001382508.1
<i>DROSHA</i>	Ex29	chr5	31422892	31423053	NM_001382508.1
<i>DROSHA</i>	Ex30	chr5	31421377	31421486	NM_001382508.1
<i>DROSHA</i>	Ex31	chr5	31410851	31410996	NM_001382508.1
<i>DROSHA</i>	Ex32	chr5	31409355	31409441	NM_001382508.1
<i>DROSHA</i>	Ex33	chr5	31409161	31409268	NM_001382508.1
<i>DROSHA</i>	Ex34	chr5	31406958	31407054	NM_001382508.1
<i>DROSHA</i>	Ex35	chr5	31405782	31405832	NM_001382508.1
<i>DROSHA</i>	Ex36	chr5	31401537	31401671	NM_001382508.1
<i>EED</i>	Ex1	chr11	85956270	85956387	NM_003797.5
<i>EED</i>	Ex2	chr11	85961336	85961492	NM_003797.5
<i>EED</i>	Ex3	chr11	85963188	85963284	NM_003797.5
<i>EED</i>	Ex4	chr11	85966262	85966331	NM_003797.5
<i>EED</i>	Ex5	chr11	85967427	85967556	NM_003797.5
<i>EED</i>	Ex6	chr11	85968555	85968640	NM_003797.5
<i>EED</i>	Ex7	chr11	85975212	85975307	NM_003797.5
<i>EED</i>	Ex8	chr11	85977123	85977260	NM_003797.5
<i>EED</i>	Ex9	chr11	85979496	85979605	NM_003797.5
<i>EED</i>	Ex10	chr11	85988020	85988182	NM_003797.5
<i>EED</i>	Ex11	chr11	85988958	85989035	NM_003797.5
<i>EED</i>	Ex12	chr11	85989439	85989569	NM_003797.5
<i>EGFR</i>	Ex1	chr7	55086969	55087060	NM_005228.5
<i>EGFR</i>	Ex2	chr7	55209977	55210132	NM_005228.5
<i>EGFR</i>	Ex3	chr7	55210996	55211183	NM_005228.5
<i>EGFR</i>	Ex4	chr7	55214297	55214435	NM_005228.5

Targeted DNA Gene Regions Interrogated by Neuro-Oncology Panel (continued)

Gene	Exon	Chromosome	Genomic Start	Genomic Stop	Reference Transcript
EGFR	Ex5	chr7	55218985	55219057	NM_005228.5
EGFR	Ex6	chr7	55220237	55220359	NM_005228.5
EGFR	Ex7	chr7	55221702	55221847	NM_005228.5
EGFR	Ex8	chr7	55223521	55223641	NM_005228.5
EGFR	Ex9	chr7	55224224	55224354	NM_005228.5
EGFR	Ex10	chr7	55224450	55224527	NM_005228.5
EGFR	Ex11	chr7	55225354	55225448	NM_005228.5
EGFR	Ex12	chr7	55227830	55228033	NM_005228.5
EGFR	Ex13	chr7	55229190	55229326	NM_005228.5
EGFR	Ex14	chr7	55231424	55231518	NM_005228.5
EGFR	Ex15	chr7	55232971	55233132	NM_005228.5
EGFR	Ex16	chr7	55238866	55238908	NM_005228.5
EGFR	Ex17	chr7	55240674	55240819	NM_005228.5
EGFR	Ex18	chr7	55241612	55241738	NM_005228.5
EGFR	Ex19	chr7	55242413	55242515	NM_005228.5
EGFR	Ex20	chr7	55248984	55249173	NM_005228.5
EGFR	Ex21	chr7	55259410	55259569	NM_005228.5
EGFR	Ex22	chr7	55260457	55260536	NM_005228.5
EGFR	Ex23	chr7	55266408	55266558	NM_005228.5
EGFR	Ex24	chr7	55268007	55268108	NM_005228.5
EGFR	Ex25	chr7	55268879	55269050	NM_005228.5
EGFR	Ex26	chr7	55269426	55269477	NM_005228.5
EGFR	Ex27	chr7	55270208	55270320	NM_005228.5
EGFR	Ex28	chr7	55272947	55273312	NM_005228.5
EIF1AX	Ex1	chrX	20159741	20159760	NM_001412.4
EIF1AX	Ex2	chrX	20156655	20156742	NM_001412.4
EIF1AX	Ex4	chrX	20152073	20152127	NM_001412.4
EIF1AX	Ex5	chrX	20150298	20150383	NM_001412.4
EIF1AX	Ex7	chrX	20146422	20146431	NM_001412.4
ERBB2	Ex1	chr17	37856490	37856566	NM_004448.4
ERBB2	Ex2	chr17	37863241	37863396	NM_004448.4
ERBB2	Ex3	chr17	37864572	37864789	NM_004448.4
ERBB2	Ex4	chr17	37865569	37865707	NM_004448.4
ERBB2	Ex5	chr17	37866064	37866136	NM_004448.4
ERBB2	Ex6	chr17	37866337	37866456	NM_004448.4
ERBB2	Ex7	chr17	37866591	37866736	NM_004448.4
ERBB2	Ex8	chr17	37868179	37868302	NM_004448.4
ERBB2	Ex9	chr17	37868573	37868703	NM_004448.4
ERBB2	Ex10	chr17	37871537	37871614	NM_004448.4
ERBB2	Ex11	chr17	37871697	37871791	NM_004448.4
ERBB2	Ex12	chr17	37871991	37872194	NM_004448.4
ERBB2	Ex13	chr17	37872552	37872688	NM_004448.4
ERBB2	Ex14	chr17	37872766	37872860	NM_004448.4
ERBB2	Ex15	chr17	37873571	37873735	NM_004448.4
ERBB2	Ex16	chr17	37876038	37876089	NM_004448.4
ERBB2	Ex17	chr17	37879570	37879712	NM_004448.4

Targeted DNA Gene Regions Interrogated by Neuro-Oncology Panel (continued)

Gene	Exon	Chromosome	Genomic Start	Genomic Stop	Reference Transcript
ERBB2	Ex18	chr17	37879789	37879915	NM_004448.4
ERBB2	Ex19	chr17	37880163	37880265	NM_004448.4
ERBB2	Ex20	chr17	37880977	37881166	NM_004448.4
ERBB2	Ex21	chr17	37881300	37881459	NM_004448.4
ERBB2	Ex22	chr17	37881578	37881657	NM_004448.4
ERBB2	Ex23	chr17	37881958	37882108	NM_004448.4
ERBB2	Ex24	chr17	37882813	37882914	NM_004448.4
ERBB2	Ex25	chr17	37883066	37883258	NM_004448.4
ERBB2	Ex26	chr17	37883546	37883802	NM_004448.4
ERBB2	Ex27	chr17	37883940	37884299	NM_004448.4
FGFR1	Ex2	chr8	38314872	38314966	NM_023110.3
FGFR1	Ex3	chr8	38287198	38287468	NM_023110.3
FGFR1	Ex4	chr8	38285862	38285955	NM_023110.3
FGFR1	Ex5	chr8	38285437	38285613	NM_023110.3
FGFR1	Ex6	chr8	38283638	38283765	NM_023110.3
FGFR1	Ex7	chr8	38282025	38282219	NM_023110.3
FGFR1	Ex8	chr8	38279313	38279461	NM_023110.3
FGFR1	Ex9	chr8	38277049	38277255	NM_023110.3
FGFR1	Ex10	chr8	38275744	38275893	NM_023110.3
FGFR1	Ex11	chr8	38275386	38275511	NM_023110.3
FGFR1	Ex12	chr8	38274822	38274936	NM_023110.3
FGFR1	Ex13	chr8	38273386	38273580	NM_023110.3
FGFR1	Ex14	chr8	38272295	38272421	NM_023110.3
FGFR1	Ex15	chr8	38272075	38272149	NM_023110.3
FGFR1	Ex16	chr8	38271668	38271809	NM_023110.3
FGFR1	Ex17	chr8	38271434	38271543	NM_023110.3
FGFR1	Ex18	chr8	38271144	38271324	NM_023110.3
FGFR2	Ex2	chr10	123353221	123353333	NM_000141.5
FGFR2	Ex3	chr10	123324950	123325220	NM_000141.5
FGFR2	Ex4	chr10	123324014	123324095	NM_000141.5
FGFR2	Ex5	chr10	123310802	123310975	NM_000141.5
FGFR2	Ex6	chr10	123298104	123298231	NM_000141.5
FGFR2	Ex7	chr10	123279491	123279685	NM_000141.5
FGFR2	Ex8	chr10	123276831	123276979	NM_000141.5
FGFR2	Ex9	chr10	123274629	123274835	NM_000141.5
FGFR2	Ex10	chr10	123263302	123263457	NM_000141.5
FGFR2	Ex11	chr10	123260338	123260463	NM_000141.5
FGFR2	Ex12	chr10	123258007	123258121	NM_000141.5
FGFR2	Ex13	chr10	123256044	123256238	NM_000141.5
FGFR2	Ex14	chr10	123247503	123247629	NM_000141.5
FGFR2	Ex15	chr10	123246866	123246940	NM_000141.5
FGFR2	Ex16	chr10	123244907	123245048	NM_000141.5
FGFR2	Ex17	chr10	123243210	123243319	NM_000141.5
FGFR2	Ex18	chr10	123239369	123239537	NM_000141.5
FGFR3	Ex2	chr4	1795660	1795772	NM_000142.4
FGFR3	Ex3	chr4	1800979	1801252	NM_000142.4

Targeted DNA Gene Regions Interrogated by Neuro-Oncology Panel (continued)

Gene	Exon	Chromosome	Genomic Start	Genomic Stop	Reference Transcript
<i>FGFR3</i>	Ex4	chr4	1801472	1801541	NM_000142.4
<i>FGFR3</i>	Ex5	chr4	1803092	1803265	NM_000142.4
<i>FGFR3</i>	Ex6	chr4	1803345	1803472	NM_000142.4
<i>FGFR3</i>	Ex7	chr4	1803560	1803754	NM_000142.4
<i>FGFR3</i>	Ex8	chr4	1805417	1805565	NM_000142.4
<i>FGFR3</i>	Ex9	chr4	1806055	1806249	NM_000142.4
<i>FGFR3</i>	Ex10	chr4	1806549	1806698	NM_000142.4
<i>FGFR3</i>	Ex11	chr4	1807080	1807205	NM_000142.4
<i>FGFR3</i>	Ex12	chr4	1807284	1807398	NM_000142.4
<i>FGFR3</i>	Ex13	chr4	1807475	1807669	NM_000142.4
<i>FGFR3</i>	Ex14	chr4	1807776	1807902	NM_000142.4
<i>FGFR3</i>	Ex15	chr4	1807982	1808056	NM_000142.4
<i>FGFR3</i>	Ex16	chr4	1808271	1808412	NM_000142.4
<i>FGFR3</i>	Ex17	chr4	1808554	1808663	NM_000142.4
<i>FGFR3</i>	Ex18	chr4	1808841	1808991	NM_000142.4
<i>FUBP1</i>	Ex1	chr1	78444567	78444690	NM_003902.5
<i>FUBP1</i>	Ex2	chr1	78435607	78435701	NM_003902.5
<i>FUBP1</i>	Ex3	chr1	78433847	78433889	NM_003902.5
<i>FUBP1</i>	Ex4	chr1	78433309	78433352	NM_003902.5
<i>FUBP1</i>	Ex5	chr1	78432731	78432787	NM_003902.5
<i>FUBP1</i>	Ex6	chr1	78432566	78432641	NM_003902.5
<i>FUBP1</i>	Ex7	chr1	78432376	78432437	NM_003902.5
<i>FUBP1</i>	Ex8	chr1	78430751	78430917	NM_003902.5
<i>FUBP1</i>	Ex9	chr1	78430553	78430655	NM_003902.5
<i>FUBP1</i>	Ex10	chr1	78430329	78430434	NM_003902.5
<i>FUBP1</i>	Ex11	chr1	78429937	78430043	NM_003902.5
<i>FUBP1</i>	Ex12	chr1	78429745	78429849	NM_003902.5
<i>FUBP1</i>	Ex13	chr1	78429257	78429402	NM_003902.5
<i>FUBP1</i>	Ex14	chr1	78428453	78428617	NM_003902.5
<i>FUBP1</i>	Ex15	chr1	78426027	78426182	NM_003902.5
<i>FUBP1</i>	Ex16	chr1	78425867	78425950	NM_003902.5
<i>FUBP1</i>	Ex17	chr1	78422255	78422387	NM_003902.5
<i>FUBP1</i>	Ex18	chr1	78420938	78421016	NM_003902.5
<i>FUBP1</i>	Ex19	chr1	78414838	78414987	NM_003902.5
<i>FUBP1</i>	Ex20	chr1	78414449	78414461	NM_003902.5
<i>GNA11</i>	Ex1	chr19	3094648	3094787	NM_002067.5
<i>GNA11</i>	Ex2	chr19	3110145	3110333	NM_002067.5
<i>GNA11</i>	Ex3	chr19	3113326	3113484	NM_002067.5
<i>GNA11</i>	Ex4	chr19	3114940	3115072	NM_002067.5
<i>GNA11</i>	Ex5	chr19	3118920	3119053	NM_002067.5
<i>GNA11</i>	Ex6	chr19	3119202	3119359	NM_002067.5
<i>GNA11</i>	Ex7	chr19	3120985	3121179	NM_002067.5
<i>GNAQ</i>	Ex1	chr9	80646014	80646153	NM_002072.5
<i>GNAQ</i>	Ex2	chr9	80537075	80537263	NM_002072.5
<i>GNAQ</i>	Ex3	chr9	80430530	80430688	NM_002072.5
<i>GNAQ</i>	Ex4	chr9	80412434	80412566	NM_002072.5

Targeted DNA Gene Regions Interrogated by Neuro-Oncology Panel (continued)

Gene	Exon	Chromosome	Genomic Start	Genomic Stop	Reference Transcript
GNAQ	Ex5	chr9	80409377	80409510	NM_002072.5
GNAQ	Ex6	chr9	80343428	80343585	NM_002072.5
GNAQ	Ex7	chr9	80336237	80336431	NM_002072.5
GNAS	Ex1	chr20	57466780	57466922	NM_000516.4
GNAS	Ex2	chr20	57470665	57470741	NM_000516.4
GNAS	Ex3	chr20	57473994	57474042	NM_000516.4
GNAS	Ex4	chr20	57478584	57478642	NM_000516.4
GNAS	Ex5	chr20	57478725	57478848	NM_000516.4
GNAS	Ex6	chr20	57480436	57480537	NM_000516.4
GNAS	Ex7	chr20	57484215	57484273	NM_000516.4
GNAS	Ex8	chr20	57484403	57484480	NM_000516.4
GNAS	Ex9	chr20	57484574	57484636	NM_000516.4
GNAS	Ex10	chr20	57484737	57484861	NM_000516.4
GNAS	Ex11	chr20	57485004	57485138	NM_000516.4
GNAS	Ex12	chr20	57485387	57485458	NM_000516.4
GNAS	Ex13	chr20	57485736	57485886	NM_000516.4
H3-3A	Ex2	chr1	226252051	226252182	NM_002107.7
H3-3A	Ex3	chr1	226253355	226253512	NM_002107.7
H3-3B	Ex2	chr17	73775126	73775257	NM_005324.5
H3-3B	Ex3	chr17	73774889	73775046	NM_005324.5
H3-3B	Ex4	chr17	73774674	73774806	NM_005324.5
H3C2	Ex1	chr6	26031876	26032290	NM_003537.4
H3C3	Ex1	chr6	26045637	26046051	NM_003531.3
HIST2H3C	Ex1	chr1	149812317	149812731	NM_021059.2
HRAS	Ex2	chr11	534210	534324	NM_005343.2
HRAS	Ex3	chr11	533764	533946	NM_005343.2
HRAS	Ex4	chr11	533451	533614	NM_005343.2
HRAS	Ex5	chr11	532634	532757	NM_005343.2
IDH1	Ex3	chr2	209116152	209116277	NM_005896.3
IDH1	Ex4	chr2	209113091	209113386	NM_005896.3
IDH1	Ex5	chr2	209110041	209110150	NM_005896.3
IDH1	Ex6	chr2	209108149	209108330	NM_005896.3
IDH1	Ex7	chr2	209106716	209106871	NM_005896.3
IDH1	Ex8	chr2	209104585	209104729	NM_005896.3
IDH1	Ex9	chr2	209103793	209103959	NM_005896.3
IDH1	Ex10	chr2	209101801	209101895	NM_005896.3
IDH2	Ex1	chr15	90645506	90645624	NM_002168.3
IDH2	Ex2	chr15	90634783	90634878	NM_002168.3
IDH2	Ex3	chr15	90633709	90633878	NM_002168.3
IDH2	Ex4	chr15	90631817	90631981	NM_002168.3
IDH2	Ex5	chr15	90631589	90631736	NM_002168.3
IDH2	Ex6	chr15	90630669	90630809	NM_002168.3
IDH2	Ex7	chr15	90630342	90630497	NM_002168.3
IDH2	Ex8	chr15	90628505	90628621	NM_002168.3
IDH2	Ex9	chr15	90628231	90628332	NM_002168.3
IDH2	Ex10	chr15	90628046	90628142	NM_002168.3

Targeted DNA Gene Regions Interrogated by Neuro-Oncology Panel (continued)

Gene	Exon	Chromosome	Genomic Start	Genomic Stop	Reference Transcript
IDH2	Ex11	chr15	90627496	90627587	NM_002168.3
KBTBD4	Ex1	chr11	47600483	47600505	NM_018095.6
KBTBD4	Ex2	chr11	47598961	47599582	NM_018095.6
KBTBD4	Ex3	chr11	47597143	47597253	NM_018095.6
KBTBD4	Ex4	chr11	47594480	47595344	NM_018095.6
KDM6A	Ex1	chrX	44732796	44732960	NM_021140.3
KDM6A	Ex2	chrX	44733168	44733235	NM_021140.3
KDM6A	Ex3	chrX	44820527	44820639	NM_021140.3
KDM6A	Ex4	chrX	44833909	44833962	NM_021140.3
KDM6A	Ex5	chrX	44870204	44870266	NM_021140.3
KDM6A	Ex6	chrX	44879853	44879977	NM_021140.3
KDM6A	Ex7	chrX	44894174	44894232	NM_021140.3
KDM6A	Ex8	chrX	44896898	44896936	NM_021140.3
KDM6A	Ex9	chrX	44910952	44911049	NM_021140.3
KDM6A	Ex10	chrX	44913072	44913202	NM_021140.3
KDM6A	Ex11	chrX	44918249	44918351	NM_021140.3
KDM6A	Ex12	chrX	44918490	44918713	NM_021140.3
KDM6A	Ex13	chrX	44919265	44919403	NM_021140.3
KDM6A	Ex14	chrX	44920567	44920666	NM_021140.3
KDM6A	Ex15	chrX	44921890	44921995	NM_021140.3
KDM6A	Ex16	chrX	44922665	44923064	NM_021140.3
KDM6A	Ex17	chrX	44928822	44929604	NM_021140.3
KDM6A	Ex18	chrX	44935940	44936073	NM_021140.3
KDM6A	Ex19	chrX	44937643	44937752	NM_021140.3
KDM6A	Ex20	chrX	44938389	44938598	NM_021140.3
KDM6A	Ex21	chrX	44941819	44941887	NM_021140.3
KDM6A	Ex22	chrX	44941958	44942036	NM_021140.3
KDM6A	Ex23	chrX	44942703	44942855	NM_021140.3
KDM6A	Ex24	chrX	44945108	44945226	NM_021140.3
KDM6A	Ex25	chrX	44948986	44949177	NM_021140.3
KDM6A	Ex26	chrX	44949966	44950111	NM_021140.3
KDM6A	Ex27	chrX	44966653	44966783	NM_021140.3
KDM6A	Ex28	chrX	44969322	44969496	NM_021140.3
KDM6A	Ex29	chrX	44970625	44970658	NM_021140.3
KIT	Ex1	chr4	55524180	55524250	NM_000222.2
KIT	Ex2	chr4	55561676	55561949	NM_000222.2
KIT	Ex3	chr4	55564448	55564733	NM_000222.2
KIT	Ex4	chr4	55565794	55565934	NM_000222.2
KIT	Ex5	chr4	55569888	55570060	NM_000222.2
KIT	Ex6	chr4	55573262	55573455	NM_000222.2
KIT	Ex7	chr4	55575588	55575707	NM_000222.2
KIT	Ex8	chr4	55589748	55589866	NM_000222.2
KIT	Ex9	chr4	55592021	55592218	NM_000222.2
KIT	Ex10	chr4	55593382	55593492	NM_000222.2
KIT	Ex11	chr4	55593580	55593710	NM_000222.2
KIT	Ex12	chr4	55593987	55594095	NM_000222.2

Targeted DNA Gene Regions Interrogated by Neuro-Oncology Panel (continued)

Gene	Exon	Chromosome	Genomic Start	Genomic Stop	Reference Transcript
<i>KIT</i>	Ex13	chr4	55594175	55594289	NM_000222.2
<i>KIT</i>	Ex14	chr4	55595499	55595653	NM_000222.2
<i>KIT</i>	Ex15	chr4	55597492	55597587	NM_000222.2
<i>KIT</i>	Ex16	chr4	55598035	55598166	NM_000222.2
<i>KIT</i>	Ex17	chr4	55599234	55599360	NM_000222.2
<i>KIT</i>	Ex18	chr4	55602662	55602777	NM_000222.2
<i>KIT</i>	Ex19	chr4	55602885	55602988	NM_000222.2
<i>KIT</i>	Ex20	chr4	55603339	55603448	NM_000222.2
<i>KIT</i>	Ex21	chr4	55604593	55604725	NM_000222.2
<i>KLF4</i>	Ex1	chr9	110251447	110251455	NM_001314052.1
<i>KLF4</i>	Ex2	chr9	110251209	110251333	NM_001314052.1
<i>KLF4</i>	Ex3	chr9	110249307	110250550	NM_001314052.1
<i>KLF4</i>	Ex4	chr9	110248030	110248209	NM_001314052.1
<i>KRAS</i>	Ex2	chr12	25398206	25398320	NM_033360.3
<i>KRAS</i>	Ex3	chr12	25380166	25380348	NM_033360.3
<i>KRAS</i>	Ex4	chr12	25378546	25378709	NM_033360.3
<i>KRAS</i>	Ex5	chr12	25368373	25368496	NM_033360.3
<i>LZTR1</i>	Ex1	chr22	21336659	21336862	NM_006767.4
<i>LZTR1</i>	Ex2	chr22	21337314	21337380	NM_006767.4
<i>LZTR1</i>	Ex3	chr22	21340128	21340188	NM_006767.4
<i>LZTR1</i>	Ex4	chr22	21341791	21341874	NM_006767.4
<i>LZTR1</i>	Ex5	chr22	21342297	21342409	NM_006767.4
<i>LZTR1</i>	Ex6	chr22	21343076	21343163	NM_006767.4
<i>LZTR1</i>	Ex7	chr22	21343912	21343973	NM_006767.4
<i>LZTR1</i>	Ex8	chr22	21344673	21344816	NM_006767.4
<i>LZTR1</i>	Ex9	chr22	21345915	21346120	NM_006767.4
<i>LZTR1</i>	Ex10	chr22	21346501	21346660	NM_006767.4
<i>LZTR1</i>	Ex11	chr22	21347081	21347195	NM_006767.4
<i>LZTR1</i>	Ex12	chr22	21347949	21348045	NM_006767.4
<i>LZTR1</i>	Ex13	chr22	21348211	21348310	NM_006767.4
<i>LZTR1</i>	Ex14	chr22	21348391	21348560	NM_006767.4
<i>LZTR1</i>	Ex15	chr22	21348845	21349018	NM_006767.4
<i>LZTR1</i>	Ex16	chr22	21349157	21349317	NM_006767.4
<i>LZTR1</i>	Ex17	chr22	21350033	21350163	NM_006767.4
<i>LZTR1</i>	Ex18	chr22	21350250	21350403	NM_006767.4
<i>LZTR1</i>	Ex19	chr22	21350983	21351092	NM_006767.4
<i>LZTR1</i>	Ex20	chr22	21351173	21351257	NM_006767.4
<i>LZTR1</i>	Ex21	chr22	21351519	21351639	NM_006767.4
<i>MAP2K1</i>	Ex1	chr15	66679684	66679767	NM_002755.4
<i>MAP2K1</i>	Ex2	chr15	66727363	66727577	NM_002755.4
<i>MAP2K1</i>	Ex3	chr15	66729082	66729232	NM_002755.4
<i>MAP2K1</i>	Ex4	chr15	66735616	66735697	NM_002755.4
<i>MAP2K1</i>	Ex5	chr15	66736992	66737047	NM_002755.4
<i>MAP2K1</i>	Ex6	chr15	66774091	66774219	NM_002755.4
<i>MAP2K1</i>	Ex7	chr15	66777326	66777531	NM_002755.4
<i>MAP2K1</i>	Ex8	chr15	66779564	66779632	NM_002755.4

Targeted DNA Gene Regions Interrogated by Neuro-Oncology Panel (continued)

Gene	Exon	Chromosome	Genomic Start	Genomic Stop	Reference Transcript
MAP2K1	Ex9	chr15	66781551	66781616	NM_002755.4
MAP2K1	Ex10	chr15	66782054	66782103	NM_002755.4
MAP2K1	Ex11	chr15	66782838	66782955	NM_002755.4
MET	Ex2	chr7	116339137	116340340	NM_001127500.2
MET	Ex3	chr7	116371720	116371915	NM_001127500.2
MET	Ex4	chr7	116380002	116380140	NM_001127500.2
MET	Ex5	chr7	116380904	116381081	NM_001127500.2
MET	Ex6	chr7	116395407	116395571	NM_001127500.2
MET	Ex7	chr7	116397489	116397595	NM_001127500.2
MET	Ex8	chr7	116397690	116397830	NM_001127500.2
MET	Ex9	chr7	116398511	116398676	NM_001127500.2
MET	Ex10	chr7	116399389	116399546	NM_001127500.2
MET	Ex11	chr7	116403102	116403324	NM_001127500.2
MET	Ex12	chr7	116409697	116409847	NM_001127500.2
MET	Ex13	chr7	116411550	116411710	NM_001127500.2
MET	Ex14	chr7	116411837	116412089	NM_001127500.2
MET	Ex15	chr7	116414933	116415167	NM_001127500.2
MET	Ex16	chr7	116417441	116417525	NM_001127500.2
MET	Ex17	chr7	116418828	116419013	NM_001127500.2
MET	Ex18	chr7	116422040	116422153	NM_001127500.2
MET	Ex19	chr7	116423356	116423525	NM_001127500.2
MET	Ex20	chr7	116435707	116435847	NM_001127500.2
MET	Ex21	chr7	116435939	116436180	NM_001127500.2
MLH1	Ex1	chr3	37035037	37035156	NM_000249.4
MLH1	Ex2	chr3	37038108	37038202	NM_000249.4
MLH1	Ex3	chr3	37042444	37042546	NM_000249.4
MLH1	Ex4	chr3	37045890	37045967	NM_000249.4
MLH1	Ex5	chr3	37048480	37048556	NM_000249.4
MLH1	Ex6	chr3	37050303	37050398	NM_000249.4
MLH1	Ex7	chr3	37053309	37053355	NM_000249.4
MLH1	Ex8	chr3	37053500	37053592	NM_000249.4
MLH1	Ex9	chr3	37055921	37056037	NM_000249.4
MLH1	Ex10	chr3	37058995	37059092	NM_000249.4
MLH1	Ex11	chr3	37061799	37061956	NM_000249.4
MLH1	Ex12	chr3	37067126	37067500	NM_000249.4
MLH1	Ex13	chr3	37070273	37070425	NM_000249.4
MLH1	Ex14	chr3	37081675	37081787	NM_000249.4
MLH1	Ex15	chr3	37083757	37083824	NM_000249.4
MLH1	Ex16	chr3	37089008	37089176	NM_000249.4
MLH1	Ex17	chr3	37090006	37090102	NM_000249.4
MLH1	Ex18	chr3	37090393	37090510	NM_000249.4
MLH1	Ex19	chr3	37091975	37092146	NM_000249.4
MSH2	Ex1	chr2	47630329	47630543	NM_000251.3
MSH2	Ex2	chr2	47635538	47635696	NM_000251.3
MSH2	Ex3	chr2	47637231	47637513	NM_000251.3
MSH2	Ex4	chr2	47639551	47639701	NM_000251.3

Targeted DNA Gene Regions Interrogated by Neuro-Oncology Panel (continued)

Gene	Exon	Chromosome	Genomic Start	Genomic Stop	Reference Transcript
<i>MSH2</i>	Ex5	chr2	47641406	47641559	NM_000251.3
<i>MSH2</i>	Ex6	chr2	47643433	47643570	NM_000251.3
<i>MSH2</i>	Ex7	chr2	47656879	47657082	NM_000251.3
<i>MSH2</i>	Ex8	chr2	47672685	47672798	NM_000251.3
<i>MSH2</i>	Ex9	chr2	47690168	47690295	NM_000251.3
<i>MSH2</i>	Ex10	chr2	47693795	47693949	NM_000251.3
<i>MSH2</i>	Ex11	chr2	47698102	47698203	NM_000251.3
<i>MSH2</i>	Ex12	chr2	47702162	47702411	NM_000251.3
<i>MSH2</i>	Ex13	chr2	47703504	47703712	NM_000251.3
<i>MSH2</i>	Ex14	chr2	47705409	47705660	NM_000251.3
<i>MSH2</i>	Ex15	chr2	47707833	47708012	NM_000251.3
<i>MSH2</i>	Ex16	chr2	47709916	47710090	NM_000251.3
<i>MSH6</i>	Ex1	chr2	48010371	48010634	NM_000179.3
<i>MSH6</i>	Ex2	chr2	48018064	48018264	NM_000179.3
<i>MSH6</i>	Ex3	chr2	48023031	48023204	NM_000179.3
<i>MSH6</i>	Ex4	chr2	48025748	48028296	NM_000179.3
<i>MSH6</i>	Ex5	chr2	48030557	48030826	NM_000179.3
<i>MSH6</i>	Ex6	chr2	48032047	48032168	NM_000179.3
<i>MSH6</i>	Ex7	chr2	48032755	48032848	NM_000179.3
<i>MSH6</i>	Ex8	chr2	48033341	48033499	NM_000179.3
<i>MSH6</i>	Ex9	chr2	48033589	48033792	NM_000179.3
<i>MSH6</i>	Ex10	chr2	48033916	48034001	NM_000179.3
<i>MTOR</i>	Ex2	chr1	11319303	11319468	NM_004958.4
<i>MTOR</i>	Ex3	chr1	11318540	11318652	NM_004958.4
<i>MTOR</i>	Ex4	chr1	11316988	11317224	NM_004958.4
<i>MTOR</i>	Ex5	chr1	11316047	11316251	NM_004958.4
<i>MTOR</i>	Ex6	chr1	11313894	11314032	NM_004958.4
<i>MTOR</i>	Ex7	chr1	11307874	11308153	NM_004958.4
<i>MTOR</i>	Ex8	chr1	11307680	11307792	NM_004958.4
<i>MTOR</i>	Ex9	chr1	11303169	11303359	NM_004958.4
<i>MTOR</i>	Ex10	chr1	11301608	11301740	NM_004958.4
<i>MTOR</i>	Ex11	chr1	11300358	11300606	NM_004958.4
<i>MTOR</i>	Ex12	chr1	11298457	11298676	NM_004958.4
<i>MTOR</i>	Ex13	chr1	11297898	11298107	NM_004958.4
<i>MTOR</i>	Ex14	chr1	11294198	11294324	NM_004958.4
<i>MTOR</i>	Ex15	chr1	11293453	11293546	NM_004958.4
<i>MTOR</i>	Ex16	chr1	11292491	11292587	NM_004958.4
<i>MTOR</i>	Ex17	chr1	11291355	11291493	NM_004958.4
<i>MTOR</i>	Ex18	chr1	11290980	11291113	NM_004958.4
<i>MTOR</i>	Ex19	chr1	11288723	11288977	NM_004958.4
<i>MTOR</i>	Ex20	chr1	11276203	11276293	NM_004958.4
<i>MTOR</i>	Ex21	chr1	11273454	11273625	NM_004958.4
<i>MTOR</i>	Ex22	chr1	11272851	11272967	NM_004958.4
<i>MTOR</i>	Ex23	chr1	11272367	11272533	NM_004958.4
<i>MTOR</i>	Ex24	chr1	11270869	11270965	NM_004958.4
<i>MTOR</i>	Ex25	chr1	11269367	11269517	NM_004958.4

Targeted DNA Gene Regions Interrogated by Neuro-Oncology Panel (continued)

Gene	Exon	Chromosome	Genomic Start	Genomic Stop	Reference Transcript
<i>MTOR</i>	Ex26	chr1	11264616	11264762	NM_004958.4
<i>MTOR</i>	Ex27	chr1	11259596	11259762	NM_004958.4
<i>MTOR</i>	Ex28	chr1	11259313	11259462	NM_004958.4
<i>MTOR</i>	Ex29	chr1	11227497	11227576	NM_004958.4
<i>MTOR</i>	Ex30	chr1	11217207	11217350	NM_004958.4
<i>MTOR</i>	Ex31	chr1	11210181	11210285	NM_004958.4
<i>MTOR</i>	Ex32	chr1	11206731	11206850	NM_004958.4
<i>MTOR</i>	Ex33	chr1	11205023	11205104	NM_004958.4
<i>MTOR</i>	Ex34	chr1	11204703	11204814	NM_004958.4
<i>MTOR</i>	Ex35	chr1	11199588	11199717	NM_004958.4
<i>MTOR</i>	Ex36	chr1	11199359	11199494	NM_004958.4
<i>MTOR</i>	Ex37	chr1	11194406	11194525	NM_004958.4
<i>MTOR</i>	Ex38	chr1	11193135	11193256	NM_004958.4
<i>MTOR</i>	Ex39	chr1	11190584	11190836	NM_004958.4
<i>MTOR</i>	Ex40	chr1	11189793	11189897	NM_004958.4
<i>MTOR</i>	Ex41	chr1	11188910	11189010	NM_004958.4
<i>MTOR</i>	Ex42	chr1	11188509	11188611	NM_004958.4
<i>MTOR</i>	Ex43	chr1	11188059	11188185	NM_004958.4
<i>MTOR</i>	Ex44	chr1	11187679	11187865	NM_004958.4
<i>MTOR</i>	Ex45	chr1	11187065	11187203	NM_004958.4
<i>MTOR</i>	Ex46	chr1	11186677	11186855	NM_004958.4
<i>MTOR</i>	Ex47	chr1	11184553	11184692	NM_004958.4
<i>MTOR</i>	Ex48	chr1	11182034	11182185	NM_004958.4
<i>MTOR</i>	Ex49	chr1	11181301	11181427	NM_004958.4
<i>MTOR</i>	Ex50	chr1	11177059	11177145	NM_004958.4
<i>MTOR</i>	Ex51	chr1	11175451	11175527	NM_004958.4
<i>MTOR</i>	Ex52	chr1	11174868	11174946	NM_004958.4
<i>MTOR</i>	Ex53	chr1	11174373	11174512	NM_004958.4
<i>MTOR</i>	Ex54	chr1	11172907	11172976	NM_004958.4
<i>MTOR</i>	Ex55	chr1	11169704	11169788	NM_004958.4
<i>MTOR</i>	Ex56	chr1	11169345	11169429	NM_004958.4
<i>MTOR</i>	Ex57	chr1	11168236	11168345	NM_004958.4
<i>MTOR</i>	Ex58	chr1	11167540	11167559	NM_004958.4
<i>NF1</i>	Ex1	chr17	29422326	29422389	NM_001042492.2
<i>NF1</i>	Ex2	chr17	29482999	29483146	NM_001042492.2
<i>NF1</i>	Ex3	chr17	29486026	29486113	NM_001042492.2
<i>NF1</i>	Ex4	chr17	29490202	29490396	NM_001042492.2
<i>NF1</i>	Ex5	chr17	29496907	29497017	NM_001042492.2
<i>NF1</i>	Ex6	chr17	29508438	29508509	NM_001042492.2
<i>NF1</i>	Ex7	chr17	29508726	29508805	NM_001042492.2
<i>NF1</i>	Ex8	chr17	29509524	29509685	NM_001042492.2
<i>NF1</i>	Ex9	chr17	29527438	29527615	NM_001042492.2
<i>NF1</i>	Ex10	chr17	29528053	29528179	NM_001042492.2
<i>NF1</i>	Ex11	chr17	29528427	29528505	NM_001042492.2
<i>NF1</i>	Ex12	chr17	29533256	29533391	NM_001042492.2
<i>NF1</i>	Ex13	chr17	29541467	29541605	NM_001042492.2

Targeted DNA Gene Regions Interrogated by Neuro-Oncology Panel (continued)

Gene	Exon	Chromosome	Genomic Start	Genomic Stop	Reference Transcript
NF1	Ex14	chr17	29546021	29546138	NM_001042492.2
NF1	Ex15	chr17	29548866	29548949	NM_001042492.2
NF1	Ex16	chr17	29550460	29550587	NM_001042492.2
NF1	Ex17	chr17	29552111	29552270	NM_001042492.2
NF1	Ex18	chr17	29553451	29553704	NM_001042492.2
NF1	Ex19	chr17	29554234	29554311	NM_001042492.2
NF1	Ex20	chr17	29554539	29554626	NM_001042492.2
NF1	Ex21	chr17	29556041	29556485	NM_001042492.2
NF1	Ex22	chr17	29556851	29556994	NM_001042492.2
NF1	Ex23	chr17	29557276	29557402	NM_001042492.2
NF1	Ex24	chr17	29557858	29557945	NM_001042492.2
NF1	Ex25	chr17	29559089	29559209	NM_001042492.2
NF1	Ex26	chr17	29559716	29559901	NM_001042492.2
NF1	Ex27	chr17	29560018	29560233	NM_001042492.2
NF1	Ex28	chr17	29562627	29562792	NM_001042492.2
NF1	Ex29	chr17	29562934	29563041	NM_001042492.2
NF1	Ex30	chr17	29576000	29576139	NM_001042492.2
NF1	Ex31	chr17	29579954	29580020	NM_001042492.2
NF1	Ex32	chr17	29585360	29585522	NM_001042492.2
NF1	Ex33	chr17	29586048	29586149	NM_001042492.2
NF1	Ex34	chr17	29587385	29587535	NM_001042492.2
NF1	Ex35	chr17	29588727	29588877	NM_001042492.2
NF1	Ex36	chr17	29592245	29592359	NM_001042492.2
NF1	Ex37	chr17	29652836	29653272	NM_001042492.2
NF1	Ex38	chr17	29654515	29654859	NM_001042492.2
NF1	Ex39	chr17	29657312	29657518	NM_001042492.2
NF1	Ex40	chr17	29661854	29662051	NM_001042492.2
NF1	Ex41	chr17	29663349	29663493	NM_001042492.2
NF1	Ex42	chr17	29663651	29663934	NM_001042492.2
NF1	Ex43	chr17	29664384	29664602	NM_001042492.2
NF1	Ex44	chr17	29664835	29664900	NM_001042492.2
NF1	Ex45	chr17	29665041	29665159	NM_001042492.2
NF1	Ex46	chr17	29665720	29665825	NM_001042492.2
NF1	Ex47	chr17	29667521	29667665	NM_001042492.2
NF1	Ex48	chr17	29670025	29670155	NM_001042492.2
NF1	Ex49	chr17	29676136	29676271	NM_001042492.2
NF1	Ex50	chr17	29677199	29677338	NM_001042492.2
NF1	Ex51	chr17	29679273	29679434	NM_001042492.2
NF1	Ex52	chr17	29683476	29683602	NM_001042492.2
NF1	Ex53	chr17	29683976	29684110	NM_001042492.2
NF1	Ex54	chr17	29684285	29684389	NM_001042492.2
NF1	Ex55	chr17	29685496	29685642	NM_001042492.2
NF1	Ex56	chr17	29685985	29686035	NM_001042492.2
NF1	Ex57	chr17	29687503	29687723	NM_001042492.2
NF1	Ex58	chr17	29701029	29701175	NM_001042492.2
NF2	Ex1	chr22	29999986	30000103	NM_000268.4

Targeted DNA Gene Regions Interrogated by Neuro-Oncology Panel (continued)

Gene	Exon	Chromosome	Genomic Start	Genomic Stop	Reference Transcript
<i>NF2</i>	Ex2	chr22	30032738	30032867	NM_000268.4
<i>NF2</i>	Ex3	chr22	30035077	30035203	NM_000268.4
<i>NF2</i>	Ex4	chr22	30038189	30038276	NM_000268.4
<i>NF2</i>	Ex5	chr22	30050644	30050716	NM_000268.4
<i>NF2</i>	Ex6	chr22	30051581	30051667	NM_000268.4
<i>NF2</i>	Ex7	chr22	30054176	30054255	NM_000268.4
<i>NF2</i>	Ex8	chr22	30057192	30057330	NM_000268.4
<i>NF2</i>	Ex9	chr22	30060977	30061055	NM_000268.4
<i>NF2</i>	Ex10	chr22	30064320	30064437	NM_000268.4
<i>NF2</i>	Ex11	chr22	30067813	30067939	NM_000268.4
<i>NF2</i>	Ex12	chr22	30069256	30069477	NM_000268.4
<i>NF2</i>	Ex13	chr22	30070823	30070932	NM_000268.4
<i>NF2</i>	Ex14	chr22	30074183	30074314	NM_000268.4
<i>NF2</i>	Ex15	chr22	30077426	30077592	NM_000268.4
<i>NF2</i>	Ex16	chr22	30090739	30090793	NM_000268.4
<i>NOTCH1</i>	Ex1	chr9	139440176	139440240	NM_017617.5
<i>NOTCH1</i>	Ex2	chr9	139438474	139438556	NM_017617.5
<i>NOTCH1</i>	Ex3	chr9	139418167	139418433	NM_017617.5
<i>NOTCH1</i>	Ex4	chr9	139417300	139417642	NM_017617.5
<i>NOTCH1</i>	Ex5	chr9	139413893	139414019	NM_017617.5
<i>NOTCH1</i>	Ex6	chr9	139413041	139413278	NM_017617.5
<i>NOTCH1</i>	Ex7	chr9	139412587	139412746	NM_017617.5
<i>NOTCH1</i>	Ex8	chr9	139412202	139412391	NM_017617.5
<i>NOTCH1</i>	Ex9	chr9	139411722	139411839	NM_017617.5
<i>NOTCH1</i>	Ex10	chr9	139410431	139410548	NM_017617.5
<i>NOTCH1</i>	Ex11	chr9	139409933	139410170	NM_017617.5
<i>NOTCH1</i>	Ex12	chr9	139409740	139409854	NM_017617.5
<i>NOTCH1</i>	Ex13	chr9	139408960	139409156	NM_017617.5
<i>NOTCH1</i>	Ex14	chr9	139407842	139407991	NM_017617.5
<i>NOTCH1</i>	Ex15	chr9	139407471	139407588	NM_017617.5
<i>NOTCH1</i>	Ex16	chr9	139405602	139405725	NM_017617.5
<i>NOTCH1</i>	Ex17	chr9	139405103	139405259	NM_017617.5
<i>NOTCH1</i>	Ex18	chr9	139404183	139404415	NM_017617.5
<i>NOTCH1</i>	Ex19	chr9	139403320	139403525	NM_017617.5
<i>NOTCH1</i>	Ex20	chr9	139402682	139402839	NM_017617.5
<i>NOTCH1</i>	Ex21	chr9	139402405	139402593	NM_017617.5
<i>NOTCH1</i>	Ex22	chr9	139401755	139401891	NM_017617.5
<i>NOTCH1</i>	Ex23	chr9	139401166	139401427	NM_017617.5
<i>NOTCH1</i>	Ex24	chr9	139400977	139401093	NM_017617.5
<i>NOTCH1</i>	Ex25	chr9	139399760	139400335	NM_017617.5
<i>NOTCH1</i>	Ex26	chr9	139399123	139399558	NM_017617.5
<i>NOTCH1</i>	Ex27	chr9	139397632	139397784	NM_017617.5
<i>NOTCH1</i>	Ex28	chr9	139396722	139396942	NM_017617.5
<i>NOTCH1</i>	Ex29	chr9	139396451	139396542	NM_017617.5
<i>NOTCH1</i>	Ex30	chr9	139396198	139396367	NM_017617.5
<i>NOTCH1</i>	Ex31	chr9	139395002	139395301	NM_017617.5

Targeted DNA Gene Regions Interrogated by Neuro-Oncology Panel (continued)

Gene	Exon	Chromosome	Genomic Start	Genomic Stop	Reference Transcript
<i>NOTCH1</i>	Ex32	chr9	139393562	139393713	NM_017617.5
<i>NOTCH1</i>	Ex33	chr9	139393349	139393450	NM_017617.5
<i>NOTCH1</i>	Ex34	chr9	139390521	139392012	NM_017617.5
<i>NRAS</i>	Ex2	chr1	115258669	115258783	NM_002524.5
<i>NRAS</i>	Ex3	chr1	115256419	115256601	NM_002524.5
<i>NRAS</i>	Ex4	chr1	115252188	115252351	NM_002524.5
<i>NRAS</i>	Ex5	chr1	115251154	115251277	NM_002524.5
<i>NTRK1</i>	Ex1	chr1	156830725	156830940	NM_002529.4
<i>NTRK1</i>	Ex2	chr1	156834144	156834222	NM_002529.4
<i>NTRK1</i>	Ex3	chr1	156834518	156834593	NM_002529.4
<i>NTRK1</i>	Ex4	chr1	156836700	156836772	NM_002529.4
<i>NTRK1</i>	Ex5	chr1	156837894	156838043	NM_002529.4
<i>NTRK1</i>	Ex6	chr1	156838295	156838441	NM_002529.4
<i>NTRK1</i>	Ex7	chr1	156841413	156841549	NM_002529.4
<i>NTRK1</i>	Ex8	chr1	156843423	156843753	NM_002529.4
<i>NTRK1</i>	Ex9	chr1	156844173	156844194	NM_002529.4
<i>NTRK1</i>	Ex10	chr1	156844361	156844420	NM_002529.4
<i>NTRK1</i>	Ex11	chr1	156844696	156844802	NM_002529.4
<i>NTRK1</i>	Ex12	chr1	156845310	156845460	NM_002529.4
<i>NTRK1</i>	Ex13	chr1	156845870	156846004	NM_002529.4
<i>NTRK1</i>	Ex14	chr1	156846190	156846366	NM_002529.4
<i>NTRK1</i>	Ex15	chr1	156848912	156849156	NM_002529.4
<i>NTRK1</i>	Ex16	chr1	156849789	156849951	NM_002529.4
<i>NTRK1</i>	Ex17	chr1	156851247	156851436	NM_002529.4
<i>NTRK2</i>	Ex2	chr9	87285662	87285877	NM_006180.6
<i>NTRK2</i>	Ex3	chr9	87317072	87317150	NM_006180.6
<i>NTRK2</i>	Ex4	chr9	87317261	87317336	NM_006180.6
<i>NTRK2</i>	Ex5	chr9	87322757	87322829	NM_006180.6
<i>NTRK2</i>	Ex6	chr9	87325550	87325708	NM_006180.6
<i>NTRK2</i>	Ex7	chr9	87338486	87338626	NM_006180.6
<i>NTRK2</i>	Ex8	chr9	87339137	87339273	NM_006180.6
<i>NTRK2</i>	Ex9	chr9	87342567	87342876	NM_006180.6
<i>NTRK2</i>	Ex10	chr9	87356805	87356844	NM_006180.6
<i>NTRK2</i>	Ex11	chr9	87359886	87359990	NM_006180.6
<i>NTRK2</i>	Ex12	chr9	87366899	87367002	NM_006180.6
<i>NTRK2</i>	Ex13	chr9	87475953	87476004	NM_006180.6
<i>NTRK2</i>	Ex14	chr9	87482156	87482348	NM_006180.6
<i>NTRK2</i>	Ex15	chr9	87549075	87549209	NM_006180.6
<i>NTRK2</i>	Ex16	chr9	87563375	87563551	NM_006180.6
<i>NTRK2</i>	Ex17	chr9	87570196	87570434	NM_006180.6
<i>NTRK2</i>	Ex18	chr9	87635119	87635281	NM_006180.6
<i>NTRK2</i>	Ex19	chr9	87636165	87636354	NM_006180.6
<i>NTRK3</i>	Ex2	chr15	88727454	88727486	NM_001320135.1
<i>NTRK3</i>	Ex3	chr15	88726647	88726722	NM_001320135.1
<i>NTRK3</i>	Ex4	chr15	88690564	88690636	NM_001320135.1
<i>NTRK3</i>	Ex5	chr15	88680633	88680794	NM_001320135.1

Targeted DNA Gene Regions Interrogated by Neuro-Oncology Panel (continued)

Gene	Exon	Chromosome	Genomic Start	Genomic Stop	Reference Transcript
<i>NTRK3</i>	Ex6	chr15	88679696	88679842	NM_001320135.1
<i>NTRK3</i>	Ex7	chr15	88679128	88679273	NM_001320135.1
<i>NTRK3</i>	Ex8	chr15	88678330	88678630	NM_001320135.1
<i>NTRK3</i>	Ex9	chr15	88671940	88671967	NM_001320135.1
<i>NTRK3</i>	Ex10	chr15	88670391	88670459	NM_001320135.1
<i>NTRK3</i>	Ex11	chr15	88669500	88669606	NM_001320135.1
<i>NTRK3</i>	Ex12	chr15	88576086	88576278	NM_001320135.1
<i>NTRK3</i>	Ex13	chr15	88483852	88483986	NM_001320135.1
<i>NTRK3</i>	Ex14	chr15	88476241	88476417	NM_001320135.1
<i>NTRK3</i>	Ex15	chr15	88472420	88472667	NM_001320135.1
<i>NTRK3</i>	Ex16	chr15	88459775	88459793	NM_001320135.1
<i>PBRM1</i>	Ex3	chr3	52713588	52713729	NM_181042.4
<i>PBRM1</i>	Ex4	chr3	52712514	52712615	NM_181042.4
<i>PBRM1</i>	Ex5	chr3	52702512	52702663	NM_181042.4
<i>PBRM1</i>	Ex6	chr3	52696147	52696294	NM_181042.4
<i>PBRM1</i>	Ex7	chr3	52692213	52692333	NM_181042.4
<i>PBRM1</i>	Ex8	chr3	52685756	52685828	NM_181042.4
<i>PBRM1</i>	Ex9	chr3	52682358	52682460	NM_181042.4
<i>PBRM1</i>	Ex10	chr3	52678718	52678807	NM_181042.4
<i>PBRM1</i>	Ex11	chr3	52677262	52677361	NM_181042.4
<i>PBRM1</i>	Ex12	chr3	52675968	52676063	NM_181042.4
<i>PBRM1</i>	Ex13	chr3	52668616	52668833	NM_181042.4
<i>PBRM1</i>	Ex14	chr3	52662908	52663053	NM_181042.4
<i>PBRM1</i>	Ex15	chr3	52661287	52661388	NM_181042.4
<i>PBRM1</i>	Ex16	chr3	52651276	52651556	NM_181042.4
<i>PBRM1</i>	Ex17	chr3	52649365	52649474	NM_181042.4
<i>PBRM1</i>	Ex18	chr3	52643327	52643973	NM_181042.4
<i>PBRM1</i>	Ex19	chr3	52637535	52637750	NM_181042.4
<i>PBRM1</i>	Ex20	chr3	52623084	52623273	NM_181042.4
<i>PBRM1</i>	Ex21	chr3	52621367	52621528	NM_181042.4
<i>PBRM1</i>	Ex22	chr3	52620439	52620706	NM_181042.4
<i>PBRM1</i>	Ex23	chr3	52613068	52613217	NM_181042.4
<i>PBRM1</i>	Ex24	chr3	52610555	52610716	NM_181042.4
<i>PBRM1</i>	Ex25	chr3	52598064	52598251	NM_181042.4
<i>PBRM1</i>	Ex26	chr3	52597297	52597511	NM_181042.4
<i>PBRM1</i>	Ex27	chr3	52595781	52595986	NM_181042.4
<i>PBRM1</i>	Ex28	chr3	52584761	52584835	NM_181042.4
<i>PBRM1</i>	Ex29	chr3	52584435	52584655	NM_181042.4
<i>PBRM1</i>	Ex30	chr3	52582077	52582253	NM_181042.4
<i>PDGFRA</i>	Ex2	chr4	55124934	55124986	NM_006206.6
<i>PDGFRA</i>	Ex3	chr4	55127260	55127581	NM_006206.6
<i>PDGFRA</i>	Ex4	chr4	55129832	55130096	NM_006206.6
<i>PDGFRA</i>	Ex5	chr4	55131084	55131218	NM_006206.6
<i>PDGFRA</i>	Ex6	chr4	55133454	55133629	NM_006206.6
<i>PDGFRA</i>	Ex7	chr4	55133717	55133910	NM_006206.6
<i>PDGFRA</i>	Ex8	chr4	55136798	55136917	NM_006206.6

Targeted DNA Gene Regions Interrogated by Neuro-Oncology Panel (continued)

Gene	Exon	Chromosome	Genomic Start	Genomic Stop	Reference Transcript
<i>PDGFRA</i>	Ex9	chr4	55138559	55138689	NM_006206.6
<i>PDGFRA</i>	Ex10	chr4	55139702	55139899	NM_006206.6
<i>PDGFRA</i>	Ex11	chr4	55140696	55140794	NM_006206.6
<i>PDGFRA</i>	Ex12	chr4	55141006	55141142	NM_006206.6
<i>PDGFRA</i>	Ex13	chr4	55143553	55143661	NM_006206.6
<i>PDGFRA</i>	Ex14	chr4	55144061	55144175	NM_006206.6
<i>PDGFRA</i>	Ex15	chr4	55144527	55144684	NM_006206.6
<i>PDGFRA</i>	Ex16	chr4	55146481	55146651	NM_006206.6
<i>PDGFRA</i>	Ex17	chr4	55151536	55151655	NM_006206.6
<i>PDGFRA</i>	Ex18	chr4	55152006	55152132	NM_006206.6
<i>PDGFRA</i>	Ex19	chr4	55153595	55153710	NM_006206.6
<i>PDGFRA</i>	Ex20	chr4	55154964	55155067	NM_006206.6
<i>PDGFRA</i>	Ex21	chr4	55155174	55155283	NM_006206.6
<i>PDGFRA</i>	Ex22	chr4	55156478	55156723	NM_006206.6
<i>PDGFRA</i>	Ex23	chr4	55161290	55161441	NM_006206.6
<i>PIK3CA</i>	Ex2	chr3	178916612	178916967	NM_006218.4
<i>PIK3CA</i>	Ex3	chr3	178917476	178917689	NM_006218.4
<i>PIK3CA</i>	Ex4	chr3	178919076	178919330	NM_006218.4
<i>PIK3CA</i>	Ex5	chr3	178921330	178921579	NM_006218.4
<i>PIK3CA</i>	Ex6	chr3	178922289	178922378	NM_006218.4
<i>PIK3CA</i>	Ex7	chr3	178927381	178927490	NM_006218.4
<i>PIK3CA</i>	Ex8	chr3	178927972	178928128	NM_006218.4
<i>PIK3CA</i>	Ex9	chr3	178928217	178928355	NM_006218.4
<i>PIK3CA</i>	Ex10	chr3	178935996	178936124	NM_006218.4
<i>PIK3CA</i>	Ex11	chr3	178936982	178937067	NM_006218.4
<i>PIK3CA</i>	Ex12	chr3	178937357	178937525	NM_006218.4
<i>PIK3CA</i>	Ex13	chr3	178937735	178937842	NM_006218.4
<i>PIK3CA</i>	Ex14	chr3	178938772	178938947	NM_006218.4
<i>PIK3CA</i>	Ex15	chr3	178941867	178941977	NM_006218.4
<i>PIK3CA</i>	Ex16	chr3	178942486	178942611	NM_006218.4
<i>PIK3CA</i>	Ex17	chr3	178943748	178943830	NM_006218.4
<i>PIK3CA</i>	Ex18	chr3	178947058	178947232	NM_006218.4
<i>PIK3CA</i>	Ex19	chr3	178947790	178947911	NM_006218.4
<i>PIK3CA</i>	Ex20	chr3	178948011	178948166	NM_006218.4
<i>PIK3CA</i>	Ex21	chr3	178951880	178952154	NM_006218.4
<i>PIK3R1</i>	Ex2	chr5	67522502	67522839	NM_181523.3
<i>PIK3R1</i>	Ex3	chr5	67569216	67569312	NM_181523.3
<i>PIK3R1</i>	Ex4	chr5	67569765	67569843	NM_181523.3
<i>PIK3R1</i>	Ex5	chr5	67575428	67575563	NM_181523.3
<i>PIK3R1</i>	Ex6	chr5	67576354	67576559	NM_181523.3
<i>PIK3R1</i>	Ex7	chr5	67576753	67576836	NM_181523.3
<i>PIK3R1</i>	Ex8	chr5	67588085	67588191	NM_181523.3
<i>PIK3R1</i>	Ex9	chr5	67588927	67589029	NM_181523.3
<i>PIK3R1</i>	Ex10	chr5	67589129	67589313	NM_181523.3
<i>PIK3R1</i>	Ex11	chr5	67589535	67589664	NM_181523.3
<i>PIK3R1</i>	Ex12	chr5	67590362	67590508	NM_181523.3

Targeted DNA Gene Regions Interrogated by Neuro-Oncology Panel (continued)

Gene	Exon	Chromosome	Genomic Start	Genomic Stop	Reference Transcript
<i>PIK3R1</i>	Ex13	chr5	67590974	67591154	NM_181523.3
<i>PIK3R1</i>	Ex14	chr5	67591246	67591318	NM_181523.3
<i>PIK3R1</i>	Ex15	chr5	67591997	67592171	NM_181523.3
<i>PIK3R1</i>	Ex16	chr5	67593238	67593431	NM_181523.3
<i>PLCB4</i>	Ex23	chr20	9389702	9389830	NM_000933.4
<i>PMS2</i>	Ex1	chr7	6048626	6048652	NM_000535.7
<i>PMS2</i>	Ex2	chr7	6045521	6045664	NM_000535.7
<i>PMS2</i>	Ex3	chr7	6043601	6043691	NM_000535.7
<i>PMS2</i>	Ex4	chr7	6043319	6043425	NM_000535.7
<i>PMS2</i>	Ex5	chr7	6042082	6042269	NM_000535.7
<i>PMS2</i>	Ex6	chr7	6038737	6038908	NM_000535.7
<i>PMS2</i>	Ex7	chr7	6036955	6037056	NM_000535.7
<i>PMS2</i>	Ex8	chr7	6035163	6035266	NM_000535.7
<i>PMS2</i>	Ex9	chr7	6031602	6031690	NM_000535.7
<i>PMS2</i>	Ex10	chr7	6029429	6029588	NM_000535.7
<i>PMS2</i>	Ex11	chr7	6026388	6027253	NM_000535.7
<i>PMS2</i>	Ex12	chr7	6022453	6022624	NM_000535.7
<i>PMS2</i>	Ex13	chr7	6018225	6018329	NM_000535.7
<i>PMS2</i>	Ex14	chr7	6017217	6017390	NM_000535.7
<i>PMS2</i>	Ex15	chr7	6013028	6013175	NM_000535.7
<i>PRKAR1A</i>	Ex2	chr17	66511539	66511719	NM_002734.5
<i>PRKAR1A</i>	Ex3	chr17	66518895	66519069	NM_002734.5
<i>PRKAR1A</i>	Ex4	chr17	66519864	66519959	NM_002734.5
<i>PRKAR1A</i>	Ex5	chr17	66520155	66520220	NM_002734.5
<i>PRKAR1A</i>	Ex6	chr17	66521051	66521101	NM_002734.5
<i>PRKAR1A</i>	Ex7	chr17	66521893	66522055	NM_002734.5
<i>PRKAR1A</i>	Ex8	chr17	66523979	66524043	NM_002734.5
<i>PRKAR1A</i>	Ex9	chr17	66525009	66525134	NM_002734.5
<i>PRKAR1A</i>	Ex10	chr17	66526059	66526144	NM_002734.5
<i>PRKAR1A</i>	Ex11	chr17	66526416	66526592	NM_002734.5
<i>PRKCA</i>	Ex13	chr17	64738738	64738880	NM_002737.3
<i>POLD1</i>	Ex2	chr19	50902107	50902312	NM_002691.4
<i>POLD1</i>	Ex3	chr19	50902626	50902743	NM_002691.4
<i>POLD1</i>	Ex4	chr19	50905033	50905183	NM_002691.4
<i>POLD1</i>	Ex5	chr19	50905254	50905383	NM_002691.4
<i>POLD1</i>	Ex6	chr19	50905460	50905632	NM_002691.4
<i>POLD1</i>	Ex7	chr19	50905709	50905794	NM_002691.4
<i>POLD1</i>	Ex8	chr19	50905867	50906000	NM_002691.4
<i>POLD1</i>	Ex9	chr19	50906308	50906478	NM_002691.4
<i>POLD1</i>	Ex10	chr19	50906748	50906856	NM_002691.4
<i>POLD1</i>	Ex11	chr19	50909437	50909581	NM_002691.4
<i>POLD1</i>	Ex12	chr19	50909662	50909776	NM_002691.4
<i>POLD1</i>	Ex13	chr19	50910238	50910433	NM_002691.4
<i>POLD1</i>	Ex14	chr19	50910582	50910674	NM_002691.4
<i>POLD1</i>	Ex15	chr19	50912040	50912160	NM_002691.4
<i>POLD1</i>	Ex16	chr19	50912377	50912494	NM_002691.4

Targeted DNA Gene Regions Interrogated by Neuro-Oncology Panel (continued)

Gene	Exon	Chromosome	Genomic Start	Genomic Stop	Reference Transcript
<i>POLD1</i>	Ex17	chr19	50912774	50912925	NM_002691.4
<i>POLD1</i>	Ex18	chr19	50916681	50916780	NM_002691.4
<i>POLD1</i>	Ex19	chr19	50916997	50917138	NM_002691.4
<i>POLD1</i>	Ex20	chr19	50918070	50918249	NM_002691.4
<i>POLD1</i>	Ex21	chr19	50918693	50918849	NM_002691.4
<i>POLD1</i>	Ex22	chr19	50918979	50919085	NM_002691.4
<i>POLD1</i>	Ex23	chr19	50919651	50919787	NM_002691.4
<i>POLD1</i>	Ex24	chr19	50919865	50919982	NM_002691.4
<i>POLD1</i>	Ex25	chr19	50920300	50920356	NM_002691.4
<i>POLD1</i>	Ex26	chr19	50920427	50920528	NM_002691.4
<i>POLD1</i>	Ex27	chr19	50921097	50921206	NM_002691.4
<i>POLE</i>	Ex1	chr12	133263838	133263903	NM_006231.4
<i>POLE</i>	Ex2	chr12	133257722	133257867	NM_006231.4
<i>POLE</i>	Ex3	chr12	133257191	133257275	NM_006231.4
<i>POLE</i>	Ex4	chr12	133256762	133256810	NM_006231.4
<i>POLE</i>	Ex5	chr12	133256538	133256634	NM_006231.4
<i>POLE</i>	Ex6	chr12	133256081	133256239	NM_006231.4
<i>POLE</i>	Ex7	chr12	133254162	133254307	NM_006231.4
<i>POLE</i>	Ex8	chr12	133253947	133254031	NM_006231.4
<i>POLE</i>	Ex9	chr12	133253130	133253241	NM_006231.4
<i>POLE</i>	Ex10	chr12	133252678	133252792	NM_006231.4
<i>POLE</i>	Ex11	chr12	133252319	133252408	NM_006231.4
<i>POLE</i>	Ex12	chr12	133251982	133252105	NM_006231.4
<i>POLE</i>	Ex13	chr12	133250159	133250295	NM_006231.4
<i>POLE</i>	Ex14	chr12	133249748	133249865	NM_006231.4
<i>POLE</i>	Ex15	chr12	133249211	133249427	NM_006231.4
<i>POLE</i>	Ex16	chr12	133248799	133248910	NM_006231.4
<i>POLE</i>	Ex17	chr12	133245395	133245527	NM_006231.4
<i>POLE</i>	Ex18	chr12	133245219	133245325	NM_006231.4
<i>POLE</i>	Ex19	chr12	133244940	133245090	NM_006231.4
<i>POLE</i>	Ex20	chr12	133244087	133244236	NM_006231.4
<i>POLE</i>	Ex21	chr12	133241886	133242038	NM_006231.4
<i>POLE</i>	Ex22	chr12	133240954	133241050	NM_006231.4
<i>POLE</i>	Ex23	chr12	133240588	133240736	NM_006231.4
<i>POLE</i>	Ex24	chr12	133238111	133238272	NM_006231.4
<i>POLE</i>	Ex25	chr12	133237553	133237752	NM_006231.4
<i>POLE</i>	Ex26	chr12	133235879	133236097	NM_006231.4
<i>POLE</i>	Ex27	chr12	133234452	133234558	NM_006231.4
<i>POLE</i>	Ex28	chr12	133233933	133234017	NM_006231.4
<i>POLE</i>	Ex29	chr12	133233720	133233846	NM_006231.4
<i>POLE</i>	Ex30	chr12	133226261	133226477	NM_006231.4
<i>POLE</i>	Ex31	chr12	133225890	133226103	NM_006231.4
<i>POLE</i>	Ex32	chr12	133225513	133225660	NM_006231.4
<i>POLE</i>	Ex33	chr12	133220421	133220565	NM_006231.4
<i>POLE</i>	Ex34	chr12	133219991	133220148	NM_006231.4
<i>POLE</i>	Ex35	chr12	133219808	133219918	NM_006231.4

Targeted DNA Gene Regions Interrogated by Neuro-Oncology Panel (continued)

Gene	Exon	Chromosome	Genomic Start	Genomic Stop	Reference Transcript
<i>POLE</i>	Ex36	chr12	133219404	133219584	NM_006231.4
<i>POLE</i>	Ex37	chr12	133219090	133219317	NM_006231.4
<i>POLE</i>	Ex38	chr12	133218761	133218985	NM_006231.4
<i>POLE</i>	Ex39	chr12	133218231	133218439	NM_006231.4
<i>POLE</i>	Ex40	chr12	133215709	133215886	NM_006231.4
<i>POLE</i>	Ex41	chr12	133214598	133214727	NM_006231.4
<i>POLE</i>	Ex42	chr12	133212476	133212612	NM_006231.4
<i>POLE</i>	Ex43	chr12	133210770	133210966	NM_006231.4
<i>POLE</i>	Ex44	chr12	133209248	133209383	NM_006231.4
<i>POLE</i>	Ex45	chr12	133208899	133209096	NM_006231.4
<i>POLE</i>	Ex46	chr12	133202701	133202905	NM_006231.4
<i>POLE</i>	Ex47	chr12	133202229	133202358	NM_006231.4
<i>POLE</i>	Ex48	chr12	133201489	133201582	NM_006231.4
<i>POLE</i>	Ex49	chr12	133201281	133201398	NM_006231.4
<i>POLR2A</i>	Ex1	chr17	7388082	7388178	NM_000937.5
<i>POLR2A</i>	Ex2	chr17	7399258	7399394	NM_000937.5
<i>POLR2A</i>	Ex3	chr17	7399527	7399667	NM_000937.5
<i>POLR2A</i>	Ex4	chr17	7399757	7399934	NM_000937.5
<i>POLR2A</i>	Ex5	chr17	7400081	7400366	NM_000937.5
<i>POLR2A</i>	Ex6	chr17	7400673	7400838	NM_000937.5
<i>POLR2A</i>	Ex7	chr17	7400967	7401191	NM_000937.5
<i>POLR2A</i>	Ex8	chr17	7401395	7401531	NM_000937.5
<i>POLR2A</i>	Ex9	chr17	7402356	7402484	NM_000937.5
<i>POLR2A</i>	Ex10	chr17	7402598	7402812	NM_000937.5
<i>POLR2A</i>	Ex11	chr17	7403956	7404169	NM_000937.5
<i>POLR2A</i>	Ex12	chr17	7404257	7404429	NM_000937.5
<i>POLR2A</i>	Ex13	chr17	7404606	7404704	NM_000937.5
<i>POLR2A</i>	Ex14	chr17	7404843	7405050	NM_000937.5
<i>POLR2A</i>	Ex15	chr17	7405217	7405443	NM_000937.5
<i>POLR2A</i>	Ex16	chr17	7405835	7406022	NM_000937.5
<i>POLR2A</i>	Ex17	chr17	7406438	7406613	NM_000937.5
<i>POLR2A</i>	Ex18	chr17	7406702	7406811	NM_000937.5
<i>POLR2A</i>	Ex19	chr17	7406903	7407112	NM_000937.5
<i>POLR2A</i>	Ex20	chr17	7411568	7411796	NM_000937.5
<i>POLR2A</i>	Ex21	chr17	7412261	7412511	NM_000937.5
<i>POLR2A</i>	Ex22	chr17	7412849	7412953	NM_000937.5
<i>POLR2A</i>	Ex23	chr17	7414532	7414640	NM_000937.5
<i>POLR2A</i>	Ex24	chr17	7414723	7414909	NM_000937.5
<i>POLR2A</i>	Ex25	chr17	7415128	7415335	NM_000937.5
<i>POLR2A</i>	Ex26	chr17	7415475	7415665	NM_000937.5
<i>POLR2A</i>	Ex27	chr17	7415794	7415911	NM_000937.5
<i>POLR2A</i>	Ex28	chr17	7416091	7416244	NM_000937.5
<i>POLR2A</i>	Ex29	chr17	7416338	7417498	NM_000937.5
<i>PPM1D</i>	Ex1	chr17	58677774	58678249	NM_003620.4
<i>PPM1D</i>	Ex2	chr17	58700880	58701112	NM_003620.4
<i>PPM1D</i>	Ex3	chr17	58711212	58711340	NM_003620.4

Targeted DNA Gene Regions Interrogated by Neuro-Oncology Panel (continued)

Gene	Exon	Chromosome	Genomic Start	Genomic Stop	Reference Transcript
<i>PPM1D</i>	Ex4	chr17	58725251	58725445	NM_003620.4
<i>PPM1D</i>	Ex5	chr17	58733958	58734204	NM_003620.4
<i>PPM1D</i>	Ex6	chr17	58740354	58740915	NM_003620.4
<i>PRKCA</i>	Ex13	chr17	64738738	64738880	NM_002737.3
<i>PTCH1</i>	Ex1	chr9	98270441	98270645	NM_000264.5
<i>PTCH1</i>	Ex2	chr9	98268687	98268883	NM_000264.5
<i>PTCH1</i>	Ex3	chr9	98247965	98248158	NM_000264.5
<i>PTCH1</i>	Ex4	chr9	98244414	98244487	NM_000264.5
<i>PTCH1</i>	Ex5	chr9	98244229	98244324	NM_000264.5
<i>PTCH1</i>	Ex6	chr9	98242670	98242872	NM_000264.5
<i>PTCH1</i>	Ex7	chr9	98242249	98242374	NM_000264.5
<i>PTCH1</i>	Ex8	chr9	98241280	98241431	NM_000264.5
<i>PTCH1</i>	Ex9	chr9	98240335	98240470	NM_000264.5
<i>PTCH1</i>	Ex10	chr9	98239827	98239986	NM_000264.5
<i>PTCH1</i>	Ex11	chr9	98239039	98239141	NM_000264.5
<i>PTCH1</i>	Ex12	chr9	98238314	98238443	NM_000264.5
<i>PTCH1</i>	Ex13	chr9	98232093	98232215	NM_000264.5
<i>PTCH1</i>	Ex14	chr9	98231031	98231437	NM_000264.5
<i>PTCH1</i>	Ex15	chr9	98229396	98229709	NM_000264.5
<i>PTCH1</i>	Ex16	chr9	98224136	98224282	NM_000264.5
<i>PTCH1</i>	Ex17	chr9	98221880	98222067	NM_000264.5
<i>PTCH1</i>	Ex18	chr9	98220293	98220577	NM_000264.5
<i>PTCH1</i>	Ex19	chr9	98218556	98218697	NM_000264.5
<i>PTCH1</i>	Ex20	chr9	98215758	98215904	NM_000264.5
<i>PTCH1</i>	Ex21	chr9	98212121	98212224	NM_000264.5
<i>PTCH1</i>	Ex22	chr9	98211349	98211607	NM_000264.5
<i>PTCH1</i>	Ex23	chr9	98209192	98209735	NM_000264.5
<i>PTEN</i>	Ex1	chr10	89624225	89624307	NM_000314.8
<i>PTEN</i>	Ex2	chr10	89653780	89653868	NM_000314.8
<i>PTEN</i>	Ex3	chr10	89685268	89685316	NM_000314.8
<i>PTEN</i>	Ex4	chr10	89690801	89690848	NM_000314.8
<i>PTEN</i>	Ex5	chr10	89692768	89693010	NM_000314.8
<i>PTEN</i>	Ex6	chr10	89711873	89712018	NM_000314.8
<i>PTEN</i>	Ex7	chr10	89717608	89717778	NM_000314.8
<i>PTEN</i>	Ex8	chr10	89720649	89720877	NM_000314.8
<i>PTPN11</i>	Ex1	chr12	112856914	112856931	NM_002834.5
<i>PTPN11</i>	Ex2	chr12	112884078	112884204	NM_002834.5
<i>PTPN11</i>	Ex3	chr12	112888120	112888318	NM_002834.5
<i>PTPN11</i>	Ex4	chr12	112890997	112891193	NM_002834.5
<i>PTPN11</i>	Ex5	chr12	112892366	112892486	NM_002834.5
<i>PTPN11</i>	Ex6	chr12	112893752	112893869	NM_002834.5
<i>PTPN11</i>	Ex7	chr12	112910746	112910846	NM_002834.5
<i>PTPN11</i>	Ex8	chr12	112915453	112915536	NM_002834.5
<i>PTPN11</i>	Ex9	chr12	112915659	112915821	NM_002834.5
<i>PTPN11</i>	Ex10	chr12	112919876	112920011	NM_002834.5
<i>PTPN11</i>	Ex11	chr12	112924277	112924435	NM_002834.5

Targeted DNA Gene Regions Interrogated by Neuro-Oncology Panel (continued)

Gene	Exon	Chromosome	Genomic Start	Genomic Stop	Reference Transcript
<i>PTPN11</i>	Ex12	chr12	112926245	112926316	NM_002834.5
<i>PTPN11</i>	Ex13	chr12	112926826	112926981	NM_002834.5
<i>PTPN11</i>	Ex14	chr12	112939946	112940062	NM_002834.5
<i>PTPN11</i>	Ex15	chr12	112942497	112942570	NM_002834.5
<i>RB1</i>	Ex1	chr13	48878047	48878187	NM_000321.2
<i>RB1</i>	Ex2	chr13	48881414	48881544	NM_000321.2
<i>RB1</i>	Ex3	chr13	48916733	48916852	NM_000321.2
<i>RB1</i>	Ex4	chr13	48919214	48919337	NM_000321.2
<i>RB1</i>	Ex5	chr13	48921959	48922001	NM_000321.2
<i>RB1</i>	Ex6	chr13	48923090	48923161	NM_000321.2
<i>RB1</i>	Ex7	chr13	48934151	48934265	NM_000321.2
<i>RB1</i>	Ex8	chr13	48936949	48937095	NM_000321.2
<i>RB1</i>	Ex9	chr13	48939028	48939109	NM_000321.2
<i>RB1</i>	Ex10	chr13	48941628	48941741	NM_000321.2
<i>RB1</i>	Ex11	chr13	48942661	48942742	NM_000321.2
<i>RB1</i>	Ex12	chr13	48947539	48947630	NM_000321.2
<i>RB1</i>	Ex13	chr13	48951052	48951172	NM_000321.2
<i>RB1</i>	Ex14	chr13	48953728	48953788	NM_000321.2
<i>RB1</i>	Ex16	chr13	48954299	48954379	NM_000321.2
<i>RB1</i>	Ex17	chr13	48955381	48955581	NM_000321.2
<i>RB1</i>	Ex18	chr13	49027127	49027249	NM_000321.2
<i>RB1</i>	Ex19	chr13	49030338	49030487	NM_000321.2
<i>RB1</i>	Ex20	chr13	49033822	49033971	NM_000321.2
<i>RB1</i>	Ex21	chr13	49037865	49037973	NM_000321.2
<i>RB1</i>	Ex22	chr13	49039132	49039249	NM_000321.2
<i>RB1</i>	Ex23	chr13	49039339	49039506	NM_000321.2
<i>RB1</i>	Ex24	chr13	49047494	49047528	NM_000321.2
<i>RB1</i>	Ex25	chr13	49050835	49050981	NM_000321.2
<i>RB1</i>	Ex26	chr13	49051489	49051542	NM_000321.2
<i>RB1</i>	Ex27	chr13	49054132	49054209	NM_000321.2
<i>SETD2</i>	Ex1	chr3	47205342	47205416	NM_014159.7
<i>SETD2</i>	Ex2	chr3	47168136	47168155	NM_014159.7
<i>SETD2</i>	Ex3	chr3	47161670	47166040	NM_014159.7
<i>SETD2</i>	Ex4	chr3	47158111	47158246	NM_014159.7
<i>SETD2</i>	Ex5	chr3	47155364	47155496	NM_014159.7
<i>SETD2</i>	Ex6	chr3	47147485	47147612	NM_014159.7
<i>SETD2</i>	Ex7	chr3	47144834	47144915	NM_014159.7
<i>SETD2</i>	Ex8	chr3	47142946	47143047	NM_014159.7
<i>SETD2</i>	Ex9	chr3	47139443	47139573	NM_014159.7
<i>SETD2</i>	Ex10	chr3	47129601	47129739	NM_014159.7
<i>SETD2</i>	Ex11	chr3	47127683	47127806	NM_014159.7
<i>SETD2</i>	Ex12	chr3	47125208	47125874	NM_014159.7
<i>SETD2</i>	Ex13	chr3	47108558	47108610	NM_014159.7
<i>SETD2</i>	Ex14	chr3	47103651	47103838	NM_014159.7
<i>SETD2</i>	Ex15	chr3	47098309	47098982	NM_014159.7
<i>SETD2</i>	Ex16	chr3	47087975	47088113	NM_014159.7

Targeted DNA Gene Regions Interrogated by Neuro-Oncology Panel (continued)

Gene	Exon	Chromosome	Genomic Start	Genomic Stop	Reference Transcript
SETD2	Ex17	chr3	47084049	47084192	NM_014159.7
SETD2	Ex18	chr3	47079154	47079269	NM_014159.7
SETD2	Ex19	chr3	47061248	47061332	NM_014159.7
SETD2	Ex20	chr3	47059126	47059231	NM_014159.7
SETD2	Ex21	chr3	47058581	47058746	NM_014159.7
SF3B1	Ex1	chr2	198299694	198299725	NM_012433.4
SF3B1	Ex2	chr2	198288530	198288700	NM_012433.4
SF3B1	Ex3	chr2	198285751	198285859	NM_012433.4
SF3B1	Ex4	chr2	198285150	198285268	NM_012433.4
SF3B1	Ex5	chr2	198283231	198283314	NM_012433.4
SF3B1	Ex6	chr2	198281463	198281637	NM_012433.4
SF3B1	Ex7	chr2	198274492	198274733	NM_012433.4
SF3B1	Ex8	chr2	198273091	198273307	NM_012433.4
SF3B1	Ex9	chr2	198272720	198272845	NM_012433.4
SF3B1	Ex10	chr2	198269997	198270198	NM_012433.4
SF3B1	Ex11	chr2	198269798	198269903	NM_012433.4
SF3B1	Ex12	chr2	198268307	198268490	NM_012433.4
SF3B1	Ex13	chr2	198267671	198267761	NM_012433.4
SF3B1	Ex14	chr2	198267278	198267552	NM_012433.4
SF3B1	Ex15	chr2	198266707	198266856	NM_012433.4
SF3B1	Ex16	chr2	198266464	198266614	NM_012433.4
SF3B1	Ex17	chr2	198266122	198266251	NM_012433.4
SF3B1	Ex18	chr2	198265437	198265662	NM_012433.4
SF3B1	Ex19	chr2	198264974	198265160	NM_012433.4
SF3B1	Ex20	chr2	198264777	198264892	NM_012433.4
SF3B1	Ex21	chr2	198263183	198263307	NM_012433.4
SF3B1	Ex22	chr2	198262707	198262842	NM_012433.4
SF3B1	Ex23	chr2	198260778	198261054	NM_012433.4
SF3B1	Ex24	chr2	198257694	198257914	NM_012433.4
SF3B1	Ex25	chr2	198257025	198257187	NM_012433.4
SMARCA2	Ex2	chr9	2029021	2029249	NM_003070.5
SMARCA2	Ex3	chr9	2032950	2033083	NM_003070.5
SMARCA2	Ex4	chr9	2039464	2039751	NM_003070.5
SMARCA2	Ex4	chr9	2039874	2039902	NM_003070.5
SMARCA2	Ex5	chr9	2047227	2047486	NM_003070.5
SMARCA2	Ex6	chr9	2054595	2054725	NM_003070.5
SMARCA2	Ex7	chr9	2056670	2056847	NM_003070.5
SMARCA2	Ex8	chr9	2058289	2058466	NM_003070.5
SMARCA2	Ex9	chr9	2060814	2060988	NM_003070.5
SMARCA2	Ex10	chr9	2070416	2070473	NM_003070.5
SMARCA2	Ex11	chr9	2073210	2073344	NM_003070.5
SMARCA2	Ex12	chr9	2073564	2073625	NM_003070.5
SMARCA2	Ex13	chr9	2076227	2076331	NM_003070.5
SMARCA2	Ex14	chr9	2077627	2077778	NM_003070.5
SMARCA2	Ex15	chr9	2081830	2081997	NM_003070.5
SMARCA2	Ex16	chr9	2083345	2083415	NM_003070.5

Targeted DNA Gene Regions Interrogated by Neuro-Oncology Panel (continued)

Gene	Exon	Chromosome	Genomic Start	Genomic Stop	Reference Transcript
SMARCA2	Ex17	chr9	2084084	2084198	NM_003070.5
SMARCA2	Ex18	chr9	2086827	2087073	NM_003070.5
SMARCA2	Ex19	chr9	2088498	2088615	NM_003070.5
SMARCA2	Ex20	chr9	2096655	2096766	NM_003070.5
SMARCA2	Ex21	chr9	2097383	2097473	NM_003070.5
SMARCA2	Ex22	chr9	2101568	2101618	NM_003070.5
SMARCA2	Ex23	chr9	2104001	2104171	NM_003070.5
SMARCA2	Ex24	chr9	2110252	2110419	NM_003070.5
SMARCA2	Ex25	chr9	2115820	2116051	NM_003070.5
SMARCA2	Ex26	chr9	2119456	2119537	NM_003070.5
SMARCA2	Ex27	chr9	2123717	2123939	NM_003070.5
SMARCA2	Ex28	chr9	2161684	2161905	NM_003070.5
SMARCA2	Ex29	chr9	2170417	2170474	NM_003070.5
SMARCA2	Ex30	chr9	2181569	2181678	NM_003070.5
SMARCA2	Ex31	chr9	2182139	2182244	NM_003070.5
SMARCA2	Ex32	chr9	2186094	2186230	NM_003070.5
SMARCA2	Ex33	chr9	2191264	2191410	NM_003070.5
SMARCA2	Ex34	chr9	2192702	2192741	NM_003070.5
SMARCA4	Ex2	chr19	11094826	11095051	NM_001128849.3
SMARCA4	Ex3	chr19	11095947	11096083	NM_001128849.3
SMARCA4	Ex4	chr19	11096863	11097271	NM_001128849.3
SMARCA4	Ex5	chr19	11097579	11097681	NM_001128849.3
SMARCA4	Ex6	chr19	11098340	11098602	NM_001128849.3
SMARCA4	Ex7	chr19	11099991	11100121	NM_001128849.3
SMARCA4	Ex8	chr19	11101824	11102001	NM_001128849.3
SMARCA4	Ex9	chr19	11105502	11105679	NM_001128849.3
SMARCA4	Ex10	chr19	11106887	11107058	NM_001128849.3
SMARCA4	Ex11	chr19	11107168	11107222	NM_001128849.3
SMARCA4	Ex12	chr19	11113703	11113837	NM_001128849.3
SMARCA4	Ex13	chr19	11114014	11114075	NM_001128849.3
SMARCA4	Ex14	chr19	11118576	11118701	NM_001128849.3
SMARCA4	Ex15	chr19	11121055	11121209	NM_001128849.3
SMARCA4	Ex16	chr19	11123623	11123790	NM_001128849.3
SMARCA4	Ex17	chr19	11129631	11129701	NM_001128849.3
SMARCA4	Ex18	chr19	11130265	11130379	NM_001128849.3
SMARCA4	Ex19	chr19	11132399	11132645	NM_001128849.3
SMARCA4	Ex20	chr19	11134192	11134309	NM_001128849.3
SMARCA4	Ex21	chr19	11135005	11135116	NM_001128849.3
SMARCA4	Ex22	chr19	11136096	11136186	NM_001128849.3
SMARCA4	Ex23	chr19	11136974	11137024	NM_001128849.3
SMARCA4	Ex24	chr19	11138458	11138628	NM_001128849.3
SMARCA4	Ex25	chr19	11141404	11141571	NM_001128849.3
SMARCA4	Ex26	chr19	11143964	11144195	NM_001128849.3
SMARCA4	Ex27	chr19	11144441	11144543	NM_001128849.3
SMARCA4	Ex28	chr19	11144797	11144878	NM_001128849.3
SMARCA4	Ex29	chr19	11145588	11145810	NM_001128849.3

Targeted DNA Gene Regions Interrogated by Neuro-Oncology Panel (continued)

Gene	Exon	Chromosome	Genomic Start	Genomic Stop	Reference Transcript
SMARCA4	Ex30	chr19	11150132	11150231	NM_001128849.3
SMARCA4	Ex31	chr19	11151981	11152238	NM_001128849.3
SMARCA4	Ex32	chr19	11168929	11169041	NM_001128849.3
SMARCA4	Ex33	chr19	11169462	11169567	NM_001128849.3
SMARCA4	Ex34	chr19	11170427	11170563	NM_001128849.3
SMARCA4	Ex35	chr19	11170719	11170865	NM_001128849.3
SMARCA4	Ex36	chr19	11172458	11172494	NM_001128849.3
SMARCAL1	Ex3	chr2	217279426	217280240	NM_014140.4
SMARCAL1	Ex4	chr2	217280978	217281032	NM_014140.4
SMARCAL1	Ex5	chr2	217285020	217285257	NM_014140.4
SMARCAL1	Ex6	chr2	217288354	217288408	NM_014140.4
SMARCAL1	Ex7	chr2	217293317	217293507	NM_014140.4
SMARCAL1	Ex8	chr2	217297439	217297593	NM_014140.4
SMARCAL1	Ex9	chr2	217300059	217300221	NM_014140.4
SMARCAL1	Ex10	chr2	217303141	217303210	NM_014140.4
SMARCAL1	Ex11	chr2	217311739	217311883	NM_014140.4
SMARCAL1	Ex12	chr2	217315567	217315789	NM_014140.4
SMARCAL1	Ex13	chr2	217329318	217329392	NM_014140.4
SMARCAL1	Ex14	chr2	217332665	217332771	NM_014140.4
SMARCAL1	Ex15	chr2	217339990	217340176	NM_014140.4
SMARCAL1	Ex16	chr2	217341830	217341934	NM_014140.4
SMARCAL1	Ex17	chr2	217342924	217343024	NM_014140.4
SMARCAL1	Ex18	chr2	217347459	217347702	NM_014140.4
SMARCB1	Ex1	chr22	24129355	24129451	NM_003073.3
SMARCB1	Ex2	chr22	24133941	24134083	NM_003073.3
SMARCB1	Ex3	chr22	24135744	24135877	NM_003073.3
SMARCB1	Ex4	chr22	24143129	24143270	NM_003073.3
SMARCB1	Ex5	chr22	24145480	24145611	NM_003073.3
SMARCB1	Ex6	chr22	24158955	24159125	NM_003073.3
SMARCB1	Ex7	chr22	24167410	24167604	NM_003073.3
SMARCB1	Ex8	chr22	24175757	24175892	NM_003073.3
SMARCB1	Ex9	chr22	24176326	24176369	NM_003073.3
SMARCE1	Ex11	chr17	38785035	38785247	NM_003079.5
SMARCE1	Ex10	chr17	38786964	38787178	NM_003079.5
SMARCE1	Ex9	chr17	38787842	38787947	NM_003079.5
SMARCE1	Ex8	chr17	38788445	38788621	NM_003079.5
SMARCE1	Ex7	chr17	38792181	38792356	NM_003079.5
SMARCE1	Ex6	chr17	38792645	38792780	NM_003079.5
SMARCE1	Ex5	chr17	38793742	38793826	NM_003079.5
SMARCE1	Ex4	chr17	38798705	38798813	NM_003079.5
SMARCE1	Ex3	chr17	38801826	38801873	NM_003079.5
SMARCE1	Ex2	chr17	38802046	38802056	NM_003079.5
SMO	Ex1	chr7	128828991	128829036	NM_005631.5
SMO	Ex1	chr7	128829065	128829325	NM_005631.5
SMO	Ex2	chr7	128843223	128843432	NM_005631.5
SMO	Ex3	chr7	128845042	128845255	NM_005631.5

Targeted DNA Gene Regions Interrogated by Neuro-Oncology Panel (continued)

Gene	Exon	Chromosome	Genomic Start	Genomic Stop	Reference Transcript
<i>SMO</i>	Ex4	chr7	128845449	128845625	NM_005631.5
<i>SMO</i>	Ex5	chr7	128845989	128846212	NM_005631.5
<i>SMO</i>	Ex6	chr7	128846303	128846430	NM_005631.5
<i>SMO</i>	Ex7	chr7	128848598	128848694	NM_005631.5
<i>SMO</i>	Ex8	chr7	128849128	128849240	NM_005631.5
<i>SMO</i>	Ex9	chr7	128850202	128850391	NM_005631.5
<i>SMO</i>	Ex10	chr7	128850804	128850956	NM_005631.5
<i>SMO</i>	Ex11	chr7	128851475	128851613	NM_005631.5
<i>SMO</i>	Ex12	chr7	128851863	128852294	NM_005631.5
<i>SUFU</i>	Ex1	chr10	104263908	104264093	NM_016169.4
<i>SUFU</i>	Ex2	chr10	104268924	104269062	NM_016169.4
<i>SUFU</i>	Ex3	chr10	104309725	104309865	NM_016169.4
<i>SUFU</i>	Ex4	chr10	104352337	104352483	NM_016169.4
<i>SUFU</i>	Ex5	chr10	104353391	104353480	NM_016169.4
<i>SUFU</i>	Ex6	chr10	104353748	104353824	NM_016169.4
<i>SUFU</i>	Ex7	chr10	104356895	104357052	NM_016169.4
<i>SUFU</i>	Ex8	chr10	104359188	104359303	NM_016169.4
<i>SUFU</i>	Ex9	chr10	104375023	104375161	NM_016169.4
<i>SUFU</i>	Ex10	chr10	104377045	104377187	NM_016169.4
<i>SUFU</i>	Ex11	chr10	104386930	104387002	NM_016169.4
<i>SUFU</i>	Ex12	chr10	104389821	104389914	NM_016169.4
<i>SUZ12</i>	Ex1	chr17	30264264	30264541	NM_015355.3
<i>SUZ12</i>	Ex2	chr17	30267303	30267353	NM_015355.3
<i>SUZ12</i>	Ex5	chr17	30293164	30293217	NM_015355.3
<i>SUZ12</i>	Ex7	chr17	30302499	30302734	NM_015355.3
<i>SUZ12</i>	Ex8	chr17	30303538	30303635	NM_015355.3
<i>SUZ12</i>	Ex10	chr17	30315337	30315518	NM_015355.3
<i>SUZ12</i>	Ex11	chr17	30320259	30320354	NM_015355.3
<i>SUZ12</i>	Ex12	chr17	30320882	30321029	NM_015355.3
<i>SUZ12</i>	Ex13	chr17	30321581	30321742	NM_015355.3
<i>SUZ12</i>	Ex14	chr17	30322581	30322783	NM_015355.3
<i>SUZ12</i>	Ex15	chr17	30323815	30323898	NM_015355.3
<i>SUZ12</i>	Ex16	chr17	30325675	30326024	NM_015355.3
<i>TCF12</i>	Ex2	chr15	57212110	57212188	NM_207037.2
<i>TCF12</i>	Ex3	chr15	57213222	57213298	NM_207037.2
<i>TCF12</i>	Ex4	chr15	57355946	57356023	NM_207037.2
<i>TCF12</i>	Ex5	chr15	57383985	57384091	NM_207037.2
<i>TCF12</i>	Ex6	chr15	57458598	57458666	NM_207037.2
<i>TCF12</i>	Ex7	chr15	57484354	57484493	NM_207037.2
<i>TCF12</i>	Ex8	chr15	57489969	57490025	NM_207037.2
<i>TCF12</i>	Ex9	chr15	57523348	57523457	NM_207037.2
<i>TCF12</i>	Ex10	chr15	57524487	57524630	NM_207037.2
<i>TCF12</i>	Ex11	chr15	57524908	57525056	NM_207037.2
<i>TCF12</i>	Ex12	chr15	57526239	57526307	NM_207037.2
<i>TCF12</i>	Ex13	chr15	57535668	57535750	NM_207037.2
<i>TCF12</i>	Ex14	chr15	57543546	57543623	NM_207037.2

Targeted DNA Gene Regions Interrogated by Neuro-Oncology Panel (continued)

Gene	Exon	Chromosome	Genomic Start	Genomic Stop	Reference Transcript
<i>TCF12</i>	Ex15	chr15	57544617	57544692	NM_207037.2
<i>TCF12</i>	Ex16	chr15	57545458	57545668	NM_207037.2
<i>TCF12</i>	Ex17	chr15	57554290	57554408	NM_207037.2
<i>TCF12</i>	Ex18	chr15	57555308	57555474	NM_207037.2
<i>TCF12</i>	Ex19	chr15	57565226	57565462	NM_207037.2
<i>TCF12</i>	Ex20	chr15	57574641	57574787	NM_207037.2
<i>TERT</i>	Promoter	chr5	1295128	1295350	NM_198253
<i>TP53</i>	Ex2	chr17	7579837	7579914	NM_000546.6
<i>TP53</i>	Ex3	chr17	7579698	7579723	NM_000546.6
<i>TP53</i>	Ex4	chr17	7579310	7579592	NM_000546.6
<i>TP53</i>	Ex5	chr17	7578369	7578556	NM_000546.6
<i>TP53</i>	Ex6	chr17	7578175	7578291	NM_000546.6
<i>TP53</i>	Ex7	chr17	7577497	7577610	NM_000546.6
<i>TP53</i>	Ex8	chr17	7577017	7577157	NM_000546.6
<i>TP53</i>	Ex9	chr17	7576851	7576928	NM_000546.6
<i>TP53</i>	Ex10	chr17	7573925	7574035	NM_000546.6
<i>TP53</i>	Ex11	chr17	7572925	7573010	NM_000546.6
<i>TRAF7</i>	Ex2	chr16	2213920	2214004	NM_032271.3
<i>TRAF7</i>	Ex3	chr16	2215878	2215939	NM_032271.3
<i>TRAF7</i>	Ex4	chr16	2218076	2218171	NM_032271.3
<i>TRAF7</i>	Ex5	chr16	2220613	2220733	NM_032271.3
<i>TRAF7</i>	Ex6	chr16	2221263	2221359	NM_032271.3
<i>TRAF7</i>	Ex7	chr16	2221571	2221608	NM_032271.3
<i>TRAF7</i>	Ex8	chr16	2222190	2222377	NM_032271.3
<i>TRAF7</i>	Ex9	chr16	2222464	2222602	NM_032271.3
<i>TRAF7</i>	Ex10	chr16	2223181	2223402	NM_032271.3
<i>TRAF7</i>	Ex11	chr16	2223480	2223557	NM_032271.3
<i>TRAF7</i>	Ex12	chr16	2223787	2223839	NM_032271.3
<i>TRAF7</i>	Ex13	chr16	2223920	2224051	NM_032271.3
<i>TRAF7</i>	Ex14	chr16	2224250	2224336	NM_032271.3
<i>TRAF7</i>	Ex15	chr16	2225110	2225153	NM_032271.3
<i>TRAF7</i>	Ex16	chr16	2225300	2225420	NM_032271.3
<i>TRAF7</i>	Ex17	chr16	2225499	2225625	NM_032271.3
<i>TRAF7</i>	Ex18	chr16	2225833	2225956	NM_032271.3
<i>TRAF7</i>	Ex19	chr16	2226048	2226183	NM_032271.3
<i>TRAF7</i>	Ex20	chr16	2226264	2226387	NM_032271.3
<i>TRAF7</i>	Ex21	chr16	2226559	2226577	NM_032271.3
<i>TSC1</i>	Ex3	chr9	135804152	135804261	NM_000368.5
<i>TSC1</i>	Ex4	chr9	135802586	135802693	NM_000368.5
<i>TSC1</i>	Ex5	chr9	135800972	135801128	NM_000368.5
<i>TSC1</i>	Ex6	chr9	135798733	135798881	NM_000368.5
<i>TSC1</i>	Ex7	chr9	135797204	135797362	NM_000368.5
<i>TSC1</i>	Ex8	chr9	135796748	135796825	NM_000368.5
<i>TSC1</i>	Ex9	chr9	135787667	135787846	NM_000368.5
<i>TSC1</i>	Ex10	chr9	135786838	135786957	NM_000368.5
<i>TSC1</i>	Ex11	chr9	135786387	135786502	NM_000368.5

Targeted DNA Gene Regions Interrogated by Neuro-Oncology Panel (continued)

Gene	Exon	Chromosome	Genomic Start	Genomic Stop	Reference Transcript
<i>TSC1</i>	Ex12	chr9	135785956	135786081	NM_000368.5
<i>TSC1</i>	Ex13	chr9	135782686	135782759	NM_000368.5
<i>TSC1</i>	Ex14	chr9	135782116	135782224	NM_000368.5
<i>TSC1</i>	Ex15	chr9	135780966	135781528	NM_000368.5
<i>TSC1</i>	Ex16	chr9	135779796	135779843	NM_000368.5
<i>TSC1</i>	Ex17	chr9	135779036	135779206	NM_000368.5
<i>TSC1</i>	Ex18	chr9	135777990	135778176	NM_000368.5
<i>TSC1</i>	Ex19	chr9	135776974	135777088	NM_000368.5
<i>TSC1</i>	Ex20	chr9	135776100	135776226	NM_000368.5
<i>TSC1</i>	Ex21	chr9	135772808	135772999	NM_000368.5
<i>TSC1</i>	Ex22	chr9	135772569	135772734	NM_000368.5
<i>TSC1</i>	Ex23	chr9	135772011	135772143	NM_000368.5
<i>TSC1</i>	Ex23	chr9	135771620	135771984	NM_000368.5
<i>TSC2</i>	Ex2	chr16	2098615	2098756	NM_000548.5
<i>TSC2</i>	Ex3	chr16	2100399	2100489	NM_000548.5
<i>TSC2</i>	Ex4	chr16	2103341	2103455	NM_000548.5
<i>TSC2</i>	Ex5	chr16	2104295	2104443	NM_000548.5
<i>TSC2</i>	Ex6	chr16	2105401	2105522	NM_000548.5
<i>TSC2</i>	Ex7	chr16	2106195	2106247	NM_000548.5
<i>TSC2</i>	Ex8	chr16	2106643	2106772	NM_000548.5
<i>TSC2</i>	Ex9	chr16	2107104	2107181	NM_000548.5
<i>TSC2</i>	Ex10	chr16	2108746	2108876	NM_000548.5
<i>TSC2</i>	Ex11	chr16	2110669	2110816	NM_000548.5
<i>TSC2</i>	Ex12	chr16	2111870	2112011	NM_000548.5
<i>TSC2</i>	Ex13	chr16	2112496	2112603	NM_000548.5
<i>TSC2</i>	Ex14	chr16	2112971	2113056	NM_000548.5
<i>TSC2</i>	Ex15	chr16	2114271	2114430	NM_000548.5
<i>TSC2</i>	Ex16	chr16	2115518	2115638	NM_000548.5
<i>TSC2</i>	Ex17	chr16	2120455	2120581	NM_000548.5
<i>TSC2</i>	Ex18	chr16	2121509	2121619	NM_000548.5
<i>TSC2</i>	Ex19	chr16	2121783	2121937	NM_000548.5
<i>TSC2</i>	Ex20	chr16	2122240	2122366	NM_000548.5
<i>TSC2</i>	Ex21	chr16	2122848	2122986	NM_000548.5
<i>TSC2</i>	Ex22	chr16	2124199	2124392	NM_000548.5
<i>TSC2</i>	Ex23	chr16	2125798	2125895	NM_000548.5
<i>TSC2</i>	Ex24	chr16	2126067	2126173	NM_000548.5
<i>TSC2</i>	Ex25	chr16	2126490	2126588	NM_000548.5
<i>TSC2</i>	Ex26	chr16	2127597	2127729	NM_000548.5
<i>TSC2</i>	Ex27	chr16	2129031	2129199	NM_000548.5
<i>TSC2</i>	Ex28	chr16	2129275	2129431	NM_000548.5
<i>TSC2</i>	Ex29	chr16	2129556	2129672	NM_000548.5
<i>TSC2</i>	Ex30	chr16	2130164	2130380	NM_000548.5
<i>TSC2</i>	Ex31	chr16	2131594	2131801	NM_000548.5
<i>TSC2</i>	Ex32	chr16	2132435	2132507	NM_000548.5
<i>TSC2</i>	Ex33	chr16	2133694	2133819	NM_000548.5
<i>TSC2</i>	Ex34	chr16	2134227	2134718	NM_000548.5

Targeted DNA Gene Regions Interrogated by Neuro-Oncology Panel (continued)

Gene	Exon	Chromosome	Genomic Start	Genomic Stop	Reference Transcript
<i>TSC2</i>	Ex35	chr16	2134950	2135029	NM_000548.5
<i>TSC2</i>	Ex36	chr16	2135229	2135325	NM_000548.5
<i>TSC2</i>	Ex37	chr16	2136192	2136382	NM_000548.5
<i>TSC2</i>	Ex38	chr16	2136731	2136874	NM_000548.5
<i>TSC2</i>	Ex39	chr16	2137862	2137944	NM_000548.5
<i>TSC2</i>	Ex40	chr16	2138047	2138142	NM_000548.5
<i>TSC2</i>	Ex41	chr16	2138226	2138328	NM_000548.5
<i>TSC2</i>	Ex42	chr16	2138445	2138613	NM_000548.5
<i>VHL</i>	Ex1	chr3	10183530	10183873	NM_000551.4
<i>VHL</i>	Ex2	chr3	10188196	10188322	NM_000551.4
<i>VHL</i>	Ex3	chr3	10191469	10191651	NM_000551.4