



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 with the following exception: *TERT* promoter 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	Exon	Chromosome	Genomic Start	Genomic Stop	Reference Transcript
<i>BAP1</i>	Ex1	chr3	52443856	52443896	NM_004656
<i>BAP1</i>	Ex2	chr3	52443728	52443761	NM_004656
<i>BAP1</i>	Ex3	chr3	52443568	52443626	NM_004656
<i>BAP1</i>	Ex4	chr3	52442488	52442624	NM_004656
<i>BAP1</i>	Ex5	chr3	52441972	52442095	NM_004656
<i>BAP1</i>	Ex6	chr3	52441413	52441478	NM_004656
<i>BAP1</i>	Ex7	chr3	52441188	52441334	NM_004656
<i>BAP1</i>	Ex8	chr3	52440843	52440925	NM_004656
<i>BAP1</i>	Ex9	chr3	52440267	52440394	NM_004656
<i>BAP1</i>	Ex10	chr3	52439779	52439930	NM_004656
<i>BAP1</i>	Ex11	chr3	52439124	52439312	NM_004656
<i>BAP1</i>	Ex12	chr3	52438467	52438604	NM_004656
<i>BAP1</i>	Ex13	chr3	52437430	52437912	NM_004656
<i>BAP1</i>	Ex14	chr3	52437152	52437316	NM_004656
<i>BAP1</i>	Ex15	chr3	52436793	52436889	NM_004656
<i>BAP1</i>	Ex16	chr3	52436616	52436692	NM_004656
<i>BAP1</i>	Ex17	chr3	52436302	52436439	NM_004656
<i>BRAF</i>	Ex1	chr7	140624364	140624505	NM_004333
<i>BRAF</i>	Ex2	chr7	140549909	140550014	NM_004333
<i>BRAF</i>	Ex3	chr7	140534407	140534674	NM_004333
<i>BRAF</i>	Ex4	chr7	140508690	140508797	NM_004333
<i>BRAF</i>	Ex5	chr7	140507758	140507864	NM_004333
<i>BRAF</i>	Ex6	chr7	140501210	140501362	NM_004333
<i>BRAF</i>	Ex7	chr7	140500160	140500283	NM_004333
<i>BRAF</i>	Ex8	chr7	140494106	140494269	NM_004333
<i>BRAF</i>	Ex9	chr7	140487346	140487386	NM_004333
<i>BRAF</i>	Ex10	chr7	140482819	140482959	NM_004333
<i>BRAF</i>	Ex11	chr7	140481374	140481495	NM_004333
<i>BRAF</i>	Ex12	chr7	140477789	140477877	NM_004333
<i>BRAF</i>	Ex13	chr7	140476710	140476890	NM_004333

Targeted Genes and Methodology Details for MayoComplete Melanoma Panel (continued)

Gene	Exon	Chromosome	Genomic Start	Genomic Stop	Reference Transcript
<i>BRAF</i>	Ex14	chr7	140453985	140454035	NM_004333
<i>BRAF</i>	Ex15	chr7	140453073	140453195	NM_004333
<i>BRAF</i>	Ex16	chr7	140449085	140449220	NM_004333
<i>BRAF</i>	Ex17	chr7	140439610	140439748	NM_004333
<i>BRAF</i>	Ex18	chr7	140434395	140434572	NM_004333
<i>CDKN2A</i>	Ex1	chr9	21974675	21974828	NM_000077
<i>CDKN2A</i>	Ex2	chr9	21970899	21971209	NM_000077
<i>CDKN2A</i>	Ex3	chr9	21968226	21968243	NM_000077
<i>CTNNB1</i>	Ex2	chr3	41265558	41265574	NM_001904
<i>CTNNB1</i>	Ex3	chr3	41266015	41266246	NM_001904
<i>CTNNB1</i>	Ex4	chr3	41266443	41266700	NM_001904
<i>CTNNB1</i>	Ex5	chr3	41266823	41267065	NM_001904
<i>CTNNB1</i>	Ex6	chr3	41267149	41267354	NM_001904
<i>CTNNB1</i>	Ex7	chr3	41268697	41268845	NM_001904
<i>CTNNB1</i>	Ex8	chr3	41274830	41274937	NM_001904
<i>CTNNB1</i>	Ex9	chr3	41275018	41275360	NM_001904
<i>CTNNB1</i>	Ex10	chr3	41275628	41275790	NM_001904
<i>CTNNB1</i>	Ex11	chr3	41277213	41277336	NM_001904
<i>CTNNB1</i>	Ex12	chr3	41277838	41277992	NM_001904
<i>CTNNB1</i>	Ex13	chr3	41278077	41278202	NM_001904
<i>CTNNB1</i>	Ex14	chr3	41279505	41279569	NM_001904
<i>CTNNB1</i>	Ex15	chr3	41280623	41280835	NM_001904
<i>EIF1AX</i>	Ex1	chrX	20159741	20159760	NM_001412
<i>EIF1AX</i>	Ex2	chrX	20156655	20156742	NM_001412
<i>EIF1AX</i>	Ex4	chrX	20152073	20152127	NM_001412
<i>EIF1AX</i>	Ex5	chrX	20150298	20150383	NM_001412
<i>EIF1AX</i>	Ex7	chrX	20146422	20146431	NM_001412
<i>GNA11</i>	Ex1	chr19	3094648	3094787	NM_002067
<i>GNA11</i>	Ex2	chr19	3110145	3110333	NM_002067
<i>GNA11</i>	Ex3	chr19	3113326	3113484	NM_002067
<i>GNA11</i>	Ex4	chr19	3114940	3115072	NM_002067
<i>GNA11</i>	Ex5	chr19	3118920	3119053	NM_002067
<i>GNA11</i>	Ex6	chr19	3119202	3119359	NM_002067
<i>GNA11</i>	Ex7	chr19	3120985	3121179	NM_002067
<i>GNAQ</i>	Ex1	chr9	80646014	80646153	NM_002072
<i>GNAQ</i>	Ex2	chr9	80537075	80537263	NM_002072
<i>GNAQ</i>	Ex3	chr9	80430530	80430688	NM_002072
<i>GNAQ</i>	Ex4	chr9	80412434	80412566	NM_002072
<i>GNAQ</i>	Ex5	chr9	80409377	80409510	NM_002072

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Gene	Exon	Chromosome	Genomic Start	Genomic Stop	Reference Transcript
GNAQ	Ex6	chr9	80343428	80343585	NM_002072
GNAQ	Ex7	chr9	80336237	80336431	NM_002072
HRAS	Ex2	chr11	534210	534324	NM_001130442
HRAS	Ex3	chr11	533764	533946	NM_001130442
HRAS	Ex4	chr11	533451	533614	NM_001130442
HRAS	Ex5	chr11	532634	532757	NM_001130442
KIT	Ex1	chr4	55524180	55524250	NM_000222
KIT	Ex2	chr4	55561676	55561949	NM_000222
KIT	Ex3	chr4	55564448	55564733	NM_000222
KIT	Ex4	chr4	55565794	55565934	NM_000222
KIT	Ex5	chr4	55569888	55570060	NM_000222
KIT	Ex6	chr4	55573262	55573455	NM_000222
KIT	Ex7	chr4	55575588	55575707	NM_000222
KIT	Ex8	chr4	55589748	55589866	NM_000222
KIT	Ex9	chr4	55592021	55592218	NM_000222
KIT	Ex10	chr4	55593382	55593492	NM_000222
KIT	Ex11	chr4	55593580	55593710	NM_000222
KIT	Ex12	chr4	55593987	55594095	NM_000222
KIT	Ex13	chr4	55594175	55594289	NM_000222
KIT	Ex14	chr4	55595499	55595653	NM_000222
KIT	Ex15	chr4	55597492	55597587	NM_000222
KIT	Ex16	chr4	55598035	55598166	NM_000222
KIT	Ex17	chr4	55599234	55599360	NM_000222
KIT	Ex18	chr4	55602662	55602777	NM_000222
KIT	Ex19	chr4	55602885	55602988	NM_000222
KIT	Ex20	chr4	55603339	55603448	NM_000222
KIT	Ex21	chr4	55604593	55604725	NM_000222
KRAS	Ex2	chr12	25398206	25398320	NM_033360
KRAS	Ex3	chr12	25380166	25380348	NM_033360
KRAS	Ex4	chr12	25378546	25378709	NM_033360
KRAS	Ex5	chr12	25368373	25368496	NM_033360
MAP2K1	Ex1	chr15	66679684	66679767	NM_002755
MAP2K1	Ex2	chr15	66727363	66727577	NM_002755
MAP2K1	Ex3	chr15	66729082	66729232	NM_002755
MAP2K1	Ex4	chr15	66735616	66735697	NM_002755
MAP2K1	Ex5	chr15	66736992	66737047	NM_002755
MAP2K1	Ex7	chr15	66777326	66777531	NM_002755
MAP2K1	Ex8	chr15	66779564	66779632	NM_002755
MAP2K1	Ex9	chr15	66781551	66781616	NM_002755

Targeted Genes and Methodology Details for MayoComplete Melanoma Panel (continued)

Gene	Exon	Chromosome	Genomic Start	Genomic Stop	Reference Transcript
MAP2K1	Ex10	chr15	66782054	66782103	NM_002755
MAP2K1	Ex11	chr15	66782838	66782955	NM_002755
MAP2K2	Ex1	chr19	4123779	4123874	NM_030662
MAP2K2	Ex2	chr19	4117415	4117629	NM_030662
MAP2K2	Ex3	chr19	4110505	4110655	NM_030662
MAP2K2	Ex4	chr19	4102372	4102453	NM_030662
MAP2K2	Ex5	chr19	4101225	4101280	NM_030662
MAP2K2	Ex7	chr19	4099197	4099414	NM_030662
MAP2K2	Ex8	chr19	4097275	4097343	NM_030662
MAP2K2	Ex9	chr19	4095384	4095449	NM_030662
MAP2K2	Ex10	chr19	4094449	4094498	NM_030662
MAP2K2	Ex11	chr19	4090594	4090708	NM_030662
NF1	Ex1	chr17	29422326	29422389	NM_001042492
NF1	Ex2	chr17	29482999	29483146	NM_001042492
NF1	Ex3	chr17	29486026	29486113	NM_001042492
NF1	Ex4	chr17	29490202	29490396	NM_001042492
NF1	Ex5	chr17	29496907	29497017	NM_001042492
NF1	Ex6	chr17	29508438	29508509	NM_001042492
NF1	Ex7	chr17	29508726	29508805	NM_001042492
NF1	Ex8	chr17	29509524	29509685	NM_001042492
NF1	Ex9	chr17	29527438	29527615	NM_001042492
NF1	Ex10	chr17	29528053	29528179	NM_001042492
NF1	Ex11	chr17	29528427	29528505	NM_001042492
NF1	Ex12	chr17	29533256	29533391	NM_001042492
NF1	Ex13	chr17	29541467	29541605	NM_001042492
NF1	Ex14	chr17	29546021	29546138	NM_001042492
NF1	Ex15	chr17	29548866	29548949	NM_001042492
NF1	Ex16	chr17	29550460	29550587	NM_001042492
NF1	Ex17	chr17	29552111	29552270	NM_001042492
NF1	Ex18	chr17	29553451	29553704	NM_001042492
NF1	Ex19	chr17	29554234	29554311	NM_001042492
NF1	Ex20	chr17	29554539	29554626	NM_001042492
NF1	Ex21	chr17	29556041	29556485	NM_001042492
NF1	Ex22	chr17	29556851	29556994	NM_001042492
NF1	Ex23	chr17	29557276	29557402	NM_001042492
NF1	Ex24	chr17	29557858	29557945	NM_001042492
NF1	Ex25	chr17	29559089	29559209	NM_001042492
NF1	Ex26	chr17	29559716	29559901	NM_001042492
NF1	Ex27	chr17	29560018	29560233	NM_001042492

Targeted Genes and Methodology Details for MayoComplete Melanoma Panel (continued)

Gene	Exon	Chromosome	Genomic Start	Genomic Stop	Reference Transcript
<i>NF1</i>	Ex28	chr17	29562627	29562792	NM_001042492
<i>NF1</i>	Ex29	chr17	29562934	29563041	NM_001042492
<i>NF1</i>	Ex30	chr17	29576000	29576139	NM_001042492
<i>NF1</i>	Ex31	chr17	29579954	29580020	NM_001042492
<i>NF1</i>	Ex32	chr17	29585360	29585522	NM_001042492
<i>NF1</i>	Ex33	chr17	29586048	29586149	NM_001042492
<i>NF1</i>	Ex34	chr17	29587385	29587535	NM_001042492
<i>NF1</i>	Ex35	chr17	29588727	29588877	NM_001042492
<i>NF1</i>	Ex36	chr17	29592245	29592359	NM_001042492
<i>NF1</i>	Ex37	chr17	29652836	29653272	NM_001042492
<i>NF1</i>	Ex38	chr17	29654515	29654859	NM_001042492
<i>NF1</i>	Ex39	chr17	29657312	29657518	NM_001042492
<i>NF1</i>	Ex40	chr17	29661854	29662051	NM_001042492
<i>NF1</i>	Ex41	chr17	29663349	29663493	NM_001042492
<i>NF1</i>	Ex42	chr17	29663651	29663934	NM_001042492
<i>NF1</i>	Ex43	chr17	29664384	29664602	NM_001042492
<i>NF1</i>	Ex44	chr17	29664835	29664900	NM_001042492
<i>NF1</i>	Ex45	chr17	29665041	29665159	NM_001042492
<i>NF1</i>	Ex46	chr17	29665720	29665825	NM_001042492
<i>NF1</i>	Ex47	chr17	29667521	29667665	NM_001042492
<i>NF1</i>	Ex48	chr17	29670025	29670155	NM_001042492
<i>NF1</i>	Ex49	chr17	29676136	29676271	NM_001042492
<i>NF1</i>	Ex50	chr17	29677199	29677338	NM_001042492
<i>NF1</i>	Ex51	chr17	29679273	29679434	NM_001042492
<i>NF1</i>	Ex52	chr17	29683476	29683602	NM_001042492
<i>NF1</i>	Ex53	chr17	29683976	29684110	NM_001042492
<i>NF1</i>	Ex54	chr17	29684285	29684389	NM_001042492
<i>NF1</i>	Ex55	chr17	29685496	29685642	NM_001042492
<i>NF1</i>	Ex56	chr17	29685985	29686035	NM_001042492
<i>NF1</i>	Ex57	chr17	29687503	29687723	NM_001042492
<i>NF1</i>	Ex58	chr17	29701029	29701175	NM_001042492
<i>NRAS</i>	Ex2	chr1	115258669	115258783	NM_002524
<i>NRAS</i>	Ex3	chr1	115256419	115256601	NM_002524
<i>NRAS</i>	Ex4	chr1	115252188	115252351	NM_002524
<i>NRAS</i>	Ex5	chr1	115251154	115251277	NM_002524
<i>SF3B1</i>	Ex1	chr2	198299694	198299725	NM_012433
<i>SF3B1</i>	Ex2	chr2	198288530	198288700	NM_012433
<i>SF3B1</i>	Ex3	chr2	198285751	198285859	NM_012433
<i>SF3B1</i>	Ex4	chr2	198285150	198285268	NM_012433

Targeted Genes and Methodology Details for MayoComplete Melanoma Panel (continued)

Gene	Exon	Chromosome	Genomic Start	Genomic Stop	Reference Transcript
<i>SF3B1</i>	Ex5	chr2	198283231	198283314	NM_012433
<i>SF3B1</i>	Ex6	chr2	198281463	198281637	NM_012433
<i>SF3B1</i>	Ex7	chr2	198274492	198274733	NM_012433
<i>SF3B1</i>	Ex8	chr2	198273091	198273307	NM_012433
<i>SF3B1</i>	Ex9	chr2	198272720	198272845	NM_012433
<i>SF3B1</i>	Ex10	chr2	198269997	198270198	NM_012433
<i>SF3B1</i>	Ex11	chr2	198269798	198269903	NM_012433
<i>SF3B1</i>	Ex12	chr2	198268307	198268490	NM_012433
<i>SF3B1</i>	Ex13	chr2	198267671	198267761	NM_012433
<i>SF3B1</i>	Ex14	chr2	198267278	198267552	NM_012433
<i>SF3B1</i>	Ex15	chr2	198266707	198266856	NM_012433
<i>SF3B1</i>	Ex16	chr2	198266464	198266614	NM_012433
<i>SF3B1</i>	Ex17	chr2	198266122	198266251	NM_012433
<i>SF3B1</i>	Ex18	chr2	198265437	198265662	NM_012433
<i>SF3B1</i>	Ex19	chr2	198264974	198265160	NM_012433
<i>SF3B1</i>	Ex20	chr2	198264777	198264892	NM_012433
<i>SF3B1</i>	Ex21	chr2	198263183	198263307	NM_012433
<i>SF3B1</i>	Ex22	chr2	198262707	198262842	NM_012433
<i>SF3B1</i>	Ex23	chr2	198260778	198261054	NM_012433
<i>SF3B1</i>	Ex24	chr2	198257694	198257914	NM_012433
<i>SF3B1</i>	Ex25	chr2	198257025	198257187	NM_012433
<i>TERT</i>	Promoter	chr5	1295128	1295350	NM_198253
<i>TP53</i>	Ex2	chr17	7579837	7579914	NM_000546
<i>TP53</i>	Ex3	chr17	7579698	7579723	NM_000546
<i>TP53</i>	Ex4	chr17	7579310	7579592	NM_000546
<i>TP53</i>	Ex5	chr17	7578369	7578556	NM_000546
<i>TP53</i>	Ex6	chr17	7578175	7578291	NM_000546
<i>TP53</i>	Ex7	chr17	7577497	7577610	NM_000546
<i>TP53</i>	Ex8	chr17	7577017	7577157	NM_000546
<i>TP53</i>	Ex9	chr17	7576851	7576928	NM_000546
<i>TP53</i>	Ex10	chr17	7573925	7574035	NM_000546
<i>TP53</i>	Ex11	chr17	7572925	7573010	NM_000546