

# Data Sheet

Product Name: CancerSeq AMS Paraffin Tissue Curl

Catalog No.: T2235152-AC

Lot No.: C202118

Species:  Human  Mouse  Rat  Monkey (Rh)  Guinea Pig  Porcine  
 Bovine  Hamster  Dog  Monkey (Cy)  Rabbit  Plant

Tissue Type:  Normal  Adult  Fetal  Tumor  Disease  Cell line

Tissue Name: Lung

Donor Information:

Male: 58 year(s) old  
Female: \_\_\_\_\_ year(s) old

Pathological Diagnosis: Adenocarcinoma, Mixed

Tumor Size: diameter 4 cm

Location: left upper lobe

Components:

1. 5 curls per package
2. Certificate of Analysis

FOR IN VITRO RESEARCH USE ONLY

APPROVED BY: \_\_\_\_\_



## 35 Genes Targeted

AKT1	FGFR2	MAP2K1
ALK	FGFR3	MAP2K2
AR	GNA11	MET
BRAF	GNAQ	MTOR
CDK4	HRAS	NRAS
CTNNB1	IDH1	PDGFRA
DDR2	IDH2	PIK3CA
EGFR	JAK1	RAF1
ERBB2	JAK2	RET
ERBB3	JAK3	ROS1
ERBB4	KIT	SMO
ESR1	KRAS	

## Details of Variants

Column Header	Definition
<b>Gene ID</b>	The Gene symbol for the gene located at this position
<b>Chrom</b>	The chromosome where the target region is located
<b>Position</b>	The genomic position of the variant in the build of the genome database
<b>Ref</b>	The reference allele of the variation
<b>Variant</b>	The alternate allele of the variation
<b>Allele Call</b>	The type of variation, either heterozygous or homozygous
<b>Frequency</b>	The percentage of reads for the sample that includes the variant
<b>Quality</b>	The quality score of the variant
<b>Type</b>	The variant type, which can be SNP, MNP, Ins, Del, and Complex
<b>Allele Source</b>	Listed as Hotspot for alleles found within the hotspots sequencing file and Novel for all other alleles
<b>Coverage</b>	The number of reads that cover the region
<b>Allele Name</b>	The allele name that is defined within the hotspots sequencing file (if Novel allele, then there is no name)

C202118

Gene ID	Chrom	Position	Ref	Variant	Allele Call	Frequency	Quality	Type	Allele Source	Coverage	Allele Name
MTOR	chr1	11174378	C	T	Heterozygous	1.9	24	SNP	Novel	582	---
MTOR	chr1	11174389	C	T	Heterozygous	2.4	39	SNP	Novel	586	---
MTOR	chr1	11174394	C	T	Heterozygous	2.4	39	SNP	Novel	588	---
MTOR	chr1	11174401	G	A	Heterozygous	1.7	29	SNP	Novel	589	---
MTOR	chr1	11174435	C	T	Heterozygous	2	27	SNP	Novel	613	---
MTOR	chr1	11174437	C	T	Heterozygous	2.8	52	SNP	Novel	614	---
MTOR	chr1	11174468	C	T	Heterozygous	2	29	SNP	Novel	588	---
MTOR	chr1	11184604	C	T	Heterozygous	1.9	16	SNP	Novel	264	---
MTOR	chr1	11184628	G	A	Heterozygous	1.9	16	SNP	Novel	262	---
MTOR	chr1	11188039	C	T	Heterozygous	1.9	297	SNP	Novel	2389	---
MTOR	chr1	11188044	C	T	Heterozygous	2.8	172	SNP	Novel	2398	---
MTOR	chr1	11188069	C	T	Heterozygous	1.7	54	SNP	Novel	2391	---
MTOR	chr1	11188182	G	A	Heterozygous	3.1	20	SNP	Novel	129	---
MTOR	chr1	11188198	G	A	Heterozygous	2.9	20	SNP	Novel	136	---
MTOR	chr1	11188240	G	A	Heterozygous	3.4	20	SNP	Novel	117	---
MTOR	chr1	11189901	G	A	Heterozygous	4.2	19	SNP	Novel	96	---
MTOR	chr1	11190783	G	A	Heterozygous	5.6	58	SNP	Novel	177	---
MTOR	chr1	11190804	C	T	Heterozygous	2.2	17	SNP	Hotspot	180	COSM180789
MTOR	chr1	11190808	G	A	Heterozygous	2.9	23	SNP	Novel	173	---
MTOR	chr1	11190811	C	T	Heterozygous	5.3	55	SNP	Novel	187	---
MTOR	chr1	11190818	G	A	Heterozygous	6.4	70	SNP	Novel	187	---
MTOR	chr1	11190829	C	T	Heterozygous	3.8	34	SNP	Novel	185	---
MTOR	chr1	11190838	G	A	Heterozygous	5.5	55	SNP	Novel	182	---
MTOR	chr1	11190852	C	A	Heterozygous	2.7	22	SNP	Novel	187	---
MTOR	chr1	11190886	G	A	Heterozygous	1.7	12	SNP	Novel	176	---
MTOR	chr1	11217205	T	A	Heterozygous	3.6	213	SNP	Novel	1771	---
MTOR	chr1	11217206	C	T	Heterozygous	1.6	36	SNP	Novel	1804	---
MTOR	chr1	11217208	C	T	Heterozygous	1.5	29	SNP	Novel	1824	---
MTOR	chr1	11217229	G	A	Heterozygous	1.3	19	SNP	Novel	1888	---
MTOR	chr1	11217233	C	T	Heterozygous	1.3	22	SNP	Novel	1892	---
MTOR	chr1	11217252	G	A	Heterozygous	1.1	12	SNP	Novel	1905	---
MTOR	chr1	11217262	G	A	Heterozygous	1.2	14	SNP	Novel	1906	---
JAK1	chr1	65310468	G	A	Heterozygous	3.7	143	SNP	Novel	649	---
JAK1	chr1	65310486	G	A	Heterozygous	2.1	36	SNP	Novel	758	---
JAK1	chr1	65310492	G	A	Heterozygous	1.3	13	SNP	Novel	779	---

JAK1	chr1	65310496	C	A	Heterozygous	1.3	13	SNP	Novel	781	---
JAK1	chr1	65310507	G	A	Heterozygous	1.3	13	SNP	Novel	784	---
JAK1	chr1	65310517	C	T	Heterozygous	2.5	49	SNP	Hotspot	728	COSM41751
JAK1	chr1	65310518	G	A	Heterozygous	3.9	116	SNP	Hotspot	774	COSM3741347
JAK1	chr1	65310519	G	A	Heterozygous	1.5	19	SNP	Novel	779	---
JAK1	chr1	65310561	G	A	Heterozygous	1.6	20	SNP	Novel	763	---
JAK1	chr1	65312314	G	A	Heterozygous	1.4	23	SNP	Novel	207	---
JAK1	chr1	65312343	C	A	Heterozygous	1.8	14	SNP	Novel	222	---
JAK1	chr1	65312347	C	T	Heterozygous	5.4	64	SNP	Novel	223	---
JAK1	chr1	65312368	C	T	Heterozygous	1.8	14	SNP	Novel	227	---
JAK1	chr1	65312372	G	A	Heterozygous	4.8	56	SNP	Novel	227	---
JAK1	chr1	65312393	C	T	Heterozygous	2	17	SNP	Novel	248	---
NRAS	chr1	115252199	C	T	Heterozygous	4.5	45	SNP	Novel	199	---
NRAS	chr1	115252217	G	A	Heterozygous	4.5	45	SNP	Novel	199	---
NRAS	chr1	115252240	CC	TT	Heterozygous	4	49	MNP	Novel	200	---
NRAS	chr1	115252252	C	T	Heterozygous	3.6	33	SNP	Novel	192	---
NRAS	chr1	115252275	G	A	Heterozygous	1.8	14	SNP	Novel	219	---
NRAS	chr1	115252296	C	T	Heterozygous	2.4	35	SNP	Novel	205	---
NRAS	chr1	115256533	C	T	Heterozygous	1.1	18	SNP	Novel	3997	---
NRAS	chr1	115256559	C	T	Heterozygous	1	10	SNP	Novel	3997	---
NRAS	chr1	115258723	G	A	Heterozygous	1	10	SNP	Novel	4000	---
NRAS	chr1	115258727	G	A	Heterozygous	1	12	SNP	Novel	4000	---
NRAS	chr1	115258729	G	A	Heterozygous	1.1	21	SNP	Novel	4000	---
NRAS	chr1	115258738	C	T	Heterozygous	1.1	21	SNP	Novel	4000	---
NRAS	chr1	115258752	T	G	Heterozygous	1	12	SNP	Novel	3997	---
NRAS	chr1	115258758	C	T	Heterozygous	1.2	30	SNP	Novel	4000	---
DDR2	chr1	162724521	C	T	Heterozygous	5.7	27	SNP	Novel	88	---
DDR2	chr1	162724540	G	A	Heterozygous	3.3	15	SNP	Novel	91	---
DDR2	chr1	162724618	C	T	Heterozygous	5.4	27	SNP	Novel	93	---
ALK	chr2	29416081	C	T	Heterozygous	7.1	21	SNP	Novel	56	---
ALK	chr2	29416092	A	G	Heterozygous	8.3	28	SNP	Novel	60	---
ALK	chr2	29416160	G	T	Heterozygous	5	15	SNP	Novel	60	---
ALK	chr2	29416344	CC	TT	Heterozygous	2.2	16	MNP	Novel	183	---
ALK	chr2	29416353	C	T	Heterozygous	3.2	28	SNP	Novel	187	---
ALK	chr2	29416366	G	C	Homozygous	100	3627	SNP	Novel	187	---
ALK	chr2	29416423	C	T	Heterozygous	2.8	22	SNP	Novel	143	---
ALK	chr2	29416426	G	A	Heterozygous	3.5	26	SNP	Novel	144	---
ALK	chr2	29416429	G	A	Heterozygous	3.5	26	SNP	Novel	143	---

ALK	chr2	29416435	C	T	Heterozygous	4.6	84	SNP	Novel	130	---
ALK	chr2	29416550	C	T	Heterozygous	3.3	110	SNP	Novel	300	---
ALK	chr2	29416566	C	T	Heterozygous	2.6	43	SNP	Novel	306	---
ALK	chr2	29416572	T	C	Heterozygous	99	6124	SNP	Novel	311	---
ALK	chr2	29416571	AT	GC	Heterozygous	1	6124	MNP	Novel	311	---
ALK	chr2	29416583	G	A	Heterozygous	2.6	28	SNP	Novel	313	---
ALK	chr2	29416587	G	A	Heterozygous	2.6	68	SNP	Novel	310	---
ALK	chr2	29416598	G	A	Heterozygous	1.9	17	SNP	Novel	323	---
ALK	chr2	29416628	G	A	Heterozygous	3.1	41	SNP	Novel	356	---
ALK	chr2	29416633	G	A	Heterozygous	3.4	48	SNP	Novel	351	---
ALK	chr2	29416640	G	A	Heterozygous	2.3	25	SNP	Novel	354	---
ALK	chr2	29416642	G	A	Heterozygous	4	60	SNP	Novel	354	---
ALK	chr2	29416654	C	T	Heterozygous	1.4	27	SNP	Novel	351	---
ALK	chr2	29416656	C	T	Heterozygous	2.8	36	SNP	Novel	351	---
ALK	chr2	29420405	T	A	Heterozygous	3.6	263	SNP	Novel	2140	---
ALK	chr2	29420407	C	T	Heterozygous	1	10	SNP	Novel	2140	---
ALK	chr2	29420418	G	A	Heterozygous	1.4	31	SNP	Novel	2145	---
ALK	chr2	29420432	G	A	Heterozygous	1.2	18	SNP	Novel	2142	---
ALK	chr2	29420457	C	T	Heterozygous	1.8	52	SNP	Novel	2112	---
ALK	chr2	29432672	C	T	Heterozygous	1	10	SNP	Novel	4000	---
ALK	chr2	29436883	C	T	Heterozygous	2.8	20	SNP	Novel	141	---
ALK	chr2	29436904	G	A	Heterozygous	4.1	33	SNP	Novel	145	---
ALK	chr2	29436944	G	A	Heterozygous	1.9	13	SNP	Novel	159	---
ALK	chr2	29443595	G	A	Heterozygous	1.6	11	SNP	Novel	188	---
ALK	chr2	29443632	C	T	Heterozygous	3.7	34	SNP	Novel	190	---
ALK	chr2	29443634	G	A	Heterozygous	3.2	28	SNP	Novel	188	---
ALK	chr2	29443649	G	A	Heterozygous	4.5	42	SNP	Novel	179	---
ALK	chr2	29443658	G	A	Heterozygous	1.8	13	SNP	Novel	164	---
ALK	chr2	29443695	G	A	Heterozygous	1.9	13	SNP	Novel	159	---
ALK	chr2	29445209	C	A	Heterozygous	1.2	11	SNP	Novel	1217	---
ALK	chr2	29445215	G	A	Heterozygous	1.6	26	SNP	Novel	1222	---
ALK	chr2	29445220	G	A	Heterozygous	1.2	14	SNP	Novel	1214	---
ALK	chr2	29445244	C	T	Heterozygous	1.1	11	SNP	Novel	1231	---
ALK	chr2	29445245	G	A	Heterozygous	1.3	16	SNP	Novel	1232	---
ALK	chr2	29445257	G	A	Heterozygous	2.9	106	SNP	Novel	1266	---
ALK	chr2	29445265	C	T	Heterozygous	1.1	10	SNP	Novel	1266	---
ALK	chr2	29445280	C	A	Heterozygous	2.4	72	SNP	Novel	1233	---
ALK	chr2	29445298	GGA	-	Heterozygous	1.2	114	DEL	Novel	1113	---

ALK	chr2	29445386	C	T	Heterozygous	2.2	57	SNP	Novel	1244	---
ALK	chr2	29445388	C	T	Heterozygous	1.4	22	SNP	Novel	1243	---
ALK	chr2	29445404	G	A	Heterozygous	1.7	135	SNP	Novel	1267	---
ALK	chr2	29445423	C	T	Heterozygous	1.2	15	SNP	Novel	1287	---
ALK	chr2	29445439	C	T	Heterozygous	1.6	26	SNP	Novel	1214	---
ALK	chr2	29445445	C	T	Heterozygous	1.3	17	SNP	Novel	1213	---
ALK	chr2	29445458	G	T	Homozygous	100	25135	SNP	Novel	1211	---
ALK	chr2	29445472	C	T	Heterozygous	1	19	SNP	Novel	1187	---
ALK	chr2	29497950	G	A	Heterozygous	3.5	15	SNP	Novel	86	---
ALK	chr2	29498020	C	T	Heterozygous	4.5	21	SNP	Novel	89	---
IDH1	chr2	209113107	C	T	Heterozygous	1.3	15	SNP	Novel	998	---
IDH1	chr2	209113113	G	A	Heterozygous	2.8	80	SNP	Hotspot	998	COSM28747
IDH1	chr2	209113136	C	T	Heterozygous	1.7	28	SNP	Novel	999	---
IDH1	chr2	209113166	C	T	Heterozygous	1.8	31	SNP	Novel	926	---
IDH1	chr2	209113174	G	A	Heterozygous	1.4	17	SNP	Novel	925	---
IDH1	chr2	209113179	C	A	Heterozygous	1.4	17	SNP	Novel	925	---
IDH1	chr2	209113186	G	A	Heterozygous	1.7	28	SNP	Novel	926	---
ERBB4	chr2	212488759	G	A	Heterozygous	1.4	41	SNP	Novel	4000	---
ERBB4	chr2	212488762	T	C	Heterozygous	1	11	SNP	Novel	4000	---
ERBB4	chr2	212488764	C	T	Heterozygous	1.2	21	SNP	Novel	3998	---
RAF1	chr3	12632358	C	T	Heterozygous	3.1	116	SNP	Novel	1227	---
RAF1	chr3	12632364	C	T	Heterozygous	1.7	32	SNP	Novel	1233	---
RAF1	chr3	12632368	C	T	Heterozygous	2.2	60	SNP	Novel	1265	---
RAF1	chr3	12632386	G	A	Heterozygous	1.5	22	SNP	Novel	1228	---
RAF1	chr3	12632392	C	T	Heterozygous	1.4	19	SNP	Novel	1222	---
RAF1	chr3	12632394	C	T	Heterozygous	1.9	40	SNP	Novel	1228	---
RAF1	chr3	12632405	G	A	Heterozygous	2	44	SNP	Novel	1220	---
RAF1	chr3	12632420	T	C	Heterozygous	2.7	85	SNP	Novel	1193	---
RAF1	chr3	12632424	C	T	Heterozygous	5.8	349	SNP	Novel	1194	---
RAF1	chr3	12632440	C	T	Heterozygous	1.6	88	SNP	Novel	1101	---
RAF1	chr3	12645682	C	T	Heterozygous	1.2	23	SNP	Novel	4000	---
CTNNB1	chr3	41266030	G	A	Heterozygous	5.3	49	SNP	Novel	150	---
CTNNB1	chr3	41266040	G	A	Heterozygous	2	13	SNP	Novel	151	---
CTNNB1	chr3	41266042	C	T	Heterozygous	2	13	SNP	Novel	151	---
CTNNB1	chr3	41266050	C	T	Heterozygous	4.3	38	SNP	Novel	162	---
CTNNB1	chr3	41266071	G	A	Heterozygous	1.7	27	SNP	Novel	173	---
CTNNB1	chr3	41266096	G	A	Heterozygous	1.8	12	SNP	Novel	170	---
CTNNB1	chr3	41266120	C	T	Heterozygous	3.3	25	SNP	Novel	150	---

PIK3CA	chr3	178916731	G	A	Heterozygous	2.8	14	SNP	Novel	109	---
PIK3CA	chr3	178916735	C	T	Heterozygous	2.8	14	SNP	Novel	109	---
PIK3CA	chr3	178916926	G	A	Heterozygous	3.8	10	SNP	Novel	52	---
PIK3CA	chr3	178921472	G	A	Heterozygous	1.6	16	SNP	Novel	502	---
PIK3CA	chr3	178921478	A	G	Heterozygous	2.7	43	SNP	Novel	519	---
PIK3CA	chr3	178921479	G	A	Heterozygous	1.9	22	SNP	Novel	516	---
PIK3CA	chr3	178921486	C	T	Heterozygous	1.9	23	SNP	Novel	523	---
PIK3CA	chr3	178921487	T	C	Heterozygous	1.5	15	SNP	Novel	523	---
PIK3CA	chr3	178921518	C	T	Heterozygous	1.3	11	SNP	Novel	541	---
PIK3CA	chr3	178921533	C	T	Heterozygous	1.5	15	SNP	Novel	548	---
PIK3CA	chr3	178921563	C	T	Heterozygous	1.6	18	SNP	Novel	556	---
PIK3CA	chr3	178922274	C	A	Heterozygous	35.8	486	SNP	Novel	109	---
PIK3CA	chr3	178927995	G	A	Heterozygous	4.5	34	SNP	Novel	133	---
PIK3CA	chr3	178938864	G	A	Heterozygous	3.6	20	SNP	Novel	111	---
PIK3CA	chr3	178938911	T	C	Heterozygous	4.4	34	SNP	Novel	135	---
PIK3CA	chr3	178938915	C	T	Heterozygous	1.5	11	SNP	Novel	130	---
PIK3CA	chr3	178947891	G	A	Heterozygous	1	13	SNP	Novel	3987	---
PIK3CA	chr3	178952056	G	A	Heterozygous	1.6	19	SNP	Novel	705	---
PIK3CA	chr3	178952062	C	T	Heterozygous	1.6	59	SNP	Novel	702	---
PIK3CA	chr3	178952081	G	A	Heterozygous	2.5	47	SNP	Hotspot	671	COSM27273
PIK3CA	chr3	178952091	G	A	Heterozygous	2	28	SNP	Hotspot	663	COSM308548
PIK3CA	chr3	178952094	G	A	Heterozygous	1.4	14	SNP	Novel	657	---
FGFR3	chr4	1797287	G	A	Heterozygous	4.2	40	SNP	Novel	190	---
FGFR3	chr4	1797306	G	A	Heterozygous	2.1	16	SNP	Novel	194	---
FGFR3	chr4	1797310	G	A	Heterozygous	2.5	42	SNP	Novel	283	---
FGFR3	chr4	1797319	C	T	Heterozygous	3.1	36	SNP	Novel	291	---
FGFR3	chr4	1797686	C	T	Heterozygous	1.1	18	SNP	Novel	3994	---
FGFR3	chr4	1797693	C	T	Heterozygous	1.4	303	SNP	Novel	3920	---
FGFR3	chr4	1797742	G	A	Heterozygous	1.1	20	SNP	Novel	4000	---
FGFR3	chr4	1801187	G	A	Heterozygous	4.2	20	SNP	Novel	95	---
FGFR3	chr4	1801219	C	T	Heterozygous	3.1	14	SNP	Novel	96	---
FGFR3	chr4	1803569	C	T	Heterozygous	2.3	156	SNP	Novel	3639	---
FGFR3	chr4	1803570	C	T	Heterozygous	1.1	15	SNP	Novel	3640	---
FGFR3	chr4	1803576	C	T	Heterozygous	1.5	50	SNP	Novel	3635	---
FGFR3	chr4	1803597	C	T	Heterozygous	1	43	SNP	Novel	3617	---
FGFR3	chr4	1803602	G	A	Heterozygous	1.2	26	SNP	Novel	3688	---
FGFR3	chr4	1803603	G	A	Heterozygous	1.4	45	SNP	Novel	3698	---
FGFR3	chr4	1803604	C	T	Heterozygous	1.4	42	SNP	Novel	3698	---

FGFR3	chr4	1803611	G	A	Heterozygous	1.2	23	SNP	Novel	3701	---
FGFR3	chr4	1803618	G	A	Heterozygous	1.2	25	SNP	Novel	3702	---
FGFR3	chr4	1803636	G	A	Heterozygous	1.2	23	SNP	Novel	3713	---
FGFR3	chr4	1803646	G	A	Heterozygous	1.5	54	SNP	Novel	3690	---
FGFR3	chr4	1803647	C	T	Heterozygous	1.9	96	SNP	Novel	3656	---
FGFR3	chr4	1805789	C	T	Heterozygous	1.2	15	SNP	Novel	1888	---
FGFR3	chr4	1805802	C	T	Heterozygous	1.3	19	SNP	Novel	1902	---
FGFR3	chr4	1805811	C	T	Heterozygous	2.2	86	SNP	Novel	1980	---
FGFR3	chr4	1805814	G	A	Heterozygous	1.7	47	SNP	Novel	2044	---
FGFR3	chr4	1805826	C	T	Heterozygous	1.2	17	SNP	Novel	2056	---
FGFR3	chr4	1805828	C	T	Heterozygous	0.9	39	SNP	Novel	2035	---
FGFR3	chr4	1805834	G	A	Heterozygous	2.7	143	SNP	Novel	2055	---
FGFR3	chr4	1805840	G	A	Heterozygous	1.7	47	SNP	Novel	2052	---
FGFR3	chr4	1805857	T	-	Heterozygous	2	155	DEL	Novel	1998	---
FGFR3	chr4	1805864	C	T	Heterozygous	1.5	32	SNP	Novel	1686	---
FGFR3	chr4	1805875	C	T	Heterozygous	1.3	18	SNP	Novel	1637	---
FGFR3	chr4	1805889	C	T	Heterozygous	2	58	SNP	Novel	1519	---
FGFR3	chr4	1806088	G	A	Heterozygous	1.2	34	SNP	Novel	1516	---
FGFR3	chr4	1806104	G	A	Heterozygous	2.5	92	SNP	Novel	1581	---
FGFR3	chr4	1806109	C	T	Heterozygous	1.1	10	SNP	Novel	1578	---
FGFR3	chr4	1806115	C	T	Heterozygous	1.1	10	SNP	Novel	1580	---
FGFR3	chr4	1806121	G	A	Heterozygous	1.8	201	SNP	Novel	1541	---
FGFR3	chr4	1806136	G	A	Heterozygous	2.3	82	SNP	Novel	1578	---
FGFR3	chr4	1806154	G	A	Heterozygous	1.5	28	SNP	Novel	1513	---
FGFR3	chr4	1806168	G	A	Heterozygous	1.5	28	SNP	Novel	1511	---
FGFR3	chr4	1806176	C	T	Heterozygous	1.1	12	SNP	Novel	1503	---
FGFR3	chr4	1807841	G	A	Heterozygous	1.2	15	SNP	Novel	1987	---
FGFR3	chr4	1807850	G	A	Heterozygous	1.3	146	SNP	Novel	1992	---
FGFR3	chr4	1807855	G	A	Heterozygous	1.6	42	SNP	Novel	2006	---
FGFR3	chr4	1807894	G	A	Heterozygous	99	41565	SNP	Novel	2016	---
FGFR3	chr4	1807893	CG	TA	Heterozygous	1	41565	MNP	Novel	2016	---
FGFR3	chr4	1807903	G	A	Heterozygous	1.3	23	SNP	Novel	2023	---
FGFR3	chr4	1808312	G	A	Heterozygous	1.7	77	SNP	Novel	3998	---
FGFR3	chr4	1808313	G	A	Heterozygous	1.2	21	SNP	Novel	3997	---
FGFR3	chr4	1808318	C	T	Heterozygous	1.2	28	SNP	Novel	3990	---
FGFR3	chr4	1808322	C	T	Heterozygous	1.1	206	SNP	Novel	3983	---
FGFR3	chr4	1808330	C	T	Heterozygous	1.2	25	SNP	Novel	3962	---
FGFR3	chr4	1808357	G	A	Heterozygous	1	12	SNP	Novel	3999	---



FGFR3	chr4	1808382	G	A	Heterozygous	1.7	77	SNP	Novel	4000	---
FGFR3	chr4	1808391	G	A	Heterozygous	1	61	SNP	Novel	3958	---
FGFR3	chr4	1808393	C	T	Heterozygous	1.1	19	SNP	Novel	3945	---
FGFR3	chr4	1808396	C	T	Heterozygous	1.3	36	SNP	Novel	4000	---
FGFR3	chr4	1808398	G	A	Heterozygous	1.1	20	SNP	Novel	4000	---
FGFR3	chr4	1809273	G	A	Heterozygous	2.6	15	SNP	Novel	117	---
FGFR3	chr4	1809300	C	T	Heterozygous	3.7	26	SNP	Novel	134	---
FGFR3	chr4	1809470	C	T	Heterozygous	4.5	34	SNP	Novel	133	---
FGFR3	chr4	1809484	C	T	Heterozygous	6.4	66	SNP	Novel	172	---
FGFR3	chr4	1809490	T	C	Heterozygous	2.3	17	SNP	Novel	172	---
PDGFRA	chr4	55097718	C	T	Heterozygous	6.6	27	SNP	Novel	76	---
PDGFRA	chr4	55097719	C	G	Heterozygous	10.5	53	SNP	Novel	76	---
PDGFRA	chr4	55097720	C	T	Heterozygous	11.8	62	SNP	Novel	76	---
PDGFRA	chr4	55097749	C	T	Heterozygous	9.4	51	SNP	Novel	85	---
PDGFRA	chr4	55097831	C	T	Heterozygous	5.3	34	SNP	Novel	113	---
PDGFRA	chr4	55104318	G	A	Heterozygous	3.6	26	SNP	Novel	138	---
PDGFRA	chr4	55104340	T	G	Heterozygous	2.9	20	SNP	Novel	140	---
PDGFRA	chr4	55104348	T	C	Heterozygous	2.2	14	SNP	Novel	138	---
PDGFRA	chr4	55121546	C	T	Heterozygous	3.7	51	SNP	Novel	323	---
PDGFRA	chr4	55121553	C	G	Heterozygous	0.9	11	SNP	Novel	323	---
PDGFRA	chr4	55121577	A	G	Heterozygous	1.6	13	SNP	Novel	322	---
PDGFRA	chr4	55121585	C	T	Heterozygous	2.2	22	SNP	Novel	322	---
PDGFRA	chr4	55121601	C	T	Heterozygous	1.9	17	SNP	Novel	320	---
PDGFRA	chr4	55121606	T	A	Heterozygous	7.2	137	SNP	Novel	318	---
PDGFRA	chr4	55121611	C	T	Heterozygous	2.5	28	SNP	Novel	317	---
PDGFRA	chr4	55123710	G	A	Heterozygous	3.1	25	SNP	Novel	159	---
PDGFRA	chr4	55123749	G	A	Heterozygous	6.1	61	SNP	Novel	164	---
PDGFRA	chr4	55123804	C	A	Heterozygous	7.4	69	SNP	Novel	135	---
PDGFRA	chr4	55126236	G	A	Heterozygous	2.3	50	SNP	Novel	906	---
PDGFRA	chr4	55133668	C	T	Heterozygous	3.3	50	SNP	Novel	389	---
PDGFRA	chr4	55133682	G	A	Heterozygous	2.3	26	SNP	Novel	391	---
PDGFRA	chr4	55133710	C	T	Heterozygous	2.8	37	SNP	Novel	396	---
PDGFRA	chr4	55133738	C	T	Heterozygous	1.9	21	SNP	Novel	415	---
PDGFRA	chr4	55133746	C	T	Heterozygous	1.7	17	SNP	Novel	411	---
PDGFRA	chr4	55133754	C	T	Heterozygous	2.3	27	SNP	Novel	388	---
PDGFRA	chr4	55133764	C	T	Heterozygous	2.1	22	SNP	Novel	385	---
PDGFRA	chr4	55141055	A	G	Heterozygous	95	2649	SNP	Novel	139	---
PDGFRA	chr4	55144122	C	T	Heterozygous	1.2	21	SNP	Novel	3725	---

PDGFRA	chr4	55144129	C	T	Heterozygous	1.3	32	SNP	Novel	3999	---
PDGFRA	chr4	55144139	C	T	Heterozygous	1.7	81	SNP	Novel	3999	---
PDGFRA	chr4	55144179	C	T	Heterozygous	1.2	24	SNP	Novel	3974	---
PDGFRA	chr4	55152032	C	T	Heterozygous	1.4	11	SNP	Novel	282	---
PDGFRA	chr4	55152074	G	A	Heterozygous	1.9	18	SNP	Novel	308	---
PDGFRA	chr4	55152088	C	T	Heterozygous	3.5	46	SNP	Novel	313	---
PDGFRA	chr4	55152093	A	G	Heterozygous	1.6	13	SNP	Novel	312	---
PDGFRA	chr4	55152129	G	A	Heterozygous	3.8	52	SNP	Novel	318	---
PDGFRA	chr4	55152146	C	T	Heterozygous	4.1	60	SNP	Novel	315	---
PDGFRA	chr4	55161900	A	G	Heterozygous	2.6	68	SNP	Novel	1019	---
KIT	chr4	55566266	G	A	Homozygous	100	1722	SNP	Novel	90	---
KIT	chr4	55589738	G	A	Heterozygous	1.1	17	SNP	Novel	3647	---
KIT	chr4	55589758	G	A	Heterozygous	1.1	17	SNP	Novel	3711	---
KIT	chr4	55589788	G	A	Heterozygous	1	11	SNP	Novel	3721	---
KIT	chr4	55592168	G	A	Heterozygous	1.1	12	SNP	Novel	2467	---
KIT	chr4	55592235	C	T	Heterozygous	1.5	36	SNP	Novel	2520	---
KIT	chr4	55593425	G	A	Heterozygous	1.2	24	SNP	Novel	2960	---
KIT	chr4	55593474	C	T	Heterozygous	1.9	89	SNP	Novel	2939	---
KIT	chr4	55593577	C	T	Heterozygous	2	17	SNP	Novel	247	---
KIT	chr4	55593579	C	T	Heterozygous	3.6	40	SNP	Novel	247	---
KIT	chr4	55593609	G	A	Heterozygous	1.2	14	SNP	Hotspot	251	COSM1251
KIT	chr4	55593691	G	T	Heterozygous	1.6	12	SNP	Novel	254	---
KIT	chr4	55593695	C	T	Heterozygous	3.8	45	SNP	Novel	264	---
KIT	chr4	55594227	C	T	Heterozygous	2.6	51	SNP	Novel	689	---
KIT	chr4	55598872	C	T	Heterozygous	3.7	31	SNP	Novel	161	---
KIT	chr4	55598912	G	A	Heterozygous	1.9	13	SNP	Novel	162	---
KIT	chr4	55599272	C	T	Heterozygous	3.1	24	SNP	Novel	160	---
KIT	chr4	55599291	C	T	Heterozygous	8	85	SNP	Novel	162	---
KIT	chr4	55599325	C	T	Heterozygous	2.8	27	SNP	Novel	254	---
KIT	chr4	55599347	G	A	Heterozygous	3.1	33	SNP	Hotspot	255	COSM19110
ROS1	chr6	117638377	G	A	Heterozygous	3.2	48	SNP	Novel	408	---
ROS1	chr6	117638404	G	A	Heterozygous	2.1	26	SNP	Novel	475	---
ROS1	chr6	117638420	G	A	Heterozygous	2.4	32	SNP	Novel	463	---
ROS1	chr6	117641042	C	T	Heterozygous	1.4	13	SNP	Novel	285	---
ROS1	chr6	117641053	C	T	Heterozygous	1.4	10	SNP	Novel	295	---
ROS1	chr6	117641070	G	T	Heterozygous	2.5	28	SNP	Novel	319	---
ROS1	chr6	117641083	G	A	Heterozygous	2.6	29	SNP	Novel	304	---
ROS1	chr6	117641099	C	T	Heterozygous	2.7	29	SNP	Novel	301	---

ROS1	chr6	117641129	G	A	Heterozygous	2.9	32	SNP	Novel	272	---
ROS1	chr6	117641130	C	T	Heterozygous	4.2	57	SNP	Novel	285	---
ESR1	chr6	152419910	G	A	Heterozygous	2.3	29	SNP	Novel	432	---
ESR1	chr6	152419913	G	A	Heterozygous	1.9	20	SNP	Novel	432	---
ESR1	chr6	152419934	C	T	Heterozygous	1.8	20	SNP	Novel	436	---
ESR1	chr6	152419936	G	A	Heterozygous	2	24	SNP	Novel	440	---
ESR1	chr6	152419937	G	A	Heterozygous	2.5	34	SNP	Novel	440	---
ESR1	chr6	152419948	C	T	Heterozygous	2	23	SNP	Novel	447	---
ESR1	chr6	152419951	C	T	Heterozygous	2.9	45	SNP	Novel	446	---
ESR1	chr6	152419952	C	T	Heterozygous	2	24	SNP	Novel	446	---
ESR1	chr6	152419956	G	A	Heterozygous	1.6	15	SNP	Novel	445	---
ESR1	chr6	152419969	C	T	Heterozygous	2	40	SNP	Novel	444	---
ESR1	chr6	152420012	C	T	Heterozygous	1.6	15	SNP	Novel	437	---
ESR1	chr6	152420020	C	T	Heterozygous	2.8	40	SNP	Novel	430	---
EGFR	chr7	55198959	C	A	Heterozygous	1.9	18	SNP	Novel	375	---
EGFR	chr7	55198974	C	T	Heterozygous	1.5	13	SNP	Novel	399	---
EGFR	chr7	55199030	C	T	Heterozygous	2.3	35	SNP	Novel	556	---
EGFR	chr7	55211072	G	A	Heterozygous	1.3	36	SNP	Novel	4000	---
EGFR	chr7	55211078	C	T	Heterozygous	1.1	17	SNP	Novel	3991	---
EGFR	chr7	55211082	G	A	Heterozygous	1	11	SNP	Novel	4000	---
EGFR	chr7	55211097	G	A	Heterozygous	1.2	26	SNP	Novel	3993	---
EGFR	chr7	55219911	C	T	Heterozygous	1.6	31	SNP	Novel	1001	---
EGFR	chr7	55219920	C	T	Heterozygous	3.2	111	SNP	Novel	1047	---
EGFR	chr7	55219939	C	T	Heterozygous	1.7	28	SNP	Novel	1069	---
EGFR	chr7	55219951	T	C	Heterozygous	2.6	70	SNP	Novel	1009	---
EGFR	chr7	55219970	T	C	Heterozygous	4.4	166	SNP	Novel	919	---
EGFR	chr7	55221805	C	T	Heterozygous	6.3	408	SNP	Novel	351	---
EGFR	chr7	55221813	G	A	Heterozygous	4.4	72	SNP	Novel	363	---
EGFR	chr7	55221819	G	A	Heterozygous	1.6	15	SNP	Novel	368	---
EGFR	chr7	55221823	C	T	Heterozygous	1.9	19	SNP	Novel	368	---
EGFR	chr7	55221838	G	A	Heterozygous	3.5	48	SNP	Novel	347	---
EGFR	chr7	55221840	G	A	Heterozygous	3.7	54	SNP	Novel	347	---
EGFR	chr7	55221844	C	T	Heterozygous	6.3	122	SNP	Novel	349	---
EGFR	chr7	55221858	C	T	Heterozygous	1.8	16	SNP	Novel	337	---
EGFR	chr7	55221863	GGCCC	TGCCT	Heterozygous	7.7	184	MNP	Novel	324	---
EGFR	chr7	55221878	C	T	Heterozygous	2.4	25	SNP	Novel	286	---
EGFR	chr7	55221880	G	A	Heterozygous	1.8	15	SNP	Novel	281	---
EGFR	chr7	55221881	G	C	Heterozygous	3.6	42	SNP	Novel	281	---

EGFR	chr7	55221914	C	T	Heterozygous	3.9	69	SNP	Novel	258	---
EGFR	chr7	55227967	A	G	Heterozygous	4.1	11	SNP	Novel	49	---
EGFR	chr7	55227977	G	A	Heterozygous	4.7	21	SNP	Novel	85	---
EGFR	chr7	55232986	G	A	Heterozygous	1.1	16	SNP	Novel	4000	---
EGFR	chr7	55233014	C	T	Heterozygous	0.9	56	SNP	Novel	3990	---
EGFR	chr7	55233031	C	T	Heterozygous	0.9	41	SNP	Novel	3994	---
EGFR	chr7	55233038	G	A	Heterozygous	0.9	63	SNP	Novel	3956	---
EGFR	chr7	55233051	G	A	Heterozygous	1.1	19	SNP	Novel	3993	---
EGFR	chr7	55241647	C	T	Heterozygous	1.1	16	SNP	Novel	4000	---
EGFR	chr7	55241710	T	G	Heterozygous	1.6	64	SNP	Novel	3998	---
EGFR	chr7	55241727	G	A	Heterozygous	1.4	42	SNP	Novel	4000	---
EGFR	chr7	55242465	G	A	Heterozygous	2	10	SNP	Novel	99	---
EGFR	chr7	55242510	C	T	Heterozygous	2.6	14	SNP	Novel	116	---
EGFR	chr7	55242534	G	A	Heterozygous	2.6	14	SNP	Novel	115	---
EGFR	chr7	55249034	C	T	Heterozygous	2.1	18	SNP	Novel	235	---
EGFR	chr7	55249038	G	A	Heterozygous	1.7	28	SNP	Novel	232	---
EGFR	chr7	55249055	A	G	Heterozygous	2.5	22	SNP	Novel	241	---
EGFR	chr7	55249061	C	T	Heterozygous	2.1	17	SNP	Novel	241	---
EGFR	chr7	55249063	G	A	Heterozygous	4.6	54	SNP	Novel	241	---
EGFR	chr7	55249069	C	T	Heterozygous	1.7	13	SNP	Novel	236	---
EGFR	chr7	55249082	C	T	Heterozygous	2.1	18	SNP	Novel	233	---
EGFR	chr7	55249097	C	T	Heterozygous	1.7	13	SNP	Novel	230	---
EGFR	chr7	55259434	G	A	Heterozygous	1.3	11	SNP	Novel	449	---
EGFR	chr7	55259448	C	T	Heterozygous	2.7	69	SNP	Novel	452	---
EGFR	chr7	55259454	C	T	Heterozygous	1.8	19	SNP	Novel	451	---
EGFR	chr7	55259465	G	A	Heterozygous	1.3	10	SNP	Novel	473	---
EGFR	chr7	55259469	G	T	Heterozygous	1.3	10	SNP	Novel	473	---
EGFR	chr7	55259475	G	C	Heterozygous	44.6	3001	SNP	Novel	487	---
EGFR	chr7	55259505	G	A	Heterozygous	1.9	22	SNP	Novel	468	---
EGFR	chr7	55259511	G	A	Heterozygous	4.2	84	SNP	Novel	453	---
EGFR	chr7	55259513	G	A	Heterozygous	1.7	18	SNP	Novel	463	---
EGFR	chr7	55259515	T	G	Heterozygous	20.3	926	SNP	Hotspot	462	COSM6224
EGFR	chr7	55259532	G	A	Heterozygous	1.3	11	SNP	Novel	461	---
MET	chr7	116313540	C	T	Heterozygous	2.8	23	SNP	Novel	176	---
MET	chr7	116339334	G	A	Heterozygous	2	25	SNP	Novel	498	---
MET	chr7	116339336	C	T	Heterozygous	1.4	13	SNP	Novel	499	---
MET	chr7	116339352	G	A	Heterozygous	3.4	64	SNP	Novel	503	---
MET	chr7	116339387	G	A	Heterozygous	4.9	117	SNP	Novel	512	---

MET	chr7	116339399	G	A	Heterozygous	1.4	12	SNP	Novel	512	---
MET	chr7	116339409	G	A	Heterozygous	1.9	24	SNP	Novel	518	---
MET	chr7	116339428	C	T	Heterozygous	1.6	29	SNP	Novel	512	---
MET	chr7	116339435	G	A	Heterozygous	2.4	34	SNP	Novel	506	---
MET	chr7	116339441	C	T	Heterozygous	1.4	13	SNP	Novel	503	---
MET	chr7	116340219	G	A	Heterozygous	1	11	SNP	Novel	3040	---
MET	chr7	116340269	C	T	Heterozygous	1.2	19	SNP	Novel	3098	---
MET	chr7	116340309	G	A	Heterozygous	1.3	28	SNP	Novel	3003	---
MET	chr7	116398769	C	T	Heterozygous	1.3	29	SNP	Novel	3638	---
MET	chr7	116403181	C	T	Heterozygous	4.3	27	SNP	Novel	117	---
MET	chr7	116403248	C	T	Heterozygous	2.8	14	SNP	Novel	108	---
MET	chr7	116412004	T	A	Heterozygous	2	13	SNP	Novel	151	---
MET	chr7	116412016	G	A	Heterozygous	3.3	25	SNP	Novel	150	---
MET	chr7	116412068	G	T	Heterozygous	2.4	14	SNP	Novel	125	---
MET	chr7	116415100	C	T	Heterozygous	1.7	18	SNP	Novel	460	---
MET	chr7	116415108	C	T	Heterozygous	1.5	14	SNP	Novel	459	---
MET	chr7	116415125	C	T	Heterozygous	2.2	30	SNP	Novel	495	---
MET	chr7	116415153	G	A	Heterozygous	1.7	21	SNP	Novel	575	---
MET	chr7	116415155	C	T	Heterozygous	2.8	50	SNP	Novel	575	---
MET	chr7	116415159	G	A	Heterozygous	2.4	39	SNP	Novel	579	---
MET	chr7	116415199	G	A	Heterozygous	1.4	14	SNP	Novel	566	---
MET	chr7	116417531	G	T	Heterozygous	10.1	71	SNP	Novel	99	---
MET	chr7	116423409	C	T	Heterozygous	1.6	63	SNP	Novel	3999	---
MET	chr7	116423432	G	A	Heterozygous	1.1	18	SNP	Novel	4000	---
MET	chr7	116423482	G	A	Heterozygous	1	13	SNP	Novel	3981	---
MET	chr7	116434484	G	A	Heterozygous	3.2	48	SNP	Novel	409	---
MET	chr7	116434497	G	T	Heterozygous	1.5	13	SNP	Novel	412	---
MET	chr7	116434499	T	G	Heterozygous	12.8	438	SNP	Novel	413	---
MET	chr7	116434504	T	C	Heterozygous	12.3	351	SNP	Novel	365	---
SMO	chr7	128845496	G	A	Heterozygous	2.1	22	SNP	Novel	389	---
SMO	chr7	128845510	C	T	Heterozygous	4.2	75	SNP	Novel	406	---
SMO	chr7	128845517	G	A	Heterozygous	2	21	SNP	Novel	407	---
SMO	chr7	128845534	C	T	Heterozygous	2.2	26	SNP	Novel	408	---
SMO	chr7	128845541	G	A	Heterozygous	2.2	26	SNP	Novel	410	---
SMO	chr7	128845571	C	T	Heterozygous	2.4	35	SNP	Hotspot	416	OM3152
SMO	chr7	128846367	G	A	Heterozygous	1	12	SNP	Novel	4000	---
SMO	chr7	128846370	C	T	Heterozygous	1.1	16	SNP	Novel	3999	---
SMO	chr7	128846373	C	T	Heterozygous	1.4	39	SNP	Novel	4000	---

SMO	chr7	128846382	C	T	Heterozygous	1.5	173	SNP	Novel	3969	---
SMO	chr7	128846392	C	T	Heterozygous	1.3	34	SNP	Novel	3999	---
SMO	chr7	128846395	G	C	Heterozygous	3.3	400	SNP	Novel	3956	---
SMO	chr7	128846412	C	T	Heterozygous	1.4	44	SNP	Novel	4000	---
SMO	chr7	128846419	C	T	Heterozygous	1.4	44	SNP	Novel	4000	---
SMO	chr7	128849111	C	T	Heterozygous	2.2	20	SNP	Novel	278	---
SMO	chr7	128849114	C	T	Heterozygous	2.5	25	SNP	Novel	278	---
SMO	chr7	128849117	C	T	Heterozygous	2.9	31	SNP	Novel	279	---
SMO	chr7	128849124	C	T	Heterozygous	3.1	36	SNP	Novel	286	---
SMO	chr7	128849128	A	G	Heterozygous	1.7	15	SNP	Novel	286	---
SMO	chr7	128849148	C	T	Heterozygous	1.7	14	SNP	Novel	289	---
SMO	chr7	128849153	G	A	Heterozygous	2.3	23	SNP	Novel	304	---
SMO	chr7	128849158	T	C	Heterozygous	2.3	24	SNP	Novel	300	---
SMO	chr7	128849169	C	T	Heterozygous	3.6	47	SNP	Novel	307	---
SMO	chr7	128849179	C	T	Heterozygous	4.6	67	SNP	Novel	307	---
SMO	chr7	128849197	C	T	Heterozygous	3.8	50	SNP	Novel	287	---
SMO	chr7	128850272	G	A	Heterozygous	1.4	35	SNP	Novel	2937	---
SMO	chr7	128850360	G	A	Heterozygous	1.5	47	SNP	Novel	3523	---
BRAF	chr7	140434412	C	T	Heterozygous	1.2	12	SNP	Novel	882	---
BRAF	chr7	140434424	C	T	Heterozygous	1.1	35	SNP	Novel	880	---
BRAF	chr7	140434438	G	A	Heterozygous	1.7	28	SNP	Novel	916	---
BRAF	chr7	140434441	T	C	Heterozygous	1.1	26	SNP	Novel	903	---
BRAF	chr7	140434447	G	A	Heterozygous	1.7	69	SNP	Novel	969	---
BRAF	chr7	140434483	G	A	Heterozygous	1.5	55	SNP	Novel	930	---
BRAF	chr7	140434488	C	T	Heterozygous	1.7	54	SNP	Novel	928	---
BRAF	chr7	140476706	A	G	Heterozygous	2.1	16	SNP	Novel	188	---
BRAF	chr7	140476713	C	T	Heterozygous	4.4	53	SNP	Novel	251	---
BRAF	chr7	140476721	T	C	Heterozygous	1.9	16	SNP	Novel	259	---
BRAF	chr7	140476729	C	T	Heterozygous	1.6	12	SNP	Novel	251	---
BRAF	chr7	140476753	G	A	Heterozygous	2	17	SNP	Novel	251	---
BRAF	chr7	140476759	C	T	Heterozygous	2	17	SNP	Novel	250	---
BRAF	chr7	140476922	G	A	Heterozygous	1	13	SNP	Novel	4000	---
BRAF	chr7	140476925	G	A	Heterozygous	1.4	49	SNP	Novel	4000	---
BRAF	chr7	140481438	A	G	Heterozygous	1.3	36	SNP	Novel	4000	---
BRAF	chr7	140481455	C	T	Heterozygous	1.1	20	SNP	Novel	3996	---
BRAF	chr7	140482795	G	A	Heterozygous	1.9	26	SNP	Novel	269	---
BRAF	chr7	140482814	C	T	Heterozygous	2.9	31	SNP	Novel	274	---
BRAF	chr7	140482825	C	T	Heterozygous	1.5	12	SNP	Novel	274	---

BRAF	chr7	140482830	C	T	Heterozygous	4.4	58	SNP	Novel	275	---
BRAF	chr7	140482842	G	A	Heterozygous	3.9	50	SNP	Novel	280	---
BRAF	chr7	140482857	C	T	Heterozygous	2.5	25	SNP	Novel	279	---
BRAF	chr7	140494200	C	T	Heterozygous	1.1	10	SNP	Novel	1436	---
BRAF	chr7	140494205	G	A	Heterozygous	1.1	11	SNP	Novel	1446	---
BRAF	chr7	140494208	C	T	Heterozygous	1.9	49	SNP	Novel	1446	---
BRAF	chr7	140494226	G	A	Heterozygous	1.1	12	SNP	Novel	1523	---
BRAF	chr7	140494227	G	A	Heterozygous	1.1	12	SNP	Novel	1523	---
BRAF	chr7	140494244	G	A	Heterozygous	2	61	SNP	Novel	1614	---
BRAF	chr7	140494246	C	T	Heterozygous	2.6	104	SNP	Novel	1617	---
BRAF	chr7	140494264	G	A	Heterozygous	1.3	18	SNP	Novel	1461	---
BRAF	chr7	140500250	G	A	Heterozygous	1	13	SNP	Novel	4000	---
BRAF	chr7	140500267	G	A	Heterozygous	1.1	16	SNP	Novel	3998	---
BRAF	chr7	140500290	C	A	Heterozygous	2.3	168	SNP	Novel	3982	---
BRAF	chr7	140501294	G	A	Heterozygous	1.1	15	SNP	Novel	3999	---
BRAF	chr7	140507789	C	T	Heterozygous	1.3	29	SNP	Novel	2976	---
BRAF	chr7	140507798	C	T	Heterozygous	2.3	133	SNP	Novel	3003	---
JAK2	chr9	5073801	G	A	Heterozygous	2.5	14	SNP	Novel	122	---
JAK2	chr9	5073803	C	T	Heterozygous	49.2	859	SNP	Novel	120	---
GNAQ	chr9	80409408	C	T	Heterozygous	2.3	17	SNP	Novel	177	---
GNAQ	chr9	80409421	C	T	Heterozygous	3.4	29	SNP	Novel	177	---
GNAQ	chr9	80409436	G	A	Heterozygous	2.3	17	SNP	Novel	177	---
GNAQ	chr9	80409438	T	G	Heterozygous	4	36	SNP	Novel	177	---
GNAQ	chr9	80409443	G	A	Heterozygous	2.3	17	SNP	Novel	176	---
GNAQ	chr9	80409453	C	T	Heterozygous	1.9	13	SNP	Novel	161	---
GNAQ	chr9	80409484	C	T	Heterozygous	1.9	13	SNP	Novel	158	---
GNAQ	chr9	80412458	C	T	Heterozygous	2.8	1088	SNP	Novel	3203	---
GNAQ	chr9	80412483	G	A	Heterozygous	2.3	146	SNP	Novel	3301	---
GNAQ	chr9	80412484	G	A	Heterozygous	1	12	SNP	Novel	3301	---
GNAQ	chr9	80412491	C	T	Heterozygous	1.1	15	SNP	Novel	3301	---
GNAQ	chr9	80412515	G	A	Heterozygous	1.2	20	SNP	Novel	3351	---
GNAQ	chr9	80412516	C	T	Heterozygous	1.8	84	SNP	Novel	3350	---
RET	chr10	43609077	C	T	Heterozygous	1.5	16	SNP	Novel	687	---
RET	chr10	43609081	C	T	Heterozygous	1.3	12	SNP	Novel	685	---
RET	chr10	43609086	G	A	Heterozygous	1.6	19	SNP	Novel	702	---
RET	chr10	43609105	G	A	Heterozygous	2.7	61	SNP	Novel	770	---
RET	chr10	43609108	C	A	Heterozygous	1.5	19	SNP	Novel	776	---
RET	chr10	43609136	C	T	Heterozygous	2.6	139	SNP	Novel	783	---

RET	chr10	43609138	G	A	Heterozygous	1.4	15	SNP	Novel	789	---
RET	chr10	43609158	C	A	Heterozygous	1.4	26	SNP	Novel	777	---
RET	chr10	43609175	T	C	Heterozygous	3.1	77	SNP	Novel	779	---
RET	chr10	43609880	G	A	Heterozygous	7.1	119	SNP	Novel	267	---
RET	chr10	43609884	C	T	Heterozygous	4.1	52	SNP	Novel	267	---
RET	chr10	43609892	T	G	Heterozygous	1.5	11	SNP	Novel	268	---
RET	chr10	43609893	G	A	Heterozygous	2.2	21	SNP	Novel	268	---
RET	chr10	43609941	C	T	Heterozygous	7.6	144	SNP	Novel	290	---
RET	chr10	43609977	C	T	Heterozygous	1.5	12	SNP	Novel	262	---
RET	chr10	43609985	T	C	Heterozygous	2	16	SNP	Novel	246	---
RET	chr10	43610004	G	A	Heterozygous	2.3	19	SNP	Novel	217	---
RET	chr10	43613795	G	A	Heterozygous	1.3	26	SNP	Novel	2582	---
RET	chr10	43613802	G	A	Heterozygous	1.6	44	SNP	Novel	2607	---
RET	chr10	43613827	C	T	Heterozygous	1.2	18	SNP	Novel	2646	---
RET	chr10	43613834	G	A	Heterozygous	1.4	36	SNP	Novel	2640	---
RET	chr10	43613836	G	A	Heterozygous	1	10	SNP	Novel	2684	---
RET	chr10	43613843	G	T	Heterozygous	49.4	19831	SNP	Novel	2690	---
RET	chr10	43613845	G	A	Heterozygous	1.1	13	SNP	Novel	2692	---
RET	chr10	43613864	C	T	Heterozygous	1.7	54	SNP	Novel	2634	---
RET	chr10	43613870	C	T	Heterozygous	1.6	50	SNP	Novel	2649	---
RET	chr10	43613876	G	A	Heterozygous	1	11	SNP	Novel	2615	---
RET	chr10	43615573	G	A	Heterozygous	29.7	88	SNP	Novel	37	---
RET	chr10	43615649	C	T	Heterozygous	6.7	15	SNP	Novel	45	---
RET	chr10	43615664	G	A	Heterozygous	13.3	36	SNP	Novel	45	---
RET	chr10	43617331	C	T	Heterozygous	4.7	44	SNP	Novel	171	---
RET	chr10	43617360	T	G	Heterozygous	5.2	53	SNP	Novel	192	---
RET	chr10	43617366	C	T	Heterozygous	4.8	45	SNP	Novel	167	---
RET	chr10	43617388	C	T	Heterozygous	3.7	31	SNP	Novel	162	---
RET	chr10	43617397	C	T	Heterozygous	4.6	40	SNP	Hotspot	151	COSM3415038
RET	chr10	43617428	C	T	Heterozygous	2.7	19	SNP	Novel	149	---
FGFR2	chr10	123247528	C	T	Heterozygous	1.3	17	SNP	Novel	1187	---
FGFR2	chr10	123247543	C	T	Heterozygous	2	46	SNP	Novel	1187	---
FGFR2	chr10	123247559	G	A	Heterozygous	1.2	13	SNP	Novel	1150	---
FGFR2	chr10	123257983	C	T	Heterozygous	1.1	11	SNP	Novel	1142	---
FGFR2	chr10	123257998	C	T	Heterozygous	1.1	10	SNP	Novel	1169	---
FGFR2	chr10	123258004	C	T	Heterozygous	1.6	28	SNP	Novel	1166	---
FGFR2	chr10	123274722	C	T	Heterozygous	2.2	31	SNP	Novel	551	---
FGFR2	chr10	123274723	G	A	Heterozygous	2.4	36	SNP	Novel	551	---



FGFR2	chr10	123274754	G	A	Heterozygous	1.8	21	SNP	Novel	561	---
FGFR2	chr10	123274760	G	A	Heterozygous	2	26	SNP	Novel	561	---
FGFR2	chr10	123274768	C	T	Heterozygous	2.9	48	SNP	Novel	559	---
FGFR2	chr10	123274771	T	A	Heterozygous	2.8	50	SNP	Novel	580	---
FGFR2	chr10	123274779	A	G	Heterozygous	2.2	34	SNP	Novel	578	---
FGFR2	chr10	123274798	C	T	Heterozygous	2.1	30	SNP	Novel	572	---
FGFR2	chr10	123274819	T	C	Heterozygous	1.1	18	SNP	Novel	562	---
FGFR2	chr10	123274827	C	T	Heterozygous	1.3	12	SNP	Novel	534	---
FGFR2	chr10	123274829	A	-	Heterozygous	1.5	15	DEL	Novel	520	---
FGFR2	chr10	123276895	G	A	Heterozygous	2.1	21	SNP	Novel	340	---
FGFR2	chr10	123276923	C	T	Heterozygous	2.3	26	SNP	Novel	341	---
FGFR2	chr10	123276928	C	T	Heterozygous	1.5	12	SNP	Novel	341	---
FGFR2	chr10	123276956	C	T	Heterozygous	1.8	16	SNP	Novel	340	---
FGFR2	chr10	123276963	G	A	Heterozygous	1.8	16	SNP	Novel	336	---
FGFR2	chr10	123276975	G	A	Heterozygous	2.4	26	SNP	Novel	332	---
FGFR2	chr10	123276976	G	A	Heterozygous	1.2	8	SNP	Novel	332	---
FGFR2	chr10	123279613	G	A	Heterozygous	1.3	14	SNP	Novel	933	---
FGFR2	chr10	123279629	G	A	Heterozygous	1.8	31	SNP	Novel	935	---
FGFR2	chr10	123279675	G	A	Heterozygous	2	42	SNP	Hotspot	1045	COSM1346291
FGFR2	chr10	123279684	-	C	Heterozygous	4.5	194	INS	Novel	1044	---
FGFR2	chr10	123279696	G	A	Heterozygous	1.7	28	SNP	Novel	985	---
FGFR2	chr10	123279708	G	A	Heterozygous	1.5	20	SNP	Novel	940	---
FGFR2	chr10	123284063	G	A	Heterozygous	2.6	28	SNP	Novel	305	---
FGFR2	chr10	123284074	C	T	Heterozygous	1.6	14	SNP	Novel	306	---
FGFR2	chr10	123284085	G	A	Heterozygous	4.2	61	SNP	Novel	306	---
FGFR2	chr10	123284092	C	T	Heterozygous	1.9	18	SNP	Novel	308	---
FGFR2	chr10	123284097	G	A	Heterozygous	1.9	18	SNP	Novel	314	---
FGFR2	chr10	123284107	G	A	Heterozygous	1.6	13	SNP	Novel	310	---
FGFR2	chr10	123284111	T	G	Heterozygous	1.6	13	SNP	Novel	310	---
FGFR2	chr10	123284124	G	A	Heterozygous	3.6	48	SNP	Novel	304	---
FGFR2	chr10	123284141	C	T	Heterozygous	2	18	SNP	Novel	306	---
FGFR2	chr10	123284170	G	A	Heterozygous	2.2	20	SNP	Novel	275	---
FGFR2	chr10	123306077	C	T	Heterozygous	1.2	11	SNP	Novel	744	---
FGFR2	chr10	123312175	G	A	Heterozygous	3.8	40	SNP	Novel	212	---
FGFR2	chr10	123312192	T	G	Heterozygous	5.4	64	SNP	Novel	221	---
FGFR2	chr10	123312263	G	A	Heterozygous	4.3	40	SNP	Novel	208	---
HRAS	chr11	533815	C	A	Heterozygous	1.9	16	SNP	Novel	265	---
HRAS	chr11	533827	C	T	Heterozygous	1.5	11	SNP	Novel	271	---

HRAS	chr11	533894	G	A	Heterozygous	1.6	14	SNP	Novel	308	---
HRAS	chr11	533906	C	T	Heterozygous	2.3	23	SNP	Novel	306	---
HRAS	chr11	534264	G	A	Heterozygous	1.5	20	SNP	Novel	1025	---
HRAS	chr11	534283	C	T	Heterozygous	1.6	26	SNP	Novel	1035	---
HRAS	chr11	534291	G	A	Heterozygous	1.9	36	SNP	Novel	1023	---
HRAS	chr11	534300	A	T	Heterozygous	1.6	25	SNP	Novel	975	---
HRAS	chr11	534318	G	T	Heterozygous	1.2	11	SNP	Novel	946	---
HRAS	chr11	534335	G	A	Heterozygous	1.8	95	SNP	Novel	777	---
HRAS	chr11	534341	G	A	Heterozygous	1.8	27	SNP	Novel	777	---
HRAS	chr11	534344	C	T	Heterozygous	2.2	40	SNP	Novel	774	---
HRAS	chr11	534351	C	T	Heterozygous	1.8	27	SNP	Novel	763	---
KRAS	chr12	25364774	C	T	Heterozygous	2.6	19	SNP	Novel	153	---
KRAS	chr12	25364802	G	A	Heterozygous	6.3	63	SNP	Novel	159	---
KRAS	chr12	25380279	C	T	Heterozygous	1.6	30	SNP	Novel	1284	---
KRAS	chr12	25380280	C	T	Heterozygous	1.9	45	SNP	Novel	1284	---
KRAS	chr12	25380282	G	A	Heterozygous	3.3	135	SNP	Novel	1284	---
KRAS	chr12	25380315	C	T	Heterozygous	2.1	53	SNP	Novel	1303	---
KRAS	chr12	25380337	T	G	Heterozygous	3.8	183	SNP	Novel	1281	---
KRAS	chr12	25380338	G	A	Heterozygous	1.5	24	SNP	Novel	1275	---
KRAS	chr12	25386052	C	T	Heterozygous	2.1	14	SNP	Novel	144	---
KRAS	chr12	25386054	C	G	Heterozygous	48.3	939	SNP	Novel	151	---
KRAS	chr12	25386062	-	A	Homozygous	100	1548	INS	Novel	159	---
KRAS	chr12	25386063	C	A	Heterozygous	89.7	3831	SNP	Novel	195	---
KRAS	chr12	25386063	C	G	Heterozygous	10.3	3831	SNP	Novel	195	---
KRAS	chr12	25386109	G	A	Heterozygous	1.9	16	SNP	Novel	258	---
KRAS	chr12	25386946	C	T	Heterozygous	3	14	SNP	Novel	101	---
KRAS	chr12	25387199	G	A	Heterozygous	4.1	36	SNP	Novel	145	---
KRAS	chr12	25387258	G	A	Heterozygous	2	13	SNP	Novel	152	---
KRAS	chr12	25389222	G	A	Heterozygous	1.2	10	SNP	Novel	573	---
KRAS	chr12	25391222	G	A	Heterozygous	12.5	21	SNP	Novel	32	---
KRAS	chr12	25398204	T	C	Heterozygous	4.3	58	SNP	Novel	276	---
KRAS	chr12	25398232	C	T	Heterozygous	2.4	28	SNP	Novel	375	---
KRAS	chr12	25398241	A	G	Heterozygous	11.3	396	SNP	Novel	468	---
KRAS	chr12	25398252	G	A	Heterozygous	1.7	18	SNP	Novel	469	---
KRAS	chr12	25398266	G	A	Heterozygous	1.9	22	SNP	Novel	465	---
KRAS	chr12	25398276	C	T	Heterozygous	3.4	58	SNP	Novel	467	---
KRAS	chr12	25398300	C	T	Heterozygous	1.5	14	SNP	Novel	463	---
KRAS	chr12	25400210	G	A	Heterozygous	1.7	15	SNP	Novel	358	---

KRAS	chr12	25400237	C	T	Heterozygous	1.7	15	SNP	Novel	352	---
KRAS	chr12	25400257	C	T	Heterozygous	4.6	75	SNP	Novel	348	---
ERBB3	chr12	56477609	T	C	Heterozygous	2	36	SNP	Novel	918	---
ERBB3	chr12	56477614	G	A	Heterozygous	4.6	193	SNP	Novel	951	---
ERBB3	chr12	56477626	G	A	Heterozygous	1.8	30	SNP	Novel	949	---
ERBB3	chr12	56477633	G	A	Heterozygous	5	272	SNP	Novel	951	---
ERBB3	chr12	56477650	G	A	Heterozygous	2.9	82	SNP	Novel	980	---
ERBB3	chr12	56477653	C	T	Heterozygous	1.9	36	SNP	Novel	985	---
ERBB3	chr12	56477656	G	A	Heterozygous	2	93	SNP	Novel	989	---
ERBB3	chr12	56477668	C	T	Heterozygous	1.3	15	SNP	Novel	995	---
ERBB3	chr12	56477674	C	T	Heterozygous	1.4	18	SNP	Novel	991	---
ERBB3	chr12	56477680	C	T	Heterozygous	2.6	69	SNP	Novel	996	---
ERBB3	chr12	56477681	C	A	Heterozygous	5.4	269	SNP	Novel	995	---
ERBB3	chr12	56477694	A	T	Homozygous	99.9	1722	SNP	Novel	828	---
ERBB3	chr12	56477696	C	T	Heterozygous	1.8	66	SNP	Novel	811	---
ERBB3	chr12	56478808	C	T	Heterozygous	1.1	12	SNP	Novel	1728	---
ERBB3	chr12	56478811	G	A	Heterozygous	2.2	76	SNP	Novel	1729	---
ERBB3	chr12	56478837	C	T	Heterozygous	1.1	13	SNP	Novel	1748	---
ERBB3	chr12	56478843	C	T	Heterozygous	1.5	32	SNP	Novel	1751	---
ERBB3	chr12	56478852	G	A	Heterozygous	2	60	SNP	Novel	1740	---
ERBB3	chr12	56478856	G	A	Heterozygous	1.2	16	SNP	Novel	1743	---
ERBB3	chr12	56478859	G	A	Heterozygous	1.4	23	SNP	Novel	1752	---
ERBB3	chr12	56478867	C	T	Heterozygous	1.3	18	SNP	Novel	1751	---
ERBB3	chr12	56478898	C	T	Heterozygous	1.1	12	SNP	Novel	1597	---
ERBB3	chr12	56478899	G	T	Heterozygous	1.5	28	SNP	Novel	1583	---
ERBB3	chr12	56481588	C	T	Heterozygous	3.2	37	SNP	Novel	279	---
ERBB3	chr12	56481589	C	T	Heterozygous	4.7	66	SNP	Novel	279	---
ERBB3	chr12	56481598	T	C	Heterozygous	5.4	79	SNP	Novel	279	---
ERBB3	chr12	56481599	C	T	Heterozygous	1.8	15	SNP	Novel	279	---
ERBB3	chr12	56481602	C	T	Heterozygous	2.5	25	SNP	Novel	279	---
ERBB3	chr12	56481628	C	T	Heterozygous	3	29	SNP	Novel	263	---
ERBB3	chr12	56481657	G	A	Heterozygous	5.1	75	SNP	Novel	274	---
ERBB3	chr12	56481672	C	T	Heterozygous	2.5	25	SNP	Novel	278	---
ERBB3	chr12	56481674	G	A	Heterozygous	2.5	25	SNP	Novel	278	---
ERBB3	chr12	56481687	C	T	Heterozygous	3.3	37	SNP	Novel	272	---
ERBB3	chr12	56482299	C	T	Heterozygous	1.6	63	SNP	Novel	3861	---
ERBB3	chr12	56482300	T	C	Heterozygous	1.1	15	SNP	Novel	3861	---
ERBB3	chr12	56482312	C	T	Heterozygous	3.4	427	SNP	Novel	4000	---

ERBB3	chr12	56482313	C	T	Heterozygous	1.2	23	SNP	Novel	4000	---
ERBB3	chr12	56482315	C	T	Heterozygous	4.7	809	SNP	Novel	3999	---
ERBB3	chr12	56482318	C	T	Heterozygous	1	12	SNP	Novel	3999	---
ERBB3	chr12	56482321	C	T	Heterozygous	1.1	20	SNP	Novel	3970	---
ERBB3	chr12	56482341	G	A	Heterozygous	1.2	25	SNP	Hotspot	3999	COSM941489
ERBB3	chr12	56482348	C	T	Heterozygous	1.2	24	SNP	Novel	3995	---
ERBB3	chr12	56482352	C	T	Heterozygous	1.7	81	SNP	Novel	4000	---
ERBB3	chr12	56482372	C	T	Heterozygous	1.2	21	SNP	Novel	3594	---
ERBB3	chr12	56482376	C	T	Heterozygous	1.8	77	SNP	Novel	3591	---
ERBB3	chr12	56482529	C	T	Heterozygous	3.1	39	SNP	Novel	322	---
ERBB3	chr12	56482564	C	T	Heterozygous	2.8	35	SNP	Novel	355	---
ERBB3	chr12	56482578	G	A	Heterozygous	5.2	100	SNP	Novel	387	---
ERBB3	chr12	56482581	C	T	Heterozygous	8.5	222	SNP	Novel	386	---
ERBB3	chr12	56482592	G	A	Heterozygous	2.6	32	SNP	Novel	388	---
CDK4	chr12	58142086	G	A	Heterozygous	5	20	SNP	Novel	80	---
CDK4	chr12	58142122	G	A	Heterozygous	6.1	27	SNP	Novel	82	---
CDK4	chr12	58142126	G	A	Heterozygous	6.5	28	SNP	Novel	77	---
CDK4	chr12	58142139	C	T	Heterozygous	2.7	10	SNP	Novel	74	---
CDK4	chr12	58142142	C	T	Heterozygous	3.2	10	SNP	Novel	63	---
CDK4	chr12	58142155	G	A	Heterozygous	7.9	28	SNP	Novel	63	---
CDK4	chr12	58142253	G	A	Heterozygous	1.6	14	SNP	Novel	380	---
CDK4	chr12	58142264	G	A	Heterozygous	1.6	24	SNP	Novel	381	---
CDK4	chr12	58142291	G	A	Heterozygous	3	43	SNP	Novel	396	---
CDK4	chr12	58142297	C	T	Heterozygous	2.6	32	SNP	Novel	392	---
CDK4	chr12	58142315	G	A	Heterozygous	1.4	11	SNP	Novel	353	---
CDK4	chr12	58142329	C	T	Heterozygous	4.8	81	SNP	Novel	352	---
CDK4	chr12	58142337	G	T	Heterozygous	1.7	15	SNP	Novel	352	---
CDK4	chr12	58142357	C	T	Heterozygous	2.7	32	SNP	Novel	333	---
CDK4	chr12	58142889	C	T	Heterozygous	1	11	SNP	Novel	3468	---
CDK4	chr12	58142899	G	A	Heterozygous	1.1	16	SNP	Novel	3555	---
CDK4	chr12	58142904	C	T	Heterozygous	1.9	104	SNP	Novel	3571	---
CDK4	chr12	58142921	C	T	Heterozygous	1.1	15	SNP	Novel	3634	---
CDK4	chr12	58142951	G	A	Heterozygous	1.1	14	SNP	Novel	3711	---
CDK4	chr12	58142965	C	T	Heterozygous	1	11	SNP	Novel	3632	---
CDK4	chr12	58142968	C	T	Heterozygous	1	14	SNP	Novel	3628	---
CDK4	chr12	58142978	G	A	Heterozygous	1.3	35	SNP	Novel	3589	---
CDK4	chr12	58142983	C	T	Heterozygous	3	275	SNP	Novel	3274	---
CDK4	chr12	58143259	C	T	Heterozygous	2.6	92	SNP	Novel	1444	---

CDK4	chr12	58143260	G	A	Heterozygous	1.2	13	SNP	Novel	1449	---
CDK4	chr12	58143295	G	A	Heterozygous	1.3	19	SNP	Novel	1427	---
CDK4	chr12	58143302	G	A	Heterozygous	1.5	25	SNP	Novel	1412	---
CDK4	chr12	58143313	G	A	Heterozygous	1.9	49	SNP	Novel	1357	---
CDK4	chr12	58144402	G	A	Heterozygous	1.9	18	SNP	Novel	259	---
CDK4	chr12	58144426	G	A	Heterozygous	1.8	16	SNP	Novel	342	---
CDK4	chr12	58144455	C	T	Heterozygous	1.9	20	SNP	Novel	427	---
CDK4	chr12	58144456	T	C	Heterozygous	1.4	12	SNP	Novel	428	---
CDK4	chr12	58144485	C	T	Heterozygous	2.1	24	SNP	Novel	430	---
CDK4	chr12	58144574	G	A	Heterozygous	4.6	50	SNP	Novel	216	---
CDK4	chr12	58144580	C	T	Heterozygous	1.8	14	SNP	Novel	217	---
CDK4	chr12	58144603	C	T	Heterozygous	2.6	23	SNP	Novel	235	---
CDK4	chr12	58144617	C	A	Heterozygous	1.6	12	SNP	Novel	257	---
CDK4	chr12	58144650	G	A	Heterozygous	2.2	21	SNP	Novel	268	---
CDK4	chr12	58144665	C	T	Heterozygous	50.2	1995	SNP	Novel	267	---
CDK4	chr12	58144888	G	A	Heterozygous	1.4	24	SNP	Novel	1454	---
CDK4	chr12	58144896	G	A	Heterozygous	1.1	10	SNP	Novel	1482	---
CDK4	chr12	58144905	G	A	Heterozygous	1.3	17	SNP	Novel	1484	---
CDK4	chr12	58144924	G	A	Heterozygous	1.1	10	SNP	Novel	1699	---
CDK4	chr12	58144936	G	A	Heterozygous	3.6	208	SNP	Novel	1650	---
CDK4	chr12	58144943	C	T	Heterozygous	1.4	23	SNP	Novel	1643	---
CDK4	chr12	58144945	A	G	Heterozygous	1.7	39	SNP	Novel	1645	---
CDK4	chr12	58145357	G	A	Heterozygous	4.3	33	SNP	Novel	141	---
CDK4	chr12	58145392	C	T	Heterozygous	2	15	SNP	Novel	200	---
CDK4	chr12	58145432	G	A	Heterozygous	2.1	17	SNP	Novel	241	---
CDK4	chr12	58145445	G	A	Heterozygous	1.7	13	SNP	Novel	242	---
CDK4	chr12	58145454	G	A	Heterozygous	9.6	164	SNP	Novel	240	---
CDK4	chr12	58145459	G	A	Heterozygous	2.5	23	SNP	Novel	240	---
CDK4	chr12	58145724	G	A	Heterozygous	1.5	12	SNP	Novel	333	---
CDK4	chr12	58145742	G	A	Heterozygous	5.4	102	SNP	Novel	332	---
CDK4	chr12	58145763	A	C	Heterozygous	5	110	SNP	Novel	464	---
CDK4	chr12	58145798	C	T	Heterozygous	1.8	19	SNP	Novel	453	---
CDK4	chr12	58145804	C	T	Heterozygous	1.4	13	SNP	Novel	414	---
CDK4	chr12	58145807	C	T	Heterozygous	1.9	21	SNP	Novel	413	---
CDK4	chr12	58145963	G	A	Heterozygous	1.8	88	SNP	Novel	4000	---
CDK4	chr12	58145964	C	T	Heterozygous	1.9	108	SNP	Novel	3999	---
CDK4	chr12	58145974	G	A	Heterozygous	1.4	220	SNP	Novel	3953	---
CDK4	chr12	58145985	G	A	Heterozygous	1.6	506	SNP	Novel	3907	---

CDK4	chr12	58146003	C	T	Heterozygous	2.1	762	SNP	Novel	3873	---
CDK4	chr12	58146016	C	T	Heterozygous	1.1	14	SNP	Novel	4000	---
AKT1	chr14	105246462	G	A	Heterozygous	4.3	20	SNP	Novel	94	---
AKT1	chr14	105246495	G	A	Heterozygous	4.2	26	SNP	Novel	120	---
AKT1	chr14	105246539	T	C	Heterozygous	1.8	13	SNP	Novel	164	---
AKT1	chr14	105246569	T	C	Heterozygous	3	24	SNP	Novel	165	---
MAP2K1	chr15	66727414	G	A	Heterozygous	1.6	17	SNP	Novel	645	---
MAP2K1	chr15	66727420	C	T	Heterozygous	2.5	50	SNP	Novel	708	---
MAP2K1	chr15	66727429	C	T	Heterozygous	2.1	35	SNP	Novel	712	---
MAP2K1	chr15	66727437	G	C	Heterozygous	1.7	22	SNP	Novel	707	---
MAP2K1	chr15	66727450	C	A	Heterozygous	18.2	1600	SNP	Novel	953	---
MAP2K1	chr15	66727458	G	A	Heterozygous	1.9	33	SNP	Novel	971	---
MAP2K1	chr15	66727464	G	A	Heterozygous	1.9	33	SNP	Novel	968	---
MAP2K1	chr15	66727475	A	G	Heterozygous	2.6	214	SNP	Novel	1000	---
MAP2K1	chr15	66727482	C	T	Heterozygous	1.5	21	SNP	Novel	1001	---
MAP2K1	chr15	66727504	C	T	Heterozygous	2	38	SNP	Novel	954	---
MAP2K1	chr15	66727506	G	A	Heterozygous	1.3	15	SNP	Novel	928	---
MAP2K1	chr15	66727514	G	A	Heterozygous	3.1	92	SNP	Novel	927	---
MAP2K1	chr15	66727521	C	T	Heterozygous	1.3	15	SNP	Novel	906	---
MAP2K1	chr15	66729108	G	A	Heterozygous	1.4	10	SNP	Novel	286	---
MAP2K1	chr15	66729140	G	A	Heterozygous	1.3	10	SNP	Novel	311	---
MAP2K1	chr15	66729150	G	A	Heterozygous	2.3	26	SNP	Novel	341	---
MAP2K1	chr15	66729152	G	A	Heterozygous	4.2	66	SNP	Novel	357	---
MAP2K1	chr15	66729174	G	T	Heterozygous	2.3	27	SNP	Novel	395	---
MAP2K1	chr15	66729176	C	T	Heterozygous	1.5	13	SNP	Novel	393	---
MAP2K1	chr15	66729183	G	A	Heterozygous	3.9	63	SNP	Novel	383	---
MAP2K1	chr15	66729193	A	T	Heterozygous	6.8	175	SNP	Novel	442	---
MAP2K1	chr15	66729198	G	A	Heterozygous	4.3	86	SNP	Novel	444	---
MAP2K1	chr15	66729206	G	A	Heterozygous	2.5	34	SNP	Novel	446	---
MAP2K1	chr15	66774085	C	T	Heterozygous	3.6	65	SNP	Novel	494	---
MAP2K1	chr15	66774090	C	T	Heterozygous	2.3	32	SNP	Novel	528	---
MAP2K1	chr15	66774101	C	T	Heterozygous	1.9	23	SNP	Novel	536	---
MAP2K1	chr15	66774118	C	T	Heterozygous	2.6	41	SNP	Novel	545	---
MAP2K1	chr15	66774131	G	A	Heterozygous	3.1	58	SNP	Hotspot	550	COSM232755
MAP2K1	chr15	66774142	C	T	Heterozygous	3.1	55	SNP	Novel	518	---
MAP2K1	chr15	66774154	G	T	Heterozygous	6.5	193	SNP	Novel	508	---
MAP2K1	chr15	66774164	C	T	Heterozygous	4.3	155	SNP	Novel	512	---
IDH2	chr15	90631838	C	T	Heterozygous	4.3	20	SNP	Hotspot	92	COSM33733

IDH2	chr15	90631849	G	A	Heterozygous	22.8	207	SNP	Novel	92	---
IDH2	chr15	90631869	G	A	Heterozygous	6.6	35	SNP	Novel	91	---
IDH2	chr15	90631878	G	A	Heterozygous	5.5	27	SNP	Novel	91	---
ERBB2	chr17	37868133	G	A	Heterozygous	6	60	SNP	Novel	166	---
ERBB2	chr17	37868146	C	T	Heterozygous	8.5	93	SNP	Novel	165	---
ERBB2	chr17	37868161	C	T	Heterozygous	5.1	50	SNP	Novel	177	---
ERBB2	chr17	37868169	T	C	Heterozygous	2.8	23	SNP	Novel	176	---
ERBB2	chr17	37868175	C	T	Heterozygous	1.7	12	SNP	Novel	179	---
ERBB2	chr17	37868180	G	A	Heterozygous	4.4	42	SNP	Novel	180	---
ERBB2	chr17	37872390	C	T	Heterozygous	2.6	29	SNP	Novel	305	---
ERBB2	chr17	37872416	A	G	Heterozygous	2.4	25	SNP	Novel	339	---
ERBB2	chr17	37872418	C	T	Heterozygous	6.2	115	SNP	Novel	336	---
ERBB2	chr17	37872420	C	T	Heterozygous	4.5	73	SNP	Novel	335	---
ERBB2	chr17	37872429	C	T	Heterozygous	7.1	136	SNP	Novel	325	---
ERBB2	chr17	37872440	C	T	Heterozygous	2.1	22	SNP	Novel	280	---
ERBB2	chr17	37872452	C	T	Heterozygous	4.6	182	SNP	Novel	261	---
ERBB2	chr17	37872471	C	T	Heterozygous	3.2	36	SNP	Novel	285	---
ERBB2	chr17	37879684	A	G	Heterozygous	1.2	27	SNP	Novel	3997	---
ERBB2	chr17	37879687	C	T	Heterozygous	1	12	SNP	Novel	3998	---
ERBB2	chr17	37879820	G	A	Heterozygous	1.1	20	SNP	Novel	3999	---
ERBB2	chr17	37879843	G	A	Heterozygous	2.4	189	SNP	Novel	3998	---
ERBB2	chr17	37879856	G	A	Heterozygous	1	12	SNP	Novel	3997	---
ERBB2	chr17	37879860	G	A	Heterozygous	1.2	22	SNP	Novel	3998	---
ERBB2	chr17	37879862	G	A	Heterozygous	1	12	SNP	Novel	3998	---
ERBB2	chr17	37879878	G	A	Heterozygous	1.8	99	SNP	Novel	3999	---
ERBB2	chr17	37879883	T	A	Heterozygous	2.8	272	SNP	Novel	3996	---
ERBB2	chr17	37879884	G	A	Heterozygous	1.6	62	SNP	Novel	3989	---
ERBB2	chr17	37879891	G	A	Heterozygous	1.8	91	SNP	Novel	3997	---
ERBB2	chr17	37880225	G	A	Heterozygous	2.4	16	SNP	Novel	123	---
ERBB2	chr17	37880237	C	T	Heterozygous	6.6	48	SNP	Novel	121	---
ERBB2	chr17	37880243	G	A	Heterozygous	4.1	26	SNP	Novel	122	---
ERBB2	chr17	37880245	C	T	Heterozygous	6.5	51	SNP	Novel	123	---
ERBB2	chr17	37880257	C	T	Heterozygous	6.7	51	SNP	Novel	120	---
ERBB2	chr17	37880261	G	T	Heterozygous	3.3	20	SNP	Hotspot	120	COSM1251412
ERBB2	chr17	37880279	C	A	Heterozygous	2.4	14	SNP	Novel	124	---
ERBB2	chr17	37880281	C	T	Heterozygous	4.8	34	SNP	Novel	124	---
ERBB2	chr17	37880284	C	T	Heterozygous	3.3	25	SNP	Novel	152	---
ERBB2	chr17	37880311	G	A	Heterozygous	2.7	19	SNP	Novel	149	---

ERBB2	chr17	37880321	C	G	Heterozygous	19.6	331	SNP	Novel	184	---
ERBB2	chr17	37880960	A	C	Heterozygous	2.9	147	SNP	Novel	1818	---
ERBB2	chr17	37880962	C	T	Heterozygous	1.2	16	SNP	Novel	1830	---
ERBB2	chr17	37880975	C	T	Heterozygous	2.6	264	SNP	Novel	1832	---
ERBB2	chr17	37881003	G	A	Heterozygous	1.3	20	SNP	Novel	1853	---
ERBB2	chr17	37881337	C	G	Heterozygous	3.5	62	SNP	Novel	462	---
ERBB2	chr17	37881343	C	T	Heterozygous	1.5	14	SNP	Novel	464	---
ERBB2	chr17	37881346	G	A	Heterozygous	2.6	37	SNP	Novel	466	---
ERBB2	chr17	37881353	C	T	Heterozygous	1.7	18	SNP	Novel	466	---
ERBB2	chr17	37881354	G	A	Heterozygous	4.9	110	SNP	Novel	466	---
ERBB2	chr17	37881385	C	T	Heterozygous	1.5	14	SNP	Novel	471	---
ERBB2	chr17	37881395	G	A	Heterozygous	1.5	14	SNP	Novel	459	---
ERBB2	chr17	37881400	C	T	Heterozygous	3.6	65	SNP	Novel	442	---
ERBB2	chr17	37881428	G	A	Heterozygous	3.8	62	SNP	Novel	398	---
ERBB2	chr17	37881430	G	A	Heterozygous	3.8	59	SNP	Novel	371	---
ERBB2	chr17	37881546	C	T	Heterozygous	1.4	12	SNP	Novel	416	---
ERBB2	chr17	37881563	C	T	Heterozygous	2.9	42	SNP	Novel	411	---
ERBB2	chr17	37881585	C	T	Heterozygous	1.8	16	SNP	Novel	331	---
ERBB2	chr17	37881600	G	A	Heterozygous	4.4	68	SNP	Novel	342	---
ERBB2	chr17	37882863	C	T	Heterozygous	1.7	34	SNP	Novel	1266	---
ERBB2	chr17	37882873	C	T	Heterozygous	1.8	42	SNP	Novel	1354	---
ERBB2	chr17	37882876	C	T	Heterozygous	1.4	21	SNP	Novel	1355	---
ERBB2	chr17	37882895	C	T	Heterozygous	1.4	20	SNP	Novel	1294	---
ERBB2	chr17	37882916	C	T	Heterozygous	1.1	10	SNP	Novel	1269	---
ERBB2	chr17	37882939	G	A	Heterozygous	2	48	SNP	Novel	1230	---
ERBB2	chr17	37882945	G	A	Heterozygous	1.3	16	SNP	Novel	1222	---
ERBB2	chr17	37883140	G	A	Heterozygous	3.7	47	SNP	Novel	217	---
ERBB2	chr17	37883151	G	A	Heterozygous	1.8	14	SNP	Novel	226	---
ERBB2	chr17	37883194	C	T	Heterozygous	1.9	16	SNP	Novel	270	---
ERBB2	chr17	37883216	G	A	Heterozygous	7.1	120	SNP	Novel	268	---
ERBB2	chr17	37883224	G	A	Heterozygous	1.4	10	SNP	Novel	282	---
ERBB2	chr17	37883249	C	T	Heterozygous	4.5	46	SNP	Novel	179	---
GNA11	chr19	3114981	C	T	Heterozygous	7.8	60	SNP	Novel	115	---
GNA11	chr19	3114988	A	G	Heterozygous	2.6	14	SNP	Novel	115	---
GNA11	chr19	3115009	G	A	Heterozygous	4.4	26	SNP	Novel	113	---
GNA11	chr19	3115018	C	T	Heterozygous	10.6	91	SNP	Novel	113	---
GNA11	chr19	3115027	G	A	Heterozygous	7	51	SNP	Novel	115	---
GNA11	chr19	3115068	C	T	Heterozygous	3.3	14	SNP	Novel	92	---



GNA11	chr19	3115070	G	A	Heterozygous	7.7	43	SNP	Novel	91	---
GNA11	chr19	3115071	G	A	Heterozygous	9.9	61	SNP	Novel	91	---
GNA11	chr19	3115080	G	A	Heterozygous	7.8	45	SNP	Novel	90	---
GNA11	chr19	3118885	C	T	Heterozygous	1.2	19	SNP	Novel	2997	---
GNA11	chr19	3118886	G	A	Heterozygous	1.1	18	SNP	Novel	2969	---
GNA11	chr19	3118890	G	A	Heterozygous	1.8	74	SNP	Novel	3010	---
GNA11	chr19	3118926	G	C	Heterozygous	1.1	17	SNP	Novel	2916	---
GNA11	chr19	3118935	G	A	Heterozygous	1.3	104	SNP	Novel	2626	---
GNA11	chr19	3118945	G	A	Heterozygous	1	11	SNP	Novel	2646	---
GNA11	chr19	3118957	G	A	Heterozygous	1.1	14	SNP	Novel	2625	---
MAP2K2	chr19	4117524	C	T	Heterozygous	4.6	20	SNP	Novel	87	---
MAP2K2	chr19	4117546	G	A	Heterozygous	3.1	14	SNP	Novel	96	---
MAP2K2	chr19	4117560	G	A	Heterozygous	5.2	27	SNP	Novel	96	---
MAP2K2	chr19	4117584	G	A	Heterozygous	7.4	27	SNP	Novel	68	---
MAP2K2	chr19	4117590	G	A	Heterozygous	4.6	15	SNP	Novel	65	---
MAP2K2	chr19	4117597	C	T	Heterozygous	4.5	15	SNP	Novel	66	---
MAP2K2	chr19	4117641	C	T	Heterozygous	3.2	14	SNP	Novel	62	---
JAK3	chr19	17945913	G	A	Heterozygous	2.8	59	SNP	Novel	251	---
JAK3	chr19	17945926	G	A	Heterozygous	2.8	27	SNP	Novel	253	---
JAK3	chr19	17945979	G	A	Heterozygous	2.4	24	SNP	Novel	287	---
JAK3	chr19	17945989	G	A	Heterozygous	2.6	26	SNP	Novel	272	---
JAK3	chr19	17946002	C	T	Heterozygous	1.4	11	SNP	Novel	283	---
JAK3	chr19	17948744	C	T	Heterozygous	4.3	58	SNP	Novel	279	---
JAK3	chr19	17948761	T	C	Heterozygous	1.4	11	SNP	Novel	282	---
JAK3	chr19	17948782	G	A	Heterozygous	2.4	24	SNP	Novel	296	---
JAK3	chr19	17948795	T	C	Heterozygous	1.8	16	SNP	Novel	282	---
JAK3	chr19	17948842	T	A	Heterozygous	9.8	147	SNP	Novel	215	---
JAK3	chr19	17948852	C	T	Heterozygous	2.8	23	SNP	Novel	179	---
JAK3	chr19	17948853	C	T	Heterozygous	3.4	40	SNP	Novel	176	---
JAK3	chr19	17949183	G	A	Heterozygous	1.3	34	SNP	Novel	4000	---
AR	chrX	66776211	G	A	Heterozygous	1.3	31	SNP	Novel	3531	---
AR	chrX	66799291	T	C	Heterozygous	1.5	28	SNP	Novel	1858	---
AR	chrX	66799300	G	A	Heterozygous	1.1	14	SNP	Novel	1759	---
AR	chrX	66866126	G	A	Heterozygous	3.3	67	SNP	Novel	568	---
AR	chrX	66866128	G	A	Heterozygous	1.8	21	SNP	Novel	569	---
AR	chrX	66866130	G	A	Heterozygous	1.8	21	SNP	Novel	569	---
AR	chrX	66866135	C	T	Heterozygous	2.4	39	SNP	Novel	574	---
AR	chrX	66866163	G	A	Heterozygous	1.7	21	SNP	Novel	723	---

AR	chrX	66866216	G	A	Heterozygous	4.2	98	SNP	Novel	553	---
AR	chrX	66866219	C	T	Heterozygous	1.3	11	SNP	Novel	548	---
AR	chrX	66874619	T	C	Heterozygous	2.8	34	SNP	Novel	216	---
AR	chrX	66915183	C	T	Heterozygous	3.2	37	SNP	Novel	283	---
AR	chrX	66915189	C	T	Heterozygous	2.5	25	SNP	Novel	285	---
AR	chrX	66915190	C	T	Heterozygous	1.8	15	SNP	Novel	285	---
AR	chrX	66915203	C	T	Heterozygous	1.1	13	SNP	Novel	284	---
AR	chrX	66915208	G	A	Heterozygous	2.8	30	SNP	Novel	290	---
AR	chrX	66915219	C	T	Heterozygous	2.7	30	SNP	Novel	291	---
AR	chrX	66915221	G	A	Heterozygous	1.7	14	SNP	Novel	294	---
AR	chrX	66915222	C	T	Heterozygous	2.3	24	SNP	Novel	299	---
AR	chrX	66915231	C	T	Heterozygous	4.1	63	SNP	Novel	339	---
AR	chrX	66915248	G	A	Heterozygous	1.5	13	SNP	Novel	411	---
AR	chrX	66915261	G	T	Heterozygous	1.5	13	SNP	Novel	406	---
AR	chrX	66915268	C	T	Heterozygous	3.7	61	SNP	Novel	409	---
AR	chrX	66915275	C	T	Heterozygous	2.3	27	SNP	Novel	397	---
AR	chrX	66938947	C	T	Heterozygous	1.5	14	SNP	Novel	478	---
AR	chrX	66938954	G	A	Heterozygous	3.8	72	SNP	Novel	480	---
AR	chrX	66938958	G	A	Heterozygous	1.2	10	SNP	Novel	480	---
AR	chrX	66938960	G	A	Heterozygous	1.9	21	SNP	Novel	480	---
AR	chrX	66938966	G	A	Heterozygous	2.5	36	SNP	Novel	480	---
AR	chrX	66938985	C	T	Heterozygous	1.5	49	SNP	Novel	473	---
AR	chrX	66938998	C	G	Heterozygous	3.4	63	SNP	Novel	501	---
AR	chrX	66939004	G	A	Heterozygous	2.6	40	SNP	Novel	498	---
AR	chrX	66939009	C	T	Heterozygous	1.6	26	SNP	Novel	492	---
AR	chrX	66941726	C	T	Heterozygous	2	13	SNP	Novel	152	---
AR	chrX	66941747	G	A	Heterozygous	3.1	24	SNP	Novel	161	---
AR	chrX	66941750	C	T	Heterozygous	1.9	13	SNP	Novel	161	---
AR	chrX	66941751	C	T	Heterozygous	3.7	31	SNP	Novel	162	---
AR	chrX	66941761	C	T	Heterozygous	3	26	SNP	Novel	168	---
AR	chrX	66943553	C	T	Heterozygous	0.9	65	SNP	Novel	3985	---
AR	chrX	66943574	C	T	Heterozygous	1.4	44	SNP	Novel	3999	---
AR	chrX	66945138	G	A	Heterozygous	1	17	SNP	Novel	293	---
AR	chrX	66945147	C	T	Heterozygous	2.3	23	SNP	Novel	301	---
AR	chrX	66945149	A	G	Heterozygous	1.6	14	SNP	Novel	308	---
AR	chrX	66945179	C	T	Heterozygous	1.9	18	SNP	Novel	311	---
AR	chrX	66945189	G	T	Heterozygous	1.6	13	SNP	Novel	311	---
AR	chrX	66945195	C	T	Heterozygous	1.9	18	SNP	Novel	310	---

AR	chrX	66945200	G	A	Heterozygous	1.6	13	SNP	Novel	310	---
AR	chrX	66945204	C	T	Heterozygous	2.3	107	SNP	Novel	305	---