

Data Sheet

Product Name: CancerSeq AMS Paraffin Tissue Curl

Catalog No.: T2235152-AC

Lot No.: C201071

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: 54 year(s) old
Female: _____ year(s) old

Pathological Diagnosis: Adenocarcinoma, (part of Bronchioloalveolar carcinoma), invasive to pleura

Tumor Size: N/A

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

C201071

Gene ID	Chrom	Position	Ref	Variant	Allele Call	Frequency	Quality	Type	Allele Source	Coverage	Allele Name
MTOR	chr1	11174402	G	T	Heterozygous	6.5	21	SNP	Novel	107	---
MTOR	chr1	11174474	G	A	Heterozygous	9.4	35	SNP	Novel	96	---
MTOR	chr1	11184560	G	A	Heterozygous	9.9	56	SNP	Novel	142	---
MTOR	chr1	11184588	G	A	Heterozygous	5.4	19	SNP	Novel	147	---
MTOR	chr1	11188015	G	A	Heterozygous	4	30	SNP	Novel	1096	---
MTOR	chr1	11188029	G	A	Heterozygous	3.9	27	SNP	Novel	1110	---
MTOR	chr1	11188037	A	G	Heterozygous	5.4	77	SNP	Novel	1112	---
MTOR	chr1	11188040	C	T	Heterozygous	3.6	22	SNP	Novel	1098	---
MTOR	chr1	11188088	G	A	Heterozygous	3.3	14	SNP	Novel	1101	---
MTOR	chr1	11188089	C	T	Heterozygous	4.9	58	SNP	Novel	1101	---
MTOR	chr1	11188186	G	A	Heterozygous	29.1	229	SNP	Novel	110	---
MTOR	chr1	11188271	T	C	Heterozygous	15.2	86	SNP	Novel	112	---
MTOR	chr1	11189806	C	T	Heterozygous	38.2	503	SNP	Novel	157	---
MTOR	chr1	11189887	G	A	Heterozygous	29.9	339	SNP	Novel	154	---
MTOR	chr1	11190778	C	T	Heterozygous	14.1	279	SNP	Novel	448	---
MTOR	chr1	11190783	G	A	Heterozygous	13.6	263	SNP	Novel	449	---
MTOR	chr1	11190814	C	T	Heterozygous	14.8	311	SNP	Novel	459	---
MTOR	chr1	11190844	G	A	Heterozygous	13.4	261	SNP	Novel	462	---
MTOR	chr1	11217209	C	T	Heterozygous	7	116	SNP	Novel	813	---
MTOR	chr1	11217235	C	T	Heterozygous	3.8	20	SNP	Novel	826	---
MTOR	chr1	11217240	GG	AA	Heterozygous	6.3	89	MNP	Novel	829	---
MTOR	chr1	11217247	C	T	Heterozygous	6.1	85	SNP	Novel	830	---
MTOR	chr1	11217250	C	T	Heterozygous	3.9	22	SNP	Novel	830	---
MTOR	chr1	11217262	G	A	Heterozygous	6.4	94	SNP	Novel	829	---
MTOR	chr1	11217276	C	T	Heterozygous	4.4	34	SNP	Novel	839	---
MTOR	chr1	11217306	C	T	Heterozygous	4.6	39	SNP	Novel	849	---
MTOR	chr1	11217310	C	T	Heterozygous	5.7	70	SNP	Novel	848	---
JAK1	chr1	65310496	C	T	Heterozygous	8.7	81	SNP	Novel	322	---
JAK1	chr1	65310520	G	A	Heterozygous	9.6	99	SNP	Novel	323	---
JAK1	chr1	65310538	G	T	Heterozygous	6.9	50	SNP	Novel	320	---
JAK1	chr1	65310558	C	T	Heterozygous	8.7	82	SNP	Novel	321	---
JAK1	chr1	65312338	C	T	Heterozygous	13	253	SNP	Novel	477	---
NRAS	chr1	115252206	G	A	Heterozygous	17.2	238	SNP	Novel	267	---
NRAS	chr1	115256510	C	T	Heterozygous	4.9	52	SNP	Novel	985	---
NRAS	chr1	115256536	C	T	Heterozygous	4.3	12	SNP	Hotspot	992	COSM578

NRAS	chr1	115256566	C	T	Heterozygous	3.6	20	SNP	Novel	991	---
NRAS	chr1	115256569	C	T	Heterozygous	3.7	22	SNP	Novel	994	---
NRAS	chr1	115258691	C	T	Heterozygous	3.8	24	SNP	Novel	1027	---
NRAS	chr1	115258747	C	T	Heterozygous	4.8	20	SNP	Hotspot	1008	COSM564
NRAS	chr1	115258757	C	T	Heterozygous	4.1	32	SNP	Novel	1037	---
DDR2	chr1	162724534	C	T	Heterozygous	10.2	37	SNP	Novel	88	---
ALK	chr2	29416332	C	T	Heterozygous	6.7	45	SNP	Novel	297	---
ALK	chr2	29416337	C	T	Heterozygous	13.3	174	SNP	Novel	300	---
ALK	chr2	29416348	C	T	Heterozygous	13	169	SNP	Novel	307	---
ALK	chr2	29416353	C	T	Heterozygous	16.9	267	SNP	Novel	307	---
ALK	chr2	29416366	G	C	Heterozygous	89	3861	SNP	Novel	309	---
ALK	chr2	29416399	C	T	Heterozygous	16.4	227	SNP	Novel	305	---
ALK	chr2	29416423	C	T	Heterozygous	11.1	128	SNP	Novel	315	---
ALK	chr2	29416572	T	C	Homozygous	100	4562	SNP	Novel	287	---
ALK	chr2	29416615	G	A	Heterozygous	24	453	SNP	Novel	287	---
ALK	chr2	29420415	C	T	Heterozygous	5.5	62	SNP	Novel	776	---
ALK	chr2	29420425	C	T	Heterozygous	6.6	94	SNP	Novel	775	---
ALK	chr2	29432706	C	T	Heterozygous	3	16	SNP	Novel	3301	---
ALK	chr2	29436861	G	A	Heterozygous	25.9	283	SNP	Novel	162	---
ALK	chr2	29436863	G	A	Heterozygous	14.2	108	SNP	Novel	162	---
ALK	chr2	29436937	G	A	Heterozygous	12.8	91	SNP	Novel	164	---
ALK	chr2	29443587	C	T	Heterozygous	10	113	SNP	Novel	339	---
ALK	chr2	29443605	G	A	Heterozygous	12.7	181	SNP	Novel	346	---
ALK	chr2	29443608	G	A	Heterozygous	3.5	10	SNP	Novel	346	---
ALK	chr2	29443631	G	A	Heterozygous	13.4	146	SNP	Novel	350	---
ALK	chr2	29443632	C	T	Heterozygous	13.4	203	SNP	Novel	351	---
ALK	chr2	29443662	C	T	Heterozygous	14.6	239	SNP	Novel	356	---
ALK	chr2	29445268	G	A	Heterozygous	14.1	233	SNP	Novel	377	---
ALK	chr2	29445397	G	A	Heterozygous	9.8	131	SNP	Novel	417	---
ALK	chr2	29445410	G	A	Heterozygous	10	136	SNP	Novel	421	---
ALK	chr2	29445458	G	T	Homozygous	100	6555	SNP	Novel	415	---
ALK	chr2	29497924	C	T	Heterozygous	17	131	SNP	Novel	141	---
ALK	chr2	29498007	C	T	Heterozygous	15.2	112	SNP	Novel	145	---
IDH1	chr2	209113194	C	T	Heterozygous	37.3	526	SNP	Novel	169	---
ERBB4	chr2	212488714	A	G	Heterozygous	4	21	SNP	Novel	704	---
ERBB4	chr2	212488768	A	G	Heterozygous	3.9	21	SNP	Novel	709	---
RAF1	chr3	12632346	G	A	Heterozygous	15	283	SNP	Novel	406	---
RAF1	chr3	12645671	G	A	Heterozygous	6.8	181	SNP	Novel	1464	---

RAF1	chr3	12645674	C	T	Heterozygous	3.6	25	SNP	Novel	1464	---
RAF1	chr3	12645702	C	T	Heterozygous	3	10	SNP	Novel	1467	---
CTNNB1	chr3	41266067	G	A	Heterozygous	7.7	18	SNP	Novel	52	---
PIK3CA	chr3	178916863	G	A	Heterozygous	4.5	12	SNP	Novel	112	---
PIK3CA	chr3	178928079	G	A	Heterozygous	6	16	SNP	Hotspot	217	COSM12584
PIK3CA	chr3	178928103	G	A	Heterozygous	6	29	SNP	Novel	216	---
PIK3CA	chr3	178947894	G	A	Heterozygous	6.8	213	SNP	Novel	1716	---
PIK3CA	chr3	178952062	C	T	Heterozygous	12.6	102	SNP	Novel	191	---
PIK3CA	chr3	178952093	G	A	Heterozygous	10.6	75	SNP	Novel	188	---
FGFR3	chr4	1797212	G	A	Heterozygous	18	139	SNP	Novel	139	---
FGFR3	chr4	1797329	G	A	Heterozygous	23.8	280	SNP	Novel	181	---
FGFR3	chr4	1801118	C	T	Heterozygous	7.5	125	SNP	Novel	749	---
FGFR3	chr4	1801120	C	T	Heterozygous	4.9	43	SNP	Novel	751	---
FGFR3	chr4	1801138	GG	-	Heterozygous	95.8	10161	DEL	Novel	744	---
FGFR3	chr4	1801142	C	A	Heterozygous	4.2	10161	SNP	Novel	744	---
FGFR3	chr4	1801172	C	T	Heterozygous	4.7	39	SNP	Novel	791	---
FGFR3	chr4	1801200	G	A	Heterozygous	7.3	122	SNP	Novel	781	---
FGFR3	chr4	1801229	C	T	Heterozygous	5.3	52	SNP	Novel	761	---
FGFR3	chr4	1801231	C	T	Heterozygous	5.8	68	SNP	Novel	757	---
FGFR3	chr4	1805840	G	A	Heterozygous	3.2	16	SNP	Novel	1543	---
FGFR3	chr4	1805886	C	T	Heterozygous	3.7	29	SNP	Novel	1530	---
FGFR3	chr4	1805889	C	T	Heterozygous	3.3	16	SNP	Novel	1527	---
FGFR3	chr4	1806097	G	A	Heterozygous	4.4	60	SNP	Novel	1780	---
FGFR3	chr4	1806134	C	T	Heterozygous	3.8	36	SNP	Novel	1773	---
FGFR3	chr4	1806162	C	T	Heterozygous	3.8	34	SNP	Novel	1766	---
FGFR3	chr4	1806187	C	T	Heterozygous	5.5	80	SNP	Novel	1090	---
FGFR3	chr4	1807894	G	A	Homozygous	100	36402	SNP	Novel	2279	---
FGFR3	chr4	1807922	G	A	Heterozygous	53.3	12150	SNP	Novel	2166	---
FGFR3	chr4	1809256	G	A	Heterozygous	16.7	245	SNP	Novel	287	---
FGFR3	chr4	1809280	G	A	Heterozygous	8	63	SNP	Novel	314	---
FGFR3	chr4	1809285	G	A	Heterozygous	6.7	47	SNP	Novel	329	---
FGFR3	chr4	1809314	C	T	Heterozygous	10.7	127	SNP	Novel	327	---
FGFR3	chr4	1809496	C	T	Heterozygous	14.6	164	SNP	Novel	239	---
FGFR3	chr4	1809504	C	A	Heterozygous	8.4	59	SNP	Novel	239	---
FGFR3	chr4	1809513	C	T	Heterozygous	17.6	225	SNP	Novel	238	---
PDGFRA	chr4	55097722	G	A	Heterozygous	17.9	161	SNP	Novel	168	---
PDGFRA	chr4	55097723	C	T	Heterozygous	26.8	310	SNP	Novel	168	---
PDGFRA	chr4	55097774	C	T	Heterozygous	21.6	227	SNP	Novel	171	---

PDGFRA	chr4	55097805	C	T	Heterozygous	18.8	183	SNP	Novel	176	---
PDGFRA	chr4	55104305	C	T	Heterozygous	10.6	65	SNP	Novel	142	---
PDGFRA	chr4	55104352	C	T	Heterozygous	9.9	54	SNP	Novel	152	---
PDGFRA	chr4	55121604	G	A	Heterozygous	9.6	24	SNP	Novel	52	---
PDGFRA	chr4	55123746	C	T	Heterozygous	21.4	157	SNP	Novel	117	---
PDGFRA	chr4	55126225	G	A	Heterozygous	5	23	SNP	Novel	278	---
PDGFRA	chr4	55126234	C	T	Heterozygous	4.3	16	SNP	Novel	280	---
PDGFRA	chr4	55133666	C	T	Heterozygous	10	28	SNP	Novel	60	---
PDGFRA	chr4	55141052	C	A	Heterozygous	45.7	419	SNP	Novel	94	---
PDGFRA	chr4	55141055	A	G	Homozygous	100	1492	SNP	Novel	94	---
PDGFRA	chr4	55144128	C	T	Heterozygous	4.6	49	SNP	Novel	1128	---
PDGFRA	chr4	55144136	G	A	Heterozygous	5	60	SNP	Novel	1130	---
PDGFRA	chr4	55144139	C	T	Heterozygous	3.4	17	SNP	Novel	1132	---
PDGFRA	chr4	55152121	G	A	Heterozygous	15.1	315	SNP	Novel	449	---
PDGFRA	chr4	55161897	C	T	Heterozygous	14	198	SNP	Novel	321	---
PDGFRA	chr4	55161899	G	A	Heterozygous	10.9	126	SNP	Novel	321	---
KIT	chr4	55566232	A	G	Heterozygous	6.5	10	SNP	Novel	31	---
KIT	chr4	55566266	G	A	Homozygous	100	445	SNP	Novel	31	---
KIT	chr4	55573108	G	A	Heterozygous	13.2	26	SNP	Novel	38	---
KIT	chr4	55589729	G	A	Heterozygous	4.7	53	SNP	Novel	1141	---
KIT	chr4	55589794	C	T	Heterozygous	4.9	60	SNP	Novel	1167	---
KIT	chr4	55589797	C	T	Heterozygous	5.1	67	SNP	Novel	1167	---
KIT	chr4	55592162	G	A	Heterozygous	5.7	56	SNP	Novel	630	---
KIT	chr4	55592168	G	A	Heterozygous	5.5	52	SNP	Novel	634	---
KIT	chr4	55592246	G	A	Heterozygous	5.8	58	SNP	Novel	621	---
KIT	chr4	55593495	C	T	Heterozygous	8.9	118	SNP	Novel	460	---
KIT	chr4	55594239	G	A	Heterozygous	19	124	SNP	Novel	116	---
ROS1	chr6	117638379	G	A	Heterozygous	71.7	485	SNP	Novel	60	---
ROS1	chr6	117638420	G	A	Heterozygous	27.6	112	SNP	Novel	58	---
ROS1	chr6	117641034	C	T	Heterozygous	5.9	24	SNP	Novel	187	---
ROS1	chr6	117641082	T	C	Heterozygous	6.1	27	SNP	Novel	198	---
ESR1	chr6	152419910	G	A	Heterozygous	17.5	326	SNP	Novel	354	---
ESR1	chr6	152419921	C	T	Heterozygous	7.8	71	SNP	Novel	361	---
ESR1	chr6	152419958	C	T	Heterozygous	7.7	71	SNP	Novel	363	---
ESR1	chr6	152419985	G	A	Heterozygous	17.1	315	SNP	Novel	357	---
ESR1	chr6	152419997	G	A	Heterozygous	11.4	155	SNP	Novel	368	---
ESR1	chr6	152420017	G	A	Heterozygous	16.7	305	SNP	Novel	366	---
EGFR	chr7	55198974	C	T	Heterozygous	4.1	18	SNP	Novel	436	---

EGFR	chr7	55199007	C	T	Heterozygous	4.5	23	SNP	Novel	445	---
EGFR	chr7	55199021	C	T	Heterozygous	4.5	23	SNP	Novel	443	---
EGFR	chr7	55199037	C	T	Heterozygous	7.2	73	SNP	Novel	444	---
EGFR	chr7	55199040	C	T	Heterozygous	13.8	264	SNP	Novel	443	---
EGFR	chr7	55211050	G	A	Heterozygous	5	43	SNP	Novel	726	---
EGFR	chr7	55211082	G	A	Heterozygous	5.1	46	SNP	Novel	728	---
EGFR	chr7	55211090	G	A	Heterozygous	5.5	57	SNP	Novel	731	---
EGFR	chr7	55211104	C	T	Heterozygous	5.1	46	SNP	Novel	731	---
EGFR	chr7	55211115	G	T	Heterozygous	3.6	16	SNP	Novel	723	---
EGFR	chr7	55211118	G	A	Heterozygous	7.3	115	SNP	Novel	723	---
EGFR	chr7	55219931	C	T	Heterozygous	7.9	67	SNP	Novel	316	---
EGFR	chr7	55219956	C	T	Heterozygous	7.1	52	SNP	Novel	324	---
EGFR	chr7	55221912	C	T	Heterozygous	9.9	118	SNP	Novel	362	---
EGFR	chr7	55228026	G	A	Heterozygous	20.2	135	SNP	Novel	114	---
EGFR	chr7	55228053	A	-	Homozygous	100	1537	DEL	Novel	109	---
EGFR	chr7	55233000	C	T	Heterozygous	3.2	18	SNP	Novel	2464	---
EGFR	chr7	55233002	C	T	Heterozygous	3	14	SNP	Novel	2460	---
EGFR	chr7	55233015	C	T	Heterozygous	3.2	22	SNP	Novel	2374	---
EGFR	chr7	55241664	G	A	Heterozygous	4.4	47	SNP	Novel	1355	---
EGFR	chr7	55241676	G	A	Heterozygous	4.5	51	SNP	Novel	1355	---
EGFR	chr7	55241677	G	A	Heterozygous	3.9	8	SNP	Hotspot	1346	COSM12988
EGFR	chr7	55241704	C	T	Heterozygous	3.4	17	SNP	Novel	1333	---
EGFR	chr7	55248994	C	T	Heterozygous	7.5	85	SNP	Novel	478	---
EGFR	chr7	55249005	G	A	Heterozygous	8.3	64	SNP	Hotspot	470	COSM12989
EGFR	chr7	55249021	C	T	Heterozygous	5.1	16	SNP	Novel	471	---
EGFR	chr7	55249027	C	T	Heterozygous	4.4	23	SNP	Novel	475	---
EGFR	chr7	55249030	C	T	Heterozygous	4.4	23	SNP	Novel	475	---
EGFR	chr7	55249063	G	A	Heterozygous	9	123	SNP	Novel	480	---
EGFR	chr7	55249073	C	T	Heterozygous	5.2	36	SNP	Novel	479	---
EGFR	chr7	55249084	C	T	Heterozygous	5.2	36	SNP	Novel	481	---
EGFR	chr7	55259427	G	A	Heterozygous	5.3	36	SNP	Novel	476	---
MET	chr7	116339382	G	A	Heterozygous	9.6	139	SNP	Novel	468	---
MET	chr7	116339385	G	A	Heterozygous	10.9	178	SNP	Novel	468	---
MET	chr7	116340219	G	A	Heterozygous	4.4	31	SNP	Novel	780	---
MET	chr7	116340228	G	A	Heterozygous	4.4	31	SNP	Novel	781	---
MET	chr7	116340252	G	A	Heterozygous	8.7	182	SNP	Novel	779	---
MET	chr7	116340292	G	A	Heterozygous	8.6	173	SNP	Novel	771	---
MET	chr7	116398823	C	T	Heterozygous	4.3	31	SNP	Novel	866	---

MET	chr7	116412042	A	G	Heterozygous	44.7	200	SNP	Novel	47	---
MET	chr7	116417499	C	T	Heterozygous	35.9	117	SNP	Novel	39	---
MET	chr7	116423464	G	A	Heterozygous	4.9	63	SNP	Novel	1197	---
SMO	chr7	128845525	C	T	Heterozygous	16.4	224	SNP	Novel	286	---
SMO	chr7	128845532	G	A	Heterozygous	18.1	281	SNP	Novel	288	---
SMO	chr7	128846410	G	A	Heterozygous	3	14	SNP	Novel	2276	---
SMO	chr7	128849164	C	T	Heterozygous	12.2	179	SNP	Novel	378	---
SMO	chr7	128849175	G	A	Heterozygous	9.8	119	SNP	Novel	377	---
SMO	chr7	128850274	C	T	Heterozygous	4	35	SNP	Novel	1320	---
BRAF	chr7	140434438	G	A	Heterozygous	6.4	52	SNP	Novel	404	---
BRAF	chr7	140434448	A	T	Heterozygous	4.2	18	SNP	Novel	407	---
BRAF	chr7	140434479	G	A	Heterozygous	10.6	149	SNP	Novel	406	---
BRAF	chr7	140434488	C	T	Heterozygous	18.2	397	SNP	Novel	401	---
BRAF	chr7	140476867	G	A	Heterozygous	4	20	SNP	Novel	574	---
BRAF	chr7	140476936	G	A	Heterozygous	24.6	926	SNP	Novel	574	---
BRAF	chr7	140481380	C	T	Heterozygous	5.7	45	SNP	Novel	470	---
BRAF	chr7	140481397	C	T	Heterozygous	9.9	146	SNP	Novel	466	---
BRAF	chr7	140482795	G	A	Heterozygous	4.1	21	SNP	Novel	217	---
BRAF	chr7	140482808	C	T	Heterozygous	8.5	58	SNP	Novel	223	---
BRAF	chr7	140482814	C	T	Heterozygous	10.2	81	SNP	Novel	225	---
BRAF	chr7	140482857	C	T	Heterozygous	7.9	51	SNP	Novel	228	---
BRAF	chr7	140494248	G	A	Heterozygous	7.3	77	SNP	Novel	465	---
BRAF	chr7	140494263	G	A	Heterozygous	7.8	90	SNP	Novel	461	---
BRAF	chr7	140494278	G	A	Heterozygous	7.8	90	SNP	Novel	460	---
BRAF	chr7	140500219	G	A	Heterozygous	3.2	20	SNP	Novel	2314	---
BRAF	chr7	140500269	G	A	Heterozygous	3.2	20	SNP	Novel	2341	---
BRAF	chr7	140501265	G	A	Heterozygous	4.9	146	SNP	Novel	3101	---
BRAF	chr7	140501284	G	A	Heterozygous	3.2	22	SNP	Novel	3134	---
BRAF	chr7	140507859	C	T	Heterozygous	4.3	31	SNP	Novel	813	---
JAK2	chr9	5073801	G	A	Heterozygous	97.7	638	SNP	Novel	43	---
GNAQ	chr9	80412489	G	A	Heterozygous	5.9	72	SNP	Novel	782	---
GNAQ	chr9	80412503	G	A	Heterozygous	7.3	121	SNP	Novel	782	---
GNAQ	chr9	80412522	C	T	Heterozygous	6.8	103	SNP	Novel	780	---
GNAQ	chr9	80412534	G	A	Heterozygous	5.3	54	SNP	Novel	779	---
GNAQ	chr9	80412539	C	T	Heterozygous	5.5	61	SNP	Novel	777	---
RET	chr10	43609071	C	T	Heterozygous	5	45	SNP	Novel	784	---
RET	chr10	43609084	G	A	Heterozygous	4.6	35	SNP	Novel	787	---
RET	chr10	43609122	G	A	Heterozygous	6.5	95	SNP	Novel	800	---

RET	chr10	43609131	G	A	Heterozygous	5.5	62	SNP	Novel	799	---
RET	chr10	43609141	G	A	Heterozygous	6.2	86	SNP	Novel	800	---
RET	chr10	43609150	A	G	Heterozygous	20	910	SNP	Novel	796	---
RET	chr10	43609155	C	T	Heterozygous	3.4	13	SNP	Novel	796	---
RET	chr10	43609179	C	T	Heterozygous	7.2	120	SNP	Novel	790	---
RET	chr10	43609921	C	T	Heterozygous	11	150	SNP	Novel	381	---
RET	chr10	43613802	G	A	Heterozygous	3.2	15	SNP	Novel	1389	---
RET	chr10	43613803	C	T	Heterozygous	3.3	16	SNP	Novel	1389	---
RET	chr10	43613843	G	T	Heterozygous	47	6434	SNP	Novel	1395	---
RET	chr10	43613853	C	T	Heterozygous	3	10	SNP	Novel	1395	---
RET	chr10	43613873	G	A	Heterozygous	5.8	115	SNP	Novel	1385	---
RET	chr10	43617330	C	A	Heterozygous	9.4	55	SNP	Novel	170	---
RET	chr10	43617372	C	T	Heterozygous	24.6	275	SNP	Novel	171	---
FGFR2	chr10	123257987	T	C	Heterozygous	4.4	22	SNP	Novel	456	---
FGFR2	chr10	123276968	C	T	Heterozygous	13.6	154	SNP	Novel	258	---
FGFR2	chr10	123279609	C	T	Heterozygous	4.4	28	SNP	Novel	659	---
FGFR2	chr10	123279634	G	A	Heterozygous	5.9	64	SNP	Novel	656	---
FGFR2	chr10	123279696	G	A	Heterozygous	8	134	SNP	Novel	673	---
FGFR2	chr10	123284172	G	A	Heterozygous	11.3	145	SNP	Novel	344	---
FGFR2	chr10	123312264	T	C	Heterozygous	10.3	19	SNP	Novel	39	---
FGFR2	chr10	123350125	A	G	Heterozygous	17	49	SNP	Novel	47	---
FGFR2	chr10	123354435	C	T	Heterozygous	3.2	11	SNP	Novel	880	---
HRAS	chr11	533825	G	A	Heterozygous	5.1	45	SNP	Novel	661	---
HRAS	chr11	533826	C	T	Heterozygous	3.9	20	SNP	Novel	662	---
HRAS	chr11	533860	C	T	Heterozygous	3.9	20	SNP	Novel	663	---
HRAS	chr11	533912	C	T	Heterozygous	7.5	108	SNP	Novel	644	---
HRAS	chr11	533926	C	T	Heterozygous	9.2	167	SNP	Novel	629	---
HRAS	chr11	534299	C	T	Heterozygous	3.2	12	SNP	Novel	1235	---
HRAS	chr11	534321	A	G	Heterozygous	3.8	27	SNP	Novel	1233	---
HRAS	chr11	534328	C	T	Heterozygous	3.1	12	SNP	Novel	1207	---
HRAS	chr11	534330	C	T	Heterozygous	3.3	14	SNP	Novel	1195	---
HRAS	chr11	534340	C	T	Heterozygous	3.9	29	SNP	Novel	1202	---
KRAS	chr12	25378625	C	T	Heterozygous	27.5	157	SNP	Novel	80	---
KRAS	chr12	25378654	C	T	Heterozygous	26.6	146	SNP	Novel	79	---
KRAS	chr12	25380283	C	T	Heterozygous	10.7	92	SNP	Hotspot	356	COSM546
KRAS	chr12	25380332	C	T	Heterozygous	12.7	181	SNP	Novel	353	---
KRAS	chr12	25386945	G	A	Heterozygous	26.7	91	SNP	Novel	45	---
KRAS	chr12	25387181	C	T	Heterozygous	12.7	47	SNP	Novel	79	---

KRAS	chr12	25387196	G	A	Heterozygous	35.4	229	SNP	Novel	79	---
KRAS	chr12	25391239	G	C	Homozygous	100	651	SNP	Novel	42	---
KRAS	chr12	25398241	A	G	Heterozygous	8	19	SNP	Novel	50	---
ERBB3	chr12	56477650	G	A	Heterozygous	9.3	161	SNP	Novel	594	---
ERBB3	chr12	56477653	C	T	Heterozygous	5.1	40	SNP	Novel	613	---
ERBB3	chr12	56477686	G	A	Heterozygous	9	155	SNP	Novel	612	---
ERBB3	chr12	56477694	A	T	Heterozygous	42.1	2311	SNP	Novel	603	---
ERBB3	chr12	56478808	C	T	Heterozygous	14.9	212	SNP	Novel	303	---
ERBB3	chr12	56478814	C	T	Heterozygous	3.9	14	SNP	Novel	304	---
ERBB3	chr12	56478828	C	T	Heterozygous	12.5	155	SNP	Novel	305	---
ERBB3	chr12	56478844	C	T	Heterozygous	4.6	20	SNP	Novel	304	---
ERBB3	chr12	56478851	C	T	Heterozygous	3.7	11	SNP	Novel	301	---
ERBB3	chr12	56478885	A	G	Heterozygous	15.2	216	SNP	Novel	297	---
ERBB3	chr12	56478892	C	T	Heterozygous	15.2	216	SNP	Novel	297	---
ERBB3	chr12	56481615	A	C	Heterozygous	4.2	14	SNP	Novel	237	---
ERBB3	chr12	56481676	C	T	Heterozygous	12.6	120	SNP	Novel	230	---
ERBB3	chr12	56482644	C	T	Heterozygous	15.8	189	SNP	Novel	240	---
CDK4	chr12	58142895	C	T	Heterozygous	3.6	25	SNP	Novel	1488	---
CDK4	chr12	58142907	C	T	Heterozygous	5.7	118	SNP	Novel	1508	---
CDK4	chr12	58142920	C	T	Heterozygous	3.3	17	SNP	Novel	1514	---
CDK4	chr12	58142939	C	T	Heterozygous	3.2	15	SNP	Novel	1514	---
CDK4	chr12	58142946	C	T	Heterozygous	4.2	44	SNP	Novel	1512	---
CDK4	chr12	58142953	C	T	Heterozygous	3.2	16	SNP	Novel	1514	---
CDK4	chr12	58142958	C	T	Heterozygous	3.2	16	SNP	Novel	1512	---
CDK4	chr12	58142964	C	T	Heterozygous	11.2	575	SNP	Novel	1513	---
CDK4	chr12	58142968	C	T	Heterozygous	3.5	21	SNP	Novel	1506	---
CDK4	chr12	58142971	C	T	Heterozygous	4.6	61	SNP	Novel	1506	---
CDK4	chr12	58143251	C	T	Heterozygous	6.4	47	SNP	Novel	359	---
CDK4	chr12	58143262	C	T	Heterozygous	8.8	94	SNP	Novel	362	---
CDK4	chr12	58143273	C	T	Heterozygous	8.8	92	SNP	Novel	363	---
CDK4	chr12	58143293	G	A	Heterozygous	9.4	107	SNP	Novel	360	---
CDK4	chr12	58143311	T	C	Heterozygous	3.9	14	SNP	Novel	357	---
CDK4	chr12	58143322	T	C	Heterozygous	5.4	31	SNP	Novel	354	---
CDK4	chr12	58144631	G	A	Heterozygous	10.5	65	SNP	Novel	162	---
CDK4	chr12	58144665	C	T	Heterozygous	60.5	1061	SNP	Novel	162	---
CDK4	chr12	58144885	G	A	Heterozygous	9.1	123	SNP	Novel	473	---
CDK4	chr12	58144887	G	A	Heterozygous	3.8	16	SNP	Novel	498	---
CDK4	chr12	58144905	G	T	Heterozygous	5.5	43	SNP	Novel	510	---

CDK4	chr12	58145463	C	T	Heterozygous	45.8	570	SNP	Novel	131	---
CDK4	chr12	58145970	C	T	Heterozygous	3	19	SNP	Novel	3957	---
AKT1	chr14	105246506	C	T	Heterozygous	5.7	28	SNP	Novel	244	---
AKT1	chr14	105246547	T	C	Heterozygous	4.1	14	SNP	Novel	268	---
MAP2K1	chr15	66727414	G	A	Heterozygous	4.8	19	SNP	Novel	229	---
MAP2K1	chr15	66727422	G	A	Heterozygous	8.8	71	SNP	Novel	260	---
MAP2K1	chr15	66727473	G	A	Heterozygous	6	32	SNP	Novel	267	---
MAP2K1	chr15	66727494	G	A	Heterozygous	8.6	68	SNP	Novel	269	---
MAP2K1	chr15	66727515	C	T	Heterozygous	14.4	173	SNP	Novel	264	---
MAP2K1	chr15	66729108	G	A	Heterozygous	6.4	41	SNP	Novel	297	---
MAP2K1	chr15	66729122	G	A	Heterozygous	11.9	143	SNP	Novel	302	---
MAP2K1	chr15	66729196	G	A	Heterozygous	11.6	179	SNP	Novel	404	---
MAP2K1	chr15	66729211	G	A	Heterozygous	14.7	273	SNP	Novel	401	---
MAP2K1	chr15	66774090	C	T	Heterozygous	14.9	197	SNP	Novel	281	---
MAP2K1	chr15	66774136	C	T	Heterozygous	14.1	179	SNP	Novel	284	---
MAP2K1	chr15	66774157	C	T	Heterozygous	14	179	SNP	Novel	286	---
MAP2K1	chr15	66774167	C	T	Heterozygous	9.4	86	SNP	Novel	286	---
MAP2K1	chr15	66774172	C	T	Heterozygous	25.9	505	SNP	Novel	286	---
MAP2K1	chr15	66774184	C	T	Heterozygous	7.4	53	SNP	Novel	285	---
MAP2K1	chr15	66774190	C	T	Heterozygous	13.7	171	SNP	Novel	285	---
IDH2	chr15	90631830	G	A	Heterozygous	5.1	16	SNP	Novel	136	---
IDH2	chr15	90631891	G	A	Heterozygous	4.4	11	SNP	Novel	135	---
ERBB2	chr17	37872388	C	T	Heterozygous	18.3	249	SNP	Novel	252	---
ERBB2	chr17	37872426	C	T	Heterozygous	11.3	99	SNP	Novel	238	---
ERBB2	chr17	37872442	C	T	Heterozygous	13.4	118	SNP	Novel	209	---
ERBB2	chr17	37872449	C	T	Heterozygous	25.6	328	SNP	Novel	203	---
ERBB2	chr17	37879884	G	A	Heterozygous	3	18	SNP	Novel	3516	---
ERBB2	chr17	37879893	G	A	Heterozygous	4.4	107	SNP	Novel	3519	---
ERBB2	chr17	37880269	C	T	Heterozygous	64.3	743	SNP	Novel	98	---
ERBB2	chr17	37880321	C	G	Heterozygous	35.5	539	SNP	Novel	183	---
ERBB2	chr17	37880962	C	T	Heterozygous	4.9	42	SNP	Novel	759	---
ERBB2	chr17	37880966	C	T	Heterozygous	8.3	160	SNP	Novel	757	---
ERBB2	chr17	37881010	C	T	Heterozygous	7.1	112	SNP	Novel	764	---
ERBB2	chr17	37881047	C	T	Heterozygous	4.3	30	SNP	Novel	767	---
ERBB2	chr17	37881327	G	A	Heterozygous	18.8	307	SNP	Novel	293	---
ERBB2	chr17	37881343	C	T	Heterozygous	14.5	199	SNP	Novel	296	---
ERBB2	chr17	37881568	C	T	Heterozygous	5	15	SNP	Novel	119	---
ERBB2	chr17	37881585	C	T	Heterozygous	42.4	364	SNP	Novel	92	---

ERBB2	chr17	37881634	C	T	Heterozygous	19.8	95	SNP	Novel	81	---
ERBB2	chr17	37882865	G	A	Heterozygous	5.1	69	SNP	Novel	1151	---
ERBB2	chr17	37882872	C	T	Heterozygous	3.7	24	SNP	Novel	1152	---
ERBB2	chr17	37882881	C	T	Heterozygous	3.6	22	SNP	Novel	1152	---
ERBB2	chr17	37882906	C	T	Heterozygous	3.8	26	SNP	Novel	1155	---
ERBB2	chr17	37882941	C	T	Heterozygous	4.8	56	SNP	Novel	1140	---
ERBB2	chr17	37883224	G	A	Heterozygous	16.3	171	SNP	Novel	203	---
ERBB2	chr17	37883226	C	T	Heterozygous	6.3	30	SNP	Novel	205	---
ERBB2	chr17	37883234	G	A	Heterozygous	7	38	SNP	Novel	214	---
GNA11	chr19	3115019	C	T	Heterozygous	10.4	166	SNP	Novel	481	---
GNA11	chr19	3115047	C	T	Heterozygous	10.8	178	SNP	Novel	481	---
GNA11	chr19	3115055	A	G	Heterozygous	7.6	88	SNP	Novel	484	---
GNA11	chr19	3115062	C	T	Heterozygous	7.1	74	SNP	Novel	482	---
GNA11	chr19	3115079	C	T	Heterozygous	9.8	176	SNP	Novel	459	---
GNA11	chr19	3118922	G	A	Heterozygous	4.7	78	SNP	Novel	1883	---
MAP2K2	chr19	4117528	G	A	Heterozygous	10.6	58	SNP	Novel	142	---
MAP2K2	chr19	4117587	C	T	Heterozygous	23.7	218	SNP	Novel	139	---
MAP2K2	chr19	4117618	C	T	Heterozygous	23.6	218	SNP	Novel	140	---
JAK3	chr19	17945919	CC	TT	Heterozygous	20.6	200	MNP	Novel	165	---
JAK3	chr19	17945939	A	G	Heterozygous	7.1	33	SNP	Novel	170	---
JAK3	chr19	17948761	T	A	Heterozygous	6.9	34	SNP	Novel	188	---
AR	chrX	66866220	G	A	Heterozygous	10.7	14	SNP	Novel	28	---
AR	chrX	66874533	G	A	Heterozygous	7.4	20	SNP	Novel	68	---
AR	chrX	66906893	G	A	Heterozygous	4.1	24	SNP	Novel	706	---
AR	chrX	66906905	G	A	Heterozygous	3.3	11	SNP	Novel	705	---
AR	chrX	66943532	C	T	Heterozygous	11.1	418	SNP	Novel	1102	---
AR	chrX	66943574	C	T	Heterozygous	12	505	SNP	Novel	1145	---
AR	chrX	66945191	C	T	Heterozygous	18.4	195	SNP	Novel	190	---