

HUGO Gen Symbool	Hotspot of volledig gen	RefSeq (NCBI) hg38	ensembl transcript ID e105	Exon	Coördinaten (chromosomale posities) van de nucleotiden van interesse (GRCh38/hg38)	hotspots
AKT1	hotspot	NM_005163.2	ENST0000055528	3	chr14:104780088-104780216	E17K, L52
				4	chr14:104776559-104776770	Q79
				11	chr14:104772878-104773092	D323
				19	chr2:29225461-29225565	T1026, H1030
ALK	hotspot	NM_004304.5	ENST00000389048	20	chr2:29223342-29223528	D1091
				21	chr2:29222517-29222607	
				22	chr2:29222344-29222408	T1151, L1152, C1156, I1171
				23	chr2:29220706-29220835	F1174, L1196, L1198, G1202, D1203, S1206
				24	chr2:29213984-29214081	F1245
				25	chr2:29209786-29209878	G1269, R1275, Y1278
				26	chr2:29207171-29207272	
				27	chr2:29197542-29197676	K1491
				28	chr2:29196770-29196860	
				29	chr2:29193223-29193922	
				APC	hotspot	NM_000038.6
7	chr5:112792446-112792529	R232				
9	chr5:112815495-112815593	R283, R302				
12	chr5:112827108-112827247	R499				
14	chr5:112828856-112828972	R554, R564				
16, deels	chr5:112837999-112840099	S805, S836, R876, Y935, K993, R1114, Q1378, R1450, R1556, E1577				
AR	hotspot	NM_000044.6	ENST00000374690	4	chrX:67711402-67711689	L702
				5	chrX:67717478-67717622	W742
				8	chrX:67723686-67723841	H875, T878
				1	chr1:26696402-26697540	
ARID1A	volledig	NM_006015.6	ENST00000324856	2	chr1:26729651-26729863	
				3	chr1:26731152-26731604	
				4	chr1:26732676-26732792	
				5	chr1:26760856-26761096	
				6	chr1:26761384-26761473	
				7	chr1:26762152-26762319	
				8	chr1:26762973-26763285	
				9	chr1:26766221-26766366	
				10	chr1:26766457-26766566	
				11	chr1:26767790-26767999	
				12	chr1:26771119-26771326	
				13	chr1:26772500-26772632	
				14	chr1:26772812-26772987	
				15	chr1:26773346-26773496	
				16	chr1:26773580-26773717	
				17	chr1:26773802-26773898	
				18	chr1:26774329-26775220	
				19	chr1:26775577-26775707	
				20	chr1:26779023-26780758	
				ATM	volledig	NM_000051.4
3	chr11:108227775-108227888					
4	chr11:108229177-108229323					
5	chr11:108235669-108235834					
6	chr11:108243952-108244118					
7	chr11:108244787-108245026					
8	chr11:108246963-108247127					
9	chr11:108248932-108249102					
10	chr11:108250700-108251072					
11	chr11:108251836-108252031					
12	chr11:108252816-108252912					
13	chr11:108253813-108254039					
14	chr11:108256214-108256340					
15	chr11:108257480-108257606					
16	chr11:108258985-108259075					
17	chr11:108267170-108267342					
18	chr11:108268409-108268609					
19	chr11:108271063-108271146					
20	chr11:108271250-108271406					
21	chr11:108272531-108272607					
22	chr11:108272721-108272852					
23	chr11:108279490-108279608					
24	chr11:108280994-108281168					
25	chr11:108282709-108282879					
26	chr11:108284226-108284473					
27	chr11:108287599-108287715					
28	chr11:108288976-108289103					
29	chr11:108289601-108289801					
30	chr11:108292618-108292793					
31	chr11:108293312-108293477					
32	chr11:108294926-108295059					
33	chr11:108297286-108297382					
34	chr11:108299713-108299885					
35	chr11:108301647-108301789					
36	chr11:108302852-108303029					
37	chr11:108304674-108304852					
38	chr11:108307896-108307984					
39	chr11:108310159-108310315					
40	chr11:108312410-108312498					
41	chr11:108315822-108315911					
42	chr11:108316010-108316113					
43	chr11:108317372-108317521					
44	chr11:108319953-108320058					
45	chr11:108321300-108321420					
46	chr11:108325309-108325544					
47	chr11:108326057-108326225					
48	chr11:108327644-108327758					
49	chr11:108329020-108329238					
50	chr11:108330213-108330421					
51	chr11:108331443-108331557					
52	chr11:108331878-108332037					
53	chr11:108332761-108332900					
54	chr11:108333885-108333968					
55	chr11:108334968-108335109					
56	chr11:108335844-108335961					
57	chr11:108343221-108343371					
58	chr11:108345742-108345908					
59	chr11:108347278-108347365					
60	chr11:108353765-108353880					
61	chr11:108354810-108354874					
62	chr11:108365081-108365218					
63	chr11:108365324-108365508					
BRAF	hotspot	NM_004333.6	ENST00000646891			
				7	chr7:140800362-140800481	D287
				11	chr7:140781576-140781693	G466, G469, Y472
				12	chr7:14077991-14078075	
				14	chr7:140754187-140754233	N581
				15	chr7:140753275-140753393	D594, G596, L597, V600, K601
				1	chr3:52409842-52409880	
				2	chr3:52409714-52409743	
				3	chr3:52409554-52409608	

BAP1	volledig	NM_004656.4	ENST00000460680	4	chr3:52408474-52408606					
				5	chr3:52407958-52408077					
				6	chr3:52407399-52407460					
				7	chr3:52407174-52407316					
				8	chr3:52406829-52406907					
				9	chr3:52406253-52406376					
				10	chr3:52405765-52405912					
				11	chr3:52405110-52405294					
				12	chr3:52404453-52404586					
				13	chr3:52403416-52403894					
				14	chr3:52403138-52403298					
				15	chr3:52402779-52402871					
				16	chr3:52402602-52402674					
				17	chr3:52402286-52402421					
				BRCA1	volledig	NM_007294.4	ENST00000357654	1	chr17:43125251-43125384	
								2	chr17:43123997-43124135	
								3	chr17:43115706-43115799	
4	chr17:43106436-43106553									
5	chr17:43104848-43104976									
6	chr17:43104102-43104281									
7	chr17:43099755-43099900									
8	chr17:43097224-43097309									
9	chr17:43095826-43095942									
10	chr17:43091415-43094880									
11	chr17:43090924-43091052									
12	chr17:43082384-43082595									
13	chr17:43076468-43076634									
14	chr17:43074311-43074541									
15	chr17:43070908-43071258									
16	chr17:43067588-43067715									
17	chr17:43063854-43063971									
18	chr17:43063313-43063393									
19	chr17:43057032-43057155									
20	chr17:43051043-43051137									
21	chr17:43049101-43049214									
22	chr17:43047623-43047723									
23	chr17:43045656-43045822									
BRCA2	volledig	NM_000059.4	ENST00000380152	1	chr13:32315454-32315687					
				2	chr13:32316402-32316547					
				3	chr13:32319057-32319345					
				4	chr13:32325056-32325204					
				5	chr13:32326081-32326170					
				6	chr13:32326222-32326302					
				7	chr13:32326479-32326633					
				8	chr13:32329423-32329512					
				9	chr13:32330899-32331050					
				10	chr13:32332252-32333407					
				11	chr13:32336245-32341216					
				12	chr13:32344538-32344673					
				13	chr13:32346807-32346916					
				14	chr13:32354841-32355308					
				15	chr13:32356408-32356629					
				16	chr13:32357722-32357949					
				17	chr13:32362503-32362713					
				18	chr13:32363159-32363553					
				19	chr13:32370382-32370577					
				20	chr13:32370936-32371120					
				21	chr13:32376650-32376811					
				22	chr13:32379297-32379535					
				23	chr13:32379730-32379933					
				24	chr13:32379987-32380165					
				25	chr13:32394669-32394953					
CCND1	volledig	NM_053056.3	ENST00000227507	1	chr11:69641314-69641511					
				2	chr11:69643031-69643246					
				3	chr11:69643832-69643991					
				4	chr11:69647994-69648142					
				5	chr11:69651118-69651282					
CDK4	volledig	NM_000075.4	ENST00000257904	2	chr12:57751500-57751717					
				3	chr12:57751207-57751342					
				4	chr12:57750923-57751090					
				5	chr12:57750656-57750765					
				6	chr12:57749454-57749504					
				7	chr12:57749182-57749317					
				8	chr12:57748525-57748617					
				9	chr12:57748252-57748344					
CDK6	volledig	NM_001259.8	ENST00000265734	2	chr7:92833091-92833324					
				3	chr7:92774696-92774831					
				4	chr7:92725626-92725793					
				5	chr7:92671426-92671535					
				6	chr7:92623036-92623086					
				7	chr7:92618072-92618207					
				8	chr7:92615139-92615286					
				9	chr7:92612071-92612117					
CDK12	volledig	NM_016507.4	ENST00000447079	2	chr17:39470879-39471763					
				3	chr17:39490557-39490733					
				4	chr17:39492751-39492890					
				5	chr17:39494524-39494694					
				6	chr17:39501250-39501439					
				7	chr17:39509705-39509761					
				8	chr17:39511529-39511630					
				9	chr17:39515731-39515808					
				10	chr17:39517440-39517556					
				11	chr17:39519956-39520087					
				12	chr17:39524674-39524885					
				13	chr17:39525864-39526316					
				14	chr17:39530604-39531318					
				15	chr9:21974678-21974827					
CDKN2A	volledig	NM_000077.5	ENST00000304494	2	chr9:21970902-21971208					
				3	chr9:21968229-21968242					
				4	chr9:22008798-22008953					
CDKN2B	volledig	NM_004936.4	ENST00000276925	2	chr9:22005987-22006247					
				3	chr3:41224067-41224081					
				4	chr3:41224526-41224753	D32-S45				
CTNNB1	hotspot	NM_001904.4	ENST00000349496	4	chr3:41224954-41225207	delV22-A97, M12-D144, M8-K132				
				7	chr3:41227208-41227352	K335				
				8	chr3:41233341-41233444	W383, N387				
				26	chr14:95093888-95094156	E1705, D1709				
DICER1	hotspot	NM_030621.4	ENST00000526495	27	chr14:95091203-95091365	G1809, E1813				
				14	chr1:97450008-97450108	*2A, c.1905+1G>A, rs3918290 (nonfunctional) c.1905+1G>A				
DPYD	hotspot	NM_000110.4	ENST00000370192	int10-11	chr1:97579843-97579943	HapB3 (rs75017182) (nonfunctional) c.1129-5923C>G				
				11	chr1:97573813-97573913	c.1236G>A (rs56038477) (linkage disequilibrium HapB3				
				13	chr1:97515737-97515837	*13 (rs55886062 A>C) (nonfunctional) c.1679T>G p.Ile560Ser				
				22	chr1:97082341-97082441	rs67376798T>A (nonfunctional) c.2846A>T p.Asp949Val				
				3	chr7:55143305-55143488	R108				
				7	chr7:55154011-55154152	M277, A289				
				12	chr7:55160139-55160338	G465, S492				

EGFR	hotspot	NM_005228.5	ENST00000275493	15	chr7:55165280-55165437	G598
				18	chr7:55173921-55174043	E709, G719
				19	chr7:55174722-55174820	T133
				20	chr7:55181293-55181478	A763-A764, S768, T790
				21	chr7:55191719-55191874	L858, L861
ERBB2	hotspot	NM_004448.4	ENST00000269571	8	chr17:39711928-39712047	G309, S310
				11	chr17:39715446-39715536	
				12	chr17:39715740-39715939	
				13	chr17:39716301-39716433	
				14	chr17:39716515-39716605	
				15	chr17:39717320-39717480	
				16	chr17:39719787-39719834	
				17	chr17:39723319-39723457	I655, V659, G660, R678
				18	chr17:39723538-39723660	T733
				19	chr17:39723912-39724010	L755, L767, D769
				20	chr17:39724726-39724911	G776, V777, G778, P780
				21	chr17:39725049-39725204	V842, T862
				22	chr17:39725327-39725402	R896
ERBB3	volledig	NM_001982.4	ENST00000267101	1	chr12:56080301-56080382	
				2	chr12:56083751-56083902	
				3	chr12:56084995-56085181	V104
				4	chr12:56086531-56086656	
				5	chr12:56087577-56087642	
				6	chr12:56087795-56087913	
				7	chr12:56088021-56088162	
				8	chr12:56088543-56088656	
				9	chr12:56088748-56088868	
				10	chr12:56092747-56092820	
				11	chr12:56092986-56093076	
				12	chr12:56093345-56093550	
				13	chr12:56093764-56093896	
				14	chr12:56094099-56094189	
				15	chr12:56094402-56094556	
				16	chr12:56095257-56095310	
				17	chr12:56095665-56095806	
				18	chr12:56096503-56096622	
				19	chr12:56096748-56096846	
				20	chr12:56097045-56097230	
				21	chr12:56097785-56097940	
				22	chr12:56098500-56098575	
				23	chr12:56098759-56098905	E928
				24	chr12:56099648-56099745	
				25	chr12:56099838-56100029	
				26	chr12:56100174-56100245	
				27	chr12:56101061-56101361	
ESR1	hotspot	NM_000125.4	ENST00000206249	4	chr6:151944173-151944508	A283, K302, K303, G344
				5	chr6:152011656-152011794	E380, V392, M396
				6	chr6:152060991-152061124	L448
				7	chr6:152094385-152094568	S463, R503
				8	chr6:152098732-152098966	E523, K531, V533, V534, P535, L536, Y537, D538, S576
				4	chr4:152346930-152347071	R224
				5	chr4:152337802-152337936	R278
FBXW7	hotspot	NM_033632.3	ENST00000603548	7	chr4:152330732-152330868	R367
				8	chr4:152329672-152329785	R393
				9	chr4:152328208-152328389	R465
				10	chr4:152326006-152326231	R479, R505
				11	chr4:152324184-152324394	S582
				12	chr4:152322881-152323149	R658, R689
				12	chr8:38417306-38417416	N577K
FGFR1	hotspot	NM_023110.3	ENST00000447712	14	chr8:38414779-38414901	K687E
				7	chr10:121519979-121520169	S252
				9	chr10:121515117-121515319	Y375, C382
				12	chr10:121498495-121498605	N549
FGFR2	hotspot	NM_000141.5	ENST00000358487	14	chr10:121487991-121488113	K659
				7	chr4:1801835-1802025	R248, S249
				9	chr4:1804330-1804520	G370, G372, Y373, Y375, A391
FGFR3	hotspot	NM_000142.5	ENST00000440486	14	chr4:1806051-1806173	K650, K652
				16	chr4:1806546-1806683	G697
				2	chr5:177089602-177089693	V10
FGFR4	hotspot	NM_213647.3	ENST00000292408	4	chr5:177090745-177090825	P136
				9	chr5:177093138-177093331	G388R
				12	chr5:177095330-177095440	N535
				13	chr5:177095533-177095723	V550
				1	chr3:138946275-138946374	C134
FOXL2	hotspot, niet volledig exon1!	NM_023067.4	ENST00000648323	1	chr3:138946275-138946374	
FRK	hotspot	NM_002031.3	ENST00000606080	6	chr6:115944244-115944425	E346, Y378-F379
GATA3	volledig	NM_001002295.2	ENST00000379328	2	chr10:8055654-8055896	
				3	chr10:8058305-8058841	
				4	chr10:8063993-8064138	
				5	chr10:8069473-8069598	
				6	chr10:8073739-8074025	
GNA11	hotspot	NM_002067.5	ENST00000078429	4	chr19:3114944-3115072	R183
				5	chr19:3118924-3119053	Q209
GNAQ	hotspot	NM_002072.5	ENST00000286548	4	chr9:77797520-77797648	R183
				5	chr9:77794463-77794592	Q209
GNAS	hotspot	NM_000516.7	ENST00000371085	7	chr20:58909162-58909216	
				8	chr20:58909350-58909423	R201
				9	chr20:58909521-58909579	Q227
H3-3A	hotspot	NM_002107.7	ENST00000366815	2	chr1:226064352-226064479	K28, G35
H3-3B	hotspot	NM_005324.5	ENST00000254810	2	chr17:75779047-75779174	K37
H3C2	volledig	NM_003537.4	ENST00000621411	1	chr6:26031651-26032060	
H3C3	volledig	NM_003531.3	ENST00000612966	1	chr6:26045411-26045821	
HNF1A	volledig	NM_000545.8	ENST00000257555	1	chr12:120978769-120979094	
				2	chr12:120988833-120989032	
				3	chr12:120993520-120993706	
				4	chr12:120994164-120994405	
				5	chr12:120996262-120996413	
				6	chr12:120996541-120996742	
				7	chr12:120997474-120997665	
				8	chr12:120999268-120999389	
				9	chr12:120999483-120999627	
				10	chr12:121001065-121001194	
HRAS	hotspot	NM_005343.4	ENST0000031189	2	chr11:534212-534322	G12, G133
				3	chr11:533766-533944	A59, Q61
				4	chr11:533453-533612	K117, A146
IDH1	hotspot	NM_005896.4	ENST00000345146	4	chr2:208248369-208248660	R132
IDH2	hotspot	NM_002168.4	ENST00000330062	4	chr15:90088587-90088747	R140, R172
IL6ST	hotspot	NM_002184.4	ENST00000381298	6	chr5:55964146-55964312	K173-D177-S187-V189-Y190-V192-N193del, D215-P216
JAK1	hotspot	NM_002227.4	ENST00000342505	10	chr5:55956025-55956235	A418, F421
				15	chr1:64845513-64845640	S703
JAK2	hotspot	NM_004972.4	ENST00000381652	16	chr1:64844754-64844889	A723
				12	chr9:5069925-5070052	
				14	chr9:5073698-5073785	
KEAP1	volledig	NM_203500.2	ENST00000171111	2	chr19:10499395-10500034	
				3	chr19:10491577-10492262	
				3	chr19:10489648-10489853	
				4	chr19:10489648-10489853	

KIT	hotspot	NM_000222.3	ENST00000288135	5	chr19:10489192-10489368	
				6	chr19:10486650-10486818	
				2	chr4:54695512-54695781	D52
				8	chr4:54723584-54723698	
				9	chr4:54725857-54726050	
				10	chr4:54727218-54727324	
				int10-11	chr4:54727325-54727415	
				11	chr4:54727416-54727542	
				13	chr4:54728011-54728121	
				14	chr4:54729335-54729485	
				17	chr4:54733069-54733192	
				18	chr4:54736498-54736609	
				2	chr12:25245274-25245384	G12, G13
				3	chr12:25227234-25227412	A59, Q61
				4	chr12:25275614-25275773	K117, A146
				1	chr15:66387348-66387427	
				2	chr15:66435027-66435237	
				3	chr15:66436746-66436892	L42, F53, L54, Q86, K57, K59, D67, E73, G91, A95, R96 E102, P105, R108, I111, L118, C121, P124, I126, G128, F129, Y130, Y134, M146
4	chr15:66443280-66443357	P162				
5	chr15:66444656-66444707	G176				
6	chr15:66481755-66481879	R189				
7	chr15:66484990-66485191	P193, E203, F223				
8	chr15:66487228-66487292	W247, M256, P264, R291, P293, G294				
9	chr15:66489215-66489276					
10	chr15:66489718-66489763	S331				
11	chr15:66490502-66490615	E367, N382, P387				
2	chr7:116699085-116700284	E168, N375				
13	chr7:116771498-116771654	I959				
int13-14	chr7:116771655-116771848					
14 + extra int14-15	chr7:116771849-116772139	T1010, Y1021				
15	chr7:116774881-116775111					
16	chr7:116777389-116777469	H1112				
17	chr7:116778776-116778957	R1188				
18	chr7:116781988-116782097					
19	chr7:116783304-116783469	D1246, Y1248, Y1253, M1268				
20	chr7:116795655-116795791	D1304				
21	chr7:116795887-116796124	A1357, P1382				
1	chr11:17719782-17720412					
2	chr11:17720902-17720980					
3	chr11:17721255-17721510					
2	chr1:114716050-114716160	G12, G13				
3	chr1:114713800-114713978	A59, Q61				
4	chr1:114709569-114709728	K117, A146				
14	chr1:156876400-156876572	V573M, F589L, G595R				
15	chr1:156879122-156879362	G667C, G667S				
15	chr9:84948462-84948634	Q596E, V601G, G623S, R630K				
16	chr9:84955283-84955517	R630K, G693S				
16	chr15:87933012-87933184	G623R				
17	chr15:87929191-87929434	G696A				
12	chr4:54274841-54274973	V561				
14	chr4:54277896-54278006	N659				
18	chr4:54285841-54285963	D842				
12	chr5:150125445-150125577	R561, P584				
13	chr5:150124727-150124831					
14	chr5:150124250-150124360	V665, N666				
15	chr5:150123042-150123201					
16	chr5:150121880-150122040					
17	chr5:150121204-150121322					
18	chr5:150120888-150121010	C843				
19	chr5:150120012-150120123					
20	chr5:150119467-150119566					
21	chr5:150118747-150118852					
2	chr3:179198827-179199177	R38, R88, K111				
3	chr3:179199690-179199899	G118				
5	chr3:179203544-179203789	N345				
8	chr3:179210186-179210338	C420, E453				
10	chr3:179218210-179218334	E542, E545, Q546				
14	chr3:179220986-179221157	E726				
21	chr3:179234094-179234364	M1043, H1047, G1049				
2	chr5:68226676-68227009					
3	chr5:68273390-68273482					
4	chr5:68273939-68274013					
5	chr5:68279602-68279733					
6	chr5:68280528-68280729					
7	chr5:68280927-68281006					
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11	chr5:68293709-68293834					
12	chr5:68294536-68294678					
13	chr5:68295148-68295324					
14	chr5:68295420-68295488					
15	chr5:68296171-68296341					
16	chr5:68297412-68297603					
9	chr12:132676546-132676653	P286, S297				
10	chr12:132676094-132676204					
11	chr12:132675735-132675820					
12	chr12:132675398-132675517					
13	chr12:132673575-132673707	V411, L424				
14	chr12:132673164-132673277	A456, S459, A465				
1	chr10:87864470-87864548					
2	chr10:87894025-87894109					
3	chr10:87925513-87925557					
4	chr10:87931046-87931089					
5	chr10:87933013-87933251	R130, R159				
6	chr10:87952118-87952259					
7	chr10:87957853-87958019	R233, K267				
8	chr10:87960894-87961118					
9	chr10:87965287-87965472					
1	chr13:48303913-48304049					
2	chr13:48307290-48307406					
3	chr13:48342599-48342714					
4	chr13:48345080-48345199					
5	chr13:48347825-48347863					
6	chr13:48348956-48349023					
7	chr13:48360017-48360127					
8	chr13:48362815-48362957					
9	chr13:48364894-48364971					
10	chr13:48367494-48367603					
11	chr13:48368527-48368604					
12	chr13:48373405-48373492					
13	chr13:48376918-48377034					
14	chr13:48379594-48379650					
15	chr13:48380053-48380084					
16	chr13:48380165-48380241					
17	chr13:48381247-48381443					
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				18	chr13:48452993-48453111	
				19	chr13:48456204-48456349	
				20	chr13:48459688-48459833	
				21	chr13:48463731-48463835	
				22	chr13:48464998-48465111	
				23	chr13:48465205-48465368	
				24	chr13:48473360-48473390	
				25	chr13:48476701-48476843	
				26	chr13:48477355-48477404	
				27	chr13:48479998-48480071	
RET	volledig	NM_020975.6	ENST00000355710	1	chr10:43077257-43077331	
				2	chr10:43100459-43100722	
				3	chr10:43102342-43102629	
				4	chr10:43104952-43105193	
				5	chr10:43106376-43106571	
				6	chr10:43109031-43109230	
				7	chr10:43111207-43111465	
				8	chr10:43112099-43112224	
				9	chr10:43112583-43112963	
				10	chr10:43113556-43113675	C611, C618, C620
				11	chr10:43114480-43114736	L629, C630, D631, E632, L633, C634
				12	chr10:43116584-43116731	
				13	chr10:43118373-43118480	
				14	chr10:43119531-43119745	
15	chr10:43120081-43120203	A883				
16	chr10:43121946-43122016	M918				
17	chr10:43123671-43123808					
18	chr10:43124883-43124982					
19	chr10:43126575-43126722					
20	chr10:43128112-43128272					
RN43	volledig	NM_017763.6	ENST00000407977	2	chr17:58415326-58415577	
				3	chr17:58370911-58371033	R113
				4	chr17:58363526-58363600	R145
				5	chr17:58363275-58363406	Q152, Y177
				6	chr17:58362544-58362648	S216
				7	chr17:58360783-58360944	
				8	chr17:58360149-58360251	
				9	chr17:58357468-58358823	R371, R519, S607
				10	chr17:58354943-58354986	
				36	chr6:117319868-117320030	
37	chr6:117318188-117318252	S1986				
38	chr6:117317143-117317272	G2032, D2033				
41	chr6:117308794-117308928	L2155				
SMAD4	volledig	NM_005359.6	ENST00000342988	2	chr18:51047047-51047295	
				3	chr18:51048686-51048860	A118, R135
				4	chr18:51049295-51049324	
				5	chr18:51054781-51054993	
				6	chr18:51058125-51058244	
				7	chr18:51059340-51059456	
				8	chr18:51059866-51059916	Q311,
				9	chr18:51065423-51065606	E330, K340, D351, D355, R361
				10	chr18:51067019-51067187	G386, G419
				11	chr18:51076638-51076776	R445
				12	chr18:51078256-51078467	R496, G510, D537, E538
				SMO	volledig	NM_005631.5
2	chr7:129203384-129203589					
3	chr7:129205203-129205412					
4	chr7:129205610-129205782					
5	chr7:129206150-129206369					
6	chr7:129206464-129206587	L412F				
7	chr7:129208759-129208851					
8	chr7:129209289-129209397					
9	chr7:129210363-129210548	W535L				
10	chr7:129210965-129211113					
11	chr7:129211636-129211770					
12	chr7:129212024-129212453					
SPOP	hotspot	NM_003563.3	ENST00000393328	5	chr17:49619234-49619385	Y83, Y87, F102
				6	chr17:49618981-49619108	W131, F133
				3	chr17:42346569-42346713	L78
STAT3	hotspot	NM_139276.3	ENST00000264657	6	chr17:42338731-42338812	E166
				17	chr17:42324711-42324846	N502
				20	chr17:42323004-42323143	S614, G618
				21	chr17:42322282-42322494	Y640, Y657, K658, M660, D661
				1	chr19:1206914-1207203	Q37
STK11	volledig	NM_000455.5	ENST00000326873	2	chr19:1218417-1218500	
				3	chr19:1219324-1219413	
				4	chr19:1220373-1220505	Q170, G171, D194, E199
				5	chr19:1220581-1220717	S216, Q220
				6	chr19:1221213-1221340	P281
				7	chr19:1221949-1222006	
				8	chr19:1222985-1223172	F354
				9	chr19:1226454-1226647	
				promoter	chr5:1295016-1295205	C228T, C250T, C242T
TP53	volledig	NM_000546.6	ENST00000269305	2	chr17:7676521-7676594	
				3	chr17:7676382-7676403	
				4	chr17:7675994-7676272	
				5	chr17:7675053-7675236	
				6	chr17:7674859-7674971	
				7	chr17:7674181-7674290	
				8	chr17:7673701-7673837	
				9	chr17:7673535-7673608	
				10	chr17:7670609-7670715	
				11	chr17:7669609-7669690	
				beta/gamma exoner	chr17:7673219-7673339	
VHL	volledig	NM_000551.4	ENST00000256474	1	chr3:10141848-10142187	
				2	chr3:10146514-10146636	
				3	chr3:10149787-10149965	