

Nr	HUGO Gen Symbol	hotspot of volledig gen	RefSeq (NCBI) hg38	ensembl transcript ID e105	Exon	Codon - hotspots	Coördinaten (chromosomale posities) van de nucleotiden van interesse (GRCh38/hg38)
1	AKT1	hotspot	NM_005163.2	ENST00000555528	3	E17K, L52	chr14:104780088-104780216
					4	Q79	chr14:104776659-104776770
					11	D323	chr14:104772878-104773092
2	ALK	hotspot	NM_004304.5	ENST00000389048	19	T1026, H1030	chr2:29225461-29225565
					20	D1091	chr2:29223342-29223528
					21		chr2:29222517-29222607
					22	T1151, L1152, C1156, I1171	chr2:29222344-29222408
					23	F1174, L1196, L1198, G1202, D1203,	chr2:29220706-29220835
					24	F1245	chr2:29213984-29214081
					25	G1269, R1275, Y1278	chr2:29209786-29209878
					26		chr2:29207171-29207272
					27	K1491	chr2:29197542-29197676
					28		chr2:29196770-29196860
					29		chr2:29193223-29193922
3	APC	volledig	NM_000038.6	ENST00000257430	2		chr5:112754891-112755025
					3		chr5:112766326-112766410
					4		chr5:112767189-112767390
					5		chr5:112775629-112775737
					6	R213	chr5:112780790-112780903
					7	R232	chr5:112792446-112792529
					8		chr5:112801279-112801383
					9	R283, R302	chr5:112815495-112815593
					10		chr5:112818966-112819344
					11		chr5:112821896-112821991
					12	R499	chr5:112827108-112827247
					13		chr5:112827929-112828006
					14	R554, R564	chr5:112828856-112828972
					15		chr5:112834951-112835165
					16	S805, S836, R876, Y935, K993, R1114, Q1378, R1450, R1556, E1577	chr5:112837553-112844127
					4	AR	hotspot
5	W742	chrX:67717478-67717622					
8	H875, T878	chrX:67723686-67723841					
5	ARID1A	volledig	NM_006015.6	ENST00000324856	1		chr1:26696402-26697540
					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
					2		chr11:108227624-108227696
					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					

6	ATM	volledig	NM_000051.4	ENST00000675843	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					
					7	BAP1	volledig	NM_004656.4	ENST00000460680	1	chr3:52409842-52409880
										2	chr3:52409714-52409743
										3	chr3:52409554-52409608
										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										
8	BARD1	volledig	NM_000465.4	ENST00000260947	1	chr2:214809412-214809571					
					2	chr2:214797061-214797117					
					3	chr2:214792297-214792445					
					4	chr2:214780560-214781509					
					5	chr2:214769232-214769312					
					6	chr2:214767482-214767654					
					7	chr2:214752447-214752555					
					8	chr2:214745722-214745854					
					9	chr2:214745067-214745159					
					10	chr2:214730411-214730508					
					11	chr2:214728674-214729008					
					2	chrX:40077844-40077930					
					3	chrX:40076454-40076532					
					4	chrX:40072349-40075180					
					5	chrX:40071637-40071690					

9	BCOR	volledig	NM_001123385.2	ENST00000378444	6	chrX:40070973-40071159					
					7	chrX:40064336-40064599					
					8	chrX:40063608-40063952					
					9	chrX:40062746-40063071					
					10	chrX:40062139-40062393					
					11	chrX:40057155-40057321					
					12	chrX:40055368-40055513					
					13	chrX:40054256-40054333					
10	BRAF	hotspot	NM_004333.6	ENST00000646891	6	D287 chr7:140801412-140801560					
					7	D287 chr7:140800362-140800481					
					11	G466, G469, Y472 chr7:140781576-140781693					
					12	chr7:140777991-140778075					
					14	N581 chr7:140754187-140754233					
					15	D594, G596, L597, V600, K601 chr7:140753275-140753393					
					1	chr17:43125251-43125384					
					2	chr17:43123997-43124135					
11	BRCA1	volledig	NM_007294.4	ENST00000357654	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					
					12	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										
26	chr13:32396878-32397064										
27	chr13:32398142-32398792										
					2	chr17:61861447-61861541					
					3	chr17:61859796-61859907					
					4	chr17:61857058-61857231					
					5	chr17:61849129-61849256					
					6	chr17:61847101-61847220					
					7	chr17:61808467-61808757					
					8	chr17:61801253-61801474					
					9	chr17:61799100-61799299					
					10	chr17:61793597-61793729					

13	BRIP1	volledig	NM_032043.3	ENST00000259008	11	chr17:61784270-61784424
					12	chr17:61780840-61781005
					13	chr17:61780261-61780401
					14	chr17:61776401-61776562
					15	chr17:61744432-61744591
					16	chr17:61743013-61743134
					17	chr17:61715951-61716063
					18	chr17:61693430-61693512
					19	chr17:61685836-61686165
					20	chr17:61683294-61684140
14	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
15	CCNE1	volledig	NM_001238.4	ENST00000262643	2	chr19:29812555-29812578
					3	chr19:29812689-29812776
					4	chr19:29812969-29813037
					5	chr19:29817137-29817282
					6	chr19:29817406-29817541
					7	chr19:29820702-29820848
					8	chr19:29821722-29821817
					9	chr19:29821996-29822130
					10	chr19:29822240-29822351
					11	chr19:29822446-29822603
					12	chr19:29823655-29823779
					16	CDH1
2	chr16:68738297-68738411					
3	chr16:68801670-68801893					
4	chr16:68808424-68808567					
5	chr16:68808693-68808848					
6	chr16:68810197-68810341					
7	chr16:68811684-68811859					
8	chr16:68812135-68812263					
9	chr16:68813313-68813495					
10	chr16:68815515-68815759					
11	chr16:68819280-68819425					
12	chr16:68822001-68822225					
13	chr16:68823399-68823626					
14	chr16:68828174-68828304					
15	chr16:68829654-68829797					
16	chr16:68833290-68833501					
17	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
					18	CDK6
3	chr7:92774696-92774831					
4	chr7:92725626-92725793					
5	chr7:92671426-92671535					
6	chr7:92623036-92623086					
7	chr7:92618072-92618207					
8	chr7:92615139-92615286					
19	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
20	CDKN2A	volledig	NM_000077.5	ENST00000304494	1	chr9:21974678-21974827
					2	chr9:21970902-21971208
					3	chr9:21968229-21968242
21	CDKN2B	volledig	NM_004936.4	ENST00000276925	1	chr9:22008798-22008953
					2	chr9:22005987-22006247

22	CHEK1	volledig	NM_001114122.3	ENST00000438015	2	chr11:125626768-125626833
					3	chr11:125627607-125627830
					4	chr11:125629232-125629296
					5	chr11:125629391-125629460
					6	chr11:125633163-125633351
					7	chr11:125635429-125635533
					8	chr11:125637449-125637544
					9	chr11:125643792-125643900
					10	chr11:125644091-125644268
					11	chr11:125644512-125644643
					12	chr11:125653746-125653847
					13	chr11:125655225-125655322
					23	CHEK2
3	chr22:28725243-28725367					
4	chr22:28724977-28725124					
5	chr22:28719395-28719485					
6	chr22:28711909-28712017					
7	chr22:28710006-28710059					
8	chr22:28703505-28703566					
9	chr22:28699838-28699937					
10	chr22:28696901-28696987					
11	chr22:28695710-28695873					
12	chr22:28695127-28695242					
13	chr22:28694032-28694117					
14	chr22:28689135-28689215					
15	chr22:28687895-28687986					
24	CTNNB1	hotspot	NM_001904.4	ENST00000349496		
					3	D32-S45 chr3:41224526-41224753
					4	delV22-A97, M12-D144, M8-K132 chr3:41224954-41225207
					7	K335 chr3:41227208-41227352
					8	W383, N387 chr3:41233341-41233444
25	DGCR8	volledig	NM_022720.7	ENST00000351989	2	chr22:20085963-20086683
					3	chr22:20087162-20087321
					4	chr22:20089669-20089811
					5	chr22:20089976-20090258
					6	chr22:20091435-20091632
					7	chr22:20091869-20091970
					8	chr22:20092809-20092907
					9	chr22:20094713-20094795
					10	chr22:20106177-20106277
					11	chr22:20106592-20106698
					12	chr22:20107271-20107398
					13	chr22:20108890-20109003
					14	chr22:20110025-20110109
					26	DDX3X
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3	chrX:41339036-41339083					
4	chrX:41341484-41341616					
5	chrX:41342495-41342653					
6	chrX:41342737-41342836					
7	chrX:41343216-41343351					
8	chrX:41343737-41343822					
9	chrX:41344030-41344128					
10	chrX:41344239-41344399					
11	chrX:41345180-41345324					
12	chrX:41345404-41345548					
13	chrX:41346229-41346410					
14	chrX:41346505-41346622					
15	chrX:41346859-41347012					
16	chrX:41347312-41347451					
17	chrX:41347640-41347720					
27	DICER1	volledig	NM_030621.4	ENST00000526495	4	chr14:95133315-95133459
					5	chr14:95132515-95132677
					6	chr14:95131509-95131639
					7	chr14:95130058-95130192
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					12	chr14:95116453-95116695
					13	chr14:95115667-95115821
14	chr14:95113092-95113224					
15	chr14:95112172-95112247					
16	chr14:95111317-95111456					
17	chr14:95108324-95108503					

					18		chr14:95107880-95108093
					19		chr14:95107608-95107761
					20		chr14:95106041-95106223
					21		chr14:95105678-95105783
					22		chr14:95105071-95105246
					23		chr14:95103346-95104126
					24		chr14:95099780-95099935
					25		chr14:95095825-95096713
					26	E1705, D1709	chr14:95093888-95094156
					27	G1809, E1813	chr14:95091203-95091365
					28		chr14:95091034-95091109
					29		chr14:95090496-95090663
28	DROSHA	volledig	NM_001382508.1	ENST00000344624	4		chr5:31529040-31529060
					5		chr5:31526079-31526912
					6		chr5:31521123-31521215
					7		chr5:31515454-31515564
					8		chr5:31514988-31515219
					9		chr5:31511035-31511176
					10		chr5:31508621-31508775
					11		chr5:31504555-31504635
					12		chr5:31495286-31495372
					13		chr5:31493207-31493293
					14		chr5:31486491-31486562
					15		chr5:31484881-31484962
					16		chr5:31483554-31483628
					17		chr5:31472063-31472232
					18		chr5:31467939-31468063
					19		chr5:31466182-31466281
					20		chr5:31464236-31464343
					21		chr5:31451533-31451640
					22		chr5:31449281-31449419
					23		chr5:31448547-31448607
					24		chr5:31437239-31437298
					25		chr5:31435765-31435864
					26		chr5:31431576-31431678
					27		chr5:31429475-31429545
					28		chr5:31424427-31424471
					29		chr5:31422787-31422944
					30		chr5:31421272-31421377
					31		chr5:31410746-31410887
					32		chr5:31409250-31409332
					33		chr5:31409056-31409159
					34		chr5:31406853-31406945
					35		chr5:31405677-31405723
					36		chr5:31401431-31401562
29	DPYD	hotspot	NM_000110.4	ENST00000370192	14	*2A, c.1905+1G>A, rs3918290 (nonfunctional) c.1905+1G>A	chr1:97450008-97450108
					int10-11	HapB3 (rs75017182) (nonfunctional) c.1129-5923C>G	chr1:97579843-97579943
					11	c.1236G>A (rs56038477) (linkage disequilibrium HapB3	chr1:97573813-97573913
					13	*13 (rs55886062 A>C) (nonfunctional) c.1679T>G p.Ile560Ser	chr1:97515737-97515837
					22	rs67376798T>A (nonfunctional) c.2846A>T p.Asp949Val	chr1:97082341-97082441
30	EGFR	hotspot	NM_005228.5	ENST00000275493	3	R108	chr7:55143305-55143488
					7	M277, A289	chr7:55154011-55154152
					12	G465, S492	chr7:55160139-55160338
					15	G598	chr7:55165280-55165437
					18	E709, G719	chr7:55173921-55174043
					19		chr7:55174722-55174820
					20	A763-A764,S768, T790	chr7:55181293-55181478
					21	L858, L861	chr7:55191719-55191874
31	EIF1AX	volledig	NM_001412.4	ENST00000379607	1		chrX:20141625-20141642
					2		chrX:20138539-20138622
					3		chrX:20135738-20135841
					4		chrX:20133957-20134007
					5		chrX:20132182-20132263
					6		chrX:20130516-20130607
					7		chrX:20128304-20128311
					2		chr9:108930997-108931147
					3		chr9:108929769-108929921
					4		chr9:108927372-108927453
					5		chr9:108926523-108926603
					6		chr9:108922842-108922927
					7		chr9:108919253-108919349

32	ELP1	volledig	NM_003640.5	ENST00000374647	8		chr9:108918811-108918901					
					9		chr9:108917547-108917670					
					10		chr9:108916204-108916297					
					11		chr9:108912264-108912494					
					12		chr9:108911010-108911180					
					13		chr9:108908305-108908404					
					14		chr9:108906303-108906485					
					15		chr9:108903563-108903669					
					16		chr9:108902839-108902942					
					17		chr9:108901628-108901681					
					18		chr9:108901425-108901530					
					19		chr9:108900260-108900375					
					20		chr9:108899822-108899895					
					21		chr9:108898671-108898749					
					22		chr9:108898502-108898581					
					23		chr9:108897148-108897285					
					24		chr9:108896953-108897038					
					25		chr9:108896496-108896644					
					26		chr9:108893943-108894066					
					27		chr9:108892986-108893083					
					28		chr9:108891203-108891404					
					29		chr9:108889332-108889393					
					30		chr9:108882125-108882187					
					31		chr9:108881705-108881765					
					32		chr9:108880052-108880165					
					33		chr9:108879446-108879557					
					34		chr9:108878623-108878750					
					35		chr9:108877995-108878149					
					36		chr9:108874895-108874970					
					37		chr9:108869113-108869182					
					33	ERBB2	hotspot	NM_004448.4	ENST00000269571	8	G309, S310	chr17:39711928-39712047
										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	I655, V659, G660, R678	chr17:39723319-39723457										
18	T733	chr17:39723538-39723660										
19	L755, I767, D769	chr17:39723912-39724010										
20	G776, V777, G778_P780	chr17:39724726-39724911										
21	V842, T862	chr17:39725049-39725204										
22	R896	chr17:39725327-39725402										
27		chr17:39727689-39728046										
34	ERBB3	patinib, volledig	NM_001982.4	ENST00000267101						1		chr12:56080301-56080382
					2		chr12:56083751-56083902					
					3	V104	chr12:56084995-56085181					
					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	E928	chr12:56098759-56098905					
					24		chr12:56099648-56099745					
					25		chr12:56099838-56100029					
					26		chr12:56100174-56100245					
					27		chr12:56101061-56101361					
					28		chr12:56101529-56102055					
35	ESR1	hotspot	NM_000125.4	ENST00000206249	4	A283, K302, K303, G344	chr6:151944173-151944508					
					5	E380, V392, M396	chr6:152011656-152011794					
					6	L448	chr6:152060991-152061124					

					7	S463, R503	chr6:152094385-152094568
					8	E523, K531, V533, V534, P535, L536, Y537, D538, S576	chr6:152098732-152098966
36	FBXW7	volledig	NM_001349798.2	ENST00000603548	2		chr4:152411303-152411804
					3		chr4:152350042-152350124
					4	R224	chr4:152346930-152347071
					5	R278	chr4:152337802-152337936
					6		chr4:152332596-152332719
					7	R367	chr4:152330732-152330868
					8	R393	chr4:152329672-152329785
					9	R465	chr4:152328208-152328389
					10	R479, R505	chr4:152326006-152326231
					11	S582	chr4:152324184-152324394
					12	R658, R689	chr4:152322881-152323149
					37	FGFR1	hotspot
14	K687E	chr8:38414779-38414901					
38	FGFR2	hotspot	NM_000141.5	ENST00000358487	7	S252	chr10:121519979-121520169
					9	Y375, C382	chr10:121515117-121515319
					12	N549	chr10:121498495-121498605
					14	K659	chr10:121487991-121488113
39	FGFR3	hotspot	NM_000142.5	ENST00000440486	7	R248, S249	chr4:1801835-1802025
					9	G370, G372, Y373, Y375, A391	chr4:1804330-1804520
					14	K650, K652	chr4:1806051-1806173
					16	G697	chr4:1806546-1806683
40	FGFR4	hotspot	NM_213647.3	ENST00000292408	2	V10	chr5:177089602-177089693
					4	P136	chr5:177090745-177090825
					9	G388R	chr5:177093138-177093331
					12	N535	chr5:177095330-177095440
					13	V550	chr5:177095533-177095723
41	FOXL2	hotspot	NM_023067.4	ENST00000648323	1	C134	chr3:138946275-138946374
42	FRK	hotspot	NM_002031.3	ENST00000606080	6	E346, Y378-F379	chr6:115944244-115944425
43	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
					4	R183	chr19:3114944-3115072
44	GNA11	hotspot	NM_002067.5	ENST00000078429	5	Q209	chr19:3118924-3119053
					4	R183	chr9:77797520-77797648
45	GNAQ	hotspot	NM_002072.5	ENST00000286548	5	Q209	chr9:77794463-77794592
					7		chr20:58909162-58909216
46	GNAS	hotspot	NM_000516.7	ENST00000371085	8	R201	chr20:58909350-58909423
					9	Q227	chr20:58909521-58909579
					2		chr1:168104477-168104850
47	GPR161	volledig	NM_001375883.1	ENST00000682931	3		chr1:168096508-168097232
					4		chr1:168090564-168090668
					5		chr1:168087585-168087704
					6		chr1:168085529-168085796
					2	K28, G35	chr1:226064352-226064479
48	H3-3A	hotspot	NM_002107.7	ENST00000366815	2		chr17:75779047-75779174
49	H3-3B	hotspot	NM_005324.5	ENST00000254810	2	K37	chr6:26031651-26032060
50	H3C2	volledig	NM_003537.4	ENST00000621411	1		chr6:26045411-26045821
51	H3C3	volledig	NM_003531.3	ENST00000612966	1		chr12:120978769-120979094
52	HNF1A	volledig	NM_000545.8	ENST00000257555	1		chr12:120988833-120989032
					2		chr12:120993520-120993706
					3		chr12:120994164-120994405
					4		chr12:120996262-120996413
					5		chr12:120996541-120996742
					6		chr12:120997474-120997665
					7		chr12:120999268-120999389
					8		chr12:120999483-120999627
					9		chr12:121001065-121001194
					10		
53	HRAS	hotspot	NM_005343.4	ENST00000311189	2	G12, G133	chr11:534212-534322
					3	A59, Q61	chr11:533766-533944
					4	K117, A146	chr11:533453-533612
54	IDH1	hotspot	NM_005896.4	ENST00000345146	4	R132	chr2:208248369-208248660
55	IDH2	hotspot	NM_002168.4	ENST00000330062	4	R140, R172	chr15:90088587-90088747
56	IL6ST	hotspot	NM_002184.4	ENST00000381298	6	K173-D177-S187-V189-Y190-V192-N193del, D215-P216	chr5:55964146-55964312
					10	A418_F421	chr5:55956025-55956235
57	JAK1	hotspot	NM_002227.4	ENST00000342505	15	S703	chr1:64845513-64845640
					16	A723	chr1:64844754-64844889
58	JAK2	hotspot	NM_004972.4	ENST00000381652	12		chr9:5069925-5070052
					14		chr9:5073698-5073785
59	KBTBD4	hotspot	NM_018095.6	ENST00000430070	4	S309, S310, P311delinsPP, R313delinsPRR	chr11:47572928-47573790

60	KEAP1	volledig	NM_203500.2	ENST00000171111	2		chr19:10499395-10500034
					3		chr19:10491577-10492262
					4		chr19:10489648-10489853
					5		chr19:10489192-10489368
					6		chr19:10486650-10486818
61	KIT	volledig	NM_000222.3	ENST00000288135	1		chr4:54658013-54658081
					2	D52	chr4:54695512-54695781
					3		chr4:54698284-54698565
					4		chr4:54699630-54699766
					5		chr4:54703724-54703892
					6		chr4:54707098-54707287
					7		chr4:54709424-54709539
					8		chr4:54723584-54723698
					9		chr4:54725857-54726050
					10		chr4:54727218-54727324
					int10-11		chr4:54727325-54727415
					11		chr4:54727416-54727542
					12		chr4:54727823-54727927
					13		chr4:54728011-54728121
					14		chr4:54729335-54729485
					15		chr4:54731328-54731419
					16		chr4:54731871-54731998
					17		chr4:54733069-54733192
					18		chr4:54736498-54736609
					19		chr4:54736721-54736820
					20		chr4:54737175-54737280
21		chr4:54738429-54738559					
62	KRAS	hotspot	NM_004985.5	ENST00000311936	2	G12, G13	chr12:25245274-25245384
					3	A59, Q61	chr12:25227234-25227412
					4	K117, A146	chr12:25225614-25225773
63	MAP2K1	volledig	NM_002755.4	ENST00000307102	1		chr15:66387348-66387427
					2	L42, F53, L54, Q56, K57, K59, D67, E73, G91, A95, R96	chr15:66435027-66435237
					3	E102, P105, R108, I111, L118, C121, P124, I126, G128, F129, Y130, Y134, M146	chr15:66436746-66436892
					4	P162	chr15:66443280-66443357
					5	G176	chr15:66444656-66444707
					6	R189	chr15:66481755-66481879
					7	P193, E203, F223	chr15:66484990-66485191
					8	W247, M256, P264, R291, P293, G294	chr15:66487228-66487292
					9		chr15:66489215-66489276
					10	S331	chr15:66489718-66489763
					11	E367, N382, P387	chr15:66490502-66490615
64	MDM2	volledig	NM_002392.6	ENST00000258149	1		chr12:68808476-68808491
					2		chr12:68809208-68809292
					3		chr12:68813554-68813628
					4		chr12:68816812-68816945
					5		chr12:68820325-68820374
					6		chr12:68824363-68824430
					7		chr12:68824555-68824651
					8		chr12:68828771-68828931
					9		chr12:68835829-68835984
					10		chr12:68836672-68836749
					11		chr12:68839274-68839851
65	MET	hotspot	NM_001127500.3	ENST00000318493	2	E168, N375	chr7:116699085-116700284
					13	I959	chr7:116771498-116771654
					int13-14		chr7:116771655-116771848
					4 + extra int14-1	T1010, Y1021	chr7:116771849-116772139
					15		chr7:116774881-116775111
					16	H1112	chr7:11677389-11677469
					17	R1188	chr7:116778776-116778957
					18		chr7:116781988-116782097
					19	D1246, Y1248, Y1253, M1268	chr7:116783304-116783469
					20	D1304	chr7:116795655-116795791
					21	A1357, P1382	chr7:116795887-116796124
66	MRE11	volledig	NM_005591.4	ENST00000323929	2		chr11:94492782-94492803
					3		chr11:94490833-94490965
					4		chr11:94485924-94486084
					5		chr11:94479674-94479761
					6		chr11:94478735-94478876
					7		chr11:94476289-94476403
					8		chr11:94471574-94471759
					9		chr11:94470471-94470642
					10		chr11:94467813-94467893
					11		chr11:94464113-94464239

					12	chr11:94460936-94461036
					13	chr11:94459408-94459581
					14	chr11:94456276-94456338
					15	chr11:94447219-94447438
					16	chr11:94445810-94445893
					17	chr11:94437177-94437235
					18	chr11:94435832-94435899
					19	chr11:94429911-94429986
					20	chr11:94420124-94420181
67	MTAP	volledig	NM_002451.4	ENST00000644715	1	chr9:21802749-21802781
					2	chr9:21815433-21815519
					3	chr9:21816714-21816772
					4	chr9:21818035-21818202
					5	chr9:21837908-21838010
					6	chr9:21854631-21854870
					7	chr9:21859303-21859425
					8	chr9:21861976-21862016
68	MYC	volledig	NM_002467.6	ENST00000621592	1	chr8:127736592-127736623
					2	chr8:127738248-127739019
					3	chr8:127740396-127740960
69	MYCN	volledig	NM_005378.6	ENST00000281043	2	chr2:15942064-15942854
					3	chr2:15945493-15946099
70	MYO1	volledig	NM_002478.5	ENST00000250003	1	chr11:17719782-17720412
					2	chr11:17720902-17720980
					3	chr11:17721255-17721510
71	NBN	volledig	NM_002485.5	ENST00000265433	1	chr8:89984525-89984563
					2	chr8:89982722-89982855
					3	chr8:89981375-89981523
					4	chr8:89980734-89980893
					5	chr8:89978220-89978323
					6	chr8:89971173-89971290
					7	chr8:89970364-89970557
					8	chr8:89964410-89964507
					9	chr8:89958725-89958854
					10	chr8:89955283-89955555
					11	chr8:89953244-89953691
					12	chr8:89947824-89947892
					13	chr8:89946140-89946295
					14	chr8:89943253-89943366
					15	chr8:89937026-89937075
					16	chr8:89935580-89935612
72	NF1	volledig	NM_001042492.3	ENST00000358273	1	chr17:31095308-31095369
					2	chr17:31155983-31156126
					3	chr17:31159010-31159093
					4	chr17:31163186-31163376
					5	chr17:31169891-31169997
					6	chr17:31181422-31181489
					7	chr17:31181710-31181785
					8	chr17:31182508-31182665
					9	chr17:31200422-31200595
					10	chr17:31201037-31201159
					11	chr17:31201411-31201485
					12	chr17:31206240-31206371
					13	chr17:31214451-31214585
					14	chr17:31219005-31219118
					15	chr17:31221850-31221929
					16	chr17:31223444-31223567
					17	chr17:31225095-31225250
					18	chr17:31226435-31226684
					19	chr17:31227218-31227291
					20	chr17:31227523-31227606
					21	chr17:31229025-31229465
					22	chr17:31229835-31229974
					23	chr17:31230260-31230382
					24	chr17:31230842-31230925
					25	chr17:31232073-31232189
					26	chr17:31232700-31232881
					27	chr17:31233002-31233213
					28	chr17:31235611-31235772
					29	chr17:31235918-31236021
					30	chr17:31248984-31249119
					31	chr17:31252938-31253000
					32	chr17:31258344-31258502
					33	chr17:31259032-31259129
					34	chr17:31260369-31260515

					35	chr17:31261711-31261857
					36	chr17:31265229-31265339
					37	chr17:31325820-31326252
					38	chr17:31327499-31327839
					39	chr17:31330296-31330498
					40	chr17:31334838-31335031
					41	chr17:31336333-31336473
					42	chr17:31336635-31336914
					43	chr17:31337368-31337582
					44	chr17:31337819-31337880
					45	chr17:31338025-31338139
					46	chr17:31338704-31338805
					47	chr17:31340505-31340645
					48	chr17:31343009-31343135
					49	chr17:31349120-31349251
					50	chr17:31350183-31350318
					51	chr17:31352257-31352414
					52	chr17:31356460-31356582
					53	chr17:31356960-31357090
					54	chr17:31357269-31357369
					55	chr17:31358480-31358622
					56	chr17:31358969-31359015
					57	chr17:31360487-31360703
					58	chr17:31374013-31374156
73	<i>NF2</i>	volledig	NM_000268.4	ENST00000338641	1	chr22:29603997-29604112
					2	chr22:29636751-29636876
					3	chr22:29639090-29639212
					4	chr22:29642202-29642285
					5	chr22:29654657-29654725
					6	chr22:29655594-29655676
					7	chr22:29658189-29658264
					8	chr22:29661205-29661339
					9	chr22:29664990-29665064
					10	chr22:29668333-29668446
					11	chr22:29671826-29671948
					12	chr22:29673269-29673486
					13	chr22:29674836-29674941
					14	chr22:29678196-29678323
					15	chr22:29681439-29681601
					16	chr22:29694752-29694803
					1	chr9:136545726-136545788
					2	chr9:136544024-136544102
					3	chr9:136523717-136523979
					4	chr9:136522850-136523188
					5	chr9:136519443-136519565
					6	chr9:136518591-136518824
					7	chr9:136518137-136518292
					8	chr9:136517752-136517937
					9	chr9:136517272-136517385
					10	chr9:136515981-136516094
					11	chr9:136515483-136515716
					12	chr9:136515290-136515400
					13	chr9:136514510-136514702
					14	chr9:136513392-136513537
					15	chr9:136513021-136513134
					16	chr9:136511152-136511271
					17	chr9:136510653-136510805
74	<i>NOTCH1</i>	volledig	NM_017617.5	ENST00000651671	18	chr9:136509733-136509961
					19	chr9:136508870-136509071
					20	chr9:136508232-136508385
					21	chr9:136507955-136508139
					22	chr9:136507305-136507437
					23	chr9:136506716-136506973
					24	chr9:136506527-136506639
					25	chr9:136505310-136505881
					26	chr9:136504673-136505104
					27	chr9:136503182-136503330
					28	chr9:136502272-136502488
					29	chr9:136502001-136502088
					30	chr9:136501748-136501913
					31	chr9:136500552-136500847
					32	chr9:136499112-136499259
					33	chr9:136498899-136498996
					34	chr9:136496099-136497558
					2	chr1:114716050-114716160

75	NRAS	hotspot	NM_002524.5	ENST00000369535	3	A59, Q61	chr1:114713800-114713978
					4	K117, A146	chr1:114709569-114709728
76	NTRK1	hotspot	NM_002529.4	ENST00000524377	14	V573M, F589L, G595R	chr1:156876400-156876572
					15	G667C, G667S	chr1:156879122-156879362
77	NTRK2	hotspot	NM_001018064.3	ENST00000376213	15	Q596E, V601G, G623S, R630K	chr9:84948462-84948634
					16	R630K, G693S	chr9:84955283-84955517
78	NTRK3	hotspot	NM_001012338.3	ENST00000360948	16	G623R	chr15:87933012-87933184
					17	G696A	chr15:87929191-87929434
79	PALB2	volledig	NM_024675.4	ENST00000261584	1		chr16:23641110-23641160
					2		chr16:23638070-23638129
					3		chr16:23637850-23637952
					4		chr16:23634862-23636334
					5		chr16:23629640-23630469
					6		chr16:23629204-23629275
					7		chr16:23626236-23626397
					8		chr16:23624009-23624094
					9		chr16:23622969-23623130
					10		chr16:23621362-23621478
					11		chr16:23614004-23614091
					12		chr16:23607864-23608012
					13		chr16:23603457-23603669
80	PDGFRA	hotspot	NM_006206.6	ENST00000257290	12	V561	chr4:54274841-54274973
					13		chr4:54277388-54277492
					14	N659	chr4:54277896-54278006
					15		chr4:54278362-54278515
18	D842	chr4:54285841-54285963					
81	PDGFRB	hotspot	NM_002609.4	ENST00000261799	11		chr5:150126520-150126614
					12	R561, P584	chr5:150125445-150125577
					13		chr5:150124727-150124831
					14	V665, N666	chr5:150124250-150124360
					15		chr5:150123042-150123201
					16		chr5:150121880-150122040
					17		chr5:150121204-150121322
					18	C843	chr5:150120888-150121010
					19		chr5:150120012-150120123
					20		chr5:150119467-150119566
					21		chr5:150118747-150118852
82	PIK3CA	volledig	NM_006218.4	ENST00000263967	2	R38, R88, K111	chr3:179198827-179199177
					3	G118	chr3:179199690-179199899
					4		chr3:179201290-179201540
					5	N345	chr3:179203544-179203789
					6		chr3:179204503-179204588
					7		chr3:179209595-179209700
					8	C420, E453	chr3:179210186-179210338
					9		chr3:179210431-179210565
					10	E542, E545, Q546	chr3:179218210-179218334
					11		chr3:179219196-179219277
					12		chr3:179219571-179219735
					13		chr3:179219949-179220052
					14	E726	chr3:179220986-179221157
					15		chr3:179224081-179224187
					16		chr3:179224700-179224821
					17		chr3:179225962-179226040
					18		chr3:179229272-179229442
					19		chr3:179230004-179230121
					20		chr3:179230225-179230376
					21	M1043, H1047, G1049	chr3:179234094-179234364
					83	PIK3R1	volledig
3		chr5:68273390-68273482					
4		chr5:68273939-68274013					
5		chr5:68279602-68279733					
6		chr5:68280528-68280729					
7		chr5:68280927-68281006					
8		chr5:68292259-68292361					
9		chr5:68293101-68293199					
10		chr5:68293303-68293483					
11		chr5:68293709-68293834					
12		chr5:68294536-68294678					
13		chr5:68295148-68295324					
14		chr5:68295420-68295488					
15		chr5:68296171-68296341					
16		chr5:68297412-68297603					
84	PIKF	hotspot	NM_006231.4	ENST00000320574			
					10		chr12:132676094-132676204
					11		chr12:132675735-132675820

					12		chr12:132675398-132675517
					13	V411, L424	chr12:132673575-132673707
					14	A456, S459, A465	chr12:132673164-132673277
85	PRKCA	hotspot	NM_002737.3	ENST00000413366	13	D463H	chr17:66742622-66742760
86	PTCH1	volledig	NM_000264.5	ENST00000331920	1		chr9:95508161-95508363
					2		chr9:95506407-95506599
					3		chr9:95485685-95485874
					4		chr9:95482134-95482203
					5		chr9:95481949-95482040
					6		chr9:95480390-95480588
					7		chr9:95479969-95480090
					8		chr9:95479000-95479147
					9		chr9:95478055-95478186
					10		chr9:95477547-95477702
					11		chr9:95476759-95476857
					12		chr9:95476034-95476159
					13		chr9:95469813-95469931
					14		chr9:95468751-95469153
					15		chr9:95467116-95467425
					16		chr9:95461856-95461998
					17		chr9:95459600-95459783
					18		chr9:95458013-95458293
					19		chr9:95456276-95456413
					20		chr9:95453478-95453620
					21		chr9:95449841-95449940
					22		chr9:95449069-95449323
					23		chr9:95446911-95447451
87	PTEN	volledig	NM_000314.8	ENST00000371953	1		chr10:87864470-87864548
					2		chr10:87894025-87894109
					3		chr10:87925513-87925557
					4		chr10:87931046-87931089
					5	R130, R159	chr10:87933013-87933251
					6		chr10:87952118-87952259
					7	R233, K267	chr10:87957853-87958019
					8		chr10:87960894-87961118
					9		chr10:87965287-87965472
88	PTPN11	volledig	NM_002834.5	ENST00000351677	1		chr12:112419110-112419125
					2		chr12:112446276-112446398
					3		chr12:112450318-112450512
					4		chr12:112453195-112453387
					5		chr12:112454564-112454680
					6		chr12:112455950-112456063
					7		chr12:112472944-112473040
					8		chr12:112477651-112477730
					9		chr12:112477857-112478015
					10		chr12:112482074-112482205
					11		chr12:112486475-112486629
					12		chr12:112488443-112488510
					13		chr12:112489024-112489175
					14		chr12:112502144-112502256
					15		chr12:112504695-112504766
89	RAD50	volledig	NM_005732.4	ENST00000378823	1		chr5:132557323-132557453
					2		chr5:132559284-132559367
					3		chr5:132575777-132575928
					4		chr5:132579317-132579502
					5		chr5:132579862-132580066
					6		chr5:132587562-132587690
					7		chr5:132587924-132588089
					8		chr5:132588687-132588880
					9		chr5:132589631-132589837
					10		chr5:132591224-132591406
					11		chr5:132591877-132592034
					12		chr5:132594869-132595044
					13		chr5:132595573-132595810
					14		chr5:132603300-132603489
15		chr5:132603920-132604046					
16		chr5:132604806-132604999					
17		chr5:132608615-132608725					
18		chr5:132609117-132609209					
19		chr5:132609283-132609396					
20		chr5:132616003-132616130					
21		chr5:132618070-132618294					
22		chr5:132637115-132637200					
23		chr5:132638081-132638223					
24		chr5:132640672-132640805					

90	RAD51B	volledig	NM_133510.4	ENST00000471583	25	chr5:132642178-132642366
					2	chr14:67823544-67823627
					3	chr14:67825464-67825577
					4	chr14:67835080-67835196
					5	chr14:67865003-67865139
					6	chr14:67885869-67885988
					7	chr14:67887021-67887204
					8	chr14:68291884-68291980
					9	chr14:68411424-68411527
					10	chr14:68468172-68468250
					11	chr14:68477648-68477666
91	RAD51C	volledig	NM_058216.3	ENST00000337432	1	chr17:58692643-58692788
					2	chr17:58694931-58695189
					3	chr17:58696693-58696859
					4	chr17:58703196-58703329
					5	chr17:58709859-58709990
					6	chr17:58720746-58720812
					7	chr17:58724040-58724100
					8	chr17:58732484-58732544
					9	chr17:58734118-58734224
92	RAD51D	volledig	NM_002878.4	ENST00000345365	1	chr17:35119532-35119614
					2	chr17:35119111-35119172
					3	chr17:35118501-35118619
					4	chr17:35107366-35107447
					5	chr17:35106988-35107122
					6	chr17:35106386-35106481
					7	chr17:35103454-35103544
					8	chr17:35103254-35103324
					9	chr17:35101201-35101365
					10	chr17:35100951-35101036
93	RB1	volledig	NM_000321.3	ENST00000267163	1	chr13:48303913-48304049
					2	chr13:48307280-48307406
					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
					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
94	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	C611, C618, C620 chr10:43113556-43113675
					11	L629, C630, D631, E632, L633, C634 chr10:43114480-43114736
					12	chr10:43116584-43116731
					13	chr10:43118373-43118480
					14	chr10:43119531-43119745
					15	A883 chr10:43120081-43120203
					16	M918 chr10:43121946-43122016
					17	chr10:43123671-43123808
					18	chr10:43124883-43124982

					19		chr10:43126575-43126722
					20		chr10:43128112-43128272
95	RNF43	volledig	NM_017763.6	ENST00000407977	2		chr17:58415326-58415577
					3	R113	chr17:58370911-58371033
					4	R145	chr17:58363526-58363600
					5	Q152, Y177	chr17:58363275-58363406
					6	S216	chr17:58362544-58362648
					7		chr17:58360783-58360944
					8		chr17:58360149-58360251
					9	R371, R519, S607	chr17:58357468-58358823
					10		chr17:58354943-58354986
					96	ROS1	hotspot
37	S1986	chr6:117318188-117318252					
38	G2032, D2033	chr6:117317143-117317272					
41	L2155	chr6:117308794-117308928					
97	SDHA	volledig	NM_004168.4	ENST00000264932	1		chr5:218355-218418
					2		chr5:223482-223568
					3		chr5:224360-224521
					4		chr5:225419-225562
					5		chr5:225883-226047
					6		chr5:228185-228333
					7		chr5:230876-231000
					8		chr5:233477-233645
					9		chr5:235144-235339
					10		chr5:236428-236599
					11		chr5:240358-240476
					12		chr5:250992-251103
					13		chr5:251338-251468
					14		chr5:254393-254506
					98	SDHB	volledig
2		chr1:17044761-17044888					
3		chr1:17033060-17033145					
4		chr1:17028600-17028736					
5		chr1:17027749-17027865					
6		chr1:17023973-17024074					
7		chr1:17022608-17022730					
8		chr1:17018880-17018958					
99	SDHC	volledig	NM_003001.5	ENST00000367975	1		chr1:161314405-161314425
					2		chr1:161323614-161323670
					3		chr1:161328396-161328497
					4		chr1:161340594-161340655
					5		chr1:161356677-161356840
					6		chr1:161362329-161362435
100	SDHD	volledig	NM_003002.4	ENST00000375549	1		chr11:112086907-112086959
					2		chr11:112087857-112087973
					3		chr11:112088867-112089011
					4		chr11:112094805-112094972
101	SF3B1	hotspot	NM_012433.4	ENST00000335508	14		chr2:197402554-197402828
					15		chr2:197401983-197402132
					16		chr2:197401740-197401890
					18		chr2:197400713-197400938
102	SMAD4	volledig	NM_005359.6	ENST00000342988	2		chr18:51047047-51047295
					3	A118, R135	chr18:51048686-51048860
					4		chr18:51049295-51049324
					5		chr18:51054781-51054993
					6		chr18:51058125-51058244
					7		chr18:51058340-51058456
					8	Q311,	chr18:51059866-51059916
					9	E330, K340, D351, D355, R361	chr18:51065423-51065606
					10	G386, G419	chr18:51067019-51067187
					11	R445	chr18:51076638-51076776
					12	R496, G510, D537, E538	chr18:51078256-51078467
4		chr19:10985273-10985405					
5		chr19:10986189-10986593					
6		chr19:10986905-10987003					
7		chr19:10987666-10987924					
8		chr19:10989317-10989443					
9		chr19:10991150-10991323					
10		chr19:10994828-10995001					
11		chr19:10996213-10996380					
12		chr19:10996494-10996544					
13		chr19:11003029-11003159					
14		chr19:11003340-11003397					

103	SMARCA4	volledig	NM_001128844.3	ENST00000429416	15		chr19:11007902-11008023
					16		chr19:11010381-11010531
					17		chr19:11012949-11013112
					18		chr19:11018957-11019023
					19		chr19:11019591-11019701
					20		chr19:11021725-11021967
					21		chr19:11023518-11023631
					22		chr19:11024331-11024438
					23		chr19:11025422-11025508
					24		chr19:11026300-11026346
					25		chr19:11027784-11027950
					26		chr19:11030730-11030893
					27		chr19:11033290-11033517
					28		chr19:11033767-11033865
					29		chr19:11034123-11034200
					30		chr19:11034914-11035132
					31		chr19:11041307-11041560
					32		chr19:11058255-11058363
33		chr19:11058788-11058889					
34		chr19:11059753-11059885					
35		chr19:11060045-11060187					
36		chr19:11061784-11061818					
104	SMARCB1	volledig	NM_003073.5	ENST00000644036	1		chr22:23787168-23787262
					2		chr22:23791756-23791894
					3		chr22:23793559-23793688
					4		chr22:23800944-23801081
					5		chr22:23803295-23803422
					6		chr22:23816770-23816936
					7		chr22:23825225-23825415
					8		chr22:23833572-23833703
					9		chr22:23834141-23834182
105	SMO	volledig	NM_005631.5	ENST00000249373	1		chr7:129189152-129189482
					2		chr7:129203384-129203589
					3		chr7:129205203-129205412
					4		chr7:129205610-129205782
					5		chr7:129206150-129206369
					6	L412F	chr7:129206464-129206587
					7		chr7:129208759-129208851
					8		chr7:129209289-129209397
					9	W535L	chr7:129210363-129210548
					10		chr7:129210965-129211113
					11		chr7:129211636-129211770
					12		chr7:129212024-129212453
106	SPOP	hotspot	NM_003563.3	ENST00000393328	5	Y83, Y87, F102	chr17:49619234-49619385
					6	W131, F133	chr17:49618981-49619108
107	STAT3	hotspot	NM_139276.3	ENST00000264657	3	L78	chr17:42346569-42346713
					6	E166	chr17:42338731-42338812
					17	N502	chr17:42324711-42324846
					20	S614, G618	chr17:42323004-42323143
					21	Y640, Y657, K658, M660, D661	chr17:42322282-42322494
108	STK11	volledig	NM_000455.5	ENST00000326873	1	Q37	chr19:1206914-1207203
					2		chr19:1218417-1218500
					3		chr19:1219324-1219413
					4	Q170, G171, D194, E199	chr19:1220373-1220505
					5	S216, Q220	chr19:1220581-1220717
					6	P281	chr19:1221213-1221340
					7		chr19:1221949-1222006
					8	F354	chr19:1222985-1223172
					9		chr19:1226454-1226647
109	SUFU	volledig	NM_016169.4	ENST00000369902	1		chr10:102504151-102504334
					2		chr10:102509169-102509303
					3		chr10:102549970-102550106
					4		chr10:102592582-102592724
					5		chr10:102593636-102593721
					6		chr10:102593993-102594065
					7		chr10:102597140-102597293
					8		chr10:102599433-102599544
					9		chr10:102615268-102615402
					10		chr10:102617290-102617428
					11		chr10:102627175-102627243
					12		chr10:102630066-102630157
110	TERT	hotspot	NM_198253.3	ENST00000310581	promoter	C228T, C250T, C242T	chr5:1295016-1295205
							chr17:7676521-7676594
							chr17:7676382-7676403
							chr17:7675994-7676272

111	TP53	volledig	NM_000546.6	ENST00000269305	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 exonen	chr17:7673219-7673339
112	VHL	volledig	NM_000551.4	ENST00000256474	1	chr3:10141848-10142187
					2	chr3:10146514-10146636
					3	chr3:10149787-10149965