

### Mutations in SK-BR-3

SKBR3\_BREAST

Gene	Protein Change	Chr	Start	End	NCBI Build	Variant Classification	Variant Type	Reference Allele	Tumor Allele 1	dbSNP ID	Annotation Transcript	Other Transcripts	Mutation Assessor
<a href="#">AAK1</a>	p.541_542QQ>Q	2	69741754	69741756	37	In_Frame_Del	Del	TGT	-	rs55712143	uc002sfp.2	AAK1_uc010fdk.2...	
<a href="#">AATK</a>	p.G974R	17	79094816	79094816	37	Missense_Mutation	SNP	C	T		uc010dia.2	AATK_uc010dHz.2...	<a href="#">view</a>
<a href="#">ACACA</a>	p.A89A	17	35687184	35687184	37	Silent	SNP	A	C		uc002hno.2	ACACA_uc002hnm....	<a href="#">view</a>
<a href="#">ADAM17</a>		2	9630245	9630245	37	3'UTR	Del	T	-		uc002qzu.2	IAH1_uc010yiz.1...	
<a href="#">ADAM28</a>		8	24211994	24211997	37	3'UTR	Del	CTAT	-	rs10610134	uc003xdy.2	ADAM28_uc011laa...	
<a href="#">AKAP12</a>	p.1531_1532insE	6	151674116	151674117	37	In_Frame_Ins	Ins	-	GAG	rs34737819	uc011eep.1	AKAP12_uc003qoe...	
<a href="#">AKAP9</a>	p.1335_1336insQ	7	91652178	91652179	37	In_Frame_Ins	Ins	-	AAC	rs34756483	uc003ulg.2	AKAP9_uc003ule....	
<a href="#">ALS2</a>	p.E1557Q	2	202569881	202569881	37	Missense_Mutation	SNP	C	G		uc002uyo.2	ALS2_uc010ftl.2...	<a href="#">view</a>
<a href="#">BCR</a>	p.E1161D	22	23656180	23656180	37	Missense_Mutation	SNP	G	C		uc002zww.2	BCR_uc002zwx.2...	<a href="#">view</a>
<a href="#">BUB1B</a>	p.A46G	15	40457355	40457355	37	Missense_Mutation	SNP	C	G		uc001zlx.3		<a href="#">view</a>
<a href="#">CARD10</a>	p.KE272del	22	37906309	37906314	37	In_Frame_Del	Del	CTCCT...	-		uc003asx.1	CARD10_uc003ast...	
<a href="#">CCL3</a>		17	34415967	34415967	37	3'UTR	SNP	C	A		uc002hkv.2		<a href="#">view</a>
<a href="#">CCNA1</a>	p.P237S	13	37012820	37012820	37	Missense_Mutation	SNP	C	T		uc001uvr.3	CCNA1_uc010teo....	<a href="#">view</a>
<a href="#">CDK11B</a>		1	1654066	1654068	37	Intron	Del	GCG	-		uc001agv.1	CDK11B_uc001aha...	
<a href="#">CDK13</a>	p.A484A	7	40027438	40027438	37	Silent	SNP	C	G		uc003thh.3	CDK13_uc003thi....	<a href="#">view</a>
<a href="#">CDK18</a>		1	205495890	205495891	37	Intron	Del	CT	-		uc001hcr.2	CDK18_uc010pri....	
<a href="#">CEP110</a>	p.L1943R	9	123929939	123929939	37	Missense_Mutation	SNP	T	G		uc004bkl.1	CEP110_uc004blb...	<a href="#">view</a>
<a href="#">CHIC2</a>		4	54876132	54876132	37	3'UTR	Del	C	-	rs4437313	uc003haj.1	PDGFRA_uc003haa...	
<a href="#">CLTCL1</a>	p.V1201_splice	22	19189003	19189004	37	Splice_Site_Ins	Ins	-	C	rs11386977	uc002zpb.2	CLTCL1_uc011agv...	
<a href="#">CNTN6</a>		3	1339681	1339686	37	Intron	Del	GTTTT...	-		uc003boz.2	CNTN6_uc010hbo....	
<a href="#">CREB3L2</a>	p.T100del	7	137612914	137612916	37	In_Frame_Del	Del	TGG	-		uc003vtw.2	CREB3L2_uc003vt...	
<a href="#">CSNK1A1L</a>		13	37678341	37678341	37	3'UTR	SNP	C	T		uc001uwm.1		<a href="#">view</a>
<a href="#">CTBP2</a>	p.K974fs	10	126678123	126678123	37	Frame_Shift_Del	Del	T	-		uc001lie.3	CTBP2_uc009yak....	
<a href="#">CTBP2</a>	p.T797N	10	126683048	126683048	37	Missense_Mutation	SNP	G	T		uc001lie.3	CTBP2_uc009yak....	<a href="#">view</a>
<a href="#">CXCL12</a>		10	44873992	44873993	37	Intron	Ins	-	CT	rs117617571	uc001jbh.2	CXCL12_uc001jbf...	
<a href="#">DBF4</a>	p.P555del	7	87537111	87537113	37	In_Frame_Del	Del	CTC	-		uc003ujf.1	DBF4_uc003ujh.1...	
<a href="#">DYRK1A</a>		21	38884966	38884967	37	3'UTR	Ins	-	T	rs72430212	uc002ywk.2	DYRK1A_uc002ywi...	
<a href="#">DYRK4</a>	p.R386L	12	4714110	4714110	37	Missense_Mutation	SNP	G	T		uc009zeh.1	DYRK4_uc001qmx....	<a href="#">view</a>
<a href="#">EDN1</a>		6	12296150	12296151	37	Intron	Ins	-	T	rs66570617	uc003nae.3	EDN1_uc003nad.2...	
<a href="#">EIF4A2</a>		3	186505515	186505515	37	Intron	SNP	C	T		uc003fqu.2	EIF4A2_uc003fqs...	<a href="#">view</a>
<a href="#">EPHA5</a>		4	66189753	66189754	37	3'UTR	Ins	-	T	rs67487372	uc011cah.1	EPHA5_uc003hcx....	
<a href="#">ERBB3</a>	p.E952Q	12	56493446	56493446	37	Missense_Mutation	SNP	G	C		uc001sjh.2	ERBB3_uc009zpj....	<a href="#">view</a>
<a href="#">ERCC3</a>		2	128047671	128047675	37	Intron	Del	TTCTC	-		uc002toh.1	ERCC3_uc002toe....	
<a href="#">ETV1</a>	p.D38Y	7	14027732	14027732	37	Missense_Mutation	SNP	C	A		uc011jxq.1	ETV1_uc011jxn.1...	<a href="#">view</a>
<a href="#">ETV1</a>		7	14028708	14028708	37	5'UTR	Del	A	-	rs77190713	uc011jxq.1	ETV1_uc011jxn.1...	
<a href="#">FASN</a>	p.P1121S	17	80044992	80044992	37	Missense_Mutation	SNP	G	A		uc002kdu.2	FASN_uc002kdw.1...	<a href="#">view</a>
<a href="#">FGFR1OP</a>		6	167453519	167453520	37	3'UTR	Ins	-	T	rs115519488	uc003qvj.2	CCR6_uc003qvl.2...	
<a href="#">FLI1</a>		11	128638217	128638217	37	Intron	Del	G	-		uc010sbu.1	FLI1_uc010sbt.1...	
<a href="#">FMN2</a>	p.PPLPGAGIPPP939del	1	240370914	240370946	37	In_Frame_Del	Del	GCCCC...	-	s4997328;rs499732	uc010pye.1	FMN2_uc010pyd.1...	

<a href="#">GAB1</a>	p.D614N	4	144381587	144381587	37	Missense_Mutation	SNP	G	A		uc003ijd.2	GAB1_uc003ije.2...	<a href="#">view</a>
<a href="#">GLI3</a>	p.M1312R	7	42004736	42004736	37	Missense_Mutation	SNP	A	C		uc011kbh.1	GLI3_uc011kgb.1...	<a href="#">view</a>
<a href="#">GRIA3</a>		X	122318386	122318387	37	Splice_Site_Ins	Ins	-	G	rs66632982	uc004etq.3	GRIA3_uc004etr....	
<a href="#">HEPH</a>	p.P398R	X	65412092	65412092	37	Missense_Mutation	SNP	C	G		uc011moz.1	HEPH_uc004dwn.2...	<a href="#">view</a>
<a href="#">HERC2</a>	p.L3391Q	15	28414687	28414687	37	Missense_Mutation	SNP	A	T		uc001zbj.2		<a href="#">view</a>
<a href="#">HIF1A</a>		14	62213929	62213930	37	3'UTR	Ins	-	T	rs67890419	uc001xfs.2	HIF1A_uc001xfq....	
<a href="#">HNF1A</a>		12	121434630	121434631	37	Intron	Ins	-	TCATTCAT	rs75100977	uc010szn.1	HNF1A_uc001tze....	
<a href="#">HNRNPH1</a>		5	179050192	179050192	37	Intron	SNP	A	G		uc003mkf.3	HNRNPH1_uc003mk..	<a href="#">view</a>
<a href="#">ID1</a>	p.P118L	20	30193543	30193543	37	Missense_Mutation	SNP	C	T		uc002wwg.1	ID1_uc002wwh.1_...	<a href="#">view</a>
<a href="#">IKBKE</a>	p.R706W	1	206667323	206667323	37	Missense_Mutation	SNP	C	T		uc001hdz.1	IKBKE_uc009xbv....	<a href="#">view</a>
<a href="#">ILK</a>		11	6630029	6630029	37	Intron	Del	C	-		uc001mee.2	ILK_uc001mef.2_...	
<a href="#">ITPR2</a>	p.R470_splice	12	26834804	26834805	37	Splice_Site_Ins	Ins	-	ACTC	56696203;rs591993	uc001rhg.2		
<a href="#">KIT</a>	p.N130D	4	55564500	55564500	37	Missense_Mutation	SNP	A	G		uc010igr.2	KIT_uc010igs.2_...	<a href="#">view</a>
<a href="#">KLK7</a>		19	51480672	51480675	37	3'UTR	Del	GGTT	-		uc002puo.2	KLK7_uc002pup.2...	
<a href="#">LRP2</a>	p.E1239K	2	170097828	170097828	37	Missense_Mutation	SNP	C	T		uc002ues.2	LRP2_uc010zdf.1...	<a href="#">view</a>
<a href="#">MAML3</a>	p.Q767_splice	4	140651585	140651587	37	Splice_Site_Del	Del	CTG	-		uc003ihz.1	MGST2_uc010ioi....	
<a href="#">MAP3K14</a>	p.R218_splice	17	43364293	43364294	37	Splice_Site_Ins	Ins	-	G	rs66766023	uc002iiw.1	MAP3K14_uc010da...	
<a href="#">MCM3AP</a>		21	47666476	47666476	37	Intron	SNP	C	G		uc002zir.1	MCM3APAS_uc002z..	<a href="#">view</a>
<a href="#">MCM3APAS</a>		21	47671275	47671276	37	3'UTR	Ins	-	AAT	rs67797185	uc002zin.2	MCM3APAS_uc002z...	
<a href="#">MET</a>		7	116436416	116436416	37	3'UTR	SNP	A	G		uc010lkh.2	MET_uc003vij.2_...	<a href="#">view</a>
<a href="#">MLL3</a>	p.Q2054E	7	151878785	151878785	37	Missense_Mutation	SNP	G	C		uc003wla.2	MLL3_uc003wkz.2...	<a href="#">view</a>
<a href="#">MLLT3</a>		9	20346377	20346378	37	3'UTR	Ins	-	A	rs66943046	uc003zoe.2	MLLT3_uc011lne....	
<a href="#">MSH3</a>	p.PPA66del	5	79950742	79950750	37	In_Frame_Del	Del	CCCCC...	-	60484572;rs104748	uc003kgz.2	DHFR_uc011ctl.1...	
<a href="#">MSH5</a>	p.S554T	6	31727677	31727677	37	Missense_Mutation	SNP	G	C		uc003nwt.1	MSH5_uc003nwt.1...	<a href="#">view</a>
<a href="#">MST1R</a>	p.R983W	3	49933163	49933163	37	Missense_Mutation	SNP	G	A		uc003cxy.3	MST1R_uc011bdc....	<a href="#">view</a>
<a href="#">MTMR11</a>		1	149900665	149900665	37	3'UTR	SNP	G	C		uc001etl.3	SF3B4_uc001eti....	<a href="#">view</a>
<a href="#">MTMR11</a>		1	149900756	149900756	37	3'UTR	SNP	G	C		uc001etl.3	SF3B4_uc001eti....	<a href="#">view</a>
<a href="#">MTMR11</a>	p.S651*	1	149901199	149901199	37	Nonsense_Mutation	SNP	G	C		uc001etl.3	SF3B4_uc001etj....	<a href="#">view</a>
<a href="#">MYO3A</a>	p.G44D	10	26241170	26241170	37	Missense_Mutation	SNP	G	A		uc001isn.2	MYO3A_uc009xko....	<a href="#">view</a>
<a href="#">NCAM1</a>		11	112832307	112832308	37	5'UTR	Ins	-	A	rs117108942	uc009yyq.1	NCAM1_uc001pno....	
<a href="#">NCAM1</a>		11	112832340	112832340	37	5'UTR	Del	C	-		uc009yyq.1	NCAM1_uc001pno....	
<a href="#">NEK3</a>	p.K313_splice	13	52718050	52718051	37	Splice_Site_Ins	Ins	-	T	rs72514762	uc001vgh.2	NEK3_uc001vgh.2...	
<a href="#">NEK8</a>	p.I252M	17	27064461	27064461	37	Missense_Mutation	SNP	C	G		uc002hcp.2		<a href="#">view</a>
<a href="#">NFIA</a>		1	61921185	61921186	37	3'UTR	Ins	-	T	57270124;rs761319	uc010oos.1	NFIA_uc001czy.2...	
<a href="#">NPR1</a>	p.R1047W	1	153665843	153665843	37	Missense_Mutation	SNP	C	T		uc001fcs.3	NPR1_uc010pdz.1...	<a href="#">view</a>
<a href="#">NR1H2</a>	p.176_177insQ	19	50881822	50881823	37	In_Frame_Ins	Ins	-	CAG	61751954;rs105255	uc010enw.2	NR1H2_uc002prv....	
<a href="#">OBSCN</a>	p.A5597G	1	228525074	228525074	37	Missense_Mutation	SNP	C	G		uc009xez.1	OBSCN_uc001hsn....	<a href="#">view</a>
<a href="#">PAX3</a>		2	223158653	223158653	37	Intron	Del	T	-	rs112753212	uc002vmt.1	PAX3_uc002vmy.1...	
<a href="#">PDE4DIP</a>	p.Q1665fs	1	144873963	144873963	37	Frame_Shift_Del	Del	T	-		uc001elw.3	NBPF10_uc009wir...	
<a href="#">PDE4DIP</a>	p.V486fs	1	144917828	144917828	37	Frame_Shift_Del	Del	A	-		uc001elw.3	NBPF10_uc009wir...	
<a href="#">PHKG2</a>		16	30768673	30768673	37	3'UTR	SNP	C	T		uc002dzk.1		<a href="#">view</a>
<a href="#">PKHD1</a>	p.W365*	6	51927341	51927341	37	Nonsense_Mutation	SNP	C	T		uc003pah.1	PKHD1_uc003pai....	<a href="#">view</a>
<a href="#">PLEKHA5</a>	p.R600T	12	19440426	19440426	37	Missense_Mutation	SNP	G	C		uc010sie.1	PLEKHA5_uc001re...	<a href="#">view</a>

<a href="#">PRCC</a>	p.S222C	1	156756548	156756548	37	Missense_Mutation	SNP	C	G		uc001fqa.2	PRCC_uc001fqb.2...	<a href="#">view</a>
<a href="#">PRCC</a>		1	156770373	156770373	37	3'UTR	SNP	C	T		uc001fqa.2	PRCC_uc001fqb.2...	<a href="#">view</a>
<a href="#">PRKDC</a>	p.L1244fs	8	48805816	48805817	37	Frame_Shift_Ins	Ins	-	G	rs67588121	uc003xqi.2	PRKDC_uc003xqj...	
<a href="#">PTK6</a>		20	62168676	62168677	37	5'UTR	Ins	-	GCGC		uc002yfg.2	PTK6_uc011aay.1...	
<a href="#">RAPGEF2</a>		4	160189200	160189201	37	5'UTR	Ins	-	T	rs72011511	uc003iqg.3		
<a href="#">RBPJ</a>		4	26431822	26431822	37	Intron	Del	A	-	rs76214390	uc003grx.1	RBPJ_uc003gry.1...	
<a href="#">RECQL4</a>	p.R766fs	8	145738768	145738768	37	Frame_Shift_Del	Del	G	-		uc003zdz.2		
<a href="#">RIPK3</a>	p.V27V	14	24808743	24808743	37	Silent	SNP	G	A		uc001wpb.2	RIPK3_uc001wpa...	<a href="#">view</a>
<a href="#">9-Sep</a>	p.E567K	17	75494678	75494678	37	Missense_Mutation	SNP	G	A		uc002jts.3	SEPT9_uc010wtk...	<a href="#">view</a>
<a href="#">SLC6A8</a>		X	152957656	152957657	37	Intron	Ins	-	A		uc004fib.3	SLC6A8_uc004fic...	
<a href="#">SOS1</a>	p.E906Q	2	39233628	39233628	37	Missense_Mutation	SNP	C	G		uc002rrk.3	SOS1_uc002rrj.3...	<a href="#">view</a>
<a href="#">SPRY2</a>	p.D232H	13	80911147	80911147	37	Missense_Mutation	SNP	C	G		uc001vli.2	SPRY2_uc001vlj...	<a href="#">view</a>
<a href="#">SRF</a>		6	43147026	43147026	37	3'UTR	SNP	G	A		uc003oui.2	SRF_uc011dvf.1_...	<a href="#">view</a>
<a href="#">SRPK1</a>	p.E57Q	6	35858696	35858696	37	Missense_Mutation	SNP	C	G		uc003olj.2	SRPK1_uc011dtg...	<a href="#">view</a>
<a href="#">SS18</a>	p.F5F	18	23670519	23670519	37	Silent	SNP	G	A		uc002kvm.2	SS18_uc002kvn.2...	<a href="#">view</a>
<a href="#">STAT5B</a>	p.E509K	17	40364157	40364157	37	Missense_Mutation	SNP	C	T		uc002hzh.2		<a href="#">view</a>
<a href="#">STK17B</a>	p.P344R	2	197002259	197002259	37	Missense_Mutation	SNP	G	C		uc002utk.2	STK17B_uc010fsh...	<a href="#">view</a>
<a href="#">STK31</a>		7	23872024	23872025	37	3'UTR	Ins	-	TTTG	rs66787534	uc003sws.3	STK31_uc003swt...	

