

## Product datasheet for **RC400639**

### **BRCA2 (NM\_000059) Human Mutant ORF Clone**

#### Product data:

Product Type:	Mutant ORF Clones
Product Name:	BRCA2 (NM_000059) Human Mutant ORF Clone
Mutation Description:	R2034C
Affected Codon#:	2034
Affected NT#:	6100
Nucleotide Mutation:	BRCA2 Mutant (R2034C), Myc-DDK-tagged ORF clone of Homo sapiens breast Cancer, early onset (BRCA2) as transfection-ready DNA
Effect:	Breast and/or ovarian cancer
Symbol:	BRCA2
Synonyms:	BRCC2; BROVCA2; FACD; FAD; FAD1; FANCD; FANCD1; GLM3; PNCA2; XRCC11
E. coli Selection:	Kanamycin (25 ug/mL)
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
Tag:	Myc-DDK
ACCN:	NM_000059
ORF Size:	10254 bp
Restriction Sites:	Sgfl-RsrII
ORF Nucleotide Sequence:	>RC400639 representing NM_000059 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**GCGATCGCC**

ATGCCTATTGGATCCAAAGAGAGGCCAACATTTTTTGAATTTTTAAGACACGCTGCAACAAAGCAGATT  
TAGGACCAATAAGTCTTAATTGGTTTGAAGAACTTTCTTCAGAAGCTCCACCCTATAATTCTGAACCTGC  
AGAAGAATCTGAACATAAAAAACAACAATTACGAACCAACCTATTTAAACTCCACAAAGGAAACCATCT  
TATAATCAGCTGGCTTCAACTCCAATAATTTCAAAGAGCAAGGGCTGACTCTGCCGCTGTACCAATCTC  
CTGTAAGAAGATTAGATAAATTCAAATTAGACTTAGGAAGGAATGTTCCCAATAGTAGACATAAAGTCT  
TCGCACAGTGAAGAACTAAATGGATCAAGCAGATGATGTTTCTGTCCACTTCTAAATCTTGTCTTAGT  
GAAAGTCTGTTGTTCTACAATGTACACATGTAACACCACAAAGAGATAAGTCAGTGGTATGTGGGAGTT



[View online »](#)

TGTTCATACACCAAAGTTTGTGAAGGGTCGTGACACACCAAAACATATTTCTGAAAGTCTAGGAGCTGA  
 GGTGGATCCTGATATGTCTTGGTCAAGTTCTTTAGCTACACCACCACCCTTAGTTCTACTGTGCTCATA  
 GTCAGAAATGAAGAAGCATCTGAAACTGTATTTCTCATGATACTACTGCTAATGTGAAAAGCTATTTTT  
 CCAATCATGATGAAAGTCTGAAGAAAAATGATAGATTTATCGTCTCTGTGACAGACAGTAAAACACAAA  
 TCAAAGAGAAGCTGCAAGTCATGGATTTGGAAAAACATCAGGGAATTCATTTAAAGTAAATAGCTGCAAA  
 GACCACATTGAAAAGTCAATGCCAAATGTCTAGAAGATGAAGTATATGAAACAGTTGTAGATACCTCTG  
 AAGAAGATAGTTTTTTCATTATGTTTTTCTAAATGTAGAACAAAAATCTACAAAAAGTAAAGAACTAGCAA  
 GACTAGGAAAAAAATTTCCATGAAGCAACGCTGATGAATGTGAAAAATCTAAAAACCAAGTGAAGAA  
 AAATACTCATTTGTATCTGAAGTGAACCAATGATACTGATCCATTAGATTCAAATGTAGCAAATCAGA  
 AGCCCTTTGAGAGTGAAGTGACAAAATCTCCAAGGAAGTTGTACCGTCTTTGGCCTGTGAATGGTCTCA  
 ACTAACCTTTCAGGTCTAAATGGAGCCAGATGGAGAAAAATACCCTATTGCATATTTCTTCATGTGAC  
 CAAAATATTTAGAAAAAGACCTATTAGACACAGAGAACAAAAGAAAGAAAGATTTTCTACTTCAGAGA  
 ATTTCTTGGCCAGTATTTCTAGCCTACCAAAATCAGAGAAGCCATTAAATGAGGAAACAGTGGTAAATAA  
 GAGAGATGAAGAGCAGCATCTTGAATCTCATACTGACTGCATTCTTGCAGTAAAGCAGGCAATATCTGGA  
 ACTTCTCCAGTGGCTTTCATTTCCAGGTATCAAAAAGTCTATATTCAGAATAAGAGAATCACCTAAAG  
 AGACTTCAATGCAAGTTTTTCCAGGTATATGACTGATCCAAACTTTAAAAAAGAAACTGAAGCCTCTGA  
 AAGTGGACTGGAATACATACTGTTTGCTCACAGAAGGAGGACTCCTTATGTCCAAATTTAATTGATAAT  
 GGAAGCTGGCCAGCCACCACCACAGAAATCTGTAGCTTTGAAGAATGCAGGTTAATATCCACTTTGA  
 AAAAGAAAAACAAATAAGTTTATTTATGCTATACATGATGAAACATCTTATAAAGGAAAAAAATACCGAA  
 AGACCAAAAAATCAGAATAATTAAGTGTTCAGCCAGTTTGAAGCAATGCTTTTGAAGCACCATTACA  
 TTTGCAATGCTGATTCAGGTTTATTGCATTCTCTGTGAAAAGAAGCTGTTACAGAAATGATTTCTGAAG  
 AACCAATGCTGATTCAGGTTTATTGCATTCTCTGTGAAAAGAAGCTGTTACAGAAATGAAACATGTTT  
 TAATAATACAGTAATCTCTCAGGATCTTGATTATAAAGAAGCAAAATGTATAAAGGAAAAACTACAGTTA  
 TTTATTACCCAGAAGCTGATTCTGTGATGCCTGCAGGAAGGACAGTGTGAAAAATGCTCAAAAAAGCA  
 AAAAAGTTTCAGATATAAAGAAGAGGTCTGGCTGCAGCATGTACCCAGTACAACATTCAAAAGTGGAA  
 ATACAGTGATACTGACTTTCAATCCCAGAAAAGTCTTTTATATGATCATGAAAATGCCAGCACTCTTATT  
 TTAAGTCTACTTCCAAGGATGTTCTGTCAAACCTAGTCATGATTTCTAGAGGCAAGAATCATAAAAA  
 TGTCAGACAAGCTCAAAGGTAACAATTATGAATCTGATGTTGAATTAACCAAAAAATTTCCCATGGAAAA  
 GAATCAAGATGTATGTGCTTTAAATGAAAATTAAAAAACGTTGAGCTGTTGCCACCTGAAAAATACATG  
 AGAGTAGCATCACCTTCAAGAAAGGTACAATTCACCAAAAACACAATCTAAGAGTAATCAAAAAAATC  
 AAGAAGAACTACTTCAATTTCAAAAAAATCACTGTCAATCCAGACTCTGAAGAATTTTCTCAGACATGA  
 GAATAATTTGTCTTCCAAGTAGCTAATGAAAGGAATAATCTTGTCTTAGGAAATACTAAGGAATTCAT  
 GAAACAGACTTGACTTGTGTAACCGAACCCATTTCAAGAATCTACCATGGTTTTATATGGAGACACAG  
 GTGATAAAACAAGCAACCAAGTGTCAATTAAAAAAGATTTGGTTTATGTTCTTGCAGAGGAGAACAAAA  
 TAGTGTAAAGCAGCATATAAAAAATGACTCTAGGTCAAGATTTAAATCGGACATCTCCTTGAATATAGAT  
 AAAATACCAGAAAAAAATATGATTACATGAACAAATGGGCAGGACTCTTAGGTCCAATTTCAAATCACA  
 GTTTTGGAGGTAGCTTCAAGACAGCTTCAAATAAGGAAATCAAGCTCTCTGAACATAACATTAAGAAGAG  
 CAAAATGTTCTCAAAGATATTGAAGAACAATATCCTACTAGTTTAGCTTGTGTTGAAATGTAATACC  
 TTGGCATTAGATAATCAAAGAAACTGAGCAAGCCTCAGTCAATTAATACTGTATCTGCACATTTACAGA  
 GTAGTGTAGTTGTTCTGATTGTAAAAATAGTCATATAACCCCTCAGATGTTATTTTCCAAGCAGGATTT  
 TAATTCAAACCATAATTTAACACCTAGCCAAAAGGCAGAAATTACAGAATTTTCTACTATATTAGAAGAA  
 TCAGGAAGTCAAGTTGAAATTTACTCAGTTTAGAAAACCAAGCTACATATTGCAGAAGAGTACATTTGAAG  
 TGCCTGAAAACAGATGACTATCTTAAAGACCCTTCTGAGGAATGCAGAGATGCTGATCTTCATGTGAT  
 AATGAATGCCCATCGATTGGTCAGGTAGACAGCAGCAAGCAATTTGAAGGTACAGTTGAAATTAACGG  
 AAGTTTGTGCTGGCCTGTTGAAAAATGACTGTAACAAAAGTCTTCTGGTTATTTAACAGATGAAAAATGAAG  
 TGGGGTTTAGGGCTTTTATTCTGCTCATGGCACAAAACCTGAATGTTTCTACTGAAGCTCTGCAAAAAGC  
 TGTGAAACTGTTAGTGATATTGAGAATATTAGTGAGGAACTCTGCAGAGGTACATCCAATAAGTTTA  
 TCTTCAAGTAAATGTCATGATTCTGTTGTTCAATGTTTAAAGATGAAAAATCATAATGATAAACTGTAA  
 GTGAAAAAAATAATAATGCCAACTGATATTACAAAATAAATTTGAAATGACTACTGGCACTTTTGTGGA  
 AGAAATTAAGTAAAAATCAAGAGAAATGAAAAATGAAGATAACAAATATACTGCTGCCAGTAGAAAT  
 TCTCATAACTTAGAATTTGATGGCAGTGATTCAAGTAAAAATGATACTGTTTGTATTATAAAGATGAAA  
 CGGACTTGCTATTTACTGATCAGCACACATATGTCTTAAATTAATCTGGCCAGTTTATGAAGGAGGGAAA

CACTCAGATTAAGAAGATTTGTCAAGTTAACTTTTTGGAAGTTGCGAAAGCTCAAGAAGCATGTCAT  
 GGTAATACTTCAATAAAGAACAGTTAACTGCTACTAAAACGGAGCAAAATATAAAGATTTTGAGACTT  
 CTGATACATTTTTTTCAGACTGCAAGTGGGAAAAATATTAGTGTGCGCCAAAGAGTCATTTAATAAAATTTG  
 AAATTTCTTTGATCAGAAACCAGAAGATTGCATAACTTTTCTTAAATTTCTGAATTACATTCTGACATA  
 AGAAAGAACAAAATGGACATTCTAAGTTATGAGGAAACAGACATAGTTAAACACAAAATCTGAAAGAAA  
 GTGTCCAGTTGGTACTGGAATCAACTAGTGACCTCCAGGGACAACCCGAACGTGATGAAAAGATCAA  
 AGAACCCTACTCTATTGGGTTTTTCATACAGCTAGCGGGAAAAAAGTTAAAATTTGCAAAGGAATCTTTGGAC  
 AAAGTGAAAAACCTTTTTGATGAAAAAGCAAGGTAAGTAAATCACCAGTTTTAGCCATCAATGGG  
 CAAAGACCCTAAAGTACAGAGAGGCTGTAAAGACCTGAATTAGCATGTGAGACCATTGAGATCACAGC  
 TGCCCCAAAGTGTAAAGAAATGCAGAATTCTCTCAATAATGATAAAAACTTGTTTCTATTGAGACTGTG  
 GTGCCACCTAAGCTCTAAGTGATAATTTATGTAGACAACTGAAAATCTCAAAACATCAAAAAGTATCT  
 TTTTGAAGTTAAAGTACATGAAAATGTAGAAAAAGAACAGCAAAAAGTCTGCAACTTGTACACAAA  
 TCAGTCCCCTTATTCAGTCATTGAAAATTCAGCCTTAGCTTTTTACACAAGTTGTAGTAGAAAACTTCT  
 GTGAGTCAGACTTCATTACTGGAAGCAAAAAATGGCTTAGAGAAGGAATATTTGATGGTCAACCAGAAA  
 GAATAAATACTGCAGATTATGTAGGAAATTTTGTATGAAAATAATTCAAACAGTACTATAGCTGAAA  
 TGACAAAAATCATCTCTCCGAAAAACAAGATACTTATTTAAGTAAACAGTAGCATGTCTAACAGCTATTCC  
 TACCATTCTGATGAGGTATATAATGATTCAGGATATCTCTCAAAAAATAAACTTGATTCTGGTATTGAGC  
 CAGTATTGAAGAATGTTGAAGATCAAAAAACACTAGTTTTTCCAAAGTAAATCCAATGTAAGAGATGC  
 AAATGCATACCCACAACTGTAATGAAGATAATTTGCGTTGAGGAACTTGTGACTAGCTCTTACCCTGC  
 AAAAAATAAAATGCAGCCATTAATTTGCCATATCTAATAGTAATAATTTTGGAGTAGGGCCACCTGCAT  
 TTAGGATAGCCAGTGGTAAATCGTTTTGTGTTTCATGAAACAATTAAGGAAAGTAAAGACATATTTAC  
 AGACAGTTTCAGTAAAGTAATTAAGGAAAAACAGGAGAATAAATCAAAAAATTTGCCAAACGAAAATATG  
 GCAGTTGTTACGAGGCATTGGATGATTCAGAGGATATCTTCATAACTCTAGATAAGTAAAGTGA  
 GCACGCATTCACATAAGGTTTTTGTGACATTCAGAGTGAAGAATTTTACAACATAACCAAAATATGTC  
 TGGATTGGAGAAAGTTTCTAAAAATACCTTGTGATGTTAGTTTGGAACTTCAGATATATGAAATGT  
 AGTATAGGGAAGCTTCATAAGTCAGTCTCATCTGCAAATACTTGTGGGATTTTTAGCACAGCAAGTGAA  
 AATCTGTCCAGGTATCAGATGCTTCATTACAAAACGCAAGACAAGTGTCTTGAATAGAAATAGTAC  
 CAAGCAAGTCTTTTCCAAAGTATTGTTTAAAAGTAACGAACATTCAGACCAGCTCACAAGAGAAGAAAAT  
 ACTGCTATATGTACTCCAGAACATTTAATATCCAAAAAGGCTTTTTCATATAATGTGGTAAATTCATCTG  
 CTTTCTCTGGATTTAGTACAGCAAGTGGAAAGCAAGTTCCATTTTGAAGGTTCTTACACAAAGTTAA  
 GGGAGTGTAGAGGAATTTGATTTAATCAGAAGTGGAGTACTTCACTATTCACCTACGTCTAGACAA  
 AATGTATCAAAAAATCTCCTCGTGTGATAAGAGAAACCCAGAGCACTGTGAAACTCAGAAATGGAAA  
 AAACCTGCAGTAAAGAATTTAAATTATCAAATAACTTAAATGTTGAAGGTGGTCTTCAGAAAATATCA  
 CTCTATTAAGGTTTCTCCATATCTCTCAATTTCAACAAGACAAAACAACAGTTGGTATTAGGAACCAAA  
 GTGTCACTTGTGAGAACATTCATGTTTTGGGAAAAAGAACAGGCTTCACTAAAAACGTAATAATGGAAA  
 TTGGTAAAACGAACTTTTTCTGATGTTCTGTGAAAACAAATAGAAAGTTGTTCTACTTACTCCAA  
 AGATTCAGAAAACACTTTTGAACAGAGCAGTAGAAATGCTAAAGCTTTTATGGAAGATGATGAAGT  
 ACAGATCTAAACTGCCAAGTCAAGCCACATTTCTTTTTACATGTCCCGAAAATGAGGAAATGGTTT  
 TGTCAAATTCAGAATTTGAAAAAGAAGAGGAGAGCCCTTATCTTAGTGGGAGAACCCCAATCAAAAAG  
 AAACCTTAAATGAATTTGACAGGATAATAGAAAAATCAAGAAAAATCCTTAAAGGCTTCAAAAAGCACT  
 CCAGATGGCACATAAAAAGATCGAAGATTGTTTATGCATCATGTTTCTTTAGAGCCGATTACCTGTGTAC  
 CCTTTCGCACAACATAAGGAACGTCAAGAGATACAGAAATCCAAATTTTACCACCTGGTCAAGAAATTTCT  
 GTCTAAATCTCATTTGTATGAACATCTGACTTTGGAAAAATCTTCAAGCAATTTAGCAGTTTCAGGACAT  
 CCATTTTATCAAGTTTCTGCTACAAGAAATGAAAAATGAGACACTTGATTACTACAGGCAGACCAACCA  
 AAGTCTTTGTTCCACCTTTTAAAACATAATCACATTTTACAGAGTTGAACAGTGTGTTAGGAATATTA  
 CTTGGAGGAAAACAGACAAAAGCAAAACATTGATGGACATGGCTCTGATGATAGTAAAAATAAGATTAAT  
 GACAATGAGATTCATCAGTTTAACAAAAACAACCTCAATCAAGCAGCAGCTGTAACCTTTCACAAAGTGTG  
 AAGAAGAACCTTTAGATTTAATTACAAGTCTTCAAGATGCCAGAGATATACAGGATATGCGAATTAAGAA  
 GAAACAAGGCAACGCGTCTTTCCACAGCCAGGAGTCTGTATCTTGAAAAACATCCACTCTGCCTCGA  
 ATCTCTCTGAAAGCAGCAGTAGGAGGCCAAGTTCCCTCTGCGTGTCTCATAAACAGCTGTATACGTATG  
 GCGTTTCTAAACATTGCATAAAAATTAACAGCAAAAATGCAGAGTCTTTTTCAGTTTACACTGAAGATTA  
 TTTTGGTAAGGAAAGTTTATGGACTGAAAAAGGAATACAGTTGGCTGATGGTGGATGGCTCATACCCTCC

AATGATGGAAAGGCTGGAAAAGAAGAATTTTATAGGGCTCTGTGTGACACTCCAGGTGTGGATCCAAAGC  
 TTATTTCTAGAATTTGGGTTTATAATCACTATAGATGGATCATATGAAACTGGCAGCTATGGAATGTGC  
 CTTTCCTAAGGAATTTGCTAATAGATGCCTAAGCCCAGAAAGGGTGCTTCTTCAACTAAAATACAGATAT  
 GATACGGAAATTTGATAGAAGCAGAAGATCGGCTATAAAAAAGATAATGAAAGGGATGACACAGCTGCAA  
 AAACACTTGTCTCTGTGTTTCTGACATAATTTTATTGAGCGCAATATATCTGAAACTTCTAGCAATAA  
 AACTAGTAGTCAGATACCCAAAAAGTGGCCATTATTGAACTTACAGATGGGTGGTATGCTGTAAAGGCC  
 CAGTTAGATCCTCCCCTTCTAGCTGTCTTAAAGAATGGCAGACTGACAGTTGGTCAGAAGATTATCTTTC  
 ATGGAGCAGAACTGGTGGGCTCTCCTGATGCCTGTACACCTCTTGAAGCCCAGAACTCTTATGTTAAA  
 GATTTCTGCTAACAGTACTCGGCCTGCTCGCTGGTATACCAAACCTGGATTCTTCTGACCCTAGACCT  
 TTTCTCTGCCCTTATCATCGCTTTTTCAGTGTGGAGGAAATGTTGGTTGTGTTGATGTAATTATTCAAA  
 GAGCATACCCTATACAGTGGATGGAGAAGACATCATCTGGATTATACATATTTGCAATGAAAGAGAGGA  
 AGAAAAGGAAGCAGCAAAATATGTGGAGGCCAACAAAAGAGACTAGAAGCCTTATTCCTAAAATTCAG  
 GAGGAATTTGAAGAACATGAAGAAAACACAACAAAACCATATTTACCATCACGTGCACTAACAGACAGC  
 AAGTTCGTGCTTTGCAAGATGGTGCAGAGCTTTATGAAGCAGTGAAGAATGCAGCAGACCAGCTTACCT  
 TGAGGGTTATTTTTCAGTGAAGAGCAGTTAAGAGCCTTGAATAATCACAGGCAAATGTTGAATGATAAGAAA  
 CAAGCTCAGATCCAGTTGAAATTAGGAAGGCCATGGAATCTGCTGAACAAAAGGAACAAGGTTTATCAA  
 GGGATGTCACAACCGTGTGGAAGTTGCGTATTGTAAGCTATTCAAAAAAGAAAAGATTTCAGTTATACT  
 GAGTATTTGGCGTCCATCATCAGATTTATTTCTGTAAACAGAAGGAAAGAGATACAGAATTTATCAT  
 CTTGCAACTTCAAATCTAAAAGTAAATCTGAAAGAGCTAACATACAGTTAGCAGCGACAAAAAACTC  
 AGTATCAACAACCTACCGTTTCAGATGAAATTTTATTTTTCAGATTTACCAGCCACGGGAGCCCTTCACTT  
 CAGCAATTTTATAGATCCAGACTTTTTCAGCCATCTTGTCTGAGGTGGACCTAATAGGATTTGTCGTTTCT  
 GTTGTGAAAAAACAGGACTTGGCCCTTTCGTCTATTTGTCAGACGAATGTTACAATTTACTGGCAATAA  
 AGTTTGGATAGACTTAATGAGGACATTATTAAGCCTCATATGTTAATTGCTGCAAGCAACCTCCAGTG  
 GCGTCCAGAAATCCAAATCAGGCCTTCTTACTTTATTTGCTGGAGATTTTCTGTGTTTTCTGCTAGTCCA  
 AAAGAGGGCCACTTTCAAGAGACATTCAACAAAATGAAAAATACTGTTGAGAATATTGACATACTTTGCA  
 ATGAAGCAGAAAAAAGCTTATGCATATACTGCATGCAATGATCCCAAGTGGTCCACCCCAACTAAAGA  
 CTGTACTTCAGGGCCGTACACTGCTCAAATCATCCTGGTACAGGAAACAAGCTTCTGATGTCTTCTCCT  
 AATTGTGAGATATATTATCAAAGTCTTTATCACTTTGTATGGCCAAAAGGAAGTCTGTTTCCACACCTG  
 TCTCAGCCAGATGACTTCAAAGTCTTGTAAAGGGGAGAAAGAGATTGATGACCAAAAAGAACTGCAAAAA  
 GAGAAGAGCCTTGGATTTCTTGAGTAGACTGCCTTACCTCCACCTGTTAGTCCCATTTGTACATTTGTT  
 TCTCCGGCTGCACAGAAGGCATTTACGCCCAAGGAGTTGTGGCACCATAACGAAACCCCATAAAGA  
 AAAAAGAACTGAATTCCTCAGATGACTCCATTTAAAAAATCAATGAAATTTCTTTTGGAAAGTAA  
 TTCAATAGCTGACGAAGAAGCTTGCATTGATAAATACCCAAGCTCTTTTGTCTGGTTCAACAGGAGAAAA  
 CAATTTATATCTGTGAGTGAATCCACTAGGACTGCTCCACCAGTTTTCAGAAGATTATCTCAGACTGAAAC  
 GACGTTGACTACATCTCTGATCAAAGAACAGGAGAGTTCCCAGGCCAGTACGGAAGAATGTGAGAAAAA  
 TAAGCAGGACACAATTACAATAAAAAATATATC

AGCGGACCCACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCC  
 TGGATTACAAGGATGACGACGA TAAGGTTTAA

**Protein Sequence:**

>RC400639 representing NM\_000059  
 Red=Cloning site Green=Tags(s)

MPIGSKERPTFFEIFKTRCNKADLGPISLWNFEELSSSEAPPYNSEPAEESHKNNNYEPNLFKTPQRKPS  
 YNQLASTPIIFKEQGLTLPLQSPVKELDKFKLDLGRNVPNSRHKSLRTVKTMDQADDVSCPLLNLSCLS  
 ESPVVLQCTHVTPQRDKSVVCGSLFHTPKFVKGRQTPKHISESLGAEVDPDMSWSSSLATPPTLSSVTLI  
 VRNEEASETVFPHDTTANVKSIFYSNHDESLKKNDRFIA SVTDSSENTNQREAASHGFGKTSNGNSFKVNSCK  
 DHIGKSMPNVLEDEVYETVVDTSEEDSFLCFSKCRTKNLQKVRTSKTRKKIFHEANADECEKSNQVKE  
 KYSFVSEVEPNDDPLDSNVANQKPFESGSDKISKEVVP SLACEWSQLTSLGLNGAQMEKIPLLHISDCD  
 QNISEKDLLDTENKRKKDFLTSNSLPRISLSEKPLNEETVVNKRDEEQHLESHTDCILAVKQAIISG  
 TSPVASSFQGIKKSIFRIRESPKETFNASFSGHMTDPNFKKETEASESGLEIHTVCSQKEDSLCPNLIDN  
 GSWPATTTQNSVALKNAGLISTLKKTKNFYIAIHDETSYKGGKIPKDQKSELINCSAQFEANAFEAPLT  
 FANADSGLLHSSVKRSCSQNDSEPTLSLTSSFGTILRKCSRNETCSNNTVISQDLDYKEAKCNKEKLQL

FITPEADSL SCLQEGQCENDPKSKKVS DIKEEV LAAACHPVQHSKVEYSDTDFQSQKSLLYDHENASTLI  
 LTPTSKDVL SNLVMISRKESYKMSDKLKGNNYSDVELTKNIPMEKNQDVCALNENYKNVELLPPEKYM  
 RVASPSRKVQFNQNTNLRVIQKNQEETTSISKITVNPDSEELFSDNENNFVFQVANERNNLALGNTKELH  
 ETDLTCVNEPIFKNSTMVL YGDTGDKQATQVSIKKDLVYVLAENKNSVKQHIKMTLGQDLKSDISLNDI  
 KIPEKNNDYMNKWAGLLGPI SNHSFGGSFRTASNKEIKLSEHNIKKSKMFFKDIIEEQYPTSLACVEIVNT  
 LALDNQKLSKPQSINTVSAHLQSSVVVSDCKNSHITPQMLFSKQDFNSNHLTPSQKAEITELSTILEE  
 SGSQFEFTQFRKPSYILQKSTFEVPENQMTILKTTSEECRDADLHVIMNAPSIGQVDSSKQFEGTVEIKR  
 KFAGLLKNDCKNSASGYLTDENEVGRGFYSAHGTKLNVSTEALQKAVKLFSDIENISEETSAEVHPISL  
 SSSKCHDSVVSVMFKIENHNDKTVSEKNKNCQLILQNNIEMTTGTFVVEITENYKRNTENEDNKYTAASRN  
 SHNLEFDGSDSSKNDTVCIHKDETDLLFTDQHNICLKLSGQFMKEGNTQIKEDLSLTFLEVAKAQEACH  
 GNTSNKEQLTATKTEQNIKFETSDTFFQTASGKNISVAKESFNKIVNFFDQKPEELHNFSLNSELHSDI  
 RKNKMDILSYEETDIVKHKILKESVPGTGNQLVTFQGGPERDEKIKEPTLLGFHTASGKVKIAKESLD  
 KVKNLFDEKEQGTSEITFSHQWAKTLKYREACKDLELACETIEITAAPKCKEMQNSLNNDKNLVSIETV  
 VPPKLLSDNLCRQNTENLKTSSIFLKVKHENVEKETAKSPATCYTNQSPYSVIENSALAFYTSCSRKTS  
 VSQTSLL EAKKWLREGIFDQPERINTADYVGNLYENNSNSTIAENDKNHLSEKQD TYLSNSSMSNSYS  
 YHSDEVYNDSGYL SKNKLDSGIEPVLKNVEDQKNTSFSKVISNVKDANAYPQTVNEDICVEELVTSSSPC  
 KNKNAAIKLSISNSNFEVGPFAFRIASGKIVCVSHETIKKVKDIFTDSFSKVIKENNENKSKICQTKIM  
 AGCYEALDDESEDILHNSLDNDECSTHSHKVFADIQSEEILQHNQNMGLEKYSKISPCDVSLETSDICKC  
 SIGKHLKSVSSANTCGIFSTASGKSVQVSDASLQARQVFSEIEDSTKQVFSKVLFKSNEHSDQLTREEN  
 TAICTPEHLISQKGFYNVNVSSAFSGFSTASGKQVSILESSLHKVKGVL EEFDLIRTEHSLHYSPTS RQ  
 NVSKILPRVDKRNPEHCVNSEMEKTCSEKFKLSNNLNVEGGSSENNHSIKVSPYLSQFQDKQQLVLGTK  
 VSLVENIHVLGKEQASPKNVKMEIGKTETTFSDVPVKTNIEVCSTYSKDSENYFETEAVEIAKAFMEDDEL  
 TDSKLP SHATHSLFTCPENEEMVLSNSRIGKRRGEPLILVGEPSIKRNLNNEFDRIIENQEKSLKASKST  
 PDGTIKDRRLFMHHVSL EPIITCVPFRTTKERQEIQNPNFTAPGQEFLSKSHLYEHLTLEKSSSNLAVSGH  
 PFYQVSA TRNEKMRHLITTRPTKVFVPPFKTKSHFHRVEQCVRNINLEENRQKQNDIGHGSDSKNKIN  
 DNEIHQFNKNSNQAAAVTFTKCEEEPLDLITSLQNARDIQDMRIKKKQRQRVFPQPSGLYLAKTSTLPR  
 ISLKA AVGGQVPSACSHKQLYTYGVSKHCIKINSKNAESFQFHTEDYFGKESLWTGKGIQLADGGWLIPS  
 NDGKAGKEEFYRALCDTPGVDPKLSRIWVYNHYRWIIWKLAA MECAFPKEFANRCLSPERVLLQLKYRY  
 DTEIDRSRRSAIKKIMERDDTAAKTLVLCVSDIISLSANISETSSNKTSSADTQKVAIIELTDGWYAVKA  
 QLDPPLLA VLNKGR LTVGQKIILHGAELVGS PDACTPLEAPESLMLKISANSTRPARWYTKLGFDPDRP  
 FPLPLSSLFSDGGNVGCVDVIIQRAYPIQWMEKTS SGLYIFRNEREEKEAAKYVEAQQKRL EALFTKIQ  
 EEFEEHEENTTKPYLPSRALTRQQVRALQDGAELYEAVKNAADPAYLEGYFSEEQLRALNNHRQMLNDKK  
 QAQIQLEIRKAMESAEQKEQGLSRDVTTVWKLRIVSYSKKEKDSVILSIWRPSSDLYSLLTEGKRYRIYH  
 LATSKSKSERANIQLAATKTKYQQLPVSD EILFQIYQPREPLHFSKFLDPDFQPSCSEVDLIGFVVS  
 VVKKTGLAPFVYL SDECYNLLAIKFWIDLNEDI IKPHMLIAASNLQWRPESKSGLLTLFAGDFSVFSASP  
 KEGHFQETFNKMKNTVENIDILCNEAENKLMHILHANDPKWSTPTKDC TSGPYTAQIIPGTGNKLLMSSP  
 NCEIYYQSPLSLCMAKRKSVSTPVSAQMTSKSCKGEKEID DQKNCKRRALDFL SRLPLPPPVPSPICTFV  
 SPAAQKAFQPPRSCGTYETPIKKKELNSPQMTPFKFFNEISLLESNSIADEELALINTQALLSGSTGEK  
 QFISVSESTRTAPTSS ELYRLKRRCTTSLIKEQESSQASTE ECEKNKQDTITTKKYI

SGPTRRRLRLEQKLI SEEDLAANDILDYKDDDDKV

**Restriction Sites:**

Sgfl-RsrII

**Cloning Scheme:**

**OTI Disclaimer:**

The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially in agreement with the reference, but a complete review of all prevailing variants is recommended prior to use. [More info](#)

**OTI Annotation:**

This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.

**Components:**

The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).

**RefSeq:**

[NP\\_000050](#)

**RefSeq Size:**

10254 bp

**RefSeq ORF:**

10257 bp

**Locus ID:**

675

**Cytogenetics:**

13q13.1

**Protein Families:**

Druggable Genome

**Protein Pathways:** Homologous recombination, Pancreatic cancer, Pathways in cancer

**MW:** 376 kDa

**Gene Summary:** Inherited mutations in BRCA1 and this gene, BRCA2, confer increased lifetime risk of developing breast or ovarian cancer. Both BRCA1 and BRCA2 are involved in maintenance of genome stability, specifically the homologous recombination pathway for double-strand DNA repair. The largest exon in both genes is exon 11, which harbors the most important and frequent mutations in breast cancer patients. The BRCA2 gene was found on chromosome 13q12.3 in human. The BRCA2 protein contains several copies of a 70 aa motif called the BRC motif, and these motifs mediate binding to the RAD51 recombinase which functions in DNA repair. BRCA2 is considered a tumor suppressor gene, as tumors with BRCA2 mutations generally exhibit loss of heterozygosity (LOH) of the wild-type allele. [provided by RefSeq, May 2020]