

## Product datasheet for **RC400723**

### 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:     | Q2893X                                                                                                                       |
| Affected Codon#:          | 2893                                                                                                                         |
| Affected NT#:             | 8677                                                                                                                         |
| Nucleotide Mutation:      | BRCA2 Mutant (Q2893X), Myc-DDK-tagged ORF clone of Homo sapiens breast Cancer, early onset (BRCA2) as transfection-ready DNA |
| Effect:                   | Breast 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:                 | 8676 bp                                                                                                                      |
| Restriction Sites:        | Sgfl-RsrII                                                                                                                   |
| ORF Nucleotide Sequence:  | <p>&gt;RC400723 representing NM_000059</p> <p>Red=Cloning site Blue=ORF Green=Tags(s)</p>                                    |

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGATCGC**C

ATGCCTATTGGATCCAAAGAGAGGCCAACATTTTTTGAAATTTTAAAGACACGCTGCAACAAAGCAGATT  
 TAGGACCAATAAGTCTTAATTGGTTTGAAGAACTTTCTTCAGAAGCTCCACCCTATAATTCTGAACCTGC  
 AGAAGAATCTGAACATAAAAAACAATAATTACGAACCAACCTATTTAAACTCCACAAAGGAAACCATCT  
 TATAATCAGCTGGCTTCAACTCCAATAATTCAAAGAGCAAGGGCTGACTCTGCCGCTGTACCAATCTC  
 CTGTAAAAGAATTAGATAAATTCAAATTAGACTTAGGAAGGAATGTTCCCAATAGTAGACATAAAAGTCT  
 TCGCACAGTGAAAATAAATGGATCAAGCAGATGATGTTTCTGTCCACTTCTAAATCTTGCTTAGT  
 GAAAGTCTGTTGTTCTACAATGTACACATGTAACACCACAAAGAGATAAGTCAGTGGTATGTGGGAGTT


[View online »](#)

TGTTTCATACACCAAAGTTTGTGAAGGGTCGTCAGACACCAAAACATATTTCTGAAAGTCTAGGAGCTGA  
 GGTGGATCCTGATATGTCTTGGTCAAGTTCTTTAGCTACACCACCCACCTTAGTTCTACTGTGCTCATA  
 GTCAGAAATGAAGAAGCATCTGAAACTGTATTTCTCATGATACTACTGCTAATGTGAAAAGCTATTTTT  
 CCAATCATGATGAAAGTCTGAAGAAAAATGATAGATTTATCGTTCTGTGACAGACAGTGAAAACACAAA  
 TCAAAGAGAAGCTGCAAGTCATGGATTTGGA AAAACATCAGGGAATTCATTTAAAGTAAATAGCTGCAAA  
 GACCACATTGGAAGTCAATGCCAAATGTCTAGAAGATGAAGTATATGAAACAGTTGTAGATACCTCTG  
 AAGAAGATAGTTTTTCATTATGTTTTCTAAATGTAGAACAAAAATCTACAAAAAGTAAAGACTAGCAA  
 GACTAGGAAAAAAATTTTCCATGAAGCAACGCTGATGAATGTGAAAAATCTAAAAACCAAGTGAAAGAA  
 AAATACTCATTTGTATCTGAAGTGGAACCAATGATACTGATCCATTAGATTCAAATGTAGCAAATCAGA  
 AGCCCTTTGAGAGTGGAAGTGACAAAATCTCCAAGGAAGTTGTACCGTCTTTGGCCTGTGAATGGTCTCA  
 ACTAACCTTTTCAAGTCTAAATGGAGCCAGATGGAGAAAAATACCCCTATTGCATATTTCTTCATGTGAC  
 CAAAATATTTAGAAAAAGACCTATTAGACACAGAGAACAAAAGAAAGAAAGATTTTCTTACTTCAGAGA  
 ATTCTTTGCCACGTATTTCTAGCCTACCAAAATCAGAGAAGCCATTAAATGAGGAAACAGTGGTAAATAA  
 GAGAGATGAAGAGCAGCATCTTGAAATCTCATACAGACTGCATTCTGCAGTAAAGCAGGCAATATCTGGA  
 ACTTCTCCAGTGGCTTCTTCATTTCAGGGTATCAAAAAGTCTATATTCAGAATAAGAGAATCACCTAAAG  
 AGACTTTCAATGCAAGTTTTTTCAGGTCTATGACTGATCCAACTTTAAAAAAGAAACTGAAGCCTCTGA  
 AAGTGGACTGGAATACATACTGTTTGCTCACAGAAGGAGGACTCCTTATGTCCAAATTTAATTGATAAT  
 GGAAGCTGGCCAGCCACCACCACACAGAATTCTGTAGCTTTGAAGAATGCAGGTTTAATATCCACTTTGA  
 AAAAGAAAAACAAATAAGTTTATTTATGCTATACATGATGAAACATCTTATAAAGGAAAAAAAATACCGAA  
 AGACCAAAAAATCAGAATAATTAAGTGTTCAGCCAGTTTGAAGCAATGCTTTTGAAGCACCATTACA  
 TTTGCAATGCTGATTGAGTTTATTGCATTCTCTGTGAAAAGAAGCTGTTACAGAATGATTCTGAAG  
 AACCAACTTTGTCCTTAAGTCTGTTTGGGACAATTCTGAGGAAATGTTCTAGAAATGAAACATGTTT  
 TAATAATACAGTAATCTCTCAGGATCTTGATTATAAAGAAGCAAAATGTAATAAGGAAAAATACAGTTA  
 TTATTACCCCGAAGCTGATTCTGTGATGCTGCAGGAGGACAGTGTGAAAAATGATCCAAAAAGCA  
 AAAAAGTTTCAGATATAAAAAGAAGGCTTGGCTGCAGCATGTACCCAGTACAACATTCAAAAGTGGA  
 ATACAGTGATACTGACTTTCAATCCCAGAAAAGTCTTTTATATGATCATGAAAATGCCAGCACTCTTATT  
 TTAAGTCTACTTCAAGGATGTTCTGTCAAACCTAGTCATGATTTCTAGAGGCAAGAATCATACAAAA  
 TGTCAGACAAGCTCAAAGGTAACAATTATGAATCTGATGTTGAATTAACCAAAAAATTTCCCATGGAAAA  
 GAATCAAGATGTATGTGCTTTAAATGAAAATTAAAAACGTTGAGCTGTTGCCACCTGAAAAATACATG  
 AGAGTAGCATCACCTTCAAGAAAGGTACAATTAACCAAAAACACAATCTAAGAGTAATCAAAAAAATC  
 AAGAAGAACTACTTCAATTTCAAAAATAACTGTCAATCCAGACTCTGAAGAATTTTCTCAGACAATGA  
 GAATAATTTTGCTTCCAAGTAGCTAATGAAAGGAATAATCTTGCTTTAGGAAATACTAAGGAATTCAT  
 GAAACAGACTTGACTTGTGTAACGAACCCATTTTCAAGAACTCTACCATGGTTTTATATGGAGACACAG  
 GTGATAAACAAGCAACCAAGTGTCAATTA AAAAGATTTGGTTTATGTTCTTGAGAGGAGAACAAAAA  
 TAGTGTAAGCAGCATATAAAAAAGTCTAGGTCAAGATTTAAATCGGACATCTCCTTGAATATAGAT  
 AAAATACCAGAAAAAATAATGATTACATGAACAAATGGGCAGGACTCTTAGGTCCAATTTCAAATCACA  
 GTTTTGGAGGTAGCTTCAGAACAGCTTCAAATAAGGAAATCAAGCTCTCTGAACATAACATTAAGAAGAG  
 CAAAATGTTCTTCAAAGATATTGAAGAACAATATCCTACTAGTTTAGCTTGTGTTGAAATTGTAATACC  
 TTGGCATTAGATAATCAAAAGAACTGAGCAAGCCTCAGTCAATTAATACTGTATCTGCACATTTACAGA  
 GTAGTGAGTTGTTTCTGATTGTAAAAATAGTCATATAACCCCTCAGATGTTATTTTCCAAGCAGGATTT  
 TAATTCAAACCATAATTTAACACCTAGCCAAAAGGCAGAAATTACAGAACTTTCTACTATATTAGAAGAA  
 TCAGGAAGTCAGTTTGAATTTACTCAGTTTAGAAAACCAAGCTACATATTGCAGAAGAGTACATTTGAAG  
 TGCCTGAAAACAGATGACTATCTTAAAGACCCTTCTGAGGAATGCAGAGATGCTGATCTTCATGTCAT  
 AATGAATGCCCATCGATTGGTCAGGTAGACAGCAGCAAGCAATTTGAAGGTACAGTTGAAATTAACGG  
 AAGTTTGCTGGCCTGTTGAAAAATGACTGTAAACAAAAGTGCTTCTGGTTATTTAACAGATGAAAAAGAG  
 TGGGGTTTAGGGGCTTTTATTCTGCTCATGGCACAAAAGTGAATGTTTCTACTGAAGCTCTGCAAAAAGC  
 TGTGAACTGTTTAGTGATATTGAGAATATTAGTGAGGAACTCTGCAGAGGTACATCCAATAAGTTTA  
 TCTTCAAGTAAATGTCATGATTCTGTTGTTTCAATGTTTAAGATAGAAAATCATAATGATAAAAGTGTA  
 GTGAAAAAATAATAATGCCAACTGATATTACAAAATAATTTGAAATGACTACTGGCACTTTTGTGGA  
 AGAAATTAAGTAAAAATACAAGAGAAATGAAAAATGAAGATAACAAATATACTGCTGCCAGTAGAAAT  
 TCTCATAACTTAGAATTTGATGGCAGTGATTCAAGTAAAAATGATACTGTTTGTATTCTAAAGATGAAA  
 CGGACTTGCTATTTACTGATCAGCACACATATGTCTTAAATTATCTGGCCAGTTTATGAAGGAGGGAAA

CACTCAGATTAAAGAAGATTTGTCAGATTTAACTTTTTTGAAGTTGCGAAAGCTCAAGAAGCATGTCAT  
 GGTAATACTTCAAATAAAGAACAGTTAACTGCTACTAAACGGAGCAAAATATAAAAGATTTTGAGACTT  
 CTGATACATTTTTTCAGACTGCAAGTGGGAAAAATATTAGTGTGCGCCAAAGAGTCATTTAATAAAATTGT  
 AAATTTCTTTGATCAGAAACCAGAAGATTGCATAACTTTTCCTTAAATTCTGAATTACATTCTGACATA  
 AGAAAGAACAAAATGGACATTCTAAGTTATGAGGAAACAGACATAGTTAAACACAAAATCTGAAAGAAA  
 GTGTCCAGTTGGTACTGGAAATCAACTAGTGACCTCCAGGGACAACCCGAACGTGATGAAAAGATCAA  
 AGAACCTACTCTATTGGGTTTTTCATACAGCTAGCGGGAAAAAGTTAAATTTGCAAAGGAATCTTTGGAC  
 AAAGTGAAAAACCTTTTTTGATGAAAAAGAGCAAGGTACTAGTGAAATCACCAGTTTTAGCCATCAATGGG  
 CAAAGACCCTAAAGTACAGAGAGGCCTGTAAAGACCTTGAATTAGCATGTGAGACCATTGAGATCACAGC  
 TGCCCCAAAGTGTAAGAAATGCAGAATTCTCTCAATAATGATAAAAACTTGTCTATTGAGACTGTG  
 GTGCCACCTAAGCTCTTAAGTGATAATTTATGTAGACAACTGAAATCTCAAAACATCAAAAAGTATCT  
 TTTTGAAGTTAAAGTACATGAAATGTAGAAAAAGAACAGCAAAAAGTCTGCAACTTGTACACAAA  
 TCAGTCCCCTTATTCAGTCATTGAAATTCAGCCTTAGCTTTTACACAAGTTGTAGTAGAAAACTTCT  
 GTGAGTCAGACTTCATTACTTGAAGCAAAAAATGGCTTAGAGAAGGAATATTTGATGGTCAACCAGAAA  
 GAATAAATACTGCAGATTATGTAGGAAATATTTGTATGAAAATAATTCAAACAGTACTATAGCTGAAAA  
 TGACAAAAATCATCTCTCCGAAAAACAAGATACTTATTTAAGTAACAGTAGCATGTCTAACAGCTATTCC  
 TACCATTCTGATGAGGTATATAATGATTCAGGATATCTCTCAAAAAATAAACTTGATTCTGGTATTGAGC  
 CAGTATTGAAGAATGTTGAAGATCAAAAAACACTAGTTTTTCCAAAGTAATATCCAATGTAAGAGATGC  
 AAATGCATACCCACAACTGTAATGAAGATATTTGCGTTGAGGAACTTGTGACTAGCTCTTACCCTGC  
 AAAAAATAAAATGCAGCCATTAAATGTCCATATCTAATAGTAATAATTTGAGGTAGGGCCACCTGCAT  
 TTAGGTAGCCAGTGGTAAAAATCGTTTGTGTTTACATGAAACAATTAAGGAAAGTAAAGACATATTTAC  
 AGACAGTTTCAGTAAAGTAATTAAGGAAAAACAGGAGAATAAATCAAAAAATTTGCCAACGAAAAATTATG  
 GCAGTTGTTACGAGGCATTGGATGATTAGAGGATATTTCTTCAACTCTCTAGATAATGATGAATGTA  
 GCACGCATTACATAAGGTTTTTGTCTGACATTCAGAGTGAAGAAATTTTACAACATAACCAAAATATGTC  
 TGGATTGGAGAAAGTTTCTAAAAATACACCTTGTGATGTTAGTTTGGAACTTCAGATATATGTAATGT  
 AGTATAGGGAAGCTTCATAAGTCAGTCTCATCTGCAAATACTTGTGGGATTTTTAGCACAGCAAGTGAA  
 AATCTGTCCAGGTATCAGATGCTTCATTACAAACGCAAGACAAGTGTCTTGAATAGAGATAGTAC  
 CAAGCAAGTCTTTTCCAAAGTATTGTTTAAAGTAACGAACATTCAGACCAGCTCACAAGAGAAGAAAAT  
 ACTGCTATACGTACTCCAGAACATTTAATATCCCAAAAAGGCTTTTCATATAATGTGGTAAATTCATCTG  
 CTTTCTCTGGATTTAGTACAGCAAGTGAAAGCAAGTTTCCATTTTAGAAAGTTCCTTACACAAAGTTAA  
 GGGAGTGTTAGAGGAATTTGATTTAATCAGAACTGAGCATAGTCTTCACTATTACCTACGTCTAGACAA  
 AATGTATCAAAAATACTTCTCTGTTGATAAGAGAAACCCAGAGCACTGTGTAACCTCAGAAATGGAAA  
 AAACCTGCAGTAAAGAATTTAAATTATCAAATAACTTAAATGTTGAAGGTGGTCTTTCAGAAAAATATCA  
 CTCTATTAAGGTTTCTCCATATCTCTCTCAATTTCAACAAGACAAACAACAGTTGGTATTAGGAACCAAA  
 GTGTCACCTTGTGAGAACATTCATGTTTTGGGAAAAGAACAGGCTTCACTAAAAACGTAAGAAATGGAAA  
 TTGGTAAACTGAACTTTTTCTGATGTTCTGTGAAAACAAATATAGAAGTTTGTCTACTTACTCCAA  
 AGATTCAGAAAACCTTTTGAACAGAGCAGTAGAAATTGCTAAAGCTTTTATGGAAGATGATGAAGT  
 ACAGATTCTAACTGCCAAGTCATGCCACATTTCTTTTTACATGTCCGAAAATGAGGAAATGGTTT  
 TGTCAAATTCAGAAATTGGAAGAAAGAGAGAGAGCCCTTATCTTAGTGGGAGAACCTCAATCAAAAG  
 AAACCTTATTAATGAATTTGACAGGATAATAGAAAAATCAAGAAAAATCCTTAAAGGCTTCAAAAAGCACT  
 CCAGATGGCACAATAAAAGATCGAAGATTGTTTATGCATCATGTTTCTTTAGAGCCGATTACCTGTGTAC  
 CCTTTCGCACAACCTAAGGAACGTCAAGAGATACAGAAATCCAAATTTTACCGCACCTGGTCAAGAAATTTCT  
 GTCTAAATCTCATTTGTATGAACATCTGACTTTGGAAAAATCTTCAAGCAATTTAGCAGTTTCAGGACAT  
 CCATTTTATCAAGTTTCTGCTACAAGAAATGAAAAATGAGACACTTGATTACTACAGGCAGACCAACCA  
 AAGTCTTTGTTCCACCTTTTAAACTAAATCACATTTTACAGAGTTGAACAGTGTGTTAGGAATATTAA  
 CTTGGAGGAAAACAGACAAAAGCAAAACATTGATGGACATGGCTCTGATGATAGTAAAAATAAGATTAAT  
 GACAATGAGATTCATCAGTTTAAACAAAACAACCTCAATCAAGCAGCAGCTGTAACCTTTCACAAAGTGTG  
 AAGAAGAACCTTTAGATTTAATTACAAGTCTTCAGAATGCCAGAGATATACAGGATATGCGAATTAAGAA  
 GAAACAAAGGCAACGCGTCTTTCCACAGCCAGGCAGTCTGTATCTTGCAAAAAACATCCACTCTGCCTCGA  
 ATCTCTCTGAAAGCAGCAGTAGGAGGCCAAGTTCCCTCTGCGTGTCTCATAAACAGCTGTATACGTATG  
 GCGTTTCTAAACATTGCATAAAAATTAACAGCAAAAAATGCAGAGTCTTTTTCAGTTTCACTGAAGATTA  
 TTTTGGTAAGGAAAGTTTATGGACTGGAAAAGGAATACAGTTGGCTGATGGTGGATGGCTCATACCCTCC

AATGATGGAAAGGCTGGAAAAGAAGAATTTTATAGGGCTCTGTGTGACACTCCAGGTGTGGATCCAAAGC  
 TTATTTCTAGAATTTGGGTTTATAATCACTATAGATGGATCATATGGAACTGGCAGCTATGGAATGTGC  
 CTTTCCTAAGGAATTTGCTAATAGATGCCTAAGCCCAGAAAGGGTGCTTCTTCAACTAAAATACAGATAT  
 GATACGGAAATTGATAGAAGCAGAAGATCGGCTATAAAAAAGATAATGGAAAGGGATGACACAGCTGCAA  
 AAACACTTGTTCTCTGTGTTTCTGACATAATTTCAATGAGCGCAATATATCTGAAACTTCTAGCAATAA  
 AACTAGTAGTCAGATACCCAAAAAGTGGCCATTATTGAACTTACAGATGGGTGGTATGCTGTTAAGGCC  
 CAGTTAGATCCTCCCTCTTAGCTGTCTTAAAGAATGGCAGACTGACAGTTGGTCAGAAGATTATTCTTC  
 ATGGAGCAGAACTGGTGGGCTCTCCTGATGCCTGTACACCTCTTGAAGCCCAGAACTCTTATGTTAAA  
 GATTTCTGCTAACAGTACTCGGCCTGCTCGCTGGTATACCAAATTTGGATTCTTCTGACCCTAGACCT  
 TTTCTCTGCCCTTATCATCGCTTTTCAGTGATGGAGGAAATGTTGGTTGTGTTGATGTAATTATTCAA  
 GAGCATACCCTATACAGTGGATGGAGAAGACATCATCTGGATTATACATATTCGCAATGAAAGAGAGGA  
 AGAAAAGGAAGCAGCAAAATATGTGGAGGCCCAACAAAGAGACTAGAAGCCTTATTCATAAAATTCAG  
 GAGGAATTTGAAGAACATGAAGAAAACACAACAAACCATATTTACCATCACGTGCACTAACAAGA

AGCGGACCGACGCGTACGCGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAAATGATATCC  
 TGGATTACAAGGATGACGACGA TAAGGTTTAA

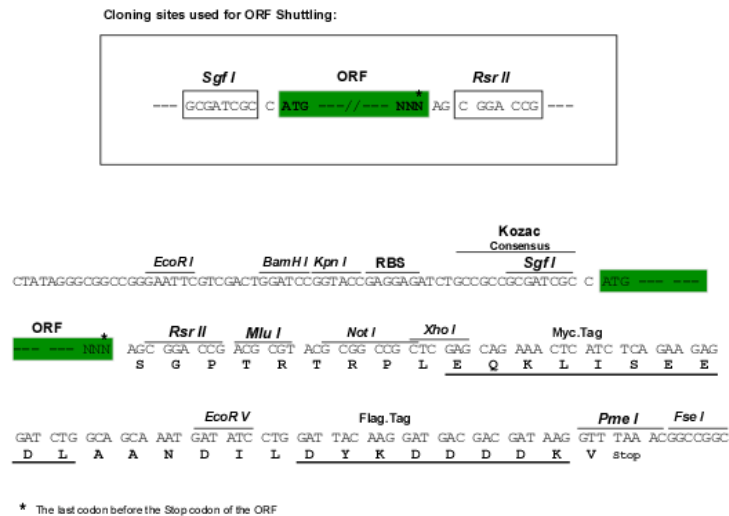
**Protein Sequence:** >RC400723 representing NM\_000059  
 Red=Cloning site Green=Tags(s)

MPIGSKERPTFFEIFKTRCNKADLGPIISLWNFEEL SSEAPPYNSEPAEESEHKNNNYEPNLFKTPQRKPS  
 YNQLASTPIIFKEQGLTLPLYQSPVKELDKFKLDLGRNVPSNRHKSRLRTVKTMDQADDVSCPLLNSCLS  
 ESPVVLQCTHVTPQRDKSVVCGSLFHTPKFVKGRQTPKHISESLGAEDPDMSSSLATPPTLSSTVLI  
 VRNEEASETVFPHDTTANVKSYSFNHDESLKKNDRFIASVTDSENTNQREAASHGFGKTSNGSFKVNSCK  
 DHIGKSMPNVLEDEVYETVVDTSSEDSFSLCFSKCRTKNLQKVRTSKTRKKIFHEANADECEKSKNQVKE  
 KYSFVSEVEPNDDPLDSNVANQKPFESGSDKISKEVVP SLACEWSQLTSLGNGAQMEKIPLLHSSCD  
 QNISEKDLLDTENKRKKDFTLSENSLPRISLPKSEKPLNEETVYNKRDEEQHLESHTDCILAVKQAIISG  
 TSPVASSFGQIKKSIFRIRESPKETFNASFSGHMTDPNFKKETEASESGLEIHTVCSQKEDSLCPNLIDN  
 GSWPATTTQNSVALKNAGLISTLKKTNKFIYAIHDETSYKGGKIPKDQKSELINCSAQFEANAFEAPLT  
 FANADSGLLHSSVKRSCSQNDSEPTLSLTSSFGTILRKCSRNETCSNNTVISQDLDYEAKCNKEKLQL  
 FITPEADSLSCLQEGQCENDPKSKKVSIDIKEEVLAAACHPVQHSKVEYSDTDFQSQSKLLYDHENASTLI  
 LTPTSKDVL SNLVMISRGKESYKMSDKLKGNNYESDVELTKNIPMEKNQDVCALNENYKNVELLPPEKYM  
 RVASPSRKVQFNQNTNLRVIQNKQEETTSISKITVNPDSSEELFSDNENNFVFQVANERNLALGNTKELH  
 ETDLTVCNEPIFKNSTMVLYGDTGDKQATQVSIKKDLVYVLAENKNSVKQHIKMTLGQDLKSDISLNI  
 KIPEKNNDYMNKWAAGLLGPIISNHSFGGSFRTASNKEIKLSEHNIKKSMFFKDIIEEQYPTSLACVEIVNT  
 LALDNQKLSKPQSINTVSAHLQSSVVVSDCKNSHITPQMLFSKQDFNSNHNLTSPQKAEITELSTILEE  
 SGSQFEFTQFRKPSYILQKSTFEVPEQMILKTTSEECRDADLHVIMNAPSIGQVDSKQFEGTVEIKR  
 KFAGLLKNDCKNSASGYLTDENEVGFRGFYSAHGKLVNSTEALQKAVKLFSDIENISEETSAEVHPISL  
 SSSKCHDSVSMFKIENHNDKTVSEKNKCKQLILQNNIEMTTGTVEEITENYKRNTENEDNKYTAASRN  
 SHNLEFDGSDSSKNDTVCIHKDETDLLFTDQHNI CLKLSGQFMKEGNTQIKEDLSDLTFLEVAKAQEACH  
 GNTSNKEQLTATKTEQNIKDFETSDTFFQTASGKNISVAKESFNKIVNFFDQKPEELHNFSLNSELHSDI  
 RKNKMDILSYEETDIVKHKILKESVPVGTGNQLVTFQGGQPERDEKIKEPTLLGFHTASGKKVKIAKESLD  
 KVKNLFDEKEQGTSEITSFSHQWAKTLKYREACKDLELACETIEITAAPKCKEMQNSLNNDKNLVSIVTV  
 VPPKLLSDNLCRQTNELKTSKISFLKVKVHENVEKETAKSPATCYTNQSPYSVIENSALAFYTCSRKTS  
 VSQTSLLAEAKWLREGIFDGQPERINTADYVGNLYENNSNSTIAENDKNHLSEKQDTYLSNSSMSNSYS  
 YHSDEVYNDSGYL SKNKLD SGIEPVLKNVEDQKNTSFSKVISNVKDANAYPQTVNEDICVEELVTSSPC  
 KNKNAAIKLSISNSNNEVGPAPFRIASGKIVCVSHETIKKVKDIFTDSFSKVIKENNENKSKICQTKIM  
 AGCYEALDDSEDILHNSLDNDECSTHSHKVFADIQSEELQHQNMSGLEKVSISPDCVSLTSDICKC  
 SIGKLSKSVSSANTCGIFSTASGKSVQVSDASLQNAQVFSEIEDSTKQVFSKVLFSNEHSDQLTREEN  
 TAIRTPPEHLISQKGSYNVNVSSAFSGFSTASGKQVSILESSLHKVKGVL EFDLIRTEHSLHYSPTS RQ  
 NVSKILPRVDKRNPEHCVNSEMEKTCSEFKLSNNLNVEGGSSENNHSIKVSPYLSQFQDQKQLVLGTK  
 VSLVENIHVLGKEQASPKNVKMEIGKTETFSVPVKNTNIEVCSTYSKDSSENYFETEAVEIAKAFMEDDEL  
 TDSKLP SHATHSLFTCPENEEMVLSNSRIGKRRGEPLILVGEP SIKRNLNFDRIENQESL KASKST  
 PDGTIKDRRLFMHVSLEPITCVPFRTTKERQEIQNPNTAPGQEF LSKSHLYEHLTLEKSSSNLAVSGH  
 PFYQVSATRNEKMRHLIT TGRPTKVFPFPFKTKSHFHRVEQCVRNINLEENRQKQNI DGHSDDSKNKIN  
 DNEIHQFNKNNSNQAAAVTFTKCEEEPLDLITSLQNARDIQDMRIKKKQQRQVFPQPGSLYLAKTSTLPR  
 ISLKAAVGGQVPSACSHKQLYTYGVSKHCIKINSKNAESFQFHTEDYFGKESLWTGKGIQLADGGWLIPS  
 NDGKAGKEEFYRALCDTPGVDPKLSRIWVYNHYRWIIWKLAAAMECAFPKEFANRCLSPERVLLQLKYRY  
 DTEIDRSRRSAIKKIMERDDTA AKTLVLCVSDIISLSANISSETSSNKTSSADTQKVAIIELTDGWYAVKA  
 QLDPPLLAVLKNGR LTVGQKII LHGAELVGSPDACTPLEAPESLMLKISANSTRPARWYTKLGFFPDPRP  
 FPLPLSSLFSDGGNVGCVDVIIQRAYPIQWMEKTSSGLYIFRNEREEKEAAKYVEAQQKRLEALFTKIQ  
 EEFEEHEENTTKPYLPSRALTR

SGPTRRRL**EQKLISEEDLA**ANDILDYKDDDDKV

**Restriction Sites:** SgfI-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. <a href="#">More info</a> |
| 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).                                                                                                                                                                                                                                                               |
| Note:             | Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.                                                                                                                                                                                                                                                                                                                           |
| RefSeq:           | <a href="#">NP_000050</a>                                                                                                                                                                                                                                                                                                                                                                                                                          |
| RefSeq Size:      | 8676 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:               | 318.1 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]