

Product datasheet for **RC400606**

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:	Y1762X
Affected Codon#:	1762
Affected NT#:	5286
Nucleotide Mutation:	BRCA2 Mutant (Y1762X), Myc-DDK-tagged ORF clone of Homo sapiens breast Cancer, early onset (BRCA2) as transfection-ready DNA
Effect:	Prostate 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:	5283 bp
Restriction Sites:	SgfI-RsrII
ORF Nucleotide Sequence:	>RC400606 representing NM_000059 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**GCGATCGCC**

ATGCCTATTGGATCCAAAGAGAGGCCAACATTTTTTGAATTTTTAAGACACGCTGCAACAAAGCAGATT
TAGGACCAATAAGTCTTAATTGGTTTGAAGAACTTTCTTCAGAAGCTCCACCCTATAATTCTGAACCTGC
AGAAGAATCTGAACATAAAAAACAACAATTACGAACCAACCTATTTAAACTCCACAAAGGAAACCATCT
TATAATCAGCTGGCTTCAACTCCAATAATTTCAAAGAGCAAGGGCTGACTCTGCCGCTGTACCAATCTC
CTGTAAGAATTAGATAAATTCAAATTAGACTTAGGAAGGAATGTTCCCAATAGTAGACATAAAGTCT
TCGCACAGTGAAGAACTAAATGGATCAAGCAGATGATGTTTCTGTCCACTTCTAAATCTGTCTTAGT
GAAAGTCTGTTGTTCTACAATGTACACATGTAACACCACAAAGAGATAAGTCAGTGGTATGTGGGAGTT



[View online »](#)

TGTTCATACACCAAAGTTTGTGAAGGGTCGTCAGACACCAAAACATATTTCTGAAAGTCTAGGAGCTGA
 GGTGGATCCTGATATGTCTTGGTCAAGTTCTTTAGCTACACCACCACCCTTAGTTCTACTGTGCTCATA
 GTCAGAAATGAAGAAGCATCTGAAACTGTATTTCTCATGATACTACTGCTAATGTGAAAAGCTATTTTT
 CCAATCATGATGAAAGTCTGAAGAAAAATGATAGATTTATCGTCTCTGTGACAGACAGTGAAAACACAAA
 TCAAAGAGAAGCTGCAAGTCATGGATTTGGAAAAACATCAGGGAATTCATTTAAAGTAAATAGCTGCAAA
 GACCACATTGAAAAGTCAATGCCAAATGTCTAGAAGATGAAGTATATGAAACAGTTGTAGATACCTCTG
 AAGAAGATAGTTTTTTCATTATGTTTTTCTAAATGTAGAACAAAAATCTACAAAAAGTAAAGAACTAGCAA
 GACTAGGAAAAAAATTTCCATGAAGCAACGCTGATGAATGTGAAAAATCTAAAAACCAAGTGAAAGAA
 AAATACTCATTTGTATCTGAAGTGAACCAATGATACTGATCCATTAGATTCAAATGTAGCAAATCAGA
 AGCCCTTTGAGAGTGAAGTGACAAAATCTCCAAGGAAGTTGTACCGTCTTTGGCCTGTGAATGGTCTCA
 ACTAACCTTTCAGGTCTAAATGGAGCCAGATGGAGAAAAATACCCTATTGCATATTTCTTCATGTGAC
 CAAAATATTTAGAAAAAGACCTATTAGACACAGAGAACAAAAGAAAGAAAGATTTTCTACTTCAGAGA
 ATTCTTTGCCACGTATTTCTAGCCTACCAAAATCAGAGAAGCCATTAAATGAGGAAACAGTGGAATAAA
 GAGAGATGAAGAGCAGCATCTTGAATCTCATACTGACTGCATTCTGCAGTAAAGCAGGCAATATCTGGA
 ACTTCTCCAGTGGCTTTCATTTCCAGGTATCAAAAAGTCTATATTCAGAATAAGAGAATCACCTAAAG
 AGACTTCAATGCAAGTTTTTCCAGGTATATGACTGATCCAAACTTTAAAAAAGAAACTGAAGCCTCTGA
 AAGTGGACTGGAATACATACTGTTTGCTCACAGAAGGAGGACTCCTTATGTCCAAATTTAATTGATAAT
 GGAAGCTGGCCAGCCACCACCACAGAAATCTGTAGCTTTGAAGAATGCAGGTTAATATCCACTTTGA
 AAAAGAAAAACAAATAAGTTTATTTATGCTATACATGATGAAACATCTTATAAAGGAAAAAAATACCGAA
 AGACCAAAAATCAGAATAATTAAGTGTTCAGCCAGTTTGAAGCAATGCTTTTGAAGCACCATTACA
 TTTGCAAAATGCTGATTCAGGTTTATTGCATTCTCTGTGAAAAGAAGCTGTTACAGAATGATTCGAAG
 AACCAATTTGCTTAACTAGCTCTTTGGGACAATCTGAGGAAATGTTCTAGAAATGAAACATGTTT
 TAATAATACAGTAATCTCTCAGGATCTTGATTATAAAGAAGCAAAATGTATAAAGGAAAAACTACAGTTA
 TTTATTACCCAGAAGCTGATTCTGTGATGCCTGCAGGAAGGACAGTGTGAAAAATGCTCAAAAAGCA
 AAAAAGTTTCAGATATAAAGAAGAGGTCTGGCTGCAGCATGTACCCAGTACAACATTCAAAAGTGGAA
 ATACAGTGATACTGACTTTCAATCCCAGAAAAGTCTTTTATATGATCATGAAAAATGCCAGCACTCTTATT
 TTAACTCTACTTCCAAGGATGTTCTGTCAAACCTAGTCATGATTTCTAGAGGCAAGAATCATACAAAA
 TGTCAGACAAGCTCAAAGGTAACAATTATGAATCTGATGTTGAATTAACCAAAAATATCCCATGGAAAA
 GAATCAAGATGTATGTGCTTTAAATGAAAATTAAAAAACGTTGAGCTGTTGCCACCTGAAAAATACATG
 AGAGTAGCATCACCTTCAAGAAAGGTACAATTAACCAAAAACACAATCTAAGAGTAATCAAAAAAATC
 AAGAAGAACTACTTCAATTTCAAAAATAACTGTCAATCCAGACTCTGAAGAATTTTCTCAGACATGA
 GAATAATTTTGTCTTCCAAGTAGCTAATGAAAGGAATAATCTTGCTTTAGGAAATACTAAGGAATTCAT
 GAAACAGACTTGACTTGTGTAACCGAACCCATTTTCAAGAACTCTACCATGGTTTTATATGGAGACACAG
 GTGATAAACAAGCAACCCAAGTGTCAATTAAAAAAGATTTGGTTTATGTTCTTGCAGAGGAGAACAAAA
 TAGTGTAAAGCAGCATATAAAAAAGACTCTAGGTCAAGATTTAAATCGGACATCTCCTTGAATATAGAT
 AAAATACCAGAAAAAAATAATGATTACATGAACAAATGGGCAGGACTCTTAGGTCCAATTTCAAATCACA
 GTTTTGGAGGTAGCTTCAAGACAGCTTCAAATAAGGAAATCAAGCTCTCTGAACATAACATTAAGAAGAG
 CAAAATGTTCTTCAAAGATATTGAAGAACAATATCCTACTAGTTTAGCTTGTGTTGAAATGTAATACC
 TTGGCATTAGATAATCAAAAGAACTGAGCAAGCCTCAGTCAATTAATACTGTATCTGCACATTTACAGA
 GTAGTGTAGTTGTTTCTGATTGTAAAAATAGTCATATAACCCCTCAGATGTTATTTTCCAAGCAGGATTT
 TAATTCAAACCATAATTTAACACCTAGCCAAAAGGCAGAAATTACAGAATTTTCTACTATATTAGAAGAA
 TCAGGAAGTCAGTTTGAATTTACTCAGTTTAGAAAACCAAGCTACATATTGCAGAAGAGTACATTTGAAG
 TGCCTGAAAACAGATGACTATCTTAAAGACCCTTCTGAGGAATGCAGAGATGCTGATCTTCATGTCAT
 AATGAATGCCCATCGATTGGTCAGGTAGACAGCAGCAAGCAATTTGAAGGTACAGTTGAAATTAACGG
 AAGTTTGTGGCCTGTTGAAAAATGACTGTAACAAAAGTCTTCTGGTTATTTAACAGATGAAAAATGAAG
 TGGGGTTTAGGGCTTTTATTCTGCTCATGGCACAAAAGTGAATGTTTCTACTGAAGCTCTGCAAAAAGC
 TGTGAAACTGTTTGTGATATTGAGAATATTAGTGAGGAACTCTGCAGAGGTACATCCAATAAGTTTA
 TCTTCAAGTAAATGTCATGATTCTGTTGTTCAATGTTTAAAGATGAAAAATCATAATGATAAACTGTAA
 GTGAAAAAAATAATAATGCCAACTGATATTACAAAATAATTTGAAATGACTACTGGCACTTTTGTGGA
 AGAAATTAAGTAAAAATCAAGAGAAATGAAAAATGAAGATAACAAATATACTGCTGCCAGTAGAAAT
 TCTCATAACTTAGAATTTGATGGCAGTGATTCAAGTAAAAATGATACTGTTTGTATTATAAAGATGAAA
 CGGACTTGCTATTTACTGATCAGCACACATATGTCTTAAATTAATCTGGCCAGTTTATGAAGGAGGGAAA

CACTCAGATTAAGAAGATTTGTGAGATTAACTTTTTGAAGTTGCGAAAGCTCAAGAAGCATGTCAT
 GGTAATACTTCAATAAAGAACAGTTAACTGCTACTAAAACGGAGCAAAATATAAAGATTTTGAGACTT
 CTGATACATTTTTTTCAGACTGCAAGTGGGAAAAATATTAGTGTGCGCCAAAGAGTCATTTAATAAAATTGT
 AAATTTCTTTGATCAGAAACCAGAAGAATTGCATAACTTTTCTTAAATTCTGAATTACATTCTGACATA
 AGAAAGAACAAAATGGACATTCTAAGTTATGAGGAAACAGACATAGTTAAACACAAAATACTGAAAGAAA
 GTGTCCAGTTGGTACTGGAAATCAACTAGTGACCTCCAGGGACAACCCGAACGTGATGAAAAGATCAA
 AGAACCTACTCTATTGGGTTTTTCATACAGCTAGCGGGAAAAAAGTTAAAATTGCAAAGGAATCTTTGGAC
 AAAGTGA AAAACCTTTTTGATGAAAAAGCAAGGTAAGTGAATCACCAGTTTTAGCCATCAATGGG
 CAAAGACCCTAAAGTACAGAGAGGCTGTAAAGACCTGAATTAGCATGTGAGACCATTGAGATCACAGC
 TGCCCCAAAGTGTAAAGAAATGCAGAATTCTCTCAATAATGATAAAAACCTTGTTTCTATTGAGACTGTG
 GTGCCACCTAAGCTCTTAAGTGATAATTTATGTAGACAACTGAAAATCTCAAAACATCAAAAAGTATCT
 TTTTGAAGTTAAAGTACATGAAAATGTAGAAAAAGAACAGCAAAAAGTCTGCAACTTGTACACAAA
 TCAGTCCCCTTATTCAGTCATTGAAAATTCAGCCTTAGCTTTTTACACAAGTTGTAGTAGAAAACTTCT
 GTGAGTCAGACTTCATTACTGAAGCAAAAAATGGCTTAGAGAAGGAATATTTGATGGTCAACCAGAAA
 GAATAAATACTGCAGATTATGTAGGAAATATTTGTATGAAAATAATTCAAACAGTACTATAGCTGAAA
 TGACAAAAATCATCTCTCCGAAAAACAAGATACTTATTTAAGTAAACAGTAGCATGTCTAACAGCTATTCC
 TACCATTCTGATGAGGTATATAATGATTCAGGA

AGCGGACCGACGCGTACGCGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCC
 TGGATTACAAGGATGACGACGA TAAGGTTTAA

Protein Sequence:

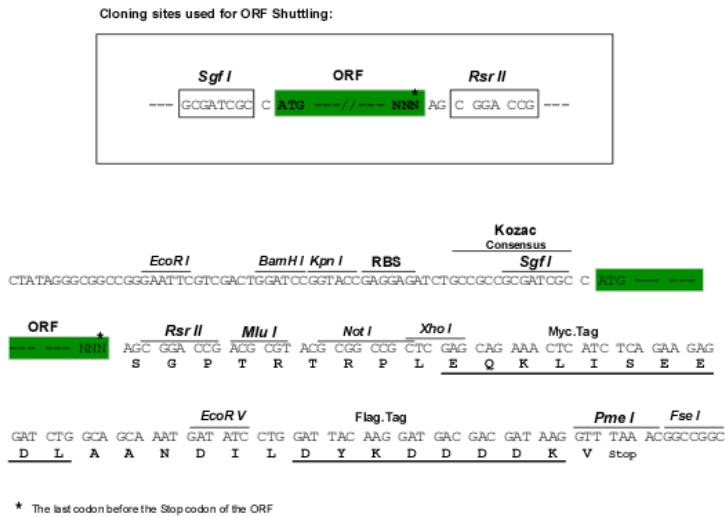
>RC400606 representing NM_000059
 Red=Cloning site Green=Tags(s)

MPIGSKERPTFFEIFKTRCNKADLGPISLWNFEELSSEAPPYNSEPAEESSEHKNNNYEPNLFKTPQRKPS
 YNQLASTPIIFKEQGLTLPYQSPVKELDKFKLDLGRNVPNSRHKSLRTVKTMDQADDVSCPLLNSCLS
 ESPVVLQCTHVPQRDKSVVCGSLFHTPKFVKGRQTPKHISESLGAEVDPDMSWSSSLATPPTLSSTVLI
 VRNEEASETVPFHDTTANVKS YFSNHDESLKKNDRFIASVTDSSENTNQREASHGFGKTSNGSNFKVNSCK
 DHIGKSMNPVLEDEVYETVVDTSEEDSFLCFSKCRTKNLQKVRTSKTRKKIFHEANADECEKSKNQVKE
 KYSFVSEVEPNDDPLDSNVANQKPFESGSDKISKEVVP SLACEWSQLTSLGNGAQMEKIPLHISSCD
 QNISEKDLLDTENKRKDFLTSNSLPRISL PKSEKPLNEETVVNKRDEEQHLESHTDCILAVKQAIISG
 TSPVASSFQGIKKSIFRIRESPKETFNASFSGHMTDPNFKKETEASESGLEIHTVCSQKEDSLCPNLIDN
 GSWPATTTQNSVALKNAGLISTLKKKTNKF IYAIHDETSYKGGKIPKDQKSELINCSAQFEANAFEAPLT
 FANADSGLLHSSVKRSCSQNDSEPTLSLTSFGTILRKCSRNETCSNNTVISQDLDYKEAKCNKEKLQL
 FITPEADSLSCLQEQCENDPKSKKVS DIKEEVLAAACHPVQHSKVEYSDFQSQKSLLYDHENASTLI
 LTPTSKDVL SNLVMISRGKESYKMSDKLKGNNYSDVELTKNIPMEKNQDVCALNENYKNVELLPPEKYM
 RVASPSRKVQFNQNTNLRVIQKNQEETTSISKITVNPDSEELFSDNENNFVFQVANERNLALGNTKELH
 ETDLTCVNEPIFKNSTMVL YGDTGDKQATQVSIKKDLVYVLAENKNSVKQHIKMTLGDLDKSDISL NID
 KIPEKNNDYMNKWAGLLGPISNHSFGGSFRTASNKEIKLSEHNKSKMFFKDIIEEQYPTSLACVEIVNT
 LALDNQKKL SKPQSINTVSAHLQSSVVVSDCKNSHITPQMLFSKQDFNSNHNLTPSQKAEITELSTILEE
 SGSQFEFTQFRKPSYILQKSTFEVPENQMTILKTTSEECRDADLHVIMNAPSIGQVDSKQFEGTVEIKR
 KFAGLLKNDCKNSASGYLTDENEVGRFGRFYSAHGKLNVSTEALQKAVKLFSDIENISEETSAEVHPISL
 SSSKCHDSVVSFMFKIENHNDKT VSEKNNKCQLILQNNIEMTTGTFFVEEITENYKRNTEDEDNKYTAASRN
 SHNLEFDGSDSSKNDTVCIHKDETDLLFTDQHNICLKL SGQFMKEGNTQIKEDLSDLTFLEVAKAQEACH
 GNTSNKEQLTATKTEQNIKDFETSDTFFQTASGKNISVAKESFNKIVNFFDQKPEELHNFSLNSELHSDI
 RKNKMDILSYEETDIVKHKILKESVPGTGNQLVTFQGP ERDEKIKEPTLLGFHTASGKKVKIAKESLD
 KVKNFLDEKEQGTSEITSFHQWAKTLKYREACKDLELACETIEITAAPKCKEMQNSLNNDKNLVS IETV
 YPPKLLSDNLCRQTENLKT SKSIFLKVYHENVEKETAKSPATCYTNQSPYSVIENSALAFYTCSRKTS
 VSQTSLL EAKKWLREGIFDGQPERINTADYVGNLYENNSNSTIAENDKNHLSEKQDTYLSNSSMSNSYS
 YHSDEVYND SG

SGPTRRRLEQKLI SEEDLAANDILDYKDDDDKV

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. [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:

5283 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:

193.7 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]