

## Product datasheet for **RC400552**

### **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:	S611X
Affected Codon#:	611
Affected NT#:	1832
Nucleotide Mutation:	BRCA2 Mutant (S611X), 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:	1830 bp
Restriction Sites:	Sgfl-RsrII



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**ORF Nucleotide Sequence:**

>RC400552 representing NM\_000059  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGGATCGCC**

ATGCCTATTGGATCCAAAGAGAGGCCAACATTTTTTGAATTTTTAAGACACGCTGCAACAAAGCAGATT  
 TAGGACCAATAAGTCTTAATTGGTTTGAAGAACTTTCTCAGAAGCTCCACCCTATAATTCTGAACCTGC  
 AGAAGAATCTGAACATAAAAAACAATAATTACGAACCAAACCTATTTAAAACTCCACAAAGGAAACCATCT  
 TATAATCAGCTGGCTTCAACTCCAATAATTCAAAGGCAAGGGCTGACTCTGCCGCTGTACCAATCTC  
 CTGTAAGAATAGATAAAATCAAAATAGACTTAGGAAGGAATGTTCCAATAGTAGACATAAAAGTCT  
 TCGCACAGTAAAACTAAATGGATCAAGCAGATGATGTTTCTGTCCACTTCTAAATCTTGTCTTAGT  
 GAAAGTCTGTTGTTCTACAATGTACACATGTAACACCACAAAGAGATAAGTCAGTGGTATGTGGGAGTT  
 TGTTTCATACACCAAAGTTGTGAAGGGTCGTGACACCAAACATATTTCTGAAAGTCTAGGAGCTGA  
 GGTGGATCCTGATATGTCTTGGTCAAGTCTTTAGCTACACCACCACCCTTAGTCTACTGTGCTCATA  
 GTCAGAAATGAAGAAGCATCTGAAACTGTATTTCTCATGATACTACTGCTAATGTGAAAAGCTATTTTT  
 CCAATCATGATGAAAGTCTGAAGAAAAATGATAGATTTATCGCTTCTGTGACAGACAGTAAAAACACAAA  
 TCAAAGAGAAGCTGCAAGTCAATGGAATTTGGAAAAACATCAGGGAATTCATTTAAAGTAAATAGCTGCAAA  
 GACCACATTGGAAGTCAATGCCAAATGTCCTAGAAGTGAAGTATATGAAACAGTTGTAGATACCTCTG  
 AAGAAGATAGTTTTTCAATATGTTTTTCTAAATGTAGAACAAAAATCTACAAAAAGTAAAGAACTAGCAA  
 GACTAGGAAAAAATTTCCATGAAGCAAACGCTGATGAATGTGAAAAATCTAAAAACCAAGTGAAGAA  
 AAATACTCATTTGTATCTGAAGTGAACCAAATGACTGATCCATTAGATTCAAATGTAGCAAATCAGA  
 AGCCCTTTGAGAGTGGAAGTGACAAAATCTCCAAGGAAGTTGTACCGCTTTGGCCTGTGAATGGTCTCA  
 ACTAACCCCTTTCAGTCTAAATGGAGCCAGATGGAGAAAAATACCCTATTGCATATTTCTTCATGTGAC  
 CAAAATATTTTCAGAAAAAGCCTATTAGACACAGAGAACAAAAAGAAAGATTTTCTTACTTCAGAGA  
 ATTCTTTGCCACGTATTTCTAGCCTACCAAAATCAGAGAAGCCATTAATGAGGAAACAGTGGTAAATAA  
 GAGAGATGAAGAGCAGCATCTTGAATCTCATACTGACTGCATTCTTGCAGTAAAGCAGGCAATATCTGGA  
 ACTTCTCCAGTGGCTTCTTCAATTCAGGGTATCAAAAAGTCTATATTCAGAATAAGAGAATCACCTAAAG  
 AGACTTCAATGCAAGTTTTTTCAGTCTATGACTGATCCAACTTTAAAAAGAAACTGAAGCCTCTGA  
 AAGTGGACTGGAATACATACTGTTTGCTCACAGAAGGAGGACTCCTTATGTCCAAATTTAATTGATAAT  
 GGAAGCTGGCCAGCCACCACACAGAATTCTGTAGCTTTGAAGAATGCAGTTAATATCCACTTTGA  
 AAAAGAAAAACAATAAGTTTATTTATGTATACATGATGAAACATCTATAAAGGAAAAAATACCGAA  
 AGACAAAAA

AG**CGGACCG**ACGCGTACGCGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCC  
 TGGATTACAAGGATGACGACGA TAAGGTTTAA

**Protein Sequence:**

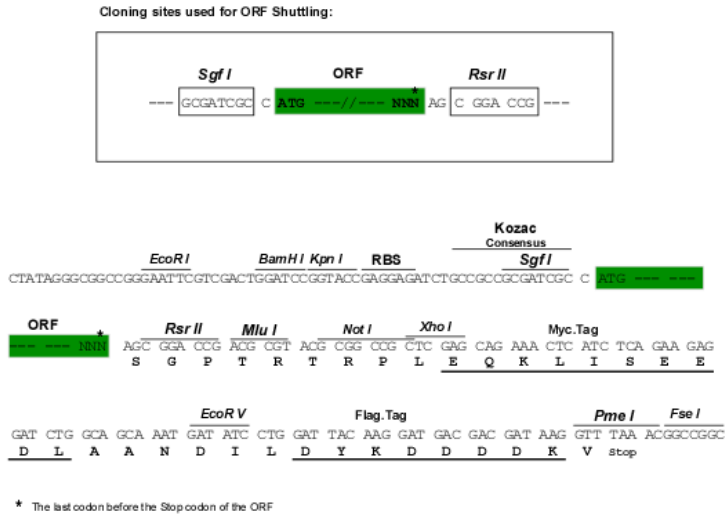
>RC400552 representing NM\_000059  
 Red=Cloning site Green=Tags(s)

MPIGSKERPTFFEIFKTRCNKADLGPISLWNFEELSSEAPPYNSEPAEESSEHKNNNYEPNLFKTPQRKPS  
 YNQLASTPIIFKEQGLTLPLYQSPVKELDKFKLDLGRNVPNSRHKSLRTVKTMDQADDVSCPLLNSCLS  
 ESPVVLQCTHVTPQRDKSVVCGSLFHTPKFVKGRQTPKHISESLGAEVDPDMSWSSSLATPPTLSSTVLI  
 VRNEEASETVFPHDTTANVKS YF SNHDESLKKNDRFIASVTDSENTNQREAASHGFGKTSNGSFKVNCK  
 DHIGKSMPNVLEDEVYETVVDTSEEDSFSLCFSKCRTKNLQKVRTSKTRKKIFHEANADECEKSKNQVKE  
 KYSFVSEVEPNDDPLDSNVANQKPFESGSDKISKEVVP SLACEWSQLTSLGLNGAQMEKIPLLHISDCD  
 QNISEKDLLDTENKRKDFLTSNSLPRISSLPKSEKPLNEETVVNKRDEEQHLESHTDCILAVKQAISSG  
 TSPVASSFQGIKKSIFRIRESPKETFNASFSGHMTDPNFKKETEASESGLEIHTVCSQKEDSLCPNLIDN  
 GSWPATTTQNSVALKNAGLISTLKKKTNKFIYAIHDETSYKGGKIPKDQK

SGP**TRRRLEQKLI**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:

1830 bp

RefSeq ORF:

10257 bp

Locus ID:

675

<b>Cytogenetics:</b>	13q13.1
<b>Protein Families:</b>	Druggable Genome
<b>Protein Pathways:</b>	Homologous recombination, Pancreatic cancer, Pathways in cancer
<b>MW:</b>	67.1 kDa
<b>Gene Summary:</b>	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]