

## **Product datasheet for RC400512**

## 9620 Medical Center Drive, Ste 200 Rockville, MD 20850, US Phone: +1-888-267-4436 https://www.origene.com

OriGene Technologies, Inc.

techsupport@origene.com EU: info-de@origene.com CN: techsupport@origene.cn

## 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: Q147X

Affected Codon#: 147

Affected NT#: 439

Nucleotide Mutation: BRCA2 Mutant (Q147X), 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; FAD1; FANCD; FANCD1; GLM3; PNCA2; XRCC11

E. coli Selection: Kanamycin (25 ug/mL)

Mammalian Cell Neomycin

Selection:

**Vector:** pCMV6-Entry (PS100001)

Tag: Myc-DDK
ACCN: NM 000059

ORF Size: 438 bp
Restriction Sites: Sgfl-Rsrll



ORF Nucleotide Sequence:

>RC400512 representing NM\_000059

Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCCGCCGCGATCGCC

AGCGGACCGACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTCGGATTACAAGGATGACGACGA TAAGGTTTAA

**Protein Sequence:** 

>RC400512 representing NM\_000059
Red=Cloning site Green=Tags(s)

MPIGSKERPTFFEIFKTRCNKADLGPISLNWFEELSSEAPPYNSEPAEESEHKNNNYEPNLFKTPQRKPS YNQLASTPIIFKEQGLTLPLYQSPVKELDKFKLDLGRNVPNSRHKSLRTVKTKMDQADDVSCPLLNSCLS ESPVVL

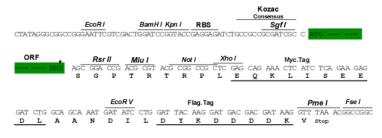
**SGPTRTRRL**EQKLISEEDLAANDILDYKDDDDK**V** 

**Restriction Sites:** 

Sgfl-Rsrll

Cloning Scheme:





<sup>\*</sup> The last codon before the Stop codon of the ORF

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



## BRCA2 (NM\_000059) Human Mutant ORF Clone - RC400512

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: 438 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:** 16.1 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]