

## Product datasheet for **RC400734**

### **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:	S2993X
Affected Codon#:	2993
Affected NT#:	8978
Nucleotide Mutation:	BRCA2 Mutant (S2993X), 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:	8976 bp
Restriction Sites:	Sgfl-RsrII
ORF Nucleotide Sequence:	>RC400734 representing NM_000059 Red=Cloning site Blue=ORF Green=Tags(s)

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GCC**CGATCGCC**

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**Protein Sequence:** >RC400734 representing NM\_000059  
 Red=Cloning site Green=Tags(s)

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SGPTRRRLEQKLI SEEDLAANDILDYKDDDDKV

**Restriction Sites:** SgfI-RsrII



**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]