

Product datasheet for **RC403086**

BRCA1 (NM_007294) Human Mutant ORF Clone

Product data:

Product Type:	Mutant ORF Clones
Product Name:	BRCA1 (NM_007294) Human Mutant ORF Clone
Mutation Description:	Q1537X
Affected Codon#:	1537
Affected NT#:	4609
Nucleotide Mutation:	BRCA1 Mutant (Q1537X), Myc-DDK-tagged ORF clone of Homo sapiens breast Cancer, early onset (BRCA1), transcript variant 1 as transfection-ready DNA
Effect:	Breast cancer
Symbol:	BRCA1
Synonyms:	BRCA1; BRCC1; BROVCA1; FANCS; IRIS; PNCA4; PPP1R53; PSCP; RNF53
E. coli Selection:	Kanamycin (25 ug/mL)
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
Tag:	Myc-DDK
ACCN:	NM_007294
ORF Size:	4608 bp
Restriction Sites:	SgfI-MluI
ORF Nucleotide Sequence:	>RC403086 representing NM_007294 Red=Cloning site Blue=ORF Green=Tags(s)

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GCC**GCGATCGCC**

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TCTAAAAGATGAAGTTTCTATCATCAAAGTATGGGCTACAGAAACCGTCCAAAAGACTTCTACAGAGT
GAACCCGAAAATCCTTCTTGCAGGAAACAGTCTCAGTGTCCAACCTCTAACCTTGGAACTGTGAGAA



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CTCTGAGGACAAAGCAGCGGATACAACCTCAAAAGACGTCTGTCTACATTGAATTGGGATCTGATTCTTC
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AGCGGACCGACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCC
 TGGATTACAAGGATGACGACGA TAAGGTTTAA

Protein Sequence:

>RC403086 representing NM_007294
 Red=Cloning site Green=Tags(s)

MDLSALRVEEVQNVINAMQKILECPICLLEIKPEVSTKCDHIFCKFCMLKLLNQKKGPSQCPLCKNDITK
 RSLQESTRFSQLVEELLKIICAFQLDTGLEANSYNFAKKENNSPEHLKDEVSIIQSMGYRNRARLLQS
 EPENPSLQETSLSVQLSNLGTVRTLRKQRIQPQKTSVYIELGSDSSEDVTNKATYCSVGDQELLQITPQ
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 KEWNKQKLPCCSENPRDTEVPWITLNSSIQKVNEWFSRDELLGSDSDHGESESNKAVDVLVDLNEVD
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 PPLFPKSFVKTKCKNLL EENFEHSMSPEREMGNENIPSTVSTISRNNIRENVFKEASSNINEVGSS
 TNEVGSSINEIGSSDENIQAELGRNRGPKLNAMLRLGVLQPEVYKQSLPGSNCKHPEIKKQYEEVVQTV
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 GLSADKFEVSADSSTSKNKEPGVERSSPSKCPSLDDRWMHSCSGSLQNRNYPSEELIKVVDVEE

SGPTRRRLLEQKLI SEEDLAANDILDYKDDDDKV

Restriction Sites:

Sgfi-MluI

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_009225
RefSeq Size:	4608 bp
RefSeq ORF:	5592 bp
Locus ID:	672
Cytogenetics:	17q21.31
Domains:	BRCT, RING
Protein Families:	Druggable Genome, Transcription Factors
Protein Pathways:	Ubiquitin mediated proteolysis
MW:	169 kDa
Gene Summary:	<p>This gene encodes a 190 kD nuclear phosphoprotein that plays a role in maintaining genomic stability, and it also acts as a tumor suppressor. The BRCA1 gene contains 22 exons spanning about 110 kb of DNA. The encoded protein combines with other tumor suppressors, DNA damage sensors, and signal transducers to form a large multi-subunit protein complex known as the BRCA1-associated genome surveillance complex (BASC). This gene product associates with RNA polymerase II, and through the C-terminal domain, also interacts with histone deacetylase complexes. This protein thus plays a role in transcription, DNA repair of double-stranded breaks, and recombination. Mutations in this gene are responsible for approximately 40% of inherited breast cancers and more than 80% of inherited breast and ovarian cancers. Alternative splicing plays a role in modulating the subcellular localization and physiological function of this gene. Many alternatively spliced transcript variants, some of which are disease-associated mutations, have been described for this gene, but the full-length natures of only some of these variants has been described. A related pseudogene, which is also located on chromosome 17, has been identified. [provided by RefSeq, May 2020]</p>