

Product datasheet for **RC229365**

BRCA1 (NM_007298) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	BRCA1 (NM_007298) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	BRCA1
Synonyms:	BRCA1; BRCC1; BROVCA1; FANCS; IRIS; PNCA4; PPP1R53; PSCP; RNF53
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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ORF Nucleotide Sequence:

>RC229365 representing NM_007298
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGCATCGCC**

ATGGATTATCTGCTCTTCGCGTTGAAGAAGTACAAAATGTCATTAATGCTATGCAGAAAATCTTAGAGT
 GTCCCATCTGTCTGGAGTTGATCAAGGAACCTGTCTCCACAAAGTGACCACATATTTTGCAAATTTTG
 CATGCTGAAACTTCTCAACCAGAAGAAAGGCGCTTACACAGTGTCTTTATGTAAGAAATGATAACCAAAA
 AGGAGCCTACAAGAAAGTACGAGATTTAGTCAACTTGTGAAGAGCTATTGAAAAATCATTGTGCTTTTC
 AGCTTGACACAGGTTTGGAGTATGCAAACAGCTATAATTTTGCAAAAAAGGAAAAAAGTCTCCTGAACA
 TCTAAAAGATGAAGTTTCTATCATCCAAAGTATGGGCTACAGAAACCGTCCAAAAAGACTTCTACAGAGT
 GAACCCGAAAATCCTTCCTTGCAGGAAACCACTCAGTGTCCAACCTCTAACCTTGGAACTGTGAGAA
 CTCTGAGGACAAAGCAGCGGATACAACCTCAAAGACGCTGTCTACATTGAATTGGGATCTGATTCTTC
 TGAAGATACCGTTAATAAGGCAACTTATTGCAGTGTGGGAGATCAAGAATTGTTACAAATCACCCCTCAA
 GGAAACCAGGGATGAAATCAGTTTGGATTCTGCAAAAAAGGCTGCTTGTGAATTTCTGAGACGGATGAA
 CAAATACTGAACATCATCAACCCAGTAATAATGATTTGAACACCACTGAGAAGCGTGCAGCTGAGAGGCA
 TCCAGAAAAGTATCAGGGTGAAGCAGCATCTGGGTGTGAGAGTGAACAAGCGTCTCTGAAGACTGCTCA
 GGGCTATCCTCTCAGAGTGACATTTTAAACCACTCAGCAGAGGGATACCATGCAACATAACCTGATAAAGC
 TCCAGCAGGAAATGGCTGAAGTGAAGTGTGTTAGAACAGCATGGGAGCCAGCCTTCTAACAGCTACCC
 TTCCATCATAAGTGACTCTTCTGCCCTTGAAGGACCTGCGAAATCCAGAACAAAGCACATCAGAAAAAGTA
 TTAACCTCACAGAAAAGTGTGAATACCCTATAAGCCAGAATCCAGAAGGCCCTTCTGCTGACAAGTTTG
 AGGTGCTGCAGATAGTTCTACCAGTAAAAATAAAGAACCAGGAGTGAAAGGTCATCCCCTTCTAAATG
 CCCATCATTAGATGATAGGTGGTACATGCACAGTTGCTCTGGGAGTCTTCAAGAATAGAAACTACCCATCT
 CAAGAGGAGCTCATTAAAGTTGTTGATGTGGAGGACAAACAGCTGGAAGAGTCTGGGCCACACGATTTGA
 CGGAAACATCTTACTTGCCAAGGCAAGATCTAGAGGGAACCCCTTACCTGGAATCTGGAATCAGCCTCTT
 CTCTGATGACCCTGAATCTGATCCTTCTGAAGACAGAGCCCAGAGTCAGCTCGTGTGGCAACATACCA
 TCTTCAACCTCTGCATTGAAAGTCCCAATTGAAAGTTGCAGAAATCTGCCCAGAGTCCAGCTGCTGCTC
 ATACTACTGATACTGCTGGGTATAATGCAATGGAAGAAAGTGTGAGCAGGGAGAAGCCAGAATTGACAGC
 TTCAACAGAAAGGGTCAACAAAAGAATGCCATGGTGGTGTCTGGCCTGACCCCAAGAAGATTTATGCTC
 GTGTACAAGTTTGCCAGAAAACACCACATCACTTAACTAATCTAATTACTGAAGAGACTACTCATGTTG
 TTATGAAAACAGATGCTGAGTTTGTGTGTGAACGGACACTGAAATATTTTCTAGGAATTGCGGGAGGAAA
 ATGGGTAGTTAGCTATTTCTGGGTGACCCAGTCTATTAAGAAAGAAAAATGCTGAATGAGCATGATTTT
 GAAGTCAGAGGAGATGTGGTCAATGGAAGAAACCACCAAGGTCCAAAGCGAGCAAGAGAATCCCAGGACA
 GAAAGATCTTCAGGGGGCTAGAAATCTGTTGCTATGGGCCCTTACCAACATGCCACAGATCAACTGGA
 ATGGATGGTACAGCTGTGTGGTCTTCTGTGGTGAAGGAGCTTTCATCATTACCCCTTGGCACAGGTGTC
 CACCCAATTGTGGTTGTGCAGCCAGATGCCTGGACAGAGGACAATGGCTTCCATGCAATTGGGCAGATGT
 GTGAGGCACCTGTGGTGACCCGAGAGTGGGTGTGGACAGTGTAGCACTTACCAGTGCCAGGAGCTGGA
 CACCTACCTGATACCCAGATCCCCACAGCCACTAC

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence: >RC229365 representing NM_007298
 Red=Cloning site Green=Tags(s)

MDLSALRVEEVQNVINAMQKILECPICLELIKEPVSTKCDHIFCKFCMLKLLNQKKGPSQCPLCKNDITK
 RSLQESTRFSQLVEELLKIICAFQLDTGLEYANSYNFAKKENNSPEHLKDEVSIIQSMGYRNRKRLQ
 EPENPSLQETSLSVQLSNLGTVRTLRKQRIQPQKTSVYIELGSDSSEDTVNKATYCSVGDQELLQITPQ
 GTRDEISLDSAKKAACEFSETDVTNTEHHQPSNNDLNTTEKRAAERHPEKYQGEAASGCESETSVSEDCS
 GLSSQSDILTQQRDTMQHNLIKLQQEMAELEAVLEQHGSQPSNSYPSIISDSSALEDLRNPEQSTSEKV
 LTSQKSSEYPIISQNEPLSADKFEVSADSSTSKNKEPGVERSSPSKPSLDDRWMHSCSGSLQNRNYP
 QEELIKVVDVEEQLEESGPHDLTETSYLPRQDLEGTPYLESGISLFSDDPESDPSEDRAPE SARVGNIP
 SSTALKVPQLKVAESAQSPAAHTTDTAGYNAMESVSREKPELTASTERVNRKMSMVVSGLTPEEFML
 VYKFARKHHITLNLITEETHVVMKTD AEFVCERTLKYFLGIAGGKVVVSYFWVTQSIKERKMLNEHDF
 EVRGDVVNGRNHQPKRARESQRKIFRGL EICCYGPF TNMPTDQLEWMVQLCGASVVKELSSFTLGTG
 HPVVVQPDAWTEDNGFHAIGQMCEAPVVTREWVLD SVALYQCQELDTYLIPQIPHSHY

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Restriction Sites:

Sgfl-MluI

Cloning Scheme:



* The last codon before the Stop codon of the ORF

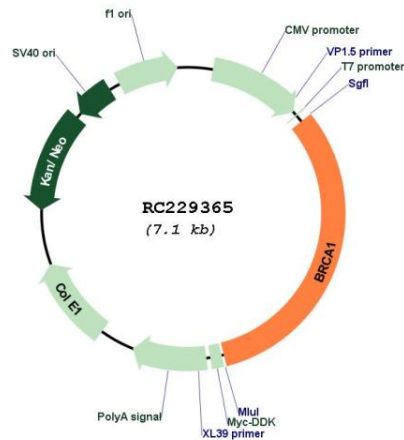
ACCN: NM_007298

ORF Size: 2277 bp

OTI Disclaimer:	<p>Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA can be purchased from OriGene with batch-specific, full-sequence verification at a reduced cost. Please contact our customer care team at custsupport@origene.com or by calling 301.340.3188 option 3 for pricing and delivery.</p> <p>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</p>
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).
Reconstitution Method:	<ol style="list-style-type: none"> 1. Centrifuge at 5,000xg for 5min. 2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA. 3. Close the tube and incubate for 10 minutes at room temperature. 4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom. 5. Store the suspended plasmid at -20°C. The DNA is stable for at least one year from date of shipping when stored at -20°C.
RefSeq:	NM_007298.3 , NP_009229.2
RefSeq ORF:	2280 bp
Locus ID:	672
UniProt ID:	P38398
Cytogenetics:	17q21.31
Protein Families:	Druggable Genome, Transcription Factors
Protein Pathways:	Ubiquitin mediated proteolysis
MW:	84.8 kDa

Gene Summary:

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 nature 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]

Product images:


Circular map for RC229365