

Product datasheet for MC224945

Brca1 (NM_009764) Mouse Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Brca1 (NM_009764) Mouse Untagged Clone
Tag:	Tag Free
Symbol:	Brca1
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Cell Selection:	Neomycin
Fully Sequenced ORF:	>MC224945 representing NM_009764 Red=Cloning site Blue=ORF Orange=Stop codon

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCCGATCGCC

ATGGATTTATCTGCCGTCCAAATCAAGAAGTACAAAATGTCCTTCATGCTATGCAGAAAATCTTAGAGT
GTCCGATCTGTTTGGAACTGATCAAAGAACCTGTTCCACAAAGTGTACCACATATTTTGCAAATTTTG
TATGCTGAACTTCTTAACCAGAAGAAAGGCCCTTCACAATGTCCTTTGTGTAAGAATGAGATAACCAA
AGGAGCCTACAGGGAAGCACAAGGTTTAGTCAGCTTGCTGAAGAGCTGCTGAGAATAATGGCTGCTTTTG
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AGCGCTCATCCAACCTGAATCATTGAGAAAGGAACCTGCTTCCACAGCAGGAGCCAAATCTATAAGCAACA
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 GGCACCACACCAGCTTCAACCTCTGCACTGAAAAATACCCCAAGGTCAAGTTGCTTTCCGGAGTGCAGCTG
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 AAGAGCGGATAGAGACATATCCATGGTGGTGTGAGGCTTGACCCCAAAGAAGTAAAGACCGTGCAAAAG
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 AGGGCCTACAGGTCTATTGTTGTGAGCCCTTACCAACATGCCCAAAGATGAGCTGGAGAGGATGCTGCA
 GCTGTGTGGGGCTTCCGTGGTGAAGGAGCTTCCATCGCTCACCATGACACAGGTGCTCATCTAGTTGTG
 ATCGTGCAGCCAAGCGCCTGGACAGAAGACAGCAACTGCCAGATATTGGGCAGCTGTGCAAGGCACGTC

TTGTGATGTGGGACTGGGTGTTGGACAGTCTATCCAGCTACCGGTGTCGGGATCTGGATGCCTACCTGGT
ACAGAATATCACCTGTGACAGTAGTGAGCCACAAGACTCCAATGATTAA

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

Restriction Sites: SgfI-MluI

ACCN: NM_009764

Insert Size: 5439 bp

OTI Disclaimer: 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.

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](#)

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:

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_009764.3](#), [NP_033894.3](#)

RefSeq Size: 6648 bp

RefSeq ORF: 5439 bp

Locus ID: 12189

UniProt ID: [P48754](#)

Cytogenetics: 11 D

Gene Summary:

E3 ubiquitin-protein ligase that specifically mediates the formation of 'Lys-6'-linked polyubiquitin chains and plays a central role in DNA repair by facilitating cellular responses to DNA damage. It is unclear whether it also mediates the formation of other types of polyubiquitin chains. The E3 ubiquitin-protein ligase activity is required for its tumor suppressor function. The BRCA1-BARD1 heterodimer coordinates a diverse range of cellular pathways such as DNA damage repair, ubiquitination and transcriptional regulation to maintain genomic stability. Regulates centrosomal microtubule nucleation. Required for normal cell cycle progression from G2 to mitosis. Required for appropriate cell cycle arrests after ionizing irradiation in both the S-phase and the G2 phase of the cell cycle. Involved in transcriptional regulation of P21 in response to DNA damage. Required for FANCD2 targeting to sites of DNA damage. May function as a transcriptional regulator. Contributes to homologous recombination repair (HRR) via its direct interaction with PALB2, fine-tunes recombinational repair partly through its modulatory role in the PALB2-dependent loading of BRCA2-RAD51 repair machinery at DNA breaks. Component of the BRCA1-RBBP8 complex which regulates CHEK1 activation and controls cell cycle G2/M checkpoints on DNA damage via BRCA1-mediated ubiquitination of RBBP8. Acts as a transcriptional activator (By similarity). Inhibits lipid synthesis by binding to inactive phosphorylated ACACA and preventing its dephosphorylation.[UniProtKB/Swiss-Prot Function]