BRCA2 Antibody – Polyclonal

PRODUCT OVERVIEW

Product Name	BRCA2, Polyclonal Antibody
Full Product Name	BRCA2 Polyclonal Antibody
Product Gene Name	anti-BRCA2 antibody
Clonality	Polyclonal
Molecular Weight	384,202 Da
OMIM	114480
3D Structure	ModBase 3D Structure for P51587
ISO Certification	Manufactured in an ISO 9001:2015 Certified Laboratory.
Related Product Information for anti-BRCA2 antibody	MBS8521501 is an antibody targeting BRCA2. Also known as BRCA2 Polyclonal Antibody.
Other Notes	Small volumes of anti-BRCA2 antibody vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for BRCA2. It may not necessarily be applicable to this product.

NCBI GI #	119395734
NCBI GeneID	675
NCBI Accession #	NP_000050.2
UniProt Primary Accession #	P51587
UniProt Secondary Accession #	O00183; O15008; Q13879; Q5TBJ7
UniProt Related Accession #	P51587
GenBank Nucleotide #	NM_000059.3
NCBI Official Full Name	breast cancer type 2 susceptibility protein
NCBI Official Synonym Full Names	BRCA2, DNA repair associated
NCBI Official Symbol	BRCA2
NCBI Official Synonym Symbols	FAD; FACD; FAD1; GLM3; BRCC2; FANCD; PNCA2; FANCD1; XRCC11; BROVCA2
UniProt Protein Name	Breast cancer type 2 susceptibility protein
UniProt Synonym Protein Names	Fanconi anemia group D1 protein
Protein Family	Breast cancer type 2 susceptibility protein
UniProt Gene Name	BRCA2
UniProt Synonym Gene Names	FACD; FANCD1
NCBI Protein Information	breast cancer type 2 susceptibility protein

NCBI Summary for BRCA2	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 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, Dec 2008]
UniProt Comments for BRCA2	Involved in double-strand break repair and/or homologous recombination. Binds RAD51 and potentiates recombinational DNA repair by promoting assembly of RAD51 onto single-stranded DNA (ssDNA). Acts by targeting RAD51 to ssDNA over double-stranded DNA, enabling RAD51 to displace replication protein-A (RPA) from ssDNA and stabilizing RAD51-ssDNA filaments by blocking ATP hydrolysis. Part of a PALB2-scaffolded HR complex containing RAD51C and which is thought to play a role in DNA repair by HR. May participate in S phase checkpoint activation. Binds selectively to ssDNA, and to ssDNA in tailed duplexes and replication fork structures. May play a role in the extension step after strand invasion at replication-dependent DNA double-strand breaks; together with PALB2 is involved in both POLH localization at collapsed replication forks and DNA polymerization activity. In concert with NPM1, regulates centrosome duplication. Interacts with the TREX-2 complex (transcription and export complex 2) subunits PCID2 and SEM1, and is required to prevent R-loop-associated DNA damage and thus transcription-associated genomic instability. Silencing of BRCA2 promotes R-loop accumulation at actively transcribed genes in replicating and non-replicating cells, suggesting that BRCA2 mediates the control of R-loop associated genomic instability, independently of its known role in homologous recombination (PubMed:24896180).
Research Articles on BRCA2	**1.** In this study, we evaluated this novel mechanism of drug resistance in newly diagnosed, early-stage BRCA1/2-mutant breast cancer patients who had a poor response to platinum-based neoadjuvant chemotherapy.
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