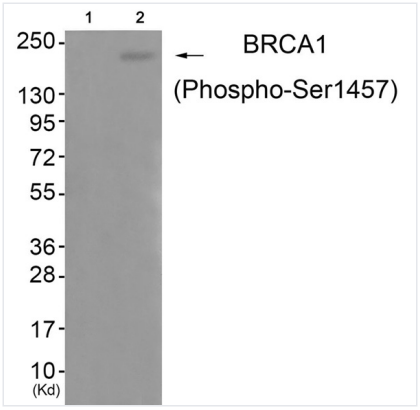
BRCA1 Antibody – Rabbit Polyclonal

PRODUCT OVERVIEW

Product Name	BRCA1, Polyclonal Antibody
Full Product Name	BRCA1 (Phospho-Ser1457) Antibody
Product Gene Name	anti-BRCA1 antibody
Product Synonym Names	BRCA1; Breast cancer type 1 susceptibility protein; familial breast/ovarian cancer gene 1
Clonality	Polyclonal
Host	Rabbit
Species Reactivity	Human
Form/Format	Rabbit IgG in phosphate buffered saline (without Mg2+ and Ca2+), pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Purity/Purification	Antibodies were produced by immunizing rabbits with synthetic phosphopeptide and KLH conjugates. Antibodies were purified by affinity-chromatography using epitope-specific phosphopeptide. Non-phospho specific antibodies were removed by chromatogramphy usi
Concentration	1.0 mg/ml (lot specific)
Specificity	The antibody detects endogenous levels of BRCA1 only when phosphorylated at serine 1457.
Preparation and Storage	Store at -20 degree C/1 year
Molecular Weight	202,342 Da
OMIM	113705
3D Structure	ModBase 3D Structure for P38398
Immunogen Type	Peptide-KLH
Immunogen Description	Peptide sequence around phosphorylation site of Serine 1457 (L-T-S(p)-Q-K) derived from Human BRCA1.
Modification	Phospho-Ser1457
Target Name	BRCA1
Product Categories/Family for anti-BRCA1 antibody	Phospho-specific Ab
Applications Tested/Suitable for anti-BRCA1 antibody	Western Blot (WB)
Application Notes for anti-BRCA1 antibody	Western blotting: 1:500~1:1000
Related Product Information for anti-BRCA1 antibody	The BRCA1-BARD1 heterodimer coordinates a diverse range of cellular pathways such as DNA damage repair, ubiquitination and transcriptional regulation to maintain genomic stability. Acts by mediating ubiquitin E3 ligase activity that is required for its tumor suppressor function. Plays a central role in DNA repair by facilitating cellular response to DNA repair. 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. Inhibits lipid synthesis by binding to inactive phosphorylated ACACA and preventing its dephosphorylationMiki Y., Science 266:66-71(1994).Smith T.M., Genome Res. 6:1029-1049(1996).Wilson C.A., Oncogene 14:1-16(1997).

Other Notes	Small volumes of anti-BRCA1 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.
Searchable Terms for BRCA1 purchase	MBS9411043 is an antibody targeting BRCA1. Also known as BRCA1 (Phospho-Ser1457) Antibody. Reactive in Human. Host: Rabbit.



Western Blot (WB) of anti-BRCA1 antibody
Western blot analysis of extracts from 293 cells (Lane 2), using BRCA1 (Phospho-Ser1457) Antibody. The lane on the left is treated with antigen-specific peptide.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for BRCA1. It may not necessarily be applicable to this product.

NCBI GI #	6552299
NCBI GeneID	672
NCBI Accession #	NP_009225.1
UniProt Primary Accession #	P38398
UniProt Secondary Accession #	O15129; Q1RMC1; Q3LRJ0; Q3LRJ6; Q6IN79; Q7KYU9; E9PFZ0
UniProt Related Accession #	P38398
GenBank Nucleotide #	NM_007294.3
NCBI Official Full Name	breast cancer type 1 susceptibility protein isoform 1
NCBI Official Synonym Full Names	breast cancer 1, early onset
NCBI Official Symbol	BRCA1
NCBI Official Synonym Symbols	IRIS; PSCP; BRCAI; BRCC1; FANCS; PNCA4; RNF53; BROVCA1; PPP1R53
UniProt Protein Name	Breast cancer type 1 susceptibility protein
UniProt Synonym Protein Names	RING finger protein 53
Protein Family	Breast cancer type 1 susceptibility protein
UniProt Gene Name	BRCA1
UniProt Synonym Gene Names	RNF53
UniProt Entry Name	BRCA1_HUMAN
NCBI Protein Information	breast cancer type 1 susceptibility protein

NCBI Summary for BRCA1	This gene encodes a nuclear phosphoprotein that plays a role in maintaining genomic stability, and it also acts as a tumor suppressor. 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 2009]
UniProt Comments for BRCA1	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. Inhibits lipid synthesis by binding to inactive phosphorylated ACACA and preventing its dephosphorylation. 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 (PubMed:20160719).
Research Articles on BRCA1	**1.** BRCA1 regulated cell cycle checkpoints in a manner dependent on the 26S proteasome activity.
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