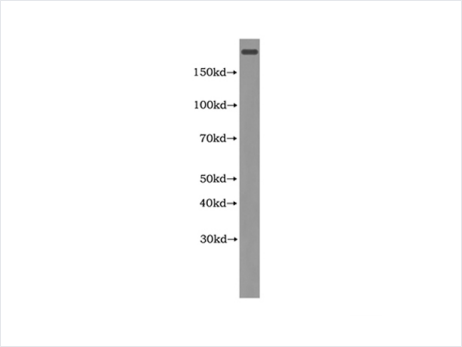
# BRCA1 Antibody – Rabbit Polyclonal

## PRODUCT OVERVIEW

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| **Product Name** | BRCA1, Polyclonal Antibody |
| **Full Product Name** | BRCA1 Polyclonal Antibody |
| **Product Gene Name** | anti-BRCA1 antibody |
| **Product Synonym Names** | BRCA1; RNF53; Breast cancer type 1 susceptibility protein; RING finger protein 53 |
| **Clonality** | Polyclonal |
| **Isotype** | IgG |
| **Host** | Rabbit |
| **Species Reactivity** | Human |
| **Purity/Purification** | Affinity Purification |
| **Concentration** | 1mg/mL (lot specific) |
| **Preparation and Storage** | Store at -20 degree C. Avoid freeze / thaw cycles. |
| **Molecular Weight** | 208kDa |
| **OMIM** | U14680 mRNA |
| **3D Structure** | ModBase 3D Structure for P38398 |
| **Immunogen** | Synthesized peptide derived from human BRCA1 around the non-phosphorylation site of Ser988. |
| **Buffer** | PBS with 0.02% sodium azide, 0.5% BSA and 50% glycerol, pH7.4 |
| **Conjugation** | Unconjugated |
| **Product Categories/Family for anti-BRCA1 antibody** | Cancer |
| **ISO Certification** | Manufactured in an ISO 9001:2015 Certified Laboratory. |
| **Applications Tested/Suitable for anti-BRCA1 antibody** | Western Blot (WB), Immunohistochemistry (IHC) Paraffin, ELISA (EIA) |
| **Application Notes for anti-BRCA1 antibody** | WB: 1:500-1:2000<br>IHC: 1:100-1:300<br>ELISA: 1:20000 |
| **Related Product Information for anti-BRCA1 antibody** | 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. |
| **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** | MBS2549189 is an antibody targeting BRCA1. Also known as BRCA1 Polyclonal Antibody. Reactive in Human. Host: Rabbit. |




**Western Blot (WB) of anti-BRCA1 antibody**
Western Blot analysis of Hela cells using BRCA1 Polyclonal Antibody at dilution of 1?1000.

## ADDITIONAL DETAILS

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

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| **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** | BRCA1, DNA repair associated |
| **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; RING-type E3 ubiquitin transferase BRCA1Curated |
| **Protein Family** | Breast cancer type 1 susceptibility protein |
| **UniProt Gene Name** | BRCA1 |
| **UniProt Synonym Gene Names** | RNF53 |
| **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] |

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| **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.** we show that this combined approach allows the rapid and reliable detection of both germline and somatic aberrations affecting BRCA1 and BRCA2 in DNA derived from FFPE OCs, enabling improved hereditary cancer risk assessment and clinical treatment of ovarian cancer patients. |
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