

**Anti-BRCA1 Antibody**  
**Mouse Monoclonal Antibody**  
**Catalog # AH13528****Specification**

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**Anti-BRCA1 Antibody - Product Information**

Application	,3,4,10,
Primary Accession	<a href="#">P38398</a>
Other Accession	<a href="#">194143</a>
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Isotype	Mouse / IgG1
Calculated MW	207721

**Anti-BRCA1 Antibody - Additional Information****Gene ID** 672**Other Names**

BRCA1; Breast and ovarian cancer susceptibility protein 1; Breast Cancer 1 Early Onset; Breast cancer type 1 susceptibility protein; BROVCA1; IRIS; PNCA4; PPP1R53; Protein phosphatase 1 regulatory subunit 53; PSCP; RING finger protein 53; RNF53

**Format**

200ug/ml of Ab purified from Bioreactor Concentrate by Protein A/G. Prepared in 10mM PBS with 0.05% BSA & 0.05% azide. Also available WITHOUT BSA & azide at 1.0mg/ml.

**Storage**

Store at 2 to 8°C. Antibody is stable for 24 months.

**Precautions**

Anti-BRCA1 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

**Anti-BRCA1 Antibody - Protein Information****Name** BRCA1**Synonyms** RNF53**Function**

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 (PubMed: [10500182](http://www.uniprot.org/citations/10500182), PubMed: [12887909](http://www.uniprot.org/citations/12887909), PubMed: [12890688](http://www.uniprot.org/citations/12890688), PubMed: [14976165](http://www.uniprot.org/citations/14976165)),

PubMed:<a href="http://www.uniprot.org/citations/16818604" target="\_blank">16818604</a>, PubMed:<a href="http://www.uniprot.org/citations/17525340" target="\_blank">17525340</a>, PubMed:<a href="http://www.uniprot.org/citations/19261748" target="\_blank">19261748</a>). It is unclear whether it also mediates the formation of other types of polyubiquitin chains (PubMed:<a href="http://www.uniprot.org/citations/12890688" target="\_blank">12890688</a>). The BRCA1-BARD1 heterodimer coordinates a diverse range of cellular pathways such as DNA damage repair, ubiquitination and transcriptional regulation to maintain genomic stability (PubMed:<a href="http://www.uniprot.org/citations/12890688" target="\_blank">12890688</a>, PubMed:<a href="http://www.uniprot.org/citations/14976165" target="\_blank">14976165</a>, PubMed:<a href="http://www.uniprot.org/citations/20351172" target="\_blank">20351172</a>). Regulates centrosomal microtubule nucleation (PubMed:<a href="http://www.uniprot.org/citations/18056443" target="\_blank">18056443</a>). Required for appropriate cell cycle arrests after ionizing irradiation in both the S-phase and the G2 phase of the cell cycle (PubMed:<a href="http://www.uniprot.org/citations/10724175" target="\_blank">10724175</a>, PubMed:<a href="http://www.uniprot.org/citations/11836499" target="\_blank">11836499</a>, PubMed:<a href="http://www.uniprot.org/citations/12183412" target="\_blank">12183412</a>, PubMed:<a href="http://www.uniprot.org/citations/19261748" target="\_blank">19261748</a>). Required for FANCD2 targeting to sites of DNA damage (PubMed:<a href="http://www.uniprot.org/citations/12887909" target="\_blank">12887909</a>). Inhibits lipid synthesis by binding to inactive phosphorylated ACACA and preventing its dephosphorylation (PubMed:<a href="http://www.uniprot.org/citations/16326698" target="\_blank">16326698</a>). 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 (PubMed:<a href="http://www.uniprot.org/citations/19369211" target="\_blank">19369211</a>). 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 (PubMed:<a href="http://www.uniprot.org/citations/16818604" target="\_blank">16818604</a>). Acts as a transcriptional activator (PubMed:<a href="http://www.uniprot.org/citations/20160719" target="\_blank">20160719</a>).

### Cellular Location

Nucleus. Chromosome. Cytoplasm. Note=Localizes at sites of DNA damage at double-strand breaks (DSBs); recruitment to DNA damage sites is mediated by ABRAXAS1 and the BRCA1-A complex (PubMed:26778126) Translocated to the cytoplasm during UV-induced apoptosis (PubMed:20160719). [Isoform 5]: Cytoplasm

### Tissue Location

Isoform 1 and isoform 3 are widely expressed. Isoform 3 is reduced or absent in several breast and ovarian cancer cell lines

## Anti-BRCA1 Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

## Anti-BRCA1 Antibody - Images

## Anti-BRCA1 Antibody - Background

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.