

**BRCA1 Antibody (N-term)**  
**Affinity Purified Rabbit Polyclonal Antibody (Pab)**  
**Catalog # AP17140a**

**Specification**

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**BRCA1 Antibody (N-term) - Product Information**

Application	WB,E
Primary Accession	<a href="#">P38398</a>
Other Accession	<a href="#">NP_009228.2</a> , <a href="#">NP_009225.1</a>
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	207721
Antigen Region	443-472

**BRCA1 Antibody (N-term) - Additional Information**

**Gene ID** 672

**Other Names**

Breast cancer type 1 susceptibility protein, 632-, RING finger protein 53, BRCA1, RNF53

**Target/Specificity**

This BRCA1 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 443-472 amino acids from the N-terminal region of human BRCA1.

**Dilution**

WB~~1:1000

**Format**

Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.

**Storage**

Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

**Precautions**

BRCA1 Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

**BRCA1 Antibody (N-term) - 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](#), PubMed:[12887909](#), PubMed:[12890688](#), PubMed:[14976165](#), PubMed:[16818604](#), PubMed:[17525340](#), PubMed:[19261748](#)). It is unclear whether it also mediates the formation of other types of polyubiquitin chains (PubMed:[12890688](#)). 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:[12890688](#), PubMed:[14976165](#), PubMed:[20351172](#)). Regulates centrosomal microtubule nucleation (PubMed:[18056443](#)). Required for appropriate cell cycle arrests after ionizing irradiation in both the S-phase and the G2 phase of the cell cycle (PubMed:[10724175](#), PubMed:[11836499](#), PubMed:[12183412](#), PubMed:[19261748](#)). Required for FANCD2 targeting to sites of DNA damage (PubMed:[12887909](#)). Inhibits lipid synthesis by binding to inactive phosphorylated ACACA and preventing its dephosphorylation (PubMed:[16326698](#)). 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:[19369211](#)). 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:[16818604](#)). Acts as a transcriptional activator (PubMed:[20160719](#)).

#### 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

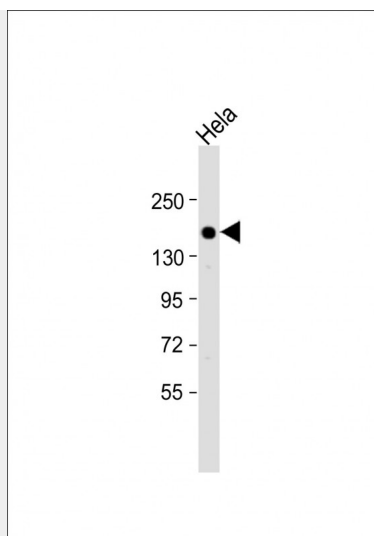
#### BRCA1 Antibody (N-term) - Protocols

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](#)

#### BRCA1 Antibody (N-term) - Images





Anti-BRCA1 Antibody (N-term) at 1:1000 dilution + HeLa whole cell lysate Lysates/proteins at 20  $\mu$ g per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 208 kDa Blocking/Dilution buffer: 5% NFD/MTBST.

### **BRCA1 Antibody (N-term) - 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. 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].

### **BRCA1 Antibody (N-term) - References**

Matsuoka, S., et al. *Science* 316(5828):1160-1166(2007)  
Olsen, J.V., et al. *Cell* 127(3):635-648(2006)  
Fabbro, M., et al. *J. Biol. Chem.* 279(30):31251-31258(2004)  
Ouchi, M., et al. *J. Biol. Chem.* 279(19):19643-19648(2004)  
Orban, T.I., et al. *MP, Mol. Pathol.* 56(4):191-197(2003)