

**BRCA1**  
Rabbit Monoclonal antibody(Mab)  
Catalog # AD80591

## Specification

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### BRCA1 - Product info

Application	IHC-P
Primary Accession	<a href="#">P38398</a>
Reactivity	Human
Host	Rabbit
Clonality	Monoclonal
Calculated MW	207721

### BRCA1 - Additional info

Gene ID **672**

#### Other Names

Breast cancer type 1 susceptibility protein, 2.3.2.27, RING finger protein 53, RING-type E3 ubiquitin transferase BRCA1, BRCA1, RNF53

Storage **This product is stored at 2-8 °C, please use it within the expiration date.**

### BRCA1 - Protein Information

Name BRCA1

Synonyms

Function

**RNF53**

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

Cellular Location	ionizing irradiation in both the S-phase and the G2 phase of the cell cycle (PubMed: <a href="#">10724175</a> , PubMed: <a href="#">11836499</a> , PubMed: <a href="#">12183412</a> , PubMed: <a href="#">19261748</a> ). Required for FANCD2 targeting to sites of DNA damage (PubMed: <a href="#">12887909</a> ). Inhibits lipid synthesis by binding to inactive phosphorylated ACACA and preventing its dephosphorylation (PubMed: <a href="#">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="#">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="#">16818604</a> ). Acts as a transcriptional activator (PubMed: <a href="#">20160719</a> ). 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: <a href="#">26778126</a> ) Translocated to the cytoplasm during UV-induced apoptosis (PubMed: <a href="#">20160719</a> ). [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 - 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 - Images