

Anti-BRCA1 Picoband Antibody
Catalog # ABO11740**Specification****Anti-BRCA1 Picoband Antibody - Product Information**

Application	IHC
Primary Accession	P38398
Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Format	Lyophilized

Description

Rabbit IgG polyclonal antibody for Breast cancer type 1 susceptibility protein(BRCA1) detection. Tested with WB, IHC-P in Human;Mouse;Rat.

Reconstitution

Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

Anti-BRCA1 Picoband Antibody - Additional Information

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

Calculated MW

207721 MW KDa

Application Details

Immunohistochemistry(Paraffin-embedded Section), 0.5-1 µg/ml, Human, Mouse, Rat, By Heat
Western blot, 0.1-0.5 µg/ml, Human

Subcellular Localization

Nucleus . Chromosome . Cytoplasm . Localizes at sites of DNA damage at double-strand breaks (DSBs); recruitment to DNA damage sites is mediated by the BRCA1-A complex. Translocated to the cytoplasm during UV-induced apoptosis. .

Tissue Specificity

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

Protein Name

Breast cancer type 1 susceptibility protein

Contents

Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na₂HPO₄, 0.05mg Na₃.

Immunogen

E.coli-derived human BRCA1 recombinant protein (Position: E1661-Y1863). Human BRCA1 shares 65% and 66% amino acid (aa) sequences identity with mouse and rat BRCA1, respectively.

Purification

Immunogen affinity purified.

Cross Reactivity

No cross reactivity with other proteins

Storage

At -20°C for one year. After reconstitution, at 4°C for one month. It can also be aliquotted and stored frozen at -20°C for a longer time. Avoid repeated freezing and thawing.

Sequence Similarities

Contains 2 BRCT domains.

Anti-BRCA1 Picoband 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, 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

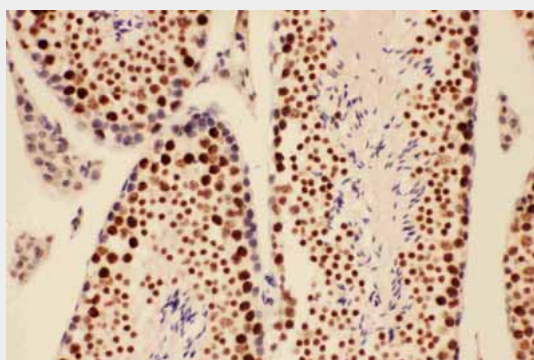
Isoform 1 and isoform 3 are widely expressed. Isoform 3 is reduced or absent in several breast and ovarian cancer cell lines

Anti-BRCA1 Picoband Antibody - Protocols

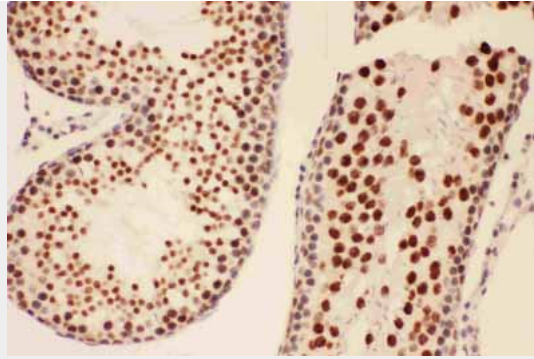
Provided below are standard protocols that you may find useful for product applications.

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

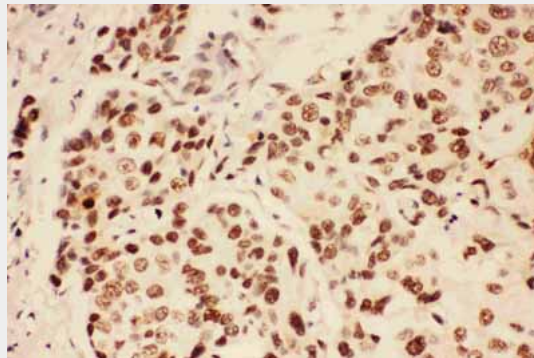
Anti-BRCA1 Picoband Antibody - Images



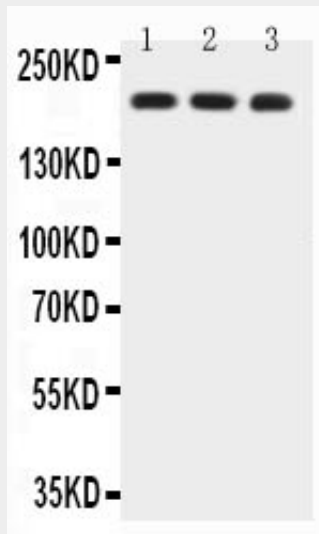
Anti-BRCA1 Picoband antibody, ABO11740-1.JPGIHC(P): Mouse Testis Tissue



Anti-BRCA1 Picoband antibody, ABO11740-2.JPGIHC(P): Rat Testis Tissue



Anti-BRCA1 Picoband antibody, ABO11740-3.JPGIHC(P): Human Mammary Cancer Tissue



Anti-BRCA1 Picoband antibody, ABO11740-4.jpgAll lanes: Anti-BRCA1(ABO11740) at 0.5ug/ml
 Lane 1: HELA Whole Cell Lysate at 40ug
 Lane 2: MCF-7 Whole Cell Lysate at 40ug
 Lane 3: A549 Whole Cell Lysate at 40ug
 Predicted bind size: 207KD
 Observed bind size: 207KD

Anti-BRCA1 Picoband Antibody - Background

BRCA1, also known as BRCC1, is a gene which mapping to 17q21.3. 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). BRCA1 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. In addition to it, BRCA1 may normally serve as a negative regulator of mammary epithelial cell growth and that this function is compromised in breast cancer either by direct mutation or by alterations in gene expression.