

**BRCC36 Antibody**  
Catalog # ASC10582**Specification****BRCC36 Antibody - Product Information**

|                   |   |
|-------------------|---|
| Application       | IF  |
| Primary Accession | <a href="#">P46736</a>  |
| Other Accession   | <a href="#">NP_077308</a> , <a href="#">79184</a>   |
| Reactivity        | Human, Mouse, Rat   |
| Host              | Rabbit  |
| Clonality         | Polyclonal  |
| Isotype           | IgG   |
| Application Notes | BRCC36 antibody can be used for detection of BRCC36 by Western blot at 0.5 - 2 µg/mL. Antibody can also be used for immunohistochemistry starting at 2.5 µg/mL. For immunofluorescence start at 20 µg/mL. |

**BRCC36 Antibody - Additional Information**Gene ID **79184****Target/Specificity**

BRCC36 antibody was raised against a 18 amino acid synthetic peptide from near the amino terminus of human BRCC36.<br><br>The immunogen is located within amino acids 20 - 70 of BRCC36.

**Reconstitution & Storage**

BRCC36 antibody can be stored at 4°C for three months and -20°C, stable for up to one year. As with all antibodies care should be taken to avoid repeated freeze thaw cycles. Antibodies should not be exposed to prolonged high temperatures.

**Precautions**

BRCC36 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

**BRCC36 Antibody - Protein Information**

Name BRCC3

Synonyms BRCC36, C6.1A, CXorf53

**Function**

Metalloprotease that specifically cleaves 'Lys-63'-linked polyubiquitin chains (PubMed:<a href="http://www.uniprot.org/citations/19214193" target="\_blank">19214193</a>, PubMed:<a href="http://www.uniprot.org/citations/20656690" target="\_blank">20656690</a>, PubMed:<a href="http://www.uniprot.org/citations/24075985" target="\_blank">24075985</a>, PubMed:<a href="http://www.uniprot.org/citations/26344097" target="\_blank">26344097</a>). Does not have activity toward 'Lys- 48'-linked polyubiquitin chains (PubMed:<a

href="http://www.uniprot.org/citations/19214193" target="\_blank">19214193</a>, PubMed:<a href="http://www.uniprot.org/citations/20656690" target="\_blank">20656690</a>, PubMed:<a href="http://www.uniprot.org/citations/24075985" target="\_blank">24075985</a>, PubMed:<a href="http://www.uniprot.org/citations/26344097" target="\_blank">26344097</a>). Component of the BRCA1-A complex, a complex that specifically recognizes 'Lys-63'-linked ubiquitinated histones H2A and H2AX at DNA lesions sites, leading to target the BRCA1-BARD1 heterodimer to sites of DNA damage at double-strand breaks (DSBs) (PubMed:<a href="http://www.uniprot.org/citations/14636569" target="\_blank">14636569</a>, PubMed:<a href="http://www.uniprot.org/citations/16707425" target="\_blank">16707425</a>, PubMed:<a href="http://www.uniprot.org/citations/17525341" target="\_blank">17525341</a>, PubMed:<a href="http://www.uniprot.org/citations/19202061" target="\_blank">19202061</a>, PubMed:<a href="http://www.uniprot.org/citations/19261746" target="\_blank">19261746</a>, PubMed:<a href="http://www.uniprot.org/citations/19261748" target="\_blank">19261748</a>, PubMed:<a href="http://www.uniprot.org/citations/19261749" target="\_blank">19261749</a>). In the BRCA1-A complex, it specifically removes 'Lys-63'-linked ubiquitin on histones H2A and H2AX, antagonizing the RNF8-dependent ubiquitination at double-strand breaks (DSBs) (PubMed:<a href="http://www.uniprot.org/citations/20656690" target="\_blank">20656690</a>). Catalytic subunit of the BRISC complex, a multiprotein complex that specifically cleaves 'Lys-63'-linked ubiquitin in various substrates (PubMed:<a href="http://www.uniprot.org/citations/20656690" target="\_blank">20656690</a>, PubMed:<a href="http://www.uniprot.org/citations/24075985" target="\_blank">24075985</a>, PubMed:<a href="http://www.uniprot.org/citations/26195665" target="\_blank">26195665</a>, PubMed:<a href="http://www.uniprot.org/citations/26344097" target="\_blank">26344097</a>). Mediates the specific 'Lys-63'-specific deubiquitination associated with the COP9 signalosome complex (CSN), via the interaction of the BRISC complex with the CSN complex (PubMed:<a href="http://www.uniprot.org/citations/19214193" target="\_blank">19214193</a>). The BRISC complex is required for normal mitotic spindle assembly and microtubule attachment to kinetochores via its role in deubiquitinating NUMA1 (PubMed:<a href="http://www.uniprot.org/citations/26195665" target="\_blank">26195665</a>). Plays a role in interferon signaling via its role in the deubiquitination of the interferon receptor IFNAR1; deubiquitination increases IFNAR1 activity by enhancing its stability and cell surface expression (PubMed:<a href="http://www.uniprot.org/citations/24075985" target="\_blank">24075985</a>, PubMed:<a href="http://www.uniprot.org/citations/26344097" target="\_blank">26344097</a>). Acts as a regulator of the NLRP3 inflammasome by mediating deubiquitination of NLRP3, leading to NLRP3 inflammasome assembly (By similarity). Down-regulates the response to bacterial lipopolysaccharide (LPS) via its role in IFNAR1 deubiquitination (PubMed:<a href="http://www.uniprot.org/citations/24075985" target="\_blank">24075985</a>). Deubiquitinates HDAC1 and PWWP2B leading to their stabilization (By similarity).

### Cellular Location

Nucleus. Cytoplasm. Cytoplasm, cytoskeleton, spindle pole Note=Localizes at sites of DNA damage at double-strand breaks (DSBs) (PubMed:20656690, PubMed:26344097). Interaction with ABRAXAS2 retains BRCC3 in the cytoplasm (PubMed:20656690).

### Tissue Location

Heart, brain, placenta, lung, liver, skeletal muscle, kidney and pancreas. Aberrantly expressed in the vast majority of breast tumors.

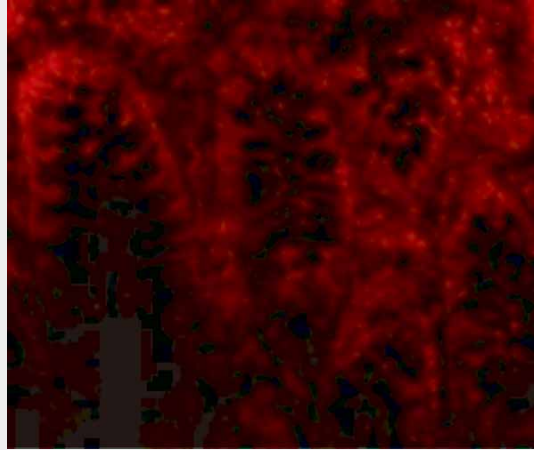
## BRCC36 Antibody - Protocols

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](#)

### **BRCC36 Antibody - Images**



Immunofluorescence of CDKN2A in Human Colon tissue with CDKN2A antibody at 20 µg/mL.

### **BRCC36 Antibody - Background**

BRCC36 Antibody: Together with the breast and ovarian predisposition proteins BRCA1 and BRCA2 and RAD51 and BRCC45, BRCC36 forms a holoenzyme complex that possesses a ubiquitin E3 ligase activity. Aberrant levels of BRCC36 were detected in sporadic breast tumors and depletion of either BRCC36 or BRCC45 by siRNA resulted in increased sensitivity to ionizing radiation and defects in the G2/M checkpoint, indicating that BRCC36 acts to enhance cellular survival following DNA damage. Recent experiments have shown that BRCC36 is essential for ionizing radiation-induced BRCA1 phosphorylation and nuclear foci formation, suggesting that BRCC36 may be an important target in the treatment of radiation-resistant breast tumors. At least two isoforms of BRCC36 are known to exist.

### **BRCC36 Antibody - References**

Dong Y, Hakimi MA, Chen X, et al. Regulation of BRCC, a holoenzyme complex containing BRCA1 and BRCA2, by a signalsome-like subunit and its role in DNA repair. *Mol. Cell* 2003; 12:1087-99.  
Chen X, Arciero CA, Wang C, et al. BRCC36 is essential for ionizing radiation-induced BRCA1 phosphorylation and nuclear foci formation. *Cancer Res.* 2006; 66:5039-46.