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BRCC3 Antibody (N-Term)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP21820a

Product Information

Application	WB, E
Primary Accession	P46736
Reactivity	Human, Rat, Mouse
Predicted	Bovine, Canine, Rabbit
Host	Rabbit
Clonality	polyclonal
Isotype	Rabbit IgG
Clone Names	RB53911
Calculated MW	36072

Additional Information

Gene ID	79184
Other Names	Lys-63-specific deubiquitinase BRCC36, 3419-, BRCA1-A complex subunit BRCC36, BRCA1/BRCA2-containing complex subunit 3, BRCA1/BRCA2-containing complex subunit 36, BRISC complex subunit BRCC36, BRCC3, BRCC36, C61A, CXorf53
Target/Specificity	This BRCC3 antibody is generated from a rabbit immunized with a KLH conjugated synthetic peptide between 18-50 amino acids from human BRCC3.
Dilution	WB~~1:2000 E~~Use at an assay dependent concentration.
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	BRCC3 Antibody (N-Term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	BRCC3
Synonyms	BRCC36, C6.1A, CXorf53
Function	Metalloprotease that specifically cleaves 'Lys-63'-linked polyubiquitin chains

	(PubMed:19214193, PubMed:20656690, PubMed:24075985, PubMed:26344097). Does not have activity toward 'Lys- 48'-linked polyubiquitin chains (PubMed:19214193, PubMed:20656690, PubMed:24075985, PubMed:26344097). 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:14636569, PubMed:16707425, PubMed:17525341, PubMed:19202061, PubMed:19261746, PubMed:19261748, PubMed:19261749). 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:20656690). Catalytic subunit of the BRISC complex, a multiprotein complex that specifically cleaves 'Lys-63'-linked ubiquitin in various substrates (PubMed:20656690, PubMed:24075985, PubMed:26195665, PubMed:26344097). 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:19214193). The BRISC complex is required for normal mitotic spindle assembly and microtubule attachment to kinetochores via its role in deubiquitinating NUMA1 (PubMed:26195665). 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:24075985, PubMed:26344097). 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:24075985). 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.

Background

Metalloprotease that specifically cleaves 'Lys-63'- linked polyubiquitin chains. Does not have activity toward 'Lys- 48'-linked polyubiquitin chains. 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). 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). Catalytic subunit of the BRISC complex, a multiprotein complex that specifically cleaves 'Lys-63'-linked ubiquitin in various substrates. 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.

References

Kenwrick S.,et al.Hum. Mol. Genet. 1:179-186(1992).
Fisch P.,et al.Oncogene 8:3271-3276(1993).
Dong Y.,et al.Mol. Cell 12:1087-1099(2003).
Ota T.,et al.Nat. Genet. 36:40-45(2004).
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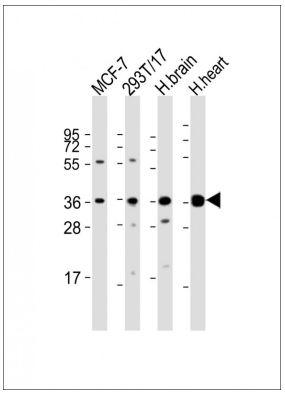
Images



All lanes : Anti-BRCC3 Antibody (N-Term) at 1:2000 dilution Lane 1: MCF-7 whole cell lysate Lane 2: 293T/17 whole cell lysate Lane 3: human brain lysate Lane 4: human heart lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 36 kDa Blocking/Dilution buffer: 5% NFDM/TBST.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.