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BRCC3 Rabbit pAb

Catalog # AP97851

Product Information

Application	WB, IHC-P, IHC-F, IF, E
Primary Accession	P46736
Other Accession	P46736
Predicted	Rat, Pig, Human, Mouse, Rabbit, Dog, Horse, Sheep
Host	Rabbit
Clonality	Polyclonal
Calculated MW	36072
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human BRCC3/BRCC36
Epitope Specificity	21-120/316
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SIMILARITY	Belongs to the peptidase M67A family. BRCC36 subfamily. Contains 1 MPN (JAB/Mov34) domain.
SUBUNIT	Component of the BRCA1-A complex, at least composed of the BRCA1, BARD1, UIMC1/RAP80, FAM175A/Abraxas, BRCC3/BRCC36, BRE/BRCC45 and BABAM1/NBA1. In the BRCA1-A complex, interacts directly with FAM175A/Abraxas and BRE/BRCC45. Component of the BRISC complex, at least composed of the FAM175B/ABRO1, BRCC3/BRCC36, BRE/BRCC45 and BABAM1/NBA1. The BRISC complex interacts with the CSN complex. Component of the BRCA1/BRCA2 containing complex (BRCC), which also contains BRCA1, BRCA2, BARD1, BRE and RAD51. BRCC is a ubiquitin E3 ligase complex that enhances cellular survival following DNA damage. Interacts with BRCA1. Binds polyubiquitin.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	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.

Additional Information

Gene ID	79184

Other Names	BRCC3_HUMAN; BRCC3; BRCA1-A complex subunit BRCC36; BRCA1/BRCA2-containing complex subunit 3; BRCA1/BRCA2-containing complex subunit 36; BRISC complex subunit BRCC36; 3.4.19.-; BRCC36; C6.1A; CXorf53; chromosome X open reading frame 53; BRCA1/BRCA2-containing complex, subunit 3; Lys-63-specific deubiquitinase
Dilution	WB=1:500-2000,IHC-P=1:100-500,IHC-F=1:100-500,IF=1:100-500,ELISA=1:5000-10000
Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

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.

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