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BABAM2 Rabbit pAb

Catalog # AP98458

Product Information

Application	WB, IHC-P, IHC-F, IF
Primary Accession	Q9NXR7
Other Accession	Q9NXR7
Reactivity	Rat, Mouse
Predicted	Human, Rabbit, Chicken, Dog, Horse, Sheep
Host	Rabbit
Clonality	Polyclonal
Calculated MW	43552
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human BRCC4/BRCC45
Epitope Specificity	301-383/383
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 BRE family.
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, BRCC3/BRCC36 and BABAM1/NBA1. Binds polyubiquitin. Component of the BRISC complex, at least composed of the FAM175B/ABRO1, BRCC3/BRCC36, BRE/BRCC45 and BABAM1/NBA1. Component of the BRCA1/BRCA2 containing complex (BRCC), which also contains BRCA1, BRCA2, BARD1, BRCC3/BRCC36 and RAD51. BRCC is a ubiquitin E3 ligase complex that enhances cellular survival following DNA damage. May interact with FAS and TNFRSF1A.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	BRCC45 was initially suggested to be a housekeeping protein that is highly expressed in brain and reproductive organs. Later experiments indicated BRCC45 forms a complex with the breast and ovarian predisposition proteins BRCA1 and BRCA2 as well as RAD51 and BRCC36. This complex has a ubiquitin E3 ligase activity and is thought to enhance cellular survival following DNA damage. BRCC45 has also been suggested to function as a death receptor associated anti apoptotic protein by inhibiting the BID induced activation of the mitochondrial apoptotic pathway. Higher levels of BRCC45 were detected in the majority of hepatocellular carcinomas, suggesting that BRCC45 may promote tumorigenesis when overexpressed. At least three isoforms of BRCC45 are known to exist.

Additional Information

Gene ID	9577

Other Names	BRCC4; BRCC45; BRE; 6030405P19Rik; B830038C02Rik; BABA2_BOVIN; BABAM2; BRCA1-A complex subunit BRE; BRCA1/BRCA2-containing complex subunit 45; Brain and reproductive organ-expressed protein; BABA2_HUMAN; BABA2_MOUSE; BABA2_RAT; BRISC and BRCA1 A complex member 2; brain and reproductive organ-expressed (TNFRSF1A modulator); BRCA1/BRCA2-containing complex, subunit 4
Dilution	WB=1:500-2000,IHC-P=1:100-500,IHC-F=1:100-500,IF=1:100-500
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	BABAM2 (HGNC:1106)
Synonyms	BRCC45, BRE
Function	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). The BRCA1-A complex also possesses deubiquitinase activity that specifically removes 'Lys-63'- linked ubiquitin on histones H2A and H2AX (PubMed:17525341, PubMed:19261746, PubMed:19261748, PubMed:19261749). In the BRCA1-A complex, it acts as an adapter that bridges the interaction between BABAM1/NBA1 and the rest of the complex, thereby being required for the complex integrity and modulating the E3 ubiquitin ligase activity of the BRCA1-BARD1 heterodimer (PubMed:19261748, PubMed:21282113). Component of the BRISC complex, a multiprotein complex that specifically cleaves 'Lys-63'-linked ubiquitin in various substrates (PubMed:19214193, PubMed:24075985, PubMed:25283148, PubMed:26195665). Within the BRISC complex, acts as an adapter that bridges the interaction between BABAM1/NBA1 and the rest of the complex, thereby being required for the complex integrity (PubMed:21282113). The BRISC complex is required for normal mitotic spindle assembly and microtubule attachment to kinetochores via its role in deubiquitinating NUMA1 (PubMed:26195665). The BRISC complex 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). Down-regulates the response to bacterial lipopolysaccharide (LPS) via its role in IFNAR1 deubiquitination (PubMed:24075985). May play a role in homeostasis or cellular differentiation in cells of neural, epithelial and germline origins. May also act as a death receptor- associated anti-apoptotic protein, which inhibits the mitochondrial apoptotic pathway. May regulate TNF signaling through its interactions with TNFRSF1A; however these effects may be indirect (PubMed:15465831).
Cellular Location	Cytoplasm. Nucleus Note=Localizes at sites of DNA damage at double-strand breaks (DSBs)
Tissue Location	Expressed in all cell lines examined. Highly expressed in placenta.

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