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BIRC6 Rabbit pAb

Catalog # AP98521

Product Information

Application	IHC-P, IHC-F, IF
Primary Accession	Q9NR09
Other Accession	Q9NR09
Reactivity	Human
Predicted	Rat, Pig, Mouse, Rabbit, Horse
Host	Rabbit
Clonality	Polyclonal
Calculated MW	530269
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human Apollon C terminus
Epitope Specificity	4701-4857/4857
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SIMILARITY	In the C-terminal section; belongs to the ubiquitin-conjugating enzyme family. Contains 1 BIR repeat.
SUBUNIT	Homodimer. Binds the activated, processed forms of CASP3, CASP6, CASP7 and CASP9. Interacts with RNF41, DIABLO/SMAC, HTRA2, KIF23/MKLP1, USP8/UBPY, BIRC5/survivin, MAP2K1/MEK1, RAB8A/RAB8, RAB11A/RAB11, PLK1, EXOC3/SEC6 and EXOC4/SEC8.
Post-translational modifications	Ubiquitinated. Ubiquitination is mediated by the RNF41 E3 ligase and leads to proteasomal degradation, impairing inhibition of apoptosis. Deubiquitinated by USP8/UBPY.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	Conserved genes that encode inhibitors of apoptosis proteins (IAPs) are frequently overexpressed in human cancers and are associated with resistance to therapy. IAPs contain a 70 amino acid cysteine and histidine rich baculovirus IAP repeat (BIR) and often a zinc binding RING finger. Chen et al. (1999) found that some brain cancer cell lines with high expression of BIRC6 exhibited resistance to apoptosis in the presence of anticancer drugs. Treatment of a high expressing cell line with BIRC6 antisense oligonucleotides reduced BIRC6 expression and reversed the resistance to anticancer drugs.

Additional Information

Gene ID	57448
Other Names	APOLLON; BRUCE; A430032G04Rik; A430040A19Rik; D630005A10Rik; mKIAA1289; BIRC6_HUMAN; BIRC6; BIR repeat-containing ubiquitin-conjugating enzyme (BRUCE); Baculoviral IAP repeat-containing protein 6; Ubiquitin-conjugating BIR domain enzyme apollon (APOLLON); 2.3.2.24; KIAA1289; BIRC6_MOUSE; baculoviral IAP repeat containing 6;

	baculoviral IAP repeat-containing 6
Dilution	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	BIRC6
Synonyms	KIAA1289
Function	Anti-apoptotic protein known as inhibitor of apoptosis (IAP) which can regulate cell death by controlling caspases and by acting as an E3 ubiquitin-protein ligase (PubMed:14765125, PubMed:15200957, PubMed:18329369). Unlike most IAPs, does not contain a RING domain and it is not a RING-type E3 ligase (PubMed:15200957, PubMed:36758104, PubMed:36758105, PubMed:36758106). Instead acts as a dual E2/E3 enzyme that combines ubiquitin conjugating (E2) and ubiquitin ligase (E3) activities in a single polypeptide (PubMed:15200957, PubMed:36758104, PubMed:36758105, PubMed:36758106). Ubiquitination is mediated by a non-canonical E1 ubiquitin activating enzyme UBA6 (PubMed:36758104, PubMed:36758105, PubMed:36758106). Ubiquitinates CASP3, CASP7 and CASP9 and inhibits their caspase activity; also ubiquitinates their procaspases but to a weaker extent (PubMed:15200957, PubMed:36758104, PubMed:36758105, PubMed:36758106). Ubiquitinates pro-apoptotic factors DIABLO/SMAC and HTRA2 (PubMed:15200957, PubMed:36758104, PubMed:36758105, PubMed:36758106). DIABLO/SMAC antagonizes the caspase inhibition activity of BIRC6 by competing for the same binding sites as the caspases (PubMed:18329369, PubMed:36758106). Ubiquitinates the autophagy protein MAP1LC3B; this activity is also inhibited by DIABLO/SMAC (PubMed:36758105). Important regulator for the final stages of cytokinesis (PubMed:18329369). Crucial for normal vesicle targeting to the site of abscission, but also for the integrity of the midbody and the midbody ring, and its striking ubiquitin modification (PubMed:18329369).
Cellular Location	Golgi apparatus, trans-Golgi network membrane. Endosome Cytoplasm, cytoskeleton, spindle pole Cytoplasm, cytoskeleton, microtubule organizing center, centrosome. Midbody, Midbody ring. Note=Exhibits cell cycle-dependent localization. Concentrates in a pericentriolar compartment in interphase, moves partially to spindle poles in metaphase, and finally localizes to the spindle midzone and the midbody in telophase and during cytokinesis. On the midbody, localizes to the midbody ring, also called Flemming body (PubMed:18329369). In interphase cells, localizes to the trans-Golgi network membrane and endosomes. During cytokinesis, a fraction moves to the midzone where it specifically arrives at the midbody ring. After abscission completion, travels with the midbody remnant into one daughter cell, and remains bound to it until a new midbody ring is formed during the next cell division (PubMed:18329369)
Tissue Location	Expressed in brain cancer cells.

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