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BRUCE Antibody
Catalog # ASC10242

Specification

BRUCE Antibody - Product Information

Application	**IHC-P, E**
Primary Accession	Q9NR09
Other Accession	NP_057336, 153792694
Reactivity	**Human**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**IgG**
Calculated MW	**534 kDa KDa**
Application Notes	**BRUCE antibody can be used for detection of BRUCE by immunohistochemistry at 5 µg/mL.**

BRUCE Antibody - Additional Information

Gene ID **57448**

Other Names
BRUCE Antibody: BRUCE, APOLLON, KIAA1289, Baculoviral IAP repeat-containing protein 6, BIR repeat-containing ubiquitin-conjugating enzyme, BRUCE, baculoviral IAP repeat-containing protein 6

Target/Specificity
BIRC6; BRUCE antibody is human specific. Multiple isoforms of BRUCE are known to exist.

Reconstitution & Storage
BRUCE antibody can be stored at 4℃ for three months and -20℃, 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
BRUCE Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

BRUCE Antibody - 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.

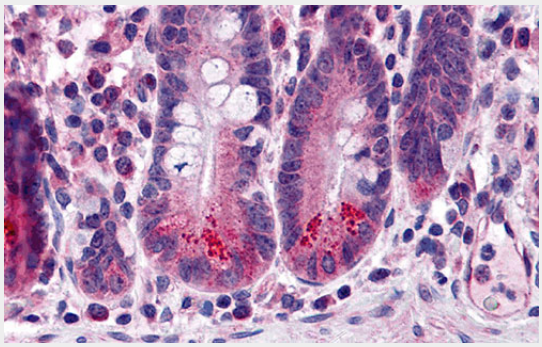
BRUCE Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot

- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

BRUCE Antibody - Images



Immunohistochemistry of BRUCE in human small intestine tissue with BRUCE antibody at 5 µg/mL.

BRUCE Antibody - Background

BRUCE Antibody: Apoptosis, or programmed cell death, is related to many diseases, such as cancer. Apoptosis is triggered by a variety of stimuli including members in the TNF family and can be prevented by the inhibitor of apoptosis (IAP) proteins. IAP proteins form a conserved gene family that binds to and inhibits cell death proteases. BRUCE, also known as BIRC6, is an IAP family member protein with a BIR (baculoviral inhibition of apoptosis protein repeat) domain and a UBCc (ubiquitin-conjugating enzyme E2, catalytic) domain. BRUCE regulates p53 and the mitochondrial pathway of apoptosis by facilitating the degradation of apoptotic proteins such as Caspase-9 and SMAC by ubiquitination.

BRUCE Antibody - References

Schimmer AD. Inhibitor of apoptosis proteins: translating basic knowledge into clinical practice. Cancer Res. 2004; 64:7183-90.
Chen Z, Naito M, Hori S, et al. A human IAP-gamily gene, apollon, expressed in human brain cancer cells. Biochem. Biophys. Res. Commun. 1999; 264:847-54
Hao Y, Sekine K, Kawabata A, et al. Apollon ubiquitinates SMAC and Caspase-9, and has an essential cytoprotection function. Nat. Cell Biol. 2004; 6:849-60.