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Bif Antibody

Catalog # ASC10425

Product Information

Application	WB, ICC, E
Primary Accession	Q9Y371
Other Accession	AAK27365, 13469879
Reactivity	Human, Mouse
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	40796
Concentration (mg/ml)	1 mg/mL
Conjugate	Unconjugated
Application Notes	BIF antibody can be used for the detection of BIF by Western blot at 1 - 2 g/mL. Antibody can also be used for immunocytochemistry starting at 10 g/mL.

Additional Information

Gene ID	51100
Other Names	Bif Antibody: Bif-1, CGI-61, PPP1R70, dJ612B15.2, KIAA0491, Endophilin-B1, Bax-interacting factor 1, Bif-1, SH3-domain GRB2-like endophilin B1
Target/Specificity	SH3GLB1;
Reconstitution & Storage	Bif 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	Bif Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	SH3GLB1
Synonyms	KIAA0491
Function	May be required for normal outer mitochondrial membrane dynamics (PubMed:15452144). Required for coatomer-mediated retrograde transport in certain cells (By similarity). May recruit other proteins to membranes with high curvature. May promote membrane fusion (PubMed:11604418). Involved in activation of caspase-dependent apoptosis by promoting BAX/BAK1 activation (PubMed:16227588). Isoform 1 acts proapoptotic in fibroblasts (By similarity). Involved in caspase- independent apoptosis during nutrition

	starvation and involved in the regulation of autophagy. Activates lipid kinase activity of PIK3C3 during autophagy probably by associating with the PI3K complex II (PI3KC3-C2) (PubMed:17891140). Associated with PI3KC3-C2 during autophagy may regulate the trafficking of ATG9A from the Golgi complex to the peripheral cytoplasm for the formation of autophagosomes by inducing Golgi membrane tubulation and fragmentation (PubMed:21068542). Involved in regulation of degradative endocytic trafficking and cytokinesis, probably in the context of PI3KC3-C2 (PubMed:20643123). Isoform 2 acts antiapoptotic in neuronal cells; involved in maintenance of mitochondrial morphology and promotes neuronal viability (By similarity).
Cellular Location	Cytoplasm. Golgi apparatus membrane; Peripheral membrane protein. Mitochondrion outer membrane; Peripheral membrane protein. Cytoplasmic vesicle, autophagosome membrane. Midbody. Note=Association with the Golgi apparatus depends on the cell type (By similarity). Following starvation colocalizes with ATG5 and LC3 autophagy-related protein(s)on autophagosomal membranes (PubMed:17891140). {ECO:0000250, ECO:0000269|PubMed:17891140}
Tissue Location	Highly expressed in heart, skeletal muscle, kidney and placenta. Detected at lower levels in brain, colon, thymus, spleen, liver, small intestine, lung and peripheral blood leukocytes

Background

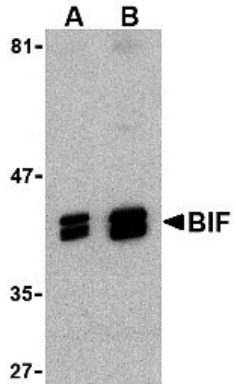
Bif Antibody: Apoptosis plays a major role in normal organism development, tissue homeostasis, and removal of damaged cells and is caused by the activation of proteolytic enzymes termed caspases. Proteins that comprise the Bcl-2 family such as Bax appear to control the activation of these enzymes. Bax activity was found to be regulated by its association with Bax-interacting factor 1 (BIF), a member of the endophilin B family that is associated with intracellular membranes. Following this interaction, Bax undergoes a conformational change and translocates to mitochondrial membranes. The Bax/BIF interaction appears to be enhanced by apoptotic stimuli, suggesting that BIF acts as the trigger to activate Bax, and as suppression of BIF promoted HeLa cell colony formation in soft agar, it may have a role in the suppression of cancer progression. At least two isoforms of BIF are known to exist.

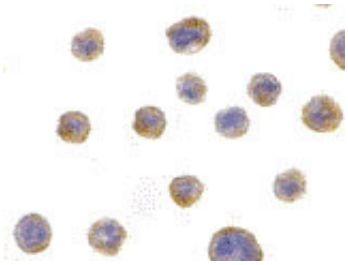
References

Lockshin RA, Osborne B, and Zakeri Z. Cell death in the third millennium. Cell Death Differ. 2000; 7:2-7.
Oltvai ZN, Milliman CL, and Korsmeyer SJ. Bcl-2 heterodimerizes in vivo with a conserved homolog, Bax, that accelerates programmed cell death. Cell 1993; 74:609-19.
Cuddeback SM, Yamaguchi H, Komatsu K, et al. Molecular cloning and characterization of bif-1. J. Biol. Chem.2001; 276:20559-65.
Takahashi Y, Karbowski M, Yamaguchi H, et al. Loss of Bif-1 suppresses Bax/Bak conformational change and mitochondrial apoptosis. Mol. Cell. Biol. 2005; 25:9369-82.

Images

Western blot analysis of BIF in HeLa cell lysate with BIF antibody at (A) 1 and (B) 2 µg/mL.





Immunocytochemistry of BIF in HeLa with BIF antibody at 10 µg/mL.