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BAG-1 Antibody

Catalog # ASC10440

Product Information

Application	WB, IF, E, IHC-P
Primary Accession	Q99933
Other Accession	NP_004314, 124494251
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	38779
Concentration (mg/ml)	1 mg/mL
Conjugate	Unconjugated
Application Notes	BAG-1 antibody can be used for the detection of BAG-1 by Western blot at 1 - 2 g/mL. Antibody can also be used for immunohistochemistry starting at 2 g/mL. For immunofluorescence start at 20 g/mL.

Additional Information

Gene ID	573
Other Names	BAG-1 Antibody: HAP, BAG-1, RAP46, HAP, BAG family molecular chaperone regulator 1, Bcl-2-associated athanogene 1, BCL2-associated athanogene
Target/Specificity	BAG1;
Reconstitution & Storage	BAG-1 antibody can be stored at 4°C for three months and -20°C, 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	BAG-1 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	BAG1
Synonyms	HAP
Function	Co-chaperone for HSP70 and HSC70 chaperone proteins. Acts as a nucleotide-exchange factor (NEF) promoting the release of ADP from the HSP70 and HSC70 proteins thereby triggering client/substrate protein release. Nucleotide release is mediated via its binding to the nucleotide-binding domain (NBD) of HSPA8/HSC70 where as the substrate release is mediated via its binding to the substrate-binding domain (SBD) of HSPA8/HSC70 (PubMed:24318877, PubMed:27474739, PubMed:9873016). Inhibits the

	pro-apoptotic function of PPP1R15A, and has anti-apoptotic activity (PubMed:12724406). Markedly increases the anti-cell death function of BCL2 induced by various stimuli (PubMed:9305631). Involved in the STUB1-mediated proteasomal degradation of ESR1 in response to age-related circulating estradiol (17-beta-estradiol/E2) decline, thereby promotes neuronal apoptosis in response to ischemic reperfusion injury (By similarity).
Cellular Location	[Isoform 1]: Nucleus. Cytoplasm. Note=Isoform 1 localizes predominantly to the nucleus [Isoform 4]: Cytoplasm. Nucleus. Note=Isoform 4 localizes predominantly to the cytoplasm. The cellular background in which it is expressed can influence whether it resides primarily in the cytoplasm or is also found in the nucleus. In the presence of BCL2, localizes to intracellular membranes (what appears to be the nuclear envelope and perinuclear membranes) as well as punctate cytosolic structures suggestive of mitochondria
Tissue Location	Isoform 4 is the most abundantly expressed isoform. It is ubiquitously expressed throughout most tissues, except the liver, colon, breast and uterine myometrium. Isoform 1 is expressed in the ovary and testis. Isoform 4 is expressed in several types of tumor cell lines, and at consistently high levels in leukemia and lymphoma cell lines. Isoform 1 is expressed in the prostate, breast and leukemia cell lines. Isoform 3 is the least abundant isoform in tumor cell lines (at protein level).

Background

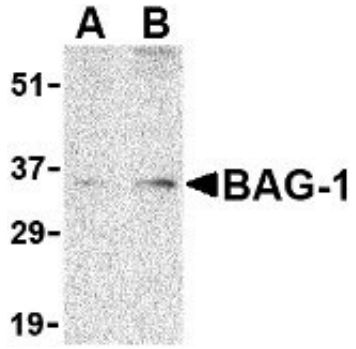
BAG-1 Antibody: Bcl-2-associated athanogene 1 (BAG-1) was first identified as an anti-apoptotic bcl-2-binding protein. Later it was found to bind the molecular chaperones Hsp70 and Hsc70 through its carboxy-terminal sequence (termed the Bag domain), resulting in the inhibition of the refolding activity of these chaperones. It is thought that by binding and inhibiting these molecular chaperones, BAG-1is able to modulate the expression level of proteins requiring chaperones to fold correctly. One such group of proteins that are affected is glucocorticoid receptors. Other reports have suggested that the level of BAG-1 expression correlates with the aggressiveness of various cancers. Multiple isoforms of BAG-1 are known to exist.

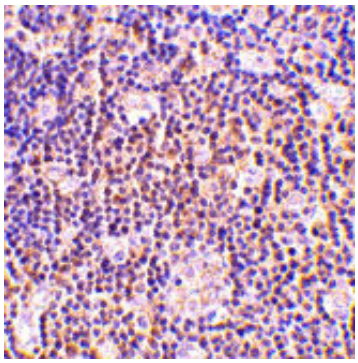
References

Takayama S, Sato T, Krajewski K, et al. Cloning and functional analysis of BAG-1: a novel Bcl2-binding protein with anti-cell death activity. Cell 1995; 80:279-84.
Nollen EAA, Brunsting JF, Song J, et al. Bag1 functions in vivo as a negative regulator of Hsp70 chaperone activity. Mol. Cell. Biol. 2000; 20:1083-8.
Cato ACB and Mink S. BAG-1 family of cochaperones in the modulation of nuclear receptor action. J. Steroid Biochem. & Mol. Biol. 2001; 78:379-88.
Kajewska M, Turner BC, Shabaik A, et al. Expression of BAG-1 protein correlates with aggressive behavior of prostate cancers. Prostate 2006; 66:801-10.

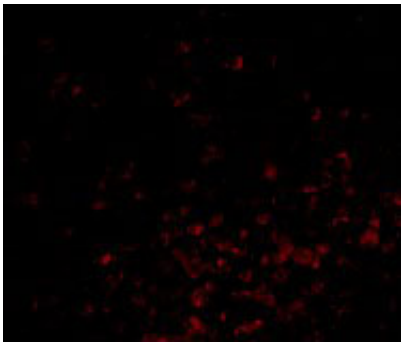
Images

Western blot analysis of BAG-1 in PC-3 cell lysate with BAG-1 antibody at (A) 1 and (B) 2 µg/mL.





Immunohistochemistry of BAG-1 in human lymph node tissue with BAG-1 antibody at 2 µg/mL



Immunofluorescence of BAG-1 in Human Lymph Node cells with BAG-1 antibody at 20 µg/mL.

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