

Bag-2 (C-6): sc-390107

BACKGROUND

Bag-2 (Bcl-2-associated athanogene 2), also known as Bag family molecular chaperone regulator 2, is a member of the Bag family of proteins and contains the most diverged of the characteristic C-terminal Bag domain. Via their Bag domain, Bag proteins bind with high affinity to the HSC 70/HSP 70 ATPase domain, regulating chaperone activity and apoptosis. Bag-2 is an evolutionarily conserved cytoplasmic protein with putative N-terminal phosphorylation sites and specifically functions as an HSC 70 co-chaperone. Bag-2 is a major component of the HSC 70/CHIP chaperone-dependent ubiquitin ligase complex and acts to disrupt CHIP-mediated ubiquitylation. In this complex, Bag-2 directly interacts with the ATPase domain of HSC 70 as well as the U-box domain of CHIP and inhibits ubiquitylation by interfering with the association between CHIP and its ubiquitin conjugating enzyme.

REFERENCES

1. Takayama, S., et al. 1999. An evolutionarily conserved family of Hsp70/Hsc70 molecular chaperone regulators. *J. Biol. Chem.* 274: 781-786.
2. Ueda, K., et al. 2004. Proteomic identification of Bcl2-associated athanogene 2 as a novel MAPK-activated protein kinase 2 substrate. *J. Biol. Chem.* 279: 41815-41821.
3. Arndt, V., et al. 2005. Bag-2 acts as an inhibitor of the chaperone-associated ubiquitin ligase CHIP. *Mol. Biol. Cell* 16: 5891-5900.
4. Dai, Q., et al. 2005. Regulation of the cytoplasmic quality control protein degradation pathway by Bag-2. *J. Biol. Chem.* 280: 38673-38681.
5. Götz, R., et al. 2005. Bag1 is essential for differentiation and survival of hematopoietic and neuronal cells. *Nat. Neurosci.* 8: 1169-1178.
6. Wada, S., et al. 2006. A genomewide analysis of genes for the heat shock protein 70 chaperone system in the ascidian *Ciona intestinalis*. *Cell Stress Chaperones* 11: 23-33.

CHROMOSOMAL LOCATION

Genetic locus: BAG2 (human) mapping to 6p11.2; Bag2 (mouse) mapping to 1 B.

SOURCE

Bag-2 (C-6) is a mouse monoclonal antibody raised against amino acids 1-211 representing full length Bag-2 of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Bag-2 (C-6) is available conjugated to agarose (sc-390107 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-390107 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-390107 PE), fluorescein (sc-390107 FITC), Alexa Fluor® 488 (sc-390107 AF488), Alexa Fluor® 546 (sc-390107 AF546), Alexa Fluor® 594 (sc-390107 AF594) or Alexa Fluor® 647 (sc-390107 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-390107 AF680) or Alexa Fluor® 790 (sc-390107 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

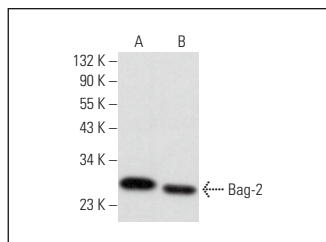
Bag-2 (C-6) is recommended for detection of Bag-2 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for Bag-2 siRNA (h): sc-72600, Bag-2 siRNA (m): sc-72601, Bag-2 shRNA Plasmid (h): sc-72600-SH, Bag-2 shRNA Plasmid (m): sc-72601-SH, Bag-2 shRNA (h) Lentiviral Particles: sc-72600-V and Bag-2 shRNA (m) Lentiviral Particles: sc-72601-V.

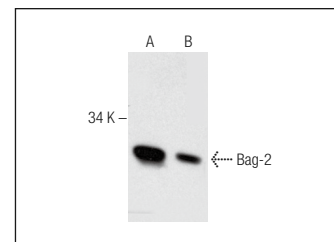
Molecular Weight of Bag-2: 26 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, K-562 whole cell lysate: sc-2203 or Jurkat whole cell lysate: sc-2204.

DATA



Bag-2 (C-6): sc-390107. Western blot analysis of Bag-2 expression in HeLa (A) and K-562 (B) whole cell lysates.



Bag-2 (C-6): sc-390107. Western blot analysis of Bag-2 expression in HeLa (A) and Jurkat (B) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Pan, M., et al. 2023. Identification of an imidazopyridine-based compound as an oral selective estrogen receptor degrader for breast cancer therapy. *Cancer Res. Commun.* 3: 1378-1396.
2. Sankar, D.S., et al. 2024. The ULK1 effector BAG2 regulates autophagy initiation by modulating AMBRA1 localization. *Cell Rep.* 43: 114689.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.