SANTA CRUZ BIOTECHNOLOGY, INC.

Bag-2 (C-20): sc-68948



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., Xie, Z. and Reed, J.C. 1999. An evolutionarily conserved family of HSP70/HSC70 molecular chaperone regulators. J. Biol. Chem. 274: 781-786.
- Ueda, K., Kosako, H., Fukui, Y. and Hattori, S. 2004. Proteomic identification of Bcl2-associated athanogene 2 as a novel MAPK-activated protein kinase 2 substrate. J. Biol. Chem. 279: 41815-41821.
- Arndt, V., Daniel, C., Nastainczyk, W., Alberti, S. and Höhfeld, J. 2005. Bag-2 acts as an inhibitor of the chaperone-associated ubiquitin ligase CHIP. Mol. Biol. Cell 16: 5891-5900.
- Dai, Q., Qian, S.B., Li, H.H., McDonough, H., Borchers, C., Huang, D., Takayama, S., Younger, J.M., Ren, H.Y., Cyr, D.M. and Patterson, C. 2005. Regulation of the cytoplasmic quality control protein degradation pathway by Bag-2. J. Biol. Chem. 280: 38673-38681.
- Götz, R., Wiese, S., Takayama, S., Camarero, G.C., Rossoll, W., Schweizer, U., Troppmair, J., Jablonka, S., Holtmann, B., Reed, J.C., Rapp, U.R. and Sendtner, M. 2005. Bag-1 is essential for differentiation and survival of hematopoietic and neuronal cells. Nat. Neurosci. 8: 1169-1178.
- Wada, S., Hamada, M. and Satoh, N. 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-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of Bag-2 of human origin.

PRODUCT

Each vial contains 200 μg lgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-68948 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Bag-2 (C-20) is recommended for detection of Bag-2 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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).

Bag-2 (C-20) is also recommended for detection of Bag-2 in additional species, including equine, canine, bovine and porcine.

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: Bag-2 (h2): 293 Lysate: sc-128081, HeLa whole cell lysate: sc-2200 or Jurkat whole cell lysate: sc-2204.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker[™] compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker[™] Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz[™] Mounting Medium: sc-24941.

DATA



Bag-2 (C-20): sc-68948. Western blot analysis of Bag-2 expression in non-transfected: sc-110760 (Å) and human Bag-2 transfected: sc-128081 (B) 293 whole cell lysates.

STORAGE

Store at 4° C, **D0 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.