

# Bag-3 (H-265): sc-292154

## BACKGROUND

The Bag family of proteins are characterized by the presence of a 45 amino acid Bag domain through which they bind with high affinity to the ATPase domain of HSP 70, thereby negatively regulating HSP 70 chaperone activity. Bag-3 (Bcl-2-associated athanogene 3), also known as BIS or CAIR-1, is a 575 amino acid protein that contains one C-terminal Bag domain and 2 N-terminal WW domains. Like other members of the Bag family, Bag-3 functions to inhibit the chaperone activity of HSP 70, specifically by promoting the release of HSP 70-bound substrates. Additionally, Bag-3 exhibits anti-apoptotic activity via cell cycle control, suggesting a possible role for Bag-3 in tumor progression. The gene encoding Bag-3 maps to human chromosome 10, which houses over 1,200 genes and comprises nearly 4.5% of the human genome.

## REFERENCES

1. Takayama, S., et al. 1999. An evolutionarily conserved family of HSP 70/HSC 70 molecular chaperone regulators. *J. Biol. Chem.* 274: 781-786.
2. Liao, Q., et al. 2001. The anti-apoptotic protein Bag-3 is overexpressed in pancreatic cancer and induced by heat stress in pancreatic cancer cell lines. *FEBS Lett.* 503: 151-157.
3. Iwasaki, M., et al. 2007. Bag-3 regulates motility and adhesion of epithelial cancer cells. *Cancer Res.* 67: 10252-10259.
4. Chiappetta, G., et al. 2007. The antiapoptotic protein Bag-3 is expressed in thyroid carcinomas and modulates apoptosis mediated by tumor necrosis factor-related apoptosis-inducing ligand. *J. Clin. Endocrinol. Metab.* 92: 1159-1163.
5. Carra, S., et al. 2008. HspB8 and Bag-3: a new chaperone complex targeting misfolded proteins to macroautophagy. *Autophagy* 4: 237-239.
6. Wang, H.Q., et al. 2008. Transcriptional upregulation of Bag-3 upon proteasome inhibition. *Biochem. Biophys. Res. Commun.* 365: 381-385.
7. Carra, S., et al. 2008. HspB8 chaperone activity toward poly(Q)-containing proteins depends on its association with Bag-3, a stimulator of macroautophagy. *J. Biol. Chem.* 283: 1437-1444.
8. Franceschelli, S., et al. 2008. Bag-3 gene expression is regulated by heat shock factor 1. *J. Cell. Physiol.* 215: 575-577.
9. Gentilella, A., et al. 2008. Activation of Bag-3 by Egr-1 in response to FGF-2 in neuroblastoma cells. *Oncogene* 27: 5011-5018.

## CHROMOSOMAL LOCATION

Genetic locus: BAG3 (human) mapping to 10q26.11; Bag3 (mouse) mapping to 7 F3.

## SOURCE

Bag-3 (H-265) is a rabbit polyclonal antibody raised against amino acids 183-447 mapping within an internal region of Bag-3 of human origin.

## RESEARCH USE

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

## PRODUCT

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

## APPLICATIONS

Bag-3 (H-265) is recommended for detection of Bag-3 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, 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-3 siRNA (h): sc-72602, Bag-3 siRNA (m): sc-72603, Bag-3 shRNA Plasmid (h): sc-72602-SH, Bag-3 shRNA Plasmid (m): sc-72603-SH, Bag-3 shRNA (h) Lentiviral Particles: sc-72602-V and Bag-3 shRNA (m) Lentiviral Particles: sc-72603-V.

Molecular Weight of Bag-3: 80 kDa.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## SELECT PRODUCT CITATIONS

1. Bloemberg, D., et al. 2013. Autophagy is altered in skeletal and cardiac muscle of spontaneously hypertensive rats. *Acta Physiol.* 210: 381-391.

## STORAGE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.



Try **Bag-3 (19): sc-136467**, our highly recommended monoclonal alternative to Bag-3 (H-265).