

Bag-5 (18Z): sc-101215

BACKGROUND

Bag-5 (Bcl-2-associated athanogene-5), also known as Bag family molecular chaperone regulator 5, is a member of the Bag family of proteins and contains four Bag domains. Via their Bag domain, Bag proteins bind with high affinity to the HSC 70/HSP 70 ATPase domain, regulating chaperone activity and apoptosis. Bag-5 is a component of the HSP 70/Parkin complex and acts to inhibit Parkin E3 ubiquitin ligase activity and HSP 70 chaperone activity. In this complex, Bag-5 directly interacts with the ATPase domain of HSP 70 and the N-terminal linker region of Parkin. Bag-5 expression is induced upon dopaminergic neuron injury and functions to sensitize the neurons to injury-induced cell death. In addition, Bag-5 may be a useful target in therapies for neurodegenerative diseases such as Parkinson's disease which is caused by a mutation in the gene encoding Parkin.

REFERENCES

- Höhfeld, J. and Jentsch, S. 1997. GrpE-like regulation of the HSP 70 chaperone by the anti-apoptotic protein Bag-1. *EMBO J.* 16: 6209-6216.
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- Briknarová, K., et al. 2002. Bag-4/SODD protein contains a short BAG domain. *J. Biol. Chem.* 277: 31172-31178.
- Kalia, S.K., et al. 2004. Bag-5 inhibits Parkin and enhances dopaminergic neuron degeneration. *Neuron* 44: 931-945.
- Esser, C., et al. 2004. Cooperation of molecular chaperones with the ubiquitin/proteasome system. *Biochim. Biophys. Acta* 1695: 171-188.
- Liman, J., et al. 2005. Interaction of Bag-1 and HSP 70 mediates neuroprotectivity and increases chaperone activity. *Mol. Cell. Biol.* 25: 3715-3725.
- 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.
- Arndt, V., et al. 2007. To be, or not to be—molecular chaperones in protein degradation. *Cell. Mol. Life Sci.* 64: 2525-2541.

CHROMOSOMAL LOCATION

Genetic locus: BAG5 (human) mapping to 14q32.33.

SOURCE

Bag-5 (18Z) is a mouse monoclonal antibody raised against recombinant Bag-5 of human origin.

PRODUCT

Each vial contains 100 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

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

APPLICATIONS

Bag-5 (18Z) is recommended for detection of Bag-5 of 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)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for Bag-5 siRNA (h): sc-72604, Bag-5 shRNA Plasmid (h): sc-72604-SH and Bag-5 shRNA (h) Lentiviral Particles: sc-72604-V.

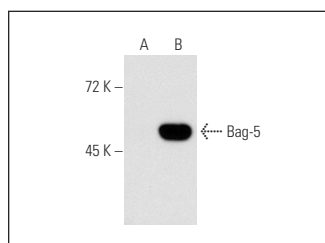
Molecular Weight of Bag-5: 51 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204 or Bag-5 (m): 293T Lysate: sc-118669.

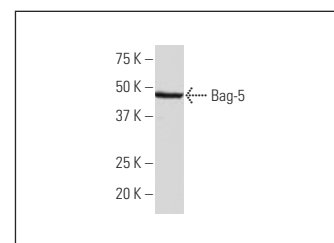
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).

DATA



Bag-5 (18Z): sc-101215. Western blot analysis of Bag-5 expression in non-transfected: sc-117752 (A) and mouse Bag-5 transfected: sc-118669 (B) 293T whole cell lysates.



Bag-5 (18Z): sc-101215. Western blot analysis of Bag-5 expression in Jurkat whole cell lysate.

SELECT PRODUCT CITATIONS

- Bruchmann, A., et al. 2013. Bcl-2 associated athanogene 5 (Bag5) is over-expressed in prostate cancer and inhibits ER-stress induced apoptosis. *BMC Cancer* 13: 96.

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.