

Bag-5 (m): 293T Lysate: sc-118669

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

- Höfheld, 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.
- Takayama, S., Xie, Z. and Reed, J.C. 1999. An evolutionarily conserved family of HSP 70/HSC 70 molecular chaperone regulators. *J. Biol. Chem.* 274: 781-786.
- Briknarová, K., Takayama, S., Homma, S., Baker, K., Cabezas, E., Hoyt, D.W., Li, Z., Satterthwait, A.C. and Ely, K.R. 2002. Bag-4/SODD protein contains a short BAG domain. *J. Biol. Chem.* 277: 31172-31178.
- Kalia, S.K., Lee, S., Smith, P.D., Liu, L., Crocker, S.J., Thorarinsdottir, T.E., Glover, J.R., Fon, E.A., Park, D.S. and Lozano, A.M. 2004. Bag-5 inhibits Parkin and enhances dopaminergic neuron degeneration. *Neuron* 44: 931-945.
- Esser, C., Alberti, S. and Höfheld, J. 2004. Cooperation of molecular chaperones with the ubiquitin/proteasome system. *Biochim. Biophys. Acta* 1695: 171-188.
- Liman, J., Ganesan, S., Dohm, C.P., Krajewski, S., Reed, J.C., Bähr, M., Wouters, F.S. and Kermer, P. 2005. Interaction of Bag-1 and HSP 70 mediates neuroprotectivity and increases chaperone activity. *Mol. Cell. Biol.* 25: 3715-3725.
- 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.
- Arndt, V., Rogon, C. and Höfheld, J. 2007. To be, or not to be—molecular chaperones in protein degradation. *Cell. Mol. Life Sci.* 64: 2525-2541.

CHROMOSOMAL LOCATION

Genetic locus: Bag5 (mouse) mapping to 12 F1.

PRODUCT

Bag-5 (m): 293T Lysate represents a lysate of mouse Bag-5 transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

RESEARCH USE

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

APPLICATIONS

Bag-5 (m): 293T Lysate is suitable as a Western Blotting positive control for mouse reactive Bag-5 antibodies. Recommended use: 10-20 µl per lane.

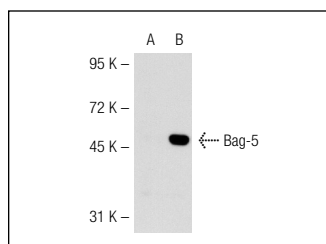
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

Bag-5 (18Z): sc-101215 is recommended as a positive control antibody for Western Blot analysis of enhanced mouse Bag-5 expression in Bag-5 transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

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.

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.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

PROTOCOLS

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