

# Bag-1 (19): sc-135844

## BACKGROUND

The Bcl-2 family of proteins is characterized by its ability to modulate cell death (apoptosis) under a broad range of physiologic conditions. Bcl-2 and several related proteins function to inhibit apoptosis, while other members of the Bcl-2 family, such as Bax and Bak, enhance cell death under various conditions. For instance, Bcl-x<sub>L</sub> represses cell death, while its shorter form, Bcl-x<sub>S</sub>, promotes apoptosis. Dimerization of another member of this family, Bad, with Bcl-x<sub>L</sub>, results in displacement of Bax from Bcl-x<sub>L</sub>/Bax complexes and restoration of Bax-mediated apoptosis. A Bcl-2-binding protein, designated Bag-1, lacks significant homology with Bcl-2 or with other Bcl-2-related proteins. Bag-1 appears to function to enhance Bcl-2 protection from cell death, suggesting that Bag-1 represents a new type of anti-cell death gene. This also suggests that certain routes of apoptosis induction, previously ascribed to Bcl-2-independent pathways, may instead reflect a requirement for a combination of Bcl-2 and Bag-1.

## REFERENCES

1. Nunez, G., London, L., Hockenbery, D., Alexander, M. and McKearn, J.P. 1990. Deregulated Bcl-2 gene expression selectively prolongs survival of growth factor-deprived hemopoietic cell lines. *J. Immunol.* 144: 3602-3610.
2. Hockenbery, D.M., Zutter, M., Hickey, W., Nahm, M. and Korsmeyer, S.J. 1991. Bcl-2 protein is topographically restricted in tissues characterized by apoptotic cell death. *Proc. Natl. Acad. Sci. USA* 88: 6961-6965.
3. Oltvai, Z.N., Millman, C.L. and Korsmeyer, S.J. 1993. Bcl-2 heterodimerizes *in vivo* with a conserved homolog, Bax, that accelerates programmed cell death. *Cell* 74: 609-619.
4. Yin, X.M., Oltvai, Z.N. and Korsmeyer, S.J. 1994. BH1 and BH2 domains of Bcl-2 are required for inhibition of apoptosis and heterodimerization with Bax. *Nature* 369: 321-323.
5. Chittenden, T., Harrington, E.A., O'Connor, R., Flemington, C., Lutz, R.J., Evan, G.I. and Guild, B.C. 1995. Induction of apoptosis by the Bcl-2 homologue Bak. *Nature* 374: 733-736.
6. Kiefer, M.C., Brauer, M.J., Powers, V.C., Wu, J.J., Umansky, S.R., Tomel, L.D. and Barr, P.J. 1995. Modulation of apoptosis by the widely distributed Bcl-2 homologue Bak. *Nature* 374: 736-739.
7. Takayama, S., Sato, T., Krajewski, S., Kochel, K., Irie, S., Millan, J.A. and Reed, J.C. 1995. Cloning and functional analysis of Bag-1: a novel Bcl-2-binding protein with anti-cell death activity. *Cell* 80: 279-284.
8. Yang, E., Zha, J., Jockel, J., Boise, L.H., Thompson, C.B. and Korsmeyer, S.J. 1995. Bad, a heterodimeric partner for Bcl-x<sub>L</sub> and Bcl-2, displaces Bax and promotes cell death. *Cell* 80: 285-291.

## CHROMOSOMAL LOCATION

Genetic locus: BAG1 (human) mapping to 9p13.3.

## SOURCE

Bag-1 (19) is a mouse monoclonal antibody raised against amino acids 155-258 of Bag-1 of human origin.

## PRODUCT

Each vial contains 50 µg IgG<sub>1</sub> in 0.5 ml of PBS with < 0.1% sodium azide, 0.1% gelatin, 20% glycerol and 0.04% stabilizer protein.

## APPLICATIONS

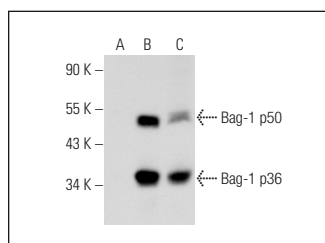
Bag-1 (19) is recommended for detection of Bag-1 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)].

Suitable for use as control antibody for Bag-1 siRNA (h): sc-29211, Bag-1 shRNA Plasmid (h): sc-29211-SH and Bag-1 shRNA (h) Lentiviral Particles: sc-29211-V.

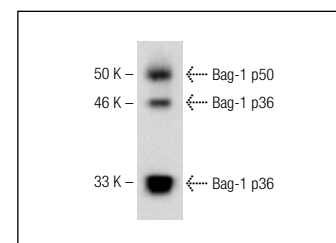
Molecular Weight of Bag-1 four major isoforms: 32/36/46/50 kDa.

Positive Controls: Bag-1 (h): 293T Lysate: sc-112723, HeLa whole cell lysate: sc-2200 or LNCaP cell lysate: sc-2231.

## DATA



Bag-1 (19): sc-135844. Western blot analysis of Bag-1 expression in non-transfected 293T: sc-112752 (A), human Bag-1 transfected 293T: sc-112723 (B) and HL-60 (C) whole cell lysates.



Bag-1 (19): sc-135844. Western blot analysis of Bag-1 expression in HeLa whole cell lysate.

## SELECT PRODUCT CITATIONS

1. Rasheed, Z. and Haqqi, T.M. 2012. Endoplasmic reticulum stress induces the expression of COX-2 through activation of eIF2 $\alpha$ , p38-MAPK and NF- $\kappa$ B in advanced glycation end products stimulated human chondrocytes. *Biochim. Biophys. Acta* 1823: 2179-2189.

## 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. Not for resale.

## PROTOCOLS

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