

Bag-1 (3.9F1E11): sc-56004

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_L represses cell death, while its shorter form, Bcl-x_S, promotes apoptosis. Dimerization of another member of this family, Bad, with Bcl-x_L results in displacement of Bax from Bcl-x_L/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 and 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., et al. 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., et al. 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., et al. 1993. Bcl-2 heterodimerizes *in vivo* with a conserved homolog, Bax, that accelerates programmed cell death. *Cell* 74: 609-619.
4. Yin, X.M., et al. 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., et al. 1995. Induction of apoptosis by the Bcl-2 homologue Bak. *Nature* 374: 733-736.
6. Takayama, S., et al. 1995. Cloning and functional analysis of Bag-1: a novel Bcl-2-binding protein with anti-cell death activity. *Cell* 80: 279-284.
7. Yang, E., et al. 1995. Bad, a heterodimeric partner for Bcl-x_L and Bcl-2, displaces Bax and promotes cell death. *Cell* 80: 285-291.
8. Kiefer, M.C., et al. 1995. Modulation of apoptosis by the widely distributed Bcl-2 homologue Bak. *Nature* 374: 736-739.

CHROMOSOMAL LOCATION

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

SOURCE

Bag-1 (3.9F1E11) is a mouse monoclonal antibody raised against full length Bag-1 of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

RESEARCH USE

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

APPLICATIONS

Bag-1 (3.9F1E11) is recommended for detection of Bag-1 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-1 siRNA (h): sc-29211, Bag-1 shRNA Plasmid (h): sc-29211-SH and Bag-1 shRNA (h) Lentiviral Particles: sc-29211-V.

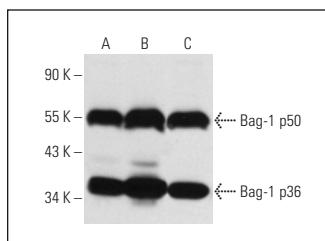
Molecular Weight of Bag-1 four major isoforms: 32/36/46/50 kDa.

Positive Controls: MCF7 whole cell lysate: sc-2206, LNCaP cell lysate: sc-2231 or Jurkat whole cell lysate: sc-2204.

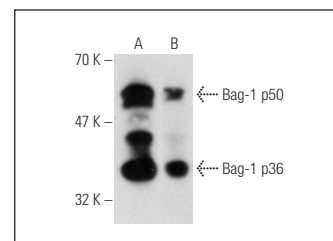
RECOMMENDED SUPPORT REAGENTS

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, 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).

DATA



Bag-1 (3.9F1E11): sc-56004. Western blot analysis of Bag-1 expression in LNCaP (A), MCF7 (B) and Jurkat (C) whole cell lysates.



Bag-1 (3.9F1E11): sc-56004. Western blot analysis of Bag-1 expression in HeLa (A) and SK-BR-3 (B) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Townsend, P.A., et al. 2003. BAG-1 prevents stress-induced long-term growth inhibition in breast cancer cells via a chaperone-dependent pathway. *Cancer Res.* 63: 4150-4157.

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 for detailed protocols and support products.