SANTA CRUZ BIOTECHNOLOGY, INC.

Bag-1 (CC9E8): sc-33704

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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. 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.

CHROMOSOMAL LOCATION

Genetic locus: BAG1 (human) mapping to 9p13.3; Bag1 (mouse) mapping to 4 A5.

SOURCE

Bag-1 (CC9E8) is a mouse monoclonal antibody raised against a recombinant protein corresponding to a 200 amino acid region of the C-terminus of the Bag-1 molecule of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

Bag-1 (CC9E8) is recommended for detection of Bag-1 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 immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for Bag-1 siRNA (h): sc-29211, Bag-1 siRNA (m): sc-29784, Bag-1 siRNA (r): sc-61877, Bag-1 shRNA Plasmid (h): sc-29211-SH, Bag-1 shRNA Plasmid (m): sc-29784-SH, Bag-1 shRNA Plasmid (r): sc-61877-SH, Bag-1 shRNA (h) Lentiviral Particles: sc-29211-V, Bag-1 shRNA (m) Lentiviral Particles: sc-29784-V and Bag-1 shRNA (r) Lentiviral Particles: sc-61877-V.

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

Positive Controls: Bag-1 (h): 293T Lysate: sc-112723, Jurkat whole cell lysate: sc-2204 or HeLa whole cell lysate: sc-2200.

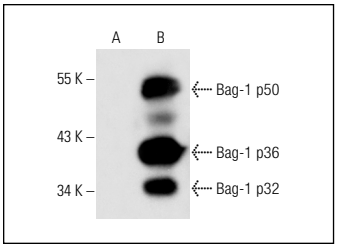
STORAGE

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

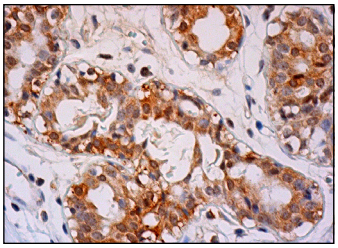
RESEARCH USE

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

DATA



Bag-1 (CC9E8): sc-33704. Western blot analysis of Bag-1 expression in non-transfected: sc-117752 (**A**) and human Bag-1 transfected: sc-112723 (**B**) 293T whole cell lysates.



Bag-1 (CC9E8): sc-33704. Immunoperoxidase staining of formalin fixed, paraffin-embedded human breast tissue showing cytoplasmic and nuclear staining of glandular cells.

SELECT PRODUCT CITATIONS

1. Yang, X., et al. 1999. Differential expression of antiapoptotic gene Bag-1 in human breast normal and cancer cell lines and tissues. Clin. Cancer Res. 5: 1816-1822.
2. Zhang, X. and Qian, S.B. 2011. Chaperone-mediated hierarchical control in targeting misfolded proteins to aggresomes. Mol. Biol. Cell 22: 3277-3288.
3. Jehle, K., et al. 2014. Coregulator control of androgen receptor action by a novel nuclear receptor-binding motif. J. Biol. Chem. 289: 8839-8851.
4. Fuchs, M., et al. 2015. A role for the chaperone complex BAG3-HSPB8 in actin dynamics, spindle orientation and proper chromosome segregation during mitosis. PLoS Genet. 11: e1005582.
5. Jodoin, R., et al. 2019. G-quadruplex located in the 5'UTR of the Bag-1 mRNA affects both its cap-dependent and cap-independent translation through global secondary structure maintenance. Nucleic Acids Res. 47: 10247-10266.
6. Monchi, M., et al. 2022. Association of high SARS-CoV-2 RNAemia with diabetes and mortality in critically ill COVID-19 patients. iScience 25: 104075.
7. Kuznik, N.C., et al. 2022. A chemical probe for BAG1 targets androgen receptor-positive prostate cancer through oxidative stress signaling pathway. iScience 25: 104175.
8. Pan, M., et al. 2023. Identification of an imidazopyridine-based compound as an oral selective estrogen receptor degrader for breast cancer therapy. Cancer Res. Commun. 3: 1378-1396.
9. Saurat, N., et al. 2024. Genome-wide CRISPR screen identifies neddylation as a regulator of neuronal aging and AD neurodegeneration. Cell Stem Cell 31: 1162-1174.e8.

PROTOCOLS

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