SANTA CRUZ BIOTECHNOLOGY, INC.

Apg-1 (m): 293T Lysate: sc-118469

BACKGROUND

The heat shock proteins (HSPs) comprise a group of highly conserved, abundantly expressed proteins with diverse functions, which include the assembly and sequestering of multiprotein complexes, transportation of nascent polypeptide chains across cellular membranes and regulation of protein folding. Heat shock proteins (also known as molecular chaperones) fall into six general families: HSP 90, HSP 70, HSP 60, the low molecular weight HSPs, the immunophilins and the HSP 110 family. The HSP 110 family (also known as the HSP 105 family) is composed of HSP 105, Apg-1 and Apg-2. Apg-1, also known as HSPA4L (heat shock 70 kDa protein 4-like) or Osp94 (osmotic stress protein 94), is an 839 amino acid protein that possesses chaperone activity *in vitro,* where it inhibits aggregation of citrate synthase. A homodimer, Apg-1 subcellularly localizes to cytoplasm and nucleus, and may translocate to nucleus after heat shock.

REFERENCES

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3. Georgopoulos, C. and Welch, W.J. 1993. Role of the major heat shock proteins as molecular chaperones. Annu. Rev. Cell Biol. 9: 601-634.
4. Todd, M.J., Viitanen, P.V. and Lorimer, G.H. 1994. Dynamics of the chaperonin ATPase cycle: implications for facilitated protein folding. Science 265: 659-666.
5. Yasuda, K., Nakai, A., Hatayama, T. and Nagata, K. 1995. Cloning and expression of murine high molecular mass heat shock proteins, HSP 105. J. Biol. Chem. 270: 29718-29723.
6. Kaneko, Y., Kimura, T., Kishishita, M., Noda, Y. and Fujita, J. 1997. Cloning of Apg-2 encoding a novel member of heat shock protein family. Gene 189: 19-24.
7. Xue, J.H., Fukuyama, H., Nonoguchi, K., Kaneko, Y., Kido, T., Fukumoto, M., Fujibayashi, Y., Itoh, K. and Fujita, J. 1998. Induction of Apg-1, a member of the HSP 110 family, following transient forebrain ischemia in the rat brain. Biochem. Biophys. Res. Commun. 247: 796-801.
8. Kumagai, J., Fukuda, J., Kodama, H., Murata, M., Kawamura, K., Itoh, H. and Tanaka, T. 2000. Germ cell-specific heat shock protein 105 binds to p53 in a temperature-sensitive manner in rat testis. Eur. J. Biochem. 267: 3073-3078.

CHROMOSOMAL LOCATION

Genetic locus: Hspa4l (mouse) mapping to 3 B.

PRODUCT

Apg-1 (m): 293T Lysate represents a lysate of mouse Apg-1 transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

APPLICATIONS

Apg-1 (m): 293T Lysate is suitable as a Western Blotting positive control for mouse reactive Apg-1 antibodies. Recommended use: 10-20 µl per lane.

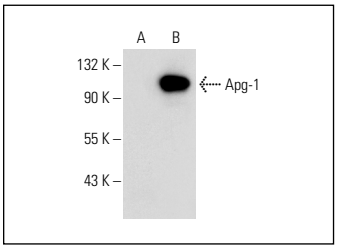
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

Apg-1 (B-7): sc-137007 is recommended as a positive control antibody for Western Blot analysis of enhanced mouse Apg-1 expression in Apg-1 transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

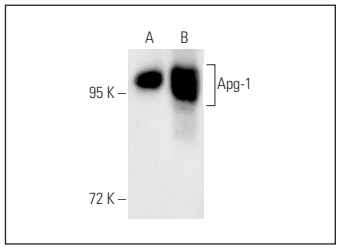
RECOMMENDED SUPPORT REAGENTS

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



Apg-1 (B-7): sc-137007. Western blot analysis of Apg-1 expression in non-transfected: sc-117752 (**A**) and mouse Apg-1 transfected: sc-118469 (**B**) 293T whole cell lysates.



Apg-1 (C-6): sc-137027. Western blot analysis of Apg-1 expression in non-transfected: sc-117752 (**A**) and mouse Apg-1 transfected: sc-118469 (**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.

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.