

# Apg-2 (F-10): sc-365140

## 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.

## REFERENCES

- Schlesinger, M.J., Ashburner, M. and Tissieres, A. 1982. Heat Shock: from Bacteria to Man. Cold Spring Harbor, NY: Cold Spring Harbor Laboratory.
- Hatayama, T., Tsujioka, K., Wakatsuki, T., Kitamura, T. and Imahara, H. 1992. Effects of low culture temperature on the induction of HSP 70 mRNA and the accumulation of HSP 70 and HSP 105 in mouse FM3A cells. *J. Biochem.* 111: 484-490.
- Georgopoulos, C. and Welch, W.J. 1993. Role of the major heat shock proteins as molecular chaperones. *Annu. Rev. Cell Biol.* 9: 601-634.
- 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.
- Yasuda, K., Nakai, A., Hatayama, T. and Nagata, K. 1995. Cloning and expression of murine high molecular mass heat shock proteins, HSP105. *J. Biol. Chem.* 270: 29718-29723.
- 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.
- 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.
- 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: HSPA4 (human) mapping to 5q31.1; Hspa4 (mouse) mapping to 11 B1.3.

## SOURCE

Apg-2 (F-10) is a mouse monoclonal antibody raised against Apg-2 of mouse origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## APPLICATIONS

Apg-2 (F-10) is recommended for detection of Apg-2 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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 solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for Apg-2 siRNA (h): sc-40652, Apg-2 siRNA (m): sc-40653, Apg-2 shRNA Plasmid (h): sc-40652-SH, Apg-2 shRNA Plasmid (m): sc-40653-SH, Apg-2 shRNA (h) Lentiviral Particles: sc-40652-V and Apg-2 shRNA (m) Lentiviral Particles: sc-40653-V.

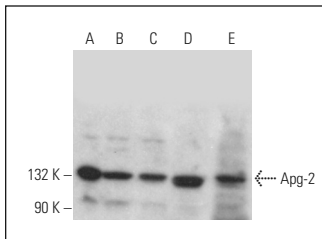
Molecular Weight of Apg-2: 120 kDa.

Positive Controls: F9 cell lysate: sc-2245, IMR-32 cell lysate: sc-2409 or RAW 264.7 whole cell lysate: sc-2211.

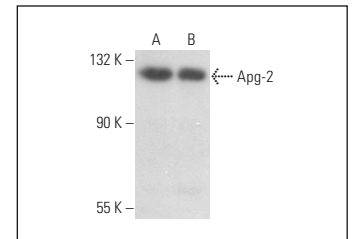
## RECOMMENDED SUPPORT REAGENTS

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. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

## DATA



Apg-2 (F-10): sc-365140. Western blot analysis of Apg-2 expression in F9 (A), WEHI-231 (B), Neuro-2A (C) and IMR-32 (D) whole cell lysates and human testis tissue extract (E).



Apg-2 (F-10): sc-365140. Western blot analysis of Apg-2 expression in F9 (A) and RAW 264.7 (B) whole cell lysates.

## 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.

## PROTOCOLS

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