

Gar22 (P-17): sc-86138

BACKGROUND

The Gas2 protein is thought to play a role in apoptosis by acting as a cell death substrate for caspases. Gas2, a component of the microfilament system, is cleaved by a caspase (caspase-3 or caspase-7) at asparagine 278 during apoptosis. The cleaved form of Gas2 dramatically induces the re-arrangement of the Actin cytoskeleton and causes potent changes in the shape of the affected cells. Gas2 is a cytoskeleton and peripheral membrane protein that co-localizes with Actin fibers at the cell border and along the stress fibers in growth-arrested fibroblasts. Gas2 is mainly membrane-associated, but when hyperphosphorylated it will accumulate at membrane ruffles, indicating Gas2 involvement in that process. Gar22 (Gas2-related protein on chromosome 22), also designated growth arrest-specific protein 2-like 1 (Gas2-like1), belongs to the Gas2 family and contains one CH (calponin-homology) domain. It is thought to be involved in the cross-linking of microtubules and microfilaments.

REFERENCES

- Zucman-Rossi, J., Legoix, P. and Thomas, G. 1996. Identification of new members of the Gas2 and Ras families in the 22q12 chromosome region. *Genomics* 38: 247-254.
- Collavin, L., Buzzai, M., Saccone, S., Bernard, L., Federico, C., DellaValle, G., Brancolini, C. and Schneider, C. 1998. cDNA characterization and chromosome mapping of the human Gas2 gene. *Genomics* 48: 265-269.
- Sgorbissa, A., Benetti, R., Marzinotto, S., Schneider, C. and Brancolini, C. 2000. Caspase-3 and caspase-7 but not caspase-6 cleave Gas2 *in vitro*: implications for microfilament reorganization during apoptosis. *J. Cell Sci.* 112: 4475-4482.
- Benetti, R., Del Sal, G., Monte, M., Paroni, G., Brancolini, C. and Schneider, C. 2001. The death substrate Gas2 binds m-calpain and increases susceptibility to p53-dependent apoptosis. *EMBO J.* 20: 2702-2714.
- Goriounov, D., Leung, C.L. and Liem, R.K. 2003. Protein products of human Gas2-related genes on chromosomes 17 and 22 (hGar17 and hGar22) associate with both microfilaments and microtubules. *J. Cell Sci.* 116: 1045-1058.
- Ragni, E., Fontaine, T., Gissi, C., Latgè, J.P. and Popolo, L. 2007. The Gas family of proteins of *Saccharomyces cerevisiae*: characterization and evolutionary analysis. *Yeast* 24: 297-308.

CHROMOSOMAL LOCATION

Genetic locus: GAS2L1 (human) mapping to 22q12.2; Gas2l1 (mouse) mapping to 11 A1.

SOURCE

Gar22 (P-17) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping within an internal region of Gar22 of human origin.

STORAGE

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

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-86138 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Gar22 (P-17) is recommended for detection of Gar22 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 solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Gar22 (P-17) is also recommended for detection of Gar22 in additional species, including bovine and porcine.

Suitable for use as control antibody for Gar22 siRNA (h): sc-75106, Gar22 siRNA (m): sc-145327, Gar22 shRNA Plasmid (h): sc-75106-SH, Gar22 shRNA Plasmid (m): sc-145327-SH, Gar22 shRNA (h) Lentiviral Particles: sc-75106-V and Gar22 shRNA (m) Lentiviral Particles: sc-145327-V.

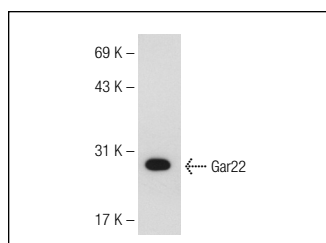
Molecular Weight of Gar22 isoforms: 73/36/35 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204 or HeLa whole cell lysate: sc-2200.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotting 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). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



Gar22 (P-17): sc-86138. Western blot analysis of Gar22 expression in Jurkat whole cell lysate.

RESEARCH USE

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