

Gar22 (h): 293T Lysate: sc-111001

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

1. 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.
2. 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.
3. 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.
4. 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.
5. 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.
6. 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.

PRODUCT

Gar22 (h): 293T Lysate represents a lysate of human Gar22 transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

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.

APPLICATIONS

Gar22 (h): 293T Lysate is suitable as a Western Blotting positive control for human reactive Gar22 antibodies.

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

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.