SANTA CRUZ BIOTECHNOLOGY, INC.

Gas2 (F-12): sc-398669

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Gas2 is a 313 amino acid protein encoded by the human gene GAS2. Gas2 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 and caspase-7) at Asparagine 278 during apoptosis. The cleaved form resulting from this dramatically induces the rearrangement of the Actin cytoskeleton and causes potent changes in the shape of the affected cells. Gas2 is believed to also be involved in the membrane ruffling process. During the G_0-G_1 transition phase Gas2 can be found phosphorylated on its serine residues. 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. Gas2 is specifically expressed at growth arrest and is ubiquitously expressed with highest levels found in liver, lung and kidney. There is no evidence, however, of Gas2 expression in spleen.

REFERENCES

1. Fleming, J.V., et al. 1998. Effects of nutrient deprivation and differentiation on the expression of growth-arrest genes (Gas and gadd) in F9 embryonal carcinoma cells. Biochem. J. 330: 573-579.
2. Collavin, L., et al. 1998. cDNA characterization and chromosome mapping of the human GAS2 gene. Genomics 48: 265-269.
3. Sgorbissa, A., et al. 1999. 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.

CHROMOSOMAL LOCATION

Genetic locus: GAS2 (human) mapping to 11p14.3; Gas2 (mouse) mapping to 7 B5.

SOURCE

Gas2 (F-12) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 273-298 near the C-terminus of Gas2 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.

Gas2 (F-12) is available conjugated to agarose (sc-398669 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-398669 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-398669 PE), fluorescein (sc-398669 FITC), Alexa Fluor® 488 (sc-398669 AF488), Alexa Fluor® 546 (sc-398669 AF546), Alexa Fluor® 594 (sc-398669 AF594) or Alexa Fluor® 647 (sc-398669 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-398669 AF680) or Alexa Fluor® 790 (sc-398669 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-398669 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

Gas2 (F-12) is recommended for detection of Gas2 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 Gas2 siRNA (h): sc-62368, Gas2 siRNA (m): sc-62369, Gas2 shRNA Plasmid (h): sc-62368-SH, Gas2 shRNA Plasmid (m): sc-62369-SH, Gas2 shRNA (h) Lentiviral Particles: sc-62368-V and Gas2 shRNA (m) Lentiviral Particles: sc-62369-V.

Molecular Weight (predicted) of Gas2: 35 kDa.

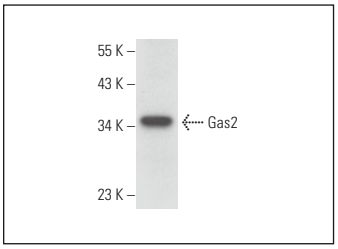
Molecular Weight (observed) of Gas2: 30-37 kDa.

Positive Controls: NIH/3T3 whole cell lysate: sc-2210, human liver extract: sc-363766 or A549 cell lysate: sc-2413.

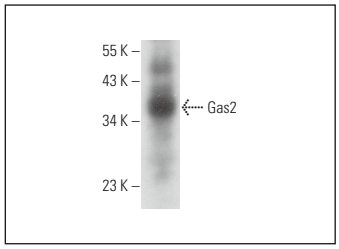
RECOMMENDED SUPPORT REAGENTS

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



Gas2 (F-12): sc-398669. Western blot analysis of Gas2 expression in NIH/3T3 whole cell lysate.



Gas2 (F-12): sc-398669. Western blot analysis of Gas2 expression in human liver tissue extract.

SELECT PRODUCT CITATIONS

1. Chen, T., et al. 2021. Cochlear supporting cells require Gas2 for cytoskeletal architecture and hearing. Dev. Cell 56: 1526-1540.e7.

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.