

Gas7 (E-13): sc-34371

BACKGROUND

Growth arrest specific proteins, including Gas1, Gas6 and Gas7, are activated in quiescent cells. Gas7 plays a role in neurite differentiation in cultured mouse cerebellar neurons and PC-12 cells, which makes it a potential therapeutic target to promote the re-establishment of neuronal connections in the injured or disease brain. The gene encoding human Gas7 maps to chromosome 17p13.1, which can translocate with MLL to form MLL-GAS7 fusion products. The Gas7 protein is expressed as three isoforms, a, b, and c, which are differentially expressed in all brain subregions.

REFERENCES

- Ju, Y.T., et al. 1998. GAS7: A gene expressed preferentially in growth-arrested fibroblasts and terminally differentiated Purkinje neurons affects neurite formation. *Proc. Natl. Acad. Sci. USA* 95: 11423-11428.
- Lazakovitch, E.M., et al. 1999. The GAS7 gene encodes two protein isoforms differentially expressed within the brain. *Genomics* 61: 298-306.
- Megonigal, M.D., et al. 2000. Detection of leukemia-associated MLL-Gas7 translocation early during chemotherapy with DNA topoisomerase II inhibitors. *Proc. Natl. Acad. Sci. USA* 97: 2814-2819.
- She, B.R., et al. 2002. Association of the growth-arrest-specific protein Gas7 with F-actin induces reorganization of microfilaments and promotes membrane outgrowth. *Exp. Cell Res.* 273: 34-44.
- Chao, C.C., et al. 2003. Involvement of Gas7 in nerve growth factor-independent and dependent cell processes in PC12 cells. *J. Neurosci. Res.* 74: 248-254.
- So, C.W., et al. 2003. MLL-Gas7 transforms multipotent hematopoietic progenitors and induces mixed lineage leukemias in mice. *Cancer Cell* 3: 161-171.
- Lortie, K., et al. 2005. The Gas7 protein potentiates NGF-mediated differentiation of PC12 cells. *Brain Res.* 1036: 27-34.

CHROMOSOMAL LOCATION

Genetic locus: GAS7 (human) mapping to 17p13.1; Gas7 (mouse) mapping to 11 B3.

SOURCE

Gas7 (E-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of Gas7 isoform b of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-34371 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

Gas7 (E-13) is recommended for detection of Gas7 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Gas7 (E-13) is also recommended for detection of Gas7 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for Gas7 siRNA (h): sc-45345, Gas7 siRNA (m): sc-45346, Gas7 shRNA Plasmid (h): sc-45345-SH, Gas7 shRNA Plasmid (m): sc-45346-SH, Gas7 shRNA (h) Lentiviral Particles: sc-45345-V and Gas7 shRNA (m) Lentiviral Particles: sc-45346-V.

Molecular Weight of Gas7 isoform a: 38 kDa.

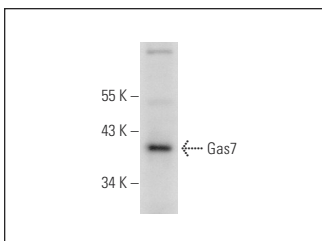
Molecular Weight of Gas7 isoform b: 48 kDa.

Positive Controls: mouse brain extract: sc-2253, mouse cerebellum extract: sc-2403 or PC-12 cell lysate: sc-2250.

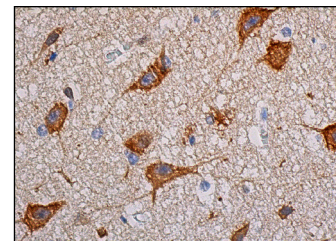
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto 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 donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 4) Immunohistochemistry: use ImmunoCruz™: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

DATA



Gas7 (E-13): sc-34371. Western blot analysis of Gas7 expression in mouse cerebellum tissue extract.



Gas7 (E-13): sc-34371. Immunoperoxidase staining of formalin fixed, paraffin-embedded human cerebral cortex tissue showing cytoplasmic staining of neuronal cells and glial cells.

RESEARCH USE

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