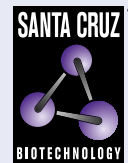


gremlin-1 (C-7): sc-515877



The Power to Question

BACKGROUND

The gremlin protein family contains antagonists of bone morphogenetic protein (BMP) signaling that are expressed in the neural crest. All family members are secreted proteins that act as BMP antagonists in embryonic explants and are expressed in the proximal airway epithelium of the lung during embryonic development. gremlin-1 is required for early limb outgrowth and patterning in the FGF4-SHH feedback loop, while gremlin-2 binds and blocks the activity of BMP-2 and BMP-4. The dorsaling factor gremlin belongs to a novel gene family that includes the head-inducing factor Cerberus and the tumor suppressor DAN. Additionally, secreted gremlin relays the Sonic hedgehog signal from the polarizing region to the apical ectodermal ridge.

CHROMOSOMAL LOCATION

Genetic locus: GREM1 (human) mapping to 15q13.3; Grem1 (mouse) mapping to 2 E4.

SOURCE

gremlin-1 (C-7) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 32-61 near the N-terminus of gremlin-1 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

gremlin-1 (C-7) is available conjugated to agarose (sc-515877 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-515877 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-515877 PE), fluorescein (sc-515877 FITC), Alexa Fluor® 488 (sc-515877 AF488), Alexa Fluor® 546 (sc-515877 AF546), Alexa Fluor® 594 (sc-515877 AF594) or Alexa Fluor® 647 (sc-515877 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-515877 AF680) or Alexa Fluor® 790 (sc-515877 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

gremlin-1 (C-7) is recommended for detection of gremlin-1 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 gremlin-1 siRNA (h): sc-39408, gremlin-1 siRNA (m): sc-39409, gremlin-1 shRNA Plasmid (h): sc-39408-SH, gremlin-1 shRNA Plasmid (m): sc-39409-SH, gremlin-1 shRNA (h) Lentiviral Particles: sc-39408-V and gremlin-1 shRNA (m) Lentiviral Particles: sc-39409-V.

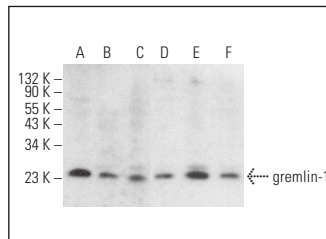
Molecular Weight of gremlin-1: 23 kDa.

Positive Controls: COLO 320DM cell lysate: sc-2226, A549 cell lysate: sc-2413 or Ramos cell lysate: sc-2216.

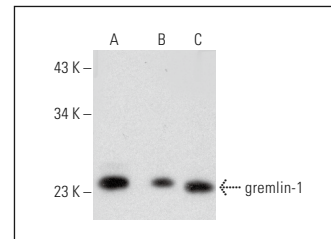
STORAGE

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

DATA



gremlin-1 (C-7): sc-515877. Western blot analysis of gremlin-1 expression in A549 (A), C2C12 (B), P19 (C), Sol8 (D), F9 (E) and L6 (F) whole cell lysates.



gremlin-1 (C-7): sc-515877. Western blot analysis of gremlin-1 expression in COLO 320DM (A), A549 (B) and Ramos (C) whole cell lysates.

SELECT PRODUCT CITATIONS

- Sun, Z., et al. 2020. Increased expression of gremlin-1 promotes proliferation and epithelial mesenchymal transition in gastric cancer cells and correlates with poor prognosis of patients with gastric cancer. *Cancer Genomics Proteomics* 17: 49-60.
- Lin, S., et al. 2021. Identification of miR-4793-3p as a potential biomarker for bacterial infection in patients with hepatitis B virus-related liver cirrhosis: a pilot study. *Exp. Ther. Med.* 21: 120.
- Tejedor-Santamaria, L., et al. 2022. Epigenetic modulation of gremlin-1/NOTCH pathway in experimental crescentic immune-mediated glomerulonephritis. *Pharmaceuticals* 15: 121.
- Gao, Y., et al. 2022. HDAC5-mediated Smad7 silencing through MEF2A is critical for fibroblast activation and hypertrophic scar formation. *Int. J. Biol. Sci.* 18: 5724-5739.
- Lee, H.G., et al. 2022. Nanoscale biophysical properties of small extracellular vesicles from senescent cells using atomic force microscopy, surface potential microscopy, and Raman spectroscopy. *Nanoscale Horiz.* 7: 1488-1500.
- Sun, H., et al. 2023. Single-cell RNA sequencing reveals resident progenitor and vascularization-associated cell subpopulations in rat annulus fibrosus. *J. Orthop. Translat.* 38: 256-267.
- Choi, S.W., et al. 2023. Adipokine gremlin-1 promotes hepatic steatosis via upregulation of ER stress by suppressing autophagy-mediated signaling. *J. Cell. Physiol.* 238: 966-975.
- Zhang, Z., et al. 2023. GREM1, LRPPRC and SLC39A4 as potential biomarkers of intervertebral disc degeneration: a bioinformatics analysis based on multiple microarray and single-cell sequencing data. *BMC Musculoskelet. Disord.* 24: 729.

RESEARCH USE

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