

gremlin-1 (N-20): sc-18274

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 (N-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of gremlin-1 of human origin.

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml of PBS with 0.1% sodium azide and 0.2% gelatin.

Blocking peptide available for competition studies, sc-18274 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

gremlin-1 (N-20) is recommended for detection of gremlin-1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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); non cross-reactive with gremlin-2.

gremlin-1 (N-20) is also recommended for detection of gremlin-1 in additional species, including equine, canine, bovine and porcine.

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.

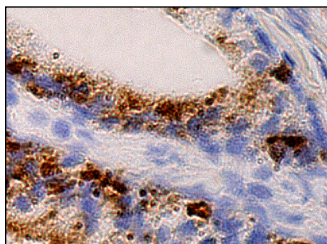
Molecular Weight of gremlin-1: 23 kDa.

Positive Controls: mouse brain extract: sc-2253.

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) 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. 3) Immunohistochemistry: use ImmunoCruz™: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

DATA



gremlin-1 (N-20): sc-18274. Immunoperoxidase staining of formalin fixed, paraffin-embedded human prostate tissue showing cytoplasmic staining of glandular cells.

SELECT PRODUCT CITATIONS

1. Koli, K., et al. 2006. Bone morphogenetic protein-4 inhibitor gremlin is overexpressed in idiopathic pulmonary fibrosis. *Am. J. Pathol.* 169: 61-71.
2. Schuetz, C., et al. 2006. Progression-specific genes identified by expression profiling of matched ductal carcinomas *in situ* and invasive breast tumors, combining laser capture microdissection and oligonucleotide microarray analysis. *Cancer Res.* 66: 5278-5286.
3. Krachulec, J., et al. 2012. GATA4 is a critical regulator of gonadectomy-induced adrenocortical tumorigenesis in mice. *Endocrinology* 153: 2599-2611.

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.

MONOS
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Try **gremlin-1 (4C2): sc-293426**, our highly recommended monoclonal alternative to gremlin-1 (N-20).