

netrin-1 (C-19): sc-9292

BACKGROUND

Netrin proteins are a family of laminin-related secreted proteins that provide guidance signals for axonal growth and cell migration during development. Netrin-1, which is the mammalian homolog of UNC-6 from *C. elegans*, is largely expressed in the developing nervous system and in mesodermal tissues. Netrin-1 is expressed by the floor plate as either a cell associated protein or in a diffusible form, and it binds to several surface receptor components, including deleted in colorectal cancer (DCC) and neogenin. During embryonic development, netrin-1 diffuses through the neuronal epithelium, where it forms a chemoattractant gradient that directs axonal migration to the ventral mid-line of the spinal cord. Netrin-2 and the corresponding mouse homolog netrin-3 are expressed primarily in the lower two-thirds of the spinal cord, and, like netrin-1, they can either attract or repel commissural axons at a distance. Netrin signaling is dependent on the concentration of calcium outside the cell and the level of PKA activity. In axonal cells, a reduction in PKA activity converts the responsiveness of the axons to the netrin proteins, as the cells are repelled, rather than attracted, by the netrin gradient.

CHROMOSOMAL LOCATION

Genetic locus: NTN1 (human) mapping to 17p13.1; Ntn1 (mouse) mapping to 11 B3.

SOURCE

netrin-1 (C-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of netrin-1 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-9292 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

netrin-1 (C-19) is recommended for detection of netrin-1 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).

netrin-1 (C-19) is also recommended for detection of netrin-1 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for netrin-1 siRNA (h): sc-42044, netrin-1 siRNA (m): sc-42045, netrin-1 shRNA Plasmid (h): sc-42044-SH, netrin-1 shRNA Plasmid (m): sc-42045-SH, netrin-1 shRNA (h) Lentiviral Particles: sc-42044-V and netrin-1 shRNA (m) Lentiviral Particles: sc-42045-V.

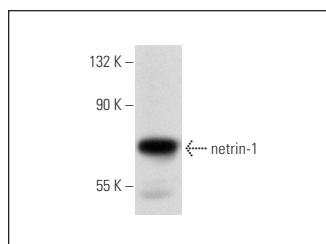
Molecular Weight of netrin-1: 75 kDa.

Positive Controls: mouse heart extract: sc-2254.

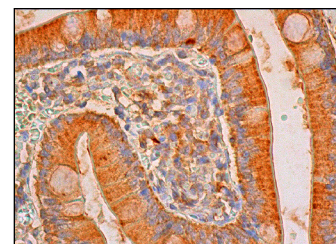
RECOMMENDED SECONDARY REAGENTS

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



netrin-1 (C-19): sc-9292. Western blot analysis of netrin-1 expression in mouse heart tissue extract.



netrin-1 (C-19): sc-9292. Immunoperoxidase staining of formalin fixed, paraffin-embedded human small intestine tissue showing cytoplasmic staining of glandular cells.

SELECT PRODUCT CITATIONS

1. Yebra, M., et al. 2003. Recognition of the neural chemoattractant Netrin-1 by integrins $\alpha 6 \beta 4$ and $\alpha 3 \beta 1$ regulates epithelial cell adhesion and migration. *Development* 5: 695-707.
2. Dakouane-Giudicelli, M., et al. 2010. Characterization and expression of netrin-1 and its receptors UNC5B and DCC in human placenta. *J. Histochem. Cytochem.* 58: 73-82.

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.



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Try **netrin-1 (5H8): sc-293197**, our highly recommended monoclonal alternative to netrin-1 (C-19).