

netrin-2 (N-18): sc-9293

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 midline 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.

REFERENCES

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- Livesey, F.J. and Hunt, S.P. 1997. Netrin and netrin receptor expression in the embryonic mammalian nervous system suggests roles in retinal, striatal, nigral, and cerebellar development. *Mol. Cell. Neurosci.* 8: 417-429.
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- Meyerhardt, J.A., et al. 1999. Netrin-1: interaction with deleted in colorectal cancer (DCC) and alterations in brain tumors and neuroblastomas. *Cell Growth Differ.* 10: 35-42.

CHROMOSOMAL LOCATION

Genetic locus: NTN3 (human) mapping to 16p13.3; Ntn3 (mouse) mapping to 17 A3.3.

SOURCE

netrin-2 (N-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of netrin-2 of human origin.

RESEARCH USE

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

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-9293 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

netrin-2 (N-18) is recommended for detection of netrin-2 of human origin and netrin-3 of mouse and rat 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

netrin-2 (N-18) is also recommended for detection of netrin-2 and netrin-3 in additional species, including bovine and porcine.

Suitable for use as control antibody for netrin-2 siRNA (h): sc-42046, netrin-3 siRNA (m): sc-42049, netrin-2 shRNA Plasmid (h): sc-42046-SH, netrin-3 shRNA Plasmid (m): sc-42049-SH, netrin-2 shRNA (h) Lentiviral Particles: sc-42046-V and netrin-3 shRNA (m) Lentiviral Particles: sc-42049-V.

Molecular Weight of netrin-2: 61 kDa.

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.

STORAGE

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

PROTOCOLS

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