

netrin-5 (G-12): sc-514786

BACKGROUND

Netrin proteins are a family of laminin-related secreted proteins that provide guidance signals for axonal growth and cell migration during development. 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. Netrin-5, also known as NTN5 or netrin-1-like protein, is a 489 amino acid secreted protein that exists as two alternatively spliced isoforms. Containing three laminin EGF-like domains, and one NTR domain, netrin-5 is encoded by a gene that maps to human chromosome 19q13.42. Chromosome 19 consists of over 63 million bases, houses approximately 1,400 genes and is recognized for having the greatest gene density of the human chromosomes. It is the genetic home for a number of immunoglobulin (Ig) superfamily members, including the killer cell and leukocyte Ig-like receptors, a number of ICAMs, the CEACAM and PSG families, and Fc receptors (FcRs).

REFERENCES

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2. Livesey, F.J. 1999. Netrins and netrin receptors. *Cell. Mol. Life Sci.* 56: 62-68.
3. Trowsdale, J., et al. 2001. The genomic context of natural killer receptor extended gene families. *Immunol. Rev.* 181: 20-38.
4. Leeb, T. and Müller, M. 2004. Comparative human-mouse-rat sequence analysis of the ICAM gene cluster on HSA 19p13.2 and a 185-kb porcine region from SSC 2q. *Gene* 343: 239-244.
5. Kang, J.S., et al. 2004. Netrins and neogenin promote myotube formation. *J. Cell Biol.* 167: 493-504.
6. Kennedy, T.E., et al. 2006. Axon guidance by diffusible chemoattractants: a gradient of netrin protein in the developing spinal cord. *J. Neurosci.* 26: 8866-8874.
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CHROMOSOMAL LOCATION

Genetic locus: NTN5 (human) mapping to 19q13.33.

SOURCE

netrin-5 (G-12) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 252-278 within an internal region of netrin-5 of human origin.

STORAGE

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

PRODUCT

Each vial contains 200 µg IgM kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-514786 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

netrin-5 (G-12) is recommended for detection of netrin-5 of 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 netrin-5 siRNA (h): sc-97160, netrin-5 shRNA Plasmid (h): sc-97160-SH and netrin-5 shRNA (h) Lentiviral Particles: sc-97160-V.

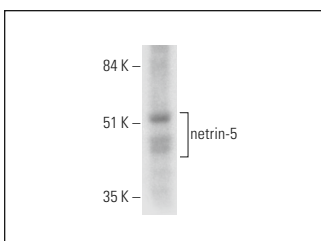
Molecular Weight of netrin-5 isoforms: 53/37 kDa.

Positive Controls: human heart extract: sc-363763.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein L-Agarose: sc-2336 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



netrin-5 (G-12): sc-514786. Western blot analysis of netrin-5 expression in human heart tissue extract.

RESEARCH USE

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

PROTOCOLS

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