

netrin G1 (N-20): sc-51369

BACKGROUND

Netrin G1 and netrin G2, also referred to as laminin-1 and laminin-2, are membrane bound axon guidance molecules involved in synaptic formation and maintenance. They comprise a subgroup within the UNC-6/netrin family. Both genes have been associated with schizophrenia involving single nucleotide polymorphisms. They are both expressed in the brain but G1 is most predominantly expressed in the thalamus and G2 is most predominantly expressed in the cortex. These two proteins differ from classical netrins by their failure to bind netrin receptors, the presence of a glycosyl phosphatidylinositol membrane anchor, and the generation of multiple isoforms. Netrin G1 has at least nine isoforms, all of which are expressed in adult brain. Isoforms G1a, c, d, and e are also expressed in fetal brain. G1c and G1d are the most highly expressed netrin G1 isoforms. Netrin G1 is involved in NMDA receptor function and may play a role in Rett syndrome (RTT), atypical autism, epilepsy and mental retardation.

REFERENCES

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2. Fukasawa, M., Aoki, M., Yamada, K., Iwayama-Shigeno, Y., Takao, H., Meerabux, J., Toyota, T., Nishikawa, T. and Yoshikawa, T. 2004. Case-control association study of human netrin G1 gene in Japanese schizophrenia. *J. Med. Dent. Sci.* 51: 121-128.
3. Miyashita, T., Nishimura-Akiyoshi, S., Itohara, S. and Rockland, K.S. 2005. Strong expression of netrin G2 in the monkey claustrum. *Neuroscience* 136: 487-496.
4. Meerabux, J.M., Ohba, H., Fukasawa, M., Suto, Y., Aoki-Suzuki, M., Nakashiba, T., Nishimura, S., Itohara, S. and Yoshikawa, T. 2005. Human netrin G1 isoforms show evidence of differential expression. *Genomics* 86: 112-116.

CHROMOSOMAL LOCATION

Genetic locus: NTNG1 (human) mapping to 1p13.3; Ntng1 (mouse) mapping to 3 G1.

SOURCE

netrin G1 (N-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of netrin G1 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-51369 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

PROTOCOLS

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

APPLICATIONS

Netrin G1 (N-20) is recommended for detection of precursor and mature netrin G1 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

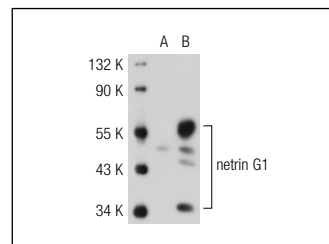
netrin G1 (N-20) is also recommended for detection of precursor and mature netrin G1 in additional species, including canine and porcine.

Suitable for use as control antibody for netrin G1 siRNA (h): sc-72290, Netrin G1 siRNA (m): sc-149917, netrin G1 shRNA Plasmid (h): sc-72290-SH, Netrin G1 shRNA Plasmid (m): sc-149917-SH, netrin G1 shRNA (h) Lentiviral Particles: sc-72290-V and Netrin G1 shRNA (m) Lentiviral Particles: sc-149917-V.

Molecular Weight of netrin G1: 61 kDa.

Positive Controls: IMR-32 cell lysate: sc-2409, EOC20 whole cell lysate or mouse brain extract: sc-2253.

DATA



netrin G1 (N-20): sc-51369. Western blot analysis of netrin G1 expression in non-transfected: sc-117752 (A) and human netrin G1 transfected: sc-114149 (B) 293T whole cell lysates.

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.



Try **netrin G1 (D-2): sc-271774** or **netrin G1 (H-4): sc-393665**, our highly recommended monoclonal alternatives to netrin G1 (N-20).