

netrin G1 (H-55): sc-292272

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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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 F3.

SOURCE

netrin G1 (H-55) is a rabbit polyclonal antibody raised against amino acids 175-229 mapping within an internal region 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.

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.

APPLICATIONS

netrin G1 (H-55) is recommended for detection of 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 (H-55) is also recommended for detection of netrin G1 in additional species, including equine, canine, porcine and avian.

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: mouse brain extract: sc-2253, EOC20 whole cell lysate or mouse hypothalamus tissue extract: sc-364242.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

PROTOCOLS

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


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Try **netrin G1 (D-2): sc-271774** or **netrin G1 (H-4): sc-393665**, our highly recommended monoclonal alternatives to netrin G1 (H-55).