BACKGROUND
Netrin G1 and netrin G2, also referred to as laminet-1 and laminet-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 G1 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 G1α, 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

CHROMOSOMAL LOCATION
Genetic locus: NTNG1 (human) mapping to 1p13.3; Ntng1 (mouse) mapping to 3 F3.

SOURCE
netrin G1 (D-2) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 47-77 near the N-terminus of netrin G1 of human origin.

PRODUCT
Each vial contains 200 µg IgG1 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-271774 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

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

APPLICATIONS
netrin G1 (D-2) is recommended for detection of precursor and mature netrin G1 of mouse, rat and 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), 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 G1 (D-2) is also recommended for detection of precursor and mature netrin G1 in additional species, including canine, bovine 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: netrin G1 (h): 293T Lysate: sc-114149.

RECOMMENDED SUPPORT REAGENTS
To ensure optimal results, the following support reagents are recommended:

DATA

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.