

NTN (D-10): sc-393626

BACKGROUND

Glial cell line-derived neurotrophic factor (GDNF) and the related neurotrophic factor neurturin (NTN) are potent survival factors for central and peripheral neurons. Two receptors for these factors, GDNFR α (also designated RETL1 or TrnR1) and RETL2 (also designated TrnR2), have been identified. The receptors do not contain transmembrane domains and are attached to the cell membrane by glycosyl-phosphoinositol linkage. Binding of GDNF or NTN to either of these receptors leads to the activation of the tyrosine kinase Ret. GDNF and NTN have also been shown to be capable of activating the MAP kinase and PI 3-kinase pathways, indicating a potential role for these proteins in neuronal survival and in the development of many neuronal populations.

REFERENCES

1. Lin, L.F., et al. 1993. GDNF: a glial cell line-derived neurotrophic factor for midbrain dopaminergic neurons. *Science* 260: 1130-1132.
2. Kotzbauer, P.T., et al. 1996. Neurturin, a relative of glial-cell-line derived neurotrophic factor. *Nature* 384: 467-470.
3. Jing, S., et al. 1997. GFR α -2 and GFR α -3 are two new receptors for ligands of the GDNF family. *J. Biol. Chem.* 272: 33111-33117.
4. Widenfalk, J., et al. 1997. Neurturin and glial cell line-derived neurotrophic factor receptor- β (GDNFR- β), novel proteins related to GDNF and GDNFR- α with specific cellular patterns of expression suggesting roles in the developing and adult nervous system and in peripheral organs. *J. Neurosci.* 17: 8506-8519.

CHROMOSOMAL LOCATION

Genetic locus: NRTN (human) mapping to 19p13.3; Nrtn (mouse) mapping to 17 D.

SOURCE

NTN (D-10) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 171-197 at the C-terminus of NTN of human origin.

PRODUCT

Each vial contains 200 μ g IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

NTN (D-10) is available conjugated to agarose (sc-393626 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-393626 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-393626 PE), fluorescein (sc-393626 FITC), Alexa Fluor® 488 (sc-393626 AF488), Alexa Fluor® 546 (sc-393626 AF546), Alexa Fluor® 594 (sc-393626 AF594) or Alexa Fluor® 647 (sc-393626 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-393626 AF680) or Alexa Fluor® 790 (sc-393626 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-393626 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

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APPLICATIONS

NTN (D-10) is recommended for detection of NTN of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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).

NTN (D-10) is also recommended for detection of NTN in additional species, including canine, bovine and porcine.

Suitable for use as control antibody for NTN siRNA (h): sc-41968, NTN siRNA (m): sc-41969, NTN shRNA Plasmid (h): sc-41968-SH, NTN shRNA Plasmid (m): sc-41969-SH, NTN shRNA (h) Lentiviral Particles: sc-41968-V and NTN shRNA (m) Lentiviral Particles: sc-41969-V.

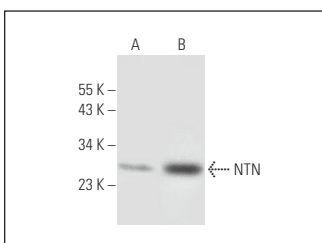
Molecular Weight of NTN: 22 kDa.

Positive Controls: mouse eye extract: sc-364241 or rat eye extract: sc-364805.

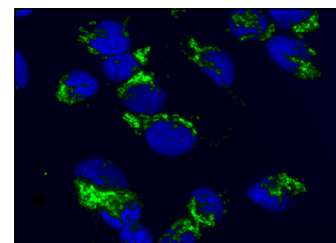
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ 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 A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgG κ BP-FITC: sc-516140 or m-IgG κ 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



NTN (D-10): sc-393626. Western blot analysis of NTN expression in mouse eye (A) and rat eye (B) tissue extracts.



NTN (D-10): sc-393626. Immunofluorescence staining of methanol-fixed HepG2 cells showing cytoplasmic localization.

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.

PROTOCOLS

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