

Neurotensin (N-17): sc-7593

BACKGROUND

The Neurotensin precursor (also known as Pro-NT/NMN) is a 170 amino acid protein that is cleaved at carboxy terminal dibasic residues by prohormone convertase to generate three processed peptides, designated Neurotensin (NT), Neuromedin N (also known as NMN) and large Neuromedin N (also known as NMN-125). The Neurotensin precursor is processed in the central nervous system and in the intestine to generate the 13 amino acid processed Neurotensin peptide. While the processed Neurotensin peptide functions as a neurotransmitter to modulate dopaminergic signaling pathways in the brain, it acts as a parahormone that may contribute to the growth of human colon cancers in the gut. The processed peptides Neurotensin and Neuromedin N bind to the G-protein coupled Neurotensin receptor (NTR), resulting in the hydrolysis of phosphatidylinositols and the mobilization of calcium.

REFERENCES

1. Kislauskis, E., et al. 1988. The rat gene encoding neurotensin and neuromedin N. Structure, tissue-specific expression, and evolution of exon sequences. *J. Biol. Chem.* 263: 4963-4968.
2. Shi, W.X., et al. 1992. Actions of neurotensin: a review of the electrophysiological studies. *Ann. N.Y. Acad. Sci.* 668: 129-145.
3. de Nadai, F., et al. 1993. Biosynthesis and posttranslational processing of the neurotensin/neuromedin N precursor in the rat medullary thyroid carcinoma 6-23 cell line. Effect of dexamethasone. *Endocrinology* 132: 1614-1620.
4. de Nadai, F., et al. 1994. Post-translational processing of the neurotensin/neuromedin N precursor in the central nervous system of the rat—I. Biochemical characterization of maturation products. *Neuroscience* 60: 159-166.
5. Vincent, J.P. 1995. Neurotensin receptors: binding properties, transduction pathways, and structure. *Cell. Mol. Neurobiol.* 15: 501-512.
6. Barbero, P., et al. 1998. PC5-A-mediated processing of pro-neurotensin in early compartments of the regulated secretory pathway of PC5-transfected PC12 cells. *J. Biol. Chem.* 273: 25339-25346.
7. Rovere, C., et al. 1998. Pro-neurotensin/neuromedin N expression and processing in human colon cancer cell lines. *Biochem. Biophys. Res. Commun.* 246: 155-159.

CHROMOSOMAL LOCATION

Genetic locus: NTS (human) mapping to 12q21.31.

SOURCE

Neurotensin (N-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of Neurotensin 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-7593 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Neurotensin (N-17) is recommended for detection of Neurotensin precursor and NMN-125 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

Neurotensin (N-17) is also recommended for detection of Neurotensin precursor and NMN-125 in additional species, including canine, porcine and avian.

Suitable for use as control antibody for Neurotensin siRNA (h): sc-42115, Neurotensin shRNA Plasmid (h): sc-42115-SH and Neurotensin shRNA (h) Lentiviral Particles: sc-42115-V.

Molecular Weight of Neurotensin: 20 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

SELECT PRODUCT CITATIONS

1. Moraes, J.C., et al. 2009. High-fat diet induces apoptosis of hypothalamic neurons. *PLoS ONE* 4: e5045.

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 or our catalog for detailed protocols and support products.



Try **Neurotensin (E-5): sc-377503**, our highly recommended monoclonal alternative to Neurotensin (N-17).