

# Neurotensin (S-17): sc-7594

## 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 3 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. Kislaukis, 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 (mouse) mapping to 10 D1.

## SOURCE

Neurotensin (S-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of Neurotensin of rat 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-7594 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

Neurotensin (S-17) is recommended for detection of Neurotensin precursor and NMN-125 of mouse and rat 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).

Suitable for use as control antibody for Neurotensin siRNA (m): sc-42116, Neurotensin shRNA Plasmid (m): sc-42116-SH and Neurotensin shRNA (m) Lentiviral Particles: sc-42116-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.

## 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](http://www.scbt.com) or our catalog for detailed protocols and support products.