ALPHA DIAGNOSTIC INTERNATIONAL

Product Specification Sheet

Neurotensin Receptor 3 (NTR3)/Sortilin Antibodies

Cat. NTR31-S	Rabbit Anti-Human NTR3 antiserum # 1	**SIZE**: 100 ul
Cat. NTR31-A	Rabbit Anti-Human NTR3 IgG # 1(aff pure)	**SIZE**: 100 ug
Cat. NTR31-P	Human NTR3 Control/blocking peptide # 1	**SIZE**: 100 ug

Neurotensin (NT) is an endogenous tridecapeptide neurotransmitter that triggers hypothermic and naloxone-insensitive analgesic responses, whereas peripheral effects include hypotension, decrease gastric acid release, potentiation of lipid digestion. NT causes contraction of smooth muscle. NT is widely distributed throughout the CNS. NT gene (human chromosome 12q21) produces both NT and neuromedin N (NN). NT initiates its biological action by interacting with two distinct G-protein coupled receptors (**NTR1 and NTR2**). Recently, a third receptor **NTR3** has been identified that is identical to **gp95/sortilin** and it is not coupled via the G-proteins. All three receptors bind NT through its C-terminal hexapeptide sequence (**8 RRPYIL 13).** Biologically active **NT (NT8-13**) has also been shown to interact with the extracellular domain 3 of NTR1.

Most recently, a novel, non-GPCR, **NTR3/sortilin/gp95/NT3** (mouse 825 aa, rat 748 aa; human 833 aa, chromosome 1p21.3; ~92% identity between human and mouse) also binds NT. Sortilin was initially isolated as by its affinity for receptor-associated protein (RAP). NTR3, the first non-GPCR neuropeptides receptor, sequence includes a putative secretory signal peptide, a furin cleavage site, and a single transmembrane domain near the C-terminus. The mature protein has 44 N-terminal residues removed during processing. It is homologous to the yeast protein Vps10p and the human sortilin-related receptor. The C terminus of the protein contains a lysosomal sorting motif shared by the mannose-6-phosphate receptors. NTR3 is expressed at high levels in brain, spinal cord, heart, skeletal muscle, thyroid, placenta, and testis.

Source of Antigen and Antibodies

Antigen	18-aa peptide of Human NTR3; (gene accession # Q99523) **Designated (NTR31-P or control peptide/blocking peptide**) conjugated to KLH
Location	~~N-terminal, Extracellular
Ab Host/type	Rabbit, Polyclonal unpurified antiserum (#**NTR31**-S) and IgG, purified over antigen-agarose (Cat # **NTR31**-A)
2-Ab	Cat # 20320, goat anti-rabbit IgG-HRP (AP, biotin, FITC conjugates also available).
-ve control	# 20009-1, Rabbit (non-immune) IgG, purified, suitable for ELISA, Western, IHC as –ve control

Form & Storage of Antibodies/Peptide Control

Antiserum (unpurified)
100ul solution lyophilized powder
Supplied in Buffer: 0.05% azide
Reconstitute powder in 100 ul PBS

Affinity pure IgG
100 ug/100ul solution lyophilized powder
Supplied in **Buffer**: PBS+0.1% BSA
Reconstitute powder in PBS at 1mg/ml

Control/blocking peptide
100 ug/100 ul solution lyophilized powder
Supplied in Buffer: PBS pH 7.5,
Reconstitute powder in PBS at 1 mg/ml.

Storage

Short-term: unopened, undiluted liquid vials at -20OC and powder at 4oC or -20oC..

Long-term: at –20C or below in suitable aliquots after reconstitution. Do not freeze and thaw and store working, diluted solutions.

Stability: 6-12 months at –20oC or below.
Shipping: 4oC for solutions and room temp for powder

Recommended Usage

Western Blotting (1:1K-5K for neat serum and 1-10 ug/ml for affinity pure using Chemiluminescence technique). NTR3/Sortilin is approx 95-105 kda.

ELISA (1:100K; using 50-100 ng control peptide/well).

Histochemistry & Immunofluorescence: Not tested. we recommend the use of affinity purified antibody at 2-20 ug/ml in formaldehyde fixed tissue.

Specificity & Cross-reactivity

The Human NTR31-P sequence is 94% conserved in rat and mouse NTR3/sortilin. No significant sequence homology exist with other NTR1 or NTR2 or other GPCR. Antibody cross-reactivity in various species has not been studied. Control peptide, because of its low mol. Wt (<3 kDa), is not suitable for Western. It should be used for ELISA or antibody blocking experiments (use 5-10 ug control peptide per 1 ug of aff pure IgG or 1 ul antiserum) to confirm antibody specificity (see detailed protocol at: www.4adi.com\data\abblock.html).

General References: (1) Petersen CM et al (1997) J. Biol. Chem. 272, 3599; Mazella J et al (1998) J. Biol. Chem. 273, 26273; Morris NJ et al (1998) J. Biol. Chem. 273, 3582; Lin BZ et al (1997) J. Biol. Chem. 272, 24145.

*This product is for in vitro research use only.

Some New Antibodies from ADI…

• Neuromedin U, NMUR1 and NMUR2 antibodies, NTR1-3, Ghrelin and Motilin receptors, Orexin and orexin receptors, CART, and Leptin receptors

Western Blot recycling kit (Use the same blot to probe with multiple antibodies) **recycle blot in 5-10 min.**
NTR31-S-A-P 50322A

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