ALPHA DIAGNOSTIC INTERNATIONAL

Product Specification Sheet

Neurotensin (NT) Antibodies

Cat. NT61-S	Rabbit Anti-Human NT antiserum (Ab # 1)	**SIZE**: 100 ul
Cat. NT61-A	Rabbit Anti-Human NT Ig G# 1(aff pure)	**SIZE**: 100 ug
Cat. NT61-P	Human NT Control/blocking peptide # 1	**SIZE**: 100 ug

Neurotensin (NT) is an endogenous tridecapeptide neurotransmitter (pGlu-Leu-Tyr-Glu-Asn-Lys-Pro-Arg-Arg-pro-Tyr-Ile-Leu-OH) that was originally isolated from bovine hypothalamus. NT influences distinct central and peripheral physiological functions in mammals. Central administration of NT modulates dopaminergic transmission and 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. It has been localized to catecholamine-containing neurons. NT gene (human chromosome 12q21) produces both NT and neuromedin N (NN). In the rat, the NT precursor consists of a 169-aa polypeptide. The signal peptide (1-22 aa) is removed to produce a peptide that is further processed to produce NN (142-147 aa) and NT (150-162 aa). NT sequence is completely conserved in mouse, rat, human, canine, bovine etc. 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 (between TM6-7) of NTR1.

FUNCTION: Neurotensin may play an endocrine or paracrine role in the regulation of fat metabolism. It causes contraction of smooth muscle.
SUBCELLULAR LOCATION: Secreted. Cytoplasmic vesicle, secretory vesicle. Note=Packaged within secretory vesicles.
SIMILARITY: Belongs to the neurotensin family.
Protein name Neurotensin/neuromedin N [Precursor]
Synonyms None
Gene name Name: NTS

Source of Antigen and Antibodies

Antigen	13aa peptide of Human NT61; (protein accession #P30990 , refs 1) **Designated (NT61-P or control peptide**). conjugated to KLH; Epitope location ~N-terminal
Ab Host/type	Rabbit, Polyclonal Aff pure IgG(**cat #NT61-A**) purified over the antigen column
Ab Format	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 20°C and powder at 4°C or -20°C..
Long-term: at –20°C or below in suitable aliquots after reconstitution. Do not freeze and thaw and store working, diluted solutions.

Stability: 6-12 months at –20°C or below.
Shipping: 4°C 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).

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 NT61-P sequence shows is completely conserved in human, mouse, rat, bovine, canine, and 92% in G. pig NT. No significant sequence homology exist with other neuromedins. 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

General References: (1) Howard AD et al (2000) Nature 406, 70; Fuji R et al (2000) JBC 275, 21068; Raddatz R et al (2000) JBC 275, 32452; Shan L et al (2000) JBC 275, 39482; Hosoya M et al (2000) JBC 275, 29528; Szekeres PG et al (2000) JBC 275, 20247.

*This product is for in vitro research use only.

Some New Antibodies from ADI…

- Neuromedin U, NMU and NMUR1 and NMUR2 antibodies, Neurotensin receptors, Ghrelin 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.**

Study distribution of proteins in **pre-made protein blots of brain, kidney, GI-tract, and major tissues**

NT61-S-A-P 70907J

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