ALPHA DIAGNOSTIC INTERNATIONAL

Product Specification Sheet

Neurotensin Receptor 1 (NTR1) Antibodies

Cat. NTR11-S	Rabbit Anti-Mouse NTR1 antiserum (Ab # 1)	**SIZE**: 100 ul
Cat. NTR11-A	Rabbit Anti-Mouse NTR1 Ig G # 1(affinity pure)	**SIZE**: 100 ug
Cat. NTR11-P	Mouse NTR1 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 (between TM6-7) of NTR1.

NTR1/NTRH/NTSR1/NT1 (mouse/rat 424 aa; human 418 aa, chromosome 20q1; ~84% interspecies sequence homology) is the levocabastine-insensitive, high affinity receptor for NT. It has the typical structure of GPCR: 7 TM domains with extracellular N-terminus and cytoplasmic C-terminus. It is shown to mediate a number of peripheral and central NT responses, including the neuroleptic-like effects of the peptide. It is highly expressed in the brain, small intestine, and other peripheral tissues.

FUNCTION: Catalyzes the phosphorylation of the 3'-hydroxyl group of dephosphocoenzyme A to form coenzyme A (By similarity).
SUBCELLULAR LOCATION: Cytoplasm (By similarity).
SIMILARITY: Belongs to the coaE family.
Protein name Dephospho-CoA kinase
Synonyms EC 2.7.1.24, Dephosphocoenzyme A kinase
Gene name Name: coaE
OrderedLocusNames: TP_0296

Source of Antigen and Antibodies

Antigen	18aa peptide of Mouse NTR1; (protein accession #O88319 , refs 1) **Designated (NTR11-P or control peptide).** conjugated to KLH; Epitope location ~ Mid-region, Extracellular
Ab Host/type	Rabbit, Polyclonal Aff pure (cat # NTR11-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). NTr1 has been shown to be 52-54 kDa in rat brain (1). NTR1 may be differentially glycosylated.

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 mouse NTR11-P sequence 84% conserved in rat and human NTR1. No significant sequence homology exist with other NTR2 or NTR3 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

General References: (1) Vita N et al (1993) FEBS Lett. 317, 139-142; Tanaka K et al (1990) Neuron 4, 847-854; Labbe-Julie C et al (1994) J Pharmacol. Exp. Ther. 268, 328; Boudin H et al (2000) J Compo. Neurol. 425, 45-57.

*This product is for in vitro research use only.

Some New Antibodies from ADI…

- Neuromedin U, NMUR1 and NMUR2 antibodies, Neurotensin receptors NTR1-3, 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**

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