ALPHA DIAGNOSTIC INTERNATIONAL

Product Specification Sheet

Neurotensin Receptor 1 (NTR1) Antibodies

Cat # NTR12-S	Rabbit Anti-Human NTR1 antiserum # 2	**SIZE**: 100 ul
Cat # NTR12-A	Rabbit Anti-Human NTR1 IgG # 2 (aff pure)	**SIZE**: 100 ug
Cat # NTR12-P	Human NTR1 Control/blocking peptide # 2	**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 biologicalaction 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 viathe 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.

Source of Antigen and Antibodies

Antigen	18-aa peptide of Human NTR1; (Gene Accession #P30989) **Designated (NTR12-P or control peptide or blocking peptide**) conjugated to KLH
Location	~C-terminus, Cytoplasmic domain
Ab Host/type	Rabbit, Polyclonal unpurified antiserum (#**NTR12**-S) and IgG, purified over antigen-agarose (Cat # **NTR12**-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)

□ 100 ul □ Solution □ Lyophilized powder
Supplied in Buffer: 0.1% azide
Reconstitute powder in 100 ul PBS

Affinity pure IgG

□ 100 ug/100 ul □ Solution □ Lyophilized powder
Supplied in **Buffer**: PBS + 0.1% BSA
Reconstitute powder in PBS at 1 mg/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 ECL technique). NTr1 has been shown to be 52- 54 kDa in rat brain (1). NTR1 may be differentially glycosylated. NOT TESTED

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 NTR12-P sequence 72% conserved in rat and mouse 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 (see detailed protocol at: www.4adi.com\data\abblock.html).

General References: (1) Vita N (1993) FEBS Lett. 317, 139; Tanaka K (1990) Neuron 4, 847; Labbe-Julie C (1994) J Pharmacol. Exp. Ther. 268, 328;

(2) Citations of ADI's Antibodies (see web site for updated list)

Buhler AV, 2005, Pain 114, 285-294, IHC

*This product is for in vitro research use only.

NMU, NMUR1 and NMUR2 antibodies, Neurotensin receptors NTR1-3, Ghrelin receptors, Orexin and orexin receptors, CART,
Western Blot recycling kit (Use the same blot to probe with multiple antibodies) **recycle blot in 5-10 min.**

NTR12-S-A-P rev. 210113AC

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