ALPHA DIAGNOSTIC INTERNATIONAL

Product Specification Sheet

Neurotensin Receptor 2 (NTR2) Antibodies

Cat. NTR21-S	Rabbit Anti-Rat NTR2 antiserum # 1	**SIZE**: 100 ul
Cat. NTR21-A	Rabbit Anti-Rat NTR2 IgG# 1(aff pure)	**SIZE**: 100 ug
Cat. NTR21-P	Rat NTR2 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.

NTR2/NTRL/NTSR2/NT2 (mouse 417 aa, rat 416 aa; human 410 aa, chromosome 20q1; ~75% interspecies sequence homology) also binds NT. Unlike NTR-1, NTR-2 recognizes, with high affinity, levocabastine, and histamine H1 receptor antagonist previously shown to compete with NT for low-affinity binding sites in brain. NTR2 is ~40 identical with NTR1. It has been suggested that the most prominent biological effects, analgesia and hypothermia, are mediated by NTR2. A non-peptide NT-antagonist SR 48692m which preferentially recognizes the NTR1, did not antagonize these effects. In mouse, it is maximally expressed the cerebellum, hippocampus, and neocortex. Low levels are also found in heart and intestine.

Source of Antigen and Antibodies

Antigen	18-aa peptide of rat NTR2; (gene accession # Q63384) **Designated (NTR21-P or control peptide or blocking peptide**) conjugated to KLH
Location	~N-terminal, Extracellular
Ab Host/type	Rabbit, Polyclonal unpurified antiserum (#**NTR21**-S) and IgG, purified over antigen-agarose (Cat # **NTR21**-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, undiluted)

100 ul/vial	50 ul/vial
solution	lyophilized powder

contains 0.05% sodium azide
Reconstitute powder 50 ul or 100 ul PBS

Affinity pure IgG

100 ug/100ul	50 ug/50 ul
solution	lyophilized powder

Buffer: PBS+0.1% BSA+0.05% azide
Reconstitute powder in PBS at 1mg/ml

Control/blocking peptide

100 ug/100 ul	50 ug/50 ul
solution	lyophilized powder

Buffer: PBS pH 7.5, contains 0.05% sodium azide
Reconstitute powder in PBS at 1 mg/ml.

Storage

Short-term: unopened, undiluted liquid vials for less than a week at 4oC.

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).

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 Rat NTR21-P sequence 100% conserved in mouse and 77% in human NTR2. No significant sequence homology exist with other NTR1 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) Chalon P (1996) FEBS Lett. 386, 91-94; Vita N (1998) Eur. J. Pharmacol. 360, 265; Dubuc I (1999) J. Neurosci. 19, 503; Mazella J (1996) J. Neurosci. 16, 5613.

**This product is for in vitro research use only.*

Some New Antibodies from ADI…

NMU, NMUR1/2, NTR1-3, Ghrelin and Motilin receptors, Orexin and orexin receptors, CART, and Leptin receptors

NTR21-S-A-P 50329A

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