ALPHA DIAGNOSTIC INTERNATIONAL

Product Specification Sheet

Neuropeptide Y 1 Receptor (NPY1R) Antibodies

Cat. # NPY1R12-P	Human NPY1R control peptide # 2	**SIZE**: 100 ug
Cat. # NPY1R12-A	**Rabbit** Anti-Human NPY1R IgG # 2 (aff pure)	**SIZE**: 100 ug

Neuropeptide Y (**NPY**), a neuropeptide colocalized and abundantly released with the neurotransmitter norepinephrine in nervous system, synthesized by postnatal olfactory epithelium of sustentacular cells. It promotes the proliferation of postnatal neuronal precursor cells and exhibits a diverse range of important physiologic activities, including effects on psychomotor activity, food intake, regulation of central endocrine secretion, and potent vasoactive effects on the cardiovascular system.

NPY a 97aa peptide in mouse, human (chr 7p15.1) and 98aa in rat has a mol. wt of 11kD. NPY shows sequence homology to Peptide YY (PYY) and over 50% homology in amino acid and nucleotide sequence to Pancreatic Polypeptide (PNP or PPY), all of these homologous peptides has a 36aa mature peptide characterized by a hairpin loop. **NPY1R**, a 382aa in mouse, rat and 384aa in human (chr 4q31.3) mainly expressed in brain, heart, kidney and spleen. It is the receptor for Neuropeptide Y and Peptide YY.

Source of Antigen and Antibodies

Antigen	15-aa peptide from **Human NPY1R** (1); **Designation (NPY1R12-P, control peptide**) conjugated to KLH; epitope location ~ C-terminus
Ab Host/type	Rabbit, Polyclonal Aff pure IgG (**cat # NPY1R12-A**) purified over antigen-agarose column
2-ab	Anti-rabbit IgG-HRP cat # 20320 (AP, biotin, FITC conjugates also available)
-ve control IgG	# 20009-1, Rabbit (non-immune) IgG, purified, suitable for ELISA, Western, IHC as –ve control

Form & Storage of Antibodies/Peptide Control

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 (1-10 ug/ml for affinity pure antibody using ECL technique).

ELISA: Control peptide can be used to coat ELISA plates at 1 ug/ml and detected with antibodies (0.5-1 ug/ml for affinity pure).

Histochemistry & Immunofluorescence: Not tested. We recommend the use of aff pure IgG at 2-20 ug/ml.

Specificity & Cross-reactivity

The NPY1R12-P control peptide is 93% in mouse, rat, chicken, canine, and pig NPY1R. 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 see detailed protocol at the web site).

General References: Rolf Uddman et al, (2002) Peptides 23, 927-934; J. Kopp et al (2002) Neuroscience Vol. 111, No: 3, 443, 532; T. E et al (1998) Nature 396: 366-369; Maccarrone C. D et al (1986) Neurochem. Int 8: 13-22; Gerald FDiBona (2002) Am J. Physiol Regulatory Integrative Comp Physiol 282: 635-36 (review).

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

Jamali S 2006 Brain 129: 625 - 641
Jackson DN 2005 J. Physiol., 562, 285-294

*This product is for In vitro research use only.

Related material available from ADI

Antibodies for PPY, PYY, and NPY receptors Y1-Y6.

Melanocortin, NMU, Neurotensin, Leptin, MCHR receptors

NPY1R12-A-P 71211A

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