ALPHA DIAGNOSTIC INTERNATIONAL

Product Specification Sheet

Neuropeptide Y 4 Receptor (NPY4R) Antibodies

Cat. # NPY4R11-P	Mouse NPY4R control peptide # 1	**SIZE**: 100 ug
Cat. # NPY4R11-A	**Rabbit** Anti-Mouse NPY4R IgG # 1 (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.

NPY4R/ **PPYR1**, a 375aa protein in mouse and human (Chr 10q11.2) is a receptor for NPY and PYY with high affinity to PPY. Highest levels of expression are found in Brain, Coronary artery and Ileum.

FUNCTION: Receptor for neuropeptide Y and peptide YY. The rank order of affinity of this receptor for pancreatic polypeptides is PP >> PYY >= NPY.
SUBCELLULAR LOCATION: Cell membrane; Multi-pass membrane protein.
SIMILARITY: Belongs to the G-protein coupled receptor 1 family [view classification].
Protein name Neuropeptide Y receptor type 4
Synonyms NPY4-R, Pancreatic polypeptide receptor 1 PP1, NPYR-D
Gene name Name: Ppyr1, Synonyms: Npy4r

Source of Antigen and Antibodies

Antigen	15-aa peptide from mouse **NPY4R** (1);(protein accession #Q61041 , refs 1) **Designation (NPY4R11-P, control peptide**) conjugated to KLH; Epitope location ~C-terminus, Cytoplasmic domain
Ab Host/type	Rabbit, Polyclonal Aff pure IgG (**cat # NPY4R11-A**) purified over the antigen column
2-ab	Anti-rabbit IgG-HRP cat # 20320 (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

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^{O}C and powder at 4^{o}C or -20^{o}C..

Long-term: at –20^{0}C or below in suitable aliquots after reconstitution. Do not freeze and thaw and store working, diluted solutions.

Stability: 6-12 months at –20^{o}C or below.
Shipping: 4^{o}C 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 Mouse NPY4R11-P control peptide is 92% conserved in rat, 86% in human and 64% in chicken NPY4R. 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: Yan, H et al (1996) PNAS 93 (10), 4661-4665; Bard, J. A et al (1995) JBC 270 (45), 26762-26765; Zou, Y. R et al (1998) Nature 393 (6685), 595-599; Choe, H et al (1996) Cell 85 (7), 1135-1148; Gregor, P et al (1996) FEBS Lett. 381 (1-2), 58-62.

*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

NPY4R11-A-P 70907J