

Product datasheet for **TA328610**

NPY1R Rabbit Polyclonal Antibody

Product data:

Product Type:	Primary Antibodies
Applications:	IF, IHC, WB
Recommended Dilution:	WB: 1:200-1:2000; IHC: 1:100-1:3000
Reactivity:	Human, Rat
Host:	Rabbit
Clonality:	Polyclonal
Immunogen:	Peptide (C)RLKRRNNMMDKMRDNK, corresponding to amino acid residues 237-252 of human NPY1R. 3rd intracellular loop.
Formulation:	Lyophilized. Concentration before lyophilization ~0.8mg/ml (lot dependent, please refer to CoA along with shipment for actual concentration). Buffer before lyophilization: Phosphate buffered saline (PBS), pH 7.4, 1% BSA, 0.05% NaN ₃ .
Reconstitution Method:	Add 50 ul double distilled water (DDW) to the lyophilized powder.
Purification:	Affinity purified on immobilized antigen.
Conjugation:	Unconjugated
Storage:	Store at -20°C as received.
Stability:	Stable for 12 months from date of receipt.
Gene Name:	neuropeptide Y receptor Y1
Database Link:	NP_000900 Entrez Gene 29358 Rat Entrez Gene 4886 Human P25929



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Background:

Neuropeptide Y (NPY) is a 36-amino acid peptide neurotransmitter in the central (CNS) and peripheral nervous systems. It belongs to the NPY family, together with the peptide YY (PYY) and the pancreatic polypeptide (PP). NPY is involved in regulation of a broad range of homeostatic functions such as eating behavior, hypertension, and reproduction. NPY exerts its effects via five receptor subtypes known as the neuropeptide Y receptors (NPYR): Y1 (NPY1R), Y2 (NPY2R), Y4 (NPY4R), Y5 (NPY5R) and Y6 (NPY6R). Four of these, Y1, Y2, Y4, and Y5, are expressed in humans. The NPY receptors belong to the G protein-coupled receptor superfamily whose members share a common structure of seven putative transmembrane domains, an extracellular amino terminus, and a cytoplasmic carboxyl terminus. Activation of these receptors by NPY produces effects on $[Ca^{2+}]$, adenylate cyclase, and a number of ion channels. Based on the high frequency and density of NPY receptors in steroid hormone-producing tumors, the NPY receptors might be of potential use in tumor management. NPY1R is considered to be a postsynaptic receptor. In the CNS, NPY1Rs are concentrated in the cortical areas of the brain, cerebral cortex, olfactory nucleus, hippocampus, hypothalamic nuclei, and thalamic nuclei. In addition, this receptor has a bimodal role in the immune system, serving as a strong negative regulator on T cells as well as a key activator of antigen-presenting cell function.

Synonyms:

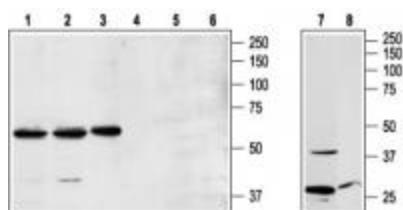
NPY1-R; NPYR

Protein Families:

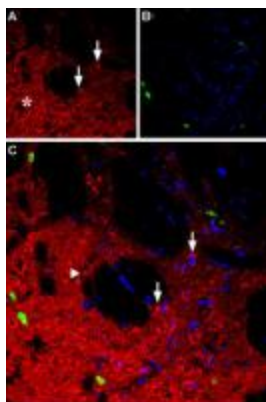
Druggable Genome, GPCR, Transmembrane

Protein Pathways:

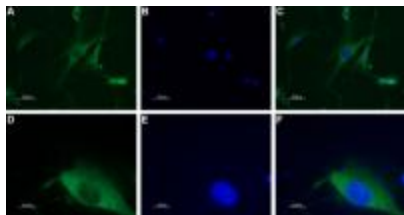
Neuroactive ligand-receptor interaction

Product images:


Western blot analysis of Jurkat (lanes 1 and 4), K562 (lanes 2 and 5), and RBL (lanes 3 and 6) cell lysates and rat brain lysates (lanes 7 and 8): 1, 2, 3, 7. Anti-Neuropeptide Y1 Receptor antibody, (1:200). 4, 5, 6, 8. Anti-Neuropeptide Y1 Receptor antibody preincubated with the control peptide antigen.



Expression of NPY1R in rat striatum. Immunohistochemical staining of rat striatum using Anti-Neuropeptide Y1 Receptor antibody. A. NPY1R (red) appears in the striatal matrix (white asterisk) and in medium-size cells in the matrix (arrows). B. Parvalbumin (green) appears in the striatal matrix. C. confocal merge of NPY1R and parvalbumin indicates that NPY1R is restricted to granule cells. DAPI is used as the counterstain (blue).



Immunocytochemical staining of a primary culture of rat dorsal root ganglion (DRG) neurons. A, D. A paraformaldehyde-fixed and permeabilized DRG primary culture was stained with Anti-Neuropeptide Y1 Receptor antibody, (1:100), followed by Alexa-555-conjugated goat-anti-rabbit secondary antibody. B, E. Nuclear fluorescence staining of cells using the membrane-permeable DNA dye Hoechst 33342. C. Merged images of A and B. F. Merged images of D and E. Magnification: A-C: x20 E-F: x100