

## Product datasheet for **TA328898**

### Npy4r Rabbit Polyclonal Antibody

#### Product data:

Product Type:	Primary Antibodies
Applications:	IF, WB
Recommended Dilution:	WB 1:200; IF 1:100, IHC 1:200
Reactivity:	Rat, Human, Mouse
Host:	Rabbit
Clonality:	Polyclonal
Immunogen:	Peptide NINFKKDIKALVLTC corresponding to amino acid residues 326-340 of rat NPY4R. Intracellular, C-terminus.
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% NaN3.
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 Y4
Database Link:	<a href="#">NP_113769</a> <a href="#">Entrez Gene 5540 Human</a> <a href="#">Entrez Gene 19065 Mouse</a> <a href="#">Entrez Gene 29471 Rat</a> <a href="#">Q63447</a>



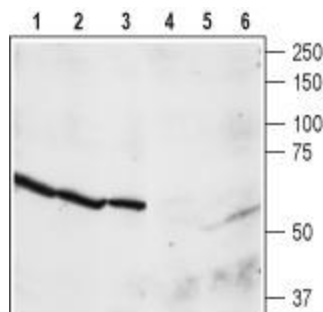
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**Background:**

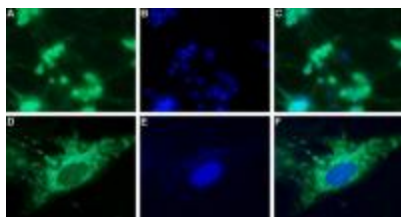
Neuropeptide Y (NPY) is a 36 amino acid peptide neurotransmitter in the central (CNS) and peripheral nervous systems. It belongs to the NPY family, along with peptide YY (PYY) and pancreatic polypeptide (PP). NPY is involved in the regulation of a broad range of homeostatic functions such as eating behavior, 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  $[Ca^{2+}]_i$ , adenylate cyclase, and a number of ion channels. Based on their high frequency and density in steroid hormone-producing tumors, the NPYRs might be of potential use in tumor management. NPY4R preferentially binds PP, while NPY1R, NPY2R, and NPY5R bind both NPY and PP. NPY1R, NPY2R, and NPY5R share a low degree of identity (27–31% overall). NPY4R is more similar to NPY1R, displaying an overall identity of 43–53%. Human NPY4R (also named pancreatic polypeptide receptor 1) mRNA is highly expressed in the small and large intestines and the prostate. Tissue distribution studies in human and mouse suggest potential roles for NPY4R in the gastrointestinal tract, heart, and prostate, as well as in neural and endocrine signaling. Only low levels of NPY4R expression in various areas of brain were displayed.

**Synonyms:**

NPY4-R; PP1; PPYR1; Y4

**Product images:**


Western blot analysis of rat brain membrane (lanes 1 and 4), cortex (lanes 2 and 5), and hippocampus (lanes 3 and 6) lysates: 1, 2, 3. Anti-Neuropeptide Y4 Receptor antibody, (1:200). 4, 5, 6. Anti-Neuropeptide Y4 Receptor antibody, preincubated with the control peptide antigen.



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 Y4 Receptor antibody, (1:100), followed by goat anti-rabbit-AlexaFluor-488 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. D-F: x100.