

# NPY2-R (N-17): sc-14733

## BACKGROUND

A gene on chromosome 4q32.1 encodes a 381 amino acid protein, NPY2-R (also designated Neuropeptide Y receptor Y2). NPY2-R is a member of the G protein-coupled receptor super-family, and like other members has seven putative transmembrane domains. However, NPY2-R gene consists of two exons, unlike the contiguous structure of other G protein-coupled receptor genes. NPY2-R shares a 31% sequence identity with NPY1-R. NPY2-R is expressed in the presynaptic membranes of the central nervous system, and to a lesser extent the peripheral nervous system. NPY2-R associates (from highest to lowest affinity) with carboxyl terminals of unphosphorylated Peptide YY (PYY) (phosphorylation of PYY greatly reduces its binding affinity), NPY, and Pancreatic Peptide. Depending on the cell type, NPY2-R couples with different G proteins, which act as different second messengers. NPY2-R reduces the effects of depolarization, calcium ion currents in arterial smooth muscle by through association with NPY. NPY2-R inhibits cholecystokinin octapeptide-induced, esophageal muscle contraction, through interactions with PYY and NPY.

## REFERENCES

1. Rose, P.M., et al. 1995. Cloning and functional expression of a cDNA encoding a human type 2 neuropeptide Y receptor. *J. Biol. Chem.* 270: 22661-22664.
2. Ammar, D.A., et al. 1996. Characterization of the human type 2 neuropeptide Y receptor gene (NPY2R) and localization to the chromosome 4q region containing the type 1 neuropeptide Y receptor gene. *Genomics* 38: 392-398.
3. Gehlert, D.R., et al. 1996. Expression cloning of a human brain neuropeptide Y Y2 receptor. *Mol. Pharmacol.* 49: 224-228.

## CHROMOSOMAL LOCATION

Genetic locus: NPY2R (human) mapping to 4q32.1.

## SOURCE

NPY2-R (N-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of NPY2-R of human origin.

## PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-14733 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## STORAGE

Store at 4° C, **\*\*DO NOT FREEZE\*\***. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.

## APPLICATIONS

NPY2-R (N-17) is recommended for detection of NPY2-R of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

NPY2-R (N-17) is also recommended for detection of NPY2-R in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for NPY2-R siRNA (h): sc-42101, NPY2-R shRNA Plasmid (h): sc-42101-SH and NPY2-R shRNA (h) Lentiviral Particles: sc-42101-V.

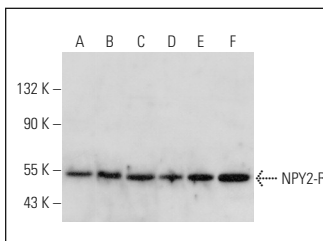
Molecular Weight of NPY2-R: 43 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204, Caki-1 cell lysate: sc-2224 or HUV-EC-C whole cell lysate: sc-364180.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## DATA



NPY2-R (N-17): sc-14733. Western blot analysis of NPY2-R expression in Jurkat (A), Caki-1 (B), HUV-EC-C (C), ACHN (D), ECV304 (E) and SH-SY5Y (F) whole cell lysates.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.