



NPY5-R (P-18): sc-31585

BACKGROUND

Pancreatic polypeptide (PP), neuropeptide Y (NPY) and peptide YY (PYY) are related 36-amino acid hormones. A number of structurally related receptors for these peptides have been isolated: NPY1-R, NPY2-R, NPY3-R, NPY4-R, NPY5-R and NPY6-R. NPY4-R is expressed in several human tissues, including brain, coronary artery and ileum. NPY4-R maps to human chromosome 10q11.2-q21.2. NPY5-R, isolated from rat hypothalamus, encodes a 456-amino acid protein with less than 35% overall identity to known Y-type receptors. The human NPY5-R sequence is nearly identical to, but in the opposite orientation from, that of the human NPY1-R sequence. NPY5-R localizes to the paraventricular hypothalamic nucleus, the lateral hypothalamus and other locations consistent with a role in the control of feeding behavior. The gene which encodes NPY5-R maps to human chromosome 4q31-32. NPY6-R is abundantly expressed in human heart and skeletal muscle. The gene which encodes NPY6-R maps to human chromosome 5q31.

REFERENCES

1. Bard, J.A., et al. 1995. Cloning and functional expression of a human Y4 subtype receptor for pancreatic polypeptide, neuropeptide Y, and peptide YY. *J. Biol. Chem.* 270: 26762-26765.
2. Gerald, C., et al. 1996. A receptor subtype involved in neuropeptide-Y-induced food intake. *Nature* 382: 168-171.
3. Hu, Y., et al. 1996. Identification of a novel hypothalamic neuropeptide Y receptor associated with feeding behavior. *J. Biol. Chem.* 271: 26315-26319.
4. Matsumoto, M., et al. 1996. Inactivation of a novel neuropeptide Y/peptide YY receptor gene in primate species. *J. Biol. Chem.* 271: 27217-27220.
5. Darby, K., et al. 1997. Assignment of the Y-4 receptor gene (PPYR1) to human chromosome 10q11.2 and mouse chromosome 14. *Genomics* 46: 513-515.
6. Lutz, C.M., et al. 1997. Neuropeptide Y receptor genes mapped in human and mouse: receptors with high affinity for pancreatic polypeptide are not clustered with receptors specific for neuropeptide Y and peptide YY. *Genomics* 46: 287-290.
7. Herzog, H., et al. 1997. Overlapping gene structure of the human neuropeptide Y receptor subtypes Y1 and Y5 suggests coordinate transcriptional regulation. *Genomics* 41: 315-319.

CHROMOSOMAL LOCATION

Genetic locus: NPY5R (human) mapping to 4q31-q32; Npy5r (mouse) mapping to 8 B3-C2.

SOURCE

NPY5-R (P-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping within a cytoplasmic domain of NPY5-R of human origin.

STORAGE

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

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-31585 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

NPY5-R (P-18) is recommended for detection of NPY5-R of human and, to a lesser extent, mouse and rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

Suitable for use as control antibody for NPY5-R siRNA (h): sc-42105.

Molecular Weight of NPY5-R: 57 kDa.

Positive Controls: MIA PaCa-2 cell lysate: sc-2285 or SK-N-SH cell lysate: sc-2410.

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) 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.

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.