

NPY5-R (H-4): sc-137167



The Power to Question

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. 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 4q32.2. NPY6-R is abundantly expressed in human heart and skeletal muscle and 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. Hu, Y., et al. 1996. Identification of a novel hypothalamic neuropeptide Y receptor associated with feeding behavior. *J. Biol. Chem.* 271: 26315-26319.
3. Matsumoto, M., et al. 1996. Inactivation of a novel neuropeptide Y/peptide YY receptor gene in primate species. *J. Biol. Chem.* 271: 27217-27220.
4. Gerald, C., et al. 1996. A receptor subtype involved in neuropeptide-Y-induced food intake. *Nature* 382: 168-171.

CHROMOSOMAL LOCATION

Genetic locus: NPY5R (human) mapping to 4q32.2.

SOURCE

NPY5-R (H-4) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 33-68 within an extracellular domain of NPY5-R of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

NPY5-R (H-4) is available conjugated to agarose (sc-137167 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-137167 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-137167 PE), fluorescein (sc-137167 FITC), Alexa Fluor® 488 (sc-137167 AF488), Alexa Fluor® 546 (sc-137167 AF546), Alexa Fluor® 594 (sc-137167 AF594) or Alexa Fluor® 647 (sc-137167 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-137167 AF680) or Alexa Fluor® 790 (sc-137167 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-137167 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

NPY5-R (H-4) is recommended for detection of NPY5-R of human origin by Western Blotting (starting dilution 1:100, 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).

Suitable for use as control antibody for NPY5-R siRNA (h): sc-42105, NPY5-R shRNA Plasmid (h): sc-42105-SH and NPY5-R shRNA (h) Lentiviral Particles: sc-42105-V.

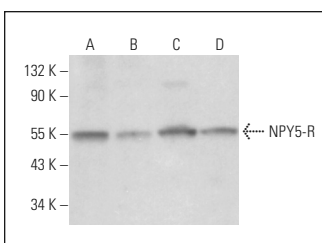
Molecular Weight of NPY5-R: 57 kDa.

Positive Controls: MIA PaCa-2 cell lysate: sc-2285, Ramos cell lysate: sc-2216 or A2058 whole cell lysate: sc-364178.

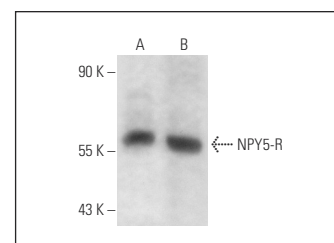
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BPHRP: sc-516102 or m-IgGκ BPHRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgGκ BPFITC: sc-516140 or m-IgGκ BPE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



NPY5-R (H-4): sc-137167. Western blot analysis of NPY5-R expression in MIA PaCa-2 (A), A2058 (B), SJRH30 (C) and T98G (D) whole cell lysates.



NPY5-R (H-4): sc-137167. Western blot analysis of NPY5-R expression in MIA PaCa-2 (A) and Ramos (B) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Zhang, Q., et al. 2022. Involvement of neuropeptide Y within paraventricular nucleus in electroacupuncture inhibiting sympathetic activities in hypertensive rats. *Int. J. Hypertens.* 2022: 9990854.

STORAGE

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

RESEARCH USE

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

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