

NPY1-R (D-16): sc-21992

BACKGROUND

The NPY1-R gene, located on human chromosome 4q32.2, encodes a 384 amino acid protein, NPY1-R (also designated Neuropeptide Y receptor Y1). NPY1-R is a member of the G protein-coupled receptor superfamily, and like other members has seven putative transmembrane domains. However, NPY1-R gene consists of three exons, unlike the contiguous structure of other G protein-coupled receptor genes. NPY1-R is expressed in the postsynaptic membrane of spleen, small intestine, kidney, testis, placenta, aortic smooth muscle, and throughout the central nervous system. NPY1-R associates with Neuropeptide Y, unphosphorylated Peptide YY (PYY) and particularly strongly with phosphorylated PYY. Depending on the cell type, NPY1-R couples with different G proteins, which act as second messengers. NPY1-R activation is necessary and sufficient for the release of substance P, a pain neurotransmitter, and the initiation of neurogenic inflammation. NPY1-R stimulates feeding behaviors, through an interaction with NPY.

CHROMOSOMAL LOCATION

Genetic locus: NPY1R (human) mapping to 4q32.2; Npy1r (mouse) mapping to 8 B3.3.

SOURCE

NPY1-R (D-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of NPY1-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-21992 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

NPY1-R (D-16) is recommended for detection of NPY1-R of mouse, rat and 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

NPY1-R (D-16) is also recommended for detection of NPY1-R in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for NPY1-R siRNA (h): sc-36097, NPY1-R siRNA (m): sc-36098, NPY1-R shRNA Plasmid (h): sc-36097-SH, NPY1-R shRNA Plasmid (m): sc-36098-SH, NPY1-R shRNA (h) Lentiviral Particles: sc-36097-V and NPY1-R shRNA (m) Lentiviral Particles: sc-36098-V.

Molecular Weight (predicted) of NPY1-R: 44 kDa.

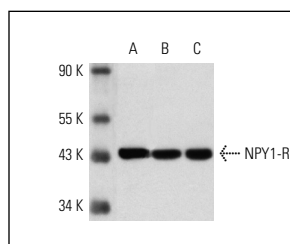
Molecular Weight (observed) of NPY1-R: 43-53 kDa.

Positive Controls: SK-N-MC cell lysate: sc-2237, rat brain extract: sc-2392 or mouse brain extract: sc-2253.

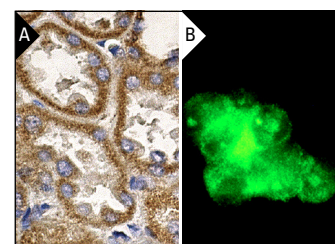
RECOMMENDED SECONDARY REAGENTS

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. 4) Immunohistochemistry: use ImmunoCruz™: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

DATA



NPY1-R (D-16): sc-21992. Western blot analysis of NPY1-R expression in SK-N-MC whole cell lysate (A) and rat brain (B) and mouse brain (C) tissue extracts.



NPY1-R (D-16): sc-21992. Immunoperoxidase staining of formalin fixed, paraffin-embedded human kidney tissue showing membrane and cytoplasmic staining of cells in tubules (A). Immunofluorescence staining of methanol-fixed SK-N-MC cells showing membrane localization (B).

SELECT PRODUCT CITATIONS

- Allen, A.R., et al. 2006. Modulation of contractile function through neuropeptide Y receptors during development of cardiomyocyte hypertrophy. *J. Pharmacol. Exp. Ther.* 319: 1286-1296.
- Bjur, D.K., et al. 2009. Presence of the neuropeptide Y1 receptor in tenocytes and blood vessel walls in the human *Achilles tendon*. *Br. J. Sports Med.* 43: 1136-1142.

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.



Try **NPY1-R (E-4): sc-393192**, our highly recommended monoclonal alternative to NPY1-R (D-16).