SANTA CRUZ BIOTECHNOLOGY, INC.

NPFF2 Receptor (T-17): sc-46206

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The Power to Question

BACKGROUND

Neuropeptide FF receptor 1 (NPFF1 or hFF1) and Neuropeptide FF receptor 2 (NPFF2) belong to the G protein-coupled receptor 1 family. Both NPFF1 and NPFF2 are integral membrane proteins. They act as receptors for NPAF (A-18-F-amide) and NPFF (F-8-F-amide) neuropeptides. Both NPFF proteins may be activated by synthetic or naturally occurring FMRF-amide like ligands. The receptors are mediated by association with G-proteins that activate a phosphatidylinositol-calcium second messenger system. NPFF-1 receptors are highly expressed in the human hypothalamus and amygdala indicating a possible role for NPFF1 in central autonomic and neuroendocrine control in the human brain. As is supported by the NPFF2 receptor expression in diencephalon and superficial layers of the spinal cord, NPFF2 receptors are thought to be involved in the modulation of sensory input and opioid analgesia. GPR74 is the human gene which codes for the NPFF2 receptor protein and maps to chromosome 4q21.

REFERENCES

1. Goncharuk, V., et al. 2004. Distribution of the NPFF1 Receptor (hFF1) in the human hypothalamus and surrounding basal forebrain structures: immunohistochemical study. J. Comp. Neurol. 474: 487-503.
2. Gouarderes, C., et al. 2004. Detailed distribution of Neuropeptide FF Receptors (NPFF1 and NPFF2) in the rat, mouse, octodon, rabbit, guinea pig, and marmoset monkey brains: a comparative autoradiographic study. Synapse 51: 249-269.
3. Quelven, I., et al. 2005. Comparison of pharmacological activities of NPFF1 and NPFF2 Receptor agonists. Eur. J. Pharmacol. 508: 107-114.
4. SWISS-PROT/TrEMBL (Q9GZQ6). World Wide Web URL: http://www.expasy.ch/sprot/sprot-top.html

CHROMOSOMAL LOCATION

Genetic locus: NPFFR2 (human) mapping to 4q13.3; Npffr2 (mouse) mapping to 5 E1.

SOURCE

NPFF2 Receptor (T-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an extracellular domain of NPFF2 Receptor 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-46206 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.

APPLICATIONS

NPFF2 Receptor (T-17) is recommended for detection of NPFF2 Receptor of human, rat and, to a lesser extent, mouse 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).

NPFF2 Receptor (T-17) is also recommended for detection of NPFF2 Receptor in additional species, including bovine and porcine.

Suitable for use as control antibody for NPFF2 Receptor siRNA (h): sc-45724, NPFF2 Receptor siRNA (m): sc-45725, NPFF2 Receptor shRNA Plasmid (h): sc-45724-SH, NPFF2 Receptor shRNA Plasmid (m): sc-45725-SH, NPFF2 Receptor shRNA (h) Lentiviral Particles: sc-45724-V and NPFF2 Receptor shRNA (m) Lentiviral Particles: sc-45725-V.

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.

SELECT PRODUCT CITATIONS

1. Zhao, S., et al. 2010. RFamide-related peptide and messenger ribonucleic acid expression in mammalian testis: association with the spermatogenic cycle. Endocrinology 151: 617-627.

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.