SANTA CRUZ BIOTECHNOLOGY, INC.

NPSF (M-40): sc-99158

BACKGROUND

The human RFamide-related peptide gene, RFRP (also designated NPVF or C7orf9), is responsible for encoding three small neuropeptides designated RFRP-1 (NPSF), RFRP-2 and RFRP-3 (NPVF). The homologous gene in rodents encodes only two functional neuropeptide: RFRP-1 (NPSF) and RFRP-3 (NPVF). RFamide-related peptides constitute a large family of neuropeptides in a wide range of species that are known to play a role in neurotransmission, neuromodulation, cardioexcitation and control of muscle contraction. Neuropeptides RFRP-1 and RFRP-3 efficiently inhibit Forskolin-induced production of cAMP. RFRP-2, however, does not appear to have a similar inhibitory activity. RFamide-related peptides are secreted and abundantly expressed in retina. RFRP-1 and RFRP-3 are also widely distributed in fetal and adult brain, including the forebrain, hypothalamus, thalamus, midbrain, pons and medulla oblongata. RFRP-1 and the prolactin (PRL)-releasing peptide-31 (PrRP-31) may be involved in the stimulation of stress hormone secretion by either direct pituitary or indirect hypothalamic actions.

REFERENCES

1. Hinuma, S., et al. 2000. New neuropeptides containing carboxy-terminal RFamide and their receptor in mammals. Nat. Cell Biol. 2: 703-708.
2. Fukusumi, S., et al. 2001. Characteristics and distribution of endogenous RFamide-related peptide-1. Biochim. Biophys. Acta 1540: 221-232.
3. Schulz, H.L., et al. 2002. Genomic structure and assessment of the retinally expressed RFamide-related peptide gene in dominant cystoid macular dystrophy. Mol. Vis. 8: 67-71.
4. Yano, T., et al. 2003. Localization and neuronal response of RFamide related peptides in the rat central nervous system. Brain Res. 982: 156-167.
5. Samson, W.K., et al. 2003. Prolactin-releasing peptide and its homolog RFRP-1 act in hypothalamus but not in anterior pituitary gland to stimulate stress hormone secretion. Endocrine 20: 59-66.
6. Yano, T., et al. 2004. Developmental expression of RFamide-related peptides in the rat central nervous system. Brain Res. Dev. Brain Res. 152: 109-120.
7. Johnson, M.A., et al. 2007. Rat RFamide-related peptide-3 stimulates GH secretion, inhibits LH secretion, and has variable effects on sex behavior in the adult male rat. Horm. Behav. 51: 171-180.

CHROMOSOMAL LOCATION

Genetic locus: Npvf (mouse) mapping to 6qB2.3.

SOURCE

NPSF (M-40) is a rabbit polyclonal antibody raised against amino acids 58-97 mapping within an internal region of RFamide-related neuropeptide NPSF of mouse origin.

PRODUCT

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

APPLICATIONS

NPSF (M-40) is recommended for detection of Neuropeptide NPSF of mouse and rat 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).

Suitable for use as control antibody for RFRP siRNA (m): sc-44798, RFRP shRNA Plasmid (m): sc-44798-SH and RFRP shRNA (m) Lentiviral Particles: sc-44798-V.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

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.

PROTOCOLS

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