SANTA CRUZ BIOTECHNOLOGY, INC.

Peptide YY siRNA (h): sc-61320

BACKGROUND

Members of the Neuropeptide Y (NPY) hormone family include NPY, PP (pancreatic polypeptide) and peptide YY. The NPY hormone family associates with the complementary Neuropeptide Y-receptor family, which is part of the G protein-coupled receptor superfamily. NPY is expressed throughout the central and peripheral nervous systems and is one of the most abundant neuropeptides. Peptide YY (PPY), also designated peptide tyrosine tyrosine, is a secreted protein. This gut protein acts as an inhibitor of exocrine pancreatic secretion, jejunal motility and colonic motility. It also plays a role in vasoconstriction.

REFERENCES

1. Tatemoto, K., et al. 1988. Isolation and primary structure of human peptide YY. Biochem. Biophys. Res. Commun. 157: 713-717.
2. Eberlein, G.A., et al. 1989. A new molecular form of PYY: structural characterization of human PYY(3-36) and PYY(1-36). Peptides 10: 797-803.
3. Kohri, K., et al. 1993. Cloning and structural determination of human peptide YY cDNA and gene. Biochim. Biophys. Acta 1173: 345-349.
4. Abbott, C.R., et al. 2005. The inhibitory effects of peripheral administration of peptide YY(3-36) and glucagon-like peptide-1 on food intake are attenuated by ablation of the vagal-brainstem-hypothalamic pathway. Brain Res. 1044: 127-131.
5. Renshaw, D., et al. 2005. Peptide YY: a potential therapy for obesity. Curr. Drug Targets 6: 171-179.
6. Talebizadeh, Z., et al. 2005. Ghrelin, peptide YY and their receptors: gene expression in brain from subjects with and without Prader-Willi syndrome. Int. J. Mol. Med. 15: 707-711.

CHROMOSOMAL LOCATION

Genetic locus: PYY (human) mapping to 17q21.31.

PRODUCT

Peptide YY siRNA (h) is a pool of 3 target-specific 19-25 nt siRNAs designed to knock down gene expression. Each vial contains 3.3 nmol of lyophilized siRNA, sufficient for a 10 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see Peptide YY shRNA Plasmid (h): sc-61320-SH and Peptide YY shRNA (h) Lentiviral Particles: sc-61320-V as alternate gene silencing products.

For independent verification of Peptide YY (h) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-61320A, sc-61320B and sc-61320C.

RESEARCH USE

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

PROTOCOLS

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

STORAGE AND RESUSPENSION

Store lyophilized siRNA duplex at -20° C with desiccant. Stable for at least one year from the date of shipment. Once resuspended, store at -20° C, avoid contact with RNAses and repeated freeze thaw cycles.

Resuspend lyophilized siRNA duplex in 330 µl of the RNAse-free water provided. Resuspension of the siRNA duplex in 330 µl of RNAse-free water makes a 10 µM solution in a 10 µM Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

APPLICATIONS

Peptide YY siRNA (h) is recommended for the inhibition of Peptide YY expression in human cells.

SUPPORT REAGENTS

For optimal siRNA transfection efficiency, Santa Cruz Biotechnology's siRNA Transfection Reagent: sc-29528 (0.3 ml), siRNA Transfection Medium: sc-36868 (20 ml) and siRNA Dilution Buffer: sc-29527 (1.5 ml) are recommended. Control siRNAs or Fluorescein Conjugated Control siRNAs are available as 10 µM in 66 µl. Each contain a scrambled sequence that will not lead to the specific degradation of any known cellular mRNA. Fluorescein Conjugated Control siRNAs include: sc-36869, sc-44239, sc-44240 and sc-44241. Control siRNAs include: sc-37007, sc-44230, sc-44231, sc-44232, sc-44233, sc-44234, sc-44235, sc-44236, sc-44237 and sc-44238.

GENE EXPRESSION MONITORING

Peptide YY (029-01-1): sc-80499 is recommended as a control antibody for monitoring of Peptide YY gene expression knockdown by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) or immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor Peptide YY gene expression knockdown using RT-PCR Primer: Peptide YY (h)-PR: sc-61320-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.