SANTA CRUZ BIOTECHNOLOGY, INC.

NPFF siRNA (h): sc-95770

BACKGROUND

NPFF (neuropeptide FF) is a 113 amino acid secreted protein that belongs to the FARP (FMRFamide related peptide) family. As a morphine modulating peptide, NPFF has wide-ranging physiologic effects, including the modulation of morphine-induced analgesia, elevation of arterial blood pressure and increased somatostatin secretion from the pancreas. NPFF potentiates and sensitizes ASIC1 and ASIC3 channels, two amiloride sensitive cation channels. The gene that encodes NPFF consists of nearly 1,000 bases and maps to human chromosome 12q13.13. Encoding over 1,100 genes, chromosome 12 comprises approximately 4.5% of the human genome. Chromosome 12 is associated with a variety of diseases and afflictions, including hypochondrogenesis, achondrogenesis, Kniest dysplasia, Noonan syndrome and trisomy 12p, which causes facial developmental defects and seizure disorders.

REFERENCES

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6. Ankö, M.L., et al. 2006. Regulation of endogenous human NPFF2 receptor by neuropeptide FF in SK-N-MC neuroblastoma cell line. J. Neurochem. 96: 573-584.
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8. Yang, H.Y., et al. 2008. Modulatory role of neuropeptide FF system in nociception and opiate analgesia. Neuropeptides 42: 1-18.
9. Goncharuk, V.D., et al. 2011. Vasopressin (VP) and neuropeptide FF (NPFF) systems in the normal and hypertensive human brainstem. J. Comp. Neurol. 519: 93-124.

CHROMOSOMAL LOCATION

Genetic locus: NPFF (human) mapping to 12q13.13.

PROTOCOLS

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

PRODUCT

NPFF siRNA (h) is a target-specific 19-25 nt siRNA 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 NPFF shRNA Plasmid (h): sc-95770-SH and NPFF shRNA (h) Lentiviral Particles: sc-95770-V as alternate gene silencing 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

NPFF siRNA (h) is recommended for the inhibition of NPFF 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.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor NPFF gene expression knockdown using RT-PCR Primer: NPFF (h)-PR: sc-95770-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

RESEARCH USE

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