SZABO SCANDIC

Part of Europa Biosite

Produktinformation

- Forschungsprodukte & Biochemikalien
- Zellkultur & Verbrauchsmaterial
- Diagnostik & molekulare Diagnostik
- Laborgeräte & Service

Weitere Information auf den folgenden Seiten!
See the following pages for more information!

Lieferung & Zahlungsart

siehe unsere Liefer- und Versandbedingungen

Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

SZABO-SCANDIC HandelsgmbH

Quellenstraße 110, A-1100 Wien

T. +43(0)1 489 3961-0

F. +43(0)1 489 3961-7

mail@szabo-scandic.com

www.szabo-scandic.com

linkedin.com/company/szaboscandic

SANTA CRUZ BIOTECHNOLOGY, INC.

NPY siRNA (h): sc-42099

BACKGROUND

The NPY hormone family consists of NPY, PP and peptide YY. NPY (neuropeptide Y) is a 36 amino acid protein that consists of a polyproline stretch followed by an amphipathic a-helix. NPY shares a 50% amino acid homology with pancreatic polypeptide gene (PP). NPY is expressed throughout the central and peripheral nervous system, particularly in the deep layers of the cortex and smaller cell bodies in the white matter. NPY interacts with the Y-receptor family of G protein-coupled receptors. NPY interacts with NPY receptor Y1 to increase corticotropin levels and decrease noradrenaline levels in the hypothalamus. Through interactions in the hypothalus, NPY plays important roles in the regulation of energy balance by stimulating food intake. NPY favors energy storage by increasing lipoprotein lipase activity in white adipose tissue. A leucine 7 to proline 7 polymorphism has been implicated in an increase in alcohol preference, and decrease in cholesterol metabolism.

REFERENCES

1. Minth, C.D., et al. 1984. Cloning, characterization, and DNA sequence of a human cDNA encoding neuropeptide tyrosine. Proc. Natl. Acad. Sci. 81: 4577-4581.
2. Takeuchi, T., et al. 1986. Genes encoding pancreatic polypeptide and neuropeptide Y are on human chromosomes 17 and 7. J. Clin. Invest. 77:1038-1041.
3. Terenghi, G., et al. 1987. Localization of neuropeptide Y mRNA in neurons of human cerbral cortex by means of *in situ* hybridization with a complementary RNA probe. Proc. Natl. Acad. Sci. 84: 7315-7318.
4. Monks, S.A., et al. 1996. Solution structure of human neuropeptide Y. J. Biomol. NMR 8: 379-390.
5. Karvonen, M.K., et al. 1998. Association of a leucine 7-to-proline 7 polymorphism in the signal peptide of neuropeptide Y with high serum cholesterol and LDL cholesterol levels. Nat. Med. 4: 1434-1437.
6. Cabrele, C., et al. 2000. Molecular characterization of the ligand-receptor interaction of the neuropeptide Y family. J. Pept. Sci. 6: 97-122.
7. Kauhanen, J., et al. 2000. Neuropeptide Y polymorphism and alcohol consumption in middle-aged men. Am. J. Med. Genet. 93: 117-121.

CHROMOSOMAL LOCATION

Genetic locus: NPY (human) mapping to 7p15.3.

PRODUCT

NPY 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 NPY shRNA Plasmid (h): sc-42099-SH and NPY shRNA (h) Lentiviral Particles: sc-42099-V as alternate gene silencing products.

For independent verification of NPY (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-42099A, sc-42099B and sc-42099C.

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

NPY siRNA (h) is recommended for the inhibition of NPY 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

NPY (F-6): sc-133080 is recommended as a control antibody for monitoring of NPY 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).

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor NPY gene expression knockdown using RT-PCR Primer: NPY (h)-PR: sc-42099-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

SELECT PRODUCT CITATIONS

1. Panossian, A., et al. 2012. Adaptogens stimulate neuropeptide Y and Hsp72 expression and release in neuroglia cells. Front. Neurosci. 6: 6.

RESEARCH USE

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