

Neurexophilin-4 siRNA (m): sc-149928

BACKGROUND

Members of the Neurexophilin family are neuropeptide-like glycoproteins that undergo proteolytic processing after synthesis. As secreted proteins, Neurexophilins are thought to function as signaling molecules which specifically bind to target proteins, such as neurexin α (a protein that promotes adhesion between dendrites and axons), and are essential for proper neurotransmitter release. Neurexophilins contain five common domains including a variable N-terminal domain, a highly conserved N-glycosylated central domain, a short linker region and a cysteine-rich conserved C-terminal domain. Neurexophilin-4, also known as NXPH4 or NPH4, is a 308 amino acid secreted protein belonging to the neurexophilin family. Neurexophilin-4 is expressed in brain, spleen and testis, and is encoded by a gene which maps to human chromosome 12q13.3.

REFERENCES

1. Petrenko, A.G., et al. 1996. Structure and evolution of neurexophilin. *J. Neurosci.* 16: 4360-4369.
2. Missler, M., et al. 1998. Neurexophilin binding to α -neurexins. A single LNS domain functions as an independently folding ligand-binding unit. *J. Biol. Chem.* 273: 34716-34723.
3. Missler, M. and Südhof, T.C. 1998. Neurexophilins form a conserved family of neuropeptide-like glycoproteins. *J. Neurosci.* 18: 3630-3638.
4. Online Mendelian Inheritance in Man, OMIM™. 2000. Johns Hopkins University, Baltimore, MD. MIM Number: 604637. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
5. Clariss, H.J., et al. 2002. Expression of neurexin ligands, the neuroligins and the neurexophilins, in the developing and adult rodent olfactory bulb. *Int. J. Dev. Biol.* 46: 649-652.

CHROMOSOMAL LOCATION

Genetic locus: Nxph4 (mouse) mapping to 10 D3.

PRODUCT

Neurexophilin-4 siRNA (m) 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 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see Neurexophilin-4 shRNA Plasmid (m): sc-149928-SH and Neurexophilin-4 shRNA (m) Lentiviral Particles: sc-149928-V as alternate gene silencing products.

For independent verification of Neurexophilin-4 (m) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-149928A, sc-149928B and sc-149928C.

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 μ l of the RNase-free water provided. Resuspension of the siRNA duplex in 330 μ l of RNase-free water makes a 10 μ M solution in a 10 μ M Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

APPLICATIONS

Neurexophilin-4 siRNA (m) is recommended for the inhibition of Neurexophilin-4 expression in mouse 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 μ M in 66 μ l. 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 Neurexophilin-4 gene expression knockdown using RT-PCR Primer: Neurexophilin-4 (m)-PR: sc-149928-PR (20 μ l). 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.