



Lynx1 siRNA (h): sc-106911

BACKGROUND

Proper neuronal function relies on the regulation of neurotransmitter receptors, such as the nicotinic and muscarinic acetylcholine receptors. Neuronal nicotinic acetylcholine receptors define a superfamily of ligand-gated ion channels that contribute to normal synaptic transmission in the central and peripheral nervous systems. Snake venom α -neurotoxins and mammalian Ly-6 family members can target different muscle-type and neuronal nicotinic acetylcholine receptors. Ly6/neurotoxin 1, known as Lynx1 or Ly-6 neurotoxin-like protein-1, is a secreted modulator of nicotinic acetylcholine receptors that is similar to snake venom neurotoxins and the lymphocyte antigen-6 gene (LY-6) family of the immune system. Lynx1 is expressed in large projection neurons in the hippocampus, cortex, and cerebellum, and localizes to the cerebellar soma and proximal dendrites.

REFERENCES

1. Hall, Z.W. 1999. α neurotoxins and their relatives: foes and friends? *Neuron* 23: 4-5.
2. Miwa, J.M., Ibanez-Tallon, I., Crabtree, G.W., Sanchez, R., Sali, A., Role, L.W. and Heintz, N. 1999. Lynx1, an endogenous toxin-like modulator of nicotinic acetylcholine receptors in the mammalian CNS. *Neuron* 23: 105-114.
3. Tsetlin, V. 1999. Snake venom α -neurotoxins and other "three-finger" proteins. *Eur. J. Biochem.* 264: 281-286.
4. Dwoskin, L.P. and Crooks, P.A. 2001. Competitive neuronal nicotinic receptor antagonists: a new direction for drug discovery. *J. Pharmacol. Exp. Ther.* 298: 395-402.
5. Dani, J.A. 2001. Overview of nicotinic receptors and their roles in the central nervous system. *Biol. Psychiatry* 49: 166-174.

CHROMOSOMAL LOCATION

Genetic locus: LYNX1 (human) mapping to 8q24.3.

PRODUCT

Lynx1 siRNA (h) is a pool of 2 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 Lynx1 shRNA Plasmid (h): sc-106911-SH and Lynx1 shRNA (h) Lentiviral Particles: sc-106911-V as alternate gene silencing products.

For independent verification of Lynx1 (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-106911A and sc-106911B.

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 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

Lynx1 siRNA (h) is recommended for the inhibition of Lynx1 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 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 Lynx1 gene expression knockdown using RT-PCR Primer: Lynx1 (h)-PR: sc-106911-PR (20 μ l). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.