

LIX1 siRNA (m): sc-146757

BACKGROUND

LIX1 (protein limb expression 1 homolog), also known as C5orf11, is a 282 amino acid protein belonging to the LIX1 family. Other members of the LIX1 family include LIX1L (LIX1-like protein). Although the function of LIX1 is unknown, the predicted secondary structure is compatible with a role in RNA metabolism. The C-terminal 100 amino acids of LIX1 also have a 98% probability of forming a coiled-coil structure. Therefore, LIX1 may interact with the many coiled-coil proteins found in most cells. LIX1 expression is largely restricted to the central nervous system, primarily in spinal motor neurons. The gene encoding LIX1 maps to human chromosome 5q15 and mouse chromosome 17 A3.2

REFERENCES

1. Roy, N., et al. 1995. The gene for neuronal apoptosis inhibitory protein is partially deleted in individuals with spinal muscular atrophy. *Cell* 80: 167-178.
2. Beck, K., et al. 1998. Supercoiled protein motifs: the collagen triple-helix and the α -helical coiled coil. *J. Struct. Biol.* 122: 17-29.
3. Swindell, E.C., et al. 2001. Cloning and expression analysis of chicken Lix1, a founding member of a novel gene family. *Mech. Dev.* 109: 405-408.
4. Moeller, C., et al. 2002. Murine Lix1, a novel marker for substantia nigra, cortical layer 5, and hindbrain structures. *Brain Res. Gene Expr. Patterns.* 1: 199-203.
5. He, Q., et al. 2005. Inherited motor neuron disease in domestic cats: a model of spinal muscular atrophy. *Pediatr. Res.* 57: 324-330.
6. Fyfe, J.C., et al. 2006. An approximately 140-kb deletion associated with feline spinal muscular atrophy implies an essential LIX1 function for motor neuron survival. *Genome Res.* 16: 1084-1090.
7. Sasongko, T.H., et al. 2010. Screening of the LIX1 gene in Japanese and Malaysian patients with SMA and/or SMA-like disorder. *Brain Dev.* 32: 385-389.

CHROMOSOMAL LOCATION

Genetic locus: Lix1 (mouse) mapping to 17 A3.2.

PRODUCT

LIX1 siRNA (m) 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 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see LIX1 shRNA Plasmid (m): sc-146757-SH and LIX1 shRNA (m) Lentiviral Particles: sc-146757-V as alternate gene silencing products.

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

LIX1 siRNA (m) is recommended for the inhibition of LIX1 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 LIX1 gene expression knockdown using RT-PCR Primer: LIX1 (m)-PR: sc-146757-PR (20 μ l). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.