SANTA CRUZ BIOTECHNOLOGY, INC.

LBX1 siRNA (m): sc-146664

BACKGROUND

The human homolog of the *Drosophila* lady bird late gene, LBX1, is specifically expressed in the developing central nervous system and musculoskeletal system. The LBX1 gene has a restrictive expression pattern in the dorsal portion of the mantle of the spinal cord and the hindbrain of the CNS. In the developing mouse and chicken musculoskeletal system, LBX1 is expressed in migrating limb muscle precursor cells. In addition, LBX1 may regulate migratory patterns of limb muscle cell precursors and may be essential to dorsal identification of forelimb muscles.

REFERENCES

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2. Mennerich, D., et al. 2001. Activation of myogenesis by the homeobox gene LBX1 requires cell proliferation. EMBO J. 20: 7174-7183.
3. Kruger, M., et al. 2002. The homeobox containing gene LBX1 is required for correct dorsal-ventral patterning of the neural tube. J. Neurochem. 82: 774-782.
4. Muller, T., et al. 2002. The homeodomain factor LBX1 distinguishes two major programs of neuronal differentiation in the dorsal spinal cord. Neuron 34: 551-562.
5. Gross, M.K., et al. 2002. LBX1 specifies somatosensory association interneurons in the dorsal spinal cord. Neuron 34: 535-549.
6. Schafer, K., et al. 2003. The homeobox gene LBX1 specifies a subpopulation of cardiac neural crest necessary for normal heart development. Circ. Res. 92: 73-80.
7. Mizuhara, E., et al. 2005. Corl1, a novel neuronal lineage-specific transcriptional corepressor for the homeodomain transcription factor LBX1. J. Biol. Chem. 280: 3645-3655.
8. SWISS-PROT/TrEMBL (P52954). World Wide Web URL: http://www.expasy.ch/sprot/sprot-top.html

CHROMOSOMAL LOCATION

Genetic locus: Lbx1 (mouse) mapping to 19 C3.

PRODUCT

LBX1 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 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see LBX1 shRNA Plasmid (m): sc-146664-SH and LBX1 shRNA (m) Lentiviral Particles: sc-146664-V as alternate gene silencing products.

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 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

LBX1 siRNA (m) is recommended for the inhibition of LBX1 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 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 LBX1 gene expression knockdown using RT-PCR Primer: LBX1 (m)-PR: sc-146664-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.