SANTA CRUZ BIOTECHNOLOGY, INC.

LUC7L siRNA (m): sc-62570

BACKGROUND

LUC7L (Luc7-like 1), also called SR+89 or putative SR protein LUC7B1, is a 371 amino acid member of the Luc7 family. A homolog of the yeast protein, mammalian LUC7L localizes to the nucleus via its arginine/serine-rich domain. Although ubiquitously expressed, LUC7L is rarely detected in adult skeletal muscle. Forced expression of LUC7L in skeletal muscle inhibits myogenesis *in vitro*. Three isoforms exist for LUC7L. Isoform 1 represents the full length protein, isoform 2 is truncated at amino acid 325 and isoform 3 contains a variation in which the first 20 amino acids have been replaced by a different sequence of 3 amino acids.

REFERENCES

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2. Tufarelli, C., Stanley, J.A., Garrick, D., Sharpe, J.A., Ayyub, H., Wood, W.G. and Higgs, D.R. 2003. Transcription of antisense RNA leading to gene silencing and methylation as a novel cause of human genetic disease. Nat. Genet. 34: 157-165.
3. Kimura, E., Hidaka, K., Kida, Y., Morisaki, H., Shirai, M., Araki, K., Suzuki, M., Yamamura, K.I. and Morisaki, T. 2004. Serine-arginine-rich nuclear protein LUC7L regulates myogenesis in mice. Gene 341: 41-47.
4. Tufarelli, C., Hardison, R., Miller, W., Hughes, J., Clark, K., Ventress, N., Frischauf, A.M. and Higgs, D.R. 2004. Comparative analysis of the α-like globin clusters in mouse, rat and human chromosomes indicates a mechanism underlying breaks in conserved synteny. Genome Res. 14: 623-630.
5. De Leo, A.A., Wheeler, D., Lefevre, C., Cheng, J.F., Hope, R., Kuliwaba, J., Nicholas, K.R., Westerman, M. and Graves, J.A. 2005. Sequencing and mapping hemoglobin gene clusters in the Australian model dasyurid marsupial *Sminthopsis macroura*. Cytogenet. Genome Res. 108: 333-341.

CHROMOSOMAL LOCATION

Genetic locus: Luc7l (mouse) mapping to 17 A3.3.

PRODUCT

LUC7L 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 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see LUC7L shRNA Plasmid (m): sc-62570-SH and LUC7L shRNA (m) Lentiviral Particles: sc-62570-V as alternate gene silencing products.

For independent verification of LUC7L (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-62570A, sc-62570B and sc-62570C.

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

LUC7L siRNA (m) is recommended for the inhibition of LUC7L 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.

GENE EXPRESSION MONITORING

LUC7L (43-I): sc-101075 is recommended as a control antibody for monitoring of LUC7L 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 LUC7L gene expression knockdown using RT-PCR Primer: LUC7L (m)-PR: sc-62570-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.