SANTA CRUZ BIOTECHNOLOGY, INC.

LSm4 siRNA (h): sc-62567

BACKGROUND

Sm and Sm-like (LSm) proteins form donut shaped heptameric complexes that are involved in various steps of RNA metabolism. Lsm proteins facilitate RNA protein interactions and structural changes that are required during ribosomal subunit assembly. LSm4, also called U6 snRNA-associated Sm-like protein or Glycine-rich protein (GRP), binds specifically to the 3'-terminal U-tract of U6 snRNA. Human LSm4 localizes to the cytoplasm in small, discrete foci. These foci are also the localization site for the mRNA decapping enzyme Dcp1/2 and the exonuclease, Xm1.

REFERENCES

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3. Brahms, H., et al. 2001. Symmetrical dimethylation of arginine residues in spliceosomal Sm protein B/B' and the Sm-like protein LSm4, and their interaction with the SMN protein. RNA 7: 1531-1542.
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5. Mazzoni, C., et al. 2003. A truncated form of KILsm4p and the absence of factors involved in mRNA decapping trigger apoptosis in yeast. Mol. Biol. Cell 14: 721-729.
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8. Fernandez, C.F., et al. 2004. An Lsm2-Lsm7 complex in *Saccharomyces cerevisiae* associates with the small nucleolar RNA snR5. Mol. Biol. Cell 15: 2842-2852.
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CHROMOSOMAL LOCATION

Genetic locus: LSM4 (human) mapping to 19p13.11.

PRODUCT

LSm4 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 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see LSm4 shRNA Plasmid (h): sc-62567-SH and LSm4 shRNA (h) Lentiviral Particles: sc-62567-V as alternate gene silencing products.

For independent verification of LSm4 (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-62567A and sc-62567B.

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

LSm4 siRNA (h) is recommended for the inhibition of LSm4 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 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 LSm4 gene expression knockdown using RT-PCR Primer: LSm4 (h)-PR: sc-62567-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.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.