SANTA CRUZ BIOTECHNOLOGY, INC.

LSm1 siRNA (m): sc-72336

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The Power to Question

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. LSm1, also designated U6 snRNA-associated Sm-like protein or small nuclear ribonuclear CaSm, binds specifically to the 3'-terminal U-tract of U6 snRNA. Human LSm1 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. LSm1 is naturally overexpressed in pancreatic cancer as well as in certain breast cancer cell lines. The down-regulation of LSm1 is involved in the progression of prostate cancer.

REFERENCES

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8. Streicher, K.L., et al. 2007. Transforming function of the LSm1 oncogene in human breast cancers with the 8p11-12 amplicon. Oncogene 26: 2104-2114.
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CHROMOSOMAL LOCATION

Genetic locus: Lsm1 (mouse) mapping to 8 A2.

PRODUCT

LSm1 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 LSm1 shRNA Plasmid (m): sc-72336-SH and LSm1 shRNA (m) Lentiviral Particles: sc-72336-V as alternate gene silencing products.

For independent verification of LSm1 (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-72336A, sc-72336B and sc-72336C.

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

LSm1 siRNA (m) is recommended for the inhibition of LSm1 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

LSm1 (A-9): sc-373685 is recommended as a control antibody for monitoring of LSm1 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 LSm1 gene expression knockdown using RT-PCR Primer: LSm1 (m)-PR: sc-72336-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.