

LSm10 siRNA (h) : sc-75702

BACKGROUND

LSm10 (U7 snRNA-associated Sm-like protein LSm10) is a nuclear protein that belongs to the snRNP (small nuclear ribonucleoproteins) Sm protein family. The survival of motor neurons (SMN) complex mediates the assembly of snRNPs involved in splicing and histone RNA processing. A crucial step in this process is the binding of Sm proteins onto the SMN protein. LSm10 and LSm11, mammalian homologs of the yeast Sm proteins D1 and D2, are important for U7 snRNP function and subcellular localization. U7 snRNP is an RNA molecule involved in the splicing of animal histone pre-mRNAs. Lsm10 and Lsm11 also associate with pICln (chloride ion current inducer protein), which interacts with Sm proteins to inhibit their assembly on U RNA. LSm10 interactions with U7 snRNA and pICln may provide the means for using modified U7 snRNA derivatives to alter specific pre-mRNA splicing events, potentially leading to advances in antisense gene therapy.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: LSM10 (human) mapping to 1p34.3.

PRODUCT

LSm10 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 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see LSm10 shRNA Plasmid (h): sc-75702-SH and LSm10 shRNA (h) Lentiviral Particles: sc-75702-V as alternate gene silencing products.

For independent verification of LSm10 (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-75702A and sc-75702B.

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

LSm10 siRNA (h) is recommended for the inhibition of LSm10 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 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.

GENE EXPRESSION MONITORING

LSm10 (2522C1a): sc-81314 is recommended as a control antibody for monitoring of LSm10 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).

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor LSm10 gene expression knockdown using RT-PCR Primer: LSm10 (h) -PR: sc-75702-PR (20 μ l). 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.