SANTA CRUZ BIOTECHNOLOGY, INC.

LSm12 siRNA (h): sc-93571

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. LSm12 is a 195 amino acid protein that contains a amino-terminal domain, a putative RNA-binding domain and a carboxy-terminal methyltransferase domain. Through interaction with PABP, a cytoplasmic protein involved in the regulatory processes of mRNA metabolism, LSm12 may be involved in stress granule assembly and mRNA-protein regulation. There are two isoforms of LSm12 that are produced as a result of alternative splicing events.

REFERENCES

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4. Online Mendelian Inheritance in Man, OMIM™. 2008. Johns Hopkins University, Baltimore, MD. MIM Number: 611793. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
5. Tharun, S. 2009. Roles of eukaryotic Lsm proteins in the regulation of mRNA function. Int. Rev. Cell Mol. Biol. 272: 149-189.
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CHROMOSOMAL LOCATION

Genetic locus: LSM12 (human) mapping to 17q21.31.

PRODUCT

LSm12 siRNA (h) 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 LSm12 shRNA Plasmid (h): sc-93571-SH and LSm12 shRNA (h) Lentiviral Particles: sc-93571-V as alternate gene silencing products.

For independent verification of LSm12 (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-93571A, sc-93571B and sc-93571C.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

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

LSm12 siRNA (h) is recommended for the inhibition of LSm12 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 LSm12 gene expression knockdown using RT-PCR Primer: LSm12 (h)-PR: sc-93571-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

PROTOCOLS

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