



Ribosomal Protein L7L1 siRNA (m): sc-152926

BACKGROUND

Ribosomes, the organelles that catalyze protein synthesis, are composed of a small subunit (40S) and a large subunit (60S) that consist of over 80 distinct ribosomal proteins. Mammalian ribosomal proteins are encoded by multigene families that contain processed pseudogenes and one functional intron-containing gene within their coding regions. Ribosomal Protein L7L1 (Ribosomal Protein L7-like 1), also known as RPL7L1, is a 246 amino acid protein that belongs to the Ribosomal Protein L30P family of ribosomal proteins. Ribosomal Protein L7L1 is similar to Ribosomal Protein L7, a cytoplasmic protein that contains an N-terminal BZIP (basic region-leucine zipper)-like domain and an RNP2 submotif and functions as a component of the large 60S subunit. Ribosomal Protein L7 is capable of binding DNA and RNA, and is believed to play a regulatory role in translation. This suggests a possible role for Ribosomal Protein L7L1 in similar functions.

REFERENCES

1. Seshadri, T., Uzman, J.A., Oshima, J. and Campisi, J. 1993. Identification of a transcript that is downregulated in senescent human fibroblasts. Cloning, sequence analysis, and regulation of the human L7 ribosomal protein gene. *J. Biol. Chem.* 268: 18474-18480.
2. Hemmerich, P., von Mikecz, A., Neumann, F., Sözeri, O., Wolff-Vorbeck, G., Zobebein, R. and Krawinkel, U. 1993. Structural and functional properties of Ribosomal Protein L7 from humans and rodents. *Nucleic Acids Res.* 21: 223-231.
3. Wool, I.G., Chan, Y.L. and Glück, A. 1995. Structure and evolution of mammalian ribosomal proteins. *Biochem. Cell Biol.* 73: 933-947.
4. Neumann, F., Hemmerich, P., von Mikecz, A., Peter, H.H. and Krawinkel, U. 1995. Human Ribosomal Protein L7 inhibits cell-free translation in reticulocyte lysates and affects the expression of nuclear proteins upon stable transfection into Jurkat T-lymphoma cells. *Nucleic Acids Res.* 23: 195-202.
5. Lecompte, O., Ripp, R., Thierry, J.C., Moras, D. and Poch, O. 2002. Comparative analysis of ribosomal proteins in complete genomes: an example of reductive evolution at the domain scale. *Nucleic Acids Res.* 30: 5382-5390.

CHROMOSOMAL LOCATION

Genetic locus: Rpl7l1 (mouse) mapping to 17 C.

PRODUCT

Ribosomal Protein L7L1 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 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see Ribosomal Protein L7L1 shRNA Plasmid (m): sc-152926-SH and Ribosomal Protein L7L1 shRNA (m) Lentiviral Particles: sc-152926-V as alternate gene silencing products.

For independent verification of Ribosomal Protein L7L1 (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-152926A, sc-152926B and sc-152926C.

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

Ribosomal Protein L7L1 siRNA (m) is recommended for the inhibition of Ribosomal Protein L7L1 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 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.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor Ribosomal Protein L7L1 gene expression knockdown using RT-PCR Primer: Ribosomal Protein L7L1 (m)-PR: sc-152926-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.

PROTOCOLS

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