



Ribosomal Protein L3 siRNA (h): sc-76400

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 L3, also known as RPL3 or TARBP-B, is a 403 amino acid protein that localizes to the cytoplasm and belongs to the L3P family of ribosomal proteins. Expressed as multiple alternatively spliced isoforms, Ribosomal Protein L3 is able to bind to HIV-1 mRNA, possibly activating HIV-1 protein translation. Like most ribosomal proteins, Ribosomal Protein L3 exists as multiple processed pseudogenes that are scattered throughout the genome.

REFERENCES

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5. Duga, S., Asselta, R., Malcovati, M., Tenchini, M.L., Ronchi, S. and Simoncic, T. 2000. The intron-containing L3 ribosomal protein gene (RPL3): sequence analysis and identification of U43 and of two novel intronic small nucleolar RNAs. *Biochim. Biophys. Acta* 1490: 225-236.
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CHROMOSOMAL LOCATION

Genetic locus: RPL3 (human) mapping to 22q13.1.

PRODUCT

Ribosomal Protein L3 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 Ribosomal Protein L3 shRNA Plasmid (h): sc-76400-SH and Ribosomal Protein L3 shRNA (h) Lentiviral Particles: sc-76400-V as alternate gene silencing products.

For independent verification of Ribosomal Protein L3 (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-76400A and sc-76400B.

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 L3 siRNA (h) is recommended for the inhibition of Ribosomal Protein L3 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.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor Ribosomal Protein L3 gene expression knockdown using RT-PCR Primer: Ribosomal Protein L3 (h)-PR: sc-76400-PR (20 μ l). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

SELECT PRODUCT CITATIONS

1. Esposito, D., Crescenzi, E., Sagar, V., Loreni, F., Russo, A. and Russo, G. 2014. Human RPL3 plays a crucial role in cell response to nucleolar stress induced by 5-FU and L-OHP. *Oncotarget* 5: 11737-11751.

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.