



# Ribosomal Protein L39L siRNA (h): sc-77969

## 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 L39L, also known as RPL39L, RPL39L1 or RPL-2, is a 51 amino acid protein that is highly similar (92% amino acid identity) to Ribosomal Protein L39, a component of the 60S subunit. Due to the lack of introns in its coding region, the gene encoding Ribosomal Protein L39L was likely retrotransposed from the X-linked Ribosomal Protein L39 gene. Specifically expressed in testis but also found in various cancer tissues, Ribosomal Protein L39L belongs to the L39e family of ribosomal proteins and may play a role in protein synthesis.

## REFERENCES

1. Nadano, D., et al. 2002. A human gene encoding a protein homologous to Ribosomal Protein L39 is normally expressed in the testis and derepressed in multiple cancer cells. *Biochim. Biophys. Acta* 1577: 430-436.
2. Uechi, T., et al. 2002. Functional second genes generated by retrotransposition of the X-linked ribosomal protein genes. *Nucleic Acids Res.* 30: 5369-5375.
3. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 607547. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
4. Wong, Y.F., et al. 2006. Genome-wide gene expression profiling of cervical cancer in Hong Kong women by oligonucleotide microarray. *Int. J. Cancer* 118: 2461-2469.
5. Marygold, S.J., et al. 2007. The ribosomal protein genes and Minute loci of *Drosophila melanogaster*. *Genome Biol.* 8: R216.
6. Thorrez, L., et al. 2008. Using ribosomal protein genes as reference: a tale of caution. *PLoS ONE* 3: e1854.

## CHROMOSOMAL LOCATION

Genetic locus: RPL39L (human) mapping to 3q27.3.

## PRODUCT

Ribosomal Protein L39L 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  $\mu$ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see Ribosomal Protein L39L shRNA Plasmid (h): sc-77969-SH and Ribosomal Protein L39L shRNA (h) Lentiviral Particles: sc-77969-V as alternate gene silencing products.

For independent verification of Ribosomal Protein L39L (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-77969A, sc-77969B and sc-77969C.

## 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  $\mu$ l of the RNase-free water provided. Resuspension of the siRNA duplex in 330  $\mu$ l of RNase-free water makes a 10  $\mu$ M solution in a 10  $\mu$ M Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

## APPLICATIONS

Ribosomal Protein L39L siRNA (h) is recommended for the inhibition of Ribosomal Protein L39L 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  $\mu$ M in 66  $\mu$ 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

Ribosomal Protein L39L (FB-09): sc-100841 is recommended as a control antibody for monitoring of Ribosomal Protein L39L 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-IgG $\kappa$  BP-HRP: sc-516102 or m-IgG $\kappa$  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-IgG $\kappa$  BP-FITC: sc-516140 or m-IgG $\kappa$  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 Ribosomal Protein L39L gene expression knockdown using RT-PCR Primer: Ribosomal Protein L39L (h)-PR: sc-77969-PR (20  $\mu$ l). 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](http://www.scbt.com) for detailed protocols and support products.