

Ribosomal Protein L11 siRNA (h): sc-60076

BACKGROUND

The genes encoding for mammalian ribosomal proteins comprise multigene families that consist predominantly of multiple processed pseudogenes and one functional intro-containing gene within their coding regions. The RPS6 gene gives rise to Ribosomal Protein S6 (also designated RPS6) and Ribosomal Protein L28. Sequence comparison has identified RPS6 as the equivalent of the ribosomal protein S10 from *Saccharomyces cerevisiae*. The sequence comparison of Ribosomal Proteins from evolutionarily distant eukaryotes, such as yeast and human, indicates that the structure and the function are highly conserved. The gene encoding human Ribosomal Protein L11 maps to chromosome 1p36.11.

REFERENCES

1. Heinze, H., et al. 1988. The primary structure of the human Ribosomal Protein S6 derived from a cloned cDNA. *J. Biol. Chem.* 263: 4139-4144.
2. Gross, T., et al. 1988. Primary structure of the Ribosomal Protein gene S6 from *Schizosaccharomyces pombe*. *Curr. Genet.* 13: 57-63.
3. Wool, I.G., et al. 1990. The primary structure of rat Ribosomal Proteins: the amino acid sequences of L27a and L28 and corrections in the sequences of S4 and S12. *Biochim. Biophys. Acta* 1050: 69-73.
4. Feo, S., et al. 1992. The mapping of seven intron-containing Ribosomal Protein genes shows they are unlinked in the human genome. *Genomics* 13: 201-207.

CHROMOSOMAL LOCATION

Genetic locus: RPL11 (human) mapping to 1p36.11.

PRODUCT

Ribosomal Protein L11 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 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see Ribosomal Protein L11 shRNA Plasmid (h): sc-60076-SH and Ribosomal Protein L11 shRNA (h) Lentiviral Particles: sc-60076-V as alternate gene silencing products.

For independent verification of Ribosomal Protein L11 (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-60076A, sc-60076B and sc-60076C.

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 L11 siRNA (h) is recommended for the inhibition of Ribosomal Protein L11 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

Ribosomal Protein L11 (2A1): sc-293224 is recommended as a control antibody for monitoring of Ribosomal Protein L11 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 κ BP-HRP: sc-516102 or m-IgG κ 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 κ BP-FITC: sc-516140 or m-IgG κ 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 L11 gene expression knockdown using RT-PCR Primer: Ribosomal Protein L11 (h)-PR: sc-60076-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. Jung, J.H., et al. 2020. Colocalization of MID1P1 and c-Myc is critically involved in liver cancer growth via regulation of Ribosomal Protein L5 and L11 and CNOT2. *Cells* 9 pii: E985.

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.