

Ribosomal Protein L22 siRNA (h): sc-63349

BACKGROUND

Ribosomal Protein L22 is also known as heparin-binding protein HBp15, because it binds heparin in the submandibular gland and brain. This small protein is also associated with two small nuclear RNAs called EBERs (Epstein-Barr encoded RNAs). These RNAs are synthesized in large amounts by human B lymphocytes infected with Epstein-Barr virus (EBV). Ribosomal Protein L22, like L4, contains a globular domain that sits on the surface of the large ribosomal subunit and an extended loop that penetrates its core. These extensions contact multiple domains of 23S rRNA, indicating a potential, but not essential, role in rRNA folding during ribosomal assembly.

REFERENCES

1. Pardo, D., et al. 1979. Assembly of ribosomal subunits affected in a ribosomal mutant of *E. coli* having an altered L22 protein. *Mol. Gen. Genet.* 174: 53-58.
2. Fujita, Y., et al. 1994. A novel heparin-binding protein, HBp15, is identified as mammalian Ribosomal Protein L22. *Biochem. Biophys. Res. Commun.* 199: 706-713.
3. Dobbstein, M., et al. 1995. *In vitro* selection of RNA ligands for the ribosomal L22 protein associated with Epstein-Barr virus-expressed RNA by using randomized and cDNA-derived RNA libraries. *J. Virol.* 69: 8027-8034.
4. Davydova, N.L., et al. 1995. Ribosomal Protein L22 from *Thermus thermophilus*: sequencing, overexpression and crystallisation. *FEBS Lett.* 369: 229-232.

CHROMOSOMAL LOCATION

Genetic locus: RPL22 (human) mapping to 1p36.31.

PRODUCT

Ribosomal Protein L22 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 L22 shRNA Plasmid (h): sc-63349-SH and Ribosomal Protein L22 shRNA (h) Lentiviral Particles: sc-63349-V as alternate gene silencing products.

For independent verification of Ribosomal Protein L22 (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-63349A, sc-63349B and sc-63349C.

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 L22 siRNA (h) is recommended for the inhibition of Ribosomal Protein L22 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 L22 (D-7): sc-373993 is recommended as a control antibody for monitoring of Ribosomal Protein L22 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 L22 gene expression knockdown using RT-PCR Primer: Ribosomal Protein L22 (h)-PR: sc-63349-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. Das, A.S., et al. 2020. Post-transcriptional regulation of C-C motif chemokine ligand 2 expression by Ribosomal Protein L22 during LPS-mediated inflammation. *FEBS J.* E-published.

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.