

Ribosomal Protein L13A siRNA (m): sc-152895

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 L13A, also known as RPL13A or 23 kDa highly basic protein, is a 203 amino acid cytoplasmic protein that belongs to the Ribosomal Protein L13P family. A component of the 60S subunit, Ribosomal Protein L13A exists as multiple processed pseudogenes that are scattered throughout the genome. The gene encoding Ribosomal Protein L13A maps to human chromosome 19q13.42.

REFERENCES

1. Wool, I.G., et al. 1995. Structure and evolution of mammalian Ribosomal Proteins. *Biochem. Cell Biol.* 73: 933-947.
2. Kenmochi, N., et al. 1998. A map of 75 human Ribosomal Protein genes. *Genome Res.* 8: 509-523.
3. Higa, S., et al. 1999. Gene organization and sequence of the region containing the Ribosomal Protein genes RPL13A and RPS11 in the human genome and conserved features in the mouse genome. *Gene* 240: 371-377.
4. Mazumder, B., et al. 2003. Regulated release of L13a from the 60S Ribosomal subunit as a mechanism of transcript-specific translational control. *Cell* 115: 187-198.
5. Kapp, L.D., et al. 2004. The molecular mechanics of eukaryotic translation. *Annu. Rev. Biochem.* 73: 657-704.
6. Chaudhuri, S., et al. 2007. Human Ribosomal Protein L13a is dispensable for canonical ribosome function but indispensable for efficient rRNA methylation. *RNA* 13: 2224-2237.

CHROMOSOMAL LOCATION

Genetic locus: Rpl13a (mouse) mapping to 7 B4.

PRODUCT

Ribosomal Protein L13A siRNA (m) is a target-specific 19-25 nt siRNA 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 L13A shRNA Plasmid (m): sc-152895-SH and Ribosomal Protein L13A shRNA (m) Lentiviral Particles: sc-152895-V as alternate gene silencing products.

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 L13A siRNA (m) is recommended for the inhibition of Ribosomal Protein L13A 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.

GENE EXPRESSION MONITORING

Ribosomal Protein L13A (C-11): sc-390131 is recommended as a control antibody for monitoring of Ribosomal Protein L13A gene expression knock-down 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 L13A gene expression knockdown using RT-PCR Primer: Ribosomal Protein L13A (m)-PR: sc-152895-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.