



Ribosomal Protein S8 siRNA (h): sc-78677

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 S8, also known as S8 or RPS8, is a 208 amino acid component of the 40S subunit. Localized to the cytoplasm, Ribosomal Protein S8 belongs to the S8E family of ribosomal proteins and functions in protein synthesis. Like most ribosomal proteins, Ribosomal Protein S8 exists as multiple processed pseudogenes that are scattered throughout the genome. Ribosomal Protein S8 is encoded by a gene located on human chromosome 1p34.1.

REFERENCES

1. Davies, B., et al. 1993. The structure of the human intron-containing S8 ribosomal protein gene and determination of its chromosomal location at 1p32-p34.1. *Genomics* 15: 68-75.
2. Hori, N., et al. 1993. A cDNA sequence of human ribosomal protein, homologue of yeast S28. *Nucleic Acids Res.* 21: 4394.
3. Kitaoka, Y., et al. 1994. The primary structure of rat ribosomal protein S23. *Biochem. Biophys. Res. Commun.* 202: 314-320.
4. Vladimirov, S.N., et al. 1996. Characterization of the human small-ribosomal-subunit proteins by N-terminal and internal sequencing, and mass spectrometry. *Eur. J. Biochem.* 239: 144-149.
5. Kenmochi, N., et al. 1998. A map of 75 human ribosomal protein genes. *Genome Res.* 8: 509-523.
6. Yoshihama, M., et al. 2002. The human ribosomal protein genes: sequencing and comparative analysis of 73 genes. *Genome Res.* 12: 379-390.
7. Yu, Y., et al. 2005. Mass spectrometric analysis of the human 40S ribosomal subunit: native and HCV IRES-bound complexes. *Protein Sci.* 14: 1438-1446.

CHROMOSOMAL LOCATION

Genetic locus: RPS8 (human) mapping to 1p34.1.

PRODUCT

Ribosomal Protein S8 siRNA (h) 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 S8 shRNA Plasmid (h): sc-78677-SH and Ribosomal Protein S8 shRNA (h) Lentiviral Particles: sc-78677-V as alternate gene silencing products.

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.

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 S8 siRNA (h) is recommended for the inhibition of Ribosomal Protein S8 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 S8 gene expression knockdown using RT-PCR Primer: Ribosomal Protein S8 (h)-PR: sc-78677-PR (20 μ l). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.