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# Ribosomal Protein S20 siRNA (m): sc-62943

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The Power to Question

## BACKGROUND

Mammalian ribosomal proteins are encoded by multigene families that consist of processed pseudogenes and one functional intron-containing gene within their coding regions. Ribosomal Protein S20, also known as RPS20, is a 119 amino acid cytoplasmic protein that is a component of the 40S ribosomal subunit. Co-transcribed with the small nucleolar RNA gene U54, Ribosomal Protein S20 is a primary binding protein (it binds independently to its target protein) that interacts with both the 5' and 3' minor domains of 16S ribosomal RNA (rRNA). Through its interactions with 16S rRNA, Ribosomal Protein S20 is thought to play a key role in nucleating the assembly of the 30S ribosomal subunit. Like most ribosomal protein-coding genes, the gene encoding Ribosomal Protein S20 is dispersed throughout the genome and exists as multiple processed pseudogenes.

## REFERENCES


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3. Coburn, G.A. and Mackie, G.A. 1998. Reconstitution of the degradation of the mRNA for Ribosomal Protein S20 with purified enzymes. J. Mol. Biol. 279: 1061-1074.
4. Culver, G.M. and Noller, H.F. 1998. Directed hydroxyl radical probing of 16S ribosomal RNA in ribosomes containing Fe(II) tethered to Ribosomal Protein S20. RNA 4: 1471-1480.
5. Grondek, J.F. and Culver, G.M. 2004. Assembly of the 30S ribosomal subunit: positioning Ribosomal Protein S13 in the S7 assembly branch. RNA 10: 1861-1866.
6. Olsvik, P.A., et al. 2005. Evaluation of potential reference genes in real-time RT-PCR studies of Atlantic salmon. BMC Mol. Biol. 6: 21-21.
7. De Bortoli, M., et al. 2006. Medulloblastoma outcome is adversely associated with overexpression of EEF1D, RPL30, and RPS20 on the long arm of chromosome 8. BMC Cancer 6: 223.
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## CHROMOSOMAL LOCATION

Genetic locus: Rps20 (mouse) mapping to 4 A1.

## 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.

## PRODUCT

Ribosomal Protein S20 siRNA (m) 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 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see Ribosomal Protein S20 shRNA Plasmid (m): sc-62943-SH and Ribosomal Protein S20 shRNA (m) Lentiviral Particles: sc-62943-V as alternate gene silencing products.

For independent verification of Ribosomal Protein S20 (m) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-62943A, sc-62943B and sc-62943C.

## 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 µl of the RNAse-free water provided. Resuspension of the siRNA duplex in 330 µl of RNAse-free water makes a 10 µM solution in a 10 µM Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

## APPLICATIONS

Ribosomal Protein S20 siRNA (m) is recommended for the inhibition of Ribosomal Protein S20 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 µM in 66 µl. 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 S20 gene expression knockdown using RT-PCR Primer: Ribosomal Protein S20 (m)-PR: sc-62943-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.