

MRP-S9 siRNA (m): sc-149636

BACKGROUND

Mammalian mitochondrial ribosomes (mitoribosomes) are responsible for protein synthesis within the mitochondrion. The mitoribosomes are composed of a 4:1 ratio of protein to RNA, with the proteins forming 2 subunits, the 28S subunit and the 39S subunit. Across species, the proteins that make up the mitoribosome subunits vary greatly in sequence, preventing easy recognition by sequence homology. MRP-S9 (mitochondrial 28S ribosomal protein S9), also known as RPMS9, is a 396 amino acid mitochondrial ribosomal protein. Localized to mitochondria, MRP-S9 is present in the 28S subunit of the mitoribosomes, which comprises a 12S rRNA and at least 30 distinct proteins.

REFERENCES

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2. Hattori, A., et al. 2000. Characterization of long cDNA clones from human adult spleen. *DNA Res.* 7: 357-366.
3. Koc, E.C., et al. 2000. A proteomics approach to the identification of mammalian mitochondrial small subunit ribosomal proteins. *J. Biol. Chem.* 275: 32585-32591.
4. Cavdar Koc, E., et al. 2001. The small subunit of the mammalian mitochondrial ribosome. Identification of the full complement of ribosomal proteins present. *J. Biol. Chem.* 276: 19363-19374.
5. Kenmochi, N., et al. 2001. The human mitochondrial ribosomal protein genes: mapping of 54 genes to the chromosomes and implications for human disorders. *Genomics* 77: 65-70.
6. Scanlan, M.J., et al. 2001. Humoral immunity to human breast cancer: antigen definition and quantitative analysis of mRNA expression. *Cancer Immun.* 1: 4.
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CHROMOSOMAL LOCATION

Genetic locus: Mrps9 (mouse) mapping to 1 B.

PRODUCT

MRP-S9 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 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see MRP-S9 shRNA Plasmid (m): sc-149636-SH and MRP-S9 shRNA (m) Lentiviral Particles: sc-149636-V as alternate gene silencing products.

For independent verification of MRP-S9 (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-149636A, sc-149636B and sc-149636C.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

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

MRP-S9 siRNA (m) is recommended for the inhibition of MRP-S9 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.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor MRP-S9 gene expression knockdown using RT-PCR Primer: MRP-S9 (m)-PR: sc-149636-PR (20 μ l, 596 bp). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.