SANTA CRUZ BIOTECHNOLOGY, INC.

MRP-S14 siRNA (m): sc-62638

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The Power to Question

BACKGROUND

MRP-S14 (mitochondrial 28S ribosomal protein S14, S14mt) is a 128 amino acid protein encoded by the human gene MRPS14. MRP-S14 is a component of the mitochondrial ribosome small subunit (28S) which comprises a 12S rRNA and about 30 distinct proteins. The human mitochondrial ribosome has 29 distinct proteins in the small subunit. Fourteen of this group of proteins are homologs of the *Escherichia coli* 30 S ribosomal proteins S2, S5, S6, S7, S9, S10, S11, S12, S14, S15, S16, S17, S18 and S21. These proteins also have homologs in *Drosophila melanogaster, Caenorhabditis elegans* and *Saccharomyces cerevisiae* mitochondrial ribosomes.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: Mrps14 (mouse) mapping to 1 H2.1.

PRODUCT

MRP-S14 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 MRP-S14 shRNA Plasmid (m): sc-62638-SH and MRP-S14 shRNA (m) Lentiviral Particles: sc-62638-V as alternate gene silencing products.

For independent verification of MRP-S14 (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-62638A, sc-62638B and sc-62638C.

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

MRP-S14 siRNA (m) is recommended for the inhibition of MRP-S14 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 MRP-S14 gene expression knockdown using RT-PCR Primer: MRP-S14 (m)-PR: sc-62638-PR (20 µl). 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.