

MRP-L52 siRNA (h): sc-92202

BACKGROUND

Mammalian mitochondrial ribosomes (mitoribosomes) are responsible for protein synthesis within mitochondria. Mitoribosomes are composed of a 4:1 ratio of protein to RNA, with the proteins forming two 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-L52 (mitochondrial ribosomal protein L52), also known as L52mt, is a 123 amino acid protein that is a component of the mitochondrial ribosome large subunit (39S), which comprises a 16S rRNA and about 50 distinct proteins. The gene encoding MRP-L52 maps to human chromosome 14, which houses over 700 genes and comprises nearly 3.5% of the human genome.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: MRPL52 (human) mapping to 14q11.2.

RESEARCH USE

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

PRODUCT

MRP-L52 siRNA (h) is a pool of 2 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-L52 shRNA Plasmid (h): sc-92202-SH and MRP-L52 shRNA (h) Lentiviral Particles: sc-92202-V as alternate gene silencing products.

For independent verification of MRP-L52 (h) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-92202A and sc-92202B.

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-L52 siRNA (h) is recommended for the inhibition of MRP-L52 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 MRP-L52 gene expression knockdown using RT-PCR Primer: MRP-L52 (h)-PR: sc-92202-PR (20 μ l). 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.