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SZABO-SCANDIC HandelsgmbH

Quellenstraße 110, A-1100 Wien

T. +43(0)1 489 3961-0

F. +43(0)1 489 3961-7

mail@szabo-scandic.com

www.szabo-scandic.com

linkedin.com/company/szaboscandic

SANTA CRUZ BIOTECHNOLOGY, INC.

MRP-L13 siRNA (m): sc-149581

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Mitochondrial ribosomes are made of a 28S subunit and a larger 39S subunit. These ribosomes have an approximate composition of 75% protein to rRNA as compared to prokaryotic ribosomes, where reverse proportions are found. MRP-L13 (39S ribosomal protein L13, mitochondrial) is a 178 amino acid protein that exists as a component of the 39S ribosomal subunit and works in conjunction with other MRPs to mediate protein synthesis. MRP-L13 contains an amino-terminal leucine zipper and a carboxy-terminal basic leucine zipper domain. MRP-L13 that is released from the 60S ribosomal subunit binds to γ-interferon-Activated Inhibitor of Translation (GAIT) element in the 3' UTR of ceruloplasmin (Cp), thereby silencing the translation of Cp. With this evidence, it has been suggested that MRP-L13 functions both as a protein synthesis machine and acts as a station for regulatory proteins that modulate translation.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: Mrpl13 (mouse) mapping to 15 D1.

PRODUCT

MRP-L13 siRNA (m) 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 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see MRP-L13 shRNA Plasmid (m): sc-149581-SH and MRP-L13 shRNA (m) Lentiviral Particles: sc-149581-V as alternate gene silencing 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 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-L13 siRNA (m) is recommended for the inhibition of MRP-L13 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-L13 gene expression knockdown using RT-PCR Primer: MRP-L13 (m)-PR: sc-149581-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.