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SANTA CRUZ BIOTECHNOLOGY, INC.

Tom7 siRNA (m): sc-154553

BACKGROUND

The mitochondrial protein translocase (MPT) shuttles preproteins into the mitochondria via recognition of an amino-terminal signal sequence (presequence) or an internal targeting domain within the preprotein. MPT contains several components that form three translocons, one in the outer membrane (Tom40/70) and two in the inner membrane (Tim17/23 and Tim22/54). The integral membrane proteins of the MPT include Tom70, Tom37, Tom22 and Tom20. MPT-dependent transport delivers the substrate protein to an outer membrane channel consisting of 5 hydrophobic proteins, Tom40, Tom38, Tom7, Tom6 and Tom5 (1,3-5). The human Tom70 gene maps to chromosome 3q12.2.

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PROTOCOLS

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

CHROMOSOMAL LOCATION

Genetic locus: Tomm7 (mouse) mapping to 5 A3.

PRODUCT

Tom7 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 Tom7 shRNA Plasmid (m): sc-154553-SH and Tom7 shRNA (m) Lentiviral Particles: sc-154553-V as alternate gene silencing products.

For independent verification of Tom7 (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-154553A, sc-154553B and sc-154553C.

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

Tom7 siRNA (m) is recommended for the inhibition of Tom7 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 Tom7 gene expression knockdown using RT-PCR Primer: Tom7 (m)-PR: sc-154553-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.