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SANTA CRUZ BIOTECHNOLOGY, INC.

MAN1A1 siRNA (m): sc-149242

BACKGROUND

The α-mannosidases (designated MAN1A1, MAN1A2, MAN2A1 and MAN2A2) comprise a group of soluble proteins that localize to the endoplasmic reticulum, the Golgi apparatus or the cytoplasm. Depending on their cellular location, these proteins are involved in either the processing or the degradation of newly synthesized N-glycans. MAN1A1 (mannosidase, α, class 1A, member 1), also known as MAN9, HUMM3 or HUMM9, is a 653 amino acid single-pass type II membrane protein that localizes to the Golgi apparatus and is involved in protein glycosylation. Using calcium as a cofactor, MAN1A1 functions to catalyze the hydrolysis of terminal α-D-mannose residues in select oligo-mannose oligosaccharides, a reaction that is important for the maturation of Asn-link oligosaccharides.

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CHROMOSOMAL LOCATION

Genetic locus: Man1a (mouse) mapping to 10 B3.

PROTOCOLS

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

PRODUCT

MAN1A1 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 MAN1A1 shRNA Plasmid (m): sc-149242-SH and MAN1A1 shRNA (m) Lentiviral Particles: sc-149242-V as alternate gene silencing products.

For independent verification of MAN1A1 (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-149242A, sc-149242B and sc-149242C.

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

MAN1A1 siRNA (m) is recommended for the inhibition of MAN1A1 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 MAN1A1 gene expression knockdown using RT-PCR Primer: MAN1A1 (m)-PR: sc-149242-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.