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SANTA CRUZ BIOTECHNOLOGY, INC.

MCTS1 siRNA (m): sc-149331

BACKGROUND

MCTS1 (malignant T cell amplified sequence 1), also known as MCT1, is a 181 amino acid protein that is ubiquitously expressed and localizes to the cytoplasm of cells. MCTS1 may play a role in cell cycle regulation by decreasing cell doubling time and by shortening the duration of G_1 transit time and G_1/S transition. The protein level of Cdk4 and Cdk6 kinases activity and cyclin D1 is enhanced by expression of MCTS1. As a translation enhancer, MCTS1 recruits DENR and binds to the cap complex of the 5'-terminus of mRNAs, subsequently altering the mRNA translation profile. MCTS1 promotes lymphoid tumor development and contributes to the pathogenesis and progression of breast cancer. MCTS1 positively regulates phosphorylation of ERK1 and ERK2.

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PROTOCOLS

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

CHROMOSOMAL LOCATION

Genetic locus: Mcts1 (mouse) mapping to X A3.3.

PRODUCT

MCTS1 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 MCTS1 shRNA Plasmid (m): sc-149331-SH and MCTS1 shRNA (m) Lentiviral Particles: sc-149331-V as alternate gene silencing products.

For independent verification of MCTS1 (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-149331A, sc-149331B and sc-149331C.

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

MCTS1 siRNA (m) is recommended for the inhibition of MCTS1 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 MCTS1 gene expression knockdown using RT-PCR Primer: MCTS1 (m)-PR: sc-149331-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.