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MTLC siRNA (m): sc-149683

BACKGROUND

MTLC (myc target 1), also known as MTMC1 (myc target in myeloid cells protein 1) or MYCT1, is a 235 amino acid nuclear protein that is thought to regulate certain myc target genes. Downregulated in gastric cancer tissues, MTLC is expressed in the hepatocellular carcinoma cell line, Bel7402. Overexpression of MTLC is thought to influence tumorigenic conversion, promotion of apoptosis genomic instability and inhibition of hematopoietic differentiation. The gene encoding MTLC maps to human chromosome 6, which contains 170 million base pairs and comprises nearly 6% of the human genome. Deletion of a portion of the q arm of chromosome 6 is associated with early onset intestinal cancer, suggesting the presence of a cancer susceptibility locus. Additionally, porphyria cutanea tarda, Parkinson's disease, Stickler syndrome and a susceptibility to bipolar disorder are all associated with genes that map to chromosome 6.

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CHROMOSOMAL LOCATION

Genetic locus: Myct1 (mouse) mapping to 10 A1.

RESEARCH USE

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

PRODUCT

MTLC 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 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see MTLC shRNA Plasmid (m): sc-149683-SH and MTLC shRNA (m) Lentiviral Particles: sc-149683-V as alternate gene silencing products.

For independent verification of MTLC (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-149683A, sc-149683B and sc-149683C.

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

MTLC siRNA (m) is recommended for the inhibition of MTLC 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 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 MTLC gene expression knockdown using RT-PCR Primer: MTLC (m)-PR: sc-149683-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.