SANTA CRUZ BIOTECHNOLOGY, INC.

# MACS1 siRNA (m): sc-149210

## BACKGROUND

Acyl-CoA synthetases are important for synthesis of cellular lipids and for β-oxidation degradation. MACS1 (middle-chain acyl-CoA synthetase 1), also known as ACSM1 (acyl-CoA synthetase medium-chain family member 1), BUCS1 (butyryl-coenzyme A synthetase 1) or LAE (lipoate-activating enzyme), is a 577 amino acid mitochondrial matrix protein that generates the substrate for lipoyltransferase in a GTP-dependent manner. Existing as a monomer, MACS1 belongs to the ATP-dependent AMP-binding enzyme family and undergoes alternative splicing to produce two isoforms. The gene encoding MACS1 maps to human chromosome 16p12.3, which encodes over 900 genes and comprises nearly 3% of the human genome. Giant axonal neuropathy, Rubinstein-Taybi syndrome and Crohn's disease are associated with chromosome 16.

## REFERENCES


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5. Cho, J.H. 2004. Advances in the genetics of inflammatory bowel disease. Curr. Gastroenterol. Rep. 6: 467-473.
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## CHROMOSOMAL LOCATION

Genetic locus: Acsm1 (mouse) mapping to 7 F2.

## PROTOCOLS

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

## PRODUCT

MACS1 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 MACS1 shRNA Plasmid (m): sc-149210-SH and MACS1 shRNA (m) Lentiviral Particles: sc-149210-V as alternate gene silencing products.

For independent verification of MACS1 (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-149210A, sc-149210B and sc-149210C.

## 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

MACS1 siRNA (m) is recommended for the inhibition of MACS1 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 MACS1 gene expression knockdown using RT-PCR Primer: MACS1 (m)-PR: sc-149210-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.