

ACSS3 siRNA (m): sc-140836

BACKGROUND

ACSS3 (acyl-CoA synthetase short-chain family member 3) is a 686 amino acid protein belonging to the ATP-dependent AMP-binding enzyme family. Existing as two alternatively spliced isoforms, ACSS3 participates in ATP and nucleotide binding, as well as acetate-CoA ligase activity. ACSS3 exhibits mitochondrial subcellular localization and activates acetate for lipid synthesis and energy generation. ACSS3 is encoded by a gene that maps to human chromosome 12q21.31. Encoding over 1,100 genes within 132 million bases, chromosome 12 makes up about 4.5% of the human genome. A number of skeletal deformities are linked to chromosome 12, including hypochondrogenesis, achondrogenesis and Kniest dysplasia. Noonan syndrome, which includes heart and facial developmental defects among the primary symptoms, is also linked to chromosome 12.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: *Acsc3* (mouse) mapping to 10 D1.

PROTOCOLS

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

PRODUCT

ACSS3 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 ACSS3 shRNA Plasmid (m): sc-140836-SH and ACSS3 shRNA (m) Lentiviral Particles: sc-140836-V as alternate gene silencing products.

For independent verification of ACSS3 (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-140836A, sc-140836B and sc-140836C.

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

ACSS3 siRNA (m) is recommended for the inhibition of ACSS3 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 ACSS3 gene expression knockdown using RT-PCR Primer: ACSS3 (m)-PR: sc-140836-PR (20 μ l). 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.