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SANTA CRUZ BIOTECHNOLOGY, INC.

SCOT-t siRNA (m): sc-153267

BACKGROUND

SCOT-t (succinyl-CoA:3-ketoacid-coenzyme A transferase 2, mitochondrial), also known as OXCT2 (3-oxoacid CoA transferase 2), is a 517 amino acid protein that belongs to the 3-oxoacid CoA-transferase family. SCOT-t is a testis-specific succinyl-CoA:3-oxoacid CoA transferase, which catalyzes the reversible transfer of CoA from succinyl-CoA to acetoacetate in the first step of ketone body utilization. As a key enzyme for ketone body catabolism, SCOT-t transfers the CoA moiety from succinate to acetoacetate. Formation of the enzyme-CoA intermediate proceeds via an unstable anhydride species formed between the carboxylate groups of the enzyme and substrate. The SCOT-t protein has been detected in testis and spermatozoa, where it localized specifically to the midpiece of sperm flagellum. The human SCOT-t protein shares 75.8% and 74.6% amino acid identity with mouse SCOT-t and human SCOT, respectively. The SCOT-t gene lacks an intron, and a nearby nonfunctional pseudogene has been identified in which nucleotides 745-762 and 778 are deleted. The entire SCOT-t transcription unit is located within an intron of the BMP-8 gene. The SCOT-t gene maps to human chromosome 1p34.2.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: Oxct2a/Oxct2b (mouse) mapping to 4 D2.2.

PRODUCT

SCOT-t siRNA (m) is a target-specific 19-25 nt siRNA 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 SCOT-t shRNA Plasmid (m): sc-153267-SH and SCOT-t shRNA (m) Lentiviral Particles: sc-153267-V as alternate gene silencing products.

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

SCOT-t siRNA (m) is recommended for the inhibition of SCOT-t 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 SCOT-t gene expression knockdown using RT-PCR Primer: SCOT-t (m)-PR: sc-153267-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.

PROTOCOLS

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