SANTA CRUZ BIOTECHNOLOGY, INC.

Sc5d siRNA (m): sc-62981

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Sc5d (sterol-C5-desaturase), also known as SC5DL, ERG3 or S5DES, is a 299 amino acid multi-pass membrane protein that localizes to the endoplasmic reticulum and belongs to the sterol desaturase family. Using iron as a cofactor, Sc5d functions to catalyze a dehydrogenation reaction that introduces a C5-6 double bond into lathosterol, a process that is NADPH- and oxygen-dependent. Defects in the gene encoding Sc5d are the cause of lathosterolosis, an autosomal recessive disorder that is characterized by liver disease, mental retardation and congenital anomalies. The gene encoding Sc5d maps to human chromosome 11q23.3, which houses over 1,400 genes and comprises nearly 4% of the human genome. Jervell and Lange-Nielsen syndrome, Jacobsen syndrome, Niemann-Pick disease, hereditary angioedema and Smith-Lemli-Opitz syndrome are associated with defects in genes that maps to chromosome 11.

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CHROMOSOMAL LOCATION

Genetic locus: Sc5d (mouse) mapping to 9 A5.1.

PRODUCT

Sc5d 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 Sc5d shRNA Plasmid (m): sc-62981-SH and Sc5d shRNA (m) Lentiviral Particles: sc-62981-V as alternate gene silencing products.

For independent verification of Sc5d (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-62981A, sc-62981B and sc-62981C.

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

Sc5d siRNA (m) is recommended for the inhibition of Sc5d 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 Sc5d gene expression knockdown using RT-PCR Primer: Sc5d (m)-PR: sc-62981-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.