SANTA CRUZ BIOTECHNOLOGY, INC.

ERG25 siRNA (m): sc-144926

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Belonging to the sterol desaturase family, ERG25, also known as C-4 methyl-sterol oxidase or Methylsterol monooxygenase, is a 293 amino acid enzyme that performs the first of three enzymatic steps required to remove the two methyl groups leading to cholesterol. ERG25 is a multi-pass membrane protein that resides within the plasma membrane and the membrane of the endoplasmic reticulum. Concentrations of ERG25 mRNA increase when subjected to low iron growth conditions, suggesting that the enzyme is not regulated by iron but by an end product of the ergosterol pathway. Low-density lipoprotein (LDL) downregulates ERG25 expression in the vascular wall, an event that may be inhibited via SREBP overexpression. ERG25 is encoded by a gene located on human chromosome 4q32.3.

REFERENCES

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PROTOCOLS

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

CHROMOSOMAL LOCATION

Genetic locus: Msmo1 (mouse) mapping to 8 B3.1.

PRODUCT

ERG25 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 ERG25 shRNA Plasmid (m): sc-144926-SH and ERG25 shRNA (m) Lentiviral Particles: sc-144926-V as alternate gene silencing products.

For independent verification of ERG25 (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-144926A, sc-144926B and sc-144926C.

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

ERG25 siRNA (m) is recommended for the inhibition of ERG25 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 ERG25 gene expression knockdown using RT-PCR Primer: ERG25 (m)-PR: sc-144926-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.