SANTA CRUZ BIOTECHNOLOGY, INC.

LENG4 siRNA (h): sc-97194

BACKGROUND

The membrane-bound O-acyltransferase family is a group of integral membrane proteins with acyltransferase activity. LENG4 (membrane bound O-acyltransferase domain containing 7), also known as lysophospholipid acyltransferase 7, leukocyte receptor cluster member 4, MBOAT7, BB1, LPLAT 7, LRC4 or OACT7, is a 472 amino acid multi-pass membrane protein involved in lipid and phospholipid metabolism. LENG4 belongs to the membrane-bound acyltransferase family and participates in the Land cycle by catalyzing reacylation of phospholipids. LENG4 is responsible for the conversion of lysophosphatidylinositol into phosphatidylinositol, and prefers arachidonoyl-CoA as its acyl donor. Overexpressed in metastatic breast and bladder carcinomas, LENG4 is downregulated by γ-interferon. Three LENG4 isoforms exist due to alternative splicing events, and LENG4 is encoded by a gene mapping to human chromosome 19q13.42.

REFERENCES

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4. Matsuda, S., Inoue, T., Lee, H.C., Kono, N., Tanaka, F., Gengyo-Ando, K., Mitani, S. and Arai, H. 2008. Member of the membrane-bound O-acyltransferase (MBOAT) family encodes a lysophospholipid acyltransferase with broad substrate specificity. Genes Cells 13: 879-888.
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6. Shindou, H., Hishikawa, D., Harayama, T., Yuki, K. and Shimizu, T. 2009. Recent progress on acyl CoA: lysophospholipid acyltransferase research. J. Lipid Res. 50: S46-S51.

CHROMOSOMAL LOCATION

Genetic locus: MBOAT7 (human) mapping to 19q13.42.

PRODUCT

LENG4 siRNA (h) 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 LENG4 shRNA Plasmid (h): sc-97194-SH and LENG4 shRNA (h) Lentiviral Particles: sc-97194-V as alternate gene silencing products.

PROTOCOLS

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

LENG4 siRNA (h) is recommended for the inhibition of LENG4 expression in human 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 LENG4 gene expression knockdown using RT-PCR Primer: LENG4 (h)-PR: sc-97194-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.