

MBOAT2 siRNA (m): sc-149308

BACKGROUND

MBOAT2 (membrane bound O-acyltransferase domain containing 2), also known as LPLAT2 (lysophospholipid acyltransferase 2), 1-acylglycerophosphate O-acyltransferase, LPEAT (lysophosphatidylethanolamine acyltransferase), OACT2 or LPCAT4, is a 520 amino acid multi-pass membrane protein that belongs to the membrane-bound acyltransferase family. Expressed in neutrophils, ovary, testis, brain and epididymis, MBOAT2 functions as an acyltransferase by regulating the conversion of lysophosphatidylethanolamine into phosphatidylethanolamine, and preferentially utilizes oleoyl-CoA as the acyl donor. MBOAT2 also catalyzes the acylation of lysophosphatidic acid into phosphatidic acid and is weakly inhibited by thimerosal. The gene encoding MBOAT2 maps to human chromosome 2p25.1 and mouse chromosome 12 A1.3.

REFERENCES

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4. Gijón, M.A., Riekhof, W.R., Zarini, S., Murphy, R.C. and Voelker, D.R. 2008. Lysophospholipid acyltransferases and arachidonate recycling in human neutrophils. *J. Biol. Chem.* 283: 30235-30245.
5. Hishikawa, D., Shindou, H., Kobayashi, S., Nakanishi, H., Taguchi, R. and Shimizu, T. 2008. Discovery of a lysophospholipid acyltransferase family essential for membrane asymmetry and diversity. *Proc. Natl. Acad. Sci. USA* 105: 2830-2835.
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CHROMOSOMAL LOCATION

Genetic locus: Mboat2 (mouse) mapping to 12 A1.3.

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.

PRODUCT

MBOAT2 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 MBOAT2 shRNA Plasmid (m): sc-149308-SH and MBOAT2 shRNA (m) Lentiviral Particles: sc-149308-V as alternate gene silencing products.

For independent verification of MBOAT2 (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-149308A, sc-149308B and sc-149308C.

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

MBOAT2 siRNA (m) is recommended for the inhibition of MBOAT2 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 MBOAT2 gene expression knockdown using RT-PCR Primer: MBOAT2 (m)-PR: sc-149308-PR (20 μ l). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.