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SANTA CRUZ BIOTECHNOLOGY, INC.

LPAAT-ε siRNA (m): sc-149018

BACKGROUND

Phosphatidic acid and lysophosphatidic acid are phospholipids involved in lipid biosynthesis and signal transduction. LPAAT-ε (lysophosphatidic acid acyltransferase epsilon, also designated 1-AGP acyltransferase 5 (AGPAT5)) catalyzes the synthesis of phosphatidic acid from lysophosphatidic acid. LPAAT-ε is a membrane-bound protein belonging to the LPAAT family. Members of the LPAAT family have a well-known role in lipid biosynthesis and they may also play a role in tumor progression. LPAAT-ε is expressed in a tissue-specific manner in prostate and testis. LPAAT-ε is most closely related to AGPAT8, which is highly expressed in heart.

REFERENCES

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5. Eberhardt, C., Gray, P.W. and Tjoelker, L.W. 1999. cDNA cloning, expression and chromosomal localization of two human lysophosphatidic acid acyltransferases. Adv. Exp. Med. Biol. 469: 351-356.
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7. Agarwal, A.K., Barnes, R.I. and Garg, A. 2006. Functional characterization of human 1-acylglycerol-3-phosphate acyltransferase isoform 8: cloning, tissue distribution, gene structure, and enzymatic activity. Arch. Biochem. Biophys. 449: 64-76.

CHROMOSOMAL LOCATION

Genetic locus: Agpat5 (mouse) mapping to 8 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

LPAAT-ε 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 LPAAT-ε shRNA Plasmid (m): sc-149018-SH and LPAAT-ε shRNA (m) Lentiviral Particles: sc-149018-V as alternate gene silencing products.

For independent verification of LPAAT-ε (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-149018A, sc-149018B and sc-149018C.

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

LPAAT-**ε** siRNA (m) is recommended for the inhibition of LPAAT-**ε** 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 LPAAT-ε gene expression knockdown using RT-PCR Primer: LPAAT-ε (m)-PR: sc-149018-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.