

LPAAT- β siRNA (m): sc-75690

BACKGROUND

Phosphatidic acid and lysophosphatidic acid are phospholipids involved in lipid biosynthesis and signal transduction. LPAAT- β (lysophosphatidic acid acyltransferase, β), also known as AGPAT2, BSCL, BSCL1, LPAAB or 1-AGPAT2 (1-acylglycerol-3-phosphate O-acyltransferase 2), is a multi-pass membrane protein localized to the endoplasmic reticulum that catalyzes the synthesis of phosphatidic acid from lysophosphatidic acid. Predominantly expressed in heart and liver, LPAAT- β belongs to the LPAAT family of proteins that have a well-known role in lipid biosynthesis. In addition, LPAAT family members may also play a role in tumor progression. Mutations in the gene encoding LPAAT- β can result in the autosomal recessive disorder CGL1 (congenital generalized lipodystrophy type 1). CGL1, also known as Berardinelli-Seip congenital lipodystrophy type 1 (BSCL1), is a disorder characterized by Insulin resistance, early onset of diabetes, hepatic steatosis, scarcity of adipose tissue and hypertriglyceridemia.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: Agpat2 (mouse) mapping to 2 A3.

PRODUCT

LPAAT- β 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 LPAAT- β shRNA Plasmid (m): sc-75690-SH and LPAAT- β shRNA (m) Lentiviral Particles: sc-75690-V as alternate gene silencing products.

For independent verification of LPAAT- β (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-75690A, sc-75690B and sc-75690C.

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

LPAAT- β siRNA (m) is recommended for the inhibition of LPAAT- β 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 LPAAT- β gene expression knockdown using RT-PCR Primer: LPAAT- β (m)-PR: sc-75690-PR (20 μ l). 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.