

PLB siRNA (m): sc-152294

BACKGROUND

A variety of lipases, including acid lipase in lingual gland or stomach and pancreatic lipase, hydrolyze triacylglycerol to produce monoacylglycerols and free fatty acids in the gastrointestinal tract. PLB (phospholipase B), also known as PLB1 (phospholipase B1) or PLB/LIP (phospholipase B/lipase), is a 1,458 amino acid single-pass type I membrane protein that belongs to the GDSL lipolytic enzyme family and the phospholipase B1 subfamily. PLB consists of an NH₂-signal peptide, four tandem repeats, with the second repeat containing the catalytic domain, and a hydrophobic domain near the C-terminus, which serves as a membrane anchor. Encoded by a gene that maps to human chromosome 2p23.2, PLB localizes to brush border membranes and is highly expressed in ileum, and to a lesser extent in esophagus and testis. PLB exhibits broad lipolytic abilities and functions as an intestinal Ca²⁺-independent phospholipase.

REFERENCES

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3. Tojo, H., et al. 1998. Purification and characterization of a catalytic domain of rat intestinal phospholipase B/lipase associated with brush border membranes. *J. Biol. Chem.* 273: 2214-2221.
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6. Maury, E., et al. 2002. Human epidermis is a novel site of phospholipase B expression. *Biochem. Biophys. Res. Commun.* 295: 362-369.
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CHROMOSOMAL LOCATION

Genetic locus: Plb1 (mouse) mapping to 5 B1.

PRODUCT

PLB siRNA (m) 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 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see PLB shRNA Plasmid (m): sc-152294-SH and PLB shRNA (m) Lentiviral Particles: sc-152294-V as alternate gene silencing 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 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

PLB siRNA (m) is recommended for the inhibition of PLB 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 PLB gene expression knockdown using RT-PCR Primer: PLB (m)-PR: sc-152294-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.