

PLSCR5 siRNA (m): sc-148650

BACKGROUND

Lipids in biological membranes are distributed asymmetrically across the bilayer with choline-containing lipids and sphingolipids on the extracellular surface and amine-containing phospholipids on the cytoplasmic surface. Phospholipid asymmetry is necessary for normal membrane function and disruption of asymmetry is associated with pathological conditions. The plasma membrane maintains lipid asymmetry via actions of aminophospholipid translocase, floppase and lipid scramblases. The phospholipid scramblase (PLS) family consists of membrane-bound enzymes that participate in the bi-directional movement of phospholipids. PLSCR5 (phospholipid scramblase 5) is a 271 amino acid calcium-dependent mitochondrial membrane protein that is a member of the phospholipid scramblase (PLS) family. The gene encoding PLSCR5 maps to human chromosome 3, which is made up of about 214 million bases encoding over 1,100 genes.

REFERENCES

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4. Bevers, E.M., et al. 1999. Lipid translocation across the plasma membrane of mammalian cells. *Biochim. Biophys. Acta* 1439: 317-330.
5. Wiedmer, T., et al. 2000. Identification of three new members of the phospholipid scramblase gene family. *Biochim. Biophys. Acta* 1467: 244-253.
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8. Phillippe, M., et al. 2006. Phospholipid scramblase isoform expression in pregnant rat uterus. *J. Soc. Gynecol. Investig.* 13: 497-501.
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CHROMOSOMAL LOCATION

Genetic locus: Plscr5 (mouse) mapping to 9 E3.3.

PRODUCT

PLSCR5 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 μM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see PLSCR5 shRNA Plasmid (m): sc-148650-SH and PLSCR5 shRNA (m) Lentiviral Particles: sc-148650-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 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

PLSCR5 siRNA (m) is recommended for the inhibition of PLSCR5 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 PLSCR5 gene expression knockdown using RT-PCR Primer: PLSCR5 (m)-PR: sc-148650-PR (20 μl). Annealing temperature for the primers should be $55-60^{\circ}\text{C}$ and the extension temperature should be $68-72^{\circ}\text{C}$.

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.