

PTPLA siRNA (m): sc-152583

BACKGROUND

PTPLA (protein tyrosine phosphatase-like (proline instead of catalytic arginine), member A), also known as CAP (cementum attachment protein), is a 288 amino acid multi-pass membrane protein that is highly expressed in myocardium, and to a lesser extent in skeletal and smooth muscular tissues. PTPLA is a member of the protein tyrosine phosphatase (PTP) family of proteins, which are known to be signaling molecules that regulate signal transduction pathways leading to cell growth, differentiation and oncogenic transformation. PTPs mediate the dephosphorylation of phosphotyrosine. The tissue specific expression of PTPLA in the developing and adult heart suggests a role in regulating cardiac development and differentiation. PTPLA exist as two alternatively spliced isoforms and is encoded by a gene located on human chromosome 10, which houses over 1,200 genes and comprises nearly 4.5% of the human genome.

REFERENCES

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3. Zondag, G.C., et al. 1995. Homophilic interactions mediated by receptor tyrosine phosphatases μ and κ . A critical role for the novel extracellular MAM domain. *J. Biol. Chem.* 270: 14247-14250.
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CHROMOSOMAL LOCATION

Genetic locus: *Ptpla* (mouse) mapping to 2 A1.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.

RODUCT

PTPLA 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 PTPLA shRNA Plasmid (m): sc-152583-SH and PTPLA shRNA (m) Lentiviral Particles: sc-152583-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

PTPLA siRNA (m) is recommended for the inhibition of PTPLA 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 PTPLA gene expression knockdown using RT-PCR Primer: PTPLA (m)-PR: sc-152583-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.