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SZABO-SCANDIC HandelsgmbH

Quellenstraße 110, A-1100 Wien

T. +43(0)1 489 3961-0

F. +43(0)1 489 3961-7

mail@szabo-scandic.com

www.szabo-scandic.com

[linkedin.com/company/szaboscandic](https://www.linkedin.com/company/szaboscandic) 

PTPLAD2 siRNA (m): sc-152584

BACKGROUND

PTPLAD2 (protein tyrosine phosphatase-like A domain containing 2), also known as HACD4 (3-hydroxyacyl-CoA dehydratase 4), is a 232 amino acid multi-pass membrane protein that belongs to the very long-chain fatty acids dehydratase HACD family. Localizing to endoplasmic reticulum membrane, the PTPLAD2 protein is responsible for the dehydration step in very long-chain fatty acids (VLCFAs) synthesis. Highly expressed in leukocytes, and low expression in heart, spleen, kidney and placenta, the PTPLAD2 protein interact with the condensation enzymes of the ELOVL family. The PTPLAD2 gene is conserved in chimpanzee, canine, bovine, mouse, rat and chicken, and maps to human chromosome 9p21.3. Chromosome 9 consists of about 145 million bases and 4% of the human genome and encodes nearly 900 genes. Hereditary hemorrhagic telangiectasia, which is characterized by harmful vascular defects, is associated with the chromosome 9 gene encoding endoglin protein, ENG.

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CHROMOSOMAL LOCATION

Genetic locus: Ptplad2 (mouse) mapping to 4 C4.

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

PTPLAD2 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 PTPLAD2 shRNA Plasmid (m): sc-152584-SH and PTPLAD2 shRNA (m) Lentiviral Particles: sc-152584-V as alternate gene silencing products.

For independent verification of PTPLAD2 (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-152584A, sc-152584B and sc-152584C.

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

PTPLAD2 siRNA (m) is recommended for the inhibition of PTPLAD2 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 PTPLAD2 gene expression knockdown using RT-PCR Primer: PTPLAD2 (m)-PR: sc-152584-PR (20 μ l). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.