



ACP6 siRNA (h): sc-78582

BACKGROUND

Lysophosphatidic acid phosphatase type 6 (ACP6), also designated acid phosphatase-like protein 1 (ACPL1) or lysophosphatidic acid phosphatase (LPAP), is a 428 amino acid secreted protein that hydrolyzes lysophosphatidic acid to monoacylglycerol. ACP6 is highly expressed in kidney, heart, small intestine, muscle, liver, prostate, testis, ovary and exists as two isoforms as a result of alternative splicing events. The gene encoding ACP6 maps to human chromosome 1, the largest human chromosome spanning about 260 million base pairs and making up 8% of the human genome. Notably, the rare aging disease Hutchinson-Gilford progeria is associated with the LMNA gene of human chromosome 1, which encodes Lamin A. Stickler syndrome, Parkinsons, Gaucher disease, familial adenomatous polyposis and Usher syndrome are also associated with chromosome 1. Aberrations in chromosome 1 are found in a variety of cancers including head and neck cancer, malignant melanoma and multiple myeloma.

REFERENCES

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2. Takayama, I., et al. 2002. Novel human and mouse genes encoding an acid phosphatase family member and its downregulation in W/W(V) mouse jejunum. *Gut* 50: 790-796.
3. Weise, A., et al. 2005. New insights into the evolution of chromosome 1. *Cytogenet. Genome Res.* 108: 217-222.
4. Marzin, Y., et al. 2006. Chromosome 1 abnormalities in multiple myeloma. *Anticancer Res.* 26: 953-959.
5. Calvo, J.H., et al. 2006. Isolation, mapping and identification of SNPs for four genes (ACP6, CGN, ANXA9, SLC27A3) from a bovine QTL region on BTA3. *Cytogenet. Genome Res.* 114: 39-43.
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CHROMOSOMAL LOCATION

Genetic locus: ACP6 (human) mapping to 1q21.2.

PRODUCT

ACP6 siRNA (h) 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 ACP6 shRNA Plasmid (h): sc-78582-SH and ACP6 shRNA (h) Lentiviral Particles: sc-78582-V as alternate gene silencing products.

For independent verification of ACP6 (h) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-78582A, sc-78582B and sc-78582C.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

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

ACP6 siRNA (h) is recommended for the inhibition of ACP6 expression in human 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 ACP6 gene expression knockdown using RT-PCR Primer: ACP6 (h)-PR: sc-78582-PR (20 μ l). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

PROTOCOLS

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