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SCP2 siRNA (h): sc-44636

BACKGROUND

Sterol carrier protein 2 (SCP2), also designated nonspecific lipid-transfer protein, mitochondrial precursor, is involved in the non-specific transfer of intracellular sterol and lipid molecules between membranes. A member of the thiolase family, SCP2 may also be involved in regulating steroidogenesis in fibroblasts, peroxisomes, liver and placenta. In the liver it is a cytoplasmic protein but in steroidogenic tissues it localizes with mitochondria. Isoform SCPx is associated with the peroxisome. SCP2 is associated with Zellweger syndrome (cerebro-hepatic-renal syndrome), characterized by peroxisome deficiency and an impairment in plasmalogen and bile acid synthesis.

REFERENCES

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2. He, Z., Yamamoto, R., Furth, E.E., Schantz, L.J., Naylor, S.L., George, H., Billheimer, J.T. and Strauss, J.F., 3rd. 1991. cDNAs encoding members of a family of proteins related to human sterol carrier protein 2 and assignment of the gene to human chromosome 1 p21→pter. *DNA Cell Biol.* 10: 559-569.
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5. Seedorf, U., Scheek, S., Engel, T., Steif, C., Hinz, H.J. and Assmann, G. 1994. Structure-activity studies of human sterol carrier protein 2. *J. Biol. Chem.* 269: 2613-2618.
6. Ohba, T., Rennert, H., Pfeifer, S.M., He, Z., Yamamoto, R., Holt, J.A., Billheimer, J.T. and Strauss, J.F., 3rd. 1994. The structure of the human sterol carrier protein X/sterol carrier protein 2 gene (SCP2). *Genomics* 24: 370-374.

CHROMOSOMAL LOCATION

Genetic locus: SCP2 (human) mapping to 1p32.3.

PRODUCT

SCP2 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 SCP2 shRNA Plasmid (h): sc-44636-SH and SCP2 shRNA (h) Lentiviral Particles: sc-44636-V as alternate gene silencing products.

For independent verification of SCP2 (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-44636A, sc-44636B and sc-44636C.

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

SCP2 siRNA (h) is recommended for the inhibition of SCP2 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 SCP2 gene expression knockdown using RT-PCR Primer: SCP2 (h)-PR: sc-44636-PR (20 μ l). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

SELECT PRODUCT CITATIONS

1. He, H., Wang, J., Yannie, P.J., Kakiyama, G., Korzun, W.J. and Ghosh, S. 2018. Sterol carrier protein-2 deficiency attenuates diet-induced dyslipidemia and atherosclerosis in mice. *J. Biol. Chem.* 293: 9223-9231.

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.