SANTA CRUZ BIOTECHNOLOGY, INC.

CEPT1 siRNA (h): sc-88215

BACKGROUND

CEPT1 (choline/ethanolaminephosphotransferase 1) is a 416 amino acid member of the CDP-alcohol phosphatidyltransferase class-I protein family. Localized to the endoplasmic reticulum and the nucleus, CEPT1 is a multi-pass membrane protein that is involved in phospholipid metabolism. By utilizing magnesium or manganese as a cofactor, CEPT1 catalyzes the biosynthesis of both phosphatidylethanolamine and phosphatidylcholine from CDP-ethanolamine and CDP-choline, respectively. CEPT1 has been found to have higher cholinephosphotransferase activity than ethanolaminephosphotransferase activity. CEPT1 may also be involved in the process of phospholipid transport to disperse phosphatidyl choline to the lumenal surface.

REFERENCES

1. Henneberry, A.L., et al. 1999. Cloning and expression of a human choline/ethanolaminephosphotransferase: synthesis of phosphatidylcholine and phosphatidylethanolamine. Biochem. J. 339: 291-298.
2. Henneberry, A.L., et al. 2000. Cloning, genomic organization, and characterization of a human cholinephosphotransferase. J. Biol. Chem. 275: 29808-29815.
3. Wright, M.M., et al. 2002. PC and PE synthesis: mixed micellar analysis of the cholinephosphotransferase and ethanolaminephosphotransferase activities of human choline/ethanolamine phosphotransferase 1 (CEPT1). Lipids 37: 663-672.
4. Henneberry, A.L., et al. 2002. The major sites of cellular phospholipid synthesis and molecular determinants of Fatty Acid and lipid head group specificity. Mol. Biol. Cell 13: 3148-3161.
5. Daub, H., et al. 2008. Kinase-selective enrichment enables quantitative phosphoproteomics of the kinome across the cell cycle. Mol. Cell 31: 438-448.
6. Chakravarthy, M.V., et al. 2009. Identification of a physiologically relevant endogenous ligand for PPARα in liver. Cell 138: 476-488.

CHROMOSOMAL LOCATION

Genetic locus: CEPT1 (human) mapping to 1p13.3.

PRODUCT

CEPT1 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 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see CEPT1 shRNA Plasmid (h): sc-88215-SH and CEPT1 shRNA (h) Lentiviral Particles: sc-88215-V as alternate gene silencing products.

For independent verification of CEPT1 (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-88215A, sc-88215B and sc-88215C.

PROTOCOLS

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

CEPT1 siRNA (h) is recommended for the inhibition of CEPT1 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 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 CEPT1 gene expression knockdown using RT-PCR Primer: CEPT1 (h)-PR: sc-88215-PR (20 µl). 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.