

CEPT1 (N-14): sc-133421

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 luminal surface.

REFERENCES

- Henneberry, A.L. and McMaster, C.R. 1999. Cloning and expression of a human choline/ethanolaminephosphotransferase: synthesis of phosphatidylcholine and phosphatidylethanolamine. *Biochem. J.* 339: 291-298.
- Henneberry, A.L., et al. 2000. Cloning, genomic organization, and characterization of a human cholinephosphotransferase. *J. Biol. Chem.* 275: 29808-29815.
- Wright, M.M. and McMaster, C.R. 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.
- 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.
- Daub, H., et al. 2008. Kinase-selective enrichment enables quantitative phosphoproteomics of the kinome across the cell cycle. *Mol. Cell* 31: 438-448.
- Chakravarthy, M.V., et al. 2009. Identification of a physiologically relevant endogenous ligand for PPAR α in liver. *Cell* 138: 476-488.

CHROMOSOMAL LOCATION

Genetic locus: CEPT1 (human) mapping to 1p13.3; Cept1 (mouse) mapping to 3 F2.3.

SOURCE

CEPT1 (N-14) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping near the N-terminus of CEPT1 of human origin.

PRODUCT

Each vial contains 100 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-133421 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

Store at 4 $^{\circ}$ C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

APPLICATIONS

CEPT1 (N-14) is recommended for detection of CEPT1 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:50-1:500), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:25, dilution range 1:25-1:250) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

CEPT1 (N-14) is also recommended for detection of CEPT1 in additional species, including equine, bovine and porcine.

Suitable for use as control antibody for CEPT1 siRNA (h): sc-88215, CEPT1 siRNA (m): sc-142293, CEPT1 shRNA Plasmid (h): sc-88215-SH, CEPT1 shRNA Plasmid (m): sc-142293-SH, CEPT1 shRNA (h) Lentiviral Particles: sc-88215-V and CEPT1 shRNA (m) Lentiviral Particles: sc-142293-V.

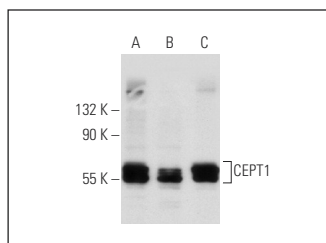
Molecular Weight of CEPT1: 46 kDa.

Positive Controls: COLO 320DM cell lysate: sc-2226, HeLa whole cell lysate: sc-2200 or SK-BR-3 cell lysate: sc-2218.

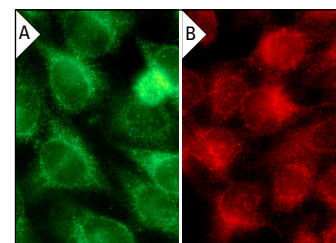
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker[™] compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker[™] Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz[™] Mounting Medium: sc-24941.

DATA



CEPT1 (N-14): sc-133421. Western blot analysis of CEPT1 expression in HeLa (A), COLO 320DM (B) and SK-BR-3 (C) whole cell lysates.



CEPT1 (N-14): sc-133421. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization (A). Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization (B).

RESEARCH USE

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

PROTOCOLS

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