SANTA CRUZ BIOTECHNOLOGY, INC.

CCT A (m): 293T Lysate: sc-119088

BACKGROUND

Increase in fetal surfactant synthesis and lung maturity is caused by the glucocorticoidal induction of enzymes required for phosphatidylcholine synthesis towards the end of gestation. The regulation of gestational age-dependent induction of phosphatidylcholine synthesis by glucocorticoids is still unclear. The rate-controlling enzyme in the phosphatidylcholine biosynthetic pathway is CTP:phosphocholine cytidylyltransferase A (CCT A). In cultured eukaryotic cells, this enzyme is essential for survival. The α isoform is located in the nucleus and is regulated by reversible phosphorylation and membrane association. There is significant identity between the α-helical membrane-binding domains of CCT A and soybean oleosin. Expressed CCT A has lipid-dependent cytidylyltransferase activity. The gene which encodes CCT A maps to human chromosome 3q29.

REFERENCES

1. Rutherford, M.S., Rock, C.O., Jenkins, N.A., Gilbert, D.J., Tessner, T.G., Copeland, N.G. and Jackowski, S. 1993. The gene for murine CTP:phosphocholine cytidylyltransferase (Ctpct) is located on mouse chromosome 16. Genomics 18: 698-701.
2. Hundertmark, S., Ragosch, V., Schein, B., Buhler, H., Lorenz, U., Fromm, M. and Weitzel, H.K. 1994. Gestational age dependence of 11 β-hydroxysteroid dehydrogenase and its relationship to the enzymes of phosphatidylcholine synthesis in lung and liverof fetal rat. Biochim. Biophys. Acta 1210: 348-354.
3. Kalmar, G.B., Kay, R.J., LaChance, A.C. and Cornell, R.B. 1994. Primary structure and expression of a human CTP:phosphocholine cytidylyltransferase. Biochim. Biophys. Acta 1219: 328-334.
4. Clement, J.M. and Kent, C. 1999. CTP:phosphocholine cytidylyltransferase: insights into regulatory mechanisms and novel functions. Biochem. Biophys. Res. Commun. 257: 643-650.
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CHROMOSOMAL LOCATION

Genetic locus: Pcyt1a (mouse) mapping to 16 B3.

PRODUCT

CCT A (m): 293T Lysate represents a lysate of mouse CCT A transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

APPLICATIONS

CCT A (m): 293T Lysate is suitable as a Western Blotting positive control for mouse reactive CCT A antibodies. Recommended use: 10-20 µl per lane.

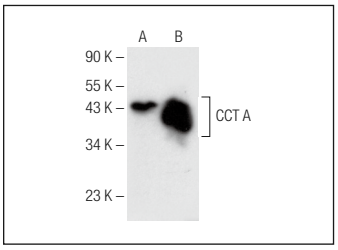
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

CCT A (F-6): sc-376107 is recommended as a positive control antibody for Western Blot analysis of enhanced mouse CCT A expression in CCT A transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048.

DATA



CCT A (F-6): sc-376107. Western blot analysis of CCT A expression in non-transfected: sc-117752 (**A**) and mouse CCT A transfected: sc-119088 (**B**) 293T whole cell lysates.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

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.