



CTP Synthetase 1 (yL-14): sc-33305

BACKGROUND

CTP synthetase catalyses the conversion of uridine 5'-triphosphate to cytidine 5'-triphosphate, the last step of the pyrimidine biosynthetic pathway. The CTP synthetase protein sequence shows a strong degree of homology with bacterial and human CTP synthetases. An alternative pathway for CTP synthesis may exist in yeast, which could involve either a divergent duplicated gene or a different route beginning with the amination of uridine mono- or diphosphate. Phosphorylation of CTP synthetase on Ser 36, Ser 330, Ser 354 and Ser 454 regulates the levels of CTP and phosphatidylcholine synthesis in yeast.

REFERENCES

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- De Wergifosse, P. et al. 1994. The sequence of a 22.4 kb DNA fragment from the left arm of yeast chromosome II reveals homologues to bacterial proline synthetase and murine α -adaptin, as well as a new permease and a DNA-binding protein. *Yeast* 10: 1489-1496.
- Yang, W.L. et al. 1994. Purification and characterization of CTP synthetase, the product of the URA7 gene in *Saccharomyces cerevisiae*. *Biochemistry* 33: 10785-10793.
- Park, T.S. et al. 2003. Phosphorylation of CTP synthetase on Ser 36, Ser 330, Ser 354, and Ser454 regulates the levels of CTP and phosphatidylcholine synthesis in *Saccharomyces cerevisiae*. *J. Biol. Chem.* 278: 20785-20794.
- Carman, G.M. et al. 2004. Phospholipid synthesis in yeast: regulation by phosphorylation. *Biochem. Cell Biol.* 82: 62-70.
- Han, G.S. et al. 2005. Expression of human CTP synthetase in *Saccharomyces cerevisiae* reveals phosphorylation by protein kinase A. *J. Biol. Chem.* 280: 38328-38336.

SOURCE

CTP Synthetase 1 (yL-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of CTP Synthetase of *Saccharomyces cerevisiae* origin.

PRODUCT

Each vial contains 200 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-33305 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

PROTOCOLS

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

APPLICATIONS

CTP Synthetase 1 (yL-14) is recommended for detection of CTP Synthetase of *Saccharomyces cerevisiae* origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

RESEARCH USE

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