

CTP (T-16): sc-86392

BACKGROUND

CTP (citrate transport protein), also known as tricarboxylate transport protein, SLC25A1 or SLC20A3, is a 311 amino acid mitochondrial multi-pass membrane protein that primarily functions to transport citrate across the mitochondrial inner membrane. Since it provides a carbon source for sterol and fatty acid biosynthesis, CTP is important for the bioenergetics of hepatic cells. The gene encoding CTP resides within a chromosomal region that is frequently deleted in patients that suffer from DiGeorge syndrome, a disease characterized by susceptibility to infection due to a deficit of T cells, cardiac malformations and tetany or seizures. Playing a significant role in intermediate metabolism, it appears that CTP function may be altered in type I diabetes and some cancers. CTP is highly expressed in adult ovary, gut liver, and testis, as well as in fetal kidney, lung, brain and liver.

CHROMOSOMAL LOCATION

Genetic locus: SLC25A1 (human) mapping to 22q11.21; Slc25a1 (mouse) mapping to 16 A3.

SOURCE

CTP (T-16) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping within an internal region of CTP of human origin.

PRODUCT

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

Blocking peptide available for competition studies, ready P, (100 µg 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.

APPLICATIONS

CTP (T-16) is recommended for detection of CTP of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

CTP (T-16) is also recommended for detection of CTP in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for CTP siRNA (h): sc-77046, CTP siRNA (m): sc-142623, CTP shRNA Plasmid (h): sc-77046-SH, CTP shRNA Plasmid (m): sc-142623-SH, CTP shRNA (h) Lentiviral Particles: sc-77046-V and CTP shRNA (m) Lentiviral Particles: sc-142623-V.

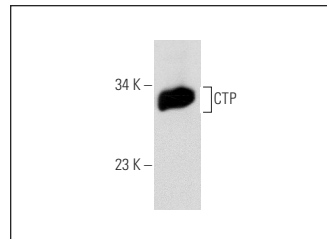
Molecular Weight of CTP isoforms: 30-38 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227 or HeLa whole cell lysate: sc-2200.

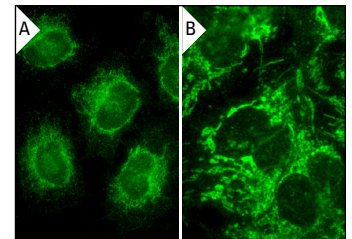
RECOMMENDED SECONDARY REAGENTS

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



CTP (T-16): sc-86392. Western blot analysis of CTP expression in HeLa whole cell lysate.



CTP (T-16): sc-86392. Immunofluorescence staining of methanol-fixed HeLa cells showing mitochondrial localization (A). Immunofluorescence staining of formalin-fixed Hep G2 cells showing mitochondria localization (B).

SELECT PRODUCT CITATIONS

1. Damiano, F., et al. 2012. Citrate carrier promoter is target of peroxisome proliferator-activated receptor alpha and gamma in hepatocytes and adipocytes. *Int. J. Biochem. Cell Biol.* 44: 659-668.
2. Damiano, F., et al. 2014. Expression of citrate carrier gene is activated by ER stress effectors XBP1 and ATF6α, binding to an UPRE in its promoter. *Biochim. Biophys. Acta* 1849: 23-31.

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.