

CTPS1 (2G7-1D10): sc-293266

BACKGROUND

CTPS (cytidine-5'-triphosphate synthase) is a 591 amino acid protein that contains one glutamine amidotransferase type-1 domain and is involved in pyrimidine metabolism. CTPS catalyzes the ATP-dependent conversion of UTP to CTP, a rate-limiting reaction that requires either ammonia or L-glutamine as a nitrogen source. Via its catalytic activity, CTPS plays an important role in the synthesis of nucleic acids and is crucial for proper cell growth and development. The function of CTPS is regulated by a variety of mechanisms, including phosphorylation by protein kinase C (PKC), an event that can either stimulate or inhibit CTPS activity. The gene encoding CTPS is located in a region on chromosome 1 that is often associated with the progression of several tumor types, suggesting a possible role for CTPS in tumorigenesis.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: CTPS1 (human) mapping to 1p34.2; Ctps (mouse) mapping to 4 D2.2.

SOURCE

CTPS1 (2G7-1D10) is a mouse monoclonal antibody raised against amino acids 1-591 of CTPS1 of human origin.

PRODUCT

Each vial contains 100 µg IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

CTPS1 (2G7-1D10) is recommended for detection of CTPS1 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)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

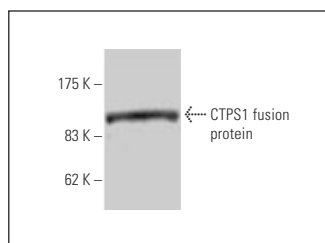
Suitable for use as control antibody for CTPS1 siRNA (h): sc-78858, CTPS1 siRNA (m): sc-142624, CTPS1 shRNA Plasmid (h): sc-78858-SH, CTPS1 shRNA Plasmid (m): sc-142624-SH, CTPS1 shRNA (h) Lentiviral Particles: sc-78858-V and CTPS1 shRNA (m) Lentiviral Particles: sc-142624-V.

Molecular Weight of CTPS1: 66 kDa.

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. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).

DATA



CTPS1 (2G7-1D10): sc-293266. Western blot analysis of human recombinant CTPS1 fusion protein.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. 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.