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CTPS2 Antibody (N-term)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP8779a

Product Information

Application	WB, FC, E
Primary Accession	Q9NRF8
Other Accession	Q5U2N0, P70303, Q1RMS2
Reactivity	Human
Predicted	Bovine, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB23574
Calculated MW	65678
Antigen Region	77-105

Additional Information

Gene ID	56474
Other Names	CTP synthase 2, CTP synthetase 2, UTP--ammonia ligase 2, CTPS2
Target/Specificity	This CTPS2 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 77-105 amino acids from the N-terminal region of human CTPS2.
Dilution	WB~~1:1000 FC~~1:10~50 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	CTPS2 Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	CTPS2 {ECO:0000303|PubMed:16179339, ECO:0000312|HGNC:HGNC:2520}
Function	CTP synthase involved in the de novo synthesis of CTP, a precursor of DNA, RNA and phospholipids. Catalyzes the ATP-dependent amination of UTP to CTP with either L-glutamine or ammonia as a source of nitrogen

	(PubMed:10899599, PubMed:16179339, PubMed:31873303, PubMed:34583994). Constitutes the rate-limiting enzyme in the synthesis of cytosine nucleotides (PubMed:10899599, PubMed:16179339).
Cellular Location	Cytoplasm, cytosol. Nucleus. Note=Cytoplasmic and nuclear; detected in long filamentous structures named cytoophidium

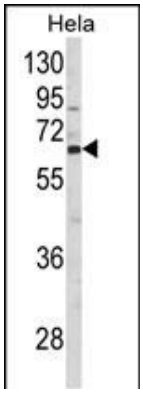
Background

CTPS2 catalyzes the formation of CTP from UTP with the concomitant eamination of glutamine to glutamate. This protein is the rate-limiting enzyme in the synthesis of cytosine nucleotides, which play an important role in various metabolic processes and provide the precursors necessary for the synthesis of RNA and DNA. Cancer cells that exhibit increased cell proliferation also exhibit an increased activity of this encoded protein. Thus, this protein is an attractive target for selective chemotherapy.

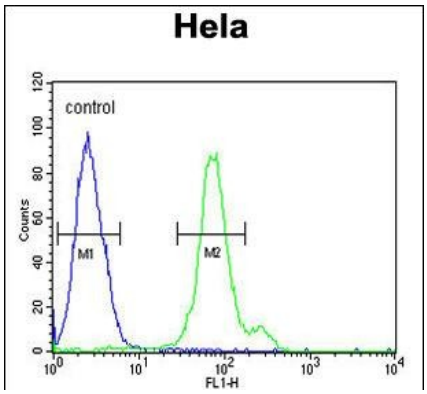
References

Olsen,J.V., et.al., Cell 127 (3), 635-648 (2006)

Images



Western blot analysis of CTPS2 Antibody (N-term) (Cat. #AP8779a) in Hela cell line lysates (35ug/lane). CTPS2 (arrow) was detected using the purified Pab.



CTPS2 Antibody (N-term) (Cat. #AP8779a) flow cytometric analysis of Hela cells (right histogram) compared to a negative control cell (left histogram).FITC-conjugated goat-anti-rabbit secondary antibodies were used for the analysis.