

# CTP Synthase Rabbit mAb

Catalog # AP75301

## Product Information

Application	WB
Primary Accession	<a href="#">P17812</a>
Host	Rabbit
Clonality	Monoclonal Antibody
Calculated MW	66690

## Additional Information

Gene ID	1503
Other Names	CTPS1
Dilution	WB~~1/500-1/1000
Format	50mM Tris-Glycine(pH 7.4), 0.15M NaCl, 40%Glycerol, 0.01% sodium azide and 0.05% BSA.
Storage	Store at 4°C short term. Aliquot and store at -20°C long term. Avoid freeze/thaw cycles.

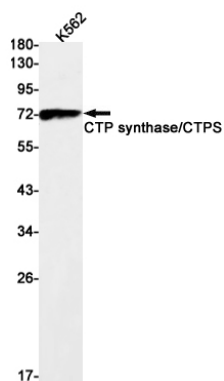
## Protein Information

Name	CTPS1 {ECO:0000303 PubMed:16179339, ECO:0000312 HGNC:HGNC:2519}
Function	<p>CTP synthase involved in the de novo synthesis of CTP, a precursor of DNA, RNA and phospholipids (PubMed:<a href="#">16179339</a>, PubMed:<a href="#">17189248</a>, PubMed:<a href="#">17463002</a>, PubMed:<a href="#">24870241</a>, PubMed:<a href="#">28459447</a>, PubMed:<a href="#">34583994</a>). Catalyzes the ATP-dependent amination of UTP to CTP with either L-glutamine or ammonia as a source of nitrogen (PubMed:<a href="#">16179339</a>, PubMed:<a href="#">24870241</a>, PubMed:<a href="#">28459447</a>, PubMed:<a href="#">34583994</a>). CTPS1 CTP synthase activity plays a crucial role in the proliferation of activated lymphocytes and immunity; additional CTP being required to meet increased demand for DNA, RNA and lipid membrane biosynthesis in proliferating lymphocytes (PubMed:<a href="#">24870241</a>, PubMed:<a href="#">8530356</a>). In addition to CTP synthase activity, also acts as a protein deamidase that catalyzes the side chain deamidation of specific asparagine residues of proteins to aspartate (PubMed:<a href="#">40240600</a>). Acts as a negative regulator of innate immunity by mediating deamidation of 'Asn-85' of IRF3, preventing IRF3 from binding DNA (By similarity). Facilitates chromatin relaxation in response to DNA damage by mediating deamidation of 'Asn-76' and 'Asn-77' of histone H1, thereby promoting subsequent acetylation of histone H1 at 'Lys-75' (H1K75ac), increasing chromatin accessibility to facilitate the recruitment of DNA repair proteins (PubMed:<a href="#">40240600</a>).</p>

<b>Cellular Location</b>	Cytoplasm, cytosol. Nucleus. Chromosome Note=Cytoplasmic and nuclear; when active, detected in long filamentous structures named cytoophidium (PubMed:24503052, PubMed:25223282, PubMed:28459447). Enriched on chromatin in response to DNA damage (PubMed:40240600).
<b>Tissue Location</b>	Widely expressed at low level, except in activated T-cells where it is highly expressed.

## Images

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