

Product datasheet for **RC202434**

CTP synthase (CTPS1) (NM_001905) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	CTP synthase (CTPS1) (NM_001905) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	CTP synthase
Synonyms:	CTPS; GATD5; GATD5A; IMD24
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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ORF Nucleotide Sequence:

>RC202434 ORF sequence
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGATCGCC**

ATGAAGTACATTCTGGTTACTGGTGGTGTATATCAGGAATTGGAAAAGGAATCATTGCCAGCAGTGTGG
 GCACAATACTCAAGTCATGTGGTTTACATGTAACCTCAATCAAAAATTGACCCCTACATTAACATTGATGC
 AGGAACATTCTCTCCTTATGAGCATGGTGGGTTTTGTGCTGGATGATGGTGGGGAAGTAGACCTTGAC
 CTGGGTAACTATGAGCGGTTCTTGACATCCGCCTCACCAAGGACAATAATCTGACCACTGGAAAGATAT
 ACCAGTATGTCATTAACAAGGAACGAAAGGAGATTACTTGGGAAAACTGTCCAAGTTGCCCTCATAT
 CACAGATGCAATCCAGGAGTGGGTGATGAGACAGGCGTTAATACCTGTAGATGAAGATGGCTGGAACT
 CAAGTGTGTATTAGCTTGGTGAACCGTGGGGACATAGAAAGCATGCCCTTATTAGGCCTTCC
 GTCAGTCCAATTCAAGGTCAAAAGAGAGAAGCTTTGTAACATCCACGTCAGTCTAGTCCCGAGCAAG
 TTCAACAGGGGAACAGAAGACTAACTACCCAGAATAGTGTTCGGGAACCTAGAGGACTTGGGCTTTCC
 CCAGATCTGGTTGATGCAGGTGCTCAAATCCACTTGACACATCAGTGAAGGAGAAAAATCAATGTTCT
 GCCATGTTGAGCCTGAACAAGTATCTGTGTCCACGATGTCTCATCCATCTACCGAGTCCCTTGTGT
 AGAGGAGCAAGGGGTTGTAGATTATTTCTTCAAGACTTGACCTTCTATTGAGAGGCAGCCAAGAAAA
 ATGCTGATGAAATGGAAAGAGATGGCTGACAGATATGATCGCTTGGTGGAGACCTGCTCTATTGCCCTTG
 TGGGCAATACACGAAGTTCTCAGACTCCTATGCCTCTGTCTAATAAGGCTCTGGAGCATTCTGACTGGC
 CATCAACCACAAATTGAAATCAAGTACATAGATTCTGCGGACTTGGAGCCCATCACCTCGCAAGAAGAG
 CCCGTGCGCTACCACGAAGCTTGGCAGAAGCTCTGTAGTGTCTATGGAGTGTGGTCCAGGAGGATTTG
 GTGTTTCGAGGAACAGAAGAAAAATCCAAGCAATTGCCTGGGCTCGGAATCAGAAAAAGCCTTTTTTGGG
 CGTGTGCTTAGGGATGCAGTTGGCAGTGGTTGAATTCTCAAGAAACGTGCTGGGATGGCAAGATGCCAAT
 TCTACAGAGTTTGACCCTACGACAGTCAATCCCGTGGTCTGAGACATGCCAGAACAACCCAGGGCAGA
 TGGGCGGAACCATGAGGCTGGGCAAGAGGAGAACCCTGTTCCAGACCAAGAACTCAGTCTGAGGAACT
 CTATGGAGACGCAGACTACTTGAAGAGAGGCACCGCCACCGATTTGAGGTGAATCCAGTCTGAAAAAG
 TGTTTGAAGAACAAGGCTTGAAGTTTGTGGCCAAGATGTTGAAGGAGAGAGAATGAAATTTGGGAGT
 TAGAAGATCATCCCTTTTTTGTGGGTTTCAAGTACCACCTGAGTTCCTGTCCAGGCCTATCAAGCCCTC
 CCCACCATACTTTGGCCTCCTCCTGGCCTCTGTGGGGCGGCTCTCACATTACCTCCAGAAAGGCTGCAGG
 CTCTCACCCAGGGACACCTATAGTGACAGGATTGGAAGCAGCTCCCTGACTCTGAAATCACCGAAGTGA
 AGTTTCCATCAATAAATCATGAC

ACGCGTACGCGGCGGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>RC202434 protein sequence
 Red=Cloning site Green=Tags(s)

MKYILVTGGVISGIGKGIASSVGTILKSCGLHVTSIKIDPYINIDAGTFSPYEHGEVFLDDGGEVDLD
 LGNYERFLDIRLTKDNNLTTGKIYQYVINKERKGDYLGKTVQVPHITDAIQEWVMRQALIPVDEDGLEP
 QVCVIELGGTVGDIESMPFIEAFRQFQFKVKRENFNIHVSLVPQPSSTGEQKTKPTQNSVRELRLGLS
 PDLVVCRCNSPLDTSVKEKISMFCHEVEQVICVHDVSSIYRVPLLEEQGVVDYFLRRLDPIERQPRK
 MLMKWKEMADRYDRLLETCSIALVGKYTKFSDSYASVIKALEHSALAINHKLEIKYIDSADLEPITSQEE
 PVRYHEAWQKLSAHGVLVPGGFVVRGTEGKIQAIAWARNQKPFLLVCLGMQLAVVEFSRNVLQWQDAN
 STEFDPTTSHPVVDMPEHNPGQMGGTMRLLGKRRTLFQTKNSVMRKL YGDADYLEERHRHFEVNPVWKK
 CLEEQGLKFGVQDVEGERMEIVELEDHPFFVGVQYHPEFLSRPIKSPPPYFGLLLASVGRLLSHYLQKGC
 LSPRDTYSDRIGSSSPDSEITELKFPSINH

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms:

https://cdn.origene.com/chromatograms/mk6576_e02.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_001905

ORF Size: 1773 bp

OTI Disclaimer: Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA can be purchased from OriGene with batch-specific, full-sequence verification at a reduced cost. Please contact our customer care team at custsupport@origene.com or by calling 301.340.3188 option 3 for pricing and delivery.

The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially in agreement with the reference, but a complete review of all prevailing variants is recommended prior to use. [More info](#)

OTI Annotation: This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.

Components: The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).

Reconstitution Method:

1. Centrifuge at 5,000xg for 5min.
2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.
3. Close the tube and incubate for 10 minutes at room temperature.
4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.
5. Store the suspended plasmid at -20°C. The DNA is stable for at least one year from date of shipping when stored at -20°C.

Note: Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.

RefSeq: [NM_001905.4](#)

RefSeq Size: 3248 bp

RefSeq ORF: 1776 bp

Locus ID: 1503

UniProt ID: [P17812](#)

Cytogenetics: 1p34.2

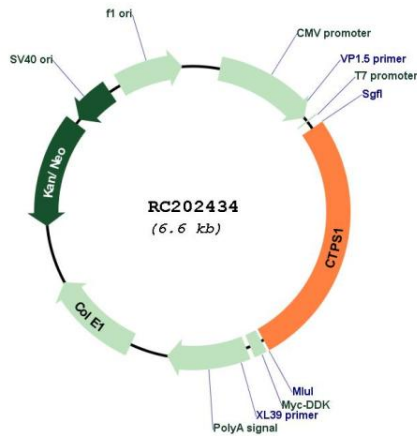
Domains: GATase

Protein Pathways: Metabolic pathways, Pyrimidine metabolism

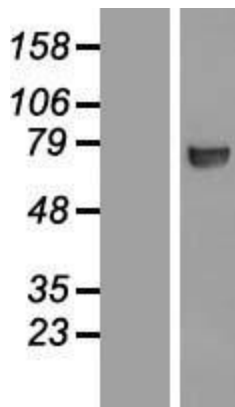
MW: 66.7 kDa

Gene Summary: This gene encodes an enzyme responsible for the catalytic conversion of UTP (uridine triphosphate) to CTP (cytidine triphosphate). This reaction is an important step in the biosynthesis of phospholipids and nucleic acids. Activity of this protein is important in the immune system, and loss of function of this gene has been associated with immunodeficiency. Alternative splicing results in multiple transcript variants. [provided by RefSeq, Jul 2014]

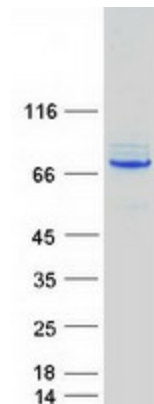
Product images:



Circular map for RC202434



Western blot validation of overexpression lysate (Cat# [LY419663]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC202434 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified CTPS1 protein (Cat# [TP302434]). The protein was produced from HEK293T cells transfected with CTPS1 cDNA clone (Cat# RC202434) using MegaTran 2.0 (Cat# [TT210002]).