

# Recombinant human RTCA protein

Catalog Number: ATGP2735

## PRODUCT INFORMATION

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### Expression system

E.coli

### Domain

1-366aa

### UniProt No.

O00442

### NCBI Accession No.

NP\_003720.1

### Alternative Names

RNA 3-terminal phosphate cyclase isoform b, RNA 3'-terminal phosphate cyclase, RPC, RTC1, RTCD1

## PRODUCT SPECIFICATION

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### Molecular Weight

41.7 kDa (389aa) confirmed by MALDI-TOF

### Concentration

0.25mg/ml (determined by Bradford assay)

### Formulation

Liquid in. 20mM Tris-HCl buffer (pH 8.0) containing 0.15M NaCl, 20% glycerol, 1mM DTT

### Purity

> 90% by SDS-PAGE

### Tag

His-Tag

### Application

SDS-PAGE

### Storage Condition

Can be stored at +2C to +8C for 1 week. For long term storage, aliquot and store at -20C to -80C. Avoid repeated freezing and thawing cycles.

## BACKGROUND

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### Description

RTCA catalyzes the conversion of 3'-phosphate to a 2', 3'-cyclic phosphodiester at the end of RNA. The mechanism of action of the enzyme occurs in 3 steps: (A) adenylation of the enzyme by ATP; (B) transfer of adenylate to an RNA-N3'P to produce RNA-N3'PP5'A; (C) and attack of the adjacent 2'-hydroxyl on the 3'-phosphorus in the diester linkage to produce the cyclic end product. The biological role of this enzyme is unknown but it is likely to function in some aspects of cellular RNA processing. Recombinant human RTCA protein, fused to His-tag at N-terminus, was expressed in E. coli and purified by using conventional

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chromatography techniques.

## Amino acid Sequence

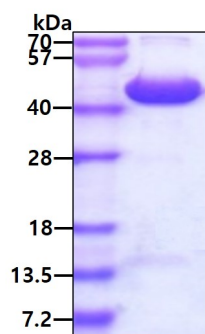
<MGSSHHHHHH SSGLVPRGSH MGS>MAGPRVE VDGSIMEGGG QILRVSTALS CLLGLPLRVQ KIRAGRSTPG  
LRPQHLSGLE MIRDLCDGQL EGAEIGSTEI TFTPEDIKGG IHTADTKTAG SVCLLMQVSM PCVLFAASPS ELHLKGGTNA  
EMAPQIDYTV MVFKPIVEKF GFIFNCDIKT RGYYPKGGGE VIVRMSPVKQ LNPINLTERG CVTKIYGRAF VAGVLPFKVA  
KDMAAAVRC IRKEIRDLYV NIQPVQEPKD QAFGNGNGII IIAETSTGCL FAGSSLGKRG VNADKVGIEA AEMLLANLRH  
GGTVDEYLQD QLIVFMALAN GVSRIKTGPV TLHTQTAIHF AEQIAKAKFI VKKSEDEEDA AKDTYIIECQ GIGMTNPNL

## General References

Genschik P., Billy E., et al. (1997) EMBO J. 16:2955-2967

## DATA

### SDS-PAGE



3ug by SDS-PAGE under reducing condition and visualized by coomassie blue stain