

**RTCA, 1-366aa, Human, His tag, E.coli**

**Cat.NO.: TP03808**

3th Edition

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

**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 chromatography techniques.

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

**Molecular Weight:**41.7 kDa (389aa) confirmed by MALDI-TOF

**Sequences:**

MGSSHHHHHHSSGLVPRGSHMGSMAGPRVEVDGSIMEGGGQILRVSTALSCLLGLPLRVQKIRAGRSTPGLRPQ  
HLSGLEMIRDLCDGQLEGAEIGSTEITFTPEKIKGGIHTADTKTAGSVCLLMQVSMPCVLF AASPSELHLKGGTNAE  
MAPQIDYTMVFKPIVEKFGFIFNC DIKTRGYYPKGGGEVIVRMSPVKQLNPINLTERGCVTKIYGRA FVAGVLPFKV  
AKDMAAAAVRCIRKEIRDLYVNIQPVQEPKDQAFGNGNGIII AETSTGCLFAGSSLGKRGVNADKVGIEAAEMLLAN  
LRHGGTVDEYLQDQLIVFMALANGVSR IKTGPVTLHTQTAIHF AEQIAKAKFIVKKS EDEEDA AKD TYII ECQGIGMTN  
PNL

**Purity:**> 95% by HPLC

**Concentration:**0.25 mg/ml (determined by Bradford assay)

**Endotoxin Level:**<1.0 EU per 1 ug of protein (determined by LAL method)

**Storage:**Can be stored at +4°C short term (1-2 weeks). For long term storage, aliquot and store at -20°C or -70°C. Avoid repeated freezing and thawing cycles.