

# Recombinant E.coli rnpA protein

Catalog Number: ATGP4054

## PRODUCT INFORMATION

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### Expression system

E.coli

### Domain

1-119aa

### UniProt No.

P0A7Y8

### NCBI Accession No.

NP\_418159.1

### Alternative Names

ECK3696, Rnase P protein, RnaseP protein, b3704, JW3681, Ribonuclease P protein component, EC 3.1.26.5, Protein C5

## PRODUCT SPECIFICATION

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### Molecular Weight

13.7kDa

### Concentration

0.25mg/ml (determined by absorbance at 280nm)

### Formulation

Liquid. Phosphate-Buffered Saline (pH 7.4) containing 10% Glycerol

### Purity

> 90% by SDS - PAGE

### Endotoxin level

< 1 EU per 1ug of protein (determined by LAL method)

### Tag

Non-Tagged

### 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

rnpA, also known as Rnase P protein, is an essential enzyme consisting of the C5 protein (encoded by rnpA) and the catalytic M1 RNA (encoded by rnpB) subunits. rnpA is ribonucleoprotein that catalyzes the removal of the 50-leader elements of precursor tRNAs and generates the mature 50-end of tRNAs. This step is essential for the

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formation of functional tRNA molecules in bacteria, archaea and eukarya. More importantly, it has recently been demonstrated that RNase P is required for the endonucleolytic separation of certain polycistronic tRNA transcripts such as valV valW, leuQ leuP leuV and secG leuU. Thus, it was hypothesized that the essential function of RNase P might be related to the complete absence of a particular tRNA that was dependent on the enzyme for initial separation from polycistronic transcripts. Recombinant E.coli rnpA, was expressed in E. coli and purified by using conventional chromatography techniques.

## Amino acid Sequence

MVKLAFPREL RLLTPSQFTF VFQQPQRAGT PQITILGRLN SLGHPRIGLT VAKKNVRRAH ERNRIKRLTR ESFRLRQHEL  
PAMDFVVAK KGVADLDNRA LSEALEKLWR RHCRLARGS

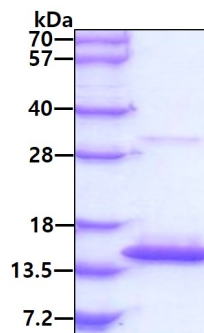
## General References

Ankit Agrawal., et al. (2014) Nucleic Acids Res. 42(17):11166-79.

Hui-Woog Choe., et al. (2002) Acta Crystallogr D Biol Crystallogr. 59(Pt 2):350-2.

## DATA

### SDS-PAGE



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