Recombinant E.coli rnpA protein

Catalog Number: ATGP4054

PRODUCT INFORMATION

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

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

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 tRNAthat 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

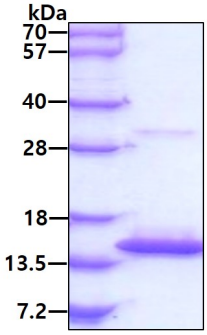
MVKLAFPREL RLLTPSQFTF VFQQPQRAGT PQITILGRLN SLGHPRIGLT VAKKNVRRAH ERNRIKRLTR ESFRLRQHEL PAMDFVVVAK KGVADLDNRA LSEALEKLWR RHCRLARGS

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