

Ribonuclease P (RNASEP) Active Protein | RNASEP active protein

Active Ribonuclease P (RNASEP)

CATALOG # AAA148167	HOST E. coli	REACTIVITY Rattus norvegicus (Rat)	APPLICATIONS Activity Assay, Cell Culture
-------------------------------	------------------------	--	---

PRODUCT SYNONYMS

Ribonuclease P (RNASEP); Active Ribonuclease P (RNASEP); Rnase-P; RNASEP1; RPP40; Ribonuclease P/MRP 40kDa Subunit; RNASEP active protein

PRODUCT SPECIFICATIONS

Host	E. coli
Reactivity	Rattus norvegicus (Rat)
Purity/Purification	>98%
Form/Format	20mM Tris, 150mM NaCl, pH8.0, containing 0.01% sarcosyl and 5% trehalose.
Concentration	Original Concentration: 50ug/mL (varies by lot)
Applicable Applications for RNASEP active protein	Activity Assay, Cell Culture
Source	Prokaryotic expression.
Residues	Met91~Asp259
Tags	N-terminal His-tag
Predicted isoelectric point	6.2
Usage	Reconstitute in ddH2O to a concentration <= 0.1mg/mL. Do not vortex.
Preparation and Storage	Storage: Avoid repeated freeze/thaw cycles. Store at 2-8 degree C for one month. Aliquot and store at -80 degree C for 12 months. Stability Test: The thermal stability is described by the loss rate. The loss rate was determined by accelerated thermal degradation test, that is, incubate the protein at 37 degree C for 48h, and no obvious degradation and precipitation were observed. The loss rate is less than 5% within the expiration date under appropriate storage condition.

IMAGES


WB (Western Blot)

Sample: Recombinant RNASEP, Rat; Antibody: Rabbit Anti-Rat RNASEP Ab


SDS-PAGE

Sample: Active recombinant RNASEP, Rat



Bioactivity

Ribonuclease P is a site specific endonuclease that generates mature tRNAs by catalysing the removal of the 5'-leader sequence from pre-tRNA to produce the mature 5'-terminus. It can also cleave other RNA substrates such as 4.5S RNA. In bacteria, RNase P consists of two components: a large RNA (about 400 base pairs) encoded by rnpB, and a small protein (119 to 133 amino acids) encoded by rnpA. The RNA moiety of RNase P carries the catalytic activity; the protein component plays an auxiliary, but essential, role in vivo by binding to the 5'-leader sequence and broadening the substrate specificity of the ribozyme. The sequence of rnpA is not highly conserved, however there is, in the central part of the protein, a conserved basic region. Besides, Nucleophosmin (NPM) has been identified as an interactor of RNASEP, thus a binding ELISA assay was conducted to detect the interaction of recombinant rat RNASEP and recombinant rat NPM. Briefly, RNASEP were diluted serially in PBS, with 0.01% BSA (pH 7.4). Duplicate samples of 100uL were then transferred to NPM-coated microtiter wells and incubated for 2h at 37 degree C. Wells were washed with PBST and incubated for 1h with anti-RNASEP pAb, then aspirated and washed 3 times. After incubation with HRP labelled secondary antibody, wells were aspirated and washed 3 times. With the addition of substrate solution, wells were incubated 15-25 minutes at 37 degree C. Finally, add 50uL stop solution to the wells and read at 450nm immediately. The binding activity of RNASEP and NPM was shown in Figure 1, and this effect was in a dose dependent manner. Figure 1. The binding activity of RNASEP with NPM.



Sequence

ADDITIONAL INFORMATION

Product Categories/Family for RNASEP active protein	Enzyme & Kinase; Developmental science
---	--

NCBI AND UNIPROT INFORMATION

NCBI GI #	61556813
NCBI GeneID	291071
NCBI Accession #	NP_001013073.1
NCBI GenBank Nucleotide #	NM_001013055.1
UniProt Accession #	Q5BK64
Molecular Weight	Predicted Molecular Mass: 23.0kDa Accurate Molecular Mass: 23kDa as determined by SDS-PAGE reducing conditions.
NCBI Official Full Name	ribonuclease P protein subunit p40
NCBI Official Synonym Full Names	ribonuclease P/MRP subunit p40
NCBI Official Symbol	Rpp40
NCBI Protein Information	ribonuclease P protein subunit p40
UniProt Protein Name	Ribonuclease P protein subunit p40
UniProt Gene Name	Rpp40
UniProt Synonym Gene Names	RNaseP protein p40

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

AAA Biotech | Tel: +1 (619) 604-9440 | Fax: +1 (619) 604-9441 | contact@aaabiotech.com
Online datasheet: <https://stage.aaabiotech.com/e-coli-rat-rattus-norvegicus-active-protein/ribonuclease-p-rnasep/148167>