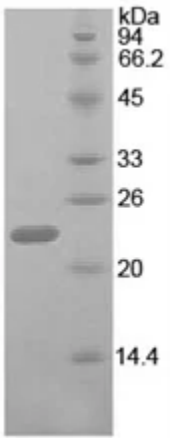
Active Ribonuclease P (RNASEP)

Catalog#:PER12274

概述（Summary）

别称（Alternative Names）	Rnase-P; RNASEP1; RPP40; Ribonuclease P/MRP 40kDa Subunit
纯度（Purity）	Greater than 97% as determined by reducing SDS-PAGE.
内毒素（Endotoxin level）	Please contact with the lab for this information
蛋白构建（Construction）	【Met91-Asp259】
Accession #	Q5BK64
表达宿主（Host）	E.coli
种属（Species）	Rattus norvegicus (Rat)
预测分子量（Predicted MW）	23.0 kDa
制剂（Form）	Lyophilized from a 0.2 μm filtered solution of PBS, pH7.4, containing 0.01% SKL, 1mM DTT, 5% Trehalose and Proclin300.
运输方式（Shipping）	The product is shipped with ice bag. Upon receipt, store it immediately at the temperature listed below.
稳定性&储存（Stability &Storage）	12 months at -20°C to -80°C in lyophilized state.6 months at -20°C to -80°C under sterile conditions after reconstitution.7-10 days at 2°C to 8°C under sterile conditions after reconstitution.Please minimize freeze-thaw cycles.
复溶（Reconstitution）	Reconstitute in 10mM PBS (pH7.4) to a concentration of 0.1-1.0 mg/mL. Do not vortex.
背景介绍（References）	Component of ribonuclease P, a ribonucleoprotein complex that generates mature tRNA molecules by cleaving their 5'-ends. Also a component of the MRP ribonuclease complex, which cleaves pre-rRNA sequences.

电泳图（SDS-PAGE image）



Greater than 97% as determined by reducing SDS-PAGE.

活性图（Bioactivity image）

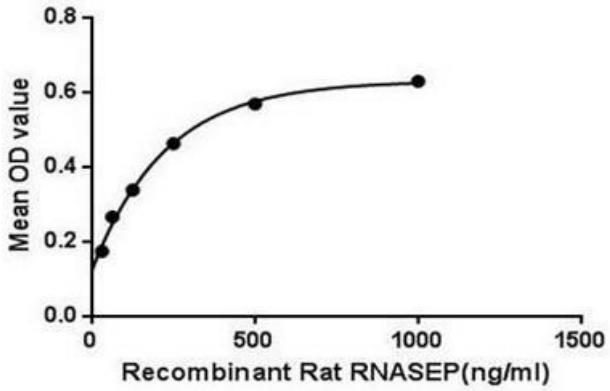


Figure 1. The binding activity of RNASEP with NPM.

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 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℃. 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℃. Finally, add 50μL stop solution to the wells and read at 450nm immediately. The binding activity of of RNASEP and NPM was shown in Figure 1, and this effect was in a dose dependent manner.

注意事项（Note）

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