Recombinant Ribonuclease Inhibitor

CAT NO.: APL-0173

DESCRIPTION

The Recombinant Ribonuclease Inhibitor is purified by affinity chromatography from a recombinant strain of *E. coli* expressing a cloned porcine liver gene. This inhibitor has a very high binding affinity for pancreatic-type ribonucleases, such as RNase A.

Like other inhibitors of pancreatic ribonuclease, the inhibitor is an acidic protein. The inhibitor has a molecular weight near 52 kDa. It forms a 1:1 complex with bovine pancreatic RNase A, and it is a noncompetitive inhibitor of these pancreatic enzymes. The inhibitor is active against RNase A, RNase B, and RNase C. It does not inhibit RNase 1, RNase T1, RNase T2, S1 nuclease, or RNase H.

CONTENT

	APL-0173
Recombinant Ribonuclease Inhibitor (40 U/μL)	5,000 units

STORAGE

Store at -30 to -10℃. Avoid exposing product to frequent temperature changes.

The inhibitor requires 1 mM DTT to maintain activity.

STORAGE buffer

20 mM Tris-HCl (pH 8.0), 50 mM KCl, 0.5 mM EDTA, 8 mM DTT, 50 %(v/v) glycerol.

Guideline

- **cDNA synthesis:**

  Use 40 units of the inhibitor per 20 μL of reaction mixture to protect mRNA and improve total cDNA yield, including the overall percentage of full-length cDNA.

- **RT-PCR**

  Use 40 units of the inhibitor per 20 μL of reaction mixture. The inhibitor is compatible with all enzymes used in RT-PCR. It has been used with the elongation in long RT-PCR mixture.

- **In Vitro Transcription**

  Use 20-40 units of the inhibitor per 10 μL of reaction mixture to produce intact RNA transcription using T3, T7, and SP6 RNA polymerases.

PRODUCT USE LIMITATION

Research use only.

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