

## **RNasin ( RNase inhibitor PCR Enhancer)**

**Ref: NB-03-0154 1000 U**

### **Concentration**

40 U/ $\mu$ l

### **Store at -20°C**

### **Description**

RNasin is a ribonuclease inhibitor purified from human placenta. RNasin reduces the activity of RNase A-type enzymes in a variety of organisms.

### **Feature**

Free of endodeoxyribonucleases, exodeoxyribonucleases, ribonucleases and phosphatases

### **Applications**

- Inhibition of RNA degradation in the following procedures:
  - in vitro transcription
  - cDNA synthesis
  - in vitro translation
  - isolation of mammalian cell fractions that contain mRNA-protein complex
- Separation and identification of specific ribonuclease activities
- Studies of tumor suppression

### **Quality Control**

The absence of endodeoxyribonucleases, exodeoxyribonucleases, phosphatases and ribonucleases confirmed by appropriate quality tests.

Functionally tested in RNA and cDNA synthesis.

### **Definition of Activity Unit**

One unit of the protein inhibits the activity of 5ng RNase A by 50%. Inhibitor activity

is assayed in the following mixture: 100 mM Tris-HCl (pH 7.5), 1.2 mM EDTA, 0.1 mg/ml BSA, 100 ng/ml RNase A, 0.1 mg/ml E.coli [3H]-RNA, 50 mg/ml yeast RNA, 8 mM DTT.

## Source

E.coli cells with a cloned gene encoding mammalian ribonuclease inhibitor.

## Storage Buffer

20mM HEPES-NaOH (pH7.5), 50mM NaCl, 8mM DTT,0.5mM ELUGENT Detergent and 50% (v/v) glycerol.

## Inhibition and Inactivation

- Inhibitors: common denaturants (SDS, urea and all oxidizing reagents (p-chloromercuribenzoate, dissolved oxygen, ions in their higher oxidation states) strongly inhibit RNase Inhibitor and release the RNase bound.
- Inactivated by heating at 75°C for 10min. Residual activity detectable after 10min heating at 70°C.

## Note

- DTT provided in the Storage Buffer ensures stability during long term storage, but is not necessary for inhibitor activity.
- Recommended concentration 1U/μl for a reaction mixture.

## PRODUCT USE LIMITATION

This product is developed, designed and sold exclusively for research purposes and in vitro use only. The product was not tested for use in diagnostics or for drug development, nor is it suitable for administration to humans or animals.