RNase Inhibitor

FB02518250 2500 Units

FB02518254 10000 Units

Store at -25°C to -15°C

RNase Inhibitor inhibits the activity of RNases A, B and C by binding them in a noncompetitive mode at a 1:1 ratio. It does not inhibit eukaryotic RNases: T1, T2, U1, U2, CL3 as well as prokaryotic RNases I and H.

Applications

- Inhibition of RNA degradation in the following
  - *in vitro* transcription (see Protocol)
  - cDNA synthesis
  - *in vitro* translation
  - isolation of mammalian cell fractions that contain mRNA-protein complex
  - RNA amplification
- RNA purification
- Separation and identification of specific ribonuclease activities
- Studies of tumor suppression

Kit Contents

Reagents	2500 Units	10000 Units
RNase Inhibitor, 40 U/µL	62.5 µL	4 x 62.5 µL

Definition of Activity Unit

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

Protocol for conventional *in vitro* transcription

1. Prepare the following reaction mixture at room temperature.

Component	50 µL Reaction
5X Transcription buffer	10 µL
ATP/GTP/CTP/UTP Mix, 10 mM each	10 µL (2 mM final concentration)
Linearized template DNA	1 µg
RNase Inhibitor	1.25 µL (50 U)
T7/T3/SP6 RNA Polymerase	varies (30 U)
DEPC-treated Water	to 50 µL

2. Incubate at 37°C for 2 hours.
3. Optional: To remove template DNA, add 2 U of DNase I, RNase-free (FB02514100), mix and incubate at 37°C for 15 min.
4. Stop the reaction by adding 2 µL 0.5 M EDTA, pH 8.0 and incubate at 65°C for 10 min.