

# Ribonuclease Inhibitor

Cat. No. AI101

Storage: at -20°C for two years

Concentration: 50 units/ $\mu$ l

## Description

Ribonuclease Inhibitor is a recombinant protein purified from *E. coli* strain carrying human placenta ribonuclease inhibitor gene. Ribonuclease Inhibitor specifically inhibits RNase A, RNase B, and RNase C. It is not effective against RNase 1, RNase T1, S1 nuclease, RNase H and aspergillus-originated RNase. It has no inhibition effect on DNA Polymerase, AMV, M-MLV, SP6, T7 and T3 RNA Polymerases.

## Storage Buffers

50 mM Tris-HCl (pH 7.5), 0.1 mM EDTA, 10 mM DTT, 100 mM NaCl, 50% glycerol

## Unit Definition

One unit is defined as the amount of enzyme required to inhibit 5 ng RNase A by 50%.

## Applications

*In vitro* inhibition of ribonuclease, cDNA synthesis and *in vitro* transcription and translation.

## First-strand cDNA synthesis

### 1. Reaction Components

Component	Volume
Total RNA/mRNA	50 ng-5 $\mu$ g/5-500 ng
Anchored Oligo(dT) <sub>18</sub> Primer (0.5 $\mu$ g/ $\mu$ l)	1 $\mu$ l
or Random Primer (0.1 $\mu$ g/ $\mu$ l)	1 $\mu$ l
or GSP	2 pmol
10 mM dNTPs	1 $\mu$ l
5 $\times$ RT Buffer	4 $\mu$ l
Ribonuclease Inhibitor	0.5 $\mu$ l
<i>EasyScript</i> <sup>®</sup> / <i>TransScript</i> <sup>®</sup> RT	1 $\mu$ l

### 2. Incubate

- For anchored oligo(dT)<sub>18</sub> primer or GSP, incubate at 42°C for 30 minutes.
- For random primer, incubate at 25°C for 10 minutes, then at 42°C for 30 minutes.

3. Incubate at 85°C for 5 seconds to inactivate *EasyScript*<sup>®</sup>/*TransScript*<sup>®</sup> RT.

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