

## RNAarmor™ RNase Inhibitor

### Description

RNAarmor™ RNase Inhibitor is a recombinant human placental protein which specifically inhibits RNase A and other eukaryotic RNase A-like proteins. RNAarmor™ RNase Inhibitor does not inhibit RNA polymerases, DNA polymerases, RNase H, or RNase T1. RNAarmor™ RNase Inhibitor is rigorously tested to be a nuclease-free reagent and is guaranteed free of nonspecific endonuclease, exonuclease, and RNase activity. Therefore, RNAarmor™ RNase Inhibitor is often used to inhibit the activity of RNases. It's ideal for use in cDNA synthesis, RT-PCR reactions, in vitro transcription, in vitro translation, cDNA library construction, as well as for long-term storage of RNA samples.

### Features

- Specifically inhibits RNase A and other eukaryotic RNase A-like proteins.
- Does not inhibit RNA polymerases, DNA polymerases, RNase H, or RNase T1.
- Free of nonspecific endonuclease, exonuclease, and RNase activity.
- Compatible with Taq Polymerase, AMV or M-MuLV Reverse Transcriptases.

### Specifications

Cat. No.	Product Name	Specification
YRI001	RNAarmor™ RNase Inhibitor, 2000 units	RNAarmor™ RNase Inhibitor (40U/ul): 500ul

### Storage Buffer

RNAarmor™ RNase Inhibitor is supplied in 20mM HEPES-KOH (pH 7.6), 50mM KCl, 5mM DTT and 50% glycerol.

### Product Source

An E. coli strain that carries the Ribonuclease Inhibitor gene from human placenta.

### Definition of Activity Unit

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

### Applications

Ideal for RNA purification and storage. Ideal for inhibition of RNA degradation in following applications: in vitro transcription, cDNA synthesis, in vitro translation, isolation of mammalian cell fractions that contain mRNA-protein complex or RNA amplification.

## Quality Control

RNAarmor™ RNase Inhibitor is rigorously tested to be free of nonspecific endonuclease, exonuclease, and RNase activity.

## Shipping and Storage Conditions

RNAarmor™ RNase Inhibitor shall be shipped and stored at -20°C. With proper storage, RNAarmor™ RNase Inhibitor can be stored for up to 12 months without showing any deduction in performance and quality.

## Protocol

### Important Notes Before Starting:

DTT is required for activation of RNAarmor™ RNase Inhibitor. DTT should be present in the reaction mixture at a final concentration of 5 mM for best results.

### Notes:

Since ribonucleases typically retain activity under denaturing conditions, care must be taken to avoid denaturing RNase Inhibitor molecules which have complexed with a ribonuclease. To prevent the release of active ribonuclease, temperatures greater than 50°C and high concentrations of urea or other denaturing agents should be avoided. Examples of common denaturants: SDS, urea and all oxidizing reagents (p-chloromercuribenzoate, dissolved oxygen, ions in their higher oxidation states).

### Recommended Amount in Per Reaction:

Please apply suitable amount according to the required condition in different applications.

For example, for use in AmpEasy™ Direct RT-PCR Kit (Cat. No. DRP050/ DRP100), if the expected PCR product size is larger than 500 bp, it is recommended to include 0.5 µl RNase inhibitor (40 unit/µl) in 50 µl of the Buffer C.