

## RIBOAssure RNase Inhibitor

25 OCT 2021

Catalog Number	Size	Concentration
RI001-0125	5000 U	40 U/ $\mu$ l

### Storage Conditions

Stable for up to 2 years at -20°C

Avoid multiple freeze-thaw cycles and exposure to frequent temperature changes.

### Description

As a recombinant human placental protein expressed in *Escherichia coli*, the RIBOAssure RNase Inhibitor inhibits ribonuclease (RNase) activity exhibited by eukaryotic enzymes such as RNase A, RNase B, and RNase C by non-covalent binding. It is intended for use in applications where the presence of RNases is undesirable for obtaining optimal RNA quality and experiment results, for example, RNA isolation, cDNA synthesis, RT-PCR, in vitro transcription and translation, or RNase-free monoclonal antibody preparation. RIBOAssure RNase Inhibitor lacks activity towards RNase 1, RNase T1, RNase T2, S1 nuclease, and RNase H. It is highly recommended to be used with our high-performance RScript Reverse Transcriptase, qPCR MasterMixes, Taq DNA polymerase, and/or 2X PCR SuperMix for subsequent experimental steps and applications.

### Kit Content(s)

RI001-0125	RIBOAssure RNase Inhibitor	125 $\mu$ l x 1 vial
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### Recommended Use

- RNA isolation and purification
- cDNA Synthesis, RT-PCR, RT-qPCR
- *In Vitro* Transcription

### Applications

The optimal final concentration of the RIBOAssure RNase Inhibitor in a reaction would be recommended to in the range of 1-2 U/ $\mu$ l, depending on (1) the level of RNase contamination; (2) the incubation time; and (3) the compounds present in the reaction mixture. For the optimal activity, a final DTT concentration of 0.5–1 mM is essential.

	cDNA Synthesis	RT-PCR RT-qPCR	<i>In Vitro</i> Transcription
RIBOAssure RNase Inhibitor volume	1 $\mu$ l	1 $\mu$ l	0.5-1 $\mu$ l
Reaction volume	20 $\mu$ l	20 $\mu$ l	10 $\mu$ l





## Storage Buffer

20 mM HEPES-KOH (pH 7.6); 50 mM KCl; 8 mM reducing agent; 50% (v/v) glycerol.

## Unit definition

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