

RiboGuard™ RNase Inhibitor

Cat. Nos. RG90925 and RG90910K

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1. Introduction

RiboGuard™ RNase Inhibitor is the best defense against common RNases including RNase A, RNase B, and RNase C. This recombinant RNase inhibitor protein provides reliable protection of precious RNA samples by binding strongly to RNases in a 1:1 ratio. Advanced purification protocols and extensive quality control tests ensure that RiboGuard RNase Inhibitor is free of unwanted contaminants that can plague other commercially available preparations of RNase inhibitors.

RiboGuard RNase Inhibitor is available in 2,500- and 10,000-Unit sizes and is provided at a concentration of 40 Units/μl.

2. Applications

- Effectively inhibits the degradation of RNA by eukaryotic RNases in a wide variety of applications, including cDNA synthesis, RT-PCR, and *in vitro* transcription and translation reactions.

3. Benefits

- A potent affinity for RNases (K_i >10⁻¹⁴ M) ensures rapid inhibition even when trace amounts of RNase are present.
- Active against RNase A, RNase B, and RNase C, but not RNase 1, RNase H, RNase T1, RNase T2, or S1 nuclease.
- Free of detectable RNase activity, DNase activity, and mammalian DNA.
- Does not interfere with enzymes commonly used to prepare or analyze RNA.
- Does not release bound RNase in the absence of dithiothreitol (DTT) or other reducing agents.

4. Product Specifications

Storage: Store only at –20°C in a freezer without a defrost cycle.

Storage Buffer: RiboGuard RNase Inhibitor is supplied in a 50% glycerol solution containing 50 mM Tris-HCl (pH 7.5), 100 mM NaCl, 10 mM DTT, and 0.1 mM EDTA.

Unit Definition: One unit of RiboGuard RNase Inhibitor results in 50% inhibition of 5 ng of RNase A. Activity is measured by the inhibition of hydrolysis of cyclic 2',3'-CMP by RNase A.

Contaminating Activity Assays: RiboGuard RNase Inhibitor is free of detectable DNA exonuclease, endonuclease, and ribonuclease activities.

5. Related Products

The following products are also available:

- TargetAmp™ RNA Amplification Kits
- AmpliScribe™ T7-Flash™ Transcription Kit
- Poly(A) Polymerase Tailing Kit
- T7 Phage RNA Polymerase
- MasterPure™ RNA Purification Kits

6. Usage Recommendation

RiboGuard RNase Inhibitor is generally used at a final reaction concentration of 1 U/ μ l.

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