Recombinant RNasin® Ribonuclease Inhibitor

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RNases are ubiquitous, cause RNA degradation and can compromise RNA integrity. Recombinant RNasin® Inhibitor is a 50kDa protein that inhibits RNase A family and human placental RNases by noncovalently binding to RNases in a 1:1 ratio. Recombinant RNasin® Inhibitor does not inhibit RNase T1, S1 nuclease, RNase from *Aspergillus*, RNase H, RNase ONE™ Ribonuclease and enzymes for downstream applications such as GoScript™ Reverse Transcriptase, AMV/M-MLV reverse transcriptases, SP6, T7/T3 RNA polymerase, and *Taq* DNA polymerases. Learn more about our custom options for this product at: www....

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PRODUCT	SIZE	CONC.	CATALOG #	*LIST PRICE	ORDER QTY	
Recombinant RNasin® Ribonuclease Inhibitor Protocol MSDS Components Add to Helix	2,500u	20–40u/µl	N2511	$ 112.00		Add to cart
Recombinant RNasin® Ribonuclease Inhibitor Protocol MSDS Components Add to Helix	10,000u	20–40u/µl	N2515	$ 272.00		Add to cart

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GoTaq® Real-Time qPCR and RT-qPCR Systems for Dye-Based Detection

GoScript™ Reverse Transcription System

QuantiFluor® RNA System

M-MLV Reverse Transcriptase, RNase H Minus, Point Mutant

QC Tests

SDS-PAGE/purity, DNase, RNase, latent RNase, endonuclease.

Source

Recombinant strain of *E. coli* (Cat.# N2511, N2515).

Storage Buffer

20mM HEPES-KOH (pH 7.6 at 4°C), 50mM KCl, 8mM DTT and 50% (v/v) glycerol.

Storage Conditions

Store at –20°C.

Unit Definition

One unit is defined as the amount of RNasin® Ribonuclease Inhibitor required to inhibit the activity of 5ng of ribonuclease A by 50%. Activity is measured by the inhibition of hydrolysis of cytidine 2,3´-cyclic monophosphate by ribonuclease A.

For product intended use please see Patents & Disclaimers tab.

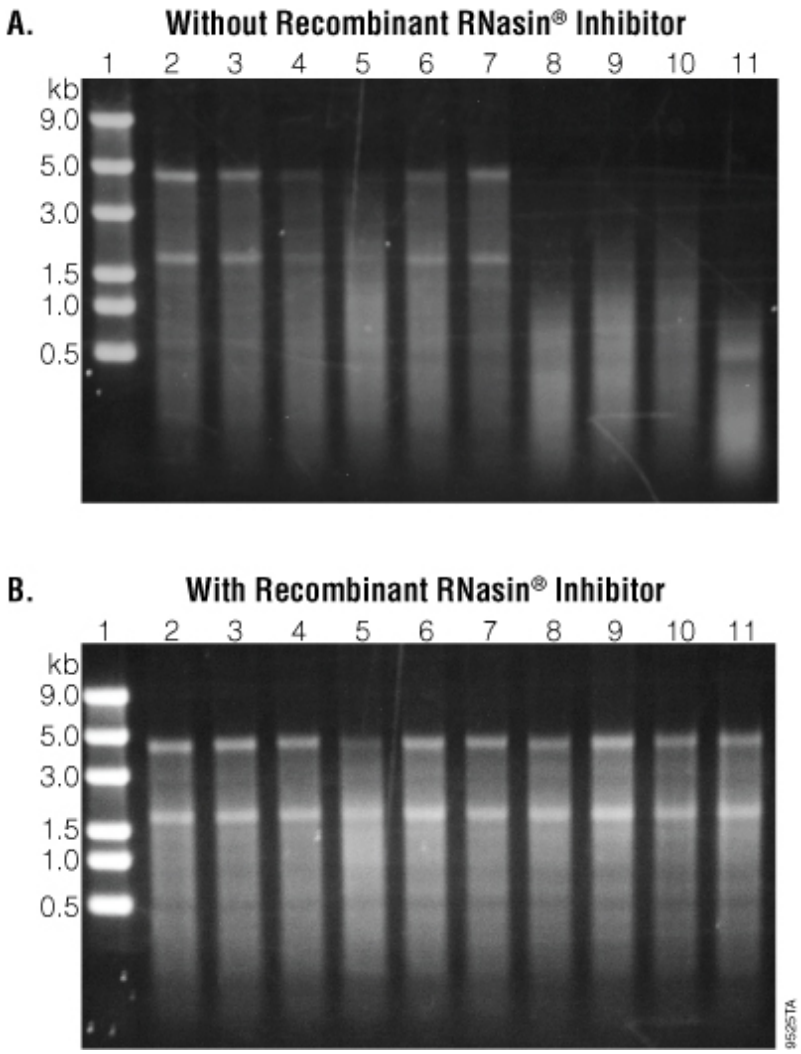

Figure 1. Gel analysis of RNA integrity after incubation. Nine samples of water and buffer stocks from an RNase-free zone of an academic lab were tested for RNases. Samples were divided into two aliquots and incubated overnight at 37°C without (Panel A) or with (Panel B) Recombinant RNasin® Ribonuclease Inhibitor. Seven of the nine stocks contained RNases.

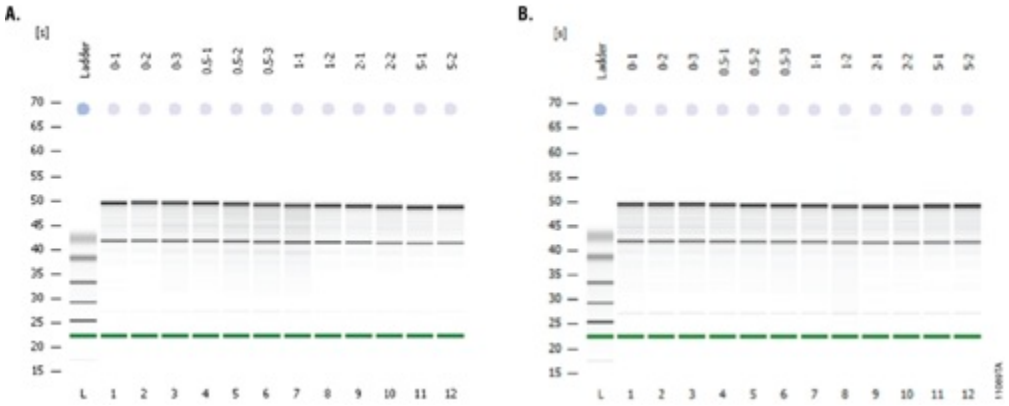

Figure 2. Gel images of RNA samples created by the Agilent Bioanalyzer system. We analyzed samples with varying concentrations of Recombinant RNasin® Ribonuclease Inhibitor before and after six weeks of storage with repeated freeze-thaw cycles. **Panel A.** Represents samples before storage. **Panel B.** Represents samples after the six-week period. The gel models demonstrate that the samples show little RNA degradation.

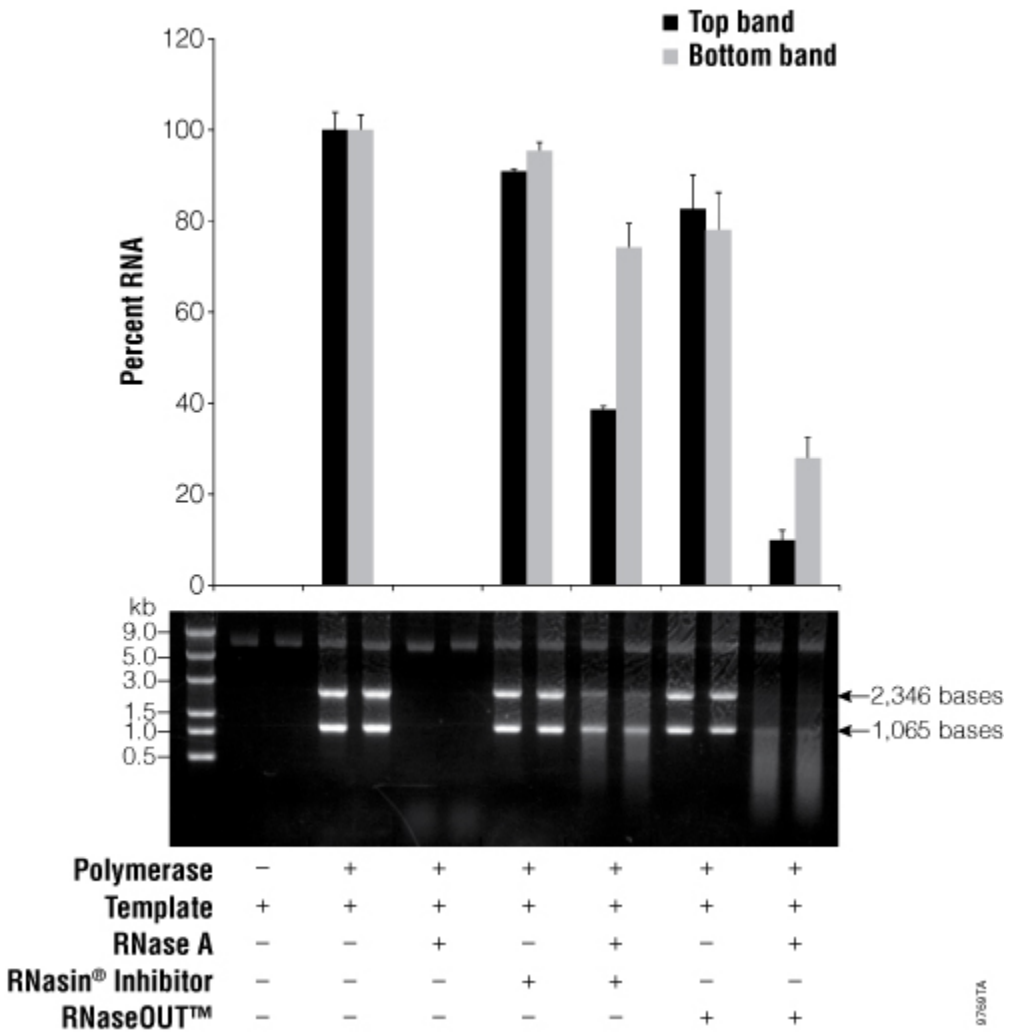

Figure 3. Comparison of RNasin® Ribonuclease Inhibitor and RNaseOUT™ inhibition of RNase A during in vitro transcription. pGEM® Express Control Template was transcribed using the RiboProbe® System—T7 following the instructions in Technical Manual #TM016. All reactions were performed in duplicate. Expected sizes in bases are displayed on the right of the gel image, and marker sizes in kb are listed on the left. The graph was generated by quantitating the bands on the gel and calculating a percent RNA compared to the positive control (polymerase + template). Error bars represent the two separate reactions. The black bars are quantitation of the top bands (2,346 bases) and the grey bars are quantitation of the bottom bands (1,065 bases).

Protocols

RNasin® Ribonuclease Inhibitor, Recombinant Product Information

Articles

Recombinant RNasin® Ribonuclease Inhibitor Protects RNA Without Affecting Analyses

A Head-to-Head Comparison of Recombinant RNasin® RNase Inhibitor to RNaseOUT™ Recombinant RNase Inhibitor

RNase Contamination Happens; Recombinant RNasin® Inhibitor Can Safeguard Your Samples

RNasin® Ribonuclease Inhibitor Part II: A Tale of Two Proteins

RNasin® Ribonuclease Inhibitor Part I: Characterization of the Protein

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Related Citations

Evolution of the hepatitis E virus hypervariable region. 2012 *J. Gen. Virol.* **93**, 2408–18.

CAG expansion induces nucleolar stress in polyglutamine diseases. 2012 *Proc. Natl. Acad. Sci. USA* **109**, 13428-13433.

Mammalian HCA66 protein is required for both ribosome synthesis and centriole duplication. 2012 *Nucl. Acids Res.* **40**, 6270–89.

Proteomic analysis of wild-type and mutant huntingtin-associated proteins in mouse brains identifies unique interactions and involvement in protein synthesis. 2012 *J. Biol. Chem.* **287**, 21599-21614.

More Citations»

FAQs

RNasin® Ribonuclease Inhibitors FAQ

Use Restrictions

N2511, N2515 For Laboratory Use. Outside of the United States, this product is intended for research use only unless otherwise stated.

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