

ENZYMES

RNase Inhibitor

ORIGIN *E.coli* (Recombinant)

CAT# SIN Range
EC# 2.7.7.7

SPECIFICATION

Concentration/Activity*	40 U/μL
Purity	≥90%
RNase Activity	None detected
Endonuclease Activity	None detected
Exonuclease Activity	None detected

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

PRODUCT FORMAT

Formulated in 20 mM Hepes-KOH (pH 7.6), 50 mM KCl, 8 mM DTT, <0.01% Tween 20, 50% Glycerol. Store at -20°C.

PART #	DESCRIPTION	CONTENT/FORMAT
SIN-201	RNase Inhibitor 2.5KU	62.5μL (2,500U) RNase Inhibitor
SIN-229	RNase Inhibitor 100KU	2.5mL (100KU) RNase Inhibitor (Bulk)
SIN-259	RNase Inhibitor 1,000KU	25mL (1,000KU) RNase Inhibitor (Bulk)

DESCRIPTION AND APPLICATION

This product is a recombinant type human ribonuclease inhibitor purified using a combination of ion exchange and affinity chromatography. This inhibitor exhibits broad-spectrum RNase inhibitory properties, including RNase A, RNase B, RNase C and human placental RNase. Does not inhibit RNase T1, S1 nuclease, RNase from *Aspergillus*, and RNase H. The 50kDa protein exerts its inhibitory effect by noncovalently binding to RNases in a 1:1 ratio. This inhibitor can be applied to a reverse transcriptase reaction.

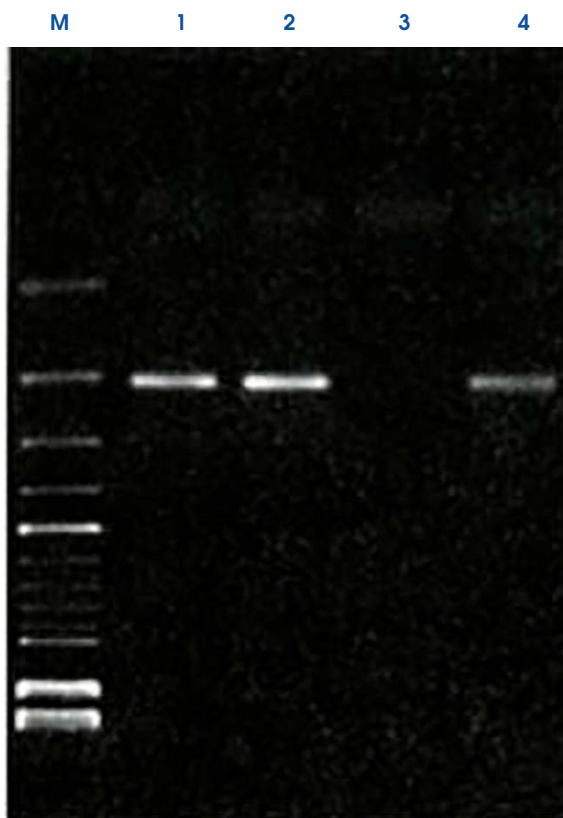
CHARACTERISTICS

Features:

- Stabilizes RNA in a cDNA synthesis or a RNA synthesis reaction
- Does not inhibit SP6, T7 or T3 RNA Polymerase, AMV or M-MLV Reverse Transcriptase, or DNA Polymerase
- Exhibits broad-spectrum RNase inhibitory properties
- Active over a broad pH range (pH 5–8)

Inhibition effect of RNase inhibitor on RT-PCR:

Reverse transcription was performed with a random primer using total RNA from HeLa cells as a template with or without RNase inhibitor and RNase A. The results of amplification of human IL-8 genes from the cDNA suggest that the addition of RNase inhibitor to the reverse transcription step effectively and efficiently protects mRNA.



M: 100 bp DNA Ladder

1: RNase -, RNase inhibitor -

2: RNase -, RNase inhibitor +

3: RNase +, RNase inhibitor -

4: RNase +, RNase inhibitor +

THE AMERICAS

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