

Product Description

RNase Inhibitor GMP-grade is a recombinant RNase inhibitor produced through recombinant expression and multi-step purification. It inhibits RNase A, RNase B, and RNase C activity through high-affinity non-covalent 1:1 binding, while having no effect on RNase H or S1 Nuclease activity. This product does not inhibit phage RNA polymerases (SP6, T7, or T3), Taq DNA polymerase, AMV reverse transcriptase, or M-MLV reverse transcriptase. RNase Inhibitor GMP-grade exhibits enhanced oxidative stability and maintains activity under low DTT conditions, making it suitable for excluding RNase contamination in mRNA in vitro transcription and related applications.

Components

Components	Cat. No.	Quantity	Volume
RNase Inhibitor GMP-grade (40 U/μL)	GMP-BP-E02-4K	4 KU	100 μL
	GMP-BP-E02-40K	40 KU	1 mL
	GMP-BP-E02-400K	400 KU	10 mL

Storage

Store at $-20\pm 5^{\circ}\text{C}$. Mix thoroughly before use. Avoid repeated freeze-thaw cycles..

Activity Unit Definition

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

Quality control

1. Solution appearance: clear and transparent, free of visible particulate matter.
2. Activity >40 U/μL.
3. Protein purity ≥95%.
4. Free of exogenous DNase, RNase, exonuclease, and endonuclease activity.
5. Residual host-cell DNA: ≤100 pg/mg.
6. Residual host-cell protein: <50 ppm.
7. Heavy metals <10 ppm.
8. HBV, HCV, HIV, and mycoplasma: not detected.
9. Bacterial endotoxin: <5 EU/mL.
10. pH 7.5-8.5.

Application

1. In vitro transcription.
2. mRNA storage and transport.
3. mRNA isolation and purification.
4. Reverse transcription and qPCR.
5. Applications requiring intact RNA.