Product Manual

Product Name	RNase Inhibitor (GMP grade)
Source	Recombinant expression in Escherichia coli
Catalog Number	CSB-DEM080
Physical Form	Liquid
Enzyme activity	40U/μL
Storage Conditions	-20±5°C
Molecular Weight	50 kDa
Storage Buffer	20 mM HEPES-KOH, 50 mM KCl, 8 mM DTT, 50% Glycerol, pH 7.6
Activity definition	One unit (U) is defined as the amount of enzyme that inhibits 50% of the activity of 5 ng RNase A.
Quality Control	Free from endonucleases, exonucleases, and RNase contamination
Shelf Life	24 months

Product Description

RNase Inhibitor can efficiently and non-covalently inhibit the activity of RNase A, B, and C in a 1:1 ratio, with a binding constant greater than 10^14. This product does not inhibit RNase 1, RNase T1, S1 nuclease, RNase H, or RNase derived from Aspergillus species. Additionally, when used in conjunction with the following polymerases, Mammalian RNase Inhibitor does not inhibit their activity: Taq DNA polymerase, AMV or M-MuLV reverse transcriptase, bacteriophage RNA polymerases (SP6, T7, or T3), etc.

Product Components

Label	Components	Specifications		
1	RNase Inhibitor	4000 U	20000U	40000 U

Operating instructions

1. Used in cDNA first-strand synthesis, RT-PCR, and RT-qPCR systems.
2. Protects RNA during in vitro transcription/translation.
3. Inhibits RNase activity during RNA isolation and purification processes.
4. Maintains its RNase inhibitory activity within the pH range of 5-8, with maximum inhibition at pH 7-8.
5. RNase Inhibitor should be used at temperatures below 50°C.

Notes:

1. The recommended concentration of RNase Inhibitor in the reaction system is 1 U/μL. RNase Inhibitor should be added before other components that may be potential sources of RNase contamination (such as enzymes or trace plasmids).
2. RNase Inhibitor is inactivated under denaturing conditions, while RNase remains active. Therefore, it is important to avoid denaturing inhibitors that are not non-covalently bound to RNase. To prevent the release of RNase after inhibitor denaturation, avoid temperatures above 50°C or the use of high concentrations of urea or other denaturing agents.