

RNase Inhibitor

1 Contents

Components	HY-K1033-2000 U	HY-K1033-10 KU
RNase Inhibitor (40 U/μL)	2000 U	10 KU

2 Introduction

MCE RNase Inhibitor is a 50 kDa recombinant protein of murine origin expressed in *E.coli*. The inhibitor specifically inhibits RNase A, B and C by binding noncovalently in a 1:1 ratio with high affinity. It is not effective against RNase 1, RNase T1, S1 Nuclease, RNase H or RNase from *Aspergillus*. In addition, no inhibition of polymerase activity is observed when RNase Inhibitor is used with Taq DNA Polymerase, AMV or M-MLV Reverse Transcriptases, or Phage RNA Polymerases (SP6, T7, or T3).

RNase Inhibitor does not contain the pair of cysteines identified in the human version that is very sensitive to oxidation, so this product has significantly improved resistance to oxidation compared to the human/porcine RNase inhibitors, and is stable at low DTT concentrations (less than 1 mM).

Application Features:

- 1). cDNA synthesis
- 2). RT-PCR
- 3). In vitro transcription/translation
- 4). Enzymatic RNA labeling reaction
- 5). Other applications where the integrity of RNA is important

3 Unit Definition

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

4 Quality Control

Projects	Methods	Results
Protein purity detection	SDS-PAGE	> 99%
Endonuclease residue detection	Add the inhibitor to superhelical plasmid DNA and incubate at 37°C for 4 hours.	There is no change of plasmid detected by electrophoresis.
Exonuclease residue detection	Add the inhibitor to double-stranded DNA and incubate at 37°C for 16 hours.	There is no change of DNA detected by electrophoresis.
RNase residue detection	Add the inhibitor to RNA and incubate at 37°C for 4 hours.	There is no change of RNA detected by electrophoresis.

5 Storage

Store at -20°C for 2 years

6 Precautions

1. This product is for R&D use only, not for drug, household, or other uses.
2. For your safety and health, please wear a lab coat and disposable gloves to operate.