Best Way for Immunology

RNase Inhibitor, Murine

REF: YS0023

Storage Condition

-20℃

Components

Component	Amount
RNase Inhibitor, Murine (40 U/μl)	250 μl

Description

RNase Inhibitor, Murine is a 50 kDa recombinant protein of murine origin. The inhibitor specifically inhibits RNases A, B and C. It inhibits RNases 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).

Recombinant murine RNase inhibitor does not contain the pair of cysteines identified in the human version that is very sensitive to oxidation, which causes inactivation of the inhibitor . As a result, RNase Inhibitor, Murine has significantly improved resistance to oxidation compared to the human/porcine RNase inhibitors, and is stable at low DTT concentrations (less than 1 mM). This makes it ideal for reactions where high concentration DTT is adverse to the reaction (eg. Real-time RT-PCR).

Applications:

1. Inhibition of common eukaryotic RNases.
2. cDNA synthesis and RT-PCR.
3. In vitro transcription and translation.
4. Enzyme-catalyzed RNA labeling reactions.
5. Other applications where the integrity of RNA is important.

Definition of Activity Unit

One unit is defined as the amount of Murine 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.

Quality Control Assays

Protein Purity

The enzyme is ≥95% pure as determined by SDS-PAGE analysis using Coomassie Blue staining.

Endonuclease Activity

A 20 μl reaction containing 1 μg of supercoiled plasmid and 40 U of RNase Inhibitor, Murine incubated for 4 hours at 37℃ results in <10% conversion to the nicked or linearized form as determined by agarose gel electrophoresis.

Non-specific Nuclease Activity

A 20 μl reaction containing 15 ng of double-stranded DNA fragments and 40 U of RNase Inhibitor, Murine incubated for 16 h at 37℃ , and no degradation was detected by agarose gel electrophoresis.

RNase Activity

A 10 μl reaction containing 500 ng of total RNA and 40 U of RNase Inhibitor, Murine incubated for 1 hours at 37℃ results in >90% of the substrate RNA remains intact as determined by agarose gel electrophoresis.

Immunoway Technology Inc.
2200 Ringwood Ave, San Jose, CA 95131
T: 877-594-3616 (Toll Free) or 408-747-0185 | F: 408-747-0145
order@immunoway.com tech@immunoway.com