

Bioactive

# RNase Inhibitor

Catalog # U0441      Size 10 mL

## Specification

**Product Description** Murine RNase inhibitor binds to RNase A, B or C in a 1:1 ratio through non-covalent bonding, thereby inhibiting the activity of the enzymes and protecting RNA from degradation.

**Host** Escherichia coli

**Preparation Method** *Escherichia coli* expression system

**Endotoxin Level** ≤ 10 EU/mg

**Activity** The amount of murine RNase inhibitor required to inhibit the activity of 5 ng of ribonuclease A by 50% was defined as one unit (U)

**Quality Control Testing** Exonuclease Activity: 40 U of murine RNaseinhibitor with 1 ug Lambda-Hind III digest DNA at 37°C for 16 hours yields no degradation as determined by agarose gel electrophoresis.  
Endonuclease Activity: 40 U of murine RNase inhibitor with 1 ug Lambda DNA at 37°C for 16 hours yields no degradation as determined by agarose gel electrophoresis.  
Nicking Activity: 40 U of murine RNase inhibitor with 1 ug pBR322 at 37°C for 16 hours yields no degradation as determined by agarose gel el

**Storage Buffer** In 50 mM KCl, 20 mM HEPES-KOH, pH 7.6 (8 mM DTT and 50% glycerol)

**Storage Instruction** Store at -20°C.

**Note** It is not effective against RNase 1, RNase T1, S1 Nuclease, RNase H or RNase from Aspergillus. Compared to human RNase inhibitors, murine RNase inhibitor does not contain two cysteines that are highly sensitive to oxidation which causes inactivation of the inhibitor. That making it stable at low concentrations of DTT (less than 1 mM).

The optimum temperature range of this the inhibitor was 25-55°C, and It was inactivated at 65°C and above.

The activities of RNase H, RNase 1 and RNase T1 were not inhibited by murine RNase\_x005F\_x005F\_x005F\_x000D\_\_x005F\_x000D\_\_inhibitor.

The inhibition of RNase activity was found in a wide range of pH (pH 5-9 were all active), and the highest activity was observed at pH 7-8.

## Applications

- Functional Study
- In vitro Transcription