RNase inhibitor

Cat. no. TTG-RI01
Storage: -20℃
Product Size: 20000 U
Concentration: 40,000 U/mL

Description

RNAse Inhibitor is a 50 kDa protein that specifically inhibits RNase A, RNase B, and RNase C. It inhibits RNases with high affinity by binding noncovalently in a 1:1 ratio. It is not effective against RNase 1, RNase T1, S1 Nuclease, RNase H, or RNase from Aspergillus. Furthermore, no inhibition of polymerase activity is observed when RNase Inhibitor is used with Taq DNA Polymerase, AMV or M-MuLV Reverse Transcriptases, or Phage RNA Polymerases (SP6, T7, or T3). This product does not have exonucleases, nuclease, or other RNase contaminations. Moreover, no residual host genomic DNA has been detected by PCR in this inhibitor.

Source of Protein

The source of protein is a recombinant *E. coli* strain carrying the porcine RNAse Inhibitor gene.

Composition

The inhibitor is composed of 20 mM Hepes-KOH, 50 mM KCl, 8 mM DTT, and 50% glycerol (pH, 7.6; temperature, 25°C).

Unit Definition

One unit is defined as the amount of RNase Inhibitor required to inhibit, by 50%, the hydrolysis of cytidine 2′,3′-cyclic monophosphate by 5 RNAse A.

Protocol

The recommended final concentration of RNase Inhibitor in a reaction is 1 U/μL. RNase Inhibitor is suitable for *in vitro* transcription, cDNA synthesis, *in vitro* translation, isolation of the mRNA-protein complex, and RNA amplification. Because ribonucleases typically retain activity under denaturing conditions, care must be taken to avoid denaturing RNase Inhibitor molecules that have been complexed with a ribonuclease. To prevent the release of active ribonuclease, temperatures higher than 50°C and high concentrations of urea or other denaturing agents should be avoided.