RNase Inhibitor, Mammalian

RK21401

Product Components

Components	Catalog	Size-1 2,000 U	Size-2 10,000 U
RNase Inhibitor, Mammalian(40,000 U/mL)	RM21401	50 μL	250 μL

Product Description

RNase Inhibitor, Mammalian has a molecular weight of 50 kD and can efficiently non-covalently bind to RNase A, B, and C in a 1:1 ratio, effectively inhibiting the activity of these enzymes, with a binding constant greater than 10^14. This product does not inhibit the activity of RNase 1, RNase T1, S1 nuclease, RNase H, or RNases derived from the Aspergillus genus. Furthermore, RNase Inhibitor, Mammalian does not inhibit the activity of the following polymerases when used in conjunction: Taq DNA polymerase, AMV or M-MuLV reverse transcriptase, and bacteriophage RNA polymerases (such as SP6, T7, or T3).

Product Source

An *E. coli* strain that carries the Ribonuclease Inhibitor gene from Porcine.

Unit Definition

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

Storage Buffer

20 mM HEPES-KOH，50 mM KCl，8 mM DTT，50%Glycerol，pH 7.6 @ 25℃

Storage Temperature

-20℃

Instructions

Methods to Avoid RNase Contamination Using RNase Inhibitor, Mammalian:

Add the inhibitor to achieve a final concentration of 1 U/μL in the reaction. During the preparation of the reaction system, the RNase inhibitor should be added before other components that may be sources of RNase contamination (such as enzymes and trace plasmids).

Note 1: RNase Inhibitor is a 50 kD protein that becomes inactive under denaturing conditions.

Note 2: RNase Inhibitor should be used at temperatures below 50℃.

Notes

- RNase Inhibitor becomes inactive under denaturing conditions, while RNases remain active under such conditions. Therefore, it is essential to avoid denaturing the inhibitor that non-covalently binds to RNase. To prevent the release of RNase due to the inactivation of the inhibitor from denaturation, temperatures above 50℃ or the use of high concentrations of urea or other denaturants should be avoided.
- The recommended concentration of RNase inhibitor in the reaction system is 1 U/μL. The RNase inhibitor should be added before other components that may be sources of RNase contamination (such as enzymes and trace plasmids).