Murine RNase Inhibitor (Glycerol-free)

RL301

Version 23.1

Product Description

Murine RNase Inhibitor (Glycerol-free) is a lyophilizable version of Murine RNase Inhibitor (Vazyme #R301) with excellent thermal stability and storage stability in the glycerol-free state. Compared to the Human RNase Inhibitor, the Murine RNase Inhibitor does not contain oxidation-sensitive cysteines. The superior antioxidant activity makes Murine RNase Inhibitor (Glycerol-free) suitable for experiments (e.g. qPCR assays) that are sensitive to reducing agents. This product does not contain excipients, please add your own as needed.

Components

Components	RL301-01 (2,000 U)	RL301-02 (10,000 U)	RL301-03 (20,000 U)
Murine RNase Inhibitor (Glycerol-free) (40 U/μl)	50 μl	250 μl	500 μl

Storage

Store at -30 ~ -15°C and transport at ≤0°C.

Applications

◇ It is applicable for any experiment where RNase interference may exist to avoid RNA degradation, such as:

1. First-strand cDNA synthesis (RT-PCR and RT-qPCR systems).
2. Protection of RNA in *in vitro* transcription/translation (e.g. virus *in vitro* replication system).
3. RNase protection assays.

◇ It does not interfere with other commonly used enzymes in RNA preparation or analytical applications.

Source

A recombinant *E. coli* strain carrying modified RNase Inhibitor gene cloned from mice.

Unit Definition

1. One unit (U) is defined as the enzyme needed for inhibiting 50% activity of 5 ng RNase A.
2. The activity of RNase A is detected by quantifying the inhibition of hydrolysis from Cyclic 2', 3'-CMP to 3'-CMP.

Notes

For research use only. Not for use in diagnostic procedures.

1. Active temperature is 25 ~ 55°C, inactivated at 65°C and above.
2. The pH range of inhibiting RNase activity is 5.0 - 9.0, and 7.0 - 8.0 performs best.
3. Foaming or Vortex can cause inactivation.
4. It does not inhibit RNase H activity or RNase T1 activity.

Experiment Process

Take Reverse Transcription as the example

1. Mix the following components in an RNase-free centrifuge tube:

Components	Volume
RNase-free ddH_2O	to 20 μl
5 × HiScript II Buffer	4 μl
Oligo $(dT)_{23}VN$ (50 μM)	1 μl
dNTP Mix (10 mM each)	1 μl
Murine RNase Inhibitor (Glycerol-free) (40 U/μl)	1 μl
HiScript II Reverse Transcriptase (Glycerol-free) (200 U/μl)	1 μl
Template RNA	10 pg - 2.5 μg

2. Mix gently.

3. 50°C 45 min, 85°C 2 min.

4. Store the obtained product at -20°C.