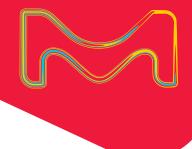
Lab & Production Materials



Murine RNase Inhibitor

Product Number: RNAINH

Product Description

Murine RNase Inhibitor is mouse-source recombinant protein expressed in *E.coli*. It can inhibit the activity of RNase A, B or C in a non-competitive way, protecting RNA from degradation. Murine RNase Inhibitor is a thermo-stable RNase inhibitor. It still has enzyme activity when using thermo-stable reverse transcriptase. It is compatible with various commercialized reverse transcriptase and DNA polymerase. Compared with human-source RNase inhibitor, mouse-source RNase inhibitor doesn't contain 2 oxidation-sensitive Cys. And therefore, it has a higher antioxidant activity and is more suitable for high-DTT-sensitive experiments (i.e. qPCR).

Components

Components	RNAINH-MC2	RNAINH-MC10
Murine RNase Inhibitor		
(40 U/μI)	50 µl	50 µl

Storage

Store at $-30 \sim -15^{\circ}$ C and transport at $\leq 0^{\circ}$ C

Application

It can be used to protect RNA from degradation.

- 1st strand cDNA synthesis in RT-PCR, PCR and qPCR.
- 2. In vitro reverse transcription/translation.
- 3. RNA isolation and purification.
- 4. RNase protection assay.

This product won't interfere with other enzymes during application.

Source

It is purified from E.coli.

Unit Definition

One unit (U) is defined as the enzyme needed for inhibiting 50% activity of 5 ng RNase A.

The activity of RNase A is detected by quantifying the hydrolysis of Cyclic 2', 3'-CMP to 3'-CMP.

Notes

- The reaction temperature is 25 ~ 55°C. The RNase Inhibitor will be inactivated at temperature ≥65°C.
- Murine RNase Inhibitor can inhibit RNase activity under a broad spectrum of pH (pH 5.0 - 9.0). The highest inhibitory activity is obtained at pH 7.0 -8.0.
- 3. It can be inactivated by bubbling or stirring intensely (i.e. Vortexing).
- 4. No inhibitory activity for RNase H and RNase T1.

Experiment Process

 Mix the following components in a RNase-free centrifuge tube and mix gently:

RNase-free ddH ₂ O	to 20 µl
5 × HiScript Buffer	1 μΙ
Oligo (dT) ₁₈ (50 μM)	1 μΙ
dNTP Mix (10 mM each)	1 µl
Murine RNase Inhibitor (40 U/µl)	1 μΙ
HiScript ReverseTranscriptase (200 U/µI)	2 μΙ
Template RNA	10 pg - 2.5 μg

- Incubate at 50°C for 45 min, then at 70°C for 15 min.
- 3. The products can be stored at -20°C.

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