Murine RNase Inhibitor(GMP grade)

Specifications

Application: RT-PCR, In vitro transcription(IVT), cDNA synthesis

Concentration: 40U/μl

Unit Definition: One unit is defined as the amount of Murine RNase Inhibitor 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.

Express System: *E.coli*

Quality Statement: Manufactured to the GMP guidelines

Antibiotic-free and animal-free production

Shipping, Reconstitution,& Storage

Form: Liquid

Shipping: Shipped with blue ice

Stability And Storage: -20°C for 12 months. Avoid repeated freeze-thaw cycles.

Product Component

SKU	Size	Component	Code	Volume
GMP-RNI-ME101-40kU	40kU	Murine RNase Inhibitor (40U/μl)	GMP-RNI-ME101-11	1ml
GMP-RNI-ME101-2.2MU	2.2MU	Murine RNase Inhibitor (40U/μl)	GMP-RNI-ME101-12	55ml

Product Introduction

RNase inhibitors are usually used to protect RNA from RNase contamination. Murine RNase inhibitor is a recombinant RNase inhibitor of murine origin expressed and purified in *E.coli*. It specifically inactivates RNases such as RNase A, RNase B and RNase C by binding covalently with RNase to form a 1:1 complex. Murine RNase Inhibitor is compatible with RNA synthesis, RT-PCR and other RNA-related reactions.

Expressed in an *E.coli* strain with the *RNase inhibitor gene* from mouse.

QC Standard

Item	Acceptable Standards
Activity	≥40kU/ml
Purity	≥95%
Residual Endonuclease	Negative
Residual Exonuclease	Negative
Residual RNase	Negative
Residual Protease	Negative
Endotoxin	≤10EU/ml
Residual Host Cell DNA	≤100pg/mg
Residual Host Protein	≤50ng/mg
Bioburden	≤1CFU/10ml

See certificate of analysis for more details.

Protocol

1. Add the following components at room temperature:

Components	Volume
RNase-free Water	To 20μl
5×Transcription Buffer	4μl
T7 RNA Polymerase	2μl
CTP/GTP/ATP/UTP(100 mM)	2μl each
Murine RNase Inhibitor	1μl
DTT(optional)	X
Pyrophosphatase, Inorganic(optional)	0.2-0.4μl
DNA Template	0.2-1μg

2. Incubate at 37°C for 1-2h.
3. After transcription, add 2U of DNaseI to digest DNA template for 15min at 37°C.

Cautions

1. The effective activity of the product ranges from pH 5-9, and the maximum activity occurs at pH 7 to 8.
2. High temperature(>65°C)，severe denaturing conditions, foaming or vortices may cause loss of activity.
3. Avoid repeated freezing and thawing.