



RNase Inhibitor, GMP Grade

Product Number: GMP-RI01

Animal-free

Ampicillin-free

Shipping and Storage

At -20±5°C.

Description

RNase Inhibitor inhibits RNase A, B and C with high efficiency by forming a 1:1 complex with them. The characteristics of RNase Inhibitor are similar to those derived from pig liver and human placenta. The inhibition is reversible, as the complex can be dissociated by urea and sulfhydryl reagents in which RNase refolds and the inhibitor is inactivated. It can be directly added to the reaction containing RNA. Different from other competitive inhibitors (e.g., nucleic acids, inorganic phosphoric acids), this product is a protein, which can be easily removed from the reaction by phenol extraction. However, the reverse transcriptase RNase H could not be inhibited.

Recombinant RNase Inhibitor is GMP Grade produced in E. coli. Our manufacturing processes are strictly controlled to ensure the end products free from host protein or nucleic acid contaminations and other impurities following the Pharmaceutical Manufacturing Guidelines. We guarantee the manufacturing and quality control comply with GMP regulation for tracking each and every step of the manufacturing process, including raw material sourcing.

This product has completed the DMF record of FDA and passed the HALAL certification.

Quality Elements

Element	Standard
Appearance	Clear and transparent solution
Identification	Positive
Visible Particles	Meet the specification
pH	7.0-8.0
Activity	39KU/ml-41KU/ml
Purity	≥95%
Endonuclease Residues	The degradation of substrate was ≤10%
Exonuclease Residues	The degradation of substrate was ≤10%
RNase Residues	The degradation of substrate was ≤10%
Bacterial Endotoxins	<5EU/ml
Exogenous DNA Residues	≤100pg/mg
Host-cell Protein Residues	≤50ppm
Mycoplasma	Negative
Heavy Metal Residues	≤10ppm

Annotation: ChP refers to the Pharmacopoeia of the People's Republic of China.

Complying to following regulations

1. ISO 9001:2015, certified facility.
2. GMP Appendix – Cellular therapeutic product National Medical Products Administration.
3. The Pandect of Genetic Therapeutic Product for Human Chinese Pharmacopoeia Commission.
4. USP Chapter <1043>, Ancillary Materials for Cell, Gene, and Tissue-Engineered Products.
5. USP Chapter <92>, Growth Factors and Cytokines Used in Cell Therapy Manufacturing.
6. Ph. Eur. General Chapter 5.2.12, Raw Materials of Biological Origin for the Production of Cell-based and Gene Therapy Medicinal Products.



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Application

1. Synthesis of cDNA
2. In-vitro translation.
3. Separation of polyribosomes
4. In-vitro transcription

Unit definition

One unit is defined as the amount of 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.

Storage buffer

50mM Tris Base; 300mM NaCl; 8mM DTT; 100mM Trehalose Dihydrate; 0.01% (v/v) Triton X-100; 0.01% (v/v) Tween 20; 50% (v/v) Glycerol; pH 7.5.

Inactivation

Temperature higher than 65°C; or intense condition for inactivation.

Package

Components	Volume
RNase Inhibitor, GMP Grade (40U/μl)	75μl
RNase Inhibitor, GMP Grade (40U/μl)	1ml
RNase Inhibitor, GMP Grade (40U/μl)	10ml
RNase Inhibitor, GMP Grade (40U/μl)	50ml

Note

RNase inhibitor has a wide range of pH values (activity was found between pH5.0-9.0), with maximum activity at pH7.0-8.0, isoelectric point at 4.7.

Related Products

Product Number	Product Name
GMP-M062	Vaccinia Capping Enzyme, GMP Grade
GMP-T701	T7 RNA Polymerase, GMP Grade
GMP-M072	mRNA Cap 2'-O-Methyltransferase, GMP Grade
GMP-RI01	RNase Inhibitor, GMP Grade
GMP-M012	Poly(A) Polymerase, GMP Grade
GMP-M036	Pyrophosphatase, Inorganic (yeast), GMP Grade (ppase)
GMP-E131	T7 High Yield RNA Transcription kit, GMP Grade
D1331	dATP 100mM solution
D2331	dGTP 100mM solution
D3331	dCTP 100mM solution
D4331	dTTP 100mM solution
N5331	N1-Me-Pseudo UTP, 100mM Solution