



10×Capping Reaction Buffer, GMP Grade

Cat. No.: GMP-EB62 **animal-free, ampicillin-free**

01/ Product Description

10×Capping Reaction Buffer, GMP Grade is the companion reaction buffer for the Vaccinia Capping Enzyme, GMP Grade (Cat. No.: GMP-M062) and mRNA Cap 2'-O-Methyltransferase, GMP Grade (Cat. No.: GMP-M072). The formula of 1×Capping Reaction Buffer is 50mM Tris-HCl (pH 8.0 at 25°C), 5mM KCl, 1mM DTT, 1mM MgCl₂.

10×Capping Reaction Buffer processes are strictly controlled to ensure the end products free from 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 passed the HALAL certification.

02/ Quality Criterion

Element	Standard
Appearance	Clear and transparent solution
Visible Particles	Meet the specification
pH	7.5-8.5
Endonuclease Residues	The degradation of substrate was ≤10%
Exonuclease Residues	The degradation of substrate was ≤10%
RNase Residues	The degradation of substrate was ≤10%
Non-Specific DNase Residues	The degradation of substrate was ≤10%
Bacterial Endotoxins	<1EU/ml
Mycoplasma	Negative
Heavy Metals	≤10ppm
Microbial Limit	Total aerobic microbial count ≤1cfu/10ml, total yeasts and molds count ≤1cfu/10ml

03/ Complying to Following Regulations

1. ISO 9001:2015, certified facility.
2. Good Manufacturing Practice (GMP) for Pharmaceutical Products (current version) and its appendices.
3. Chinese Pharmacopoeia – General Chapter 0232: Quality Control of Raw Materials and Excipients Used in the Production of Biological Products.
4. USP Chapter <1043>, Ancillary Materials for Cell, Gene, and Tissue-Engineered Products.
5. Ph. Eur. General Chapter 5.2.12, Raw Materials of Biological Origin for the Production of Cell-based and Gene Therapy Medicinal Products.

04/ Product Feature

Versatility: Suitable for enzymatic capping reactions for Cap0 and Cap1 RNA synthesis.

Efficiency: This system can be used for the capping reaction of RNA produced by T7 RNA Polymerase (GMP-E121, Novoprotein), so that the capping reaction is completed within one hour, the efficiency is close to 100%, and the correct direction is guaranteed.

05/ Storage Conditions

At -20°C±5°C.

06/ Product Packaging

SKU	Size	Components	Volume
GMP-EB62-01A	1ml	10×Capping Reaction Buffer, GMP Grade	1ml
GMP-EB62-M005	5ml	10×Capping Reaction Buffer, GMP Grade	5ml
GMP-EB62-M010	10ml	10×Capping Reaction Buffer, GMP Grade	10ml
GMP-EB62-M050	50ml	10×Capping Reaction Buffer, GMP Grade	50ml
GMP-EB62-M100	100ml	10×Capping Reaction Buffer, GMP Grade	100ml

07/ Reaction System (20μl)

Vaccinia Capping Enzyme (Cat. No.: GMP-M062) Reaction System:

Components	Quantity
Denatured RNA	15μl
10×Capping Reaction Buffer, GMP Grade	2μl
GTP, GMP Grade (10mM)	1μl
SAM, GMP Grade (2mM)	1μl
Vaccinia Capping Enzyme, GMP Grade (10U/μl)	1μl

mRNA Cap 2'-O Methyltransferase (Cat. No.: GMP-M072) Reaction System:

Components	Quantity
Denatured Capped RNA	16μl
10×Capping Reaction Buffer, GMP Grade	2μl
SAM, GMP Grade (4mM)	1μl
mRNA Cap 2'-O Methyltransferase, GMP Grade (50U/μl)	1μl

08/ Precautions

- Please mix upside down gently (avoid foaming) and slight centrifugation before use. For the preparation and dispensing of the reaction solution, please use a new (RNase-free) pipette tip, microtube, etc., to ensure that all reagents are free of RNase pollution.
- To ensure the efficient reaction, high-quality DNA template should be used and operated on ice.
- For your safety and health, please wear a lab coat and disposable gloves.

09/ Related Product

Cat. No.	Product Name	Cat. No.	Product Name
GMP-M062	Vaccinia Capping Enzyme, GMP Grade	GMP-E125	RNase Inhibitor, GMP Grade
GMP-M072	mRNA Cap 2'-O-Methyltransferase, GMP Grade	GMP-E127	DNase I, GMP Grade
GMP-M012	<i>E. coli</i> Poly(A) Polymerase, GMP Grade	GMP-M036	Pyrophosphatase, Inorganic (yeast), GMP Grade
GMP-E121	T7 RNA Polymerase, GMP Grade	GMP-E131	T7 RNA Transcription Enzyme Mix, GMP Grade
GMP-S023-026	NTPs, GMP Grade		