

LeadGMP® T7 RNA Polymerase

Catalog Number	LDG005R-GMP
Package	25,000 U / 200,000 U / Customized package

For full product information, images and publications, please visit [our website](#).



Overview

Description

Bacteriophage T7 RNA Polymerase is a DNA-dependent RNA polymerase with high specificity for the T7 promoter. This enzyme catalyzes the 5'→3' synthesis of RNA from DNA downstream from its promoter.

Components

Package	Items	Quantity
25,000 U	T7 RNA Polymerase (200 U/μL)	1 vial (25,000 U)
	10× RNA Polymerase reaction buffer	1 vial (1 mL)
	100 mM DTT	1 vial (1 mL)

Specifications

Expression system

Escherichia coli

Buffer

T7 RNA Polymerase is supplied in 100 mM Tris-HCl (pH 7.9), 20 mM KCl, 1 mM DTT, 1 mM EDTA, 0.1% Triton® X-100 and 50% (v/v) glycerol.

Purity

>98% as determined by SDS-PAGE analysis.

Unit Definition

One unit is defined as the amount of the enzyme incorporates 1 nmol of ATP into acid-insoluble product in 1 hour at 37°C.

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Reaction Condition

1× RNA Polymerase Reaction Buffer, supplemented with 0.5 mM each ATP, UTP, GTP, CTP, and DNA template containing the T7 RNA Polymerase promoter. Incubate at 37°C.

10× RNA Polymerase Reaction Buffer: 400 mM Tris-HCl (pH 8.0), 60 mM MgCl₂, and 20 mM spermidine.

Mycoplasma

Not detected

Endotoxin level

<0.05 EU per 1 µg of the protein by the LAL method.

Instruction**Shipping**

The product is shipped with polar packs. Upon receipt, store it immediately at -20°C or lower for long term storage.

Stability & Storage

This product is stable after storage at:

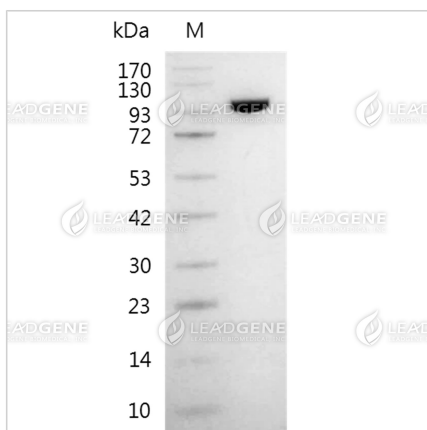
- -20°C or -80°C for 12 months under sterile conditions from date of receipt.
- For optimal storage, aliquot the enzyme, reaction buffer and DTT reagent into smaller quantities and store at recommended temperature.
- For most favorable performance, avoid repeated handling and multiple freeze/thaw cycles.

Manufacturing specifications

LeadGMP® recombinant proteins are manufactured in ISO 13485:2016 and GMP certified facility. The processes include:

- Animal-free reagent and laboratory
- Manufactured and tested under GMP guideline
- Testing and traceability of raw material
- Records of the maintenance and equipment calibration
- Personnel training records
- Batch-to-batch consistency
- Documentation of QA control and process changes
- Manufactured and tested under an ISO 13485:2016 certified quality management system
- Stability monitor of product shelf-life

Image



SDS-PAGE analysis of recombinant T7 RNA Polymerase.

Disclaimer : For Research Use or Further Manufacturing Only.

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