

T7 RNA Polymerase

(M007)

Product Description

T7 RNA Polymerase is a **DNA-dependent 5'→3' RNA polymerase** highly specific for the T7 promoter sequence, recombinantly expressed in *Escherichia coli*, with a molecular weight of **99 kDa**. Using single- or double-stranded DNA containing the T7 promoter as the template and NTPs as substrates, it synthesizes RNA complementary to the DNA template strand downstream of the promoter.

Components

Cat. No.	Product Name	Volume (M007-02)
M007-A	T7 RNA Polymerase	50 U/μL, 25 KU
M007-B	10 × Transcription Buffer	1 mL×5

Definition of Activity

One unit (U) is defined as the amount of enzyme required to catalyze the incorporation of **1 nmol AMP** into polyribonucleotides within **60 minutes at 37°C**.

Applications

1. Synthesis of mRNA, siRNA, dsRNA, gRNA, etc.
2. Synthesis of labeled or unlabeled **high-specificity RNA probes**.

Shipping and Storage

Storage: **-30 ~ -15 °C** Shipping: **≤ 0 °C**

Precautions

1. This product is **for research use only** by qualified professionals.
2. Wear disposable gloves and a mask during laboratory operations to prevent RNA products from being degraded by RNase.
3. Transcription reactions must be performed in an **RNase-free environment**.