



T7 RNA Polymerase (T7RNAP)

Catalog #MB7118S, 0.25 mL

or

Catalog #MB7118L, 1.25 mL

Product Description

Bacteriophage T7 RNA Polymerase is a DNA-dependent RNA polymerase with high specificity for T7 promoter. It catalyzes the 5'→3' synthesis of RNA downstream of the promoter from NTPs. T7 RNA Polymerase accepts regular and modified nucleotides for RNA synthesis. Products are supplied with 5X Transcription Buffer.

Product Options

Catalog #MB7118S

Cat #	Component	Quantity	Concentration	Storage
MB7118S	T7 RNA Polymerase 5,000 units	1 x 0.25 mL	20U/μL	-20°C

Catalog #MB7118L

Cat #	Component	Quantity	Concentration	Storage
MB7108L	T7 RNA Polymerase 25,000 units	1 x 1.25 mL	20U/μL	-20°C

Product Source

ScienCell's T7 RNA Polymerase with N-terminal His-tag was purified from a recombinant *E. coli* strain.

Unit Definition

One unit is defined as the amount of enzyme that will incorporate 1 nmol of ATP into acid-precipitable material in 1 hour at 37°C.

Storage Buffer

20 mM Tris-HCl, pH 8.0, 100 mM NaCl, 1 mM DTT, 0.1 mM EDTA, 0.1% Triton X-100, 50% Glycerol.

Quality Control

The purity of T7 RNA Polymerase was verified by SDS-PAGE. DNase activity was NOT detected by incubating the enzyme with single-stranded and double-stranded DNA at 37 °C for 24 hours.

Product Use

ScienCell's T7 RNA Polymerase is for research use only. It is not approved for human or animal use, or for application in clinical or in vitro diagnostic procedures.

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Shipping and Storage

The product is shipped on dry ice. Upon receipt, store at -20°C in a manual defrost freezer. Avoid repeated freeze-and-thaw cycles.

Procedure for *in vitro* Transcription

Prepare the following reaction mixture. For DNA template, use linearized plasmids or purified PCR fragments containing T7 promoter sequence. Incubate for 2 hours at 37°C.

5X Transcription Buffer	4 µL
NTP mix, 25 mM each	1 µL
RNase inhibitor	0.5 µL
Pyrophosphatase (optional)	0.5 µL
DNA template	0.5-1 µg
T7 RNA Polymerase	1 µL
RNase free water	to 20 µL

Note: NTP mix, RNase inhibitor, and Pyrophosphatase are not included in this kit. We recommend products from ScienCell (RNase inhibitor #MB9048; Pyrophosphatase #MB7108) to use in the transcription reaction.