



Limited liability company

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T7 RNA Polymerase

Cat. Number: E-1001, E-1010

Enzyme Description

Highly processive recombinant DNA-dependent RNA polymerase of bacteriophage T7 (T7 RNA polymerase, RNA polymerase of phage T7) specifically interacts with the T7 promoter and catalyzes the synthesis of RNA fragments in the 5'-3' direction on a single-stranded or double-stranded DNA template controlled by this promoter. It can incorporate labeled modified nucleotides into the RNA chain such as aminoacyl, biotin, fluorescein, and digoxigenin.

Attention! The enzyme is supplied without reaction buffer!

Applications

in vitro transcription,
mRNA synthesis,
synthesis of guide RNAs for genome editing systems,
production of labeled RNA probes,
RNA amplification,
synthesis of small interfering and antisense RNAs.

Source

The enzyme is isolated from *E. coli* strain containing a plasmid with a cloned gene of bacteriophage T7.

Unit Definition

One unit of activity corresponds to the amount of enzyme required to incorporate 1 nmol of NTP into the acid-soluble fraction in 60 min at 37°C.

Enzyme concentration and packaging: 400 U/μl.

| Cat. No. | Product Name | Quantity | Volume |
|----------|-------------------|-----------|--------|
| E-1001 | T7 RNA Polymerase | 10 000 U | 25 μl |
| E-1010 | | 100 000 U | 250 μl |

Storage Buffer

40 mM Tris-HCl (pH 7.4 at 25°C), 15 mM MgCl₂, 2 mM spermidine, 10 mM NaCl, 10 mM DTT, and 50% glycerol.

Quality Control

Each batch of the enzyme is tested for specific activity, electrophoretic purity in SDS-PAGE, and DNase activity.

Storage and transportation conditions

Store at -20°C. Transportation at temperatures not exceeding +8°C is allowed for up to one day.