T7 RNA Polymerase

[Cat. No.]
E - 3041 (2,000 Units)
E - 3042 (10,000 Units)

[Lot No.]

[Concentration]
100units/uL

● **Description :** T7 RNA Polymerase is a DNA dependent RNA polymerase with a highly specificity for the initiation of transcription at T7 RNA polymerase promoters. It is widely used for the rapid synthesis *in vitro* of specific RNAs.

● **Source :** T7 RNA Polymerase is isolated from *E. coli* cells containing the ligase gene cloned from T7 bacteriophage.

● **Applications**
► Synthesis of RNA transcripts for northern hybridization and southern hybridization probes.
► RNA generation for studies of RNA structure, procession and catalysis.

● **Supplied with Enzymes**
- 10X Reaction Buffer (1 mL) : 400 mM Tris-HCl, 60 mM $MgCl_2$, 20 mM Spermidine (pH 8.0)
- 100 mM DTT (0.5 mL)
- DEPC-DW (1 mL)

● **Storage conditions :** 20 mM Na-phosphate, 100 mM NaCl, 1 mM EDTA, 1 mM DTT, 0.02 % Triton X-100, 0.08 % Tween-20, 50 % Glycerol (pH 7.7), store at –20°C

● **Unit Definition :** One unit of enzyme catalyzed incoporation of 1 nmoles of [^{3}H]ATPs into acid insoluble form in 60min at 37 °C.

● **Quality Assurance**
Nuclease Contamination Assay :
Nuclease activity is not detected after incubation of 1 μg of substrate DNA with 500 units of T7 RNA Polymerase for 18 hr in 37℃
Protease Contamination Assay:
Protease activity is not detected after incubation of 2,000 units of T7 RNA Polymerase for 18 hr in 37 °C

● **Note :** T7 RNA Polymerase dose not recognize T3 or SP6 RNA Polymerase promoter sequences as a start site for transcription.

Note

For research use only. Not for use in diagnostic or therapeutic procedures.

● **References**

1. Milligan, J. F., et al. (1987) *Nucl. Acids. Res.* **15** : 8783
2. Melton, D., et al. (1984) *Nucl. Acids. Res.* **12** : 7035
3. Kreig, P. (1984) *Nucl. Acids. Res.* **12** : 7057