

## T7 RNA polymerase

Cat. No.:	HY-E70090
CAS No.:	9014-24-8
Target:	DNA/RNA Synthesis
Pathway:	Cell Cycle/DNA Damage
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.

## T7 RNA polymerase

### BIOLOGICAL ACTIVITY

#### Description

T7 RNA polymerase is a polymerase expressed by Escherichia coli from the RNA polymerase gene of T7 bacteriophage. T7 RNA polymerase is highly specific and involved in in vitro transcription (IVT) of mRNA. In the presence of Mg<sup>2+</sup>, T7 RNA polymerase only uses the single-stranded or double-stranded DNA containing the T7 promoter sequence as a template, and uses NTP as a substrate to synthesize RNA complementary to the single-stranded DNA downstream of the promoter<sup>[1][2]</sup>.

### REFERENCES

- [1]. Dousis A, et al. An engineered T7 RNA polymerase that produces mRNA free of immunostimulatory byproducts. Nat Biotechnol. 2023 Apr;41(4):560-568.
- [2]. Borkotoky S, et al. The highly efficient T7 RNA polymerase: A wonder macromolecule in biological realm. Int J Biol Macromol. 2018 Oct 15;118(Pt A):49-56.

**Caution: Product has not been fully validated for medical applications. For research use only.**

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA