

# Certificate of Analysis

## T7 RNA Polymerase

Product No. 18033019, 10093062

Lot No. 2777027

Date of Manufacture 10-Nov-2023

Expiration Date 09-Dec-2024

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### Refractive Index

Specification: 1.40 - 1.41

Result: Meets specifications.

### Unit

Specification: 50 units/ $\mu$ l

Result: Meets specifications.

### Purity

Specification: 2, 5, and 10  $\mu$ g of T7 RNA Polymerase are  $\geq$  95% homogeneous according to SDS-PAGE.

Result: Meets specification.

### Nicking

Specification: On 1  $\mu$ g of  $\Phi$ X174 DNA, there must be  $\leq$  20% conversion to Form II and no conversion to Form III compared to the negative control after a 3-hour incubation with 600 units of enzyme.

Result: Meets specification.

### Exonuclease

Specification: With 1 pmol of the relevant substrate the following criteria must be obtained after a 1-hour incubation:

3' ss, 3' ds, 5' ds % released:  $\leq 0.3\%$  of termini released per unit of enzyme.

Result: Meets specification.

### Ribonuclease

Specification: When 1,000 units of enzyme are incubated with 5  $\mu\text{g}$  of 0.5-10 kb RNA ladder at 37°C for 30 min, there must be no downward smearing below the 0.5-kb band as compared to the control.

Result: Meets specification.

### RNA Functional Assay

Specification: When T7 RNA Polymerase is used in a transcription reaction,  $\geq 0.3 \mu\text{g}$  of RNA must be produced.  $\geq 15\%$  of the RNA must be full-length ( $>7 \text{ kb}$ ).

Result: Meets specification.

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