

Certificate of Analysis

T7 RNA Polymerase

Product No. 18033019, 10093062

Lot No. 2863148

Date of Manufacture 26-Feb-2024

Expiration Date 27-Mar-2025

Refractive Index

Specification: 1.40 - 1.41

Result: Meets specifications.

Unit

Specification: 50 units/ μ l

Result: Meets specifications.

Purity

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

Result: Meets specification.

Nicking

Specification: On 1 μ g of Φ 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 μg 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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