

New England Biolabs Certificate of Analysis

Product Name: DNA Polymerase I (*E. coli*)
Catalog Number: M0209L
Concentration: 10,000 U/ml
Unit Definition: One unit is defined as the amount of enzyme that will incorporate 10 nmol of dNTP into acid insoluble material in 30 minutes at 37°C.
Packaging Lot Number: 10234115
Expiration Date: 11/2025
Storage Temperature: -20°C
Storage Conditions: 25 mM Tris-HCl , 1 mM DTT , 0.1 mM EDTA , 50 % Glycerol, (pH 7.4 @ 25°C)
Specification Version: PS-M0209S/L v1.0

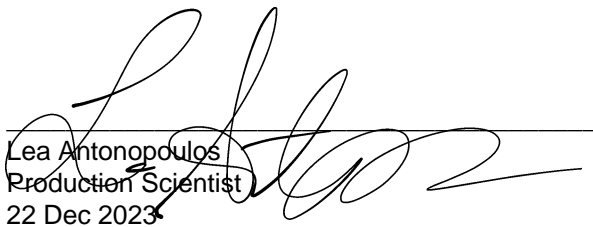
| DNA Polymerase I (<i>E. coli</i>) Component List | | | |
|--|-------------------------------------|------------|----------------------|
| NEB Part Number | Component Description | Lot Number | Individual QC Result |
| M0209LVIAL | DNA Polymerase I (<i>E. coli</i>) | 10221143 | Pass |
| B7002SVIAL | NEBuffer™ 2 | 10221172 | Pass |

| Assay Name/Specification | Lot # 10234115 |
|---|----------------|
| Endonuclease Activity (Nicking) A 50 µl reaction in NEBuffer 2 containing 1 µg of supercoiled PhiX174 DNA and a minimum of 100 units of DNA Polymerase I (<i>E. coli</i>) incubated for 4 hours at 37°C results in <10% conversion to the nicked form as determined by agarose gel electrophoresis. | Pass |
| Phosphatase Activity (pNPP) A 200 µl reaction in 1M Diethanolamine, pH 9.8, 0.5 mM MgCl ₂ containing 2.5 mM p-Nitrophenyl Phosphate (pNPP) and a minimum of 100 units DNA Polymerase I (<i>E. coli</i>) incubated for 4 hours at 37°C yields <0.0001 unit of alkaline phosphatase activity as determined by spectrophotometric analysis. | Pass |
| Protein Purity Assay (SDS-PAGE) DNA Polymerase I (<i>E. coli</i>) is ≥ 99% pure as determined by SDS-PAGE analysis using Coomassie Blue detection. | Pass |
| RNase Activity (Extended Digestion) A 10 µl reaction in NEBuffer 4 containing 40 ng of a 300 base single-stranded RNA and a minimum of 1 µl of DNA Polymerase I (<i>E. coli</i>) is incubated at 37°C. After | Pass |

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|---|--------------------|
| <p>incubation for 16 hours, >90% of the substrate RNA remains intact as determined by gel electrophoresis using fluorescent detection.</p> <p>qPCR DNA Contamination (E. coli Genomic) A minimum of 10 units of DNA Polymerase I (E. coli) is screened for the presence of E. coli genomic DNA using SYBR® Green qPCR with primers specific for the E. coli 16S rRNA locus. Results are quantified using a standard curve generated from purified E. coli genomic DNA. The measured level of E. coli genomic DNA contamination is ≤ 1 E. coli genome.</p> | <p>Pass</p> |

This product has been tested and shown to be in compliance with all specifications.

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 Lea Antonopoulos
 Production Scientist
 22 Dec 2023


 Michael Tonello
 Packaging Quality Control Inspector
 20 Mar 2024