

New England Biolabs Certificate of Analysis

Product Name: DNA Polymerase I (*E. coli*)
Catalog Number: M0209S
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: 10246034
Expiration Date: 05/2026
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
M0209SVIAL	DNA Polymerase I (<i>E. coli</i>)	10244068	Pass
B7002SVIAL	NEBuffer™ 2	10221172	Pass

Assay Name/Specification	Lot # 10246034
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

Assay Name/Specification	Lot # 10246034
<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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28 May 2024



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11 Jun 2024