

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: 10167678
Expiration Date: 10/2024
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>)	10167301	Pass
B7002SVIAL	NEBuffer™ 2	10156436	Pass

Assay Name/Specification	Lot # 10167678
<p>Phosphatase Activity (pNPP) A 200 µl reaction in 1M Diethanolamine, pH 9.8, 0.5 mM MgCl₂ 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.</p>	Pass
<p>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.</p>	Pass
<p>qPCR DNA Contamination (<i>E. coli</i> Genomic) A minimum of 10 units of DNA Polymerase I (<i>E. coli</i>) is screened for the presence of <i>E. coli</i> genomic DNA using SYBR® Green qPCR with primers specific for the <i>E. coli</i> 16S rRNA locus. Results are quantified using a standard curve generated from purified <i>E. coli</i> genomic DNA. The measured level of <i>E. coli</i> genomic DNA contamination is ≤ 1 <i>E. coli</i> genome.</p>	Pass
<p>RNase Activity (Extended Digestion) A 10 µl reaction in NEBuffer 4 containing 40 ng of a 300 base single-stranded RNA</p>	Pass

Assay Name/Specification	Lot # 10167678
<p>and a minimum of 1 µl of DNA Polymerase I (E. coli) is incubated at 37°C. After incubation for 16 hours, >90% of the substrate RNA remains intact as determined by gel electrophoresis using fluorescent detection.</p> <p>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 (E. coli) incubated for 4 hours at 37°C results in <10% conversion to the nicked form as determined by agarose gel electrophoresis.</p>	<p>Pass</p>

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

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12 Oct 2022



Michael Tonello
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01 Nov 2022