

New England Biolabs Certificate of Analysis

Product Name: DNA Polymerase I, Large (Klenow) Fragment
Catalog Number: M0210M
Concentration: 50,000 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: 10117349
Expiration Date: 06/2023
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-M0210M v1.0

DNA Polymerase I, Large (Klenow) Fragment Component List			
NEB Part Number	Component Description	Lot Number	Individual QC Result
M0210MVIAL	DNA Polymerase I, Large (Klenow) Fragment	10111982	Pass
B7002SVIAL	NEBuffer™ 2	10097265	Pass

Assay Name/Specification	Lot # 10117349
<p>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, Large (Klenow) Fragment 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>	Pass
<p>qPCR DNA Contamination (E. coli Genomic) A minimum of 50 units of DNA Polymerase I, Large (Klenow) Fragment 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>	Pass
<p>Endonuclease Activity (Nicking) A 50 µl reaction in NEBuffer 2 containing 1 µg of supercoiled PhiX174 DNA and a minimum of 50 units of DNA Polymerase I, Large (Klenow) Fragment incubated for 4 hours at 37°C results in <10% conversion to the nicked form as determined by agarose gel electrophoresis.</p>	Pass

Assay Name/Specification	Lot # 10117349
<p>Protein Purity Assay (SDS-PAGE) DNA Polymerase I, Large (Klenow) Fragment is $\geq 99\%$ pure as determined by SDS-PAGE analysis using Coomassie Blue detection.</p>	Pass
<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, Large (Klenow) Fragment incubated for 4 hours at 37°C yields <0.0001 unit of alkaline phosphatase activity as determined by spectrophotometric analysis.</p>	Pass

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

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30 Aug 2021



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30 Aug 2021