

## New England Biolabs Certificate of Analysis

**Product Name:** DNA Polymerase I, Large (Klenow) Fragment  
**Catalog Number:** M0210S  
**Concentration:** 5,000 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:** 10250254  
**Expiration Date:** 12/2025  
**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-M0210S/L v1.0

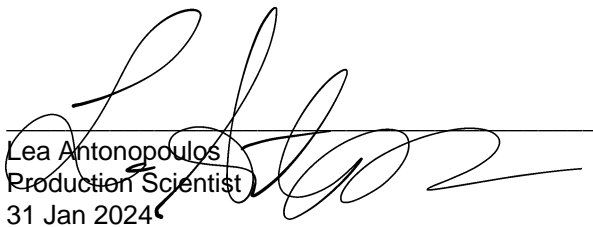
| DNA Polymerase I, Large (Klenow) Fragment Component List |   |            |                      |
|--|---|------------|----------------------|
| NEB Part Number  | Component Description                     | Lot Number | Individual QC Result |
| M0210SVIAL   | DNA Polymerase I, Large (Klenow) Fragment | 10221824   | Pass                 |
| B7002SVIAL   | NEBuffer™ 2                               | 10237091   | Pass                 |

| Assay Name/Specification   | Lot # 10250254 |
|--|----------------|
| <p><b>Endonuclease Activity (Nicking)</b><br/>           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 &lt;10% conversion to the nicked form as determined by agarose gel electrophoresis.</p>   | Pass           |
| <p><b>Phosphatase Activity (pNPP)</b><br/>           A 200 µl reaction in 1M Diethanolamine, pH 9.8, 0.5 mM MgCl<sub>2</sub> 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 &lt;0.0001 unit of alkaline phosphatase activity as determined by spectrophotometric analysis.</p> | Pass           |
| <p><b>Protein Purity Assay (SDS-PAGE)</b><br/>           DNA Polymerase I, Large (Klenow) Fragment is ≥ 99% pure as determined by SDS-PAGE analysis using Coomassie Blue detection.</p>  | Pass           |
| <p><b>RNase Activity (Extended Digestion)</b><br/>           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</p>  | Pass           |

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|--|--------------------|
| <p>37°C. After incubation for 16 hours, &gt;90% of the substrate RNA remains intact as determined by gel electrophoresis using fluorescent detection.</p> <p><b>qPCR DNA Contamination (E. coli Genomic)</b><br/>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> | <p><b>Pass</b></p> |

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

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