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New England Biolabs Certificate of Analysis

Product Name: Therminator™ DNA Polymerase

Catalog Number: M0261S Concentration: 2,000 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 75°C.

Packaging Lot Number: 10155758
Expiration Date: 05/2024
Storage Temperature: -20°C

Storage Conditions: 10 mM Tris-HCl, 100 mM KCl, 1 mM DTT, 0.1 mM EDTA, 50 %

Glycerol, (pH 7.4 @ 25°C)

Specification Version: PS-M0261S/L v2.0

| Therminator™ DNA Polymerase Component List | | | | |
|--|---------------------------------|------------|----------------------|--|
| NEB Part Number | Component Description | Lot Number | Individual QC Result | |
| M0261SVIAL | Therminator™ DNA Polymerase | 10148800 | Pass | |
| B9004SVIAL | ThermoPol® Reaction Buffer Pack | 10153016 | Pass | |

| Assay Name/Specification | Lot # 10155758 |
|---|----------------|
| Exonuclease Activity (Radioactivity Release) A 50 µl reaction in ThermoPol® Reaction Buffer containing 1 µg of a mixture of single and double-stranded [³H] E. coli DNA and a minimum of 20 units of Therminator™ DNA Polymerase incubated for 4 hours at 37°C and 75°C releases <0.1% of the total radioactivity. | Pass |
| 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 Therminator™ DNA Polymerase 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) Therminator™ DNA Polymerase is ≥ 98% 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 Therminator™ DNA Polymerase is incubated at 37°C. After | Pass |



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|--|----------------|
| incubation for 16 hours, >90% of the substrate RNA remains intact as determined by gel electrophoresis using fluorescent detection. | |
| Non-Specific DNase Activity (16 Hour) A 50 µl reaction in NEBuffer 2 containing 1 µg of T3 or T7 DNA in addition to a reaction containing Lambda-HindIII DNA and a minimum of 2 units of Therminator™ DNA Polymerase incubated for 16 hours at 37°C results in a DNA pattern free of detectable nuclease degradation as determined by agarose gel electrophoresis. | Pass |
| Endonuclease Activity (Nicking) A 50 µl reaction in ThermoPol® Reaction Buffer containing 1 µg of supercoiled PhiX174 DNA and a minimum of 20 units of Therminator™ DNA Polymerase incubated for 4 hours at 37°C results in <10% conversion to the nicked form as determined by agarose gel electrophoresis. | Pass |

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

One or more products referenced in this document may be covered by a 3rd-party trademark. Please visit www.neb.com/trademarks for additional information.

Christie Vazquez Production Scientist 23 Jun 2022

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Erin Varney

Packaging Quality Control Inspector

23 Jun 2022



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