

## New England Biolabs Certificate of Analysis

Product Name: *Phusion® High-Fidelity PCR Kit*  
 Catalog Number: *E0553L*  
 Packaging Lot Number: *10164750*  
 Expiration Date: *07/2024*  
 Storage Temperature: *-20°C*  
 Specification Version: *PS-E0553S/L v1.0*

| Phusion® High-Fidelity PCR Kit Component List |                                       |            |                      |
|---|---------------------------------------|------------|----------------------|
| NEB Part Number                               | Component Description                 | Lot Number | Individual QC Result |
| S0536AVIAL                                    | 10 kb Control Primer Mix              | 10154733   | Pass                 |
| S0535AVIAL                                    | 1.3 kb Control Primer Mix             | 10154730   | Pass                 |
| N3010AVIAL                                    | Control Lambda Template               | 10158275   | Pass                 |
| N0447AAVIAL                                   | Deoxynucleotide (dNTP) Solution Mix   | 10158267   | Pass                 |
| N0303AAVIAL                                   | Quick-Load® DNA Marker, Broad Range   | 10158264   | Pass                 |
| M0530AAVIAL                                   | Phusion® High-Fidelity DNA Polymerase | 10158245   | Pass                 |
| B0519SVIAL                                    | Phusion® GC Buffer Pack               | 10145977   | Pass                 |
| B0518SVIAL                                    | Phusion® HF Buffer Pack               | 10153014   | Pass                 |
| B0515AVIAL                                    | DMSO                                  | 10150729   | Pass                 |
| B0510AVIAL                                    | MgCl <sub>2</sub> Solution (50 mM)    | 10131968   | Pass                 |

| Assay Name/Specification  | Lot # 10164750 |
|---|----------------|
| <p><b>PCR Amplification (20 kb Lambda DNA)</b><br/>           A 50 µl reaction in Phusion® HF Buffer in the presence of 200 µM dNTPs and 1 µM primers containing 10 ng Lambda DNA with 1 unit of Phusion® DNA Polymerase for 22 cycles of PCR amplification results in the expected 20 kb product.</p>  | Pass           |
| <p><b>PCR Amplification (7.5 kb Human Genomic DNA)</b><br/>           A 50 µl reaction in Phusion® HF Buffer in the presence of 200 µM dNTPs and 1 µM primers containing 50 ng Human Genomic DNA with 1 unit of Phusion® DNA Polymerase for 30 cycles of PCR amplification results in the expected 7.5 kb product.</p>  | Pass           |
| <p><b>Endonuclease Activity (Nicking, Polymerase, dNTP)</b><br/>           A 50 µl reaction in NEBuffer 2 in the presence of 200 µM dNTPs containing 1 µg of supercoiled PhiX174 DNA and a minimum of 10 units of Phusion® DNA Polymerase incubated for 4 hours at 37°C and 72°C results in &lt;10% conversion to the nicked form as determined by agarose gel electrophoresis.</p> | Pass           |

| Assay Name/Specification  | Lot # 10164750     |
|---|--------------------|
| <p><b>* Individual Product Component Note</b><br/>Standard Quality Control Tests are performed for each component included in Phusion<sup>®</sup> High-Fidelity PCR Kit and meet the designated specifications.</p> | <p><b>Pass</b></p> |

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](http://www.neb.com/trademarks) for additional information.



Trinh Nguyen  
Production Scientist  
17 Aug 2022



Michael Tonello  
Packaging Quality Control Inspector  
21 Sep 2022