

## New England Biolabs Certificate of Analysis

Product Name: NEBNext® High-Fidelity 2X PCR Master Mix  
 Catalog Number: M0541S  
 Concentration: 2 X Concentrate  
 Lot Number: 10018356  
 Expiration Date: 10/2019  
 Storage Temperature: -20°C  
 Specification Version: PS-M0541S/L v1.0  
 Composition (1X): Proprietary

| NEBNext® High-Fidelity 2X PCR Master Mix Component List |  |            |                      |
|---|--|------------|----------------------|
| NEB Part Number   | Component Description                    | Lot Number | Individual QC Result |
| M0541SVIAL  | NEBNext® High-Fidelity 2X PCR Master Mix | 10010839   | Pass                 |

| Assay Name/Specification  | Lot # 10018356 |
|---|----------------|
| <p><b>Non-Specific DNase Activity (16 hour, Master Mix)</b><br/>           A 50 µl reaction in 1X NEBNext® High-Fidelity 2X PCR Master Mix containing 1 µg of T3 DNA in addition to a reaction containing Lambda-HindIII DNA incubated for 16 hours at 37°C results in a DNA pattern free of detectable nuclease degradation as determined by agarose gel electrophoresis.</p>            | Pass           |
| <p><b>PCR Amplification (Master Mix)</b><br/>           A 50 µl reaction containing 0.5 µM primers with 20 ng human genomic DNA and 1X NEBNext® High-Fidelity 2X PCR Master Mix for 30 cycles of PCR amplification results in the expected 737 bp product.</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 20 µl of NEBNext® High-Fidelity 2X PCR Master Mix incubated for 4 hours at 37°C yields &lt;0.00001 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.

*Melissa Arn*

Melissa Arn  
Production Scientist  
07 Jun 2018

*Michael Tonello*

Michael Tonello  
Packaging Quality Control Inspector  
07 Aug 2018