

## New England Biolabs Certificate of Analysis

**Product Name:** HindIII  
**Catalog Number:** R0104M  
**Concentration:** 100,000 U/ml  
**Unit Definition:** One unit is defined as the amount of enzyme required to digest 1 µg of Lambda DNA in 1 hour at 37°C in a total reaction volume of 50 µl.  
**Lot Number:** 10035326  
**Expiration Date:** 01/2021  
**Storage Temperature:** -20°C  
**Storage Conditions:** 300 mM NaCl, 10 mM Tris-HCl (pH 7.4), 1 mM DTT, 0.1 mM EDTA, 50% Glycerol, 500 µg/ml BSA  
**Specification Version:** PS-R0104T/M v1.0

| HindIII Component List |                              |            |                      |
|------------------------|------------------------------|------------|----------------------|
| NEB Part Number        | Component Description        | Lot Number | Individual QC Result |
| R0104MVIAL             | HindIII                      | 10035324   | Pass                 |
| B7202SVIAL             | NEBuffer™ 2.1                | 10035939   | Pass                 |
| B7024SVIAL             | Gel Loading Dye, Purple (6X) | 10021138   | Pass                 |

| Assay Name/Specification  | Lot # 10035326 |
|---|----------------|
| <b>Blue-White Screening (Terminal Integrity)</b><br>A sample of Litmus28i vector linearized with a 10-fold excess of HindIII, religated and transformed into an E. coli strain expressing the LacZ beta fragment gene results in <1% white colonies.  | Pass           |
| <b>Endonuclease Activity (Nicking)</b><br>A 50 µl reaction in NEBuffer 2.1 containing 1 µg of supercoiled PhiX174 DNA and a minimum of 60 Units of HindIII incubated for 4 hours at 37°C results in <10% conversion to the nicked form as determined by agarose gel electrophoresis.            | Pass           |
| <b>Exonuclease Activity (Radioactivity Release)</b><br>A 50 µl reaction in NEBuffer 2.1 containing 1 µg of a mixture of single and double-stranded [ <sup>3</sup> H] E. coli DNA and a minimum of 200 units of HindIII incubated for 4 hours at 37°C releases <0.1% of the total radioactivity. | Pass           |
| <b>Ligation and Recutting (Terminal Integrity)</b><br>After a 200-fold over-digestion of Lambda DNA with HindIII, >95% of the DNA fragments can be ligated with T4 DNA ligase in 16 hours at 16°C. Of these ligated   | Pass           |

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|---|----------------|
| fragments, >95% can be recut with HindIII.  |                |
| <p><b>Non-Specific DNase Activity (16 Hour)</b><br/>A 50 µl reaction in NEBuffer 2.1 containing 1 µg of Lambda DNA and a minimum of 60 Units of HindIII incubated for 16 hours at 37°C results in a DNA pattern free of detectable nuclease degradation as determined by agarose gel electrophoresis.</p> | <b>Pass</b>    |
| <p><b>Protein Purity Assay (SDS-PAGE)</b><br/>HindIII is &gt;95% pure as determined by SDS PAGE analysis using Coomassie Blue detection.</p>  | <b>Pass</b>    |

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



Tony Spear-Alfonso  
Production Scientist  
19 Dec 2018



Michael Tonello  
Packaging Quality Control Inspector  
19 Feb 2019