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.

Packaging Lot Number: 10116690
Expiration Date: 08/2023
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

<table>
<thead>
<tr>
<th>NEB Part Number</th>
<th>Component Description</th>
<th>Lot Number</th>
<th>Individual QC Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>R0104MVIAL</td>
<td>HindIII</td>
<td>10116691</td>
<td>Pass</td>
</tr>
<tr>
<td>B7024AVIAL</td>
<td>Gel Loading Dye, Purple (6X)</td>
<td>10105817</td>
<td>Pass</td>
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<tr>
<td>B6002SVIAL</td>
<td>NEBuffer™ r2.1</td>
<td>10102965</td>
<td>Pass</td>
</tr>
</tbody>
</table>

**Assay Name/Specification**

**Protein Purity Assay (SDS-PAGE)**
HindIII is >95% pure as determined by SDS PAGE analysis using Coomassie Blue detection.

**Ligation and Recutting (Terminal Integrity)**
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 fragments, >95% can be recut with HindIII.

**Non-Specific DNase Activity (16 Hour)**
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.

**Endonuclease Activity (Nicking)**
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.
<table>
<thead>
<tr>
<th>Assay Name/Specification</th>
<th>Lot # 10116690</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blue-White Screening (Terminal Integrity)</td>
<td>Pass</td>
</tr>
<tr>
<td>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 &lt;1% white colonies.</td>
<td></td>
</tr>
<tr>
<td>Exonuclease Activity (Radioactivity Release)</td>
<td>Pass</td>
</tr>
<tr>
<td>A 50 µl reaction in NEBuffer 2.1 containing 1 µg of a mixture of single and double-stranded [³H] E. coli DNA and a minimum of 200 units of HindIII incubated for 4 hours at 37°C releases &lt;0.1% of the total radioactivity.</td>
<td></td>
</tr>
</tbody>
</table>

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.

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Penghua Zhang  
Production Scientist  
10 Aug 2021

Michael Tonello  
Packaging Quality Control Inspector  
10 Aug 2021