

## 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:** 10011803  
**Expiration Date:** 06/2020  
**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	10011804	Pass
B7202SVIAL	NEBuffer™ 2.1	0251706	Pass
B7024SVIAL	Gel Loading Dye, Purple (6X)	0261805	Pass

Assay Name/Specification	Lot # 10011803
<b>Blue-White Screening (Terminal Integrity)</b> 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> 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> 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> 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

Assay Name/Specification	Lot # 10011803
fragments, >95% can be recut with HindIII.	
<p><b>Non-Specific DNase Activity (16 Hour)</b> 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> 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.



Jianying Luo  
Production Scientist  
21 Jun 2018



Michael Tonello  
Packaging Quality Control Inspector  
31 Jul 2018