

New England Biolabs Certificate of Analysis

Product Name: HindIII
Catalog Number: R0104S
Concentration: 20,000 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: 10050547
Expiration Date: 04/2021
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-R0104S/L v1.0

| HindIII Component List | | | |
|------------------------|------------------------------|------------|----------------------|
| NEB Part Number | Component Description | Lot Number | Individual QC Result |
| R0104SVIAL | HindIII | 10041741 | Pass |
| B7202SVIAL | NEBuffer™ 2.1 | 10043906 | Pass |
| B7024SVIAL | Gel Loading Dye, Purple (6X) | 10043909 | Pass |

| Assay Name/Specification | Lot # 10050547 |
|---|----------------|
| Blue-White Screening (Terminal Integrity) 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 |
| 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. | Pass |
| Exonuclease Activity (Radioactivity Release) A 50 µl reaction in NEBuffer 2.1 containing 1 µg of a mixture of single and double-stranded [³ 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 |
| Protein Purity Assay (SDS-PAGE) HindIII is >95% pure as determined by SDS PAGE analysis using Coomassie Blue detection. | Pass |

| Assay Name/Specification | Lot # 10050547 |
|---|----------------|
| <p>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.</p> | Pass |
| <p>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.</p> | Pass |

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



Jianying Luo
Production Scientist
05 Apr 2019



Jay Minichiello
Packaging Quality Control Inspector
13 Aug 2019