Product Name: HindIII
Catalog #: R0104S/L
Concentration: 20,000 units/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 #: 0711705
Assay Date: 05/2017
Expiry Date: 5/2019
Storage Temp: -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
Effective Date: 03 Dec 2014

Assay Name/Specification (minimum release criteria) | Lot #0711705
--- | ---
**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 [³H]*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**

**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. | **Pass**

**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. | **Pass**

**Protein Purity Assay (SDS-PAGE)** - HindIII is >95% pure as determined by SDS PAGE analysis using Coomassie Blue detection. | **Pass**
New England Biolabs
Certificate of Analysis

* The BSA in this product has been granted an EDQM “Certificate of Suitability” from the European Directorate for the Quality of Medicines (# R1-CEP-2003-204-Rev00) and has been granted a USDA Certificate for Export of Bovine Blood Plasma/Serum for Manufacture into Pharmaceutical Products.

Authorized by
Derek Robinson
03 Dec 2014

Inspected by
Jianying Luo
30 May 2017