

## New England Biolabs Certificate of Analysis

**Product Name:** PvuII-HF®  
**Catalog Number:** R3151S  
**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° in a total reaction volume of 50 µl.  
**Packaging Lot Number:** 10109218  
**Expiration Date:** 03/2023  
**Storage Temperature:** -20°C  
**Storage Conditions:** 200 mM NaCl, 10 mM Tris-HCl (pH 7.4), 1 mM DTT, 0.1 mM EDTA, 50% Glycerol, 200 µg/ml BSA  
**Specification Version:** PS-R3151S/L v1.0

| PvuII-HF® Component List |                              |            |                      |
|--------------------------|------------------------------|------------|----------------------|
| NEB Part Number          | Component Description        | Lot Number | Individual QC Result |
| R3151SVIAL               | PvuII-HF®                    | 10101098   | Pass                 |
| B7024AVIAL               | Gel Loading Dye, Purple (6X) | 10105817   | Pass                 |
| B6004SVIAL               | rCutSmart™ Buffer            | 10108412   | Pass                 |

| Assay Name/Specification  | Lot # 10109218 |
|---|----------------|
| <b>Endonuclease Activity (Nicking)</b><br>A 50 µl reaction in CutSmart™ Buffer containing 1 µg of supercoiled PhiX174 DNA and a minimum of 200 Units of PvuII-HF™ 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 CutSmart™ Buffer 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 PvuII-HF™ 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 10-fold over-digestion of Lambda DNA with PvuII-HF™, >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 PvuII-HF™.                                     | Pass           |
| <b>Non-Specific DNase Activity (16 Hour)</b><br>A 50 µl reaction in CutSmart™ Buffer containing 1 µg of Lambda DNA and a minimum of 100 Units of PvuII-HF™ incubated for 16 hours at 37°C results in a DNA pattern free   | Pass           |

| Assay Name/Specification   | Lot # 10109218 |
|--|----------------|
| of detectable nuclease degradation as determined by agarose gel electrophoresis. |                |

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.



Penghua Zhang  
Production Scientist  
22 Jun 2021



Michael Tonello  
Packaging Quality Control Inspector  
22 Jun 2021