

## New England Biolabs Certificate of Analysis

**Product Name:** BamHI-HF<sup>®</sup>  
**Catalog Number:** R3136M  
**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:** 10131320  
**Expiration Date:** 12/2023  
**Storage Temperature:** -20°C  
**Storage Conditions:** 50 mM KCl, 10 mM Tris-HCl (pH 7.4), 1 mM DTT, 0.1 mM EDTA, 50% Glycerol, 200 µg/ml BSA  
**Specification Version:** PS-R3136T/M v1.0

| BamHI-HF <sup>®</sup> Component List |                               |            |                      |
|--------------------------------------|-------------------------------|------------|----------------------|
| NEB Part Number                      | Component Description         | Lot Number | Individual QC Result |
| R3136MVIAl                           | BamHI-HF <sup>®</sup>         | 10131319   | Pass                 |
| B7024AVIAl                           | Gel Loading Dye, Purple (6X)  | 10126634   | Pass                 |
| B6004SVIAl                           | rCutSmart <sup>™</sup> Buffer | 10130602   | Pass                 |

| Assay Name/Specification  | Lot # 10131320 |
|---|----------------|
| <p><b>Non-Specific DNase Activity (16 Hour)</b><br/>           A 50 µl reaction in CutSmart<sup>™</sup> Buffer containing 1 µg of Lambda DNA and a minimum of 100 Units of BamHI-HF<sup>™</sup> 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><b>Ligation and Recutting (Terminal Integrity)</b><br/>           After a 50-fold over-digestion of Lambda DNA with BamHI-HF<sup>™</sup>, &gt;95% of the DNA fragments can be ligated with T4 DNA ligase in 16 hours at 16°C. Of these ligated fragments, &gt;95% can be recut with BamHI-HF<sup>™</sup>.</p>                                  | Pass           |
| <p><b>Exonuclease Activity (Radioactivity Release)</b><br/>           A 50 µl reaction in CutSmart<sup>™</sup> Buffer containing 1 µg of a mixture of single and double-stranded [<sup>3</sup>H] E. coli DNA and a minimum of 100 units of BamHI-HF<sup>™</sup> incubated for 4 hours at 37°C releases &lt;0.1% of the total radioactivity.</p>   | Pass           |
| <p><b>Endonuclease Activity (Nicking)</b><br/>           A 50 µl reaction in CutSmart<sup>™</sup> Buffer containing 1 µg of supercoiled PhiX174 DNA and a minimum of 100 Units of BamHI-HF<sup>™</sup> incubated for 4 hours at 37°C results in &lt;10%</p>   | Pass           |

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|--|--------------------|
| <p>conversion to the nicked form as determined by agarose gel electrophoresis.</p> <p><b>Blue-White Screening (Terminal Integrity)</b><br/>A sample of pUC19 vector linearized with a 10-fold excess of BamHI-HF™, religated and transformed into an E. coli strain expressing the LacZ beta fragment gene results in &lt;1% white colonies.</p> | <p><b>Pass</b></p> |

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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14 Jan 2022




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14 Jan 2022