

New England Biolabs Certificate of Analysis

Product Name: BamHI-HF[®]
Catalog Number: R3136S
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.
Packaging Lot Number: 10097972
Expiration Date: 12/2022
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-R3136S/L v1.0

| BamHI-HF [®] Component List | | | |
|--------------------------------------|------------------------------|------------|----------------------|
| NEB Part Number | Component Description | Lot Number | Individual QC Result |
| R3136SVIAL | BamHI-HF [®] | 10092873 | Pass |
| B7204SVIAL | CutSmart [®] Buffer | 10093121 | Pass |
| B7024AVIAL | Gel Loading Dye, Purple (6X) | 10091034 | Pass |

| Assay Name/Specification | Lot # 10097972 |
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| <p>Non-Specific DNase Activity (16 Hour) A 50 µl reaction in CutSmart[™] Buffer containing 1 µg of Lambda DNA and a minimum of 100 Units of BamHI-HF[™] 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>Exonuclease Activity (Radioactivity Release) A 50 µl reaction in CutSmart[™] Buffer containing 1 µg of a mixture of single and double-stranded [³H] E. coli DNA and a minimum of 100 units of BamHI-HF[™] incubated for 4 hours at 37°C releases <0.1% of the total radioactivity.</p> | Pass |
| <p>Blue-White Screening (Terminal Integrity) 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 <1% white colonies.</p> | Pass |
| <p>Endonuclease Activity (Nicking) A 50 µl reaction in CutSmart[™] Buffer containing 1 µg of supercoiled PhiX174 DNA and a minimum of 100 Units of BamHI-HF[™] incubated for 4 hours at 37°C results in <10%</p> | Pass |

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| <p>conversion to the nicked form as determined by agarose gel electrophoresis.</p> <p>Ligation and Recutting (Terminal Integrity) After a 50-fold over-digestion of Lambda DNA with BamHI-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 BamHI-HF™.</p> | <p>Pass</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 for additional information.



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Production Scientist
12 Feb 2021



Josh Hersey
Packaging Quality Control Inspector
12 Feb 2021