

New England Biolabs Certificate of Analysis

Product Name: BbsI-HF®
Catalog Number: R3539S
Concentration: 20,000 U/ml
Unit Definition: One unit is defined as the amount of enzyme required to digest 1 µg of λ DNA in 1 hour at 37°C in a total reaction volume of 50 µl.
Lot Number: 10037247
Expiration Date: 09/2020
Storage Temperature: -20°C
Storage Conditions: 300 mM NaCl, 10 mM Tris-HCl, 1 mM DTT, 0.1 mM EDTA, 50 % Glycerol, 500 µg/ml BSA, (pH 7.4 @ 25°C)
Specification Version: PS-R3539S/L v1.0

| BbsI-HF® Component List | | | |
|-------------------------|------------------------------|------------|----------------------|
| NEB Part Number | Component Description | Lot Number | Individual QC Result |
| R3539SVIAL | BbsI-HF® | 10020723 | Pass |
| B7204SVIAL | CutSmart® Buffer | 10031568 | Pass |
| B7024SVIAL | Gel Loading Dye, Purple (6X) | 10021142 | Pass |

| Assay Name/Specification | Lot # 10037247 |
|---|----------------|
| Endonuclease Activity (Nicking) A 50 µl reaction in CutSmart® Buffer containing 1 µg of supercoiled pUC19 DNA and a minimum of 60 units of BbsI-HF incubated for 4 hours at 37°C results in <20% conversion to the nicked form as determined by agarose gel electrophoresis. | Pass |
| Exonuclease Activity (Radioactivity Release) A 50 µl reaction in CutSmart® Buffer containing 1 µg of a mixture of single and double-stranded [³ H] E. coli DNA and a minimum of 100 units of BbsI-HF incubated for 4 hours at 37°C releases <0.1% of the total radioactivity. | Pass |
| Functional Testing (15 minute Digest) A 50 µl reaction in CutSmart® Buffer containing 1 µg of Lambda DNA and 1 µl of BbsI-HF incubated for 15 minutes at 37°C results in complete digestion as determined by agarose gel electrophoresis. | Pass |
| Ligation and Recutting (Terminal Integrity) After a 20-fold over-digestion of Lambda DNA with BbsI-HF, >95% of the DNA fragments can be ligated with T4 DNA ligase in 16 hours at 16°C. Of these ligated fragments, | Pass |

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|--|--------------------|
| <p>>95% can be recut with BbsI-HF.</p> <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 BbsI-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> | <p>Pass</p> |
| <p>Protein Purity Assay (SDS-PAGE) BbsI-HF is ≥ 95% pure as determined by SDS-PAGE analysis using Coomassie Blue detection.</p> | <p>Pass</p> |

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



Stephanie Cornelio
Production Scientist
19 Sep 2018



Michael Tonello
Packaging Quality Control Inspector
07 Mar 2019