

## New England Biolabs Certificate of Analysis

**Product Name:** SbfI-HF<sup>®</sup>  
**Catalog Number:** R3642S  
**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.  
**Lot Number:** 10035418  
**Expiration Date:** 12/2020  
**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-R3642S/L v1.0

| SbfI-HF <sup>®</sup> Component List |                              |            |                      |
|-------------------------------------|------------------------------|------------|----------------------|
| NEB Part Number                     | Component Description        | Lot Number | Individual QC Result |
| R3642SVIAL                          | SbfI-HF <sup>®</sup>         | 10030747   | Pass                 |
| B7204SVIAL                          | CutSmart <sup>®</sup> Buffer | 10031567   | Pass                 |
| B7024SVIAL                          | Gel Loading Dye, Purple (6X) | 10021140   | Pass                 |

| Assay Name/Specification   | Lot # 10035418 |
|--|----------------|
| <p><b>Endonuclease Activity (Nicking)</b><br/>           A 50 µl reaction in CutSmart<sup>™</sup> Buffer containing 1 µg of supercoiled pBR322 DNA and a minimum of 20 Units of SbfI-HF<sup>™</sup> incubated for 4 hours at 37°C results in &lt;20% conversion to the nicked form as determined by agarose gel electrophoresis.</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 SbfI-HF<sup>™</sup> incubated for 4 hours at 37°C releases &lt;0.1% of the total radioactivity.</p> | Pass           |
| <p><b>Ligation and Recutting (Terminal Integrity)</b><br/>           After a 10-fold over-digestion of Lambda DNA with SbfI-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 SbfI-HF<sup>™</sup>.</p>                                 | Pass           |
| <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 20 Units of SbfI-HF<sup>™</sup> incubated for 16 hours at 37°C results in a DNA pattern free of</p>  | Pass           |

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|--|--------------------|
| <p>detectable nuclease degradation as determined by agarose gel electrophoresis.</p> <p><b>Protein Purity Assay (SDS-PAGE)</b><br/>Sbfl-HF™ is &gt;95% pure as determined by SDS PAGE analysis using Coomassie Blue detection.</p> | <p><b>Pass</b></p> |

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




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Stephanie Cornelio  
Production Scientist  
04 Dec 2018




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Michael Tonello  
Packaging Quality Control Inspector  
15 Feb 2019