

New England Biolabs Certificate of Analysis

Product Name: BbsI-HF[®]
Catalog Number: R3539L
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.
Packaging Lot Number: 10093083
Expiration Date: 12/2022
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
R3539LVIAL	BbsI-HF [®]	10093079	Pass
B7204SVIAL	CutSmart [®] Buffer	10091033	Pass
B7024AVIAL	Gel Loading Dye, Purple (6X)	10089401	Pass

Assay Name/Specification	Lot # 10093083
<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 BbsI-HF incubated for 4 hours at 37°C releases <0.1% of the total radioactivity.</p>	Pass
<p>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.</p>	Pass
<p>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, >95% can be recut with BbsI-HF.</p>	Pass
<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</p>	Pass

Assay Name/Specification	Lot # 10093083
detectable nuclease degradation as determined by agarose gel electrophoresis.	
<p>Protein Purity Assay (SDS-PAGE) BbsI-HF is $\geq 95\%$ pure as determined by SDS-PAGE analysis using Coomassie Blue detection.</p>	Pass
<p>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.</p>	Pass

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

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Production Scientist
18 Dec 2020



Michael Tonello
Packaging Quality Control Inspector
18 Dec 2020