

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: 10071225
Expiration Date: 04/2022
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 [®]	10071224	Pass
B7204SVIAL	CutSmart [®] Buffer	10074630	Pass
B7024SVIAL	Gel Loading Dye, Purple (6X)	10071081	Pass

Assay Name/Specification	Lot # 10071225
Protein Purity Assay (SDS-PAGE) BbsI-HF is ≥ 95% pure as determined by SDS-PAGE analysis using Coomassie Blue detection.	Pass
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.	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, >95% can be recut with BbsI-HF.	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

Assay Name/Specification	Lot # 10071225
<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>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.



Penghua Zhang
Production Scientist
03 Jun 2020



Michael Tonello
Packaging Quality Control Inspector
03 Jun 2020