

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: 10031345
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	10021126	Pass
B7024SVIAL	Gel Loading Dye, Purple (6X)	10021131	Pass

Assay Name/Specification	Lot # 10031345
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, >95% can be recut with BbsI-HF.	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	Pass

Assay Name/Specification	Lot # 10031345
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.



Stephanie Cornelio
Production Scientist
19 Sep 2018



Michael Tonello
Packaging Quality Control Inspector
11 Dec 2018