

New England Biolabs Certificate of Analysis

Product Name: BssHII (25,000 units/ml)
Catalog Number: R0199M
Concentration: 25,000 U/ml
Unit Definition: One unit is defined as the amount of enzyme required to digest 1 µg Lambda DNA in 1 hour at 50°C in a total reaction volume of 50 µl.
Packaging Lot Number: 10075260
Expiration Date: 05/2022
Storage Temperature: -20°C
Storage Conditions: 300 mM NaCl, 10 mM Tris-HCl (pH 7.4), 1 mM DTT, 0.1 mM EDTA, 50% Glycerol, 500 µg/ml BSA
Specification Version: PS-R0199M v2.0

BssHII (25,000 units/ml) Component List			
NEB Part Number	Component Description	Lot Number	Individual QC Result
R0199MVIAL	BssHII	10075259	Pass
B7204SVIAL	CutSmart® Buffer	10075571	Pass

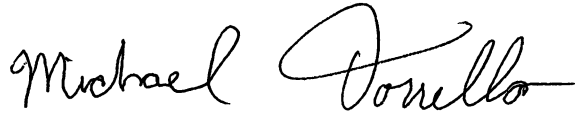
Assay Name/Specification	Lot # 10075260
Protein Purity Assay (SDS-PAGE) BssHII is ≥ 95% pure as determined by SDS-PAGE analysis using Coomassie Blue detection.	Pass
Blue-White Screening (Terminal Integrity) A sample of LITMUS28i vector linearized with a 10-fold excess of BssHII, religated and transformed into an E. coli strain expressing the LacZ beta fragment gene results in <1% white colonies.	Pass
Endonuclease Activity (Nicking) A 50 µl reaction in CutSmart™ Buffer containing 1 µg of supercoiled pBR322 DNA and a minimum of 25 units of BssHII incubated for 4 hours at 50°C results in <10% 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 50 units of BssHII incubated for 4 hours at 50°C releases <0.1% of the total radioactivity.	Pass

Assay Name/Specification	Lot # 10075260
<p>Ligation and Recutting (Terminal Integrity) After a 20-fold over-digestion of Lambda DNA with BssHII, >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 BssHII.</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 50 Units of BssHII incubated for 16 hours at 50°C results in a DNA pattern free of detectable nuclease degradation as determined by agarose gel electrophoresis.</p>	Pass
<p>Blue-White Screening (Terminal Integrity) A sample of LITMUS28i vector linearized with a 10-fold excess of BssHII, religated and transformed into an E. coli strain expressing the LacZ beta fragment gene results in <1% white colonies.</p>	Pass
<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 50 units of BssHII incubated for 4 hours at 50°C releases <0.1% of the total radioactivity.</p>	Pass
<p>Ligation and Recutting (Terminal Integrity) After a 20-fold over-digestion of Lambda DNA with BssHII, >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 BssHII.</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 50 Units of BssHII incubated for 16 hours at 50°C results in a DNA pattern free of detectable nuclease degradation 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
22 Jul 2020



Michael Tonello
Packaging Quality Control Inspector
22 Jul 2020