

New England Biolabs Certificate of Analysis

Product Name: BamHI-HF[®]
Catalog Number: R3136S
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: 10054273
Expiration Date: 06/2021
Storage Temperature: -20°C
Storage Conditions: 50 mM KCl, 10 mM Tris-HCl (pH 7.4), 1 mM DTT, 0.1 mM EDTA, 50% Glycerol, 200 µg/ml BSA
Specification Version: PS-R3136S/L v1.0

BamHI-HF [®] Component List			
NEB Part Number	Component Description	Lot Number	Individual QC Result
R3136SVIAL	BamHI-HF [®]	10047340	Pass
B7204SVIAL	CutSmart [®] Buffer	10046089	Pass
B7024SVIAL	Gel Loading Dye, Purple (6X)	10047936	Pass

Assay Name/Specification	Lot # 10054273
<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 BamHI-HF[™] incubated for 4 hours at 37°C releases <0.1% of the total radioactivity.</p>	Pass
<p>Ligation and Recutting (Terminal Integrity) After a 50-fold over-digestion of Lambda DNA with BamHI-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 BamHI-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 BamHI-HF[™] incubated for 16 hours at 37°C results in a DNA pattern free of detectable nuclease degradation as determined by agarose gel electrophoresis.</p>	Pass
<p>Endonuclease Activity (Nicking) A 50 µl reaction in CutSmart[™] Buffer containing 1 µg of supercoiled PhiX174 DNA and a minimum of 100 Units of BamHI-HF[™] incubated for 4 hours at 37°C results in <10%</p>	Pass

Assay Name/Specification	Lot # 10054273
<p>conversion to the nicked form as determined by agarose gel electrophoresis.</p> <p>Blue-White Screening (Terminal Integrity) A sample of pUC19 vector linearized with a 10-fold excess of BamHI-HF™, religated and transformed into an E. coli strain expressing the LacZ beta fragment gene results in <1% white colonies.</p>	<p>Pass</p>

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



Jianying Luo
Production Scientist
12 Jun 2019



Jay Minichiello
Packaging Quality Control Inspector
20 Sep 2019