

New England Biolabs Certificate of Analysis

Product Name: BsrGI-HF[®]
Catalog Number: R3575L
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.
Packaging Lot Number: 10110715
Expiration Date: 06/2023
Storage Temperature: -20°C
Storage Conditions: 50 mM NaCl , 10 mM Tris-HCl (pH 7.4), 1 mM DTT , 0.1 mM EDTA , 50 % Glycerol , 200 µg/ml BSA
Specification Version: PS-R3575S/L v1.0

BsrGI-HF [®] Component List			
NEB Part Number	Component Description	Lot Number	Individual QC Result
R3575LVIAL	BsrGI-HF [®]	10110714	Pass
B7024AVIAL	Gel Loading Dye, Purple (6X)	10105817	Pass
B6004SVIAL	rCutSmart [™] Buffer	10108730	Pass

Assay Name/Specification	Lot # 10110715
<p>Ligation and Recutting (Terminal Integrity) After a 10-fold over-digestion of Lambda DNA with BsrGI-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 BsrGI-HF.</p>	Pass
<p>Functional Test (15 minute Digest) A 50 µl reaction in CutSmart[™] Buffer containing 1 µg of Lambda DNA and 1 µl of BsrGI-HF incubated for 15 minutes at 37°C results in complete digestion as determined by agarose gel electrophoresis.</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 BsrGI-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>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 BsrGI-HF incubated</p>	Pass

Assay Name/Specification	Lot # 10110715
for 4 hours at 37°C releases <0.1% of the total radioactivity.	
<p>Endonuclease Activity (Nicking) A 50 µl reaction in CutSmart™ Buffer containing 1 µg of supercoiled ϕX174 DNA and a minimum of 60 units of BsrGI-HF incubated for 4 hours at 37°C results in <10% conversion to the nicked form as determined by agarose gel electrophoresis.</p>	Pass
<p>Protein Purity Assay (SDS-PAGE) BsrGI-HF is ≥ 95% pure as determined by SDS-PAGE analysis using Coomassie Blue detection.</p>	Pass

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

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Production Scientist
29 Jun 2021



Josh Hersey
Packaging Quality Control Inspector
29 Jun 2021