

New England Biolabs Certificate of Analysis

Product Name: BsrGI-HF[®]
Catalog Number: R3575S
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: 10061259
Expiration Date: 12/2021
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
R3575SVIAL	BsrGI-HF [®]	10061257	Pass
B7204SVIAL	CutSmart [®] Buffer	10061304	Pass
B7024SVIAL	Gel Loading Dye, Purple (6X)	10055732	Pass


Assay Name/Specification	Lot # 10061259
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.	Pass
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.	Pass
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.	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 BsrGI-HF incubated for 16 hours at 37°C results in a DNA pattern free	Pass

Assay Name/Specification	Lot # 10061259
of detectable nuclease degradation as determined by agarose gel electrophoresis.	
Protein Purity Assay (SDS-PAGE) BsrGI-HF is $\geq 95\%$ pure as determined by SDS-PAGE analysis using Coomassie Blue detection.	Pass
Exonuclease Activity (Radioactivity Release) A 50 μ l reaction in CutSmart [™] Buffer containing 1 μ g of a mixture of single and double-stranded [³ H] E. coli DNA and a minimum of 100 units of BsrGI-HF incubated for 4 hours at 37°C releases <0.1% of the total radioactivity.	Pass

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



Stephanie Cornelio
Production Scientist
10 Dec 2019



Jay Minichiello
Packaging Quality Control Inspector
24 Jan 2020