

New England Biolabs Certificate of Analysis

Product Name: BfuAI
Catalog Number: R0701L
Concentration: 5,000 U/ml
Unit Definition: One unit is defined as the amount of enzyme required to digest 1 µg of Lambda DNA in NEBuffer™ r3.1 in 1 hour at 50°C in a total reaction volume of 50 µl.
Packaging Lot Number: 10171232
Expiration Date: 11/2024
Storage Temperature: -20°C
Storage Conditions: 10 mM Tris-HCl, 300 mM NaCl, 1 mM DTT, 0.1 mM EDTA, 50% Glycerol, 500 µg/ml rAlbumin (pH 7.4 @ 25°C)
Specification Version: PS-R0701S/L v2.0

BfuAI Component List			
NEB Part Number	Component Description	Lot Number	Individual QC Result
R0701LVIAL	BfuAI	10171231	Pass
B6003SVIAL	NEBuffer™ r3.1	10168652	Pass

Assay Name/Specification	Lot # 10171232
Exonuclease Activity (Radioactivity Release) A 50 µl reaction in NEBuffer™ r3.1 containing 1 µg of a mixture of single and double-stranded [³ H] E. coli DNA and a minimum of 15 units of BfuAI incubated for 4 hours at 50°C releases <0.1% of the total radioactivity.	Pass
RNase Activity (Extended Digestion) A 10 µl reaction in NEBuffer 4 containing 40 ng of a 300 base single-stranded RNA and a minimum of 5 units of BfuAI is incubated at 37°C. After incubation for 4 hours, >90% of the substrate RNA remains intact as determined by gel electrophoresis using fluorescent detection.	Pass
Functional Testing (15 minute Digest) A 50 µl reaction in NEBuffer™ r3.1 containing 1 µg of Lambda DNA and 1 µl of BfuAI incubated for 15 minutes at 50°C results in complete digestion as determined by agarose gel electrophoresis.	Pass
Non-Specific DNase Activity (16 Hour) A 50 µl reaction in NEBuffer™ r3.1 containing 1 µg of Lambda DNA and a minimum of	Pass


Assay Name/Specification	Lot # 10171232
15 units of BfuAI incubated for 16 hours at 50°C results in a DNA pattern free of detectable nuclease degradation as determined by agarose gel electrophoresis.	
Protein Purity Assay (SDS-PAGE) BfuAI is ≥ 95% pure as determined by SDS-PAGE analysis using Coomassie Blue detection.	Pass
Ligation and Recutting (Terminal Integrity) After a 10-fold over-digestion of Lambda DNA with BfuAI, >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 BfuAI.	Pass

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

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YunJie Sun
Production Scientist
22 Nov 2022



Michael Tonello
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22 Nov 2022