

New England Biolabs Certificate of Analysis

Product Name: BsrF*al*
Catalog Number: R0682S
Concentration: 10,000 U/ml
Unit Definition: One unit is defined as the amount of enzyme required to digest 1 µg of pBR322 DNA in 1 hour at 37°C in a total reaction volume of 50 µl.
Lot Number: 10025009
Expiration Date: 10/2019
Storage Temperature: -20°C
Storage Conditions: 250 mM NaCl, 10 mM Tris-HCl, 1 mM DTT, 0.1 mM EDTA, 50 % Glycerol, 0.15 % TritonX-100, 200 µg/ml BSA, (pH 7.4 @ 25°C)
Specification Version: PS-R0682S/L v1.0

BsrF <i>al</i> Component List			
NEB Part Number	Component Description	Lot Number	Individual QC Result
R0682SVIAL	BsrF <i>al</i>	10024165	Pass
B7204SVIAL	CutSmart® Buffer	10018444	Pass

Assay Name/Specification	Lot # 10025009
<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 30 units of BsrF<i>al</i> incubated for 4 hours at 37°C releases <0.1% of the total radioactivity.</p>	Pass
<p>Functional Testing (15 minute Digest) A 50 µl reaction in CutSmart® Buffer containing 1 µg of pBR322 DNA and 1 µl of BsrF<i>al</i> incubated for 15 minutes at 37°C results in complete digestion as determined by agarose gel electrophoresis.</p>	Pass
<p>Ligation and Recutting (Terminal Integrity) After a 10-fold over-digestion of pBR322 DNA with BsrF<i>al</i>, >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 BsrF<i>al</i>.</p>	Pass
<p>Non-Specific DNase Activity (16 Hour) A 50 µl reaction in CutSmart® Buffer containing 1 µg of pBR322 DNA and a minimum of 10 units of BsrF<i>al</i> 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

Assay Name/Specification	Lot # 10025009
Protein Purity Assay (SDS-PAGE) BsrFal is $\geq 95\%$ pure as determined by SDS-PAGE analysis using Coomassie Blue detection.	Pass

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



Tony Spear-Alfonso
Production Scientist
17 Sep 2018



Michael Tonello
Packaging Quality Control Inspector
02 Oct 2018