NEW ENGLAND BioLabs Inc.
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240 County Road
Ipswich, MA 01938-2723
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New England Biolabs
Certificate of Analysis

Product Name:	*BsrFI-v2*
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.*
Packaging Lot Number:	*10062080*
Expiration Date:	*12/2020*
Storage Temperature:	*-20°C*
Storage Conditions:	*250 mM NaCl, 10 mM Tris-HCl, 1 mM DTT, 0.1 mM EDTA, 50 % Glycerol, 0.15 % Triton® X-100, 200 µg/ml BSA, (pH 7.4 @ 25°C)*
Specification Version:	*PS-R0682S/L v2.0*

BsrFI-v2 Component List			
NEB Part Number	**Component Description**	**Lot Number**	**Individual QC Result**
R0682SVIAL	BsrFI-v2	10062079	**Pass**
B7204SVIAL	CutSmart® Buffer	10064409	**Pass**

Assay Name/Specification	**Lot # 10062080**
Protein Purity Assay (SDS-PAGE) BsrFI-v2 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 pBR322 DNA with BsrFI-v2, >95% of the DNA fragments can be ligated with T4 DNA ligase in 16 hours at 16ºC. Of these ligated fragments, >95% can be recut with BsrFI-v2.	**Pass**
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 BsrFI-v2 incubated for 16 hours at 37ºC results in a DNA pattern free of detectable nuclease degradation as determined by agarose gel electrophoresis.	**Pass**
Functional Testing (15 minute Digest) A 50 µl reaction in CutSmart® Buffer containing 1 µg of pBR322 DNA and 1 µl of BsrFI-v2 incubated for 15 minutes at 37ºC results in complete digestion as determined by agarose gel electrophoresis.	**Pass**

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Assay Name/Specification	Lot # 10062080
Exonuclease Activity (Radioactivity Release) A 50 µl reaction in CutSmart® Buffer containing 1 µg of a mixture of single and double-stranded [^{3}H] E. coli DNA and a minimum of 30 units of BsrFI-v2 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
06 Dec 2019

Michael Tonello
Packaging Quality Control Inspector
11 Feb 2020