

New England Biolabs Certificate of Analysis

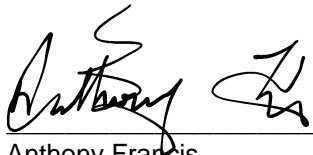
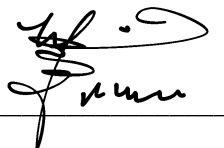
Product Name: *SfiI*
Catalog Number: R0123S
Concentration: 20,000 U/ml
Unit Definition: One unit is defined as the amount of enzyme required to digest 1 µg of pXba in 1 hour at 50°C in a total reaction volume of 50 µl.
Packaging Lot Number: 10063457
Expiration Date: 08/2021
Storage Temperature: -20°C
Storage Conditions: 250 mM NaCl, 10 mM Tris-HCl (pH 7.4), 1 mM DTT, 0.1 mM EDTA, 50% Glycerol, 0.15% Triton X-100, 200 µg/ml BSA
Specification Version: PS-R0123S/L v1.0

| SfiI Component List | | | |
|---------------------|------------------------------|------------|----------------------|
| NEB Part Number | Component Description | Lot Number | Individual QC Result |
| R0123SVIAL | SfiI | 10050032 | Pass |
| B7204SVIAL | CutSmart® Buffer | 10068803 | Pass |
| B7024SVIAL | Gel Loading Dye, Purple (6X) | 10064412 | Pass |

| Assay Name/Specification | Lot # 10063457 |
|---|----------------|
| Non-Specific DNase Activity (16 Hour) A 50 µl reaction in CutSmart™ Buffer containing 1 µg of pXba DNA and a minimum of 100 units of SfiI incubated for 16 hours at 50°C results in a DNA pattern free of detectable nuclease degradation as determined by agarose gel electrophoresis. | Pass |
| Protein Purity Assay (SDS-PAGE) SfiI is >95% pure as determined by SDS PAGE analysis using Coomassie Blue detection. | Pass |
| Endonuclease Activity (Nicking) A 50 µl reaction in CutSmart™ Buffer containing 1 µg of supercoiled PhiX174 DNA and a minimum of 100 units of SfiI incubated for 4 hours at 50°C results in <10% conversion to the nicked form as determined by agarose gel electrophoresis. | Pass |
| 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 100 units of SfiI incubated for 4 hours at 50°C releases <0.1% of the total radioactivity. | Pass |

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| <p>Ligation and Recutting (Terminal Integrity) After a 10-fold over-digestion of pXba DNA with Sfil, >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 Sfil.</p> | <p>Pass</p> |

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

Anthony Francis
Production Scientist
02 Aug 2019



Jay Minichiello
Packaging Quality Control Inspector
06 Mar 2020