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## New England Biolabs Product Specification

Product Name: SfiI

Catalog #: R0123S/L/V
Concentration: 20,000 units/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

 $50 \mu l$ .

Shelf Life: 24 months
Storage Temp: -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
Effective Date: 05/09/2013

## Assay Name/Specification (minimum release criteria)

Endonuclease Activity (Nicking) - A 50  $\mu$ l reaction in CutSmart<sup>TM</sup> Buffer containing 1  $\mu$ g 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.

Exonuclease Activity (Radioactivity Release) - A 50 μl reaction in CutSmart<sup>TM</sup> Buffer containing 1 μg of a mixture of single and double-stranded [ <sup>3</sup>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.

Ligation and Recutting (Terminal Integrity) - After a 10-fold over-digestion of pXba DNA with SfiI, >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 SfiI.

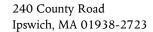
Non-Specific DNase Activity (16 Hour) - A 50 µl reaction in CutSmart™ Buffer containing 1 µg of pXba DNA and a minimum of 100 units of SfiI incubated for 16 hours at 50°C results in a DNA pattern free of detectable nuclease degradation as determined by agarose gel electrophoresis.

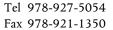
Protein Purity Assay (SDS-PAGE) - SfiI is >95% pure as determined by SDS PAGE analysis using Coomassie Blue detection.











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One or more products referenced in this document may be covered by a 3rd-party trademark. Please visit <a href="www.neb.com/trademarks">www.neb.com/trademarks</a> for additional information.

New england Biolabs

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Date 05/09/2013

Derek Robinson Quality Approver





