Product Name: SrfI
Catalog Number: R0629L
Concentration: 20,000 U/ml
Unit Definition: One unit is defined as the amount of enzyme required to digest 1 µg of pNEB193-SrfI DNA in CutSmart incubated for 1 hour at 37°C in a total reaction volume of 50 µl.
Lot Number: 10034051
Expiration Date: 07/2020
Storage Temperature: -20°C
Storage Conditions: 300 mM NaCl, 10 mM Tris-HCl, 1 mM DTT, 0.1 mM EDTA, 50% Glycerol, 500 µg/ml BSA, (pH 7.4 @ 25°C)
Specification Version: PS-R0629S/L v1.0

<table>
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<tr>
<th>NEB Part Number</th>
<th>Component Description</th>
<th>Lot Number</th>
<th>Individual QC Result</th>
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<td>B7204SVIAL</td>
<td>CutSmart® Buffer</td>
<td>10031566</td>
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### Assay Name/Specification

**Ligation and Recutting (Terminal Integrity)**

After a 20-fold over-digestion of pNEB193-SrfI DNA with SrfI, ~75% 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 SrfI.

**Non-Specific DNase Activity (16 Hour)**

A 50 µl reaction in CutSmart® Buffer containing 1 µg of pNEB193-SrfI DNA and a minimum of 20 units of SrfI incubated for 16 hours at 37°C results in a DNA pattern free of detectable nuclease degradation as determined by agarose gel electrophoresis.

**Protein Purity Assay (SDS-PAGE)**

SrfI is ≥ 95% pure as determined by SDS-PAGE analysis using Coomassie Blue detection.

**Functional Testing (15 minute Digest)**

A 50 µl reaction in CutSmart® Buffer containing 1 µg of pNEB193-SrfI DNA and 1 µl of SrfI incubated for 15 minutes at 37°C results in complete digestion as determined by
Assay Name/Specification | Lot # 10034051
---|---
agarose gel electrophoresis. | 

**Endonuclease Activity (Nicking)**

A 50 µl reaction in CutSmart® Buffer containing 1 µg of supercoiled pBR322 DNA and a minimum of 100 units of SrfI incubated for 4 hours at 37°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 [³H] E. coli DNA and a minimum of 200 units of SrfI 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  
15 Jan 2019

Michael Tonello  
Packaging Quality Control Inspector  
18 Mar 2019