

New England Biolabs Certificate of Analysis

Product Name: *SrfI*
Catalog Number: *R0629S*
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.*
Packaging Lot Number: *10226456*
Expiration Date: *05/2025*
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*

SrfI Component List			
NEB Part Number	Component Description	Lot Number	Individual QC Result
R0629SVIAL	SrfI	10213865	Pass
B6004SVIAL	rCutSmart™ Buffer	10224839	Pass

Assay Name/Specification	Lot # 10226456
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 [³ H] 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
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 agarose gel electrophoresis.	Pass
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	Pass

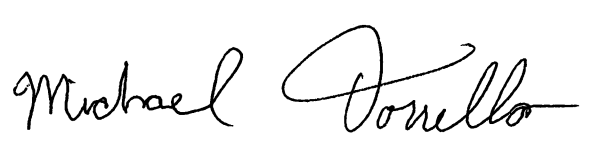
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fragments, >95% can be recut with SrfI.	
Non-Specific DNase Activity (16 Hour) A 50 µl reaction in CutSmart® Buffer containing 1 µg of pNEB193-SrfI DNA and a minimum of 20 units of SrfI incubated for 16 hours at 37°C results in a DNA pattern free of detectable nuclease degradation as determined by agarose gel electrophoresis.	Pass
Protein Purity Assay (SDS-PAGE) SrfI is ≥ 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.

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YunJie Sun
Production Scientist
27 Oct 2023



Michael Tonello
Packaging Quality Control Inspector
07 Feb 2024