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New England Biolabs Certificate of Analysis

Product Name: Srfl
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-Srfl DNA in CutSmart incubated for 1 hour at 37°C in a

total reaction volume of 50 μl.

Lot Number: 10046380
Expiration Date: 11/2020
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

Srfl Component List				
NEB Part Number	Component Description	Lot Number	Individual QC Result	
R0629SVIAL	SrfI	10046381	Pass	
B7204SVIAL	CutSmart® Buffer	10043347	Pass	

Assay Name/Specification	Lot # 10046380
Endonuclease Activity (Nicking) A 50 μl reaction in CutSmart® Buffer containing 1 μg of supercoiled pBR322 DNA and a	Pass
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.	
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 Srfl 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-Srfl DNA and 1 μl of Srfl 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-Srfl DNA with Srfl, ~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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Assay Name/Specification	Lot # 10046380
fragments, >95% can be recut with Srfl.	
Non-Specific DNase Activity (16 Hour) A 50 µl reaction in CutSmart® Buffer containing 1 µg of pNEB193-Srfl DNA and a minimum of 20 units of Srfl 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) Srfl 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.

Production Scientist 14 May 2019 Jay Minichiello

Packaging Quality Control Inspector 18 Jun 2019



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