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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: 10019617
Expiration Date: 02/2020
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	Srfl	10019618	Pass	
B7204SVIAL	CutSmart® Buffer	10015394	Pass	

Assay Name/Specification	Lot # 10019617
Endonuclease Activity (Nicking) A 50 μl reaction in CutSmart® Buffer containing 1 μg of supercoiled pBR322 DNA and a minimum of 100 units of Srfl 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 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 # 10019617
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.

Tony Spear-Alfonso Production Scientist

23 Jul 2018

Michael Tonello

Packaging Quality Control Inspector

31 Aug 2018



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