

New England Biolabs Certificate of Analysis

Product Name: SrfI
Catalog #: R0629S/L
Concentration: 20,000 units/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 #: 0011803
Assay Date: 03/2018
Expiration Date: 9/2019
Storage Temp: -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
Effective Date: 11 Nov 2015

Assay Name/Specification (minimum release criteria)	Lot #0011803
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] <i>E. coli</i> 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 fragments, >95% can be recut with SrfI.	Pass
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



Authorized by
Derek Robinson
11 Nov 2015



Inspected by
Stephanie Cornelio
28 Mar 2018

