NEW ENGLAND BioLabs Inc.
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240 County Road
Ipswich, MA 01938-2723
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New England Biolabs
Certificate of Analysis

Product Name:	*SgrAI*
Catalog Number:	*R0603S*
Concentration:	*10,000 U/ml*
Unit Definition:	*One unit is defined as the amount of enzyme required to digest 1 µg of LambdaDNA in 1 hour at 37°C in a total reaction volume of 50 µl.*
Packaging Lot Number:	*10159265*
Expiration Date:	*08/2024*
Storage Temperature:	*-20°C*
Storage Conditions:	*100 mM NaCl, 10 mM Tris-HCl (pH 7.4), 1 mM DTT, 0.1 mM EDTA, 50% Glycerol, 200 µg/ml BSA*
Specification Version:	*PS-R0603S/L v1.0*

SgrAI Component List			
NEB Part Number	**Component Description**	**Lot Number**	**Individual QC Result**
R0603SVIAL	SgrAI	10159264	**Pass**
B6004SVIAL	rCutSmart™ Buffer	10156430	**Pass**

Assay Name/Specification	**Lot # 10159265**
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 50 units of SgrAI incubated for 4 hours at 37ºC releases <0.1% of the total radioactivity.	**Pass**
Endonuclease Activity (Nicking) A 50 µl reaction in CutSmart™ Buffer containing 1 µg of supercoiled PhiX174 DNA and a minimum of 30 Units of SgrAI incubated for 4 hours at 37ºC results in <10% conversion to the nicked form as determined by agarose gel electrophoresis.	**Pass**
Non-Specific DNase Activity (16 hour) A 50 µl reaction in CutSmart™ Buffer containing 1 µg of Lambda DNA and a minimum of 10 Units of SgrAI incubated for 16 hours at 37ºC results in a DNA pattern free of detectable nuclease degradation as determined by agarose gel electrophoresis. NOTE: although no nuclease degradation is detected under these conditions, extended incubations and/or high concentrations of this enzyme may result in star activity. See the product FAQ for recommended reaction conditions for this enzyme.	**Pass**
Ligation and Recutting (Terminal Integrity)	**Pass**

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Assay Name/Specification	Lot # 10159265
After a 2-fold over-digestion of Lambda DNA with SgrAI, >95% of the DNA fragments can be ligated with T4 DNA ligase in 16 hours at 16ºC. Of these ligated fragments, >95% can be recut with SgrAI.	

This product has been tested and shown to be in compliance with all specifications.

One or more products referenced in this document may be covered by a 3rd-party trademark. Please visit www.neb.com/trademarks for additional information.

Penghua Zhang
Production Scientist
01 Sep 2022

Erin Varney
Packaging Quality Control Inspector
01 Sep 2022