

## New England Biolabs Certificate of Analysis

**Product Name:** SgrAI  
**Catalog Number:** R0603L  
**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.  
**Lot Number:** 10015521  
**Expiration Date:** 07/2020  
**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
R0603LVIAL	SgrAI	10015522	Pass
B7204SVIAL	CutSmart® Buffer	3081804	Pass

Assay Name/Specification	Lot # 10015521
<p><b>Non-Specific DNase Activity (16 hour)</b>            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 37°C 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.</p>	Pass
<p><b>Endonuclease Activity (Nicking)</b>            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 37°C results in &lt;10% conversion to the nicked form as determined by agarose gel electrophoresis.</p>	Pass
<p><b>Exonuclease Activity (Radioactivity Release)</b>            A 50 µl reaction in CutSmart™ Buffer containing 1 µg of a mixture of single and double-stranded [<sup>3</sup>H] E. coli DNA and a minimum of 50 units of SgrAI incubated for 4 hours at 37°C releases &lt;0.1% of the total radioactivity.</p>	Pass
<p><b>Ligation and Recutting (Terminal Integrity)</b></p>	Pass

Assay Name/Specification	Lot # 10015521
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 16°C. Of these ligated fragments, >95% can be recut with SgrAI.	

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



Stephanie Cornelio  
Production Scientist  
13 Jul 2018



Michael Tonello  
Packaging Quality Control Inspector  
13 Jul 2018