

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.
Packaging Lot Number: 10164032
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
R0603LVIAL	SgrAI	10159266	Pass
B6004SVIAL	rCutSmart™ Buffer	10161526	Pass

Assay Name/Specification	Lot # 10164032
<p>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 50 units of SgrAI incubated for 4 hours at 37°C releases <0.1% of the total radioactivity.</p>	Pass
<p>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 37°C results in <10% conversion to the nicked form as determined by agarose gel electrophoresis.</p>	Pass
<p>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 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>Ligation and Recutting (Terminal Integrity)</p>	Pass

Assay Name/Specification	Lot # 10164032
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.

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Penghua Zhang
Production Scientist
04 Aug 2022



Josh Hersey
Packaging Quality Control Inspector
23 Sep 2022