

## New England Biolabs Certificate of Analysis

**Product Name:** *SmlI*  
**Catalog Number:** *R0597L*  
**Concentration:** *10,000 U/ml*  
**Unit Definition:** *One unit is defined as the amount of enzyme required to digest 1 µg of Lambda DNA in 1 hour at 55°C in a total reaction volume of 50 µl.*  
**Lot Number:** *10037166*  
**Expiration Date:** *03/2021*  
**Storage Temperature:** *-20°C*  
**Storage Conditions:** *50 mM KCl, 10 mM Tris-HCl (pH 7.4), 1 mM DTT, 0.1 mM EDTA, 50% Glycerol, 400 µg/ml BSA*  
**Specification Version:** *PS-R0597S/L v1.0*

SmlI Component List			
NEB Part Number	Component Description	Lot Number	Individual QC Result
R0597LVIAL	SmlI	10037167	Pass
B7204SVIAL	CutSmart® Buffer	10036668	Pass

Assay Name/Specification	Lot # 10037166
<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 SmlI incubated for 4 hours at 55°C releases &lt;0.1% of the total radioactivity.</p>	Pass
<p><b>Ligation and Recutting (Terminal Integrity)</b>            After a 10-fold over-digestion of Lambda DNA with SmlI, ~75% of the DNA fragments can be ligated with T4 DNA ligase in 16 hours at 16°C. Of these ligated fragments, &gt;95% can be recut with SmlI.</p>	Pass
<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 30 units of SmlI incubated for 16 hours at 55°C results in a DNA pattern free of detectable nuclease degradation as determined by agarose gel electrophoresis.</p>	Pass

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



Anthony Francis  
Production Scientist  
21 Feb 2019



Michael Tonello  
Packaging Quality Control Inspector  
02 Apr 2019