

## New England Biolabs Certificate of Analysis

**Product Name:** *SmlI*  
**Catalog Number:** *R0597S*  
**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.*  
**Packaging Lot Number:** *10139028*  
**Expiration Date:** *02/2024*  
**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
R0597SVIAL	SmlI	10139027	Pass
B6004SVIAL	rCutSmart™ Buffer	10132778	Pass

Assay Name/Specification	Lot # 10139028
<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
<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

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

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16 Feb 2022



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