

## New England Biolabs Certificate of Analysis

**Product Name:** *Acil*  
**Catalog Number:** *R0551S*  
**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 37°C in a total reaction volume of 50 µl.*  
**Lot Number:** *10011442*  
**Expiration Date:** *04/2020*  
**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-R0551S/L v1.0*

Acil Component List			
NEB Part Number	Component Description	Lot Number	Individual QC Result
R0551SVIAL	Acil	0291804	Pass
B7204SVIAL	CutSmart® Buffer	3071804	Pass
B7024SVIAL	Gel Loading Dye, Purple (6X)	0231804	Pass

Assay Name/Specification	Lot # 10011442
<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 30 units of Acil incubated for 4 hours at 37°C releases <0.1% of the total radioactivity.	Pass
<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 Acil incubated for 16 hours at 37°C results in a DNA pattern free of detectable nuclease degradation as determined by agarose gel electrophoresis.	Pass
<b>Ligation and Recutting (Terminal Integrity)</b> After a 10-fold over-digestion of Lambda DNA with Acil, >95% of the DNA fragments can be ligated with T4 DNA ligase in 16 hours at 16°C. Of these ligated fragments, ~50% can be recut with Acil.	Pass

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

*Stephanie Cornelio*

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Stephanie Cornelio  
Production Scientist  
08 Jun 2018

*Michael Tonello*

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Michael Tonello  
Packaging Quality Control Inspector  
08 Jun 2018