

## New England Biolabs Certificate of Analysis

**Product Name:** Apol  
**Catalog Number:** R0566S  
**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 50°C in a total reaction volume of 50 µl.  
**Packaging Lot Number:** 10069256  
**Expiration Date:** 01/2022  
**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-R0566S/L v1.0

Apol Component List			
NEB Part Number	Component Description	Lot Number	Individual QC Result
R0566SVIAL	Apol	10064168	Pass
B7203SVIAL	NEBuffer™ 3.1	10053975	Pass

Assay Name/Specification	Lot # 10069256
<b>Protein Purity Assay (SDS-PAGE)</b> Apol is ≥ 95% pure as determined by SDS-PAGE analysis using Coomassie Blue detection.	Pass
<b>Non-Specific DNase Activity (16 Hour)</b> A 50 µl reaction in NEBuffer 3.1 containing 1 µg of lambda DNA and a minimum of 100 Units of Apol incubated for 16 hours at 50°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 20-fold over-digestion of lambda DNA with Apol, >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 Apol.	Pass
<b>Exonuclease Activity (Radioactivity Release)</b> A 50 µl reaction in NEBuffer 3.1 containing 1 µg of a mixture of single and double-stranded [ <sup>3</sup> H] E. coli DNA and a minimum of 100 units of Apol incubated for 4 hours at 50°C releases <0.1% of the total radioactivity.	Pass

Assay Name/Specification	Lot # 10069256
<p><b>Blue-White Screening (Terminal Integrity)</b> A sample of pUC19 vector linearized with a 10-fold excess of Apol, religated and transformed into an E. coli strain expressing the LacZ beta fragment gene results in &lt;1% white colonies.</p>	<p><b>Pass</b></p>

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



Penghua Zhang  
Production Scientist  
02 Apr 2020



Jay Minichiello  
Packaging Quality Control Inspector  
02 Apr 2020