

## New England Biolabs Certificate of Analysis

**Product Name:** *Lambda Protein Phosphatase*  
**Catalog Number:** *P0753L*  
**Concentration:** *400,000 U/ml*  
**Unit Definition:** *One unit is defined as the amount of enzyme that hydrolyzes 1 nmol of p-Nitrophenyl Phosphate in 1 minute at 30°C in a total reaction volume of 50 µl.*  
**Packaging Lot Number:** *10211579*  
**Expiration Date:** *09/2025*  
**Storage Temperature:** *-80°C*  
**Storage Conditions:** *100 mM NaCl , 50 mM HEPES , 2 mM DTT , 0.1 mM EGTA , 0.1 mM MnCl<sub>2</sub> , 50 % Glycerol , 0.01 % Brij 35, (pH 7.5 @ 25°C)*  
**Specification Version:** *PS-P0753S/L v1.0*

### Lambda Protein Phosphatase Component List

NEB Part Number	Component Description	Lot Number	Individual QC Result
P0753LVIAL	Lambda Protein Phosphatase	10201894	Pass
B1761SVIAL	10mM MnCl <sub>2</sub>	10167824	Pass
B0761SVIAL	NEBuffer for Protein MetalloPhosphatases (PMP)	10193048	Pass

Assay Name/Specification	Lot # 10211579
<p><b>Endonuclease Activity (Nicking)</b>            A 50 µl reaction in CutSmart® Buffer containing 1 µg of supercoiled PhiX174 DNA and a minimum of 400 units of Lambda Protein Phosphatase (Lambda PP) incubated for 4 hours at 30°C results in &lt;10% conversion to the nicked form 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 400 units of Lambda Protein Phosphatase (Lambda PP) incubated for 4 hours at 30°C releases &lt;0.1% of the total radioactivity.</p>	Pass
<p><b>Protease Activity (SDS-PAGE)</b>            A 20 µl reaction in 1X CutSmart® Buffer containing 24 µg of a standard mixture of proteins and a minimum of 2,000 units of Lambda Protein Phosphatase (Lambda PP) incubated for 20 hours at 37°C, results in no detectable degradation of the protein mixture as determined by SDS-PAGE with Coomassie Blue detection.</p>	Pass

Assay Name/Specification	Lot # 10211579
<p><b>RNase Activity (Extended Digestion)</b> A 10 µl reaction in NEBuffer 4 containing 40 ng of a 300 base single-stranded RNA and a minimum of 400 units of Lambda Protein Phosphatase (Lambda PP) is incubated at 37°C. After incubation for 16 hours, &gt;90% of the substrate RNA remains intact as determined by gel electrophoresis using fluorescent detection.</p>	<p><b>Pass</b></p>

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

One or more products referenced in this document may be covered by a 3rd-party trademark. Please visit [www.neb.com/trademarks](http://www.neb.com/trademarks) for additional information.



Alicia Bielik  
Production Scientist  
19 Sep 2023



Michael Tonello  
Packaging Quality Control Inspector  
06 Oct 2023