

## 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:** *10105461*  
**Expiration Date:** *07/2022*  
**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	10105462	Pass
B1761SVIAL	10mM MnCl <sub>2</sub>	10091462	Pass
B0761SVIAL	NEBuffer for Protein MetalloPhosphatases (PMP)	10048442	Pass

Assay Name/Specification	Lot # 10105461
<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, >90% of the substrate RNA remains intact as determined by gel electrophoresis using fluorescent detection.	Pass
<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.	Pass
<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 <10% conversion to the nicked form as determined by agarose gel electrophoresis.	Pass

Assay Name/Specification	Lot # 10105461
<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>	<p><b>Pass</b></p>

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

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