

## New England Biolabs Certificate of Analysis

**Product Name:** Alkaline Phosphatase, Calf Intestinal (CIP)  
**Catalog Number:** M0290S  
**Concentration:** 10,000 U/ml  
**Unit Definition:** One unit is defined as the amount of enzyme that hydrolyzes 1  $\mu$ mol of p-Nitrophenyl Phosphate, PNPP in a total reaction volume of 1 ml in 1 minute at 37°C  
**Lot Number:** 10016560  
**Expiration Date:** 04/2020  
**Storage Temperature:** -20°C  
**Storage Conditions:** 10 mM Tris-HCl , 50 mM KCl , 1 mM MgCl<sub>2</sub> , 0.1 mM ZnCl<sub>2</sub> , 50 % Glycerol, (pH 8.2 @ 25°C)  
**Specification Version:** PS-M0290S/L v2.0

Alkaline Phosphatase, Calf Intestinal (CIP) Component List			
NEB Part Number	Component Description	Lot Number	Individual QC Result
M0290SVIAL	Alkaline Phosphatase, Calf Intestinal (CIP)	0731804	Pass
B7204SVIAL	CutSmart® Buffer	10015395	Pass

Assay Name/Specification	Lot # 10016560
<p><b>Non-Specific DNase Activity (16 Hour)</b>            A 50 <math>\mu</math>l reaction in NEBuffer 4 containing 1 <math>\mu</math>g of PhiX174-HaeIII DNA and a minimum of 50 units of Alkaline Phosphatase, Calf Intestinal (CIP) incubated for 16 hours at 37°C results in a DNA pattern free of detectable nuclease degradation as determined by agarose gel electrophoresis.</p>	Pass
<p><b>RNase Activity (Extended Digestion)</b>            A 10 <math>\mu</math>l reaction in NEBuffer 4 containing 40 ng of a 300 base single-stranded RNA and a minimum of 1 <math>\mu</math>l of Alkaline Phosphatase, Calf Intestinal (CIP) is incubated at 37°C. After incubation for 4 hours, &gt;90% of the substrate RNA remains intact as determined by gel electrophoresis using fluorescent detection.</p>	Pass
<p><b>Exonuclease Activity (Radioactivity Release)</b>            A 50 <math>\mu</math>l reaction in CutSmart® Buffer containing 1 <math>\mu</math>g of a mixture of single and double-stranded [<sup>3</sup>H] E. coli DNA and a minimum of 50 units of Alkaline Phosphatase, Calf Intestinal (CIP) incubated for 4 hours at 37°C releases &lt;0.1% of the total radioactivity.</p>	Pass

Assay Name/Specification	Lot # 10016560
<p><b>Endonuclease Activity (Nicking)</b> A 50 µl reaction in CutSmart® Buffer containing 1 µg of supercoiled PhiX174 DNA and a minimum of 50 units of Alkaline Phosphatase, Calf Intestinal (CIP) incubated for 4 hours at 37°C results in &lt;10% conversion to the nicked form as determined by agarose gel electrophoresis.</p>	<p><b>Pass</b></p>

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



Tony Spear-Alfonso  
Production Scientist  
08 Aug 2018



Michael Tonello  
Packaging Quality Control Inspector  
07 Sep 2018