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 μmol of p-Nitrophenyl Phosphate, PNPP in a total reaction volume of 1 ml in 1 minute at 37°C
Lot Number: 10033018
Expiration Date: 12/2020
Storage Temperature: -20°C
Storage Conditions: 10 mM Tris-HCl, 50 mM KCl, 1 mM MgCl2, 0.1 mM ZnCl2, 50 % Glycerol, (pH 8.2 @ 25°C)
Specification Version: PS-M0290S/L v2.0

Alkaline Phosphatase, Calf Intestinal (CIP) Component List

<table>
<thead>
<tr>
<th>NEB Part Number</th>
<th>Component Description</th>
<th>Lot Number</th>
<th>Individual QC Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>M0290SVIAL</td>
<td>Alkaline Phosphatase, Calf Intestinal (CIP)</td>
<td>10024409</td>
<td>Pass</td>
</tr>
<tr>
<td>B7204SVIAL</td>
<td>CutSmart® Buffer</td>
<td>10021125</td>
<td>Pass</td>
</tr>
</tbody>
</table>

Assay Name/Specification

Endonuclease Activity (Nicking)
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 <10% conversion to the nicked form as determined by agarose gel electrophoresis.

Exonuclease Activity (Radioactivity Release)
A 50 μl reaction in CutSmart® Buffer containing 1 μg of a mixture of single and double-stranded [³H] E. coli DNA and a minimum of 50 units of Alkaline Phosphatase, Calf Intestinal (CIP) incubated for 4 hours at 37°C releases <0.1% of the total radioactivity.

Non-Specific DNase Activity (16 Hour)
A 50 μl reaction in NEBuffer 4 containing 1 μg 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.

Lot # 10033018
Pass

Pass

Pass
<table>
<thead>
<tr>
<th>Assay Name/Specification</th>
<th>Lot # 10033018</th>
</tr>
</thead>
<tbody>
<tr>
<td>RNase Activity (Extended Digestion)</td>
<td>Pass</td>
</tr>
<tr>
<td>A 10 µl reaction in NEBuffer 4 containing 40 ng of a 300 base single-stranded RNA and a minimum of 1 µl of Alkaline Phosphatase, Call 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.</td>
<td></td>
</tr>
</tbody>
</table>

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

Tony Spear-Alfonso  
Production Scientist  
10 Dec 2018

Michael Tonello  
Packaging Quality Control Inspector  
03 Jan 2019