

New England Biolabs Product Specification

Product Name:	<i>Alkaline Phosphatase, Calf Intestinal (CIP)</i>
Catalog #:	<i>M0290S/L</i>
Concentration:	<i>10,000 units/ml</i>
Unit Definition:	<i>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</i>
Shelf Life:	<i>24 months</i>
Storage Temp:	<i>-20°C</i>
Storage Conditions:	<i>10 mM Tris-HCl, 50 mM KCl, 1 mM MgCl₂, 0.1 mM ZnCl₂, 50 % Glycerol, (pH 8.2 @ 25°C)</i>
Specification Version:	<i>PS-M0290S/L v2.0</i>
Effective Date:	<i>11 Aug 2017</i>

Assay Name/Specification (minimum release criteria)

Endonuclease Activity (Nicking) - A 50 μ l reaction in CutSmart[®] Buffer containing 1 μ g 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 μ l reaction in CutSmart[®] Buffer containing 1 μ g 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 μ l reaction in NEBuffer 4 containing 1 μ 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.

RNase Activity (Extended Digestion) - A 10 μ l reaction in NEBuffer 4 containing 40 ng of a 300 base single-stranded RNA and a minimum of 1 μ l of Alkaline Phosphatase, Calf Intestinal (CIP) is incubated at 37°C. After incubation for 4 hours, >90% of the substrate RNA remains intact as determined by gel electrophoresis using fluorescent detection.



Date 11 Aug 2017

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Director of Quality Control

