

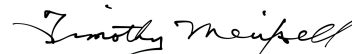
New England Biolabs Certificate of Analysis

Product Name: *Thermostable Inorganic Pyrophosphatase*
Catalog #: *M0296S/L*
Concentration: *2,000 units/ml*
Unit Definition: *One unit is the amount of enzyme that will generate 1 μmol of phosphate per minute from inorganic pyrophosphate under standard reaction conditions (a 10 minute reaction at 75°C in 50 mM Tricine [pH 8.5], 1 mM MgCl₂, 0.32 mM PPi, reaction volume of 0.5 ml).*
Lot #: *0091805*
Assay Date: *05/2018*
Expiration Date: *05/2020*
Storage Temp: *-20°C*
Storage Conditions: *20 mM Tris-HCl, 100 mM KCl, 1 mM DTT, 0.1 mM EDTA, 50 % Glycerol, (pH 8.0 @ 25°C)*
Specification Version: *PS-M0296S/L v1.0*
Effective Date: *23 May 2018*

Assay Name/Specification (minimum release criteria)	Lot #0091805
dNTPase Activity - A 500 μl reaction in CircumVent™ Sequencing Buffer in the presence of 200 μM each dNTPs and a minimum of 100 units Thermostable Inorganic Pyrophosphatase incubated for 1 hour at 75°C results in <0.01 μmole of inorganic phosphate from dNTPs as determined by the AAM assay.	Pass
Endonuclease Activity (Nicking) - A 50 μl reaction in NEBuffer 2 containing 1 μg of supercoiled PhiX174 DNA and a minimum of 100 units of Thermostable Inorganic Pyrophosphatase incubated for 4 hours at 75°C results in <20% conversion to the nicked form as determined by agarose gel electrophoresis.	Pass
Exonuclease Activity (Radioactivity Release) - A 50 μl reaction in NEBuffer 1 containing 1 μg of a mixture of single and double-stranded [³ H] <i>E. coli</i> DNA and a minimum of 100 units of Thermostable Inorganic Pyrophosphatase incubated for 4 hours at 75°C releases <0.1% of the total radioactivity.	Pass
Phosphatase Activity (pNPP) - A 1 ml reaction in 1M Diethanolamine, pH 9.8, 0.5 mM MgCl ₂ containing 10 mM <i>p</i> -Nitrophenyl Phosphate (pNPP) and a minimum of 100 units of Thermostable Inorganic Pyrophosphatase incubated for 30 minutes at 75°C yields <0.00001 unit of alkaline phosphatase activity as determined by spectrophotometric analysis.	Pass



Authorized by
Derek Robinson
23 May 2018



Inspected by
Timothy Meixsell
01 May 2018

