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New England Biolabs
Certificate of Analysis

Product Name:	*Pyrophosphatase, Inorganic (E. coli)*
Catalog #:	*M0361S/L*
Concentration:	*100 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.*
Lot #:	*0031709*
Assay Date:	*09/2017*
Expiration Date:	*9/2019*
Storage Temp:	*-20°C*
Storage Conditions:	*100 mM NaCl , 20 mM Tris-HCl (pH 8.0), 1 mM DTT , 0.1 mM EDTA , 50 % Glycerol*
Specification Version:	*PS-M0361S/L v2.0*
Effective Date:	*27 Apr 2015*

Assay Name/Specification (minimum release criteria)	**Lot #0031709**
Endonuclease Activity (Nicking) - A 50 µl reaction in NEBuffer 4 containing 1 µg of supercoiled PhiX174 DNA and a minimum of 0.5 units of Pyrophosphatase, Inorganic (*E. coli*) incubated for 4 hours at 37°C results in <10% conversion to the nicked form as determined by agarose gel electrophoresis.	**Pass**
Exonuclease Activity (Radioactivity Release) - A 50 µl reaction in NEBuffer 4 containing 1 µg of a mixture of single and double-stranded [^{3}H] *E. coli* DNA and a minimum of 0.5 units of Pyrophosphatase, Inorganic (*E. coli*) incubated for 4 hours at 37°C releases <0.1% of the total radioactivity.	**Pass**
Phosphatase Activity (pNPP) - A 100 µl reaction in NEBuffer 4 containing 10 mM *p*-Nitrophenol Phosphate (pNPP) and a minimum of 1 unit Pyrophosphatase, Inorganic (*E. coli*) incubated for 1 hour at 37°C yields <0.0001 unit of alkaline phosphatase activity as determined by spectrophotometric analysis.	**Pass**
Protein Purity Assay (SDS-PAGE) - Pyrophosphatase, Inorganic (*E. coli*) is ≥ 95% pure as determined by SDS-PAGE analysis using Coomassie Blue detection.	**Pass**
RNase Activity (Extended Digestion) - A 10 µl reaction in NEBuffer 4 containing 40 ng of a 300 base single-stranded RNA and a minimum of 0.1 unit of Pyrophosphatase, Inorganic (*E. coli*) 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**

Authorized by
Derek Robinson
27 Apr 2015

Inspected by
Dongxian Yue
18 Sep 2017

nqa ISO 9001 Registered Quality Management
nqa ISO 14001 Registered Environmental Management
nqa ISO 13485 Registered Medical Devices