

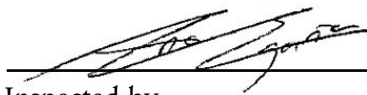
New England Biolabs Certificate of Analysis

Product Name: Apyrase
Catalog #: M0398S/L
Concentration: 500 units/ml
Unit Definition: One unit is defined as the amount of enzyme that catalyses the release of 1 μmol of inorganic phosphate from ATP in 1 minute at 30°C in a total reaction of 50 μl.
Lot #: 0011703
Assay Date: 03/2017
Expiration Date: 09/2018
Storage Temp: -20°C
Storage Conditions: 20 mM MES, 50 mM NaCl, 1 mM DTT, 0.1 mM CaCl₂, 0.1 % Tween® 20, 50 % Glycerol, (pH 6.5 @ 25°C)
Specification Version: PS-M0398S/L v1.0
Effective Date: 05 Oct 2016

Assay Name/Specification (minimum release criteria)	Lot #0011703
Endonuclease Activity (Nicking) - A 50 μl reaction in Apyrase Reaction Buffer containing 1 μg of supercoiled PhiX174 DNA and a minimum of 5 units of Apyrase incubated for 4 hours at 30°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 Apyrase Reaction Buffer containing 1 μg of a mixture of single and double-stranded [³ H] <i>E. coli</i> DNA and a minimum of 5 units of Apyrase incubated for 4 hours at 30°C releases <0.1% of the total radioactivity.	Pass
Non-Specific DNase Activity (16 Hour) - A 50 μl reaction in NEBuffer 4 containing 1 μg of PhiX174-HaeIII DNA and a minimum of 5 units of Apyrase incubated for 16 hours at 37°C results in a DNA pattern free of detectable nuclease degradation as determined by agarose gel electrophoresis.	Pass
Phosphatase Activity (pNPP) - A 200 μl reaction in 1M Diethanolamine, pH 9.8, 0.5 mM MgCl ₂ containing 2.5 p-Nitrophenyl Phosphate (pNPP) and a minimum of 5 units of Apyrase incubated for 4 hours at 37°C yields <0.0001 unit of alkaline phosphatase activity as determined by spectrophotometric analysis.	Pass
Protein Purity Assay (SDS-PAGE) - Apyrase 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 1 μl of Apyrase 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
05 Oct 2016



Inspected by
Ana Egana
28 Feb 2017

