NEW ENGLAND BioLabs Inc.
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# New England Biolabs
# Certificate of Analysis

| | |
|---|---|
| *Product Name:* | *Apyrase* |
| *Catalog Number:* | *M0398S* |
| *Concentration:* | *500 U/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 Number:* | *10029146* |
| *Expiration Date:* | *06/2020* |
| *Storage Temperature:* | *-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* |

| **Apyrase Component List** | | | |
|---|---|---|---|
| **NEB Part Number** | **Component Description** | **Lot Number** | **Individual QC Result** |
| M0398SVIAL | Apyrase | 10029144 | **Pass** |
| B0398SVIAL | Apyrase Reaction Buffer | 10020202 | **Pass** |

| **Assay Name/Specification** | **Lot # 10029146** |
|---|---|
| **RNase Activity (Extended Digestion)**<br>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 37ºC. After incubation for 16 hours, >90% of the substrate RNA remains intact as determined by gel electrophoresis using fluorescent detection. | **Pass** |
| **Endonuclease Activity (Nicking)**<br>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 30ºC results in <10% conversion to the nicked form as determined by agarose gel electrophoresis. | **Pass** |
| **Exonuclease Activity (Radioactivity Release)**<br>A 50 µl reaction in Apyrase Reaction Buffer containing 1 µg of a mixture of single and double-stranded [ $^3$H] E. coli DNA and a minimum of 5 units of Apyrase incubated for 4 hours at 30ºC releases <0.1% of the total radioactivity. | **Pass** |
| **Non-Specific DNase Activity (16 Hour)**<br>A 50 µl reaction in NEBuffer 4 containing 1 µg of PhiX174-HaeIII DNA and a minimum | **Pass** |

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| Assay Name/Specification | Lot # 10029146 |
|---|---|
| of 5 units of Apyrase incubated for 16 hours at 37ºC results in a DNA pattern free of detectable nuclease degradation as determined by agarose gel electrophoresis. | |
| **Phosphatase Activity (pNPP)**<br>A 200 µl reaction in 1M Diethanolamine, pH 9.8, 0.5 mM MgCl2 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)**<br>Apyrase is ≥ 95% pure as determined by SDS-PAGE analysis using Coomassie Blue detection. | **Pass** |

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

Ana Egana
Production Scientist
03 Apr 2019

Michael Tonello
Packaging Quality Control Inspector
03 Apr 2019