

New England Biolabs Certificate of Analysis

Product Name: RNA 5' Pyrophosphohydrolase (RppH)
Catalog Number: M0356S
Concentration: 5,000 U/ml
Unit Definition: One unit is the amount of enzyme that converts 1 µg 300 mer RNA transcript into a XRN-1 digestible RNA in 30 minutes at 37°C.
Packaging Lot Number: 10090447
Expiration Date: 08/2022
Storage Temperature: -20°C
Storage Conditions: 200 mM NaCl, 20 mM Tris-HCl, 1 mM DTT, 0.1 mM EDTA, 50% Glycerol, 0.01% Triton®X-100, (pH 7.5 @ 25°C)
Specification Version: PS-M0356S v1.0

| RNA 5' Pyrophosphohydrolase (RppH) Component List | | | |
|---|------------------------------------|------------|----------------------|
| NEB Part Number | Component Description | Lot Number | Individual QC Result |
| M0356SVIAL | RNA 5' Pyrophosphohydrolase (RppH) | 10081895 | Pass |
| B7002SVIAL | NEBuffer™ 2 | 10089398 | Pass |

| Assay Name/Specification | Lot # 10090447 |
|---|----------------|
| <p>Endonuclease Activity (Nicking) A 50 µl reaction in NEBuffer 2 containing 1 µg of supercoiled PhiX174 DNA and a minimum of 25 units of RNA 5' Pyrophosphohydrolase (RppH) incubated for 4 hours at 37°C results in <10% conversion to the nicked form as determined by agarose gel electrophoresis.</p> | Pass |
| <p>Exonuclease Activity (Radioactivity Release) A 50 µl reaction in NEBuffer 2 containing 1 µg of a mixture of single and double-stranded [³H] E. coli DNA and a minimum of 25 units of RNA 5' Pyrophosphohydrolase (RppH) incubated for 4 hours at 37°C releases <0.1% of the total radioactivity.</p> | Pass |
| <p>Phosphatase Activity (pNPP) A 200 µl reaction in 1M Diethanolamine, pH 9.8, 0.5 mM MgCl₂ containing 2.5 mM p-Nitrophenyl Phosphate (pNPP) and a minimum of 25 units of RNA 5' Pyrophosphohydrolase (RppH) incubated for 4 hours at 37°C yields <0.0001 unit of alkaline phosphatase activity as determined by spectrophotometric analysis.</p> | Pass |
| <p>Protein Purity Assay (SDS-PAGE)</p> | Pass |

| Assay Name/Specification | Lot # 10090447 |
|---|--------------------|
| <p>RNA 5' Pyrophosphohydrolase (RppH) is $\geq 95\%$ pure as determined by SDS-PAGE analysis using Coomassie Blue detection.</p> <p>RNase Activity Assay (4 Hour Digestion) A 10 μl reaction in NEBuffer 4 containing 40 ng of a 300 base single-stranded RNA and a minimum of 5 units of RNA 5' Pyrophosphohydrolase (RppH) 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.</p> | <p>Pass</p> |

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

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23 Dec 2020



Michael Tonello
Packaging Quality Control Inspector
23 Dec 2020