New England Biolabs
Product Specification

Product Name: AMV Reverse Transcriptase
Catalog #: M0277S/L
Concentration: 10,000 units/ml
Unit Definition: One unit is defined as the amount of enzyme required to incorporate 1 nmol of dTTP into an acid-insoluble form in 10 minutes at 37°C.
Shelf Life: 24 months
Storage Temp: -20°C
Storage Conditions: 200 mM KPO₄, 2 mM DTT, 0.2 % Triton® X-100, 50 % Glycerol, (pH 7.2 @ 25°C)
Specification Version: PS-M0277S/L v2.0
Effective Date: 12 Feb 2020

<table>
<thead>
<tr>
<th>Assay Name/Specification (minimum release criteria)</th>
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<tbody>
<tr>
<td><strong>Endonuclease Activity (Nicking)</strong> - A 50 µl reaction in AMV Reverse Transcriptase Reaction Buffer containing 1 µg of supercoiled PhiX174 DNA and a minimum of 50 units of AMV Reverse Transcriptase incubated for 4 hours at 37°C results in &lt;10% conversion to the nicked form as determined by agarose gel electrophoresis.</td>
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<td><strong>Exonuclease Activity (Radioactivity Release)</strong> - A 50 µl reaction in AMV Reverse Transcriptase Reaction Buffer containing 1 µg of a mixture of single and double-stranded [³H] E. coli DNA and a minimum of 50 units of AMV Reverse Transcriptase incubated for 4 hours at 37°C releases &lt;0.1% of the total radioactivity.</td>
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<td><strong>Non-Specific DNase Activity (16 Hour)</strong> - A 50 µl reaction in NEBuffer 2 containing 1 µg of T3 or T7 DNA in addition to a reaction containing Lambda-HindIII DNA and a minimum of 10 units of AMV Reverse Transcriptase incubated for 16 hours at 37°C results in a DNA pattern free of detectable nuclease degradation as determined by agarose gel electrophoresis.</td>
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<td><strong>RNase Activity Assay (4 Hour Digestion)</strong> - A 10 µl reaction in NEBuffer 4 containing 40 ng of a 300 base single-stranded RNA and a minimum of 1 µl of AMV Reverse Transcriptase is incubated at 37°C. After incubation for 4 hours, &gt;90% of the substrate RNA remains intact as determined by gel electrophoresis using fluorescent detection.</td>
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Derek Robinson
Director, Quality Control

Date 12 Feb 2020