T4 RNA Ligase 2 Component List

<table>
<thead>
<tr>
<th>NEB Part Number</th>
<th>Component Description</th>
<th>Lot Number</th>
<th>Individual QC Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>M0239LVIAL</td>
<td>T4 RNA Ligase 2 (dsRNA Ligase)</td>
<td>10043736</td>
<td>Pass</td>
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<tr>
<td>B0239SVIAL</td>
<td>T4 RNA Ligase 2 Reaction Buffer</td>
<td>10028358</td>
<td>Pass</td>
</tr>
</tbody>
</table>

Assay Name/Specification

Endonuclease Activity (Nicking)
A 50 µl reaction in T4 RNA Ligase Reaction Buffer containing 1 µg of supercoiled PhiX174 DNA and a minimum of 100 units of T4 RNA Ligase 2 (dsRNA Ligase) incubated for 4 hours at 37°C results in <10% conversion to the nicked form as determined by agarose gel electrophoresis.

Exonuclease Activity (Radioactivity Release)
A 50 µl reaction in T4 RNA Ligase Reaction Buffer containing 1 µg of a mixture of single and double-stranded [³H] E. coli DNA and a minimum of 100 units of T4 RNA Ligase 2 (dsRNA Ligase) incubated for 4 hours at 37°C releases <0.1% of the total radioactivity.

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 100 units of T4 RNA Ligase 2 (dsRNA Ligase) incubated for 4 hours at 37°C yields <0.00001 unit of alkaline phosphatase activity as determined by spectrophotometric analysis.
**Assay Name/Specification** | **Lot # 10039469**
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Protein Purity Assay (SDS-PAGE)  
T4 RNA Ligase 2 (dsRNA Ligase) is ≥ 99% pure as determined by SDS-PAGE analysis using Coomassie Blue detection. | Pass

**RNase Activity (Extended Digestion)**  
A 10 µl reaction in T4 RNA Ligase Reaction Buffer containing 40 ng of a 300 base single-stranded RNA and a minimum of 10 units of T4 RNA Ligase 2 (dsRNA Ligase) is incubated at 37°C. After incubation for 4 hours, >90% of the substrate RNA remains intact as determined by gel electrophoresis using agarose gel electrophoresis. | Pass

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

Bo Wu  
Production Scientist  
12 Nov 2018

Michael Tonello  
Packaging Quality Control Inspector  
10 Jun 2019