

New England Biolabs Certificate of Analysis

Product Name: T4 RNA Ligase 2, truncated K227Q
Catalog Number: M0351S
Concentration: 200,000 U/ml
Unit Definition: 200 units is defined as the amount of enzyme required to give 80% ligation of a 31-mer RNA to the pre-adenylated end of a 17-mer DNA in a total reaction volume of 20 µl in 1 hour at 25°C.
Lot Number: 10055999
Expiration Date: 08/2021
Storage Temperature: -20°C
Storage Conditions: 100 mM NaCl, 10 mM Tris-HCl, 1 mM DTT, 0.1 mM EDTA, 50 % Glycerol, (pH 7.4 @ 25°C)
Specification Version: PS-M0351S/L v2.0

| T4 RNA Ligase 2, truncated K227Q Component List | | | |
|---|----------------------------------|------------|----------------------|
| NEB Part Number | Component Description | Lot Number | Individual QC Result |
| M0351SVIAL | T4 RNA Ligase 2, truncated K227Q | 10052553 | Pass |
| B1004SVIAL | PEG 8000 | 10045988 | Pass |
| B0216SVIAL | T4 RNA Ligase Reaction Buffer | 10048447 | Pass |

| Assay Name/Specification | Lot # 10055999 |
|---|----------------|
| 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 [³ H] E. coli DNA and a minimum of 200 units of T4 RNA Ligase 2, truncated K227Q incubated for 4 hours at 37°C releases <0.1% of the total radioactivity. | Pass |
| Phosphatase Activity (pNPP) A 200 ul reaction in 1M Diethanolamine, pH 9.8, 0.5 mM MgCl ₂ containing 2.5 mM p-Nitrophenyl Phosphate (pNPP) and a minimum of 200 units of T4 RNA Ligase 2, truncated K227Q 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) T4 RNA Ligase 2, truncated K227Q is ≥ 95% pure as determined by SDS-PAGE analysis using Coomassie Blue detection. | Pass |
| RNase Activity (Extended Digestion) | Pass |

| Assay Name/Specification | Lot # 10055999 |
|---|--------------------|
| <p>A 10 µl reaction in NEBuffer 4 containing 40 ng of a 300 base single-stranded RNA and a minimum of 200 units of T4 RNA Ligase 2, truncated K227Q 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.</p> <p>Endonuclease Activity (Nicking) A 50 µl reaction in T4 RNA Ligase Reaction Buffer containing 1 µg of supercoiled PhiX174 DNA and a minimum of 200 units of T4 RNA Ligase 2, truncated K227Q incubated for 4 hours at 37°C results in <10% conversion to the nicked form as determined by agarose gel electrophoresis.</p> | <p>Pass</p> |

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



Bo Wu
Production Scientist
24 Jun 2019



Michael Tonello
Packaging Quality Control Inspector
11 Oct 2019