

New England Biolabs Certificate of Analysis

Product Name: T4 RNA Ligase 2, truncated KQ
Catalog #: M0373S/L
Concentration: 200,000 units/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 #: 0031710
Assay Date: 10/2017
Expiration Date: 10/2019
Storage Temp: -20°C
Storage Conditions: 10 mM Tris-HCl, 100 mM NaCl, 0.1 mM EDTA, 0.1 mM DTT, 50 % Glycerol, (pH 7.5 @ 25°C)
Specification Version: PS-M0373S/L v1.0
Effective Date: 12 Feb 2018

Assay Name/Specification (minimum release criteria)	Lot #0031710
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 KQ incubated for 4 hours at 37°C results in <10% conversion to the nicked form as determined by agarose gel electrophoresis.	Pass
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] <i>E. coli</i> DNA and a minimum of 200 units of T4 RNA Ligase 2, truncated KQ incubated for 4 hours at 37°C releases <0.1% of the total radioactivity.	Pass
Phosphatase Activity (pNPP) - A 200 µl reaction in 1M Diethanolamine, pH 9.8, 0.5 mM MgCl ₂ containing 2.5 mM <i>p</i> -Nitrophenyl Phosphate (pNPP) and a minimum of 200 units of T4 RNA Ligase 2, truncated KQ incubated for 4 hours at 37°C yields <0.00001 unit of alkaline phosphatase activity as determined by spectrophotometric analysis.	Pass
Protein Purity Assay (SDS-PAGE) - T4 RNA Ligase 2, truncated KQ is ≥ 95% pure as determined by SDS-PAGE analysis using Coomassie Blue detection.	Pass
RNase Activity (Extended Digestion) - 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 KQ 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.	Pass



Authorized by
Derek Robinson
12 Feb 2018



Inspected by
Fei Liu
16 Oct 2017

