Applications:
- Ligate a nick in dsDNA
- Ligate the 3’ OH of RNA to the 5’ phosphate of DNA in a double stranded structure

Supplied in: 10 mM Tris-HCl (pH 7.5), 50 mM KCl, 35 mM (NH₄)₂SO₄, 0.1 mM EDTA, 0.1 mM DTT and 50% glycerol.

Reagents Supplied with Enzyme: 10X T4 Rnl2 Reaction Buffer.

Reaction Conditions: Incubate at 37°C.

Unit Assay Conditions: 1X T4 Rnl2 Reaction Buffer containing 40 ng of labeled RNA and 10 units T4 RNA Ligase 2 is incubated at 37°C for 4 hours. After incubation for 4 hours, >90% of the substrate RNA remains intact as determined by agarose gel electrophoresis.

Specific Activity: 40,000 units/mg

Quality Control Assays

RNase Activity (Extended Digestion): A 10 µl reaction in 1X T4 RNA Ligase 2 Reaction Buffer containing 40 ng of labeled RNA and 10 units T4 RNA Ligase 2 is incubated at 37°C for 4 hours. After incubation for 4 hours, >90% of the substrate RNA remains intact as determined by agarose gel electrophoresis.

Phosphatase Activity: A 50 µl reaction in 1X T4 RNA Ligase 2 Reaction Buffer containing 100 units T4 RNA Ligase 2 with 1 µg pNPP for 16 hours at 37°C results in < 0.05 µmol inorganic phosphate released.

Protein Purity (SDS-PAGE): T4 RNA Ligase 2 is ≥ 99% pure as determined by SDS-PAGE analysis using Coomassie Blue detection.
References: