



Just fine Molecular Biology

T4 RNA Ligase

Description: T4 RNA Ligase catalyzes the ATP-dependent ligation of single-stranded RNA or DNA onto the 5'-phosphoryl termini of single-stranded RNA or DNA. Substrates include single-stranded RNA and DNA as well as dinucleoside pyrophosphates. The enzyme has a molecular weight of 43.5kDa.

Source: Purified from *E. coli* strain containing the plasmid with T4 ligase gene.

Applications:

- Labeling of 3' -termini of RNA with 5' -[³²P] pCp
- Inter- and intramolecular joining of RNA and DNA molecules
- Synthesis of single-stranded oligodeoxyribonucleotides
- Incorporation of unnatural amino acids into proteins

Reaction Conditions:

1X T4 RNA Ligase Buffer:

50 mM Tris-HCl (pH 7.8), 10 mM MgCl₂, 10 mM DTT and 1 mM ATP. Incubate at 37°C.

Unit Definition: One unit is defined as the amount of enzyme required to convert 1 pmol of AMP to an acid-insoluble form in 10 minutes at 25°C.

Concentration: 10-100,000 units/ml.

Heat Inactivation: 65°C for 15 minutes or boiling for 2 minutes.

Catalog #	Pack size
404010	1000 u
404050	5000 u

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