

# T4 Polynucleotide Kinase

Catalog # N102



Version 21.1

## Introduction

T4 Polynucleotide Kinase (T4 PNK) catalyzes the transfer of the  $\gamma$ -phosphate from ATP to the 5'-hydroxyl group of oligonucleotides (double- and single-stranded DNA and RNA) and nucleoside 3'-monophosphates. T4 Polynucleotide Kinase also catalyzes the removal of 3'-phosphoryl groups from 3'-phosphoryl polynucleotides, deoxynucleoside 3'-monophosphates and deoxynucleoside 3'-diphosphates.

## Package Information

### Components N102-01 10,000 U

T4 Polynucleotide Kinase (10 U/ $\mu$ l)	1 ml
10x T4 PNK Buffer	2 ml

## Buffer Contents

### 10x T4 PNK Buffer

- 700 mM Tris-HCl pH 7.6 @ 25 °C
- 100 mM MgCl<sub>2</sub>
- 50 mM DTT

## Storage

Store at -30 ~ -15 °C, Transportation at  $\leq$  0 °C.

## Application

- DNA or RNA 5' end phosphorylation for ligation reaction.
- End labeling of DNA or RNA, used as probe and DNA sequencing.

## Source

Purified from a strain of recombinant E. coli that carries the T4 Polynucleotide Kinase gene.

## Unit Definition

One unit (U) is defined as the amount of enzyme catalyzing the incorporation of 1 nmol of [ $\gamma$ -<sup>32</sup>P] ATP into acid insoluble material in 30 min at 37°C.

## Notes

The enzyme should be placed on ice and put back to -20 °C immediately after use.

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