T4 Polynucleotide Kinase

N102

Version 22.1

Product Description

T4 Polynucleotide Kinase catalyzes the transfer of the γ-phosphate from ATP to a 5'-hydroxy terminus (double-stranded or single-stranded DNA or RNA) and nucleoside 3'-monophosphates. T4 Polynucleotide Kinase also has 3'-phosphatase activity, which can hydrolyze 3'-phosphoryl groups from oligonucleotide 3'-phosphate termini, deoxynucleoside 3'-monophosphates and deoxynucleoside 3'-diphosphates.

Components

Components	N102-01 10,000 U
T4 Polynucleotide Kinase (10 U/μl)	1 ml
10 × T4 PNK Buffer	2 × 1 ml

Reaction Buffer

10 × T4 PNK Buffer:

700 mM Tris-HCl pH 7.6 @25℃
100 mM $MgCl_2$
50 mM DTT

Storage

Store at -30 ~ -15℃ and transport at ≤0℃.

Applications

1. 5' phosphorylation of DNA or RNA for ligation.
2. End labeling of DNA or RNA for probes and DNA sequencing.

Source

Recombinant *E.coli* strains carrying the cloned T4 bacteriophage DNA polymerase gene.

Unit Definition

One unit of activity (U) is defined as the amount of enzyme required to incorporate 1 nmol of [γ-32P] ATP into acid-insoluble precipitates within 30 min at 37℃.

Notes

For research use only. Not for use in diagnostic procedures.

It is recommended to place the enzyme on ice during use and put it back to -20℃ immediately after use.