Creative Enzymes
Diagnostic Enzymes

Diagnostic T4 Polynucleotide Kinase

Product Information

Cat#	TRA-011
Specification	500U,2500U
Description	T4 poly(nucleotide) kinase (T4 PNK) catalyzes the transfer of a phosphate group from ATP to the 5'-OH group of single-stranded and double-stranded DNA and RNA, oligonucleotides, or nucleoside monophosphates (forward reaction). This reaction is reversible. In the presence of ADP, T4 PNK exhibits 5'-phosphatase activity, catalyzing phosphate exchange between 5'-phosphate-oligonucleotides-polynucleotides and ATP (exchange reaction). The enzyme also functions as a 3'-phosphatase.
Source	E.coli
Activity	10 U/μL
Unit Definition	One unit is defined as the amount of enzyme required to incorporate 1 nmol of [γ-32P] ATP into acid-insoluble precipitate within 30 minutes at 37°C and pH 7.6, using Micrococcal Nuclease-treated calf thymus DNA as substrate.
Molecular Weight	42.9&44.8 kDa
Storage	-20°C
Notes	The 1× T4 PNK reaction buffer does not contain ATP. Add ATP to a final concentration of 1 mM in the reaction system, or substitute with the reaction mixture of T4 DNA ligase. Ammonium ions strongly inhibit T4 PNK activity; therefore, DNA should be dissolved in an ammonium-free solution. DTT oxidation reduces enzyme activity; replenish DTT when the buffer is not fresh.

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