



The ENZYME Company

T4 Polynucleotide Kinase

Description: T4 Polynucleotide Kinase (PNK) catalyzes the transfer of terminal phosphate from the gamma position of rATP to the 5' hydroxyl terminus of polynucleotides (double- and single-stranded DNA or RNA) and nucleoside 3' -monophosphates. PNK also catalyses the exchange of 5'-terminal phosphates and exhibits 3'-phosphatase activity.

Applications End-labeling DNA or RNA, addition of 5' -phosphates to oligonucleotides, removal of 3' -phosphoryl groups.

Reaction Buffer (10x): 100 mM Tris-HCl (pH 7.5), 50 mM MgCl₂, 50 mM DTT.

The efficiencies of blunt and recessed 5' -end phosphorylation can be improved by heating to 70°C for 5 minutes, then chilling on ice prior to kinase addition.

Since Polynucleotide Kinase is inhibited by ammonium ions, DNA should not be precipitated in the presence of ammonium ions prior to phosphorylation.

Quality Assurance: Free of exonuclease, phosphatase, endonuclease and RNase activities, ribonucleases

Unit Definition: One unit is the amount of enzyme catalyzing the transfer of 1 nmol of phosphate in 30 minutes at 37°C.

Storage Buffer: 50 mM KCl, 10 mM Tris-HCl (pH 7.4), 0,1 mM EDTA, 0,1 µM ATP, 1 mM DTT, 50% Glycerol

Storage temperature: -20°C.

Catalog #	Pack size
403005	500 µ
402010	2500 µ

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Bioron

Contact Germany Phone: +49-(0)-621- 5720 915

Contact Singapore Phone +65 6896 6942

E-Mail: info@bioron.net

WEB: www.bioron.net