



Genaxxon Polynukleotide Kinase

Data sheet

Recombinant protein isolated from E.coli

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Product	Cat#	Package size
T4-Polynukleotide Kinase (5 U/μl)	M3026.0500	500 units
T4-Polynukleotide Kinase (5 U/μl)	M3026.2500	2500 units
T4-Polynukleotide Kinase (5 U/μl)	M3026.5000	5000 units

Product 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.

Application

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

Storage buffer

50 mM KCl, 10 mM Tris-HCl (pH 7.4), 0.1 mM EDTA, 1 mM dithiothreitol, 0.1 μM ATP and 50% glycerol.

Reaction buffer

100 mM Tris-HCl (pH 7.5), 10 mM MgCl₂, 5 mM DTT.

Technical support – Trouble shooting

The efficiency 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.

Concentration: 5 U/μl

Unit definition

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

Quality assurance

Free of exonuclease, phosphatase, endonuclease and RNase activities.

Stability and storage

The enzyme is stable for more than 12 months if stored at -20°C.