

## T4 Polynucleotide Kinase

### Product Information

<b>Cat#</b>	DIA-586
<b>Source</b>	Escherichia coli
<b>Description</b>	<p>T4 polynucleotide kinase catalyzes the transfer of the <math>\gamma</math>-phosphate from ATP to the 5'-hydroxyl termini of DNA or RNA (single- or double-stranded), as well as to 3'-monophosphate nucleosides.</p> <p>In addition, it exhibits 3'-phosphatase activity, removing phosphate groups from 3'-phosphorylated oligonucleotides and deoxynucleoside mono- and diphosphates.</p>
<b>Unit Definition</b>	One unit is defined as the amount of enzyme required to incorporate 1 nmol of [ $\gamma$ -32P] ATP into acid-insoluble material within 30 minutes at 37 °C.
<b>Storage</b>	-20 °C
<b>Buffer</b>	50 mM Tris-HCl pH 7.5, 50 mM KCl, 1 mM DTT, 0.1 $\mu$ M ATP, 50% glycerol
<b>Applications</b>	Phosphorylation of DNA or RNA 5' ends; end labeling of DNA or RNA; removal of 3' phosphate groups; 5' phosphorylation and 3' dephosphorylation of insert fragments during library preparation.
<b>Product Overview</b>	5' phosphorylation of DNA or RNA ends for subsequent ligation reactions. End labeling of DNA or RNA for probe preparation or DNA sequencing applications.
<b>Package</b>	10000 U T4 Polynucleotide Kinase (10 U/ $\mu$ L): 1 mL 10× T4 PNK Buffer (700 mM Tris-HCl pH 7.6, 100 mM MgCl <sub>2</sub> , 50 mM DTT): 2 mL