

## T4 DNA Ligase (Rapid)

### Product Information

<b>Cat#</b>	DIA-584
<b>Source</b>	Escherichia coli
<b>Description</b>	T4 DNA ligase catalyzes the formation of phosphodiester bonds between adjacent 5'-phosphate and 3'-hydroxyl termini in double-stranded DNA or RNA. It efficiently ligates both blunt-ended and cohesive-ended fragments and can also repair single-strand nicks in double-stranded DNA, RNA, or DNA/RNA hybrid duplexes.
<b>Unit Definition</b>	One unit is defined as the amount of enzyme required to ligate 50% of HindIII-digested $\lambda$ DNA fragments (100 ng) in a 50 $\mu$ L reaction containing 1 $\times$ T4 DNA ligase buffer at 23 $^{\circ}$ C for 30 minutes.
<b>Storage</b>	-20 $^{\circ}$ C
<b>Buffer</b>	20 mM Tris-HCl pH 7.4, 50 mM KCl, 0.1 mM EDTA, 1 mM DTT, 50% glycerol
<b>Applications</b>	Catalyzes ligation between blunt or cohesive ends; repairs single-strand nicks in double-stranded DNA, RNA, or DNA/RNA hybrids.
<b>Product Overview</b>	Rapid ligation at room temperature: Efficient ligation of cohesive or blunt ends in 5 minutes. For T/A cloning. Repair of nicks in double-stranded DNA.
<b>Package</b>	600000 U T4 DNA Ligase (Rapid)(600 U/ $\mu$ L): 1 mL 2 $\times$ Rapid Ligation Buffer (132 mM Tris-HCl pH 7.6 25 $^{\circ}$ C, 20 mM MgCl <sub>2</sub> , 2 mM DTT, 2 mM ATP, 15% PEG 6000): 6 mL 10 $\times$ T4 DNA Ligase Buffer (500 mM Tris-HCl pH 7.6 25 $^{\circ}$ C, 100 mM MgCl <sub>2</sub> , 50 mM DTT, 10 mM ATP): 6 mL