**T4 DNA Ligase**

**[Cat. No.]**
- E-3061 (20,000 Units)
- E-3062 (100,000 Units)

**[Lot No.]**

**[Concentration]**
- 200 unit/uL

- **Description**: Catalyzes the formation of a phosphodiester bond between juxtaposed 5' phosphate and 3' hydroxyl termini in duplex DNA or RNA. This enzyme will join blunt-end and cohesive-end termini as well as repair single stranded nicks in duplex DNA, RNA, or DNA/RNA hybrids.

- **Source**: T4 DNA Ligase is isolated from a recombinant *E. coli* strain containing the ligase gene cloned from T4 DNA Ligase.

- **Applications**: Joining double-stranded DNA with cohesive or blunt ends.

- **Supplied with Enzyme**
  - 10X Reaction Buffer (1 mL) : 500 mM Tris-HCl, 100 mM MgCl₂, 50 mM DTT, 10 mM ATP, 25 ug/ml BSA (pH 7.8)

- **Storage condition**: 10 mM Tris-HCl (pH 7.5), 50 mM KCl, 1 mM EDTA, 10 mM 2-mercaptoethanol, 50% glycerol, store at –20 °C.

- **Unit Definition**: 1 Weiss unit (200 unit) of enzyme is defined as the amount of enzyme required to give 90% ligation of *Hind* III fragments of lambda DNA in 30 min at 16 °C in 20 uL of the assay mixture.

- **Heat Inactivation**: 70 °C for 10 minutes

- **Quality Assurance**: Nuclease activity is not detected after incubation of 1 ug of substrate DNA with 10 units of T4 DNA Ligase in 20 uL reaction volume with the supplied Reaction buffer for 18 hr at 37 °C.

- **Note**: Store the buffer in small aliquots at –20 °C to minimize degradation of the ATP and DTT.

- **References**

**Note**
For research use only. Not for use in diagnostic or therapeutic procedures.