E. Coli DNA Ligase

FB02501040 400 U

Store at -25°C to -15°C

E. coli DNA Ligase is an NAD-dependent DNA ligase. It catalyzes formation of phosphodiester bonds between 5'-phospate and 3'-hydroxyl termini in double-stranded DNA. The enzyme is not active on blunt-ended DNA.

The *E. coli* DNA Ligase is active in wide temperature range (4°C to 37°C) and has high specificity to cohesive DNA ends.

Application includes nick ligation in double-stranded DNA, cDNA synthesis and cloning.

Kit Contents

Component	Volume
E. Coli DNA Ligase, 8 U/µL	50 µL

Definition of Activity Unit

One unit is the amount of enzyme required to ligate 50% pUC 57 DNA/HindIII fragments at a concentration of 0.12 µM in 30 minutes at 16°C.

Note

- Incubate DNA reaction with *E. coli* DNA Ligase at 16°C for 1 hour in a reaction buffer containing NAD
- Recommended reaction buffer (Not provided)
  - 18.8 mM Tris-HCl (pH 8.3)
  - 90.6 mM KCl
  - 4.6 mM $MgCl_2$
  - 3.8 mM DTT
  - 0.15 mM λ-NAD
  - 10 mM $(NH_4)_2SO_4$
- Heat inactivate enzyme at 65°C for 20 minutes