



## Quick T4 DNA Ligation Kit

### Catalog Number: E102-1, E102-2

**Table 1. Kit Components and Storage**

Kit Component	E102-1 (30 rxn)	E102-2 (150 rxn)	Storage	Stability
Quick T4 DNA Ligase	30 $\mu$ L	150 $\mu$ L	-20 °C, avoid repeated free-thaw	The product is stable for at least 6 months when stored as directed.
2x Quick Ligation Buffer	1 mL	5x1 mL		

### Product Description

The Quick T4 DNA Ligation Kit enables ligation of cohesive end or blunt end DNA fragments in 15 minutes at room temperature.

### Application

- ❖ Routine subcloning.
- ❖ Recircularization of linear DNA.
- ❖ Library construction.
- ❖ Linker ligation.

### Quick Ligation Protocol

1. Combine 50 ng of vector with a 3-fold molar excess of insert. Adjust volume to 10  $\mu$ L with dH<sub>2</sub>O.
2. Add 10  $\mu$ L of 2x Quick Ligation Buffer and mix.
3. Add 1  $\mu$ L of Quick T4 DNA Ligase and mix thoroughly.
4. Centrifuge briefly and incubate at room temperature (25°C) for 15 minutes.
5. Chill on ice, then transform or store at -20°C.
6. Do not heat inactivate. Heat inactivation dramatically reduces transformation efficiency.

### Transformation Protocol

1. Thaw competent cells on ice.
2. Chill approximately 5 ng (2  $\mu$ L) of the ligation mixture in a 1.5 mL microcentrifuge tube.
3. Add 50  $\mu$ L of competent cells to the DNA and mix gently by pipetting up and down.
4. Incubate on ice for 30 minutes.
5. Heat shock for 2 minutes at 37°C, chill on ice for 5 minutes.
6. Add 950  $\mu$ L of recovery media (e.g. SOC) to the tube and incubate at 37°C for 1 hour.
7. Spread 100  $\mu$ L onto the appropriate solid medium.
8. Incubate overnight at 37°C.