T4 DNA Polymerase

Instruction for Use

Cat. No./Spec.: K011-A/100U; K011-B/500U; K011-C/2000U; K011-D/5000U

Concentration: 5U/μL

Product Description

In the presence of templates and primers, T4 DNA Polymerase catalyzes DNA synthesis in the 5 →3 direction. This enzyme also has the activity of 3 →5 exonuclease which is stronger than *E. coli* DNA polymerase I. Unlike DNA polymerase I, T4 DNA Polymerase does not have 5 →3 exonuclease activity.

Components

Component	K011-A (100U)	K011-B (500U)	K011-C (2,000U)	K011-D (5,000U)
T4 DNA Polymerase (5U/μL)	20 μL	100 μL	400 μL	1 mL
10X Blue Buffer	100 μL	250 μL	500 μL	1.25 mL

Storage Condition

All reagents should be stored at -20°C. The product is valid for 12 months.

Unit Definition

One unit is defined as the amount of enzyme that will incorporate 10 nmol of dNTP into acid insoluble material in 30 minutes at 37°C.

Scope of Application

1. Removal of 3’ overhangs to form blunt ends;
2. Fill-in of 5’ overhangs to form blunt ends;
3. Labeling DNA probe synthesis through displacement reaction;
4. Synthesis of the second strand during site-directed mutagenesis;
5. PCR product cloning without relying on ligation reactions.

Heat Inactivation

75°C for 20 minutes

Notes

1. Elevated temperatures, excessive amounts of enzyme, failure to supplement with dNTPs or long reaction times may result in recessed ends due to the 3´→ 5´ exonuclease activity of the enzyme.
2. The enzyme should be placed on ice when using, and it should be put back to -20 °C immediately after use.

This product is for research use only.