

***Pfu* Super DNA Polymerase (with dNTPs)**

02-022 200 U 2.5 U/ul , 02-022 200 U x 5 2.5 U/ul

Pyrococcus furiosus (*Pfu*) DNA polymerase is produced in *E.coli* and highly purified. The enzyme has thermostable DNA polymerase activity and 3' → 5' exonuclease (proofreading) activity, which corrects replication errors and ensures high fidelity. Adding an activation factor to this enzyme system increases amplification length and volume without sacrificing high fidelity.

■ *Pfu* DNA polymerase is thermostable and has low error rates.

■ It is suitable for PCR and primer extension reactions that require high fidelity synthesis.

■ *Pfu* DNA polymerase generates PCR products which are blunt-ended.

Applications:

- 1) Cloning long genes after PCR amplification
- 2) High-fidelity DNA amplification in general.
- 3) Site-directed mutagenesis

Storage Buffer:

50mM Tris-HCl (pH 8.2), 0.1mM EDTA, 1mM DTT, 50% glycerol, 0.1% Tween20, 0.1% Igepal CA-630,

Store at:

-20°C

Concentration: 2.5 units/ul, where one unit is defined as the amount of enzyme that can incorporate 10 nmols of dNTPs into an acid-insoluble material in 30 minutes at 72°C when activated salmon sperm DNA was used as template/primer.

Quality Assurance: Greater than 95% of protein determined by SDS-PAGE (CBB staining)

The absence of endonucleases and exonucleases was confirmed.

PCR Test: Good amplification result was obtained in PCR reaction using λDNA as a template (Fig.1).

Reagents Supplied with Enzyme:

- 1) 10 x Standard Reaction Buffer (*Pfu*): 200mM Tris-HCl (pH 8.8), 100mM KCl, 100mM (NH₄)₂SO₄, 20mM MgSO₄, 1% TritonX-100, 1 mg/ml BSA
- 2) 2.5mM (each) dNTPs

| General composition of PCR reaction mixture (total 50ul) | |
|--|-------------------------|
| <i>Pfu</i> LA DNA polymerase (2.5 units/ul) | 0.5 ul |
| 10 x Standard Buffer (<i>Pfu</i>) | 5 ul |
| 2.5mM (each) dNTPs | 4 ul |
| Template | <500ng |
| Primer 1 | 0.2~1.0uM (final conc.) |
| Primer 2 | 0.2~1.0uM (final conc.) |
| Sterile distilled water | up to 50ul |

Fig.1 Amplification of λ DNA

PCR 条件

98 ° C 10sec

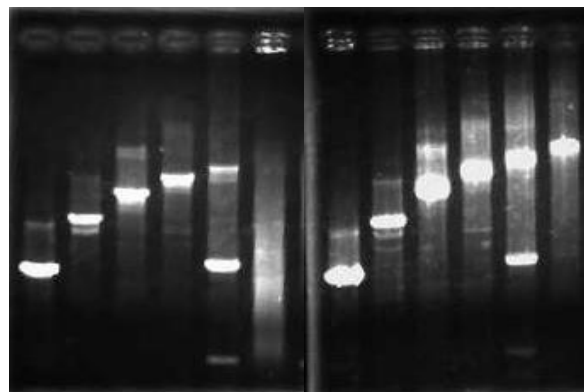
55 ° C 30sec

72 ° C 12min.

30 cycles

Existing product(02-021) **This product** (02-022)

2 4 6 8 10 12 2 4 6 8 10 12 kbp





Related products: # [02-001](#) Taq DNA Polymerase (+dNTPs) # [02-011](#) Taq DNA Polymerase