

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

02-022 200 U 2.5 U/μl 02-022-5 200 U x 5 2.5 U/μl

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:

Shipped at 4°C or -20°C and 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 (02-Psd, 1ml)
- 2) 2.5mM (each) dNTPs (02-Dnt, 640μL)

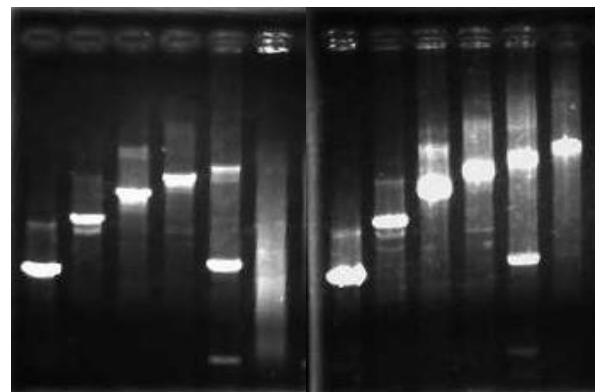
General composition of PCR reaction mixture (total 50μl)	
<i>Pfu</i> LA DNA polymerase (2.5 units/ul)	0.5 μl
10 x Standard Buffer (<i>Pfu</i>)	5 μl
2.5mM (each) dNTPs	4 μl
Template	<500ng
Primer 1	0.2~1.0μM (final conc.)
Primer 2	0.2~1.0μM (final conc.)
Sterile distilled water	up to 50μl

Fig.1 Amplification of λ DNA

PCR 条件

98 ° C 10sec
 55 ° C 30sec 30 cycles
 72 ° C 12min.

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