



***Pfu* DNA Polymerase (with dNTPs), Economy**

BACKGROUND

Pyrococcus furiosus DNA polymerase (*Pfu* DNA polymerase) gene was expressed in *E.Coli* in large quantities and highly purified. The enzyme has thermostable DNA polymerase activity and 3' → 5' exonuclease (proofreading) activity. The MW is 90 kDa, same as that of the natural *Pfu* DNA polymerase.

- *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-generated PCR fragments are blunt-ended.

Applications:	1) Cloning 2) DNA expression 3) site-directed mutagenesis
Size:	200 U (2.5U/μl)
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.
Form:	50mM Tris-HCl (pH 8.2), 0.1mM EDTA, 1mM DTT, 50% glycerol, 0.1% Tween20, 0.1% Igepal CA-630
Quality Assurance:	Greater than 95% of protein determined by SDS-PAGE (CBB staining) (Fig.1) The absence of endonucleases and exonucleases was confirmed.
PCR Test:	Good amplification result was obtained in PCR reaction using λDNA as a template (Fig.2).
Reagents Supplied with Enzyme:	10 x Reaction Buffer (<i>Pfu</i>): 200mM Tris-HCl (pH 8.8), 100mM KCl, 100mM (NH ₄) ₂ SO ₄ , 20mM MgSO ₄ , 1% TritonX-100, 1 mg/ml BSA 2.5mM (each) dNTPs
Storage:	Store at -20°C
References:	

Related Products

BAM-02-001-EX	Taq DNA Polymerase(+dNTPs)
BAM-02-011-EX	Taq DNA Polymerase



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General composition of PCR reaction mixture (total 50ul)

<i>Pfu</i> DNA polymerase (2.5 units/ul)	0.5 ul
10 x Reaction Buffer (<i>Pfu</i>)	5 ul
2.5mM (each) dNTPs	4 ul
Template	<500ng
Primer 1	0.2 ~ 1.0 uM (final conc.)
Primer 2	0.2 ~ 1.0 uM (final conc.)
Sterile distilled water	up to 50 ul

PCR condition

98°C 10 sec
55°C 30 sec
72°C 10 min
} 30 cycles
(2 min in the case of 2 kb DNA)

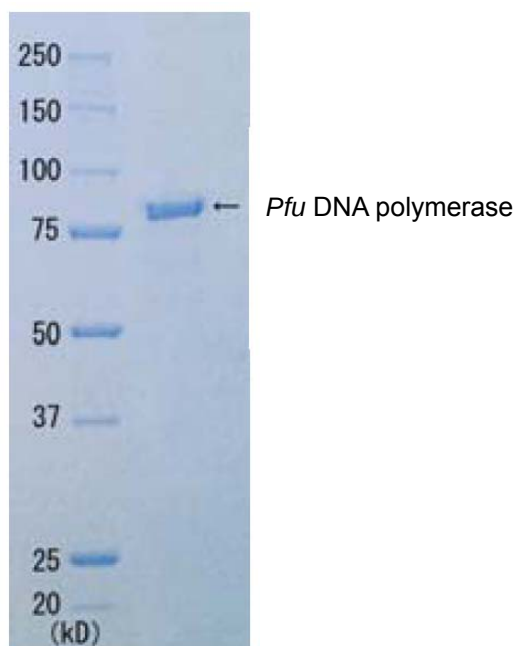


Fig.1 SDS-PAGE of *Pfu* DNA polymerase

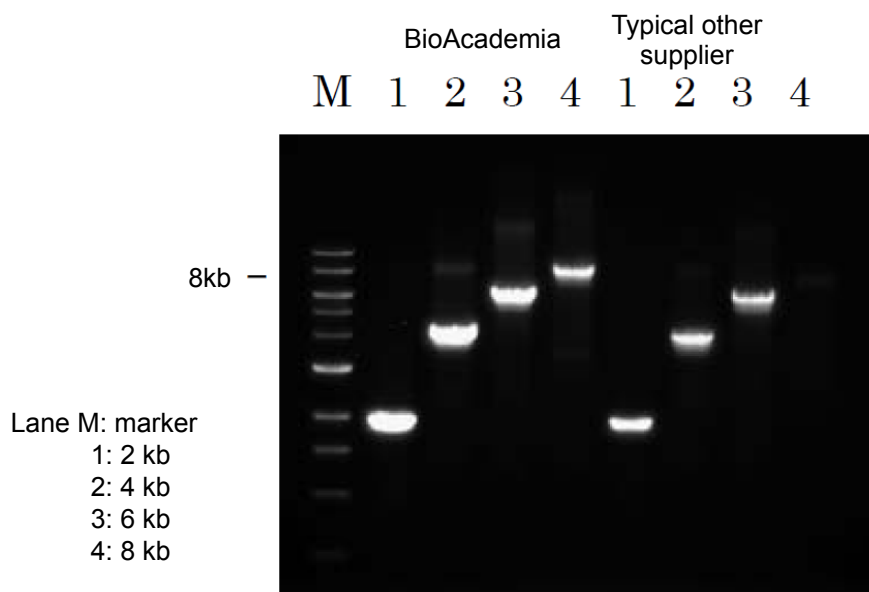


Fig.2 Amplification of λ DNA

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TOYO 2CHOME, KOTO-KU, TOKYO, 135-0016, JAPAN

http://www.cosmobio.co.jp/index_e.asp

Phone : +81-3-5632-9617

E-mail: export@cosmobio.co.jp

FAX : +81-3-5632-9618