

## **Taq DNA Polymerase (with dNTPs), Economy**

### **BACKGROUND**

*Thermus aquaticus* DNA polymerase (**Taq DNA polymerase**) was expressed in *E. coli* in large quantities and highly purified. The enzyme has thermostable DNA polymerase activity and the MW is 94 kDa. This enzyme is suitable for PCR reactions; capable of amplifying DNA with various primers.

<b>Applications:</b>	1) High-throughput PCR 2) Colony PCR 3) Incorporation of dUTP, dITP, and fluorescence-labeled nucleotides 4) Primer extension 5) Addition of a single nucleotide (adenosine) at the 3'-blunt ends
<b>Size:</b>	200 U (5U/μl)
<b>Concentration:</b>	5 units/ul, where one unit is defined as the amount of enzyme that can incorporate 10 nmols of total dNTPs into an acid-insoluble material in 30 minutes at 74°C when activated salmon sperm DNA was used as template/primer.
<b>Form:</b>	20mM Tris-HCl (pH 8.0), 100mM KCl, 0.1mM EDTA, 1mM DTT, 50% glycerol, 0.5% Tween20, 0.5% Igepal CA-630
<b>Quality Assurance:</b>	Greater than 95% purity as determined by SDS-PAGE (CBB staining) (Fig.1) The absence of endonucleases and exonucleases was confirmed.
<b>PCR Test:</b>	Good amplification result was obtained in PCR reaction using λDNA as a template (Fig.2).
<b>Reagents Supplied with Enzyme:</b>	10 x Reaction Buffer ( <i>Taq</i> ): 100mM Tris-HCl (pH 8.3), 500mM KCl, 15mM MgCl <sub>2</sub> 2.5mM(each) dNTPs
<b>Storage:</b>	Store at -20°C
<b>References:</b>	

#### **Related Products**

BAM-02-021-EX	Pfu DNA polymerase (+dNTPs), Economy
BAM-02-031-EX	Pfu DNA polymerase (-dNTPs), Economy



COSMO BIO Co., LTD.

Inspiration for Life Science

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

**General composition of PCR reaction mixture (total 50ul)**

Taq DNA polymerase (5 units/ul)	*0.25 ul
10 x Reaction Buffer (Taq)	5 ul
2.5mM (each) dNTPs	4ul
Template	<500ng
Primer 1	0.2 ~ 1.0uM (final conc.)
Primer 2	0.2 ~ 1.0uM (final conc.)
Sterile distilled water	up to 50ul

\*Use of excess amount is not recommended.

**PCR condition**

98°C 10 sec  
57°C 30 sec  
72°C 8 min  
} 25 cycles  
(2 min in the case of 2 kb DNA)

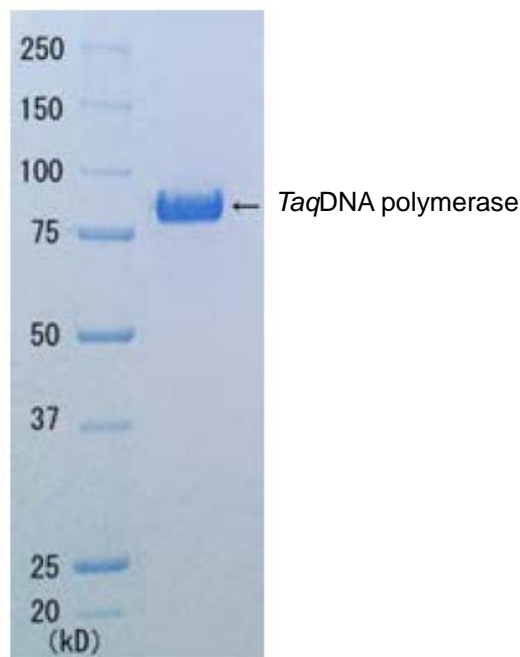


Fig.1 SDS-PAGE of Taq DNA polymerase

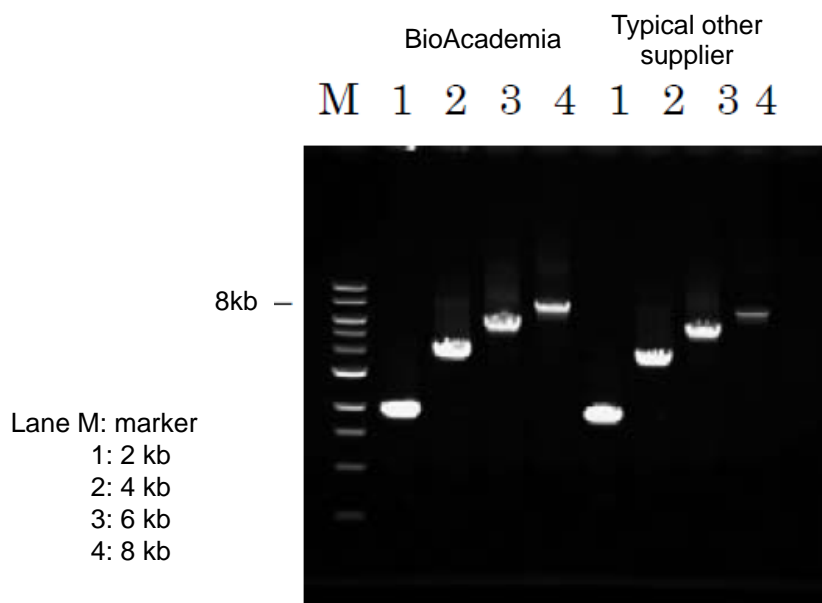


Fig.2 Amplification of  $\lambda$  DNA

*For research use only. Not for clinical diagnosis.*

Manufactured by BioAcademia, Inc.



COSMO BIO Co., LTD.

Inspiration for Life Science

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

URL: <http://www.cosmobio.co.jp>

e-mail: [export@cosmobio.co.jp](mailto:export@cosmobio.co.jp)

[Outside Japan] Phone : +81-3-5632-9617

[国内連絡先] Phone : +81-3-5632-9610

FAX : +81-3-5632-9618

FAX : +81-3-5632-9619