COSMO BIO CO., LTD.
Inspiration for Life Science

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**Catalog No. BAM-02-001-5-EX**

# *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.

**Applications:**
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

**Size:** 5 x 200 U (5U/μl)

**Concentration:** 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.

**Form:** 20mM Tris-HCl (pH 8.0), 100mM KCl, 0.1mM EDTA, 1mM DTT, 50% glycerol, 0.5% Tween20, 0.5% Igepal CA-630

**Quality Assurance:** Greater than 95% purity as 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 (*Taq*): 100mM Tris-HCl (pH 8.3), 500mM KCl, 15mM $MgCl_2$ 2.5mM(each) dNTPs

**Storage:** Store at -20°C

**References:**

**Related Products**

| | |
|---|---|
| BAM-02-021-EX | Pfu DNA polymerase (+dNTPs), Economy |
| BAM-02-031-EX | Pfu DNA polymerase (-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 } 25 cycles
72°C 8 min

(2 min in the case of 2 kb DNA)

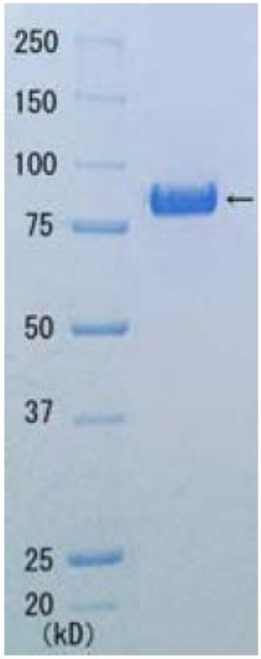


Fig.1SDS-PAGE of Taq DNA polymerase

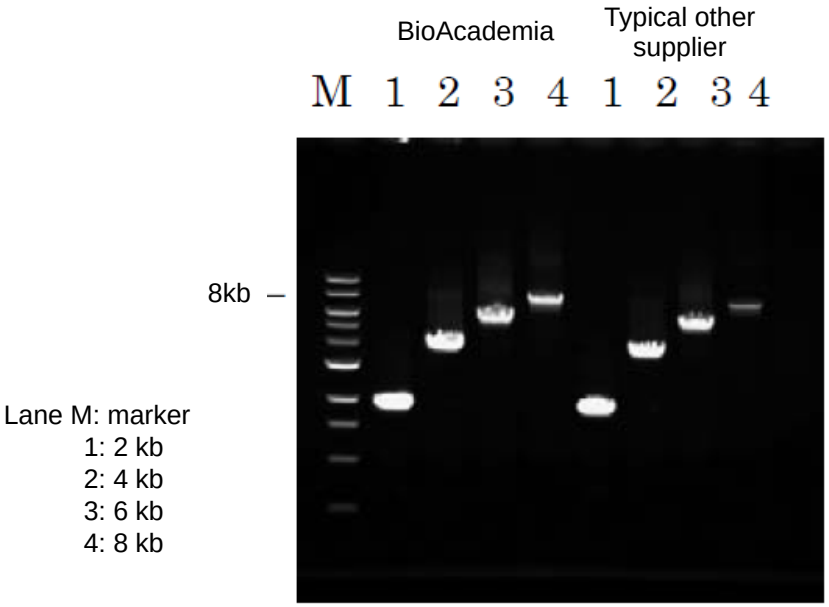


Fig.2 Amplification of λ DNA

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Manufactured by BioAcademia,Inc.

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