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Inspiration for Life Science

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Catalog No. 02-011

Taq DNA Polymerase, Economy

BACKGROUND

***Thermus aquaticus* DNA polymerase (*Taq* DNA polymerase)** gene was expressed in *E.Coli* in large quantities and highly purified. The enzyme has thermostable DNA polymerase activity and the MW is 94 kDa, same as that of the natural enzyme.

■ 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: 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% 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 (*Taq*): 100mM Tris-HCl (pH 8.3), 500mM KCl, 15mM $MgCl_2$

Storage: Store at -20°C

References:

Related Products

BAM-02-001-EX	Taq DNA Polymerase(+dNTPs)
BAM-02-021-EX	Pfu DNA Polymerase(+dNTPs)

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)

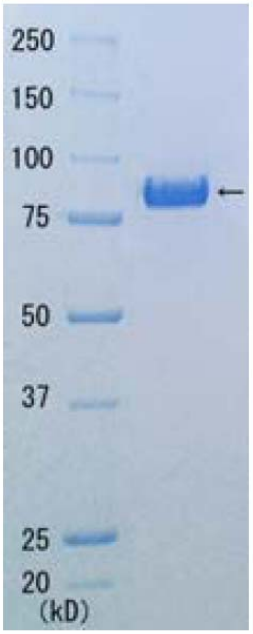

Fig.1SDS-PAGE of *Taq* DNA polymerase

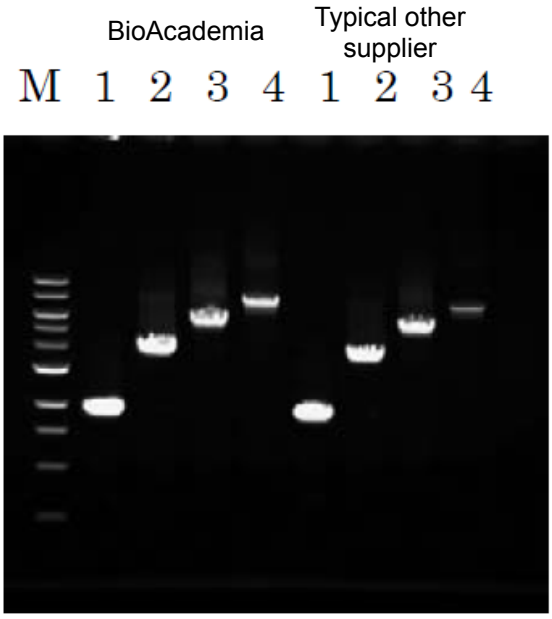

Fig.2 Amplification of λ DNA

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