Taq DNA Polymerase, Economy

02-011　　200 U　(5U/ul),　　02-011-5　　5 x 200 U　(5U/ul)

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

General composition of PCR reaction mixture (total 50ul)	
Taq DNA polymerase (5 units/ul)	*0.25 ul
10 x Standard 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 of enzyme is not recommended.	

Storage Conditions:

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

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℃ when activated salmon sperm DNA was used as template/primer.
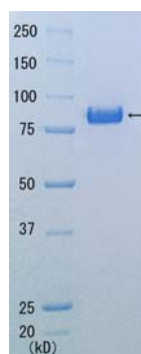
Quality Assurance: Greater than 95% of protein determined by SDS-PAGE (CBB staining) (Fig.1)
The absence of endonucleases and exonucleases was confirmed.

PCR Test: Good amplification result was obtained in PCR reaction using λDNA as a template (Fig.2).

Reagents Supplied with Enzyme:

10 x Standard Buffer (*Taq*): 100mM Tris-HCl (pH 8.3), 500mM KCl, 15mM MgCl₂

*Taq*DNA polymerase

PCR condition

98℃　10sec
57℃　30sec　} 25cycles
72℃　8min

(2min in the case of 2kb DNA)

Lane M：marker

1：2 kb
2：4 kb
3：6 kb
4：8 kb

BioAcademia　Typical other supplier

M 1 2 3 4 1 2 3 4

8kb—

Fig.1 SDS-PAGE of *Taq* DNA polymerase　　　　Fig.2 Amplification of λ DNA

Related Products: # 02-001 Taq DNA Polymerase(+dNTPs)　**#** 02-021 Pfu DNA Polymerase(+dNTPs)

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