Taq DNA Polymerase (with dNTPs), Economy

02-001　　200 U　(5U/µl) ,　　02-001-5　　5 X 200 U　(5U/µl)

***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

General composition of PCR reaction mixture (total 50µl)	
Taq DNA polymerase (5 units/µl)	*0.25 µl
10 x Reaction Buffer (*Taq*)	5 µl
2.5mM (each) dNTPs	4µl
Template	<500ng
Primer 1	0.2～1.0µM (final conc.)
Primer 2	0.2～1.0µM (final conc.)
Sterile distilled water	up to 50µl

*Use of excess amount 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/µl, 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% purity as determined by SDS-PAGE (CBB staining) (Fig.1)

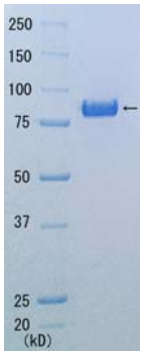
The absence of endonucleases and exonucleases was confirmed.

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



*Taq*DNA polymerase

Fig.1SDS-PAGE of *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

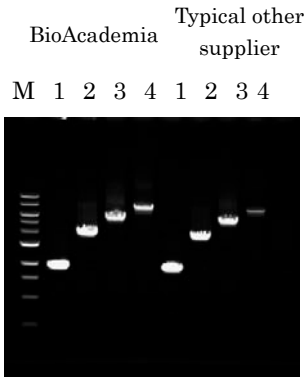


Fig.2 Amplification of λ DNA

Related product: # 2-021 Pfu DNA pol#0ymerase (+dNTPs),Economy

 # 2-031 Pfu DNA pol#0ymerase (-dNTPs),Economy

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