Taq DNA Polymerase with Standard Buffer (+ dNTPs)

Product code	02-001　200 U　　02-001-5　200 U x 5
Size	200 U
Storage	-20℃
Concentration	5 U/μl
Product Description	*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.
Definition of activity	One unit is defined as the amount of enzyme that can incorporate 10nmols of total dNTPs into an acid-insoluble material in 30 minutes at 74℃ when activated salmon sperm DNA was used as template / primer.
Purity	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)
Components	**Taq DNA polymerse (5U/μl)**: 20 mM Tris-HCl (pH 8.0), 100 mM KCl, 0.1 mM EDTA, 1 mM DTT, 50% glycerol, 0.5% Tween20, 0.5% Igepal CA-630 (02-Taq 40μl) **10 x Standard Buffer (Taq)**: 100 mM Tris-HCl (pH 8.3), 500 mM KCl, 15 mM $MgCl_2$ (02-Tsd 1.0ml) **2.5 mM (each) dNTPs** (02-Dnt 640 μl)
Application	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 U/μl) (02-Taq) ※0.25 μl 10x Standard Buffer (Taq) (02-Tsd) 5 μl 2.5mM (each) dNTPs (02-Dnt) 4 μl Template <500 ng Primer 1 0.2~1.0 mM (final conc.) Primer 2 0.2~1.0 mM (final conc.) Sterile distilled water up to 50 μl ※ Use of excess amount is not recommended.
Related product	02-011 Taq DNA polymerase with Standard Buffer (-dNTPs) 02-021 Pfu DNA polymerase with Standard Buffer (+dNTPs)
Please note: All products are FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES. NOT FOR MILITARY USE.	

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Data Images: 02-001 Taq DNA Polymerase with Standard Buffer (+ dNTPs)

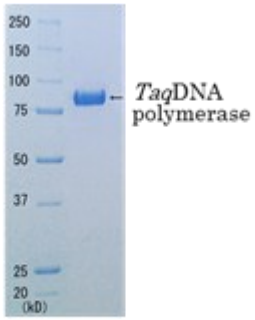
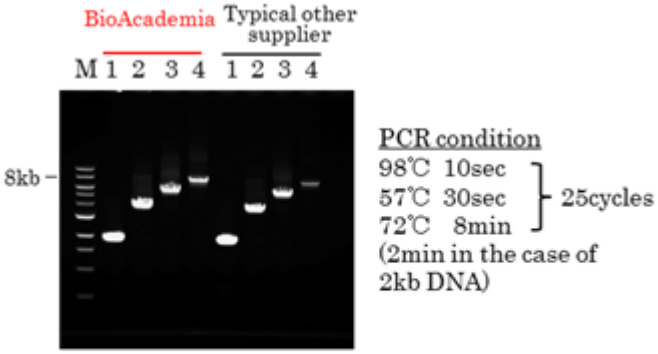


Fig.1 SDS-PAGE of *Taq* DNA polymerase



M : marker,
lane 1 : 2 kb, lane 2 : 4 kb,
lane 3 : 6 kb, lane 4 : 8 kb.

Fig.2 Amplification of λDNA

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