

C-Taq DNA Polymerase

From *Thermus aquaticus*, recombinant (*E. coli*)

Cat. No. CT-500, CT-2500

Storage Temperature - 20°C

1. 제품 정보(Description)

C-Taq DNA Polymerase는 *Thermus aquaticus* DNA polymerase 유전자를 *E. coli* 에서 발현하여 고순도로 정제된 제품입니다. 일반적인 PCR 실험에 적합합니다

2. 제품 특징

- Source : *Thermus aquaticus*
- 5'→3' exonuclease activity : Yes
- 3'→5' exonuclease activity : No
- Amplification size : < 3 kb
- A-tailing : Yes

3. 제품 적용(Application)

- Routine PCR, multiplex PCR and qPCR
- Allele specific PCR
- 16S and 23S rRNA gene amplification
- Detection of bacteria in samples(e.g. blood)
- DNA labeling reactions & TA-cloning
- Sequencing / cycle sequencing

4. 제품 구성(Kit components)

제품 구성	CT-500 (500 Unit)	CT-2500 (2500 Unit)
C-Taq DNA Polymerase (5 Unit/ μ l)	100 μ l	500 μ l
dNTPs mixture 10 mM (2.5 mM each)	1 mL	5 mL
10X PCR Buffer With 25 mM MgCl ₂	1.5 mL	7.5 mL

5. Storage buffer:

20 mM Tris-HCl(pH 8.0), 100 mM KCl, 0.5 mM EDTA, 0.1 mM DTT, 50% Glycerol

6. Unit definition:

One unit is defined as the amount of enzyme that will incorporate 10 nM of dNTP into acid-insoluble products in 30 minutes at 75°C.

7. 실험방법(Reaction protocol)

1) Reaction mixture(for 20 μ l or 50 μ l reaction)

Reaction Component	Volume	
Template*	0.1 ng ~ 1 μ g	
10X PCR buffer	2 μ l	5 μ l
DNA free-dNTPs mixture **	1.6 μ l	4 μ l
Forward primers	1~5 pmole	
Reverse primers	1~5 pmole	
C-Taq DNA polymerase	1 ~ 2.5 unit	
DNase free water	up to 20 μ l	up to 50 μ l

* For genomic DNA template, 10 ng ~ 1000 ng

For plasmid DNA, 0.1 ng ~ 15 ng

** Repeat thawing of dNTPs may cause poor PCR reaction.

2) PCR 반응 조건

Step	Temperature	Time	# of cycles
Initial denaturation*	95°C	5 min	1
Denaturation	95°C	30 sec	25~35
Annealing**	55~65°C	30 sec	
Extension	72°C	30 sec ~ 2 min	
Final elongation	72°C	5~10 min	1
Cooling	4°C	Unlimited time	1

* The denaturation temperature can vary from 92°C~95°C.

** Optimal annealing temperature depends on the melting temperature of the primers and on the system used.

8. 관련 제품

Hot Taq Polymerase	Cat. No
<i>DNA free-HotTaq</i> DNA Polymerase 250 unit	DFH-250
<i>DNA free-HotTaq</i> DNA Polymerase 500 unit	DFH-500
PCR Master Mix	
<i>DNA free-Taq</i> Master Mix, 5 ml	DFTM-5
<i>DNA free-HotTaq</i> Master Mix, 5 ml	DFHM-5
SafeDry Premix	
<i>SafeDry Taq Premix</i> (96 tube/480 tube)	LTP-96/480
<i>SafeDry HotTaq Premix</i> (96 tube/480 tube)	LHP-96/480
<i>SafeDry Pfu Premix</i> (96 tube/480 tube)	LPP-96-480
<i>SafeDry Multiplex Premix</i> (96 tube/480 tube)	LMP-96/480