

Ver.23.04

Pfu DNA Polymerase

Cat.No.: OPD16-R01

Description: *Pfu* DNA Polymerase is a recombinant type PCR enzyme, which has 12 times higher fidelity than other *Taq* DNA polymerase. It is recommended for cloning and protein expression studies. Produced target amplicon have blunt-end. You may modify the amount of template, extension time, annealing temperature, amount of DNA polymerase, the number of PCR cycle according to the target size, primer's T_m , and the type of templates for amplification.

Product contents:

- 1) *Pfu* DNA Polymerase (5U/ μ L, 250U)
- 2) 10X *Pfu* Reaction buffer (with 20mM $MgCl_2$), 500 μ L

Features

Source	<i>Pyrococcus furiosus</i>
5'→3' exonuclease activity	No
3'→5' exonuclease activity (fidelity)	Yes
Amplification size	< 3kb PCR
Hot Start activity (chemical-mediated Hot Start)	No
A-tailing	No
Error rate	1-2bp error/ 10^6 bp
Expiration date (storage at -20°C)	2 years and 3 months

Recommended PCR mixture and cycling condition

PCR mixture (Reaction vol. 50 μ L)		Cycle		
10X Taq Reaction buffer	5 μ L	95°C	1-2 min	×1
10mM dNTP mix	1 μ L	95°C	0.5-1 min	} ×35-40
Forward primer (10pmol/ μ L)	1 μ L	AT	40 sec	
Reverse primer (10pmol/ μ L)	1 μ L	72°C	2-4 min	
Template DNA (< 500ng)	- μ L	72°C	5-10 min	×1
<i>Pfu</i> DNA Polymerase (5U/ μ L)	0.25 μ L	4°C	∞	×1
Add D.W to	50 μ L			

The annealing temperature for a specific amplification reaction will depend upon the sequences of the two primers.

Allow approximately 2 minutes for every 1kb to be amplified for extension