

2X *Pfu* PCR Smart Mix (w/o dye)

Cat.No.: OPD16-R

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.

2X *Pfu* PCR Smart mix is a convenient premix type PCR amplification kit which includes *Pfu* DNA Polymerase, Buffer and dNTPs to use easily. The product is recommended to use of amplification for less than 3 kb PCR Product.

Product contents:

- 1) 2X *Pfu* PCR Smart Mix (w/o dye)

Features

Source	<i>Pyrococcus furiosus</i>
5'→3' exonuclease activity	No
3'→5' exonuclease activity (fidelity)	Yes
Amplification size	< 3kb PCR
HotStart activity (chemical-mediated HotStart)	No
A-tailing	No
Error rate	1-2 bp 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. 50μL)		Cycle		
2X <i>Pfu</i> PCR Smart mix (w/o dye)	25μL	95°C	2 min	×1
Forward primer (10 pmole/μl)	2μL	95°C	20 sec	} ×35-40
Reverse primer (10 pmole/μl)	2μL	AT	40 sec	
Template DNA (< 200ng)	-μL	72°C	2 min/kb	
Add D.W to	50μL	72°C	5 min	×1

Note:

- PCR can be performed to at lower reaction volume also. Reduce the volume of 2X *Pfu* PCR Smart mix (w/o dye), primers, template and water accordingly
- 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
- Modifications on the amount of template, extension time, annealing temperature, and the number of PCR cycles can be done according to the target size, primer's T_m, and the type of templates for amplification.