Product Details



Pfu DNA Polymerase, 5U/µL

(For High Fidelity)

Product Overview

Pfu DNA polymerase catalyzes DNA dependent polymerization from $5' \rightarrow 3'$, in presence of Mg2+ and also exhibits $3' \rightarrow 5'$ exonuclease activity for proof reading, which enables the polymerase to correct base insertion errors.

Catalog Details		
R1201	250 U	Visit us for
R1202	1000 U	more variants
R1203	2000 U	www.dxbidt.com

Storage

- 20 °C

PCR Protocol for templates ≤ 5KB

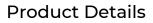
The samples must be prepared in sterile DNase Free micro-centrifuge tubes, with the following composition placed on ice

Components	50µL reaction	Final Concentration	
Template DNA	lμL	10ng - 250ng	
Forward Primer (10µM)	lμL	0.1 - 1µM	
Reverse Primer (10µM)	lµL	0.1 - 1µM	
dNTPs Mix (2.5mM Each)	4 µL	Upto 200 µM each	
10X Pfu Reaction Buffer	5 µL	1X	
DX/DT Pfu DNA Polymerase	0.5 µL	0.5 - 1.25 U	
Nuclease Free Water	Upto 50 µL		

NOTES:

- Addition of all the above reagents should be done using ice boxes to prevent non-specific amplification.
- To collect all liquid at the bottom of the vial, reaction mix can be kept for a quick spin (10 seconds).
- While doing PCR without heat lid, it is recommended to overlay the sample with 1-2 drops of mineral oil.

Step	Temperature	Time	Cycle
Initial denaturation	95 ± 1 ℃	2 - 5 minutes	1
Denaturation	95 ± 1 ℃	0.5 - 1 minutes	
Annealing *	45 - 65 ℃	0.5 - 1 minutes	30 - 35
Extension**	68 - 72 °C	ninute/kb	
Final Extension	68 - 72 ℃	5-10 minutes	1
Hold, if required.	2-8 ℃	variable	1





Pfu DNA Polymerase, 5U/µL

(For High Fidelity)

PCR Protocol for templates > 5KB

The samples must be prepared in sterile DNase Free micro-centrifuge tubes, with the following

composition placed on ice

Components	50µL reaction	Final Concentration	
Template DNA	lμL	50ng - 250ng	
Forward Primer (10µM)	lμL	0.1 - 1µM	
Reverse Primer (10µM)	lμL	0.1 - 1µM	
dNTPs Mix (2.5mM Each)	upto 6 µL	Upto 300 µM each	
10X Pfu Reaction Buffer	5 µL	1X	
DX/DT Pfu DNA Polymerase	0.5 µL	0.5 - 2.5µL	
Nuclease Free Water	Upto 50 µL		

NOTES:

- Addition of all the above reagents should be done using ice boxes to prevent non-specific amplification.
- To collect all liquid at the bottom of the vial, reaction mix can be kept for a quick spin (10 seconds).
- While doing PCR without heat lid, it is recommended to overlay the sample with 1-2 drops of mineral oil.

Step	Temperature	Time	Cycle
Initial denaturation	95 ± 1 ℃	2 - 5 minutes	1
Denaturation	95 ± 1 ℃	≤ 30s	
Annealing *	45 - 65 °C	0.5 - 1 minutes	30 - 35
Extension**	68 - 72 ° C	1.25 minute/kb	
Final Extension	68 - 72 ℃	10-20 minutes	1
Hold, if required.	2-8 ℃	variable	1

Quality Control Assays

1. **Purity:** SDS Page analysis with Coomassie Blue Staining resulted in \ge 95% purity.

2. **Performance testing (1): 2.5**U of enzyme was used to amplify 10ng of DNA template (300bp, 1kb, 3kb and 5kb) in 30 PCR cycles resulted in a single band, confirmed by 1% agarose gel electrophoresis with EtBr.

- 3. Performance testing (2): 2.5U of enzyme was used to amplify 50ng of DNA template (8kb) in 30 PCR cycles resulted in a single band, confirmed by 1% agarose gel electrophoresis with EtBr.
- 4. Nuclease tests: No contamination of endo or exonucleases were detected.

Any Technical Help?

Please write to us at <u>tech@dxbidt.com</u>. Response can be expected within 24Hrs. Our technical team shall be happy to assist you all the time.

Order Related Queries

Email : info@dxbidt.com | Ph: +91-7349708807 Website: https://dxbidt.com Address: #87, Dasanapura, Lakshmipura Post, Bangalore - 560073