P Easy-Pfu Taq DNA Polymerase

Cat. No. ABTGMBP03
Concentration 2.5 units/μl
Storage -20°C for two years

Description

P Easy-Pfu Taq DNA Polymerase is an engineered version of pfu DNA Polymerase with enhanced yield and higher fidelity. P Easy-Pfu Taq DNA Polymerase possesses a proofreading 3'-5' exonuclease activity.

Highlights

- Fidelity is 18 times higher than P Easy-Pfu DNA Polymerase.
- Extension rate is about 0.5 kb/min.
- PCR products can be directly cloned into AllBio Blunt vectors.
- Amplification of genomic DNA fragment up to 6 kb.
- Amplification of plasmid DNA fragment up to 10 kb..

Applications

- High fidelity PCR
- Blunt-end cloning
- Site-directed mutagenesis

Unit Definition

One unit (U) is defined as the amount of enzyme required to catalyze the incorporation of 10 nmol of dNTP into an acid-insoluble material in 30 minutes at 74℃, with activated salmon sperm DNA used as template.

Quality Control

P Easy-Pfu Taq DNA Polymerase has passed the following quality control assays: functional absence of double- and single-stranded endonuclease activity, >99% homogeneous measured by SDS-PAGE. Each batch of P Easy-Pfu Taq DNA Polymerase has been assayed for amplification efficiency from as little as 10 ng of human genomic DNA.

Storage Buffer

50 mM Tris-HCl (pH 8.0), 50 mM KCl, 1 mM DTT, 0.1 mM EDTA, 50% (v/v) glycerol stabilizers

10×EasyPfu Buffer with 20 mM $MgSO_4$

200 mM Tris-HCl (pH 8.8), 100 mM $(NH_4)_2SO_4$, 100 mM KCl, 20 mM $MgSO_4$, others

Kit Contents

Component	100 rxns
P Easy-Pfu Taq DNA Polymerase	250 U×1
10×P Easy-Pfu Taq Buffer	500 μl×1
50 mM $MgSO_4$	50 μl×1

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Reaction Components

Component	Volume	Final Concentration
Template	Variable	as required
Forward Primer (10 μM)	1 μl	0.2 μM
Reverse Primer (10 μM)	1 μl	0.2 μM
10×P Easy-Pfu Buffer	4 μl	1X
2.5 mM dNTPs	5 μl	0.25 mM
P Easy-Pfu Taq DNA Polymerase	1 μl	2.5units
ddH_2O	Variable	-
Total volume	50 μl	-

Thermal cycling conditions

94°C	2-5 min	
94°C	30 sec	30-35 cycles
50-60°C	30 sec	
72°C	0.5 kb/min	
72°C	5-10 min	

Notes

• For GC-rich templates, the recommended denaturation temperature is 98℃.
• To ensure high fidelity,we recommended using high quality dNTPs. dNTPs containing dUTP cannot be used.
• Since it is not hot-start, we recommended to add enzyme last during PCR.