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Pfu DNA Polymerase

Catalog Number: CSB004A
Package size : 250Units
Concentration : 2.5U/μl
Storage: Store at –20°C (non-frost-free)

Product Description

Pfu DNA Polymerase is a recombinant 90kDa DNA polymerase, originally inducibly expressed in and purified from Pyrococcus furiosis that containing DNA polymerase, thermostable gene. It has the same function as native Pfu DNA polymerase. Pfu Taq DNA Polymerase has a 5 ' -3 ' DNA polymerase activity and 3 ' -5 ' exonuclease activity and can correct the base mismatch during PCR process. Elongation rate is 0.5-1kb/min. It does not exhibit nucleotidyl terminal transferase activity so its amplification products can be directly used for cloning in blunt-ended vectors.

Component

Pfu DNA Polymerase	100ul
10×Pfu buffer（Mg2+ Plus)	1ml
dNTP Mixture（10mM each）	100μl
6×loading buffer	1ml

Unit Definition

One unit Taq DNA polymerase is defined as the amount of enzyme that incorporates 10 nmol of deoxyribonucleosidetriphosphate into acid precipitable DNA with salmon sperm DNA as template / primer in 30 min at 74°C.

Quality Control

The purity of enzyme is above 97%, evaluated by SDS-PAGE. It's validated to be no exogenous nucleic acid enzymatic activity. There is no residual host cell DNA by PCR detection. Functionally tested in amplification of a single-copy gene from human genomic DNA. No obvious enzyme activity changes observed after storing at room temperature for one week.

Intended Use

1 DNA amplification by Polyermerase Chain Reaction (PCR).

2 High-fidelity DNA amplification, cloning and expression

3 DNA sequencing.

4 Site directed mutagenesis

5 Gene synthesis.

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General reaction mixture for PCR (50 µl reaction volume):

Components	Volume
Template DNA	＜0.5µg
Forward Primer(10µM)	1-2µl
Reverse Primer(10µM)	1-2µl
10×Pfu buffer	5µl
10mM dNTPs	1µl
Pfu DNA Polymerase	0.5～1µl
ddH2O to final volume	50µl

PCR Conditions

94℃	2～5min	
94℃	30 sec	28-35cycles
52℃	30 sec	
72℃	3-4 kb/min	
72℃	5-10 min	

Storage Buffer

20 mM Tris-HCl（PH8.0）,1 mM DTT；0.1mM EDTA,100mM KCl,0.5% (v/v) Tween 20,0.5% (v/v) Nonidet P40,50% Glycerol.

Note

1. Keep all reagents on ice until use.

2. For research use only. Not for use in therapeutic or diagnostic procedures.