

Product Information

Pfu S⁺ DNA Polymerase
Catalog No.: 40401

Product Name: Pfu S⁺ DNA Polymerase

Description

Pfu S⁺ DNA polymerase is expressed in E.coli and purified to high homogeneity. This product is thermostable with both 5'- to 3'- DNA polymerase and 3'- to 5'-exonuclease activity. Thus its fidelity of DNA synthesis is much higher than that of Taq DNA polymerase. The enzyme is ideal for a variety of applications requiring high-fidelity DNA synthesis by the polymerase chain reaction (PCR). Successful PCR using Pfu DNA polymerase is readily performed requiring only slight modifications from PCR protocol enclosed in this introduction sheet.

Unit Definition

One unit is defined as the amount of enzyme required to catalyze the incorporation of 10nmol of dNTPs into acid-insoluble material in 30 minutes at 75°C.

Concentration

5 U/μL

Package size

250 U/set

Storage

-20°C

Reaction Mixture Set Up

Component	Condition
10X Pfu PCR Buffer with Mg ²⁺	2.5 μL [#]
10 mM dNTPs (Cat. No. 40701)	1 μL
Template	10 pg - 200 ng ⁺
Primer F (10 μM)	0.5-1 μL
Primer R (10 μM)	0.5-1 μL
Pfu S ⁺ DNA Polymerase	1-5 U
ddH ₂ O to the final volume	25 μL

[#]Additional 0.5-2 mM Mg²⁺ could be optimized.

⁺For plasmid or viral templates: 10 pg - 1 ng

For genomic or cDNA templates: 1 ng - 100 ng

Recommended thermal cycling conditions

Temperature	Time	Number of Cycles
94 ^o C	3 min	1
94 ^o C	15-30 sec	30-35
Tm-(3-5) ^o C	30 sec	
72 ^o C	1 kb/min	1
72 ^o C	5-10 min	

For research use only.

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