

## Product Information

**Pfu S<sup>+</sup> DNA Polymerase**
**Catalog No.:** 40401

**Product Name:** Pfu S<sup>+</sup> DNA Polymerase

**Description**

Pfu S<sup>+</sup> 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 <sup>2+</sup>	2.5 μL <sup>#</sup>
10 mM dNTPs (Cat. No. 40701)	1 μL
Template	10 pg - 200 ng <sup>+</sup>
Primer F (10 μM)	0.5-1 μL
Primer R (10 μM)	0.5-1 μL
Pfu S <sup>+</sup> DNA Polymerase	1-5 U
ddH <sub>2</sub> O to the final volume	25 μL

<sup>#</sup>Additional 0.5-2 mM Mg<sup>2+</sup> could be optimized.

<sup>+</sup>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 <sup>o</sup> C	3 min	1
94 <sup>o</sup> C	15-30 sec	30-35
Tm-(3-5) <sup>o</sup> C	30 sec	
72 <sup>o</sup> C	1 kb/min	1
72 <sup>o</sup> C	5-10 min	

**For research use only.**

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