

Pfu DNA Polymerase

P1021

Package: 250 U/1000 U

Concentration: 5 U/μl

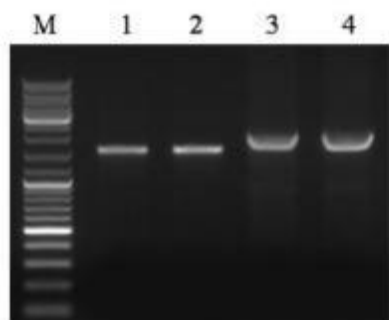
Introduction

Pfu DNA Polymerase exhibits 3'→5' exonuclease activity, that enables the polymerase to correct nucleotide incorporation errors, however the traditional Taq DNA polymerase do not have this function. Other high temperature DNA polymerase such as: Vent, DeepVent, Tli, UITma, they also have a correction function, but Pfu is the lowest rate of error in the DNA amplification of in all DNA polymerases that have been found. Pfu DNA polymerase is more thermally stable than normal Taq DNA polymerase, and remains activity at more than 90% at 95 °C for 1 hour.

Source

Pyrococcus furiosus

Experimental case



One and two are the fragment of 1.5 kb, Three and four are the fragment of 2 kb, Loading 2 μl. 1% agarose gel. Marker is 10 kb Marker.

Storage: -20°C

Unit Definition

One unit is defined as the amount of the enzyme required to catalyze the incorporation of 10 nM of dNTPs into an acid-insoluble form in 30 minutes at 70°C using hering sperm DNA as substrate.

10X PCR Buffer

200 mM Tris-HCl (pH 8.8); 100 mM KCl;
100 mM (NH₄)₂SO₄; 20 mM MgSO₄;
1.0 mg/ml BSA; 1.0% TritonX-100.

Storage Buffer

50 mM Tris-HCl (pH 8.2), 0.1 mM EDTA, 0.1% Tween20, 0.1% NP-40, 1 mM DTT, 50% glycerin.

Applications

Conventional PCR, High fidelity PCR.

site-directed mutagenesis.

Generation of PCR products for cloning and expression.

50 μl PCR system

Template DNA:	10~100ng
Forward primer (10~20 pmol) :	2 μl
Reverse primer (10~20 pmol) :	2 μl
10X PCR Buffer:	5 μl
dNTP (each 10 mM) :	1 μl
Pfu DNA Polymerase (5 U/μl) :	1 μl
ddH ₂ O up to	50 μl

Note

In general, the activity of Pfu DNA Polymerase increases with increasing MgCl₂ concentration, typically, the concentration of MgCl₂ is 1.5 mM in 50 μl PCR system. you can increase the amount of Mg²⁺ If want to increase the amount of PCR products. If the PCR product specificity is not well, can reduce the amount of Mg²⁺ appropriately.