Pfu DNA Polymerase

Cat # : PT-GL-PFU Size : 250U (5U/μl)
SA-GL-PFU Size : 25U (5U/μl)

Product Description:

"*Pfu* DNA Polymerase" is a recombinant, thermostable, modified DNA polymerase from *Pyrococcus furiosus*. This enzyme is recombinant *Pfu* according to the published gene sequence. The reaction temperature of this enzyme is 68°C. The elongation rate is ~1/2 to *Taq* DNA polymerase (*Pfu* is ~500bp/min; *Taq* is ~1kb/min). It can easily amplify up to 5kb specific DNA fragment from lambda DNA, and 1-2 kb specific DNA fragment from Human genomic DNA.

Components: stored in -20 °C for at least 1 year

* 1 tube of 50uL *Pfu* DNA polymerase in *Pfu* Storage Buffer (SA: 5uL)
* 1 tube 10X *Pfu* PCR Buffer 1.5mL (SA: 150uL)

***Pfu* Storage Buffer**:

[50 mM Tris-HCl (pH 8.2), 0.1 mM EDTA, 1 mM DTT, 0.1% Nonidet-P40 (v/v), 0.1% Tween-20(v/v), and 50% glycerol.]

10X *Pfu* PCR Buffer:

[200 mM Tris-HCl (*p*H 8.8 at 25 °C), 100 mM KCl, 100 mM $(NH_4)_2SO_4$, 1% Triton X-100, include 20 mM $MgSO_4$.]

General Protocol:

Recommended PCR reaction mix

Reagent	Quantity	Final concentration
Pfu DNA Polymerase (5U/μl)	0.25 μl	1.25 U
10X *Pfu* PCR Buffer with $MgSO_4$	5 μl	1X
dNTP Mixture (10mM each)	1 μl	200 μM each
Primer 1	variable	0.1-1.0 μM
Primer 2	variable	0.1-1.0 μM
DNA Template	variable	<0.5 μg
Nuclease-Free Water	Up to 50 ul	-

Recommended PCR cycles

Stage		Temperature	Time
Initial denature		95°C	3-5 min
Denature	25-40 cycles*	95°C	0.5-1 min
Annealing		50-60°C*	30 sec
Extension		68°C	2 min per kb
Final extension		68°C	10 min
Cooling		4°C	Indefinite

* Annealing temperature is depending on the Tm value of primers.

* Cycle Number

  For less than 10 copies of template DNA use 40 cycles

  If >10 copies, use 25-35 cycles

Research Use Only

Please do not hesitate to contact us while you have any questions.

Manufactured for and distributed by Protech Technology Enterprise Co.,Ltd

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