Power HotStart *Taq* DNA Polymerase

Cat. No: PR1601 200 U (40 μl)
PR1602 1000 U (200 μl)

Storage: Up to one year at -20℃

Description:
Hot Start *Taq* DNA Polymerase is a recombinant *Taq* DNA polymerase, which has been chemically modified by the addition of heat-labile blocking groups to its amino acid residues. The enzyme is inactive at room temperature, avoiding extension of non-specifically annealed primers or primer dimers and providing higher specificity of DNA amplification. The functional activity of the enzyme is recovery during short 4-minute incubation at 95°C. The activated enzyme possesses the same functionality as *Taq* DNA polymerase: catalyzes 5'→3' synthesis of DNA, having no detectable 3'→5' proofreading exonuclease activity, but possesses low 5'→3' exonuclease activity. It exhibits deoxynucleotidyl transferase activity, which frequently results in the addition of extra adenines at the 3'-end of PCR products. Before activation, the two activities are not detectable.

Unit definition：

One unit is defined as the amount of enzyme required to incorporate 10 nm isotope labeling dNTP into insoluble acid material at 72°C in 30 minutes

Reaction Setup

Hotstart *Taq* DNA Polymerase (5 U/μl)	0.5-1 μl
10×PCR Buffer (Mg^{2+} plus)	5 μl
dNTP Mixture(2.5 mM each)	4 μl
Template DNA	＜ 1 g
Primer 1 (20 μM)	1 μl
Primer 2 (20 μM)	1 μl
Sterile Water	Up to 50 μl

Thermal cycler condition

Cycle Numbers	Step	Temperature	Time
1	1	95℃	2-5 min
30-35	1	95℃	30 s
	2	50-60℃	30 s
	3	72℃	1 min/1-2kb
1	1	72℃	10 min

Notes

- Please optimize the reagent concentrations, conditions, and parameters according to the experiment.
- Make PCR reaction mixture on ice to avoid non-specific reaction.