GENETBIO

Made by ISO 9001 & ISO 13485 system

Prime Taq DNA Polymerase

Cat. No.	Size	Remark
G-1000	250 Units	with dNTPs mix., +$MgCl_2$ buffer

Package Information

G-1000	- Prime Taq DNA Polymerase (5 Units/㎕): 50㎕ - 10X Reaction buffer (with $MgCl_2$): 1.0 ml - 10 mM dNTP Mixture (2.5 mM of each dNTPs): 0.5 ml

Description

Prime Taq DNA Polymerase is a high quality recombinant enzyme and catalyzes 5'→3' synthesis of DNA. The enzyme has no detectable 3'→5' proofreading exonuclease activity.
It is provided with 10X reaction buffer that contains PCR enhancers. This reaction buffer will enable or improve sub-optimal PCR caused by templates that have a high degree of secondary structure or that are GC-rich.

Buffer and Reagents

Storage Buffer
20 mM Tris-HCl (pH 8.0), 100 mM KCl, 0.5 mM EDTA, 0.1 mM DTT, 0.5% Tween 20, Nonidet P-40 and 50% Glycerol
10X Reaction Buffer (with $MgCl_2$)
Contains 500 mM Tris-HCl (pH 9.0), 20 mM $MgCl_2$, 200 mM $(NH_4)_2SO_4$ and PCR enhancers.
10 mM dNTP mixture
2.5 mM of each dATP, dCTP, dGTP and dTTP

Usage Information

▣ A DNA fragment which is amplified by Prime Taq DNA Polymerase has A-overhang, and it enables you to do cloning by using T-vectors.
▣ This product is sold for research purpose only. This is not to be used for human diagnostic or drug purposes.
▣ All claims must be brought within expired date.

Protocol

Optimal reaction conditions, such as reaction time, temperature and amount of template DNA, may vary and must be individually determined.

1. Thaw 10X Reaction buffer.

2. Prepare a master mix.

Components	Volume	
10X Reaction buffer	2 ㎕	5 ㎕
10 mM dNTP Mix (2.5 mM of each)	1 ~ 5 ㎕	1 ~ 5 ㎕
Upstream Primer (10 pmoles/㎕)	0.2 ~ 2.0 ㎕	0.2 ~ 2.0 ㎕
Downstream Primer (10 pmoles/㎕)	0.2 ~ 2.0 ㎕	0.2 ~ 2.0 ㎕
Prime Taq DNA Pol. (5Unit/㎕)	0.5 ~ 1 U	1.25 ~ 2.5 U
Template DNA	10 fg ~ 1 ㎍	10 fg ~ 1 ㎍
Sterilized D.W	Variable	Variable
Total Volume	20㎕	50㎕-

* Amount of template:
- Bacteriophage lambda, cosmid, plasmid: 10 fg ~ 300 ng
- Total genomic DNA: 100 ng ~ 1 ㎍

3. Mix the master mix and dispense appropriate volumes into PCR tubes. Centrifuge the reactions in a micro-centrifuge for 10 seconds.

4. Perform PCR using your standard parameters (3-step cycling).

Step	Temp. & Time		Cycles
	Temp.	Time	
Initial denaturation	95℃	5 min.	1
Amplification	95℃ 50~60℃ 72℃	30 sec. 30 sec. 30~60 sec.	25 ~ 45
Final extension	72℃	5 min.	1

* For PCR products longer than 3~4kb, use an extension time of approximately 1 min per Kb DNA.

5. Separate the PCR products by agarose gel electrophoresis and visualize with EtBr or any other means.

■ **Research Use Only** ■ **Store at -20℃**
■ **Avoid multiple freeze-thaw cycles and exposure to frequent temperature changes.**

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