

# Taq DNA Polymerase

**Cat. No:**

FPLF001.0250

FPLF001.0500

## Contents:

Components	100 RXN	200 RXN
Taq DNA poly. 5 U/μl	250 U	500 U
MgCl <sub>2</sub> Solution 25 mM	0.5 ml	1 ml
10X Buffer MgCl <sub>2</sub> free	0.5 ml	1 ml

## Kit storage:

This kit should be stored at -20 °C. Under this condition reagents are stable for two years from the date of production.

## Description:

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

## Protocol:

- 1) Thaw 10X reaction buffer, dNTP mixture.

- 2) Mix the master mix thoroughly and dispense appropriate volumes into PCR tubes or plates.

Component	Volume	Final Conc.
10X Reaction Buffer	2 μl	1X
MgCl <sub>2</sub> Solution 25 mM	1.2 μl	1.5 mM
40 mM dNTPs Mix (10 mM each)	0.4 μl	0.2 mM
Upstream Primer (10 pmol/ μL)	1 μl	0.5 pmoles/μl
Downstream Primer (10 pmol/ μL)	1 μl	0.5 pmoles/μl
Template DNA	Variable	10 fg~1 μg
PCR grade water	Variable	-
Taq DNA poly. 5 U/μl	0.25 μl	0.065 U/μl
Total Volume	20μl	-

- 3) Add templates DNA to the individual PCR tubes or wells containing the master mix.
- 4) Program the PCR machine according to the program outlined.

Cycle	Time	Temp °C
1	4 min	95
30-35	30 sec	94
	30 sec	57
	30-60 sec	72
1	5 min	72

## Note:

\* Extension temperature is between 68 and 72°C.

We highly recommend 68 °C for more efficiency of Taq DNA polymerase.

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

\* A DNA fragment which is amplified by Taq DNA polymerase has A overhang, and it enables you to do cloning by using T-vector.

## Agarose gel Electrophoresis:

Run the total 5-7 μL of PCR products alongside 3μL DNA marker on a 2% agarose gel containing DNA safe stain.

## Disclaimers and Addresses:

This product is for **Research use only** and should only be used by trained professionals.