

# Prime Taq Premix (2X)

| Cat. No. | Size | Remark           |
|----------|------|------------------|
| G-2000   | 1 ml | 2X concentration |

## Package Information

|        |  |
|--------|--|
| G-2000 | 2X Prime Taq Premix (1.0 ml X 1)<br>- with Prime Taq DNA Polymerase, reaction buffer, enzyme stabilizer, dNTPs mixture and loading dye |
|--------|--|

## Description

Prime Taq Premix is composed of Prime Taq DNA Polymerase, reaction buffer, dNTP mixture, enzyme stabilizer and sediment which is needed for electrophoresis, and loading dye, and these components maximize the convenience of the users.

Prime Taq DNA Polymerase is a high quality 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 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.

## Composition of 2X Premix

Prime Taq DNA Polymerase 1 unit/10 $\mu$ l, 2X reaction buffer, 4mM MgCl<sub>2</sub>, enzyme stabilizer, sediment, loading dye, pH 9.0 and 0.5 mM each of dATP, dCTP, dGTP, dTTP.

## Usage Information

- A DNA fragment which is amplified by Prime Taq Premix 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.

## ■ Research Use Only

## ■ Store at -20°C

(Avoid multiple freeze-thaw cycles and exposure to frequent temperature changes.)

## Protocol

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

1. Thaw 2X Prime Taq Premix solution.

2. Prepare a master mix.

| Components                  | Volume               | Final Conc.       |
|-----------------------------|----------------------|-------------------|
| 2X Prime Taq Premix         | 10 $\mu$ l           | 1X                |
| Upstream Primer             | Variable             | 0.1 ~ 1.0 $\mu$ M |
| Downstream Primer           | Variable             | 0.1 ~ 1.0 $\mu$ M |
| Template DNA <sup>(1)</sup> | Variable             | 10 fg~1 $\mu$ g   |
| Sterilized D.W              | add up to 20 $\mu$ l |                   |
| Total Volume                | 20 $\mu$ l           |                   |

(1) Amount of template:

- Bacteriophage lambda, cosmid, plasmid: 10 fg ~ 300 ng
- Total genomic DNA: 100 ng ~ 1  $\mu$ g

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°C         | 5 min.     | 1       |
| Amplification        | 95°C         | 30 sec.    | 25 ~ 45 |
|                      | 50~60°C      | 30 sec.    |         |
|                      | 72°C         | 30~60 sec. |         |
| Final extension      | 72°C         | 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.