

## 2×PCR MasterMix, with blue dye

**Product Number: PCM01A**

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### Shipping and Storage

-20°C.

### Components

| Component                      | PCM01A |
|--------------------------------|--------|
| 2×PCR MasterMix, with blue dye | 1ml    |

### Description

2×PCR MasterMix, with blue dye is a ready to use solution, which contains Taq DNA polymerase, dNTP, MgCl<sub>2</sub>, PCR buffer, PCR reaction stabilizer, sample loading buffer and blue dye (bromophenol blue). Therefore, PCR products can be directly subjected to agarose gel electrophoresis after PCR. The product goal is to save operating time and reduce the risk of pollution. The optimized 2×PCR MasterMix, with blue dye, can expand and grow up to 5 kb of target fragments from lambda DNA. Users only need to add templates, water, and primers to establish a PCR reaction. The provided 25 mM Mg<sup>2+</sup> was used to optimize the PCR system in order to obtain the desired PCR product.

### Protocol

- Optimize the template concentration based on the following conditions:

|             |             |
|-------------|-------------|
| gDNA        | 1~10 µg/ml  |
| Plasmid DNA | 0.1~1 µg/ml |

- Optimizing primer concentration: A primer concentration of 0.2~0.5µM is suitable for most PCR amplification reactions.
- Dissolve the reagent on ice.
- Prepare the reaction system according to the table below:

| Component                     | Volume      | Final Conc.                         |
|-------------------------------|-------------|-------------------------------------|
| 2×PCR MasterMix               | 25 µl       | 1×                                  |
| DNA template                  | 1 µl        | 1~10 µg/ml gDNA<br>0.1~1 µg/ml pDNA |
| Primer F (10 µmol/L)          | 2 µl        | 0.4 µM                              |
| Primer R (10 µmol/L)          | 2 µl        | 0.4 µM                              |
| Sterilized ddH <sub>2</sub> O | Up to 50 µl | -                                   |

- Centrifuge the reaction tube in a centrifuge for 30-60 seconds.
- If the PCR instrument used does not have a heat cap function, please cover the reaction solution with mineral oil.
- Most PCR reactions can use the following cyclic procedures:

| Step         | Temperature | Time     | Cycles         |
|--------------|-------------|----------|----------------|
| Pre-Duration | 94°C        | 4 min    | 1 cycle        |
| Duration     | 94°C        | 30 s     | } 30-35 cycles |
| Anneal       | 45~68°C     | 30 s     |                |
| Extend       | 72°C        | 1 kb/min |                |
| Post-Extend  | 72°C        | 10 min   | 1 cycle        |