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# 2×PCR Super MasterMix

**Product Number: PCM10**

## Shipping and Storage

Store at -20℃.

## Component

| Component | PCM10 |
|---|---|
| 2×PCR Super MasterMix | 1mL |
| $ddH_2O$ | 1mL |

## Description

This product contains Tag Plus DNA polymerase dNTPs, $MgCl_2$, Reaction buffer with a concentration of 2×. It has the advantages of being fast, simple, highly sensitive, specific, and stable, which can minimize human error to the greatest extent possible.

This product is easy to use and can avoid contamination during PCR operations. To use, simply take an appropriate amount of 2×PCR Super MasterMix solution, add templates and primers, and add deionized water to make up the volume, so that the MasterMix solution concentration is 1x for reaction. Please ensure sufficient dissolution and mixing before use.

This product comes in two types: dye containing and dye free. There are two types of dyes (blue dye and yellow dye) in dye containing products, which are separated during electrophoresis to monitor migration progress. The mobility of blue dye in 1% agarose gel is the same as that of 3-5 kb DNA fragment. The yellow dye migrated faster (<50 bp) than the primer in 1% agarose gel.

## Application

Genetic testing: The error between different batches of this product is very small, making it particularly suitable for large-scale genetic testing, semi quantitative PCR experiments, and trace DNA detection.

This product is suitable for PCR amplification of DNA fragments, DNA labeling, primer extension, sequence determination, etc. The PCR product with band A can be directly cloned using TA after purification.

## Quality control

No exogenous nuclease activity detected: PCR method detects no host residual DNA; Can effectively amplify single copy genes in human genes; After being stored at room temperature for one week, there was no significant change in activity.

## Protocol

Note: The following examples are for reference only. The actual reaction conditions vary depending on the structure of templates, primers, etc., and the optimal reaction conditions need to be set according to the actual situation.

1. **Using 2×PCR Super MasterMix product, amplify a 1kb fragment using human genomic DNA as a template, with a reaction system of 25μL (if the reaction system is different, the dosage can be increased or decreased according to this ratio).**

| Component | Volume |
|---|---|
| Template | 10pg-1μg |
| Forword Primer (10μM) | 0.5μL |
| Reverse Primer (10μM) | 0.5μL |
| 2×PCR Super MasterMix | 12.5μL |
| $ddH_2O$ | Supplement to 25μL |

2. **Setting of PCR reaction cycle:**

| | | | |
|---|---|---|---|
| 94℃: | 2-5 min | | |
| 94℃: | 30 sec | ⎫ | 30-35 cycles |
| 55℃: | 30 sec | ⎬ | |
| 72℃: | 1-2 kb/min | ⎭ | |
| 72℃: | 5-10 min | | |

**3. Result detection:**

After reaction, 5 μL-10mL reaction product was taken and detected by agarose gel electrophoresis.