

## 2×Hieff™ PCR Master Mix (No Dye)

### Product description

2×Hieff™ PCR Master Mix is a kind of conventional PCR premixed solution which is ready to use, including Hieff™ Taq DNA Polymerase (Cat#10101), dNTP mix, MgCl<sub>2</sub> and optimized buffer. During the reaction, only the primer and template can be added for amplification, which greatly simplifies the operation steps of experiment. This product contains excellent stabilizers and can be stored for 3 months at 4°C. The PCR product have 3'-dA protrusion and can be easily cloned into T vector.

### Components

Name	10103ES03	10103ES08	10103ES25	10103ES50	10103ES60
2×Hieff™ PCR Master Mix(No Dye)	1 mL	5×1 mL	25 mL	50×1 mL	100×1 mL

### Specifications

Fidelity (vs. Taq)	1×
Hot Start	No
Overhang	3'-A
Polymerase	Taq DNA Polymerase
Reaction Format	SuperMix or Master Mix
Reaction Speed	Standard
Product Type	PCR Master Mix (2x)

### Storage

The 2×Hieff™ PCR Master Mix products should be stored at -25~-15°C for 2 years.

### Instructions

#### 1. Reaction System

Components	Size (μL)
Template DNA	suitable
Primer 1 (10 μmol/L)	2
Primer 2 (10 μmol/L)	2
2×Hieff™ PCR Master Mix	25
ddH <sub>2</sub> O	to 50

Table 1 Reaction system (50 μL)

## 2. Amplification Protocol

Cycle steps	Temperature (°C)	Time	Cycles
Pre-denaturation	94	5 min	1
Denaturation	94	30 sec	35
Annealing	50-60	30 sec	
Extension	72	30-60 sec/kb	
Final extension	72	10 min	1

Table 2 Amplification protocol

[Note]:

- 1) Template usage: 50-200 ng genomic DNA; 0.1-10 ng plasmid DNA.
- 2) Mg<sup>2+</sup> concentration: This product contains 3 mM of MgCl<sub>2</sub>, suitable for most PCR reactions.
- 2) Annealing temperature: Please refer to the theoretical T<sub>m</sub> value of primers. The annealing temperature can be set to 2-5°C lower than the theoretical value of the primer.
- 3) Extension time: For molecular identification, 30 sec/kb is recommended. For gene cloning, 60 sec/kb is recommended.

### Notes

1. PCR products with 2×Hieff™ PCR Master Mix are not suitable for polyacrylamide gel electrophoresis.
2. For your safety and health, please wear lab coats and disposable gloves for operation.
3. This product is for research use ONLY!

### Application example

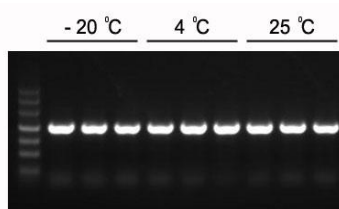


Figure 1 The expected 1.2 kb PCR products can be amplified with 2×Hieff™ PCR Master Mix.

The Master Mix was stored at -20°C for 1 year following another 3 months at 4°C and 1 month at 25°C. Template: Arabidopsis genome.

Annealing temperature: 60°C. Extension time: 40 sec.