2X PCR Master Mix

Catalogue No.: K089

Size: 400T

Kit component:

Item	400T
2X PCR Master Mix	1 mL*4

Storage:

The kit should be stored at -20° C for one year.

Introduction:

The 2X PCR Master Mix contains 2X Taq DNA Polymerase, 2X PCR Buffer, 2X dNTP, and can be amplified by PCR only by adding an appropriate amount of primers, templates, and water. The PCR operation is greatly simplified, the operation is faster, the pollution that may be caused during the PCR operation is reduced, and the repeatability of PCR is better.

The product can perform a variety of conventional PCR amplification, and is particularly suitable for qualitative and semi-quantitative PCR amplification, as well as T-vector cloning of DNA fragments below 2kb.

This product has high stability and has no significant effect on PCR amplification after repeated freezing and thawing for 15 times.

For a PCR reaction system of 50 microliters, it is enough for 160 samples; For 20 microliters of PCR reaction system, it is enough for 400 samples.

Assay Procedure:

一. PCR reaction system was set up:

1. Melt and mix the solutions required for PCR reaction. Place the 2X PCR Master Mix on an ice bath or in an ice box.

2. Refer to the table below to set up the PCR reaction system under ice bath conditions.

reagents	final concentration	volume(μ L)	volume(μ L)
double distilled water or Milli-Q water	-	21-x	8.4-y
Template DNA	10pg-1 μ g	x	y
Primer mixture（10 μ M each）	0.8 μ M	4	1.6
2X PCR Master Mix	1X	25	10
Total volume	-	50	20

Note: The recommended dosage of 50 μ l reaction volume for different types of templates is as follows:

Mammalian genomic DNA: 0.1-1 μ g; Escherichia coli genomic DNA: 10-100ng; Plasmid DNA: 0.1-10ng.

3. Gently blow and mix with a pipette, centrifuge at room temperature for a few seconds.

4. Put the PCR reaction liquid on the PCR instrument to start the PCR reaction.

二. The setting of PCR reaction parameters can be referred to as follows:

STEP1(initial denaturation): 94℃ 3min

STEP2(denaturation): 94℃ 30sec

STEP3(annealing): 55℃ 30sec

STEP4(extension): 72℃ 1min

STEP5(cycle): Go To STEP2 for 30 cycles

STEP6(final extension): 72℃ 10min

STEP7(temporary storage): 4℃ forever

Notes:

1. Because PCR reaction is very sensitive and can amplify the target gene sequence more than 10 million times, please pay attention to avoid contamination of trace DNA to be amplified when using Taq enzyme, and try to consider setting a blank control without template to confirm whether there is contamination of DNA to be amplified.

2.Taq DNA polymerase has an error rate of about 2.2×10^{-5} per cycle in the PCR process. For cloning DNA fragments larger than 1kb, it is recommended to use a high-fidelity DNA polymerase with a lower error rate. Taq DNA polymerase is the best choice for qualitative or quantitative PCR or RT-PCR.

3. Although this product still has almost the same PCR amplification effect after 15 times of repeated freeze-thaw, it is still appropriate to avoid repeated freeze-thaw this product, repeated freeze-thaw may degrade product performance.

4. This product is only for the use of scientific researchers, can not be used for clinical diagnosis or treatment, food or medicine, shall not be stored in ordinary homes.

5. For your safety and health, please wear good clothes and disposable gloves.