艾科瑞生物
Accurate Biology

Instruction for Use

2X *Pro Taq* Master Mix (dye plus)

AG11109
Version.V2E1

Research Use Only
Not For Diagnosis Procedures

1. Description

This product is designed based on the Long and Accurate (LA) PCR principle. It incorporates a high-fidelity enzyme into Accurate Taq enzyme, granting it 3′→5′ exonuclease activity (proofreading activity). This makes it highly suitable for amplifying DNA fragments over 10 kb with excellent fidelity.

The product is a ready-to-use 2x Pro Taq Enzyme PCR reaction premix, which includes dye reagents (blue and yellow) required for electrophoresis analysis. After the PCR reaction, the solution appears bright green and can be directly used for gel electrophoresis. During PCR, simply add the template and primers to the premix to start amplification.

This premix simplifies operation, minimizes human error, and provides results within a short timeframe. Most PCR products have an A base added at the 3′ end, making them directly compatible for cloning into T vectors.

2. Kit Information

Kit Name	Cat. No	Specification
2X *Pro Taq* Master Mix (dye plus)	AG 11109	120 rxns / 50 µl

3. Transportation and Storage

Storage	Store at −20°C
Transportation	Transport at −20°C Dry Ice or Blue Ice Condition

4. Kit Components

Cat. No AG 11109

Kit Components	Volume
2X *Pro Taq* Master Mix (dye plus)	500 µl x 6 pcs
RNase free water	1 ml x 3pcs

5. Protocol

5.1 Reagent Preparation

The final reaction volume in this protocol is 50μl. The volumes given here may be scaled for larger or smaller reaction volume.

Components	Final Concentration	Volume
2X *Pro Taq* Master Mix (dye plus) *1	1 X	25 μL
Template	≤ 500 ng*2	-
Primer F (10 μM)	0.2 μM*3	1 μL
Primer R (10 μM)	0.2 μM*3	1 μL
RNase free water	-	Up to 50 μL

*1: For the first use of 2X Pro Taq Master Mix (Dye Plus), centrifuge the solution to collect it at the bottom of the tube before use to minimize enzyme loss.

*2: It is generally recommended to add no more than 500 ng of template DNA. Adjust the amount as needed based on experimental requirements.

*3: Use a final concentration of 0.2 μM for primers. This can be adjusted within the range of 0.2 ~ 1.0 μM based on experimental results.

*4: Prepare the reaction mixture on ice. After preparation, place the mixture in a PCR machine for the reaction.

5.2 Thermal Cycling Program

The cycling parameters below are offered as a guideline and may be modified as necessary for optimal results.

(As example for target DNA length of 1kb)

Step	Temperature	Time	Number of Cycles
Initial-Denaturation	94°C	30 sec	1
Denaturation*	98°C	10 sec	
Annealing	55°C	30 sec	25~35
Extension	72°C	1 min	
Final Extension	72°C	2 min	1

*: Could be adjusted based on the instrument model and experiment requirement, recommended to be as :
94°C 20 ~ 30 sec; 98°C 5 ~ 10 sec.
Annealing Temperature is recommended to be ±5°C of the Tm Value of upstream downstream primers.

6. Result Analysis

Collect and Purify the PCR product. Then analyse via Agarose Gel Electrophoresis.

Accurate Biotechnology (Hunan) Co., Ltd
Hunan Inspection Industrial Park, Bachelor Road,
Yuelu District, Changsha City, Hunan Province, China
service@agbio.com.cn
+86 400 767 6022
en.agbio.com.cn
Research Use Only