ama*R* 2X PCR Mix

Cat. No.: SM217-0250 Size: 250 Reactions (2 × 1.25 ml)
Cat .No.: SM217-0010 Size: 10 Reactions (1 × 100 µl)

Description

The ama*R* 2X PCR Mix is a ready-to-use PCR reaction mixture. Simply add primers, template, and water, the reagent will execute primer extensions and other molecular biology applications. The ama*R* 2X PCR Mix is a pre-mixed solution containing *Taq* DNA polymerase, PCR reaction buffers, dNTPs, and gel loading dye. The ama*R* OnePCR which contains the *Taq* DNA polymerase, is purified from the *E. coli.,* and expressing the Thermus aquaticus DNA polymerase gene. This enzyme has a 5' → 3' DNA polymerase and the 5' → 3' exonuclease activity but lacks the 3' → 5' exonuclease activity. The ama*R* 2X PCR Mix can amplify DNA fragments up to 5 kb and with good amplification specificity, and it is compatible with the template. The PCR product has an A base at the 3' end and can be directly used for T/ A cloning after purification. The ama*R* OnePCR contents red tracking dyes that run at 10 bp on a 1% agarose gel. The ama*R* 2X PCR Mix mixture is supplied at the 2X concentration to allow 50% of the final reaction volume to be used for the addition of primer and template solutions. Reagents are provided with the sufficient amplification reactions of 20 µl each.

Features

- No need to prepare PCR Reagents.
- Direct loading onto your agarose gel.

Applications

- PCR Amplification

Kit Contents

Contents	SM217-0250	SM217-0010
ama*R* 2X PCR Mix	1.25 ml X 2 vials	100 µl X 1 vial

Tracking Dye

- Amaranth

Quality Control

The quality of the ama*R* 2X PCR Mix is tested on a lot-to-lot basis to ensure consistent product quality.

Required Materials

- Electrophoresis equipment.
- DNA Markers (optional).
- DNA Staining reagent
- BLooK LED transilluminator or UV epi-illuminator

Storage

Store at room temperature up to 3 months
Store at 4°C up to 6 months
Store at -20°C up to 1 year
Shipping temperature: 4°C

ama*R* 2X PCR Mix Protocol

Standard PCR with ama*R* 2X PCR Mix

1. For each 20 µl reaction, assemble the following components in a 0.2 ml PCR tube on ice before the experiment:

Component	Volume (µl)	Final Concentration
ama*R* 2X PCR Mix	10	1X
Forward primer (5-10 µM)	Variable	0.1-0.2 µM
Reverse primer (5-10 µM)	Variable	0.1-0.2 µM
DNA template	Variable	
Add ddH_2O to	20	

2. Mix gently. If necessary, centrifuge briefly. Cap the tube and place it in the thermal cycler.

3. To process in the thermal cycler for 25-35 cycles as follows:

Initial Denaturation	3-5 minutes at 94°C	
Denaturation	30 seconds at 94°C	30-35 cycles
Annealing	30 seconds at 55-65°C	
Extension	30-60 seconds/ kb at 72°C	
Final Extension	5 minutes at 72°C	

Note: Optimal conditions for amplification will vary depending on the primers and thermal cycler used. It may be necessary to optimize the system.

4. After the PCR reaction, please perform DNA electrophoresis and gel staining.
5. Use the BLooK LED Transilluminator or UV epi-illuminator to photograph the gel.

Troubleshooting

Refer to the table below to troubleshoot problems that you may encounter when you did PCR amplification with the kit.

Problem	Cause	Solution
Low yield of PCR products	Incomplete concentration of start materials	Use the appropriate method for the DNA preparation based on the amount of the starting materials.
DNA degrade	DNA is not fresh	Avoid repeated freeze / thaw cycles of the sample.
		Keep DNA preparations on ice or frozen in order to avoid the degradation.
	DNase contaminant	Use the fresh TAE or TBE electrophoresis buffer.
		Maintain a sterile work environment to avoid contamination from DNase.

Related Ordering Information

Cat. No.	Description	Size
SA001-0500	AGAROSE Tablet, 0.5g	100 Tablets
BK001	BLooK LED Transilluminator	1 Set
SD010-R600	1 Kb DNA Ladder RTU	600 µl
SL002-0500	Novel Green (10000X)	500 µl
SN005-0100	Plasmid *mini*PREP Kit	100 Reactions

Caution

- During operation, always wear a lab coat, disposable gloves, and protective equipment.
- Research Use Only. Not intended for any animal or human therapeutic or diagnostic uses.