LAMDA BIOTECH

PRODUCT INFORMATION

Catalog No.: D139Mix

Product Name: SafeStain 2x PCR Master Mix

Special Feature: Direct loading & visualization

Contents:

SafeStain 2X PCR Master Mix	2000µl

Storage: 4°C, or -20°C for long term

Description:

The **SafeStain 2x PCR Master Mix** is a 2X PCR Master Mix with a SafeStain DNA dye. *Taq* Plus DNA polymerase is used to formulate the master mix with dNTP, Mg^{2+} and PCR reaction buffer optimally optimized for efficient amplification of DNA templates by PCR. Users only need to add template, primers for PCR, which greatly saves time and reduces contamination due to less pipetting steps needed for PCR set-up. The PCR product can be directly loaded to the gel and visualized under UV or blue light for checking PCR results. No extra staining step is needed because the master mix is already premixed with the SafeStain DNA dye. When running the agarose gel, two non-toxic inert dyes, blue and yellow, will be revealed on the gel. The blue dye migrates at the position about 4kb and the yellow dye is about 10bp of DNA fragments. It is recommended to run the PCR products side-by-side either with PreSafeStained 100bp DNA Ladder (Cat. No.M3002) or PreSafeStained 1Kb DNA Ladder (M1008).

Related products	**Catalog No.**
• Agarose (Standard-Agarose)	A113
• PreSafeStained 100bp DNA Ladder	M3002
• PreSafeStained 1Kb DNA Ladder	M1008
• SafeStain 6X DNA Loading Dye	6XLD
• Ultra Bright LED Transilluminator	LB-16
• UltraSlim® LED Illuminator	SLB-01

1x Composition: 10mM KCl, 20mM Tris HCl (pH9.0), 16mM $(NH_4)_2SO_4$, 0.1% Triton X-100, **1.5mM $MgCl_2$***, 200µM dNTPs, 2.5units/25ul of *Taq* DNA polymerase, trace amount of dyes and enzyme enhancer and stabilizer.

Magnesium Chloride: In general, 1.5mM $MgCl_2$ is recommended; this may vary with different conditions and primer sets. If needed, Mg^{2+} concentration can be adjusted as shown below:

Final $MgCl_2$ conc.	**25mM $MgCl_2$ for a 50µl reaction**
1.5mM	------
2.0mM	1.0µl
2.5mM	2.0µl

Directions for use:

1. Add the following reagents to a PCR tube or plate, and mix:

2X *Taq* Master Mix:	25 µl
Primers:	y µl
Sample:	1 µl
Water:	x µl
***Total volume:**	**50 µl**

*Adjust your PCR volume proportionally, such as, using 25 µl as your final PCR reaction volume.

2. Perform the thermal cycling. For example:

Step	**Temperature**	**Time**	**Cycles**
Initial Denature	95°C	1-3 min	1
Denature	95°C	0.5-1 min	30-35
Annealing	50-65°C	0.5-1 min	
Extension	72°C	1 min/kb	
Final Extension	72°C	5-7 min	1
Hold	4°C	∞	

3. Direct loading the PCR product along with the PreSafeStained 1Kb DNA Ladder to agarose gel for visualization of PCR results and DNA ladder.