LAMDA BIOTECH

PRODUCT INFORMATION

Catalog No.: GD124

Product Name: **GoGreen^{tm} *Taq*$^{+}$ Master Mix**

Concentration: **2X**

Special Feature: **Room Temperature Stable**

Contents: *2X Taq* Master Mix 1000µl

Storage: RT when in use
4°C if not in use
-20°C for long term storage

Description: The GoGreen^{tm} *Taq*$^{+}$ Master Mix is a Ready-to-Use 2X PCR master mix, containing *Taq* Plus DNA polymerase, dNTP, Mg^{2+} and PCR reaction buffer optimally formulated with PCR enhancer and stabilizer 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. This GoGreen^{tm} *Taq*$^{+}$Master Mix contains two non-toxic inert dyes, blue and yellow, to visualize the PCR mixing steps during PCR set-up and to allow direct loading onto gels after PCR for electrophoresis. The blue dye migrates at the position of a 4kb DNA fragment and the yellow dye at about 10bp.

Taq Plus DNA Polymerase is a modified recombinant T*aq* DNA Polymerase with a molecular weight of 94 kDa, derived from thermophilic bacterium *Thermus aquaticus*. Different from regular *Taq* DNA Polymerase, *Taq* Plus DNA Polymerase improves the fidelity and length of amplified PCR fragment. It can amplify over 5 kb DNA template resulting a mixture of DNA blunt-ended fragments and those with 3'-A overhangs, which allows users to choose either blunt-end or T-vector protocols to clone the amplified products.

Quality Control: Every lot is tested as to the integrity of the overall performance of the reaction system under the defined conditions for the enzyme.

Unit Definition: One unit incorporates 10 nmoles of dNTPs into acid-insoluble material in 30 minutes at 74°C.

This product is for research use only

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 for agarose gel to visualize PCR results.

Related Products	**Cat. No.**
• DNA SafeStain	C138
• GoGreen^{tm} 100bp DNA ladder	MG107
• GoGreen^{tm} 1kb DNA ladder	M1000
• Standard-Agarose	A113
• UltraSlim® LED Illuminator	LB-16