BOSTER
antibody and ELISA experts

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Boster's PCR Master Mix (No-Dye) 8-tube strips, 20 µl x 96 reactions
SKU: MB1001-1

I. Introduction

The Boster's PCR Master Mix contains DNA polymerase, dNTPs and reaction buffer in a pre-mixed format that is freeze-dried into an individual packet.

II. Storage

Store at -20°C

III. Application

- Routine PCR
- Primer Extension
- TA Cloning
- Gene Sequencing

III. Content

Components	20µl Reaction	50µl Reaction
Top DNA Polymerase	1U	2.5U
dNTP(dATP,dCTP,dGTP,dTTP)	Each 250 µM	Each 250 µM
Reaction Buffer with 1.5mM $MgCl_2$	1X	1X
Stabilizer	O	O

IV. Advantages

• **Speed:** Substantial reduction in PCR setup time.
• **Stability:** PCR Master Mix is the powerful technology for convenient and easy to perform DNA amplification. It contains DNA polymerase, dNTPs, and reaction buffer in a pre-mixed format, freeze-dried into a pellet. The patented chemical stabilizer of this product enables to maintain the activity of pre mixture for over 2 years in the freezer. It ensures superior amplification efficiency with experiment stability and uniform activity of polymerase in the process of PCR.
• **Reproducibility and Yield:** Batch manufacturing under strict ISO 9001 quality control conditions guarantees reproducibility. Minimal handling during reaction set up provides improved accuracy.
• **Simplicity:** Each product contains an application specific enzyme in an easy to re-suspended, lyophilized premix of dNTPs, reaction buffer, and a stabilizer. The Master Mix is ready to use, thus offering virtually no reaction set up time.

V. Notice to Purchaser

This enzyme is specifically optimized for increasing base incorporation rate by inactivating 5' -> 3' exonuclease activity. Therefore, this is not recommended to use for Real Time PCR using Taqman® probe.

VI. Protocol

1. Add template DNA and primers into PCR MasterMix tubes.
2. Add distilled water into PCR MasterMix tubes to a total volume of 20 µl or 50µl. Do not calculate the dried pellet.
   Ex) Reaction Mix

Components	20µl Reaction	50µl Reaction
Template DNA	Variable (1~10 µl)	Variable (1 ~ 25 µl)
Forward Primer (10 pmole/µl)	0.5µl~2µl	1 µl ~ 5µl
Reverse Primer (10 pmole/µl)	0.5µl~ 2 µl	1 µl ~ 5µl
D.W.	Variable (6 µl ~ 18 µl)	Variable (15µl ~ 47µl)
Total Volume	20µl	50µl

- Note 1: Amount of template

Template DNA	Amount of template	
	20µl Reaction	50µl Reaction
Bacteriophage λ, Plasmid DNA	100fg~200ng	100fg~500ng
Total Genomic DNA	1ng ~500ng	1ng ~ 1µg

3. Dissolve the lyophilized blue pellet by flicking your finger or pipetting, and briefly spin down
4. (Optional) If Necessary, overlay mineral oil. This step is unnecessary when using a thermal cycler with top heating.
5. Perform the reaction under the following conditions.
   - In case of routine PCR

Step	Temp	Time	Cycles
Pre-Denaturation	95°C	5 min	1 Cycle
Denaturation	95°C	20 sec	25~35 cycles
Annealing	45~65°C	20 sec	
Extension	72°C	30sec ~ 1min/kb	
Final Extension	72°C	Optional Normally 3~6mins	1 cycle

   - In case Primer's Tm value is more than 65°C or PCR product size is more than 5kb.

Step	Temp	Time	Cycles
Pre-Denaturation	95°C	5 min	1 Cycle
Denaturation	95°C	20 sec	30~35 cycles
Anneal/ Extension	68°C	1 min/kb	
Final Extension	72°C	Optional. Normally 3~5 min	1 Cycle

6. Maintain the reaction at 4°C~8°C after cycling. The samples can be stored at -20°C until use.
7. Load samples on agarose gel without adding a loading-dye mixture and perform electrophoresis.