Ultra-Pure BlasTaq™ 2X PCR MasterMix

Cat. No. G885
Store at -20°C.

Product Description
Ultra-Pure BlasTaq™ 2X PCR MasterMix is a ready-to-use MasterMix containing **abm**'s Ultra-Pure BlasTaq™ DNA Polymerase in a uniquely-formulated buffer with gel loading dye. This strategically-engineered, next generation Taq Polymerase provides **rapid extension rates and robust performance**. With specialized reaction conditions, this polymerase provides increased processivity, yields, and sensitivity, while shortening reaction times by up to 70%, compared to wild-type Taq DNA polymerase. BlasTaq™ has 5'-3' polymerase and 5'-3' exonuclease activities, lacks 3'-5' exonuclease activity, and produces 3'-dA-tailed amplicons. PCR products made with BlasTaq™ can be used with TA cloning vectors. The enzyme is subject to a rigorous multi-step purification protocol using physical, chemical, and enzymatic methods for maximum removal of contaminating genomic DNA. Quality control involves a PCR DNA Contamination Test with three different primer sets against host DNA.

Product Component	Quantity	Part No.
Ultra-Pure BlasTaq™ 2X PCR MasterMix [1]	100 rxn (1.25 ml)	G885

[1] Buffer contains 1.5 mM Mg^{2+}.

Protocol
1. Mix individual components before use and assemble reaction on ice.

Product Component	Volume
2X Ultra-Pure BlasTaq™ PCR MasterMix	12.5 µl
Forward Primer (10 µM)	1 µl
Reverse Primer (10 µM)	1 µl
Template DNA	Variable (100 ng genomic DNA)
Nuclease-free H_2O	Up to 25 µl

2. Gently mix the reaction components, and briefly centrifuge. Run thermocycling conditions for standard PCR:

Step	Temperature	Time
Initial Denaturation [2]	95°C	3 min
25 – 35 Cycles	95°C 60°C [3] 72°C	15 sec 15 sec 15 sec/kb
Final Extension	72°C	1 min

[2] For most applications, an initial 3 minute denaturation step at 95°C is sufficient. Increase to 5 minutes for high-GC or difficult templates.

[3] BlasTaq™'s PCR buffer allows for primer annealing at 60°C for most primers and adjust only if needed.

3. After PCR, maintain the reaction at 4°C or store at -20°C until use.
4. Analyze the amplification products by agarose gel electrophoresis.
5. Visualize by ethidium bromide or SafeView™ (Cat No. **G108**) staining.

General Notes
- Specialized buffer for higher yields, sensitivity, and specificity compared to wild-type Taq polymerase.
- Decrease reaction times by 70% using specialized protocol.
- For optimal efficiency, use a 25 µl reaction volume.
- We recommend assembling no template controls in a DNA-free environment to prevent contamination. Nuclease-free pipette tips and PCR tubes will also improve the results.

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