BlasTaq™ DNA Polymerase

Cat. No. G894

Store at -20°C.

Product Description

BlasTaq™ DNA Polymerase is a strategically-engineered, next generation Taq Polymerase that has **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.

Product Component	Quantity	Part No.
BlasTaq™ DNA Polymerase	400 rxn (200 µl)	G894-1
5X BlasTaq™ Buffer [1]	2 x 1.0 ml	P894-2

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

Protocol

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

Component	Volume
5X BlasTaq™ Buffer	5 µl
dNTP Mix (10 mM)	0.5 µl
Forward Primer (10 µM)	1 µl
Reverse Primer (10 µM)	1 µl
Template DNA	Variable (100 ng genomic DNA)
BlasTaq™ DNA Polymerase	0.5 µl [2]
Nuclease-free H_2O	up to 25 µl

[2] Reaction volumes of 25 µl are recommended with 0.5 µl BlasTaq™ DNA Polymerase. For difficult targets or crude samples, increase to 1 µl.

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

Step	Temperature	Duration
Initial Denaturation [3]	95°C	3 min
25 – 35 Cycles	95°C 60°C [4] 72°C	15 sec 15 sec 15 sec/kb
Final Extension	72°C	1 min

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

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

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.

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