BIO BASIC
Quality-Affordable Research

Product information

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Newly improved and faster

HotStart PCR Master Mix (2x dye)

Catalog #: BS9291
Size: 5 x 1 ml
Storage: 18-25°C

Product Description:

Newly improved and faster **HotStart PCR Master Mix (2X dye)** is a ready-to-use solution containing HotStart Taq DNA polymerase, dNTP, $MgCl^2$, PCR buffer, PCR stabilizers, gel loading reagent and dye. PCR products can be loaded onto agarose gel directly. Optimized HotStart Master Mix (2X dye) can amplify targets up to 5 kb in length from lambda DNA. Users only need to add a template, water and primers to set up a PCR reaction.

Newly Improved and Faster:

- Shorter initial denaturation (**2 min at 95°C** vs 10min at 94°C)
- Shorter Denaturation step (**10s at 98°C** vs 30s at 94°C)
- Shorter Extension (**1kb per <10s** vs 1kb/min) and lower temperature (**68°C** vs 72°C)
- Shorter final extension (**5 min** vs 10min)

Storage and Stability:

Transporation at 4°C. Store at -20°C. Avoid repeated freeze-thaw cycles.

Kit Components:

Components	
HotStart Master Mix (2X, Green Dye)	5 x 1 ml
Protocol	1

Protocol:

1. Use the following guidelines to optimize the template concentration:

   gDNA: 1-10µg/ml
   plasmid DNA: 0.1-1µg/ml

2. Optimizing the Primer Concentration: Primer concentrations in the range of 0.2-0.5M work for most PCR amplifications.

3. Thaw reagents on ice.

4. Prepare a reaction Master Mix using the following protocol:

HotStart Master Mix:	25µl	(1x)
DNA template:	1µl	(0.1-10 ng)
Primer F (10µM)	2µl	(0.42 µM)
Primer R (10µM)	2µl	(0.4 µM)
Nuclease-free ddH2O	20µl	
Total Volume	50µl	

5 Place the tube in a centrifuge and spin for 30-60 sec.

6. Overlay PCR mixture with mineral oil when sing a thermal cycler without a heated lid. Perform most PCR reactions using the following cycling program:

Pre-Duration	95°C	2 min	1 cycle
Duration	98°C	10 sec	30-35 cycles
Anneal	45-68°C	30 sec	
Extend	68°C	1 kb per <10 sec	
Post-Extend	72°C	5 min	1 cycle
Hold	4°C	N/A	N/A

