WizPure™ HS-PCR FDmix

(20ul reaction, aliquot & lyophilized in 8-strip tube)

- W1611 **96 rxn**
- W1611-5 **480 rxn**

Description

WizPure™ HS-PCR FDmix combines all the reagents necessary for successful hot-start PCR in a convenient individually aliquot and lyophilized in single-tube. WizPure™ HS-PCR FDmix is an optimized, economical, highly efficient and ready-to-use hot-start PCR premix which can amplify templates of up to 5 kb. The HS-PCR FDmix contains an antibody-mediated hot-start Taq DNA Polymerase, MgCl2, dNTPs, enhancer and stabilizer. The mixture is suitable for amplification of most of the DNA templates. Tested for absence of endo nucleases & exo nucleases and is also tested for amplification of single gene copy.

WizPure™ HS-PCR FDmix yields excellent and consistent results in routine PCR reactions as well as high-throughput PCR genotyping, colony PCR, RT-PCR and PCR cloning. PCR reactions can be directly loaded onto an agarose gel without the additional need of loading buffer and dyes.

Kit Contents

Contents	W1611	W1611-5
WizPure™ HS-PCR FDmix	96 tubes	480 tubes

Applications

WizPure™ HS-PCR FDmix is suitable and tested for amplification of genomic targets ranging from 100 bp to 4 kb and of episomal targets (lambda phage; plasmids) up to 10 kb under various reaction conditions.

- Hot-start PCR
- High through-put PCR
- Routine diagnostic PCR requiring high reproducibility
- DNA sequencing template preparation

Storage Conditions

Upon receipt, store all components at –20°C.

Note

Do not contaminate the WizPure™ HS-PCR FDmix with primers and template DNA used in individual reactions.

Quality Control

No endonuclease activity, nicking activity, exonuclease activity, or priming activity has been detected.

Quality Authorized by : Jamie Ahn 

Protocol

This standard protocol applies to a single reaction where only template, primers, and water need to be added to the HS-PCR FDmix. For multiple reactions, scale-up volume of reaction components proportionally. All reagents should be thawed on ice, gently mixed and briefly centrifuged before use.

1. Prepare the HS-PCR FDmix tube on PCR tube rack.
2. Add the reaction component to the HS-PCR FDmix tube as following table shows recommended component volumes:

Reaction Conditions

Component	20 µl reaction	Final Conc.
HS-PCR FDmix	1 tube	1X
10µM Forward Primer	0.2 ~ 2.0 µl	0.1~1.0 µM
10µM Reverse Primer	0.2 ~ 2.0 µl	0.1~1.0 µM
Template DNA	1 ~ 5 µl	< 250 ng
Water, RNase-Free	up to 20 µl	

NOTE: In general, use greater than 0.5 µM primers for sensitivity and less than 0.5 µM for specificity.

NOTE: Recommended amount of template per PCR reaction:

- < 50 ng plasmid or
- < 500~1000 ng genomic DNA or
- 2 µl of a 100 µl single plaque eluate or
- one single bacterial colony

3. Ensure reactions are mixed thoroughly by pipetting or gentle vortexing followed by a brief spin in a microcentrifuge.
   (Optional) Overlay reactions with one-half volume PCR-grade mineral oil when not using heated lid on thermal cycler.
4. Transfer tubes into a PCR instrument and run as following table.

PCR Conditions

Step	Temp (°C)	Time	Cycle
Initial Denaturation	95	5 min.	1
Denature	95	10 ~ 60 sec.	25 ~ 40
Anneal	50~65	10 ~ 60 sec.	
Extend	72	60 sec./kb	
Final Extension	72	5 min.	1

NOTE: Cycling conditions may need to be optimized, depending on different primer and template combinations. For example, raise the annealing temperature to prevent non-specific primer binding, increase extension time to generate longer PCR products.

5. After cycling, maintain the reactions at 4°C or store at -20°C until ready for analysis.

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