WizPure™ PCR 2X Master

RUO For Research Use Only

REF W1401

DESCRIPTION

WizPure™ PCR 2X Master is an economical, highly efficient and ready-to-use PCR premix which can amplify templates of up to 5 kb. The PCR 2X Master contains a Taq DNA Polymerase, $MgCl_2$, dNTPs, enhancer and stabilizer. The amplification products are compatible with TA cloning. WizPure™ PCR 2X Master yields excellent and consistent results in routine PCR reactions as well as high-throughput PCR genotyping, colony PCR, RT-PCR and PCR cloning. WizPure™ PCR 2X Master is a highly processive 5'→3' DNA polymerase that lacks 3'→5' exonuclease activity and lacks a 3'→5' proofreading function. PCR reactions can be directly loaded onto an agarose gel without the additional need of loading buffer and dyes.

KIT CONTENTS

Contents	W1401	W1401-5
WizPure™ PCR 2X Master	1 ml	5 X 1 ml

APPLICATIONS

WizPure™ PCR 2X Master 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.

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

STORAGE CONDITIONS

Store all components at -20ºC in a non-frost-free freezer.

NOTE

Do not contaminate the WizPure™ PCR 2X Master with primers and template DNA used in individual reactions. Thaw and mix all components thoroughly, spin down shortly and chill on ice.

QUALITY CONTROL ANALYSIS:

In accordance with Wizbiosolutions Inc. ISO 13485-certified Quality Management System, each lot WizPure™ PCR 2X Master kit is tested against predetermined specifications to ensure consistent product quality.

PROTOCOL

This standard protocol applies to a single reaction where only template, primers, and water need to be added to the PCR 2X Master mix. 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. Thaw reagents at room temperature. Mix thoroughly and then place on ice immediately after thawing.
2. Assemble reaction tubes on ice whenever possible to avoid premature, nonspecific polymerase activity.
3. The following table shows recommended component volumes:

Component	20 µl reaction	Final Conc.
PCR 2X Master	10 µl	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
- < 500~1000ng genomic DNA or
- 2µl of a 100µl single plaque eluate or
- one single bacterial colony

4. 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.
5. Transfer tubes into a PCR instrument and run as following table.

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.

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

ORDERING INFORMATION

Product	Cat No.	Package
WizPure™ PCR 2X Master	W1401	100 rxn
	W1401-5	500 rxn

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