Cat. No.: ETAQ-101

Taq DNA Polymerase Mastermix (2X)

(ETERBIO-EZ-ETAQ-101)

Lot:_____

Expiry Date: yy / mm / dd

Store at -20℃

DESCRIPTION

Taq DNA Polymerase Mastermix (2X) is a ready-to-use 2X solution containing *Taq* DNA polymerase, dNTPs, $MgCl_2$ and reaction buffers at optimal concentrations for PCR. Simply add primers, template, and water to amplify the target sequence and other molecular biology applications. This formulation not only saves valuable time, but also reduces number of pipetting and reagent handling errors.

Composition of the *Taq* DNA Polymerase Mastermix (2X)

0.2 U/µl *Taq* DNA polymerase, reaction buffer, 3 mM $MgCl_2$, 0.4 mM of each dNTP (dATP, dCTP, dGTP and dTTP).

USAGE

1. Gently vortex and briefly centrifuge *Taq* DNA Polymerase Mastermix (2X) after thawing.
2. Set up each reaction as follows:

Component	50 µl reaction	Final Concentration
Mastermix (2X)	25 µl	1X
Primer A	Variable	0.1–1.0 µM
Primer B	Variable	0.1–1.0 µM
Template DNA	Variable	< 1.0 µg
Nuclease-free water	to 50 µl	

3. Gently mix the solution a few times and spin down.
4. Perform PCR using the recommended thermal cycling conditions outlined below:
   (For maximum yield and specificity, temperatures and cycling times should be optimized for each new template target or primer pair)

Step	Temperature	Time
Initial Denaturation	95℃	30 seconds
30 Cycles	95℃	15-30 seconds
	45-68℃	15-60 seconds
	72℃	1 minute/kb
Final Extension	72℃	5 minutes
Hold	4-10℃	

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CERTIFICATE OF ANALYSIS

Endonuclease Assay
No conversion of covalently closed circular DNA to nicked form was detected after incubation of 1X *Taq* DNA Polymerase Mastermix with 1 µg of supercoiled plasmid DNA (pUC19) in for 4 hours at 37℃.

Exonuclease Assay
No degradation of DNA was observed after incubation of 1 µg of lambda DNA/*Hin*dIII fragments in 1X *Taq* DNA Polymerase Mastermix for 4 hours at 37℃.

Functional Assay
Good performance in PCR was tested for amplification of 1.8 kb gene.

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