PCR Fluorescence Master Mix, 2X

Cat. No.: MM2071
Store: -20°C (keep at dark place)

Quantity: 100 reactions/ 25 µl
Shipment: Wet Ice

Description: PCR Fluorescence Master Mix offers convenient reagents for PCR amplifications. The reagent of Fluorescence Master Mix is an optimized 2X PCR mixture of Taq DNA Polymerase (recombinant), PCR buffer, $MgCl_2$, dNTPs, gel loading dyes, and fluorescence dye. Fluorescence Master Mix contains all components for PCR, except DNA template and primers. Additionally, sterile and PCR grade water is supplied. PCR Fluorescence Master Mix, which contains the fluorescence dye, is directly detected on BLOOK LED transilluminator (Cat.No: BK001)* or UV epi-illuminator after the DNA electrophoresis. PCR Fluorescence Master Mix is sufficient for 100 amplification reactions of 25µl volume or 50 amplification reactions of 50 µl volume.

Generated PCR products would have 3` single A-over-hang products and can be used for TA cloning.

Components (supplied):

Master Mix	1250 µl
Distilled Water	5 ml

Composition of PCR Master Mix (2X)
0.2 units/µl *Taq* DNA polymerase in reaction buffer, 3 mM MgCl2, 0.4 mM dATP, 0.4 mM dCTP, 0.4 mM dGTP and 0.4 mM dTTP, Bromophenol Blue, Xylene Cyanol FF.

Stability: The kit is stable at -20°C until expiration date. Repeated freezing and thawing should be avoided.

Feature:
No post-staining processing of DNA required.
No need to prepare PCR Reagents.
Direct loading onto your Agarose gel for analysis.
Sensitivity-high degree of sensitivity as the Ethidium Bromide.
Speed-No de-staining requirement.
Compatibility-Use the blue light or UV to detect the signal.
Safe-Absence of mutagenity.
Economic-No hazardous product; No expenses required for the waste management.

General Protocol for DNA amplification:
The PCR Fluorescence Master Mix, 2X can be used for nearly all PCR applications. The only limitation is that the sample volume must not exceed half the total reaction volume. The optimal reaction conditions (incubation temperatures and times, concentration of template DNA and primer) depend on the template/primers system and must be determined individually.
All solutions should be thawed on ice, gently vortexed and briefly centrifuged. Add in a thin walled PCR tube on ice:

	For a total 50µl reaction volume:		For a total 25µl reaction volume	
Component of a sample	**Volume**	**Final concentration**	**Volume**	**Final concentration**
Master Mix	25µl	1X	12.5µl	1X
Forward Primer	Variable	0.1-1µM	Variable	0.1-1µM
Reverse Primer	Variable	0.1-1µM	Variable	0.1-1µM
Template DNA	Variable	10pg-1µg	Variable	10pg-1µg
Sterile Deionized Water	to 50µl	-	to 25µl	-

Note: - Annealing temperature depends on the melting temperature of the primer used.
- Extension time and temperature depends on fragment length.

Removal of fluorescence dye:

1. Immerse the PCR product containing the fluorescence dye into the 100 mM Nacl and add 2.5 volumes of absolute or 95% ethanol.
2. Incubate on ice for 20 minutes.
3. Centrifuge the mixture at 4°C for at least 10 minutes.
4. Remove the suspension of ethanol and wash the pellet with 1ml of 70% ethanol.
5. Dry the residual and resuspend the double-stranded DNA in the TE.

Caution:

1. During operation, always wear a lab coat, disposable gloves, and protective equipment.
2. Research Use Only. Note intended for any animal or human therapeutic or diagnostic uses.

*****BLooK is a remarkable blue light LED transilluminator for the detection of nucleic acids or protein under non-UV conditions. The wavelength of the special blue LED lights is 470 nm , hence no damage to your nucleic acids or protein. Also, since UV is not used, there is no need for any special personal eye or skin protection.