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2X PCR TaqFast MasterMix

Store at -20°C

Cat. No.	Description	Quantity
G280	2X PCR TaqFast MasterMix	5 ml
G280-dye	2X PCR TaqFast MasterMix with Dye	5 ml

Product Description

The TaqFast DNA polymerase is a uniquely engineered version of Taq DNA polymerase which allows it to achieve rapid PCR amplification. This member of **abm**'s PCR polymerase product series is the perfect solution to ultimate speed and dramatically reduced reaction time. The newly introduced 2X PCR Precision™ MasterMix is a ready-to-use mixture containing abm's TaqFast DNA polymerase, dNTPs, and reaction buffer with proprietary additives in a 2X concentration. It contains all the necessary reagents for reproducible, efficient and high yield amplification of DNA. The 2X PCR TaqFastMasterMix with dye (Cat. No. G280-dye) contains a proprietary blend of inert blue dye and stabilizer in precisely balanced proportions. This allows easy, direct loading of the final PCR products onto a gel for analytical electrophoresis.

abm's TaqFast DNA polymerase is capable of an extension speed of 6 kb/min – 6 times faster than the regular Taq polymerase. This polymerase catalyzes the 5' – 3' synthesis of DNA. It possess 5' – 3' exonuclease activity and lacks 3' – 5' proofreading exonuclease activity: making it the ideal choice for high through-put PCR. In addition, template-independent "A" can be attached at the 3' end of the PCR product which can then be cloned into TA cloning vectors for downstream applications.

Features and Benefits

- Saves preparation time by combining TaqFast DNA Polymerase, dNTPs and reaction buffer into a ready-to-use mixture.
- Reduces the risk of contamination by decreasing the number of pipetting steps.
- Provides consistent reaction performance and results.

Shipping and Storage

Keep at -20°C for long term storage. 2X PCR TaqFast MasterMix and 2X PCR TaqFast MasterMix with dye are stable at 4°C for one month or fifteen freeze-thaw cycles. For daily use, it is recommended to keep an aliquot at 4°C.

Protocol

All PCR experiments should be assembled in a nuclease-free environment. In addition, DNA sample preparation, reaction set-up and subsequent reaction(s) should be performed in separate areas to avoid cross contamination. The use of "clean", automatic pipettors designated for PCR and aerosol resistant barrier tips are recommended. Always keep the control DNA and other templates to be amplified isolated from the other components.

A negative control reaction (omitting template DNA) should always be performed in tandem with the sample PCR to ensure the absence of DNA contamination.

1. Add the following components to a sterile 0.2 ml PCR tube sitting on ice:

Components	Volume	Final Concentration
Template DNA	~ 100 ng	~ 2 ng/µl
Forward primer (10 µM)	1 - 2.5 µl	200 - 500 nM
Reverse primer (10µM)	1 - 2.5 µl	200 - 500 nM
2X PCR TaqFast MasterMix/ with dye	25 µl	1X
Nuclease-free H_2O	Up to 50 µl	-

- *We recommend preparing a mastermix for multiple reactions to minimize reagent loss and enable accurate pipetting*

2. Mix contents of the tube and centrifuge briefly.

3. Incubate tube in a thermal cycler according to the following program:

Step	Temp	Duration	Cycle(s)
Initial Denaturation	94°C	3 mins	1
Denaturation	94°C	5 secs	30-35
Annealing	45 - 72°C	15 secs	
Extension	72°C	10 secs/ 1 kb template	
Final Extension	72°C	5 mins	1
Final Holding	4°C	-	1

** The samples can be stored at -20°C until use.*

4. Analyze the amplification products by agarose gel electrophoresis and visualize by ethidium bromide or SafeView™ (Cat No. G108) staining. Use appropriate molecular weight standards.

For laboratory research only. Not for clinical applications.
For technical questions, please email us at technical@abmgood.com
or visit our website at www.abmGood.com