

UltraBio™ 2×Taq Master Mix (Dye Plus)

Cat. No.: FP1509090 | Pack size: 1ml / 5×1ml / 15×1ml / 50×1ml | Storage: Store at -20°C, Avoid repeated freezing and thawing

Product Information

Item	Description
Product name	UltraBio™ 2×Taq Master Mix (Dye Plus)
Catalog No.	FP1509090
Pack size	1ml / 5×1ml / 15×1ml / 50×1ml
Specifications & Purity	BioReagent, DNase, RNase free, PCR Reagent, Suitable for molecular biology, for DNA and RNA applications, 2×
Storage	Store at -20°C, Avoid repeated freezing and thawing
Shipped in	Ice chest + Ice pads
Application	PCR
Stability and storage	Store at -20°C long term (12 months). Avoid freeze/thaw cycle. Upon receipt, it is recommended to aliquot.

Overview

UltraBio™ 2×Taq Master Mix (Dye Plus) is specifically designed for qualitative PCR. It contains a loading dye (bromophenol blue) and a gel electrophoresis buffer, allowing direct loading of the PCR reaction onto an agarose gel without additional steps. This ready-to-use mix includes hot-start Taq DNA Polymerase, dNTPs, and optimized buffer with magnesium. Users only need to add template and primers to perform amplification, and the products can be directly analyzed by agarose gel electrophoresis. This product ensures high amplification efficiency and specificity while simplifying operation and saving time.

Intended Use: Qualitative PCR requiring post-amplification analysis.

Instructions for Use

1. Preparation of Reaction Mix

- Thaw all reagents at room temperature or on ice and mix gently before use.
- Prepare a 50 μ L reaction system as follows:

Component	Volume	Final Concentration
2×Taq Master Mix (Dye Plus)	25 μ L	1×
※ Primers	—	—
※ Sample	—	—
ddH ₂ O	To 50 μ L	—
Total Volume	50 μ L	—

※ Add primers and sample according to project requirements.

- It is recommended to aliquot the reaction mix to avoid repeated freeze-thaw cycles.
- Prepare the reaction mix on ice or a cooling rack.

2. Thermal Cycling Protocol

Step	Temperature	Time	Cycles
Hot Start	95°C	2 min 30 s	1
Denaturation	94°C	20 s	30-35
Annealing	55°C	20 s	
Extension	72°C	20 s	
Final Extension	72°C	7 min	1
Hold	12°C	∞	1

Note

Because this product contains bromophenol blue dye for agarose gel electrophoresis, the solution appears bluish-purple. Mix thoroughly by vortexing before use.

Safety & Precautions

1. Read the current SDS before use and handle the product according to local laboratory safety and EHS procedures.
2. Use nuclease-free plasticware and aerosol-resistant tips. Separate reagent preparation, sample preparation, and amplification areas to minimize contamination.
3. Wear a lab coat, disposable gloves, and appropriate eye protection during operation.
4. For research use only. Do not use for clinical diagnosis, treatment, food, cosmetic, or household applications.

Quality Control

QC Item	Method	Acceptable Range
Appearance and integrity	Visual inspection on receipt	No leakage, abnormal color change, or precipitation that cannot be re-dissolved as directed
Nuclease control	Lot-specific nuclease/background control testing	Meets product specification for molecular biology use
Functional performance	PCR/qPCR amplification with validated templates and controls	Expected amplification efficiency, specificity, and reproducibility for the intended application
Storage condition	Review label and COA before use	Stored at the recommended temperature; avoid repeated freeze-thaw cycles

Troubleshooting

Issue	Possible Causes	Corrective Action
Weak or no amplification	• Low template amount or degraded template • Inappropriate primer/probe design • Incorrect thermal cycling program	• Verify template quality and input amount • Optimize primer/probe concentration and annealing temperature • Confirm the recommended cycling conditions and instrument settings

Issue	Possible Causes	Corrective Action
Non-specific bands or signals	- Annealing temperature too low - Excessive primer concentration - Contamination or carryover products	- Increase annealing temperature or redesign primers - Optimize primer concentration - Use clean work areas and follow anti-contamination procedures
Poor reproducibility	- Repeated freeze-thaw cycles - Incomplete mixing - Pipetting variability	- Aliquot reagents after receipt - Mix gently and centrifuge briefly before use - Use calibrated pipettes and prepare master mixes on ice

Contact & Global Offices

Whether you have a technical question, need help with a quotation, or want to inquire about an order, our regional teams are ready to assist. Please contact the office for your region; for general inquiries, the North American office is the corporate primary.

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Limitations & Disclaimer

- For Research Use Only (RUO). Not for use in human or animal diagnostics, therapeutics, or in vivo applications. Not for food, cosmetic, or household use.
- This product is not a CE-marked in vitro diagnostic device under IVDR (EU) 2017/746 and is not an FDA-cleared device under 21 CFR. Use is restricted to verified businesses, institutions, and qualified professionals for research and development purposes.
- Where any product component is classified as hazardous under CLP (EC) 1272/2008 or OSHA HCS (29 CFR 1910.1200), the product Safety Data Sheet (SDS) takes precedence over this document for handling, storage, and disposal information.



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Product Instructions
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- Performance depends on sample type, sample condition, handling, and operator technique. Users are responsible for validating the product for their specific application.
- Aladdin product labels, SDS, COA, and approved specifications take precedence over this document. If product formulation, label, SDS, storage conditions, pack size, or quality specifications change, this document would be reviewed and reissued.