

Fast SYBR® Green Blue qPCR Mix (Universal ROX+)

For research use only

Cat. No./Spec.

Cat. No.	P2151	P2152	P2153	P2154
20-μl rxn Nos.	100 rxns	500 rxns	1,000 rxns	10,000 rxns

Components

Component	P2151	P2152	P2153	P2154
2X Fast SYBR® Green Blue qPCR Mix (Universal ROX+) ^a	1 ml	1 ml × 5	1 ml × 10	1 ml × 100
Nuclease-free Water	1 ml	1 ml × 5	-	-

^a contains SYBR® Green I, Fast Hotstart Taq DNA polymerase, universal ROX reference dye, dNTP, reaction buffer, etc.

Storage

This reagent can be stored for 2 months at 4°C and protected from light. For longer storage, it should be kept at -20°C and protected from light.

Description

Fast SYBR® Green Blue qPCR Mix (Universal ROX+) is a dye-based qPCR Master Mix pre-mixed with blue loading indicator and universal ROX. It eliminates the need for instrument-specific ROX concentration adjustments, simplifying operation. Utilizing a mutant hot-start Taq DNA polymerase, it enables highly sensitive rapid amplification while minimizing interference from primer dimers and by-products, significantly enhancing the specificity, amplification efficiency, and quantifiable dynamic range of quantitative PCR. Incorporated with a novel enhancer, it minimizes variability in PCR efficiency across different target amplicons and exhibits negligible impact on amplification performance after repeated freeze-thaw cycles. This product is fully compatible with common quantitative PCR instruments, such as those from ABI, Roche, and Bio-Rad.

The reaction system of this product can be prepared at room temperature without an ice box. The prepared PCR reaction system can be placed at room temperature for 24 hours and the amplification efficiency remains unchanged.

Applications

- Gene expression analysis

- Low-copy gene detection
- Microarray validation
- Gene knockdown validation

Features

- Fast and stable amplification performance
- Contains universal ROX reference dye
- Compatible with many Real-time systems
- Hot-start technology brings high specificity and reproducible amplification

Protocol

Note: Please follow the procedures outlined in the manual of each respective instrument.

1. Preparation of reaction solution

Add the following reagents to the proper thermal cycler reaction tube or plate on ice:

Component	20-μl rxn	Final Conc.
DNA template ^[1]	2 μl	≤5μl
Forward primer (10 μM) ^[2]	2 μl	≥0.5 μM
Reverse primer (10 μM)	2 μl	≥0.5 μM
2X Fast SYBR® Green Blue qPCR Mix (Universal ROX+)	10 μl	1X
ddH ₂ O	4 μl	-
Total volume	20 μl	

Note:

[1] This product has sufficient performance to amplify DNA at different concentrations.

[2] This product has sufficient performance, where high-concentration primers do not affect specificity while also increasing sensitivity.

2. Preform qPCR using the following thermal cycling condition

Set the thermal cycling conditions using default PCR thermal cycling conditions specified in the following tables according to the instrument cycling parameters and melting temperatures of the specific primers.

2-step PCR mode:

Stage	Temperature	Time	Cycle
Initial Denaturation	95°C	1 min	1
Denaturation	95°C	5 sec	40
Annealing & Extension	60°C	10 sec	
Melting curve analysis (optional)			

3. Analyze the results

Data analysis varies depending on the instrument used. Please refer to your instrument

user guide for information.

Quality Control

The absence of endodeoxyribonucleases, exodeoxyribonucleases and ribonucleases is confirmed by appropriate quality tests. Functionally tested in amplification of a single-copy gene from human genomic DNA.

Product Use Limitations

This product is sold exclusively for research purposes and in vitro use. Neither the product, nor any individual components, was tested for use in diagnostic applications or for drug development, nor is it suitable for administration to humans or animals. Please refer to the MSDS, available upon request.