HiSense™ QGreenBlue qPCR Master Mix

Cat. No. QBLR-05, QBHR-05

1. Product Information

Introduction

The HiSense™ QGreenBlue qPCR Master Mix is a comprehensive blend of Taq DNA Polymerase, ROX reference dye, essential components (excluding primers, DNA template, and water), and SybrGreen Type fluorescence dye with a 2X concentration. This product is optimized for high-efficiency qPCR amplification and is ideal for the quantification of cDNA and genomic DNA.

Description

The HiSense™ QGreenBlue qPCR Master Mix is at a 2X concentration, providing sufficient reagents for 500 experiments based on 20µl reactions. The hot-start PCR technique ensures highly specific amplification, minimizing non-specific reactions and enhancing the overall sensitivity of experiments. Optimized for high-efficiency qPCR, this master mix is ideal for quantifying cDNA and genes. The product is in an optimized ratio, enabling both fast qPCR and general qPCR reactions.

2. Contents and Storage

Materials Provided

Label	QBLR-05
2X QGreenBlue qPCR Master Mix (Low ROX*)	5 ml
Label	**QBHR-05**
2X QGreenBlue qPCR Master Mix (High ROX*)	5 ml

* Cat. No for Instruments (Depending on ROX concentration)
: See [Appendix A]

Storage

Store at -20°C

Check the label on the product for expiration date.

3. Test Protocol

Preparing for qPCR reaction

Before use, mix the 2X QGreenBlue qPCR Master Mix well by inverting the tube several times and centrifuge it.

Do not vortex!! - Inverting and tapping are enough to mix.

1. Prepare a reaction master mix by adding the following components (except template DNA) for each 20µl reaction to a tube at room temperature.

Reaction components	Volume
2X QGreenBlue qPCR Master Mix	10 µl
Forward primers, (10pmol/µl)*	1-2 µl
Reverse primers, (10pmol/µl)*	1-2 µl
Template DNA	≤ 500 ng
DNase free water	up to 20µl
Total volume	20µl

* A final primer concentration of 0.2 µM is optimal in most cases but may be individually optimized in a range of 0.1 µM to 1.0 µM.

2. Gently mix (do not vortex) the master mix by inverting, centrifuge briefly and dispense appropriate volumes into PCR tubes or plates.

3. Add template DNA to the individual PCR tubes or wells containing the master mix.

4. Centrifuge briefly.

5. Program the thermal cycler according to the recommendations below, place the samples in the cycler and start the program.

Thermal Cycling Condition

1. Two-step cycling protocol (Fast)

Steps	Temp(°C)	Time	Cycles
Pre-denature	95	3 min	1
Denature	95	1~5 sec	40
Anneal / Extend and read fluorescence	60	10~30 sec*	
Melting curve analysis depending on Instrument manual			

* An optimal time may be optimized depending on amplicon size.

2. Three-step cycling protocol

Steps	Temp(℃)	Time	Cycles
Pre-denature	95	3 min	1
Denature	95	1~10 sec	40
Anneal	55~60	10~30 sec*	
Extend and read fluorescence	72	10~30 sec*	
Melting curve analysis depending on Instrument manual			

* An optimal time may be optimized depending on amplicon size.

[Appendix A]

Cat. No for Instruments (Depending on ROX concentration)

Instruments		Cat. No.
Brand	Model	
BioRad	iCycler, MyiQ, MiQ 2, iQ 5, CFX-96, CFX-384	(No ROX) QBLR-05
MJ Research	Opticon, Option2, Chromo4, MiniOpticon	
Qiagen	Roto-Gene Q, Roto-Gene3000, Roto-Gene 6000	
Eppendorf	Mastercycler realplex	
Illumina	Eco RealTime PCR System	
Roche	LightCycler 480, LightCycler 2.0	
ABI	5700, 7000, 7300, 7700, 7900, 7900HT, 7900HT Fast, StepOne, StepOne plus	(High ROX) QBHR-05
ABI	7500, 7500 Fast, QuantStudio (1, 3, 5, 6, 7)	(Low ROX) QBLR-05
Stratagene	MX3000, MX3005P, MX4000	