Related Products

Product Group	Cat #	Size	PCR Instrument
First strand cDNA Synthesis			
CellScript cDNA Master Mix	CDS -50 CDS-100 CDS-200 CDS-400	50Rxn 100 Rxn 200 Rxn 400 Rxn	All Machines
SybrGreen realtime PCR Master Mix (One Step and Two Steps)			
QGreen (no ROX) Master Mix QGreenBlue (Low ROX) Master Mix CellScript RT-QGreen Master Mix CellScript (Low ROX) RT-QGreenBlue Master Mix	QG-05 QBLR-05 RTQG-05 RTQBLR-05	5ml	BioRad: CFX-96, FX-384, MJ 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
QGreen (Low ROX) Master Mix QGreenBlue (Low ROX) Master Mix CellScript RT-QGreen Master Mix CellScript (Low ROX) RT-QGreenBlue Master Mix	QGLR-05 QBLR-05 RTQG-05 RTQBLR-05	5ml	ABI: 7500, 7500 Fast, QuantStudio series, Stratagene: MX4000P, MX3000P, MX3005P
QGreen (High ROX) Master Mix QGreenBlue (High ROX) Master Mix CellScript RT-QGreen Master Mix CellScript (High ROX) RT-QGreenBlue Master Mix	QGHR-05 QBHR-05 RTQG-05 RTQBHR-05	5ml	ABI: 5700, 7000, 7300, 7700, 7900, 7900HT, 7900HT Fast, StepOne, StepOne plus
Taqman probe realtime PCR Master Mix (One Step and Two Steps)			
QPlex RT-qPCR Master Mix	QP-05	5ml	All Machines (For Multiplex TaqMan assay)
QRTPlex RT-qPCR Master Mix	RTQP-01	1ml	All Machines (For Multiplex TaqMan assay)

QGreen
Master Mix

Instruction Manual

Cat. No. QG-01, QGLR-01, QGHR-01
QG-05, QGLR-05, QGHR-05

Research Use Only

QGreen Master Mix

Introduction

2X QGreen qPCR Master Mix is designed specifically for real-time PCR with SybrGreen Type dye. In addition to SybrGreen Type dye, this mix contains *DNA free Taq DNA Polymerase* and components (except primers, template and water) necessary to perform real-time PCR using SybrGreen Type dye. Direct detection of PCR product is monitored by measuring the increase in fluorescence caused by the binding of SybrGreen Type dye to double-stranded (ds) DNA.

Product descriptions

The **2X QGreen qPCR Master Mix** is supplied in a 2X concentration and contains sufficient reagents to perform 500 20 µl reactions. The mix is optimized for SybrGreen reactions and contains SybrGreen Type dye, *DNA-free* DNA Polymerase, dNTPs, passive reference ROX dye, and optimized buffer components.

Storage and stability

This kit is shipped in a package containing dry ice.

For long-term storage, keep it at -20℃.

For frequent use store thawed product at 4℃ and use it within 6 months.

For once use a week store at -20℃ and could use it over 6 months.

Materials provided

Materials provided	Quantity					
	QG-01	QG-05	QGLR-01	QGLR-05	QGHR-01	QGHR-05
2x QGreen qPCR Master Mix	1ml	5ml	1ml	5ml	1ml	5ml
ROX (Reference Dye)	40ul (50x ROX)/	200ul (50x ROX)	0.1x ROX contained	0.1x ROX contained	1x ROX contained	1x ROX contained

ROX concentration for Instruments

Instruments	Reference dye (Cat. No.)
BioRad: iCycler, MyiQ, MiQ 2, iQ 5, CFX-96, CFX-384, **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	No ROX (QG-05)
ABI: 5700, 7000, 7300, 7700, 7900, 7900HT, 7900HT Fast, StepOne, StepOne plus	High ROX (1x) (QGHR-05)
ABI: 7500, 7500 Fast **Stratagene**: MX3000, MX3005P, MX4000	Low ROX (0.1x) (QGLR-05)

QGreen Master Mix Protocol

Preparing for qPCR Reaction

- Before use, mix the **2X QGreen qPCR Master Mix** well by inverting the tube several times and centrifuge it. - **Inverting and tapping is enough to mix. Do not vortex!!**

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

2X QGreen qPCR Master Mix	10 µl
Forward Primer	0.3 µM*
Reverse Primer	0.3 µM*
Template DNA	≤ 500 ng
50x ROX	0X, 0.1X and 1X**
DNase-free water	up to 20 ul***

* An optimal primer concentration may be optimized in a range of 0.05 µM to 0.9 µM.
** Other reaction volumes can be used if recommended for a specific instrument.
*** Depend on instrument

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. Gently mix the reactions without creating bubbles (do not vortex). Centrifuge briefly if needed. Bubbles will interfere with fluorescence detection.

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

Thermal cycling condition

Three-step or two-step cycling protocol can be used.

Three-step cycling protocol

Step	Temperature (°C)	Time	Number of cycles
Pre-denaturation	95	3~5 min	1
Denaturation	95	10~30 sec	30~40
Annealing	55~60	10~30 sec	
Extension and read fluorescence	72	10~30 sec	
Melting curve analysis			