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)
RTPlex RT-qPCR Master Mix	RTQP-01	1ml	All Machines (For Multiplex TaqMan assay)

QPlex
Master Mix

Instruction Manual

Cat. No. QP-01, QP-05

Research Use Only

QPlwx Master Mix Instruction Manual *Ver.4.0 (20190221)*

QPlex Master Mix

Introduction

2X QPlex qPCR Master Mix is designed specifically for real-time PCR with probe. This mix contains *DNA-free* Taq DNA Polymerase and components (except primers, template and water) necessary to perform real-time PCR using probe. Direct detection of PCR product is monitored by measuring the increase in fluorescence releasing from probe.

Product descriptions

The **2X QPlex qPCR Master Mix** is supplied in a 2X concentration and contains sufficient reagents to perform 200 50 µl reactions. The mix is optimized for Probe reactions and contains *DNA-free* DNA Polymerase, dNTPs, passive reference, and optimized buffer components.

Storage and stability

Upon receipt, store the **2X QPlex qPCR Master Mix** at –20°C. Note: If stored under the recommended conditions, we guarantee product performance through the expiration date (control date) printed on the label.

Materials provided

Materials provided	Quantity	
	QP-01	QP-05
2X QPlex qPCR aster Mix	1 ml	5 ml
50X ROX (reference dye)	40 ㎕	200 ㎕

Instruments for 50X ROX

Instruments	50X ROX
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
ABI: 5700, 7000, 7300, 7700, 7900, 7900HT,7900HT Fast, StepOne, StepOne plus	High ROX (1x)
ABI: 7500, 7500Fast **Stratagene**: MX3000, MX3005P, MX4000	Low ROX (0.1x)

QPlex Master Mix Protocol

Preparing for qPCR reaction

- Before use, mix the **2X QPlex qPCR Master Mix** well by inverting the tube several times. - **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 QPlex qPCR Master Mix	10 µl
Forward Primer	0.3 µM*
Reverse Primer	0.3 µM*
Probe	0.2 µM
Template DNA	≤ 500 ng
DNase-free water	up to 20 ul**

* A final primer concentration of 0.3 µM is optimal in most cases, but may be individually optimized in a range of 0.05 µM to 0.9 µM.

** Other reaction volumes can be used if recommended for a specific 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 min	1
Denaturation	95	15 sec	30~45
Annealing*	55~60	30 sec	
Extension	72	30 sec	

*Data acquisition should be performed during the annealing step.

Two-step cycling protocol

Step	Temperature (°C)	Time	Number of cycles
Pre-denaturation	95	3 min	1
Denaturation	95	15 sec	30~45
Annealing/ extension*	60~68	60 sec	

*Data acquisition should be performed during the annealing/extension step.