



SMOBIO

Small Bio, Smart Tool

www.smobio.com

Product Information

ExcelTaq™ serial

2X Q-PCR Master Mix

TQ1100 200 Reactions

2X Q-PCR Master Mix (SYBR, no ROX) 1 ml x2

Storage

-20°C ≥ 12 months

Aliquot to avoid multiple freeze-thaw cycles.

Protect from light.

Features

- High sensitivity
- High signal intensity
- More compatible with reverse transcriptase
- With smart blue contrast dye as a visual aid for reaction setup
- Low background

Description

The ExcelTaq™ 2X Q-PCR Master Mix (SYBR, no ROX) is a ready-to-use reagent with all the essential components for quantitative real-time PCR (Q-PCR) except primers and templates. The master mix features high sensitivity (Fig. 1) and signal intensity as well as low background and better compatibility with cDNA templates derived directly from reverse transcriptase reaction mixture (Fig. 2).

The ExcelTaq™ 2X Q-PCR Master Mix contains hot-start *Taq* polymerase in an optimized buffer with dsDNA specific SYBR green fluorescent dye. This master mix allows sensitive, precise amplification, real-time tracking of the amplification process, and simultaneous quantification for targeted DNA molecules.

With inert smart blue contrast dye, the ExcelTaq™ 2X Q-PCR Master Mix is ready-to-use and greatly reduces pipetting errors, while largely improving the reproducibility of the process. The ExcelTaq™ 2X Q-PCR Master Mix is also compatible with ROX reference dye if recommended by the manufacturer of the Q-PCR system.

Application

- Quantitative real-time PCR
- Quantitative two-step real-time PCR

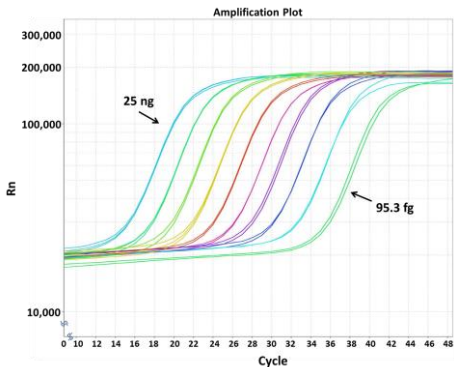


Fig. 1. The amplification plot of real-time PCR with cDNA template ranged from 25 ng to 95.3 fg in quantity, analyzed by using TQ1100 ExcelTaq™ 2X Q-PCR Master Mix for Q-PCR amplification.

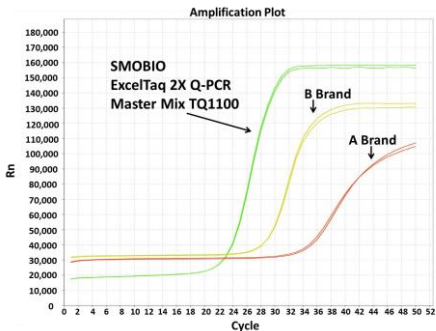


Fig. 2. SMOBIO's ExcelTaq™ 2X Q-PCR Master Mix (TQ1100) shows better compatibility with reverse transcriptase as compared with similar products from A and B brands. Two μl of cDNA directly obtained from reverse-transcription reaction mixture were used in a 20 μl Q-PCR reaction for the compatibility test.

Guide for use

For best results of Q-PCR by using ExcelTaq™ 2X Q-PCR Master Mix, the following procedures and components listed in Tables 1 to 3 are recommended.

Table 1. Recommended reaction mixture set up for Q-PCR

Reaction Components	Volume	Final dose or concentration
Template	2 μ l	cDNA: 100 ng~100 fg gDNA: 50 ng~80 μ g plasmid: 10^8 ~ 10^2 molecules
Forward primer*	varied	50~400 nM
Reverse primer*	varied	50~400 nM
2X Q-PCR Master Mix (SYBR, no ROX)	10 μ l	1X
ddH ₂ O	To 20 μ l	
Total volume	20 μl	

* The PCR primer concentration for an optimal Q-PCR reaction may vary according to primers' properties and template condition.

Table 2. Recommended real-time PCR program for **Two-step cycle**

Steps	Temp.	Time	Cycles
Template Denature and Enzyme activation	95 °C	10 min*	1
Denature	95 °C	15 sec	40
Annealing/Extension	60 °C	60 sec	

* We suggest 10 minutes for the first step to thoroughly denature DNA and activate enzymes.

Table 3. Recommended real-time PCR program for **Three-step cycle**

Steps	Temp.	Time	Cycles
Template Denature and Enzyme activation	95 °C	10 min*	1
Denature	95 °C	15 sec	40
Annealing	60 °C	30 sec	
Extension	72 °C	30 sec	

* We suggest 10 minutes for the first step to thoroughly denature DNA and activate enzymes.

Other Information

SMOBIO Technology, Inc. claims all warranties with respect to this document, expressed or implied, including but not limited to those of merchantability or fitness for a particular purpose. In no event shall SMOBIO Technology, Inc. be liable, whether in contract, tort, warranty, or under any statute or any other basis for special, incidental, indirect, punitive, multiple or consequential damages in connection with or arising from this document, including but not limited to the use thereof.

Caution: Not intended for human or animal diagnostic or therapeutic use.

Related Products

DM1100	ExcelBand 50 bp DNA Ladder, 500 μ l
DM2100	ExcelBand 100 bp DNA Ladder, 500 μ l
DM2300	ExcelBand 100 bp+3K DNA Ladder, 500 μ l
DM3100	ExcelBand 1 KB (0.25-10 kb) DNA Ladder, 500 μ l
DM3200	ExcelBand 1 KB Plus (0.1-10 kb) DNA Ladder, 500 μ l
DL5000	FluoroDye DNA Fluorescent Loading Dye (Green, 6 \times), 1 ml
NS1000	FluoroVue Nucleic Acid Gel Stain (10,000X), 500 μ l
TF1000	ExcelTaq SMO-HiFi DNA Polymerase, 1 U/ μ l, 100 U \times 1
TP1000	ExcelTaq Taq DNA Polymerase, 500 U \times 1
TP1200	ExcelTaq 5 \times PCR Master Dye Mix, 200 RXN
TP1260	ExcelTaq 5 \times Fluorescent PCR Master Mix, 200 RXN
TP2100	ExcelTaq Blood Direct PCR Master Mix Kit, 200 RXN
TQ1110	ExcelTaq 2X Q-PCR Master Mix (SYBR, ROX), 200 RXN
RP1100	ExcelRT One-step RT-PCR Kit, 50 RXN