PR1MA™ qMax™ Probe qPCR Master Mix

Description

PR1MA qMax Probe qPCR Mix is a single tube formulation for sensitive and efficient real-time, quantitative PCR assays utilizing probe detection technologies, including TaqMan®, Scorpions® and molecular beacon probes. The mix is optimized for earlier threshold detection cycles (C_t), fast cycling with exceptional, reproducible results and low PCR inhibition.

-Ideal for multiplex qPCR, two step RT-PCR, gene expression analysis, probe based detection of DNA/cDNA and screening of sequence variants.

-Utilizes high quality, PR1MA Hot Start Taq Polymerase to reduce the formation of primer-dimers and provide easy reaction set up on the bench.

-Unique buffer formulation works for both single and multiplex qPCR.

-Compatible with both standard and fast cycling protocols.

Storage

Upon receipt, immediately store at -20°C. Avoid excessive freeze/thaw cycles. When stored as directed, this product will retain its activity for 12 months from date of receipt. The product may also be stored at 4°C for up to one month.

Limitations of Use

For research purposes only. Not intended for therapeutic or diagnostic use.

Quality Control

PR1MA qPCR mixes are tested for efficiency, activity, sensitivity, processivity, heat activation, and absence of nuclease and nucleic acid contamination. This product is manufactured under a comprehensive quality management system, following ISO 9001:2008 standards.

General Guidelines

1. *2X Taq Master Mix*

The Master Mix contains PR1MA Taq Hot Start DNA polymerase, dNTPs and an buffer designed specifically for maximum efficiency, sensitivity and successful optimized quantitative PCR using TaqMan probes.

2. *Amplicon*

The optimal amplicon length should from 80 to 200 base pairs. Length should not exceed 400 base pairs.

3. *Primers*

Primers should have a predicted melting temperature (Tm) of approximately 60°C, using primer design software such as Primer 3 (http://frodo.wi.mit.edu/primer3) or visual OMPTM (http://dnasoftware.com/). Probe Tm should be 6° - 10°C higher than that of the primers. For TaqMan® probes, avoid terminal guanosine residues by choosing a probe close to the 5' primer.

4. *Reference Dyes (ROX™)*

ROX passive reference dyes are required by some real-time PCR instruments. Not all instruments require the same level of ROX, and many of the newer instruments do not require passive reference but include the option to use it for normalization.

Comparisons between suppliers should always be done in a 10-fold amplification series. Low concentration loss of detection is the only direct measurement of sensitivity.

Technical Support

For trouble-shooting and tech support, contact us by phone at 800 227-9997 or email tech@midsci.com. When possible, please include instrument model, reaction conditions, PCR parameters, amplicon size, and any traces and melting profiles.

Reaction setup

Briefly vortex the 2X mix before adding to the reaction

Component	*20 µl reaction*	*Final concentration*
PR1MA qMax Probe Master Mix	10 µl	1X
Forward Primer (10µM)	0.8 µl	400 nM
Reverse Primer (10µM)	0.8 µl	400 nM
Probe (10µm)	0.4µl	200 nM
Template DNA	<100 ng cDNA, <1 µg genomic	variable
PCR-grade water	to final reaction volume	

For other volumes, adjust the amount of each component accordingly.

Gently mix the solution. If needed, spin briefly in a microcentrifuge to bring reaction mixture to the bottom of the tube. Transfer samples to a real time thermal cycler, acquiring data on the appropriate channel.

PCR Program

Step	Temperature	Time
Initial denaturation	95°C	2 minutes (3 minutes for genomic DNA)
40 cycles*	95°C	5 second
	60° - 65°C	20-30 seconds
Melt Anaylsis (optional)		

*Do not use temperatures below 60° or exceed 30 seconds.

MidSci guarantees the performance of this product as described when used in accordance with these instructions. It is the responsibility of the purchaser to determine the suitability of this product for their particular applicaiton. 09/21 slj pdf

Package contents and reordering

PR1MA qMax Probe qPCR Master Mix, is supplied in 100, 500 and 1000 reaction (20µl) packages.

PR1MA qMax Probe qPCR Master Mix, Sample
Cat number: No ROX - PR2001-N-S
Low ROX - PR2001-L-S
High ROX - PR2001-H-S
Includes 200µl of 2X Master Mix (20 rxns)

PR1MA qMax Probe qPCR Master Mix, 100 rxns
Cat number: No ROX - PR2001-N-100
Low ROX - PR2001-L-100
High ROX - PR2001-H-100
Includes 1.0ml of 2X Master Mix (100 rxns)

PR1MA qMax Probe qPCR Master Mix, 500 rxns
Cat number: No ROX - PR2001-N-500
Low ROX - PR2001-L-500
High ROX - PR2001-H-500
Includes 5x1 .0ml of 2X Master Mix (500 rxns)

PR1MA qMax Probe qPCR Master Mix, 1000 rxns
Cat number: No ROX - PR2001-N-1000
Low ROX - PR2001-L-1000
HIgh ROX - PR2001-H-1000
Includes 10x1.0ml of 2X Master Mix (1000 rxns)

MIDSCI™

PR1MA™

qMax™
Probe qPCR Mix

☐ PR2001-N
No ROX

☐ PR2001-L
Low Rox

☐ PR2001-H
High ROX

One Tube Formulation, 2X Concentration

Package contains:
☐ 1.0ml of 2X qMax Probe qPCR Mix
100 reactions, Based on 20µl total reaction volume
☐ 5.0ml of 2X qMax Probe qPCR Mix
500 reactions, Based on 20µl total reaction volume

Store at -20°C upon receipt

888-227-9997 custserv@midsci.com