PR1MA™ qMAX™ Gold qPCR Mix

Description

PR1MA qMAX Gold qPCR Mix is a single tube formulation for sensitive and efficient real-time, quantitative PCR assays with the option of post amplification melt profiles. The proprietary qMAX Green dye provides a high level of fluorescence when bound to double stranded DNA with minimal PCR inhibition. qMAX Gold includes an inert yellow dye so small volumes are easy to visualize in PCR plates. The mix is optimized for earlier threshold detection cycles (C_t) and fast cycling with exceptional, reproducible results. Ideal for genomic DNA, cDNA and dilute templates.

-Ideal for fluorescent DNA/cDNA detection, gene expression analysis and sequence variant screening.

-Utilizes high quality, PR1MA Hot Start Taq Polymerase to reduce nonspecific binding and provide easy reaction set up.

-A unique combination of salts, pH and PCR enhancers allow for detection of dilute targets and earlier C_t values.

-Compatible with fast cycling protocols.

Storage

For long term storage, keep 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. qMAX Gold is thermally stable and will maintain activity if kept at room temp for 5 days.

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, qMax Green (a proprietary, fluorescent binding dye), dNTPs and an optimized buffer designed specifically for maximum efficiency, sensitivity and successful quantitative PCR.

2. *Amplicon*

The optimal amplicon length is 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/).

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 been 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.

MidSci is not responsible for consequential or incidental damages, whether direct or indirect, resulting from use of this product.

Reaction setup

Briefly vortex the 2X mix before adding to the reaction

Component	*20 µl reaction*	*Final concentration*
PR1MA qMax 2X Gold Master Mix	10 µl	1X
Forward Primer (10µM)	0.8 µl	400 nM
Reverse Primer (10µM)	0.8 µl	400 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 SYBR Green or FAM channel.

PCR Program

Step	Temperature	Time
Initial denaturation	95°C	2 minutes (3 minutes for gemonic DNA)
40 cycles*	95°C	5 seconds
	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 application. 11/20

Package contents and reordering

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

PR1MA qMax Gold qPCR Master Mix, Sample
Catalog number: Low ROX - PR2010-L-S
High ROX - PR2010-H-S
No ROX - PR2010-N-S
Includes 200µl of 2X Master Mix (20 rxns)

PR1MA qMax Gold qPCR Master Mix, 100 rxns
Catalog number: Lo ROX - PR2010-L-100
High ROX - PR2010-H-100
No ROX - PR2010-L-N-100
Includes 1.0ml of 2X Master Mix (100 rxns)

PR1MA qMax Gold qPCR Master Mix, 500 rxns
Catalog number: Lo ROX - PR2010-L-500
High ROX - PR2010-H-500
No ROX - PR2010-N-500
Includes 5x1.0ml of 2X Master Mix (500 rxns)

PR1MA qMax Gold qPCR Master Mix, 1000 rxns
Catalog number: Lo ROX - PR2010-L-1000
High ROX PR2010-H-1000
No Rox - PR2010-N-1000
Includes 10x1.0ml of 2X Master Mix (1000 rxns)

MidSci offers a full line of PCR enzymes and master mixes. Visit www.midsci.com for details.

MIDSCI™

PR1MA™

qMax™ Gold
Low ROX qPCR Mix
☐ PR2010-L

qMax™ Gold
High ROX qPCR Mix
☐ PR2010-H

qMax™ Gold
No ROX qPCR Mix
☐ PR2010-N

One Tube Formulation, 2X Concentration

Package contains:
☐ 1.0ml of 2X qMax **Gold** qPCR Mix
100 reactions, Based on 20µl total reaction volume
☐ 5.0ml of 2X qMax **Gold** qPCR Mix
500 reactions, Based on 20µl total reaction volume
Store at -20°C upon receipt

888-227-9997 custserv@midsci.com