PRIMETIME™ GENE EXPRESSION MASTER MIX

For probe-based qPCR assays

- Achieve high efficiency qPCR with fast or standard cycling, or singleplex or multiplex conditions
- Obtain consistent results from overnight experiments with exceptional benchtop stability
- Attain optimal performance at an optimal price
- Inquire about license-free options for commercial or diagnostic use

VERSATILE, TWO-STEP, RT-qPCR MASTER MIX

PrimeTime Gene Expression Master Mix is optimized to support probe-based qPCR assays for gene expression analysis. This master mix is guaranteed to provide assay efficiencies >90% in two-step RT-qPCR with PrimeTime 5′ Nuclease Assays. It is also compatible with other qPCR primers and probes. Each order includes 2X master mix (antibody-mediated hot-start DNA polymerase, dNTPs, $MgCl_2$, enhancers, and stabilizers) and a separate reference dye stock solution.

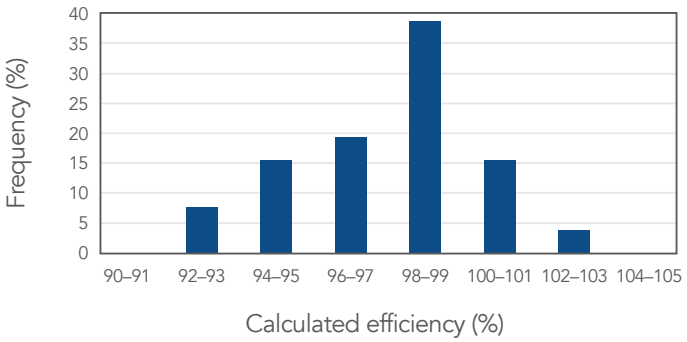
SUPERIOR PERFORMANCE—UNDER FAST OR STANDARD CYCLING CONDITIONS

PrimeTime Gene Expression Master Mix performs well under fast or standard cycling conditions (Figure 1) on a variety of real-time PCR instruments, including the 7900HT Fast (Thermo Fisher), QuantStudio™ 7 Flex (Thermo Fisher), CFX384 Touch (BioRad), and LightCycler® 480 (Roche).

AMBIENT TEMPERATURE SHIPPING

As part of our sustainability efforts, IDT scientists conducted extensive testing to show that ambient temperature shipping conditions do not impact the function of the master mix. Elimination of shipping on dry ice maximizes your research budget, minimizes shipping delays, and benefits the environment. See Figure 3 and our ambient shipping white paper (found in the resources section of **www.idtdna.com/qPCRmastermix**).

A. High PCR efficiency under fast cycling conditions.



B. Consistent C_q values under fast or standard cycling conditions.

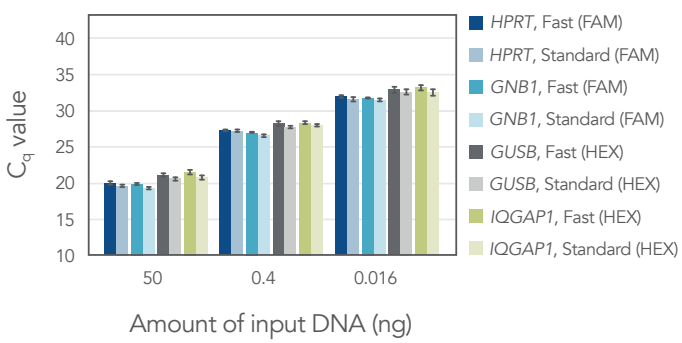


Figure 1. Consistent, high-efficiency PCR amplification under fast or standard cycling conditions. qPCRs consisting of PrimeTime qPCR Assays, PrimeTime Gene Expression Master Mix, reference dye, and template were run on a 7900HT Fast system (Thermo Fisher). (**A**) This histogram (n = 26) shows the calculated PCR efficiency of 13 assays run under fast cycling conditions using either diluted cDNA (50–0.016 ng) or gBlocks™ Gene Fragments (10^1–10^7 copies) as template. All assays exhibited 90–110% PCR efficiency with R^2 >0.99. (**B**) At each concentration of cDNA (50–0.016 ng; 3 of 6 dilutions shown), the difference in C_q values determined using fast or standard cycling conditions was <1. Standard cycling: 3 min. 95°C; 49 x (15 sec. 95°C; 1 min. 60°C). Fast cycling: 3 min. 95°C; 49 x (5 sec. 95°C; 30 sec. 60°C).

CONSISTENT C_q RESULTS EVERY TIME—EXCEPTIONAL BATCH UNIFORMITY AND BENCHTOP STABILITY

You can expect consistent performance, even when using different batches of PrimeTime Gene Expression Master Mix (Figure 2). In addition, this robust master mix is ideal for high throughput applications and overnight experiments. It has shown exceptional temperature stability with no loss of amplification efficiency or degradation of components after 24 hours at room temperature (Figure 2) or after extended heat-stress (50°C up to 7 days) (Figure 3).

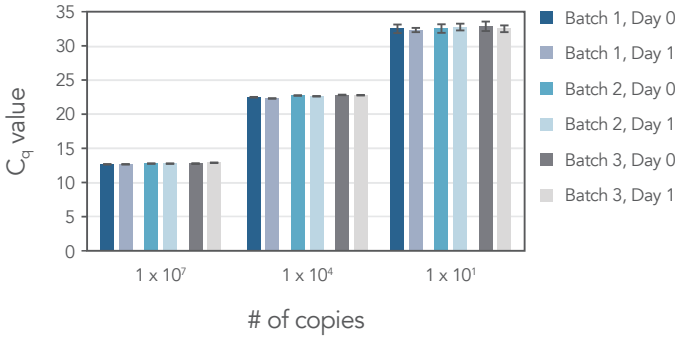


Figure 2. Reliable results using different batches of master mix 0 and 24 hr at room temperature. qPCRs consisting of PrimeTime *HPRT* qPCR Assay (FAM-labeled probe; Assay ID: Hs.PT.58v.45621572), PrimeTime Gene Expression Master Mix, reference dye, and varying amounts of gBlocks Gene Fragments (3 of 7 dilutions shown: 10^1–10^7 copies, 8 replicates) were run immediately (Day 0) or after 24 hours (Day 1) on a QuantStudio 7 Flex System (Thermo Fisher). The standard deviations of the C_q values for template levels >10 copies were <0.5. To see additional results, visit **www.idtdna.com/qPCRmastermix**

A. Consistent results after heating at 50°C up to 7 days.

B. PCR efficiency maintained after extended heat treatment

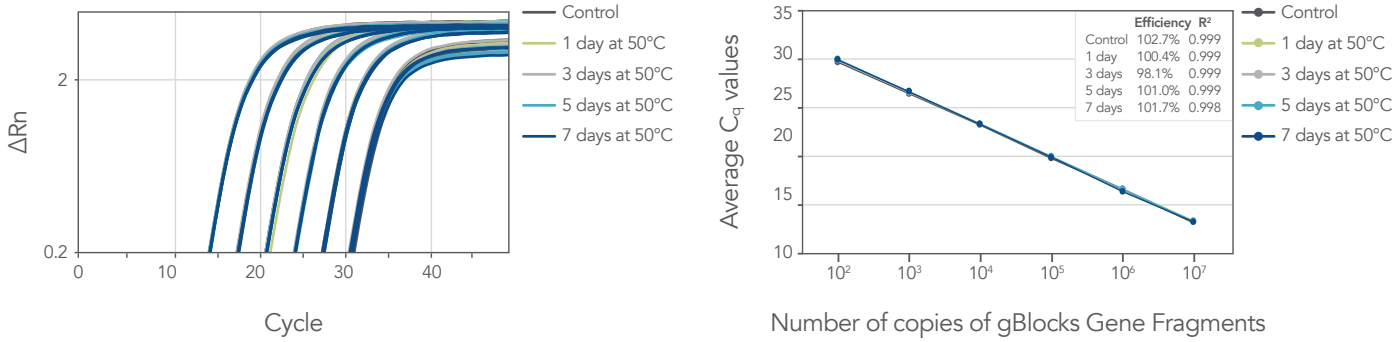


Figure 3. Even after treatment at 50°C for up to 7 days, PrimeTime Gene Expression Master Mix provides high PCR efficiency with no change in C_q values, when compared to untreated master mix. PrimeTime master mix was incubated at 50°C for 1, 3, 5, or 7 days, or stored at –20°C until use (control). Consistent, high-efficiency PCR results are shown by representative amplification curves (**A**) and standard curves (**B**) from *HPRT* assays that remained at room temperature for 24 hours before running the thermal cycler.

ORDERING INFORMATION

Product	Unit size	Catalog #
PrimeTime Gene Expression Master Mix	1 x 1 mL	1055770
	1 x 5 mL	1055772
	5 x 5 mL	1055771

Master mix is shipped at ambient temperatures. Store at –20°C. Contact custcare@idtdna.com for discounted pricing for 500 mL or more.

Related products	
PrimeTime qPCR Probe Assays	Order at www.idtdna.com/primetime-probe-assays
PrimeTime qPCR Probes	Order at www.idtdna.com/qPCRprobes
Affinity Plus™ qPCR Probes	Order at www.idtdna.com/AffinityPlus

> FOR MORE INFORMATION, VISIT **WWW.IDTDNA.COM/qPCRMASTERMIX**

For Research Use Only. Not for use in diagnostic procedures.