PrimeTime Gene Expression Master Mix

For probe-based assays

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; MgCl₂; enhancers; and stabilizers) and a separate reference dye stock solution.

Superior performance—under standard and fast cycling conditions

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

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 (www.idtdna.com/qPCRmastermix).

Figure 1. Consistent, high-efficiency PCR amplification under standard or fast cycling conditions. qPCRs consisting of PrimeTime qPCR Assays, PrimeTime Gene Expression Master Mix, reference dye, and template were run on a 7900HT 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 (10⁻¹⁰⁻¹⁰⁷ copies) as template. All assays exhibited 90–110% PCR efficiency with R² >0.99. (B) At each concentration of cDNA (50–0.016 ng; 3 of 6 dilutions shown), the difference in Cq values determined using standard or fast 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). To see additional results, visit www.idtdna.com/qPCRmastermix.
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: 10^7–10^1 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.](image)

### Ordering information

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<tr>
<th>Product</th>
<th>Unit size</th>
<th>Catalog #</th>
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Master mix is shipped at ambient temperatures. Store at –20°C.

**Related products**

- **PrimeTime qPCR Assays (probe based)**
  [Order at www.idtdna.com/PrimeTime](www.idtdna.com/PrimeTime)
- **PrimeTime qPCR Probes**
  [Order at www.idtdna.com/qPCRprobes](www.idtdna.com/qPCRprobes)

Contact [custcare@idtdna.com](mailto:custcare@idtdna.com) for discounted pricing for 500 mL or more.

For more information and to order, visit [www.idtdna.com/qPCRmastermix](www.idtdna.com/qPCRmastermix).

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