



Brilliant III Ultra-Fast SYBR[®] Green QPCR Master Mix

Quick Reference Guide for the ABI 7900HT Fast Real-Time PCR System

This quick reference guide provides an optimized protocol for using the Stratagene Brilliant III Ultra-Fast SYBR[®] Green QPCR Master Mix with the 7900HT Fast Real-Time PCR System from Applied Biosystems. For detailed instructions, refer to the full product manual.

Prepare the Reactions

- 1 Dilute the reference dye 1:50 using nuclease-free PCR-grade water.
- 2 Prepare the experimental reactions by combining the components of the reagent mixture in the order listed in the table below. Prepare a single reagent mixture for replicate reactions (plus *at least* one reaction volume excess) using multiples of each component.

| Reagent Mixture |
|---|
| Nuclease-free PCR-grade water to bring final volume to 20 μ l (including DNA) |
| 10 μ l of 2 \times SYBR Green QPCR Master Mix |
| x μ l of upstream primer at optimized concentration (200–500 nM) |
| x μ l of downstream primer at optimized concentration (200–500 nM) |
| 0.3 μ l of diluted reference dye |

- 3 Gently mix the reagent mixture without creating bubbles, then distribute the mixture to the experimental reaction tubes.
- 4 Add x μ l of experimental DNA to each reaction to bring the final reaction volume to 20 μ l. The table below lists a suggested quantity range for different DNA templates.

| DNA | Quantity per reaction |
|-------------|-----------------------|
| Genomic DNA | 5 pg – 50 ng |
| cDNA | 0.5 pg – 100 ng* |

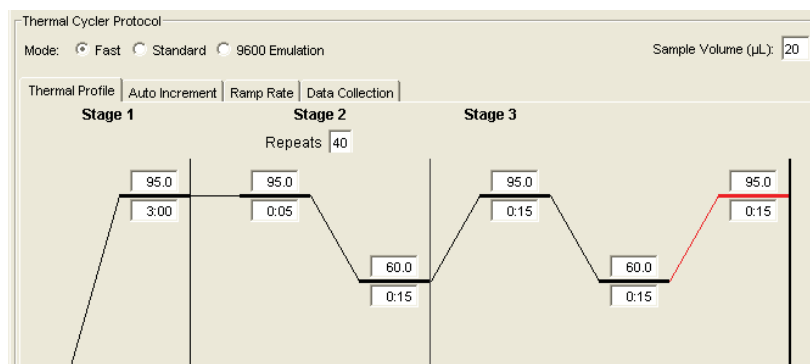
*Refers to RNA input amount during cDNA synthesis

- 5 Mix the reactions without creating bubbles, then centrifuge briefly.



Set Up the QPCR Plate and Thermal Profile

- 1 From the SDS software, click **File > New** to open the Plate Document Wizard.
- 2 Enter the appropriate assay and well information for a new experiment.
- 3 Click **OK**. The Wizard will close and the plate document will appear in the main software window.
- 4 Click **Add Detector**, and select the correct reporter for the assay. Click **Copy to Plate Document**, then click **Done**.
- 5 Highlight the wells that will contain samples and check the selected reporter dye.
- 6 On the Instrument/Thermal Profile tab, enter a sample volume of 20 μ l and select the *Fast* run mode. Adjust the thermal cycling conditions according to the image below, and set the instrument to report fluorescence during the 60°C step of each cycle.



Run the PCR Program

- 1 Place the reactions in the 7900HT instrument.
- 2 On the Instrument/Real Time tab, click **Start Run**.

Analyze Data

- 1 Analyze the results of the run as needed for your experiment.

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Product Information

Catalog #600805, 400 reactions
Catalog #600816, 4000 reactions

Ordering Information

By phone (US only*): 800-424-5444, x3
On the web: www.genomics.agilent.com

Technical Services

By phone (US only*): 800-894-1304, x2
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Brilliant III Ultra-Fast SYBR® Green QPCR Master Mix

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