

TaqMan® Array Fast Plates

This quick reference card describes procedures for performing experiments using TaqMan® Array 96-Well Fast Plates or TaqMan® Array Gene Signature Sets 96-Well Fast Plates. For safety and biohazard guidelines, refer to the “Safety” section in the *TaqMan® Array Plates Protocol: 96-Well Fast Plates, 96-Well Plates, and TaqMan® Gene Signature Sets* (PN 4391016). For all chemicals in **bold red** type, read the MSDS and follow the handling instructions. Wear appropriate protective eyewear, clothing, and gloves.

1 Prepare the cDNA template

- Evaluate the total RNA from your sample.
- Perform reverse transcription on your total RNA sample.

2 Set up the plate document/experiment

- Start the SDS software, 7500 software, or StepOne software.
- Download the appropriate text (.txt) file from the Information CD to the real-time PCR system computer.

System	Download
7500 Fast	<ul style="list-style-type: none"> SDS Software – <i>ProdNum_7300_7500_SDS.txt</i> 7500 Software – <i>ProdNum_7500_2.0.txt</i>
7900HT Fast	<i>ProdNum_7900_SDS.txt</i>
StepOnePlus™	<i>ProdNum_StepOne_2.1.txt</i>

- Refer to the appropriate instrument user guide for information on how to set up the plate document/experiment or create a template from the setup file.

3 Combine the cDNA and master mix

- For each cDNA sample, label a tube of sufficient size to accommodate the total volume of reaction mix for the number of reactions (see the table below).
- To each labeled cDNA tube, add the components at the indicated volumes:

Component	Volume per well (μL)					
	1	8 [‡]	16 [‡]	32 [‡]	48 [‡]	96 [‡]
cDNA + DNase-free water [§]	5	45	90	180	270	540
TaqMan® master mix[#]	5	45	90	180	270	540
Total volume	10	90	180	360	540	1080

[‡] Number of 10-μL reactions. Volumes include 12.5% excess volume.

[§] The recommended range of input cDNA is 5 to 50 ng per 10-μL reaction.

[#] **TaqMan® Fast Universal PCR Master Mix** and **TaqMan® Gene Expression Master Mix** are compatible for use with TaqMan® Array 96-Well Fast Plates and TaqMan® Array Gene Signature Sets 96-Well Plates.

- Cap the tubes, then gently vortex each tube to thoroughly mix the solution.
- Centrifuge the tubes briefly to bring the liquid to the bottoms of the tubes.

4 Prepare the plate

- Before removing the plate cover, briefly centrifuge the plate (1000 rpm for 1 min).
- Remove the cover from the plate, then dispense the 10 µL of the cDNA and master mix solution to the appropriate wells of the plate.
- Cover the plate using MicroAmp® Optical Adhesive Film.
- Briefly centrifuge the plate to bring the solution to the bottom of the wells (1000 rpm for 1 min).

IMPORTANT! For optimal results when using TaqMan® Fast Universal PCR Master Mix (2X), prepare the plate on ice and run the plate immediately. If you cannot run the plate within 2 hrs of preparation, refrigerate the reaction plate until you can run it (for up to 24 hrs).

5 Run the plate

- Set the thermal-cycling conditions as specified in the following table:

TaqMan® Fast Universal Master Mix				TaqMan® Gene Expression Master Mix			
Hold [‡]	Hold	PCR (40 cycles)		Hold	Hold	PCR (40 cycles)	
		Melt	Anneal/extend			Melt	Anneal/extend
50 °C	95 °C	95 °C	60 °C	50 °C	95 °C	95 °C	60 °C
2:00	0:20	0:03	0:30	2:00	10:00	0:15	1:00

[‡] Omit the hold (50 °C) if you are using TaqMan® Fast Universal Master Mix that does not contain AmpErase® UNG.

- In the plate document or experiment, specify the settings. If running a:
 - 7900HT Fast system or 7500 Fast system running SDS software v1.4, select **Fast** mode, then enter **10 µL** for the sample volume.
 - StepOnePlus™ system or 7500 Fast system running 7500 software v2, select **Fast** (or **Standard**) mode, then enter **10 µL** for the sample volume.
- Load the plate in the instrument and start the run.

6 Analyze your results

The details of analysis depend on the real-time PCR system that you use. Refer to the appropriate instrument user guide for instructions on how to analyze your data.

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NOTICE TO PURCHASER: PLEASE REFER TO THE TAQMAN EXPRESS PLATES/TAQMAN FAST EXPRESS PLATES PRODUCT INSERT AND PROTOCOL FOR LIMITED LABEL LICENSE OR DISCLAIMER INFORMATION.

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