

## RT<sup>2</sup> Profiler PCR Arrays

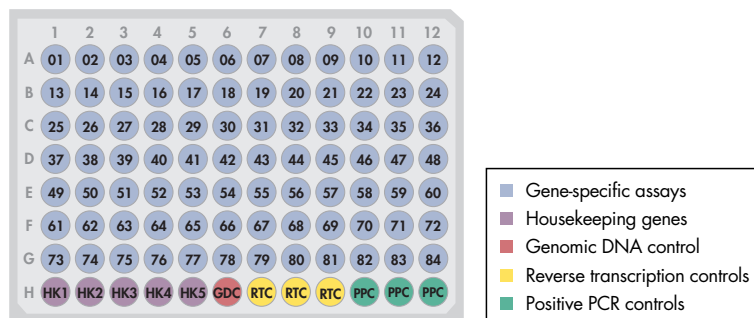
### For pathway-focused gene expression analysis

RT<sup>2</sup> Profiler PCR Arrays are a highly reliable, sensitive gene expression profiling real-time PCR-based technology for analyzing focused panels of genes involved in biological processes, signal transduction, or disease research pathways.

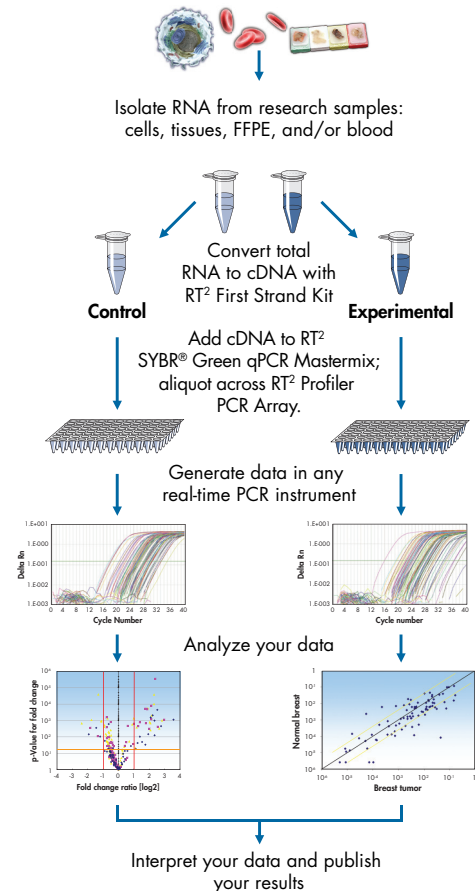
#### RT<sup>2</sup> Profiler PCR Arrays provide:

- Focused gene expression profiling for any lab with a real-time instrument
- Integrated controls that assess sample quality and PCR process
- Free easy-to-use data analysis tools (Web- or Excel®-based)

With RT<sup>2</sup> Profiler PCR Arrays, you can analyze the expression of the most relevant genes in your pathway of interest with complete confidence in your results, to build a better biological story. The RT<sup>2</sup> Profiler PCR Array system comprises a complete experimental workflow, from sample preparation through data analysis and interpretation, starting with just 25 ng of RNA (or <1 ng of RNA with the RT<sup>2</sup> PreAMP cDNA Synthesis Kit) and provides free data analysis software. Each catalogued RT<sup>2</sup> Profiler PCR Array incorporates laboratory-verified assays for 84 pathway-focused genes, 5 housekeeping genes for normalization, and controls that check for sample quality and reaction quality (Figure 1).



**Figure 1.** Each well in an RT<sup>2</sup> Profiler PCR Array measures the relative expression of a gene related to a pathway or disease state. Arrays are available in 4 formats: the 96-well plate, the 384-well plate, the 100-well disc, and the 96x96 chip. Every format includes comprehensive, proprietary controls in addition to the laboratory-verified gene assays, including controls to monitor genomic DNA contamination (GDC), first strand synthesis (RTC), and real-time PCR efficiency (PPC).

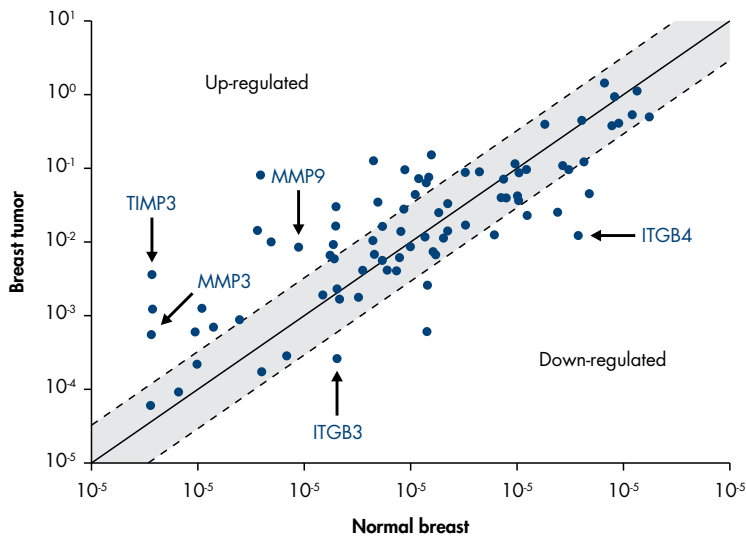


**Figure 2.** RT<sup>2</sup> Profiler PCR Array workflow. Starting from cell, tissue, blood, formalin-fixed paraffin-embedded (FFPE), or laser-capture microdissection (LCM) samples, a comprehensive gene expression profile for your pathway of interest can be achieved in less than 3 hours.

#### Profiling of sample types:

- Cells
- Tissues
- Blood
- FFPE
- LCM





**Figure 3. Identification of potential breast cancer biomarkers through expression analysis of extracellular matrix genes.** Triplicate total RNA samples from normal human breast and a human breast tumor were characterized using the Human Extracellular Matrix and Adhesion Molecules RT<sup>2</sup> Profiler PCR Array. Genes encoding the matrix metalloproteinases (MMP3 and MMP9) and their inhibitors (TIMP3) are up-regulated, while genes encoding integrins (ITGB3 and ITGB4) are down-regulated by at least 3-fold in breast tumors relative to normal tissue.

### Popular RT<sup>2</sup> Profiler PCR Arrays for research

Angiogenesis	Inflammatory Cytokines & Receptors
Apoptosis	Innate & Adaptive Immune Response
Autophagy	Mitochondrial Energy Metabolism
Cancer PathwayFinder	NFκB Signaling Pathway
Cell Cycle	Oxidative Stress
Epigenetic Chromatin Modification Enzymes	Signal Transduction PathwayFinder
Epithelial to Mesenchymal Transition (EMT)	TGFβ/BMP Signaling Pathway
Extracellular Matrix & Adhesion Molecules (Figure 3)	Toll-Like Receptor Signaling Pathway
Fibrosis	WNT Signaling Pathway

Over 140 more pathways available online:  
[www.sabiosciences.com/ArrayList.php](http://www.sabiosciences.com/ArrayList.php)

## Ordering Information

Product	Contents	Cat. no.
RT <sup>2</sup> Profiler PCR Arrays	Pathway, disease, or custom* panels of gene assays	<u>330231</u>
RT <sup>2</sup> SYBR Green qPCR Mastermixes	Reagents for real-time PCR reactions (available with ROX, fluorescein, or no internal reference dye)	<u>Varies</u>
RT <sup>2</sup> First Strand Kit (12)	Reagents for cDNA synthesis reactions for 12 samples	<u>330401</u>
RNeasy Mini Kit (50)**	Columns, plasticware, and reagents for 50 preps	<u>74104</u>
RNase-free DNase Set (50)	Reagents for 50 preps	<u>79254</u>

Compatible with real-time PCR instruments from the following manufacturers:

QIAGEN®, Agilent/Stratagene®, Applied Biosystems®, Bio-Rad®, Eppendorf®, Fluidigm®, Roche®, TaKaRa®

\* For custom arrays, please visit [www.sabiosciences.com/custompcrplate.php](http://www.sabiosciences.com/custompcrplate.php)

\*\* For cell samples. For other sample types, please visit [QIAGEN.com](http://QIAGEN.com)

## Find out more, visit [www.sabiosciences.com/RT2PCR.php](http://www.sabiosciences.com/RT2PCR.php) !

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