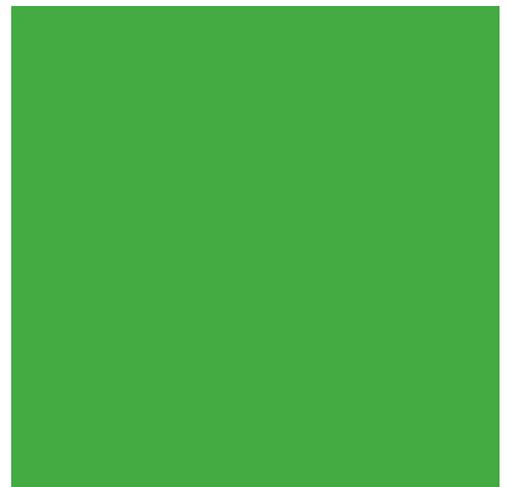
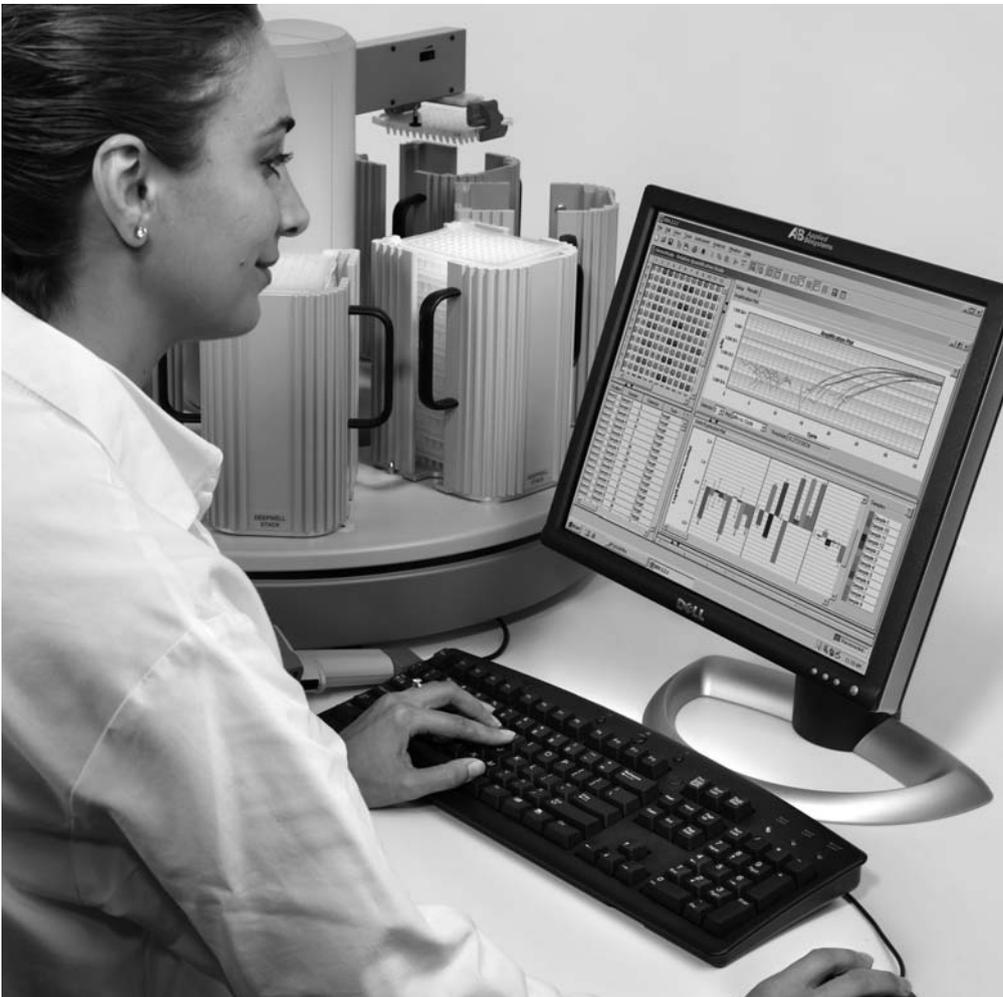
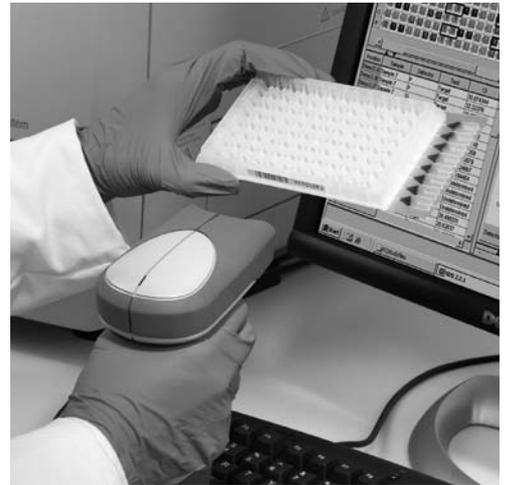
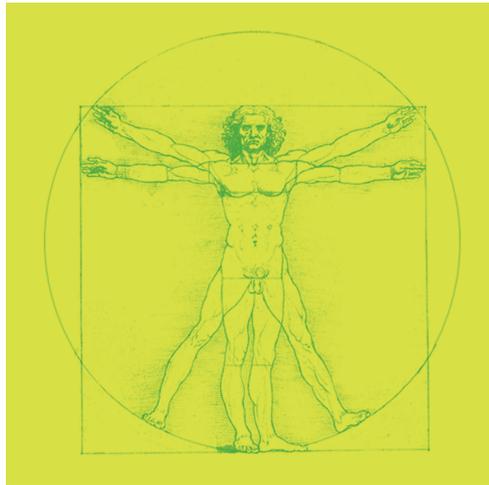


# TaqMan® Gene Signature Arrays

Pre-loaded micro fluidic cards for target class and pathway studies.





# Speed, Accuracy and Sensitivity

- Perform hundreds of real-time PCR reactions simultaneously
- Profile comprehensive panels of disease target classes or pathways
- Validate microarray hits and related targets to expand your research
- Obtain quality TaqMan<sup>®</sup> Gene Expression Assay data from low-expressing genes otherwise undetectable in DNA microarrays

## Ready to Run

The TaqMan<sup>®</sup> Array is a customizable 384-well micro fluidic card (array) that enables researchers to perform hundreds of real-time PCR reactions simultaneously. Simple to implement, TaqMan Arrays require minimal amounts of sample and allow for 1 to 8 samples to be run in parallel against 12 to 384 TaqMan<sup>®</sup> Gene Expression Assay targets (including manufacturing controls). More so, they do not require liquid-handling robotics or complex pipetting to load samples.

TaqMan<sup>®</sup> Gene Signature Arrays are pre-designed TaqMan Arrays containing TaqMan Gene Expression Assays matching genes specific to disease target classes or pathways to facilitate drug discovery, disease research, and pathway analysis. The genes are chosen from pathway analysis tools, published articles, and collaborator and customer input. Reliable, sensitive Gene Signature Arrays are ideal for gene expression analysis of comprehensive sets of gene targets related to a disease or pathway because they provide quantitative, reproducible results. Furthermore, they are cost effective, affordable, and suitable for any throughput need.

The use of TaqMan Gene Expression Assays in each well ensures that results from these Gene Signature Arrays are robust and quantitative. TaqMan Assays provide the best combination of specificity, sensitivity, and dynamic range in real-time PCR. Assay performance in a TaqMan Array is comparable to performance in a 96- or 384-well plate, even though the real-time PCR reactions in a TaqMan Array are run in less volume, and require less master mix and sample. Additionally, the sealed wells in a TaqMan Array decrease the chance of contamination, enabling the highest level of performance compared to any pre-designed real-time PCR array.

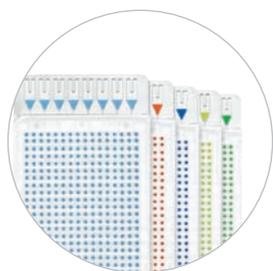
# A Valuable Research Tool

Ease of use and high sample throughput are important factors in pathway and disease research. Easily study a target class of interest by choosing from a variety of readily available TaqMan Gene Signature Arrays covering areas such as GPCRs, immune response, or protein kinases.

## Simple to Use

TaqMan Arrays make it easy to process up to eight samples in parallel. Simply load the sample and TaqMan® Universal PCR Master Mix into each of the eight loading ports of a TaqMan Array, centrifuge it to dispense the sample mix into the individual wells, and cycle it on an Applied

Biosystems 7900HT Fast Real-Time PCR System for accurate and reproducible gene expression data. Since each TaqMan Array requires just a few minutes to set up, hundreds of samples can be processed without complex pipetting or robotics.



[ 1. Load



2. Spin



3. Seal ]



4. Run

[ 5 minutes to complete steps 1 through 3 ]

The TaqMan® Array streamlines the reaction set-up process in four simple steps. Loading the array with your cDNA sample and TaqMan® Universal PCR Master Mix takes only five minutes.

## Expression Profiling and Microarray Validation

A clear example of the advantages of TaqMan Gene Signature Arrays for expression profiling and microarray hit validation can be seen in the Human Immune Array. This array contains 96 targets involved in immune response and inflammation, and includes many chemokines and cytokines. Use the Human Immune Array to validate the interesting hits from a semiquantitative microarray experiment. Then, profile the rest of the immune response genes contained in the array individually, or on a custom array, to find out how each gene interacts with one another as a result of the stimulus in the experiment.

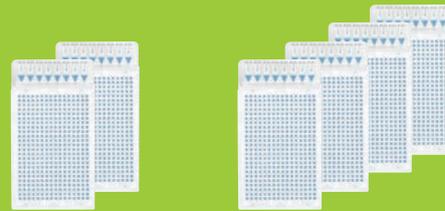
## Disease Target Screens

An even more powerful application of TaqMan Gene Signature Arrays is to study genes that are below the limit of detection in microarrays. G-protein coupled receptor (GPCR) genes are often ignored or overlooked in microarrays because they are low expressors and fall within the area of background. However, GPCRs are one of the most important disease targets, and up to 40% of modern drugs target these genes. Because TaqMan Gene Signature Arrays can even detect low expressing genes with great accuracy and reproducibility, the Human or Mouse GPCR Array, containing 380 GPCR targets each, are the perfect tools to study these genes.

## Endogenous Control Selection

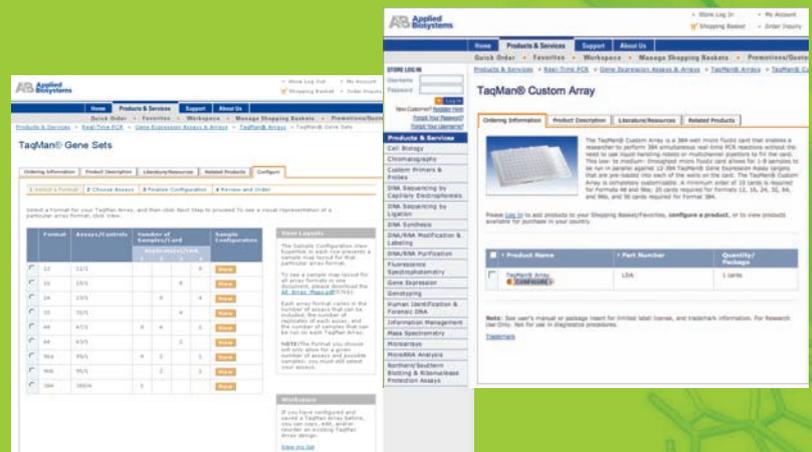
Applied Biosystems also offers human, mouse, and rat Endogenous Control Arrays to assess which housekeeping genes are best for a specific study. Not all housekeeping genes maintain constant expression levels, and choosing the controls that are not differentially expressed in a particular experiment is vital to correct experimental design. Endogenous Control Arrays make this simple by providing a means to test 16 common housekeeping genes with one TaqMan Array.

For a complete list of available TaqMan Gene Signature Arrays, visit [taqmanarray.appliedbiosystems.com](http://taqmanarray.appliedbiosystems.com)



## Fast Delivery and Convenient Package Sizes

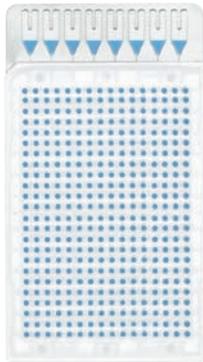
TaqMan Gene Signature Arrays are readily available and delivered 2–4 days after ordering. They are packaged conveniently with two or four arrays per pack, making them cost effective, and just the right size for any experiment.



## Create Your Own Array!

If a pre-designed TaqMan Gene Signature Array is not available for your area of research, you can customize your own to include your specific targets of interest. Select from thousands of inventoried TaqMan Gene Expression Assays to create the ideal TaqMan® Custom Array for your experiment needs. Alternatively, TaqMan® Gene Sets are “virtual” Gene Signature Arrays containing pre-defined lists of TaqMan Gene Expression Assays matching genes specific to a target class or pathway, and simplify configuration of a TaqMan Custom Array. Learn more at [taqmanarray.appliedbiosystems.com](http://taqmanarray.appliedbiosystems.com)

# Take Your Gene Expression Experiments to a Whole New Level



## The Perfect Combination

The TaqMan Array was designed expressly for use with the Applied Biosystems 7900HT Fast Real-Time PCR System—a high-throughput, real-time PCR platform that detects and quantitates nucleic acid sequences in 96- or 384-well format. The 7900HT TaqMan® Array Upgrade maximizes the full capabilities of the 7900HT System by accommodating the TaqMan Array. Using the optional 7900HT

Automation Accessory with the 7900HT TaqMan Array Upgrade takes your gene expression experiments to a whole new level. Load your sample and master mix into multiple TaqMan Arrays in advance, and leave it to the 7900HT Automation Accessory to put each TaqMan Array into the 7900HT System without manual intervention. The combination of the TaqMan Array and the 7900HT System makes high-throughput gene expression research simple and powerful.



More arrays will be available soon! Register to receive new Gene Signature Array product announcements, or suggest an array of your own at [taqmanarray.appliedbiosystems.com](http://taqmanarray.appliedbiosystems.com)

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The TaqMan® Array is covered by U.S. Patents Nos. 6,514,750, 6,942,837, 7,211,443, and 7,235,406. Micro Fluidic Card developed in collaboration with 3M Company.

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