


# *FastGene*<sup>®</sup> *qFTR*

96-well Real-Time PCR Systems



 *FastGene*<sup>®</sup> *qFTR*  
FG-QPTC01, 4+1 Channel System

 *FastGene*<sup>®</sup> *qFTR PLUS*  
FG-QPTC02, 6 Channel System

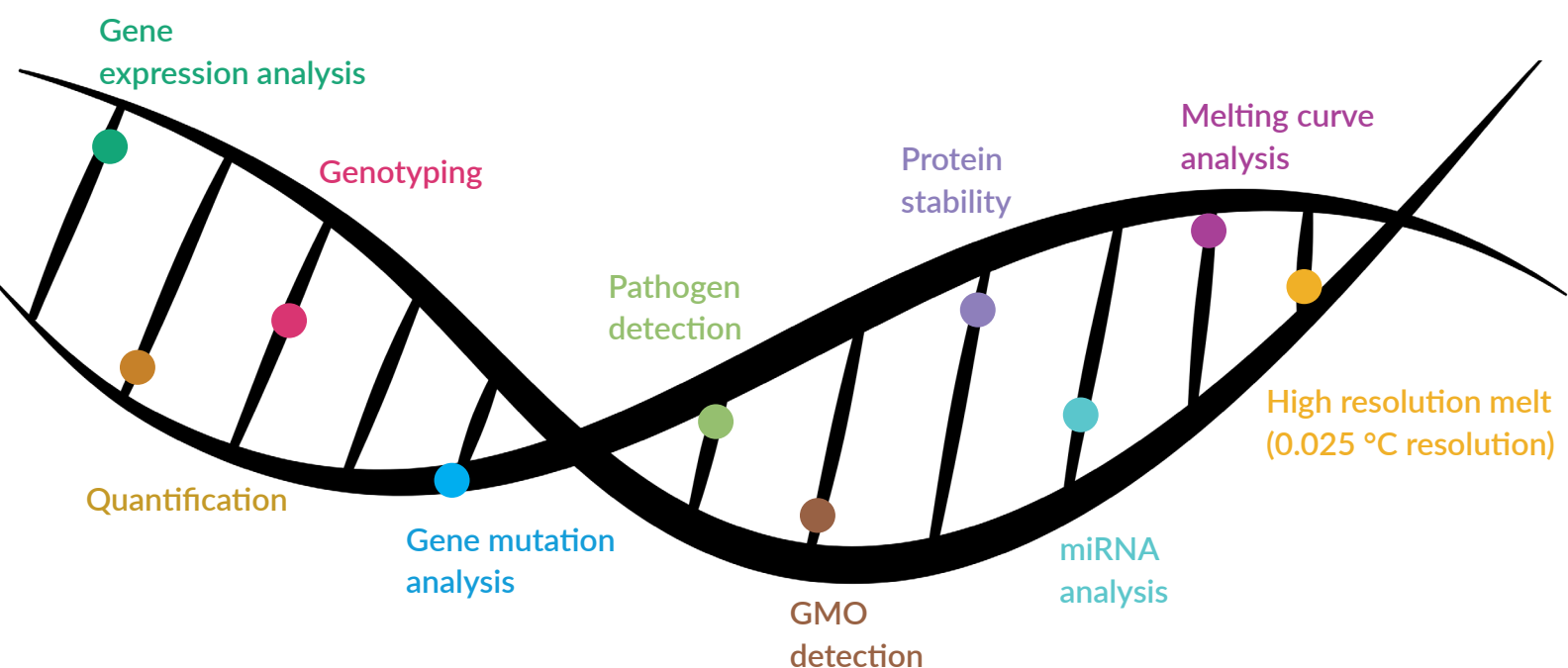


## Next level qPCR systems

With qFYR, your setup is safeguarded from the start

Setting up a qPCR experiment should be straightforward, but a simple plate setup error can cost time, samples, and valuable data. The FastGene® qFYR systems guide you through the process in under three minutes—so you can be confident that everything is set up correctly before you start. And with simultaneous detection of all fluorescence channels, you get immediate, reliable data without the risk of losing results due to mistakes. Precision should never be left to chance.

The FastGene® qFYR systems were developed to meet highest laboratory standards and deliver reliable performance for various real-time PCR applications:

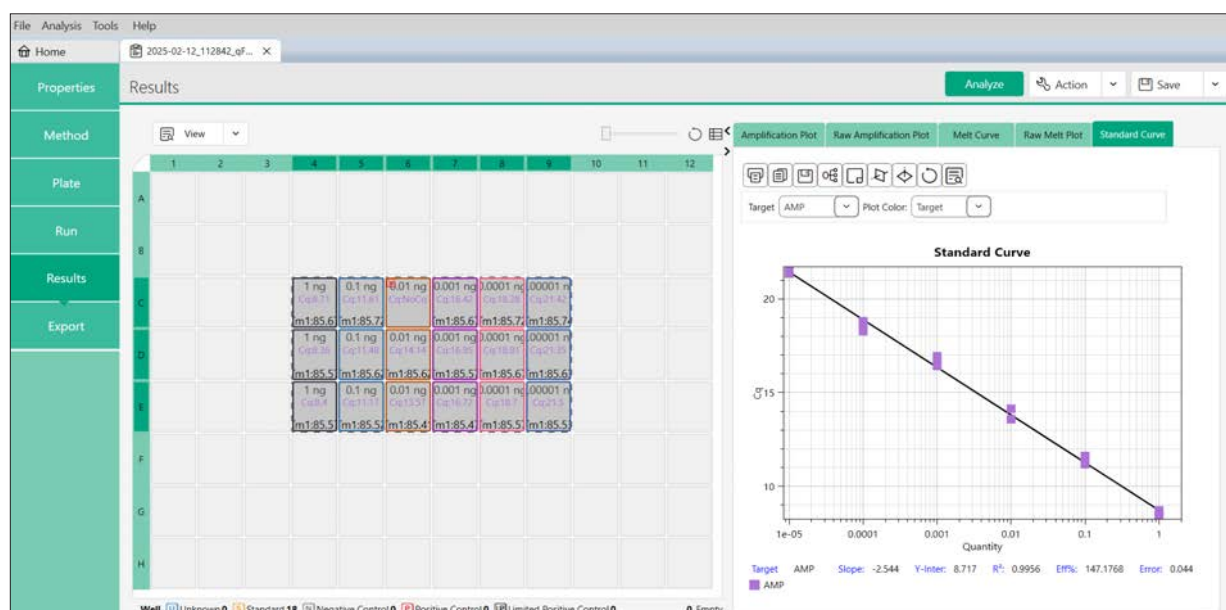




## ► qFYR Analysis Studio Software

### Let the software do the work

Designed with researchers in mind, qFYR Analysis Studio Software streamlines your qPCR workflow, from experiment setup to data analysis, ensuring an easy and faster setup.



#### Simple & fast setup

- Intuitive navigation, no steep learning curve
- Predefine and save settings for future runs
- Auto-export results in Excel, PDF, or .txt

#### Automated & reliable analysis

- Automatic baseline subtraction and Cq calculation
- Automated absolute and relative quantification
- Multi-plate analysis for high-throughput research

#### Flexible & scalable

- Run multiple qFYRs with one software
- Customizable settings for different experiments
- Modern UI design for seamless experience



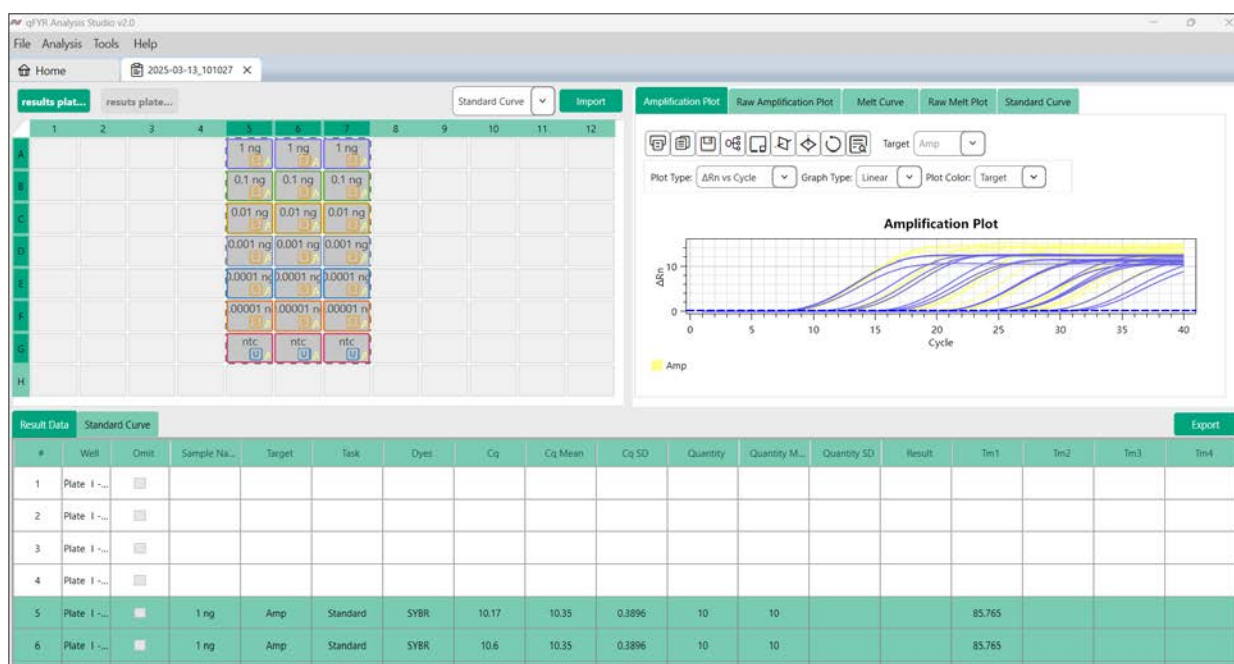
## Increase your throughput

- Run multiple FastGene® qFYR systems from a single PC.
- Perform independent qPCR experiments simultaneously.



## Multi plate analysis

- Combine data analysis from multiple runs.
- Compare experiments directly in a single, unified dataset.

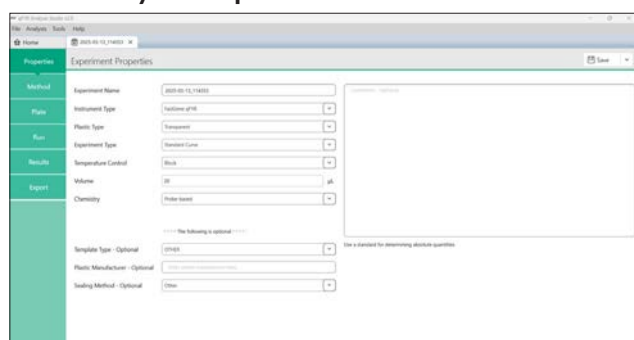




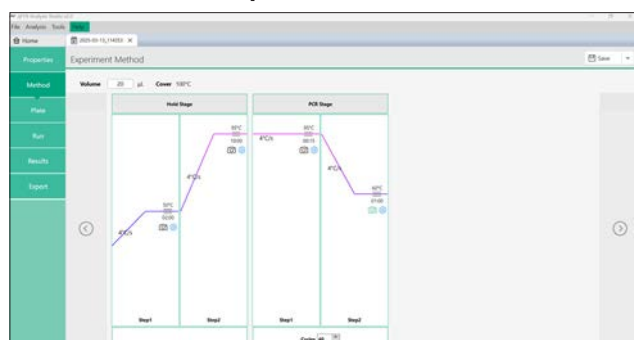
**No missed steps, no guesswork – follow an intuitive experiment workflow**

With a clear 6-step guide and easy navigation, the qFyr Analysis Studio Software ensures every step is completed correctly.

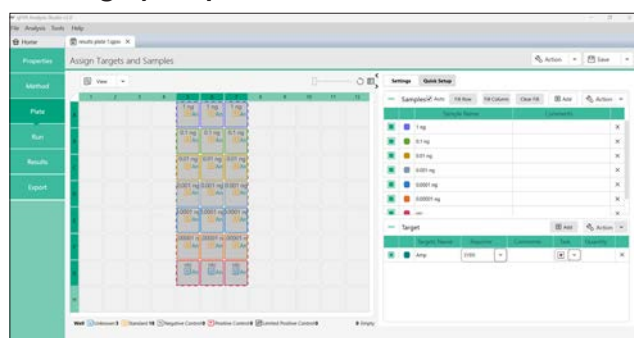
### 1. Define your experiment



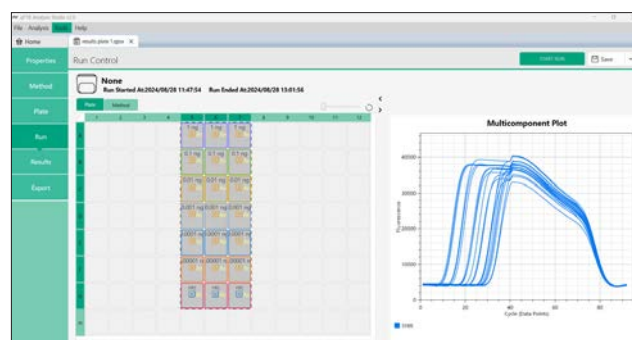
### 2. Personalize the protocol



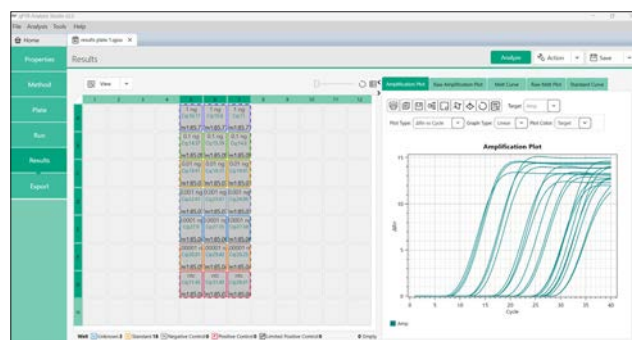
### 3. Design your plate



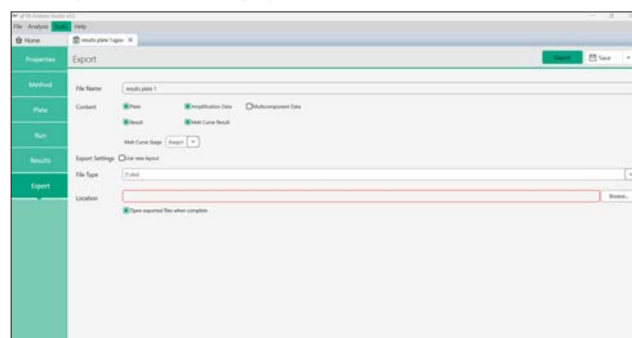
### 4. Start and monitor the run



### 5. Analyze your results



### 6. Export and keep your data safe

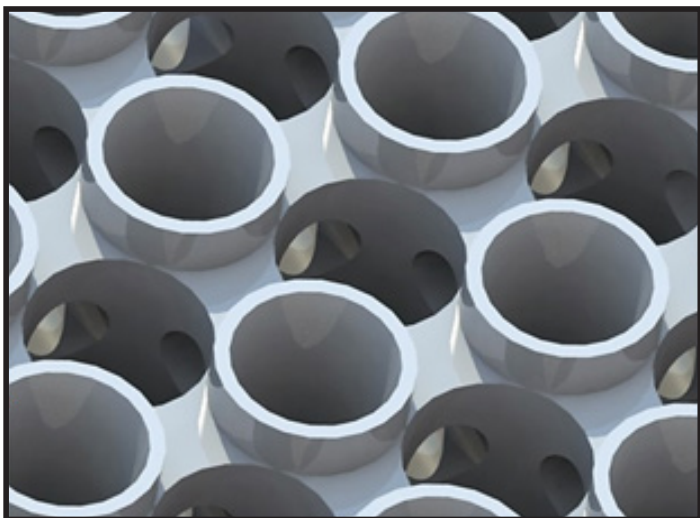




## › Innovative qPCR technology

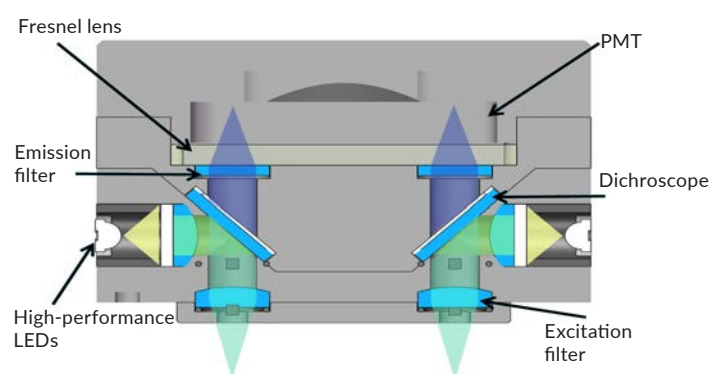
### Superior thermal consistency you can trust

- The qFYR systems ensure  $\pm 0.2^{\circ}\text{C}$  precision and uniformity across all 96 wells, eliminating edge effects and delivering reliable results every time.
- A lightweight, hollow thermal block enables ultra-fast ramp rates (up to  $6^{\circ}\text{C/s}$ ), speeding up qPCR runs without sacrificing accuracy.
- Advanced Peltier technology guarantees stable, reproducible performance—boosting confidence and reducing repeat runs.



### High-sensitivity optical detection – clarity at every cycle

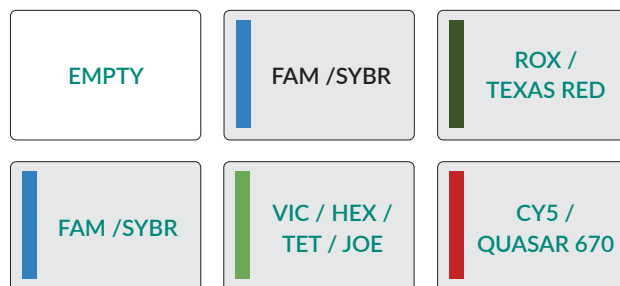
- qFYR combines a high-quality PMT with a precision Fresnel lens to capture even the faintest signals.
- The short focal length minimizes signal loss and cross-talk, delivering sharp, accurate quantification—ideal for low-abundance targets.



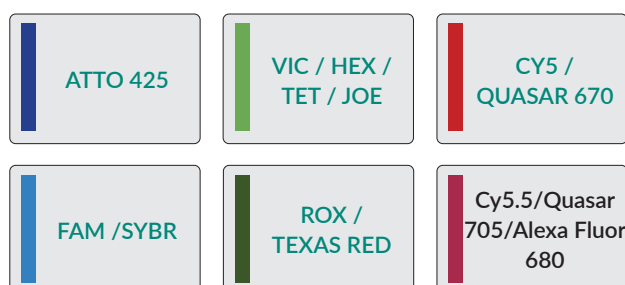
### Multi-color fluorescence detection – fast, efficient multiplexing

- qFYR's multi-channel system detects all standard qPCR dyes in just 8 seconds per scan, streamlining data collection.
- A dual FAM/SYBR channel in the qFYR 4+1 channel system accelerates HRM and melt curve analysis—cutting run time in half and boosting efficiency.

#### FastGene® qFYR 4+1 Channel System



#### FastGene® qFYR PLUS 6 Channel System





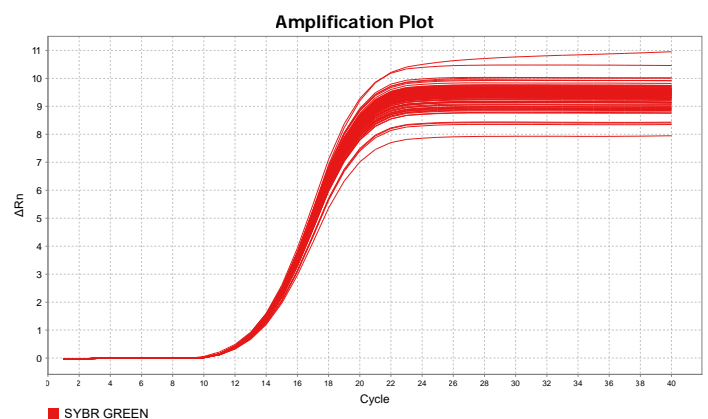
## ► Results you can trust

### High-quality data, every time

FastGene® qFyr systems deliver reliable, precise qPCR results with advanced optics and a high-precision thermal block. Engineered for accuracy and reproducibility, it ensures optimal amplification conditions for every application.

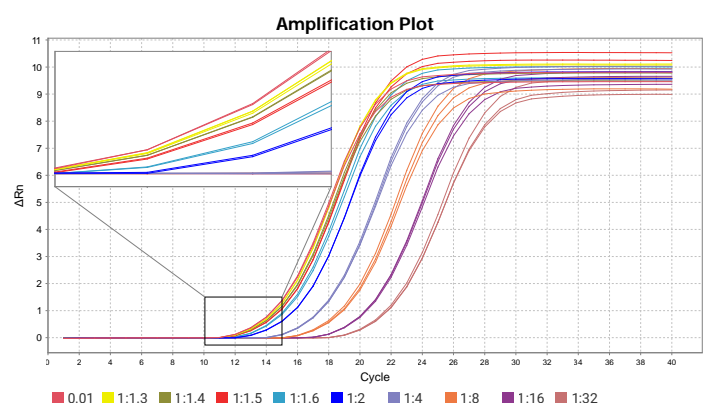
### Unmatched consistency across the plate

Eliminate well-to-well variation for consistent, reproducible results, even with as little as 1 ng of plasmid DNA. With a mean  $C_q$  of  $13.89 \pm 0.055$ , you get consistent, reproducible data across all 96 wells—no second-guessing required.

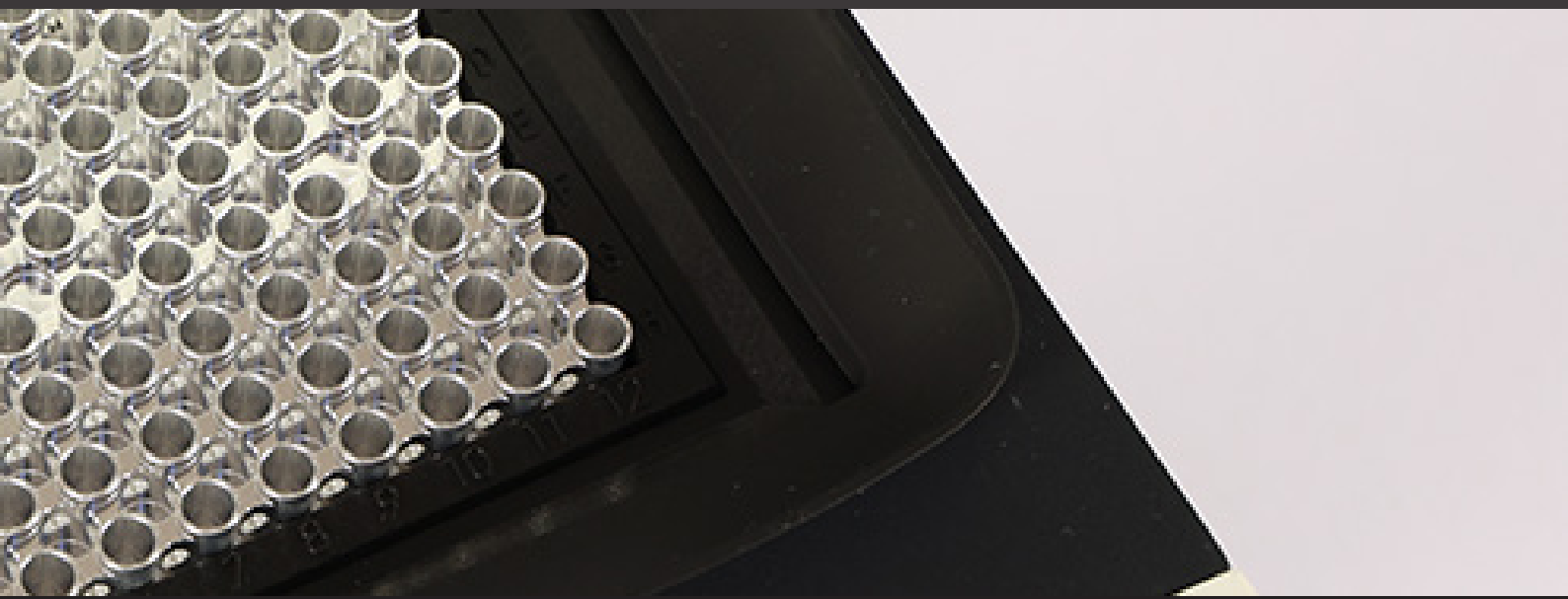


### Detect even the smallest differences

FastGene® qFyr's high sensitivity enables detection of subtle changes—as small as a 1.3-fold difference in target concentration. Using AMP-specific primers and a dilution series starting at 0.01 ng, it reliably distinguishes even the slightest variations in expression.



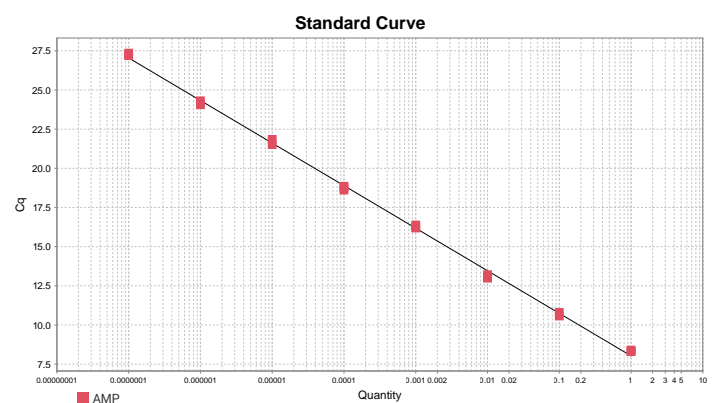
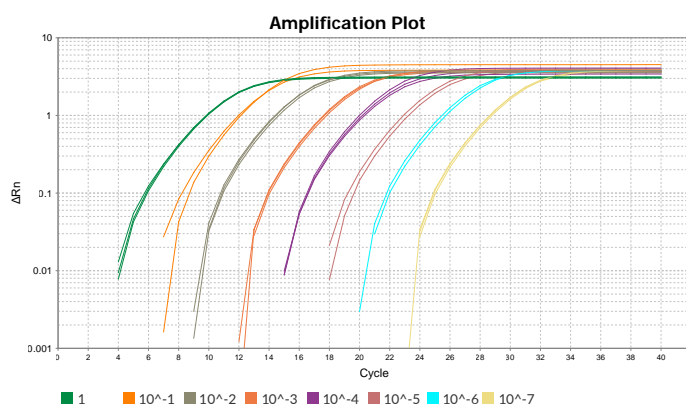




## Intuitive data visualization

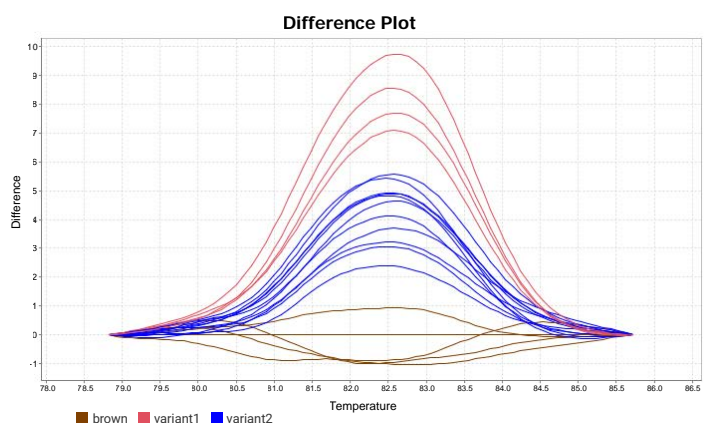
### Broad dynamic range – precise quantification

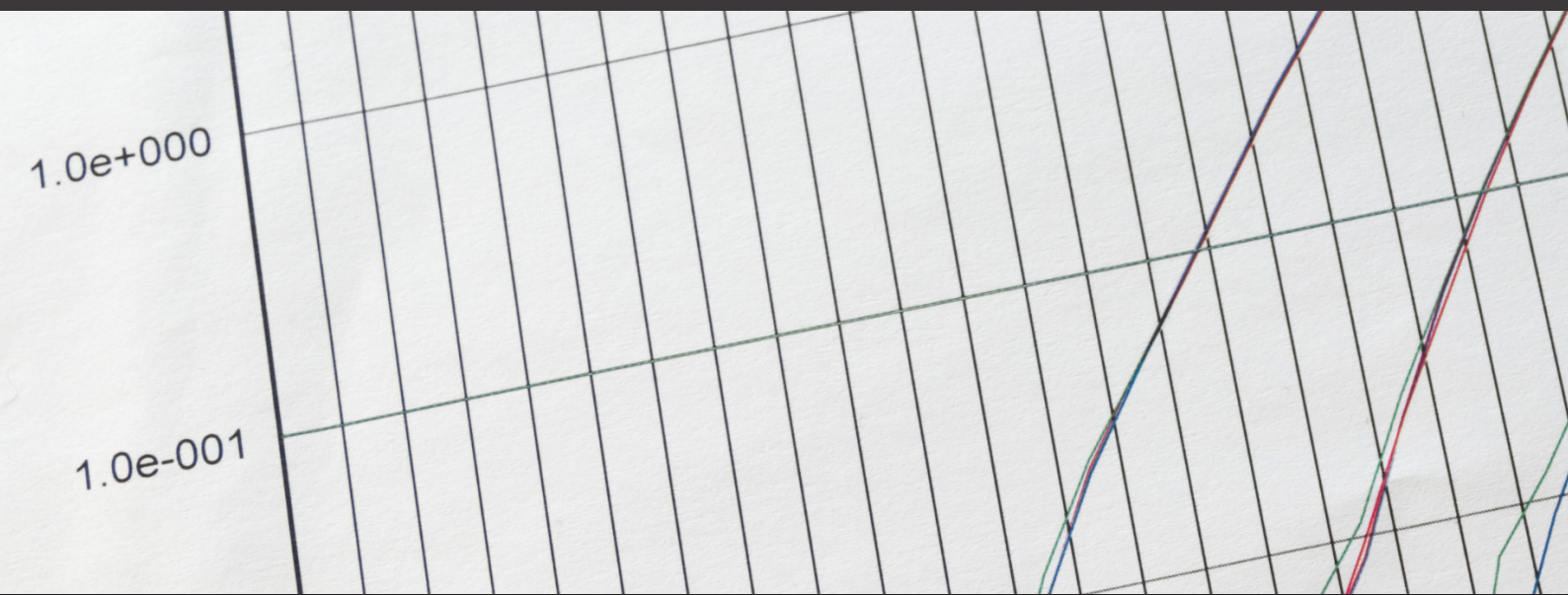
FastGene® qFYR systems deliver precise, reliable results across a wide range of template concentrations. With highest efficiency in standard curve generation, you can count on consistent quantification—whether working with high or low inputs.



### Integrated HRM – simplified SNP analysis

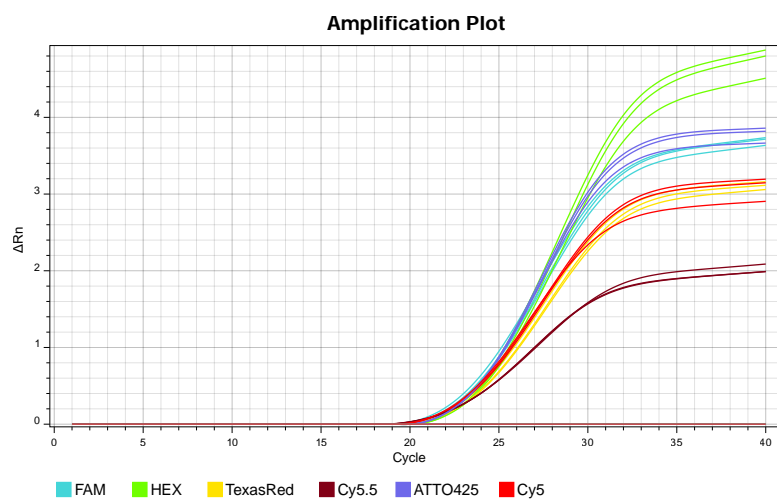
The software includes high-resolution melt curve analysis for accurate SNP detection—easily distinguishing variants like brown vs. blue eye alleles from blood samples.





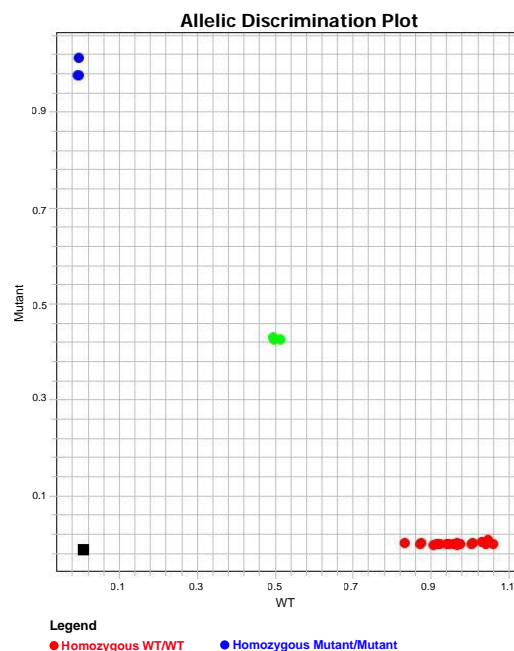
### Powerful multiplexing – maximize efficiency

With FastGene® qFYR, you can detect up to 4 targets per well; qFYR Plus increases that capacity to 6, helping you save time, conserve reagents, and reduce sample usage without sacrificing precision.



### Effortless SNP analysis – genotyping made simple

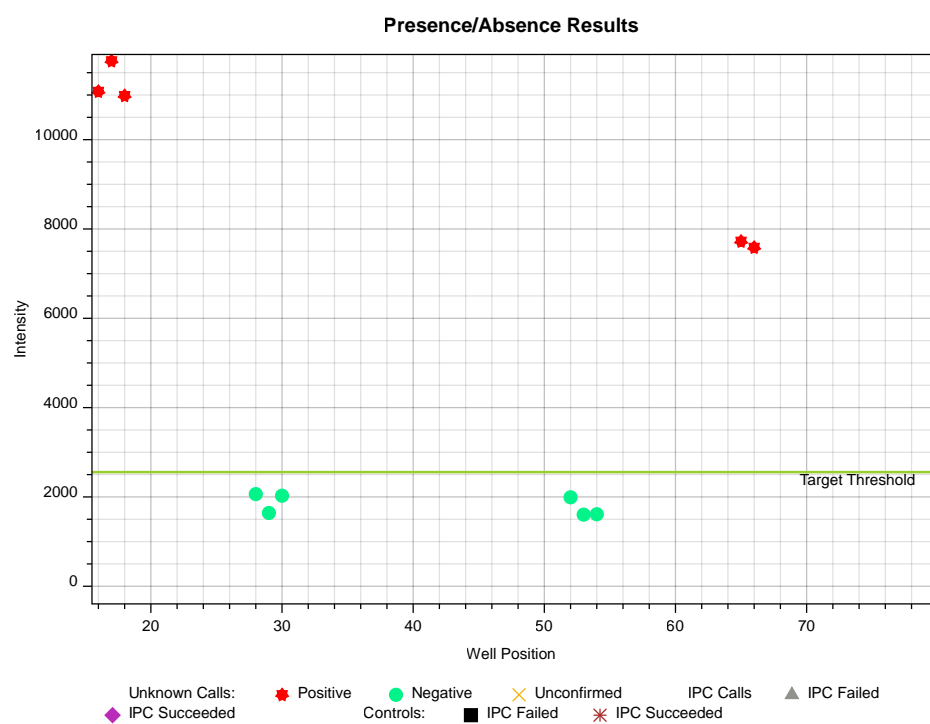
With clear cluster plots and automatic genotype calling, FastGene® qFYR makes it easy to distinguish allelic populations, no manual interpretation needed.





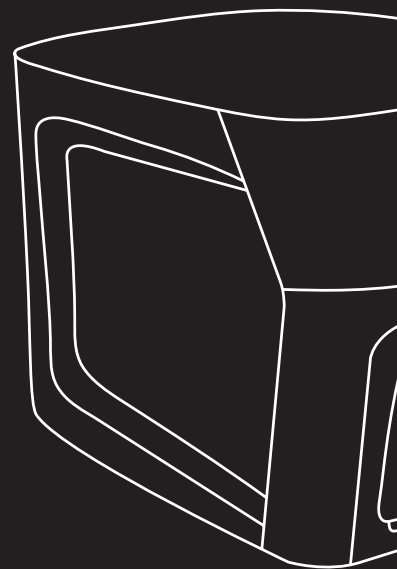
### Presence/absence – instant confirmation

Quickly confirm target presence. FastGene® qFYR software simplifies probe-based assays, while providing quantitative data.



### FastGene® qFYR Analysis Studio – powerful, user-friendly software

- Automatic data interpretation – instantly analyze qPCR, HRM, genotyping, and multiplexing results with intelligent, experiment-specific tools.
- Clear, customizable visuals – easily interpret results with intuitive charts and export high-quality images, including vector formats.
- All-in-one analysis – from standard curves to SNP genotyping, everything is integrated—no need for additional software.



## ► Technical specifications

	Optical Detection System	
	FastGene® qFYR (FG-QPTC01)	FastGene® qFYR Plus (FG-QPTC02)
Excitation source	<b>4 single-color</b> high-efficiency LEDs (maintenance-free, working life >100,000 hours)	<b>6 single-color</b> high-efficiency LEDs (maintenance-free, working life >100,000 hours)
Detector	Highly sensitive PMT (photo multiplier tube) with Fresnel lens	Highly sensitive PMT (photo multiplier tube) with Fresnel lens
Detector position	Top of the block	Top of the block
Detection sensitivity	1 copy of the target sequence	1 copy of the target sequence
Scanning principle	Time-resolved scanning technology	Time-resolved scanning technology
System sensitivity	Distinguishable 1.33-fold copy number difference in singleplex reactions	Distinguishable 1.33-fold copy number difference in singleplex reactions
Detection time	<ul style="list-style-type: none"> <li>Standard mode (full channel): 8.5 seconds/96-well plate;</li> <li><b>Fast mode (dual FAM): 4 seconds/96-well plate</b></li> </ul>	Standard mode (full channel): 8.5 seconds/96-well plate
Excitation/detection	<ul style="list-style-type: none"> <li>Excitation range: 455–650 nm;</li> <li>Scope of test: 510–715 nm</li> </ul>	<ul style="list-style-type: none"> <li><b>Excitation range: 415–685 nm;</b></li> <li><b>Scope of test: 455–745 nm</b></li> </ul>
Fluorescence channel number	4 channels (2x FAM)	<b>6 channels</b>
Dye compatibility	<ul style="list-style-type: none"> <li>FAM/SYBR Green</li> <li>VIC/HEX/TET/JOE</li> <li>ROX/Texas Red, Mustang Purple</li> <li>Cy5/LIZ</li> </ul>	<ul style="list-style-type: none"> <li>FAM/SYBR Green</li> <li>VIC/HEX/TET/JOE</li> <li>ROX/Texas Red, Mustang Purple</li> <li>Cy5/LIZ</li> <li><b>Cy5.5/Quasar 705/Alexa Fluor 680</b></li> <li><b>ATTO 425</b></li> </ul>



	Thermal Block	
	FastGene® qFyr (FG-QPTC01)	FastGene® qFyr Plus (FG-QPTC02)
Block capacity	96	96
Sample volume	1-50 µl	1-50 µl
Heating/cooling method	Peltier (6 temperature control modules)	Peltier (6 temperature control modules)
Temperature control technology	Hollow-out module combined with edge temperature compensation technology	Hollow-out module combined with edge temperature compensation technology
Maximum ramp rate	<ul style="list-style-type: none"> <li>• 6 °C/s (thermal block)</li> <li>• 4 °C/s (sample)</li> </ul>	<ul style="list-style-type: none"> <li>• 6 °C/s (thermal block)</li> <li>• 4 °C/s (sample)</li> </ul>
Temperature setting range	4-100 °C	4-100 °C
Heated lid	Electronic automatic lid	Electronic automatic lid
Temperature accuracy	± 0.2 °C	± 0.2 °C
Temperature uniformity	± 0.2 °C	± 0.2 °C
Gradient zone	12 columns	12 columns
Gradient range	1-36 °C	<b>1-40 °C</b>
Linear dynamic range	10 orders of magnitude: 1-10 <sup>10</sup> copies	10 orders of magnitude: 1-10 <sup>10</sup> copies
Software	FastGene® qFyr Analysis Studio	FastGene® qFyr Analysis Studio





## ► qPCR workflow

### NIPPON Genetics EUROPE qPCR Portfolio – complete solutions from start to finish

From RNA isolation and enzymes to qPCR reagents, premium plastics, and the advanced FastGene® qFYR Real-Time PCR Systems—we provide everything you need for a seamless qPCR workflow.



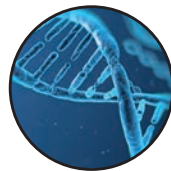
#### RNA Isolation Kits

- FastGene® RNA Basic Kit
- FastGene® RNA Premium Kit



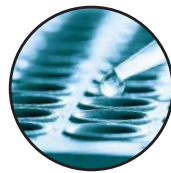
#### Reverse Transcription

- FastGene® Scriptase Basic
- FastGene® Scriptase II
- FastGene® Scriptase III
- FastGene® Scriptase Ready Mixes



#### qPCR Reaction Mixes

- FastGene® Probe One Step Mix with UDG
- FastGene® 2x IC Green Mixes
- FastGene® 2x Probe Mixes



#### Plastics

- FastGene® PCR Tubes
- FastGene® PCR 8-well strips
- FastGene® PCR plates



#### qPCR Cycler

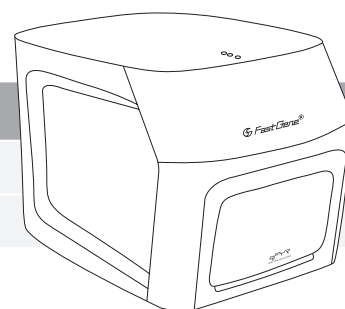
- FastGene® qFYR
- FastGene® qFYR Plus



## ► More information

### Ordering information

Cat. No.	Product
FG-QPTC01	FastGene® qFYR Real-Time PCR System (4 + 1 channels)
FG-QPTC02	FastGene® qFYR Plus Real-Time PCR System (6 channels)



### Get the right consumables for the qFYR

The FastGene® qFYR systems are compatible with low-profile (0.1 mL) PCR tubes/8-well PCR tube strips with transparent, flat tops, as well as non-skirted or semi-skirted low profile 96 well PCR reaction plates. It is not compatible with high-profile (0.2 mL) PCR reaction tube and convex tube covers.

Cat. No.	Product
FG-170350	Non-skirted, low-profile 96-well plate
FG-210250	Semi-skirted, low-profile 96-well plate
FG-HD0196(BC)	Semi-skirted, low-profile Two-component 96-well plate (optional barcode)
FG-018WF	0.1 ml clear 8-well strips, single flat caps
FG-19FC	0.1 ml white 8-well strips, flat cap strips



FG-170350



FG-210250



FG-HD0196(BC)

**Get your personal demo of the FastGene® qFYR!**

Get in touch with us and you will receive a complete product demonstration tailored to your specific needs!

**[www.nippongenetics.eu](http://www.nippongenetics.eu)**

