

The iQTM5 Multicolor Real-Time PCR Detection System The Next Generation for Real-Time PCR Analysis

The iQ5 real-time PCR detection system is a modular upgrade that is easily installed on an iCycler[®] thermal cycler. This powerful system offers five-target analysis capabilities and enhanced software features. For laboratories operating in regulated environments, the iQ5 Security Edition software offers tools for compliance with US FDA 21 CFR Part 11 regulations. Regardless of your PCR application, the iQ5 system is the ultimate instrument for value and flexibility.

Specifications

Thermal Cycler

Heating rate	3.3°C/sec
Cooling rate	2.0°C/sec
Method of heating/cooling	Peltier and Joule
Heated lid	Up to 105°C
Temperature	
Range	4–100°C
Accuracy	±0.3°C
Uniformity	±0.4°C
Overshoot maximum	<0.5°C
Gradient mode	
Operational range	40–100°C
Programmable gradient span	1–25°C
Gradient accuracy	±0.4°C
Gradient uniformity	±0.4°C

Optics Module

Optical lamp	Tungsten-halogen
Range of excitation/emission wavelengths available	400–700 nm
Sensitivity	Can detect one copy of IL-1 β in human genomic DNA
Dynamic range	9 orders of magnitude
Excitation/emission filters	5 filter sets included: FAM/SYBR, HEX, TAMRA, Texas Red, Cy5

Software

Operating platform	Windows XP Professional (Security Edition), Windows XP (Standard Edition)
Multiplex analysis	Up to 5 targets per well
Data analysis modes	Absolute quantification with standard curve Automated allelic discrimination by end-point fluorescence or threshold cycle Melt-curve analysis End-point analysis for up to 5 fluorophores Gene expression analysis by relative quantity (ΔC_T) or normalized expression ($\Delta\Delta C_T$) with multiple reference genes Multifile gene expression analysis for comparison of over 5,000 C_T values

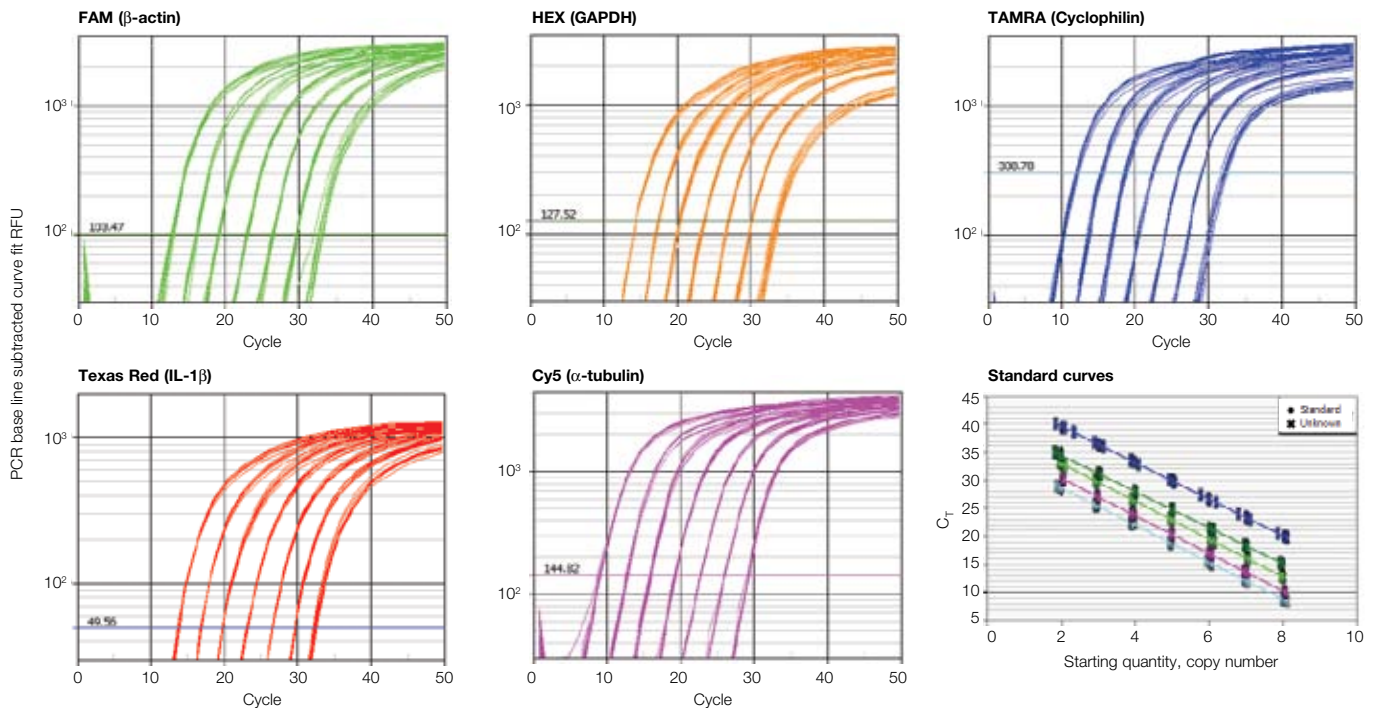


Software (cont.)

Data export modes	Print data graphs and tables from software-based menu Export formatted data table to Microsoft Excel Copy and paste directly into Microsoft Excel, Word, or PowerPoint files Detailed reports contain run conditions, data graphs and tables, and data analysis parameters
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System

Sample capacity	96 wells
Sample size	15–100 μ l
Licensed for PCR	Yes
Communications	USB 2.0 high-speed
Electrical approvals	IEC, CE
Dimensions (W x D x H)	29.2 x 58.4 x 38.7 cm (11.5 x 23 x 15.2")
Weight	17.6 kg (39 lb)



Linearity of five-target detection with the iQ5 real-time PCR detection system. A series of 10-fold dilutions of plasmid DNA (10^8 – 10^2 copies per 25 μ l reaction) were amplified for five target genes. Standard curves: FAM, $R^2 = 0.998$, efficiency = 98.0%; HEX, $R^2 = 0.999$, efficiency = 104.4%; TAMRA, $R^2 = 0.999$, efficiency = 100.8%; Texas Red, $R^2 = 0.999$, efficiency = 102.5%; Cy5, $R^2 = 0.999$, efficiency = 98.9%.

Ordering Information

Catalog #	Description
170-9780	iQ5 Multicolor Real-Time PCR Detection System, includes iCycler base, optics module, software CD-ROM, 5 installed filter sets, 96-well reaction module, calibration solutions, optical-quality 96-well PCR plates, Microseal® 'B' seals, communication cables, power cord, quick reference cards, instructions
170-9785	iQ5 System Upgrade Kit, includes iQ5 optics module, optical lid for 96-well block, iQ5 optical system software, 96-well optical-quality PCR plates, sealing tape, communication cables, power cords, instructions
170-9788	iQ5 Multicolor Real-Time PCR Detection System With Desktop PC
170-9789	iQ5 Multicolor Real-Time PCR Detection System With Laptop PC
170-8860	iQ™ Supermix, 100 x 50 μ l reactions
170-8862	iQ Supermix, 500 x 50 μ l reactions
170-8880	iQ™ SYBR® Green Supermix, 100 x 50 μ l reactions
170-8882	iQ SYBR Green Supermix, 500 x 50 μ l reactions
170-8890	iScript™ cDNA Synthesis Kit, 25 x 20 μ l reactions
170-8891	iScript cDNA Synthesis Kit, 100 x 20 μ l reactions
223-9441	iQ 96-Well PCR Plates, 25
MSB-1001	Microseal 'B' adhesive seals, 100

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Purchase of this instrument conveys a limited non-transferable immunity from suit for the purchaser's own internal research and development and for use in applied fields other than Human In Vitro Diagnostics under one or more of U.S. Patents Nos. 5,656,493, 5,333,675, 5,475,610 (claims 1, 44, 158, 160–163 and 167 only), and 6,703,236 (claims 1–7 only), or corresponding claims in their non-U.S. counterparts, owned by Applied Biosystems. No right is conveyed expressly, by implication or by estoppel under any other patent claim, such as claims to apparatus, reagents, kits, or methods such as 5' nuclease methods. Further information on purchasing licenses may be obtained by contacting the Director of Licensing, Applied Biosystems, 850 Lincoln Centre Drive, Foster City, California 94404, USA.

Bio-Rad's iQ5 real-time thermal cyclers are licensed real-time thermal cyclers under Applied Biosystems' United States Patent No. 6,814,934 B1 for use in research and for all other fields except the fields of human diagnostics and veterinary diagnostics.

Appearances and specifications are subject to change without notice.

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