

CFX96™ Deep Well Real-Time PCR Detection System–IVD

Specifications

Real-Time PCR

Bulletin 6690

Bio-Rad's CFX96 Deep Well Real-Time PCR Detection System–IVD for in vitro diagnostic use offers industry-leading performance for large-volume reactions. Solid-state optical components provide sensitive detection for up to five targets. Together with unsurpassed thermal cycler performance and easy-to-use software, the CFX96 Deep Well System–IVD offers the ultimate flexibility in commercial assay selection or rapid assay development.

The CFX96 Deep Well System–IVD makes it easy for you to:

- Generate robust results right away with factory-calibrated optics and fast system setup
- Streamline data analysis with built-in analysis modules and sophisticated quality control (QC) tools
- Create a personalized system setup with user-specific system access settings and flexible instrument configurations



Specifications

C1000™ Thermal Cycler with 96–Deep Well Reaction Module

Maximum ramp rate	2.5°C/sec	Gradient	
Average ramp rate	2°C/sec	Operational range	30–100°C
Heating and cooling method	Peltier	Programmable span	1–24°C
Lid	Heats up to 105°C	Temperature range	0–100°C
		Temperature accuracy	±0.2°C of programmed target at 90°C
		Temperature uniformity	±0.4°C well-to-well within 10 sec of arrival at 90°C

Optical Detection

Excitation	6 filtered LEDs	Dynamic range	10 orders of magnitude
Detection	6 filtered photodiodes	Scan time	
Range of excitation/emission wavelengths	450–730 nm	All channels	12 sec
Sensitivity	Detects 1 copy of target sequence in human genomic DNA	Single channel fast scan	3 sec

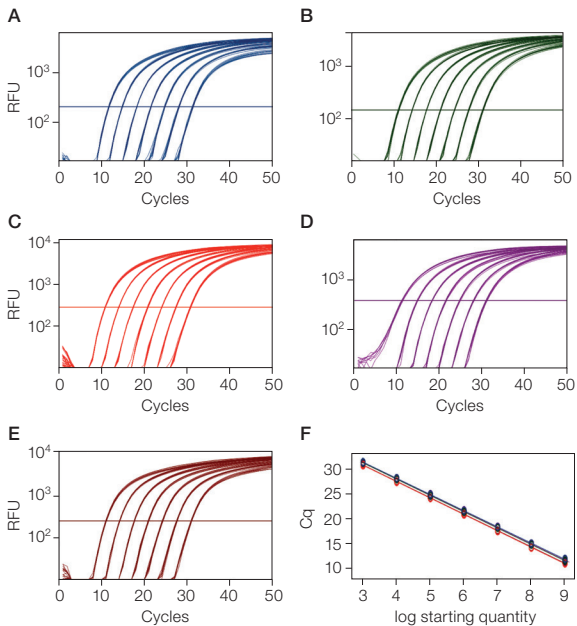
Software

Operating systems	Windows 7, Windows 8		Allelic discrimination
Memory	Minimum of 1 GB		End-point analysis
Multiplex analysis	Up to 5 targets per well	Data export	Save, copy, and print all graphs and spreadsheets from right-click menu
Data analysis modes	PCR quantification with standard curve		Export specified data in multiple formats
	Melt curve analysis		Copy and paste into Microsoft Excel, Word, or PowerPoint file
	Gene expression analysis by relative quantity (ΔCq) or normalized expression ($\Delta\Delta Cq$) with multiple reference genes and individual reaction efficiencies		Customizable reports containing run settings, data graphs, and spreadsheets can be directly printed or saved as PDFs
	Data analysis options include bar chart, clustergram, scatter plot, volcano plot, and heat map		
	Multiple file gene expression analysis for comparison of an unlimited number of Cq values		

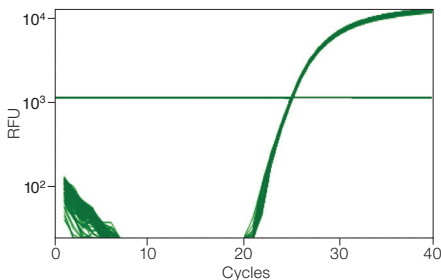
System

Licensed for real-time PCR	Yes	Dimensions (W x D x H)	33 x 46 x 36 cm (13 x 18 x 14 in.)
Sample capacity	96 wells	Weight	21 kg (47 lb)
Sample size	10–125 μ l	In vitro diagnostic license	Yes
Communications	USB 2.0	CE-IVD mark	Yes
Electrical approvals	IEC, CE		

BIO-RAD



Linearity of five-target multiplex detection. A–E, fluorescence data from a series of tenfold dilutions of plasmid DNA (10^9 – 10^3 copies) amplified using reporter dyes to monitor five targets in a 75 μ l reaction volume: ■, FAM/cyclophilin; ■, HEX/GAPDH; ■, Texas Red/actin; ■, Cy5/tubulin; ■, Quasar 705/IL-1 β ; F, standard curves generated from data in A–E, reaction efficiencies range from 100 to 102%. Cq, quantification cycle; RFU, relative fluorescence units.

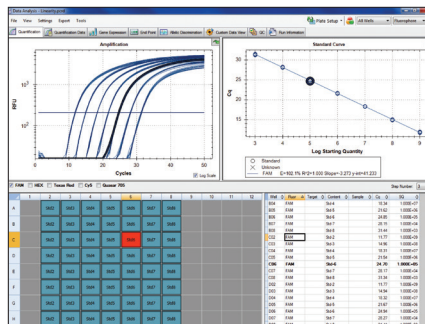


Excellent uniformity. IL-1 plasmid template was diluted to 10^5 copies/reaction and amplified in the presence of a FAM-labeled detection probe with iQ™ Supermix. Graph shows 96 replicates of 100 μ l reactions. Average Cq = 25.14 ± 0.10 . RFU, relative fluorescence units.

Software Solutions for Accurate Results

CFX Manager™ IVD Software offers tools to simplify real-time PCR for every laboratory. Immediately generate results using the Startup Wizard and intuitive experiment setup. Enter or edit well information before, during, or after a run.

Analyze data when and where you want by receiving an email with an attached data file when a run is completed. When data are in hand, use the comprehensive data analysis, QC, and report tools to take the guesswork out of analyzing and reporting results for any real-time PCR application.



CFX Manager Software data analysis module.

The CFX96 Deep Well Real-Time PCR Detection System–IVD is licensed for human in vitro diagnostics and all other applied fields except veterinary diagnostics. The system is CE-IVD marked in compliance with the European Union diagnostic medical device manufacturing standards.

Ordering Information

Catalog #	Description
185-4095-IVD	CFX96 Deep Well Real-Time PCR Detection System–IVD with CFX Manager IVD Software, Version 1.6. CE-IVD marked, includes C1000 Thermal Cycler Chassis, CFX96 Deep Well Optical Reaction Module–IVD, CFX Manager IVD Software, Version 1.6, communication cable

Note: This product is not available for sale in the United States and Canada. Purchase or use of this product in Europe (Austria, Belgium, Switzerland, Germany, Denmark, Spain, Finland, France, United Kingdom, Greece, Ireland, Italy, Liechtenstein, Luxembourg, Monaco, Netherlands, Portugal, Sweden), Japan, and Australia excludes the right to use the melt curve function and melt curve analysis software in human or veterinary in vitro diagnostics applications.

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Bio-Rad's real-time thermal cyclers are covered by one or more of the following U.S. patents or their foreign counterparts owned by Eppendorf AG: U.S. Patent Numbers 6,767,512 and 7,074,367.

Use of iQ Supermix is covered by one or more of the following U.S. patents and corresponding patent claims outside the U.S.: 5,804,375; 5,994,056; and 6,171,785. The purchase of this product includes a limited, non-transferable immunity from suit under the foregoing patent claims for using only this amount of product for the purchaser's own internal research. No right under any other patent claim and no right to perform commercial services of any kind, including without limitation reporting the results of purchaser's activities for a fee or other commercial consideration, are conveyed expressly, by implication, or by estoppel. This product is for research use only. Diagnostic uses under Roche patents require a separate license from Roche. Further information on purchasing licenses may be obtained from the Director of Licensing, Applied Biosystems, 850 Lincoln Centre Drive, Foster City, California 94404, USA.



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Laboratories, Inc.**

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