

CFX96 Deep Well Dx System

Specifications

Real-Time PCR

Bulletin 7054

Bio-Rad's CFX96 Deep Well Dx System 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, easy-to-use software, and the capability to support larger reaction volumes, the CFX96 Deep Well Dx is an open system offering the ultimate flexibility in commercial assay selection or rapid assay development.

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

- Create a personalized system setup with user-specific system access settings and flexible instrument configurations
- 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



Specifications

11000 Dx Thermal Cycler with CFX96 Deep Well Dx ORM*

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

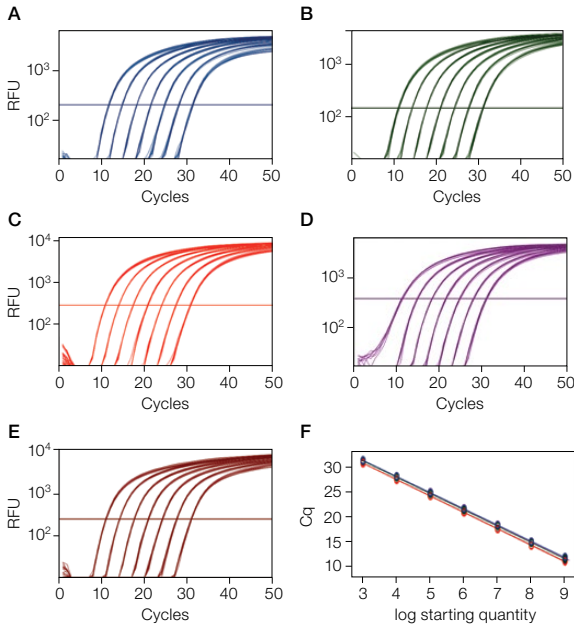
Software

Operating systems	Windows 7 (32-bit, 64-bit), Windows 10 (64-bit)	Allelic discrimination
Memory	Minimum of 1 GB	End-point analysis
Multiplex analysis	Up to 5 targets per well	Data export
Data analysis modes	PCR quantification with standard curve	Save, copy, and print all graphs and spreadsheets from right-click menu
	Melt curve analysis	Export specified data in multiple formats
	Gene expression analysis by relative quantity (ΔCq) or normalized expression ($\Delta\Delta Cq$) with multiple reference genes and individual reaction efficiencies	Copy and paste into Microsoft Excel, Word, or PowerPoint file
	Data analysis options include bar chart, clustergram, scatter plot, volcano plot, and heat map	Customizable reports containing run settings, data graphs, and spreadsheets can be directly printed or saved as PDFs
	Multiple file gene expression analysis for comparison of an unlimited number of quantification cycle (Cq) values	

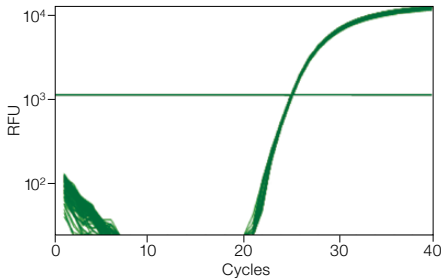
System

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

* Optical Reaction Module.



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.

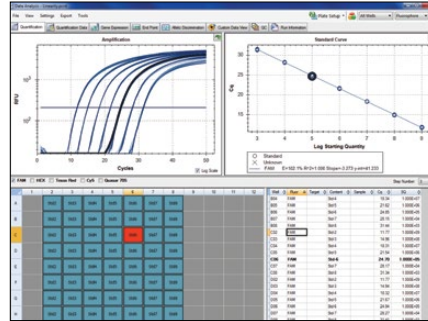


Excellent uniformity. IL-1 plasmid template was diluted to 10^5 copies/reaction and amplified in the presence of a FAM labeled detection probe with iQ Supermix. Graph shows 96 replicates of 100 μ l reactions. Average Cq = 25.14 \pm 0.10. RFU, relative fluorescence units.

Software Solutions for Accurate Results

CFX Manager Dx 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 Dx Software data analysis module.

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

Ordering Information

To order the CFX96 Deep Well Dx System, you must include both catalog numbers.

Catalog #	Description
1844095-IVD	CFX96 Deep Well Dx ORM , includes CFX Manager Dx Software, version 3.1 (catalog number 12007917)
1841000-IVD	C1000 Dx Thermal Cycler

USA: For in vitro diagnostic (IVD) use. The CFX96 Dx System and CFX96 Deep Well Dx System are registered with the U.S. FDA as Class II 510(k) exempt devices.

Canada: The CFX96 Dx System and CFX96 Deep Well Dx System are registered as Class I devices.

China: The CFX96 Deep Well Dx System has been certified as a Class III medical device by China's National Medical Products Administration (NMPA).

EU: For in vitro diagnostic use. The CFX96 Dx and CFX96 Deep Well Dx Systems meet the requirements of the In Vitro Diagnostic Medical Devices Directive (98/79/EC). The CE IVD-registered CFX96 Dx and CFX96 Deep Well Dx Systems are for distribution and use in EU countries only (Austria, Belgium, Bulgaria, Croatia, Denmark, Estonia, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Malta, Netherlands, Poland, Portugal, Slovenia, Spain, and Sweden).

Worldwide: The CFX96 Dx and CFX96 Deep Well Dx Systems are for sale for in vitro diagnostic use in the following countries:

- Americas: Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Dominican Republic, El Salvador, Guatemala, Paraguay, and Venezuela
- Asia-Pacific: Australia, Brunei, Hong Kong, India, Laos, Mongolia, New Zealand, Pakistan, Philippines, Singapore, South Korea, Taiwan, Thailand, and Vietnam
- Europe, Middle East, and Africa: Belarus, Egypt, Morocco, Netherlands, Norway, Qatar, Saudi Arabia, Switzerland, Turkey, Ukraine, United Kingdom, and Yemen

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