

Real-Time PCR

Bulletin 7053

Bio-Rad's CFX96 Dx System for in vitro diagnostic use is designed with reliability and performance in mind. With five-target detection, unsurpassed thermal cycler performance, and easy-to-use software, the CFX96 Dx System offers the ultimate flexibility in commercial assay selection or rapid assay development.

The CFX96 Dx System makes it easy for you to:

- Generate robust results right away with factory-calibrated optics and fast system setup
- Conserve samples and reduce reagent cost using up to 5-target multiplexing with reaction volumes as low as 10 µl
- 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

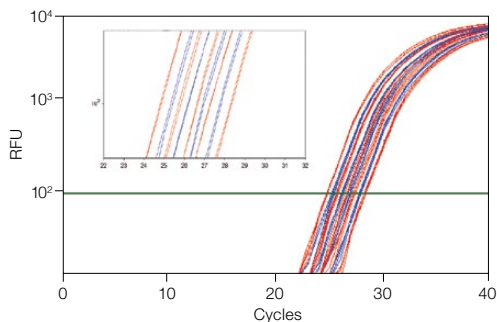
C1000™ Dx Thermal Cycler with CFX96 Dx ORM*			
Maximum ramp rate	5°C/sec	Gradient	
Average ramp rate	3.3°C/sec	Operational range	30–100°C
Heating and cooling method	Peltier	Programmable span	1–24°C
Lid	Heats up to 105°C	Temperature range	0–100°C
		Temperature accuracy	±0.2°C of programmed target at 90°C
		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	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			
Sample capacity	96 wells	Dimensions (W x D x H)	33 x 46 x 36 cm (13 x 18 x 14 in.)
Sample size	1–50 µl (10–25 µl recommended)	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.

Simplicity Through Innovation™

The CFX96 Dx System is built on Bio-Rad's proven 1000-series thermal cycling platform. The system incorporates innovative optical technologies with long-lasting LEDs and solid-state components to provide maximum reliability and flexibility.

- Scanning optics read each well individually with high sensitivity and no cross talk to deliver optimal quantitative results
- Multiple data acquisition modes, including a fast scan option for EvaGreen® or SYBR® Green I users and an all channels mode to detect up to 5 targets in a single well, let a run be tailored to suit the application
- Several control configurations are available — run a stand-alone system or independently run up to 4 instruments from 1 computer
- A startup wizard, intuitive experiment setup, and streamlined data analysis enable fast result turnaround



Exceptional reproducibility can be achieved with SsoFast™ EvaGreen® Supermix. Efficient discrimination and reliable quantification can be obtained from 1.33-fold serial dilutions of input template. The *CBP* gene was amplified from varying amounts of human genomic DNA. From left to right: (■) 5 ng, 2.83 ng, 1.60 ng, 903 pg, and 511 pg; (■) 3.76 ng, 2.13 ng, 1.20 ng, and 679 pg. *CBP* efficiency = 96.5%, $R^2 = 0.996$. Inset is a magnified view showing robust discrimination and reproducible amplification. 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.

The CFX96 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 Dx System, you must include both catalog numbers.

Catalog #	Description
1845097-IVD	CFX96 Dx ORM,* includes CFX Manager Dx Software, version 3.1 (catalog number 12007917)
1841000-IVD	C1000 Dx Thermal Cycler

Note: These products are not available for sale in the United States and Canada.
* Optical Reaction Module.

EvaGreen is a trademark of Biotium, Inc. Bio-Rad Laboratories, Inc. is licensed by Biotium, Inc. to sell reagents containing EvaGreen Dye for use in real-time PCR, for research purposes only. Excel, Microsoft, PowerPoint, and Windows are trademarks of Microsoft Corporation. SYBR is a trademark of Thermo Fisher Scientific Inc.

Bio-Rad's thermal cyclers and 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.

Notice regarding high resolution melt analysis:

No rights are granted by Bio-Rad for the use of melt curve analysis in high resolution melt analysis in the fields of human or veterinary in vitro diagnostics. In addition, it is the responsibility of the purchaser to obtain any intellectual property rights which may be required for its specific applications.

BIO-RAD

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Laboratories, Inc.**

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