

## CFX96™ Real-Time PCR Detection System

### Designed for the Way You Work

The CFX96 system will meet all your real-time PCR needs, whether you are running your first experiment or analyzing multiple gene expression files at one time. Solid-state optical components provide sensitive detection for precise quantitation and target discrimination. Five-target multiplexing enables powerful simultaneous analyses, or tailor the run to detect SYBR® Green in the single-color fast scan mode. CFX Manager™ software is customizable for all levels of users and different experiment needs. A startup wizard and intuitive experiment setup make it easy to get started with real-time PCR. Data analysis modules include gene expression by normalized expression ( $\Delta\Delta C_T$ ) using multiple reference genes and individual reaction efficiencies in the calculations.



### Specifications

#### C1000™ Thermal Cycler With 96-Well Fast Reaction Module

Maximum ramp rate	5°C/sec	Temperature range	0–100°C	Gradient	
Average ramp rate	3.3°C/sec	Temperature accuracy	±0.2°C of programmed target at 90°C	Operational range	30–100°C
Heating and cooling method	Peltier	Temperature uniformity	±0.4°C well-to-well within 10 sec of arrival at 90°C	Programmable span	1–24°C
Lid	Heats up to 105°C				

#### Optical Detection

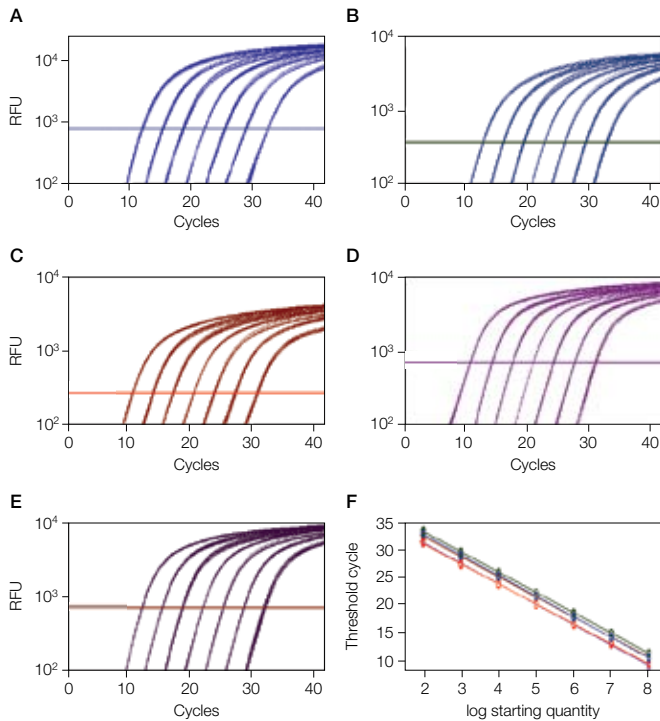
Excitation	6 filtered LEDs	Sensitivity	Detects 1 copy of target sequence in human genomic DNA
Detection	6 filtered photodiodes	Dynamic range	10 orders of magnitude
Range of excitation/emission wavelengths	450–730 nm	Scan time	
		All channels	12 sec
		Single channel fast scan	3 sec

#### Software

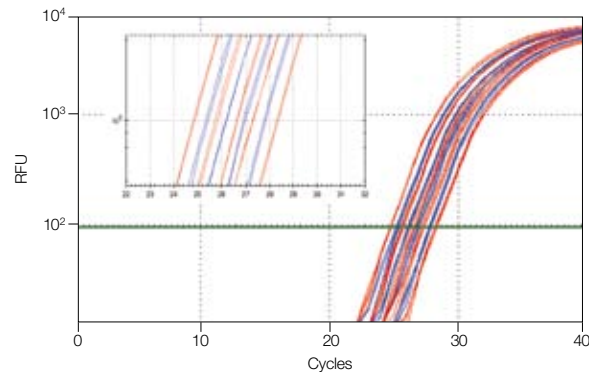
Operating systems	Windows XP, Windows Vista	Data export	Save, copy, and print all graphs and spreadsheets from right-click menu
Multiplex analysis	Up to 5 targets per well		Export results to Microsoft Excel
Data analysis modes	PCR quantitation with standard curve		Copy and paste into Microsoft Excel, Word, or PowerPoint files
	Melt-curve analysis		Customizable reports containing run settings, data graphs, and spreadsheets can be directly printed or saved as a PDF
	Gene expression analysis by relative quantity ( $\Delta C_T$ ) or normalized expression ( $\Delta\Delta C_T$ ) with multiple reference genes and individual reaction efficiencies		
	Multiple file gene expression analysis		
	Allelic discrimination		
	End-point analysis		

#### System

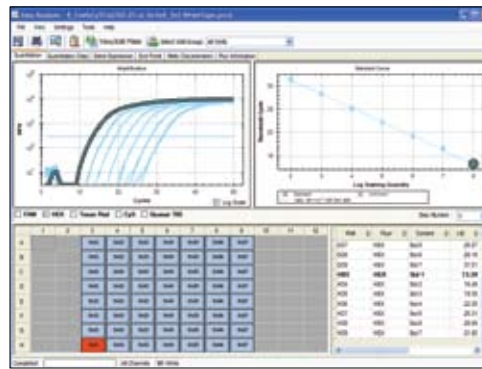
PCR license	Yes	Electrical approvals	IEC, CE
Sample capacity	96 wells	Dimensions (W x D x H)	33 x 46 x 36 cm (13 x 18 x 14")
Sample size	1–50 µl (10–25 µl recommended)	Weight	21.4 kg (47 lb)
Communication	USB 2.0		



**Linearity of five-target multiplex detection.** A–E, fluorescence data from a series of 10-fold dilutions of plasmid DNA ( $10^5$ – $10^2$  copies) amplified using reporter dyes to monitor five targets: ■, FAM/actin; ■, HEX/GAPDH; ■, Texas Red/cyclophilin; ■, Cy5/tubulin; ■, Quasar 705/IL-1 $\beta$ ; F, standard curves generated from data in A–E, reaction efficiencies range from 97 to 103%. RFU, relative fluorescence units.



**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 (5 ng to 500 pg). 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%,  $r = 0.996$ . Insert is a magnified view showing robust discrimination and reproducible amplification. RFU, relative fluorescence units.



CFX Manager software data analysis module.

## Ordering Information

Catalog #	Description
184-5096	<b>CFX96 Optical Reaction Module</b> , includes CFX Manager software, license for qbase <sup>PLUS</sup> software, communication cable, reagent and consumable samples, instructions
185-5096	<b>CFX96 Real-Time PCR Detection System</b> , includes C1000 thermal cycler chassis, CFX96 optical reaction module, CFX Manager software, license for qbase <sup>PLUS</sup> software, communication cable, power cord, reagent and consumable samples, instructions
185-1096	<b>C1000 Thermal Cycler With 96-Well Fast Reaction Module</b> , includes thermal cycler chassis, 96-well fast reaction module, USB flash drive, power cord, reagent and consumable samples, instructions
184-5001	<b>CFX Manager Software, Security Edition</b> , includes 1 user license, installation CD, HASP HL key, instructions
184-5025	<b>Precision Melt Analysis™ Software</b> , includes 2 user licenses, installation CD, 2 HASP HL keys, calibration kit, instructions
184-5008	<b>CFX Manager Software, Chinese Edition</b> , includes 3 user licenses, installation CD, 3 HASP HL keys, instructions
184-5028	<b>CFX Manager Software, Russian Edition</b> , includes 3 user licenses, installation CD, 3 HASP HL keys, instructions
170-8862	<b>iQ™ Supermix</b> , 500 x 50 $\mu$ l reactions
170-8882	<b>iQ™ SYBR® Green Supermix</b> , 500 x 50 $\mu$ l reactions
172-5849	<b>iQ Multiplex Powermix</b> , 200 x 50 $\mu$ l reactions
170-8890	<b>iScript™ cDNA Synthesis Kit</b> , 25 x 20 $\mu$ l reactions
170-8891	<b>iScript cDNA Synthesis Kit</b> , 100 x 20 $\mu$ l reactions
172-5200	<b>SsoFast EvaGreen Supermix</b> , 200 x 20 $\mu$ l reactions, 2x mix contains dNTPs, Sso7d fusion polymerase, MgCl <sub>2</sub> , EvaGreen dye, stabilizers
MLL-9601	<b>Multiplate™ Low-Profile 96-Well Unskirted PCR Plates</b> , natural, 25
MSB-1001	<b>Microseal™ 'B' Adhesive Seals</b> , 100

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