

CFX96 Touch™ Real-Time PCR Detection System

Specifications

Real-Time PCR

Bulletin 6075

Advancing qPCR Together

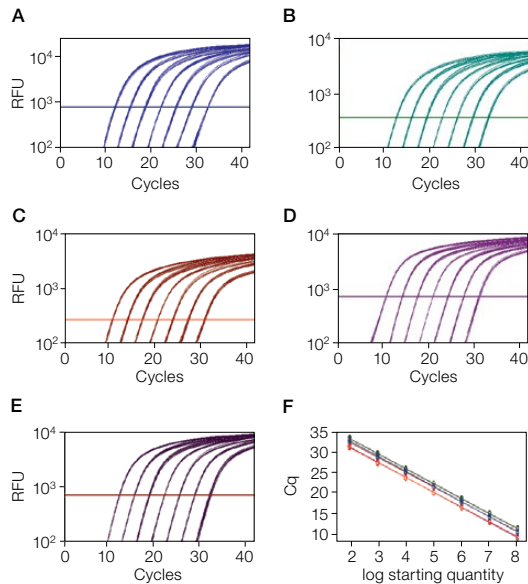
The CFX96 Touch Real-Time PCR Detection System lets you quickly set up runs, easily monitor their progress, and use powerful analysis tools. Solid-state optical components provide sensitive detection for precise quantification and target discrimination. Five-target multiplexing enables powerful simultaneous analyses, or tailor the run to detect SYBR® Green in the single-color fast scan mode. Set up runs and view data traces in real time on the integrated touch screen. 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 ($\Delta\Delta Cq$) using multiple reference genes and individual reaction efficiencies in the calculations. Extract more meaningful information from runs by using bar chart, clustergram, scatter plot, volcano plot, or heat map analysis.



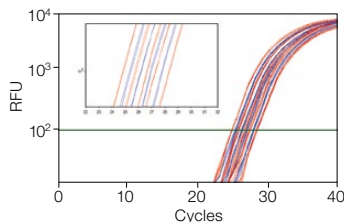
Specifications

C1000 Touch™ Thermal Cycler with 96-Well Reaction Module			
Maximum ramp rate	5°C/sec	Temperature range	0–100°C
Average ramp rate	3.3°C/sec	Temperature accuracy	±0.2°C of programmed target at 90°C
Heating and cooling method	Peltier	Temperature uniformity	±0.4°C well-to-well within 10 sec of arrival at 90°C
Lid	Heats up to 105°C		
Gradient			
Operational range	30–100°C		
Programmable span	1–24°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	Data export	Save, copy, and print all graphs and spreadsheets from right-click menu
Memory	Minimum of 1 GB		Export specified data in multiple formats
Multiplex analysis	Up to 5 targets per well		Copy and paste into Microsoft Excel, Word, or PowerPoint file
Data analysis modes	PCR quantification with standard curve Melt curve analysis Gene expression analysis by relative quantity (ΔCq) or normalized expression ($\Delta\Delta Cq$) with multiple reference genes and individual reaction efficiencies 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 Allelic discrimination End-point analysis		Customizable reports containing run settings, data graphs, and spreadsheets can be directly printed or saved as PDFs
System			
Licensed for real-time PCR	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 in.)
Sample size	1–50 μ l (10–25 μ l recommended)	Weight	21 kg (47 lb)
Communications	USB 2.0		

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Linearity of five-target multiplex detection. A–E, fluorescence data from a series of tenfold dilutions of plasmid DNA (10^3 – 10^2 copies) amplified using reporter dyes to monitor five targets: ■, FAM/actin; ■, HEX/GAPDH; ■, Texas Red/cyclophilin; ■, Cy5/tubulin; ■, Quasar 705/L-1 β ; F, standard curves generated from data in A–E, reaction efficiencies range from 97 to 103%. Cq, quantification cycle; 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–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%, $r = 0.996$. Inset is a magnified view showing robust discrimination and reproducible amplification. RFU, relative fluorescence units.

Ordering Information

Catalog #	Description
184-1100	C1000 Touch Thermal Cycler Chassis , includes USB flash drive, power cord; does not include reaction module
184-5097	CFX96™ Optical Reaction Module , for use with C1000 Touch Thermal Cycler Chassis, includes CFX Manager Software, license for qbase+ Software, communication cable
185-5196	CFX96 Touch Real-Time PCR Detection System , includes C1000 Touch Thermal Cycler Chassis, CFX96 Optical Reaction Module, CFX Manager Software, license for qbase+ Software, communication cable, reagents, consumables

185-5195	CFX96 Touch Real-Time PCR Detection System , includes C1000 Touch Thermal Cycler Chassis, CFX96 Optical Reaction Module, CFX Manager Software, license for qbase+ Software, communication cable
184-5001	CFX Manager Software, Security Edition , includes 1 user license, installation CD, HASP HL key
184-5025	Precision Melt Analysis™ Software , includes 2 user licenses, installation CD, 2 HASP HL keys, melt calibration kit
184-5075	CFX Automation System II , includes plate handler and barcode scanner, mounting plate, automation software
181-4000	PX1™ PCR Plate Sealer , includes heat sealing instrument
181-4030	Optically Clear Heat Seal , for use with PX1 PCR Plate Sealer, 100
MSB-1001	Microseal® 'B' Adhesive Seals , optically clear, 100
HSP-9655	Hard-Shell® Low-Profile 96-Well Skirted PCR Plates , white well, white shell, 50
HSP-9955	Hard-Shell Low-Profile 96-Well Skirted PCR Plates , white well, white shell, barcoded, 50
170-8840	iScript™ Reverse Transcription Supermix for RT-qPCR , 25 x 20 μ l reactions, includes 100 μ l 5x iScript RT Supermix, iScript RT Supermix No-RT Control
172-5037	iScript Advanced cDNA Synthesis Kit for RT-qPCR , 25 x 20 μ l reactions, includes 100 μ l 5x iScript Advanced Reaction Mix, 25 μ l iScript Advanced Reverse Transcriptase
172-5270	SsoAdvanced™ Universal SYBR® Green Supermix , 2 ml (2 x 1 ml vials), 200 x 20 μ l reactions, 2x qPCR mix, contains Sso7d fusion polymerase, ROX Normalization Dyes
172-5280	SsoAdvanced Universal Probes Supermix , 2 ml (2 x 1 ml vials), 200 x 20 μ l reactions, 2x qPCR mix, contains Sso7d fusion polymerase, ROX Normalization Dyes
172-5160	SsoAdvanced PreAmp Supermix , 1.25 ml (1 x 1.25 ml vial), 50 x 50 μ l reactions
172-5095	SingleShot™ SYBR® Green One-Step Kit , 100 x 50 μ l reactions

Visit bio-rad.com/web/CFX96TouchSpecs for more information.

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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.

The use of SsoAdvanced and SsoFast Supermixes is covered by one or more of the following U.S. patents and corresponding patent claims outside the U.S.: 5,804,375; 5,538,848; 5,723,591; 5,876,930; 5,994,056; 6,030,787; 6,171,785; and 6,258,569. The purchase of these products 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. These products are 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.

Hard-Shell Plates are covered by one or more of the following U.S. patents or their foreign counterparts owned by Eppendorf AG: U.S. Patent Numbers 7,347,977; 6,340,589; and 6,528,302.



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