CFX Maestro Software

For Bio-Rad CFX Real-Time PCR Instruments

Visit bio-rad.com/CFXMaestro for more information.
CFX Maestro Software is real-time PCR software that not only collects data, but understands your data and what you want to do with it, combining data collection, statistics, and publication tools into one comprehensive package.

Whether you are a novice researcher running your first qPCR experiment or are analyzing thousands of samples across hundreds of runs, CFX Maestro Software was built with your needs in mind and to work in whatever way is best for you.
C Fur Software for CFX Real-Time PCR Instruments
An easy-to-learn yet powerful system for push-button data collection, data analysis, and data visualization.

Easy Plate Setup and Reference Gene Selection
- Quickly set up experiments with both technical replicates and biological groups
- Identify reference gene stability and select ideal reference genes
- Simplify experimental design and primer design with PrimePCR Assay integration

Push-Button Data Analysis and Statistics
- Automatically calculate Cq values and reaction efficiency
- Easily perform statistical analyses, including t-tests and one-way ANOVA
- Efficiently analyze multiplate studies

Publication-Ready Graphics
- Visualize your results in bar charts, box and whisker graphs, clustergrams, and volcano plots
- Edit and annotate graphs and export for publication or presentations
Intuitive Plate Setup

CFX Maestro Software is built to help you quickly get started collecting data. Set up plates using a visual interface that color codes replicates for confirmation of accurate layout. Studies can be designed with both technical replicates and biological groups.

Plate setup can be performed before, during, or even after your real-time PCR run is complete — at whatever time is most convenient for you.

Select Your Ideal Reference Genes

Stable reference genes are essential when performing gene expression analysis. CFX Maestro Software’s Reference Gene Selection Tool will compare the stability of multiple reference genes, providing you with information about which reference genes are most likely to be expressed at consistent levels in all your samples throughout your runs, helping to ensure reliable relative expression data.

PrimePCR Assay Integration

Want to simplify your primer design, run design, and setup? With CFX Maestro Software and PrimePCR Assays it’s easy. Drag and drop a PrimePCR run file into CFX Maestro Software to automatically populate plate setup and run conditions. Post-run, ensure run quality with included PCR controls (positive control, RT, gDNA, and RNA quality controls).
**qPCR SOFTWARE THAT WORKS LIKE YOU DO**

**PUSH-BUTTON DATA ANALYSIS AND STATISTICS**

---

**Automatic Cq and Efficiency Calculation**
CFX Maestro Software has tools that allow you to view, analyze, and understand your data. A baseline threshold will automatically be set for each reaction target to calculate Cq value, or you can adjust thresholds yourself by simply clicking and dragging the threshold line. If a standard curve is present, CFX Maestro Software will automatically calculate reaction efficiency.

**Statistical Analysis in Seconds**
With just a few mouse clicks you can perform allelic discrimination, view normalized expression levels, perform t-tests, or analyze your data with one-way ANOVA.

**Streamlined Multiplate Study Analysis**
CFX Maestro Software can also automate data analysis for multiplate studies. Combine dozens or even hundreds of plates using the Gene Study function and perform statistical analysis on all your data in aggregate, without the need to export and combine large datasets in a separate software program.

---

*View each individual amplification trace and color code them by target, by sample, or randomly by well. RFU traces and baseline thresholds for three different target genes.*

*Combine multiple runs for analysis. Clustergram showing gene expression levels grouped by hierarchical similarity in a 24-plate study.*
**Multiple Data Visualization Options**

Visualize your data to suit your needs using bar charts, volcano plots, box and whisker plots, and more. Change colors, fonts, titles, and legends, and annotate your graphs with \( P \) values, text, and arrows to call out specific data.

**Export High-Resolution Graphics**

With CFX Maestro Software, creating publication-quality images for posters, presentations, or journals is painless. Simply choose which data view to export then set your image size and resolution, and CFX Maestro Software will generate a beautiful graph of your data in .jpg, .png, or .bmp format.

Volcano plots support rapid identification of genes of interest with statistically significant fold-level changes.

Box and whisker plots provide a visual representation of data medians and quartiles.

Bar charts provide a standard means to view relative normalized gene expression levels and can also be annotated with \( P \) values to provide statistical significance of your data.
BIO-RAD LABORATORIES, INC.  |  7

U.S. FDA 21 CFR Part 11 Tools
CFX Maestro Software Security Edition provides tools to support 21 CFR Part 11 compliance, such as:

- Mandatory password-protected log-in — log-in required; administrator sets user privileges
- Time- and date-stamped audit trails — edit information is tracked and saved with each specific data file for easy tracking
- Electronic signatures — multiple electronic signatures can be applied to a single file at any editing step
- File encryption — file cannot be opened or edited by another program, minimizing risk of data corruption

Work on your own computer, anywhere, without the need for an Internet connection. CFX Maestro Software now lets PC users utilize the integrated data analysis, statistics, and publication tools of CFX Maestro Software.

INSTRUMENT INTEGRATION AND HIGH-THROUGHPUT SOLUTIONS

Designed to Work with CFX Real-Time PCR Instruments
CFX Instruments feature:

- Optical design that ensures superior data uniformity
- Block controls for accurate target temperatures
- 2–5 color multiplexing
- Thermal gradient to optimize run temperatures

LIMS and Automation System Integration
CFX Maestro Software and CFX Real-Time Instruments are designed for high-throughput qPCR:

- Data export into a designated LIMS folder
- Remote notification of run completion with attached data file
- Multi-instrument connectivity
- Automation systems configuration with the API Reference Guide

WORK ANYWHERE FROM YOUR PC
Specifications

CFX Maestro Software

- **Operating systems**: Windows 7 (64-bit), Windows 10 (64-bit)
- **Memory**: Minimum 4 GB
- **Data analysis modes**:
  - PCR quantification with standard curve
  - Melt curve analysis
  - Gene expression analysis by relative quantity (ΔCq) or normalized expression (ΔΔCq) with multiple reference genes and individual reaction efficiencies
  - Data analysis options include bar chart, box and whisker plot, dot plot, clustergram, scatter plot, volcano plot
  - Statistical analysis with t-tests and one-way ANOVA
  - Multiple file gene expression analysis for comparison of an unlimited number of Cq values for multiplate studies
  - Allelic discrimination
  - End-point analysis

Image export

- **Image size**: any
- **Resolution**: 72–600 dpi
- **Image format**: .jpg, .png, .bmp

Data export

- **Data export**: Save, copy, and print all spreadsheets and data from right-click menu
- **Export specified data in multiple formats**: Copy and paste into Microsoft Word, Excel, or PowerPoint file
- **Customizable reports containing run settings, data graphs, and spreadsheets can be printed directly or saved as PDFs

Ordering Information

<table>
<thead>
<tr>
<th>Catalog #</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>12013758</td>
<td>CFX Maestro Software 2.3</td>
</tr>
<tr>
<td>12012832</td>
<td>CFX Maestro Software 2.3, Security Edition, 1 license</td>
</tr>
<tr>
<td>12013028</td>
<td>CFX Maestro Software 2.3, Security Edition, 5 licenses</td>
</tr>
<tr>
<td>12012834</td>
<td>CFX Maestro Software 2.3, Chinese Edition</td>
</tr>
<tr>
<td>12012833</td>
<td>CFX Maestro Software 2.3, Russian Edition</td>
</tr>
<tr>
<td>1845025</td>
<td>Precision Melt Analysis Software, 2 user licenses, data analysis software for all CFX Real-Time PCR Systems, 2 HASP HL keys, calibration kit</td>
</tr>
</tbody>
</table>

**Instruments**

- CFX Opus 96 Real-Time PCR System, includes integrated 96-well system; Ethernet cable, USB cable, and power cord
  - 17005940 CFX Opus 96 Real-Time PCR System with Starter Pack, includes integrated 96-well system; Ethernet cable; USB cable; power cord; Hard-Shell™ 96-Well PCR Plates, low-profile, thin-wall, skirted, white shell/clear well; SsoAdvanced Universal SYBR® Green Supermix, 2 x 1 ml; Microseal "B" Adhesive Seals, pkg of 100; CFX Maestro Software
- CFX Opus 384 Real-Time PCR System, includes integrated 384-well system, Ethernet cable, USB cable, and power cord
  - 17005939 CFX Opus 384 Real-Time PCR System with Starter Pack, includes integrated 384-well system; Ethernet cable; USB cable; power cord; Hard-Shell 384-Well PCR Plates, thin wall, skirted, clear shell/white well; SsoAdvanced Universal SYBR® Green Supermix, 2 x 1 ml; Microseal 'B' Adhesive Seals, pkg of 100; CFX Maestro Software

Visit [bio-rad.com/CFXMaestro](http://bio-rad.com/CFXMaestro) for more information.

Bio-Rad's PCR reagents and analytical instruments are manufactured under an ISO 13485:2016 certified Quality Management System and are quality control tested to ensure consistent product performance you can trust.

**BIO-RAD, HARD-SHELL, and MICROSEAL** are trademarks of Bio-Rad Laboratories, Inc. in certain jurisdictions. All trademarks used herein are the property of their respective owner. © 2024 Bio-Rad Laboratories, Inc.

**SYBR** is a trademark of Thermo Fisher Scientific Inc. Bio-Rad Laboratories, Inc. is licensed by Thermo Fisher Scientific Inc. to sell reagents containing SYBR Green I for use in real-time PCR, for research purposes only.