Specification Sheet

Biomark X9 System

Deep insights and high throughput with nanoscale genomics

The only genomics system for real-time PCR and next-generation sequencing library preparation to support discovery through screening.

The Biomark™ X9 System for High-Throughput Genomics is a versatile microfluidics-based benchtop platform that delivers thousands of nanoliter-scale reactions in a single run – ensuring cost-effective, comprehensive and scalable sample profiling with minimal operator contribution.

- **INCREASED PRODUCTIVITY**
  Integrated reaction setup for streamlined workflows generates up to 46,080 datapoints per eight-hour shift and up to 384 barcoded libraries per day.
- **DEEP INSIGHTS**
  Easily add or remove assays, and simultaneously detect up to 96 targets with singleplex simplicity. Design libraries for dual coverage to enhance performance.
- **OPTIMIZED RESOURCES**
  Sustainably generate up to 9,216 datapoints with 96x savings compared with traditional methods.
- **EFFICIENT OPERATION**
  Compact instrument with walk-away automation produces qPCR data in as little as two hours and NGS-ready libraries in approximately eight hours.

Meet the demand for high productivity with the Biomark X9 System, powered by an intuitive interface for an effortless user experience and a futuristic approach to high-volume genomic data generation that radically improves laboratory operations.

The Biomark X9 System delivers immediate cost savings with its well-established and proven proprietary integrated fluidic circuit (IFC) technology and reliable nanoliter reaction format.

High-throughput detection

The system integrates sample and reagent preparation, thermal cycling and performance of PCR-based assays on Standard BioTools™ IFCs. Supporting detection of up to three fluorescent dyes per assay, the system acquires data for each IFC reaction chamber simultaneously and can operate in either real-time or endpoint detection mode depending on application needs.

IFCs

IFCs are the backbone of the Biomark X9 System, supporting different configurations of samples and assays for multiple applications and empowering the ultimate flexibility and scalability of the platform. See the IFC portfolio flyer for more details.

Assays

The Biomark X9 System supports multiple commercially available chemistries, including SNP Type™ and TaqMan assays for genotyping, Delta Gene™ and TaqMan for gene expression, as well as Standard BioTools custom assay designs.

Analysis software

The Biomark X9 System features onboard software for data collection and system interactions without need for a connected computer. The system is bundled with genotyping and gene expression analysis software. These robust and highly customizable tools support multiple data analysis methods and a variety of report types, including amplification curves, heat maps and numeric tables. Results may be easily managed, annotated and archived.

Protocol Editor

Standard BioTools Protocol Editor allows you to create or edit preset PCW run files that can be used on the Biomark X9 System or other Standard BioTools instruments running Standard BioTools Real-Time PCR Analysis Software v1.0.2 or later. It also enables you to create, edit and fully customize any thermal protocol file (PCL).

Preset files contain the prime, load, mix and thermal-cycle parameters, in addition to default analysis settings for specific applications, based on the type of IFC and chemistry being used. The analysis feature streamlines data processing from multiple runs that share a common sample layout, assay layout and/or thermal parameters.

For detailed product use instructions, please refer to the **Standard BioTools Protocol Editor User Guide (FLDM-01073)** and the **Biomark X9 High-Throughput Genomics System NGS Library Preparation User Guide (FLDM-01080)**, which are both available for download on our website.

Specifications

Instrument	
Part number	X9-X9
Dimensions	Depth: 64.2 cm (25.2 in) Width: 26 cm (10.2 in) Height: 53.5 cm (21.1 in)
Weight	37 kg (83 lb)
Thermal control	Peltier-based, 4–99 °C
Heating ramp rate	Up to 5.5 °C/sec
Cooling ramp rate	Up to 5.5 °C/sec
Detection	CMOS camera; 20M pixel
Fluorescence excitation	485 nm, 530 nm, 580 nm
Fluorescence emission	525 nm, 570 nm, 630 nm
Power requirements	100–240 VAC, 50/60 Hz, 8.0 A Standard BioTools provides a region-specific power cord for the Biomark X9 System.

Software	
Instrument software	Standard BioTools X9 Instrument Software†‡
Protocol Editor	Standard BioTools Protocol Editor
Analysis	Standard BioTools Real-Time PCR Analysis Software
	Standard BioTools SNP Genotyping Analysis Software
	Advanta™ PGx Assay Preset

† Activation of NGS LP capabilities requires a license key, which does not expire.

‡ A software update is required to use the Flex Six IFC.

Supported IFCs
Flex Six™ Genotyping IFC*
Flex Six Gene Expression IFC
48.48 Dynamic Array™ IFC-X Real-Time PCR
48.48 Dynamic Array IFC for Genotyping*
96.96 Dynamic Array IFC for Gene Expression
96.96 Dynamic Array IFC for Genotyping*
96.96 GT Preamp IFC-X (for genotyping)*
24.192 Dynamic Array IFC for Genotyping*
24.192 Dynamic Array IFC for Gene Expression
192.24 Dynamic Array IFC for Genotyping*
192.24 Dynamic Array IFC for Gene Expression
NGS LP 8.8.6 IFC for NGS library preparation
NGS LP 48.48 IFC for NGS library preparation
NGS LP 192.24 IFC for NGS library preparation

* Supports SNP Type and TaqMan chemistry

Computer requirements for Analysis Software (Computer not provided)	
Memory	4 GB
Operating system	Microsoft Windows 10 or 11
Storage	200 MB of free space
Connections	USB port or Ethernet

Contact us at **standardbio.com/contactus**

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For Research Use Only. Not for use in diagnostic procedures.