EP1

- **Scalable.** Select from multiple configurations of 12–192 samples and 12–192 assays per run, all on a single instrument.
- **Flexible.** Run multiple applications and easily change markers to suit your research needs.
- **Economical.** Leverage microfluidics technology to decrease reagent volumes > 95% vs conventional platforms.
- **Proven performance.** Over 1,000 Biomark™/EP1 publications and counting.

EP1™ is an endpoint PCR analysis system for high-throughput SNP genotyping, sample identification, and digital PCR analysis. Using versatile microfluidics technology, Fluidigm offers a large menu of integrated fluidic circuits (IFCs) that support different configurations of samples and assays and different applications that can be analyzed with the EP1. These IFCs, together with detection chemistries, software and EP1-enabled systems simplify multiplex PCR-based genomic analysis workflows while enabling low running costs.

For laboratories that focus their efforts on specific PCR-based applications, EP1 is packaged with an IFC controller and the FC1™ IFC thermal cycler. For laboratories that require higher application flexibility including support for targeted NGS library preparation, EP1 is bundled with the Juno™ IFC preparation system. Combined with the Fluidigm-provided EP1 data collection and data analysis software packages, EP1 offers a versatile solution for multiple endpoint PCR applications.

As your laboratory throughput requirements grow, you can expand the scalability of your EP1 system by adding Juno systems or IFC controllers and FC1 cyclers to increase the runs per day on a single EP1. The EP1 system's flexibility and economy make it a mainstay in any molecular testing laboratory.

CHEMISTRIES AND ASSAYS

EP1 allows you to easily convert from plate-based to microfluidics-based workflows without the inconvenience of switching reagents. EP1 also supports analysis using both major groove binding assays (MGB) and Locked Nucleic Acid assays (LNA) in the same run, providing convenience in assay selection during panel development.

EP1 supports multiple commercially available chemistries including industry-proven TaqMan® for genotyping and digital PCR and SNP Type™ assays for genotyping. SNP Type assays can be designed through our interactive D3™ assay design service. You simply define your targets, and we'll design and deliver the ideal assays for your SNP genotyping research.

ANALYSIS SOFTWARE

EP1 is bundled with data collection and data analysis software. These robust and highly customizable tools support multiple data analysis methods and a variety of report types including scatter plots, call maps and tabular reports. Results may be easily managed, annotated and archived.

Key features of the SNP Genotyping Analysis software include cluster-calling algorithm technology, multiple IFC scoring and automatic confidence score ratings. Assay libraries can be created and applied to improve cluster assignment for large studies with set assay content.

Key features of the Digital PCR Analysis Software include automated copy number variation analysis, endpoint imaging and the ability to quantitate up to two targets per sample using multiple reporter dyes.

SPECIFICATIONS

Instrument (Part Number EP1-EP1)

Dimensions	
Depth	56 cm (22 in)
Width	56 cm (22 in)
Height	71 cm (28 in)
Weight	57 kg (125 lb)
Detection	High resolution CCD camera; 4M pixel (or higher)
Fluorescence excitation	485 nm, 530 nm, 580 nm
Fluorescence emission	525 nm, 570 nm, 630 nm
Illumination	175 W Xenon Arc Lamp
Power requirements	100–240 V AC, 50–60 Hz, 375 W Fluidigm provides a region-specific power cord for the EP1 instrument.
Instrument Control Computer	
Computation	Intel® Core™ i3 - 6102E 1.9G Dual-core 3M Cache, 25 W
Memory	4 GB
Storage	500 GB HDD
Ports	4 USB 1 GB/sec Ethernet
Operating system	Microsoft® Windows® Professional Embedded 10
Monitor	LCD flat panel
Accessories	Keyboard and mouse

Work Environment (indoor use only)

Temperature	15–30 °C (59–86 °F)
Humidity	20%–80% relative humidity, non-condensing
Altitude	Not to exceed 2,000 m (6,562 ft) above sea level

Supported IFCs

Genotyping	48.48 Dynamic Array™ IFC 96.96 Dynamic Array IFC 192.24 Genotyping IFC Flex Six™ Genotyping IFC Juno 96.96 Genotyping IFC
Digital PCR	qdPCR 37K™ IFC 48.770 Digital Array™ IFC 12.765 Digital Array IFC

Included Software

Data collection	EP1 Data Collection software
Analysis	SNP Genotyping Analysis software Digital PCR Analysis software

Learn more at

fluidigm.com/ep1

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