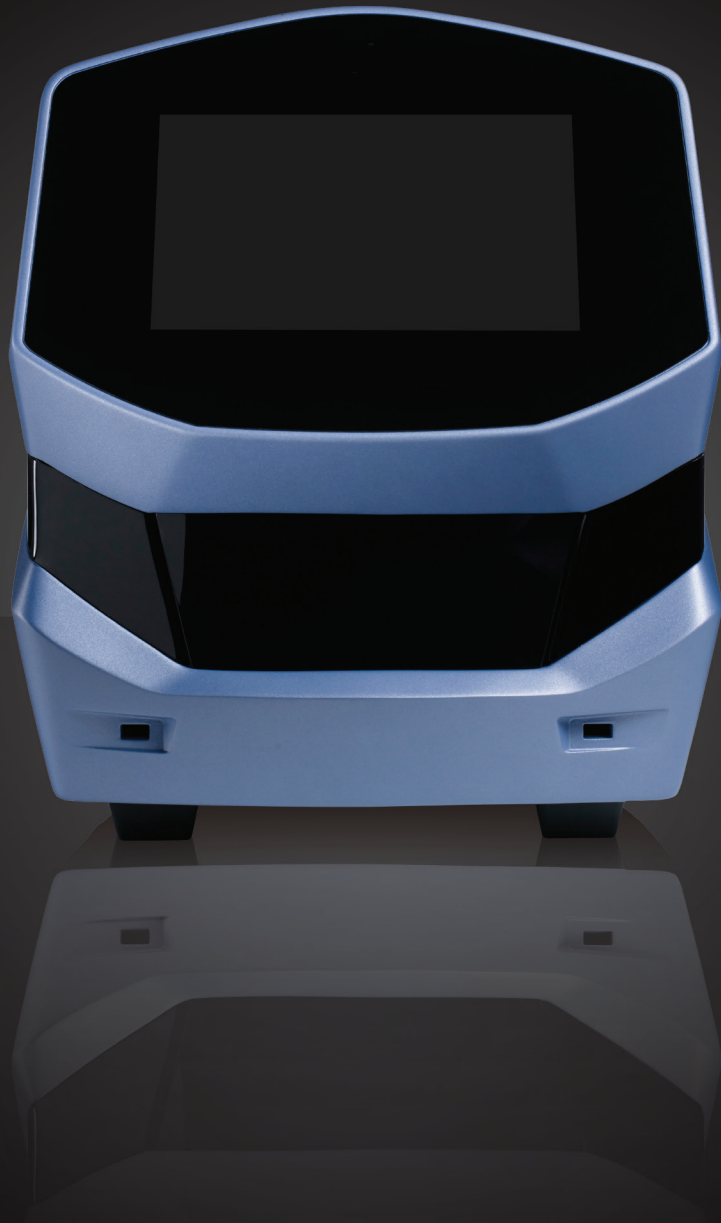




# C1 System



# EVERY CELL IS UNIQUE

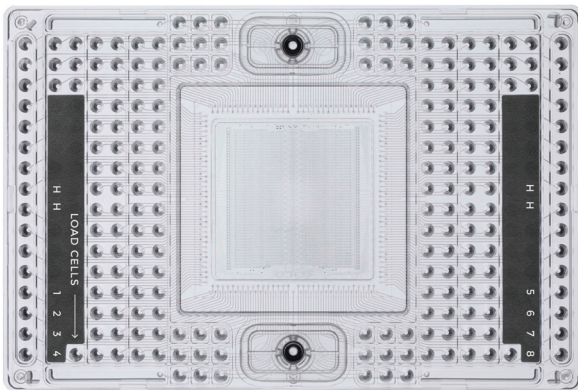
## THE C1 SYSTEM: DEFY THE LAW OF AVERAGES

- **Single-cell precision**—greater accuracy to measure differences in gene expression profiles
- **Easy to use**—simplified cell isolation and preparation with a streamlined workflow and intuitive interface
- **Fast**—cell input-to-data in less than a day
- **All in one**—comprehensive, automated workflow generates reproducible and reliable results
- **Flexible**—expandable into whole transcriptome and variant discovery

Individual cells vary as much as the researchers who study them. Traditional methods of extraction, isolation by pipette, and processing cells are laborious, time-consuming and prone to introducing errors. In addition, averaging cell pools masks many important functions within a single cell. Geneticists and clinical researchers have been looking for a complete workflow that can examine and differentiate individual cells and group them according to unique genomes and transcriptomes while minimizing technical noise.

The C1™ system takes an entirely new approach, based on innovative Fluidigm® microfluidic technology that enables you to rapidly and reliably isolate, process, and profile individual cells for genomic analysis. For the first time, you can extract, reverse transcribe, preamplify, and ultimately detect and analyze cell activity using just one technology, reducing the variability caused by multiplatform technical errors.

The C1 enables you to study cell differentiation, measuring individual cell responses to specific stimuli, verify critical disease biomarkers, validate RNAi knockdown, and conduct candidate drug screens.



The C1 IFC uses integrated thermal and pneumatic control at nanoliter scale to perform every step of the C1 workflow. From single-cell capture to amplification, the C1 IFC operates without intervention. No reagent mixing, transfer or addition is required. It is easy to load, requires minimal hands-on time, reduces the risk of carryover contamination, and provides highly reliable data quality.

# C1 Components

The C1 system is the world's first commercially available, automated single-cell isolation and preparation system for genomic analysis. The C1 System provides an easy and highly reproducible gene expression workflow to process 96 single cells across 96 mRNA targets. In this format, our single-cell workflow enables you to measure the expression of hundreds of genes in just a few hours compared to experiments that would normally take days using traditional systems. With this new system you can rapidly explore unique attributes of individual cells without the technical variability of a standard gene expression workflow.

The C1 system consists of the following:

- **C1 instrument**—breakthrough, bench-top automation of isolation, lysis, and preamplification of single cells
- **C1 IFC**—proprietary integrated fluidics circuit that facilitates capture and highly paralleled preparation of 96 individual cells
- **C1 Reagent Kit**—a ready-to-use reagent kit to support cell suspension, lysis, and purification

## Up to 96 Single Cells in Just One Hour

The C1 system provides a simple plug-and-play workflow to reproducibly prepare 96 individual cells in about one hour of hands-on time.

The C1 system coupled with the Biomark HD system streamlines gene expression analysis through seamless effort and significant time savings with support for up to 96 individual cells across 96 transcripts. With automation and minimal costs, the C1 dramatically increases productivity to further accelerate expression profiling studies. With an optimized protocol, preformulated reagent kit and disposable arrays, you can achieve single-cell accuracy with load-and-go productivity.

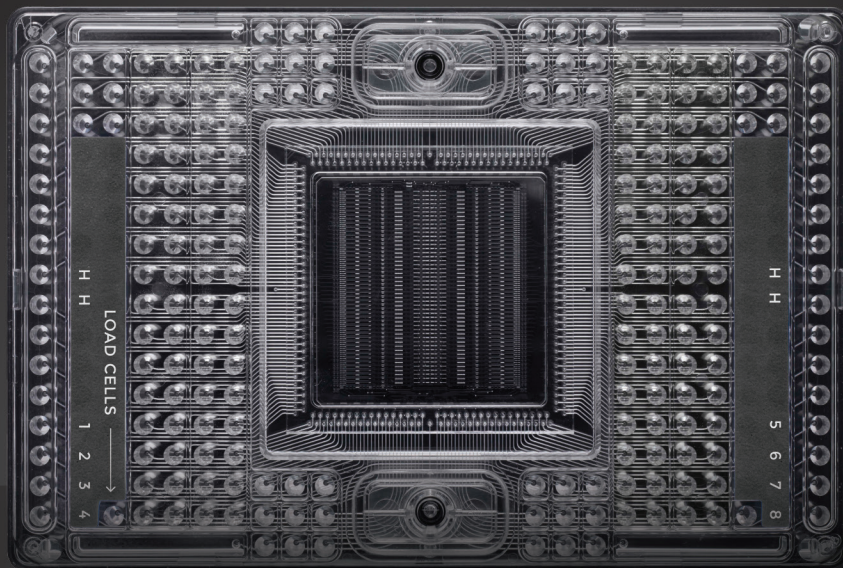
## Easy workflow

The simple user interface and comprehensive C1 workflow will help you:

- 1 CAPTURE CELLS**  
Load batches of cells in a single pipetting step and rapidly separate into 96 individual chambers for preparation
- 2 VERIFY**  
Use an “in-process” quality control checkpoint to verify the number of captured cells and distinguish live and dead cells to preserve data integrity
- 3 LYSE**  
Use a rapid direct cell lysis method to save time and cost without RNA purification
- 4 REVERSE TRANSCRIBE AND PREAMPLIFY**  
cDNA synthesis and specific target amplification occur on the same sample without reagent mixing and sample transfer
- 5 HARVEST**  
All preamplified products are pooled, harvested, and transferred to the Biomark™ HD system for quantitative PCR analysis



Your cells and your research are anything but average. Learn how the C1 system can put your gene expression work above the curve at [fluidigm.com/products/c1-system](https://fluidigm.com/products/c1-system).



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