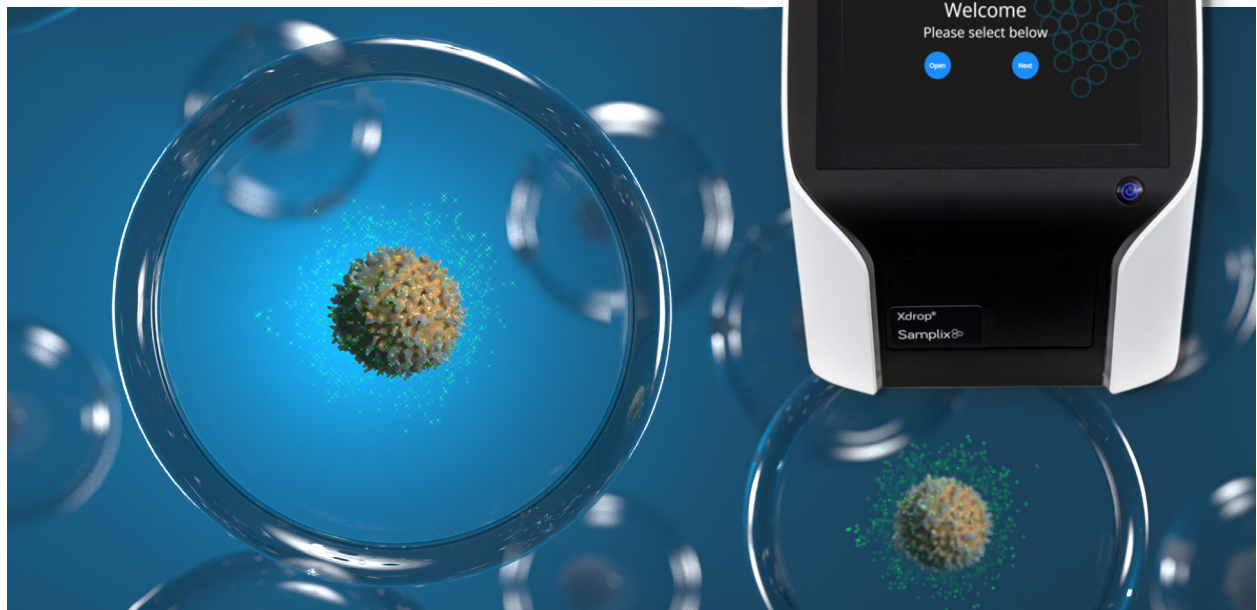


Xdrop®

Function-first single-cell encapsulation platform



Why Xdrop?

Traditional bulk assays mask cellular heterogeneity and miss rare, high-value functional cells. Xdrop encapsulates each cell in its own droplet, enabling single-cell functional analysis and recovery of the cells that matter most.

Features

- Small benchtop microfluidic platform
- Encapsulates living cells in stable double-emulsion (DE) droplets
- Millions of droplets per run
- Processes 8 samples in parallel in under an hour
- Open platform compatible with multiple assays
- High-throughput single-cell encapsulation

Benefits

- Uncover hidden heterogeneity: detect rare cells missed by bulk assays
- Function-first design: measure secretion, cytotoxicity, or signaling per cell
- Versatile droplets: compatible with incubators, flow cytometers, cell sorters and thermal cyclers
- Straightforward workflow: load sample and Samplix reagents
- Accessible to every lab: user-friendly instrument requiring minimal training



Applications

Xdrop fits into flow cytometry workflows for antibody discovery and cell therapy research.

Functional single-cell analysis

- Identify high-performing antibody- or cytokine-secreting cells
- Isolate cells with high cytotoxic activity (e.g., NK, T cells)
- Profile rare functional immune phenotypes
- Screening for rare enzyme variants
- Compatibility with downstream analysis such as flow cytometry and sorting, imaging, or biochemical assays.

Find the right cartridge for your applications

Cartridge type	Xdrop DE20	Xdrop DE50
Droplet inner diameter	18 µm	50 µm
Droplet volume	3 pl	65 pl
Droplets per lane per run	>9,000,000	>1,000,000
Run time (for up to 8 samples)	60 minutes	5 minutes
Sample type	Microbial cells, organelles, DNA	Mammalian cells, microbial cells, DNA

Contact us at samplix.com/contact

