



UNLOCK THE POTENTIAL
OF YOUR CELLS

MODAFLOW™

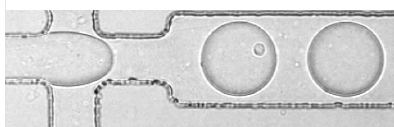
High-throughput functional screening at the single-cell level,
and gentle sorting



The ModaFlow™ is a plug-and-play instrument dedicated to high-throughput single-cell compartmentalization, fluorescence-based screening and sorting, carried out in aqueous-in-oil microfluidic droplets. Inside the droplets, the molecules secreted by the individual cells remain confined and can be detected through dedicated in-droplet bioassays.

This cutting-edge technology enables functional characterization and selection of your precious cells, based on their secretome and/or on cell-cell interaction.

**1. Cell and reagents
encapsulation**
(> 1,000 droplets/s)



**2. Off-chip
Incubation**



3. Screening and sorting
(1,000 droplets/s)



Discarded

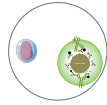
Sorted

MODAFLOW™ FEATURES

- Benchtop – fits in a hood
- Gentle on cells: adapted to sensitive cells (primary cells, immune cells, etc.)
- No dead-volume – instant priming
- Fluorescence-based detection: up to 3 lasers and 5 photodetectors
- Automatic image acquisition of every detected event
- Sorting rate: up to 1,000 droplets/s
- Versatile instrument for various applications

One unique instrument for a variety of applications in cell therapy

SECRETION ASSAYS

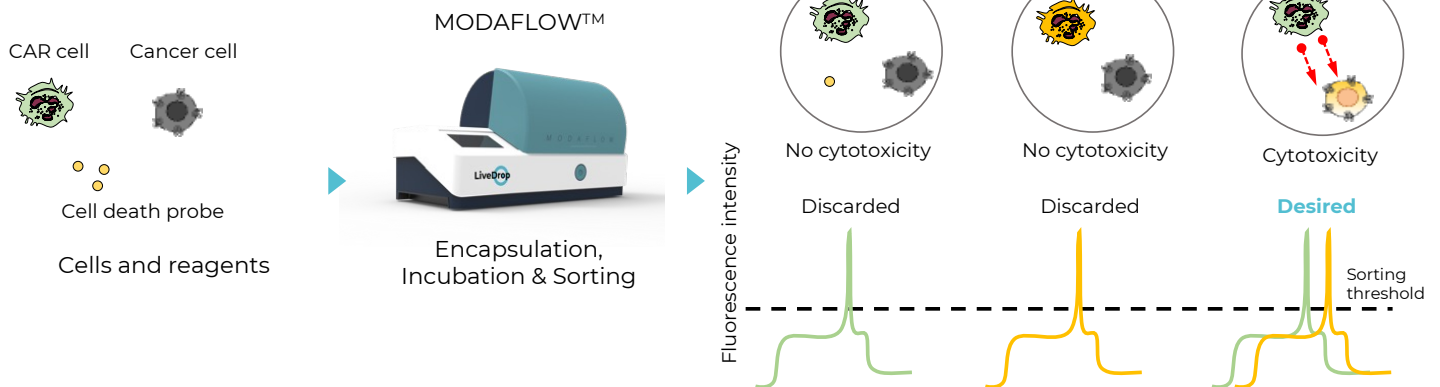


Cells and their secreted biomolecules (such as antibodies, cytokines, enzymes and vesicles) remain confined in the droplets and quickly reach detectable concentrations. The assay readouts generated for each droplet reveal the functional properties of the cells.

CO-CULTURE ASSAYS



Pairs of two distinct cells, such as a CAR cell and a target cancer cell, are confined in individual droplets, allowing to perform valuable cell-cell cytotoxicity assays at biologically relevant throughput.

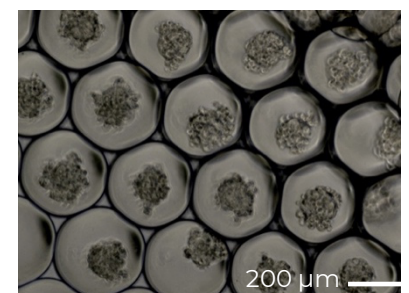


Cytotoxicity assay: co-encapsulation of pairs of CAR cells and cancer cells.

SPHEROID – 3D CELL AGGREGATE*

ModaFlow™ enables the reproducible encapsulation of a determined number of cells in every droplet. After collection and incubation, cells aggregate within 24 hours and form mini-spheroids in the droplets.

Process a 100 μ L cell sample in 3 minutes and produce 20,000 droplets of 5 nL, with 100 cells/droplet.



Cell sedimentation and 3D aggregate formation in each droplet.

CONTACT

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* This application is also available with the OneFlow™, the little sister of ModaFlow™, dedicated to cell encapsulation.