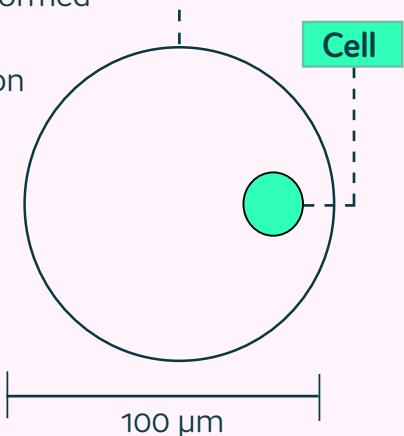


# Cyto-Mine® Platforms

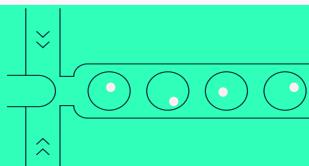


# Sphere Bio core technology - Picodroplets

**Picodroplet**  
Tiny droplet of media (picoliters) in oil formed with Sphere Bio's patented emulsion technology.

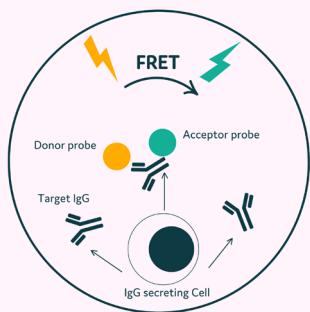


Features	Benefits
Gas permeable	Maintains cell viability
Cell Encapsulation	Analyze secreted proteins & antibodies
Picoliter sized	Allows for rapid detection of signals
Optically clear	Compatible with fluor-based molecular assays
Highly stable	Protects cell through assessment, sorting, and dispensing

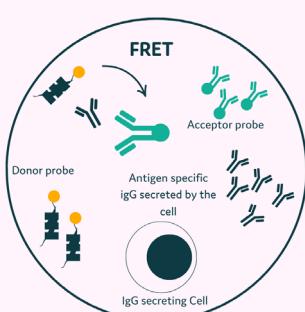


Picodroplets provide an ultra-miniaturized reaction vessel, containing media, reagents and cells, that allows large-scale experiments at the single cell level.

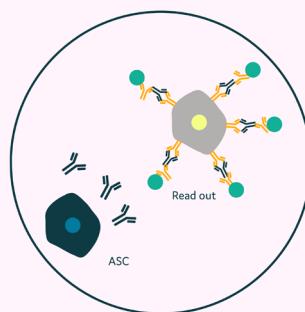
## Bioassays in picodroplets



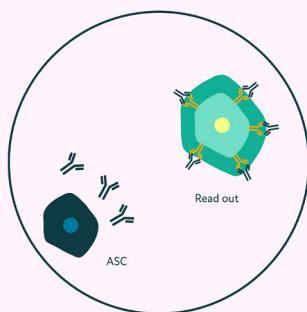
FRET assay:  
IgG specific



FRET assay:  
antigen specific



Binding assay:  
cell binding



Functional assay:  
fluorescent reporter

### Secreted Targets

A variety of assays can be performed in picodroplets, enabling dramatically reduced incubation times and throughput of 10s of millions of cells.

### Surface Targets

# Automated screening of live single cells with Cyto-Mine® and Cyto-Mine® Chroma

Picodroplet technology for biologists, not microfluidics experts.

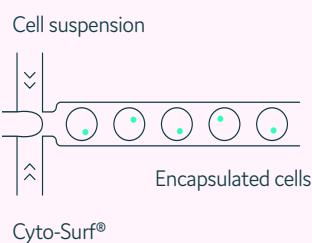


- ✓ **High Throughput** - Functionally analyze hundreds of thousands to millions of cells in a single day.
- ✓ **Enhanced Detection** - Ability to detect secreted cellular products.
- ✓ **Easy to Use** - Easy to use controls allow quick setup and execution.
- ✓ **Automated Design** - Automatically encapsulates, analyzes, sorts, and dispenses single viable cells.
- ✓ **Multiplexing Capabilities with Cyto-Mine Chroma®** - Up to four lasers and detectors allow for multiple fluor based readouts.

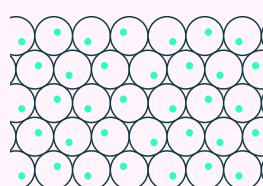
## Integrated Workflow

A fully integrated workflow for encapsulating single cells, sorting them by fluorescent markers, and dispensing with monoclonality assurance and industry-leading cell viability.

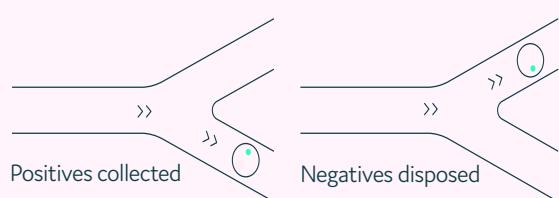
### 1 Cells encapsulated in picodroplets



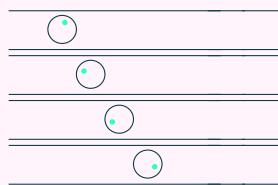
### 2 Cells incubated with assay reagents while fluorescent signal develops.



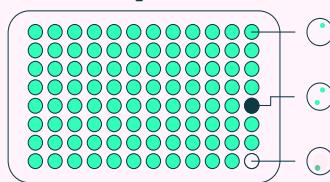
### 3 Cells of interest sorted for downstream dispensing



### 4 Imaging prior to dispense confirms single cell per picodroplet

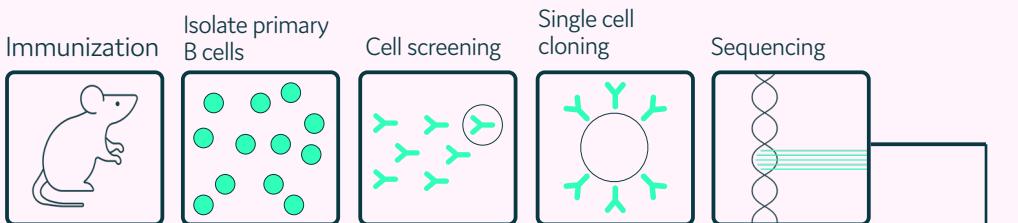


### 5 Cells gently dispensed into 24, 96 or 384 well microplates



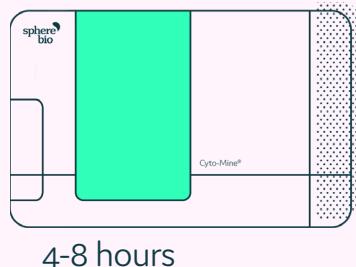
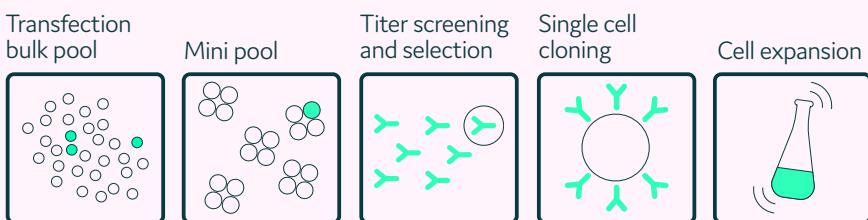
# Reduce months of work to days with Cyto-Mine® Platforms

## Antibody Discovery



Screen and select single cells in just **1 day**

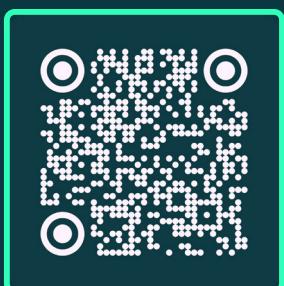
## Cell Line Development



4-8 hours

Combining the advantages of picodroplets with advanced automation, Cyto-Mine® platforms enable screens to be performed in **1 day rather** than **2 months**.

Explore antibody discovery  
app notes



Explore cell line  
development app notes



Learn more about our products

