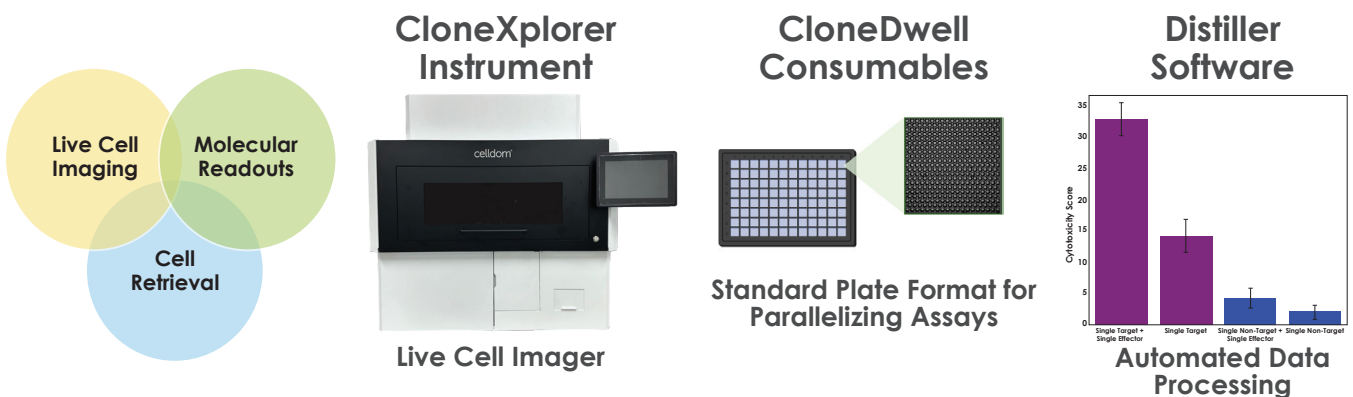




# Celldom<sup>®</sup> CloneXplorer<sup>™</sup> Platform

CloneXplorer is the next-generation live single-cell assay platform that combines functional imaging and molecular readouts with integrated cell retrieval. Continuous microscopic observation of >100,000 cells in one plate for extended durations provides high resolution CAR T-cell potency testing, mAB/TCR discovery, cell line development, and precision medicine.

## Integrated Platform: Next-Gen Live Cell Assays



The CloneXplorer imager has onboard environmental controls, liquid handling, and a clone picker that enables continuous unattended monitoring of live cells and real-time measurement of morphological, molecular or functional properties of heterogeneous cell populations. The platform uses CloneDwell culture plates with standard SBS format containing >100,000 microwells for isolation and identification of rare cells and events. Realtime data processing and visualization tools provide quantitative results, statistical comparisons, summary plots, and videos.

## Benefits

### • Live Cell Assays

Timelapse 4-color imaging for real-time morphological, functional, and molecular measurements, plus sequencing-based readouts

### • Single-Cell Resolution

AI-based cell detection and tracking of each cell's functions associated to its phenotype

### • Simple-to-Use

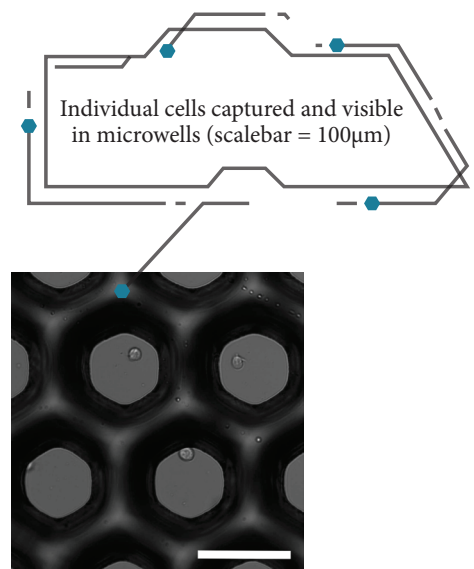
Microfluidics-free, standard 96-well cell culture format

### • On-Instrument Picker

Cell or clone picking capabilities for downstream analysis or cell line development

### • High Throughput

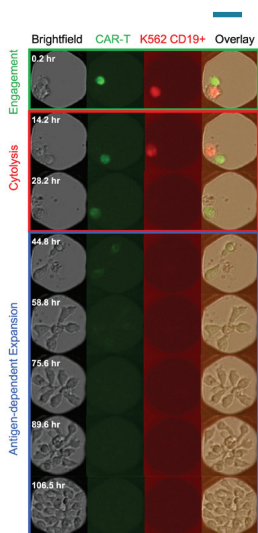
100,000+ single-cell functional assays per experiment



# CloneXplorer T-Cell Potency Assay

Cell-based immunotherapies offer powerful cures to cancers that were traditionally considered to be a death sentence. However, these medicines are significantly more complex than small molecule pharmaceuticals, or even biologics. As a result, R&D, manufacturing, and QC testing require fundamentally different analytical methods to measure essential quality attributes such as identity, safety, specificity, and potency.

Bulk measurements of cell populations are incapable of quantifying the potency of highly heterogeneous and dynamic cell-based medicines. Similarly, single time-point measurements will inevitably miss important events and functions in dynamic living medicines. Live cell assays in CloneDwell plates enable statistically meaningful sample sizes at single-cell resolution for complete characterization of critical quality parameters for release or for testing during development.



The Celldom CloneXplorer and consumables provide a flexible combination of assays to comprehensively characterize cell mixtures using a single platform, rather than requiring a piecemeal of partial assays and instruments (e.g., flow cytometry, live imaging, supernatant ELISA):

- Potency – percentage of cells that kill
- Viability – percentage of live cells
- Functionality – secretome patterns in each cell
- Identity – surface markers (e.g. CAR)
- Purity – presence of contaminants
- Specificity – on-target vs. off-target
- Persistence – cells that kill and then expand

Time lapse images of co-cultures in brightfield and 2 fluorescent channels. Antigen-specific engagement, cytolysis, and expansion of the effector cell is observed.

## Future Workflows

In addition to T-Cell Potency testing, the CloneXplorer instrument and CloneDwell consumables have the versatility to implement practically any live cell assays at a single-cell level, such as in antibody and TCR discovery, genomic/transcriptomic profiling, gene therapy and cell line development, as well as other workflows currently under development. Stay updated at [www.celldom.com](http://www.celldom.com), our LinkedIn page, or contact [info@celldom.com](mailto:info@celldom.com) for more information.

## Start Using Next-Gen Cell Assays

Instruments are available starting March 2023; limited early access and beta testing slots remain. Contact [info@celldom.com](mailto:info@celldom.com) to express interest and discuss options to start using next-gen cell assays with the ExCyte platform.



[www.celldom.com](http://www.celldom.com)

Celldom, Inc. 733 Industrial Rd. San Carlos, CA 94070  
© 2022 Celldom, Inc. All rights reserved. All trademarks are the property of Celldom, Inc.  
For Research Use Only. Not for use in diagnostic procedures.