High assurance monoclonality for cell line development

Monoclonality verification & growth stage

• Double confirmation of clonality. Image based evidence confirming single cell deposition event, and single cell in 96- and 384-well plate post sort
• Track monoclonality from single cell to colony including growth rate and confluence analysis
• Increased viability and clone throughput
• Automated export of clonality data for regulatory submission

1 Sort single cells into microplate wells
   Single-cell sorter

2 Scan plate WL at Day 0 and subsequent days
   Aquire

3 Review plate scan and assess overall growth (WL)
   Analyze

4 Confirm monoclonality and export well data for regulatory submission
   Report

Sort single cells into microplate wells
Single, viable cells must be isolated and cloned in order to ensure that the cell population is genetically identical, significantly reducing the heterogeneity of expression.

Scan plate WL at Day 0 and subsequent days
Image plate at Day 0 and subsequent days. Documentation of monoclonality (a regulatory metric for therapeutic cell lines) is typically image-based, whereby an image of a single cell is recorded and included in regulatory filings.

Review and analyze images tracking cell growth rates, confluence measurements, and colony formation.

Confirm monoclonality and export well data in detailed report for regulatory submission.
Product highlight

CloneSelect Single Cell Printer Series

**Improve clonal outgrowth**

Achieve up to 8X improvement in clonal outgrowth efficiency over traditional methods. Deposit single cells with high efficiency into 96- or 384-well plates. It takes as little as ~5 min to dispense into a 96-well plate.

**CellTracker Green stained CHO cells**

**CHO mAb staining (cold capture assay)**

**Erythroid progenitor cells (blood therapy)**

**CRISPR/CAS9 edited mesenchymal stem cells**

**Hepatocytes (isolated from mice)**

**Mouse colonic sensory neurons**

**Peripheral blood mononuclear cells (PBMCs)**

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**CloneSelect Single-Cell Printer**

**Demonstrate monoclonality with greater confidence**

The CloneSelect® Single-Cell Printer (SCP series) by Cytena and Molecular Devices is a fully automated system that utilizes proprietary microfluidics-based technology and real-time image analysis to sort and deposit single cells into standard microplates—while simultaneously providing assurance of monoclonality through image documentation.

*†† Only available in North America, China, Hong Kong, and Taiwan.

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**CloneSelect Imager with fluorescence**

**Verify monoclonality confidently**

The CloneSelect® Imager can help you meet regulatory demands of single cell verification with its automated analysis of cells in the white light channel and optional fluorescence to add another layer of confidence to monoclonality verification. The system also enables concurrent confluence and monoclonality studies.

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To learn more, please contact your regional Molecular Devices technical sales specialist, visit www.moleculardevices.com or call +1.877.589.2214.