

CYTOOplates™

Normalize. Analyze. Discover.



CELL ARCHITECTS

High Content Analysis. Empowered.



CYTOOplates

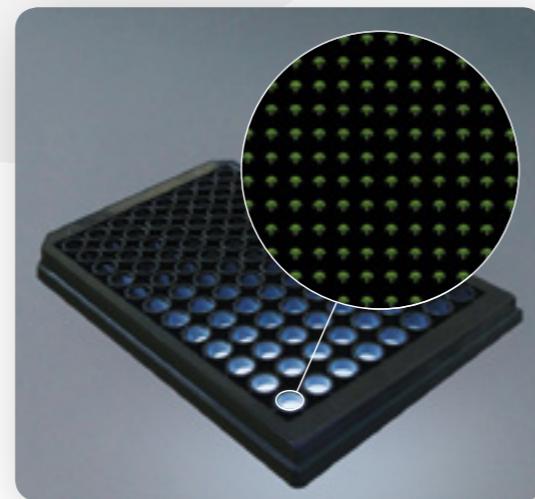
High Content Analysis. Empowered.

CYTOOplates are high resolution glass-bottom microplates with thousands of adhesive micropatterns arrayed on a cytophobic surface in each well.

Cell normalization... Assay standardization

When seeded on concave micropatterns, cells attach and stretch out over the non-adhesive surface. The geometric distribution of adhesive contacts between cells and substrate induces the reproducible polarization of the cell machinery. Cell position, cell shape, cell polarity and internal cell organization become normalized.

CYTOO's technology paves the way to more reliable and sensitive quantitative cell analysis...



A new dimension to your HCA/HCS assays:

- Powerful assay standardization
- Reproducible & sensitive cell phenotype quantification
- Straightforward image analysis

Cells on micropatterns

Results obtained on micropatterns with the following cell types have already been published: Epithelial cells, Fibroblasts, Adenocarcinoma cell lines, Hepatic cell lines, Primary cells, Neurons and neuron progenitors, Stem cells...
For an updated list of cell types and publications: www.cytoo.com/celltypes, www.cytoo.com/publications

A whole range of micropatterns for diverse applications

For custom micropatterns please contact us contact@cytoo.com

	Disc	Crossbow	H	Y	L
Adhesive patterns					
Cells					
Description	No polarization	Strong polarization	Symmetric organization	Triaxial symmetry organization	Single free edge organization
Noteworthy Applications	Ciliogenesis assays	Cell polarity Organelle positioning assays	Cell division & Cell-cell arrangement assay	Multipolar division assay	Cytoskeleton contractility & Spindle orientation assays

Getting started

The CYTOOplate Starter's allows you to identify which pattern works best for your specific assay from a choice of 5 standard patterns in 2 sizes.

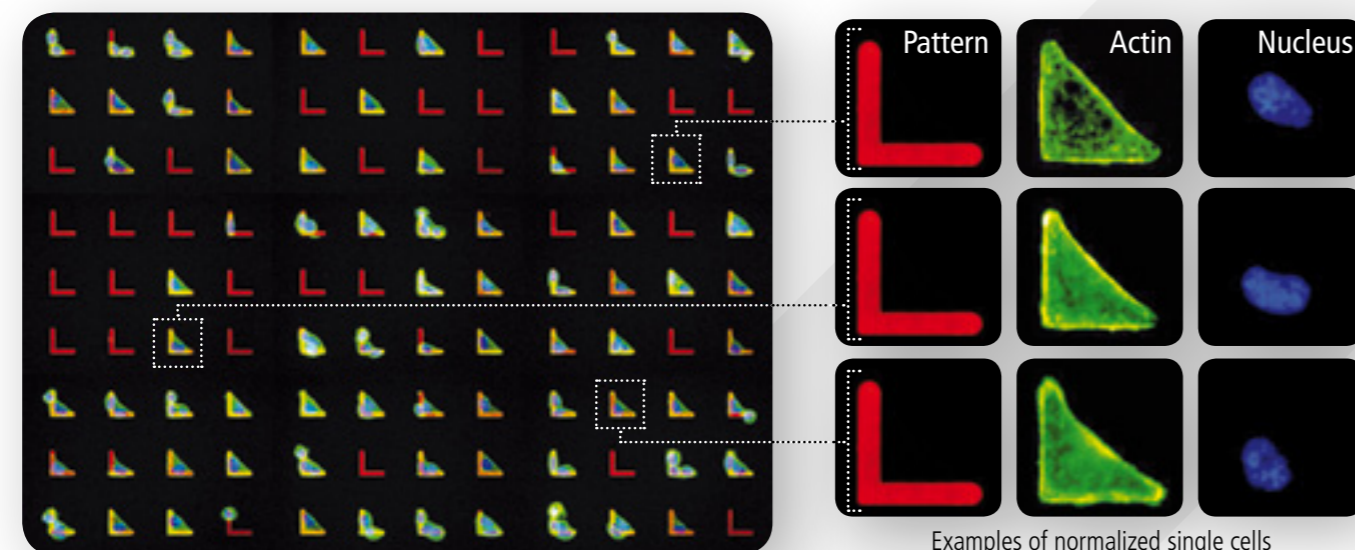
Columns 1 and 12 are homogeneously covered with adhesive protein where your cells will behave as if they were on a conventional cell culture surface.



Custom

Imagine all the patterns... Your needs are unique. We can design customized patterns for your specific project. Please contact us at contact@cytoo.com

Generate High Content Reference Cells™

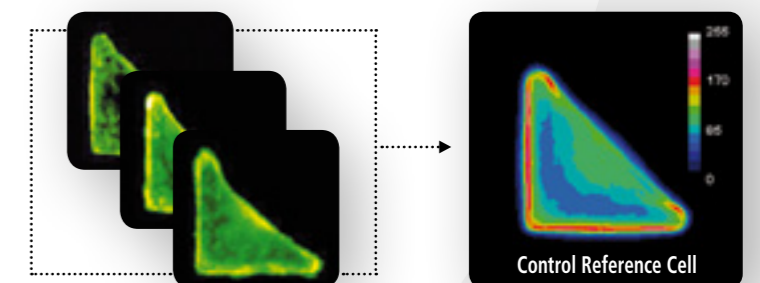


Example of image mosaic acquired at 20x on standard HCS instruments or automated microscopes. Using standard image processing tools and error-free segmentation, single cells are automatically identified within the images and selected for further analysis.

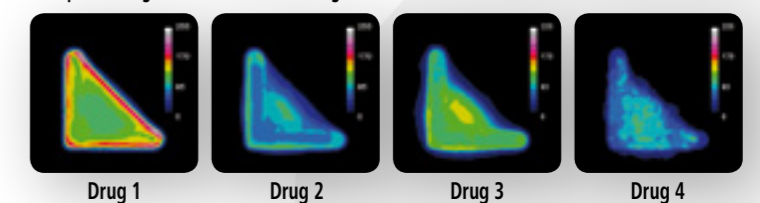
From as few as 50 normalized cells, it is now possible to convert a stack of images into a single representative image of the cell population phenotype: the Reference Cell.

The Reference Cell is a unique HCA methodology allowing comparability between reproducible and standardized assays.

Download the Reference Cell Application Note here: www.cytoo.com/applications



Examples of drug-induced Reference Cell signatures



Product specifications

Description	96 well microplate with adhesive micropatterns; F-glass bottom (flat), alphanumeric well coding; with lid		
Plate bottom	High quality low fluorescence borosilicate glass		
Plate dimensions	Standard SBS format (length: 127.76 mm; width: 85.48 mm)		
Bottom thickness	170 µm, curvature <100 µm		
Material	Plate: PS (Black Polystyrene); Lid: PS (Clear Polystyrene)		
Working well volume	25 –340 µL		
Micropattern geometries	Disk, Crossbow, H, Y, L and custom-made		
Standard pattern sizes	Small	Medium	Large
Cell area	700 µm ²	1100 µm ²	1600 µm ²
Number of micropatterns per well	5000+	3000+	2000+
Pitch between micropatterns	80 µm	100 µm	120 µm
Custom-made pattern size	Minimum line width of 2µm		
Adhesion protein*	Fibronectin, Poly-L-Lysine, or Ready-to-coat (Activated)*		
Fluorescent patterns (optional)	Fibronectin Exc. 550 nm or 650 nm		
Packaging	Individual; Aluminum bag; vacuum sealed under protective atmosphere		
Working temperature range	+4°C to +37°C		
Shelf life	4 months after date of production (at +4°C)		
Other Information	For single use only		

* = pre-activated micropatterned glass surface for adsorption of the protein of your choice. Contact us for specific needs.

Ordering information

Cat. No. ¹⁾	Product ²⁾	Micropattern	Size	Min. of order
20-900-X	CYTOOplates 96 Starter-[Protein]	Multi	Multi	2
20-001-X	CYTOOplates 96 DC-S-[Protein]	Disc	Small (700 µm ²)	5
20-002-X	CYTOOplates 96 DC-M-[Protein]	Disc	Medium (1100 µm ²)	5
20-003-X	CYTOOplates 96 DC-L-[Protein]	Disc	Large (1600 µm ²)	5
20-004-X	CYTOOplates 96 CW-S-[Protein]	Crossbow	Small (700 µm ²)	5
20-005-X	CYTOOplates 96 CW-M-[Protein]	Crossbow	Medium (1100 µm ²)	5
20-006-X	CYTOOplates 96 CW-L-[Protein]	Crossbow	Large (1600 µm ²)	5
20-007-X	CYTOOplates 96 H-S-[Protein]	H	Small (700 µm ²)	5
20-008-X	CYTOOplates 96 H-M-[Protein]	H	Medium (1100 µm ²)	5
20-009-X	CYTOOplates 96 H-L-[Protein]	H	Large (1600 µm ²)	5
20-010-X	CYTOOplates 96 Y-S-[Protein]	Y	Small (700 µm ²)	5
20-011-X	CYTOOplates 96 Y-M-[Protein]	Y	Medium (1100 µm ²)	5
20-012-X	CYTOOplates 96 Y-L-[Protein]	Y	Large (1600 µm ²)	5
20-013-X	CYTOOplates 96 L-S-[Protein]	L	Small (700 µm ²)	5
20-014-X	CYTOOplates 96 L-M-[Protein]	L	Medium (1100 µm ²)	5
20-015-X	CYTOOplates 96 L-L-[Protein]	L	Large (1600 µm ²)	5
20-950-X	CYTOOplates 96 Custom-[Protein]	Custom	Custom	10

1) To generate Cat. No. replace X with: 00 - Activated Ready-to-coat (no ECM protein); 10 – Fibronectin (FN);

12 - Fluorescent FN with excitation at 550 nm; 13 - Fluorescent FN with excitation at 650 nm; 20 - Poly-L-Lysine.

2) To generate Product Name: replace [Protein] with: A - Activated Ready-to-coat (no ECM protein); FN - Fibronectin; FN550 -

Fluorescent FN with excitation 550 nm; FN650 - Fluorescent FN with excitation 650 nm; PLL - Poly-L-Lysine.

For inquiries please email sales@cytoo.com or connect to our on-line store: www.cytoo.com/store

Further Reading

List of relevant publications : www.cytoo.com/publications

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CELL ARCHITECTS

CYTOO S.A.
7, parvis Louis Néel
BHT 52, BP50
38040 Grenoble cedex 9 - FRANCE
Tel. +33(0) 438 88 47 05

CYTOO, Inc
161 Worcester Road,
Suite 303, Framingham,
Massachusetts 01701, USA
Tel. +1 508.270.8870

www.cytoo.com - info@cytoo.com

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