

THE BEACON[®]

OPTOFLUIDIC PLATFORM

1000s of cells
100X the insights
10X faster
1/X total cost

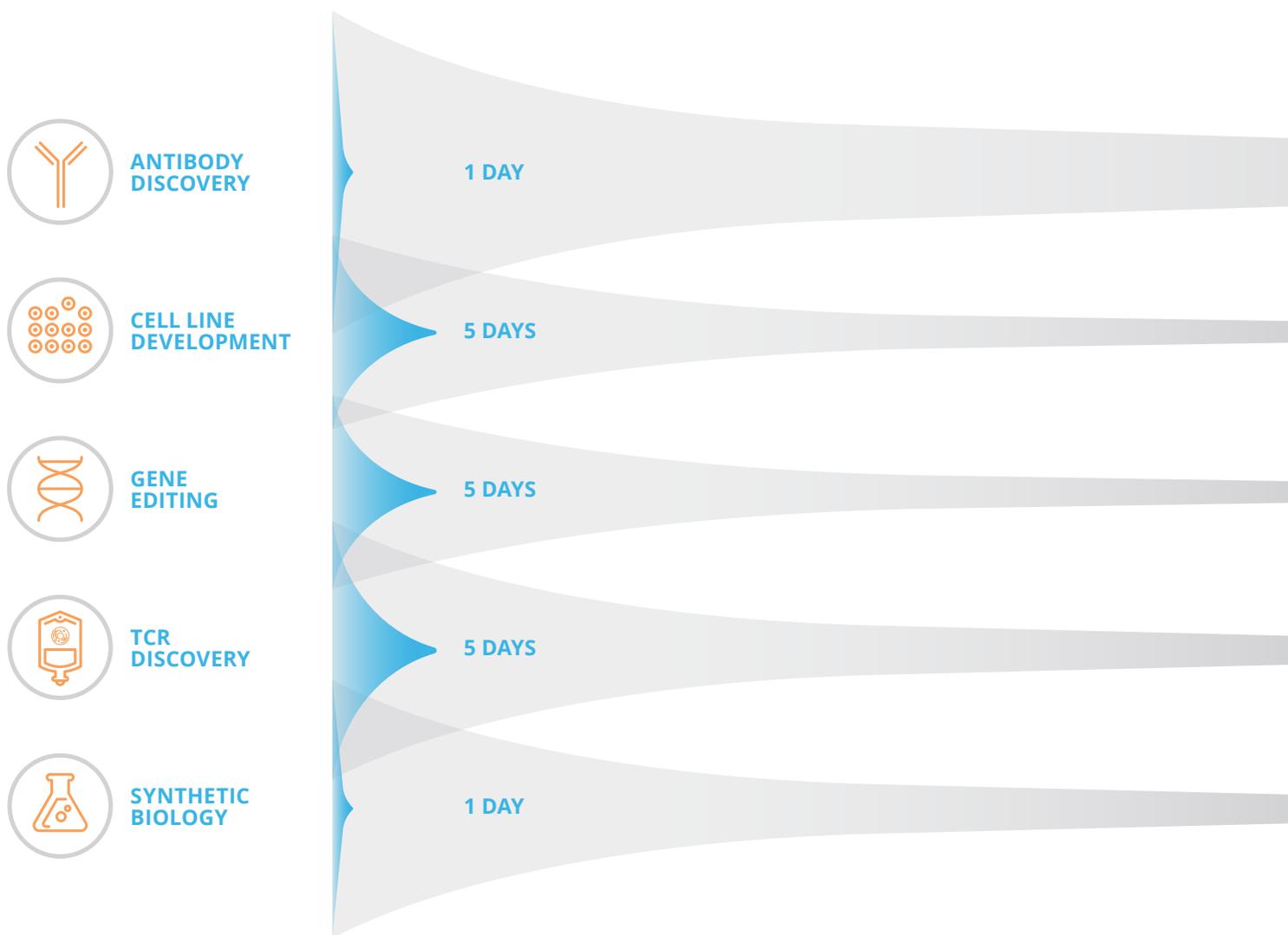
**BERKELEY
LIGHTS**



Finding the most important individual cells requires the most **time, money and effort.**

Antibody Discovery. Cell Line Development. Gene Editing. TCR Discovery. Synthetic Biology. In these and other fields that depend on finding the right cell or clone, selecting from hundreds of thousands of cells to the handful that are most important can take 2 to 3 months or more of intensive, expensive, manual manipulation.

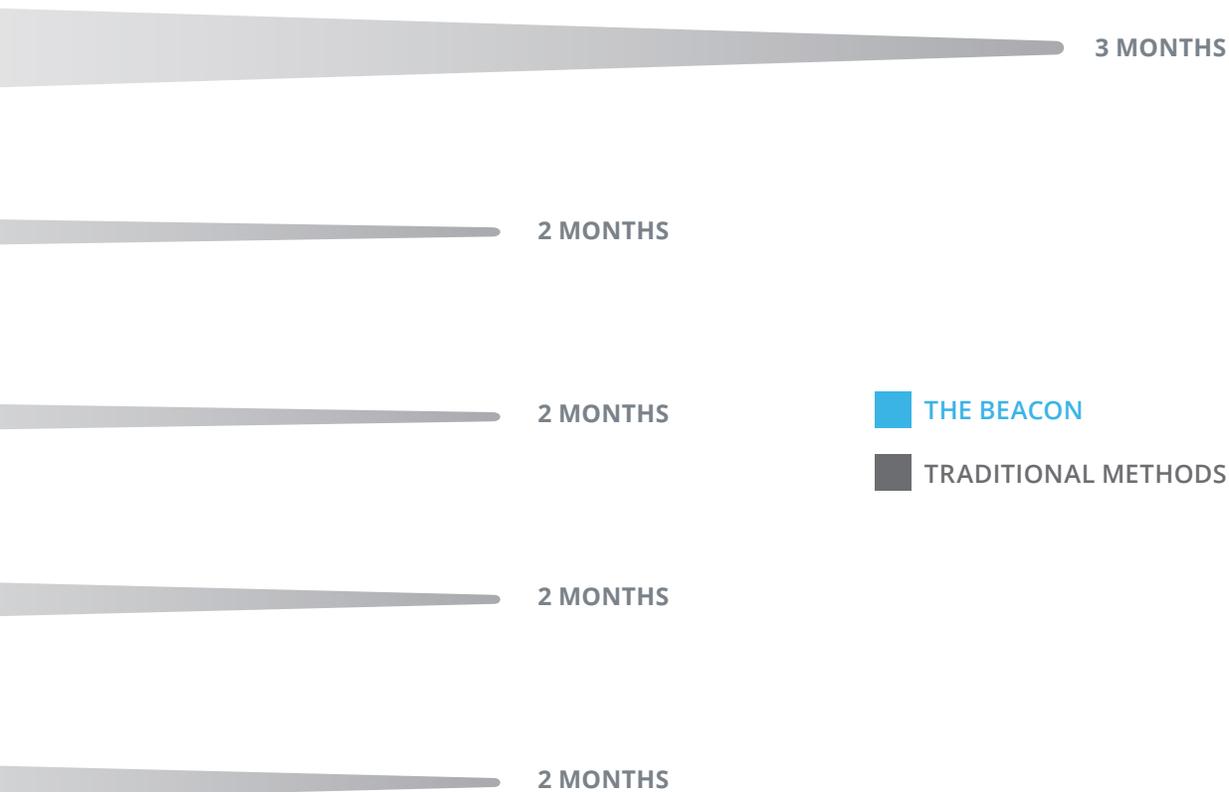
Imagine how much further you can take your product development with a cell workflow that shortens the selection process to just days. Bring the right biologic therapies into clinical testing faster. Identify the cells that matter much sooner. Move any field light-years ahead.



Now, the Beacon platform reduces timelines from months to days, **saving time and money.**

With the Beacon platform's light-speed workflows, you'll gain insights, iterate and innovate as fast as your inspiration.

- Replace a roomful of equipment with the Beacon system
- Work with individual cells radically faster than other technologies
- Perform assays at any time, as often as you need
- Track phenotype and genotype of single cells or clones
- Automate and scale workflows far beyond manual, time-intensive analysis
- Update workflows via software instantly, based on a day's or hour's data
- Generate greater insights through deep profiling of each cell or clone

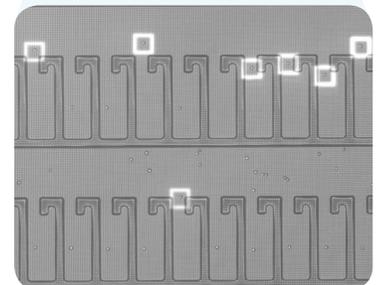
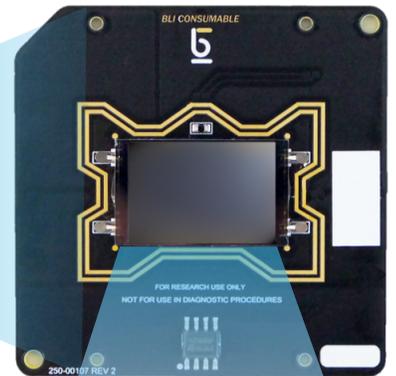


Process and analyze cells in a faster, **more insightful way.**

At the core of the Beacon platform is a combination of optics and nanofluidics called optofluidics. Light and semiconductor technology combine to move single cells or beads in large numbers so they can be isolated, cultured, assayed, and exported.



OptoSelect™ chips use light to automatically move individual cells.
[CHIP SHOWN ACTUAL SIZE]



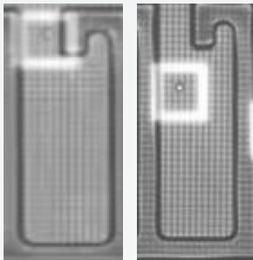
Cells are cloned and assayed in individual 500 pL or 1 nL **NanoPens™**. Each pen is ~100,000 times smaller than a microwell.

Screen the right cells easily, automatically, and precisely.

1

Load

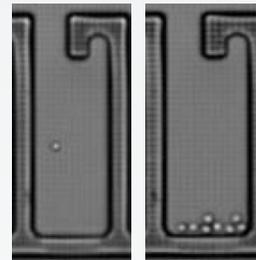
Each cell or clone is imaged and monitored separately, allowing **rich, robust visual data**.



2

Culture

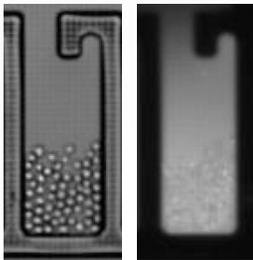
Each cell or clone is imaged and monitored separately, allowing **rich, robust visual data**.



3

Assay

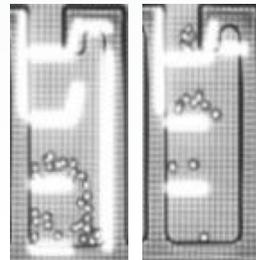
Each cell or clone is imaged and monitored separately, allowing **rich, robust visual data**.



4

Export

Each cell or clone is imaged and monitored separately, allowing **rich, robust visual data**.



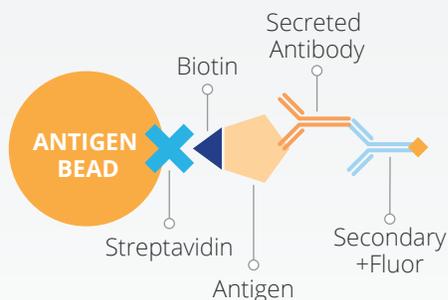
Assays can be performed with as little as a single cell.

NanoPens are **100,000 times smaller** in volume than a microwell. That means a single cell can be isolated and assayed in its own discrete chamber. There's no need to wait weeks for a large quantity of cells to assay.

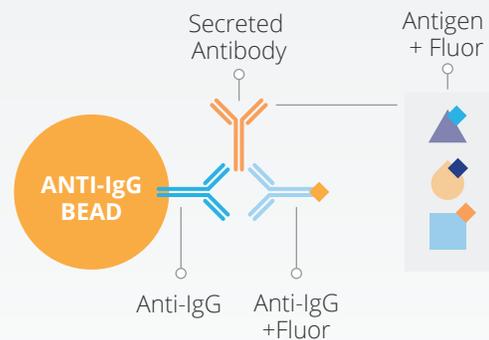
Perform secretion assays with both soluble or membrane-bound targets within hours of cloning. You have **complete flexibility** to run fully-automated assays, sequentially or simultaneously, as frequently as you choose.

SOME TYPICAL BEACON ASSAYS.

ANTIGEN-SPECIFIC BEAD ASSAY



MULTIPLEX IgG CAPTURE ASSAY

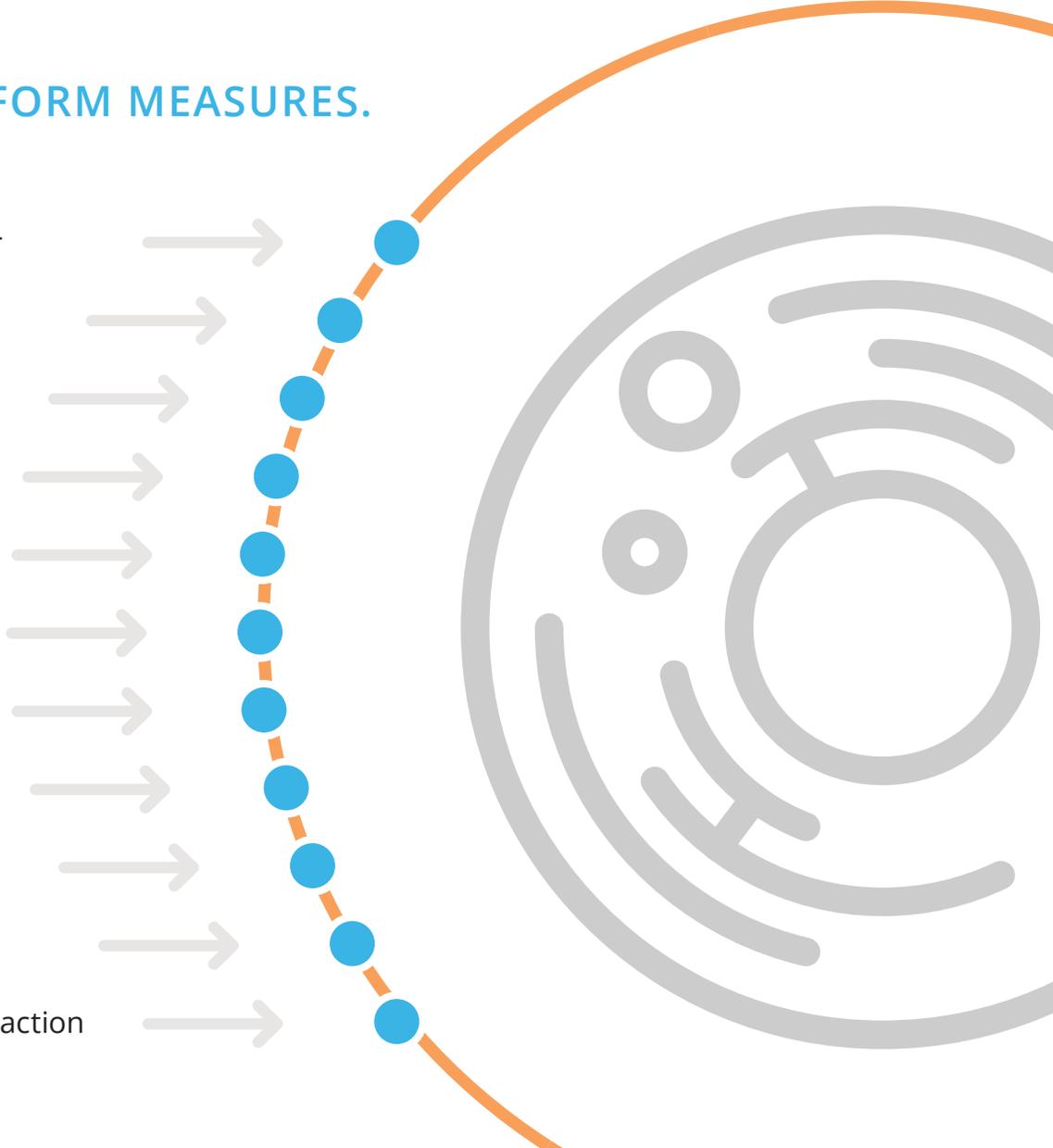


Illuminate new insights with rich fingerprints at every cell stage.

Older technologies limit cellular discoveries with limited data. But now, with the Beacon platform, you can capture bright field and fluorescence images of each NanoPen™ at any time.

As you compare results through multiple chips and runs over time, **deep profiling** captures richly detailed “**fingerprints**” of your cells and clones that reveal valuable insights you can't get any other way.

BEACON PLATFORM MEASURES.

- Cell Diameter
 - Cell Circularity
 - Growth Rate
 - Cell Count
 - Surface Markers
 - IgG Secretion
 - Multispecies Binding
 - RNA Expression
 - Phenotype
 - Link to Genotype
 - Cell/Cell Interaction
- 

Beacon Platform

FEATURES

APPLICATIONS	Cell Line Development Plasma B Discovery Other R&D Workflows
ASSAYS	Antigen Specificity Quantitative Secretion Assay Multiplexed Fluorescent Assays Lead Selection Assays Custom Assay Development
CELL TYPES	CHO, Plasma B cells, Memory B cells, T cells, Hybridoma cells, primary cells, adherent cells, others

SPECIFICATIONS

IMPORT	Recommended input density: 1e5 - 5e6 cells/mL Formats: 1.5mL Eppendorf tubes, 0.2mL PCR tubes Std. height (up to 16mm) 96 well microtiter plates
FLUORESCENCE CAPABILITIES	Brightfield Up to 5 colors Standard configuration: DAPI: Ex: 370 – 410nm / Em: 429 – 475nm FITC: Ex: 450 – 500nm / Em: 515 – 565nm TxRed: Ex: 542 – 582nm / Em: 604 – 644nm Cy5: Ex: 608 – 648nm / Em: 672 – 712nm
CULTURE	Customer defined media Per chip temperature control: 10°C to 40°C
EXPORT FORMAT	Automated Recovery Format: 96 well microtiter plate Well plate temp control 10°C to 40°C

INPUTS

POWER	Dedicated 110 -240 V AC, 50Hz-60Hz, 20A circuit
GAS SUPPLY	CDA: 20-120psi, 6mm push-to-connect fitting* >99% CO ₂ : 20-120psi, 6mm push-to- connect fitting* <i>*Other NPT compatible fitting options available</i>
STERILITY	Integrated BSC Class II, A1 compatible airflow Dual ULPA filtration. Exceeds Cleanroom Class 100, ISO Class 5
RECOMMENDED CLEARANCE	36 in (91 cm) aisle in front of workstation 3 in (7.6 cm) rear 12 in (30 cm) left & right sides
OTHER CONNECTIONS	Ethernet
COMPUTER	Windows 10, i7 processor, 8GB Memory, 2TB RAID1 data drive Data Capacity: 250 experiments or 6-12 months
WORKING ENVIRONMENT	Temperature: 64-79° F (18-26° C) Humidity: 20-80% Altitude: <6,500 ft (2,000 m)

ATTRIBUTES

DIMENSIONS	Width: 46 in/116.8 cm Depth: 34 in/86.4 cm Height: 71.5 in/181.6 cm
WEIGHT	Crated for shipment: 1700 lb/770 kg Free-standing: 1260 lb/571 kg



5858 Horton Street | Suite 320 | Emeryville, CA 94608

info@berkeleylights.com

+1-510-858-2855

berkeleylights.com

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