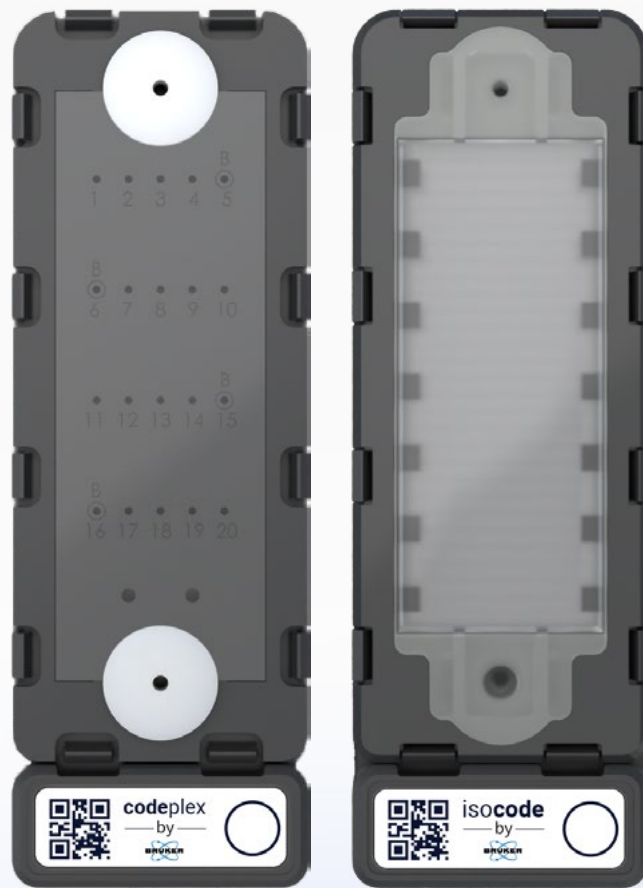


isolight[®]

A single-cell cytokine detection system



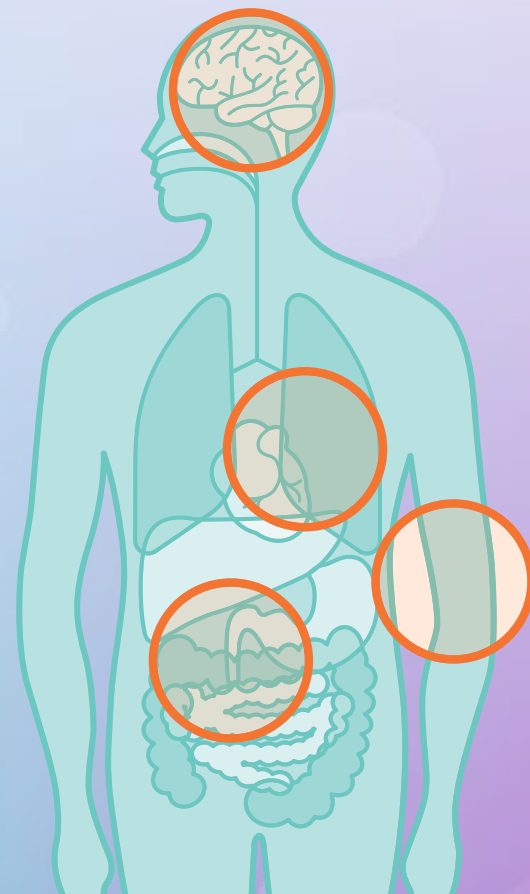


Predictive Single Cell Response

The **IsoLight**® is a hub for comprehensive proteomic profiling of each cell type across a large assay menu of single-cell and population chip and software products. With one instrument achieve functional immune profiling at single-cell level, analyze intracellular signaling omics, and run high-plex walk-away immunoassays.

Through **IsoCode**® Chips, the **IsoLight**® captures single-cell, functional proteomics profiles from thousands of single cells in parallel to better understand complex immunotherapy patient response. Through **CodePlex**® Chips, the **IsoLight**® enables highly multiplexed proteomics from low sample volumes to generate bulk cytokine data via a fully automated workflow.

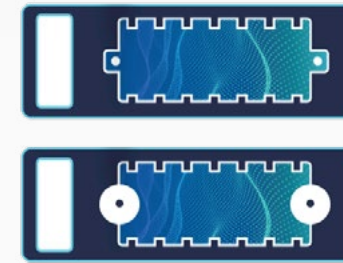
Our **IsoSpeak**® bioinformatics platform helps discover new patient relationships among heterogeneous cells and clearly defines subsets of powerful, polyfunctional cells, secreting 2+ cytokines simultaneously, that can help predict patient outcome and determine disease progression.



Discover the Benefits of Single-Cell Cytokine Profiling with the IsoLight®

The first and only system designed to functionally profile immunotherapy products at the single cell level, including CAR-T and TCR-T product characterization, clinical biomarker discovery, patient monitoring, and biomarkers for checkpoint inhibitor and combination therapies.

Bruker's Single-Cell Functional Technology



IsoCode® and **CodePlex**®
1. Sample Preparation



IsoLight®
2. Automated Assay Workflow



IsoSpeak®
3. Automated Data Processing and Interactive Analysis

Simple and Easy to Use

- Less than 10 minutes of hands-on time
- Immune cells of interest are isolated and stimulated following Bruker's proven and published sample preparation protocols
- One pipette action per sample
- Automated sample tracking barcode scanner
- Built-in bioinformatics for intuitive data analysis

Highly Versatile

- A benchtop instrument that fits into every lab
- Completely automated and hands-off workflow
- With advanced fluidics and precision imaging, live single cells are automatically detected within an onboard incubator
- 1 to 8 chips per run with a throughput of 1k to 8k single cells
- Over 30-plex functional secreted cytokines are automatically analyzed per single cell to identify the unique polyfunctional cell subsets that are unable to be detected by traditional technologies

Impactful Data*

- Cell detection and cytokine analysis are performed automatically within the IsoSpeak software suite
- Easily create advanced bioinformatics visualizations for comparison between samples and generation of data reports
- Captured unique single-cell biology has been correlative in many data sets*
- Highly specific and sensitive results
- Enhances discovery of clinically relevant biomarkers
- Enables improved targeting and monitoring of complex treatments
- Ensures consistent and improved cellular product manufacturing

*based on validated data in 110+ publications

System Specifications

Working Environment

For indoor use only
Operating temperature: 65 – 77°F (18 – 25°C)
Humidity: 40 – 60%, non-condensing
Altitude: < 6,500 ft (2,000 m)

Dimensions

Width: 28.5 in (72.5 cm)
Height: 30.5 in (77.5 cm)
Depth: 28 in (71 cm)

Weight

Crated for shipping: 338 lb (154 kg)
Free standing: 255 lb (116 kg)

Bench Size

Width: > 36 in (91 cm)
Depth: > 24 in (61 cm)

Clearance

Front: > 36 in (91 cm) aisle for operator access
Rear: > 4 in (10 cm)
Left: > 4 in (10 cm)
Right: > 4 in (10 cm)

Power Supply

Voltage: 100 V (min) to 240 V (max)
Current: 6.3 A (max)
Frequency: 50/60 Hz

Gas Supply

Connection: 0.25 in or 4 mm
OD push to connect tubing
Pressure: 30-70 PSI
Composition: Carbon dioxide (CO₂)
at > 99% purity

User Interface

24 in IPS 10-point multi-touch screen
RGB LED status indicator

Connection

Ethernet: 1xGigE
USB: 2x USB 3.0

Performance Specifications

Consumables

Up to 8 disposable **IsoCode**® Chips
per run with barcode tracking

Reagents

Disposable one-time use reagents

Cell Counts

> 1,000 isolated single cells per chip
> 8,000 isolated cells per run with 8 chips

Throughput

Over 30-plex functional cytokines
per isolated single cell
Over 300,000 single cell, secreted
protein data points per run

Hands-On Time

< 3 min per sample
(cell preparation time not included)

Run Time

< 24 hours from sample loading to results

On-Board Incubator

Temperature: 37 ± 2°C
CO₂ concentration: 5 ± 1%

Laser Wavelengths

405 nm, 473 nm, 638 nm

Software Solutions

IsoSpeak® data analysis software

For research use only.
Not for use in diagnostic procedures.
Individual components cannot be
sold or used separately.

