How well do you know your cells?

» Human physiology and disease models in a dish available for everyone. «
Combine contractility, electrophysiology, maturation and cell viability

4 readouts in 1 instrument

**CARDIOEXCYTE 96**
CardioExcyte 96 is a compact, hybrid technology, combining several functional readouts under physiological conditions, directly on your bench.

Small but powerful, the system supports highly resolved impedance-based contractility, electric field potential recordings and cell viability monitoring.

**FLEXCYTE 96**
The CardioExcyte 96 add-on, FLEXcyte 96, provides physiological relevance to cell contraction and maturation in a higher throughput.

This innovative technology greatly enhances the evaluation of drug candidates in cardiac safety, tox, and efficacy studies or basic research.
Sophisticated solutions for cardiac research

» Fundamental insights on the electrical and mechanical dynamics of the human heart can uncover the complexity of cardiac disease. «

CardioExcyte 96 offers a unique experimental constellation, uniting electrical and impedance readouts from the same cells, such as human iPSC derived cardiomyocytes. This gives valuable insight in both electrophysiological and mechanical cellular phenotypes.

FLEXcyte 96, an add-on to CardioExcyte 96, transforms traditionally limited cardiac contractility approaches of the Langendorff Heart into a cutting-edge modern high-throughput technique operating on a unique flexible substrate, mimicking in vivo-like environment.

<table>
<thead>
<tr>
<th>Langendorff Heart</th>
<th>FLEXcyte 96</th>
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<tbody>
<tr>
<td>Adult Cardiac Phenotype</td>
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<td>Target Species</td>
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<td>Throughput</td>
<td><img src="image" alt="Test tube" /></td>
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<tr>
<td>Measured Parameters</td>
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<tr>
<td>Genetic Disease Model</td>
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The impedance change recorded of planar gold-film electrodes reveals changes in electrode coverage or cell morphology. This provides valuable insights in various cell phenotypes, even over prolonged periods of time, with the crucial advantage: the continuous cell monitoring.

Fast, label free and real-time single and multi-frequency impedance readout proved to be an excellent method for monitoring cell adhesion, cell specific structural changes, GPCR research, cancer research (e.g. breast cancer, immuno-oncology), proliferation and cytotoxicity (e.g. cardiotoxicity or hepatotoxicity).
Throughput, flexibility, pro-maturation

» Flexibility is key for a pro-maturation effect on cultured human iPSC-derived cardiomyocytes. «

Throughput is essential when working with precious materials, such as patient cells or when running multiple drug assays. Standard format 96-well plates in various configurations ensure optimal experimental flexibility, data reliability and speed.

Flexible, native like environment mimics the mechanical conditions of real biological tissue thereby inducing pro-maturation effect. Additionally, electrical, optical and pressure stimulation options offer the perfect tool for contractility research in the pre-clinical field.
Human iPSC-derived cardiomyocytes are the future of safe and efficient drug development. The FLEXcyte technology provides a tool for functional cardiac toxicology and efficacy screening on these cells. Force-frequency relation are the subject of current scientific discussions and require an assay technology that can accurately quantify them and we meet this need with the FLEXcyte 96.

PETER LINDER,
CTO, INNOVITRO (CRO, FLEXCYTE SERVICE PROVIDER)

PROF. ALFRED L. GEORGE, JR.,
PROFESSOR AND CHAIR OF PHARMACOLOGY,
NORTHWESTERN UNIVERSITY FEINBERG SCHOOL OF MEDICINE
Choose your solution in one instrument

your applications

- cardiotoxicity
- contraction force
- cell proliferation
- cell signaling
- cell viability
- hepatotoxicity
- immunology
- oncology
- virology

your industry

- basic research
- CROs
- pharma
- drug safety
- drug discovery
- dermatology

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