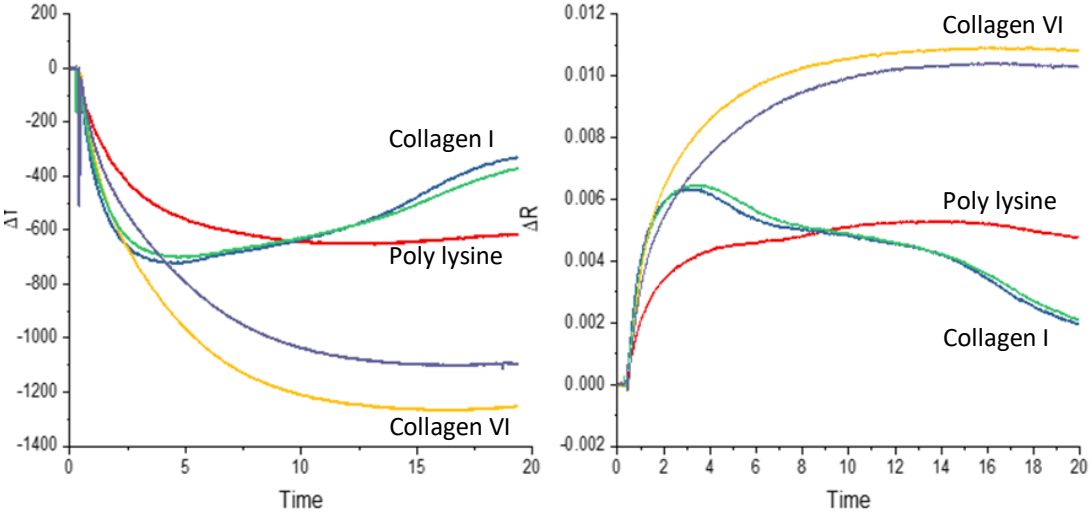
Make the invisible visible

Measure quantitatively the effect that extracellular matrix has on cell culture health and disease progression using the Discovery-Q

Abstract

The Discovery-Q's sensor allows for the addition of custom made extracellular matrix (ECM). This ability enables researchers to conduct cell-based research that can provide the quantitative measurement of the effect of different ECM on cells, and the biological interplay between the components.

When cells adhere to different extracellular matrices the tension that is exhibited between EMC and cells, as well as between cell to cell is modified. Our device can quantify these modifications to enable accurate modeling of disease states or regeneration due to ECM. This ground breaking method allows for understanding the complex role that scaffolds play in cell viability, as well as the subsequent secretion profiles of biomarkers of the cells.

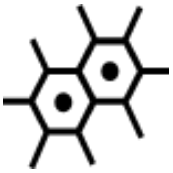


Plating of HepG2 on different extracellular matrices. With Collagen IV the frequency (Δf) decreases demonstrating a stressed cytoskeletal conformation and decreased cell to cell interactions. The resistance (Δf) shows the monolayer and polarity is compromised, and homeostasis is disrupted.

Modeling physiological scaffold effect on cellular response

Adherent & Semi-Adherent cells

Modify ECM to measure cellular responses



Monitoring cell-cell interactions

Monitor Real–time Cell Health

Product information

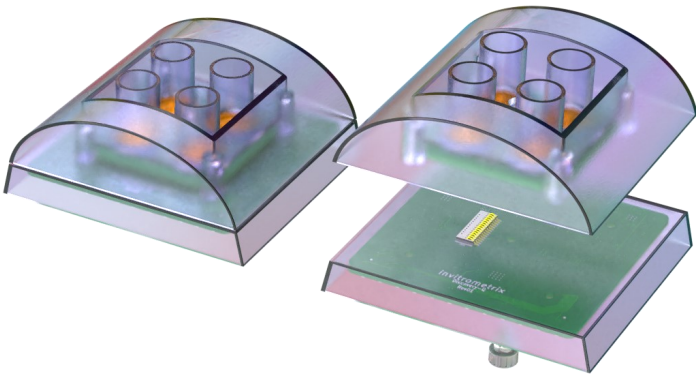
Platform: Discovery-Q

- Compatible with adherent and semi-adherent cell lines
- Simultaneous real time readings of frequency and resistance (dissipation)
- Minimum cell number per well: 1,000
- Label free detection, **specialized media or serum not required**
- Network based system
- Remote operations on web browser
- Data is date and time stamped and downloadable as CSV files

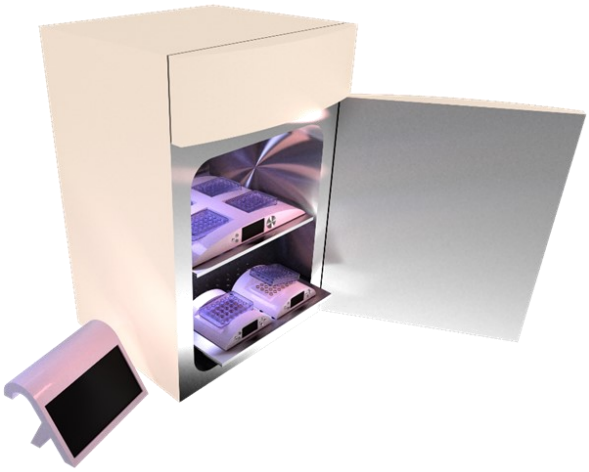
Cell culture types tested: Primary cell lines (cryopreserved plateable hepatocytes, stellates and co-cultures), isolated cells from liver, breast, lung, umbilical , macrophage, and primary tumors

Cell culture lines tested (not a comprehensive list): HepG2, Sk-Hep-1, DH82, SK-Br-3, MDA-MB-231, HUVEC, BAE, BAEC, HL-60, HT-29, HMEC, NHBE, HMVEC-L, HMVEC-BL, HepRG, Hs578t, FaDu, MCF-7, MCF-12A,

For information regarding pricing of units or any other matters please contact: info@invitrometrix.com



The Discovery-Q and consumable well plate



Invitro-Q units working in a cell culture incubator.

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Not for use in diagnostic procedures

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