



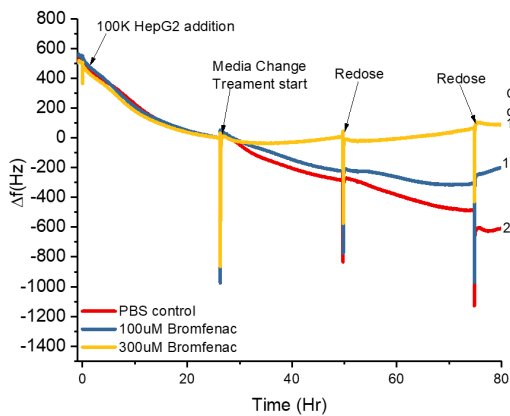
Make the invisible visible

Determine the mechanism of death, and identify when physiological changes occur triggering death with the Discovery-Q

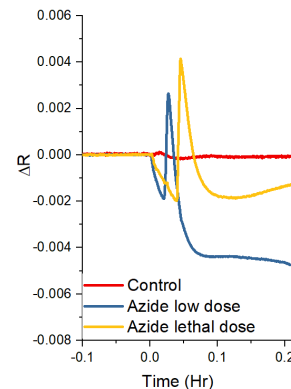
Abstract

Recognizing when a lethal insult occurs and what type of cell death occurs are vital pieces of information to determine mechanism of action and toxicity of the agent. The Discovery-Q can detect at what time point injury occurs in real time post addition. Such as 8 min post sodium azide addition that hyperpolarized the mitochondria leading to apoptosis 12 hours later.

The combined frequency and resistance signatures generated with apoptosis, necrosis and pyroptosis are unique, and enable researchers to increase productivity by looking when cellular events are occurring and understanding why they occur. To enable this research the Discovery-Q is designed to work in a cell culture incubator to ensure ideal conditions for cell research over multiple days. This enables repeat low dose experiment to determine cumulative toxicity. The technique is label free, rapid, sensitive, and it gives unique kinetic information when an agent interacts with the bound cells. These kinetic traces can become a finger print to recognize your agents response.



A 3 day real time frequency reading of HepG2 cells. Bromfenac, a NSAID that induces apoptosis is redosed for 3 day with a low and medium dose.

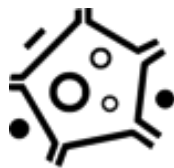


Macrophages treated with Sodium Azide induces mitochondrial hyperpolarization shown by the upwards resistance spike due to swelling, and subsequent depolarization leading to caspase 3/7 mediated apoptosis in 8 hrs.

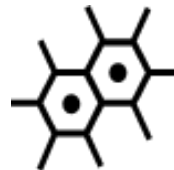
Elucidate the time point when the lethal insult occurs



Cell death mechanism



Organelle & cell changes due to agent



Cell to cell interactions



Monitor Real-time Cell Health



Product information

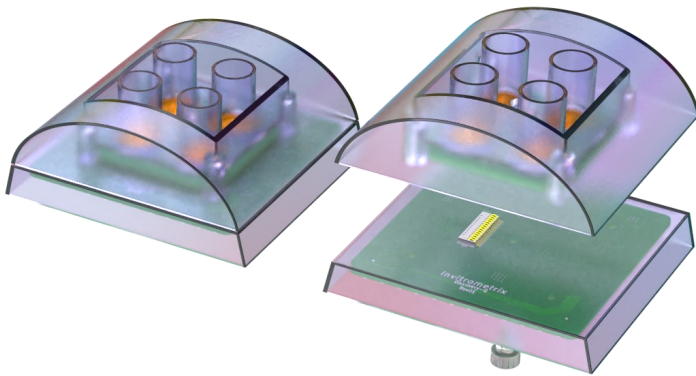
Platform: Discovery-Q

- 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

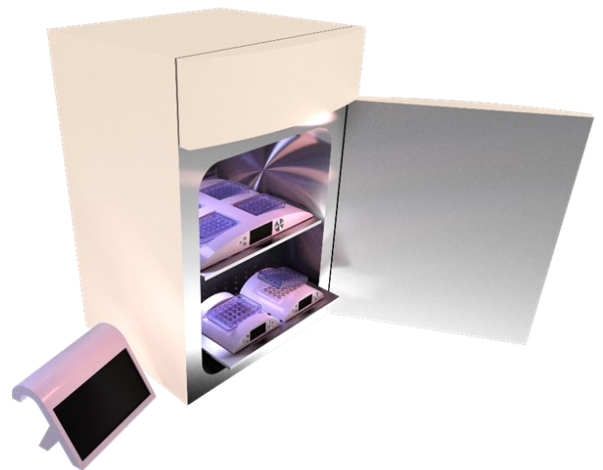
Cell culture types tested: Primary cell lines (cryopreserved plateable hepatocytes, stellates and co-cultures), isolated cells from liver, breast, lung, umbilical, macrophage, and primary tumors

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.

invitrometrix

Make the invisible visible

Invitrometrix Corporation

116 John St. Ste. 340

Lowell, MA 01854

www.invitrometrix.com

For Research Only:

Not for use in diagnostic procedures

This information is subject to change without notice.

© Invitrometrix Corporation 2019

Published in the USA, July 2019

AB-002