InvivoSciences®, Inc.

Discovery with a Human Touch

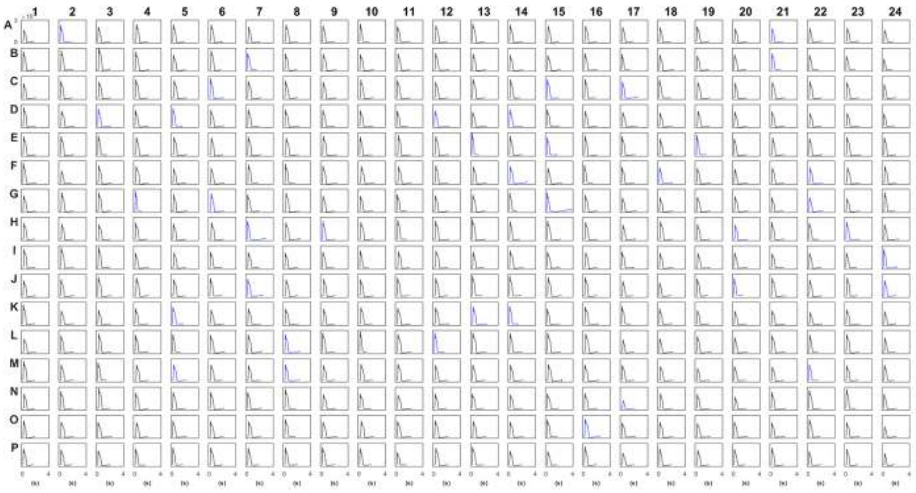
Excitation-Contraction Coupling Analysis: 2D CMs

(Cat#: ivs100215-ap, -ca, -mp, -sp)

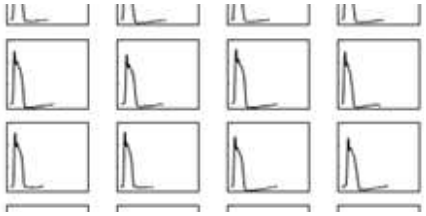
Overview

High-throughput (96 or 384 format) assay services analyze effects of compounds on **Action Potential, Calcium Transient,** and/or other physiological parameters of 2D cultures of cardiomyocytes (CMs) derived from human induced pluripotent stem cells. We apply state of the art computational analyzer and compiler for periodic data of cardiac contraction gathered using a high-throughput plate reader, FDSS (Hamamatsu). Analysis includes peaks, durations (e.g., APD_{90}), beat rates, rates of rise, and other parameters. The report can be customized to display specific parameters of interest.

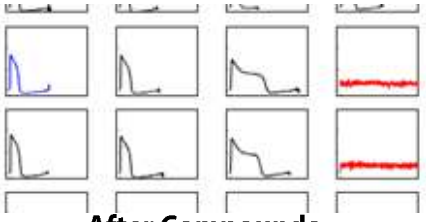
Sample Data Summary View



Action Potential overview of whole plate (before compounds)



Before Compounds



After Compounds

Benefits

- Record profiles of Action Potentials and Calcium Transients in CMs growing in 96- or 384– well plates
- Rapid turnaround time achieved by highly automated assay processes
- Apply a proprietary optical-noise reduction processes in experiments and data analyses
- Unbiased automated analysis of profiles of Action Potentials and Calcium Transients
- Improve statistical significance by using ensemble averages of number of profiles (>10)
- Option to complete the excitation-contraction analysis by using NuHeart™ (micro 3D cardiac strip-tissues) assay series

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