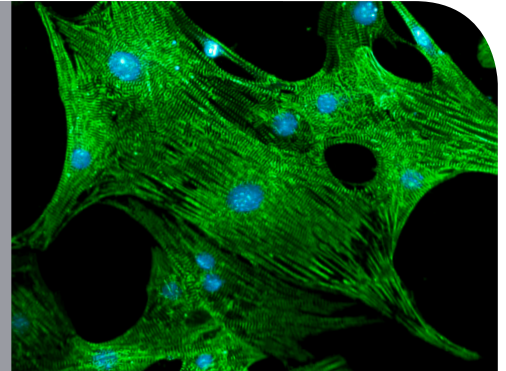
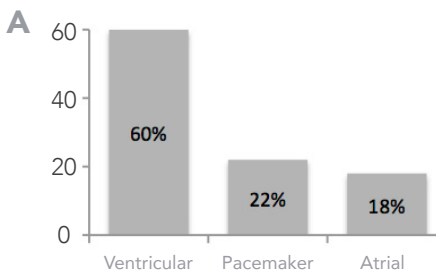




- Predictive and physiological cell model; applicable for drug development and preclinical research
- Established model system for cardiac preclinical safety assessment, currently validated by the CiPA initiative
- Quantity, consistency and efficiency for HTS – Get your results in 3 days or less



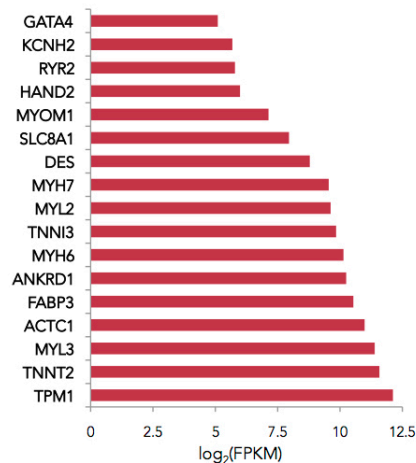
CHARACTERISTICS



**B**

RMP	-79 mV
Amplitude	110 mV
Rate of Rise	75.9 V/s
APD90	429.9 ms

*Ionic Transport Assays*



DESCRIPTION

Cor.4U<sup>®</sup> human cardiomyocytes are an essential tool both for general cardiovascular research and to address key unmet needs in drug development and pre-clinical research markets.

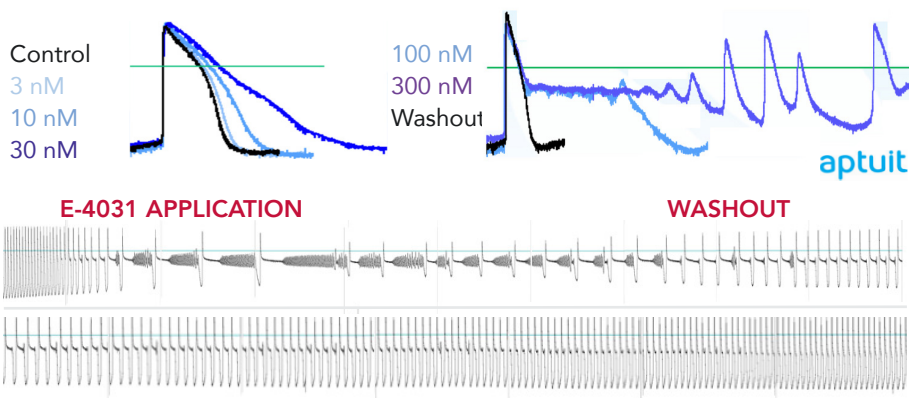
Cardiovascular safety liabilities are a major cause for compound failure in P2/3 clinical programs of drug development. New testing systems, such as human induced pluripotent stem cell (iPSC)-derived cardiomyocytes, enable the assessment of the safety pharmacology “core battery” at the preclinical stage.

The leading cause of morbidity in developed countries is cardiovascular disease. A major constraint for the development of adequate therapies has been the lack of suitable cell-based assays with physiological relevance.

Axiogenesis provides well - characterized, human iPSC-derived cardiomyocytes, named Cor.4U<sup>®</sup>, which represent a highly translational, cost effective and validated *in vitro* model system to address these industry needs.

Composition of Cor.4U<sup>®</sup> determined by manual patch clamp (n=50) (A). Electrophysiological characteristics of Cor.4U<sup>®</sup> reflect human levels (B).

Relative gene expression of Cor.4U<sup>®</sup>. Relevant cardiac genes, GPCRs, ion channels and cellular machinery are present.



Cor.4U<sup>®</sup> are a relevant arrhythmia model. Reaction to gold standard compound E-4031 as assessed by manual patch clamp, current clamp mode. Data courtesy of Caterina Virgino (Aptuit).



## VALIDATED APPLICATIONS

- Manual and automated patch clamp
- Microelectrode array (MEA)
- Impedance assays
- Calcium transient analysis
- Voltage sensitive dyes
- Cell metabolism analysis
- High content analysis (e.g., hypertrophy disease modeling)
- Cell contraction force
- 3D organotypic cell culture / organ-on-a-chip

## PRODUCT SPECIFICATIONS

Cell type	iPSC-derived cardiomyocytes
Source	iPSC of 26 y/o Caucasian female
Species	Human
Purity	100% (60% ventricular); fibroblast-free
Assay window	Stable beating after 72h. Refer to our protocols for assay-specific recommendations



## DELIVERY OPTIONS

**3 vials of 0.25 x 10<sup>6</sup>** >0.5 x 10<sup>6</sup> T25 Flask  
Ax-B-HC02-MPC Ax-C-HC02-APC

**>1 x 10<sup>6</sup>** >1 x 10<sup>6</sup> T25 Flask  
Ax-B-HC02-1M Ax-C-HC02-FR1

**>4 x 10<sup>6</sup>** >3 x 10<sup>6</sup> T75 Flask  
Ax-B-HC02-4M Ax-C-HC02-FR3



Cryopreserved Cor.4U<sup>®</sup>



Cultured Cor.4U<sup>®</sup>

**96w Plate**  
Ax-C-HC02-96

**96w E-Plate**  
Ax-C-HC02-EPL

**96w MEA Plate**  
Ax-C-HC02-APL

**384w Plate**  
Ax-C-HC02-384

## AXIOGENESIS OVERVIEW

### DIFFERENTIATED HUMAN CELLS

Axiogenesis is a leading expert in providing commercial-grade *in vitro* differentiated cell types derived from human induced pluripotent stem cells (iPSCs).

Core products include Cor.4U<sup>®</sup> cardiac myocytes and fibroblasts as well as Peri.4U<sup>™</sup>, Dopa.4U<sup>™</sup>, CNS.4U<sup>™</sup> and Astro.4U<sup>™</sup> neural cells.

### VALIDATED ASSAYS & PROTOCOLS

Axiogenesis enables customer efficiency by providing ready to use cells along with validated protocols. Assays for each cell type have been developed for advanced drug discovery, safety pharmacology, *in vitro* toxicology applications, and disease and tissue modeling.

Based on its in-house assay capabilities, Axiogenesis can provide expert scientific support in order to facilitate selection and quick implementation of validated assays and technologies.

### CONTRACT SERVICES

Axiogenesis provides compound testing services for HTS, electrophysiological and toxicology applications as well as disease modeling and customized cell type development for cardiac cells. Customized services are available upon request.



iPSC-derived neurons



iPSC-derived cardiac cells

FOR MORE INFORMATION VISIT [WWW.AXIOGENESIS.COM](http://WWW.AXIOGENESIS.COM) OR CONTACT [INFO@AXIOGENESIS.COM](mailto:INFO@AXIOGENESIS.COM)

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