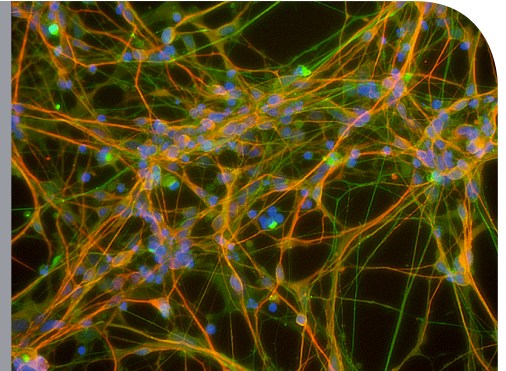


Peri.4U™

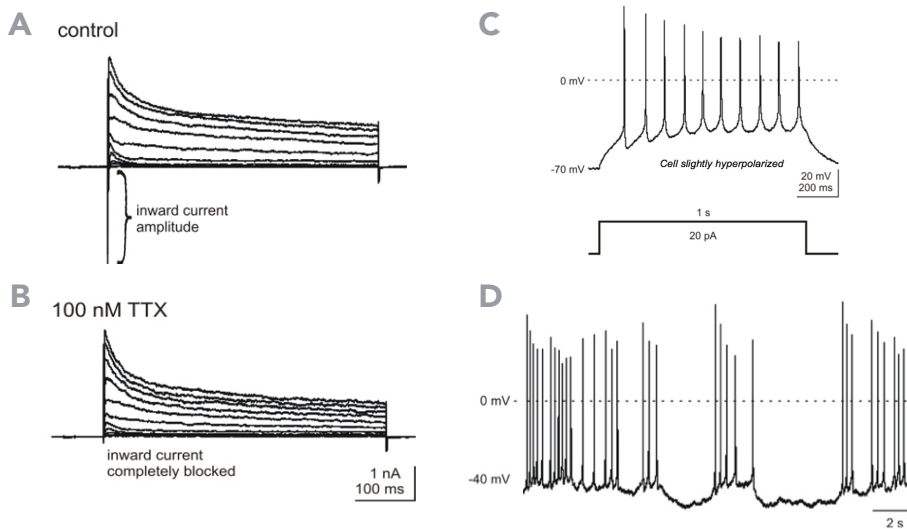
Human Induced Pluripotent Stem Cell-Derived Peripheral Neurons



- Highly translational and cost effective *in vitro* model system for neurotoxicity applications
- Validated in morphological, electrophysiological and pharmacological assays
- Ready to use cells with long-term viability in culture



CHARACTERISTICS



DESCRIPTION

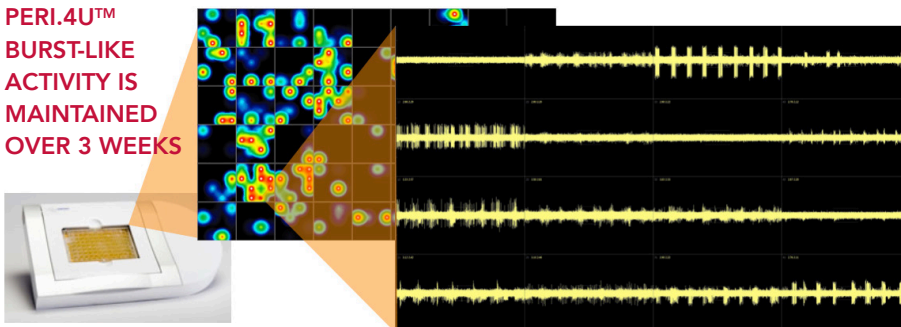
Peri.4U™ peripheral neurons represent a novel human *in vitro* cell model for neurotoxicity assays in drug development and general neuroscience research.

New standards are needed to address drug development for neurological degenerative diseases and neurotoxicological liability screens. Current drug efficacy and toxicology assays largely employ classical animal derived *in vitro* and *in vivo* models. However, those are cost and labor intensive, have limited predictivity and robustness, and lack true human neuronal cells.

Axiogenesis developed Peri.4U™ induced pluripotent stem cell (iPSC)-derived neurons to address the lack of relevant human peripheral cellular systems. Peri.4U™ are suitable for HTS and have been optimized for easy handling, quick implementation and an extended assay window. Validated applications include functional and general neurotoxicity assays (e.g., for chemotherapy-induced peripheral neuropathy - CIPN) as well as BoNT activity testing.

Electrophysiological characterization: Peri.4U™ reveal significant TTX-sensitive inward and at least two types of outward currents in voltage-clamp mode (A). Current injection elicits primary-like action potentials (B). A subset of Peri.4U™ exhibit spontaneous activity in current clamp mode (C).

**PERI.4U™
BURST-LIKE
ACTIVITY IS
MAINTAINED
OVER 3 WEEKS**



Peri.4U™ exhibit long-term burst-like spontaneous activity recorded by microelectrode array (MEA) technology. Middle inset shows snap-shot of spike activity of a 48 well MEA plate. Right inset reveals 16 electrodes within one well.



VALIDATED APPLICATIONS

- Microelectrode array (MEA)
- Manual patch clamp
- Automated patch clamp
- Botulinum neurotoxin (BoNT) activity testing
- Neurite outgrowth assay (e.g., for CIPN) using high content analysis (HCA) or live cell imaging

PRODUCT SPECIFICATIONS

Cell type	iPSC-derived peripheral neurons
Source	iPSC of 26 y/o Caucasian female
Species	Human
Purity	>95% neurons
Assay window	Day 3 to 21+ post-thaw (recommended for compound treatment: day 6-12 post-thaw)



Note: Peri.4U™ do not express functional TRP channels and are therefore not suitable for research targeting these receptors. For TRP expressing cells, please inquire about our sensory neurons.

DELIVERY OPTIONS



>2 x 10⁶ viable cells
Ax-B-HP02-2M

- Cryopreserved cells
- 100 ml basal culture medium
- 2 x 1.25 ml culture supplement

Cryopreserved Peri.4U™

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® cardiac myocytes and fibroblasts as well as Peri.4U™, Dopa.4U™, CNS.4U™ and Astro.4U™ 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 OR CONTACT INFO@AXIOGENESIS.COM

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