FUJIFILM
FUJIFILM Cellular Dynamics

PRODUCT DATASHEET



iCell® Pericytes Kit

Human induced pluripotent stem cell (hiPSC)-derived iCell® Pericytes represent a promising and versatile cell source for vascular biology research and regenerative medicine. These pericytes are generated by differentiating hiPSCs into pericyte-like cells that exhibit key functional characteristics such as supporting endothelial cells, stabilizing blood vessels, and contributing to angiogenesis. hiPSC-derived pericytes offer significant advantages over primary pericytes, including scalability, patient-specific applicability, and reduced ethical concerns.

These iCell Pericytes can be used in disease modeling, drug screening, and tissue engineering applications, particularly for studying vascular disorders and developing therapies for conditions involving microvascular dysfunction. In preclinical research, hiPSC-derived pericytes are instrumental in creating more physiologically relevant in vitro models of the blood-brain barrier, tumor microenvironments, and diabetic vasculopathy, allowing researchers to better understand disease mechanisms and test potential therapeutics. Furthermore, the ability to generate patient-specific pericytes enables personalized approaches in regenerative treatments and enhances our understanding of pericyte-related pathologies.

The inherent power of induced pluripotent stem cell (iPSC) technology provides access to these specialized cell types, enabling reliable manufacturing to generate a consistent supply of cells at scale. FUJIFILM Cellular Dynamics Inc., a market leader in iPSC technology and innovation, is launching a component of its popular human iPSC-derived BBB isogenic kit the iCell Pericytes Kit for us in other applications.

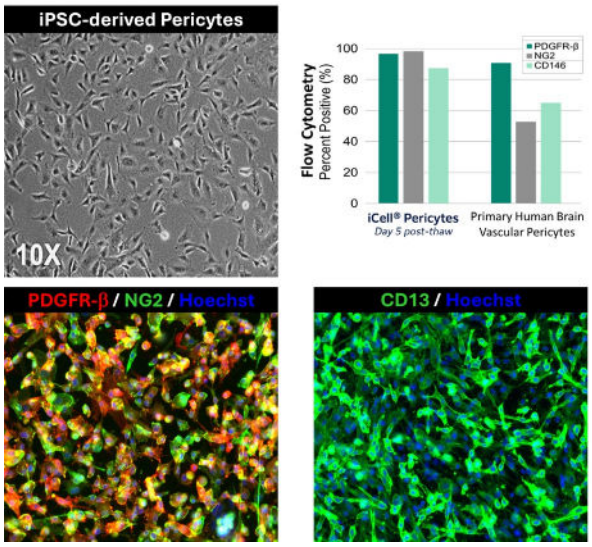


Figure 1: Characterization of iCell Pericytes.
Pericytes are mural cells, similar to vascular smooth muscle cells, that ensheathe the endothelium throughout the body. They play a crucial role in the blood-brain barrier (BBB) by maintaining barrier homeostasis, regulating blood flow, and facilitating neuro-inflammatory responses. iCell Pericytes exhibit morphology comparable to primary pericytes and express key pericyte markers, including PDGFR-β, NG2, CD13, and CD146, as demonstrated by immunocytochemistry (ICC) and flow cytometry analyses.

Advantages

- **Human Cells:** The iCell Pericytes in the iCell Pericytes Kit are differentiated from human iPS cells and are isogenic to iCell Astrocytes 2.0 and iCell Brain Microvascular Endothelial Cells and iCell Retinal Pigmented Epithelial Cells.
- **Reproducible:** Rigorous quality control ensures the same performance with every batch to yield reliable and reproducible results.
- **Superior Function:** iCell Pericytes in vitro model expresses relevant markers such as PDGFR-beta, αSMA, NG2, CD13, and CD146 and negative for CD31, CD34, CD45, and CD56 and display functional phagocytic activity.
- **Easy to Implement:** iCell Pericytes Kits are shipped cryopreserved with optimized media. Simply thaw, plate and assay.in specifically formulated for optimal cell performance. Simply thaw and use.
- **Compatible with High-Throughput Screens:** The iCell Pericytes Kits can be used in high throughput screening studies to evaluate compound response.

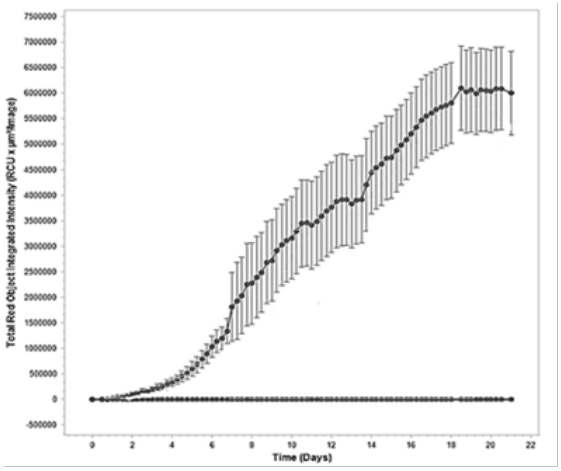


Figure 2: Assessing phagocytosis function of iCell Pericyte Model. *Pericytes are capable of clearing toxic circulating plasma proteins normally excluded from the brain. To assess their phagocytic function, iCell Pericytes were incubated with pHrodo-labeled S. aureus bioparticles and imaged using the IncuCyte live-cell analysis system. The graph shows the total red object integrated intensity, reflecting the fluorescence intensity of bioparticles internalized by pericytes over a 20 day time period. The red fluorescence intensity observed is significantly higher than that of all media and reagent control conditions, indicating robust phagocytic uptake by the iCell Pericytes.*

Applications

iCell Pericytes Kits are amenable to a variety of assays including:

Monoculture Applications

- Phagocytosis and clearance
- Inflammatory response and cytokine secretion
- Drug toxicity and safety screening
- Migration and wound healing

Co-Culture Applications

- Barrier integrity and permeability assays (e.g., with endothelial cells)
- Angiogenesis and vessel maturations
- Blood-Brain barrier modeling
- Blood-Retinal barrier modeling

Specifications

Cell Type	iCell Pericytes
Organism	Human
Source	Differentiated from a FUJIFILM Cellular Dynamics reprogrammed human iPS cell line
Quantity	≥1.5 x 10^6 viable cells per vial
Shipped	Frozen

Ordering Information

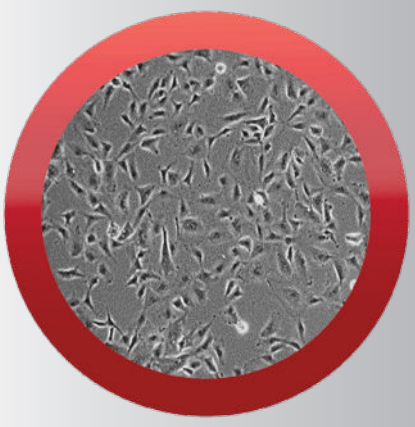
Item[1]	Component(s)	Catalog Number
iCell Pericytes Kit, 01279	C1241, M1041, and M1057	R1276

1 A Quick Guide is provided in each kit.

iCell Products

Provide access to biologically relevant, human iPS cells for disease modeling, drug discovery, toxicity testing, and regenerative medicine.

Visit www.fujifilmcdi.com for the most current list of FUJIFILM Cellular Dynamics' rapidly growing portfolio of iCell products.



FUJIFILM Cellular Dynamics, Inc.
525 Science Drive
Madison, WI 53711 USA
(608) 310-5100 | Toll-free US (877) 310-6688
fcdi-sales@fujifilm.com
www.fujifilmcdi.com

DS-PER260312
© Copyright 2026 FUJIFILM Cellular Dynamics, Inc.