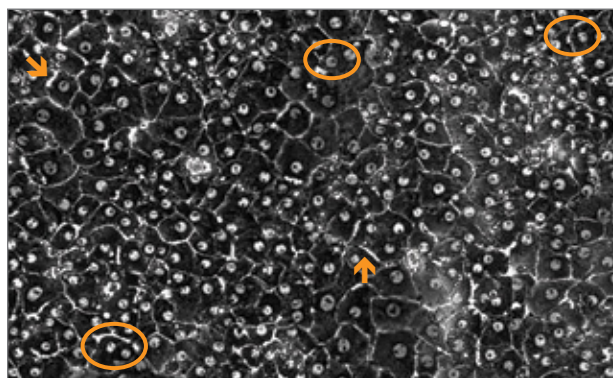


iCell[®] Hepatocytes 2.0

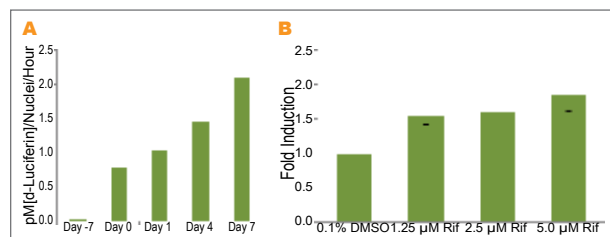
FUJIFILM Cellular Dynamics, Inc. (FCDI), has developed iCell[®] Hepatocytes, human induced pluripotent stem (iPS) cell-derived hepatocytes. iCell Hepatocytes 2.0 provide access to commercial quantities of high quality, high purity human liver cells for preclinical drug discovery, hepatotoxicity testing, and disease research.

Liver toxicity and alterations of hepatic physiology are frequently occurring reasons for preclinical failure during drug development. In addition, drug-induced liver injury is the most common reason for market withdrawal of approved drugs due to safety concerns. Liver diseases

associated with drug toxicity can be attributed, in large part, to the lack of biologically relevant and predictive model systems. Current hepatocyte model systems include primary human hepatocytes harvested from cadavers, immortalized cell lines, and animal models. Each of these models presents limitations in functionality, reproducibility, and/or availability. iCell Hepatocytes 2.0 overcome these limitations and provide a reliable source of well-characterized, highly reproducible, and readily available human hepatocytes for preclinical drug development and safety testing.



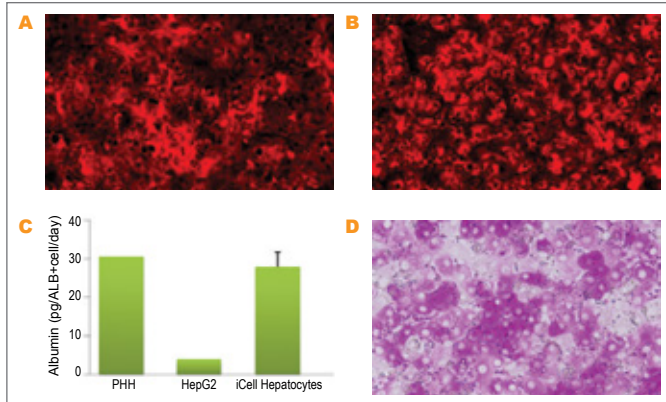
▲ Figure 1: iCell Hepatocytes 2.0 Show Characteristic Morphology
*The hepatocytes exhibit cobblestone morphology, round nuclei with distinct nucleoli, bi-nucleation (ovals), and formation of bile canaliculi (arrows).**



▲ Figure 2: iCell Hepatocytes 2.0 Exhibit P450 Metabolism Activity
*The hepatocytes exhibit robust (A) CYP3A basal activity and (B) CYP3A4 induction activity (response to rifampin measured by P450-Glo[™] CYP3A4 Induction/Inhibition Assay, Promega Corp.).**

Advantages

- **Human cells:** iCell Hepatocytes 2.0 are terminally differentiated from human iPS cells and exhibit hepatocyte characteristics and functions.
- **Homogenous and reproducible:** iCell Hepatocytes are >95% pure, providing biologically relevant and reproducible results.
- **Functionally stable:** iCell Hepatocytes 2.0 are platable and maintain hepatocyte functions in culture for at least one week.
- **Known genotype:** iCell Hepatocytes 2.0 have been genotyped for 1,936 ADME markers in over 200 genes, including all FDA-validated genes and >90% of the ADME Core markers as defined by the PharmaADME group.



▲ Figure 3: iCell Hepatocytes 2.0 Exhibit Hepatocyte Protein Expression and Function
*The hepatocytes exhibit expression of (A) alpha-1-antitrypsin and (B) albumin, (C) albumin production (measured by ELISA), (D) glycogen storage (measured by PAS staining), and lipid storage (data not shown).**

Applications

iCell Hepatocytes 2.0 are amenable to a variety of assays including:

- Hepatotoxicity
- Glucose regulation (Insulin/Glucagon signaling)
- Phospholipidosis
- Transporter function
- Viral infectivity
- Intrinsic metabolism
- Cytochrome P450 induction/inhibition

Specifications

Cell Type	Hepatocytes
Organism	Human
Source	Differentiated from an FCDI reprogrammed human iPS cell line
Quantity	≥3.0 x 10 ⁶ or ≥10.0 x 10 ⁶ viable cells per vial
Shipped	Frozen

Ordering Information

Product	Component(s) ¹	Catalog Number
iCell Hepatocytes 2.0 Kit, 01434	≥10.0 x 10 ⁶ viable cells 2 x 3 ml Medium Supplement	R1027
iCell Hepatocytes 2.0 Kit, 01279	≥3.0 x 10 ⁶ viable cells 2 x 3 ml Medium Supplement	R1104
	≥10.0 x 10 ⁶ viable cells 2 x 3 ml Medium Supplement	R1025
iCell Hepatocytes 2.0 Medium Supplement	3 ml Medium Supplement	M1024

¹ A User's Guide is provided in each kit.

For More Information

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* Images and data are representative of iCell Hepatocytes 2.0 derived from two different genetic backgrounds (donors 01434 and 01279).

iCell Products

Provide access to biologically relevant, human iPS cells for disease modeling, drug discovery, toxicity testing, and regenerative medicine. FCDI's rapidly growing portfolio of iCell products includes human cardiomyocytes, GABAergic, glutamatergic, dopaminergic, and motor neurons, hepatocytes, endothelial cells, astrocytes, hematopoietic progenitor cells, skeletal myoblasts, macrophages and others.

Visit the FCDI website for the most current list of supported cell types.

