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.

**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.
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.

Applications

iCell Hepatocytes 2.0 are amenable to a variety assays including:
- Hepatotoxicity
- Viral infectivity
- Glucose regulation
  (Insulin/Glucagon signaling)
- Intrinsic metabolism
- Cytochrome P450 induction/inhibition
- Phospholipidosis
- Transporter function

Specifications

<table>
<thead>
<tr>
<th>Cell Type</th>
<th>Hepatocytes</th>
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<tbody>
<tr>
<td>Organism</td>
<td>Human</td>
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<tr>
<td>Source</td>
<td>Differentiated from an FCDI reprogrammed human iPS cell line</td>
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<tr>
<td>Quantity</td>
<td>≥3.0 x 10^6 or ≥10.0 x 10^6 viable cells per vial</td>
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<tr>
<td>Shipped</td>
<td>Frozen</td>
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Ordering Information

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<th>Product</th>
<th>Component(s)</th>
<th>Catalog Number</th>
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<tbody>
<tr>
<td>iCell Hepatocytes 2.0 Kit, 01434</td>
<td>≥10.0 x 10^6 viable cells 2 x 3 ml Medium Supplement</td>
<td>R1027</td>
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<tr>
<td>iCell Hepatocytes 2.0 Kit, 01279</td>
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<tr>
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<td>M1024</td>
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</table>

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).