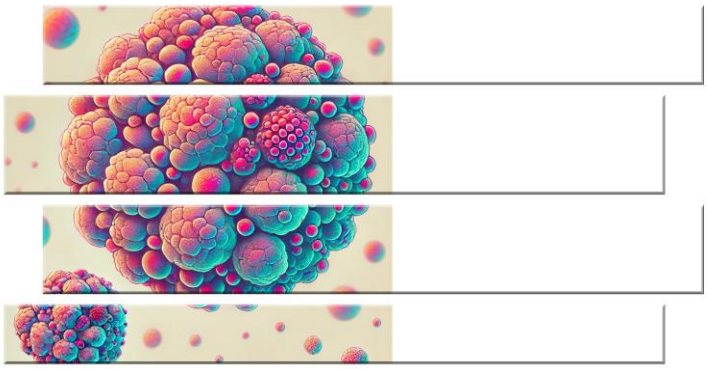

TriDix Bio
INNOVATING DRUG DISCOVERY

# PRODUCT DATA SHEET

## Primary Human Hepatocytes (PHH), plateable

## SKU: TDC-P1102

### Product Details

**Catalog Number:** TDC-P1102

**Organism:** *Homo Sapiens*, Human

**Cell Type:** Hepatic Cell

**Tissue:** Liver

**Clinical Information:** Healthy (with no known disease phenotypes)

**Package Size:** 5 x $10^6$ cells/vial

**Passage Number:** P0

**Growth Properties:** Plateable; Adherent

**Associated Media:** Hepatocyte Culture Medium Kit (TDM-1012K)

### Storage Conditions & Shipment

**Product Format/Shipped:** Cryopreserved / Dry ice

**Storage:** Liquid Nitrogen

### Safety Precaution

**PLEASE READ BEFORE HANDLING ANY FROZEN VIALS.** *Please wear appropriate Personal Protection Equipment (lab coat, thermal gloves, safety goggles and a face shield) when handling*

## Description

Primary hepatocytes isolated from the liver are effective tools for the in vitro evaluation of metabolism, drug-drug interactions, hepatotoxicity, and transporter activity.

TriDix™ Bio plateable hepatocytes offer high viabilities (routinely greater than 80%), in vivo-like enzyme expression levels, and are characterized for phase I and phase II drug metabolizing enzyme activities. They are ideal for reproducible long-term and multi-site studies. Our plateable hepatocytes are also spheroid qualified for the generation of hepatic spheroids in your own lab. Each vial contains a minimum of five million viable cells, sufficient for up to sixteen 96-well plates of hepatic spheroids.

## Product Data

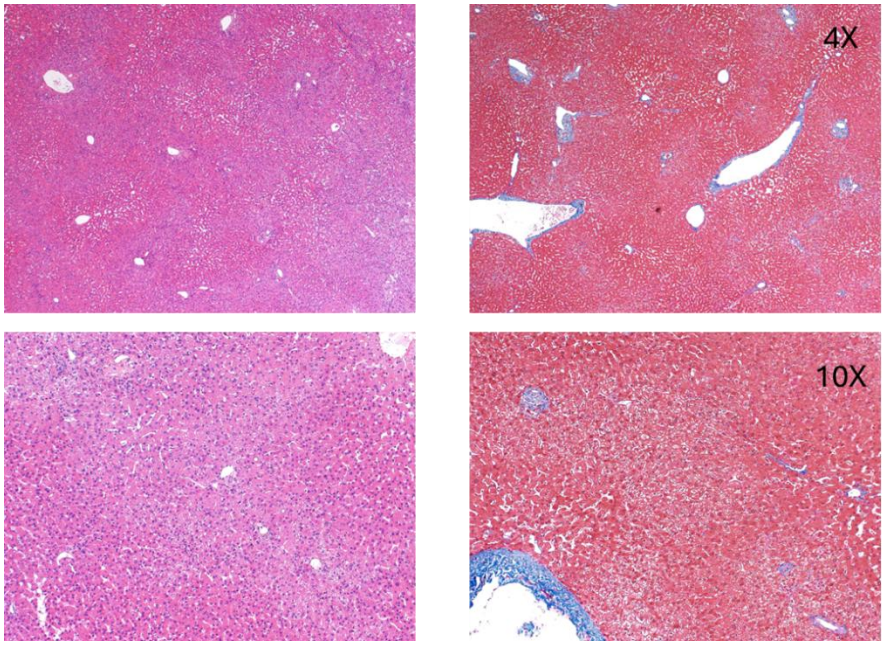


**Figure 1, Histological examination of liver tissue:** Haematoxylin-eosin staining(Left) and trichrome staining (right) both show normal liver histology, no evidence of steatotic changes is observed. The Steatosis, Lobular inflammation, Hepatocyte Ballooning and Fibrosis stage scores are all zero.

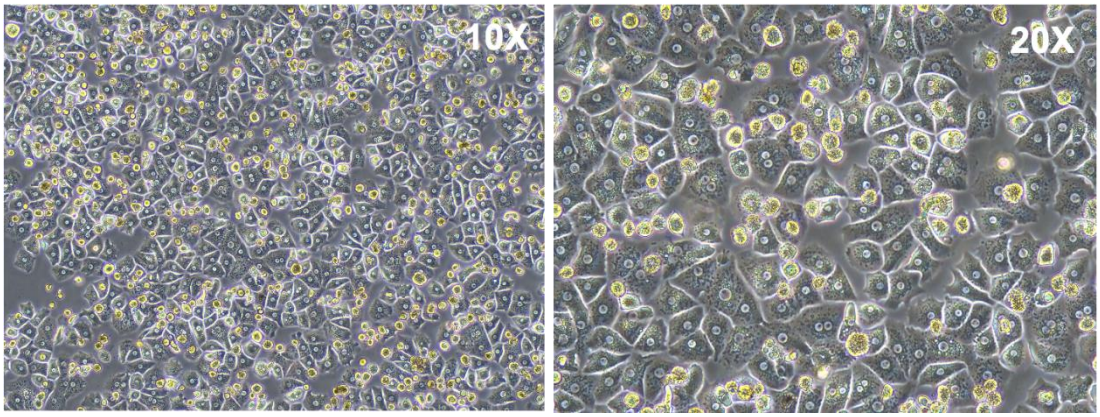


**Figure 2, Primary human hepatocytes were isolated from healthy donor:** One of vials (5M/vial) were thawed and seeded in type IV collagen coated 6-well plate in a density of 1M/well. Images were taken 24hr post seeding.

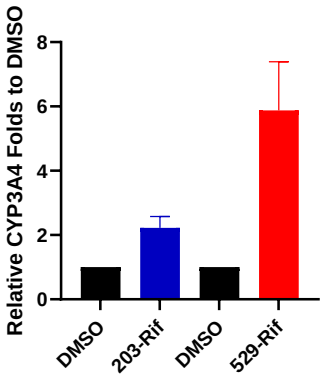


**Figure 3, Hepatocytes exhibit P450 Metabolism Activity:** Hepatocytes were treated with 25uM. After 48hrs, the supernatants were collected and Luciferin-IPA substrate was then added for incubation of 60 minutes. CYP3A4 enzymatic activity was assessed using the P450-Glo™ Assay (Promega, Cat. No. V9001), following the manufacturer's instructions. The fold change in drug-induced CYP3A4 enzyme activity compared to the DMSO control level was calculated.

## Applications

1. Hepatotoxicity
2. Viral infection
3. Glucose regulation
4. Intrinsic metabolism (Insulin/Glucagon signaling)
5. Cytochrome P450 induction/inhibition
6. Phospholipidosis

# Protocols

## 1. Medium preparations

### 1) Hepatocyte Thawing Medium (50ml)

Cat# TDM-1012A as prepared ready for use

### 2) Plating Medium (50ml):

| | |
|---|---|
| Hepatocyte Culture Base Medium (Cat# TDM-1012): | 44.9ml |
| Hepatocyte Culture Supplement A, 1ml TDM-1012SA | 0.1ml |
| Fetal Bovine Serum (Cat# TDM-FB) | 5ml |

### 3) Maintenance Medium (200ml):

| | |
|---|---|
| Hepatocyte Culture Base Medium (Cat# TDM-1012): | 200ml |
| Hepatocyte Culture Supplement A, 1ml TDM-1012SA | 0.4ml |

## 2. Recovering hepatocytes

1) Take the cryovial containing the frozen cells out of liquid nitrogen storage; quickly thaw the cells in a 37°C water bath by gently swirling the vial.
2) When there still be a small amount of ice left in the vial, take out the vial from the water bath, slowly add 1ml of prewarm Plating Medium, gently pipette twice with 1ml wide open tip.
3) Transfer the cells to the top of Thawing medium (Cat.# TDM-1012A)
4) Revert the tube 5-7 times (do not vortex or shake) before spinning at 4C for 100g for 10min without breaking.
5) Discard the supernatant and wash the cells with Plating Medium by spinning at 4C with 100g for 5 min.
6) Resuspend the cells in 2ml Plating Medium and count the cells by adding (20ul cell suspension, 40ul Hepatocyte Culture Base Medium and 20ul trypan blue (1:4 dilution)

## 3. Culturing hepatocytes

1) Plate hepatocytes on Collagen coated plates with the densities shown in the table below and allow them to attach in a 37°C, 5% CO2 incubator.

| Collagen Coated Plate | Cell Number |
|---|---|
| 6-well plate | 1M/well |
| 12-well plate | 500K/well |
| 24-well plate | 250K/well |
| 96-well plate | 60K/well |

2) Wash the cells within 6-8 hours with Maintenance Medium and change to Maintenance Medium

3) Change Maintenance Medium 2-3 times a week