

# CryostaX

Single Freeze Plateable Cryopreserved Human Hepatocytes

**HP1500.HP+ Lot No. H1428**

Cryopreserved Human Hepatocytes  
 Human, Female, Individual

Assured Minimum Yield:  $5.0 \times 10^6$  cells per vial  
 Viability: 93%

Yield and viability are based on experiments performed at XenoTech using XenoTech's thawing protocol and OptiThaw Hepatocyte Kit.

| Enzyme   | Marker Substrate Reaction             | [S] ( $\mu$ M) | Rate (pmol/million cells/min) |
|----------|---------------------------------------|----------------|-------------------------------|
| CYP1A2   | Phenacetin O-dealkylation             | 100            | $54.7 \pm 3.4$                |
| CYP2A6   | Coumarin 7-hydroxylation              | 50             | $76.1 \pm 5.1$                |
| CYP2B6   | Bupropion hydroxylation               | 500            | $21.5 \pm 1.5$                |
| CYP2C8   | Amodiaquine N-dealkylation            | 20             | $333 \pm 12$                  |
| CYP2C9   | Diclofenac 4'-hydroxylation           | 100            | $49.6 \pm 4.9$                |
| CYP2C19  | S-Mephenytoin 4'-hydroxylation        | 400            | $56.4 \pm 2.5$                |
| CYP2D6   | Dextromethorphan O-demethylation      | 80             | $8.83 \pm 0.78$               |
| CYP2E1   | Chlorzoxazone 6-hydroxylation         | 500            | $64.0 \pm 3.6$                |
| CYP3A4/5 | Testosterone 6 $\beta$ -hydroxylation | 250            | $564 \pm 3$                   |
| CYP3A4/5 | Midazolam 1'-hydroxylation            | 30             | $99.3 \pm 0.9$                |
| UGT      | 7-Hydroxycoumarin glucuronidation     | 100            | $568 \pm 83$                  |
| SULT     | 7-Hydroxycoumarin sulfonation         | 100            | $22.5 \pm 4.9$                |

Values for enzyme activities were determined at a single substrate concentration and are mean  $\pm$  standard deviation of three or more determinations.

To measure cytochrome P450 (CYP), UDP-glucuronosyl transferase (UGT) and sulfotransferase (SULT) activities, hepatocytes ( $1 \times 10^6$  /mL) in suspension were incubated in triplicate at  $37 \pm 2^\circ\text{C}$  for 30 minutes in OptiIncubate and marker substrate, at the final concentrations indicated. Metabolite formation was determined by validated LC-MS/MS methods with deuterated metabolites as internal standards.

## Donor Information

|   |                 |
|---|-----------------|
| <b>Gender:</b>  | Female          |
| <b>Age:</b>   | 53 years of age |
| <b>Race:</b>  | Caucasian       |
| <b>Cause of Death:</b>  | Anoxia          |
| <b>Antibody to Cytomegalovirus (CMV):</b>   | Negative        |
| All donors tested negative for Human Immunodeficiency Virus (HIV), Hepatitis B Surface Antigen (HBsAg), Hepatitis C Virus, and Rapid Plasma Reagin. |                 |



## Store in liquid nitrogen, vapor phase

CAUTION: This sample should be considered as a potential biohazard and universal precautions should be followed. Intended for *in vitro* use only.

These data were generated by and are the property of XenoTech. These data are not to be reproduced, published or distributed without the express written consent of XenoTech.

Datasheet prepared 14 January 2021

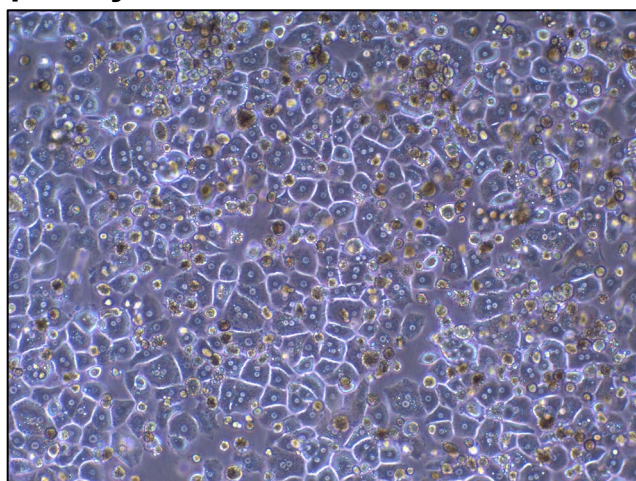
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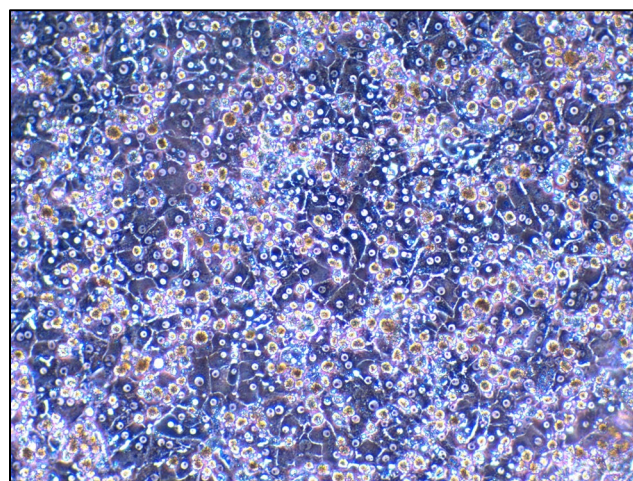
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### Hepatocyte Cell Culture



Photomicrograph (100x) of H1428 Day 1 of culture



Photomicrograph (100x) of H1428 incubation day

| Plate Format   | Recommended Seeding           |   |
|----------------|-------------------------------|---|
|                | Density<br>(million cells/mL) | Recommended Seeding/<br>Feeding Volume Per Well |
| 6-well format  | 1.4                           | 1.7 mL  |
| 12-well format | 1.4                           | 650 $\mu$ L                                     |
| 24-well format | 1.4                           | 330 $\mu$ L                                     |
| 48-well format | 0.75                          | 200 $\mu$ L                                     |
| 96-well format | 0.75                          | 75 $\mu$ L                                      |

### Induction Data

| Enzyme | Inducer                     | mRNA Fold Induction | Marker Substrate Reaction  | Enzymatic Fold Induction |
|--------|-----------------------------|---------------------|----------------------------|--------------------------|
| CYP1A2 | Omeprazole (50 $\mu$ M)     | 49.0                | Phenacetin O-dealkylation  | 29.0                     |
| CYP2B6 | Phenobarbital (750 $\mu$ M) | 5.3                 | Bupropion hydroxylation    | 3.5                      |
| CYP2B6 | CITCO (100 nM)              | 3.8                 | Bupropion hydroxylation    | 3.8                      |
| CYP3A4 | Rifampin (20 $\mu$ M)       | 5.4                 | Midazolam 1'-hydroxylation | 3.2                      |