XENOTECH
A BioIVT Company

Data Sheet

CryostaX

Single Freeze Plateable Cryopreserved Human Hepatocytes

HP1000.HP+ Lot No. H1443

Cryopreserved Human Hepatocytes
Human, Male, Individual

Assured Minimum Yield: 5.0 x 10^6 cells per vial
Viability: 85%

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

Enzyme	*Marker Substrate Reaction*	*[S] (µM)*	*Rate (pmol/million cells/min)*
CYP1A2	Phenacetin *O*-dealkylation	100	8.90 ± 0.30
CYP2A6	Coumarin 7-hydroxylation	50	2.22 ± 0.18
CYP2B6	Bupropion hydroxylation	500	14.9
CYP2C8	Amodiaquine *N*-dealkylation	20	120 ± 4
CYP2C9	Diclofenac 4'-hydroxylation	100	168 ± 33
CYP2C19	*S*-Mephenytoin 4'-hydroxylation	400	2.70 ± 0.13
CYP2D6	Dextromethorphan *O*-demethylation	80	31.6 ± 3.1
CYP2E1	Chlorzoxazone 6-hydroxylation	500	326 ± 17
CYP3A4/5	Testosterone 6β-hydroxylation	250	64.0 ± 5.1
CYP3A4/5	Midazolam 1'-hydroxylation	30	19.5 ± 2.3
UGT	7-Hydroxycoumarin glucuronidation	100	217 ± 34
SULT	7-Hydroxycoumarin sulfonation	100	11.6 ± 0.9

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

To measure cytochrome P450 (CYP), UDP-glucuronosyl transferase (UGT) and sulfotransferase (SULT) activities, hepatocytes (1 x 10^6 /mL) in suspension were incubated in triplicate at 37 ± 2°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

Gender:	Male
Age:	53 years of age
Race:	Caucasian
Cause of Death:	Cerebrovascular Accident
Antibody to Cytomegalovirus (CMV):	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.

Datasheet prepared 19 May 2021

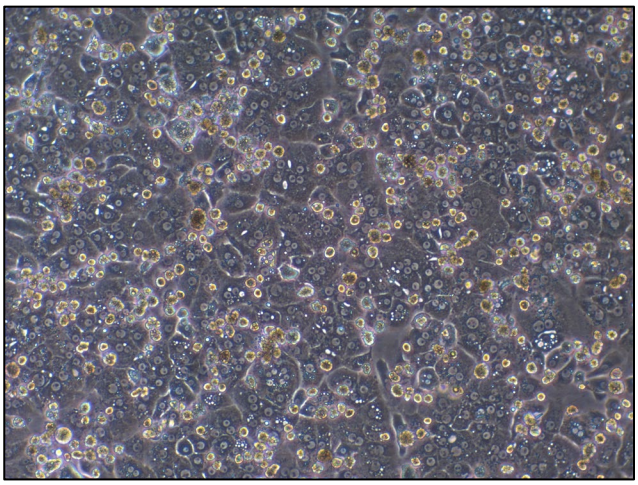
HP1000.HP+ Lot No. H1443

Cryopreserved Human Hepatocytes
Human, Male, Individual

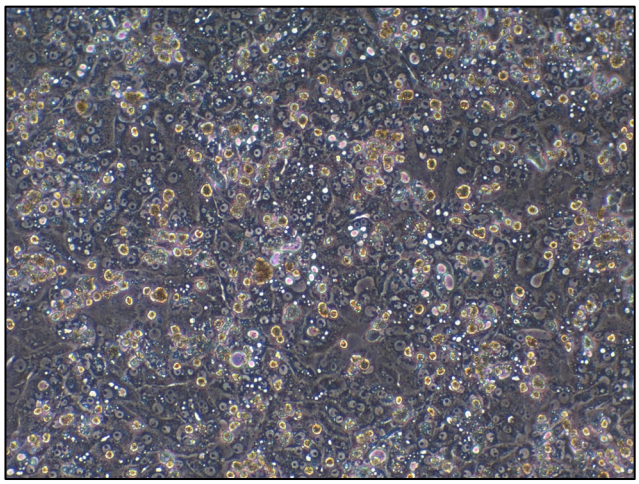
Assured Minimum Yield:	5.0 x 10^6 cells per vial
Viability:	85%

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

Hepatocyte Cell Culture



Photomicrograph (100x) of H1443 Day 2 of culture



Photomicrograph (100x) of H1443 incubation day

Plate Format	Recommended Seeding Density (million cells/mL)	Recommended Seeding/ Feeding Volume Per Well
6-well format	1.6	1.7 mL
12-well format	1.6	650 µL
24-well format	1.6	330 µL
48-well format	Not Recommended	
96-well format	Not Recommended	

Induction Data

Enzyme	Inducer	mRNA Fold Induction	Marker Substrate Reaction	Enzymatic Fold Induction
CYP1A2	Omeprazole (50 µM)	58.8	Phenacetin O-dealkylation	10.1
CYP2B6	Phenobarbital (750 µM)	13.6	Bupropion hydroxylation	9.5
CYP2B6	CITCO (100 nM)	4.3	Bupropion hydroxylation	2.3
CYP3A4	Rifampin (20 µM)	35.7	Midazolam 1'-hydroxylation	5.2

XENOTECH
A BioIVT Company