XENOTECH
A BioIVT Company

Data Sheet

H1000.H15B+ Lot No. HC4-25

Cryopreserved Human Hepatocytes
Human, Male, Individual

Assured Minimum Yield: 4.0×10^6 cells per vial
Viability: 86%

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	12.5 ± 0.5
CYP2A6	Coumarin 7-hydroxylation	50	3.01 ± 0.22
CYP2B6	Bupropion hydroxylation	500	10.7 ± 0.8
CYP2C8	Amodiaquine *N*-dealkylation	20	89.6 ± 4.7
CYP2C9	Diclofenac 4'-hydroxylation	100	131 ± 13
CYP2C19	*S*-Mephenytoin 4'-hydroxylation	400	17.5 ± 2.3
CYP2D6	Dextromethorphan *O*-demethylation	80	50.1 ± 4.4
CYP2E1	Chlorzoxazone 6-hydroxylation	500	120 ± 10
CYP3A4/5	Testosterone 6β-hydroxylation	250	77.7 ± 2.8
CYP3A4/5	Midazolam 1'-hydroxylation	30	13.6 ± 1.4
UGT	7-Hydroxycoumarin glucuronidation	100	459 ± 42
SULT	7-Hydroxycoumarin sulfonation	100	21.7 ± 1.8

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 (1×10^6 /mL) in suspension were incubated in triplicate at 37 ± 1°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:	18 years of age
Race:	Caucasian
Cause of Death:	Anoxia
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 24 January 2019

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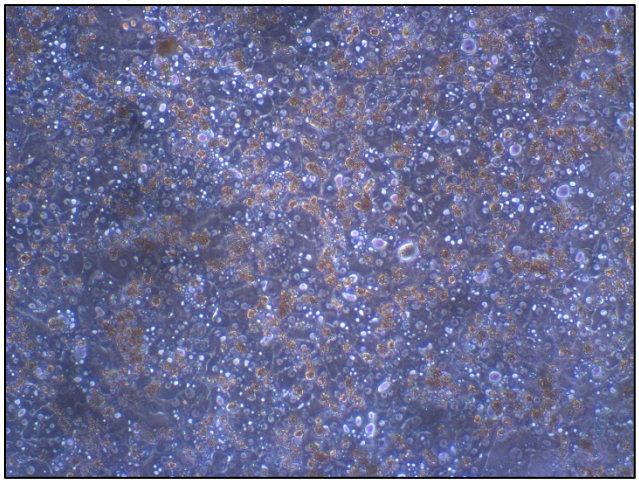
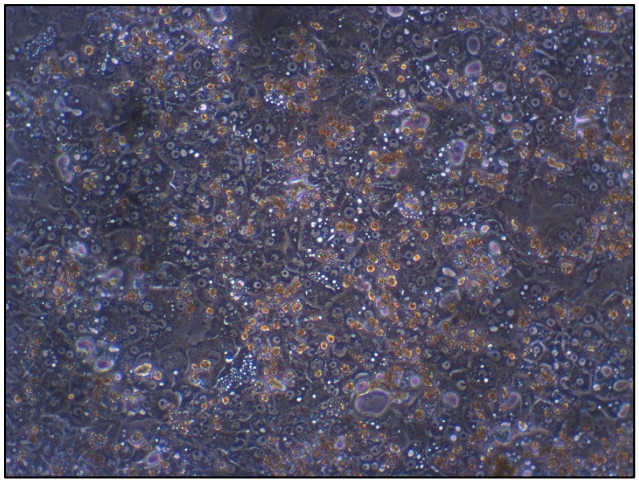
Hepatocyte Cell Culture



Photomicrograph (100x) of HC4-25 Day 3 of culture



Photomicrograph (100x) of HC4-25 incubation day

Plate Format	Recommended Seeding Density (million cells/mL)	Recommended Seeding/ Feeding Volume Per Well
6-well format	1.4	1.7 mL
12-well format	1.4	650 µL
24-well format	1.4	330 µL
48-well format	0.75	200 µL
96-well format	0.75	75 µL

Induction Data

Enzyme	Inducer	mRNA Fold Induction	Marker Substrate Reaction	Enzymatic Fold Induction
CYP1A2	Omeprazole (50 µM)	44.0	Phenacetin O-dealkylation	32.6
CYP2B6	Phenobarbital (750 µM)	15.7	Bupropion hydroxylation	13.3
CYP2B6	CITCO (100 nM)	6.1	Bupropion hydroxylation	2.8
CYP3A4	Rifampin (20 µM)	20.0	Midazolam 1'-hydroxylation	11.9