

HCP100.H15 Lot No. 2010012

Pool of 100 (50 Males and 50 Females)

Assured Minimum Yield: 5.0×10^6 cells per vial
 Viability: 82%

This product was pooled from individual human hepatocytes that have been frozen and thawed. The yield and viability given above are based on experiments performed at Sekisui XenoTech using our thawing protocol that includes a density gradient fractionation and the K8500 OptiThaw Kit. Details of Sekisui XenoTech's hepatocyte thawing protocol can be found at www.xenotech.com. It is recommended to use Sekisui XenoTech's thawing protocol, which includes a density gradient step, to maximize the viability of the recovered cells.

Enzyme	Marker Substrate Reaction	[S] (μM)	Rate (pmol/million cells/min)
CYP1A2	Phenacetin O-dealkylation	100	45.0 ± 0.4
CYP2A6	Coumarin 7-hydroxylation	50	52.5 ± 7.4
CYP2B6	Bupropion hydroxylation	500	38.8 ± 2.1
CYP2C8	Amodiaquine N-dealkylation	20	334 ± 33
CYP2C9	Diclofenac 4'-hydroxylation	100	190 ± 9
CYP2C19	S-Mephenytoin 4'-hydroxylation	400	13.8 ± 0.7
CYP2D6	Dextromethorphan O-demethylation	80	41.9 ± 2.9
CYP2E1	Chlorzoxazone 6-hydroxylation	500	122 ± 5
CYP3A4/5	Testosterone 6β-hydroxylation	250	174 ± 19
CYP3A4/5	Midazolam 1'-hydroxylation	30	49.0 ± 3.9
UGT	7-Hydroxycoumarin glucuronidation	100	182 ± 20
SULT	7-Hydroxycoumarin sulfonation	100	5.85 ± 0.46

Values for enzyme activities were determined at a single substrate concentration run with triplicate determinations.

To measure cytochrome P450 (CYP), UDP-glucuronosyl transferase (UGT) and sulfotransferase (SULT) activities, hepatocytes (1×10^6 cells/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.

Uptake Activity Data

Uptake Transporter	Marker Substrate	[S] (μM)	Rate (pmol/million cells/min)
OATP1B1	Estrone sulfate	1	12.8
OATP1B3	CCK-8	1	3.1
OCT1	MPP+	1	7.4
NTCP	TCA	1	4.6

To measure uptake activities, hepatocytes (1.0×10^6 cells/mL) in suspension were incubated in triplicate at 4°C and 37°C for 1 minute in Krebs-Henseleit buffer and marker substrate, at the final concentrations indicated. Uptake of substrate was measured by scintillation counter.

Donor Information

Gender:	Males (50), Females (50)
Age:	8-74 years of age
Race:	Caucasian (80), African American (8), Asian (3), Hispanic (9)
Cause of Death:	Anoxia (40), Head trauma (25), Cerebrovascular accident (35)
Antibody to Cytomegalovirus (CMV):	Positive (56), Negative (44)
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.

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