

# CryostaX

Single-Freeze Pooled Cryopreserved Human Hepatocytes

**HPCH20-50**

**Lot No. 2310021**

Pool of 20

Assured Minimum Yield:

5.0 x 10<sup>6</sup> cells per vial

Viability:

74%

Enzyme	Marker Substrate Reaction	[S] (μM)	Rate (pmol/million cells/min)
CYP1A2	Phenacetin O-dealkylation	100	50.1 ± 0.8
CYP2A6	Coumarin 7-hydroxylation	50	71.6 ± 1.8
CYP2B6	Bupropion hydroxylation	500	47.8 ± 2.2
CYP2C8	Amodiaquine N-dealkylation	20	337 ± 13
CYP2C9	Diclofenac 4'-hydroxylation	100	256 ± 8
CYP2C19	S-Mephenytoin 4'-hydroxylation	400	13.0 ± 0.6
CYP2D6	Dextromethorphan O-demethylation	80	44.0 ± 2.1
CYP2E1	Chlorzoxazone 6-hydroxylation	500	126 ± 8
CYP3A4/5	Testosterone 6β-hydroxylation	250	219 ± 14
CYP3A4/5	Midazolam 1'-hydroxylation	30	49.1 ± 2.2
UGT	7-Hydroxycoumarin glucuronidation	100	600 ± 17
SULT	7-Hydroxycoumarin sulfonation	100	21.8 ± 1.4

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

## Uptake Activity Data

Uptake Transporter	Marker Substrate	[S] (μM)	Rate (pmol/million cells/min)
OATP1B1	Estrone sulfate	1	34.6
OATP1B3	CCK-8	1	7.2
OCT1	MPP+	1	5.5
NTCP	TCA	1	3.3

To measure uptake activities, hepatocytes (0.5 x 10<sup>6</sup> cells/mL) in suspension were incubated in triplicate at 4°C ± 2°C and 37°C ± 2°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

<b>Gender:</b>	Males (10), Females (10)
<b>Age:</b>	7-65 years of age
<b>Race:</b>	Caucasian (17), African American (2), Hispanic (1)
<b>Cause of Death:</b>	Cerebrovascular accident (4), Anoxia (9), Head trauma (7)
<b>Antibody to Cytomegalovirus (CMV):</b>	Positive (9), Negative (10), Not Determined (1)
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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**This data sheet serves as a Certificate of Analysis and has been approved by Stephanie Helmstetter, Assistant Director.**

Signature and Date: Stephanie Helmstetter 17 February 2023