

H1000 Lot No. 2410088

Human Liver Microsomes

Male, Pool of 10

0.5 mL at 20 mg protein / mL

Suspension medium: 250 mM sucrose

Specific Content and Enzyme Activities		Content / Rate	
Cytochrome P450 content	(nmol/mg protein)	0.335	
Cytochrome b ₅ content	(nmol/mg protein)	0.349	
NADPH-cytochrome c reductase	(nmol/mg protein/min)	195 ± 8	
Glucuronidation of 4-Methylumbelliferone	(nmol/mg protein/min)	101 ± 5	
Enzyme	Marker Substrate Reaction	[S] (µM)	Rate (pmol/mg protein/min)
CYP1A2	Phenacetin O-dealkylation	80	508 ± 24
CYP2A6	Coumarin 7-hydroxylation	50	798 ± 26
CYP2B6	Bupropion hydroxylation	500	283 ± 21
CYP2C8	Amodiaquine N-dealkylation	20	1520
CYP2C9	Diclofenac 4'-hydroxylation	100	2100 ± 140
CYP2C19	S-Mephenytoin 4'-hydroxylation	400	47.7 ± 3.5
CYP2D6	Dextromethorphan O-demethylation	80	198 ± 8
CYP2E1	Chlorzoxazone 6-hydroxylation	500	1750 ± 140
CYP3A4/5	Testosterone 6β-hydroxylation	250	2090 ± 30
CYP3A4/5	Midazolam 1'-hydroxylation	30	581 ± 54
CYP4A11	Lauric acid 12-hydroxylation	100	1670 ± 60

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) activity, liver microsomes (50 µg/mL) were incubated in triplicate at 37 ± 2°C for 10 minutes in potassium phosphate buffer (50 mM, pH 7.4), containing MgCl₂ (3.0 mM), EDTA (1.0 mM), NADP (1.0 mM), glucose-6-phosphate (5.0 mM), glucose-6-phosphate dehydrogenase (1 Unit/mL) and marker substrate, at the final concentrations indicated. Metabolite formation was determined by validated LC-MS/MS methods with deuterated metabolites as internal standards. FMO activity was measured under similar conditions except the protein concentration was 1 mg/mL and the buffer was 49 mM Tricine (pH 8.5).

To measure UDP-glucuronosyltransferase (UGT) activity, liver microsomes (10 - 250 µg/mL) were incubated in triplicate at 37 ± 2°C for 5 or 10 minutes in Tris-HCl (100 mM, pH 7.7 at 37°C), CHAPS (0.5 mM), EDTA (1.0 mM), MgCl₂ (10 mM), D-saccharic acid 1,4-lactone (100 µM), uridine diphosphate-glucuronic acid (8.0 mM) and marker substrate at the final concentrations indicated.



Store at -80°C

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 29 April 2024

Donor Information

Sample	Gender	Age (Yrs)	Race	Cause of Death
339	M	29	African American	Head trauma
468	M	47	Caucasian	Cerebrovascular accident
479	M	65	Caucasian	Anoxia
533	M	28	African American	Anoxia
549	M	55	Caucasian	Cerebrovascular accident
790	M	52	Caucasian	Cerebrovascular accident
1039	M	61	African American	Anoxia
1057	M	58	Caucasian	Anoxia
1068	M	43	Caucasian	Head trauma
1111	M	54	Hispanic	Head trauma

Serology information

- Cytomegalovirus: 6 donors tested positive.
- RPR*: All donors tested negative
- HIV, HTLV, HbsAg, and HCV**: All donors tested negative.

* Rapid Plasma Reagin

** Antibody to Human Immunodeficiency Virus, Antibody to Human T Cell Lymphotropic Virus, Hepatitis B Surface Antigen, Antibody to Hepatitis C Virus, respectively.

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