XENOTECH
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Data Sheet

H1500 Lot No. 1210079

Human Liver Microsomes
Female, 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)	0.402
Cytochrome b_5 content	(nmol/mg protein)	0.269
NADPH-cytochrome c reductase	(nmol/mg protein/min)	130 ± 7

Enzyme	**Marker Substrate Reaction**	**[S] (µM)**	**Rate (pmol/mg protein/min)**
CYP1A2	Phenacetin *O*-dealkylation	80	440 ± 23
CYP2A6	Coumarin 7-hydroxylation	50	1360 ± 30
CYP2B6	Bupropion hydroxylation	500	515 ± 12
CYP2C8	Amodiaquine *N*-dealkylation	20	3210 ± 330
CYP2C9	Diclofenac 4'-hydroxylation	100	2370 ± 40
CYP2C19	*S*-Mephenytoin 4'-hydroxylation	400	86.0 ± 4.2
CYP2D6	Dextromethorphan *O*-demethylation	80	195 ± 2
CYP2E1	Chlorzoxazone 6-hydroxylation	500	1520 ± 30
CYP3A4/5	Testosterone 6β-hydroxylation	250	3160 ± 130
CYP3A4/5	Midazolam 1'-hydroxylation	30	786 ± 16
CYP4A11	Lauric acid 12-hydroxylation	100	1200 ± 80
FMO	Benzydamine *N*-oxygenation	500	1110 ± 190
UGT1A1	17β-Estradiol 3-glucuronidation	100	833 ± 18
UGT1A4	Trifluoperazine glucuronidation	25	818 ± 19
UGT1A6	1-Naphthol glucuronidation	500	10900 ± 600
UGT1A9	Propofol glucuronidation	50	4210 ± 90
UGT2B7	Morphine 3-glucuronidation	1000	3720 ± 50

Characterization is performed when the first lot of a product from a given subcellular fraction (*e.g., S9*) is prepared. Subsequent lots are subject to a verification test only. 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 ± 1°C for 10 minutes in potassium phosphate buffer (50 mM, pH 7.4), containing $MgCl_2$ (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 ± 1°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), $MgCl_2$ (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.

Datasheet prepared 15 April 2013

Donor Information

Sample	Gender	Age (Yrs)	Race	Cause of Death
90	F	47	Caucasian	Head trauma
132	F	62	Caucasian	Anoxia
158	F	36	African American	Cerebrovascular accident
208	F	78	Caucasian	Head trauma
225	F	72	Caucasian	Cerebrovascular accident
250	F	50	Caucasian	Cerebrovascular accident
251	F	42	Caucasian	Anoxia
259	F	64	Caucasian	Anoxia
265	F	65	Caucasian	Cerebrovascular accident
272	F	31	Caucasian	Cerebrovascular accident

Serology information

- Cytomegalovirus: 5 donors tested positive.
- RPR*: 7 donors tested negative, 1 donor was non-reactive and 2 donors were not determined
- 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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