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Data Sheet

HU1A9.HA Lot No. 0710410

Human Liver Microsomes
Male, Individual No. 504
0.5 mL at 20 mg protein/mL
Suspension medium: 250 mM sucrose

Genotype, Specific Content and Enzyme Activities		***Content / Rate***
UGT1A9 Allelic variant		UGT1A9*1/*1
Cytochrome P450 content	(nmol/mg protein)	0.730
Cytochrome b_5 content	(nmol/mg protein)	0.349
NADPH-cytochrome c reductase	(nmol/mg protein/min)	182 ± 4

Enzyme	**Marker Substrate Reaction**	**[S] (µM)**	**Rate (pmol/mg protein/min)**
CYP1A2	Phenacetin *O*-dealkylation	80	455 ± 46
CYP2A6	Coumarin 7-hydroxylation	50	2350 ± 90
CYP2B6	Bupropion hydroxylation	500	825 ± 17
CYP2C8	Amodiaquine *N*-dealkylation	20	1840 ± 120
CYP2C9	Diclofenac 4'-hydroxylation	100	412 ± 23
CYP2C19	*S*-Mephenytoin 4'-hydroxylation	400	88.5 ± 6.5
CYP2D6	Dextromethorphan *O*-demethylation	80	86.8 ± 1.4
CYP2E1	Chlorzoxazone 6-hydroxylation	500	3500 ± 200
CYP3A4/5	Testosterone 6β-hydroxylation	250	12300 ± 400
CYP3A4/5	Midazolam 1'-hydroxylation	30	1480 ± 30
CYP4A11	Lauric acid 12-hydroxylation	100	1480 ± 60
UGT1A9	Propofol glucuronidation	50	12000 ± 400

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.

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 01 July 2014

Donor Information

Sample	Gender	Age (Yrs)	Race	Cause of Death
504	M	60	Caucasian	Cerebrovascular Accident

Serology information

- Cytomegalovirus: donor tested negative.
- RPR*: donor tested negative
- Donor tested negative for HIV, HTLV, HbsAg, and HCV**

* 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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