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Data Sheet
Certificate of Analysis

H1500.S9 Lot No. 2310342

Human Liver S9
Female, Pool of 10
1.0 mL at 20 mg protein / mL
Suspension medium: 50 mM Tris·HCl, 150 mM KCl, 2 mM EDTA

Specific Content and Enzyme Activities		***Content / Rate***
Cytochrome P450 content	(nmol/mg protein)	0.159
Cytochrome b_5 content	(nmol/mg protein)	0.087
7-Ethoxycoumarin *O*-dealkylation	(pmol/mg protein/min)	188 ± 10
Glucuronidation of 4-methylumbelliferone	(nmol/mg protein/min)	19.2 ± 1.0
CDNB [a]	(nmol/mg protein/min)	476 ± 18

[a] 1-Chloro-2,4-dinitrobenzene-glutathione conjugation by glutathione *S*-transferase.

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 S9 samples (0.2 mg/mL) were incubated in triplicate at 37 ± 2°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 7-ethoxycoumarin (500 µM), 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 S9 samples (0.1 mg/mL) were incubated in triplicate at 37 ± 2°C for 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 4-methylumbelliferone (1 mM), at the final concentrations indicated. Metabolite formation was determined by validated LC-MS/MS methods with deuterated metabolites as internal standards.

To measure glutathione S-transferase activity (GST), liver S9 samples (5 to 50 µg/mL) were incubated in triplicate at 37 ± 2°C for 10 minutes in potassium phosphate buffer (100 mM, pH 6.5), glutathione (1 mM), and CDNB (1 mM), at the final concentrations indicated. Reaction rates are determined by photometric kinetic measurements at 340 nm.

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.

This data sheet serves as a Certificate of Analysis and has been approved by Stephanie Helmstetter, Assistant Director.
Signature and Date: Stephanie Helmstetter 15 December 2023

Donor Information

Sample	Gender	Age (Yrs)	Race	Cause of Death
421	F	53	Caucasian	Anoxia
463	F	58	Caucasian	Anoxia
484	F	55	Caucasian	Cerebrovascular accident
517	F	47	Caucasian	Cerebrovascular accident
548	F	61	Caucasian	Anoxia
585	F	44	Caucasian	Anoxia
594	F	51	Caucasian	Anoxia
780	F	48	African American	Cerebrovascular accident
817	F	31	Caucasian	Anoxia
842	F	60	Caucasian	Anoxia

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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