

H1000.S9 Lot No. 2310104

Human Liver S9

Male, 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)	0.111
Cytochrome b ₅ content	(nmol/mg protein)	0.081
7-Ethoxycoumarin O-dealkylation	(pmol/mg protein/min)	163 ± 16
Glucuronidation of 4-methylumbelliferone	(nmol/mg protein/min)	22.3 ± 1.6
CDNB ^a	(nmol/mg protein/min)	461 ± 8

^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 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 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), MgCl₂ (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.

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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 11 April 2023

Donor Information

Sample	Gender	Age (Yrs)	Race	Cause of Death
468	M	47	Caucasian	Cerebrovascular accident
479	M	65	Caucasian	Anoxia
533	M	28	African American	Anoxia
549	M	55	Caucasian	Cerebrovascular accident
551	M	2	Caucasian	Head Trauma
772	M	46	Caucasian	Anoxia
790	M	52	Caucasian	Cerebrovascular accident
803	M	23	African American	Head Trauma
812	M	73	Caucasian	Cerebrovascular accident
1007	M	20	Caucasian	Head Trauma

Serology information

- Cytomegalovirus: 8 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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