

D1000.S9 Lot No. 1310285

Beagle Dog Liver S9 Fraction

Untreated, Male, Pool of 8

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)	0.166
Cytochrome b ₅ content	(nmol/mg protein)	0.098
7-Ethoxycoumarin O-dealkylation	(pmol/mg protein/min)	535 ± 12
Glucuronidation of 4-methylumbelliferone	(nmol/mg protein/min)	156 ± 12
CDNB ^a	(nmol/mg protein/min)	378 ± 9

^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 ± 1°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 ± 1°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 ± 1°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.

Animal Information

Species: Dog; *Canis familiaris*
 Strain: Beagle
 Sex: Male
 Age: >6 months
 Vendor: XenoMetrics, Stillwell, KS

Animals were housed in an AAALAC-accredited facility and allowed to acclimate ≥ seven days before use.

Food: Nutrena (*ad libitum*)
 Water: Automatic watering system, tap water (*ad libitum*)
 Light/dark cycle: Not monitored
 Temperature: Ranges from 62°-82°F
 Humidity: Not monitored
 Cage: Indoor/outdoor run cages, plastic coated rod bottom, sanitized at least every 2 weeks



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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