

D1000.P Lot No. 2310123

Beagle Dog Lung Microsomes
Untreated, Male, Pool of 4
0.5 mL at 10 mg protein / mL
Suspension medium: 250 mM sucrose

Enzyme Activities		Rate
NADPH-cytochrome c reductase	(nmol/mg protein/min)	28.4 ± 1.4
7-Ethoxyresorufin O-dealkylation	(pmol/mg protein/min)	4.05 ± 0.49
Phenacetin O-dealkylation	(pmol/mg protein/min)	15.5 ± 1.5
Glucuronidation of 4-Methylumbelliferone	(nmol/mg protein/min)	3.87 ± 0.29

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, lung microsomes (0.075 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-ethoxyresorufin (10 µM), at the final concentrations indicated. Metabolite formation was determined fluorimetrically.

To measure cytochrome P450 (CYP) activity, lung microsomes (0.1 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 Phenacetin (80 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, lung microsomes (0.2 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.

Animal Information

Species: Dog; *Canis familiaris*
Strain: Beagle
Sex: Male
Age: > 6 months
Vendor: Envigo, Cumberland, VA; Marshall Bioresources, North Rose, NY

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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This data sheet serves as a Certificate of Analysis and has been approved by Stephanie Helmstetter, Assistant Director.
Signature and Date: Stephanie Helmstetter 22 May 2023