

## R1063 Lot No. 2010206

Sprague Dawley (SD) Rat Liver Microsomes

Clofibric Acid-treated

Male, Pool of 25

0.5 mL at 20 mg protein / mL

Suspension medium: 250 mM Sucrose

Specific Content and Enzyme Activities		Content / Rate
Cytochrome P450 content	(nmol/mg protein)	1.308
Cytochrome b <sub>5</sub> content	(nmol/mg protein)	0.613
NADPH-cytochrome c reductase	(nmol/mg protein/min)	320 ± 16
Lauric acid 12-hydroxylation	(pmol/mg protein/min)	13050 ± 570

**Background:** Treatment of rats with the peroxisome proliferator, clofibric acid, causes a marked induction (>7-fold) of liver microsomal CYP4A levels, which is associated with an increase in lauric acid 12-hydroxylation. The above results confirm the anticipated induction of CYP4A activity. Note: Clofibric acid is not the same as clofibrate, although both compounds are peroxisome proliferators and CYP4A inducers. Clofibrate is the ethyl ester of clofibric acid and is not readily soluble in water, in contrast to the free acid, clofibric acid.

To measure cytochrome P450 (CYP) activity, treated liver microsome samples (0.05 mg/mL) were incubated in triplicate at 37 ± 2°C for 10 minutes in potassium phosphate buffer (50 mM, pH 7.4), containing MgCl<sub>2</sub> (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 lauric acid (100 µM), at the final concentrations indicated. Metabolite formation was determined by validated LC-MS/MS methods with deuterated metabolites as internal standards.

### Animal Information

Species:	Rat	Treatment:	Clofibric acid
Strain:	* IGS Sprague Dawley	Source:	Sigma (Cat. No. 197777)
Sex:	Male	Vehicle:	Saline, pH adjusted to 7 with NaOH
Age:	~ 8 weeks	Concentration:	40 mg/mL
Vendor:	Charles River, Raleigh, NC	Regimen:	200 mg/kg body weight once per day on days 1-4, liver microsomes prepared on day 5

\*International Genetic Standard

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

Food:	Purina 5L79 ( <i>ad libitum</i> )
Water:	Automatic watering system ( <i>ad libitum</i> )
Light/dark cycle:	5:00 am - 5:00 pm, light; 5:00 pm - 5:00 am, dark (12-hour light/dark)
Temperature:	70°F ± 2°F
Humidity:	30-70 %
Bedding:	Beta Chip (hardwood), NEPCO, Warrensburg, NY
Cage:	Polycarbonate Shoebox Cage, conventional cage



### 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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