

Human Pooled Liver Microsomes and S9 Fractions NADPH Regenerating System Reagent (NADPH-RS) Specification Sheet

Microsomes and S9 Fractions

Lifeline's Pooled Human Liver Microsomes and S9 Fractions provide a fully characterized, relevant, reliable and reproducible *in vitro* tool. Pooled Liver Microsomes and S9 Fractions are available in pools of 50 or 200 donors, giving an accurate population representation. Pooled Human Liver Microsomes and S9 Fractions may be used to describe the metabolic profile of a drug or drug candidate in high-throughput assays as well as the following other uses:

- Conduct studies of metabolic stability (% of original drug remaining over time)
- Identify which cytochrome P450 (CYP) enzymes oxidize a drug candidate and which UDP-glucuronosyltransferase (UGT) enzymes are responsible for glucuronidation
- Identify, quantify and characterize drug metabolites
- Describe a drug's metabolic pathways
- Identify inhibition of cytochrome P450 (CYP) enzymes.

NADPH-RS Reagent

Many assays using Microsomes or S9 Fractions require enzyme co-factors, such as NADPH, to support reactions catalyzed by CYP enzymes. Lifeline provides a convenient, simple-to-use single reagent solution. Simply add water and Lifeline's NADPH Reagent generates NADPH through an enzymatic reaction catalyzed by glucose-6-phosphate *in situ*. Ask for part number CM-0062.

MICROSOME AND S9 FRACTION FEATURES:

- Extensive characterization of CYP and UGT activity
- Pools of 50 and 200 donors available (mixed gender)
- S9 fraction and microsomes available from same donor pool
- Large lot sizes available for long-term studies
- Donor information available

NADPH-RS REAGENT FEATURES:

- One step – add water and vortex (chart and data included to determine water volume needed for concentration needed in your assay)
- Maintain proper concentration of NADPH in your assay for up to 12 hours at room temperature; 48 hours at 2-8°C.
- Single 7 mL vial

MICROSOMES AND S9 FRACTIONS ARE TESTED FOR:

• Cytochrome P450 (CYP)	1A2; 2A6; 2B6; 2C8; 2C9; 2C19; 2D6; 2E1; 3A4; 3A5 (K _m , V _{max} and intrinsic clearance values provided for each CYP)
• UDP-glucuronosyltransferase (UGT) enzymes	1A1; 2B7; 1A6; 1A9; 1A4
• Flavin Monooxygenases (FMO)	Benzydamine <i>N</i> -oxygenation
• Donor Information	Age; Ethnicity; Gender; Cause of death; Infectious disease status

To place an order, please visit lifelinecelltech.com or call customer service at 877.845.7787.

Safety Statement and note regarding products derived from human tissue:

This product is For Research Use Only and is not approved for human or veterinary use or for use in *in vitro* diagnostic or clinical procedures. All tissue used to derive Lifeline's hepatocyte products are determined to be non-transplantable by a medical professional. Although Lifeline only accepts tissue from donors who test negative for HIV 1 and 2, and Hepatitis B and C, all products derived from human tissue should be regarded as a potential biohazard and should be stored and handled accordingly.

The Lifeline® Guarantee

Consistency and Reproducible Results

Lifeline's rigorous quality control ensures sterility and performance to standardized testing criteria. All donated tissues have been obtained under proper informed consent and adhere to the Declaration of Helsinki, The Human Tissue Act (UK), CFR Title 21, and HIPAA Regulations relative to obtaining and handling human tissue for research use. If Lifeline's products do not meet our posted performance and quality standards, we will replace them at no charge or provide a full refund. Upon request, Lifeline will provide lot specific QC test results, material safety data sheets and certificates of analysis. See complete guarantee/warranty statement at lifelinecelltech.com or contact your Lifeline representative for more information.

Handling and Storage

Lifeline's human liver microsomes and S9 Fractions should be stored at or below -70°C and can undergo up to 10 freeze thaw cycles without losing significant CYP activity. All thawed Microsomes and S9 Fractions should be kept on wet ice. Lifeline's NADPH reagent should be stored at -20°C.

PRODUCT INFORMATION:	
Part #	Human Liver Microsomes
HC-0014	Human Liver Microsomes-200 Donor Pool, mixed gender, 0.5 mL at 20 mg/mL (10mg)
HC-0015	Human Liver Microsomes-50 Donor Pool, mixed gender, 0.5 mL at 20 mg/mL (10 mg)
HC-0016	Human Liver Microsomes-50 Donor Pool, mixed gender, 5 mL at 20 mg/mL (100 mg)
	Human Liver S9 Fractions
HC-0017	Human Liver S9 Fractions-200 Donor Pool, mixed gender, 0.5 mL at 20 mg/mL (10mg)
HC-0018	Human Liver S9 Fractions-50 Donor Pool, mixed gender, 0.5 mL at 20 mg/mL (10 mg)
HC-0019	Human Liver S9 Fractions-50 Donor Pool, mixed gender, 5 mL at 20 mg/mL (100 mg)
	NADPH-RS Reagent
CM-0062	NADPH-RS Reagent, 1.5 mL (0.5 mL of 100 mM NADP; 0.5 mL of 500mM Glucose-6-phosphate; 0.5 mL of 100 units/mL Glucose-6-phosphate dehydrogenase)

Call Lifeline's Customer Service at 877.845.7787
or visit lifelinecelltech.com for more information

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