



Kosheeka carries an extensive selection of subcellular fractions for ADME/Tox studies to be a part of advanced research in drug discovery, drug screening, and pre-clinical drug development.

Our ADME/Tox products are physiologically relevant to address a wide array of research questions, including drug interaction, drug toxicity, metabolite analysis, and stability of different species, along with drug efficacy.

The subcellular fractions are obtained from the endoplasmic reticulum of the liver, containing a variety of metabolic enzymes for assessing the *in vitro* metabolism of drug candidates suitable for a variety of applications including:

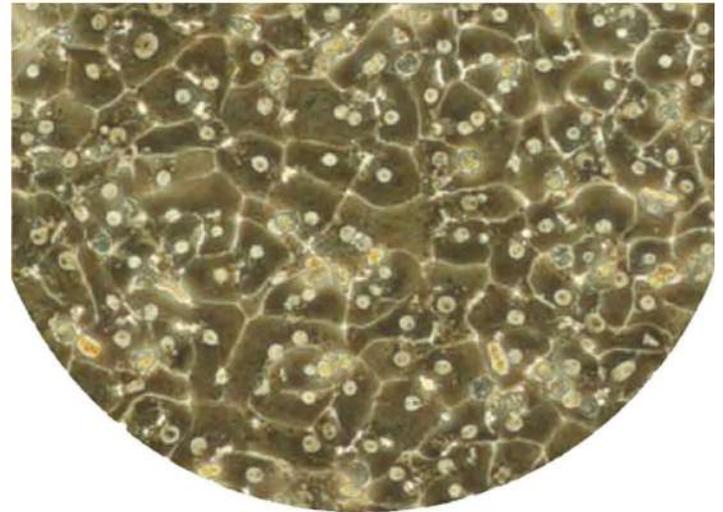
- Metabolic characterization
- Metabolic stability
- Enzyme mapping (Reaction phenotyping)
- Enzyme induction assays
- P450 inhibition studies

Our standard products feature fully-characterized liver subcellular fractions, primary hepatocytes from various species, importantly having high toxicological relevance.

- Human
- Rat (SD, Wistar)
- Mouse (CD-1)
- Hamster
- Guinea Pig

## With us, you are a step closer to better healthcare!

- A robust, extensive tissue procurement network.
- Carefully honed isolation techniques, followed by maintaining rigorous quality control standards.
- A wide range of donor demographics with minimized lot-to-lot variation and ready availability.
- Availability of good infrastructure to support the fulfillment of customized demands.
- Established characterization protocol with validated methods.



## Primary Hepatocytes

Kosheeka primary hepatocytes isolated from the liver are effective tools for the *in vitro* evaluation of metabolism, drug-drug interactions, hepatotoxicity, and transporter assessment. We have validated our isolation techniques to help ensure optimal cell health.

### We Offer

- Viabilities  $\geq 80\%$
- Customized lot demands for long-term studies
- Characterization for phase I and II drug metabolizing activities

Homo Sapiens		QC Tests
Products	Lot No.	
Plateable Hepatocytes	hVS-1704	<ul style="list-style-type: none"> <li>• Cell Morphology</li> <li>• Metabolic Activity Testing for               <ul style="list-style-type: none"> <li>- CYP1A2: Phenacetin O-dealkylation</li> <li>- CYP2B6: Bupropion-hydroxylation</li> <li>- CYP2D6: Dextromethorphan O-demethylation</li> <li>- CYP3A4/5: Midazolam 1' hydroxylation</li> </ul> </li> </ul>
Plateable Hepatocytes Pooled	hVS-1705	
Hepatocytes in Suspension	hVS-1706	
Hepatic Stellate Cells	hVS-1708	
Mus Musculus		<ul style="list-style-type: none"> <li>• Vmax Value of Phase I-dependent activity               <ul style="list-style-type: none"> <li>- CYP2C19: S-mephenytoin hydroxylase activity</li> </ul> </li> <li>• Vmax Value of Phase II-dependent activity               <ul style="list-style-type: none"> <li>- UGT1A1, UGT1A6, UGT1A9, UGT2B15</li> <li>- SULT1A1, SULT1A3/4, SULT1E1</li> </ul> </li> </ul>
Plateable Hepatocytes	musVS-2206	
Plateable Hepatocytes Pooled	musVS-2206P	
Hepatocytes in Suspension	musVS-2207	<ul style="list-style-type: none"> <li>• Post Thaw Viability</li> <li>• Microbial Sterility</li> <li>• Number of viable cells per vial: <math>\geq 1 \times 10^6</math></li> </ul>
Rattus Rattus		
Plateable Hepatocytes	ratVS-3206	
Plateable Hepatocytes Pooled	ratVS-3206P	
Hepatocytes in Suspension	ratVS-3207	

## Liver Subcellular Fractions

Kosheeka offers a variety of liver subcellular fractions from toxicologically relevant species such as non-human primates, dogs, rabbits, rats, and mice. They are primarily used in the evaluation of metabolic stability, in vitro intrinsic clearance, enzyme induction assays, and other valuable information on drug interaction models. We use custom-designed preparation methods and offer characterization assays validated by LC-MS/MS for your custom needs. We are equipped to prepare custom batches of hepatic, intestinal, pulmonary, and renal subcellular fractions, in accordance with client specifications.

		Human	Mouse	Rat	Other
Product		<ul style="list-style-type: none"> <li>• S9</li> <li>• Microsomes</li> <li>• Cytosols</li> <li>• Mitochondria</li> <li>• Lysosomes</li> </ul>			
Specificity		<ul style="list-style-type: none"> <li>• Single donor</li> <li>• Mixed gender</li> <li>• Pooled</li> </ul>			
Concentration		20 mg/ml			
Volume/Vial		0.5 ml			
<b>Characterization Provided</b>					
Enzyme	Marker Substrate Reaction				
CYP1A2	Phenacetin O-dealkylation	✓	✓	✓	✓
CYP2A6	Coumarin 7-hydroxylation	✓	✓	✓	✓
CYP2D6	Dexamethorphan O-demethylation	✓	✓	✓	✓
CYP3A4/5	Phenacetin O-dealkylation	✓	✓	✓	✓
CYP2C19	S-Mephenytoin 4'-hydroxylation	On-Demand in case of Pooled Donors			
CYP2B6	Bupropion hydroxylation				
CYP2C8	Amodiaquine N-dealkylation				
CYP2C9	Diclofenac 4'-hydroxylation				
CYP2E1	Chlorzoxazone 6-hydroxylation				
CYP4A11	Lauric Acid 12-hydroxylation				
FMO	Benzydamine N-Oxidation				
UGT1A1	17β-Estradiol 3-glucuronidation	✓	✓	✓	✓
UGT1A4	Trifluoperazine glucuronidation	On-Demand in case of Pooled Donors			
UGT1A6	1-Naphthol glucuronidation	✓	✓	✓	✓
UGT1A9	Propofol glucuronidation	On-Demand in case of Pooled Donors			
UGT2B7	Morphine 3-glucuronidation				
Reductase	NADPH-cytochrome c reductase				
<b>V max Values</b>					
CYP1A2	Phenacetin	On-Demand in case of Pooled Donors			
CYP2A6	Morphine 3-glucuronidation				
CYP2B6	Bupropion				
CYP2C8	Amodiaquine				
CYP2C9	Diclofenac				
CYP2C19	S-Mephenytoin				
CYP2D6	Dexamethorphan				
CYP3A4/5	Midazolam				
CYP4A11	Lauric Acid				



### Examples of Custom Preparations:

- Individual human liver subcellular fractions (Including poor and extensive metabolizers)
- Demographically defined human pools
- Non-standard rodent strains, farm animals

### Safety, Handling, and Storage

Kosheeka accepts only non-transplantable tissues from human donors who test negative for HIV-1/ HIV-2, HTLV, and Hepatitis B, and Hepatitis C. All animal tissue is acquired through accredited facilities from healthy animals and in accordance with the necessary regulations. We strongly recommend that all samples should be used as potential hazards, and universal precautions are to be exercised when handling and disposing of these products. Cellular and subcellular fractions are intended for in vitro use only. These products can be shipped overnight in dry ice, and should be stored at or below -700c.