

*InVitro*CYP™ Human Liver Microsomes

BioreclamationIVT offers a variety of *InVitro*CYP human liver microsomes to meet the unique requirements of your inhibition and metabolism studies.

- *InVitro*CYP 150-Donor
- *InVitro*CYP H-class™ for high enzyme activity
- *InVitro*CYP M-class™ for moderate enzyme activity
- *InVitro*CYP C-class™ for custom preparations

Technical Information

*InVitro*CYP human liver microsomes are characterized using the following assays.

Assay	Enzyme
7-ethoxycoumarin	Coupled phase I & II metabolism
7-hydroxycoumarin	ST
7-hydroxycoumarin	UGT
Phenacetin	CYP1A2
Coumarin	CYP2A6
Bupropion	CYP2B6
Tolbutamide	CYP2C9
S-mephenytoin	CYP2C19
Dextromethorphan	CYP2D6
Chlorzoxazone	CYP2E1
Midazolam	CYP3A4
Testosterone	CYP3A4

Activity is measured at the apparent K_m for each substrate. V_{max} is reported for the individual CYPs. In addition to the above assays, protein and Total P450 values are reported on the lot-specific product data sheet. *InVitro*CYP human liver microsomes are sold in vials of 0.5 mL (10 mg), 1.0 mL (20 mg) and 5 mL (100 mg). Characterization information is available online.

Storage

*InVitro*CYP human liver microsomes must be stored in a mechanical cryogenic freezer below -70°C to guarantee the preservation of cytochrome P450 enzymes.

InVitroCYP 150-Donor Microsomes

Human liver microsomes are a major tool for studying metabolite ID, reaction phenotyping, intrinsic clearance and inhibition studies. *InVitroCYP* 150-donor pooled liver microsomes activity represents the population average. BioreclamationIVT microsomes are prepared from fresh human tissue which ensures a higher retention of enzyme levels. Every donor used in the pool has a quality tested enzyme profile.

InVitroCYP H-class Microsomes

Liver microsomes provide a readily available and well-characterized biological model for use in CYP enzyme inhibition studies. *InVitroCYP* H-class microsomes are prepared from tissues that are screened and selected for high activity across the panel of relevant cytochrome P450 enzymes, including those CYPs that are traditionally low in activity. This microsome classification provides researchers with enhanced sensitivity on typically low activity CYPs.

InVitroCYP M-class Microsomes

Human liver microsomes are subcellular fractions that contain drug-metabolizing enzymes including CYP enzymes, flavin monooxygenases and UDP glucuronyl transferases. *InVitroCYP* M-class microsomes are designed to exhibit moderate CYP activity, ideal for clearance and metabolite identification studies. Celsis' extensive characterization and tissue profiling process guarantees that each lot of *InVitroCYP* M-class microsomes will provide consistent and reproducible results for your metabolism and clearance studies.

InVitroCYP C-class Microsomes

Because some studies require specialized microsome products, *InVitroCYP* C-class microsomes are designed by you to fit your research criteria.

Examples of C-class preparations include, but are not limited to, the following:

1. Microsomes prepared with specific donor demographic requirements like age, gender, race, CMV status, etc.
2. Large lots manufactured to a specific vial configuration.
3. Single donor microsomes with particularly high- or low-activity in specific CYP enzymes
4. Microsome pools designed with particularly high- or low-activity in specific CYP enzymes
5. Additional enzyme characterization

For *InVitroCYP* C-class microsome requests, please contact IVTproductsrequest@bioreclamationivt.com or ask your BioreclamationIVT representative for more information.



InVitroCYP Human Liver Microsomes



InVitroCYP™ is a trademark of BioreclamationIVT

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