

Product Characterization Sheet

HH1042

Human Hepatocytes, Catalog Number 82001



Classification

Plateability	Suspension
Number of days plateable	NA
Confluency	NA
P450 Inducibility	NA
Transporter activity	NA
Number of donors	1

Donor Demographics

Gender	Male
Age	57 years
Race	Caucasian
Cause of death	Head trauma
BMI	23.0
Smoking	Yes
Alcohol	Yes
Substance abuse	Yes
Medical history	COPD, HTN, DM, GERD
Infectious diseases	HBV-, HCV-, HIV-, CMV+

Post-thaw Viability and Yield

Viability	95 %
Yield	3.7 million

Characterization: Hepatocytes were thawed using 37°C UCRM™ and centrifuged for 10 minutes at 100g. After removing the supernatant, hepatocytes were re-suspended in 4°C HQM™ and counted for viability and yield using the Trypan Blue exclusion method.

Drug Metabolism Activity

Drug Metabolizing Enzyme	Substrate (μM)	Incubation Time (minutes)	Metabolite Quantified	Activity (pmol/minute/million cells)
CYP1A2	Phenacetin (100)	15	Acetaminophen	18.9
CYP2A6	Coumarin (50)	30	7-Hydroxycoumarin	11.1
CYP2B6	Bupropion (500)	15	Hydroxybupropion	5.4
CYP2C8	Paclitaxel (20)	15	6α-Hydroxypaclitaxel	1.6
CYP2C9	Diclofenac (25)	15	4-Hydroxydiclofenac	7.2
CYP2C19	S-Mephenytoin (250)	30	4-Hydroxymephenytoin	0.5
CYP2D6	Dextromethorphan (15)	15	Dextrorphan	2.3
CYP2E1	Chlorzoxazone (250)	15	6-Hydroxychlorzoxazone	6.3
CYP3A4	Midazolam (20)	10	1-Hydroxymidazolam	10.2
	Testosterone (200)	15	6β-Hydroxytestosterone	234.7
ECOD	7-Ethoxycoumarin (100)	30	7-Hydroxycoumarin	14.9
UGT	7-Hydroxycoumarin (100)	30	7-Hydroxycoumarin glucuronide	36.9
Sulfotransferase	7-Hydroxycoumarin (100)	30	7-Hydroxycoumarin sulfate	9.0

CYP450 Activity Assessment: The hepatocytes were incubated at a cell density of 0.5 million cells/mL in a 48-well plate (125,000 hepatocytes/well) for the designated time durations with isoform-selective substrates. The metabolites were identified and analyzed using LC-MS/MS.

IVAL cell culture media and tissue culture plates used in this evaluation:

- Recovery of thawed hepatocytes - Cat. No. 81015 - UCRM™ Universal Cryopreservation Recovery Media, 50 mL tube
- Suspension and incubation of hepatocytes - Cat. No. 81039/81040 - HQM™ Hepatocyte Incubation Media, 50 mL tube/500 mL bottle

To inquire about our products and services or for technical questions please contact:

- In Vitro ADMET Laboratories by phone at +1 (866) 458-1094 or +1 (410) 869-9037 or email at info@invitroadmet.com