

Product Characterization Sheet

HH1111

Human Hepatocytes, Catalog Number 82002



Classification

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

Donor Demographics

Gender	Female
Age	52
Race	Caucasian
Cause of death	Anoxia
BMI	40.3
Smoking	No
Alcohol	No
Substance abuse	Yes
Medical history	COPD, HTN, fibromyalgia, asthma, depression, bipolar
Infectious diseases	HBV-, HCV-, HIV-, CMV+

Post-thaw Viability and Yield

Viability	92 %
Yield	4.4 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	33.5 ± 7.7
CYP2A6	Coumarin (50)	30	7-Hydroxycoumarin	62.4 ± 2.9
CYP2B6	Bupropion (500)	15	Hydroxybupropion	23.2 ± 6.2
CYP2C8	Paclitaxel (20)	15	6α-Hydroxypaclitaxel	28 ± 8.2
CYP2C9	Diclofenac (25)	15	4-Hydroxydiclofenac	49.7 ± 2.3
CYP2C19	S-Mephenytoin (250)	30	4-Hydroxymephenytoin	56 ± 30.3
CYP2D6	Dextromethorphan (15)	15	Dextrorphan	17.2 ± 0.2
CYP2E1	Chlorzoxazone (250)	15	6-Hydroxychlorzoxazone	58.4 ± 17.9
CYP3A4	Midazolam (20)	10	1-Hydroxymidazolam	16.7 ± 2.7
	Testosterone (200)	15	6β-Hydroxytestosterone	115 ± 11.5
ECOD	7-Ethoxycoumarin (100)	30	7-Hydroxycoumarin	96.6 ± 19.2
UGT	7-Hydroxycoumarin (100)	30	7-Hydroxycoumarin glucuronide	791 ± 206
Sulfotransferase	7-Hydroxycoumarin (100)	30	7-Hydroxycoumarin sulfate	9.1 ± 2.7

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