

Product Characterization Sheet

HH1115

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	18
Race	Caucasian
Cause of death	Anoxia
BMI	36.9
Smoking	No
Alcohol	No
Substance abuse	No
Medical history	Autism
Infectious diseases	HBV-, HCV-, HIV-, CMV-, EBV (IgG)+

Post-thaw Viability and Yield

Viability	96 %
Yield	4.2 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	3.6 ± 3.82
CYP2A6	Coumarin (50)	30	7-Hydroxycoumarin Glucuronide	0.000
CYP2A6	Coumarin (50)	30	7-Hydroxycoumarin Sulfate	9.02 ± 1.4
CYP2B6	Bupropion (500)	15	Hydroxybupropion	0.11 ± 0.57
CYP2C8	Paclitaxel (20)	15	6α-hydroxypaclitaxel	5.15 ± 0.49
CYP2C9	Diclofenac (25)	15	4-OH Diclofenac	79.2 ± 6.1
CYP2C19	S-Mephenytoin (250)	30	4-OH S-Mephenytoin	0.91 ± 0.13
CYP2D6	Dextromethorphan (15)	15	Dextrophan	2.95 ± 0.17
CYP2E1	Chlorzoxazone (250)	15	6-OH Chlorzoxazone	76.1 ± 6.2
CYP3A4-1	Midazolam (20)	10	1-Hydroxymidazolam	12.1 ± 2.41
CYP3A4-2	Testosterone (200)	15	6β-hydroxytestosterone	69.6 ± 13.9
ECOD	7-Ethoxycoumarin (100)	30	7-HC, 7-HC-Sulfate, 7-HC-Glucuronide	42.9 ± 2.26
ECOD	7-Ethoxycoumarin (100)	30	7-Hydroxycoumarin	8.4 ± 1.06
ECOD	7-Ethoxycoumarin (100)	30	7-Hydroxycoumarin Glucuronide	25.5 ± 3.62
ECOD	7-Ethoxycoumarin (100)	30	7-Hydroxycoumarin Sulfate	9.02 ± 1.02
UGT	7-Hydroxycoumarin (100)	30	7-Hydroxycoumarin Glucuronide	672 ± 47.2
SULT	7-Hydroxycoumarin (100)	30	7-Hydroxycoumarin Sulfate	31.4 ± 2.72
FMO	Benzydamine HCl (250)	30	Benzydamine-N-Oxide	43.8 ± 17.3
MAO	Kynuramine HCl (160)	30	4-hydroxyquinoline	297 ± 20.9
AO	Carbazeran HCl (10)	30	4-Hydroxycarbazeran	12.5 ± 4.76
NAT1	4-Aminobenzoic HCl (200)	30	N-Acetyl-p-aminobenzoic acid	15.2 ± 0.27
NAT2	Sulfamethazine (100)	30	N-Acetyl-sulfamethazine	124 ± 7.34

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