Product Characterization Sheet
HE3044

Human Enterocytes, Catalog Number 82013

In Vitro ADMET Laboratories, Inc.

Classification

Plateability	Suspension
Number of days plateable	NA
Confluency	NA
P450 Inducibility	NA
Number of donors	1
Enterocyte size	17 ± 3.8 microns

Donor Demographics

Gender	Male
Age	37 years
Race	African American
Cause of death	CVA 2nd to ICH
BMI	47.3
Smoking	No
Alcohol	No
Substance abuse	Yes
Medical history	Diabetes, HTN
Infectious diseases	HBV-, HCV-, HIV-, CMV-

Post-thaw Viability and Yield

Viability	92 %
Yield	3.0 million

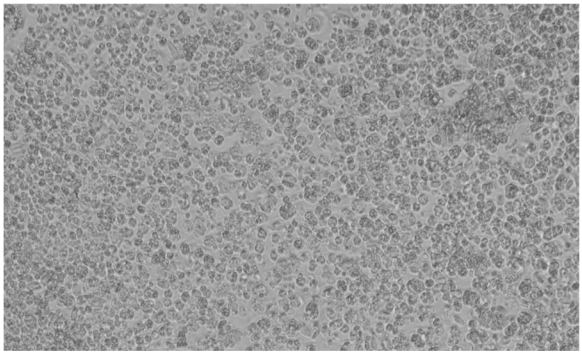
Characterization: Enterocytes were thawed using 37°C CERM™ and centrifuged for 10 minutes at 100g. After removing the supernatant, enterocytes were re-suspended in 4°C HQM™ and counted for viability and yield using the Trypan Blue exclusion method.

Drug Metabolism Activity

Drug Metabolizing Enzyme	Substrate (µM)	Incubation Time (minutes)	Metabolite Quantified	Activity (pmol/minute/million cells)
CYP3A4	Midazolam (20)	120	1-Hydroxymidazolam	0.83 ± 0.04
	Testosterone (200)	120	6β-Hydroxytestosterone	21.5 ± 7.6
CYP2J2	Astemizole (50)	120	O-Desmethyl astemizole	0.67 ± 0.1
CES2	Irinotecan (50)	120	SN38	0.32 ± 0.06
CYP2C9	Diclofenac (25)	120	4-Hydroxydiclofenac	1.45 ± 0.1
CYP2C19	S-Mephenytoin (250)	120	4'-Hydroxymephenytoin	0.08 ± 0.02
Sulfotransferase	7-Hydroxycoumarin (100)	120	7-Hydroxycoumarin sulfate	1.4 ± 0.1
UGT	7-Hydroxycoumarin (100)	120	7-Hydroxycoumarin glucuronide	2.9 ± 0.1

CYP450 Activity Assessment: The enterocytes were incubated at a cell density of 1.5 million enterocytes/mL in a 96-well plate (150,000 enterocytes/well) for the designated time duration of 120 minutes with isoform-selective substrates. The metabolites were identified and analyzed using LC-MS/MS.

Photomicrographs (100X, Brightfield)



Enterocyte Morphology: Enterocyte cell size is approximately 12 – 17 microns in diameter. Lymphocytes are approximately 4 microns and may also be observed in the enterocyte cell population.

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

- Recovery of thawed enterocytes - Cat. No. 81056 - CERM™ Cryopreserved Enterocyte Recovery Media, 50 mL tube
- Suspension and incubation of enterocytes - Cat. No. 81039 - HQM™ Hepatocyte and Enterocyte Incubation Media, 50 mL tube

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