

Product Characterization Sheet

HE3042

Human Enterocytes, Catalog Number 82097



Classification

Plateability	Suspension
Number of days plateable	NA
Confluency	NA
P450 Inducibility	NA
Number of donors	1
Enterocyte Size	16.2 ± 3.1 microns

Donor Demographics

Gender	Male
Age	60 years
Race	Caucasian
Cause of death	CVA 2 nd to ICH
BMI	22.8
Smoking	Yes
Alcohol	Yes
Substance abuse	No
Medical history	Diabetes, HTN
Infectious diseases	HBV-, HCV-, HIV-, CMV+

Post-thaw Viability and Yield

Viability	85 %
Yield	2.0 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	1.66 ± 0.04
	Testosterone (200)	120	6β-Hydroxytestosterone	31.2 ± 0.6
CYP2J2	Astemizole (50)	120	O-Desmethyl astemizole	1.06 ± 0.11
CES2	Irinotecan (50)	120	SN38	0.06 ± 0.02
CYP2C9	Diclofenac (25)	120	4-Hydroxydiclofenac	0.23 ± 0.1
CYP2C19	S-Mephenytoin (250)	120	4'-Hydroxymephenytoin	0.03 ± 0.04
Sulfotransferase	7-Hydroxycoumarin (100)	120	7-Hydroxycoumarin sulfate	8.98 ± 0.18
UGT	7-Hydroxycoumarin (100)	120	7-Hydroxycoumarin glucuronide	74.2 ± 1.2

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