

Product Characterization Sheet

HE3049/HE3051/HE3054

Human Enterocytes, Catalog Number 82176



Classification

Plateability	Suspension
Number of days plateable	NA
Confluency	NA
P450 Inducibility	NA
Number of donors	1
Enterocyte isolation	Villi

Donor Demographics

Gender	Female
Age	59
Race	NA
Cause of death	CVA 2 nd to ICH
BMI	30.4
Smoking	Yes
Alcohol	Yes
Substance abuse	Yes
Medical history	None
Infectious diseases	HBV-, HCV-, HIV-, CMV+, EBV (IgG)+

Post-thaw Viability and Yield

Viability	NA
Yield	NA

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	0.040 ± 0.021
	Testosterone (200)	120	6β-Hydroxytestosterone	9.592 ± 1.014
CYP2J2	Astemizole (50)	120	O-Desmethyl astemizole	0.163 ± 0.043
CES2	Irinotecan (50)	120	SN38	0.473 ± 0.085
CYP2C9	Diclofenac (25)	120	4-Hydroxydiclofenac	0.185 ± 0.034
CYP2C19	S-Mephenytoin (250)	120	4'-Hydroxymephenytoin	0.193 ± 0.058
Sulfotransferase	7-Hydroxycoumarin (100)	120	7-Hydroxycoumarin sulfate	2.843 ± 0.440
UGT	7-Hydroxycoumarin (100)	120	7-Hydroxycoumarin glucuronide	4.588 ± 0.252

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: This preparation consists of villi isolated from the intestinal lumen with enterocytes retaining in vivo organization and cell-cell contact.

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