

# Product Characterization Sheet

## HE3029

Human Enterocytes, Catalog Number 82097



### Classification

Plateability	Suspension
Number of days plateable	NA
Confluency	NA
P450 Inducibility	NA
Number of donors	1
Enterocyte Size	13.4 ± 2.4 microns

### Donor Demographics

Gender	Male
Age	41 years
Race	Caucasian
Cause of death	Anoxia 2 <sup>nd</sup> to CVA
BMI	34.6
Smoking	Yes
Alcohol	Yes
Substance abuse	Yes
Medical history	GERD, viral meningitis
Infectious diseases	HBV-, HCV-, HIV-, CMV+, EBV (IgG)+

### Post-thaw Viability and Yield

Viability	85 %
Yield	1.7 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	0.59
	Testosterone (200)	120	6β-Hydroxytestosterone	12.1 ± 3.9
CYP2J2	Astemizole (50)	120	O-Desmethyl astemizole	0.76
CES2	Irinotecan (50)	120	SN38	0.08
CYP2C9	Diclofenac (25)	120	4-Hydroxydiclofenac	0.86
CYP2C19	S-Mephenytoin (250)	120	4'-Hydroxymephenytoin	0.12
Sulfotransferase	7-Hydroxycoumarin (100)	120	7-Hydroxycoumarin sulfate	3.65
UGT	7-Hydroxycoumarin (100)	120	7-Hydroxycoumarin glucuronide	6.55

**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](mailto:info@invitroadmet.com)