

# Product Characterization Sheet

## HE3009

Human Enterocytes, Catalog Number 82097



### Classification

Plateability	Suspension
Number of days plateable	NA
Confluency	NA
P450 Inducibility	NA
Number of donors	1
Enterocyte Size	15.0 ± 2.8 microns

### Donor Demographics

Gender	Female
Age	44 years
Race	Caucasian
Cause of death	Head trauma 2 <sup>nd</sup> to blunt injury
BMI	48.3
Smoking	Yes
Alcohol	Yes
Substance abuse	Yes
Medical history	NA
Infectious diseases	HBV-, HCV-, HIV-, CMV+, EBV (IgG)+

### Post-thaw Viability and Yield

Viability	89 %
Yield	2.8 million

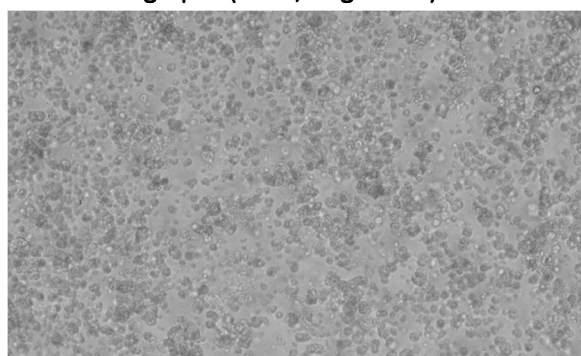
**Characterization:** Enterocytes were thawed using 37°C CERM™ and centrifuged for 10 minutes at 100g. After removing the supernatant, enterocytes were re-suspended in 4°C HQM™ and counted for viability and yield using the Trypan Blue exclusion method.

### Drug Metabolism Activity

Drug Metabolizing Enzyme	Substrate (μM)	Incubation Time (minutes)	Metabolite Quantified	Activity (pmol/minute/million cells)
CYP3A4	Midazolam (20)	120	1-Hydroxymidazolam	0.72
	Testosterone (200)	120	6β-Hydroxytestosterone	32.1 ± 3.2
CYP2J2	Astemizole (50)	120	O-Desmethyl astemizole	0.25
CES2	Irinotecan (50)	120	SN38	0.60
CYP2C9	Diclofenac (25)	120	4-Hydroxydiclofenac	1.18
CYP2C19	S-Mephenytoin (250)	120	4'-Hydroxymephenytoin	0.35
Sulfotransferase	7-Hydroxycoumarin (100)	120	7-Hydroxycoumarin sulfate	7.78
UGT	7-Hydroxycoumarin (100)	120	7-Hydroxycoumarin glucuronide	4.32

**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)