# Product Characterization Sheet
# HE3060

Human Enterocytes, Catalog Number 82097

In Vitro ADMET Laboratories, Inc.

## Classification

| | |
|---|---|
| Plateability | Suspension |
| Number of days plateable | NA |
| Confluency | NA |
| P450 Inducibility | NA |
| Number of donors | 1 |
| Enterocyte size | 15.5 ± 2.5 |

## Post-thaw Viability and Yield

| | |
|---|---|
| Viability | 62 % |
| Yield | 1.6 million |

## Donor Demographics

| | |
|---|---|
| Gender | Male |
| Age | 27 years |
| Race | African American |
| Cause of death | ICH |
| BMI | 30.7 |
| Smoking | No |
| Alcohol | No |
| Substance abuse | No |
| Medical history | Hypertension, diabetes, depression |
| Infectious diseases | HBV-, HCV-, HIV-, CMV+, EBV (IgG)+ |

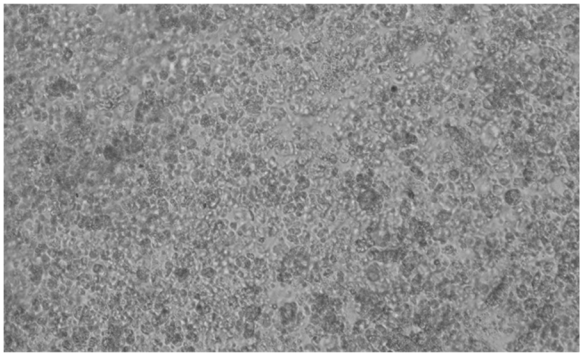
Characterization: Enterocytes were thawed using 37°C CERM™ and centrifuged for 10 minutes at 100g. After removing the supernatant, enterocytes were re-suspended in 4°C HQM™ and counted for viability and yield using the Trypan Blue exclusion method.

## Drug Metabolism Activity

| Drug Metabolizing Enzyme | Substrate (µM) | Incubation Time (minutes) | Metabolite Quantified | Activity (pmol/minute/million cells) |
|---|---|---|---|---|
| CYP2C9 | Diclofenac (25) | 60 | 4-Hydroxydiclofenac | 0.67 ± 0.03 |
| CYP2C19 | S-Mephenytoin (250) | 60 | 4'-Hydroxymephenytoin | 0.18 ± 0.03 |
| CYP3A4 | Testosterone (200) | 60 | 6β-Hydroxytestosterone | 22.5 ± 2.56 |
| | Midazolam (20) | 60 | 1-Hydroxymidazolam | 1.61 ± 0.06 |
| UGT | 7-Hydroxycoumarin (100) | 60 | 7-Hydroxycoumarin glucuronide | 0.24 ± 0.05 |
| Sulfotransferase | 7-Hydroxycoumarin (100) | 60 | 7-Hydroxycoumarin sulfate | 1.33 ± 0.21 |
| CYP2J2 | Astemizole (50) | 60 | O-Desmethyl astemizole | 0.67 ± 0.36 |
| CES2 | Irinotecan (50) | 60 | SN38 | 1.07 ± 0.28 |

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