

Product Characterization Sheet

HE3040

Human Enterocytes, Catalog Number 82176



Classification

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

Donor Demographics

Gender	Male
Age	38 years
Race	African American
Cause of death	Anoxia
BMI	21.1
Smoking	No
Alcohol	No
Substance abuse	No
Medical history	None
Infectious diseases	HBV-, HCV-, HIV-, CMV+, EBV (IgG)+

Post-thaw Viability and Yield

Viability	86 %
Yield	2.5 million

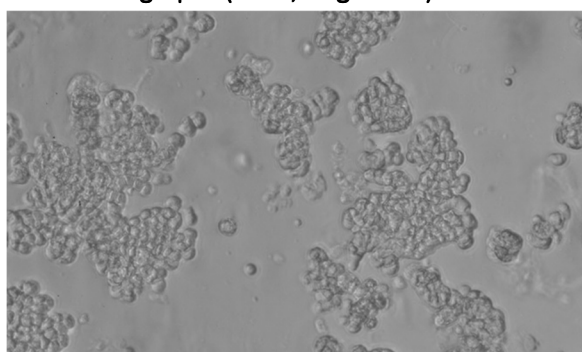
Characterization: Enterocytes were thawed using 37°C CERM™ and centrifuged for 10 minutes at 100g. After removing the supernatant, enterocytes were re-suspended in 4°C HQM™ and counted for viability and yield using the Trypan Blue exclusion method.

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 ± 0.09
	Testosterone (200)	120	6β-Hydroxytestosterone	32.3 ± 6.1
CYP2J2	Astemizole (50)	120	O-Desmethyl astemizole	0.3 ± 0.03
CES2	Irinotecan (50)	120	SN38	0.18 ± 0.03
CYP2C9	Diclofenac (25)	120	4-Hydroxydiclofenac	0.96 ± 0.04
CYP2C19	S-Mephenytoin (250)	120	4'-Hydroxymephenytoin	0.78 ± 0.04
Sulfotransferase	7-Hydroxycoumarin (100)	120	7-Hydroxycoumarin sulfate	22 ± 1.3
UGT	7-Hydroxycoumarin (100)	120	7-Hydroxycoumarin glucuronide	23.8 ± 4

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:

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