

Product Characterization Sheet

PHE3068

Pooled Human Enterocytes, Catalog Number 82180



Specification

Number of donors	10
Viability	83%
Yield	1.2 x 10 ⁶ /mL

Drug Metabolism Activity

Drug Metabolizing Enzyme	Substrate (μM)	Metabolite Quantified	Average Activity (pmol/minute/million cells)	Standard Deviation
CYP2C9	Diclofenac (25)	4-Hydroxydiclofenac	2.088	0.256
CYP2C19	S-Mephenytoin (250)	4-Hydroxymephenytoin	0.349	0.114
CYP3A4	Midazolam (20)	1-Hydroxymidazolam	0.562	0.053
	Testosterone (200)	6β-Hydroxytestosterone	10.122	2.592
UGT	7-Hydroxycoumarin (100)	7-Hydroxycoumarin glucuronide	6.307	0.430
Sulfotransferase	7-Hydroxycoumarin (100)	7-Hydroxycoumarin sulfate	4.638	0.155
2J2	Astemizole (50)	O-Demethyl Astemizole	0.311	0.121
CES2	Irinotecan (50)	SN38	0.032	0.070

CYP450 Activity Assessment: MetMax™ pooled human enterocytes were thawed in a 37°C water bath. A 1000 μL Eppendorf pipette (with tip) was used to pipet up and down three times to achieve homogeneity. MetMax™ enterocytes were prepared at a density of 2 million cells per mL. Equal volumes of MetMax™ enterocytes and 2X substrate were incubated for 60 minutes with isoform-selective substrates at 37°C. The final cell density of MetMax™ enterocytes and substrate was 1.0 million cells/mL in a 96-well plate (96 well plates pre-loaded with 50 μL of 2X substrates per well, and metabolism initiated by adding 50 μL of MetMax™ enterocytes to each of the wells, 100,000 enterocytes /well). The metabolites were identified and analyzed using LC-MS/MS.

Donor Demographics

	Donor 1	Donor 2	Donor 3	Donor 4	Donor 5
Gender	Female	Female	Female	Female	Female
Age	49 years	48 years	44 years	53 years	50 years
Race	Caucasian	Caucasian	Caucasian	Caucasian	Caucasian
Cause of death	Head trauma, GSW	CVA 2 nd to ICH	CVA 2 nd to ICH	Head trauma, GSW	Head trauma 2 nd to blunt injury
BMI	25.5	27.1	32.7	36.5	24.2
Smoking	Yes	Yes	Yes	No	Yes
Alcohol	Yes	No	Yes	No	Yes
Substance abuse	No	No	Yes	No	No
Medical history	None	HTN	HTN	None	Schizophrenia, epilepsy, asthma
Infectious diseases	HBV-, HCV-, HIV-, CMV+, EBV (IgG)+	HBV-, HCV-, HIV-, CMV+, EBV (IgG)+, EBV (IgM)+	HBV-, HCV-, HIV-, CMV+, EBV (IgG)+	HBV-, HCV-, HIV-, CMV+, EBV (IgG)+	HBV-, HCV-, HIV-, CMV-, EBV (IgG)+

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	Donor 6	Donor 7	Donor 8	Donor 9	Donor 10
Gender	Male	Male	Male	Male	Male
Age	60 years	61 years	34 years	32 years	47 years
Race	African American	Caucasian	African American	Hispanic	Caucasian
Cause of death	CVA 2 nd to ICH	Anoxia	CVA 2 nd to ICH	Anoxia	Head trauma 2 nd to blunt injury
BMI	20.7	30.0	30.6	21.0	31.1
Smoking	Yes	No	No	No	Yes
Alcohol	Yes	No	Yes	No	Yes
Substance abuse	No	No	No	Yes	No
Medical history	HTN	Melanoma	HTN	Diabetes, HTN	NA
Infectious diseases	HBV-, HCV-, HIV-, CMV+	HBV-, HCV-, HIV-, CMV+, EBV (IgG)+	HBV-, HCV-, HIV-, CMV-	HBV-, HCV-, HIV-, CMV+	HBV-, HCV-, HIV-, CMV-, EBV (IgG)+

IVAL cell culture media and tissue culture plates used in this evaluation:

- Substrate preparation for incubation of hepatocytes - Cat. No. 81039/81040 - HQM™ Hepatocyte Incubation Media, 50 mL tube/500 mL bottle

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