

Product Characterization Sheet

PHEX3097

MetMax™ Pooled Human Enterocytes, Catalog Number 82133



Specification

Number of donors	5
Volume	1.0 mL
Cell concentration	2.0 x 10 ⁶ /mL

Drug Metabolism Activity

Drug Metabolizing Enzyme	Substrate (μM)	Metabolite Quantified	Activity (pmol/minute/ million cells)
CYP1A2	Phenacetin (100)	Acetaminophen	0.55 ± 0.37
CYP2A6	Coumarin (50)	7-HC, 7-HC-Sulfate, 7-HC-Glucuronide	0.025 ± 0.021
CYP2A6	Coumarin (50)	7-Hydroxycoumarin	0 ± 0
CYP2A6	Coumarin (50)	7-Hydroxycoumarin Glucuronide	0.02 ± 0.02
CYP2A6	Coumarin (50)	7-Hydroxycoumarin Sulfate	0 ± 0
CYP2B6	Bupropion (500)	Hydroxybupropion	0.52 ± 0.13
CYP2C8	Paclitaxel (20)	6α-hydroxypaclitaxel	0.08 ± 0.02
CYP2C9	Diclofenac (25)	4-OH Diclofenac	4.08 ± 0.3
CYP2C19	S-Mephenytoin (250)	4-OH S-Mephenytoin	6.01 ± 1.62
CYP2D6	Dextromethorphan (15)	Dextrophan	0.97 ± 0.22
CYP2E1	Chlorzoxazone (250)	6-OH Chlorzoxazone	0.79 ± 0.05
CYP3A4-1	Midazolam (20)	1-Hydroxymidazolam	47.9 ± 5.37
CYP3A4-2	Testosterone (200)	6β-hydroxytestosterone	249 ± 31.8
ECOD	7-Ethoxycoumarin (100)	7-HC, 7-HC-Sulfate, 7-HC-Glucuronide	705 ± 59.6
ECOD	7-Ethoxycoumarin (100)	7-Hydroxycoumarin	694 ± 58.7
ECOD	7-Ethoxycoumarin (100)	7-Hydroxycoumarin Glucuronide	2.24 ± 0.49
ECOD	7-Ethoxycoumarin (100)	7-Hydroxycoumarin Sulfate	8.67 ± 0.44
UGT	7-Hydroxycoumarin (100)	7-Hydroxycoumarin Glucuronide	8.06 ± 2.89
SULT	7-Hydroxycoumarin (100)	7-Hydroxycoumarin Sulfate	11.7 ± 0.69
GST	Acetaminophen (10)	Acetaminophen Glutathione	122 ± 20.4
UGT	Acetaminophen (10)	Acetaminophen Glucuronide	2.3 ± 0.2
SULT	Acetaminophen (10)	Acetaminophen Sulfate	28.9 ± 1.95
FMO	Benzydamine HCl (250)	Benzydamine-N-Oxide	9.07 ± 1.42
MAO	Kynuramine HCl (160)	4-hydroxyquinoline	1236 ± 135
AO	Carbazeran HCl (10)	4-Hydroxycarbazeran	0.000
NAT1	4-Aminobenzoic HCl (200)	N-Acetyl-p-aminobenzoic acid	105 ± 11.9
NAT2	Sulfamethazine (100)	N-Acetyl-sulfamethazine	10.5 ± 0.52

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 15 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.

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Donor Demographics

	Donor 1	Donor 2	Donor 3	Donor 4	Donor 5
Gender	Female	Female	Male	Male	Male
Age	34 years	48 years	60 years	32 years	38 years
Race	Caucasian	Caucasian	Caucasian	Hispanic	African American
Cause of death	Anoxia	CVA 2 nd to ICH	CVA 2 nd to ICH	Anoxia	Anoxia
BMI	23.8	27.1	22.8	21.0	21.1
Smoking	No	Yes	Yes	No	No
Alcohol	Yes	No	Yes	No	No
Substance abuse	No	No	No	Yes	No
Medical history	Asthma	HTN	Diabetes, HTN	Diabetes, HTN	HTN
Infectious diseases	HBV-, HCV-, HIV-, CMV-, EBV (IgG)+	HBV-, HCV-, HIV-, CMV+, EBV (IgG)+, EBV (IgM)+	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