

# Cryo Characterization Report (CCR)

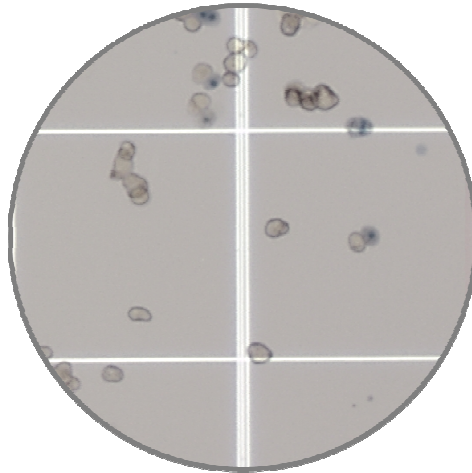


Lot Overview		
Lot Number	Qualification	Catalog Number
HUP2000	Pooled human suspension, metabolism qualified 20-donor pool	HUCS20P

Donor Demographics								
Sex	Race	Age	BMI	Tobacco Use	Alcohol Use	Drug Use	HIV, HBV, HCV Serologies	Cause of Death
Female	African American	48	24.4	Yes	Past	No	Negative	Anoxia
Female	Hispanic	67	28.4	No	No	No	Negative	Stroke
Female	Caucasian	48	35.5	Past	Past	No	Negative	Stroke
Female	Caucasian	22	23.4	No	No	No	Negative	Pneumonia
Female	African American	16 mos	14.6	No	No	No	Negative	Anoxia
Female	Caucasian	34	26.5	Yes	No	No	Negative	Stroke
Female	Caucasian	45	23.5	No	Yes	No	Negative	Stroke
Female	African American	48	24.3	No	Rare	No	Negative	Anoxia
Female	African American	50	32.0	Yes	Rare	No	Negative	Natural Causes
Female	Caucasian	42	29.0	No	No	No	Negative	Anoxia
Male	Caucasian	23	18.2	No	Past	Past	Negative	Anoxia
Male	Caucasian	30	25.2	Yes	Past	Past	Negative	Head Trauma
Male	Caucasian	64	18.9	No	No	No	Negative	Anoxia
Male	Hispanic	21	29.7	Yes	Yes	Yes	Negative	Head Trauma
Male	Caucasian	77	26.0	No	No	No	Negative	Anoxia
Male	Caucasian	58	22.7	Yes	Past	No	Negative	Anoxia
Male	Caucasian	39	25.7	Past	Yes	Yes	Negative	Head Trauma
Male	Caucasian	75	28.0	No	Yes	Yes	Negative	Head Trauma
Male	African American	21	23.9	Yes	Yes	No	Negative	Stroke
Male	Caucasian	37	26.0	No	Rare	No	Negative	Head Trauma

Additional donor demographic information, including relevant medical and medication history, is available upon request

Post-thaw Viability and Cell Quality Assessment			
Thawing Medium Used	Centrifuge Conditions	Viable Cell Yield per Vial	% Viability Post-Thaw
MCHT50P	200 x g for 10 min	6.5 x 10 <sup>6</sup> viable cells	77%



HUP2000, Post-Thaw, 10X

Suspension Metabolism			
Isoform	Substrate	Marker Metabolite	Activity pmol/min/10 <sup>6</sup> cells
CYP1A2	100 $\mu$ M Phenacetin	Acetaminophen	58.2
CYP2A6	5 $\mu$ M Coumarin	7-Hydroxycoumarin	29.5
CYP2B6	500 $\mu$ M Bupropion	Hydroxybupropion	104.8
CYP2C8	20 $\mu$ M Paclitaxel	6 $\alpha$ -Hydroxypaclitaxel	39.1
CYP2C9	25 $\mu$ M Diclofenac	4-Hydroxydiclofenac	245.9
CYP2C19	250 $\mu$ M Mephenytoin	4-Hydroxymephenytoin	30.1
CYP2D6	15 $\mu$ M Dextromethorphan	Dextrorphan	87.2
CYP2E1	250 $\mu$ M Chlorzoxazone	Hydroxychlorzoxazone	39.7
CYP3A4	200 $\mu$ M Testosterone	6 $\beta$ -Hydroxytestosterone	893.5
CYP3A4	8 $\mu$ M Midazolam	Hydroxymidazolam	189.3
General	100 $\mu$ M 7-Ethoxycoumarin	*Disappearance of 7-EC*	889.2
SULT	100 $\mu$ M 7-Hydroxycoumarin	7-Hydroxycoumarin Sulfate	50.4
UGT	100 $\mu$ M 7-Hydroxycoumarin	7-Hydroxycoumarin Glucuronide	871.6

Suspension Uptake			
Test Article	Accumulation at 37°C (pmol/million cells)	Accumulation at 4°C (pmol/million cells)	Transporter Specific Accumulation (Fold)
MPP+	30.2	8.8	3.4
E3S	94.0	44.4	2.1
TCA	37.1	17.0	2.2

*Media products used for characterization:*

MCHT50P – Cryopreserved human hepatocyte thawing medium - pooled, 50mL

MM250 – Hepatocyte maintenance medium, 250mL

Contact customer service to place an order or to obtain additional information on any of our cryopreserved primary hepatocyte lots.

**To contact TRL:**

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