

Materials List for

Human Liver Microphysiological System for Assessing Drug-Induced Liver Toxicity *In Vitro*

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jove.com/video/63389

Materials

Name	Company	Catalog Number	Comments
24 well cell culture cluster plates flat bottom	Corning	3524	
96 well clear assay plates, flat bottom clear plastic	Greiner	655101	
96 well plates black flat bottom	Corning	3915	
96 Well White/Clear Bottom Plate, TC Surface	ThermoScientific	165306	
Advanced DMEM (1x)	Gibco	12491015	Cell culture media.
AssayMax Albumin ELISA Kit	AssayPro	EA3201-1	Dilution 1:250. Time point Day 4, 6, and 8.
Cell Maintenance Cocktail B, (Primary Hepatocyte Maintenance Supplements)	Gibco	CM4000	
CellTiter-Glo 3D Cell Viability Assay	Promega	G9682	Dilution 1:1. Time point Day 8.
Chlorpromazine HCl	Sigma Aldrich	C8138	
Chromacol blue lids, 9 mm Autosampler Vial Screw Thread Caps	ThermoScientific	9-SCK(B)-ST1	glass vial
Chromacol vials, 9 mm Clear Glass Screw Thread Vials	ThermoScientific	2-SVW	
Class 2 Microbiological Safety Cabinets - Trimat2 1500 exhaust	Contained Air Solutions		
Conical tubes 50 mL	Greiner	227261	
Cryopreserved Hepatocyte Recovery Medium (CHRM)	ThermoFisher Scientific	Gibco CM7000	
Cryopreserved primary human hepatocytes	BioIVT Europe	Lot. RAS	
CytoTox 96 Cytotoxicity (LDH) Assay Kit	Promega	G1781	Dilution - none. Time point Day 4, 6 and 8
>Data analysis model used to generate the graph and EC:50 curves was nonlinear regression	GraphPad Prism 9		

(curve fit) asymmetric sigmoidal, 5PL, where X is log(concentration)			
Disposable PES Filter Units 500mL	Fisher Scientific	15913307	
Disposable Pipette Basins 50ml	Fisher Scientific	12369175	
DMSO (Dimethyl sulfoxide)	Sigma-Aldrich	Sigma D2650	
Dulbecco's Phosphate Buffered Saline without Ca ²⁺ and Mg ²⁺ (D-PBS)	ThermoFisher Scientific	14190-144	
Easy Reader Conical Polypropylene Centrifuge Tubes 15 mL	Fisher Scientific	11889640	
Foetal bovine serum	Gibco	10500064	
Human ALT ELISA Kit	Abcam	ab 234578	Dilution 1:5. Time point Day 6 and 8.
Human Cryopreserved Kupffer Cells	Lonza Europe	Lot. 190088KC	
hydrocortisone	Merck	H0888-1G	
Incubators models: New Brunswick Galaxy 170 S, New Brunswick Galaxy 170 R and CellXpert® C170.	Eppendorf		All serviced yearly; paperwork available upon request.
Inverted Microscope	Leica DMIL LED		
MPS know as Organ-on-a-Chip (OOC)	CN Bio Innovations Ltd.		
MPS LC-12 plate	CN Bio Innovations Ltd.		
Neubauer Improved C-Chip Disposable Haemocytometer (2 channel)	Cambridge Bioscience	DHC-N01-50	
P450-Glo CYP3A4 Assay and Screening System	Promega	V9002	Dilution - none. Time point Day 8
PhysioMimix MPS platform	CN Bio Innovations Ltd.		
Pioglitazone	MedChemExpress Tocris	HY-13956/CS-1700	
Quantichrom Urea Assay Kit – Bioassay systems	Bioassay Systems	DY970-05	Dilution 1:2 if initial reading is too high. Time point Day 4, 6 and 8.
Silica gel	Sigma-Aldrich	S7625	
Software used to analyse and generate all the graphs was	GraphPad Prism 9		
Stripettes 10 mL	Fisher Scientific	11839660	
Stripettes 25 mL	Fisher Scientific	11839181	
Thawing plate Cocktail A, (Primary Hepatocyte Thawing and Plating Supplements)	Gibco	CM3000	
Troglitazone	MedChemExpress Tocris	97322-87-7	
Trypan Blue Solution, 0.4%	Gibco	15250061	
Tubes 1.5 mL	Greiner	616201	
Weighing balance - model PA214C and AV213C	Ohaus Corp		