

Materials List for

Exploring Mitochondrial Energy Metabolism of Single 3D Microtissue Spheroids Using Extracellular Flux Analysis

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jove.com/video/63346

Materials

Name	Company	Catalog Number	Comments
A549	ECACC	#86012804	Lung carcinoma cell line
Agilent Seahorse XF RPMI Medium, pH 7.4	Agilent Technologies Inc.	103576-100	XF assay medium with 1 mM HEPES, without phenol red, sodium bicarbonate, glucose, L-glutamine, and sodium pyruvate
Agilent Seahorse XFe96 Extracellular Flux Analyzer	Agilent Technologies Inc.	-	Instrument for measuring rates of spheroid oxygen uptake in single spheroids
Antimycin A	Merck Life Science	A8674	Mitochondrial respiratory complex III inhibitor
BAM15	TOCRIS bio-technie	5737	Mitochondrial protonophore uncoupler
Black-walled microplate	Greiner Bio-One	655076	For fluorescence-based assays
CELLSTAR cell-repellent surface 96 U well microplates	Greiner Bio-One	650970	Microplates for generating spheroids
CellTiter-Glo 3D Cell Viability Assay	Promega	G9681	Assay for the determination of cell viability in 3D microtissue spheroids
Cultrex Poly-D-Lysine	R&D Systems a biotechnie brand	3439-100-01	Molecular cell adhesive for coating XFe96 spheroid microplates to facilitate attachment of spheroids
D-(+)-Glucose	Merck Life Sciences	G8270	Supplement for cell culture growth and XF assay medium
Dulbecco's Modified Eagle Medium (DMEM)	Gibco	11885084	Culture medium for HepG2/C3A spheroids
EVOS XL Core Imaging System	Thermo Fisher Scientific	AMEX1000	Phase-contrast imaging microscope
EZ-PCR Mycoplasma test kit	Biological Industries	20-700-20	Mycoplasma screening in cell cultures
FIJI Is Just Image J			Analysis of collated images
Foetal bovine serum	Merck Life Science	F7524	Supplement for cell culture medium
HepG2/C3A	ATCC	#CRL-10741	Hepatic carcinoma cell line, a clonal derivative of the parent HepG2 cell line

Lactate-Glo	Promega	J5021	Assay for measurement of lactate within spheroid culture medium
L-glutamine (200 mM solution)	Merk Life Sciences	G7513	Supplement for cell culture growth and XF assay medium
M50 Stereo microscope	Leica Microsystems	LEICAM50	Stereo dissection microscope; used for spheroid handling
MCF-7	ECACC	#86012803	Breast adenocarcinoma cell line
Oligomycin from <i>Streptomyces diastatochromogenes</i>	Merck Life Science	O4876	ATP Synthase Inhibitor
Penicillin-Streptomycin	Gibco	15140122	Antibiotics added to cell culture medium
Quant-iT PicoGreen dsDNA Assay Kit	Invitrogen	P7589	Analysis of dsDNA in spheroids
Rotenone	Merck Life Science	R8875	Mitochondrial Respiratory Complex I Inhibitor
RPMI 1640	Gibco	21875091	Culture medium for A549, MCF7, and SK-OV-3 spheroids
Seahorse Analytics	Agilent Technologies Inc.	Build 421	https://seahorseanalytics.agilent.com
Seahorse XFe96 Spheroid FluxPak	Agilent Technologies Inc.	102905-100	Each Seahorse XFe96 Spheroid FluxPak contains: 6 Seahorse XFe96 Spheroid Microplates (102978-100), 6 XFe96 sensor cartridges, and 1 bottle of Seahorse XF Calibrant Solution 500 mL (100840-000)
Serological pipette: 5, 10, and 25 mL	Greiner Bio-One	606107; 607107; 760107	Consumables for cell culture
SK-OV-3	ECACC	#HTB-77	Ovarian adenocarcinoma cell line
Sodium pyruvate (100 mM solution)	Merck Life Science	S8636	Supplement for cell culture growth and XF assay medium
T75 cm ² cell culture flask	Greiner Bio-One	658175	Tissue culture treated flasks for maintaining cell cultures
TrypLEExpress	Gibco	12604-021	Cell dissociation reagent
Wave controller software	Agilent Technologies Inc.	-	
Wide orifice tip	STARLAB International GmbH	E1011-8400	Pipette tips with wide opening for spheroid handling