

Materials List for:

Generation of Human Nasal Epithelial Cell Spheroids for Individualized Cystic Fibrosis Transmembrane Conductance Regulator Study

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Materials

Name	Company	Catalog Number	Comments
1.5 mL Eppendorf Tube	USA Scientific	4036-3204	
150 mL Filter Flask	Midsci	TP99150	To filter Media
15 mL Conical Tube	Midsci	TP91015	
1 L Filter Flask	Midsci	TP99950	To filter Media
35 mm Glass-Bottom Dish	MatTek Corporation	P35G-0-20-C	Optional
3-Isobutyl-1-Methylxanthine (IBMX)	Fisher Scientific	AC228420010	Prepare a 100 mM stock solution of 22.0 mg in 1 mL of DMSO
50 mL Conical Tube	Midsci	TP91050	
Accutase	Innovative Cell Technologies, Inc.	AT-104	Cell detachment solution
Adenine	Sigma-Aldrich	A2786-25G	See Table 1
Amphotericin B	Sigma-Aldrich	A9528-100MG	See Table 1
Bovine Brain Extract (9mg/mL)	Lonza	CC-4098	See Table 2
Ceftazidime hydrate	Sigma-Aldrich	C3809-1G	See Table 1
Cell Scrapers 20 cm	Midsci	TP99010	
CFTR Inh172	Tocris Bioscience	3430	Prepare a 10 mM stock solution of 4.0 mg in 1 mL of DMSO
Cholera Toxin B (From <i>Vibrio cholerae</i>)	Sigma-Aldrich	C8052-.5MG	See Table 1
CYB-1	Medical Packaging Corporation	CYB-1	Cytology brush
Dimethyl sulfoxide (DMSO)	Sigma-Aldrich	D5879-500ML	
Dulbecco's Modified Eagle Media (DMEM)/F12 Hepes	Life Technologies	11330-057	Base Medium; See Tables 1 and 2
Epidermal Growth Factor (Recombinant Human Protein, Animal-Origin Free)	Thermo Fisher Scientific	PHG6045	See Table 1
Epinephrine	Sigma-Aldrich	E4250-1G	See Table 2
Ethanol	Fisher Scientific	2701	
Ethanolamine	Sigma-Aldrich	E0135-500ML	16.6 mM solution; See Table 2
Ethylenediaminetetraacetic Acid (EDTA)	TCI America	E0084	
Fetal Bovine Serum (high performance FBS)	Invitrogen	10082147	See Table 1
Forskolin	Sigma-Aldrich	F6886-50	Prepare a 10 mM stock solution of 4.1 mg in 1 mL of DMSO
Growth Factor-Reduced Matrigel	Corning, Inc.	356231	Corning Matrigel Growth Factor Reduced (GFR) Basement Membrane Matrix, Phenol Red-Free, LDEV-Free, 10 mL.

Hemocytometer	Hausser Scientific	1483	
Human Collagen Solution, Type I (Vitracol; 3 mg/mL)	Advanced BioMatrix	5007-A	Collagen solution
HyClone (aka FetalClone II)	GE Healthcare	SH30066.03HI	See Table 2
Hydrocortisone	StemCell Technologies	07904	See Tables 1 and 2
Insulin, human recombinant, zinc solution	Life Technologies	12585014	4 mg/mL solution; see Table 2
IVF 4-Well Dish, Non-treated	NUNC (via Fisher Scientific)	12566350	4-well plate for spheroids; similar well size to a 24-well plate
MEF-CF1-IRR	Globalstem	GSC-6001G	Irradiated murine embryonic fibroblasts
Metamorph 7.7	Molecular Devices		Analysis Software; https://www.moleculardevices.com/systems/metamorph-research-imaging/metamorph-microscopy-automation-and-image-analysis-software for a quote
Olympus IX51 Inverted Microscope	Olympus Corporation	Discontinued	Imaging Microscope. Replacement: Olympus IX53, https://www.olympus-lifescience.com/pt/microscopes/inverted/ix53/ for a quote
Pen Strep	Life Technologies	15140122	See Table 2
Phosphorylethanolamine	Sigma-Aldrich	P0503-5G	See Table 2
Retinoic Acid	Sigma-Aldrich	R2625-50MG	See Table 2
Rhinoprobe	Arlington Scientific, Inc.	96-0905	Nasal curette
Slidebook 5.5	3i, Intelligent Imaging Innovations	Discontinued	Imaging Software. Replacement: Slidebook 6, https://www.intelligent-imaging.com/slidebook for a quote
Sterile Phosphate Buffered Saline (PBS)	Thermo Fisher Scientific	20012050	
Sterile Water	Sigma-Aldrich	W3500-6X500ML	
Tissue Culture Dish 100	Techno Plastic Products	93100	Tissue culture dish for expansion
Tobramycin	Sigma-Aldrich	T4014-100MG	See Table 1
Transferrin (Human Transferrin 0.5 mL)	Lonza	CC-4205	See Table 2
Triiodothyronine	Sigma-Aldrich	T6397-1G	3,3',5-Triiodo-L-thyronine sodium salt [T3]; See Table 2
Trypsin from Porcine Pancreas	Sigma-Aldrich	T4799-10G	
Ultroser-G	Crescent Chemical (via Fisher Scientific)	NC0393024	20 mL lyophilized powder; See Table 2
Vancomycin hydrochloride from Streptomyces orientalis	Sigma-Aldrich	V2002-5G	See Table 1
VX770	Selleck Chemicals	S1144	Prepare a 1 mM stock solution of 0.4 mg in 1 mL of DMSO
VX809	Selleck Chemicals	S1565	Purchase or prepare a 10 mM stock solution of 4.5 mg in 1 mL of DMSO
Y-27632 Dihydrochloride ROCK inhibitor	Enzo LifeSciences	ALX-270-333-M025	See Table 1