

Materials List for:

Production, Characterization and Potential Uses of a 3D Tissue-engineered Human Esophageal Mucosal Model

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Materials

Name	Company	Catalog Number	Comments
Trypsin	BD Biosciences	215240	Prepare 0.1% w/v solution in PBS and filter sterilize. Warm in 37 °C water bath before use.
DMEM	Labtech	LM-D1112	Warm in 37 °C water bath before use
Ham's F12	Labtech	LM-H1236	Warm in 37 °C water bath before use
Foetal Calf Serum	Labtech	FB-1090	
Epidermal Growth Factor	R+D Systems	236-EG-200	Prepare 200 µg/ml stock solution in 10 mM acetic acid, 1% FCS
Hydrocortisone	Sigma-Aldrich	H0396	Prepare stock solution in PBS and filter sterilize before use
Adenine	Sigma-Aldrich	A2786	Prepare stock solution in PBS and filter sterilize before use
Insulin	Sigma-Aldrich	I2767	Prepare 10 mg/ml solution in 0.01 M HCl, dilute 1:10 in distilled water and filter sterilize before use
Transferrin	Sigma-Aldrich	T2036	Prepare stock solution in distilled water and filter sterilize before use
Triiodothyronine	Sigma-Aldrich	T2752	Prepare stock solution in distilled water and filter sterilize before use
Cholera toxin	Sigma-Aldrich	C8052	Prepare stock solution in water
L-Glutamine	Sigma-Aldrich	G7513	
Penicillin-Streptomycin	Sigma-Aldrich	P0781	
Amphotericin B	Gibco	15290-026	Brand name Fungizone
PBS	Oxoid	BR0014	Dissolve 1 tablet in 100 ml water and autoclave to sterilize
Collagenase A	Roche	10103578001	
Povidone-iodine solution	Ecolab	10830E	Brand name Videne
Ethanol	Sigma-Aldrich	E7023	
Chelex 100	Sigma-Aldrich	C7901	
Newborn calf serum	Gibco	26010074	
Progesterone	Sigma-Aldrich	P8783	Prepare stock solution in DMEM and filter sterilize before use
Ethanolamine	Sigma-Aldrich	E9508	Prepare stock solution in DMEM and filter sterilize before use

Hydrocortisone	Sigma-Aldrich	H0888	Prepare stock solution in DMEM and filter sterilize before use
O-phosphorylethanolamine	Sigma-Aldrich	P0503	Prepare stock solution in DMEM and filter sterilize before use
ITS (insulin, transferrin, selenium)	Lonza	17-838Z	Used for composite media preparation
Trypsin-EDTA	Sigma-Aldrich	T3924	Warm in 37 °C water bath before use
EDTA 0.02% solution	Sigma-Aldrich	E8008	Warm in 37 °C water bath before use
T75 culture flask	VWR	734-2313	
50 ml centrifuge tube	Fisher	11819650	
15 ml universal tube	SLS	SLS7504	
180 ml pot	VWR	216-2603	
Petri dish	SLS	150350	
6 well plate	VWR	734-2323	
stainless steel rings			Manufactured in house - medical grade stainless steel, internal diameter 10 mm, external diameter 20 mm
steel mesh grids			Manufactured in house - sheets have 0.3 cm diameter holes, bent to produce grid 2 cm (w) x 2 cm (d) x 0.5 cm (h)
ki67	Novocastra	KI67-MM1-L-CE	Clone MM1. Use at 1:100.
CK4	Abcam	ab9004	Clone 6B10. Use at 1:200.
CK14	Novocastra	LL002-L-CE	Clone LL002. Use at 1:200.
Involucrin	Novocastra	INV	Clone SY5. Use at 1:100.
OE21	Sigma-Aldrich	96062201	
OE33	Sigma-Aldrich	96070808	
Het-1A	ATCC-LGC	CRL-2692	
Mouse 3T3 fibroblasts	ATCC-LGC	CRL-1658	previously growth arrested by irradiation (60 Gy)