

# Engineered Lung Tissues Prepared from Decellularized Lung Slices

 Katherine L. Leiby<sup>1,2</sup>, Ronald Ng<sup>1</sup>, Stuart G. Campbell<sup>1,3</sup>, Laura E. Niklason<sup>1,4</sup>
<sup>1</sup>Department of Biomedical Engineering, Yale University <sup>2</sup>Yale School of Medicine <sup>3</sup>Department of Cellular and Molecular Physiology, Yale School of Medicine <sup>4</sup>Department of Anesthesiology, Yale School of Medicine

## Corresponding Author

 Laura E. Niklason  
 laura.niklason@yale.edu

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## Materials

Name	Company	Catalog Number	Comments
3D Printer: Form 2	Formlabs		
3-Isobutyl-1-methylxanthine (IBMX)	Sigma	I5879	
8-Bromo cAMP	Sigma	B7880	
Agarose, UltraPure LMP	Invitrogen	15517-014	
Amphotericin B	Sigma	A2942	
Barbed reducer fitting, 3/8 inch x 1/4 inch	McMaster-Carr	5121K271	
Benzonase nuclease	Sigma	E1014	
Bovine serum albumin (BSA) Fraction V	Gemini	700-104P	For AEC2 growth medium
Bovine serum albumin (BSA), standard grade	Gemini	700-100P	For benzonase buffer
Check valve, polypropylene, 1/8 inch hose barb	Cole-Parmer	SK-98553-10	
CHIR99021	PeproTech	2520691	
Clear Resin, 1 L	Formlabs	RS-F2-GPCL-04	
Cyanoacrylate glue, such as Krazy Maximum Bond Permanent Glue	Any hardware, craft, or drug store	KG483 or similar	
Dexamethasone	Sigma	D4902	
DMEM (low glucose)	Gibco	11885-084	
DMEM (high glucose)	Gibco	11965-092	
DNA assay (Quant-iT PicoGreen dsDNA Assay Kit)	Invitrogen	P7589	
EDTA, 0.5 M, pH 8.0	AmericanBio	AB00502-01000	
EdU kit (Click-iT EdU Cell Proliferation Kit for Imaging, Alexa Fluor 647)	Invitrogen	C10340	Used according to manufacturer's directions
Elbow fitting, 3/8 inch	McMaster-Carr	5121K907	
F12	Gibco	11765-054	

Fetal bovine serum (FBS), characterized	Hyclone	SH30071.03	
Gentamicin sulfate	Gemini	400-100P	Reconstituted in diH <sub>2</sub> O for a stock solution at 50 mg/mL
Hair clippers	Wahl	MiniArco	
Hank's balanced salt solution (HBSS), Phenol Red Free	Gibco	14175-095	
Heparin sodium injection, USP, 1000 U/mL	Sagent	NDC: 25021-400-30	For intraperitoneal and intracardiac injection
Heparin sodium salt	Sigma	H4784	For pulmonary artery perfusion; prepare stock solution at 100 U/mL in PBS
HEPES Buffer	Corning	25-060-CI	
Inline tee fitting, 3/8 inch x 1/8 inch	McMaster-Carr	5121K851	
Inoculating loop, disposable	Fisherbrand	22-363-600	
Insulin from bovine pancreas	Sigma	I6634	
Ketamine injection, 100 mg/mL	Covetrus (Butler Animal Health)	010177	
KGF, recombinant human	PeptoTech	100-19	
Laser cutter, VLS 3.50 30 watt	Universal Laser Systems		
L-glutamine	Gibco	25030-081	
Luer-lock, female, 3/32 inch	Cole-Parmer	45508-02	
Luer-lock, male, 1/8 inch	Cole-Parmer	30800-24	
Luer-lock, male, 1/4 inch	McMaster-Carr	51525K146	
MCDB-131 Complete without serum	VEC Technologies	MCDB-131 WOFBS	
Magnesium chloride (MgCl <sub>2</sub> ), 1 M	AmericanBio	AB09006-00100	
NaCl	American Bioanalytical	AB01915	
Phosphate buffered saline (PBS), without Ca <sup>2+</sup> and Mg <sup>2+</sup> , 10X	Sigma	D1408	Reconstitute to 1X with diH <sub>2</sub> O
Phosphate buffered saline (PBS), with Ca <sup>2+</sup> and Mg <sup>2+</sup>	Gibco	21300-058	
PDMS - SYLGARD 184 Silicone Elastomer Kit	Dow Corning Corporation	4019862	
Penicillin/Streptomycin (10,000 U/mL penicillin/10,000 µg/mL streptomycin)	Gibco	15140-122	
Petri dish, 150 mm	Falcon	351058	
Plastic film (parafilm)	Bemis	PM-996	
Pharmed BPT tubing, LS 16	Masterflex	06508-16	
Pharmed BPT tubing, LS 17	Masterflex	06508-17	
Platinum-cured silicone tubing, LS 14	Masterflex	96420-14	
Platinum-cured silicone tubing, LS 16	Masterflex	96420-16	
Platinum-cured silicone tubing, LS 36	Masterflex	96410-36	
Poloxamer 407 (Pluronic F-127)	Sigma	P2443	
Povidone/iodine prep pads, 10%	Dynarex Corporation	1108	
PTFE sheet, 0.060 inch (1/16 inch) thick	ePlastics	PTFENAT0.060X12X12	For tissue culture cassette tabs
PTFE sheet, 0.093 inch (3/32 inch) thick	ePlastics	PTFENAT0.093X12X12	For tissue culture cassette frames and clips
Peristaltic pump drive: Masterflex L/S Variable-Speed Digital Drive	Cole-Parmer	ZM-07528-30	
Peristaltic pump head: Masterflex L/S Easy-Load II Pump Head	Cole-Parmer	EW-77202-60	
Rat, Sprague Dawley	Charles River	Strain Code: 400	

Razor blade	Any hardware or craft store	Personna 94-120-71 or similar	
Retinoic acid	Sigma	R2625	
Rotary blades, 28 mm	Omnigrid	2046	
Rotary cutter, 28 mm	Olfa	Model 9551	
Sodium deoxycholate (SDC)	Sigma	D6750	
Sodium nitrorusside (SNP)	Sigma	71778	
Stopcock, 4-way	Edwards	594WSC	
Suture, 4-0 monofilament polypropylene	Covidien	VP-557-X	
Syringe, 10 mL	BD	302995	
Syringe, 50 mL	BD	309653	
Tissue culture dish, 35 mm	Falcon	353001	
Tissue culture dish, 100 mm	Corning	430167	
Tissue culture plate, 6-well	Falcon	353046	
Tissue culture plate 12-well	Falcon	353043	
Transferrin human	Sigma	T8158	
Tris, 1 M solution, pH 8.0	AmericanBio	AB14043-01000	
Triton X-100	American Bioanalytical	AB02025-00500	
Vibratome, Compresstome VF-300-0Z	Precisionary Instruments LLC		
Xylazine, 100 mg/mL	Henry Schein	NDC: 11695-4022-1	
Y-connector, 1/16 inch barbed	Cole-Parmer	30614-43	