

Materials List for:

# Rapid, Directed Differentiation of Retinal Pigment Epithelial Cells from Human Embryonic or Induced Pluripotent Stem Cells

Leah P. Foltz<sup>1</sup>, Dennis O. Clegg<sup>1</sup>

<sup>1</sup>Center for Stem Cell Biology and Engineering, University of California, Santa Barbara

Correspondence to: Leah P. Foltz at [leah.foltz@lifesci.ucsb.edu](mailto:leah.foltz@lifesci.ucsb.edu)

URL: <https://www.jove.com/video/56274>

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## Materials

Name	Company	Catalog Number	Comments
SterilGARD III laminar flow biosafety cabinet	Baker	model: SG603A-HE, type: A2, class: 2	6' Baker laminar flow biosafety cabinet
Dissection Hood	Labconco	Model 3970405	laminar flow bench top
dissecting microscope	Nikon	SMZ 1500	heated stage
air-jacketed CO2 incubator	Sanyo	MCO-17AIC	37 oC and 5% CO2
inverted phase contrast microscope	Olympus	IX53	
Name	Company	Catalog Number	Comments
<b>Media Components</b>			
DMEM/F12	Gibco	10565042	
N2 Supplement	Gibco	17502048	
B27 Supplement	Gibco	17504044	
NEAA	Gibco	11140050	
Name	Company	Catalog Number	Comments
<b>Growth Factors and Reagents</b>			
Nicotinamide	Sigma	N0636	
Recombinant mouse noggin	R&D systems	1967-NG-025	
Recombinant human DKK-1	R&D systems	5439-DK-010	
Recombinant IGF-1	R&D systems	291-G1-200	
FGF-basic	Peptotech	100-18B	
Recombinant human/mouse/rat Activin A	Peptotech	120-14E	
SU5402 FGF inhibitor	Santa Cruz Biotechnology	sc-204308	
Name	Company	Catalog Number	Comments
<b>Substrates</b>			
Matrigel Basement Membrane Matrix, Phenol Red-Free, LDEV-Free	Corning	356237	extracellular matrix-based hydrogel (ECMH)
Matrigel hESC-Qualified Matrix, LDEV-Free	Corning	354277	growth factor reduced ECMH
Name	Company	Catalog Number	Comments
<b>Other reagents</b>			
1X Versene (EDTA)	Gibco	15040066	
DPBS	Gibco	14190250	
1X PBS (no calcium, no magnesium)	Gibco	10010023	

TrypLE (trypsin-like dissociation enzyme, TDE)	Gibco	12563011	
X-VIVO 10 (RPE supporting medium)	Lonza	BW04-743Q	
Y-27632	Tocris	12-541-0 (1254)	
CryoStor CS10	BioLife Solutions	210102	cryopreservation medium
1.2 mL Cryogenic Vial	Corning	430487	
Mr. Frosty (freezing container)	Nalgene	5100-0001	freezing container
Normocin	Invivogen	ant-nr-2	antimicrobial reagent
<b>Name</b>	<b>Company</b>	<b>Catalog Number</b>	<b>Comments</b>
<b>Other Equipment</b>			
Pipet-aid	Drummond	4-000-101	
12-well culture plate	Corning	CLS3516	Used during differentiation.
T75 flask	Corning	430641	Used during RPE maturation.
6-well culture plate	Corning	CLS3513	Used during RPE maturation.
cell scraper	Corning	08-771-1A	Used during passages.
cell strainer	Falcon	352340	Used during passages before cell count.