

Materials List for:

Suppression of Pro-fibrotic Signaling Potentiates Factor-mediated Reprogramming of Mouse Embryonic Fibroblasts into Induced Cardiomyocytes

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Materials

Name	Company	Catalog Number	Comments
C57BL/6 Mice	Charles River's Laboratory	027	For MEF isolation
Platinum E (PE) Cells	Cell Biolabs, INC	RV-101	For retrovirus production
DMEM High Glucose	Gibco	SH30022.FS	Component of iCM, PE, and Growth media
Medium 199	Life Technologies	11150-059	Component of iCM media
Fetal Bovine Serum	Gemini	100106	Component of iCM, PE, and Growth media
Donor Horse Serum	Gemini	100508 500	Component of iCM media
MEM Essential Amino Acids, 50X	Life Technologies	11130051	Component of iCM media
Sodium Pyruvate Solution, 100X	Life Technologies	11360070	Component of iCM media and for calcium imaging
MEM Non-Essential Amino Acids, 100X	Life Technologies	11140050	Component of iCM media
MEM Vitamin Solution, 100X	Life Technologies	11120-052	Component of iCM media
Insulin-Transferrin-Selenium	Gibco	41400045	Component of iCM media
B27	Gibco	17504-044	Component of iCM media
Penicillin-Streptomycin	Gibco	15140-122	Component of iCM, PE, and Growth media
GlutaMAX (L-Glutamine Supplement)	Gibco	35050-061	Component of iCM, PE, and Growth media
Blasticidin-HCl	Life Technologies	A11139-03	Component of PE media
Puromycin dihydrochloride	Life Technologies	A11138-03	Component of PE media
0.25% Trypsin/EDTA	Gibco	25200-056	For detaching cells from culture dishes
A-83-01	R&D Systems - Tocris	2939/10	Treat cells to inhibit TGF- β signaling - promotes high efficiency reprogramming. Use at 0.5 μ M
DMSO	Thermo Scientific	85190	For dilution and storage of A-83-01 and component of Freeze Medium
SureCoat	Cellutron	SC-9035	For coating dishes to plate MEFs
FuGENE 6 Transfection Reagent	Promega	E2692	Transfection Reagent
Opti-MEM Reduced Serum Media	Gibco	11058-021	Transfection Reagent
pBabe-X Myc-GATA4			Plasmid containing reprogramming factor
pBabe-X Myc-Hand2			Plasmid containing reprogramming factor

pBabe-X Myc-Mef2c			Plasmid containing reprogramming factor
pBabe-X Myc-Tbx5			Plasmid containing reprogramming factor
pBabe-X miR-1			Plasmid containing reprogramming factor
pBabe-X miR-133			Plasmid containing reprogramming factor
pBabe-X GFP			Plasmid containing reprogramming factor
Polybrene (Hexadimethrine bromide)	Sigma	H9268-5G	For viral induction. Use at a concentration of 6 µg/mL
Vacuum Filter + bottles (0.22 µm pores)	Nalgene	569-0020	For filtering media
Syringes	Bd Vacutainer Labware	309654	For viral filtration
0.45 µm Filters	Celltreat	229749	For viral filtration
70 µm cell strainers	Falcon	352350	For MEF isolation and Flow Cytometry
Cytofix/Cytoperm Solution	BD	554722	For fixation and permeabilization of cells for flow cytometry
perm/wash buffer	BD	554723	For washing cells for flow cytometry
DPBS 1X	Gibco	14190-250	For washing cells
Bovine Serum Albumin	VWR	0332-100g	For flow cytometry and calcium imaging
Goat Serum	Sigma	G9023	For blocking cells for Flow Cytometry
Donkey Serum	Sigma	D9663-10mg	For blocking cells for Flow Cytometry
Mouse Troponin T	Thermo Scientific	ms-295-p	1:400 IF, 1:200 Flow Cytometry
Mouse α-actinin	Sigma	A7811L	1:400 IF, 1:200 Flow Cytometry
Rabbit Connexin 43	Sigma	C6219	1:400 IF
Rabbit Troponin I	PhosphoSolutions	2010-TNI	1:400 IF
Hoechst	Life Technologies	62249	1:10000 IF
Alexa 488, rabbit	Life Technologies	A-11034	1:800 IF
Alexa 555, mouse	Life Technologies	A-21422	1:800 IF
Alexa 647, mouse	Life Technologies	A-31571	1:200 Flow Cytometry
27-color ZE5 Flow Cytometer	Bio-RAD		For FACS
Paraformaldehyde	sigma	P6148-500mg	For fixing cells for IF
Triton X-100	Promega	H5142	For permeabilization of cells for IF
EVOS™ FL Color Imaging System	Thermo Scientific	AMEFC4300	For IF
NaCl	RPI	S23020-5000	For calcium imaging
KCl	VWR	395	For calcium imaging
CaCl ₂	Fisher	C614-500	For calcium imaging
MgCl ₂	VWR	97061-352	For calcium imaging
glucose	sigma	G7528-250g	For calcium imaging
HEPES	sigma	H4034-500g	For calcium imaging
Fura-2 AM	Life Technologies	F1221	For calcium imaging
Fluoronic F-127	Sigma	P2443-250g	For calcium imaging

Nifedipine	Sigma	N7634-1G	For disruption calcium transients in iCMs - use at 10 μ M
Isoproterenol	sigma	I6504-1g	For increasing number of calcium transients in iCMs - use at 1-2 μ M
Marianas Spinning Disk Confocal microscope	3i		For calcium imaging
ethanol	Decon Laboratories	2801	
bleach	Clorox		
50 mL conical tubes	GREINER BIO-ONE	227261	
15 mL conical tubes	GREINER BIO-ONE	188271	
15 cm cell culture dishes	Falcon	353025	
10 cm cell culture dishes	Falcon	353003	
60 mm cell culture dishes	GREINER BIO-ONE	628160	
6 well cell culture plates	GREINER BIO-ONE	657160	
12 well cell culture plates	GREINER BIO-ONE	665180	
24 well cell culture plates	GREINER BIO-ONE	662160	