

Materials List for:

Directed Dopaminergic Neuron Differentiation from Human Pluripotent Stem Cells

Pengbo Zhang^{*1}, Ninuo Xia^{*1}, Renee A. Reijo Pera^{1,2}

¹Institute for Stem Cell Biology and Regenerative Medicine, Stanford University School of Medicine

²Department of Obstetrics and Gynecology, Stanford University School of Medicine

*These authors contributed equally

Correspondence to: Pengbo Zhang at zhangpb@stanford.edu

URL: <https://www.jove.com/video/51737>

DOI: [doi:10.3791/51737](https://doi.org/10.3791/51737)

Materials

Name	Company	Catalog Number	Comments
DMEM	Life Technologies	10569-010	
FBS	Life Technologies	26140	
penicillin/ampicillin	Life Technologies	15140-122	
DMEM/F12	Life Technologies	10565-018	
KSR	Life Technologies	10828-028	
Non-essential amino acid	Life Technologies	11140-050	
b-mercaptoethanol	Millipore	ES-007-E	
bFGF	R&D Systems	233-FB-025	
mTesR1	STEMCELL Technologies	5850	
Collagenase IV	Life Technologies	17104-019	
Gelatin	Sigma-Aldrich	G9391	
N2 supplement	Life Technologies	17502-048	
B27 supplement	Life Technologies	17504-044	
Neurobasal	Life Technologies	21103-049	
Glutamax	Life Technologies	35050-061	
PBS	Life Technologies	10010-023	
Growth factor reduced matrigel	BD Biosciences	354230	
Accutase	MP Biomedicals	1000449	
Thiazovivin	Santa Cruz Biotechnology	sc-361380	
SB431542	Tocris Bioscience	1614	
LDN-193189	Stemgent	04-0074	
SAG	EMD Millipore	566660-1MG	
Purmorphamine	Santa Cruz Biotechnology	sc-202785	
FGF8b	R&D Systems	423-F8-025	
CHIR99021	Cellagen Technology	C2447-2s	
BDNF	R&D Systems	248-BD-025	
GDNF	R&D Systems	212-GD-010	
TGF-beta3	R&D Systems	243-B3-002	
Ascorbic acid	Sigma-Aldrich	A4034	
cAMP	Sigma-Aldrich	D0627	
Mouse anti human NESTIN antibody	Santa Cruz Biotechnology	sc-23927	1/1,000 dilution

Rabbit anti human OTX2 antibody	Millipore	AB9566	1/2,000 dilutiion
Goat anti human FOXA2 antibody	R&D Systems	AF2400	1/200 dilution
rabbit anti human LMX1a antibody	Millipore	AB10533	1/1,000 dilution
Rabbit anti human TH antibody	Pel Freez	P40101	1/500 dilution
Chicken anti human TH antibody	Millipore	AB9702	1/500 dilution
Mouse anti human TUJ1 antibody	Covance	MMS-435P	1/,2000 dilution
Rabbit anti human GIRK2 antibody	Abcam	ab30738	1/300 dilution
Rabbit anti human Calbindin antibody	Abcam	ab25085	1/400 dilution
Centrifuge	Eppendorf	5804	