

Materials List for:

Differentiation and Characterization of Neural Progenitors and Neurons from Mouse Embryonic Stem Cells

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Materials

Name	Company	Catalog Number	Comments
0.05% Trypsin + 0.53mM EDTA 1X	Corning	25-052-CV	
0.1% Gelatin	Sigma	G1890-100G	Prepared in de-ionized water
16% Paraformaldehyde	Thermo Scientific	28908	Diluted in 1X PBS
40-µm cell strainer	Falcon	352340	
Albumax	Thermo Fisher Scientific	11020021	
AlexaFluor 488 goat anti-mouse IgG (H+L)	Invitrogen	A11001	Antibody was diluted at 1:500 for IF
Alkaline Phosphatase Staining Kit II	Stemgent	00-0055	
AzuraQuant Green Fast qPCR Mix LoRox	Azura Genomics	AZ-2105	
B27 supplement	Thermo Fisher Scientific	17504044	
BD FACSCanto	BD	657338	
bFGF	Sigma	11123149001	
BioAnalyzer High Sensitivity DNA Kit	Agilent	5067-4626	
Chir99021	Cayman Chemicals	13122	
Chloroform	C298-500	Fisher Chemical	
DAPI	Invitrogen	R37606	
DMEM	Corning	10-017-CM	
DMEM/F12 medium	Thermo Fisher Scientific	11320033	
EB buffer	Qiagen	19086	
Ethanol	111000200	Pharmco	Diluted in de-ionized water
Fetal bovine serum	Atlanta Biologicals	S10250	
Fisherbrand Superfrost Plus Microscope Slides	Fisher Scientific	12-550-15	
HiSeq 2500 Sequencing System	Illumina	SY-401-2501	
Isopropanol	BDH1133-4LG	BDH VWR Analytical	Diluted in de-ionized water
L-glutamine	Thermo Fisher Scientific	25030024	
LIF	N/A	N/A	Collected from MEF supernatant
m18srRNA primers	IDTDNA	N/A	5'-GCAATTATTCCTCATGAACG-3' 5'-GGCCTCACTAAACCATCCAA-3'
MEM Non-essential amino acids	Corning	25-025-CI	
mNanog primers	IDTDNA	N/A	5'-AGGCTTTGGAGACAGTGAGGTG-3'

			5'-TGGGTAAGGGTGTTC AAGCACT-3'
mNes primers	IDTDNA	N/A	5'-AGTGCCCAGTTCTAGTGGTGTCC-3' 5'-CCTCTAAAATAGAGTGGTGAGGGTTG-3'
mNeuroD1 primers	IDTDNA	N/A	5'-CGAGTCATGAGTGCCCAGCTTA-3' 5'-CCGGGAATAGTGAACTGACGTG-3'
mOct4 primers	IDTDNA	N/A	5'-AGATCACTCACATCGCCAATCA-3' 5'-CGCCGGTTACAGAACCATACTC-3'
mPax6 primers	IDTDNA	N/A	5'-CTTGGGAAATCCGAGACAGA-3' 5'-CTAGCCAGGTTGCGAAGAAC-3'
N2 supplement	Thermo Fisher Scientific	17502048	
Nestin primary antibody	Millipore	MAB5326	Antibody was diluted at 1:200 for IF
Neural basal	Thermo Fisher Scientific	21103049	
Neurofilament primary antibody	DSHB	2H3	
NEXTflex Illumina Rapid Directional RNA-Seq Library Prep Kit	BioO Scientific	NOVA-5138-07	
PD0325901	Cayman Chemicals	13034	
Penicillin/streptomycin	Corning	30-002-CI	
Phosphate-buffered saline (PBS)	N/A	N/A	Prepared in de-ionized water
- Potassium chloride	P217-500G	VWR	
- Potassium phosphate monobasic anhydrous	0781-500G	VWR	
- Sodium chloride	BP358-10	Fisher Bioreagents	
- Sodium phosphate, dibasic, heptahydrate	SX0715-1	Millipore	
Random hexamer primer	Thermo Scientific	SO142	
Retinoic acid	Sigma	R2625	Prepared in DMSO
Sodium pyruvate	Corning	25-000-CI	
Sucrose	Sigma	84097	Diluted in 1X PBS
SuperScript III Reverse Transcriptase	Invitrogen	18064022	
Tissue-Tek O.C.T. compound	Sakura	4583	
TriPure Isolation Reagent	Sigma-Aldrich	11667165001	
TruSeq Rapid	Illumina	20020616	
β-mercaptoethanol	Fisher BioReagents	BP176-100	