

Materials List for:

# Generation of Induced Pluripotent Stem Cells from Frozen Buffy Coats using Non-integrating Episomal Plasmids

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## Materials

Name	Company	Catalog Number	Comments
Sodium Citrate buffered Venosafe Plastic Tube	Terumo	VF-054SBCS07	
Ammodium chloride	Sigma-Aldrich	A9434	
Potassium bicarbonate	Sigma-Aldrich	60339	
EDTA disodium powder	Sigma-Aldrich	E5134	0.5 M solution
Ficoll-Paque Premium	GE Healthcare Life Sciences	17-5442-02	Polysucrose solution for density gradient centrifugation
Iscove's modified Dulbecco's medium (IMDM)	Gibco	21056-023	No phenol red
Ham's F-12	Mediatech	10-080-CV	
Insulin-Transferrin-Selenium-Ethanolamine (ITS -X)	Gibco	51500-056	1X (Stock: 100X)
Chemically Defined Lipid Concentrate	Gibco	11905031	1X (Stock: 100X)
Bovine Serum Albumin (BSA)	Sigma-Aldrich	A9418	
L-Ascorbic acid 2-phosphate sesquimagnesium salt hydrate	Sigma-Aldrich	A8960	
1-Thioglycerol	Sigma-Aldrich	M6145	Final Concentration at 200 µM
Recombinant Human Stem Cell Factor (SCF)	PeproTech	300-07	100 ng/ml (Stock: 100 µg/ml)
Recombinant Human Interleukin-3 (IL-3)	PeproTech	200-03	10 ng/ml (Stock: 10 µg/ml)
Recombinant Human Insulin-like Growth Factor (IGF-1)	PeproTech	100-11	40 ng/ml (Stock: 40 µg/ml)
Recombinant Human Erythropoietin (EPO)	R&D Systems	287-TC-500	2 U/ml (Stock: 50 U/ml)
Dexamethasone	Sigma-Aldrich	D2915	1 µM (Stock: 1 mM)
Human Holo-Transferrin	R&D Systems	2914-HT	100 µg/ml (Stock: 20 mg/ml)
Amniomax II	Gibco	11269016	Medium for cytogenetic analysis
mTeSR1	StemCell Technologies	5850	Medium for iPSC feeder-free culture
Knockout DMEM	Gibco	10829-018	
Knockout Serum Replacement	Gibco	10828-028	
Penicillin-Streptomycin (10,000 U/ mL)	Gibco	15140-122	

L-Glutamine (200 mM)	Gibco	25030-024	
MEM Non-Essential Amino Acids Solution (100X)	Gibco	11140-050	
2-Mercaptoethanol	Gibco	31350-010	0.1 mM (Stock: 50 mM)
Sodium Butyrate	Sigma-Aldrich	B5887	0.25 mM (Stock: 0.5 M)
Recombinant Human FGF basic, 145 aa	R&D Systems	4114-TC	10 ng/ml (Stock: 10 µg/ml)
Y-27632 dihydrochloride	Sigma-Aldrich	Y0503	10 µM (Stock: 10 mM)
Fetal Defined Bovine Serum	Hyclone	SH 30070.03	
EmbryoMax 0.1% Gelatin Solution	Merck-Millipore	ES-006-B	
Matrigel Basement Membrane Matrix Growth Factor Reduced	BD Biosciences	354230	
Collagenase, Type IV	Gibco	17104-019	1 mg/ml (Stock: 10 mg/ml)
Accutase	PAA Laboratories GmbH	L11-007	Cell detachment solution
Mouse Embryonic Fibroblast (CF1)	Global Stem	GSC-6201G	1*10 <sup>6</sup> cells/6 well plate
Plasmid pCXLE-hOCT3/4-shp53-F	Addgene	27077	1 µg (Stock: 1 µg/µl)
Plasmid pCXLE-hSK	Addgene	27078	1 µg (Stock: 1 µg/µl)
Plasmid pCXLE-hUL	Addgene	27080	1 µg (Stock: 1 µg/µl)
Plasmid pCXLE-EGFP	Addgene	27082	1 µg (Stock: 1 µg/µl)
Alkaline Phosphatase Staining Kit	Stemgent	00-0009	
Anti-Stage-Specific Embryonic Antigen-4 (SSEA-4) Antibody	Merck-Millipore	MAB4304	1/250
Anti-TRA-1-60 Antibody	Merck-Millipore	MAB4360	1/250
Anti-TRA-1-81 Antibody	Merck-Millipore	MAB4381	1/250
Anti-Oct-3/4 Antibody	Santa Cruz Biotechnology	sc-9081	1/500
Anti-Nanog Antibody	Santa Cruz Biotechnology	sc-33759	1/500
Anti-Troponin I Antibody	Santa Cruz Biotechnology	sc-15368	1/500
Anti-α-Actinin (Sarcomeric) Antibody	Sigma-Aldrich	A7732	1/250
Neuronal Class III β-Tubulin (TUJ1) Antibody	Covance Research Products Inc	MMS-435P-100	1/500
Anti-Tyrosine Hydroxylase (TH) Antibody	Calbiochem	657012	1/200
Alexa Fluor 488 Goat Anti-Mouse	Molecular Probes	A-11029	1/1000
Alexa Fluor 555 Goat Anti-Rabbit	Molecular Probes	A-21429	1/1000
Ultra-Low Attachment Cell Culture 6-well plate	Corning	3471	
Trizol Reagent	Ambion	15596-018	reagent for RNA extraction
SuperScript VILO cDNA Synthesis Kit	Invitrogen	11754050	Reverse transcriptase kit
iTaq Universal SYBR Green Supermix	Bio-Rad	172-5124	
CFX96 Real-Time PCR Detection System	Bio-Rad	185-5195	
Experion Automated Electrophoresis System	Bio-Rad	700-7000	Instrument to check RNA integrity
Experion RNA Highsense Analysis kit	Bio-Rad	7007105	Reagent kit to check RNA integrity
Dissecting microscope (SteREO Discovery V12 )	Zeiss	495007	

NeonTransfection System 100 $\mu$ l Kit	Invitrogen	MPK10025	Reagent kit for electroporation
Neon Transfection System	Invitrogen	MPK5000	Instrument used for electroporation
NanoDrop UV/Vis Spectrophotometer	Thermo Scientific	ND-2000	Instrument for DNA/RNA quantification
EndoFree Plasmid Maxi Kit	Qiagen	12362	Plasmid purification kit