

Materials List for:

Generation of Integration-free Human Induced Pluripotent Stem Cells Using Hair-derived Keratinocytes

Sandy S.C. Hung¹, Alice Pébay¹, Raymond C.B. Wong¹

¹Centre for Eye Research Australia & Department of Ophthalmology, University of Melbourne

Correspondence to: Raymond C.B. Wong at ching.wong@unimelb.edu.au

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Materials

Name	Company	Catalog Number	Comments
Antibiotic Mix:			
250 ng/ml Antimycotic amphotericin B	Sigma	A2942-20ml	Antibiotic mix is made up in PBS.
1X Penicillin/Streptomycin	Invitrogen	15140-122	
PBS (-)	Invitrogen	14190-144	
Knockout Serum Replacement (KSR) medium:			KSR medium is filtered using Stericup (Millipore, #SCGPU05RE) before use. bFGF is added fresh to the media before use.
20% knockout serum replacement (KSR)	Invitrogen	10828-028	
DMEM/F12 with glutamax	Invitrogen	10565-042	
1× MEM non-essential amino acid	Invitrogen	11140-050	
0.5× Penicillin/Streptomycin	Invitrogen	15140-122	
0.1 mM β-mercaptoethanol	Invitrogen	21985	
bFGF (10 ng/ml, added fresh)	Millipore	GF003	
Keratinocyte medium:			
EpiLife with 60 μM Calcium	Invitrogen	M-EPI-500-CA	
1× Human keratinocyte growth supplement (HKGS)	Invitrogen	S-001-5	
Fetal Bovine Serum (FBS) medium:			FBS medium is filtered using Stericup (Millipore, #SCGPU05RE) before use.
10% fetal bovine serum (FBS)	Invitrogen	26140079	
DMEM	Invitrogen	11995-073	
0.5x Penicillin/Streptomycin	Invitrogen	15140-122	
2 mM L-glutamine	Invitrogen	25030	
0.25% trypsin-EDTA	Invitrogen	25200-056	
Extracellular Matrix (ECM):			
Matrigel	Corning	354234	Aliquot Matrigel stock and store in -80°C following manufacturer's instructions. Stock concentration of Matrigel varies slightly from batch to batch (~9mg/ml). We recommend to use 200μl matrigel for coating a 12-well plate (~150μg/well).
Coating Matrix Kit	Invitrogen	R-011-K	

Plasmids:			Note that pCXLE-eGFP is only used for monitoring transfection efficiency and is not required for reprogramming.
- pCXLE-eGFP	Addgene	27082	
- pCXLE-hOct3/4-shP53F	Addgene	27077	
- pCXLE-hSK	Addgene	27078	
- pCXLE-hUL	Addgene	27080	
Transfection reagent Fugene HD	Promega	E231B	
Gelatin (from porcine skin)	Sigma	G1890	Make up 0.1% gelatin in distilled water. Autoclave before use.
Reduced Serum medium: OPTI-MEM	Invitrogen	31985062	
Accutase	Sigma	A6964-100ml	
Mouse embryonic fibroblast (MEF) feeder			MEF can be inactivated by mitomycin C treatment or irradiation as described previously 16.
26G needle	Terumo	NN2613R	
6-well plate (tissue culture treated)	BD Biosciences	353046	
12-well plate (tissue culture treated)	BD Biosciences	353043	
10 cm dish (tissue culture treated)	BD Biosciences	353003	
Dispase	Invitrogen	17105-041	Use at 10 mg/ml
Collagenase IV	Invitrogen	17104-019	Use at 1 mg/ml
TRA-160 antibody	Millipore	MAB4360	Use at 5 µg/ml
OCT4 antibody	Santa Cruz	SC-5279	Use at 5 µg/ml
NANOG antibody	R&D Systems	AF1997	Use at 10 µg/ml
MycoAlert Detection kit	Lonza	LT07-418	