

Materials List for

Establishment, Maintenance, Differentiation, Genetic Manipulation, and Transplantation of Mouse and Human Lacrimal Gland Organoids

Marie Banner-Hélaouët^{1,2}, Maarten H. Geurts^{1,2}, Jeroen Korving¹, Harry Begthel¹, Hans Clevers^{1,2}

¹Hubrecht Institute, Royal Netherlands Academy of Arts and Sciences (KNAW), University Medical Center Utrecht ²Oncode Institute, Hubrecht Institute

Corresponding Author

Hans Clevers

h.clevers@hubrecht.eu

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Materials

Name	Company	Catalog Number	Comments
1.5 mL safe-lock centrifuge tubes	Eppendorf	EP0030 120.094	
3,3'-Diaminobenzidine tetrahydrochloride hydrate (DAB)	Sigma-Aldrich	D5637	CAS: 868272-85-9 , CAUTION, 6 g/ L solution can be stored aliquotted at -20 °C
5x green GoTaq Flexi buffer	Promega	M891A	Store at -20 °C
A83-01	Tocris	2939	Store at -20 °C, stock at 30 mM, 10000x
Advanced DMEM/F12	Invitrogen	12634-010	store at 4 °C
Agar plates containing Ampicillin	Hubrecht Institute		
Ampicillin sodium salt	Sigma-Aldrich	A9518	
Autoclave VAPOUR-Line lite	VWR chemicals		
B27 supplement	Invitrogen	17504-044	Store at -20 °C, 50x
BD Micro-Fine insulin needle 1 mL	BD Bioscience	324825	
Benchtop microscope DMI1	Leica		
Bovine serum albumine (BSA)	MP biomedicals	160069	Store at 4 °C
BTXpress	BTX	MDS450805	
C57BL/6 mice	Hubrecht Institute		
Cassettes	Klinipath	410-02S	
CellBanker 1	amsbio	11910	Cryopreservation medium, adhere to instructions
Centrifuge	Eppendorf		
Citric acid monohydrate	J.T. Baker	0088	CAS: 5949-29-1
Collagenase I	Sigma Aldrich	C9407	Aliquots at 20 mg/mL, 20x, store at -20 °C
Conical tubes 15 mL	Greiner Bio-One	5618-8271	
Conical tubes 50 mL	Corning	CLS430828-500EA	
Coverslips 24 mm x 50 mm	Menzel-Gläzer	BB024050S1	

Cultrex Basement Membrane Extract (BME), Growth Factor Reduced, Type 2 - extracellular matrix	R&D Systems, Bio-Techne	3533-001-02	Store at -20 °C, keep at 4 °C for up to 1 month
DAPT	Sigma Aldrich	D5942	Store at -20 °C, stock at 10 mM, 1000x
Disodium hydrogen phosphate anhydrous	VWR chemicals	28026.292	CAS: 7558-79-4
Di-sodiumhydrogenphosphate dihydrate	Sigma-Aldrich	71643	CAS:10028-24-7
Dispase	ThermoFisher Scientific	17105-041	Aliquots at 50 U/mL, store at -20 °C until use, 400x
Disposable Scalpel Sterile N° 10	Swann Morton	3033838	
DM4000 microscope	Leica		
dNTPs 25 mM	Promega	U1420	Mix all 4 nucleotides together, Store at -20 °C
Dpn1	New England Biolabs	R0176	
Dulbecco's Phosphate-buffered Saline (DPBS)	Gibco	14190144	1x
Easy strainers 70 µm	Greiner	542170	
Electroporation cuvette	Nepagene	EC002S	
EnVision+HRP mouse	Agilent	K400111-2	
Ethanol 100%	BOOM	84045206;5000	CAUTION, Use to prepare other Ethanol dilutions
Ethanol 70%	BOOM	84010059.5000	CAUTION
Ethanol 96%	BOOM	84050065.5000	CAUTION
EVOS FL Auto 2 Cell Imaging System	ThermoFisher Scientific		Live-imaging brightfield microscope
FGF10	Peprtech	100-26	Store at -20 °C, stock at 100 mg/mL in base medium, 100x
Fiji	NIH, Fiji developers		
Formaldehyde solution 4%	Sigma-Aldrich	1.00496	CAS: 50-00-0, CAUTION
Forskolin	Tocris	1099	Store at -20 °C, stock at 10 mM, 10000x
Glutamax	Gibco	35050-061	100x
GoTaq G2 Flexi DNA Polymerase	Promega	M7805	Store at -20 °C
Haematoxylin	VWR chemicals	10047105	Store at room temperature
HEPES	Gibco	15630-080	Store at 4 °C, 100x
Histocore H and C, Tissue embedding machine	Leica		
Hot plate	Meidax		
Human nucleolar antigen antibody	Abcam	ab-190710	
Hydrochloric acid 5 N	ThermoFisher Scientific	10605882	CAS: 7647-01-0, CAUTION
Hydrogen peroxyde 30%	Chem-lab	CL00.2308.1000	CAS: 7722-84-1, CAUTION
Hygromycin B-gold	InvivoGen	ant-hg	Stock at 100 mg/µL, 1000x
Hygromycin resistance cassette-containing plasmid			Andersson-Rolf et al, Nature Methods, 2017. doi: 10.1038/nmeth.4156
IsoFlo 100%	Mecan	5960501	
LB medium	Hubrecht Institute		
MgCl ₂ 25 mM	Promega	A351H	Store at -20 °C
Microtome RM2235	Leica		
Midiprep DNA isolation kit	ThermoFisher Scientific	K210005	
Miniprep DNA isolation kit	ThermoFisher scientific	K210003	

N-acetylcysteine	Sigma Aldrich	A9165	Store at -20 °C, stock at 500 mM, 400x
NEPA21 electroporator	Nepagene		
Nicotinamide	Sigma Aldrich	N0636	Store at -20 °C, stock at 1M, 100x
NOD Scid Gamma (NSG) mice	Hubrecht Institute colony		
Noggin conditioned medium	U-Protein Express	Custom order	Store at -20 °C
Noradrenaline	Sigma Aldrich	A7257	Store at -20 °C, stock at 100 mM
Oven	Memmert		Set at 58 °C
P20, P200 and P1000 pipettes	Gilson		
Paraffin	VWR chemicals	10048502	
Pasteur pipettes, glass plugged	ThermoFisher Scientific	1150-6973	
Pax6_C>T_F: AGACTGTTCCAGGATGGCTG	IDT		
Pax6_C>T_R: TCTCCTAGGTACTGGAAGCC	IDT		
pCMV_ABE _{max} _P2A_GFP	Addgene	112101	
Penicillin/Streptomycin	Invitrogen	15140-122	Store at -20 °C
Pertex	Klinipath	AM-08010	
pFYF1320	Addgene	47511	
Primocin	InvivoGen	ant-pm-1	1000X, store at -20 °C
Prostaglandin E2 (PGE2)	Tocris	2296	Store at -20 °C, stock at 10 mM, 10000x
Petri dish, 10 cm	Greiner	633102	
Q5 buffer	New England Biolabs	B9027S	
Q5 high-fidelity DNA polymerase	New England Biolabs	M0491S	
QIAquick Gel Extraction Kit	Qiagen	28704	
QuickExtract DNA Extraction Solution	Lucigen	QE09050	Store aliquots at -20 °C
R-spondin 3 conditioned medium	U-Protein Express	Custom order	Store at -20 °C
sgRNA Reverse Primer: TCTGCGCCCATCTGTTGCTT CGGTGTTTCGTCTTTCCACAAG	IDT		
Slides	StarFrost	MBB-0302-55A	Adhesive, ground
Sodium azide	Merck	8.22335.1000	CAS: 26628-22-8, CAUTION
Sodium cytrate dihydrate	J.T. Baker	0280	CAS: 6132-04-3
Standard Forward Primer: ³² P-phos/ GTTTGTAGAGCTAGAAATAGCAAG TTAAATAAGGC	IDT		
Subcloning efficiency competent cells DH5alpha	Invitrogen	18265-017	
Suspension cell culture plates (24-well)	Greiner Bio-One	662102	24-well
Suspension cell culture plates (12-well)	Greiner Bio-One	665102	12-well
T4 DNA ligase	New England Biolabs	M0202	
TAE buffer	ThermoFisher Scientific	B49	Stock at 50x, dilute to 1x with ultrapure water
Transposase-containing plasmid			Andersson-Rolf et al, Nature Methods, 2017. doi: 10.1038/nmeth.4156
TrypLE Express Enzyme	Invitrogen	12605-028	store at 4 °C
U6_Forward primer: GGGCAGGAAGAGGGCCTAT	IDT		

UltraPure Agarose 1000	Invitrogen	16550	
Water bath	Tulabo		
Xylene	Klinipath	4055-9005	CAS: 1330-20-7, CAUTION
Y-27632	Abmole Bioscience	Y-27632 dihydrochloride	Store at -20 °C, stock at 10 mM, 1000x