

Materials List for

# Robust Tissue Fabrication for Long-Term Culture of iPSC-Derived Brain Organoids for Aging Research

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## Materials

Name	Company	Catalog Number	Comments
2-β-Mercaptoethanol	Thermo Fisher Scientific	31350010	
4',6-Diamidino-2-phenylindole dihydrochloride (DAPI)	Invitrogen	D1306	1:4000
6-well Clear Flat Bottom CELLSTAR Cell Culture Multiwell Plate	Greiner Bio-One	657185	
6-well Clear Flat Bottom Ultra-Low Attachment Well Plate	Corning	3471	
96-well Clear Round Bottom Ultra-Low Attachment Microplate	Corning	7007	
96-Well, Nunclon Delta-Treated, Flat-Bottom Microplate	Thermo Fisher Scientific	136101	
Accutase	Sigma-Aldrich	46964	cell detachment solution
Antibiotic-Antimycotic (100x)	Gibco	15240062	
B27 Supplement (with Vitamin A) (50x)	Gibco	17504044	
B27 Supplement (minus Vitamin A) (50x)	Gibco	12587010	
BD Vacutainer™ Glass Mononuclear Cell Preparation (CPT) Tubes	Thermo Fisher Scientific	02-685-125	
Bovine Serum Albumin	Sigma-Aldrich	A9418	
Centrifuge	Eppendorf	5810 R	With plate holders
CHIR99021	Selleck Chemicals	S2924	
CytoTune Sendai Reprogramming Vector	Thermo Fisher Scientific	A1378001	
ddPCR primers   human   MAPT	Bio-Rad	dHsaCPE192234	
ddPCR primers   human   RBFOX3 (NeuN)	Bio-Rad	dHsaCPE5052108	
DMEM/F12	Thermo Fisher Scientific	11320074	
Doublecortin (DCX)	Santa Cruz Biotechnology	SC-8066	1:500

Dulbecco's phosphate buffered saline (DPBS)	Thermo Fisher Scientific	14190144	no calcium, no magnesium
Eppendorf cups, 1.5 mL	Eppendorf	0030 125.215	
Essential 6	Gibco	A1516401	
Essential 8	Gibco	A1517001	
Ethylenediaminetetraacetic acid (EDTA)	Invitrogen	15575020	
Falcon tubes, 15 mL, conical	Greiner Bio-One	188271-N	
Formaldehyde	Sigma-Aldrich	252549	37% Stock solution, diluted to 4% in PBS
Geltrex LDEV-Free Reduced Growth Factor Basement Membrane Matrix	Thermo Fisher Scientific	A1413202	
GlutaMax (100x)	Gibco	35050038	
Hemocytometer cell counter	Hausser scientific	1490	
HEPES Buffer	Thermo Fisher Scientific	15-630-080	
Insulin	Sigma-Aldrich	I9278	
LDN 193189	StemCell Technologies	72147	
MAP2	Abcam	ab32454	1:200
Matrigel Growth Factor Reduced (GFR) Basement Membrane Matrix, LDEV-free	Corning	356230	basement membrane matrix
MEM-Non Essential Amino Acid Solution (MEM-NEAA; 100x)	Thermo Fisher Scientific	11140050	
Multilabel Counter Victor 3 Plate Reader	Perkin Elmer	1420	luminometer
MycoAlert Mycoplasma Detection Kit	Lonza	LT07-318	
N-2 Supplement (100x)	Thermo Fisher Scientific	17502-048	
NeuN	Millipore	MAB377	1:500
Neurobasal Medium	Thermo Fisher Scientific	21103049	
Oct-3/4 Antibody (C-10) Alexa Fluor 647	Santa Cruz Biotechnology	sc-5279 AF647	1:100
Parafilm	Bemis	PM-996	thermoplastic film sheet
PAX6	Thermo Fisher Scientific	42-6600	1:200
Penicillin/Streptomycin	Gibco	15070063	
Poly(lactic-co-glycolic acid) (PLGA) microfilaments	Ethicon	J463	
QX200 Droplet digital PCR system	Bio-Rad	1864001	
ROCK inhibitor (Y27632)	Selleck Chemicals	S1049	
SB431542	R&D Systems	1614/50	
SOX2 Monoclonal Antibody (Btjce), Alexa Fluor 488, eBioscience	Invitrogen	53-9811-80	1:100
Synapsin I (SYN)	Calbiochem	574777	1:200
Triton-X 100	Sigma-Aldrich	T8787	
TUJ1	Santa Cruz Biotechnology	sc-80005	Beta-3-tubulin; 1:500
XAV939	Tocris Bioscience	3748	