

Materials List for:

# Modified Roller Tube Method for Precisely Localized and Repetitive Intermittent Imaging During Long-term Culture of Brain Slices in an Enclosed System

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## Materials

Name	Company	Catalog Number	Comments
Bottoms from 15 cm culture dishes	VWR Scientific	25384-326	
Phillips Head Machine Screws (#10-32)	Ace Hardware		2.5" long and 3/16" in diameter
Flat Washers #10	ACE Hardware		
Machine Screw Nuts (#10-32)	ACE Hardware		
Rubber Grommets	ACE Hardware		5/16", thick; 5/8", hole diameter; 1.125", OD
Polyethylene tubing (5/16"; OD, 3/16"; ID)	ACE Hardware		Cut to 1.8" length
Lock Washer #10	ACE Hardware		
Drill Press, 5 speed	Ace Hardware	ProTech Model 1201	
Nunclon Delta Flat-Sided Tubes	VWR	62407-076	
Drill bits, 3 mm, 6 mm and 15 mm	Ace Hardware	Diablo freud brand	Drill bits for cutting plastic.
Drill bits for wood, 1.5 cm and 1 mm	Ace Hardware		
Wood file, 1/4" round	Ace Hardware		
Spring clips, 16 mm snap holder	Ace Hardware		
Swivel Head Deburring Tool, 5"	Ace Hardware	26307	
Adhesive Silicone Sheet (Secure Seal)	Grace Bio-Labs	666581	0.5 mm Thickness
6 mm hole punch	Office Max		
12 mm hole punch	thepunchbunch.com		
70% Ethanol			
Phototechd Coverslips, 12 mm diameter	Bellco Glass, Inc.	1916-91012	
Bunsen Burner			
Absolute Ethanol			
Nanopure Water			
3-aminopropyltriethoxylane	Sigma-Aldrich	A3648	
Acetone	Sigma-Aldrich	179124	
#5 Dumont Forceps	Fine Science Tools	11251-30	

Mcllwain Tissue Chopper	Ted Pella, Inc.	10180	
Double Edge Razor Blades	Ted Pella, Inc.	121-6	
Whatman Filter Paper	VWR	28450-182	Cut into 5.8 cm diameter circles
Poly-chloro-trifluoro-ethylene (Aclar)	Ted Pella, Inc.	10501-10	Cut into 5.8 cm diameter circles
#21 Surgical Blade	VWR Scientific	25860-144	
#5 Dumont Forceps	Fine Science Tools	11251-30	
Spatula, stainless with tapered end	VWR	82027-518	
Gey's Balanced Salt Solution	Sigma-Aldrich	G9779	
Glucose	ThermoFisher Scientific	15023-021	25% (w/v) Solution, 0.2 mm filter sterilized
Chicken Plasma	Cocalico Biologicals	30-0300-5L	Rehydrate in sterile water, centrifuge at 2500 x g 30 min at 4 °C, quick freeze aliquots in liquid nitrogen and store at -80 °C.
Thrombin, Topical (Bovine)	Pfizer	Thrombin-JMI	Quick freeze aliquots in liquid nitrogen at 1,000 international units/mL in diluent provided and store at -80°C. Use at 250 units/mL.
Cell Roller System	Bellco Biotech	SciERA	
Roller Incubator	Forma	Model 3956	
N21-MAX	ThermoFisher Scientific	AR008	
Pen/Strep (100X)	ThermoFisher Scientific	15140122	
200 mM Glutamine	ThermoFisher Scientific	25030081	
Glucose	ThermoFisher Scientific	15023-021	25% (w/v) Solution, 0.2 mm filter sterilized
Neurobasal A	ThermoFisher Scientific	10888-022	Complete Medium: 48 mL Neurobasal A, 1 mL N21-MAX, 0.625 mL 200 mM Glutamine, 0.180 mL 25% Glucose, 0.250 mL 100x pen/strep.
Third generation lentivirus packaging	Life Technologies	K4975-00	
159 K cutoff centrifugal filters (Centricon)	EMD Millipore		
Lentiviral cloning system (InFusion)	Clontech		
Plasmids 30323, 50856, 51279	Addgene		
Neuronal cell viability dye (NeuO)	Stemcell technologies	1801	Thaw once and quick freeze in 4 µL aliquots. Store at -20 °C
Inverted microscope	Olympus	IX83	
Microscope objectives	Olympus	air: 4X, 20; oil: 40X, 60X,	
Spinning disc confocal system	Yokagawa	CSU22	
Microscope EMCCD camera	Photometrics	Cascade II	
Linear encoded (x,y), piezo z flat top stage	ASI		
Microscope lasers and integration	Intelligent Imaging Innovations		
HEK293T cells	American Type Culture Collection	CRL-3216	
Human Plasmin	Sigma Aldrich	P1867	0.002 U/mL in 0.1% bovine serum albumin (0.2 mm filter sterilized), quick freeze in liquid nitrogen and store at -80 °C.