

Materials List for:

Preparation of Non-human Primate Brain Tissue for Pre-embedding Immunohistochemistry and Electron Microscopy

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Materials

Name	Company	Catalog Number	Comments
Dibasic anhydrous sodium phosphate (Na ₂ HPO ₄)	Fisher scientific	S374-500	
Monobasic monohydrate sodium phosphate (NaH ₂ PO ₄ ·H ₂ O)	EM Science	SX0710-1	
Sodium chloride (NaCl)	Fisher scientific	S271-3	
Hydroxymethyl aminomethane (THAM)	Fisher scientific	T370-500	
HCl	EMD	HX0603-3	1 N dilution. Product is corrosive. Use with appropriate protection.
NaOH	EMD	SX0590-1	5 N dilution. Product is corrosive. Use with appropriate protection.
Paraformaldehyde (PFA)	Sigma	P6148	4% dilution. Product is highly volatile in its powder form and highly toxic. Use with caution under a venting hood with appropriate protection.
Acrolein (90%)	Sigma	110221	3% dilution. Product is highly toxic. Use under a venting hood with appropriate protection.
Autopsy venting table	Mopec	CE400	
Electronic perfusion pump	cole parmer	masterflex L/S 7523-90	
Needle (perfusion)	terumo	NN-1838R	18 G 11/2
Needle	terumo	NN-2713R	21 G 1/2
Ketamine			20 mg/kg
Xylazine			4 mg/kg
Acepromazine			0.5 mg/kg
Scalpel			
Scalpel blades	Feather lance	201011 J9913	No.22 for surgery and No. 11 for EM
Surgical scissors			
Rongeurs			
Vibratome	Leica	VT 1200S	Calibrate blade before each use, when the device allows it
Vibratome razor blade	Gillette	GIN 642107	
Glycerol	Fisher scientific	G33-4	30% dilution
Ethylene glycol	Fisher scientific	E178-4	30% dilution
Sodium borohydride (NaBH ₄)	Sigma	S-9125	

Normal horse serum (NHS)	Jackson immunoResearch Laboratories	008-000-121	2% dilution
Cold-fish gelatin	Aurion	900.033	0.5% dilution. Original product is concentrated at 40%
Primary antibody, SERT	Santa Cruz biotechnology	SC-1458	1/500 dilution
Primary antibody, ChAT	Chemicon (Millipore)	AB144P	1/25 dilution
Primary antibody, TH	ImmunoStar	22941	1/1,000 dilution
Biotinylated secondary antibody, goat	Vector laboratories	BA-9500	1/1,000 dilution
Biotinylated secondary antibody, mouse	Vector laboratories	BA-2000	1/1,000 dilution
Vectastain elite ABC kit	Vector laboratories	PK6100	8.8 µL/mL of A and B each
3,3'-diaminobenzidine (DAB)	Sigma	D5637	0.05% dilution. Product is highly volatile in its powder form and toxic. Do not throw waste in the sink.
Peroxide (H ₂ O ₂) 30%	Fisher scientific	H-323	0.005% dilution
Osmium tetroxide (OsO ₄)	Electron microscopic science	2% 19152 4% 19150	Original solution can be either 2 or 4%. Keep attention to which one is used to calculate the final 1% dilution. Product is very sensitive to light. Osmium is highly toxic. Use only under a venting hood with appropriate protection.
Durcupan water-repellent epoxy resin	Sigma	A: M epoxy resin (44611) B: hardener 964 (44612) C: accelerator 960 (DY 060) (44613) D: plasticizer (44614)	Polymerize 48 h at 58 °C before throwing in waste.
Alumium cups	Electron microscopic science	70048-01	
Ethanol	commercial alcohols	1019C	Dilute in distilled water with appropriate concentration
Propylene oxide	Electron microscopic science	20401	Organic solvent. Highly volatile and toxic. Use under a venting hood.
Non-coated medium glass slides	brain research laboratories	3875-FR	Grease surface with mineral oil
Plastic film (Aclar embedding film)	Electron microscopic science	50425-25	Grease surface with mineral oil
Ultramicrotome	Leica UC7	EM UC7	
Diamond trimming tool (ultratrim)	Diatome	UT 1081	Can use glass knife alternatively
Ultra 45° Diatome Diamond knife	Diatome	MC13437	equipped with a boat
Xylenes	Fisher scientific	X5SK-4	
150-mesh copper grids	Electron microscopic science	G150-cu	
grid-box	Electron microscopic science	71138	Can store up to 100 grids
Sodium citrate	Anachemia	81983	
Lead nitrate	Sigma	L-6258	Make a stock solution of lead citrate made of 1.33 g of lead nitrate and 1.76 g of sodium citrate diluted in 42 mL of preboiled and cooled distilled water to which 8 mL of 1 N NaOH are added after the conversion from lead nitrate to lead citrate is complete. pH should be approximately 12. Store solution in a hermetic plastic bottle and protect from light.
Syringe	terumo	SS-05L	5 mL

Syringe filter	Corning	431222	0.2 μm
Absorbing paper (bibulous paper)	Electron microscopic science	70086-1	
Parafilm	Laboratory film	PM-999	
Mineral oil	Sigma	M5904	