

Materials List for:

Three-Dimensional Imaging of the Vertebral Lymphatic Vasculature and Drainage using iDISCO⁺ and Light Sheet Fluorescence Microscopy

Laurent Jacob^{*1}, Jose Brito^{*1,2}, Jean-Leon Thomas^{1,3}

¹Université Pierre et Marie Curie Paris, Sorbonne Université, Institut du Cerveau et de la Moelle Epinière

²Instituto de Ciências Biomédicas, Universidade Federal do Rio de Janeiro

³Department of Neurology, Yale University School of Medicine

* These authors contributed equally

Correspondence to: Jean-Leon Thomas at jean-leon.thomas@yale.edu

URL: <https://www.jove.com/video/61099>

DOI: [doi:10.3791/61099](https://doi.org/10.3791/61099)

Materials

Name	Company	Catalog Number	Comments
Consumables			
Centrifuge tubes: 0.2ml	Eppendorf	30124359	
Centrifuge tubes: 2ml	Eppendorf	30120094	
Conical centrifuge tubes: 15ml	Falcon	352096	
Conical centrifuge tubes: 50ml	Falcon	352070	
Microtome blade 80mm	Microm Microtech France	F/MM35P	
Needles 26G (0.45x13 mm)	Terumo	AN*2613R1	
Syringe 1ml	Terumo	SS+01H1	
Microscopes and imaging softwares			
AxioZoom.V16 fluorescence stereo zoom microscope, equipped with an ORCA-Flash 4.0 digital sCMOS camera (Hamamatsu Photonics) or an OptiMOS sCMOS camera	Zeiss		
Inspector Microscope controller software, Version v144 (acquisition software)	Abberior instruments		
Imaris File Converter x64 9.2.0(file conversion software) , Imaris stitcher software 9.2.0 (stitcher software), Imaris x64 9.2.0 (3D software)	OXFORD instruments		
LED lasers (OBIS) LVBT Laser module 2nd generayion	COHERENT		
Ultramicroscope II equipped with a sCMOS camera (Andor Neo) and a 4 × /0.3 objective lens (LVMI-Fluor WD6)	LaVision Biotec		
Reagents			
Alexa Fluor 568 Donkey anti Rabbit	Thermo Fisher	A10042	
Alexa Fluor 647 Donkey anti goat	Jackson ImmunoResearch	705-605-147	
Alexa Fluor 647 Donkey anti Rabbit	Jackson ImmunoResearch	711-605-152	
Anti-LYVE1 polyclonal antibody	Angiobio	#11-034	

Anti-PROX1 goat polyclonal IgG antibody	R&D systems	#AF2727	
Buprenorphine Injection Ampoules (Buprepare solution, 0.3mg/ml)	Animalcare	Ampule 1ml	
Dibenzyl Ether 100% (DBE)	Sigma Aldrich	108014	
Dichloromethane 100% (DCM)	Sigma Aldrich	270997	
Formic acid 99%	CARLO ERBA	405793	
Glycine	Sigma Aldrich	G.7126	
Heparine sodium salt from porcine	Sigma Aldrich	H4784	
Hydrogen peroxide solution (H ₂ O ₂ 30%)	Sigma Aldrich	H1009	
Isoflurane (Iso-Vet 100%)	Piramal	NDC 66794-013-10	
Methanol 100%	Sigma Aldrich	322415	
Ovalbumin Alexa Fluor 555 Conjugate	Invitrogen	11549176	
Phosphate Buffer Solution PBS (stock solution 10X)	Euromedex	ET330-A	
Sodium Pentobarbital (Euthasol 400mg/mL)	Dechra	08718469445110	
Tri-sodium citrate	VWR	6132-04-3	
Surgical tools and equipments			
Anaesthesia system	Univentor	Univentor 410 Anaesthesia Unit	
Glass micropipette puller	Narishige	PC-10	
Heating pad	CMA Microdialysis AB	CMA 450 Temperature controller	
Microcapillaries (Glass Capillaries)	Harvard Apparatus	GC120-15	
Microforceps, forceps, dissection scissors and Michel Suture Clips (7.5 × 1.75mm)	Fine Science Tool	12040-01	
Scalpel (sterile disposable scalpel 23)	Swann-Norton	0510	
Stereotaxic apparatus	KOPF	Model 940	
Syringe Hamilton 10µl 701N	Hamilton	28618-U	
Warm air System	Vet-Tech LTD	HE011	