

Preparing Lamellae from Vitreous Biological Samples using a Dual-Beam Scanning Electron Microscope for Cryo-Electron Tomography

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Citation

Bisson, C., Hecksel, C.W., Gilchrist, J.B., Carbajal, M.A., Fleck, R.A. Preparing Lamellae from Vitreous Biological Samples using a Dual-Beam Scanning Electron Microscope for Cryo-Electron Tomography. *J. Vis. Exp.* (174), e62350, doi:10.3791/62350 (2021).

Date Published

August 5, 2021

DOI

10.3791/62350

URL

jove.com/video/62350

Materials

Name	Company	Catalog Number	Comments
c-clips	Thermo Fisher Scientific	1036171	
Clipping station	Thermo Fisher Scientific	n/a	Direct quote from Thermo
Clipping station	Sub-angstrom	CSA-01	
Compound 2	n/a	n/a	Synthesised by Dr Simon A. Osborne, LifeArc
Cryo-FIB specific autogrid rims	Thermo Fisher Scientific	1205101	
E64	Sigma	E3132	
Emitech K100X glow discharge unit	Quorum	n/a	
Gibco RPMI 1640 media	Thermo Fisher Scientific	12633012	Formulation used for culturing is custom made (REF 041-91762 A) and includes Albumax, glutamine, HEPES and hypoxanthine supplements
Giemsa Stain	VWR International	350864X	
Glass slides	Thermo Fisher Scientific	11562203	
Grid boxes	Sub-angstrom	PB	For clipped grids
Grid boxes	Thermo Fisher Scientific	n/a	For clipped grids - direct quote from Thermo Fisher Scientific
Grid boxes	Agar Scientific	AGG3727	
Home-made manual plunge freezing rig	n/a	n/a	With an insulated ethane pot (high-density foam) and liquid nitrogen bath (polystyrene) on a bench top in a containment facility.
Human blood	n/a	n/a	UK National Blood and Transplant service
JEOL 4700F Z JSM with a Leica VCT500 stage cooling system	JEOL	n/a	FIB-SEM

Leica EM ACE600 with a VCT500 cryostage	Leica	n/a	sputter coater
Leica EM ACE900	Leica	n/a	e-beam rotary coater. In a humidity controlled room.
Linkam cryo-stage for light microscope	Linkam	Model No. CMS196	Cassettes for clipped and un-clipped grids. In a humidity controlled room.
Methanol	Sigma	179957	
Nikon Eclipse E200 light microscope	Nikon	n/a	with Linkam cryo-stage in a humidity controlled room.
Percoll	VWR International	17-0891-01	Solution for percoll cushion is 35 ml 10x PBS, 150 ml RPMI 1640 media and 315 ml Percoll
Quantifoil copper 200 mesh 2/4 holey carbon EM Finder grids	Quantifoil	N1-C17nCuH2-01	100 pack
Quantifoil copper 200 mesh 2/4 holey carbon EM grids	Quantifoil	N1-C17nCu20-01	100 pack
Quorum PP3010 prep-chamber	Quorum	n/a	sputter coater
Scios dual beam equipped with a Quorum PP3010 transfer stage.	FEI	n/a	FIB-SEM
Staedtler Lumocolor fine black permanent marker pen	Viking Direct	ND538522	
TFS Titan Krios 300 kV TEM	Thermo Fisher Scientific	n/a	TEM equipped with a K2 or K3 camera.
Whatmann grade 1 filter paper	Sigma	WHA1001150	
Zeiss Axio Scope A1 light microscope	Zeiss	n/a	with Linkam cryo-stage in a humidity controlled room.