

Imaging Replicative Domains in Ultrastructurally Preserved Chromatin by Electron Tomography

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Materials

Name	Company	Catalog Number	Comments
Reagent			
5-ethynyl-2'-deoxyuridine (EdU)	Thermo Fisher	A10044	
2-(4-Morpholino)ethane Sulfonic Acid (MES)	Fisher Scientific	BP300-100	
AlexaFluor 555-azide	Termo Fisher	A20012	
biotin-azide	Lumiprobe	C3730	
Bovine Serum Albumine	Boval	LY-0080	
DDSA	SPI-CHEM	26544-38-7	
DMP-30	SPI-CHEM	90-72-2	
DRAQ5	Thermo Scientific	62251	
Epoxy resin monomer	SPI-CHEM	90529-77-4	
Glutaraldehyde (25%, EM Grade)	TED PELLA, INC	18426	
Gum arabic	ACROS Organics	258850010	
Magnesium chloride	Panreac	141396.1209	
NaBH ₄	SIGMA-ALDRICH	213462	
NMA	SPI-CHEM	25134-21-8	
N-propyl gallate	SIGMA-ALDRICH	P3130	
PBS	MP Biomedicals	2810305	
Silver lactate	ALDRICH	359750-5G	
Streptavidin-AlexaFluor 488 conjugate	Termo Fisher	S11223	
Streptavidin-Nanogold conjugate	Nanoprobe	2016	
tetrachloroauric acid	SIGMA-ALDRICH	HT1004	

Tris(hydroxymethyl)aminomethane (Tris)	CHEM-IMPEX INT'L	298	
Triton X-100	Fluka Chemica	93420	
Instruments			
Carbon Coater	Hitachi		
Copper single slot grids	Ted Pella	1GC10H	
Cy5 fluorescence filter set (Ex620/60 DM660 Em700/75)	Nikon	Cy5 HQ	Alternatives: Zeiss, Leica, Olympus
Diamond knife Ultra Wet 45°	Diatome	DU	Alternatives: Ted Pella
Fluorescent microscope	Nikon	Ti-E	Alternatives: Zeiss, Leica, Olympus
High-tilt sample holder	Jeol		
Rotator	Biosan	Multi Bio RS-24	
Transmission electron microscope operating at 200 kV in EFTEM mode, with high-tilt goniometer	Jeol	JEM-2100	Alternatives: FEI, Hitachi
Tweezers	Ted Pella	523	
Ultramicrotome	Leica	UltraCut-E	Alternatives: RMC
Software			
Image acquisition	Open Source	SerialEM (https://bio3d.colorado.edu/SerialEM/)	
Image processing	Open Source	IMOD (https://bio3d.colorado.edu/imod/)	