

Materials List for

# Isolation of Nuclei from Flash-frozen Liver Tissue for Single-cell Multiomics

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jove.com/video/64792

## Materials

Name	Company	Catalog Number	Comments
10% Tween 20 - 5 mL	Bio-Rad	1662404	
2100 Bioanalyzer Instrument	Agilent	G2939BA	
Adhesive PCR film	Thermo Fisher Scientific	AB0558	
Bioanalyzer High Sensitivity DNA Analysis	Agilent	5067-4626	
C1000 Touch Thermal Cycler	Bio-Rad	1851196	
Cell Sorter			For fluorescence-activated cell sorting (FACS); e.g. BD FACSAria Cell Sorter.
Centrifuge 5430R	Eppendorf	5428000619	Use chilled at 4 °C
Chromium Controller & Next GEM Accessory Kit	10X Genomics	1000204	
Chromium Next GEM Chip G Single Cell Kit	10X Genomics	1000127	
Chromium Next GEM Chip J Single cell kit, 16 reactions	10X Genomics	1000230	
Chromium Next GEM Single Cell 3' Kit v3.1, 4 reactions	10X Genomics	1000269	
Chromium Next GEM Single Cell Multiome ATAC + Gene Expression Reagent Bundle, 4 reactions	10X Genomics	1000285	
cOmplete, EDTA-free Protease Inhibitor Cocktail	Sigma Aldrich	11873580001	
Dithiothreitol (DTT) 1 M solution	Sigma Aldrich	646563	Make 1 mM stock solution and use at 1 μM final concentration.
DNA AWAY Surface Decontaminant	Thermo Fisher Scientific	10223471	Wipe surfaces and pipettes before start of experiment
DNA LoBind Tubes, 1.5 mL	Thermo Fisher Scientific	16628742	
DNA LoBind Tubes, 2.0 mL	Thermo Fisher Scientific	16638742	
Elution Buffer (EB) - 250 mL	Qiagen	19086	
Eppendorf ThermoMixer C	Thermo Fisher Scientific	13527550	

Eppendorf ThermoMixer C Accessory: Smartblock	Thermo Fisher Scientific	13518470	
Ethanol, Absolute (200 Proof), Molecular Biology Grade - 100 mL	Thermo Fisher Scientific	10517694	
Filters 50 µm, sterile	SYSMEX PARTEC - CELLTRICS	04-004-2327	Adjust filter diameter according with tissue and nuclei size
Glycerin (Glycerol), 50% (v/v) - 1 L	Ricca Chemical Company	3290-32	
Hard-Shell, 384-Well PCR Plates, thin wall, skirted, clear/white	Bio-Rad	HSP3905	
Herenz Heinz ABS Forceps	Thermo Fisher Scientific	1131884	
Hoechst 33342, Trihydrochloride, Trihydrate, 10 mg/mL Solution in Water	Invitrogen	H3570	Light-sensitive
Imaging Flow Cytometer			For imaging flow cytometry analysis, e.g. Luminex Amnis ImageStream
Invitrogen TE Buffer - 100 mL	Thermo Fisher Scientific	11568846	
KCl (2 M), RNase-free, 100 mL	Thermo Fisher Scientific	AM9640G	
MgCl <sub>2</sub> (1 M), 100 mL	Thermo Fisher Scientific	AM9530G	
MicroAmp 8-Cap Strip, clear-300 strips	Thermo Fisher Scientific	10209104	
MicroAmp 8-Tube Strip, 0.2 mL-125 strips	Thermo Fisher Scientific	10733087	
Mörser 2 mL DOUNCE	Wagner & Munz GmbH	9651632	RNase zap and rinse with MillQ before use
MyFuge 12 Mini MicroCentrifuge C1012	Benchmark Scientific	C1012	Or any other strip and tube mini centrifuge
Neubauer Hemocytometer	OMNILAB LABORZENTRUM	5435293	Visualize and count nuclei under microscope
Nuclease-Free Water (not DEPC- Treated)	Thermo Fisher Scientific	AM9937	
OptiPrep Density Gradient Medium	Sigma Aldrich	D1556	
Pipette tips RT LTS 1000 µL, Wide-O	Mettler Toledo	30389218	
Pistill "A" 2 mL	Wagner & Munz GmbH	9651621	RNase zap and rinse with MillQ before use
Pistill "B" 2 mL	Wagner & Munz GmbH	9651627	RNase zap and rinse with MillQ before use
Polypropylene 15 mL Centrifuge Tube	Thermo Fisher Scientific	10579691	
Polystyrene Petri dish, 60 mm x 15 mm	Thermo Fisher Scientific	10634141	
Polystyrene Round-Bottom 5 mL FACS Tubes	Thermo Fisher Scientific	10100151	
Protector RNase inhibitor - 2,000 U	Sigma Aldrich	3335399001	Keep in -20 °C until use
Protein-based RNase Inhibitor SUPERase•In (20 U/µL)	Thermo Fisher Scientific	AM2696	Keep in -20 °C until use
Recombinant RNase Inhibitor	Clontech Takara	2313B	Keep in -20 °C until use
RNase free microfuge tubes - 0.5 mL	Thermo Fisher Scientific	AM12450	
RNaseZap RNase Decontamination Solution	Thermo Fisher Scientific	AM9780	Wipe surfaces and pipettes before start of experiment
SPRIselect - 60 mL	Beckman Coulter	B23318	Aliquot and store in 4 °C
Sucrose, 500 g	Sigma Aldrich	S0389-500G	Make a 1 M stock solution
Swann-Morton Sterile Disposable Stainless Steel Scalpels	Thermo Fisher Scientific	11798343	
Tris-HCl (1M), pH 8.0	Invitrogen	15568025	

Triton X-100, 98%, 100 mL	Thermo Fisher Scientific	10671652	Make 10% stock solution. Keep at 4 °C and protect from light.
Trypan Blue Solution, 0.4%	Thermo Fisher Scientific	11538886	
Vortex- Mixer	VWR	444-1372	Or any other type of vortex