

Materials List for:

Isolation, Characterization, and Purification of Macrophages from Tissues Affected by Obesity-related Inflammation

Joselyn N. Allen¹, Adwitia Dey¹, Ruth Nissly², James Fraser¹, Shan Yu¹, Gayathri Balandaram¹, Jeffrey M. Peters¹, Pamela A. Hankey-Giblin¹

¹Department of Veterinary and Biomedical Sciences, The Pennsylvania State University

²Microscopy and Cytometry Facility, The Huck Institutes of Life Sciences, Pennsylvania State University

Correspondence to: Joselyn N. Allen at jna131@psu.edu

URL: <https://www.jove.com/video/55445>

DOI: [doi:10.3791/55445](https://doi.org/10.3791/55445)

Materials

Name	Company	Catalog Number	Comments
26 G x 5/8 in Needles	BD	305115	
23 G x 0.75 in needle x 12 in. tubing Blood Collection Set	BD	367297	Used for cannulation of subhepatic IVC during liver perfusion
21 G 1 1/2 in. Needles	BD	305156	
1 mL syringe with rubber stops	BD	309659	
10 mL Syringes	BD	309604	
1 mL Syringe	BD	309659	
F4/80 PE	Biolegend	123110	
CD11c PE/Cy7	Biolegend	117318	
CD11b PE/Cy5	eBioscience	15-0112-81	
Anti-mouse CD16/32 Fc Block	Biolegend	101320	
CD45 Pacific Blue	Biolegend	103126	
PE Rat IgG2a	Biolegend	400508	
PE/Cy7 Armenian Hamster IgG	Biolegend	400922	
PE/Cy5 Rat IgG2b	Biolegend	400610	
Pacific Blue Rat IgG2c	Biolegend	400717	
Dulbecco's Modified Eagle Medium (DMEM)	Cellgro	15-017-CV	
1x Phosphate Buffered Saline (PBS)	Cellgro	21-031-CV	
70 µm cell strainers	Corning, Inc.	352350	
1.7 mL microcentrifuge tube	Denville	C2170	
Paraformaldehyde Aqueous Solution -16x	Electron Microscopy Sciences	CAS #30525-89-4	
Micro Dissecting Scissors, 3.5 inch, Straight, 23 mm, Sharp	Stoelting	52132-10P	Used for general dissecting purposes
Micro Forceps, 4 inches, full curve, 0.8 mm	Stoelting	52102-37P	Used for general dissecting purposes
Spring dissection scissors – 3 mm Cutting edge	Fine Science Tool	15000-10	Used for aorta dissection Steps 1.3.3.17 to 1.3.3.28
Curved 0.07 mm x 0.04 mm Tip Forceps	Fine Science Tool	11297-10	Used for aorta dissection Steps 1.3.3.17 to 1.3.3.28
Hemostatic Forceps (Curved)	Fine Science Tool	13021-12	
Heparin Sodium Salt	Fischer Scientific	9041-08-1	
35 mm Cell Culture/Petri Dishes	Fischer Scientific	12-565-90	

Polystyrene Petri Dishes (10 cm) w/lid	Fischer Scientific	08-757-100D	
15 mL Conical Centrifuge Tubes (Polypropylene)	Fischer Scientific	14-959-53A	
50 mL Conical Centrifuge Tubes (Polypropylene)	Fischer Scientific	14-432-22	
5 mL Round-Bottom Polystyrene Tubes	Fischer Scientific	14-959-5	
Fetal Bovine Serum	Gemini Bio-Products	100-106	
Ethanol (Stock Ethyl Alcohol Denatured, Anyhydrous)	Millipore	EX0285-1	
Bovine Serum Albumin	Rockland	BSA-50	
HEPES	Sigma-Aldrich	H3375	
Collagenase Type II	Sigma-Aldrich	C6885	
Collagenase Type XI	Sigma-Aldrich	C7657	
Hyaluronidase Type I	Sigma-Aldrich	H3506	
DNase	Sigma-Aldrich	DN25	
Collagenase Type I	Sigma-Aldrich	C0130	
NaOH	Sigma Aldrich	1310-73-2	
CaCl ₂	Sigma Aldrich	449709-10G	
500 mL beaker	Sigma Aldrich	02-540M	
4 cm Hemostatic clamp	Stoelting	52120-40	
Toothed forceps	Stoelting	52104-33P	
50 µm Disposable filters	Systemex	04-0042-2317	
Collagenase Type IV	ThermoFischer Scientific	17104019	
Ammonium Chloride Potassium (ACK)	ThermoFischer Scientific	A1049201	
Razors (0.22 mm (0.009"))	VWR International	55411-050	
Texas Red Live/Dead stain			Red viability stain (in Figure 1A)