

Materials List for:

# Preparation of Whole Bone Marrow for Mass Cytometry Analysis of Neutrophil-lineage Cells

Yanfang Peipei Zhu<sup>1</sup>, Lindsey Padgett<sup>1</sup>, Huy Q. Dinh<sup>1</sup>, Paola Marcovecchio<sup>1</sup>, Runpei Wu<sup>1</sup>, Denise Hinz<sup>2</sup>, Cheryl Kim<sup>2</sup>, Catherine C. Hedrick<sup>1</sup>

<sup>1</sup>Division of Inflammation Biology, La Jolla Institute for Immunology

<sup>2</sup>Flow Cytometry Core Facility, La Jolla Institute for Immunology

Correspondence to: Yanfang Peipei Zhu at [peipei@lji.org](mailto:peipei@lji.org), Catherine C. Hedrick at [hedrick@lji.org](mailto:hedrick@lji.org)

URL: <https://www.jove.com/video/59617>

DOI: [doi:10.3791/59617](https://doi.org/10.3791/59617)

## Materials

Name	Company	Catalog Number	Comments
<b>CytoF Antibodies (mouse)</b>			
Anti-Mouse CD45 (Clone 30-F11)-89Y	Fluidigm	Cat# 3089005B	
Anti-Human/Mouse CD45R/B220 (Clone RA36B2)-176Yb	Fluidigm	Cat# 3176002B	
Anti-mouse CD105 (Clone MJ7/18)-Purified	Biolegend	Cat# 120402; RRID:AB_961070	
Anti-mouse CD115 (CSF-1R) (Clone AFS98)-Purified	Biolegend	Cat# 135502; RRID:AB_1937293	
Anti-Mouse CD117/c-kit (Clone 2B8)-166Er	Fluidigm	Cat# 3166004B	
Anti-mouse CD11a (Clone M17/4)-Purified	Biolegend	Cat# 101101; RRID:AB_312774	
Anti-Mouse CD11b (Clone M1/70)-148Nd	Fluidigm	Cat# 3148003B	
Anti-Mouse CD11c (Clone N418)-142Nd	Fluidigm	Cat# 3142003B	
Anti-mouse CD127 (IL-7R $\alpha$ ) (Clone A7R34)-MaxPar Ready	Biolegend	Cat# 133919; RRID:AB_2565433	
Anti-Mouse CD150 (Clone TC1512F12.2)-167Er	Fluidigm	Cat# 3167004B	
Anti-mouse CD16.2 (Fc $\gamma$ RIV) (Clone 9E9)-Purified	Biolegend	Cat# 149502; RRID:AB_2565302	
Anti-Mouse CD162 (Clone 4RA10 (RUO))-Purified	BD Biosciences	Cat# 557787; RRID:AB_647340	
Anti-mouse CD169 (Siglec-1) (Clone 3D6.112)-Purified	Biolegend	Cat# 142402; RRID:AB_10916523	
Anti-mouse CD182 (CXCR2) (Clone SA044G4)-Purified	Biolegend	Cat# 149302; RRID:AB_2565277	
Anti-mouse CD183 (Clone CXCR3-173)-Purified	Biolegend	Cat# 126502; RRID:AB_1027635	
Anti-mouse CD335 (NKp46) (Clone 29A1.4)-MaxPar Ready	Biolegend	Cat# 137625; RRID:AB_2563744	
Anti-mouse CD34 (Clone MEC14.7)-Purified	Biolegend	Cat# 119302; RRID:AB_345280	
Anti-mouse CD41 (Clone MWReg30)-MaxPar Ready	Biolegend	Cat# 133919; RRID:AB_2565433	
Anti-Mouse CD43 (Clone S11)-146Nd	Fluidigm	Cat# 3146009B	

Anti-Mouse CD48 (Clone HM48.1)-156Gd	Fluidigm	Cat# 3156012B	
Anti-mouse CD62L (Clone MEL-14)-MaxPar Ready	ThermoFisher	Cat# 14-1351-82; RRID:AB_467481	
Anti-mouse CD71 (Clone R17217)-Purified	Biolegend	Cat# 113802; RRID:AB_313563	
Anti-mouse CD90 (Clone G7)-Purified	Biolegend	Cat# 105202; RRID:AB_313169	
Anti-Mouse F4/80 (Clone BM8)-159Tb	Fluidigm	Cat# 3159009B	
Anti-mouse FcεR1α (Clone MAR-1)-MaxPar Ready	Biolegend	Cat# 134321; RRID:AB_2563768	
Anti-mouse GM-CSF (MP1-22E9 (RUO))-Purified	BD Biosciences	Cat# 554404; RRID:AB_395370	
Anti-Mouse I-A/I-E (Clone M5/114.15.2)-174Yb	Fluidigm	Cat# 3174003B	
Anti-Mouse Ki67 (Clone B56 (RUO))-Purified	BD Biosciences	Cat# 556003; RRID:AB_396287	
Anti-Mouse Ly-6A/E (Sca-1) (Clone D7)-169Tm	Fluidigm	Cat# 3169015B	
Anti-Mouse Ly6B (Clone 7/4)-Purified	abcam	Cat# ab53457; RRID:AB_881409	
Anti-mouse Ly-6G (Clone 1A8)-MaxPar Ready	Biolegend	Cat# 127637; RRID:AB_2563784	
Anti-Mouse NK1.1 (Clone PK136)-165Ho	Fluidigm	Cat# 3165018B	
Anti-Mouse Siglec-F (Clone E50-2440 (RUO))-Purified	BD Biosciences	Cat# 552125; RRID:AB_394340	
Anti-Mouse TCRβ (Clone H57-597)-143Nd	Fluidigm	(Clone H57-597)-143Nd	
Anti-mouse TER-119/Erythroid Cells (Clone TER-119)-MaxPar Ready	Biolegend	Cat# 116241; RRID:AB_2563789	
<b>Chemicals, Peptides and Recombinant Proteins</b>			
Antibody Stabilizer	CANDOR Bioscience	Cat# 130050	
Bovine Serum Albumin	Sigma-Aldrich	Cat# A4503	
Cisplatin-194Pt	Fluidigm	Cat# 201194	
eBioscience 1x RBC Lysis Buffer	ThermoFisher	Cat# 00-4333-57	
eBioscience Foxp3 / Transcription Factor Staining Buffer Set	ThermoFisher	Cat# 00-4333-57	
EQ Four Element Calibration Beads	Fluidigm	Cat# 201078	
Ethylenediaminetetraacetic acid (EDTA)	ThermoFisher	Cat# AM9260G	
Fetal Bovine Serum	Omega Scientific	Cat# FB-02	
HyClone Phosphate Buffered Saline solution	GE Lifesciences	Cat#SH30256.01	
Intercalator-Ir	Fluidigm	Cat# 201192B	
MAXPAR Antibody Labeling Kits	Fluidigm	<a href="http://www.dvsscience.com/product-catalog-maxpar.php">http://www.dvsscience.com/product-catalog-maxpar.php</a>	
Paraformaldehyde	Sigma-Aldrich	Cat# 158127	
Sodium azide	Sigma-Aldrich	Cat# S2002	

Triton X-100	Sigma-Aldrich	Cat# X100	
Trypsin EDTA 1x	Corning	Cat# 25-053-CI	
<b>Experimental Model: Organism/ Strains</b>			
Mouse: C57BL/6J	The Jackson Laboratory	Stock No: 000664	
<b>Software Alogrithm</b>			
Bead-based Normalizer	Finck et al., 2013	<a href="https://med.virginia.edu/flow-cytometry-facility/wp-content/uploads/sites/170/2015/10/3_Finck-Rachel_CUGM_May2013.pdf">https://med.virginia.edu/flow-cytometry-facility/wp-content/uploads/sites/170/2015/10/3_Finck-Rachel_CUGM_May2013.pdf</a>	
Cytobank	Cytobank	<a href="https://www.cytobank.org/">https://www.cytobank.org/</a>	
Cytofkit v1.r.0	Chen et al., 2016	<a href="https://bioconductor.org/packages/release/bioc/html/cytofkit.html">https://bioconductor.org/packages/release/bioc/html/cytofkit.html</a>	
t-SNE	van der Maaten and Hinton, 2008	<a href="https://cran.r-project.org/web/packages/Rtsne/index.html">https://cran.r-project.org/web/packages/Rtsne/index.html</a>	