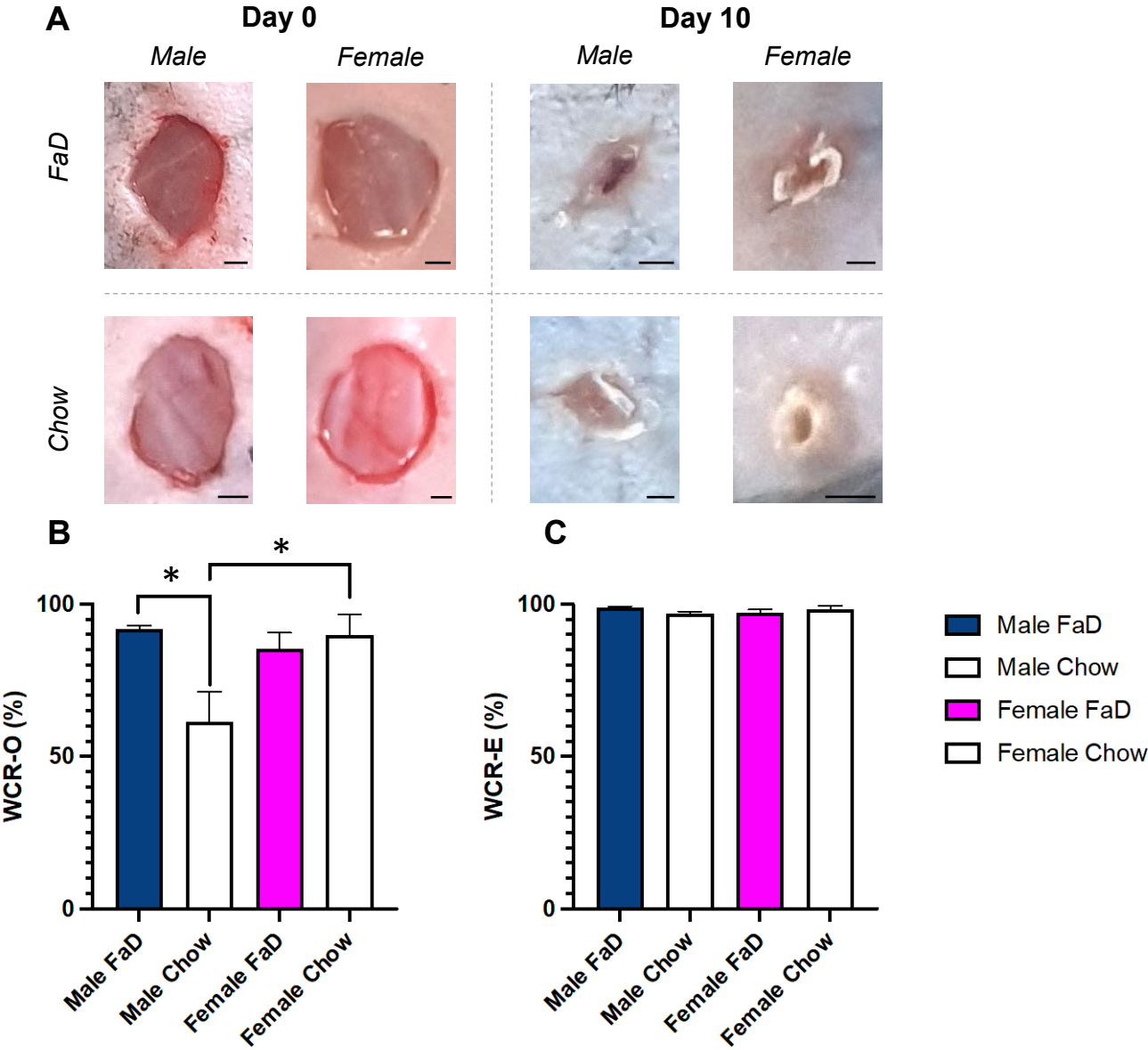
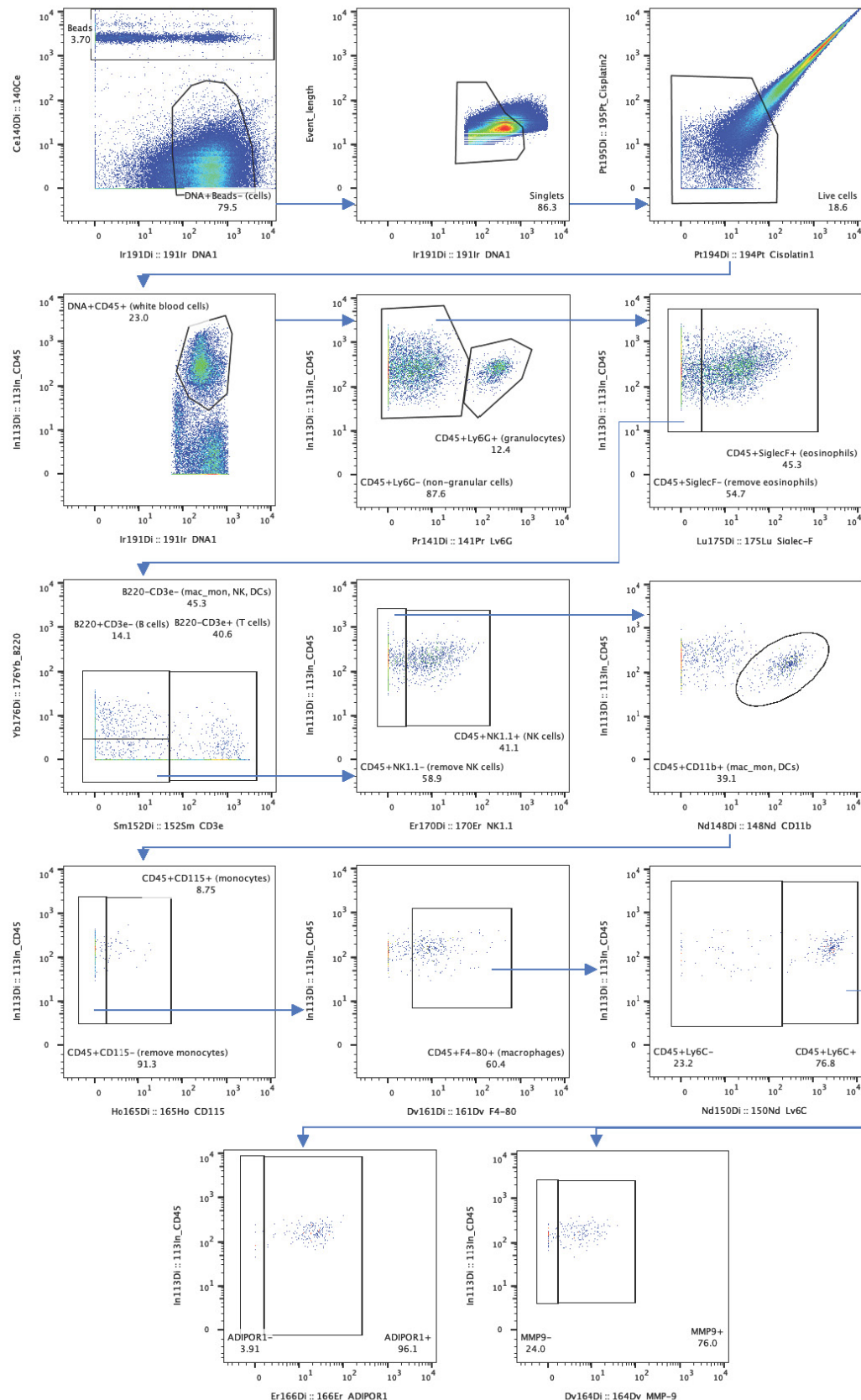


Supplementary Figure S1



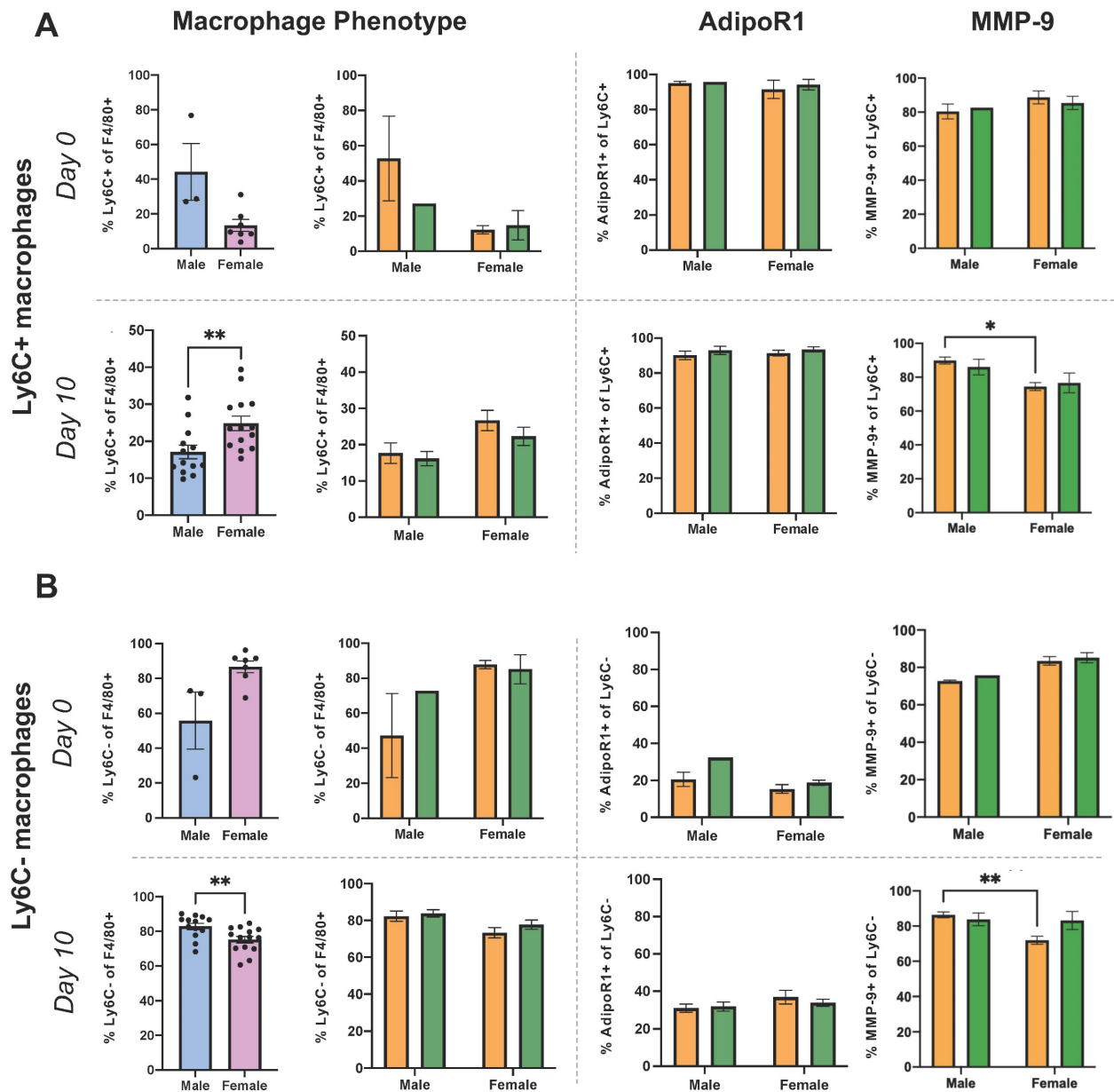
Supplementary Figure S1: Mouse wound healing. (A) Representative images of wounds from male FaD, male Chow, female FaD and female Chow mice at 0- and 10-days post-wounding, with 1 mm scale bar. Image brightness has been adjusted for clarity. (B) Wound closure rate by wound outline (WCR-O) and (C) re-epithelialization (WCR-E) measured at termination. Two-way ANOVAs were performed to compare male FaD, male Chow, female FaD, and female Chow. Significance was indicated as $p < 0.05$ (*).

Supplementary Figure S2



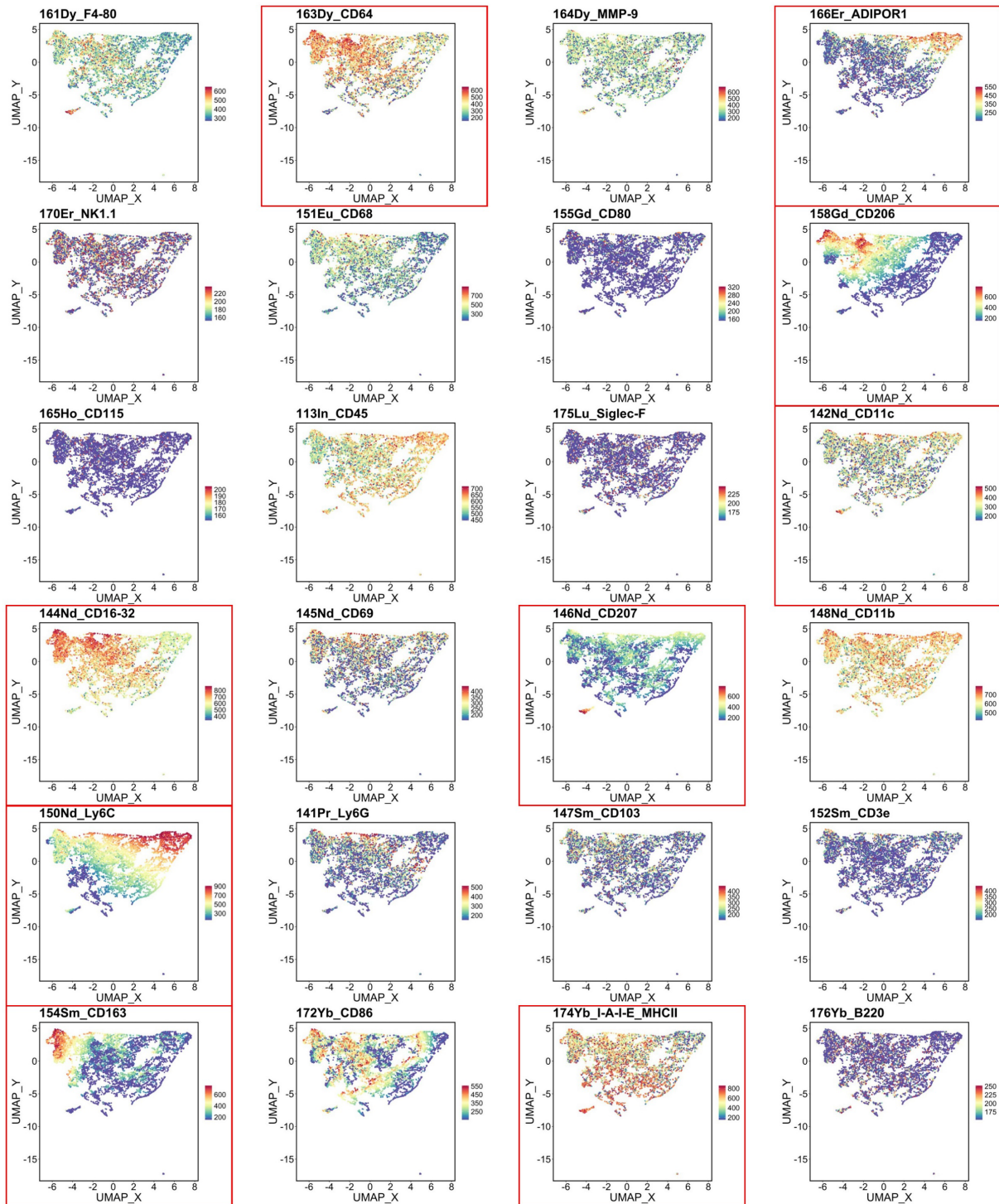
Supplementary Figure S2: Representative manual gating strategy for macrophages and their expression of AdipoR1 and MMP-9. Calibration beads, non-singlet cells, and dead cells were excluded, then the white blood cell (CD45+) population was identified. Granulocytes, eosinophils, B and T cells, and natural killer (NK) cells were excluded from this population, then the CD11b+ population was identified, and monocytes were excluded. Total macrophages (F4/80+) and their subsets (e.g. Ly6C+) were identified and expressed as a proportion of their parents' population. Subsequently, the expression of functional markers AdipoR1 and MMP-9 in these subsets were analyzed.

Supplementary Figure S3



Supplementary Figure S3: Proportion of Ly6C+ and Ly6C- macrophages at Day 0 and Day 10 post-wounding. (A) Ly6C+ and (B) Ly6C- macrophages were compared between male and female mice, or male FaD, male Chow, female FaD and female Chow mice. The proportion of macrophages expressing AdipoR1 or MMP-9 was also compared across the latter four groups. FaD groups are shown in orange, Chow in green. Day 0: male FaD ($n=2$ samples), male Chow ($n=1$ sample), female FaD ($n=4$ samples), female Chow ($n=3$ samples). Day 10: male FaD ($n=8$ samples), male Chow ($n=5$ samples), female FaD ($n=8$ samples), female Chow ($n=6$ samples). Significance was indicated as follows: $p < 0.05$ (*), $p < 0.01$ (**).

Supplementary Figure S4



Supplementary Figure S4: Multi-plot of individual marker expression by these metaclusters generated using *Spectre* R package. Red-framed plots show distinct differences in marker expression between metaclusters.

Supplementary Table S1: Antibodies used for mass cytometry.

Target	Metal	Dilution	Catalog #	Manufacturer Details
F4/80	161Dy	1:133	123102	BioLegend, San Diego, CA, USA
NK1.1	170Er	1:200	553162	BD Biosciences, Franklin Lakes, NJ, USA
CD115	165Ho	1:625	135502	BioLegend, San Diego, CA, USA
CD16/32	144Nd	1:200	553142	BD Biosciences, Franklin Lakes, NJ, USA
Ly6C	150Nd	1:100	128002	BioLegend, San Diego, CA, USA
CD163	154Sm	1:200	155302	BioLegend, San Diego, CA, USA
CD64	163Dy	1:200	139302	BioLegend, San Diego, CA, USA
CD68	151Eu	1:100	137002	BioLegend, San Diego, CA, USA
CD45	113In	1:100	103102	BioLegend, San Diego, CA, USA
CD69	145Nd	1:100	104502	BioLegend, San Diego, CA, USA
Ly6G	141Pr	1:135	127602	BioLegend, San Diego, CA, USA
CD86	172Yb	1:100	553689	BD Biosciences, Franklin Lakes, NJ, USA
MMP-9	164Dy	1:200	AF909	R&D Systems, Minneapolis, MN, USA
CD80	155Gd	1:400	553766	BD Biosciences, Franklin Lakes, NJ, USA
Siglec-F	175Lu	1:111	552125	BD Biosciences, Franklin Lakes, NJ, USA
CD207	146Nd	1:50	144202	BioLegend, San Diego, CA, USA
CD103	147Sm	1:50	121402	BioLegend, San Diego, CA, USA
I-A/I-E (MHC-II)	174Yb	1:200	556999	BD Biosciences, Franklin Lakes, NJ, USA
AdipoR1	166Er	1:50	ab240022	Abcam, Cambridge, UK
CD206	158Gd	1:50	141702	BioLegend, San Diego, CA, USA
CD11c	142Nd	1:200	117302	BioLegend, San Diego, CA, USA
CD11b	148Nd	1:800	101202	BioLegend, San Diego, CA, USA
CD3e	152Sm	1:100	100302	BioLegend, San Diego, CA, USA
CD45R/B220	176Yb	1:800	103202	BioLegend, San Diego, CA, USA

Supplementary Table S2: Expression of markers by metaclusters

<i>Cluster no.</i>	<i>Abbreviated name (in Fig. 4A)</i>	<i>Markers expressed</i>
1	MHC-II+ CD163– CD206–	MHC-II+ CD163– CD206– AdipoR1–
2	CD207+ (Langerhans)	CD207+ MHC-II+ CD11c+ CD163– CD64– CD206– AdipoR1–
3	CD163– CD16/32+ CD64+ CD206+	CD163– CD16/32+ CD64+ CD206+ AdipoR1–
4	CD163+ CD16/32+ CD64+ CD206+	CD163+ CD16/32+ CD64+ CD206+ AdipoR1–
5	Ly6C+ AdipoR1+ CD163– CD206–	Ly6C+ AdipoR1+ CD163– CD206–
6	CD16/32+ Ly6C+	CD16/32+ Ly6C+