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SUPPLEMENTAL DATA

Adipose-derived MSC extracellular vesicles ameliorate sepsis by reprogramming macrophages via miR-21-5p targeting *PELI1*

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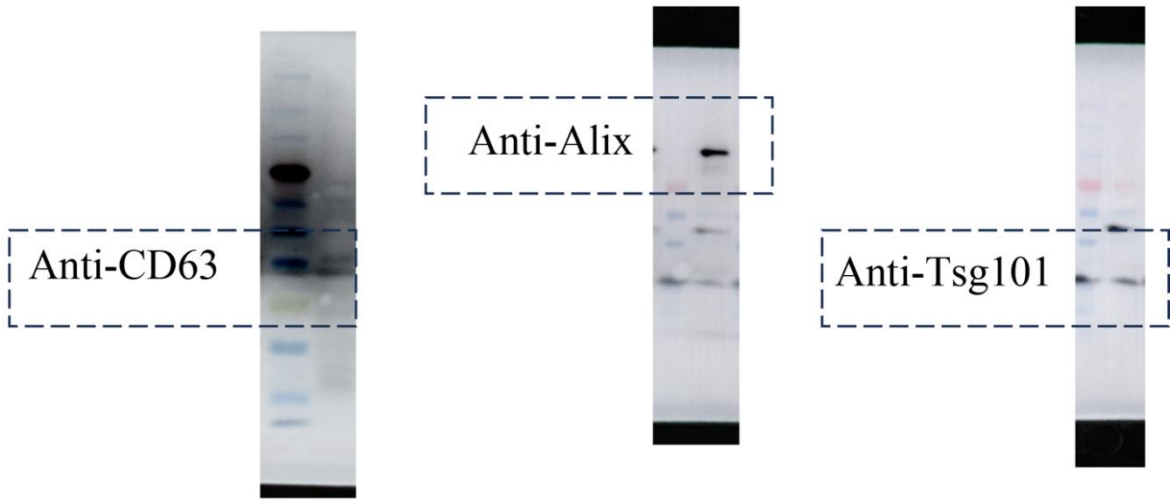
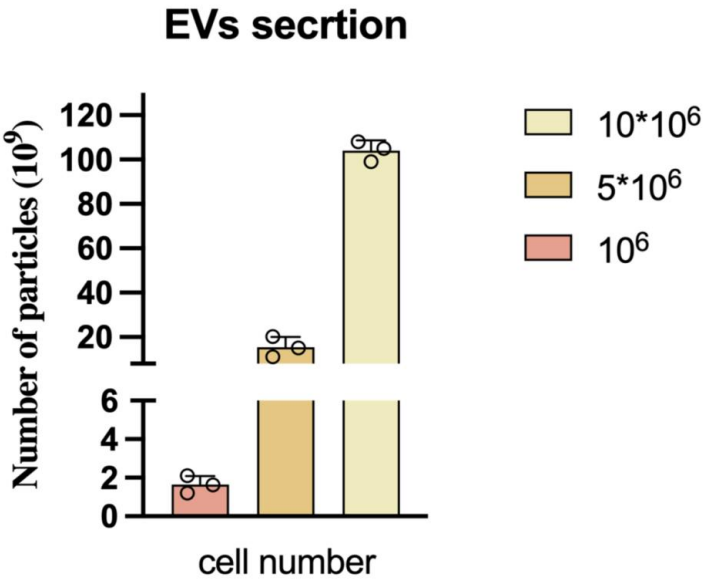
Full article is available at the following link: Adipose-derived MSC extracellular vesicles ameliorate sepsis by reprogramming macrophages via miR-21-5p targeting *PELI1*

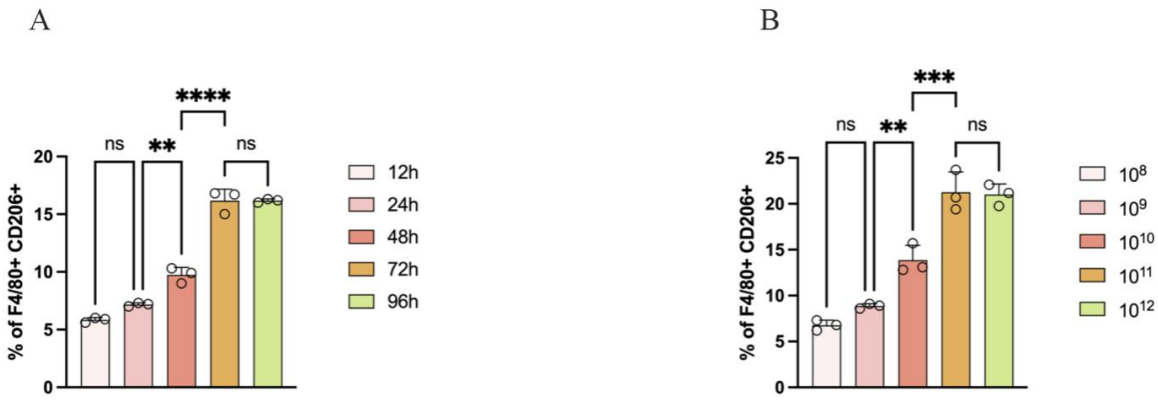


Supplementary figure S1. Western blot validation of canonical EV markers in ADMSC-EVs. Representative immunoblots of isolated ADMSC-EVs probed with anti-CD63, anti-Alix, and anti-Tsg101 antibodies. Detection of these marker proteins confirms the vesicular identity of the preparation. Abbreviations: ADMSC-EVs: Adipose-derived mesenchymal stem cell–derived extracellular vesicles; EVs: Extracellular vesicles.

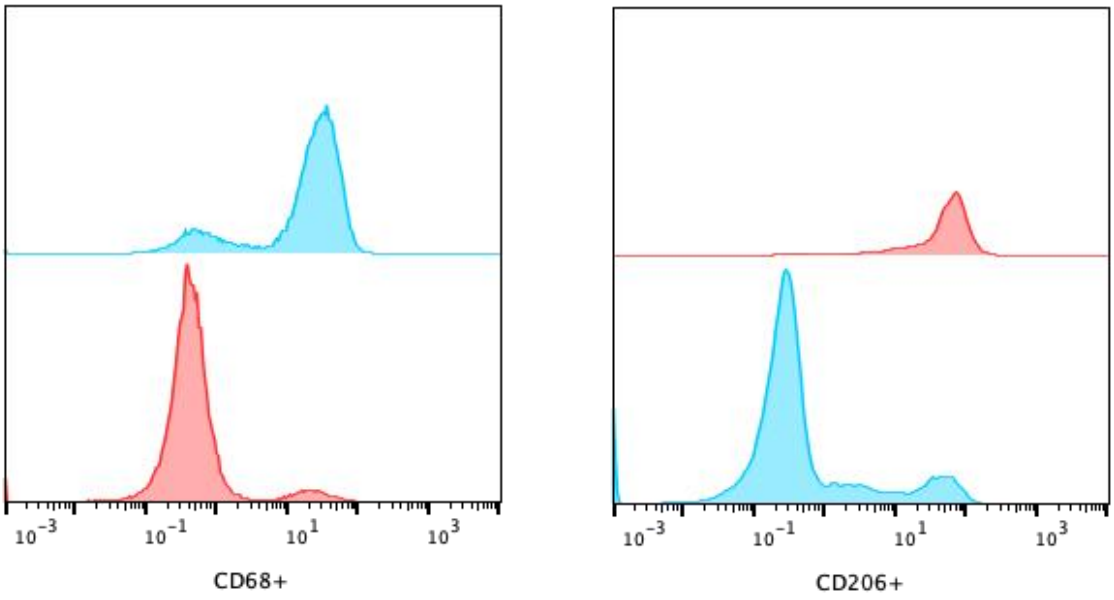


Supplementary figure S2. Secretion of ADMSC-EVs quantified by NTA. NTA of extracellular vesicles secreted by ADMSCs. The bar plot shows particle counts (×10^9) collected from cultures containing 1×10^6, 5×10^6, and 10×10^6

cells. Abbreviations: ADMSC-EVs: Adipose-derived mesenchymal stem cell–derived extracellular vesicles; ADMSCs: Adipose-derived mesenchymal stem cells; EVs: Extracellular vesicles; NTA: Nanoparticle tracking analysis.

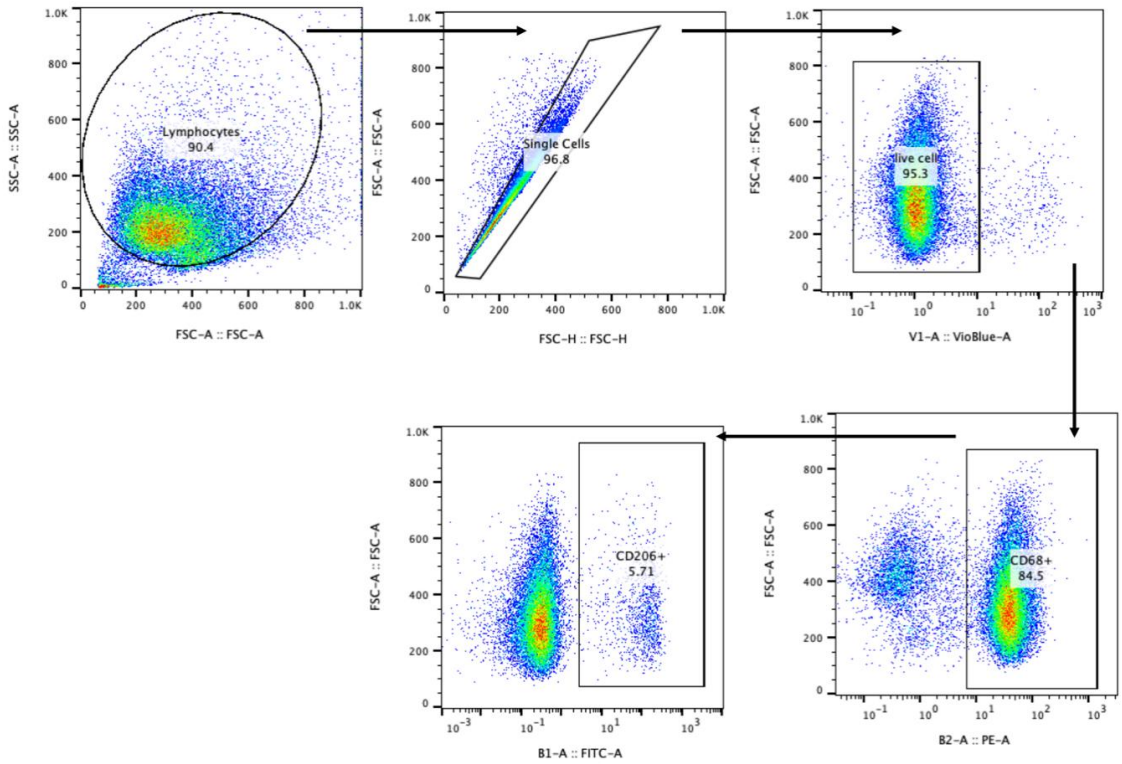


Supplementary figure S3. Time dependent performance and dose dependent performance of ADMSCs derived EVs. (A) The time dependent performance of ADMSCs derived EVs. (B) The dose dependent performance of ADMSCs derived EVs. Abbreviations: ADMSCs: Adipose-derived mesenchymal stem cells; EVs: Extracellular vesicles.

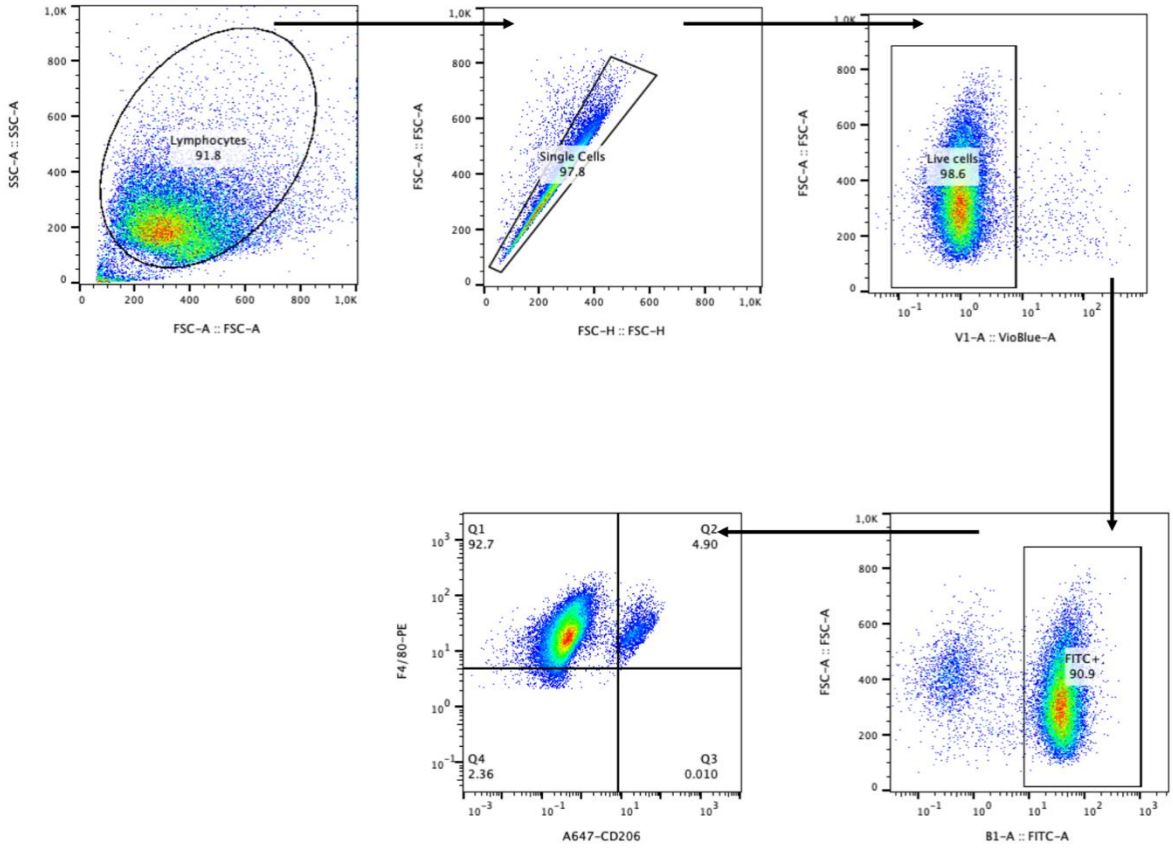


Supplementary figure S4. Phenotyping of THP-1 cells. The surface marker CD68 and CD206 to detect the induced THP-1 cells via flow cytometry. Left: blue histogram represents PBS treated THP-1 as control, red histogram represents PMA

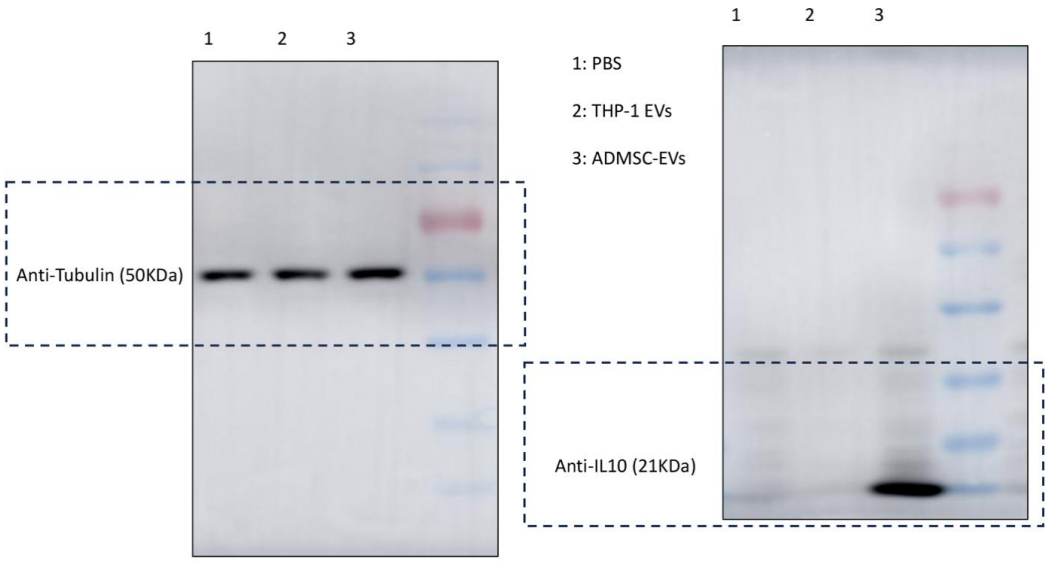
treated THP-1 as positive cells. Right: blue histogram represents PBS treated CD68+ THP-1 cells as control, red histogram represents stimulation treated CD68+ THP-1 as positive cells.Abbreviation: PBS: Phosphate-buffered saline.



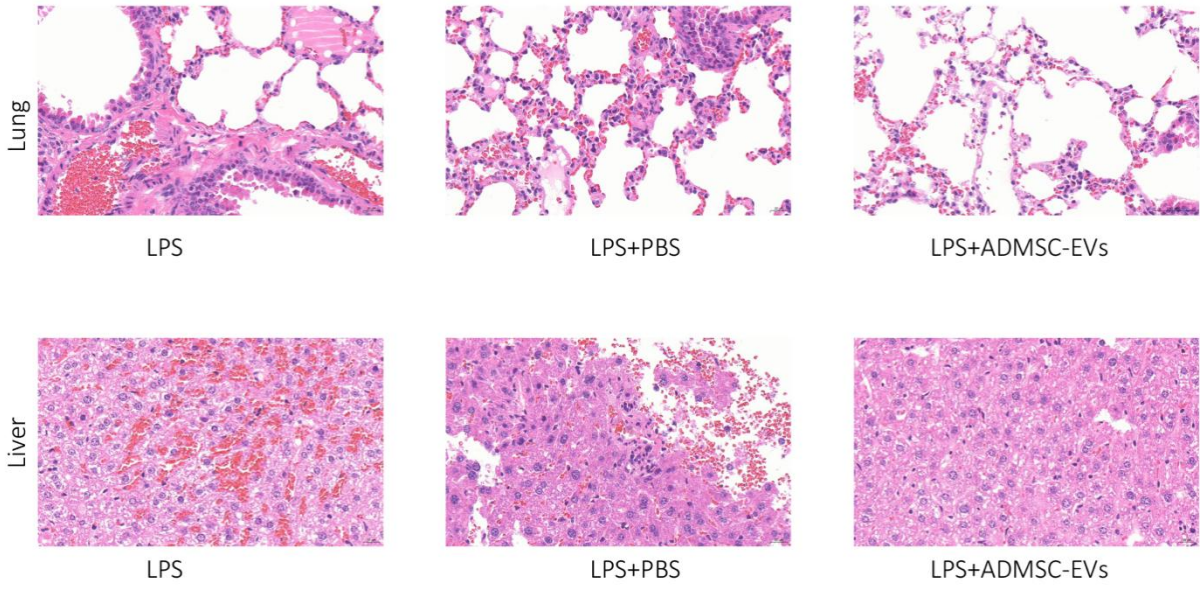
Supplementary figure S5. Gating strategy for detecting the CD68+CD206+ cells populations. The gating strategy for detecting the CD68+CD206+ cells populations for Figure 3B and Figure 3D.



Supplementary figure S6. Gating strategy for detecting the FITC+ F4/80+CD206+ cells populations. The gating strategy for detecting the F4/80+CD206+ cells populations for Figure 6F.

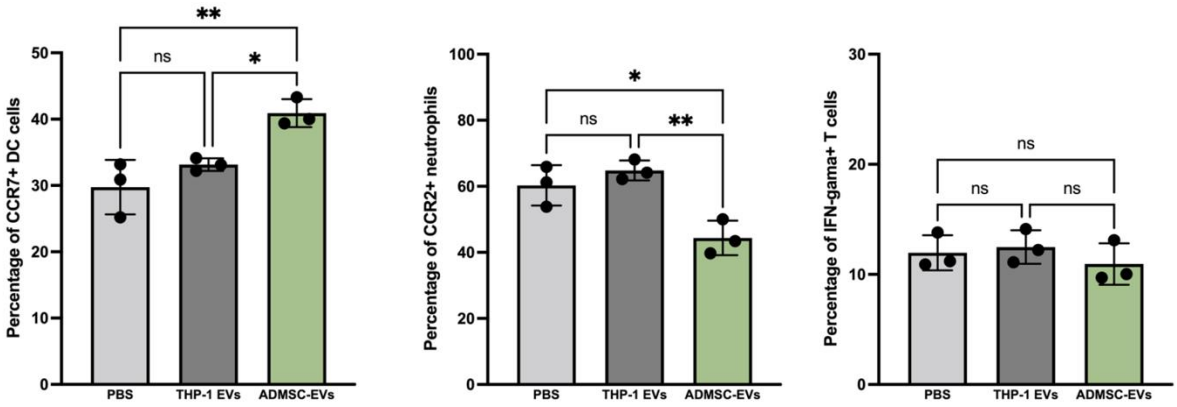


Supplementary figure S7. Original membrane of expression of IL-10. The original membrane of IL-10 expression in Western blot for Figure 3H.

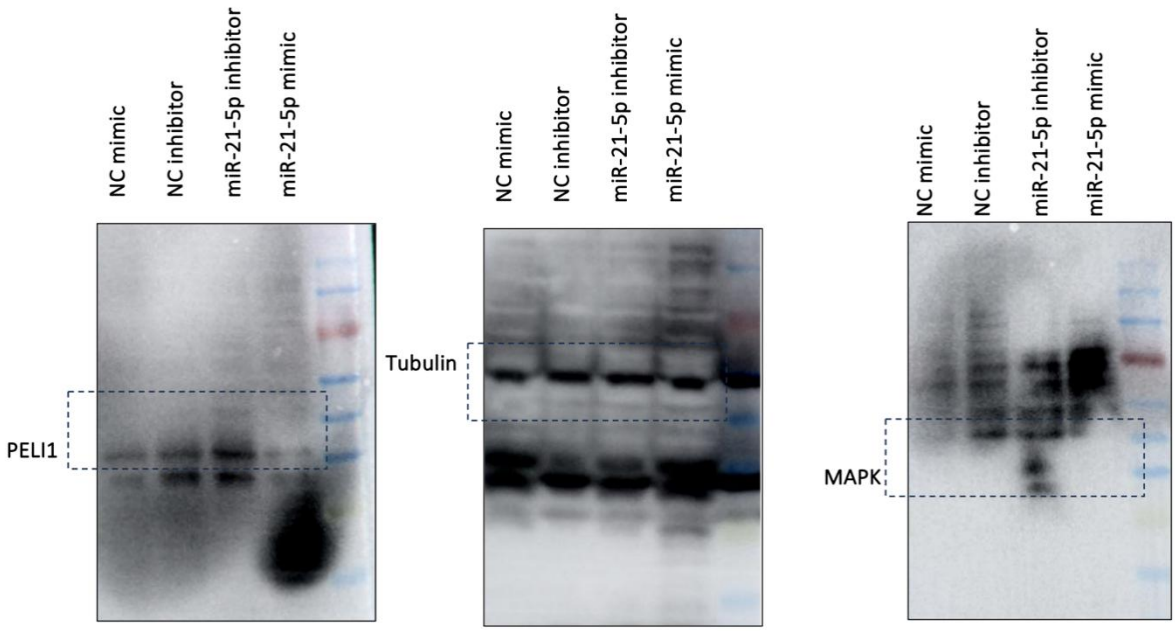


Supplementary figure S8. Histopathology of lung and liver in LPS-induced sepsis with or without ADMSC-EV treatment. Representative H&E-stained sections of lung (top row) and liver (bottom row) from LPS-challenged mice receiving no treatment (LPS), vehicle (LPS+PBS), or ADMSC-EVs (LPS+ADMSC-EVs). Compared with LPS and LPS+PBS controls, ADMSC-EV treatment mitigated sepsis-associated pathological changes, most notably in the lung. Abbreviations: LPS:

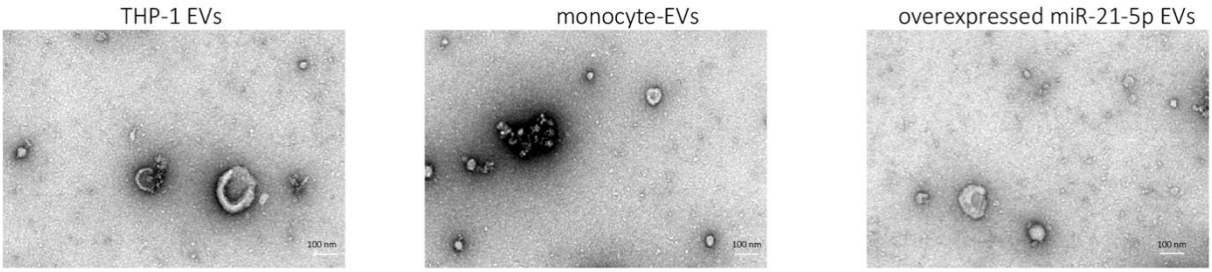
Lipopolysaccharide; ADMSC-EVs: Adipose-derived mesenchymal stem cell–derived extracellular vesicles; PBS: Phosphate-buffered saline; H&E: Hematoxylin and eosin.



Supplementary figure S9. The effect of ADMSC-EVs on different immune cell populations. The effect of ADMSC-EVs on DCs (left), neutrophils (middle) and T cells (left). Abbreviations: ADMSC-EVs: Adipose-derived mesenchymal stem cell–derived extracellular vesicles.



Supplementary figure S10. Original membranes of PELI1 and MAPK expression. The original membrane of PELI1 expression and MAPK expression in Western blot for Figure 7E. Abbreviations: PELI1: Pellino E3 ubiquitin protein ligase 1; MAPK: Mitogen-activated protein kinase.



Supplementary figure S11. Characterization of different EVs. The characterization of different EVs by TEM. Abbreviations: EVs: Extracellular vesicles; TEM: Transmission electron microscopy.