Figure S1. Characterization of human placenta-derived MSCs. (A) The morphology of MSCs. Scale bar, 100 μm. (B) Quantitative analysis of markers, including CD45, CD34, CD31, CD44 and CD90, in MSCs through flow cytometry. MSCs, mesenchymal stem cells.

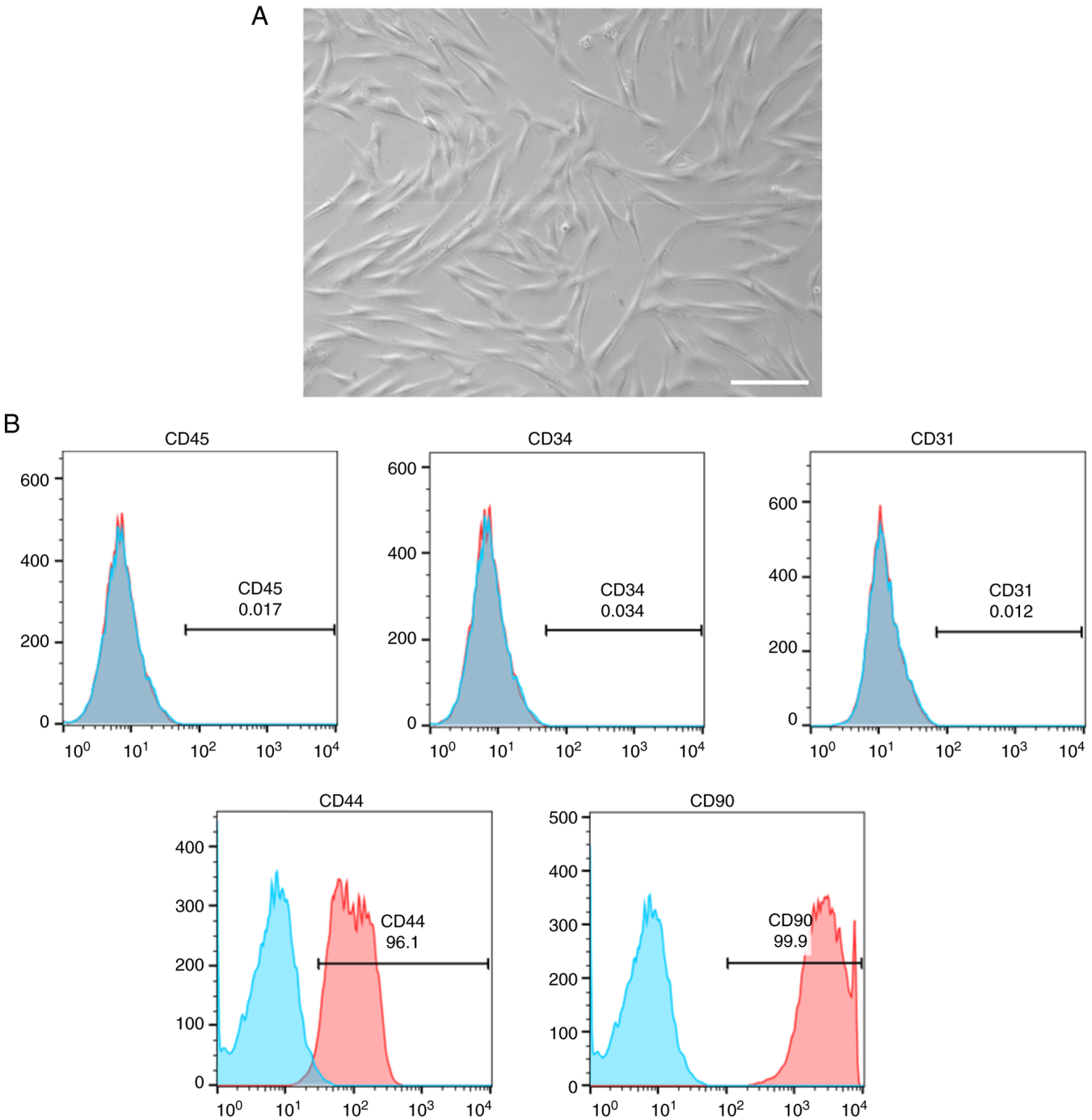

Figure S2. The expression and quantity of TSG101, ALIX and CD63 in MSCs and MSC-EVs. Images of the uncropped immunoblots are shown in Fig. 1C. Boxes indicate cropped regions. TSG101, tumor susceptibility gene 101; ALIX, ALG-2 interacting protein X.

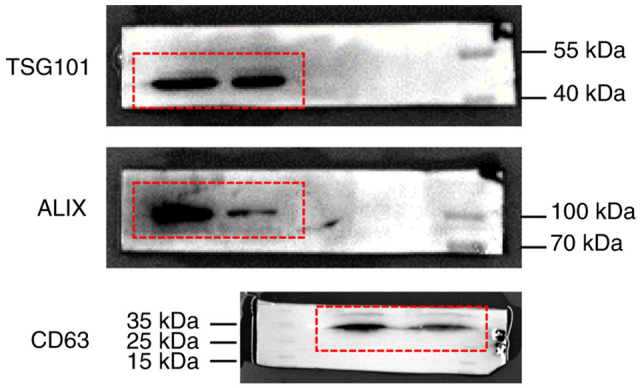

Figure S3. Generation of 4T1-DF cells. Cells were labeled with double fusion reporter genes. (A) Schematic of the lentiviral construct showing the 5'LTR promoter driving Fluc and eGFP. (B) Bright-field and fluorescence microscopy images showing robust eGFP expression in undifferentiated 4T1 cells. Scale bar, 100 μm. (C and D) Bioluminescence imaging of 4T1 cells in 6-well plates showing a linear correlation between cell number and Fluc activity.

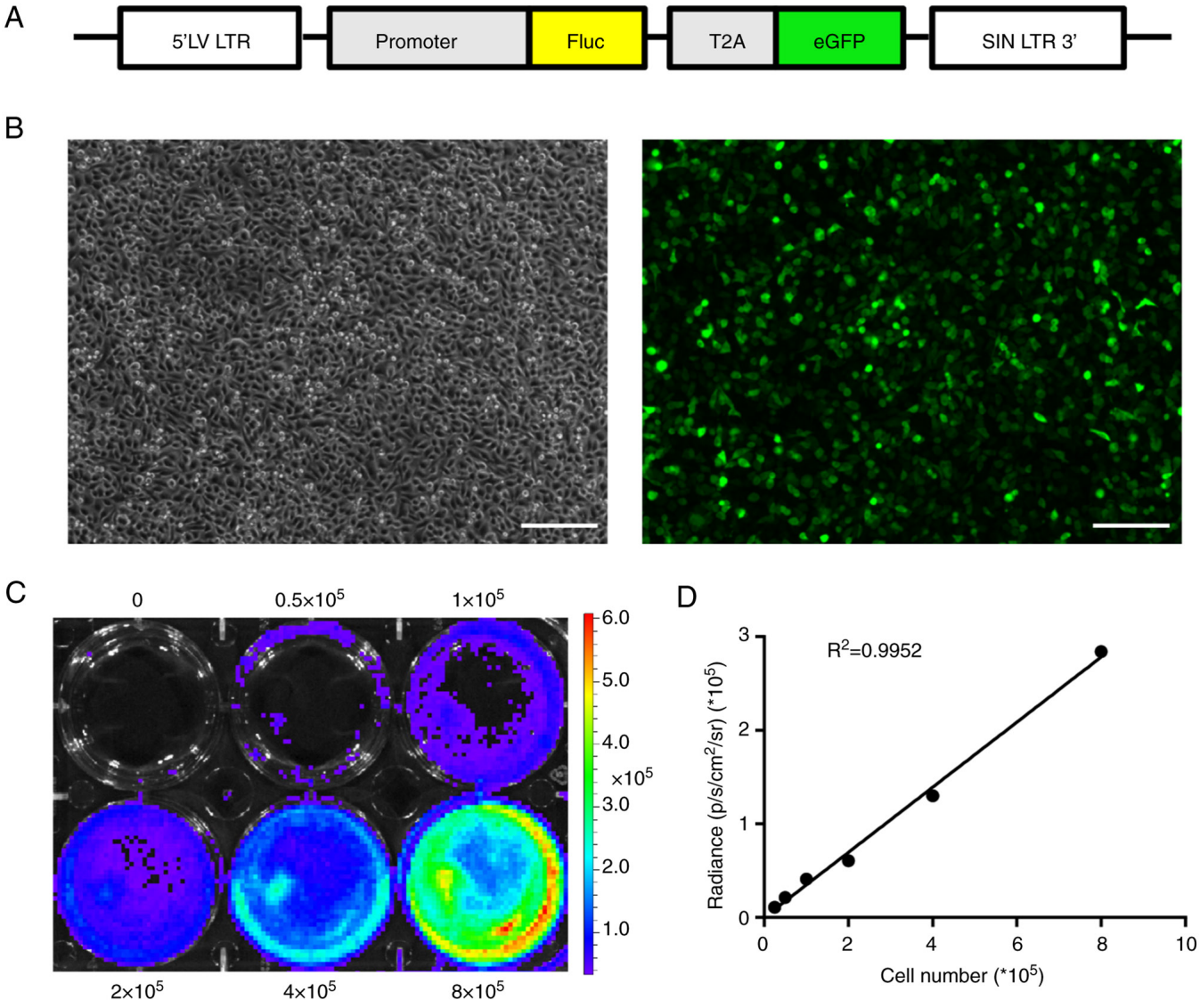

Figure S4. The inhibitory effect of hUCMSCs-EVs on 4T1 breast cancer cells. Scale bar, 50 μm. hUCMSCs-EVs, human umbilical cord MSC-derived extracellular vesicles.

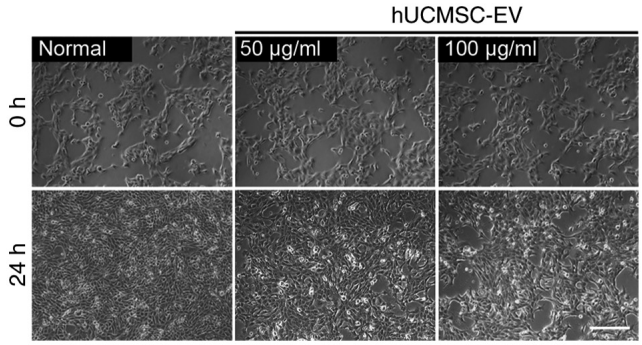

Figure S5. The inhibitory effect of hPMSC-EVs on MCF7 breast cancer cells. hPMSC-EVs, human placenta MSC-derived extracellular vesicles. Scale bar, 50 μm.