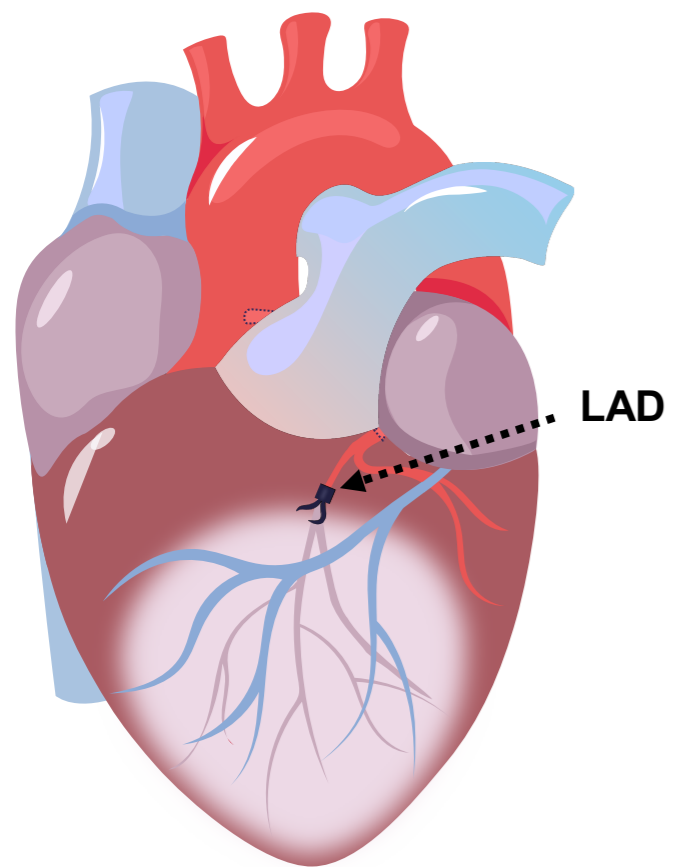


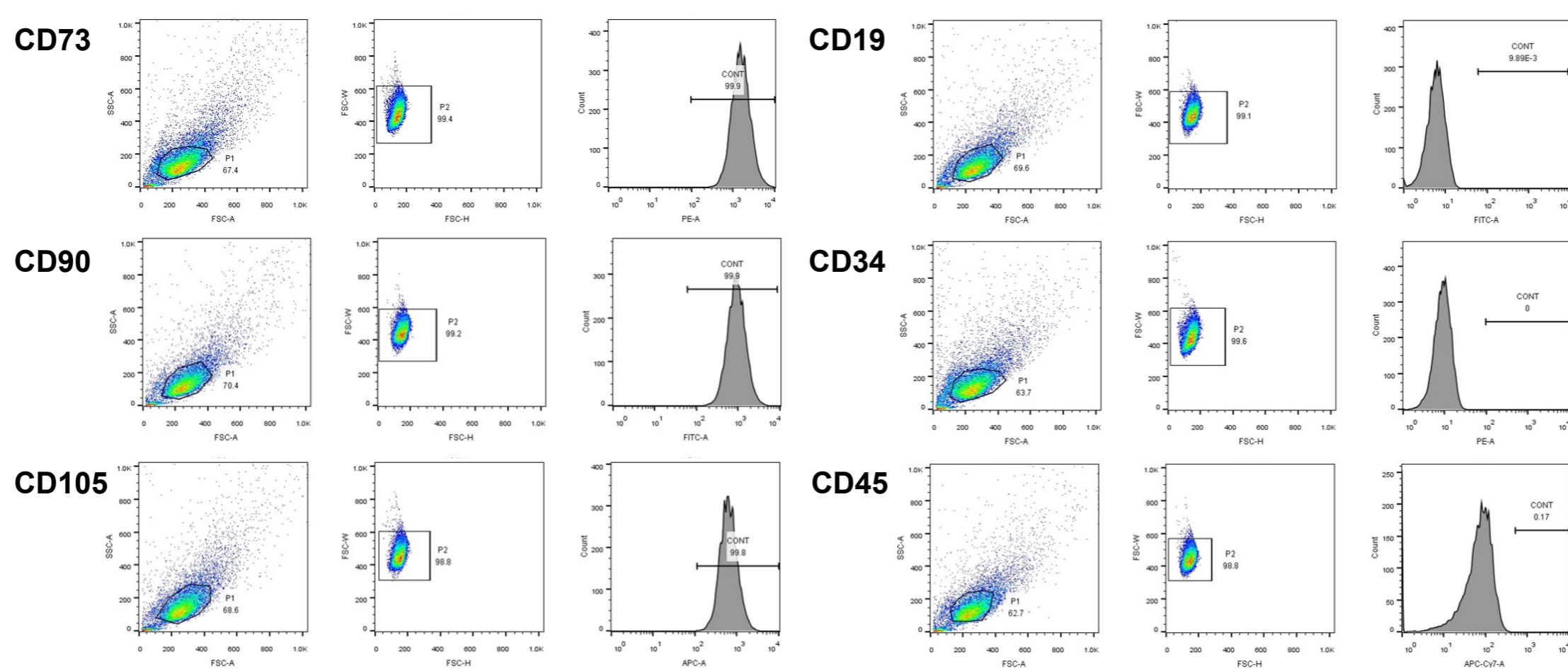
Supplementary Figures

Supplementary Figure 1



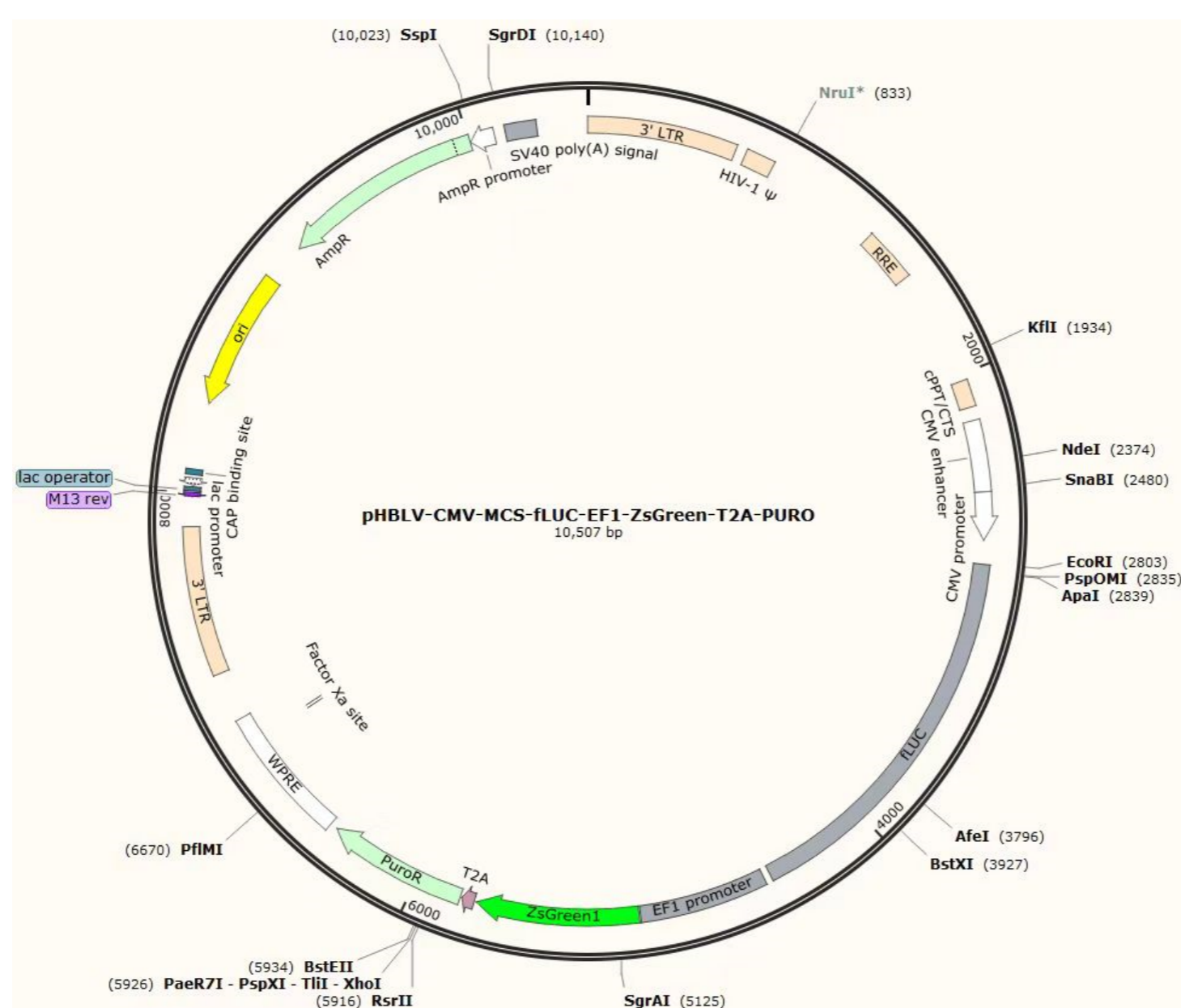
Supplementary Figure 1 Left anterior descending (LAD) ligation site.

Supplementary Figure 2



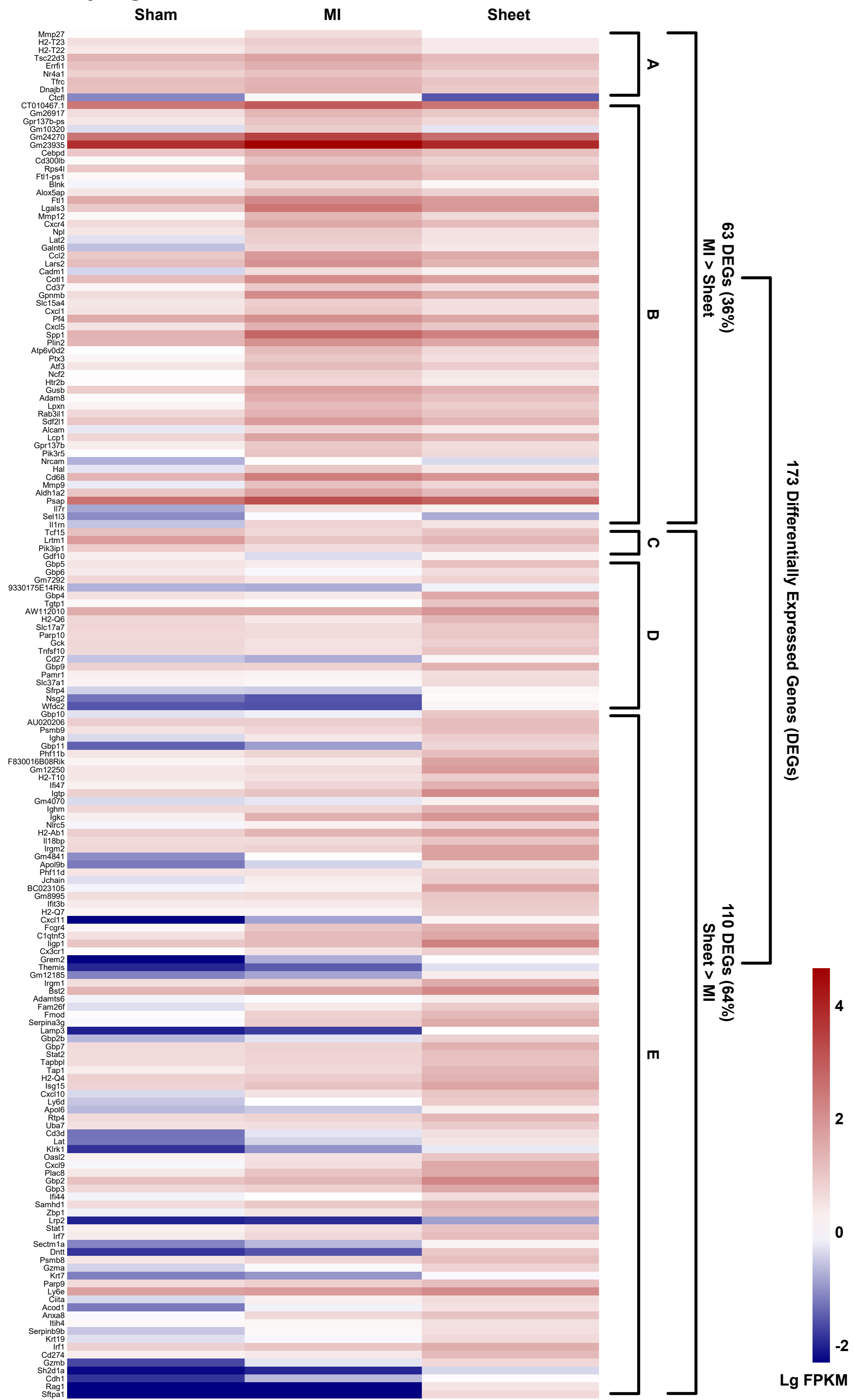
Supplementary Figure 2 Flow cytometric analysis of P4 human umbilical cord mesenchymal stem cells (hUCMSCs). Detection rate of hUCMSC markers: CD73 = 99.9%; CD90 = 99.9%; CD105 = 99.8%. Detection rate of non-hUCMSC markers: CD19 = 9.38E-3%; CD34 = 0%; CD45 = 0.17%.

Supplementary Figure 3



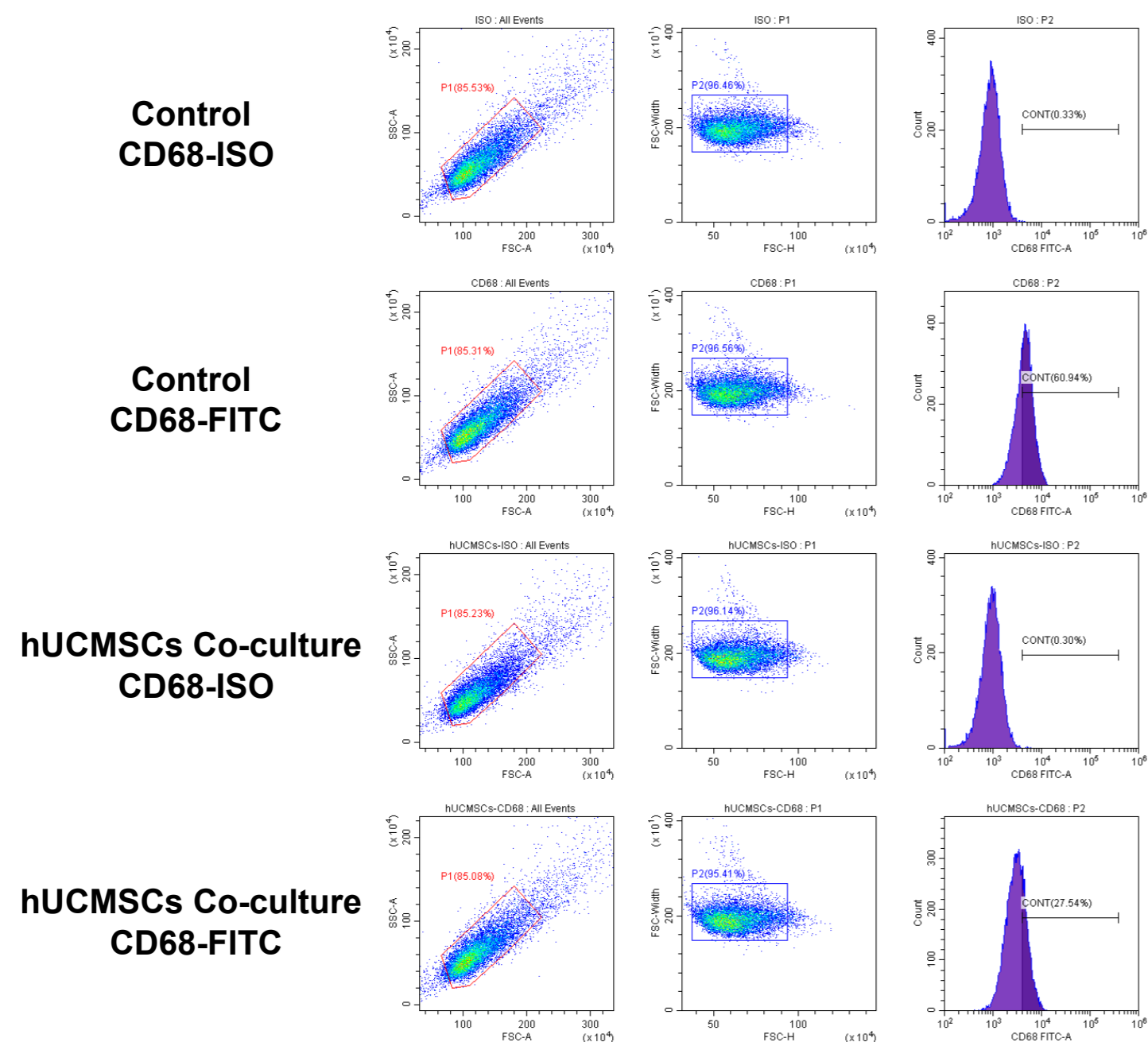
Supplementary Figure 3 Lentiviral luciferase expression vector.

Supplementary Figure 4



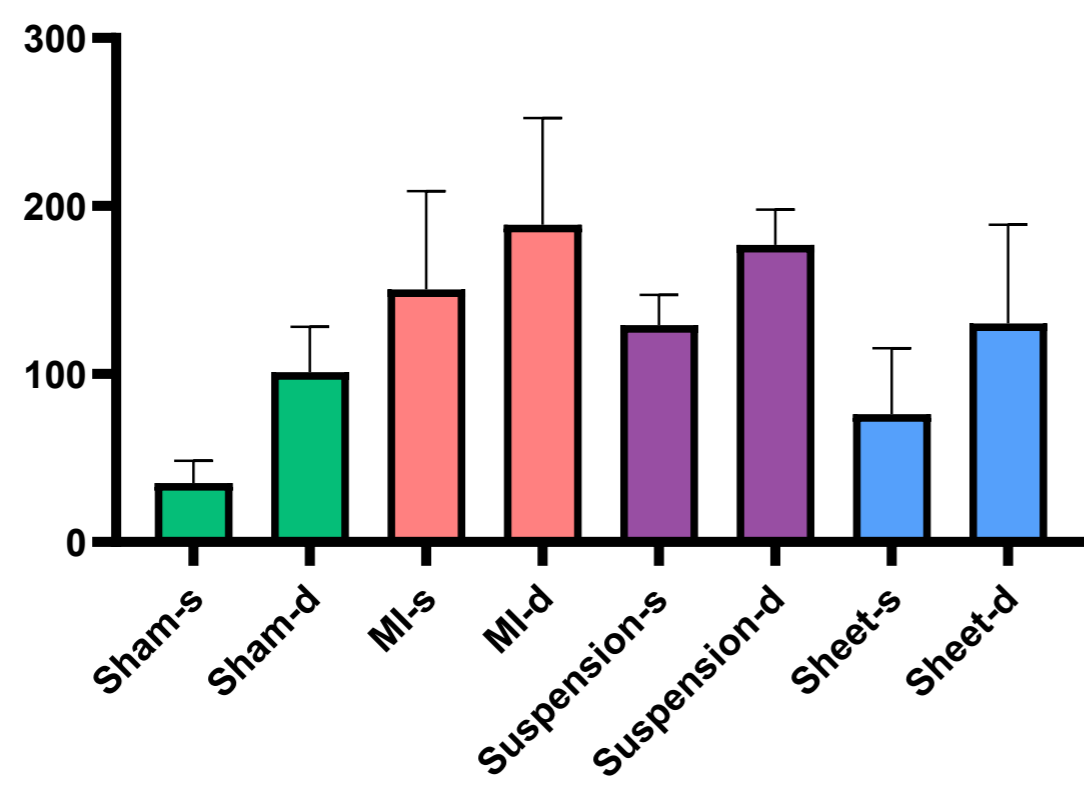
Supplementary Figure 4 Differentially expressed genes (DEGs) (n = 173) in the heart tissue of hUCMSC sheet-treated and MI-only groups day 5 after surgery. Heat map of DEG Lg fragments per kilobase per million mapped fragments values for the Sham, MI and Sheet groups (n = 2 for each group). Selection criteria: A, MI > Sham > Sheet; B, MI > Sheet > Sham; C, Sham > Sheet > MI; D, Sheet > Sham > MI; E, Sheet > MI > Sham..

Supplementary Figure 5



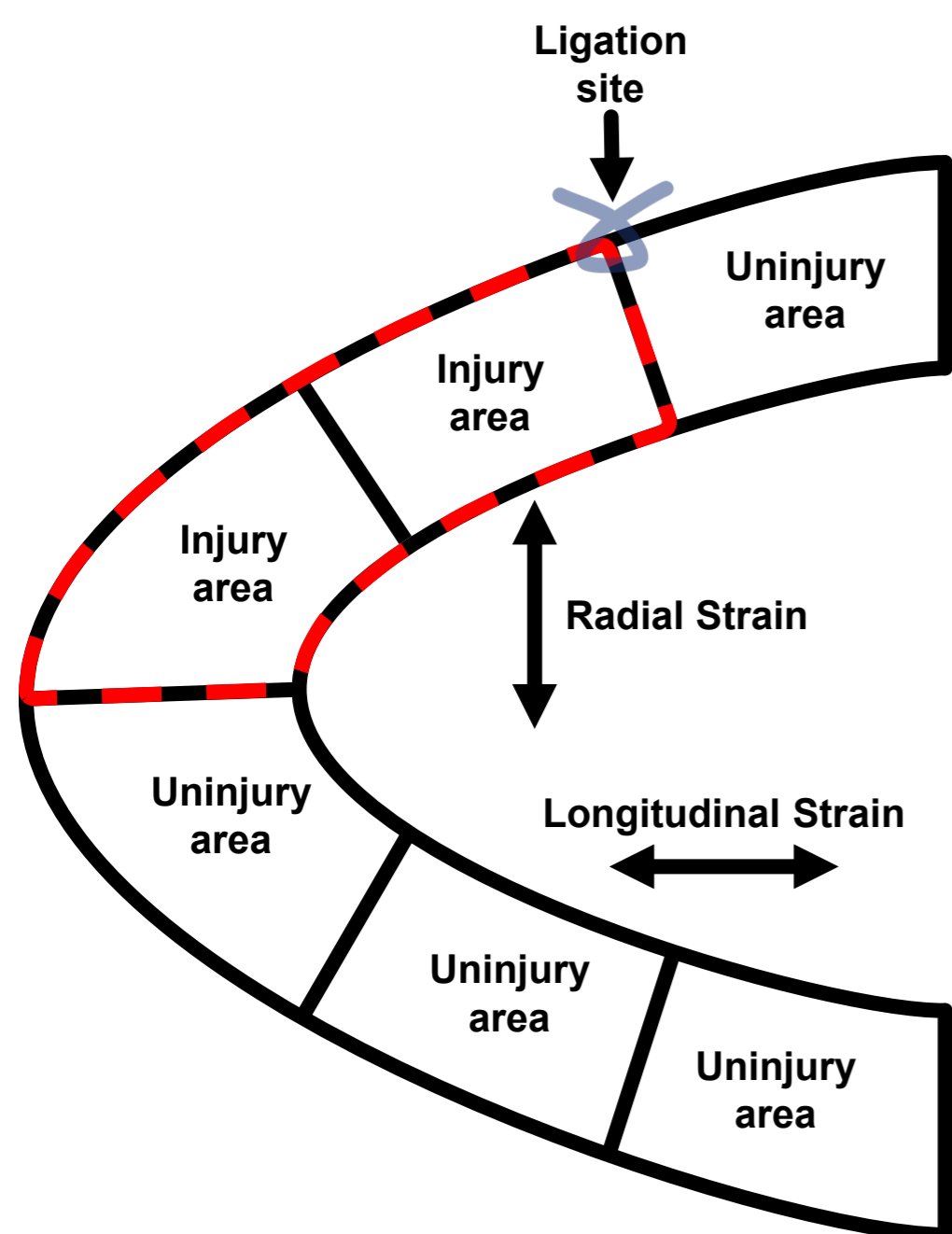
Supplementary Figure 5 Flow cytometric analysis of THP-1-derived CD68-positive classical macrophages in the hUCMSCs co-culture and control groups.

Supplementary Figure 6



Supplementary Figure 6 Left ventricular end systolic and end diastolic volumes. Values are mean \pm SD (control group, n = 6; MI-only group, n = 16; suspension group, n = 8; cell sheet group, n = 16).

Supplementary Figure 7



Supplementary Figure 7 Strain and strain rate measurements of the left ventricular long axis of the treatment and myocardial infarction (MI)-only groups on day 28 post-MI; Only the injury area (red dotted line) was analyzed (radial and longitudinal measurements).