

Supplement

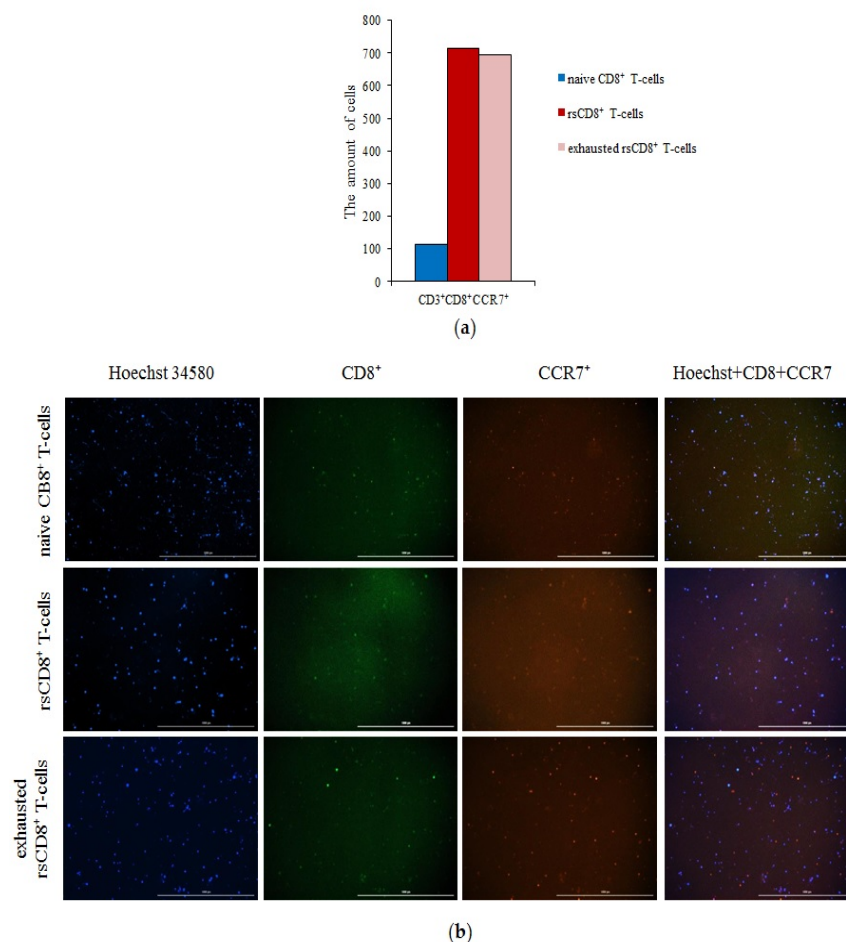


Figure S1. The count of CCR7⁺ CD3⁺CD8⁺T-cells in a culture of naive, reprogrammed, exhausted reprogrammed CD8⁺ T-cells isolated from the spleen. (a) The count of naive, reprogrammed, and exhausted reprogrammed CD8⁺ T-cells of the spleen of C57BL/6 mice expressing the CCR7 marker in T-cell culture; (b) 20× images of T-cells stained with: Hoechst (blue) to identify cell nuclei; CD8 FITC (green); CCR7 AF555 (red); (Hoechst+CD8+ CCR7) composite image using all three colors. Determination of the percentage of cells CD3⁺CD8⁺CCR7⁺ was made by assessing the ratio of cells counted in green and red channel to total cells counted in the blue (DAPI) channel. All scale bars are 1000 µm. *—for comparison with the naive spleen T-cells by Mann–Whitney test ($p < 0.05$).

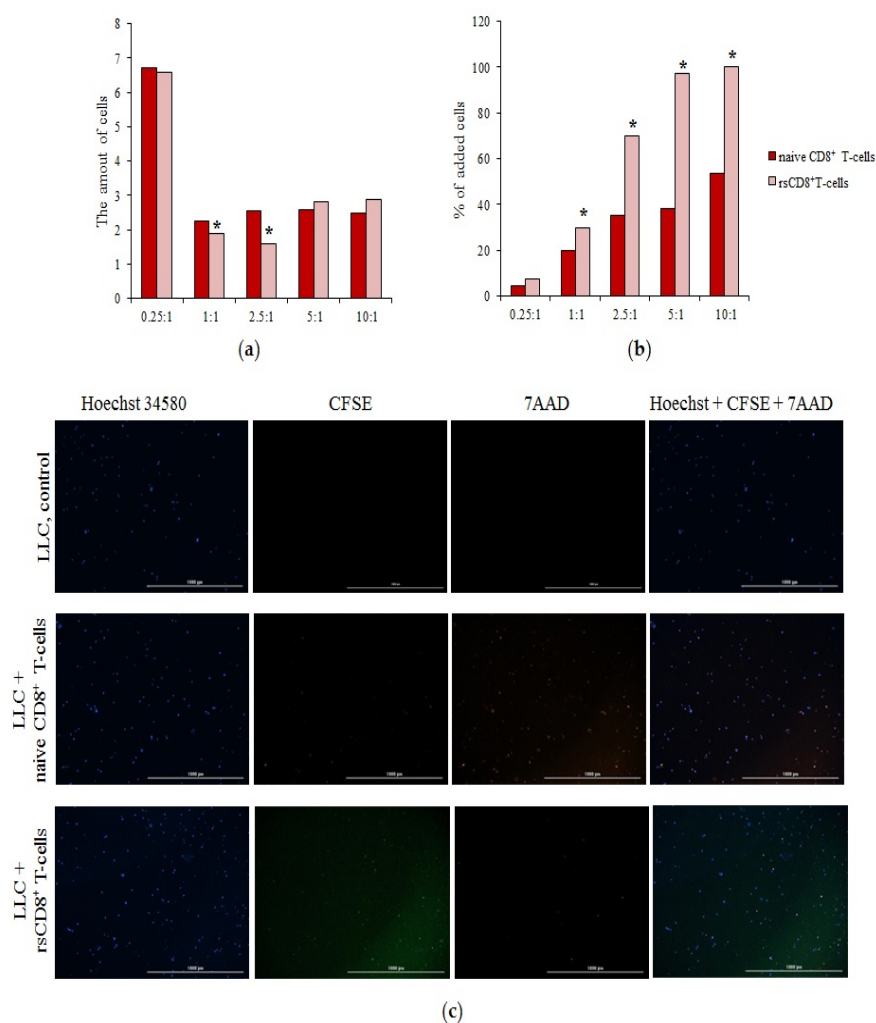


Figure S2. Cytotoxicity and apoptosis of naive and reprogrammed spleen CD8⁺ T-cells in LLC culture. **(a)** The count of apoptotic tumor LLC cells after co-cultivation with reprogrammed spleen CD8⁺ T-cells (% from dead cells of LLC culture); **(b)** The count of apoptotic tumor LLC cells after cocultivation with spleen CD8⁺ T-cells (% from added cells); **(c)** Hoechst (blue) to identify cell nuclei; 7AAD (red); (Hoechst+7AAD+) composite image using all two colors. Determination of the percent of died cells of LLC Hoechst+7AAD+ was made by assessing the ratio of cells counted in blue and red channel to total cells of LLC without green channel. All scale bars are 1000 μm. * - for comparison with naive CD8⁺ T-cell by Mann–Whitney test ($p < 0.05$).

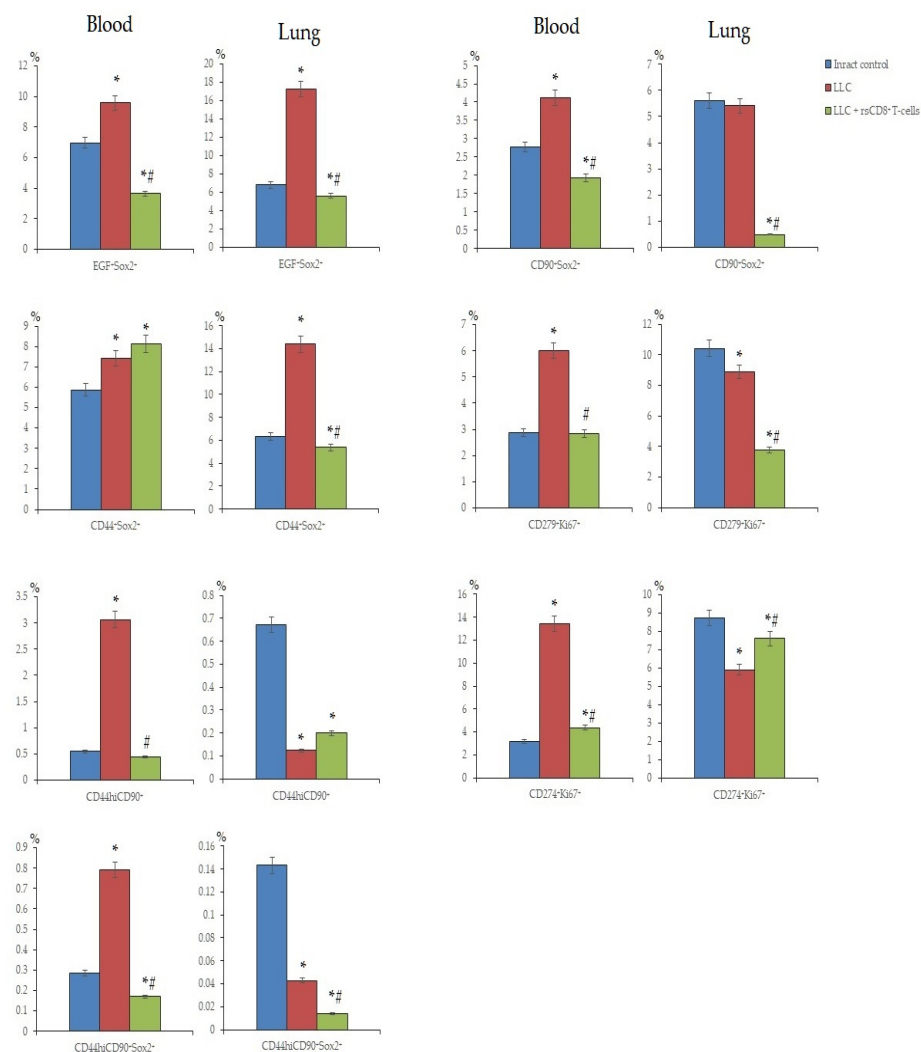


Figure S3. The count of cancer cells and cancer stem cells in the blood and lung of mice with LLC on d7 (% of total mononuclear cells number). The phenotype of cancer cells and cancer stem cells: EGF⁺Sox2⁺, CD44⁺Sox2⁺, CD44^{hi}CD90⁺, CD44^{hi}CD90⁺Sox2⁺, CD90⁺Sox2⁺, CD279⁺Ki67⁺, CD274⁺Ki67⁺. *—for comparison with the intact group by Mann–Whitney test ($p < 0.05$); #—for comparison with the mice with LLC by Mann–Whitney test ($p < 0.05$).

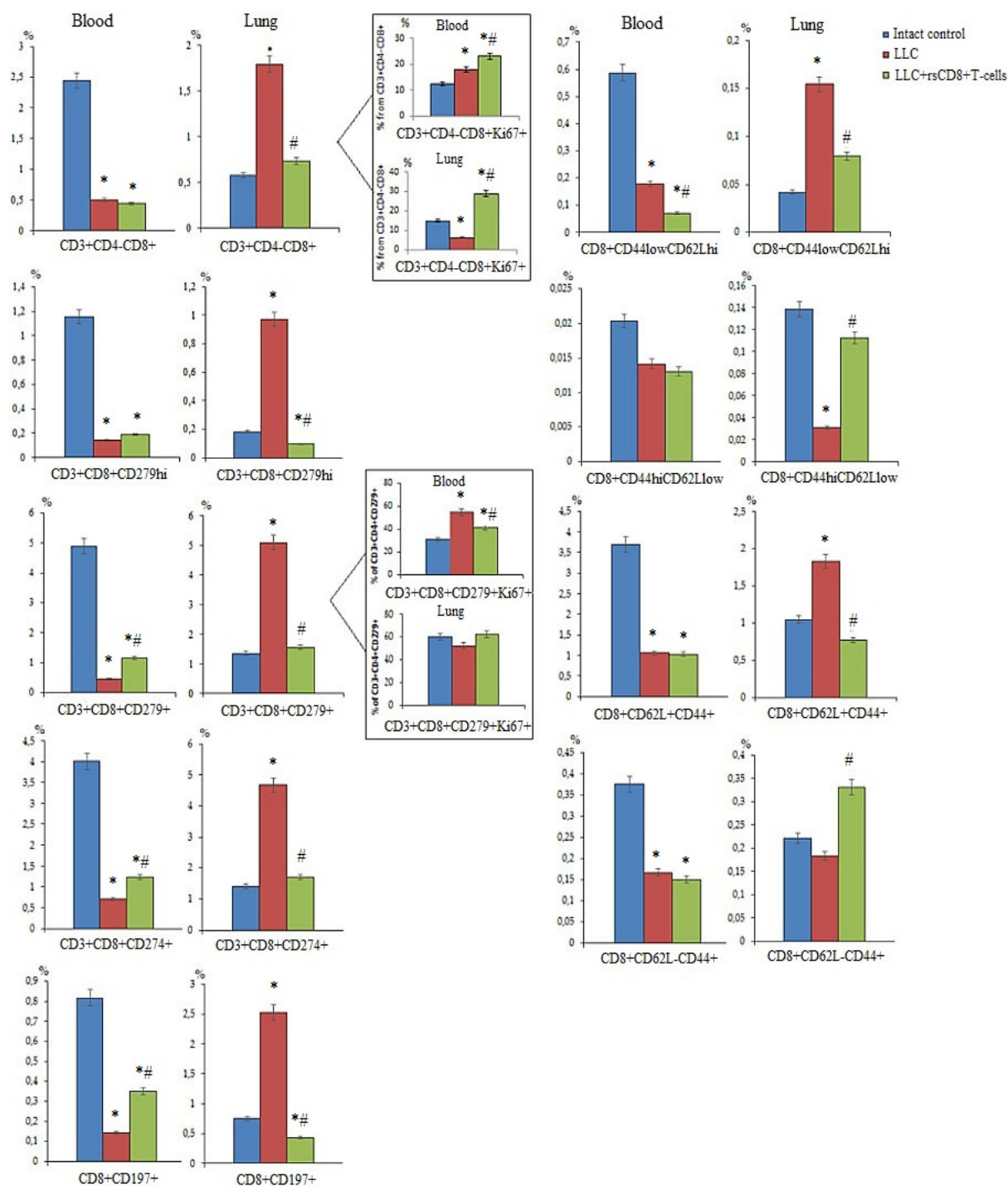


Figure S4. The effect of rsCD8⁺ T-cell-therapy on CD8⁺ T-cell count in blood and lung of mice with LLC on d7 (% of total mononuclear cells number). Phenotype of CD8 cells: CD3⁺CD4⁻CD8⁺, CD3⁺CD8⁺PD-1⁺, CD3⁺CD8⁺PD-L1⁺, CD3⁺CD8⁺PD-1^{hi}, CD8⁺CD197⁺, CD8⁺CD62L-CD44⁺, CD8⁺CD62L^{hi}CD44^{low}, CD8⁺CD62L^{hi}CD44^{low}, CD3⁺CD4⁻CD8⁺Ki67⁺ and CD3⁺CD8⁺PD-1^{hi}Ki67⁺. *—for comparison with the intact group by Mann–Whitney test ($p < 0.05$); #—for comparison with the mice with LLC by Mann–Whitney test ($p < 0.05$).

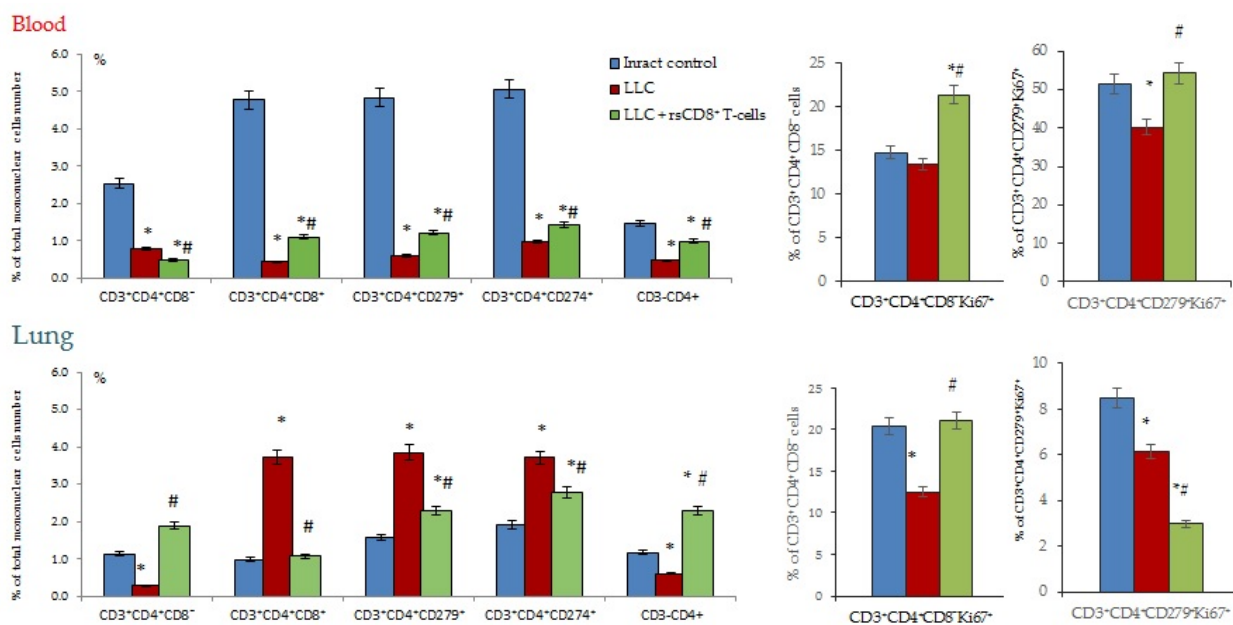


Figure S5. The effect of rsCD8⁺ T-cell-therapy on CD4⁺ T-cell count in blood and lung of mice with LLC on d7 (% of total mononuclear cell number). Phenotype of CD4⁺ T-cells: CD3⁺CD4⁺, CD3⁺CD4⁺CD8⁺, CD3⁺CD4⁺PD-L1⁺, CD3⁺CD4⁺PD-1⁺, CD3⁺CD4⁺CD8⁺, CD3⁺CD4⁺PD-1⁺Ki67⁺ and CD3⁺CD4⁺CD8⁺Ki67⁺. *—for comparison with the intact group by Mann–Whitney test ($p < 0.05$); #—for comparison with the mice with LLC by Mann–Whitney test ($p < 0.05$).