Supplementary Information:

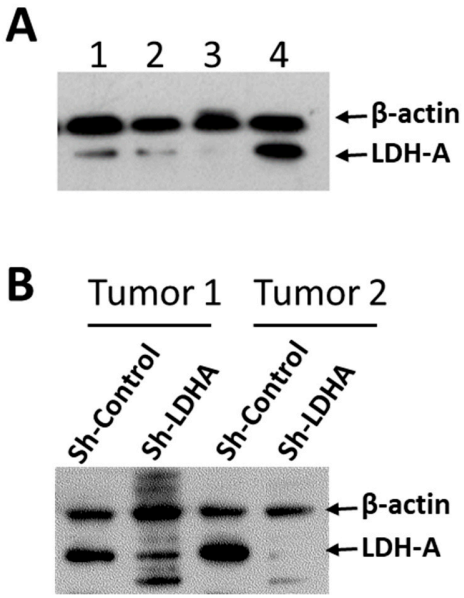


Figure S1. Western blotting with antibody against LDH-A is shown on B16-GFP versus shLDH melanoma cells. (**A**) In cell line before treatment. 1: B16F10 experiment 1 + shLDH; 2: B16F10 experiment 2 + shLDH; 3: B16F10 experiment 3 + shLDH; 4: B16F10 experiment 4 + Scramble shRNA. β-Actin as control. Cell line 3 was used as shLDH and cell line 4 was used as control in the subsequent experiments. (**B**) In implanted tumors.

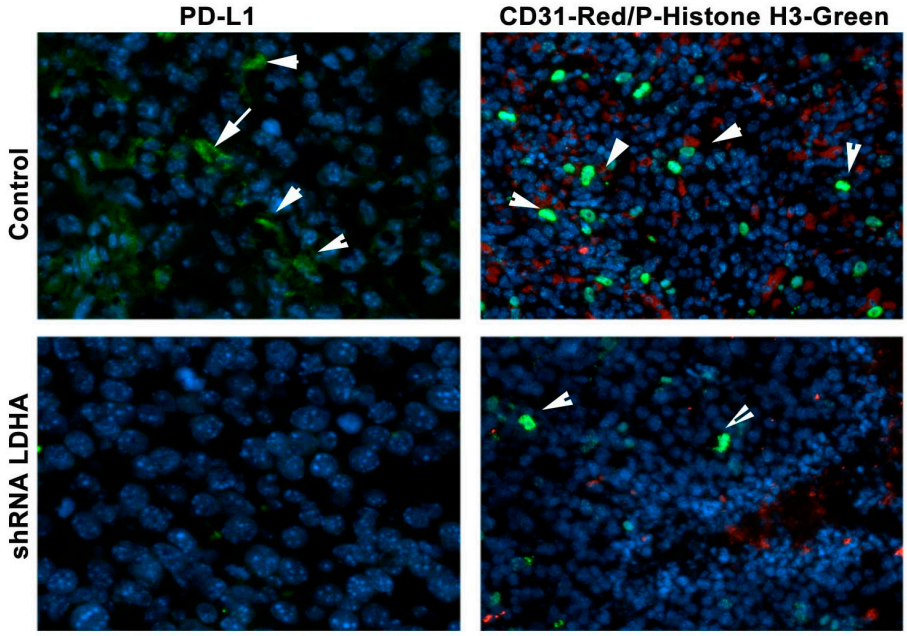


Figure S2. Intra-tumoral PD-L1, CD31 and P-HH3 expressions. A. Immunofluorescence staining with antibodies against PD-L1 on tumor tissues from B16 or B16-sh. Green: PD-L1; Blue: melanoma cell nuclei. (n = 2 to 3 per group). Analysis of tumor tissue slices by IFC for angiogenesis (indicated as CD31 expression) and proliferation (P-Histone H3). Immunofluorescence staining with antibodies against CD31 and histone H3 on tumor tissues from B16 or B16-sh (n = 2 to 3 per group).

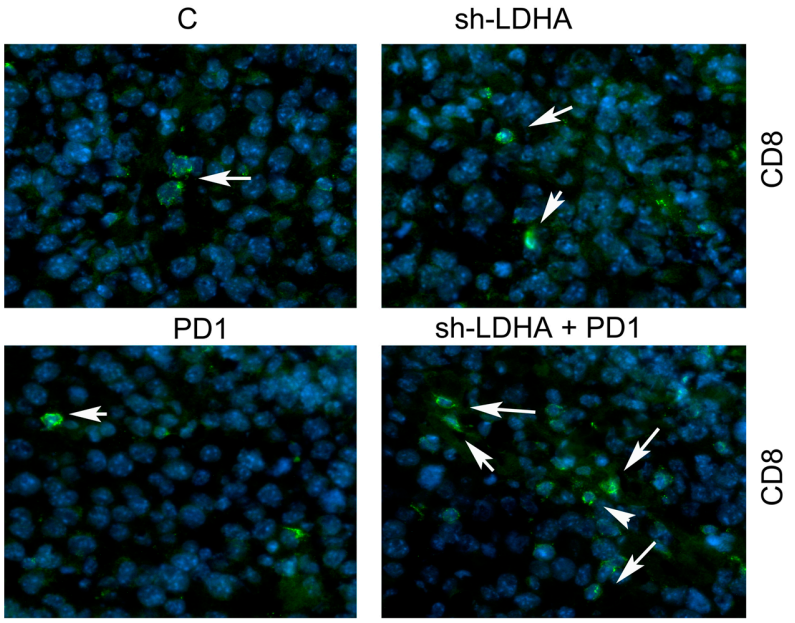
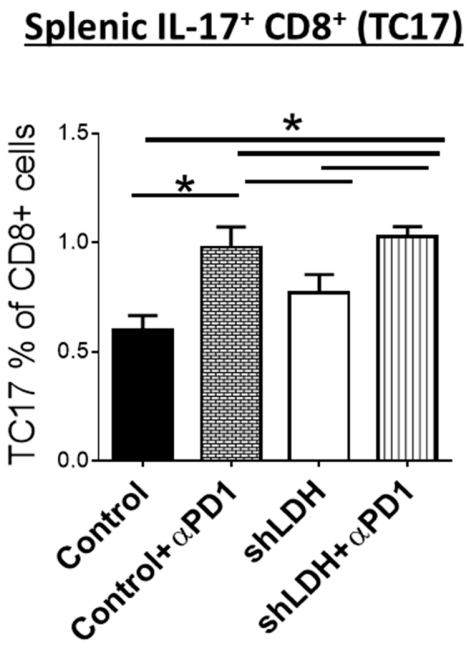


Figure S3. Intra-tumoral infiltration of $CD8^+$ T cells Immunofluorescence staining with antibodies against CD8 on tumor tissues from B16 or B16-sh treated or untreated with anti-PD-1.



Supplementary Figure 4. Increased population of IL-$17A^+$ $CD8^+$ (TC17) cells in mice spleen after anti-PD1 treatment. Splenic IL-$17A^+$ $CD8^+$ (TC17) cells frequency in different treatment groups.