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Supporting Information for

Anti-PD-L1 DNA Aptamer Antagonizes the Interaction of PD-1/PD-L1 with Antitumor Effect

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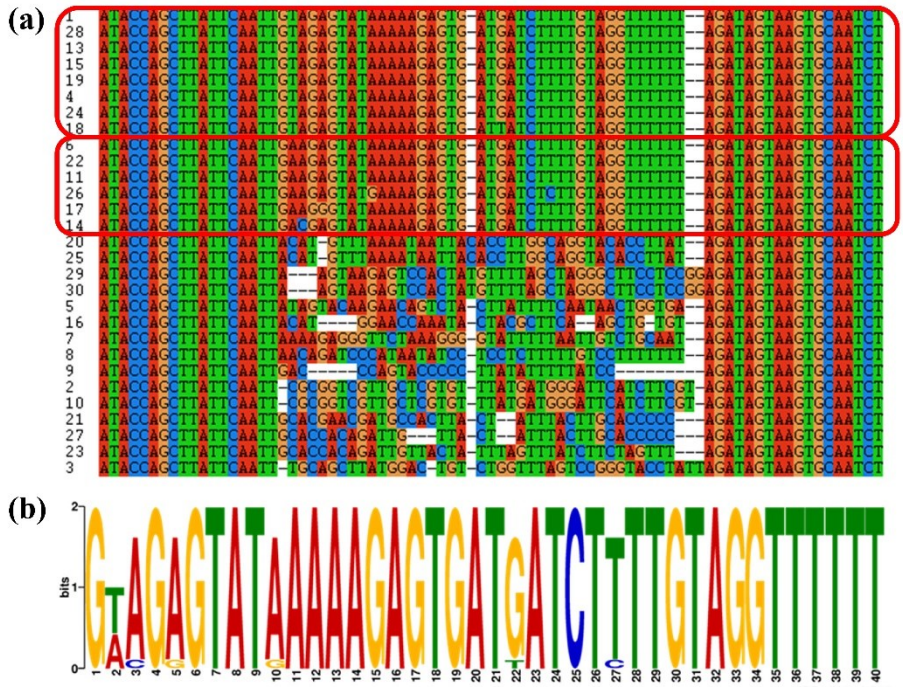

Figure S1. Sequences alignment analysis result by Clustalx 1.8.3 (a) and MEME Suite (b).

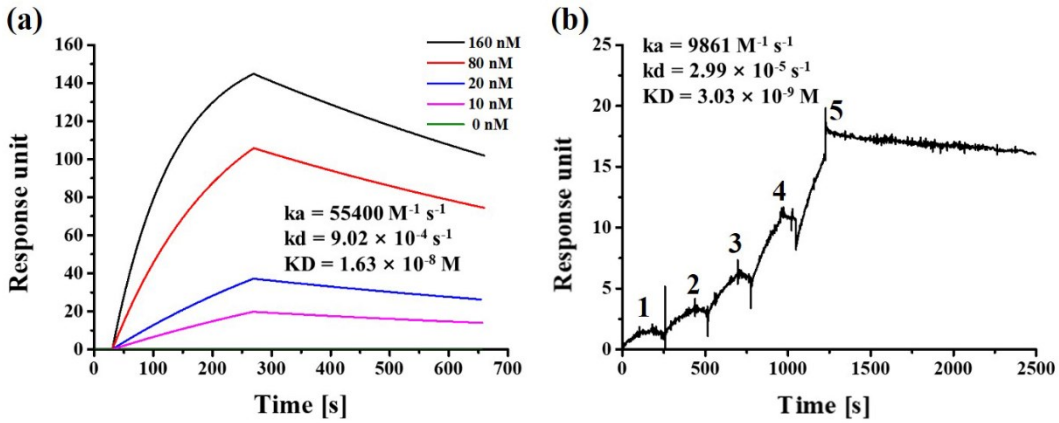

Figure S2 Affinity analysis of aptamer PL1 and antibody atezolizumab interacted with PD-L1 by SPR. SPR sensorgram (a) demonstrated interaction of different concentrations of aptamer PL1 (10 nM, 20 nM, 80 nM and 160 nM) with PD-L1 protein. SPR sensorgram (b) demonstrated interaction of different concentrations of antibody atezolizumab with PD-L1 protein: (1) 25 nM, (2) 50 nM, (3) 100 nM, (4) 200 nM and (5) 400 nM.

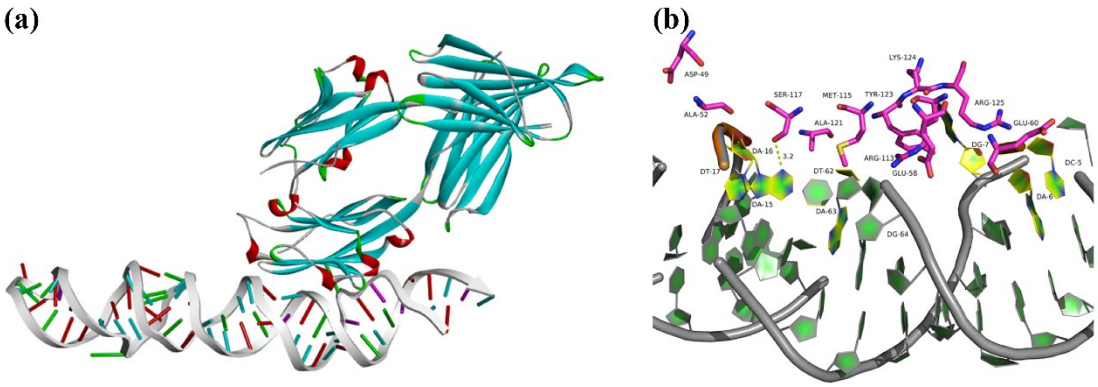

Figure S3 The docking stimulation for the complex structure of aptamer PL1 and PD-L1 protein (PDB: 4Z18) (a) and the analysis of interaction sites (b).

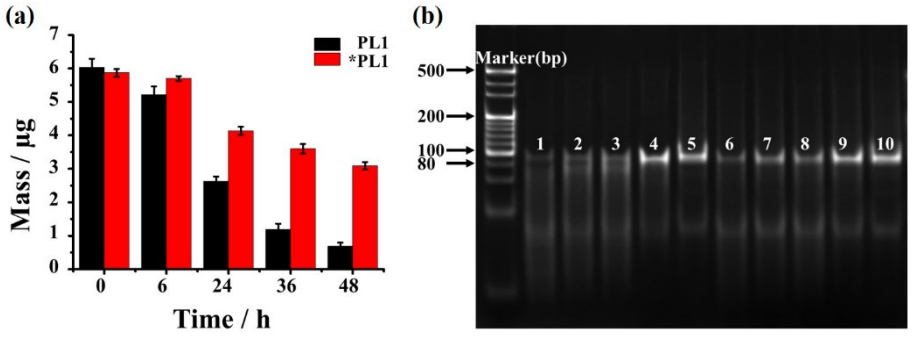

Figure S4. The serum stability of free aptamer PL1 (PL1) and phosphorothioate modified aptamer PL1 (*PL1) in 10% FBS at 37 ^{o}C for 0, 6, 24, 36 and 48 h was evaluated by ultrafiltration centrifuge (a) and native PAGE using 12% polyacrylamide gel (b). The 1-5 and 6-10 bands represent the free PL1 and phosphorothioate modified aptamer PL1 (*PL1) respectively at 48, 36, 24, 6 and 0 h.

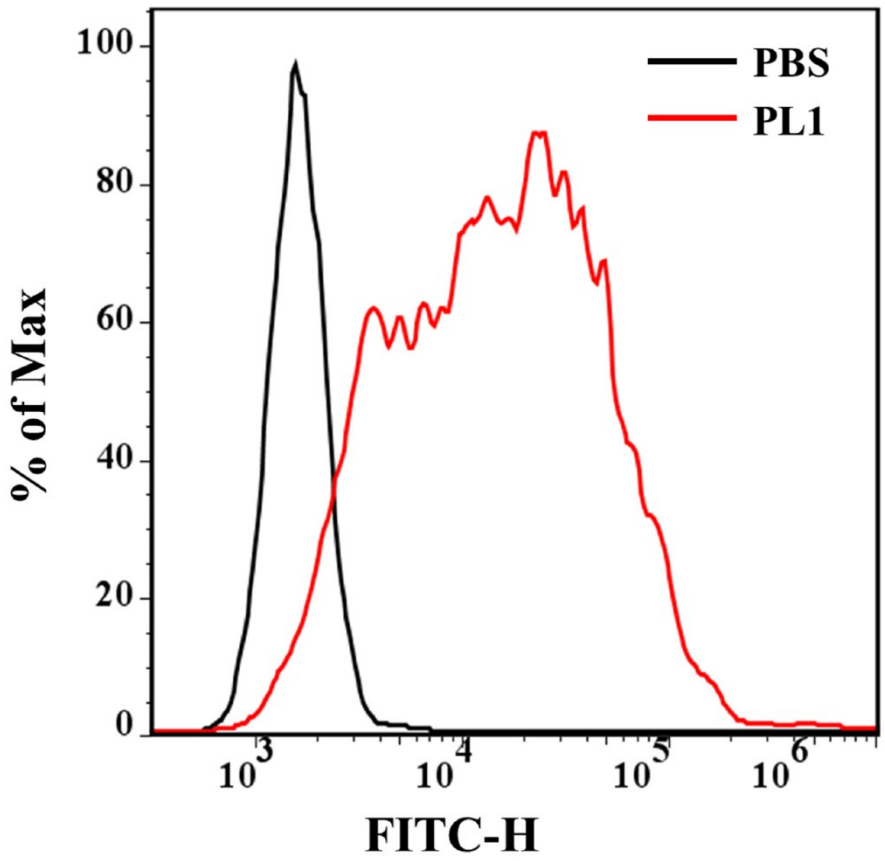

Figure S5. Binding assays of selected aptamer PL1 with CT26 cells.

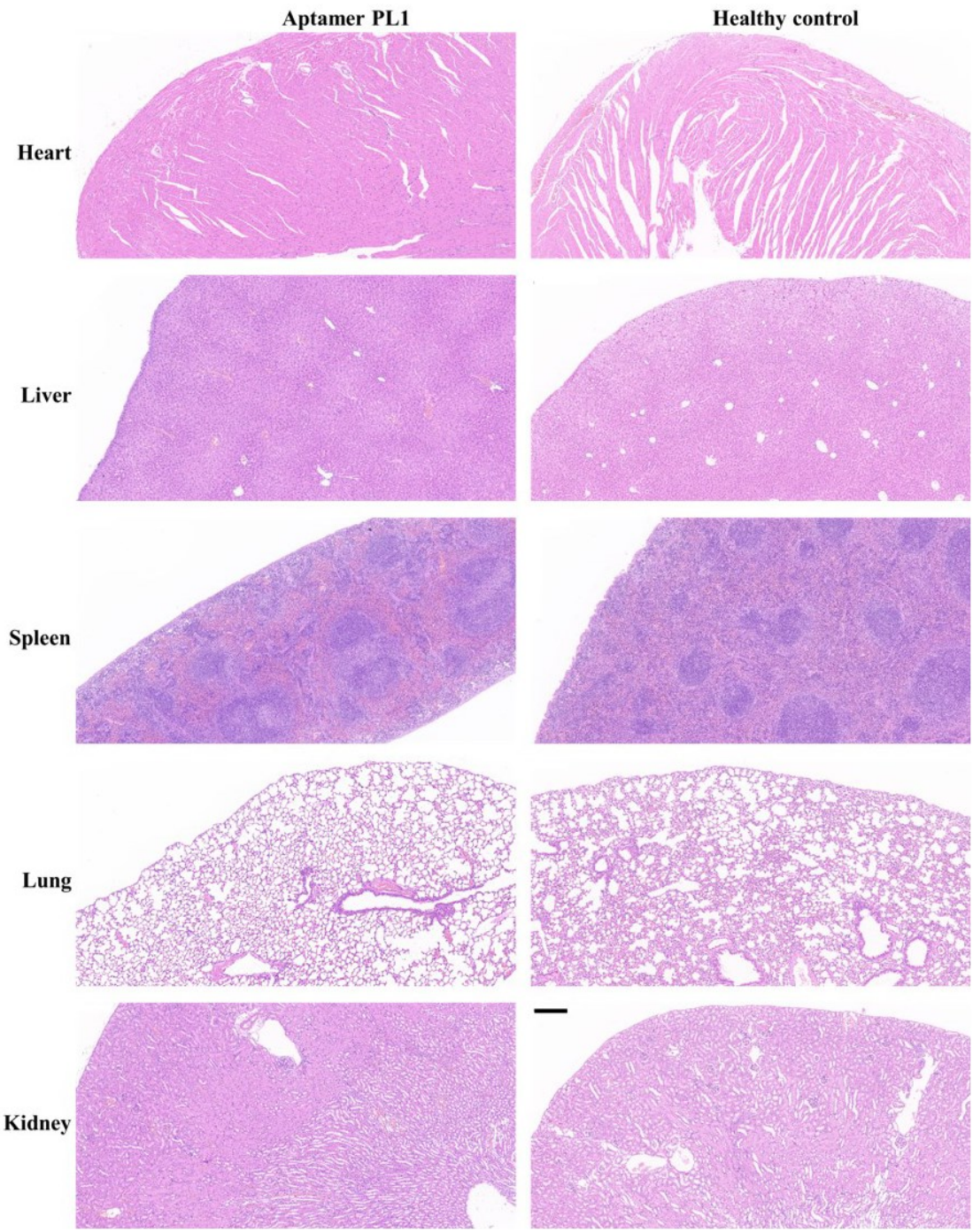

Fig. S6 The HE staining of the tissues from the healthy mice and PL1-treated mice. The scale bar in the images is 200 μm.