

Supporting information

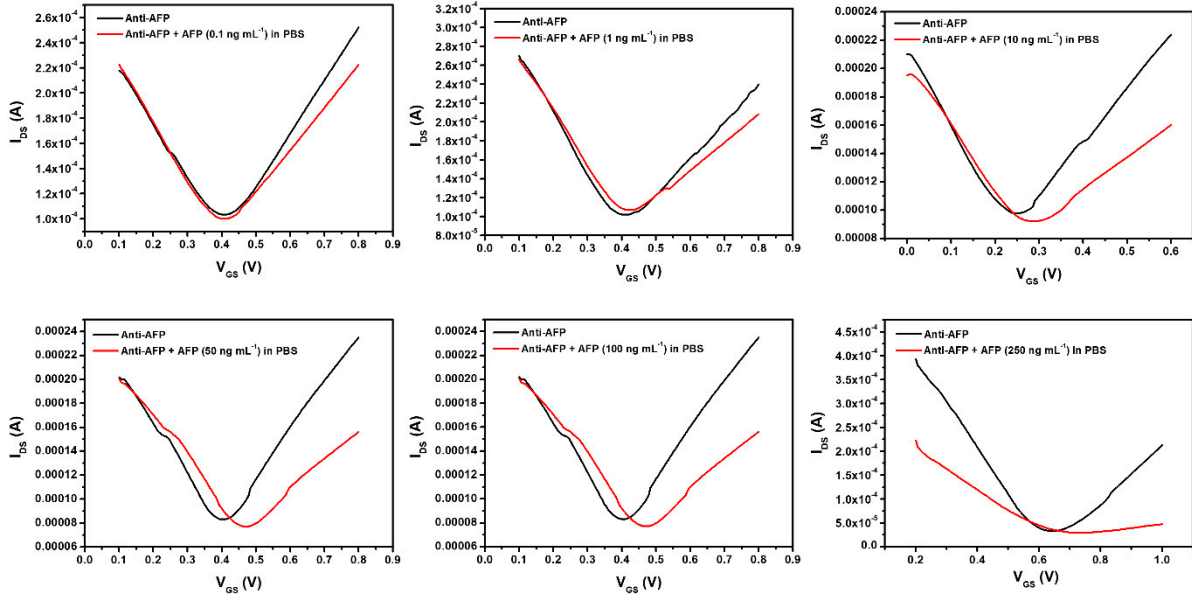


Figure S1. The I_{DS} - V_{GS} characteristics of G-FET before and after binding to each concentration of AFP (0.1, 1, 10, 50, 100 and 250 ng mL⁻¹) in PBS on the anti-AFP-immobilized channel surface.

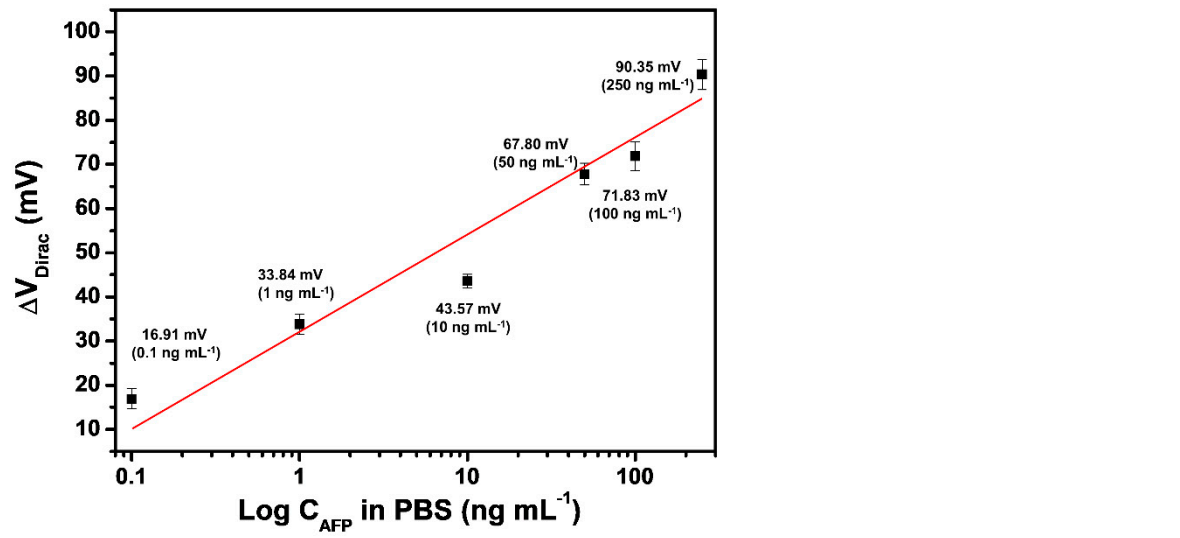


Figure S2. The sensitivity of the anti-AFP-immobilized G-FET for AFP detection in PBS into semi-log scale

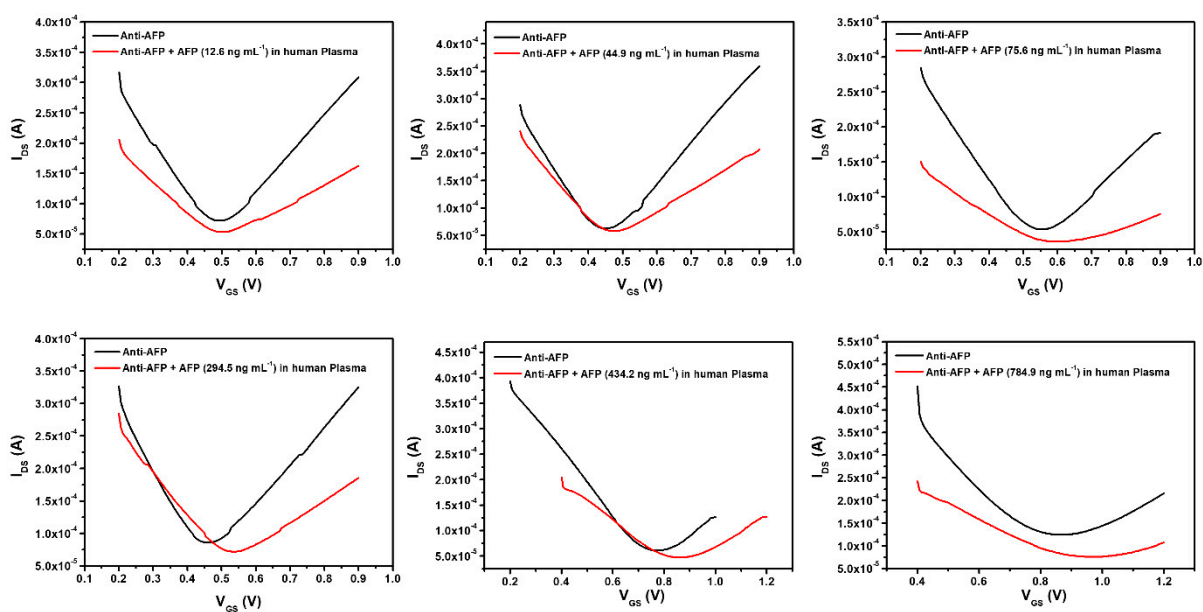


Figure S3. The I_{DS} - V_{GS} characteristics of G-FET before and after binding to each concentration of AFP (12.6, 44.9, 75.6, 294.5, 434.2, and 784.9 ng mL⁻¹) in human plasma of HCC patient on the anti-AFP-immobilized channel surface.

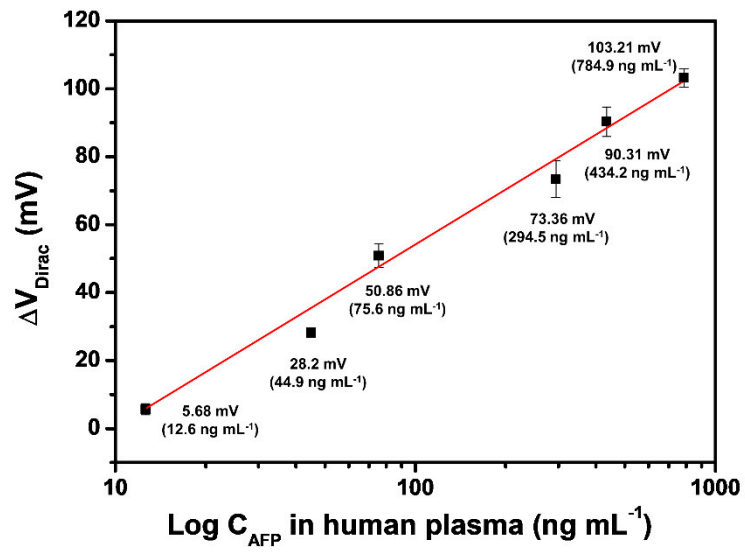


Figure S4. The sensitivity of the anti-AFP-immobilized G-FET for AFP detection in human plasma from HCC patients into semi-log scale.