Electronic Supplementary Material (ESI) for Analyst

EFFECT OF ANTIBODY IMMOBILIZATION STRATEGIES ON THE ANALYTICAL PERFORMANCE OF A SURFACE PLASMON RESONANCE IMMUNOASSAY

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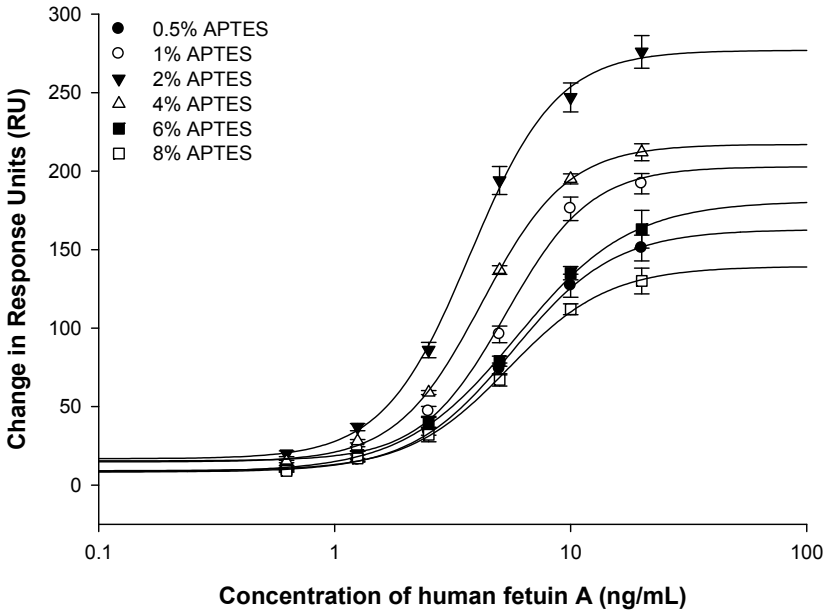
(A)



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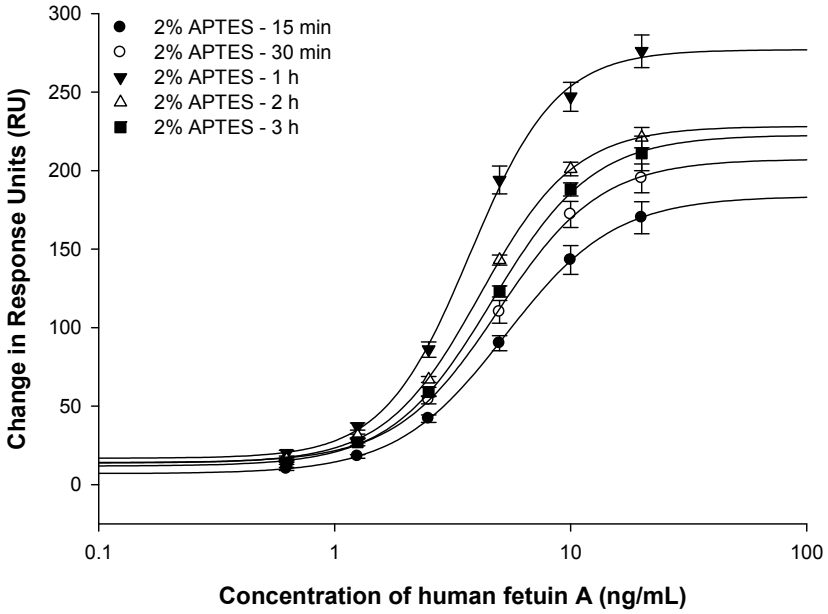

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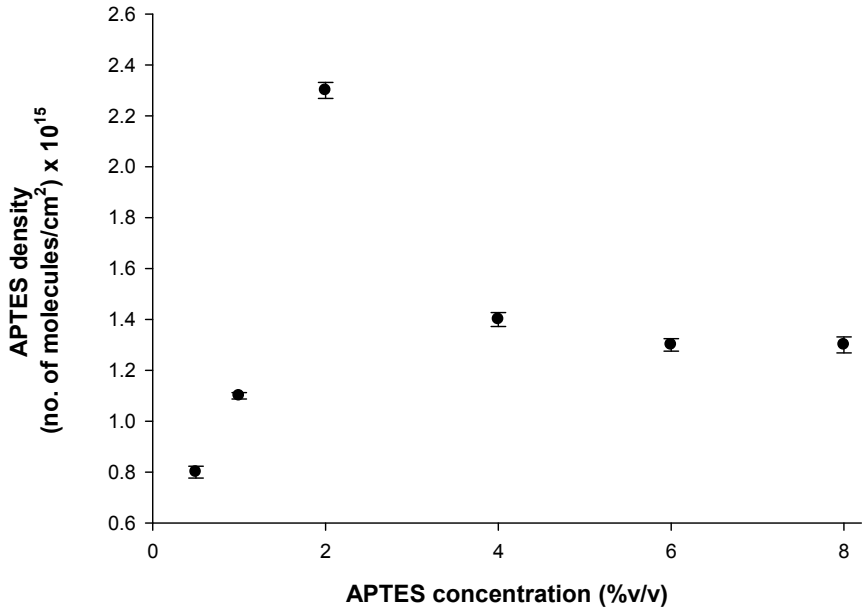
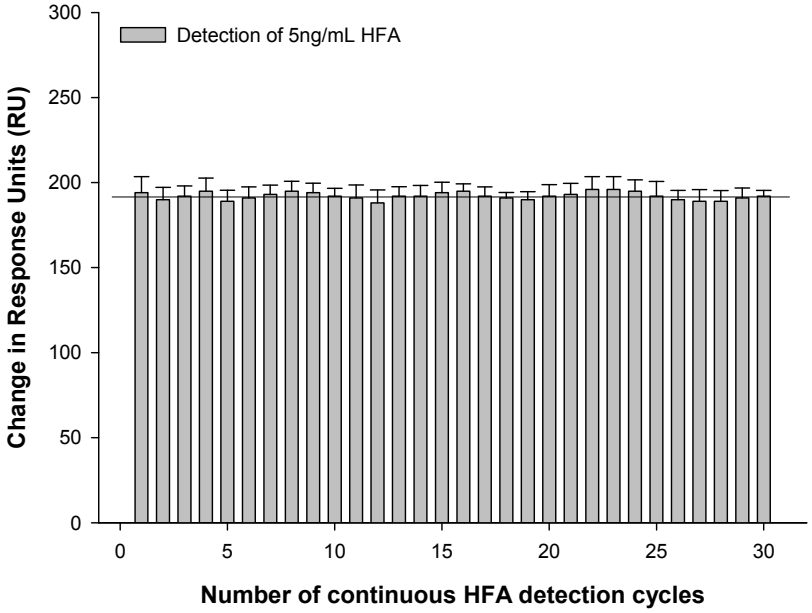


Fig. S1. Optimization of the APTES-functionalization step for covalent-orientated strategy on gold SPR chip on the basis of(A) APTES concentration, (B) APTES functionalization time, and (C) APTES density (number of molecules/cm^2),as determined by Rutherford backscattering, for various APTES concentrations. All experiments were done in triplicate. Error bars represent standard deviation.

(A)



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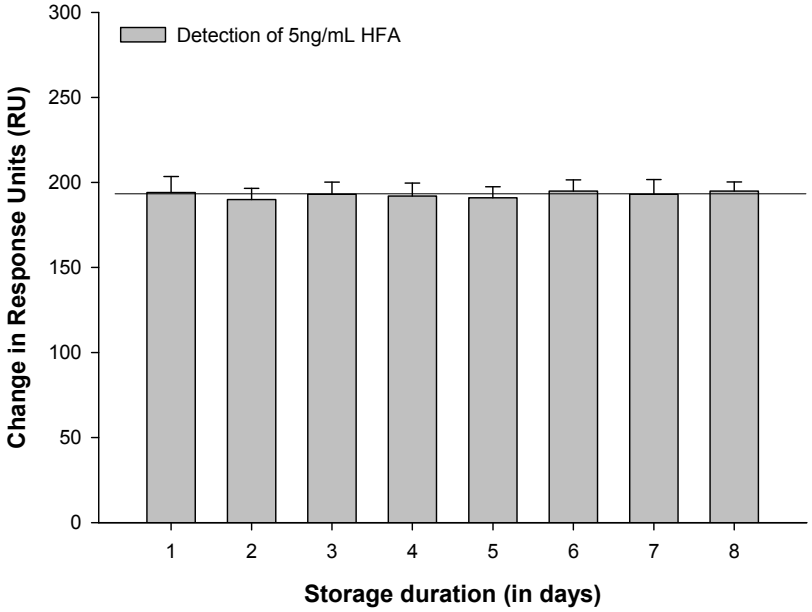

Fig. S2. Reproducibility of the covalent-orientated strategy based anti-HFA bound SPR chip when (A) 5 ng/mL HFA was detected continuously for 30 detection cycles by regeneratingthe chip with 20 µL of 30mMglycine.HCl after each cycle, and (B) it was employed for 8 days by storing the chip at 4ºC. All experiments were done in triplicate. Error bars represent standard deviation.

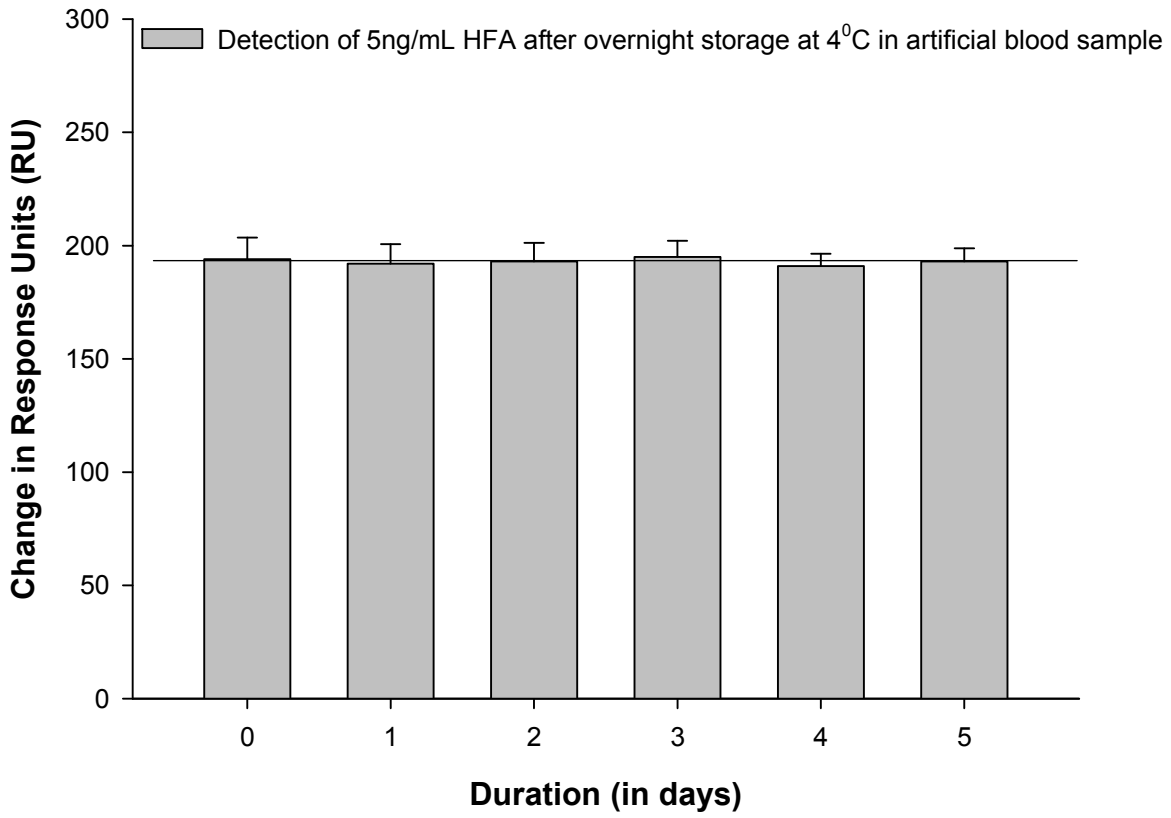

Fig. S3. Evaluating the biofouling of covalent-orientated strategy based anti-HFA bound SPR chip for 5 days at 4ºC in artificial blood sample (Streck, USA), which had exactly same composition as human blood but with extended stability. Error bars represent standard deviation.