

Surface Plasmon Resonance Aptasensor for Soluble ICAM-1 Protein in Blood Samples

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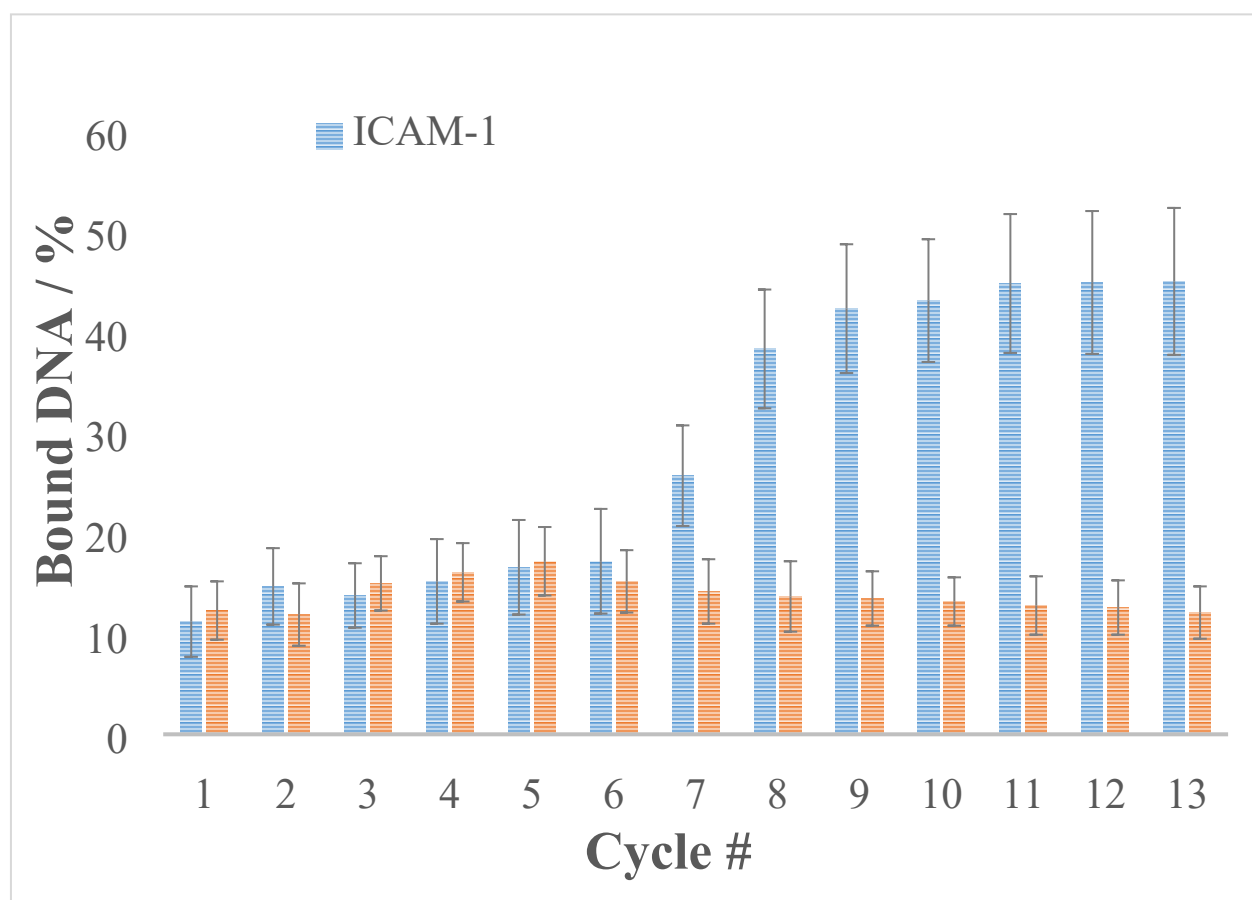


Fig. S1. The amount of bound library members by fluorescent enrichment analysis after each SELEX cycle.

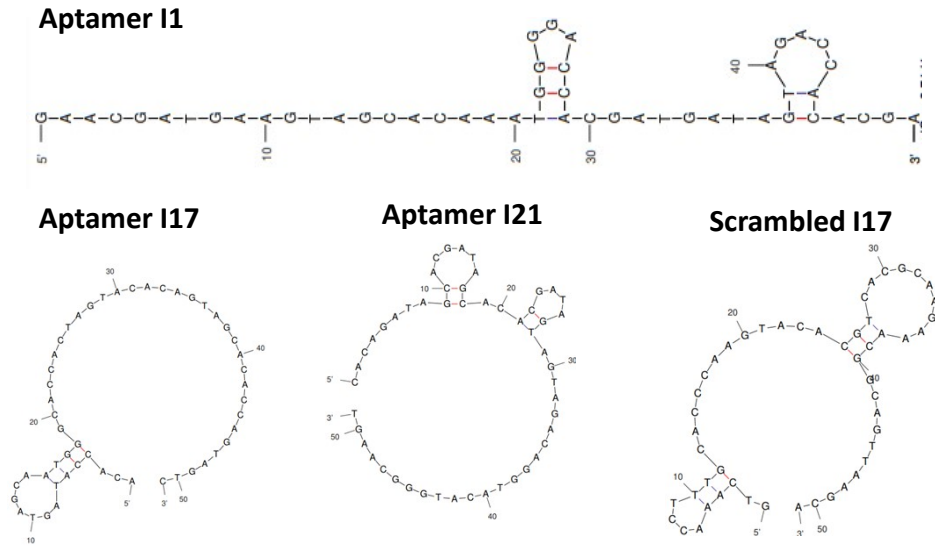


Fig. S2. The folding structures of aptamer sequences at 25 °C in PBS were obtained on Mfold web site.

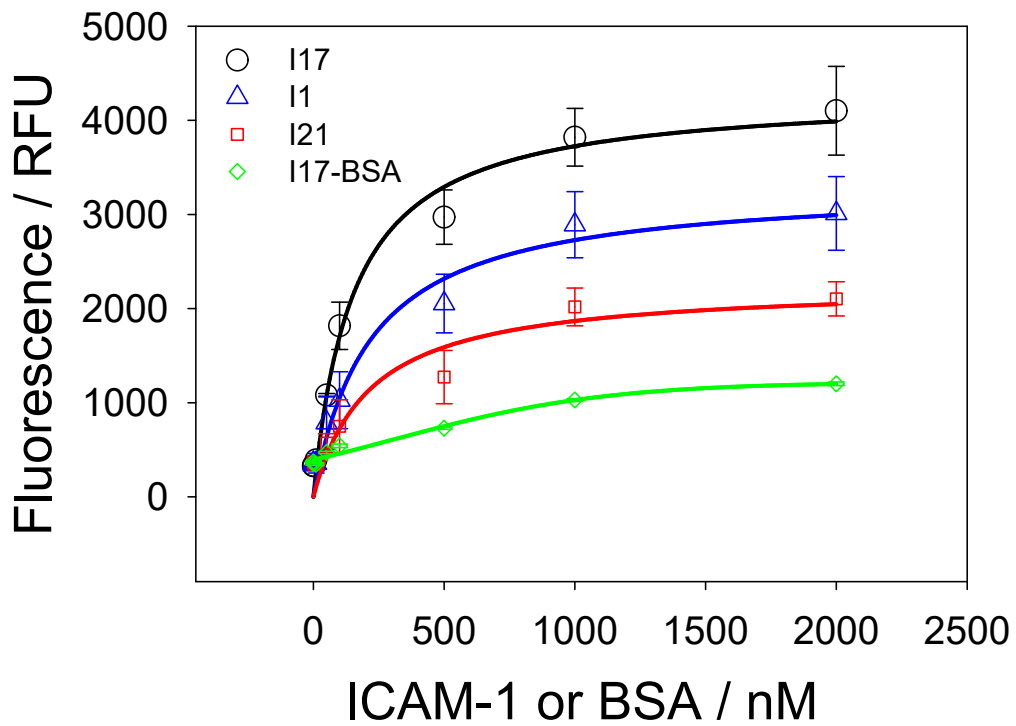


Fig. S3. Dose-response curve for selected aptamers and ICAM-1 as determined by fluorescence assay. I17 aptamer and BSA interaction is given in green line.

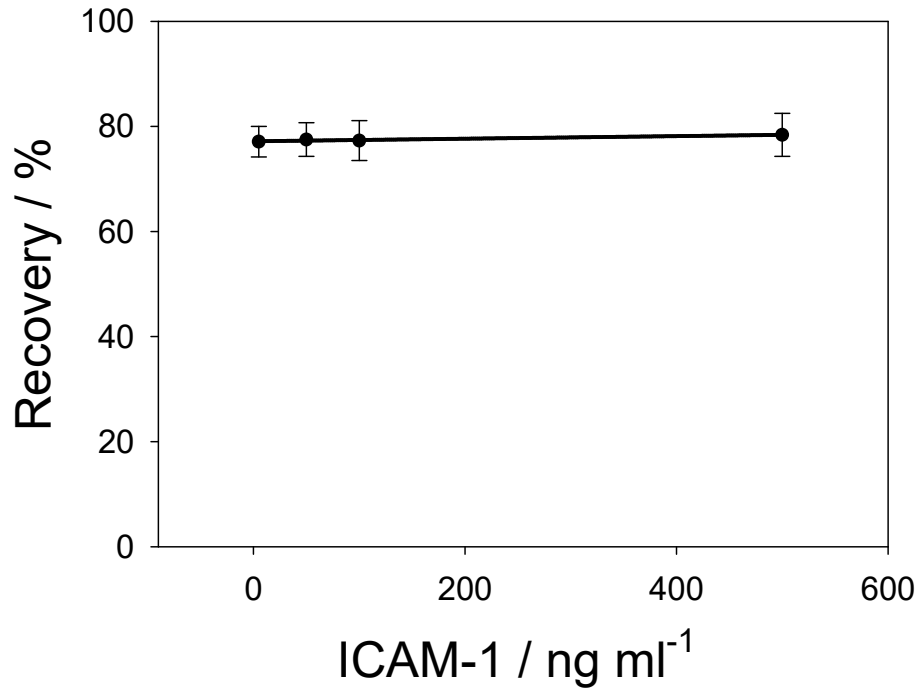


Fig. S4. Recovery analysis for magnetic separation procedure from blood samples spiked with ICAM-1 in 30 min treatments with $100 \mu\text{g ml}^{-1}$ magnetic nanoparticles.

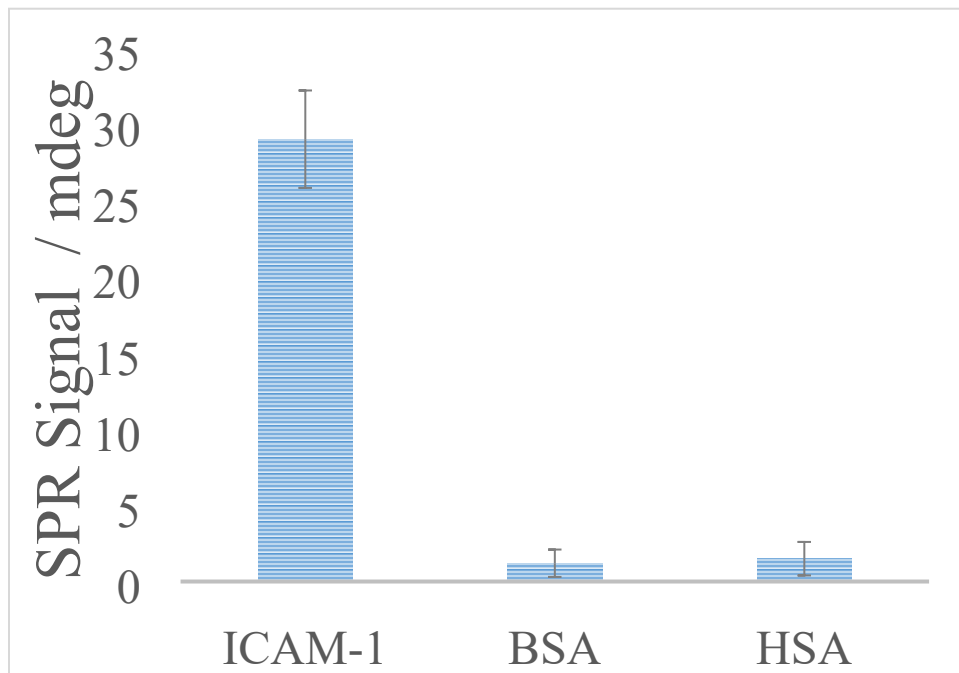


Fig. S5. The SPR signals at 600 seconds after Injection of ICAM-1, BSA or HAS spiked samples eluted from magnetic capture procedure of serum samples resulted in typical binding curves.

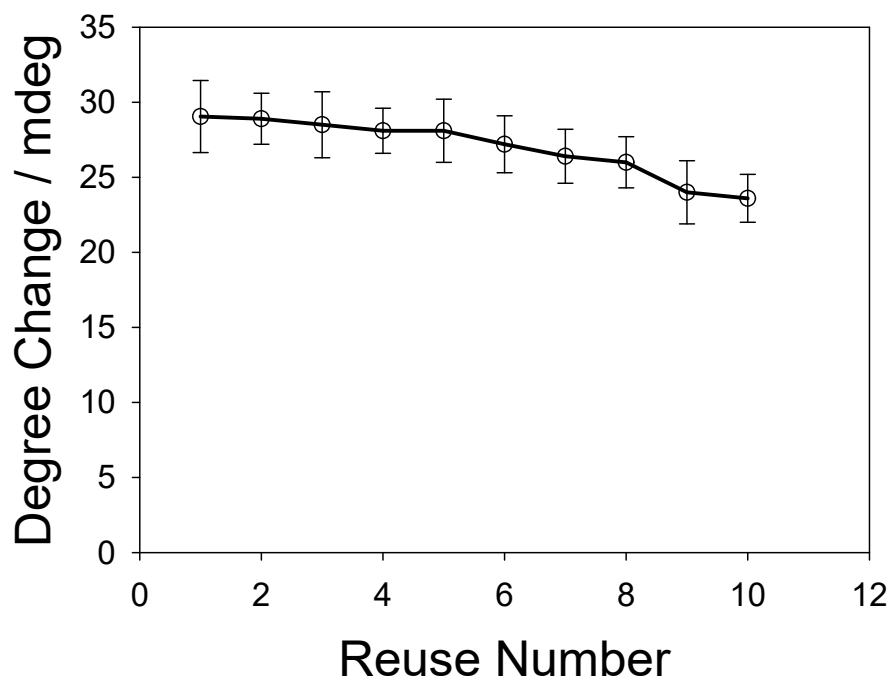


Fig. S6. SPR signal after repeated injection cycles of 100 ng ml⁻¹ ICAM-1 sample and subsequent regeneration procedure.

Table S1. Recovery analysis for magnetic separation procedure from blood samples spiked with ICAM-1 in 30 min treatments with 100 µg ml⁻¹ magnetic nanoparticles with SPR or ELISA method.

ICAM-1 (ng ml ⁻¹)	SPR (% recovery)	ELISA (% recovery)
5	77.1 ± 1.7	78.5 ± 6.9
50	77.5 ± 2.4	78.6 ± 5.3
100	77.3 ± 2.3	78.0 ± 3.6
500	78.4 ± 2.4	78.7 ± 5.9