

Supplementary Materials

Liposome-assisted enzyme catalysis: toward signal amplification for sensitive split-type electrochemiluminescence immunoassay

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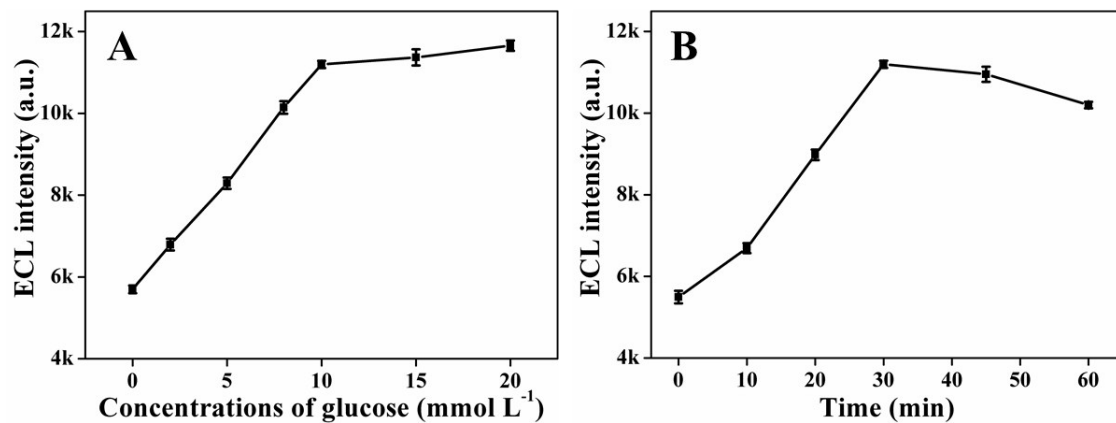


Fig. S1. Effects of the glucose concentration (A) and the reaction time (B) between GOx and glucose on ECL response. Working solution: (A) 0.1 mol L⁻¹, pH 7.4 PBS containing 1.0×10^{-4} mol L⁻¹ luminol and different concentrations of glucose. (B) 0.1 mol L⁻¹, pH 7.4 PBS containing 1.0×10^{-4} mol L⁻¹ luminol and 0.01 mol L⁻¹ glucose. scan rate: 100 mV s⁻¹, scan range: -0.2–0.8 V.

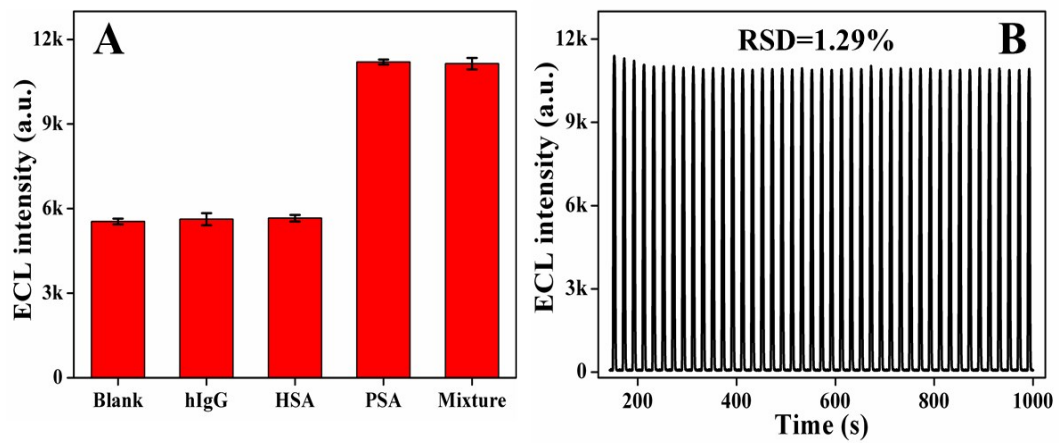


Fig. S2. (A) Selectivity of the ECL immunoassay against 1.0×10^{-8} g mL⁻¹ PSA, 0.04 g mL⁻¹ HSA, and 0.01 g mL⁻¹ hIgG; (B) Stability of the designed sensor.

Table S1. Analytical results of PSA in seven human serum samples using the proposed method and the reference method.

Serum samples	Reference work (ng mL ⁻¹)	This method (ng mL ⁻¹)	Relative errors (%)	RSDs (<i>n</i> = 3, %)
1	0.54	0.52	-3.7	1.4
2	19.93	20.99	5.3	2.3
3	1.67	1.73	3.6	3.4
4	10.88	10.48	-3.7	5.4
5	1.29	1.37	6.2	3.7
6	1.45	1.53	5.5	2.5
7	25.74	26.43	2.7	3.9

Table S2. Recoveries of PSA in two human serum samples.

Sample No.	Found (ng mL ⁻¹)	Added (ng mL ⁻¹)	Total found (ng mL ⁻¹)	Recoveries (%)	RSDs (<i>n</i> = 3, %)
1	1.45	0.1	1.56	110.0	6.6
		1.0	2.34	89.0	4.9
		10.0	10.95	95.0	4.5
2	19.93	0.1	20.03	100.0	3.2
		1.0	20.83	90.0	3.5
		10.0	31.23	113.0	4.2