Supporting Information

An ultrasensitive label-free electrochemical immunosensor based on signal amplification strategy of multifunctional magnetic graphene loaded with cadmium ions

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Table S1 The comparison of different immunosensor for the detection of IgG.

Measurement protocol	Linear range	Limit of detection	References
Electrochemical immunoassay	0.01–200 ng/mL	4 pg/mL	[1]
Sandwich-type electrochemical immunosensor	0.01 pg/mL–100 ng/mL	4.3 fg/mL	[2]
Electrochemiluminescence immunosensor	7.5-100 pg	1.0 pg/mL	[3]
Electrochemical immunosensor	5 pg-50 ng	5.0 pg/mL	[4]
Electrochemical immunosensor	10 fg/mL-100 pg/mL	5.0 fg/mL	[5]
Electrochemical immunoassay	0.01-10.0 ng/mL	6.9 pg/mL	[6]
Electrochemical immunosensor	5 fg/mL-50 ng/mL	2 fg/mL	This work

Table S2 Determination of IgG in human serum samples with the proposed immunosensor.

Initial concentration (ng/mL)	Added concentration (ng/mL)	Measured concentration (ng/mL)	Average value (ng/mL)	RSD (%,n=5)	Recovery (%, n=5)
1.01	1.00	1.97, 2.05, 2.09, 1.94, 2.03	2.016	3.01	100.3
1.01	2.00	2.93, 2.95, 3.01, 3.06, 3.03	2.996	1.822	99.53
1.01	4.00	4.99, 5.02, 5.09, 5.11, 4.94	5.03	1.40	100.4

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