

Supporting Information

Rolling circle amplification-mediated in situ synthesis of palladium nanoparticles for ultrasensitive electrochemical detection of microRNA

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Table S1 Sequence information of the nucleic acids used in this work.

Name	Sequences (5' to 3')
hairpin probe	HS-TTT TTT TTT CAA CAT CAG TCT GAT AAG CTA ACT GAT GTT GAT ATT ACA TT
miRNA-21	UAG CUU AUC AGA CUG AUG UUG A
circular template	p-AAC ATC AAA AAC CCA ACC CGC CCT ACC CAA AAA ATG TAA TAT C
single-base mismatched miRNA-21	UAG CUU AUC GGA CUG AUG UUG A
three-base mismatched miRNA-21	UUG CUU AUC GGA CUG AUC UUG A
miRNA-141	UAA CAC UGU CUG GUA AAG AUG G
let-7d	AGA GGU AGU AGG UUG CAU AGU U

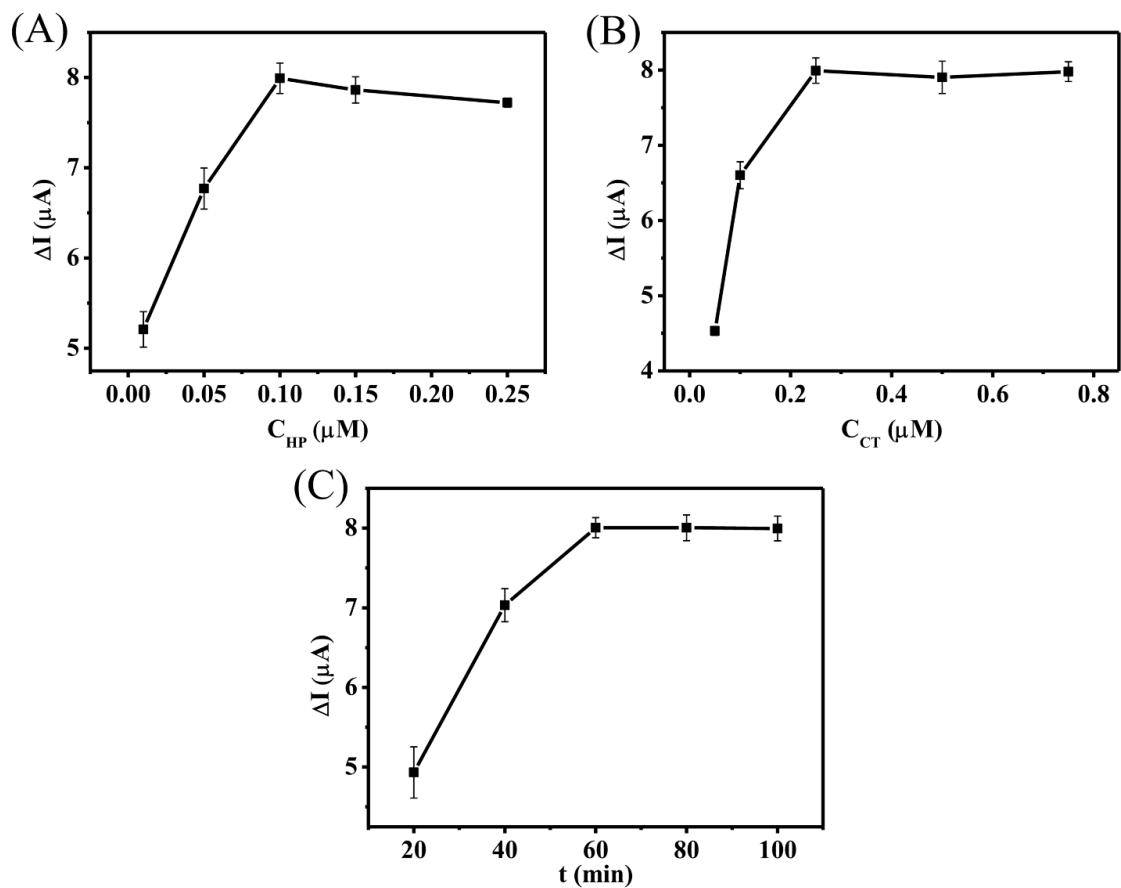


Fig. S1 Effects of (A) concentration of HP, (B) concentration of CT and (C) RCA incubation time on the sensor responses towards detection of 0.5 pM miRNA-21.

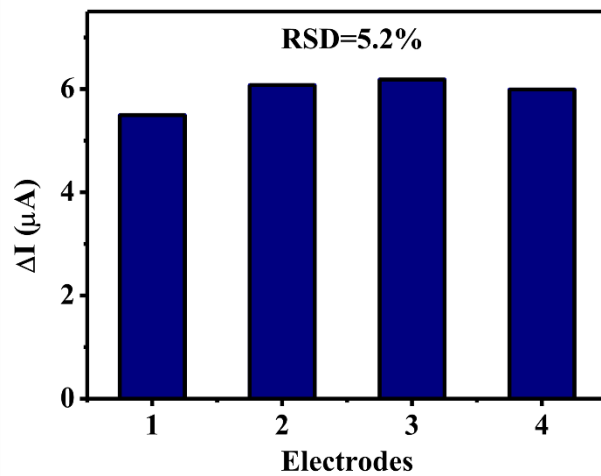


Fig. S2 Responses of four HP/AuE sensors prepared in the same conditions towards 10 fM miRNA-21.

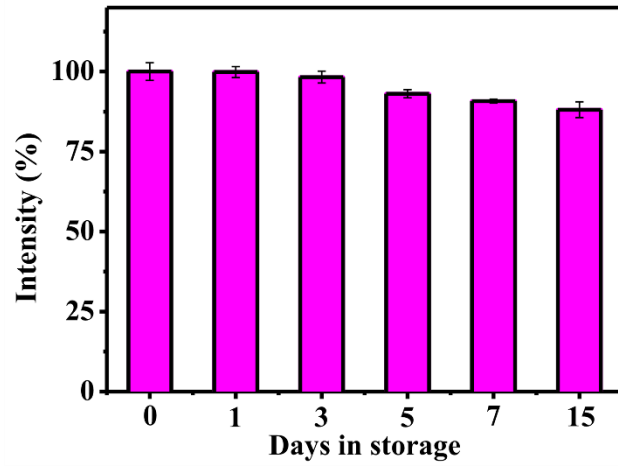


Fig. S3 Responses of the developed biosensor towards 10 fM miRNA-21 after storage at 4 °C for 1, 3, 5, 7 and 15 days.

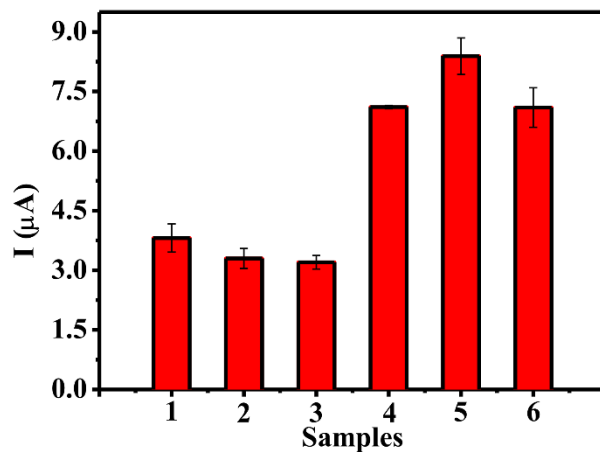


Fig. S4 DPV peak currents of the developed biosensor for miRNA-21 detection in human blood serums. Sample 1-3 were obtained from three healthy people and sample 4-6 were collected from three breast cancer patients.