

Supplementary information

DNAzyme-manipulated fluorescence signal variation of DNA-AgNCs and construction of an aptasensor for ATP

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Table S1. Sequences used in this work.

Name	Sequences
TC-1	5'-ATAGTCCCCCCTACTAT-3'
TC-2	5'-ACTCACTAT/rA/GGAAGAGATGATAGTCCCCCCTACTAT-3'
	5'-
TC-3	AAAAAAAAAAAAAAAAATTTTACTCACTAT/rA/GGAAGAGATGATAG TCCCCCCTACTAT-3'
	5'-
TC-4	AAAAAAAAAAAAAAAAATTTTACTCACTAT/rA/GGAAGAGATGTTTT TATAGTCCCCCCTACTAT-3'
	5'-
TC-5	AAAAAAAAAAAAAAAAATTTTACTCACTAT/rA/GGAAGAGATGTTTT TTTTTTATAGTCCCCCCTACTAT-3'
Apt	5'-ACCTGGGGGAGTATTGCGGAGGAAGGTTATT-3'
cDNA	5'-ACCTTCCTCCGCAAATGA-3'
	5'-CATCTCTTCTCCGAGCCGGTCGAAAATAGTGAGT
HP	CGGAGAAGAGATGTTGCGGAGGAAG-3'

Table S2. Comparison of the performance of the aptasensor in this work and the relevant methods in the references for ATP detection.

Detection Method	LOD (μM)	Detection range (μM)	References
Fluorescence DNA-Cu/Ag NCs	7	$2 \times 10^3 - 1.8 \times 10^4$	1
Light-up DNA-scaffolded silver nanoclusters	810	$1 \times 10^3 - 6 \times 10^3$	2
DNA-Ag NC fluorescence light-up system	440	$0 - 4 \times 10^6$	3
DNA-AgNCs fluorescence light- up system	3	$3 \times 10^3 - 2.4 \times 10^4$	4
Fluorescence DNA-AgNCs	4.46	$2.5 \times 10^1 - 1 \times 10^3$	This work

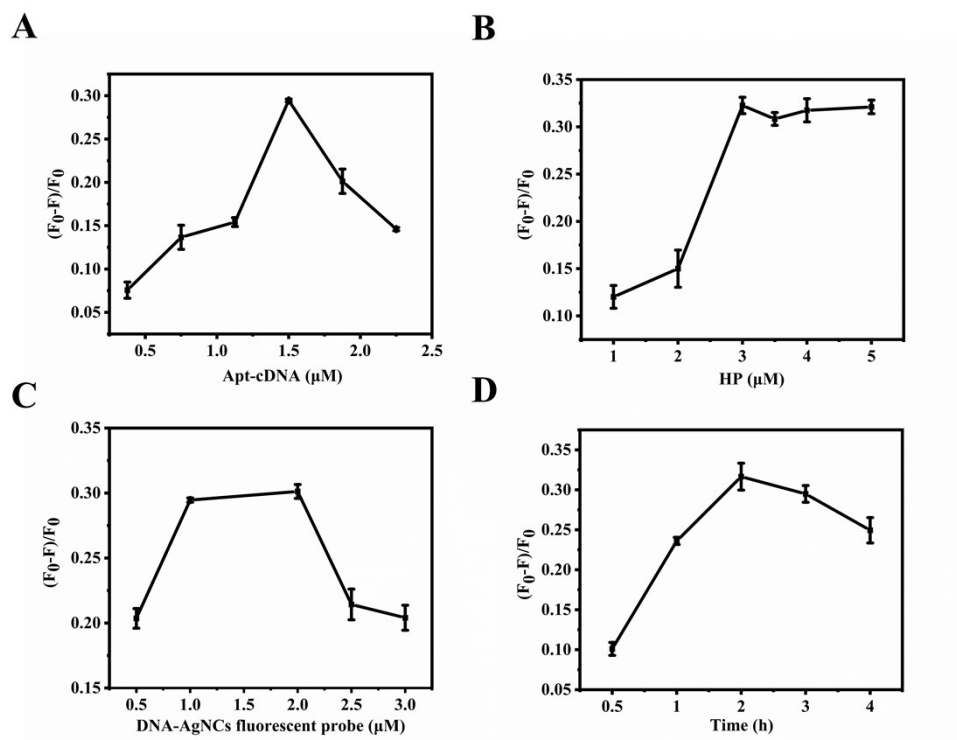


Fig. S1. Optimization of the experimental conditions. (A) The concentration of Apt-cDNA (molar ratio of Apt and cDNA set as 1:1), (B) The concentration of HP, (C) The concentration of the DNA-AgNCs fluorescent probes, and (D) The incubation time of DNAzyme.

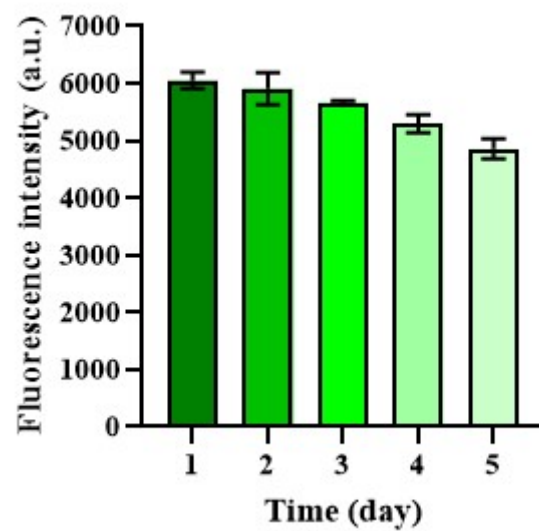


Fig. S2. Investigation on the stability of DNA-AgNCs in human serum.

References

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