Supporting Information

Simultaneous Determination of Protein Kinase A and Casein Kinase II by Dual-Color Peptide Biomineralized Metal Nanoclusters

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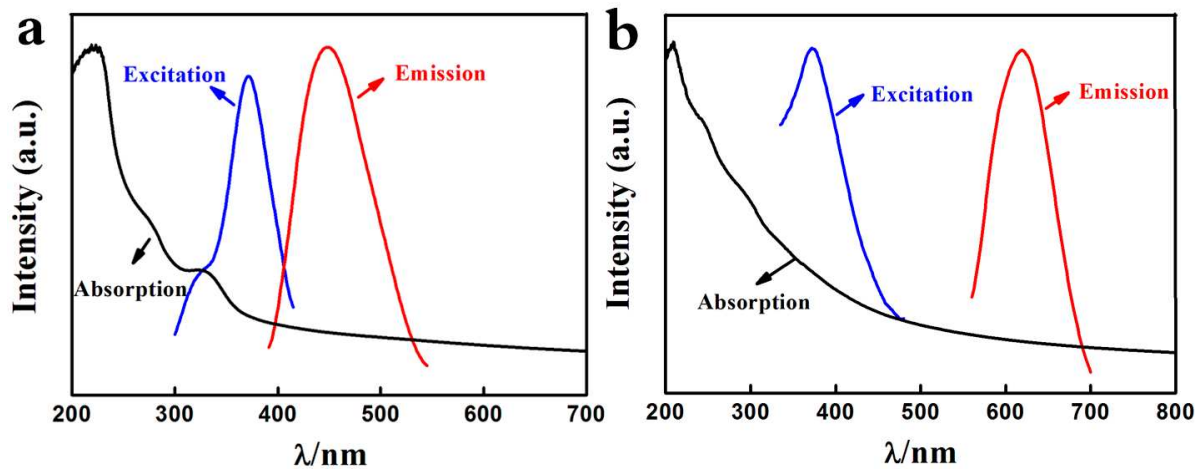

Figure S1. (a) UV-vis absorption spectrum, fluorescence excitation spectrum (λ_{em} = 450 nm) and fluorescence emission spectrum (λ_{ex} = 370 nm) of P1-CuNCs. (b) UV-vis absorption spectrum, fluorescence excitation spectrum (λ_{em} = 620 nm) and fluorescence emission spectrum (λ_{ex} = 370 nm) of P2-AuNCs.

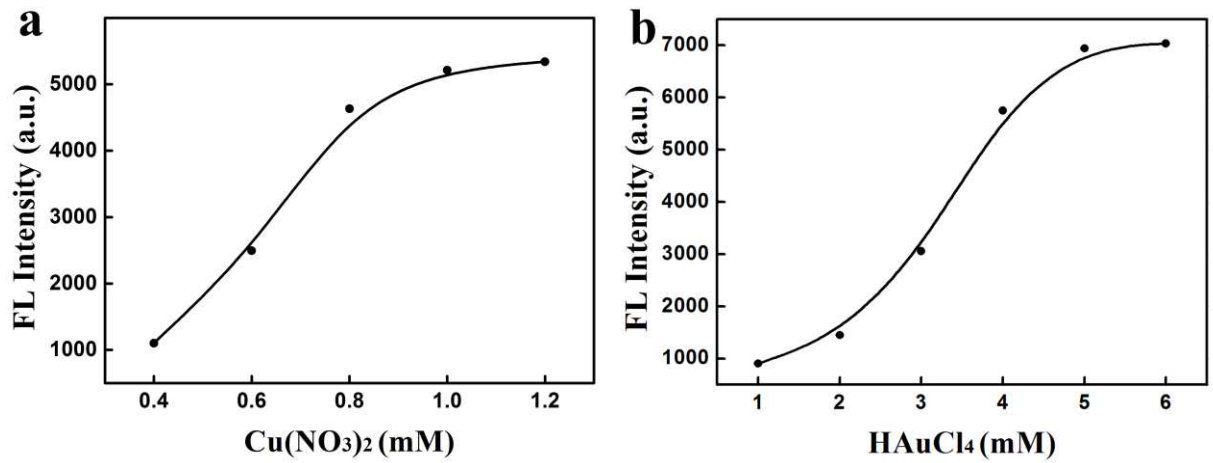

Figure S2. (a) Effect of the $Cu(NO_3)_2$ concentration on the fluorescence intensity of P1-CuNCs. (b) Effect of the $HAuCl_4$ concentration on the fluorescence intensity of P2-AuNCs.

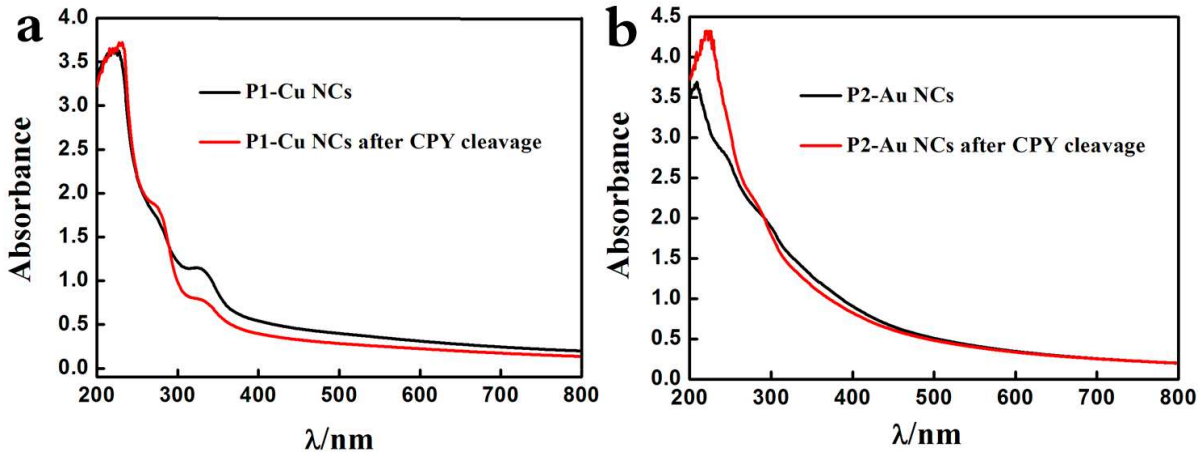

Figure S3. (a) UV-vis absorption spectra of P1-CuNCs before and after CPY cleavage. (b) UV-vis absorption spectra of P2-AuNCs before and after CPY cleavage.

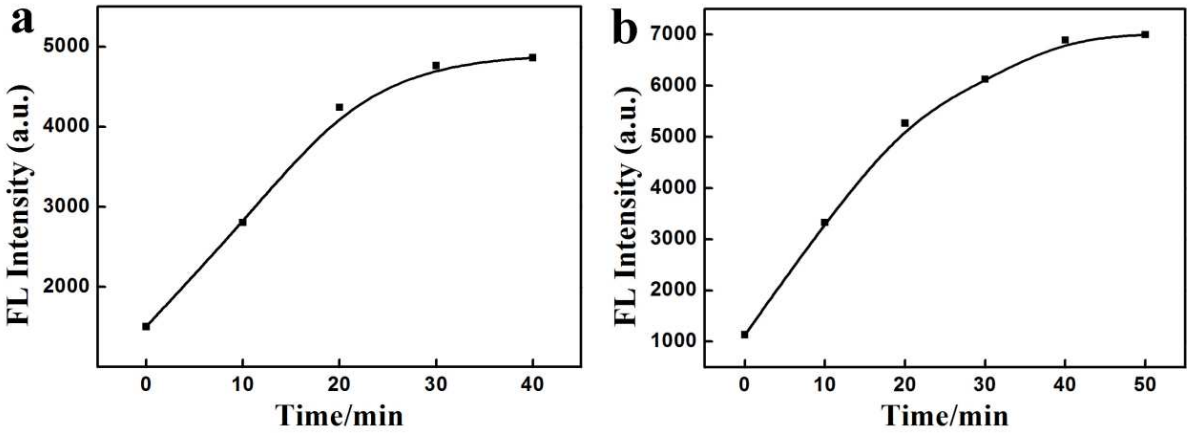

Figure S4. (a) The fluorescence intensity of P1-CuNCs incubated with PKA and ATP for different time, followed by the addition of CPY. (b) The fluorescence intensity of P2-AuNCs incubated with CK2 and ATP for different time, followed by the addition of CPY.

Table S1. Analytical performance for PKA and CK2

Detection technique	Detection mode	Target	Linear range	Detection limit	Refs
Colorimetric	Single	PKA	/	0.232 U mL^{-1}	1
Fluorescence	Single	PKA	2.5-125 U mL^{-1}	0.5 U mL^{-1}	2
Fluorescence	Single	PKA	0.3-150 U mL^{-1}	0.3 U mL^{-1}	3
Electrochemistry	Single	PKA	0-1 U mL^{-1}	0.2 U mL^{-1}	4
Fluorescence	Single	CK2	0.8-50 U mL^{-1}	0.15 U mL^{-1}	5
Fluorescence	Single	CK2	0.5-5 U mL^{-1}	0.5 U mL^{-1}	6
Electrochemistry	Single	CK2	0-500 U	10 U	7
Electrochemistry	Single	CK2	0-20 U	1 U	8
Fluorescence	Both	PKA, CK2	/	PKA: 0.134 U mL^{-1} CK2: 0.0833 U mL^{-1}	9
Fluorescence	Both	PKA, CK2	PKA: 0.4-3 U mL^{-1} CK2: 0.8-7 U mL^{-1}	PKA: 0.1 U mL^{-1} CK2: 0.2 U mL^{-1}	This work

References

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