

Electronic Supplementary Information

For

Glutenin-directed gold nanoclusters employed for assaying

vitamin B1†

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Figures

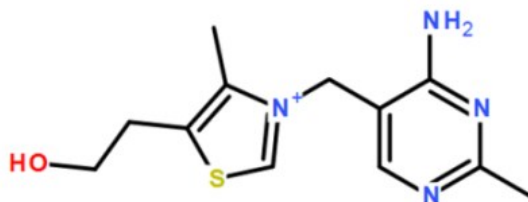


Figure S1 Structure of VB₁

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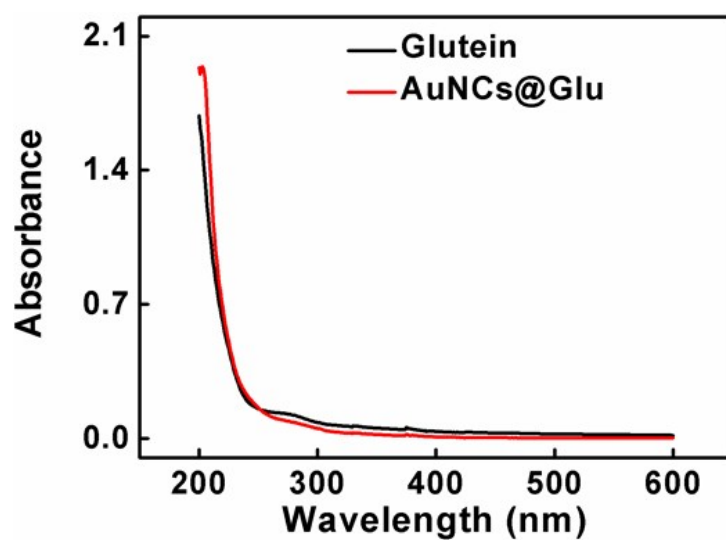


Figure S2 UV-vis absorption spectra of glutenin and AuNCs@Glu

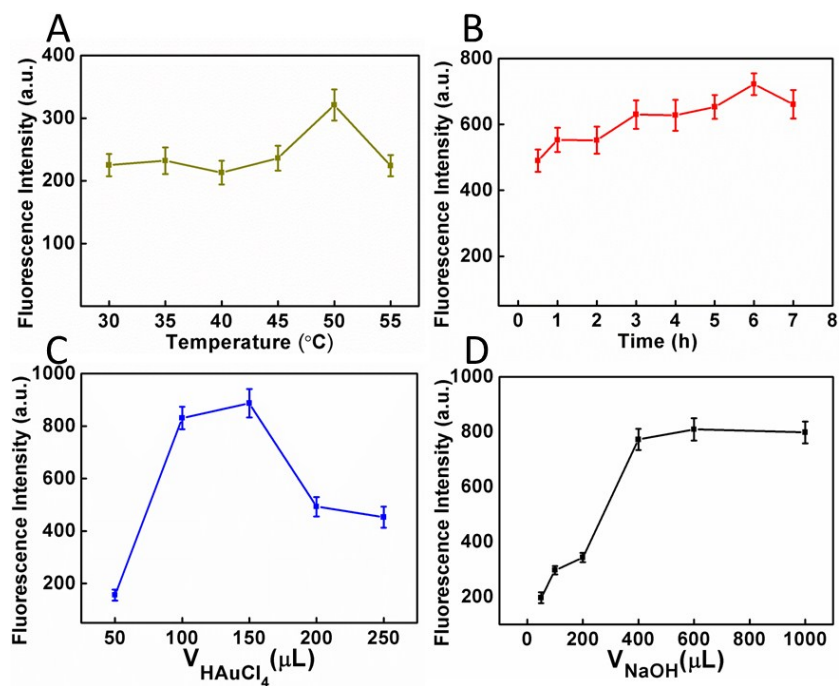


Figure S3 Optimizing the synthesizing conditions of AuNCs@Glu with different temperature (A), time (B), amounts of HAuCl_4 (C) and NaOH (D)

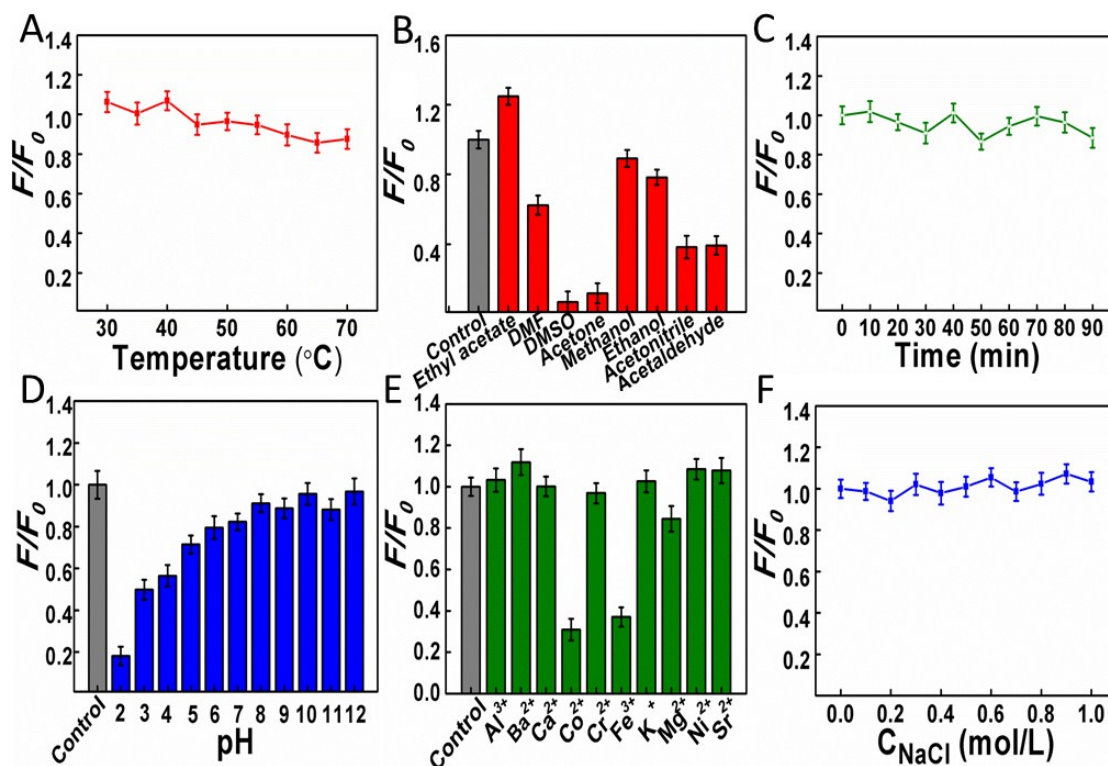


Figure S4 Fluorescence stability of AuNCs@Glu with different temperature (A), organic solvents (B), time (C), pH (D), ions (E) and concentrations of NaCl (F)

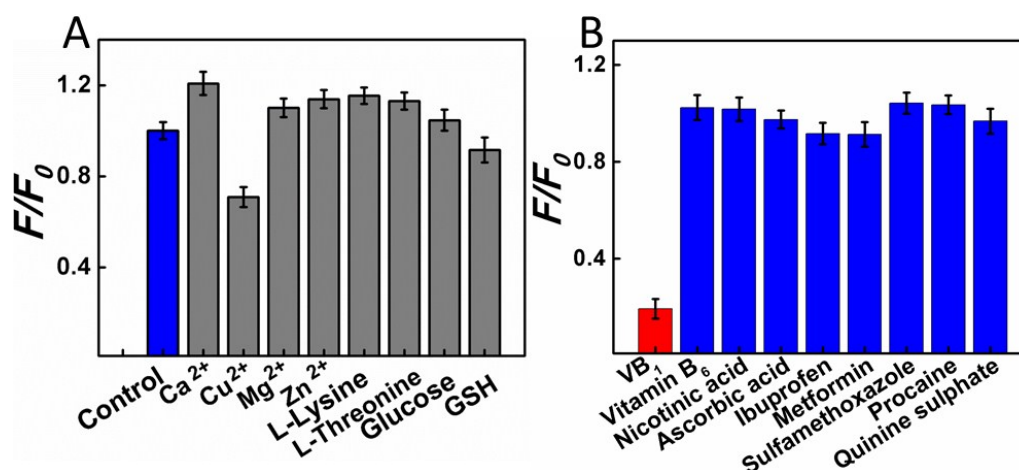


Figure S5 Fluorescence decrease (F/F_0) of AuNCs@Glu with VB_1 in presence of ions or compounds (A); Fluorescence decrease (F/F_0) of AuNCs@Glu in presence of VB_1 or other compounds (B)

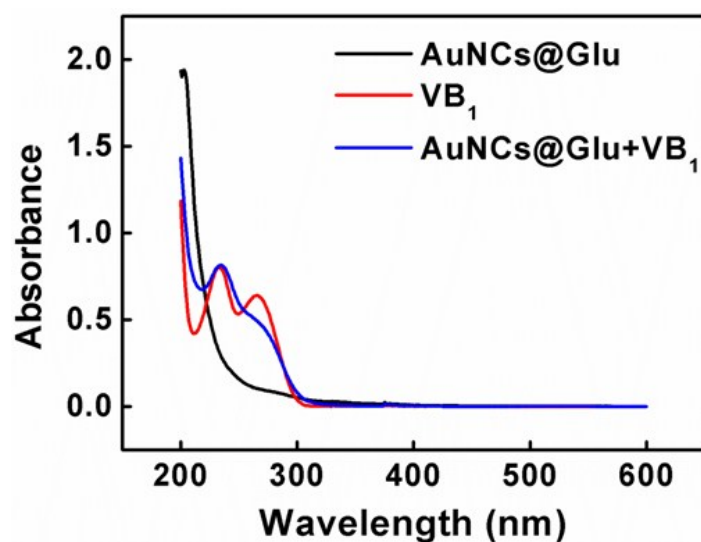


Figure S6 UV-vis absorption spectra of VB₁, AuNCs@Glu without or with VB₁

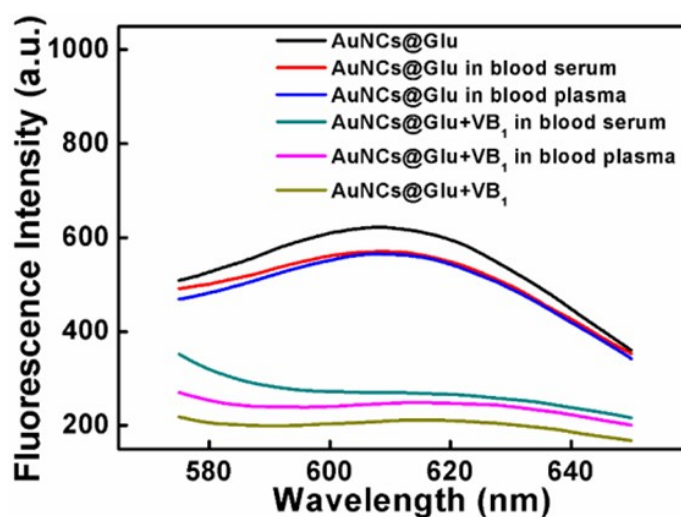


Figure S7 Stability of AuNCs@Glu with or without VB₁ in blood serum and blood plasma

Table S1

High performance liquid chromatography for detecting VB1 or its derivatives

Analyte	Sample	Detection	Year	Ref
Th, ThMP, ThDP	Brain tissue homogenate, whole blood	FLD	2016	1
Th, B ₂ , B ₃ , B ₅ , B ₆ , B ₉ , B ₁₂ , biotin	Plasma	UV-VIS	2015	2
Th, ThMP, ThDP	Cell culture	FLD	2016	3
Th, B ₆ , B ₁₂ , sulbuthiamine,	Plasma	HPLC-MS	2015	4
Th, B ₂ , B ₃ , B ₅ , B ₆ , B ₇ , B ₉ , B ₁₂	Blood serum, human tears	HPLC-MS	2015	5

Reference:

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