

Supplementary file for

**Synthesis of β -Cyclodextrin@gold Nanoparticles
and Its Application on Colorimetric Assays for
Ascorbic Acid and *Salmonella* Based on
Peroxidase-like Activities**

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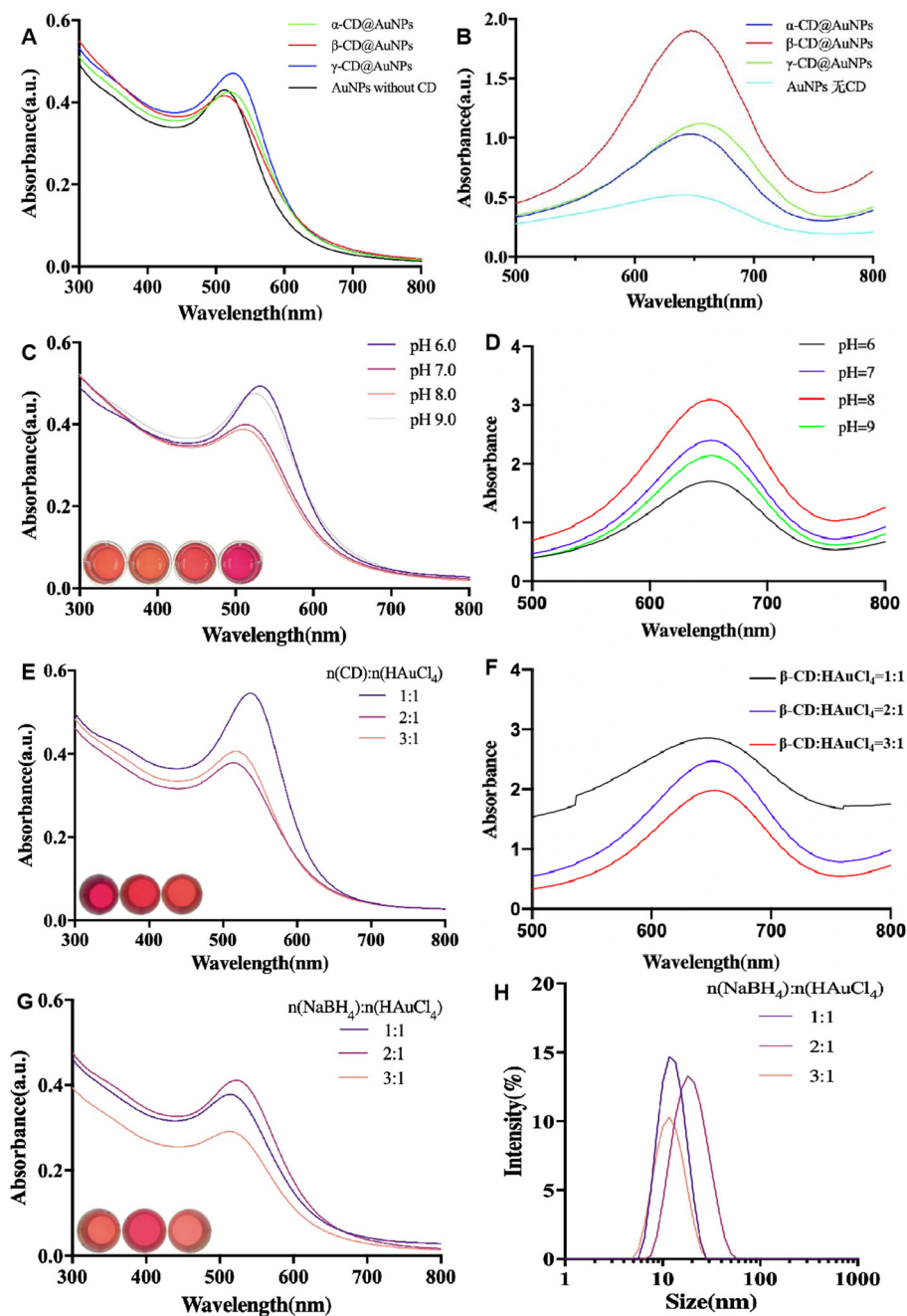


Figure S2. Optimization of β -CD@AuNPs on peroxidase-like activity performances. (A) pH; (B) incubation temperature; (C) incubation time; (D) concentration of H_2O_2 ; (E) concentration of TMB.

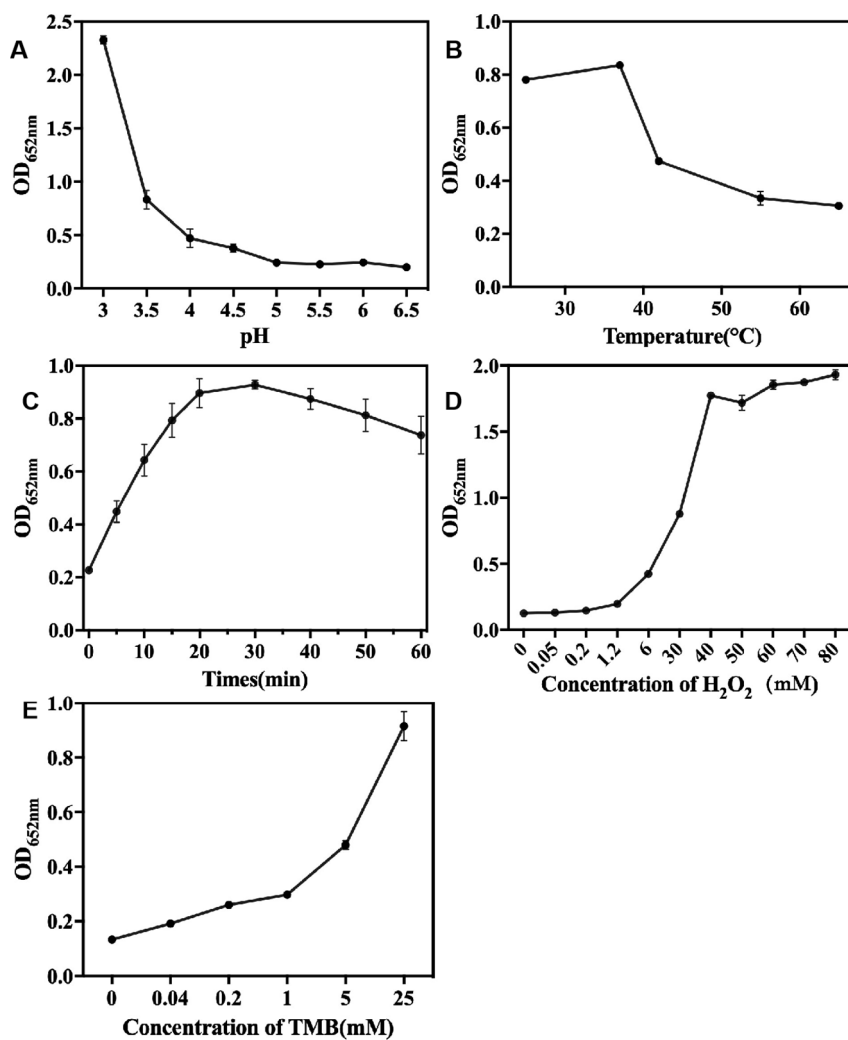


Figure S3. Influences of temperature (A), ionic strength (B) and concentration of Ada (C) on the peroxidase-like performances of β -CD@AuNPs.

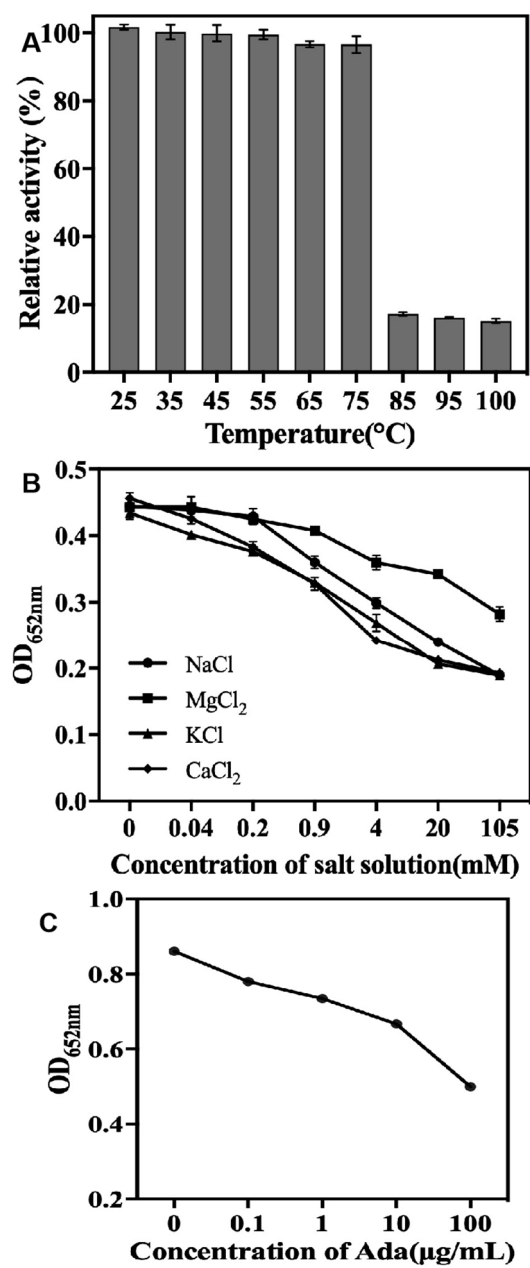


Figure S4. Selectivities of colorimetric detection of AA based on β -CD@AuNPs

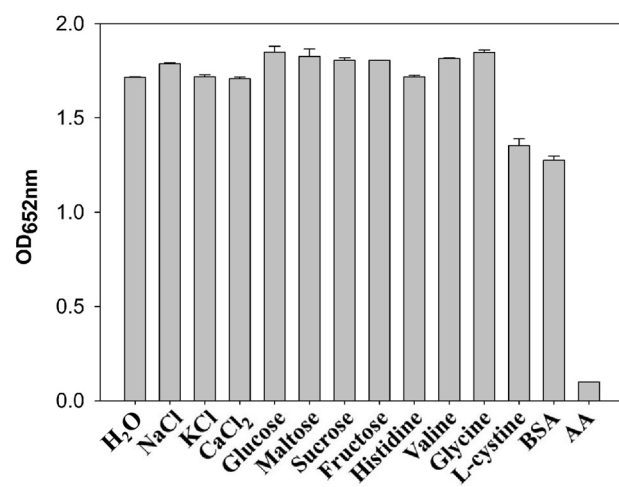


Figure S5. Expression and purification of VHH confirmed by SDS-PAGE analysis (A) and UV-Vis absorption spectra (B).

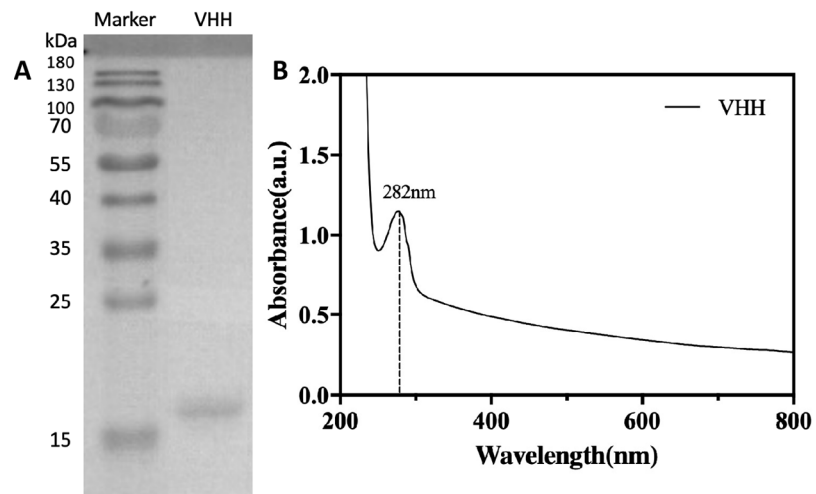


Figure S6. Correlations between one-step ELISA and culture-based methods in spiked lettuce.

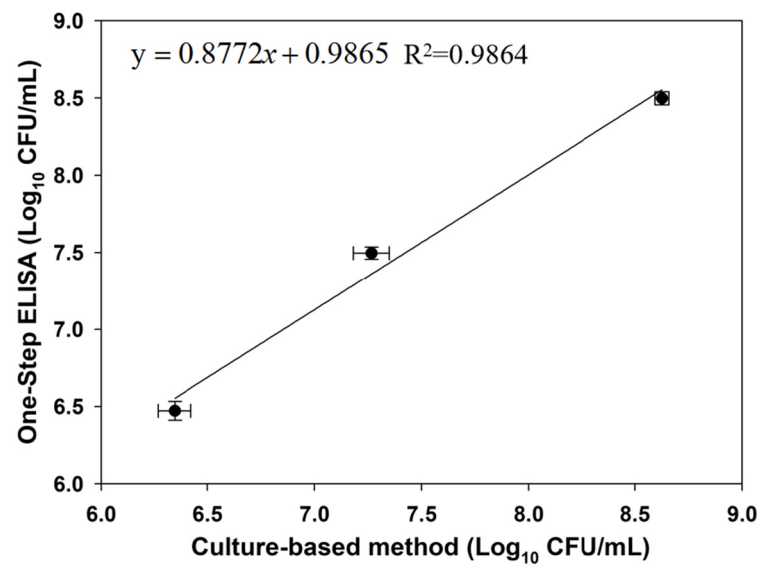


Table S1. ^1H NMR Chemical shifts corresponding of β -CD and β -CD@AuNPs.

	H1	H2	H3	H4	H5	H6
β -CD	5.0353	3.6228	3.9517	3.5538	3.8456	3.9355
β -CD@AuNPs	5.0398	3.6201	3.9382	3.5574	3.8236	3.9224

Table S2. The kinetic parameters of peroxidase-like activity of β -CD@AuNPs.

Catalyst	Substrate	$V_{\max}/\text{M}\cdot\text{s}^{-1}$	$K_m/(\text{mM})$
β -CD@AuNPs	TMB	0.927×10^{-7}	0.0074
β -CD@AuNPs	H ₂ O ₂	7.517×10^{-7}	263.5