Electronic Supplementary Material (ESI) for Analyst.

Supporting information

Universal strategy for visual chiral recognition of *α*-amino acids with L-tartaric acid-capped gold nanoparticles as colorimetric probes

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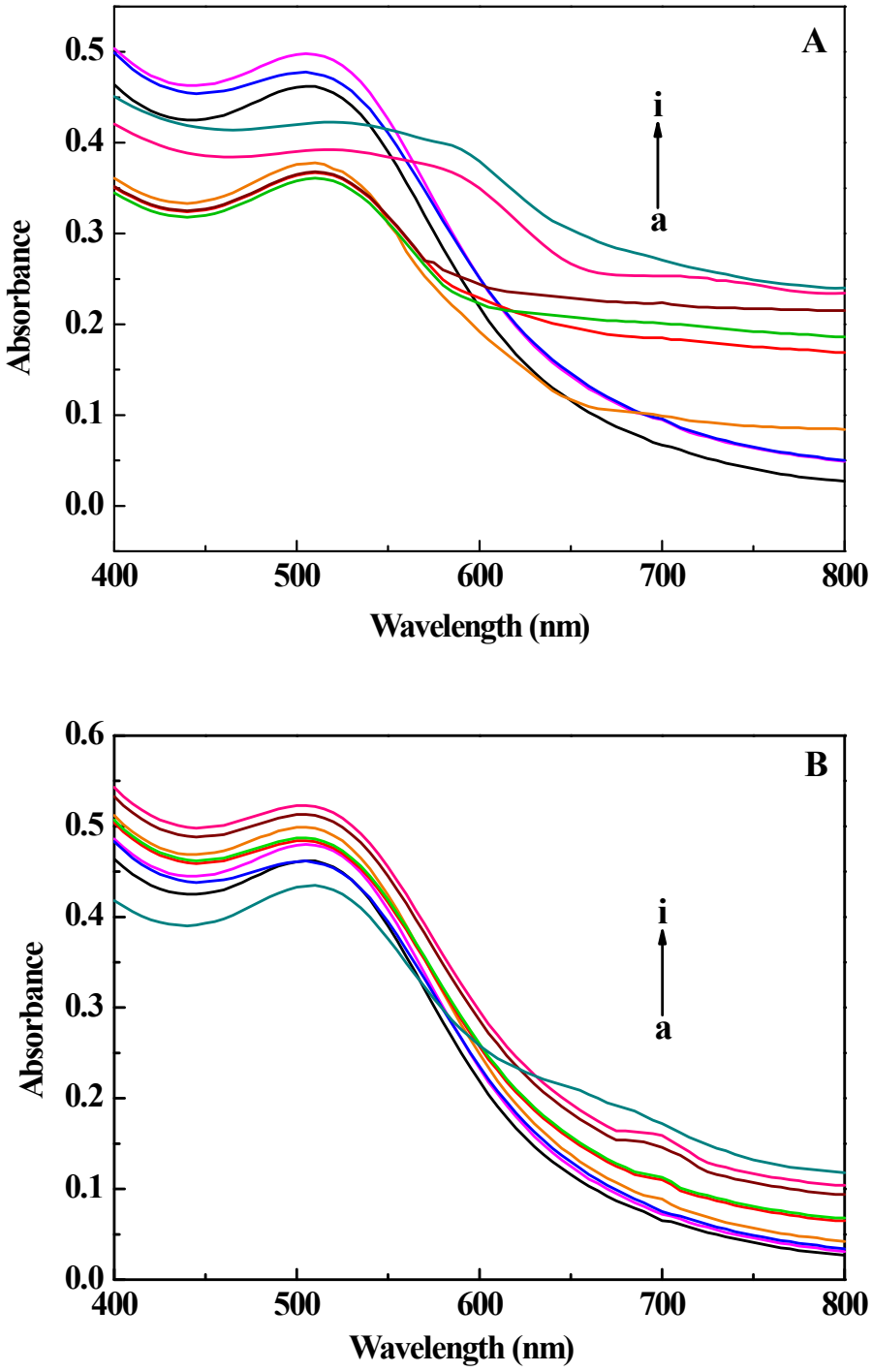

Figure S1. UV–vis absorbance of L-TA-capped AuNPs solution upon addition of (A) L–His or (B) D–His (a–i: 0, 0.01, 0.1, 0.5, 1, 10, 100, 200 and 500 μM).

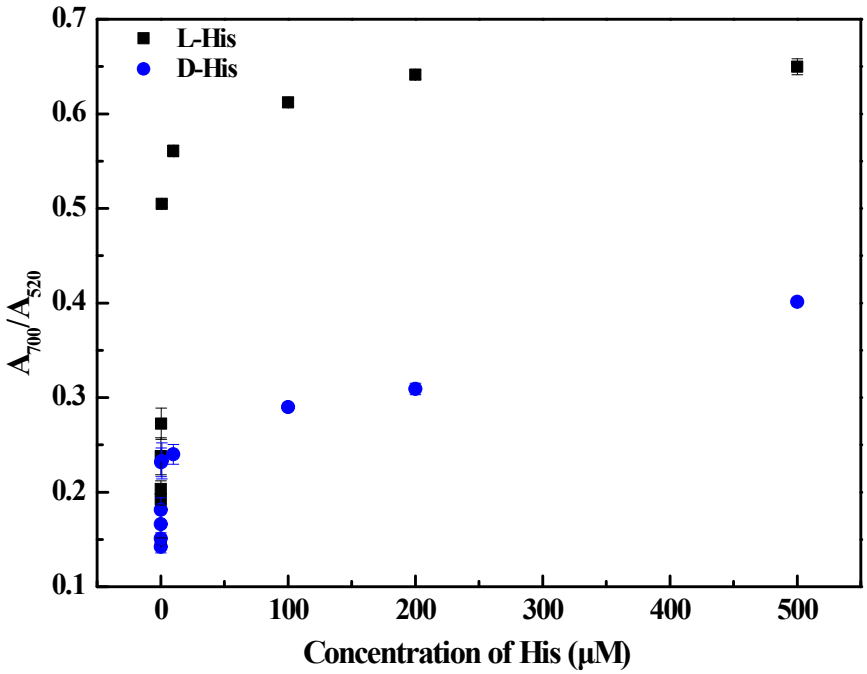

Figure S2. Plots of A_{700}/A_{520} ratio of L-TA-capped AuNPs upon the addition of L– or D–His at different concentrations (0, 0.01, 0.1, 0.5, 1, 10, 100, 200 and 500 μM). Experiment condition: 120 μL BR（pH 6.0），180 μL L-TA-capped AuNPs（8.8 nM），50 μL H_2O，50 μL His.

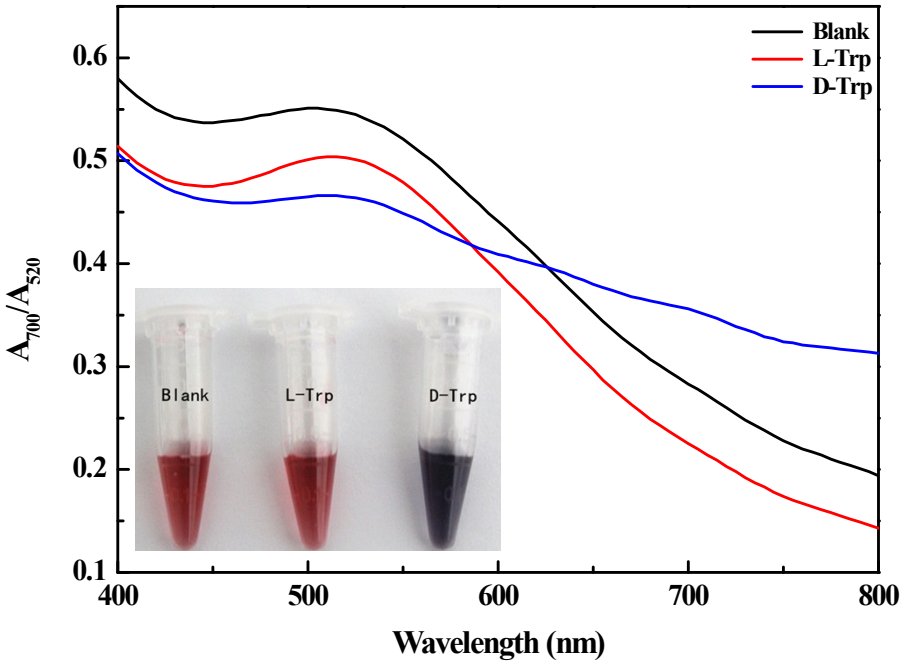

Figure S3. Absorption spectra of L-TA–capped AuNPs in the presence of L-Trp or D-Trp. The inset shows the corresponding photographs. Experiment condition: 120 μL BR buffer (0.04 M H_3PO_4, 0.04 M HAc, 0.04 M H_3BO_3, pH 6.0), 180 μL L-TA–capped AuNPs (8.8 nM), 50 μL H_2O, 50 μL L- or D-Trp (1 mM).

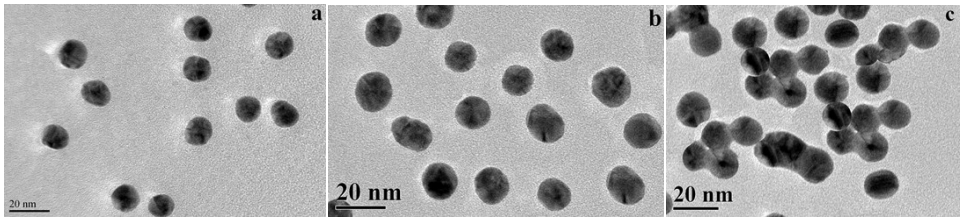

Figure S4. TEM images of L-TA–capped AuNPs (a), AuNPs+1 mM L-Trp (b), and AuNPs + 1 mM D-Trp (c).

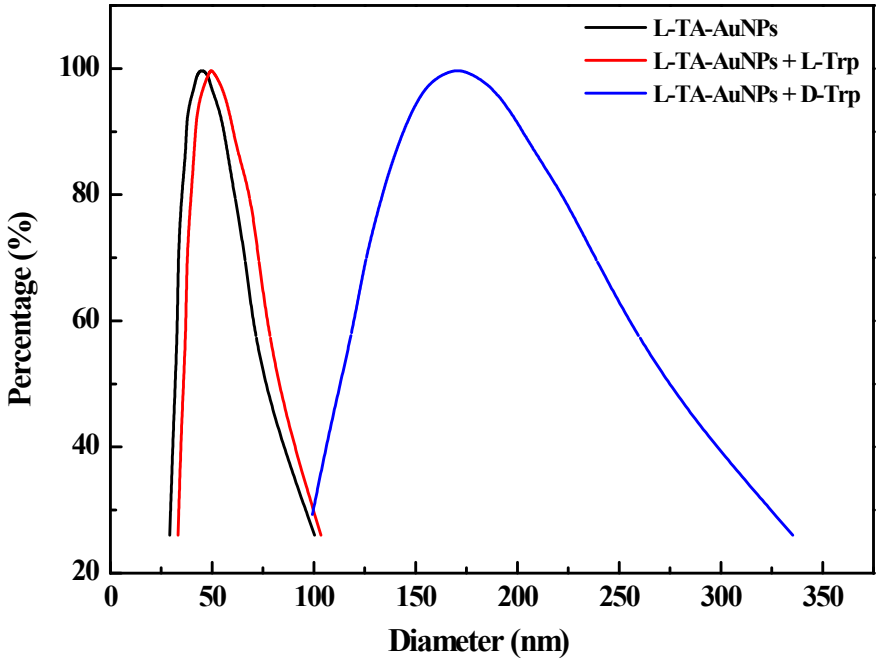

Figure S5. DLS of L-TA–capped AuNPs before and after treatment with 1 mM L-Trp or D-Trp.

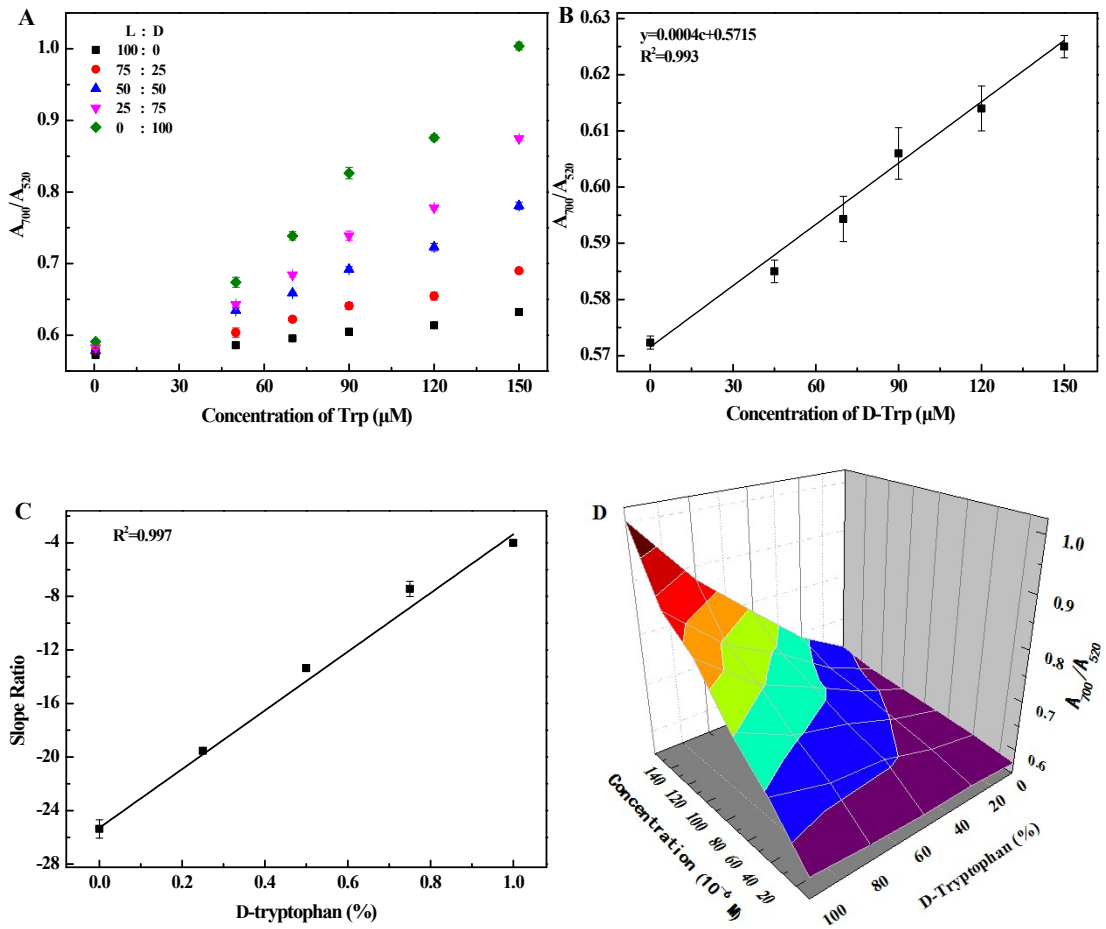

Figure S6. Plots of A_{700}/A_{520} vs Trp concentrations with various compositions (A). Plots of A_{700}/A_{520} vs a function of D-Trp concentration (B). Plots of slope vs D-Trp (%) compositons (C). 3D plots of L-His compositions and A_{700}/A_{520} with the Trp concentration (D)