## **Electronic supplementary information**

## A gold nanoparticle-based label free colorimetric aptasensor for

## adenosine deaminase detection and inhibition assay

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Figure S1

Fig. S1 UV-vis absorption spetra of ~13 nm AuNPs.



Figure S2

Fig. S2 Transmission electron microscopy image of AuNPs stabilized by citrate.



Figure S3

Fig. S3 Characterization of surface zeta potential of AuNPs.



Figure S4

Fig. S4 The dynamic process of AuNPs system after addition of NaCl solution.



Figure S5

Fig. S5 Absorption spectra of AuNPs system in different concentration of NaCl solution.



 $\label{eq:Figure S6} Fig. S6 \mbox{ The relation between $A_{700}/A_{522}$ of the AuNPs system and the concentration of NaCl solution.}$ 



Figure S7

Fig. S7 Absorption spectra of AuNPs system in different concentration of AD aptamer solution.



 $Figure \ S8$  Fig.S8 The relation between  $A_{522}/A_{700}$  of the AuNPs system and the concentration of AD aptamer.



Fig.S9 The relation between  $A_{700}/A_{522}$  of the AuNPs system and the concentration of AD.