## **Supporting informations**

## Conformational-transited Protein Corona regulated cell-membrane penetration

## and Induced Cytotoxicity of Ultrasmall Au Nanoparticles

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Fig. S1 (a) Thermogravimetric decomposition trace of Au-HSA corona and HSA.
(b) ICP-MS analysis of Au ions in Au-HSA corona. Data represent mean ± SEM (n = 3 per group).



**Fig. S2. a~c.** the original FTIR spectra of free HSA and HSA coated on AuNPs at different temperature (37°C, 50°C and 70 °C).

**d~f.** Secondary derivative figures (FTIR)of free HSA and HSA coated on AuNPs at different temperature (37°C, 50°C and 70 °C).

g~l Curve-fitted inverted second-derivative amide I spectrum(FTIR spectra) of HSA

and HSA coated on AuNPs at different temperature (37°C, 50°C and 70 °C).



**Fig. S3** (a) Cell viability of 293T cells incubated with AuNPs and Au-HSA corona for 6 h at different concentrations (200, 100, 50, 25, 12.5, 6.25, 3.13, 1.56 μg mL -1).



**Fig.S4.** 3A cellular viability comparisons in different concentration of AuNPs and AuNPs-corona in complete medium (with 10% fetal bovine serum).



Fig. S5. LDH release from 293T cells exposed to AuNPs and Au-HSA corona for 6 h.