

Supplementary materials

Novel ractopamine–protein carrier conjugation and its application to the lateral flow strip test for ractopamine detection in animal feed

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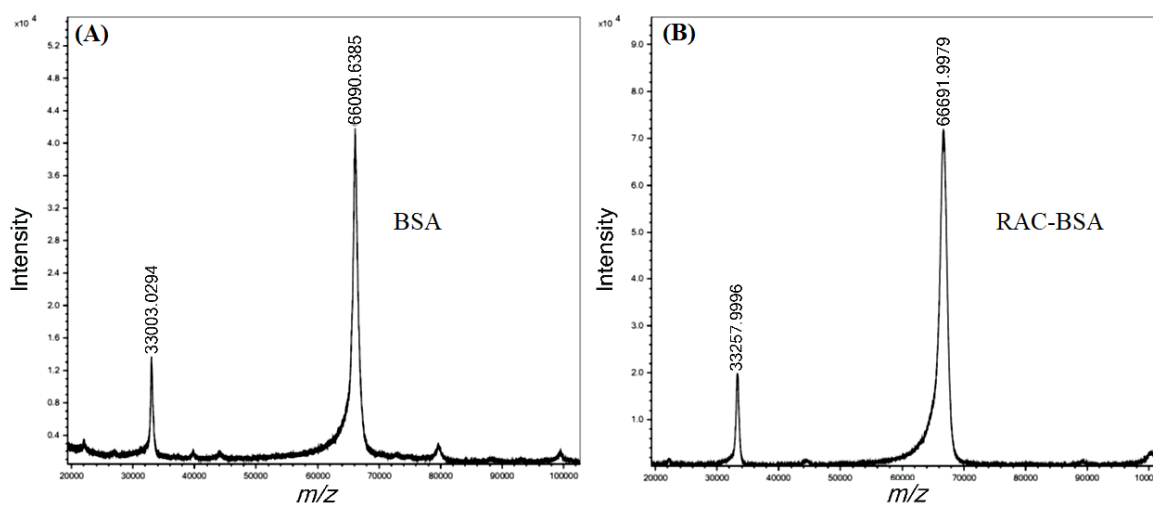


Fig. S1 Results of MALDI-TOF-MS analysis

(A) MW of BSA is 66 090 g/mol; (B) MW of RAC–BSA is 66 691 g/mol

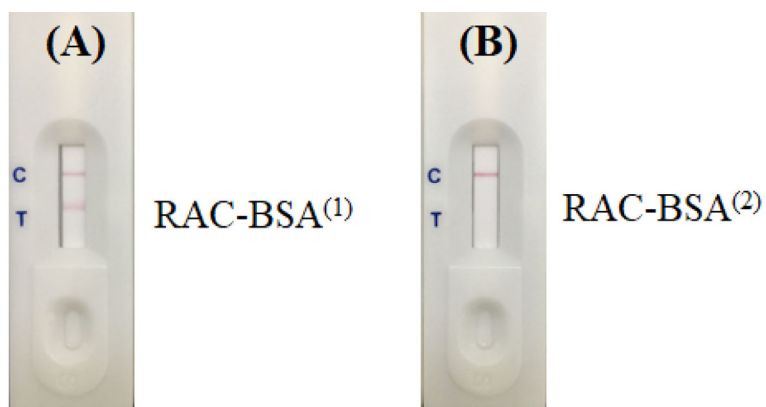


Fig. S2 Lateral flow strip test for RAC detection using the RAC-BSA⁽¹⁾ prepared via the Mannich reaction and the RAC-BSA⁽²⁾ prepared using previous method for the immobilization on test line
 (A) RAC-BSA⁽¹⁾ prepared via the Mannich reaction; (B) RAC-BSA⁽²⁾ prepared using previous method

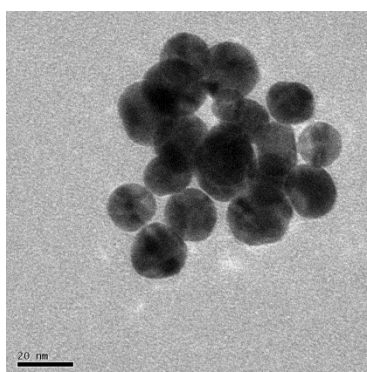


Fig. S3 TEM image of AuNPs

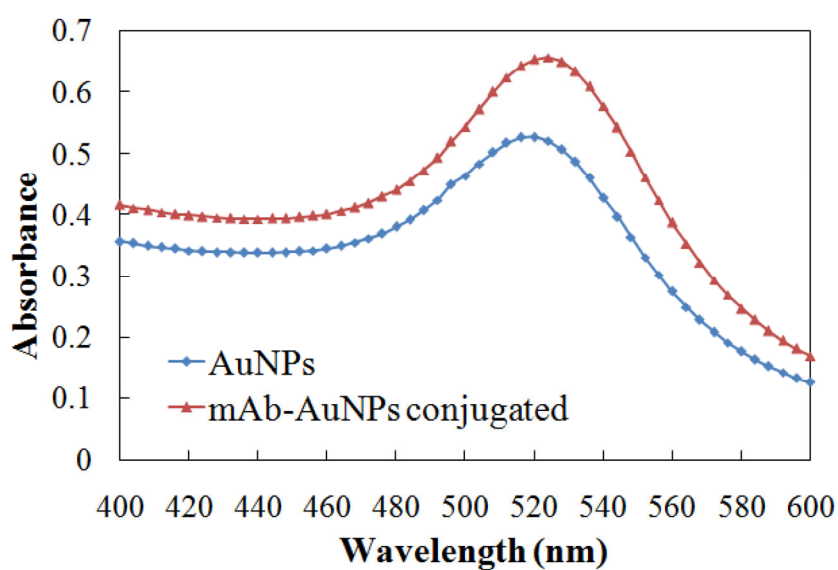


Fig. S4 UV-vis spectra of AuNPs and monoclonal antibody against RAC-AuNPs conjugated

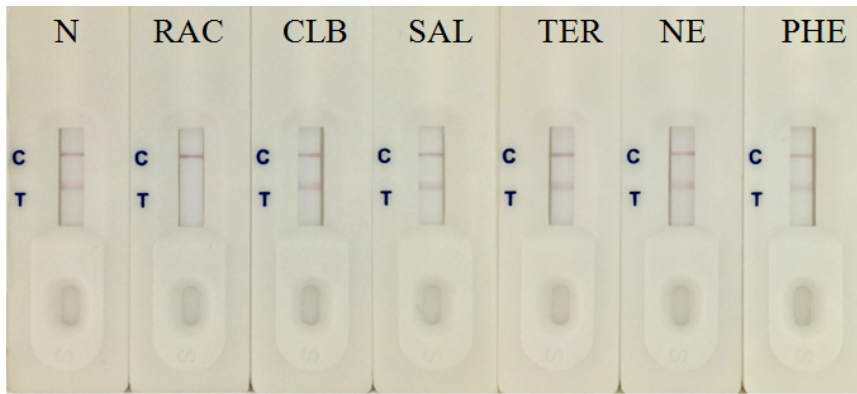


Fig. S5 Cross reactivity test by loading running buffer, RAC, SAL, CLB, TER, NE, and PHE

N: loading running buffer; **RAC:** ractopamine; **SAL:** salbutamol; **CLB:** clenbuterol; **TER:** terbutaline; **NE:** norepinephrine; **PHE:** phenylephrine

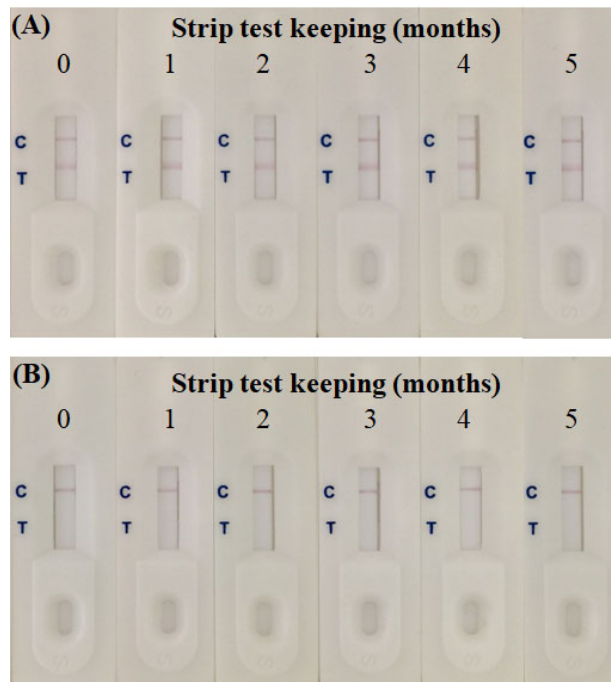


Fig. S6 Storage stability after keeping the strip tests for 0 to 5 months after loading running buffer as negative control and 1 ng/mL of RAC as positive control

(A) Running buffer as negative control; (B) 1 ng/mL of RAC as positive control

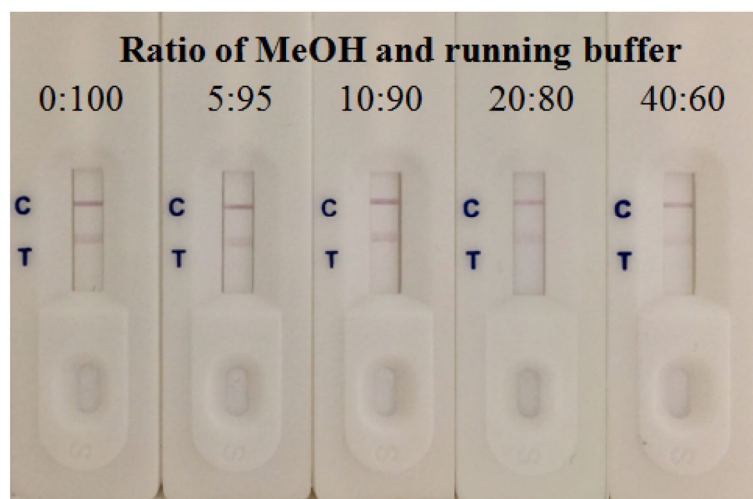


Fig. S7 Effect of the volume ratio of methanol and running buffer of 0:100, 5:95, 10:90, 20:80, and 40:60 toward the lateral flow strip test

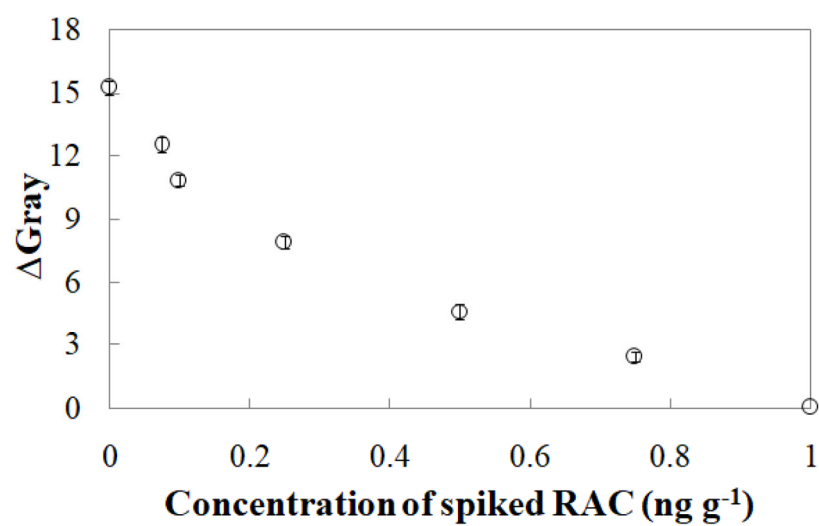


Fig. S8 Relationship between the Δ gray intensity and the concentrations of the non-spiked (0) and spiked RAC in animal feed at 0.075–1.000 ng/g