

Boronic Acid Recognition Based- Gold Nanoparticles Labeling-
Strategy for the Assay of Sialic Acid Expression on Cancer Cell
Surface by Inductively Coupled Plasma Mass Spectrometry

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Supplemental materials

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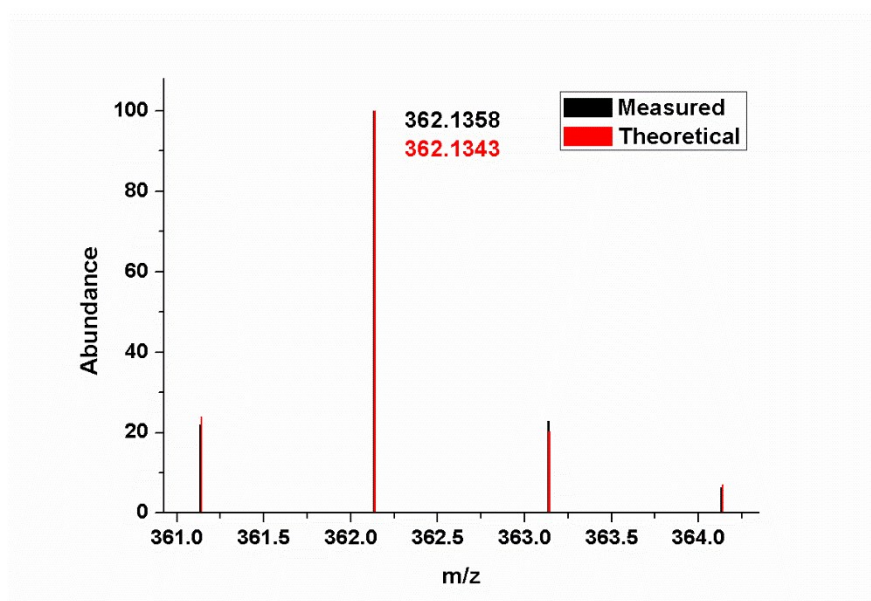


Fig. S1 Mass spectra of the obtained product (in black) and the simulated theoretical one (in red). Mass error= $(M-M_0) / M_0 = 4.14$ ppm.

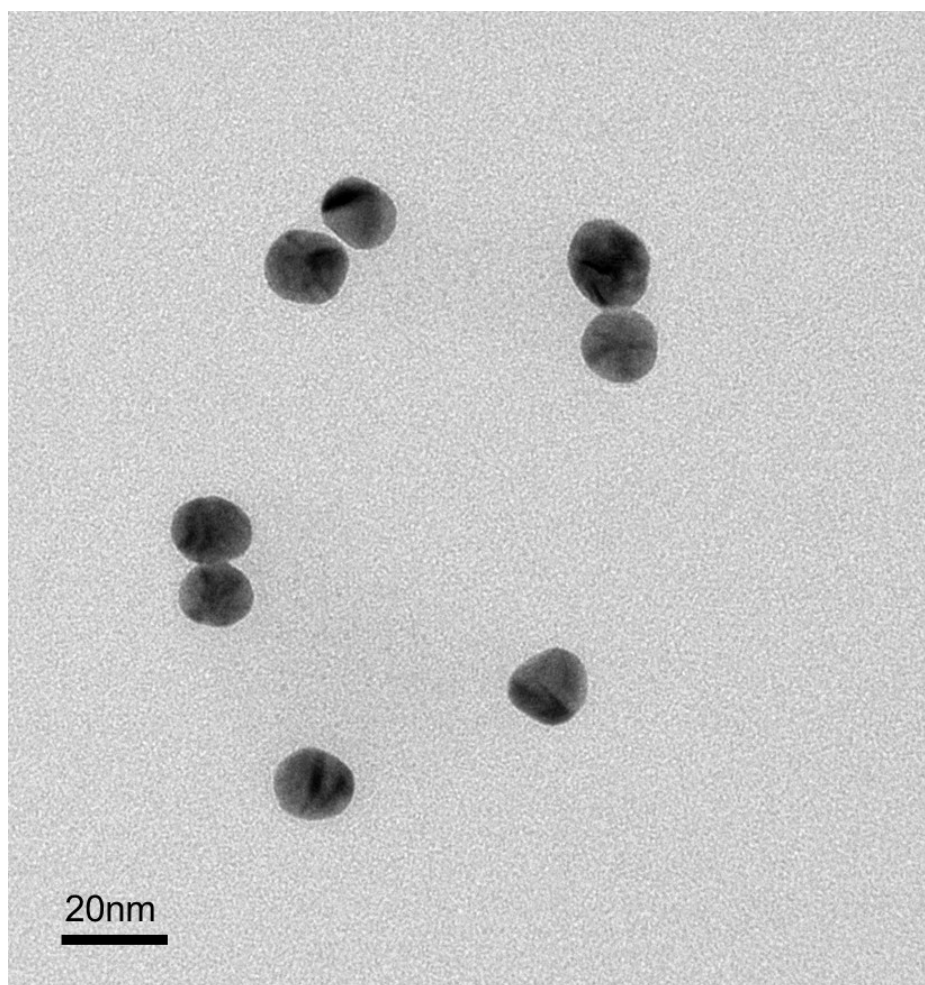


Fig. S2 TEM image of AuNPs (80,000 $\times$).

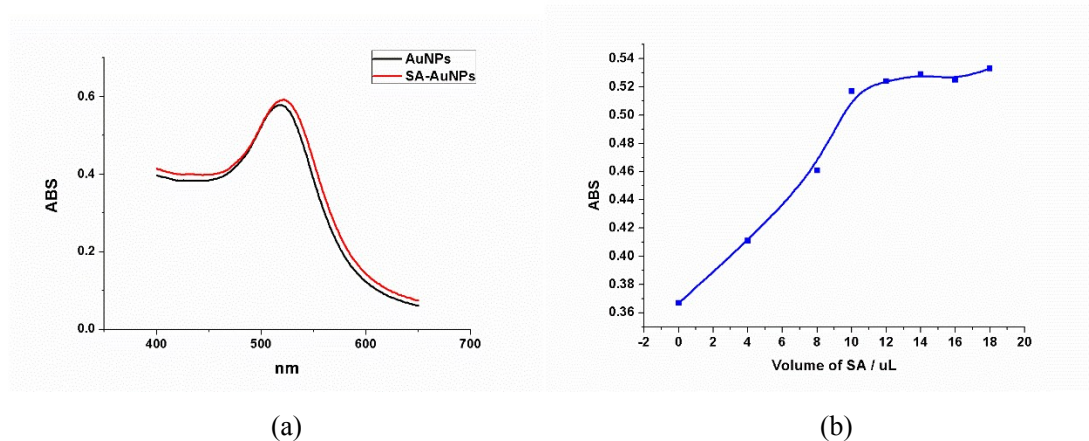


Fig. S3 UV absorption spectra of Au NPs before and after binding with streptavidin (a); and optimization of streptavidin amount for streptavidin (SA)-AuNPs probe preparation (b).

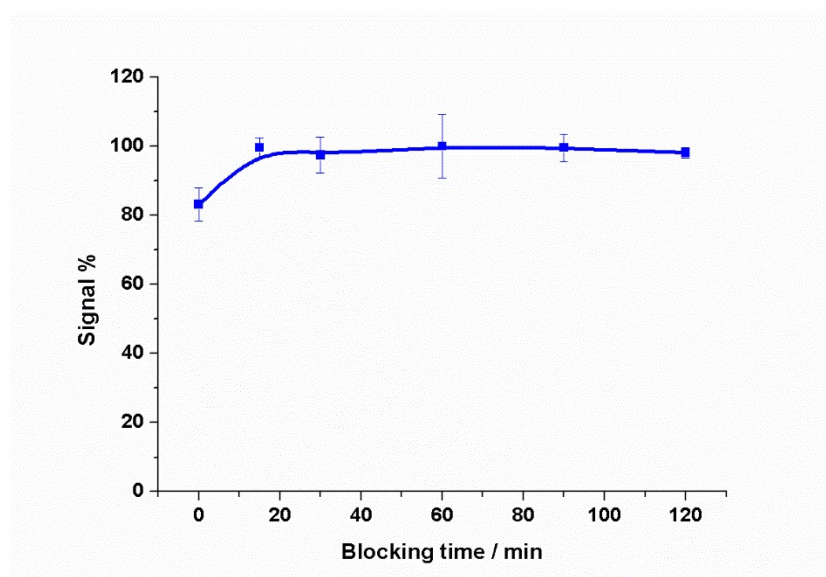


Fig. S4 Effect of blocking time. Cell number: 10,000; volume of biotin-APBA: 10 μ L; volume of streptavidin-AuNPs: 5 μ L. Error bar represents s.d. value for triplicate analysis.

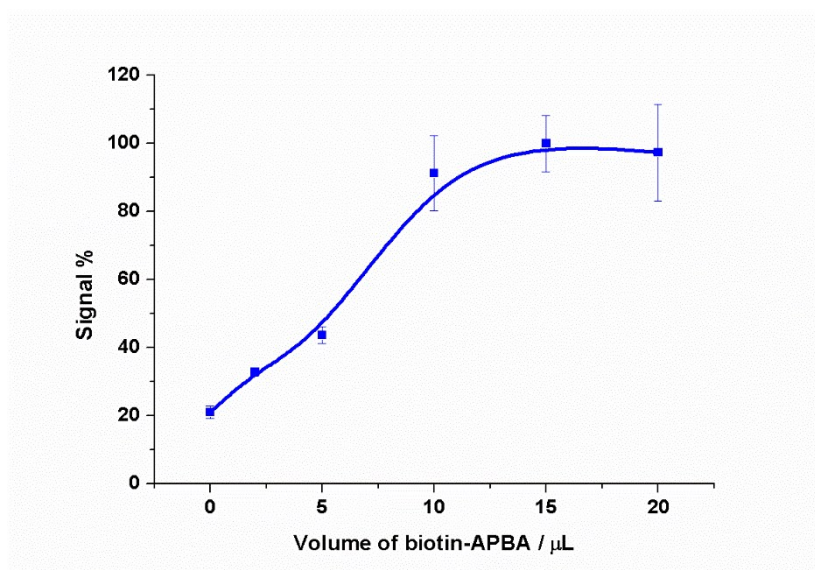


Fig. S5 Effect of biotin-APBA amount. Cell number: 10,000; blocking time: 0.5 h; volume of streptavidin-AuNPs: 5 μL . Error bar represents s.d. value for triplicate analysis.

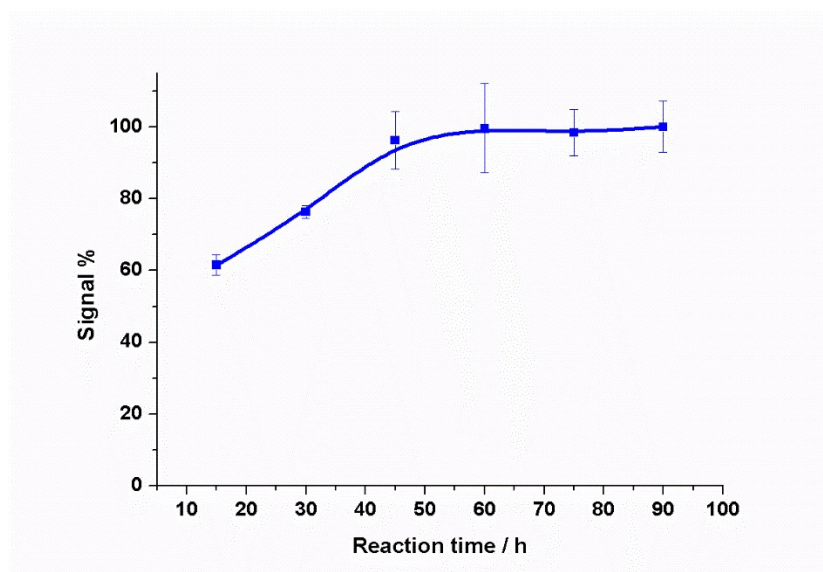


Fig. S6 Effect of reaction time for biotin-APBA with sialic acids on cell surfaces. Cell number: 10,000; blocking time: 0.5 h; volume of biotin-APBA: 15 μ L; volume of streptavidin-AuNPs: 5 μ L. Error bar represents s.d. value for triplicate analysis.

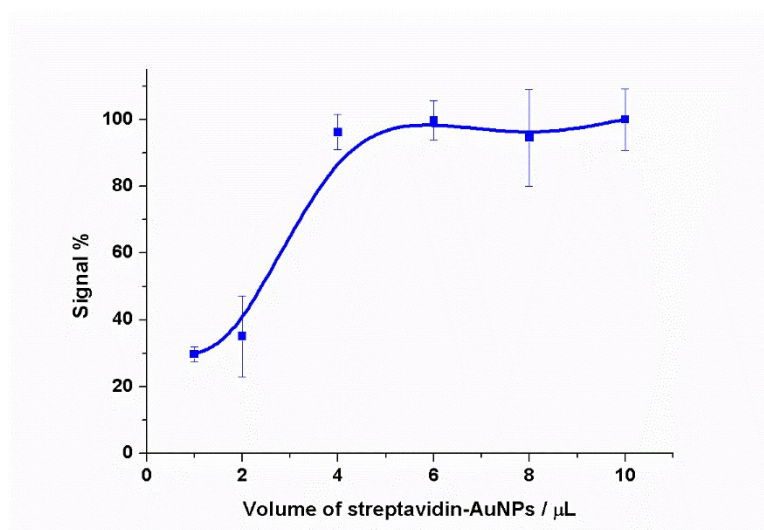


Fig. S7 Effect of streptavidin-AuNPs probe volume. Cell number: 10,000; blocking time: 0.5 h; volume of biotin-APBA: 15 μL . Error bar represents s.d. value for triplicate analysis.

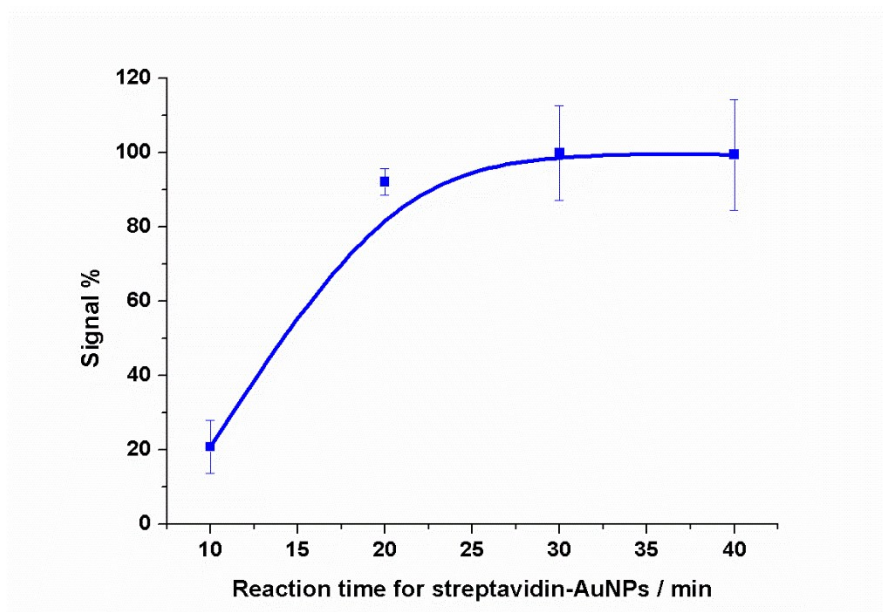


Fig. S8 Effect of reaction time for streptavidin-AuNPs. Cell number: 10,000; blocking time: 0.5 h; volume of biotin-APBA: 15 μ L; volume of streptavidin-AuNPs: 5 μ L. Error bar represents s.d. value for triplicate analysis.

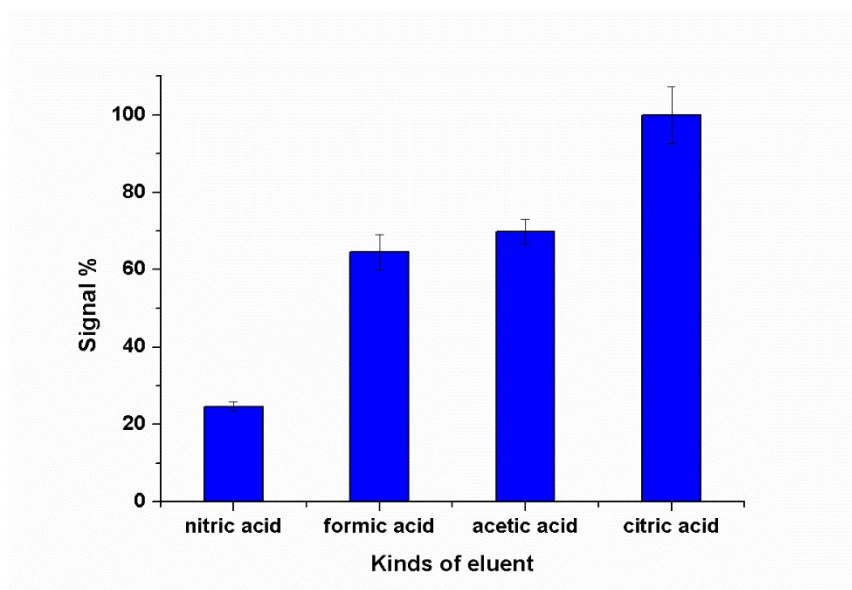


Fig. S9 Effect of eluent kinds. Cell number: 10,000; blocking time: 0.5 h; volume of biotin-APBA: 15 μ L; volume of streptavidin-AuNPs: 5 μ L. Error bar represents s.d. value for triplicate analysis.

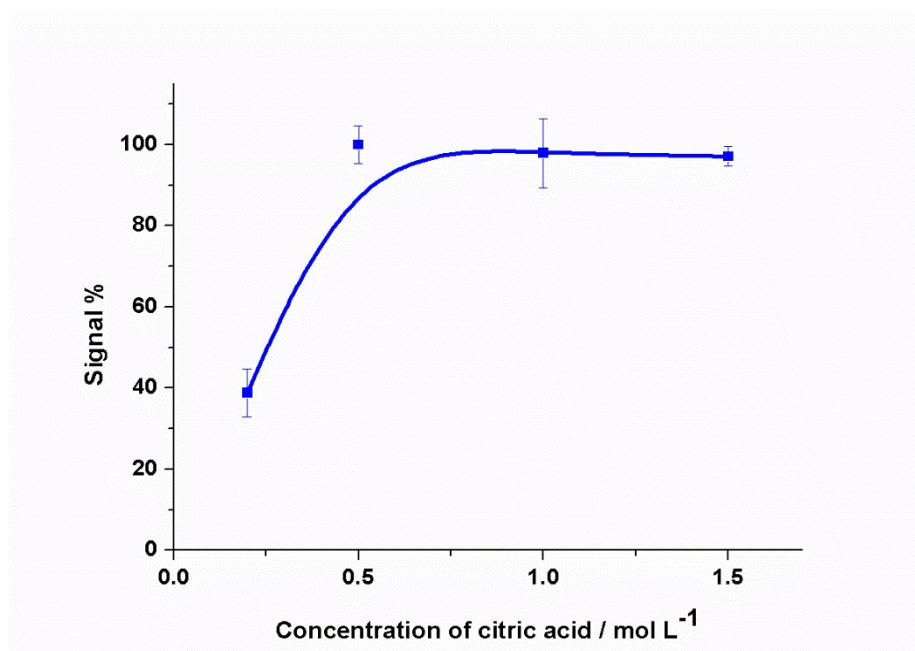


Fig. S10 Effect of citric acid concentration. Cell number: 10,000; blocking time: 0.5 h; volume of biotin-APBA: 15 μ L; volume of streptavidin-AuNPs: 5 μ L; eluent: citric acid. Error bar represents s.d. value for triplicate analysis.

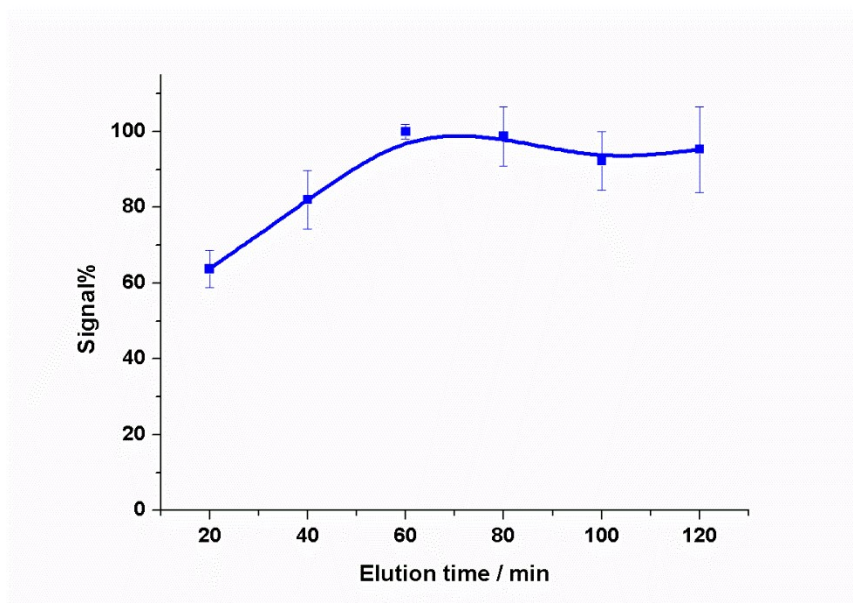


Fig. S11 Effect of elution time. Cell number: 10,000; blocking time: 0.5 h; volume of biotin-APBA: 15 μ L; volume of streptavidin-AuNPs: 5 μ L; eluent: 1 mol L⁻¹ citric acid. Error bar represents s.d. value for triplicate analysis.

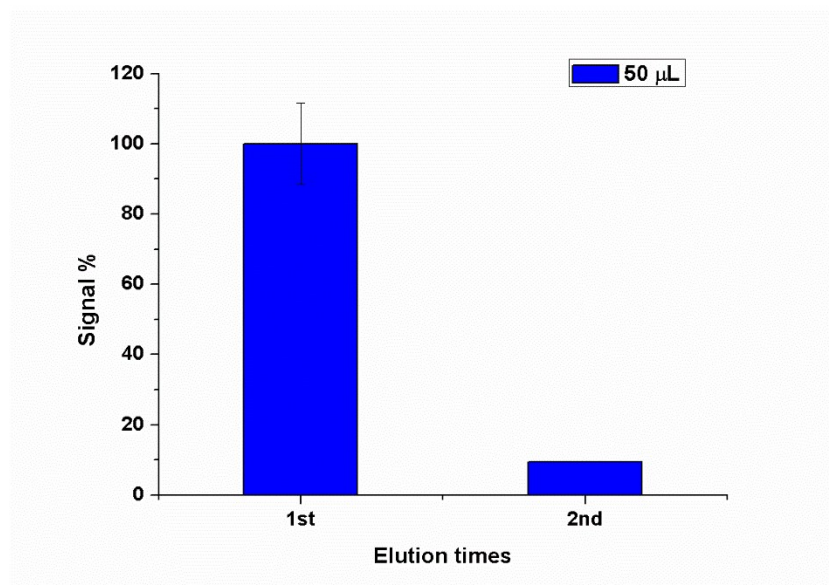


Fig. S12 Effect of eluent volume. Cell number: 10,000; blocking time: 0.5 h; volume of biotin-APBA: 15 µL; volume of streptavidin-AuNPs: 5 µL; eluent: 1 mol L⁻¹ citric acid. Error bar represents s.d. value for triplicate analysis.