

Fig. S1 SDS-PAGE result of rabbit IgG antibody of *L. monocytogenes*. Protein marker (lane M); rabbit IgG antibody of *L. monocytogenes* (lane 1).

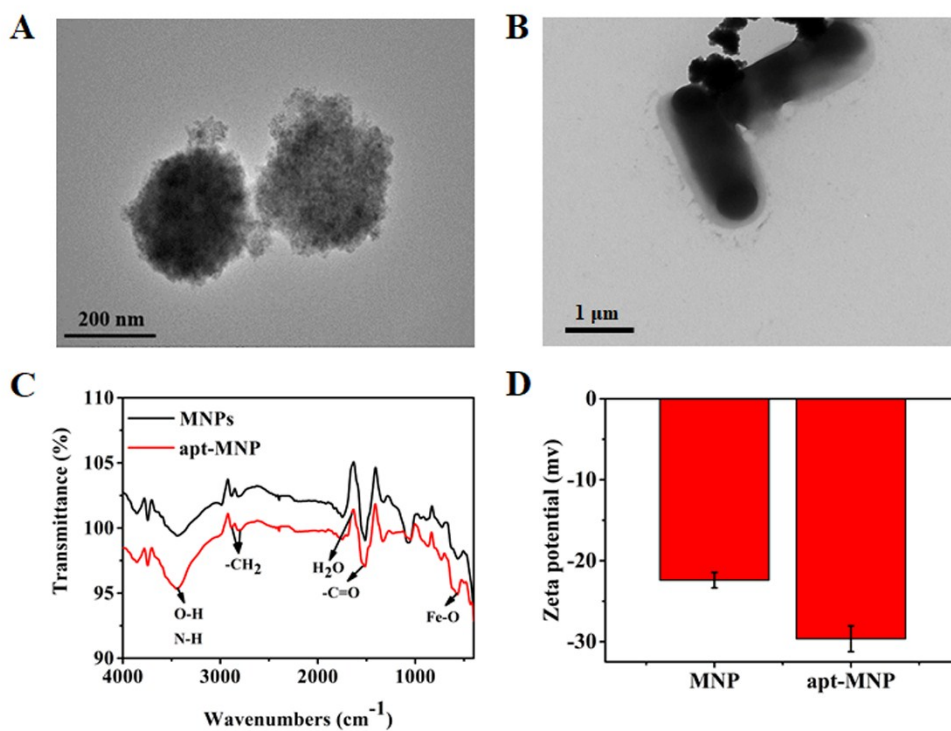


Fig. S2 (A) TEM images of apt-MNPs and (B) apt-MNP captured *L. monocytogenes*. (C) FT-IR spectrum of Fe₃O₄ MNPs and apt-MNP. (D) Zeta potential measurements of Fe₃O₄ MNPs and apt-MNPs.

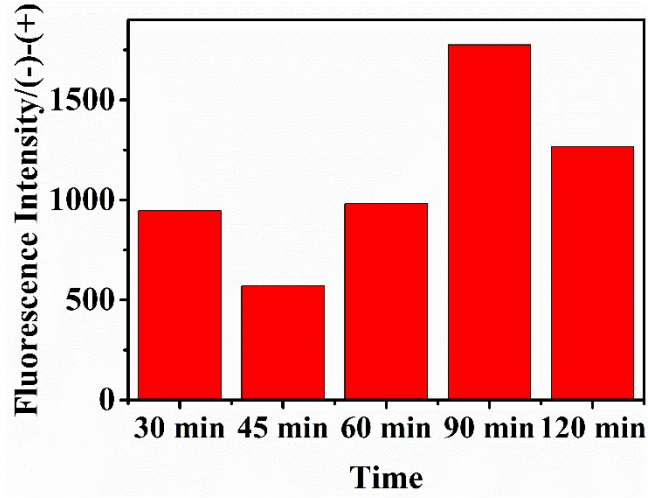
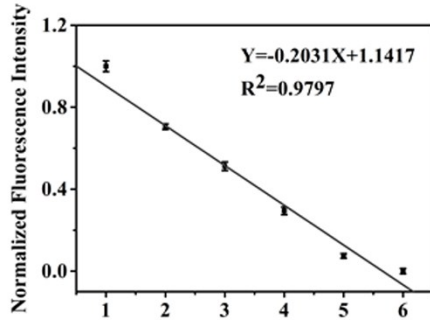


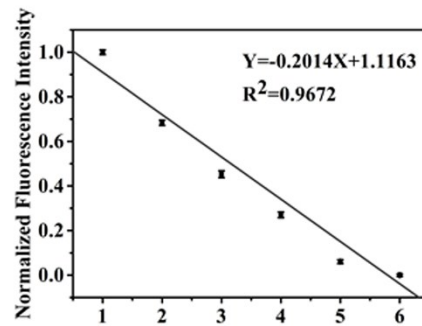
Fig. S3 Optimization of incubation time (30, 45, 60, 90, 120 min).

A



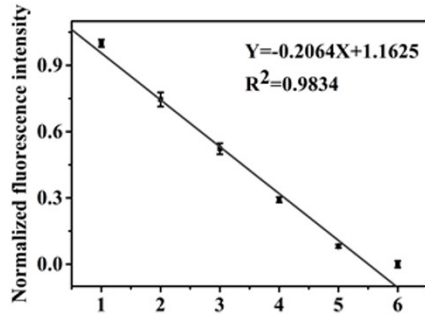
log scale of *L. monocytogenes* concentrations in Nan Lake

B



log scale of *L. monocytogenes* concentrations in Yan Lake

C



log scale of *L. monocytogenes* concentrations in pork meat

Fig. S4 (A) The calibration curve for *L. monocytogenes* in Nan Lake samples. (B) The calibration curve for *L. monocytogenes* in Yan Lake samples. (C) The calibration curve for *L. monocytogenes* in pork meat samples. (Fluorescence intensity vs the logarithm of *L. monocytogenes* concentration). Error bars represent the standard deviation of three replicates.