Supplementary Materials

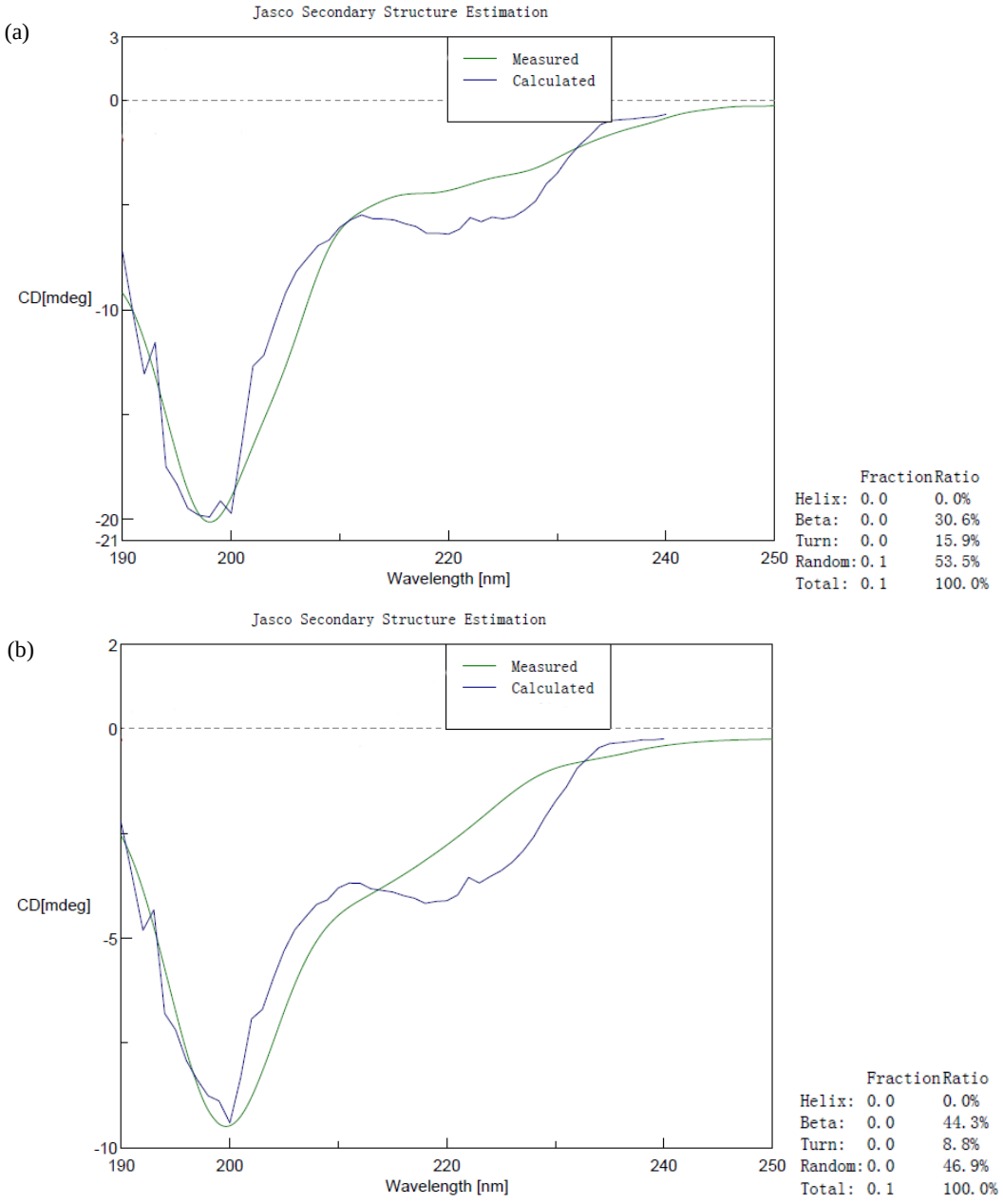

Figure S1. Circular dichroism (CD) results and fraction ratio of structure compositions. To analyze their secondary structure, DP7 and HH2 were send to Shanghai applied Protein Technology Co. Ltd. For the CD measurement, the solvent was ddH_2O, peptide concentration was 0.3 mol/L. Measure was taken over the range from 190 to 250 nm under room temperature, the cell length of 0.1 cm was used. The scanning speed was 50 nm/min at a step size of 0.1 nm, a 0.5 s response time and 1.0 nm bandwidth. There's not big difference in the structure composition of HH2 (a) and DP7 (b), mostly liner and partly beta sheet.

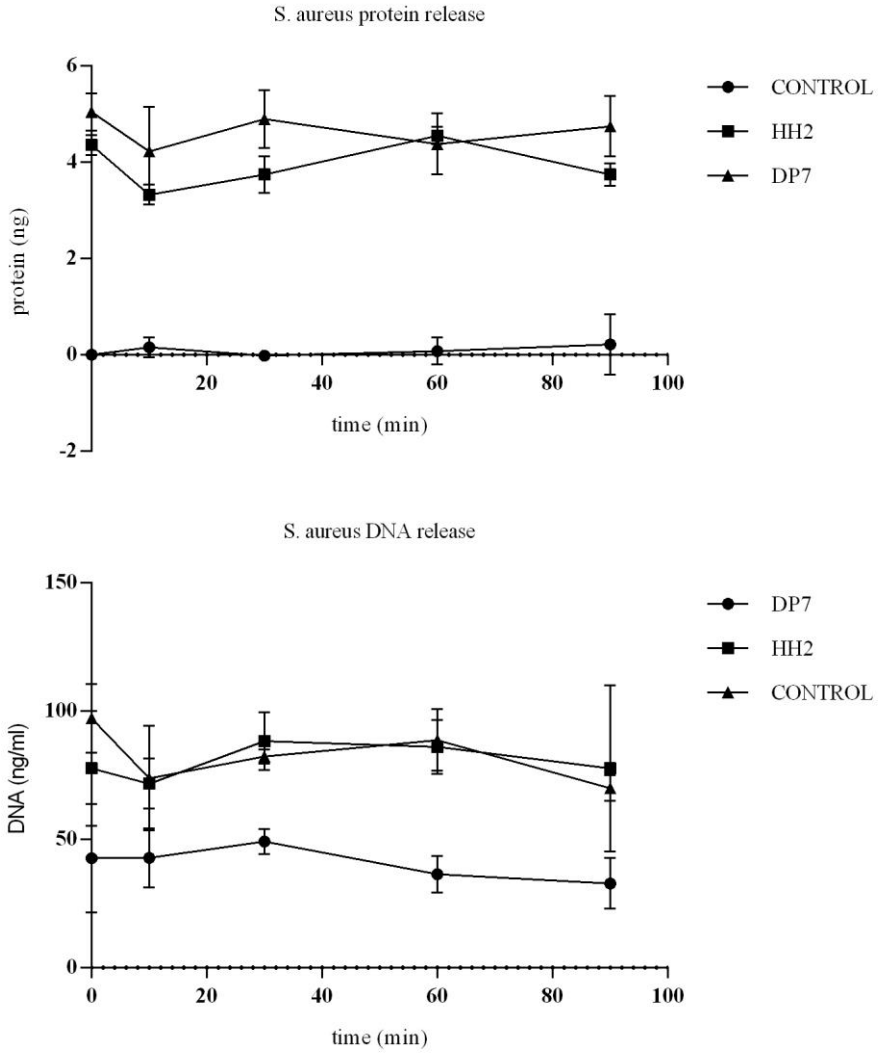

Figure S2. The permeability of S. aureus cytomembrane treated with DP7 or HH2. After incubated to the logarithmic phase, S. aureus was washed with PBS for three times (3500 rpm 5min). 1×10^8 S. aureus in PBS was treated with 0.32 mg peptide DP7 or 0.64 mg peptide HH2 in a 0.1 ml PBS solution for 0 min, 10 min, 30 min, 60 min and 90 min. Bacteria solution without peptide was used as control. Bacteria solution was centrifuged at 5000 rpm for 10 min and supernatant was collected. The absorbency at 595 was measured to calculate the protein concentration after samples were quantified with bradford protein assay method. The DNA concentration was measured with Quant-iT^{TM} PicoGreen dsDNA Reagent and Kits.