

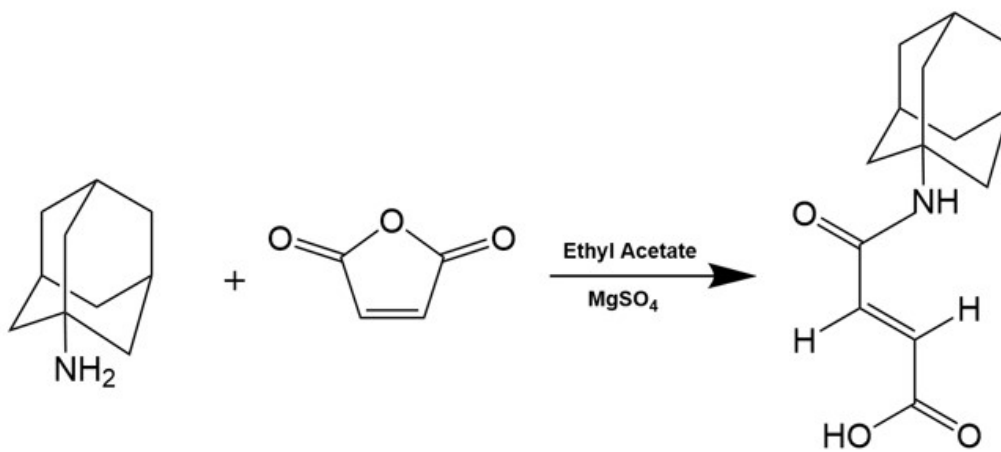
## Supporting information

### **A pH-responsive supramolecular antibacterial agent based on host-guest chemistry**

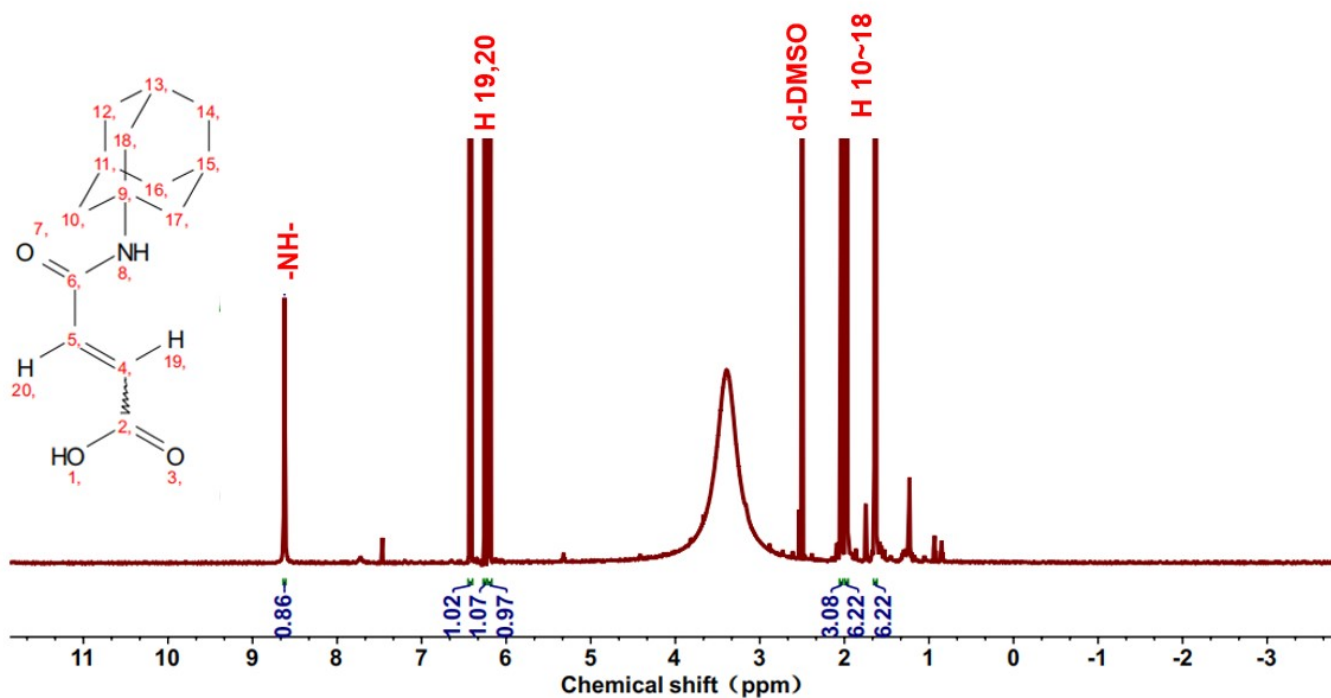
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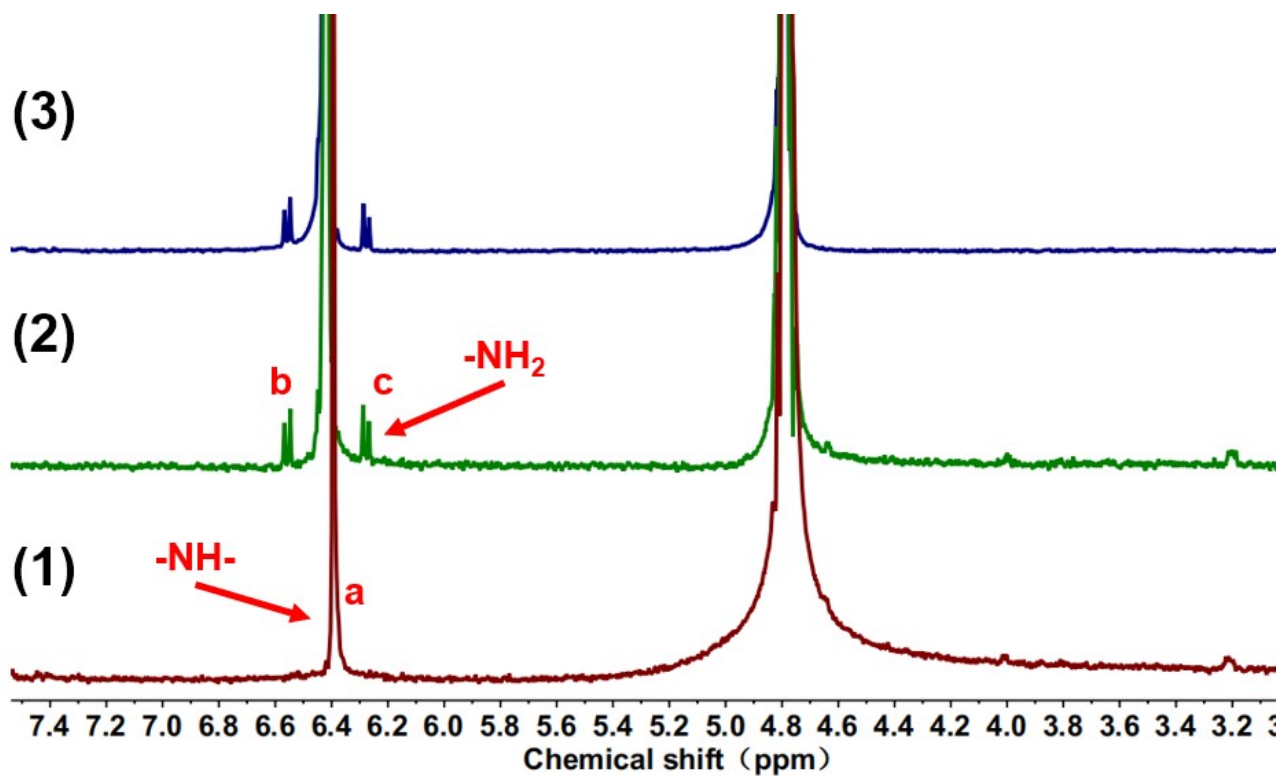
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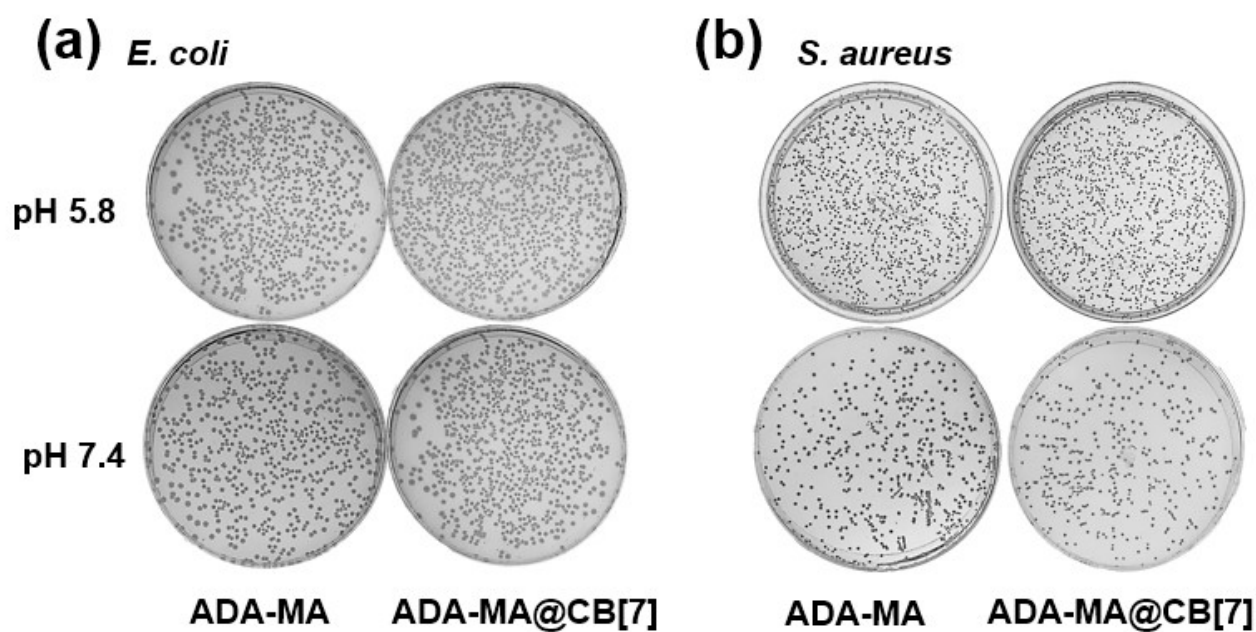
**Scheme S1.** Synthetic scheme of ADA-MA.



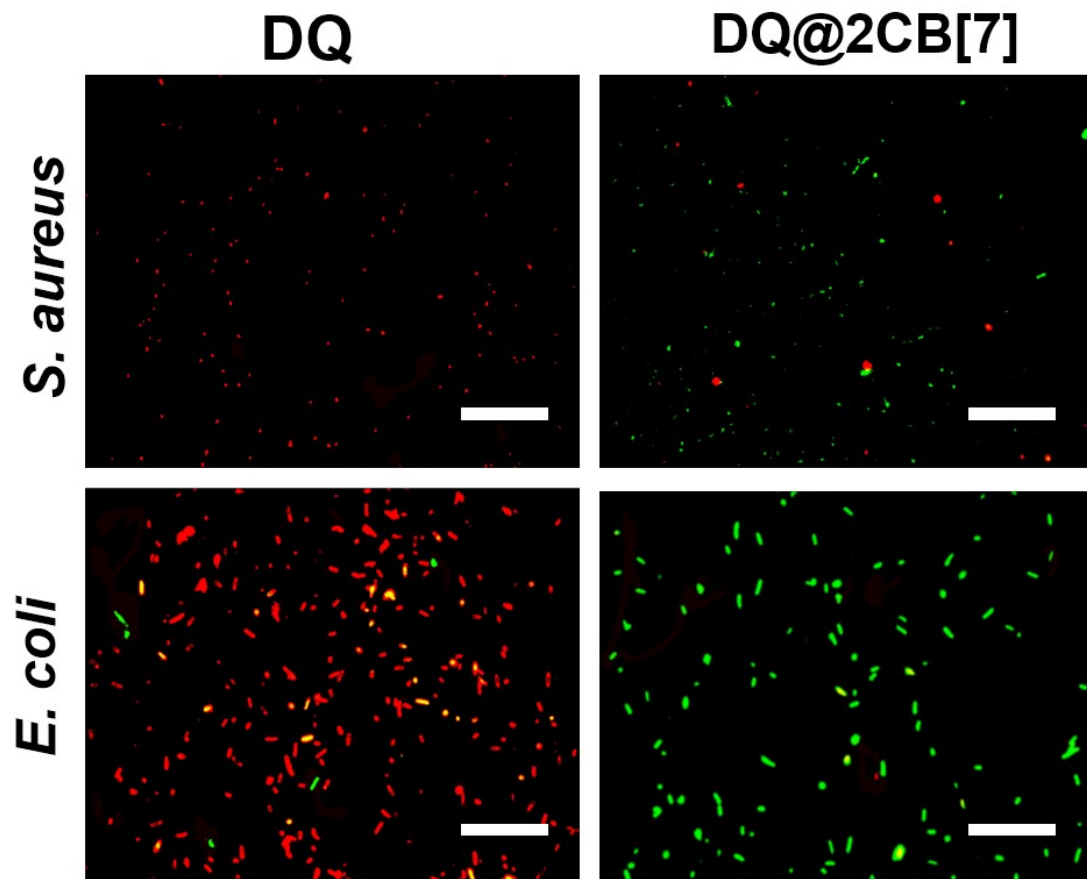
**Fig. S1.** <sup>1</sup>H NMR spectra of ADA-MA in d-DMSO.



**Fig. S2.**  $^1\text{H}$  NMR spectra of 1) ADA-MA in  $\text{D}_2\text{O}$  (pH 7.4) incubated for 12 h, 2) ADA-MA in  $\text{D}_2\text{O}$  (pH 5.8) incubated for 12 h, 3) ADA-MA in  $\text{D}_2\text{O}$  (pH 5.8) incubated for 16 h.



**Fig. S3.** Colony-forming units (CFU) of (a) *E. coli* and (b) *S. aureus* treated with ADA-MA and ADA-MA@CB[7] complexes on LB agar plates with different pH conditions.



**Fig. S4.** Fluorescence microscopy images of *E. coli* and *S. aureus* with DQ and DQ@2CB[7]. Scale bar = 20  $\mu\text{m}$ . (green staining represents live bacteria, and red staining represents dead bacteria).