Supplementary data for

Binding of ankaflavin with bovine serum albumin (BSA) in the presence of carrageenan and protective effects of *Monascus* yellow pigments against oxidative damage to BSA after forming the complex with carrageenan

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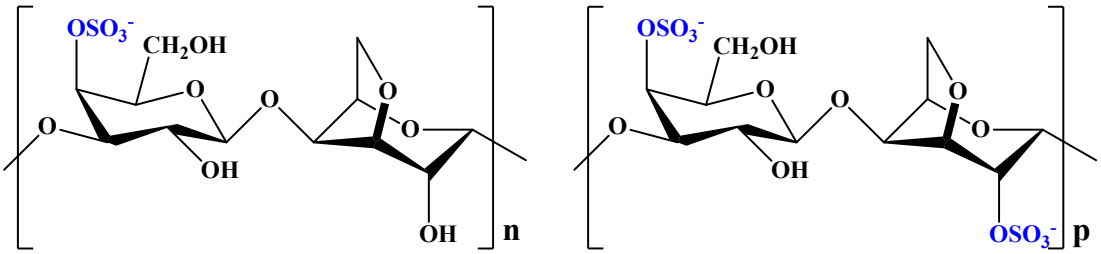

κ-Car ι-Car

Fig. S1. The chemical structures of κ-Car and ι-Car.

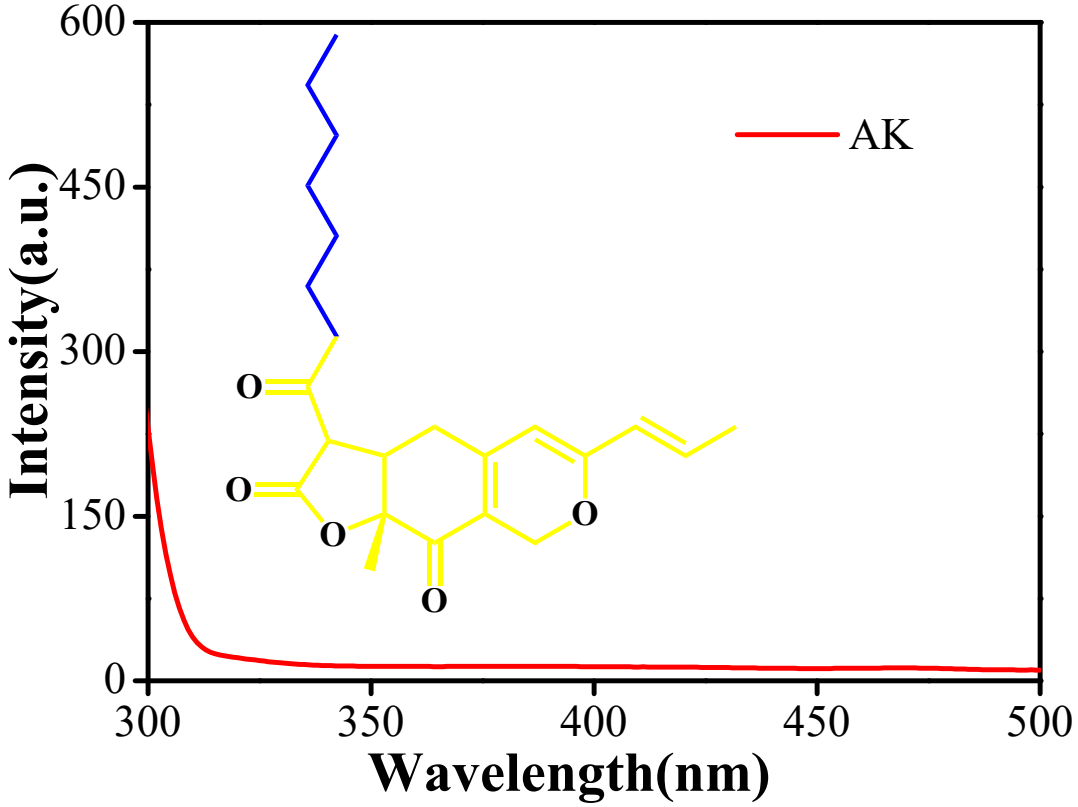

Fig. S2. The fluorescence spectra of AK at 298 K, λ_{ex} = 280 nm. The insert shows the chemical structure of AK.

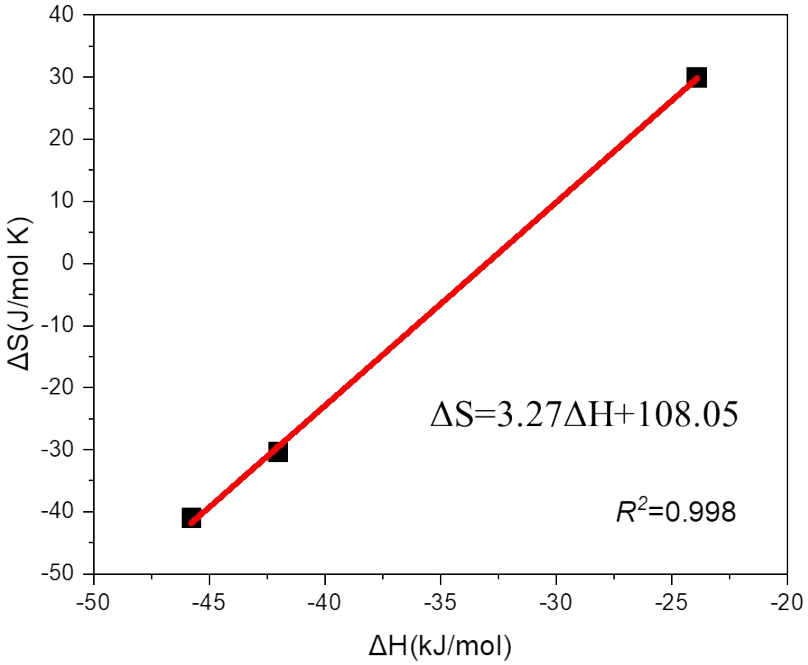

Fig. S3. Plot of Δ*S* vs Δ*H*.

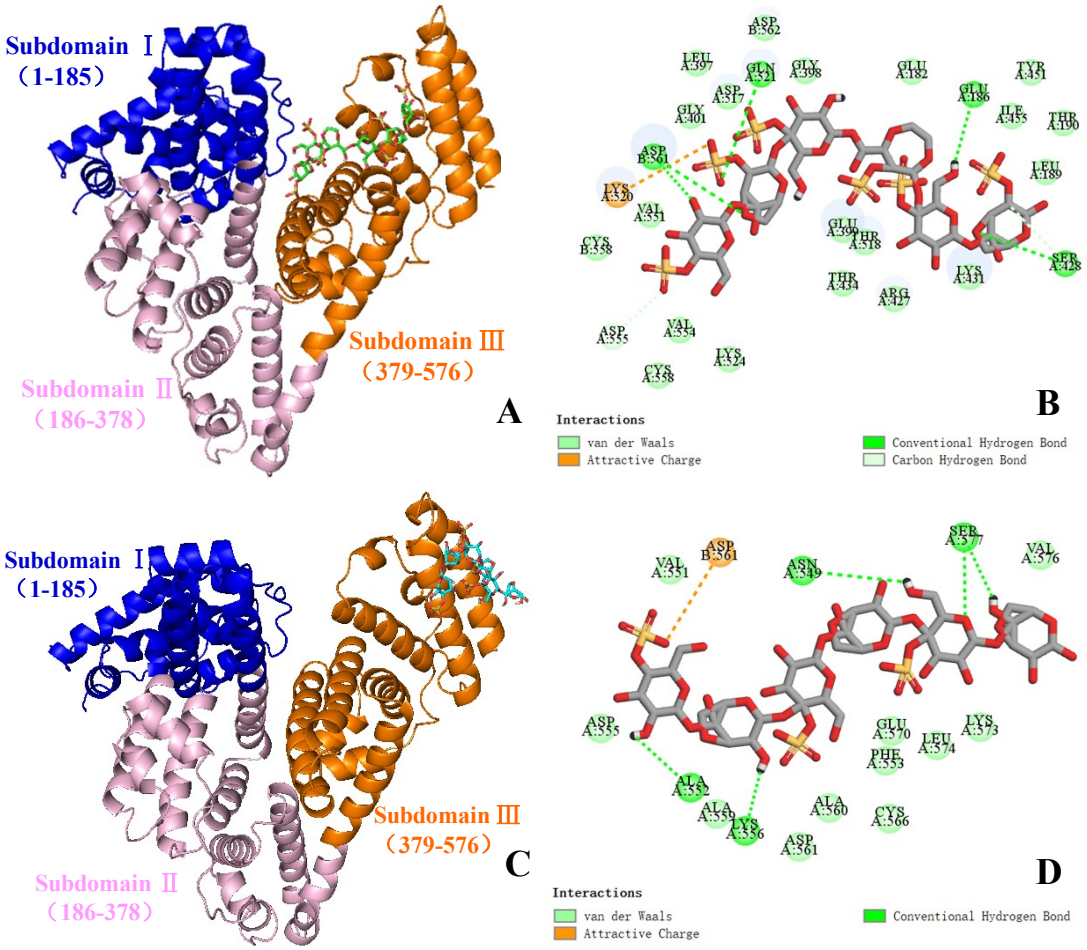

Fig. S4. The most favorable docking poses of BSA-ι-Car complex (A) and BSA-κ-Car complex (B) by blind docking. The 2D detailed view shows the interactions between ι-Car (C) or κ-Car (D) and the neighboring residues. (For interpretation of the references to color in this figure legend, the reader is referred to the web version of this article.)

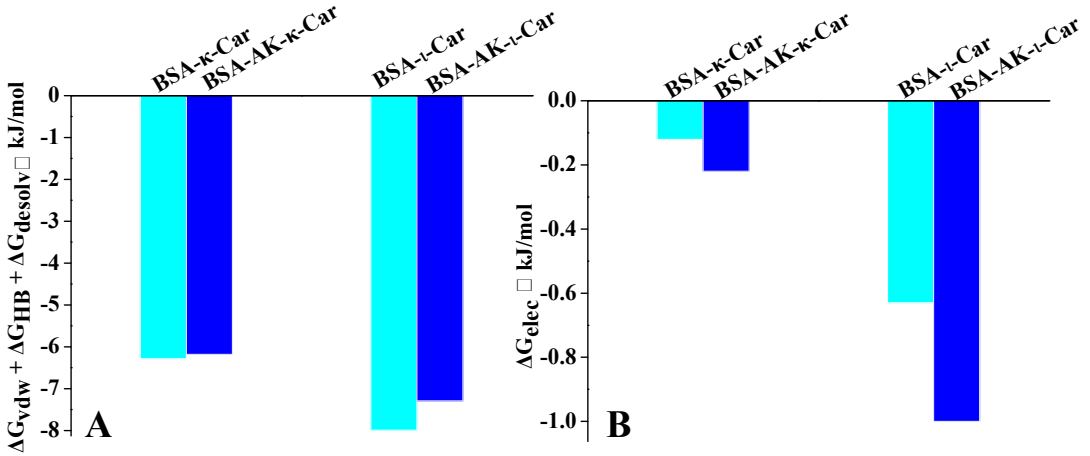

Fig. S5. Calculated interaction energy components (ΔG_{vdw}+ΔG_{hbond}+$\Delta G_{solvation}$) (A) and ΔG_{elec} (B) of BSA-κ-Car, BSA-AK-κ-Car, BSA-ι-Car, and BSA-AK-ι-Car complexes.

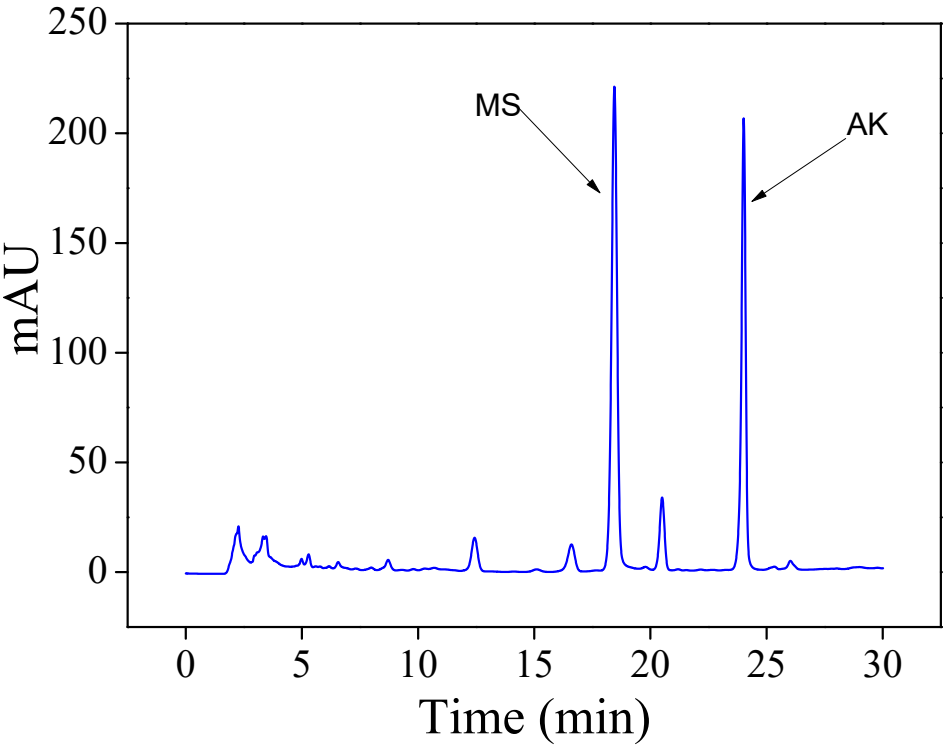

Fig. S6. HPLC profile of Mps rich in MS and AK [1].

References

1.D. Chen, C. Xue, M. Chen, S. Wu, Z. Li and C. Wang, Effects of blue light on pigment biosynthesis of Monascus, *J. Microbiol.*, 2016, **54**, 305-310.

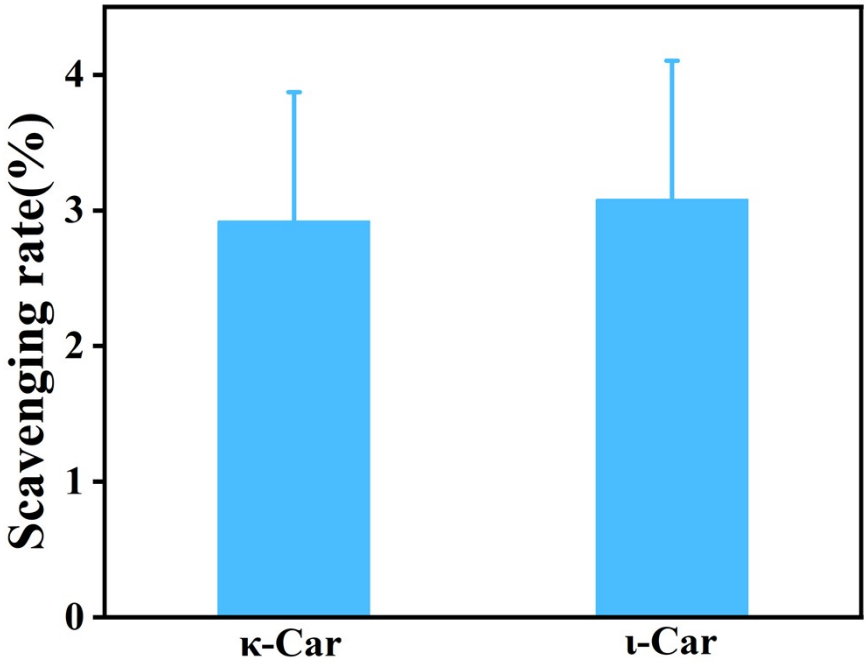

Fig. S7. DPPH radical scavenging activity of κ-Car and ι-Car, condition: $C_{ι\text{-}Car}/C_{κ\text{-}Car}$ = 1.5 g/L.