

Supporting Information

Improvement of water solubility of mercaptoundecahydrododecaborate (BSH)-peptides by conjugating with ethylene glycol linker and inclusion in cyclodextrin

Mizui Kitamatsu ^{1,*}, Ayaka Nakamura-Tachibana ¹, Yoshimichi Ishikawa¹,

and Hiroyuki Michiue ²

¹ Department of Applied Chemistry, Kindai University, 3-4-1 Kowakae, Higashi-Osaka, Osaka 577-8502, Japan

² Neutron Therapy Research Center, Okayama University, 2-5-1 Shikata-cho, Kita-ku, Okayama 700-8558, Japan

* Correspondence: kitamatu@apch.kindai.ac.jp

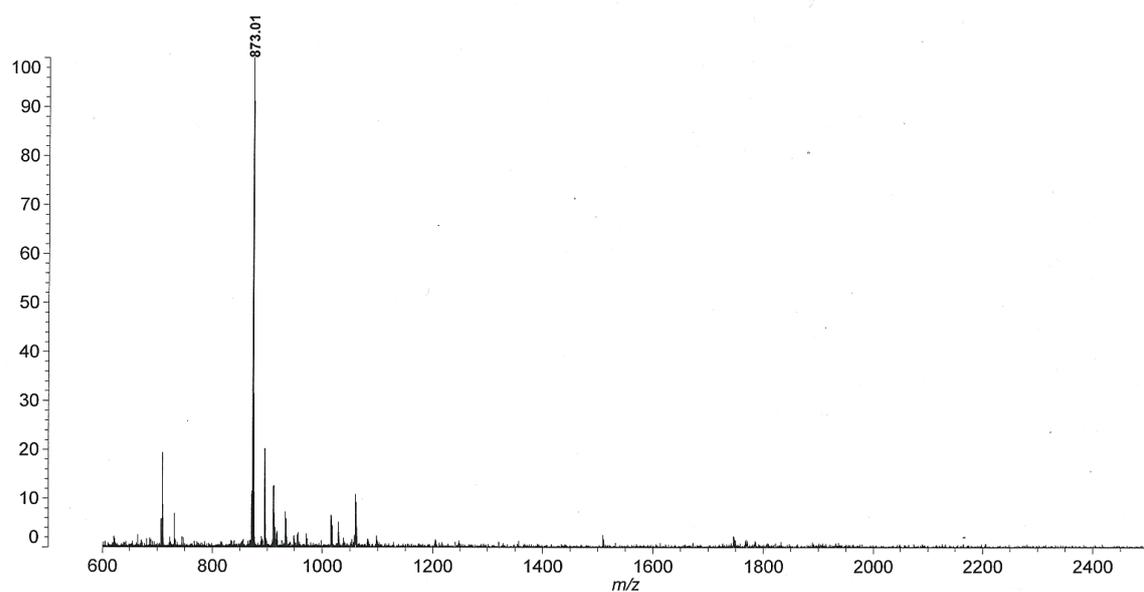


Figure S1. MALDI-ToF Mass spectrum of **BSH-3R**. An α -CHCA was used as a matrix. calcd. $[M+H]^+ = 872.49$ and obsd. $[M+H]^+ = 873.01$.

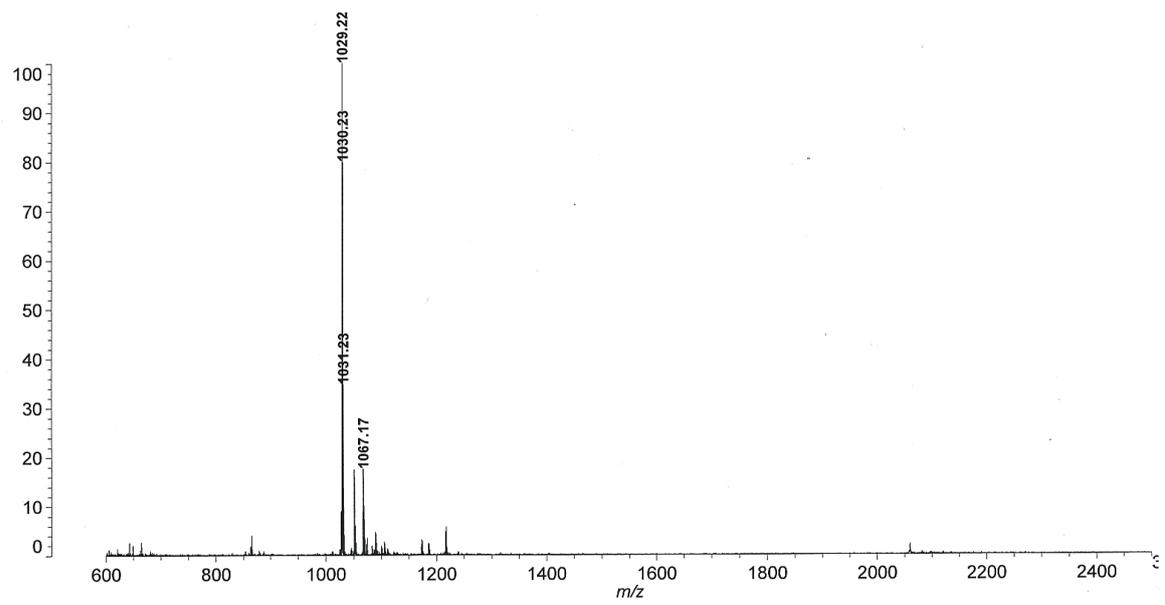


Figure S2. MALDI-ToF Mass spectrum of **BSH-4R**. An α -CHCA was used as a matrix. calcd. $[M+H]^+ = 1028.59$ and obsd. $[M+H]^+ = 1029.22$.

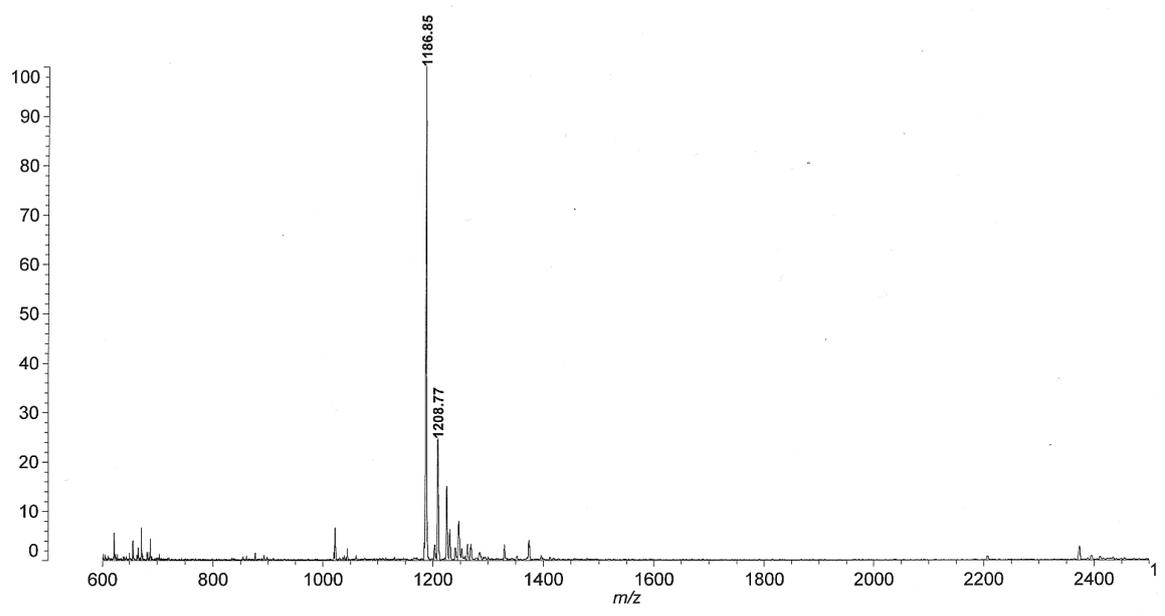


Figure S3. MALDI-ToF Mass spectrum of **BSH-5R**. An α -CHCA was used as a matrix. calcd. $[M+H]^+ = 1184.69$ and obsd. $[M+H]^+ = 1186.85$.

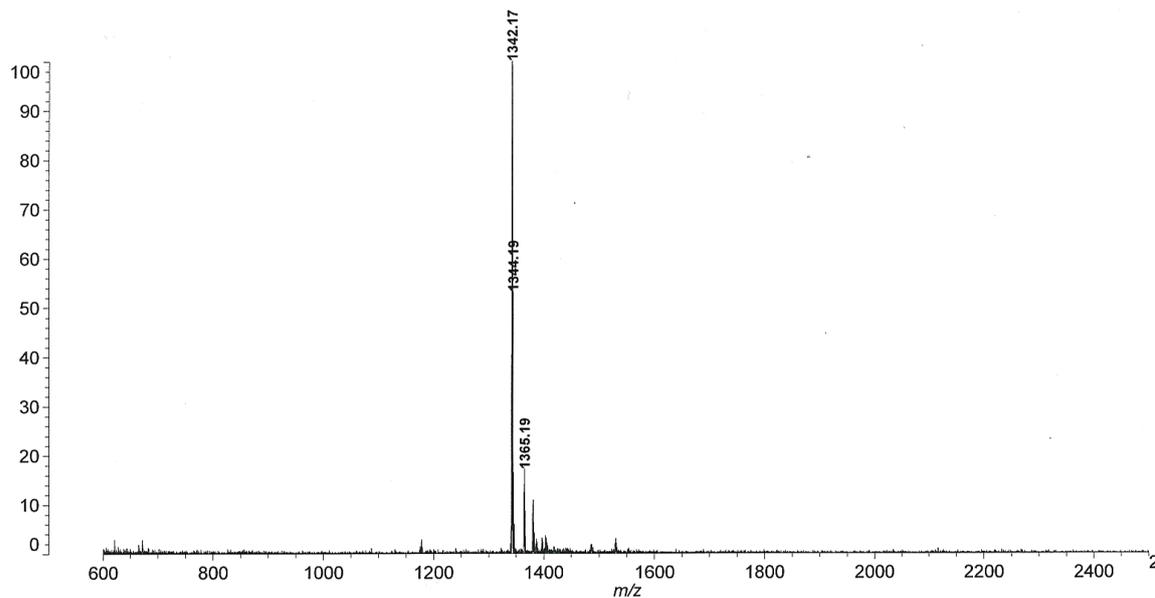


Figure S4. MALDI-ToF Mass spectrum of **BSH-6R**. An α -CHCA was used as a matrix. calcd. $[M+H]^+ = 1340.79$ and obsd. $[M+H]^+ = 1342.17$.

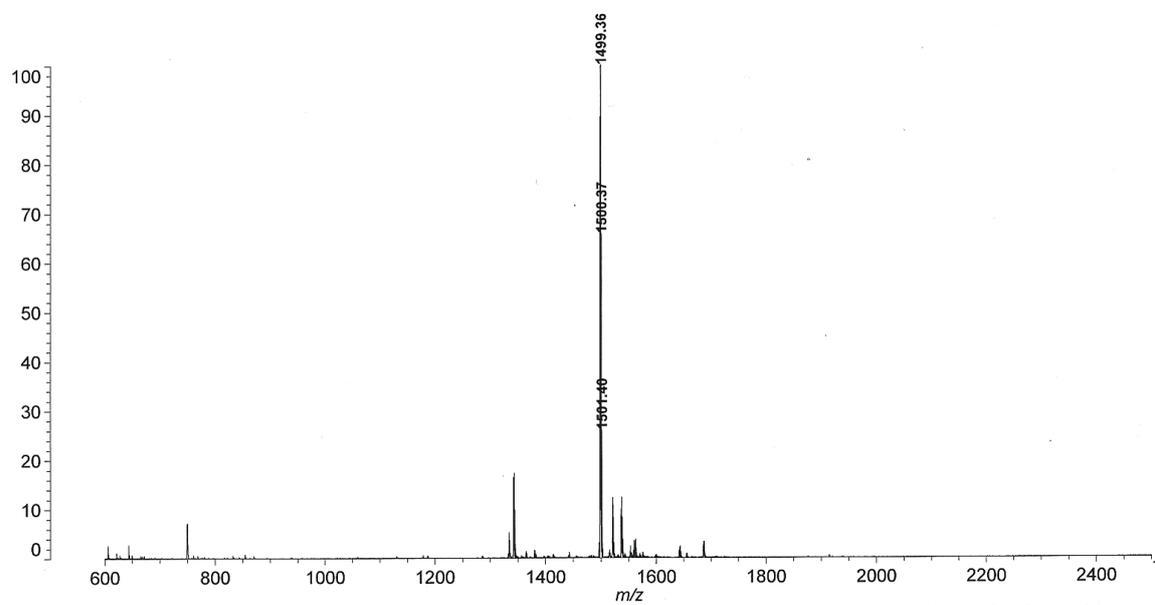


Figure S5. MALDI-ToF Mass spectrum of **BSH-7R**. An α -CHCA was used as a matrix. calcd. $[M+H]^+ = 1496.89$ and obsd. $[M+H]^+ = 1499.36$.

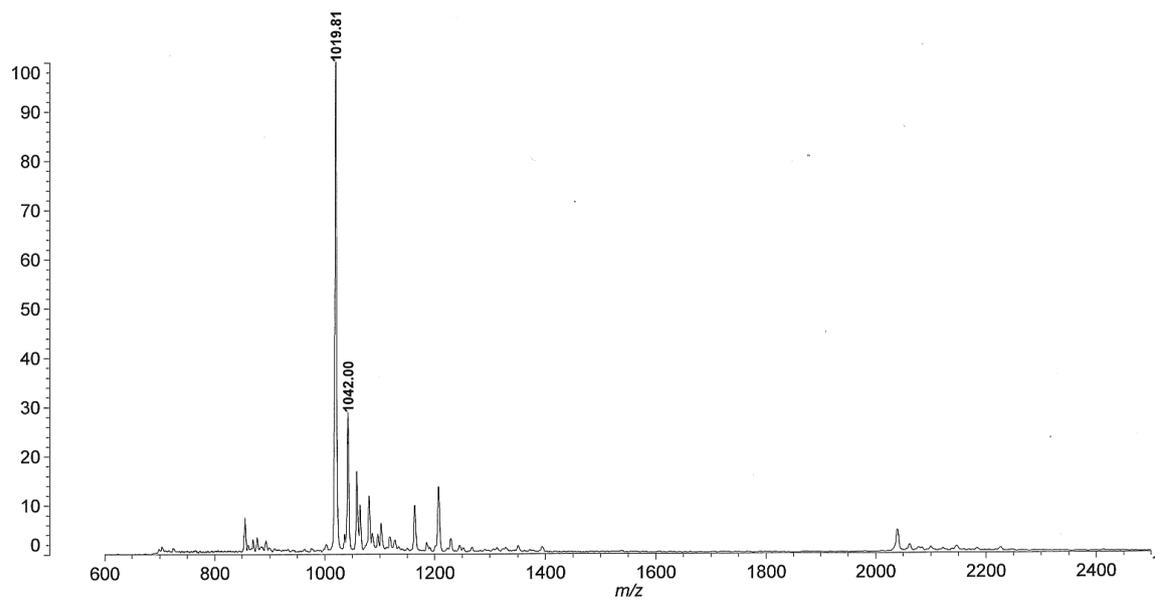


Figure S6. MALDI-ToF Mass spectrum of **BSH-2Eg-3R**. An α -CHCA was used as a matrix. calcd. $[M+H]^+ = 1017.56$ and obsd. $[M+H]^+ = 1019.81$.

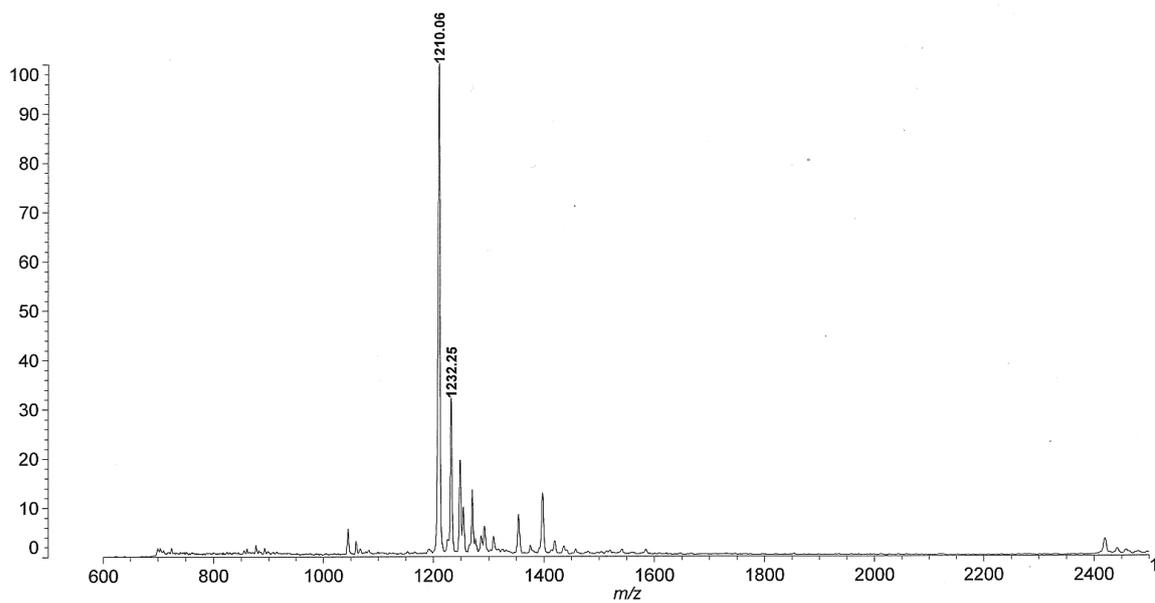


Figure S7. MALDI-ToF Mass spectrum of **BSH-6Eg-3R**. An α -CHCA was used as a matrix. calcd. $[M+H]^+ = 1207.68$ and obsd. $[M+H]^+ = 1210.06$.

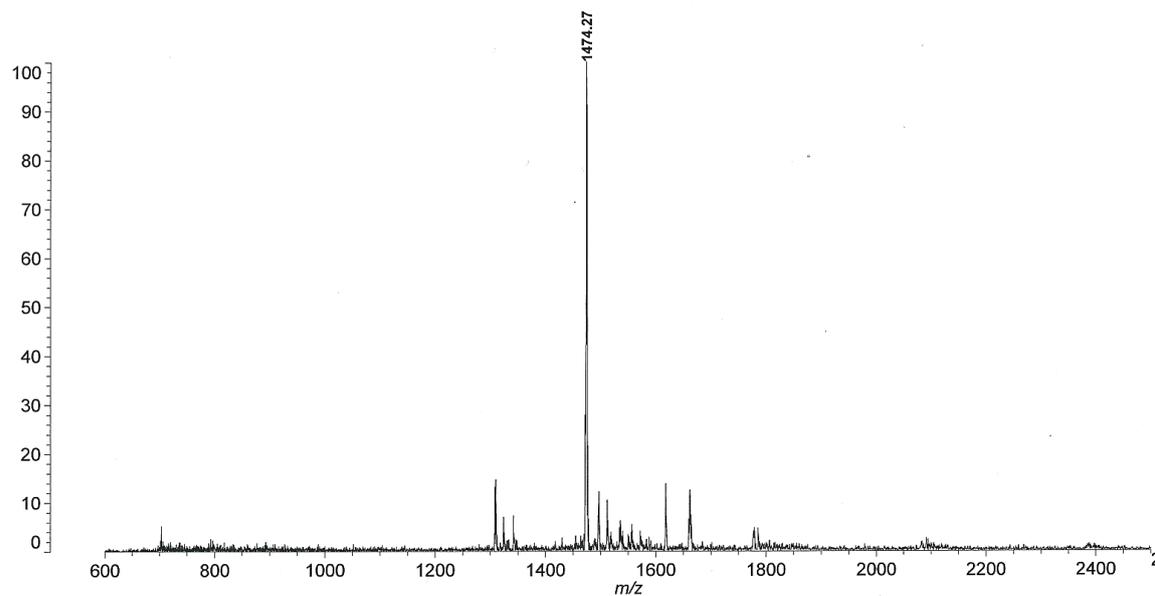


Figure S8. MALDI-ToF Mass spectrum of **BSH-12Eg-3R**. An α -CHCA was used as a matrix. calcd. $[M+H]^+ = 1471.84$ and obsd. $[M+H]^+ = 1474.27$.

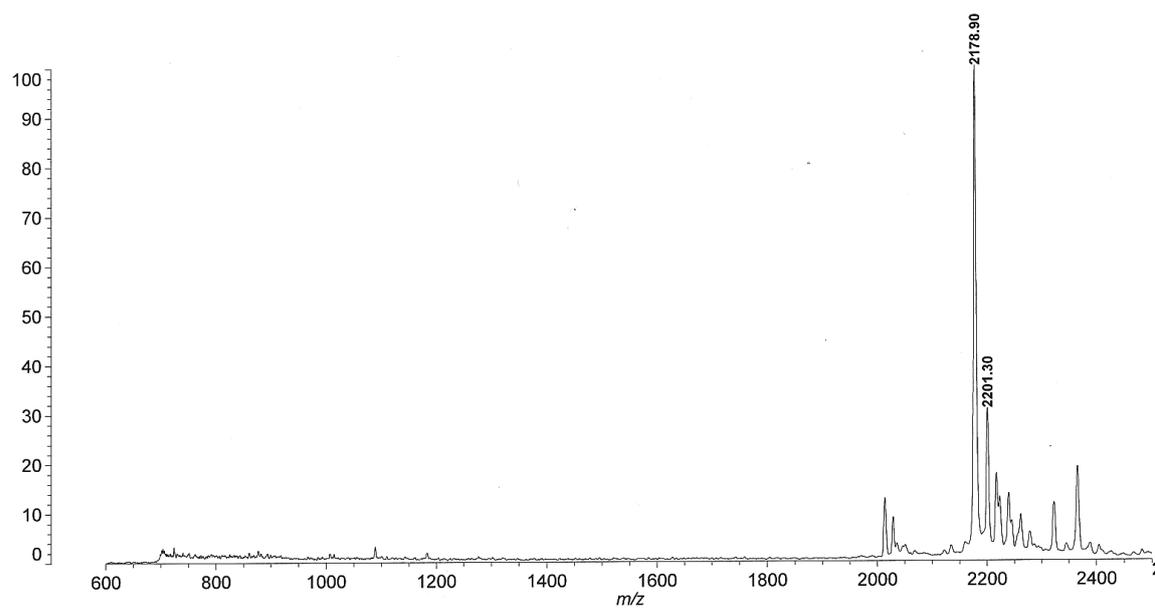


Figure S9. MALDI-ToF Mass spectrum of **BSH-28Eg-3R**. An α -CHCA was used as a matrix. calcd. $[M+H]^+ = 2176.26$ and obsd. $[M+H]^+ = 2178.90$.

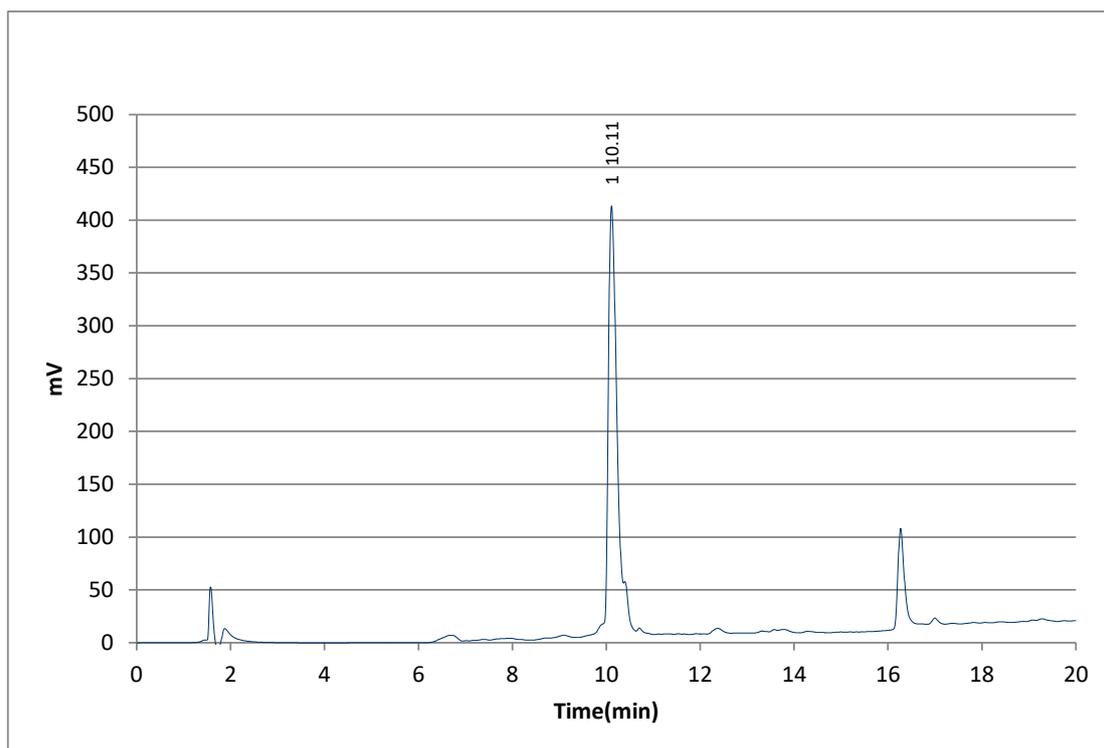


Figure S10. RP-HPLC chart of **BSH-3R** on C18 column. Buffer A. 0.1% TFA in water; buffer B, acetonitrile and monitoring at 230 nm with a gradient of 0-100% for 20 min.

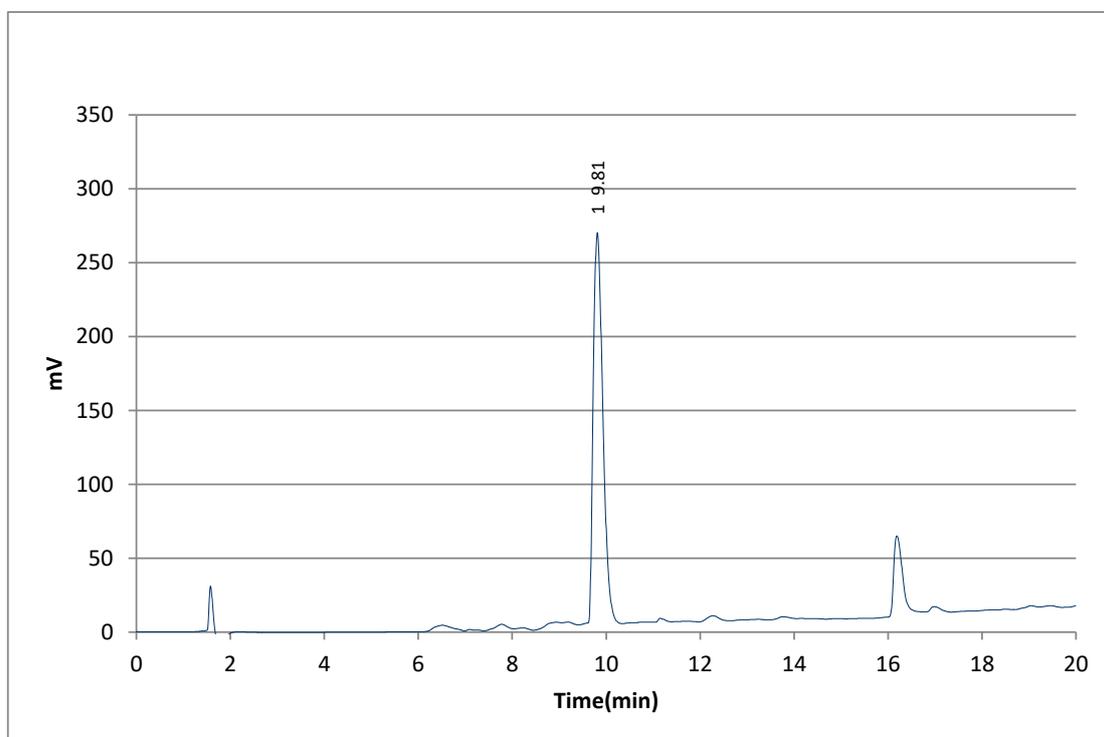


Figure S11. RP-HPLC chart of **BSH-4R** on C18 column. Buffer A. 0.1% TFA in water; buffer B, acetonitrile and monitoring at 230 nm with a gradient of 0-100% for 20 min.

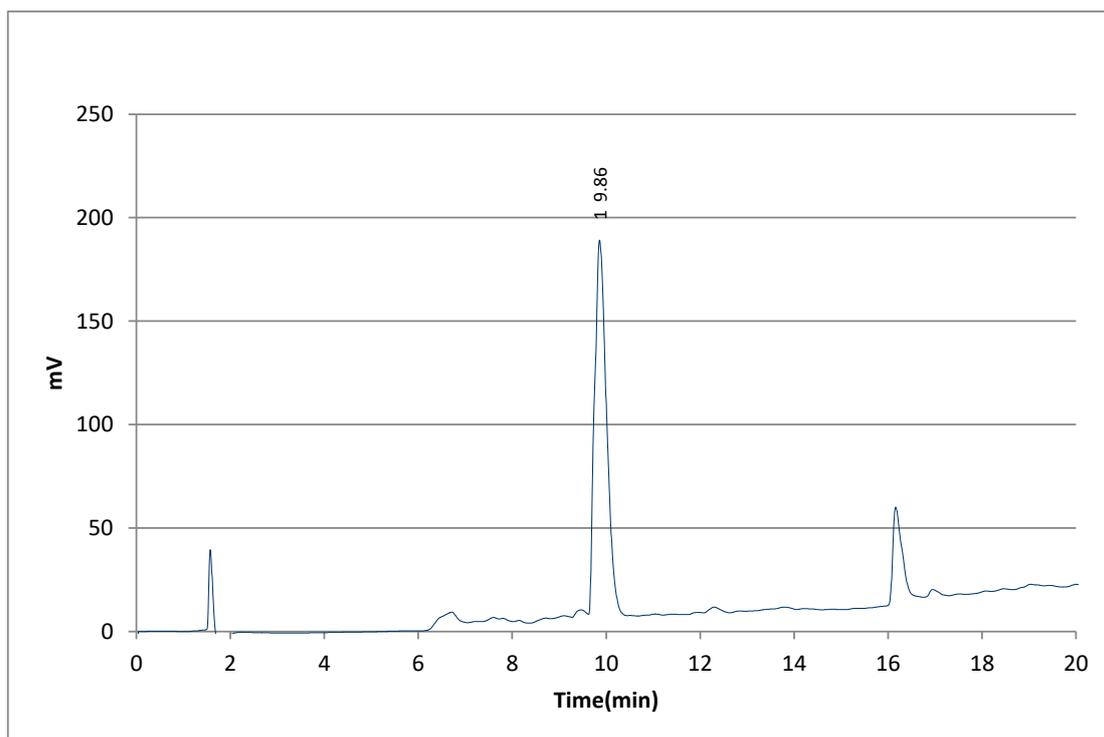


Figure S12. RP-HPLC chart of **BSH-5R** on C18 column. Buffer A. 0.1% TFA in water; buffer B, acetonitrile and monitoring at 230 nm with a gradient of 0-100% for 20 min.

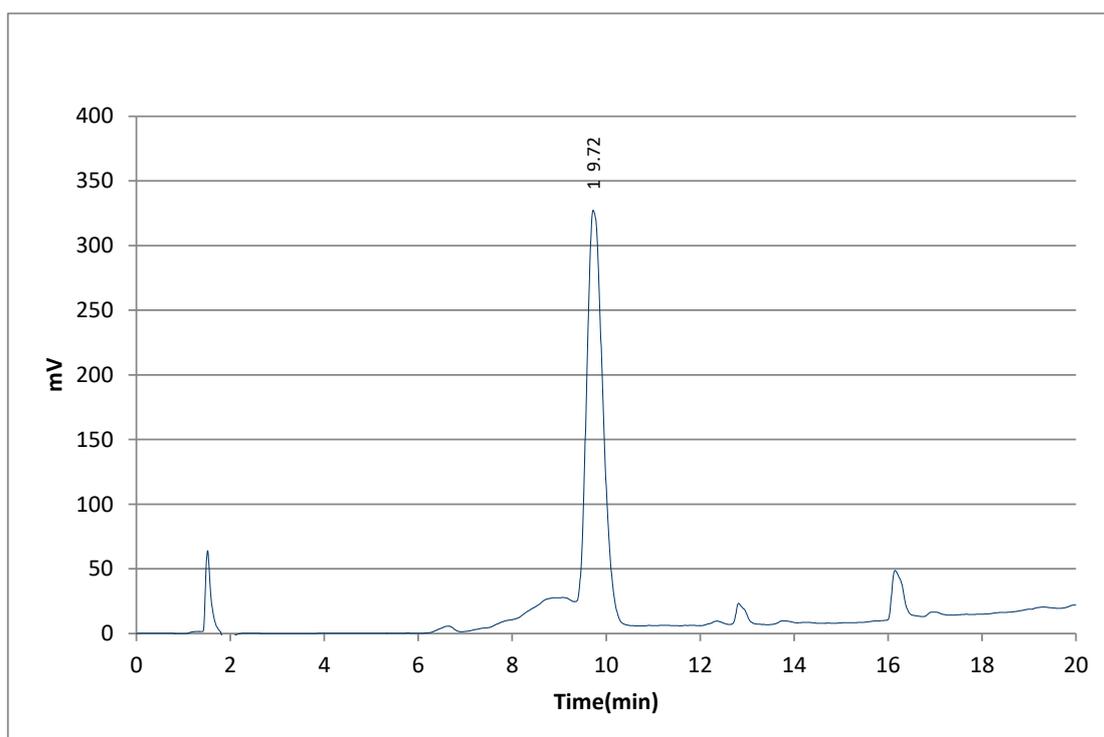


Figure S13. RP-HPLC chart of **BSH-6R** on C18 column. Buffer A. 0.1% TFA in water; buffer B, acetonitrile and monitoring at 230 nm with a gradient of 0-100% for 20 min.

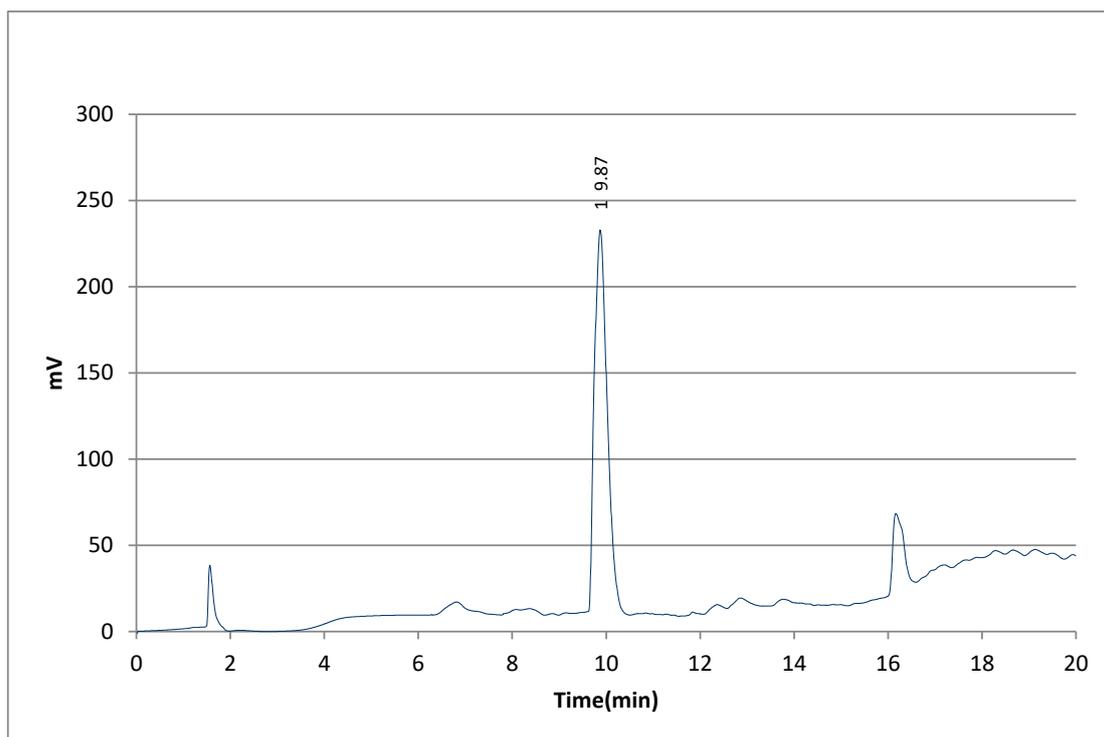


Figure S14. RP-HPLC chart of **BSH-7R** on C18 column. Buffer A. 0.1% TFA in water; buffer B, acetonitrile and monitoring at 230 nm with a gradient of 0-100% for 20 min.

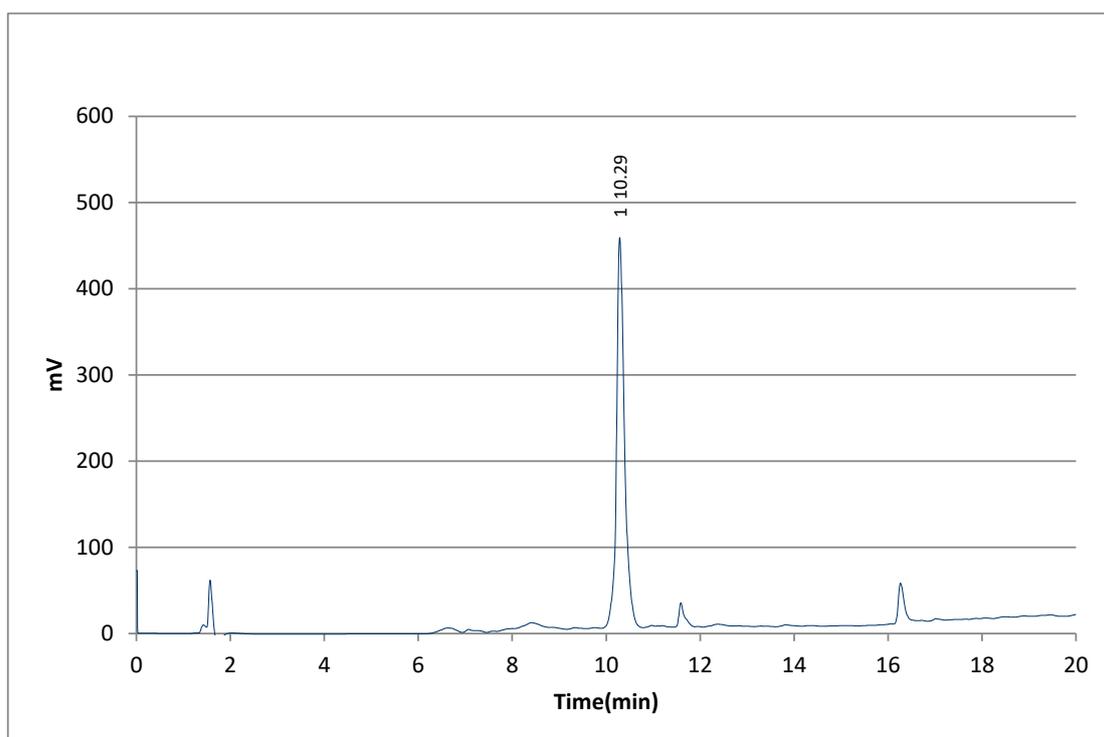


Figure S15. RP-HPLC chart of **BSH-2Eg-3R** on C18 column. Buffer A. 0.1% TFA in water; buffer B, acetonitrile and monitoring at 230 nm with a gradient of 0-100% for 20 min.

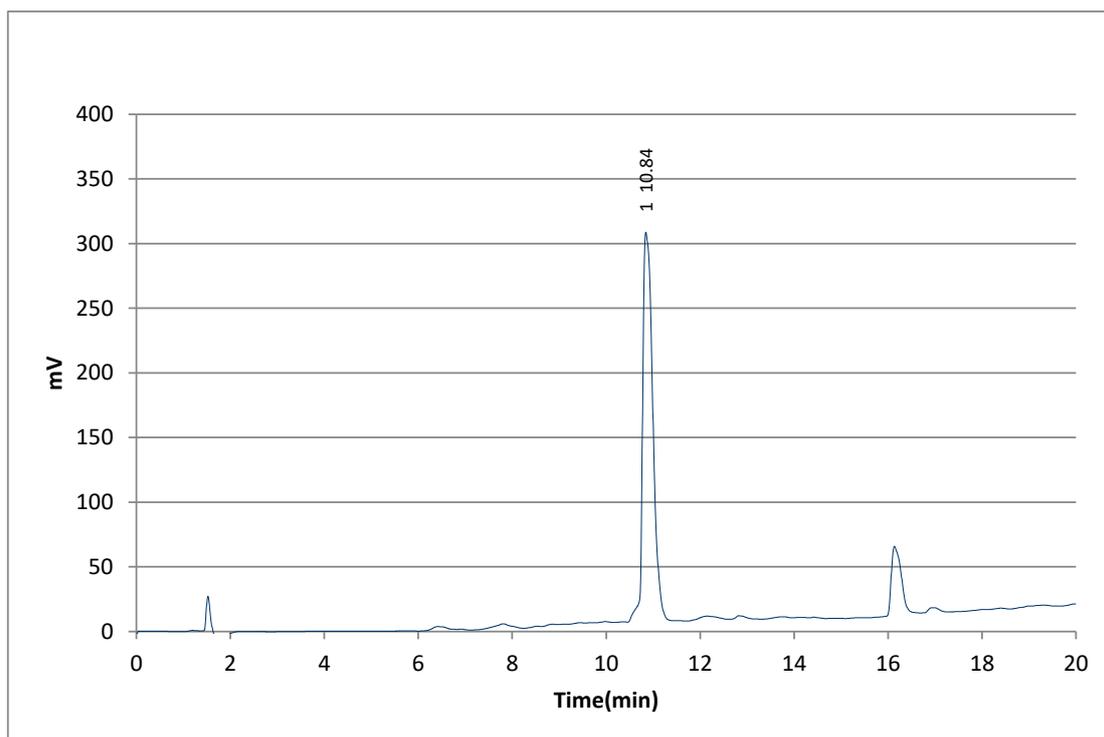


Figure S16. RP-HPLC chart of **BSH-6Eg-3R** on C18 column. Buffer A. 0.1% TFA in water; buffer B, acetonitrile and monitoring at 230 nm with a gradient of 0-100% for 20 min.

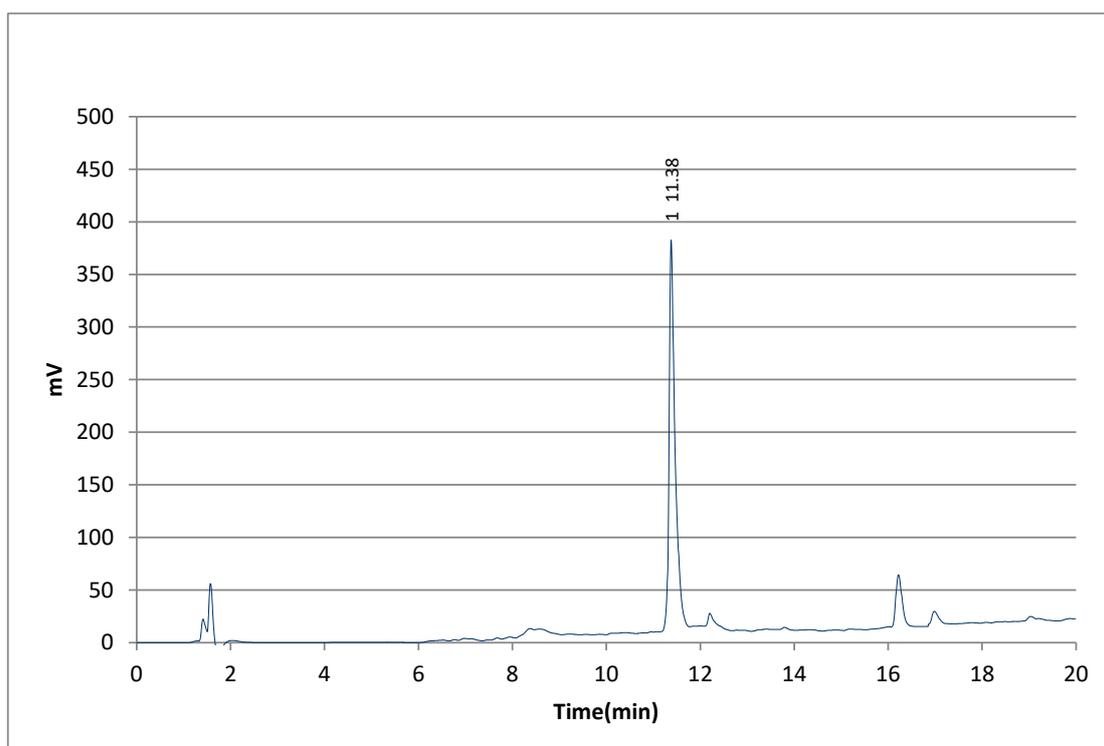


Figure S17. RP-HPLC chart of **BSH-12Eg-3R** on C18 column. Buffer A. 0.1% TFA in water; buffer B, acetonitrile and monitoring at 230 nm with a gradient of 0-100% for 20 min.

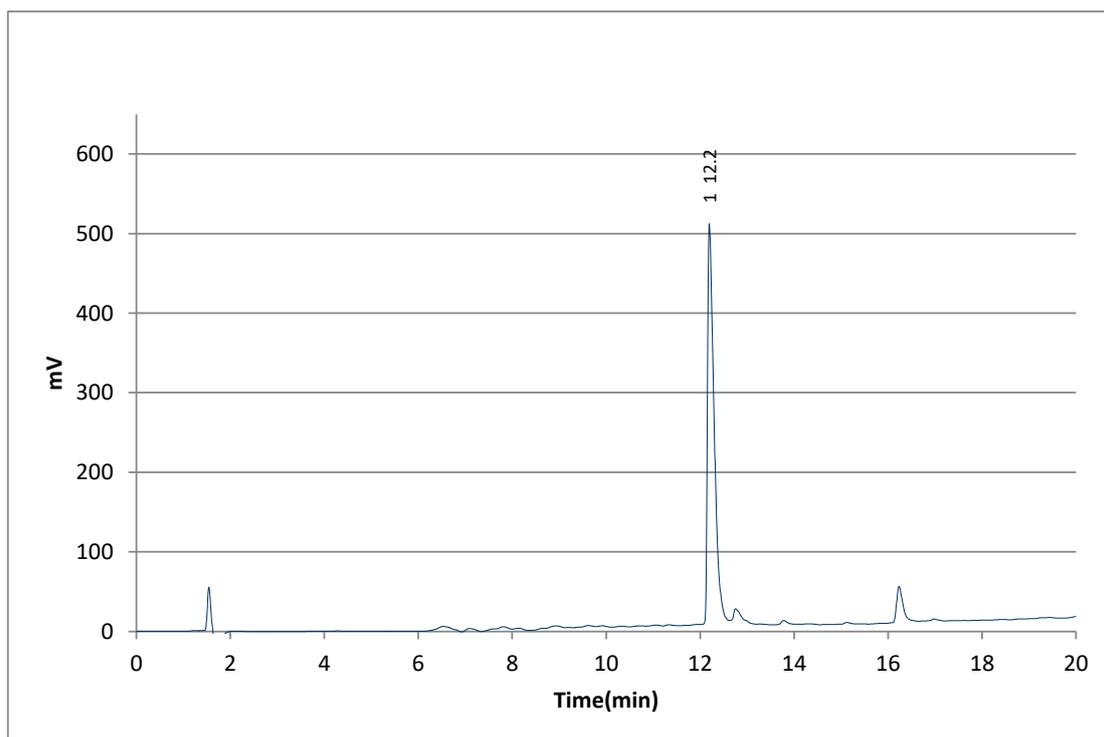


Figure S18. RP-HPLC chart of **BSH-28Eg-3R** on C18 column. Buffer A. 0.1% TFA in water; buffer B, acetonitrile and monitoring at 230 nm with a gradient of 0-100% for 20 min.

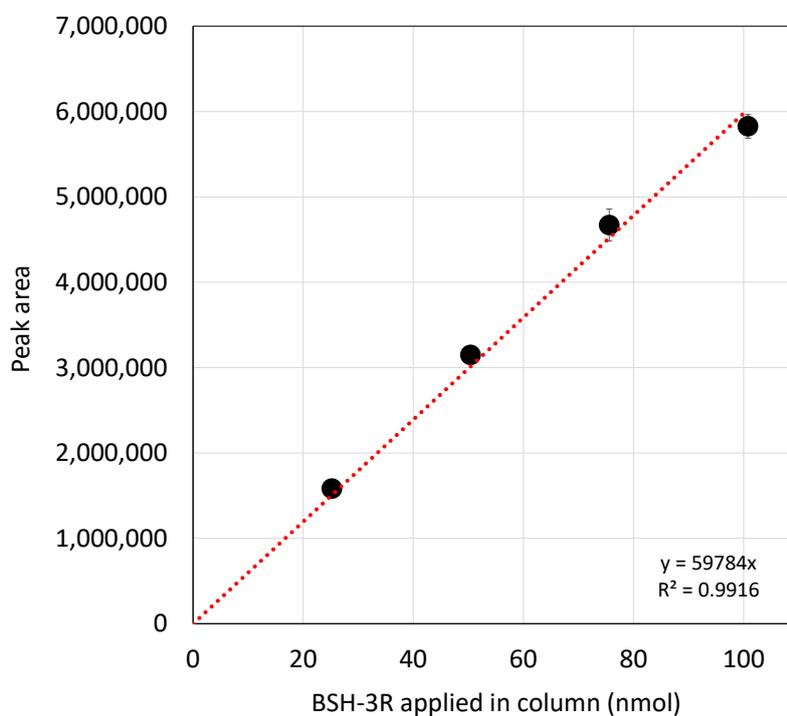


Figure S19. Calibration curve for estimation of water solubility of **BSH-3R**.

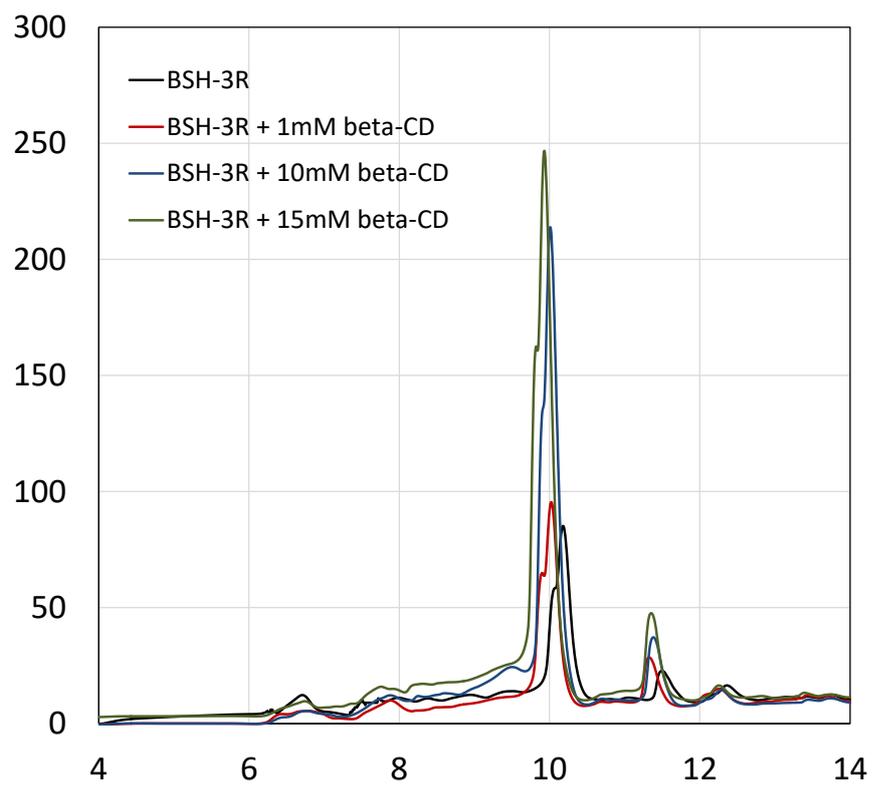


Figure S20. HPLC charts of **BSH-3R** treated with various concentration of β -CD.