

Supporting Information

Neuroprotective Effects of a New Triterpenoid from Edible Mushroom on Oxidative Stress and Apoptosis through the BDNF/TrkB/ERK/CREB and Nrf2 Signaling Pathway in Vitro and in Vivo

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Figure S1. The structures of metabolites from *I. obliquus*.

Figure S2. Neuroprotection of compounds **1-10** in H₂O₂-induced SH-SY5Y cells at 20 μM.

Figure S3. H₂O₂ inhibited the BDNF/TrkB/ERK/CREB pathway in SH-SY5Y cells.

(A) Western blot analysis at various time. (B-E) Density analysis.

Figure S4. The effects of TrkB (ANA-12), ERK (SCH772984), and CREB (666-15)

inhibitors. (A-C) Western blot analysis for p-ERK/ERK, p-CREB/CREB, BDNF and p-TrkB/TrkB, respectively. (D-G) Density analysis.

Figure S5. Nrf2 was involved in the antioxidant effect of 2α-HI (10 μM) in SH-SY5Y

cells stimulated by H₂O₂. (A and B) Nrf2 siRNA or NC siRNA transfected cells. (C)

Western blot analysis for Nrf2 in nuclear, HO-1 and NQO-1 in Nrf2 siRNA or NC siRNA transfected cells. (D-F) Density analysis.

Figure S6-S11. NMR spectra of 2α-hydroxy-inotodiol

Figure S12. HRESIMS spectrum of 2α-hydroxy-inotodiol

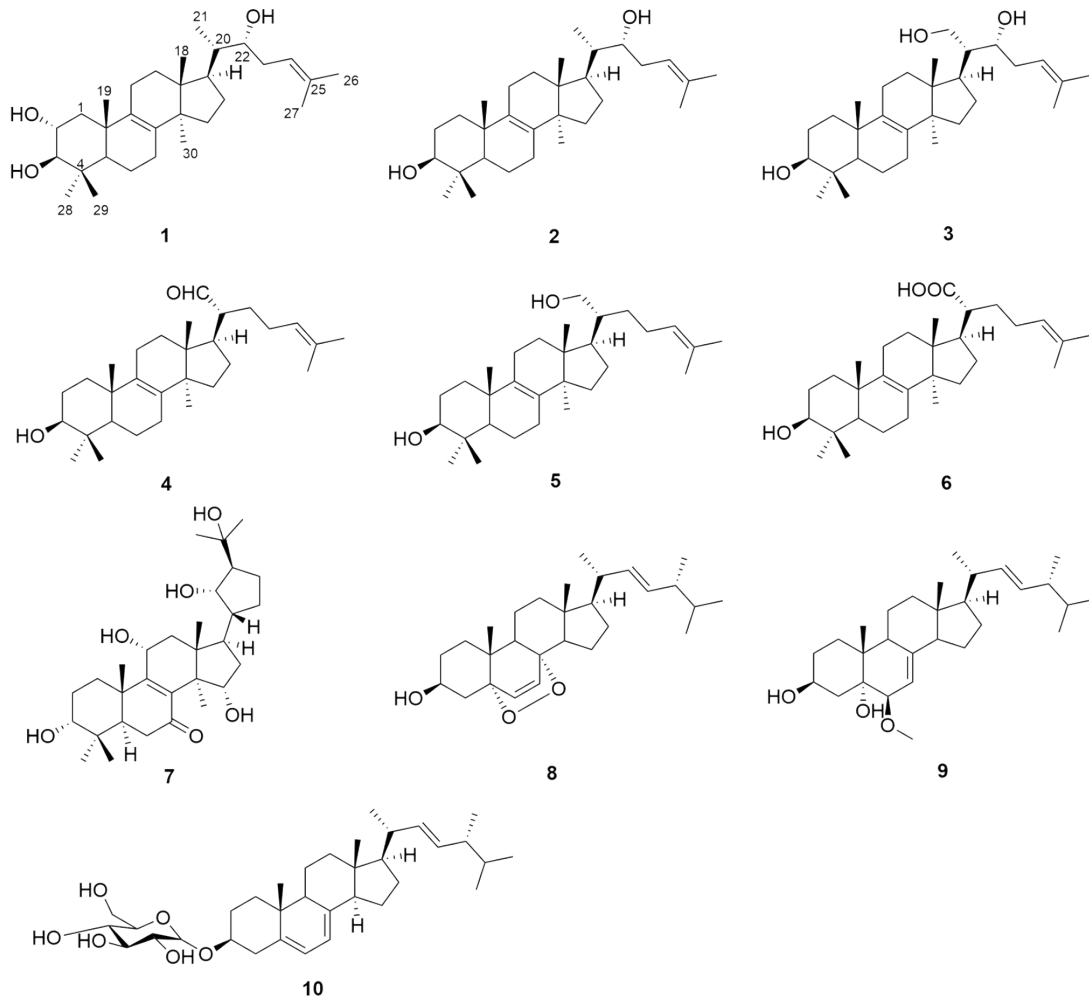


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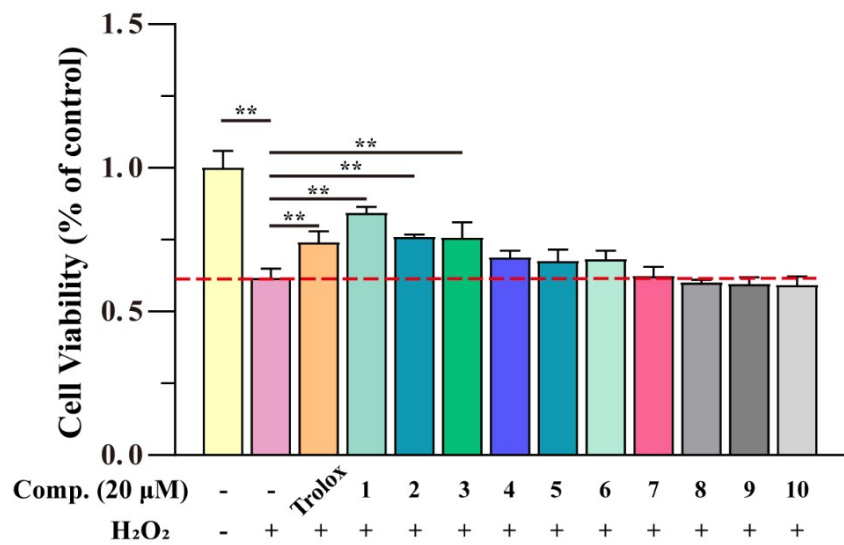


Figure S2. Neuroprotection of compounds 1-10 in H₂O₂-induced SH-SY5Y cells at 20 μM.

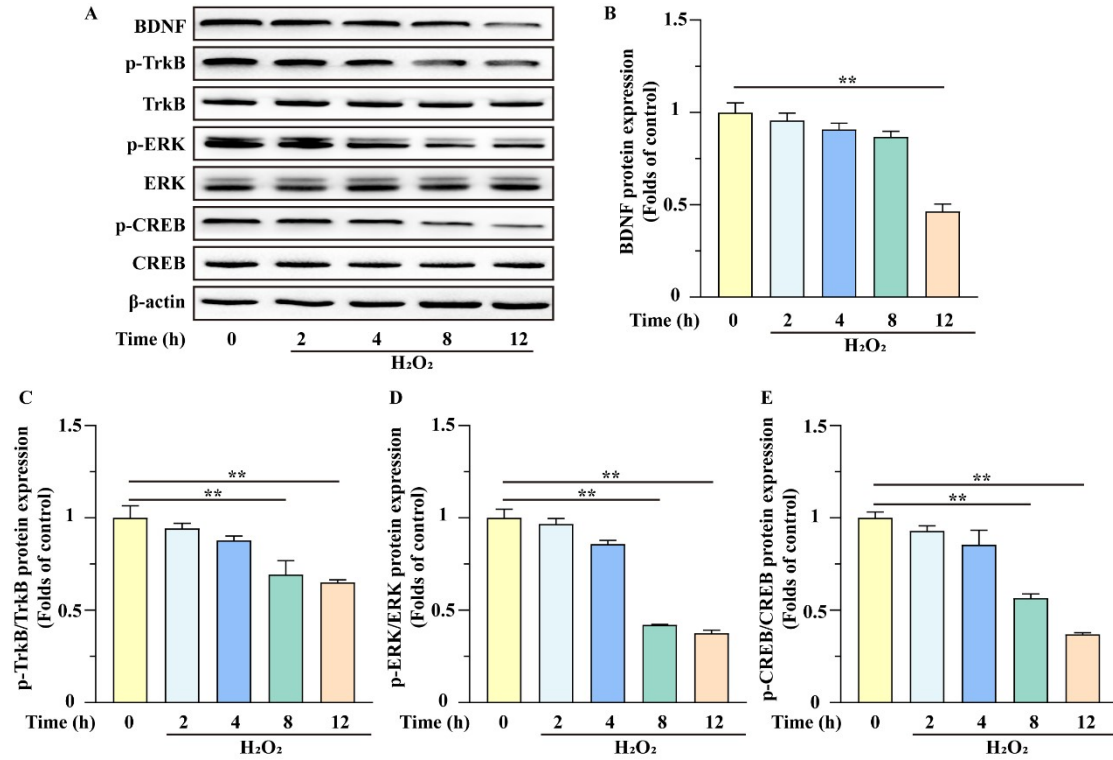


Figure S3. H₂O₂ inhibited the BDNF/TrkB/ERK/CREB pathway in SH-SY5Y cells. (A) Western blot analysis at various time. (B-E) Density analysis.

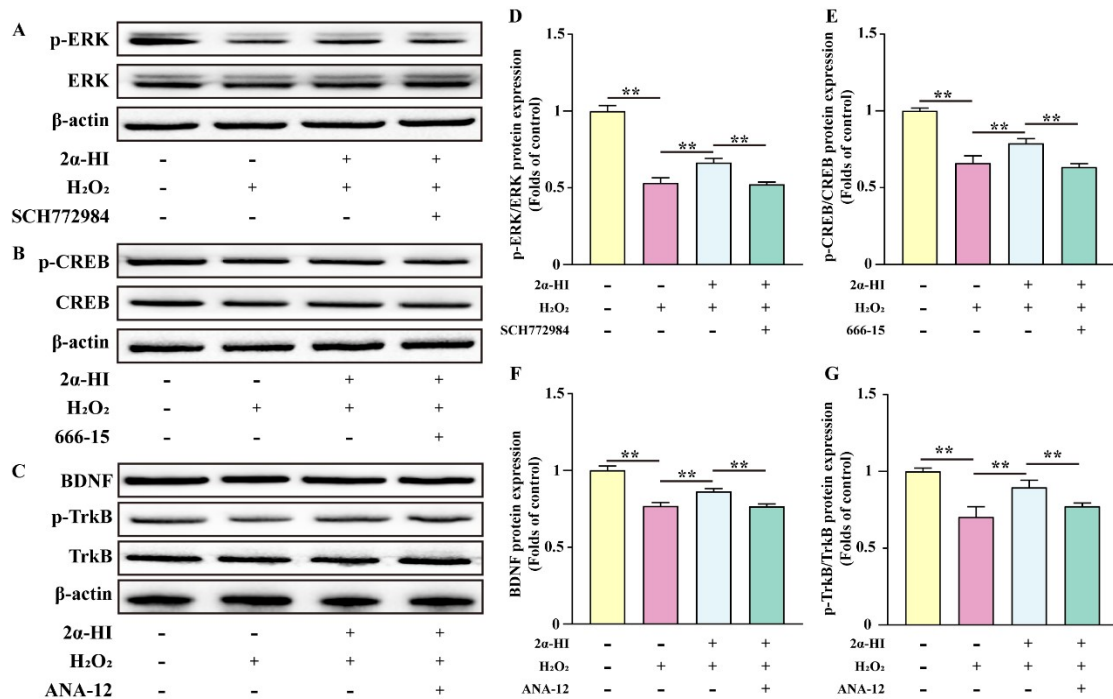


Figure S4. The effects of TrkB (ANA-12), ERK (SCH772984), and CREB (666-15) inhibitors. (A-C) Western blot analysis for p-ERK/ERK, p-CREB/CREB, BDNF and p-TrkB/TrkB, respectively. (D-G) Density analysis.

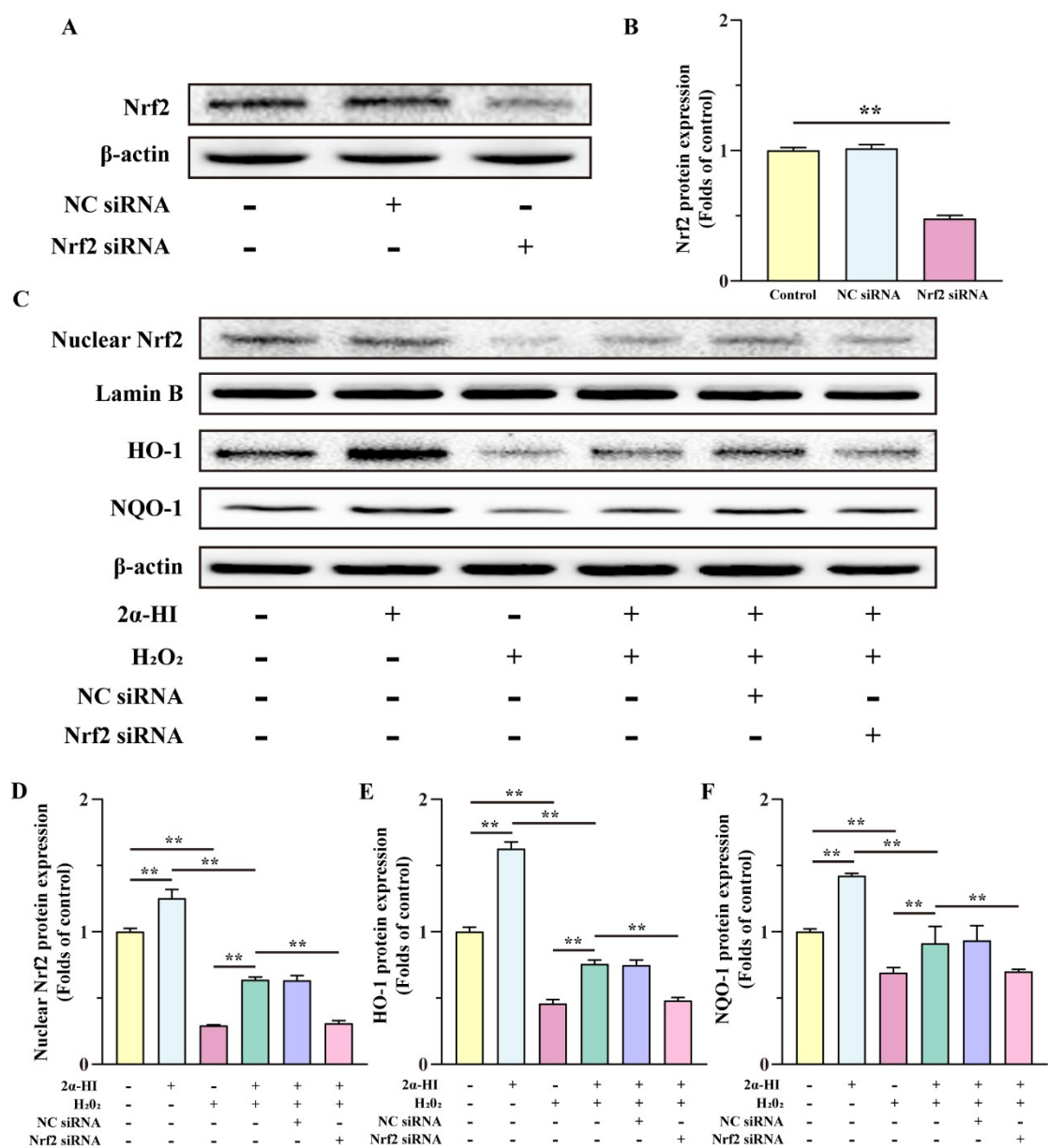


Figure S5. Nrf2 was involved in the antioxidant effect of 2α-HI (10 μM) in SH-SY5Y cells stimulated by H₂O₂. (A and B) Nrf2 siRNA or NC siRNA transfected cells. (C) Western blot analysis for Nrf2 in nuclear, HO-1 and NQO-1 in Nrf2 siRNA or NC siRNA transfected cells. (D-F) Density analysis.

Figure S6. ¹H NMR spectrum of 2 α -hydroxy-inotodiol.

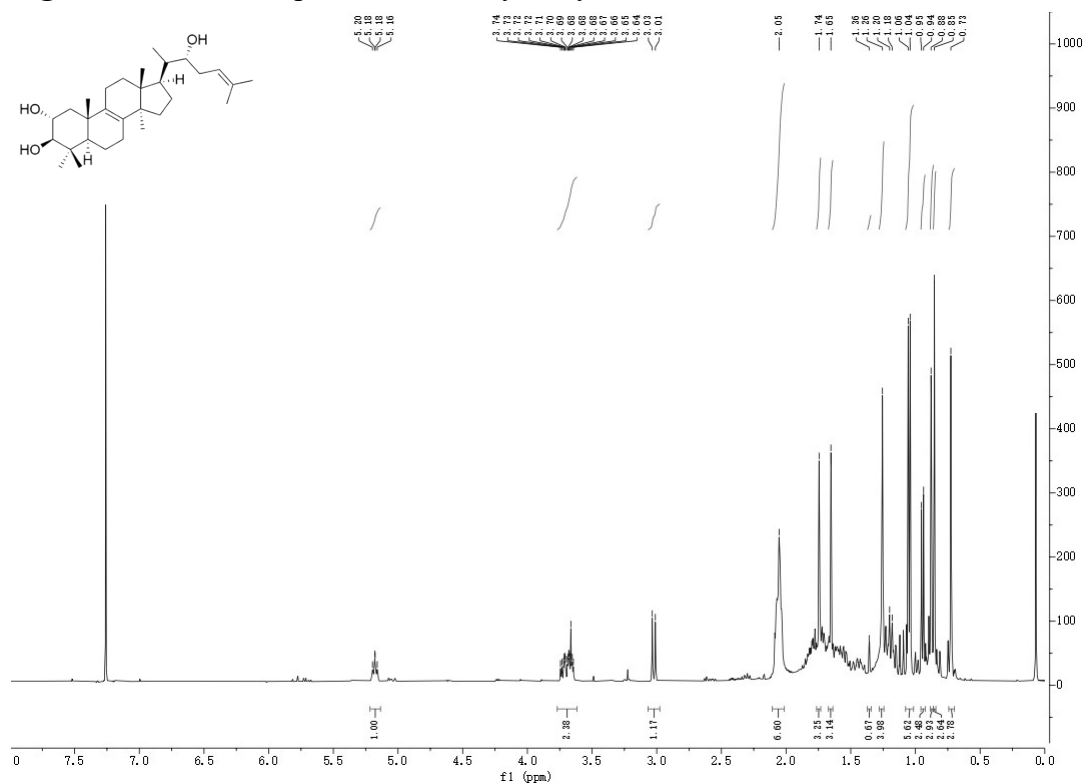


Figure S7. ¹³C NMR spectrum of 2 α -hydroxy-inotodiol

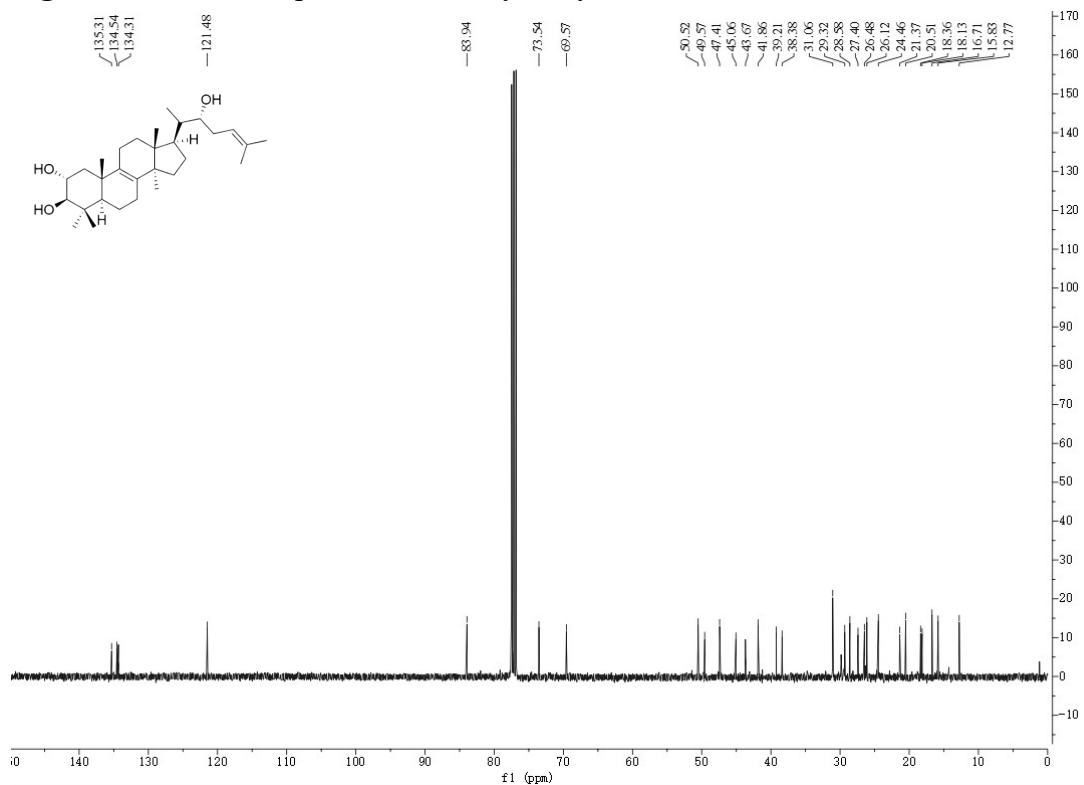


Figure S8. HSQC spectrum of 2 α -hydroxy-inotodiol

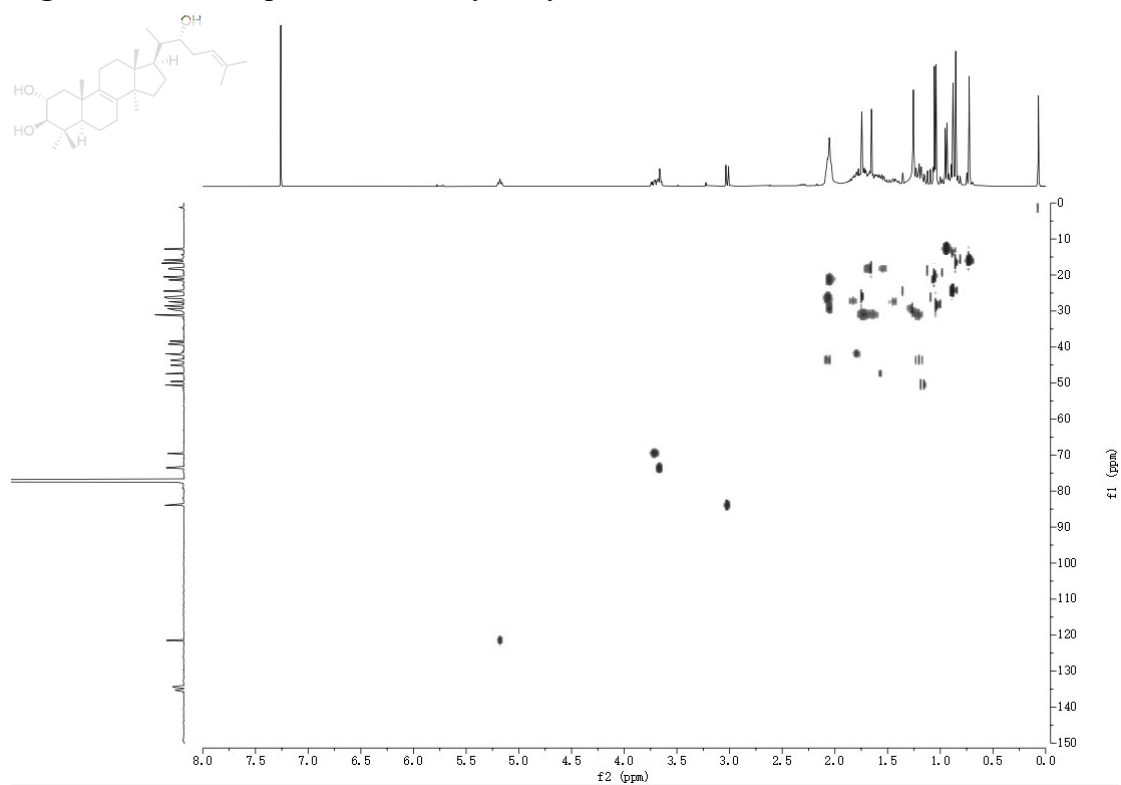


Figure S9. ^1H - ^1H COSY spectrum of 2 α -hydroxy-inotodiol

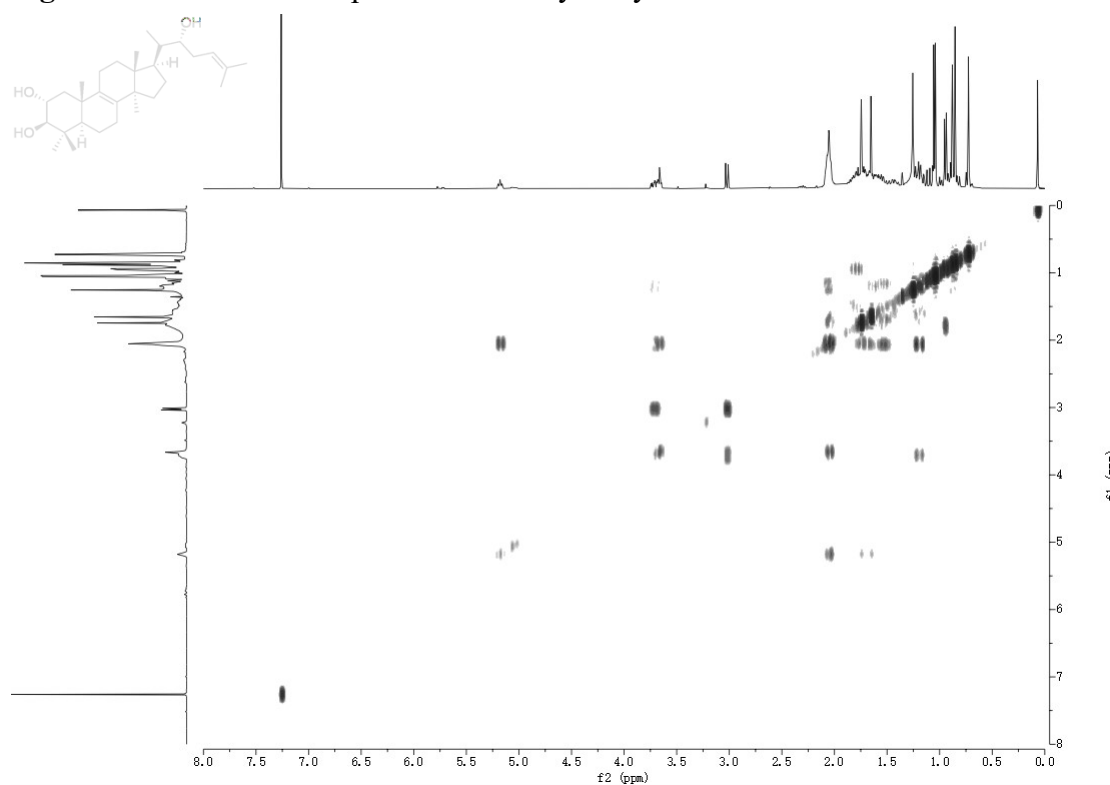


Figure S10. HMBC spectrum of 2 α -hydroxy-inotodiol

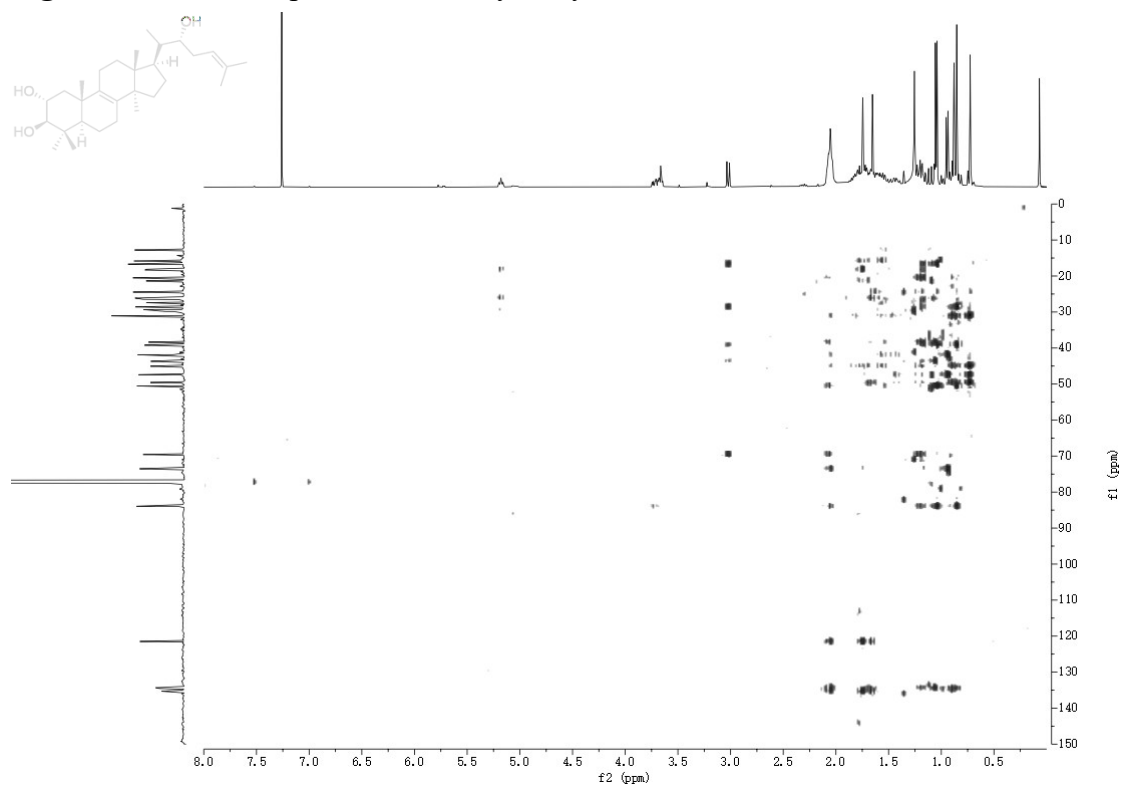


Figure S11. NOESY spectrum of 2 α -hydroxy-inotodiol

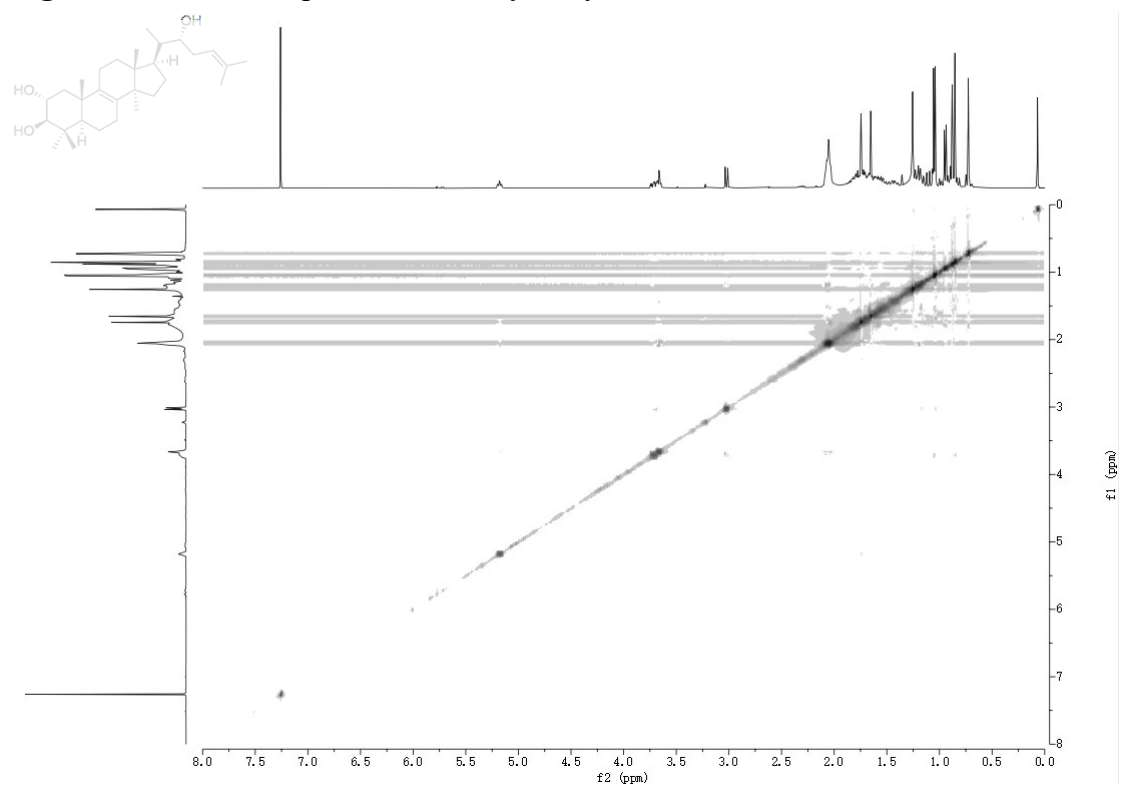


Figure S12. HRESIMS spectrum of 2 α -hydroxy-inotodiol

