

Supplementary Information (SI) for Organic & Biomolecular Chemistry.
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Supplementary Information

Design of Pyrrolo[2,3-d]Pyrimidine-Endoperoxide Hybrids as First-in-Class Dual Degraders of Cyclin D1/3 and CDK4/6 with Potent Antiproliferative Effects

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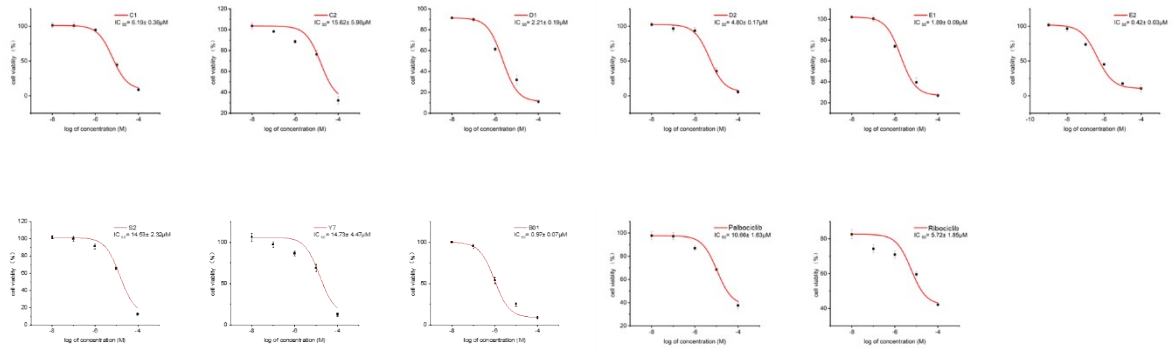


Fig. S1 Dose-response curve of target compound in T47D cells. (New)

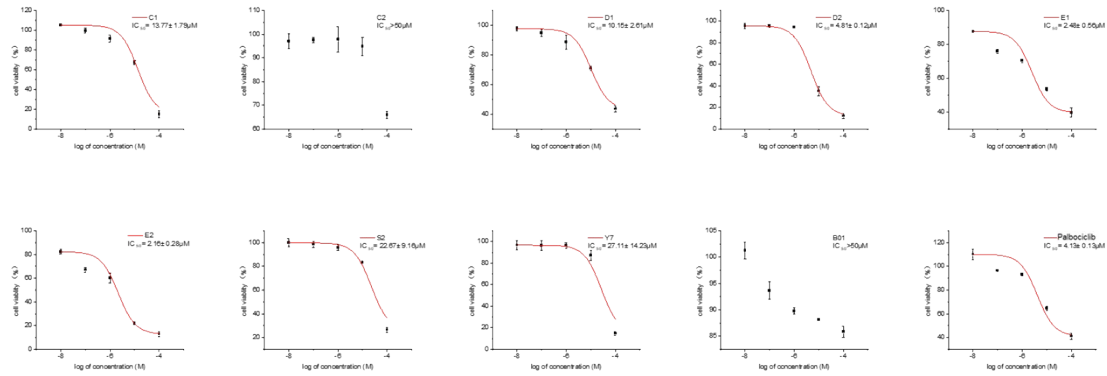


Fig. S2 Dose-response curve of target compound in MCF-7 cells. (New)

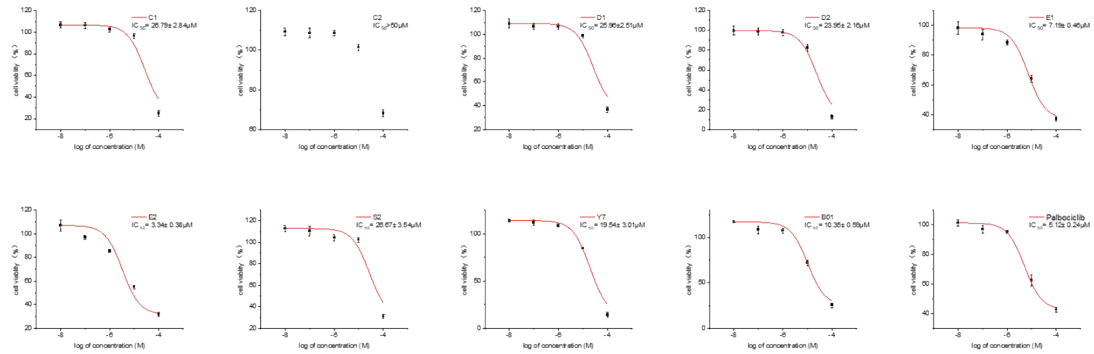


Fig. S3 Dose-response curve of target compound in MCF-10A cells. (New)

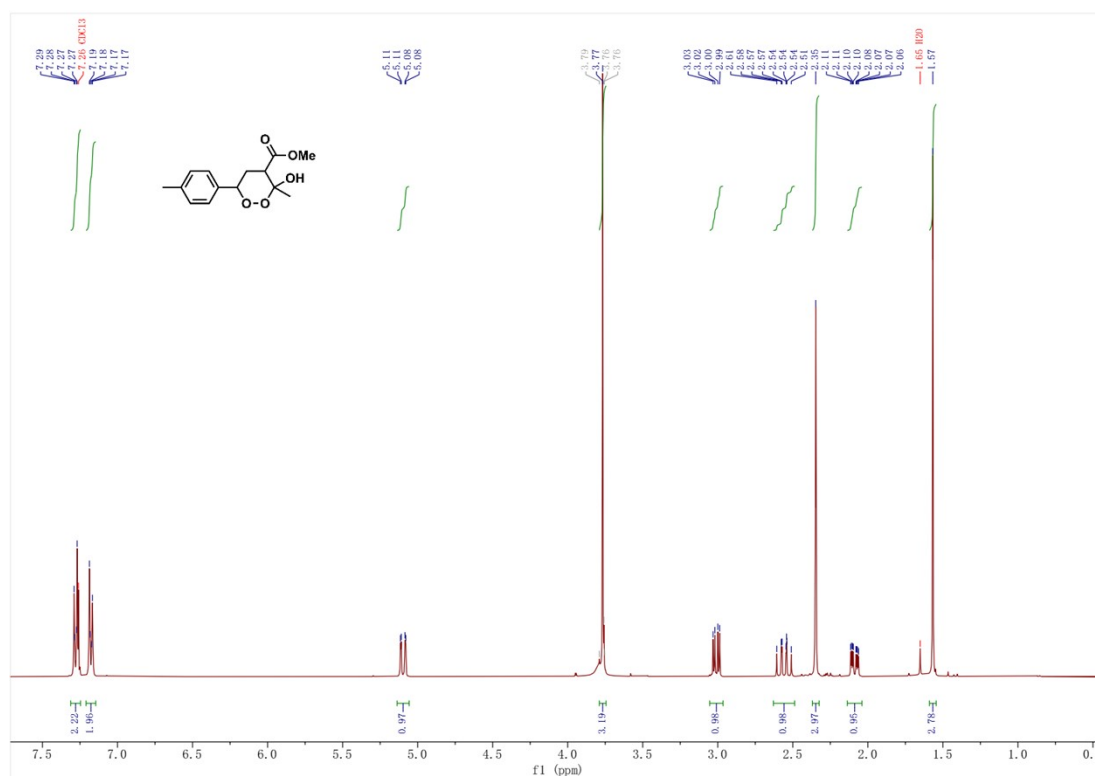


Fig. S4 ¹H NMR spectra of **a2**. (New)

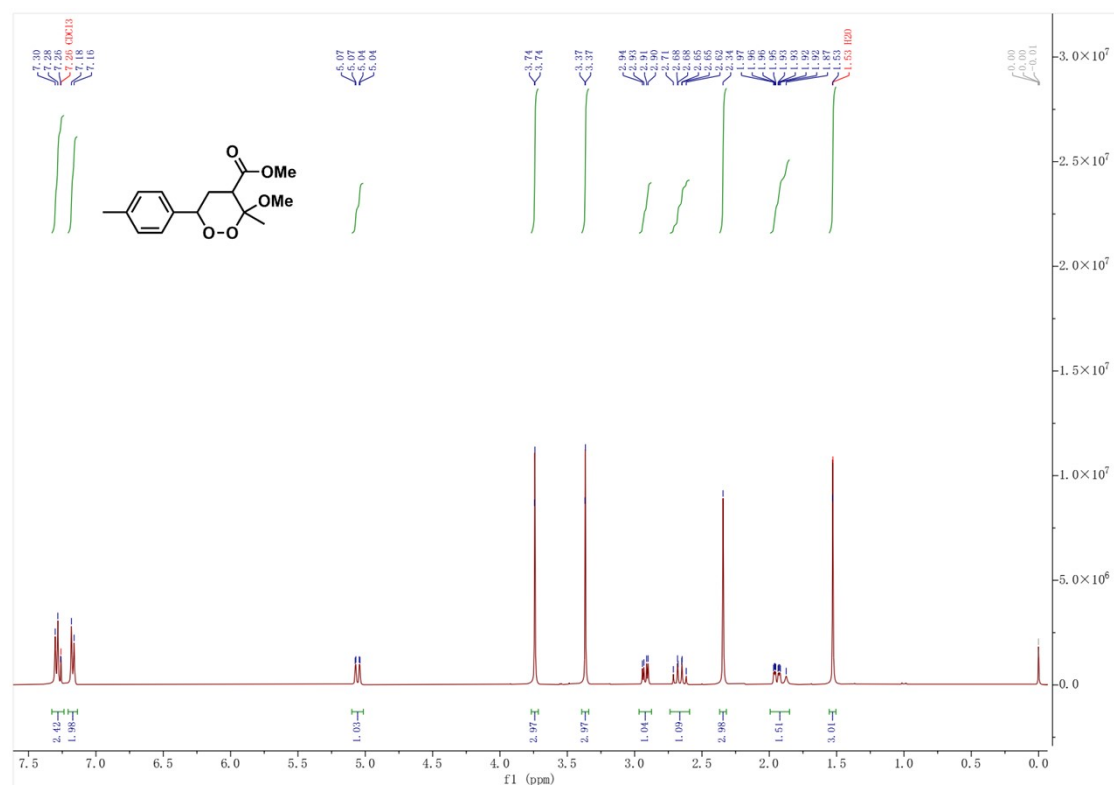


Fig. S5 ¹H NMR spectra of **a4**. (New)

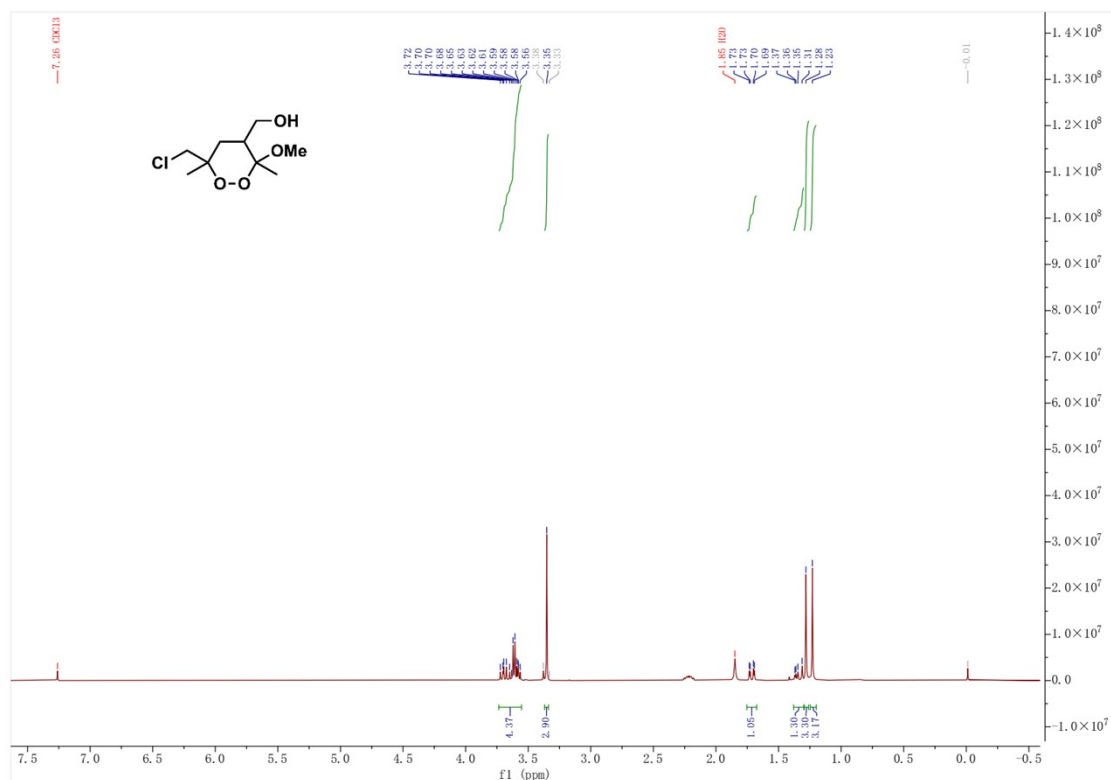


Fig. S6 ^1H NMR spectra of **a5**. (New)

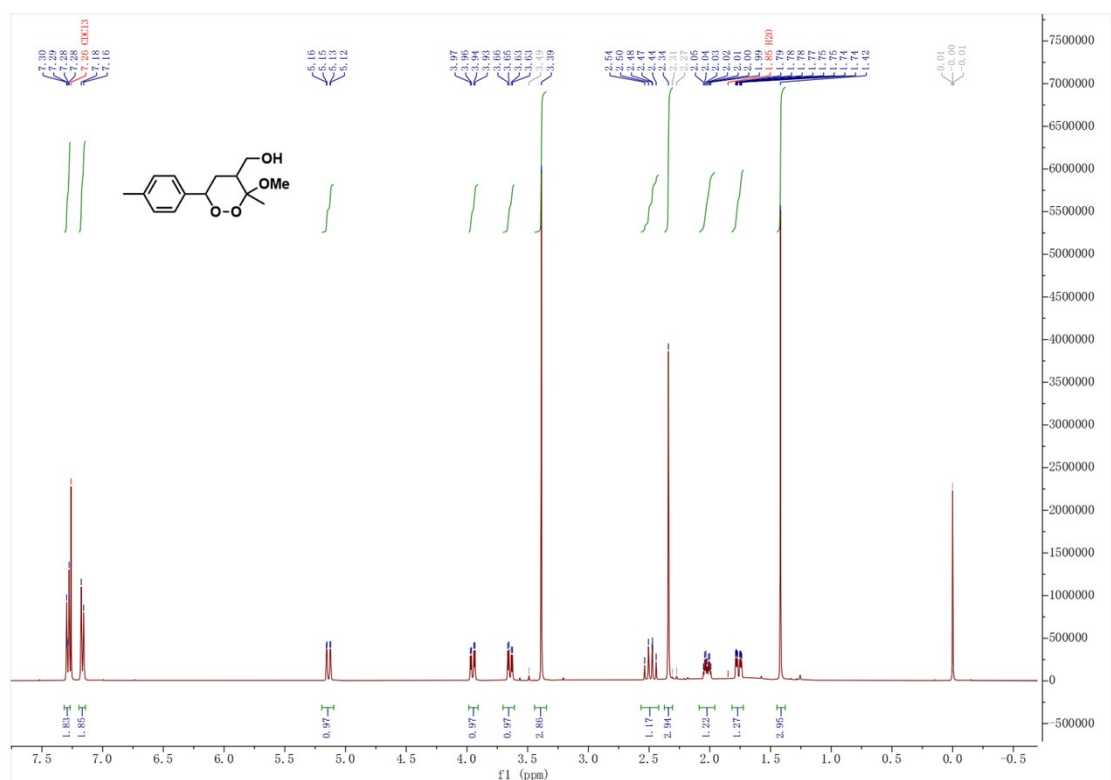


Fig. S7 ^1H NMR spectra of **a6**. (New)

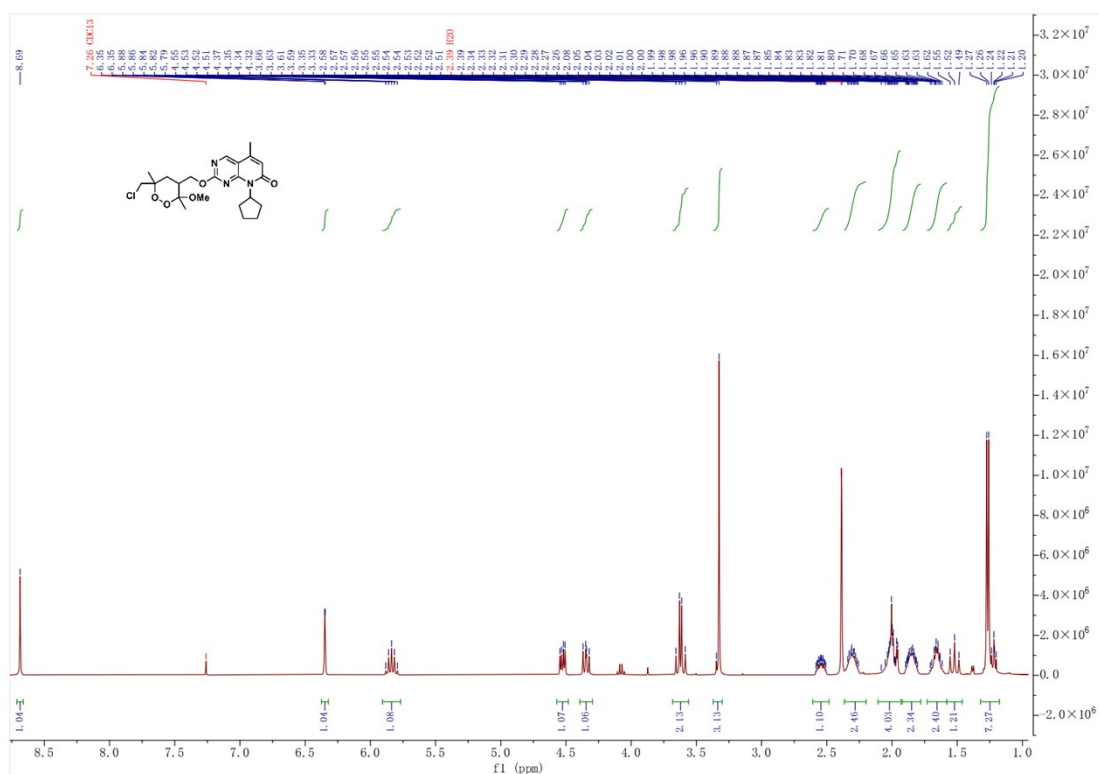


Fig. S8 ¹H NMR spectra of C1.

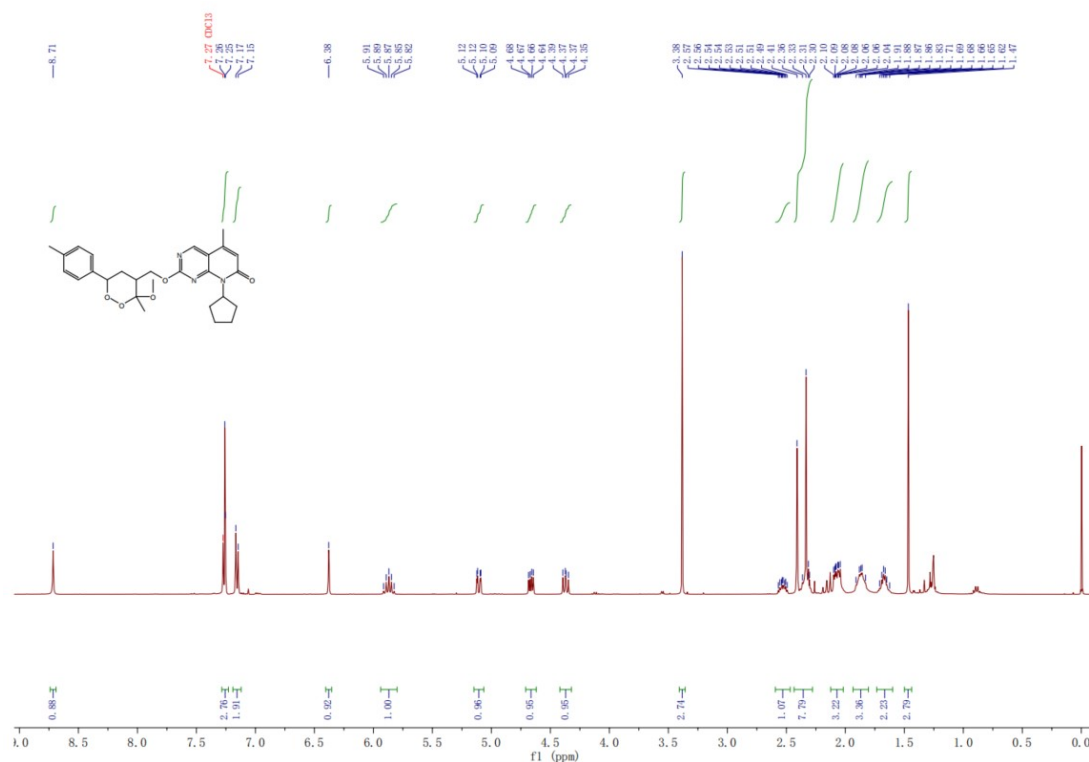


Fig. S9 ¹H NMR spectra of C2.

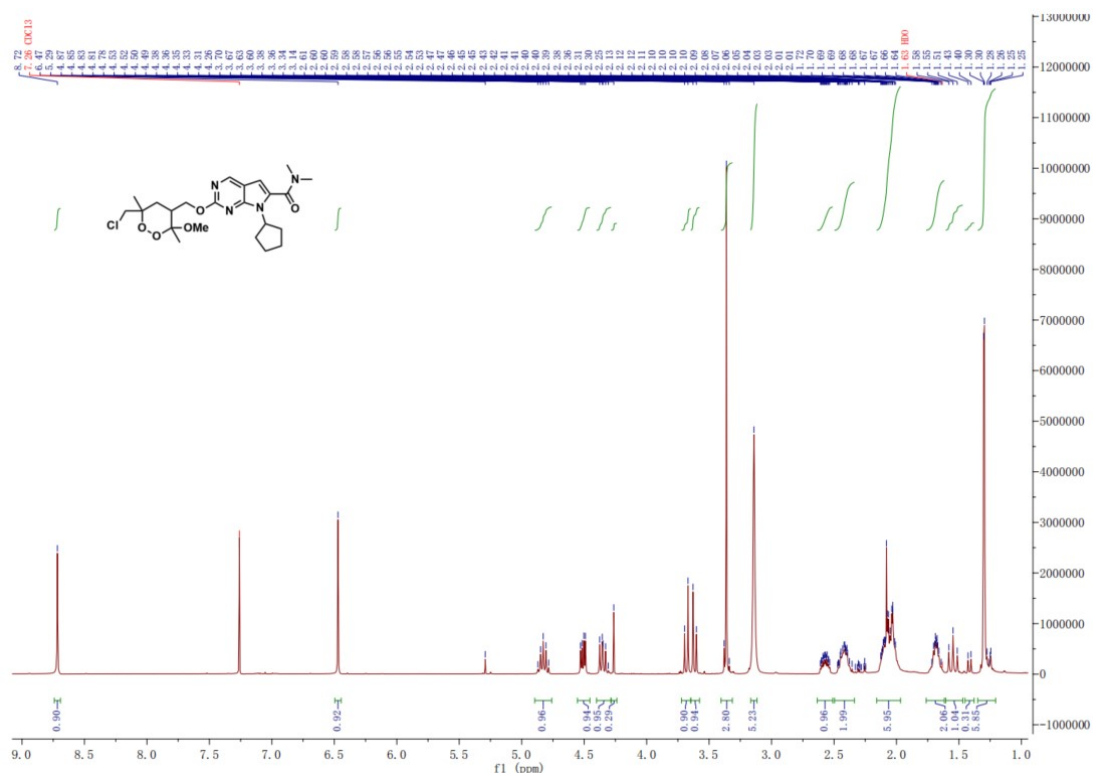


Fig. S10 ¹H NMR spectra of D1.

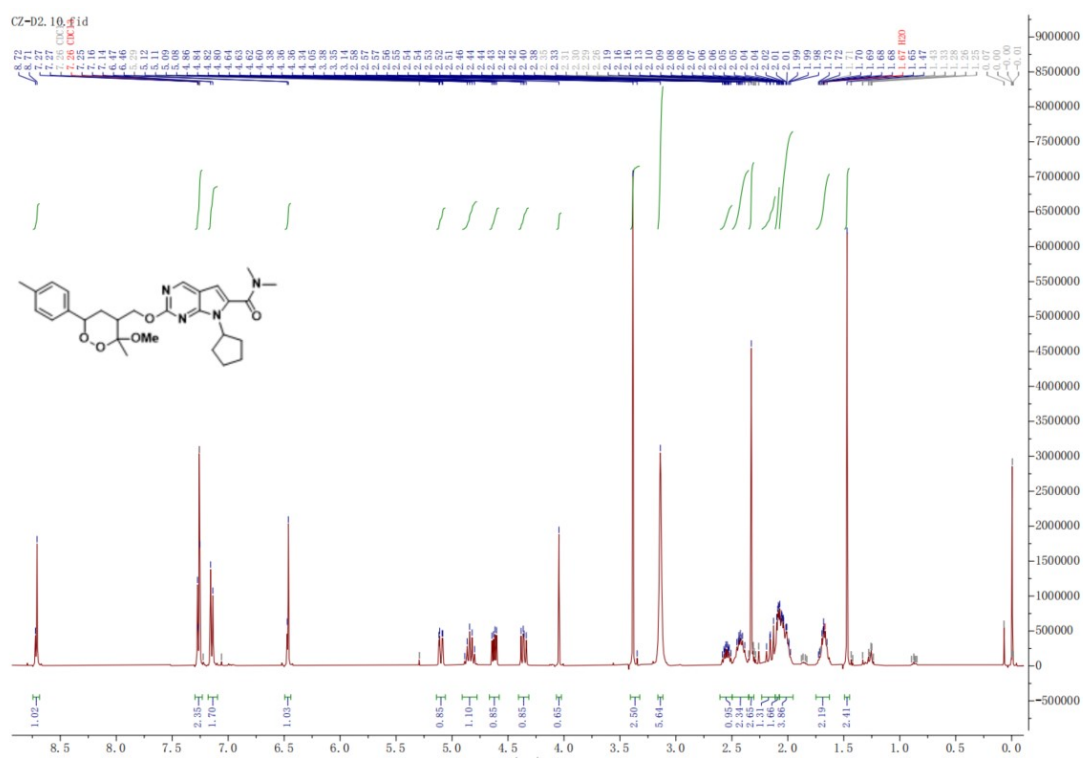
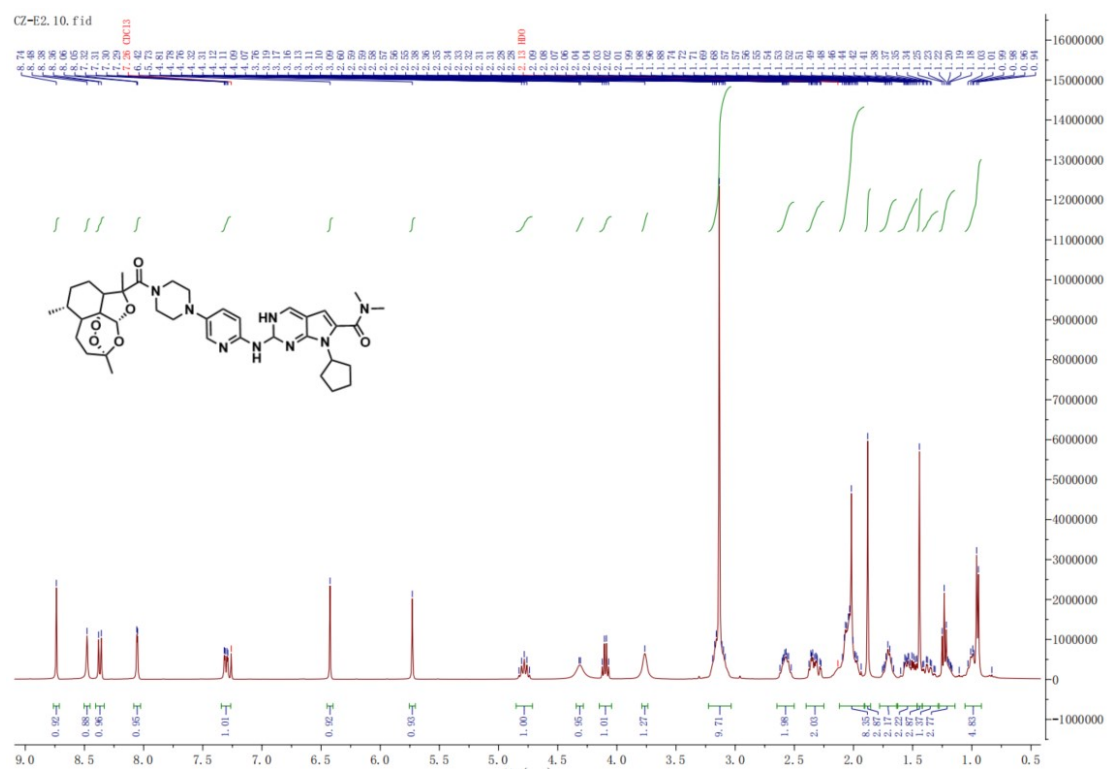
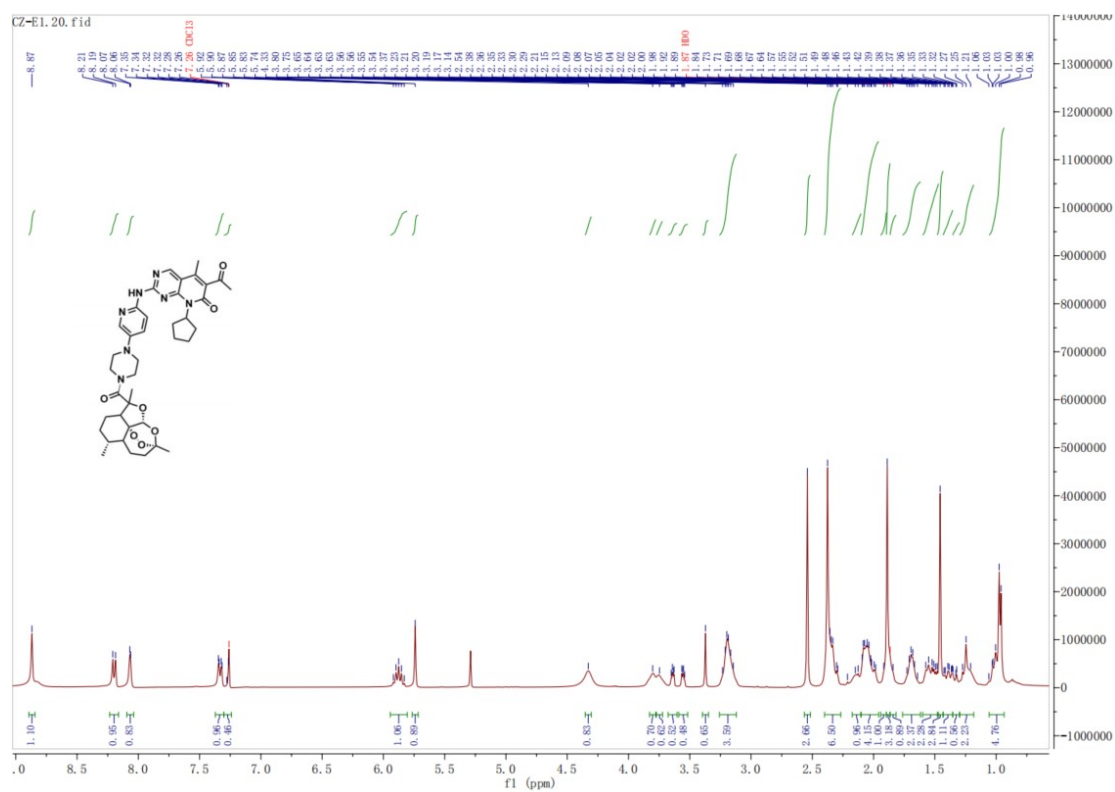


Fig. S11 ¹H NMR spectra of D2.



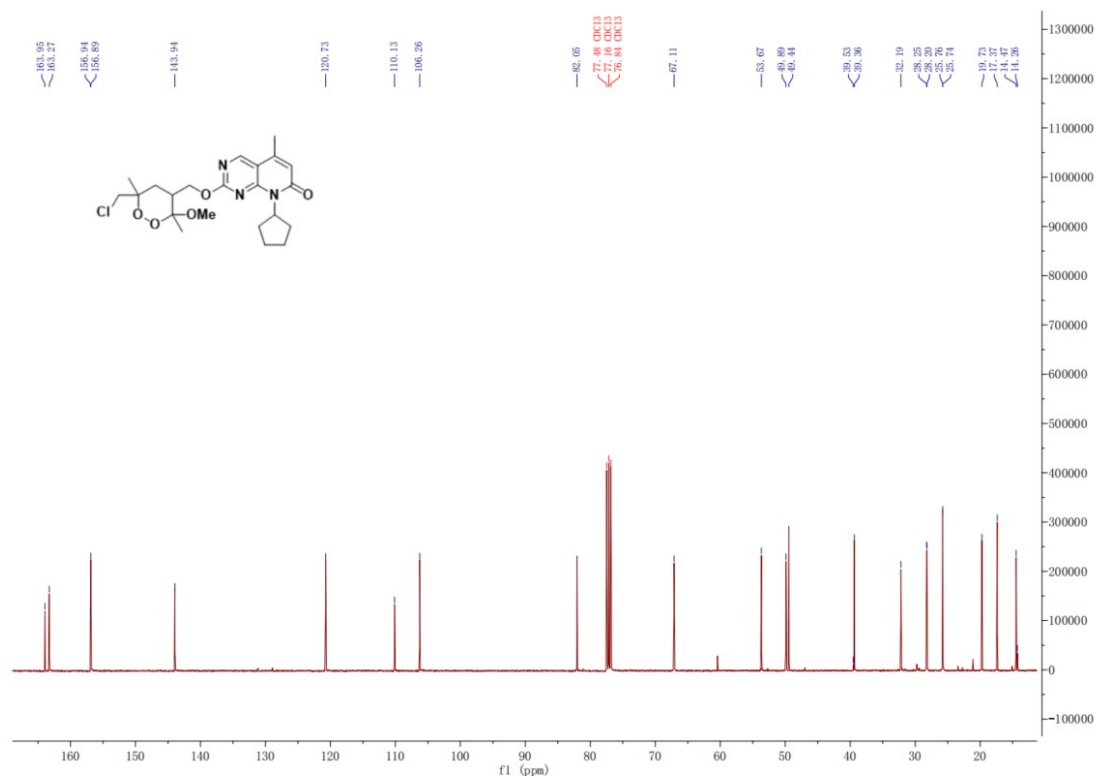


Fig. S14 ¹³C NMR spectra of C1.

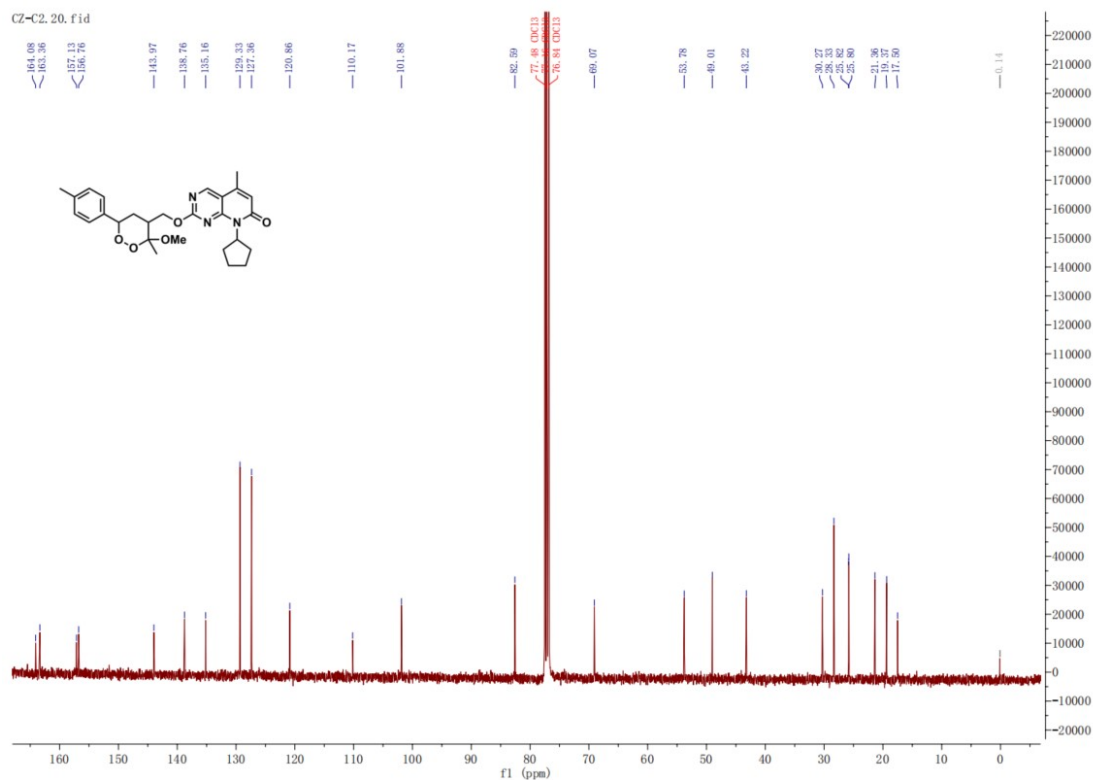


Fig. S15 ¹³C NMR spectra of C2.

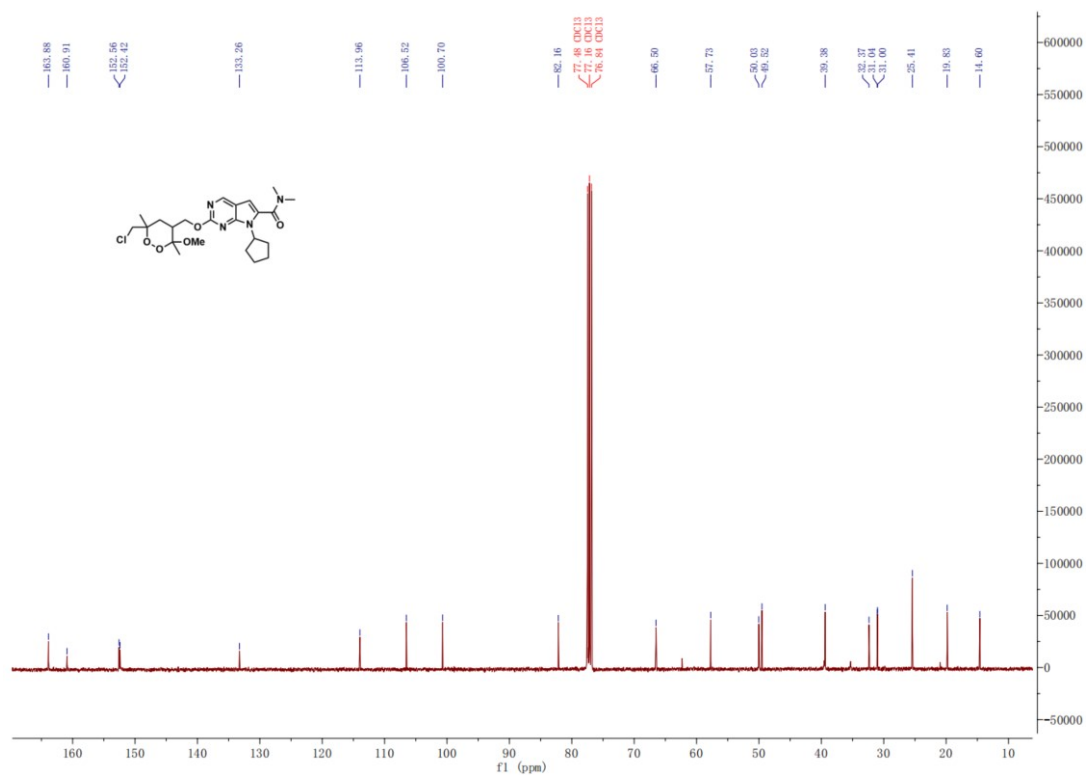


Fig. S16 ¹³C NMR spectra of D1.

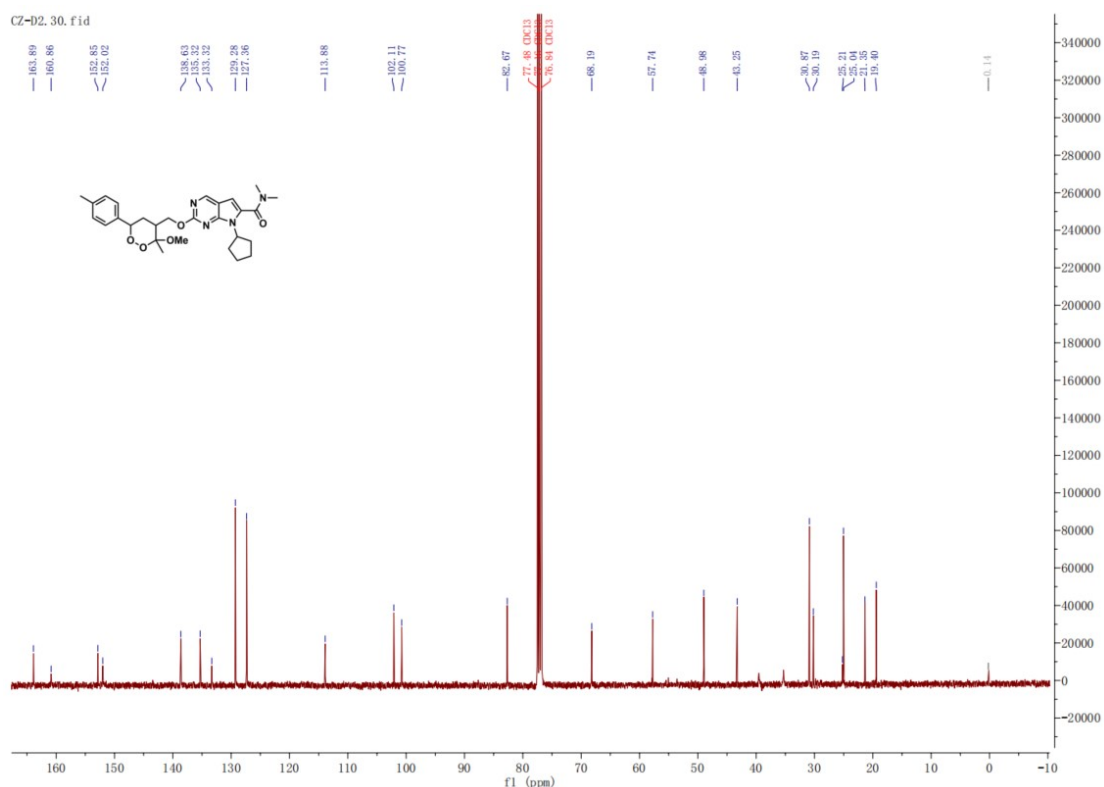


Fig. S17 ¹³C NMR spectra of D2.

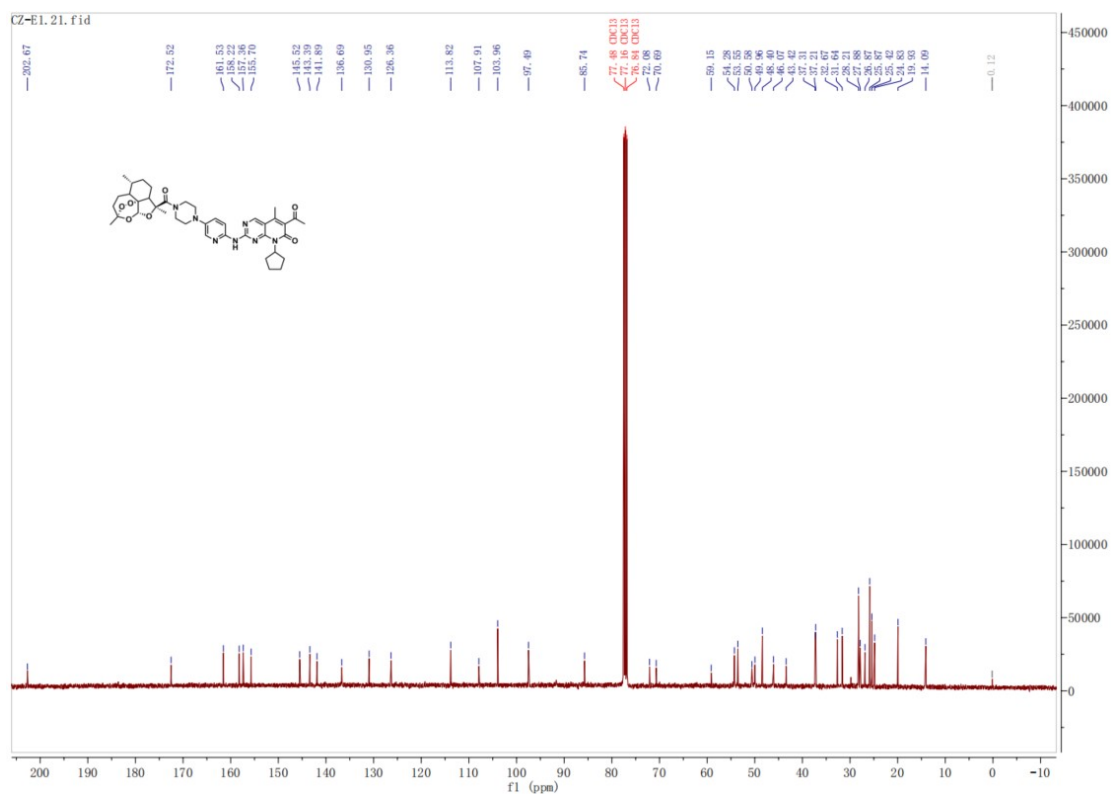


Fig. S18 ^{13}C NMR spectra of E1.

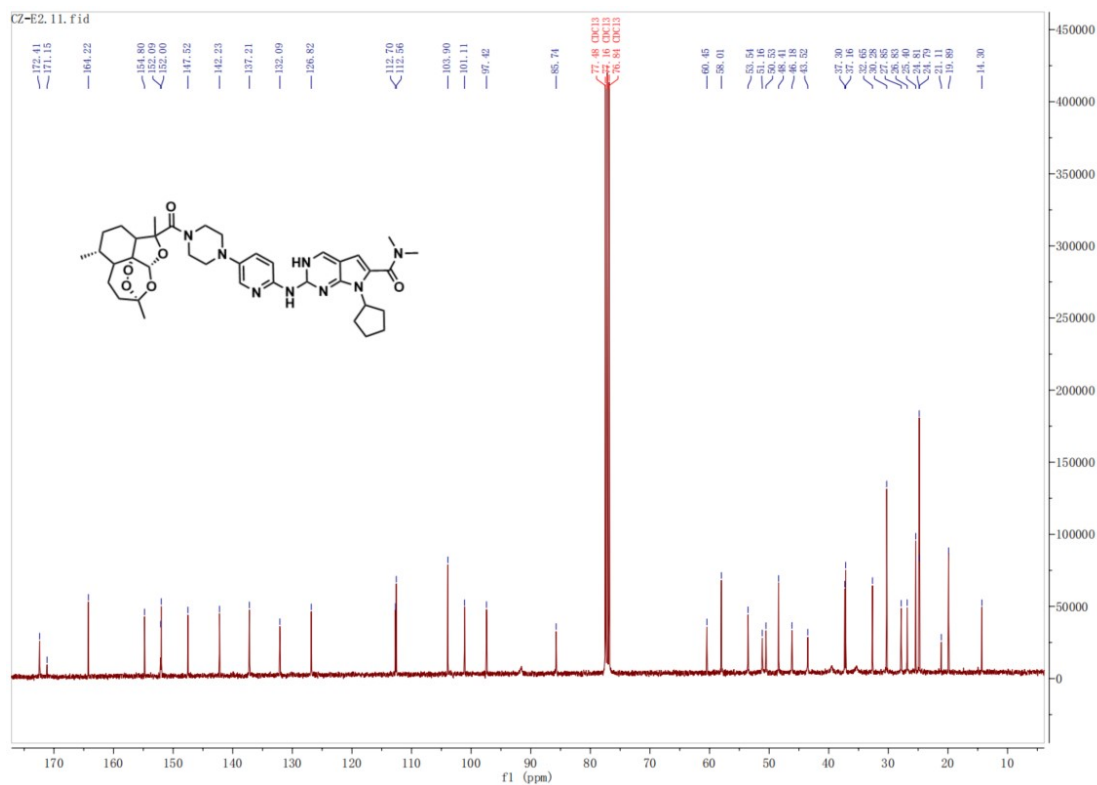


Fig. S19 ^{13}C NMR spectra of E2.

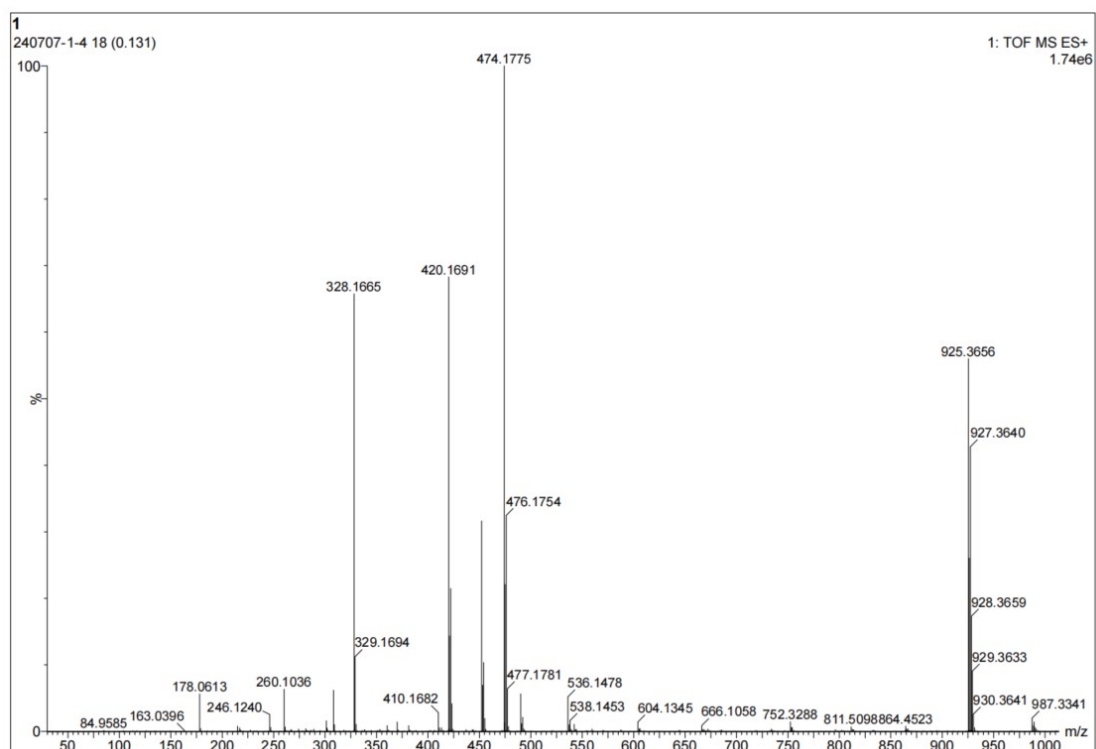


Fig. S20 HRMS spectra of C1

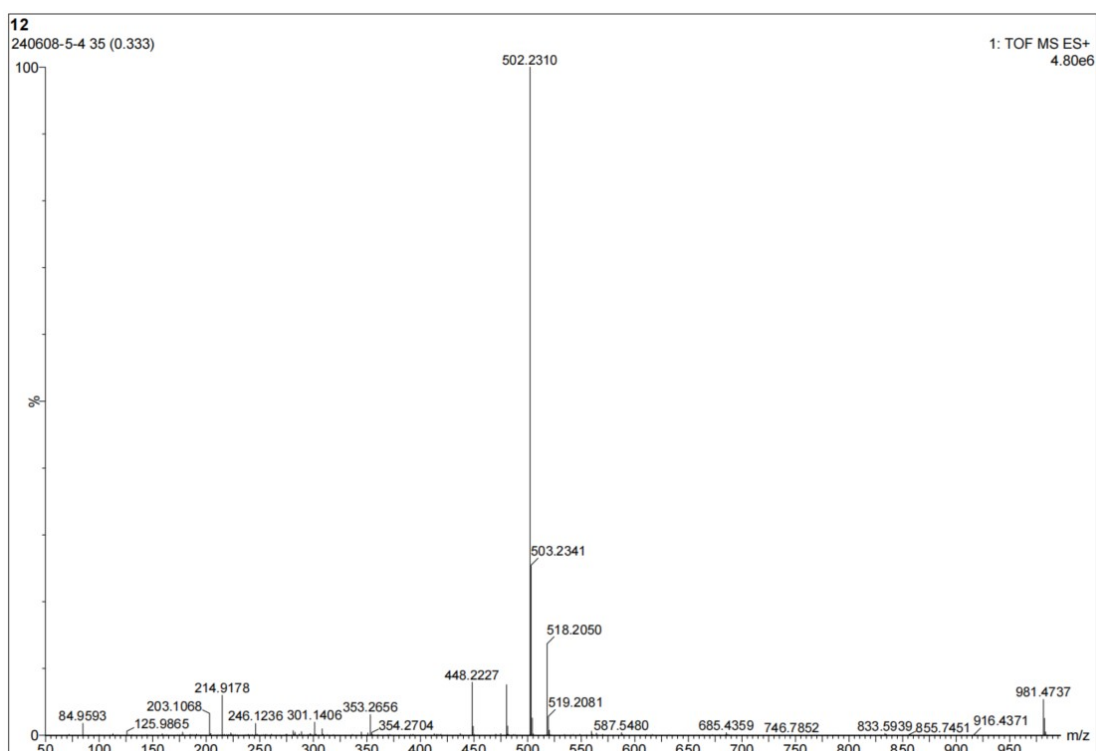


Fig. S21 HRMS spectra of C2

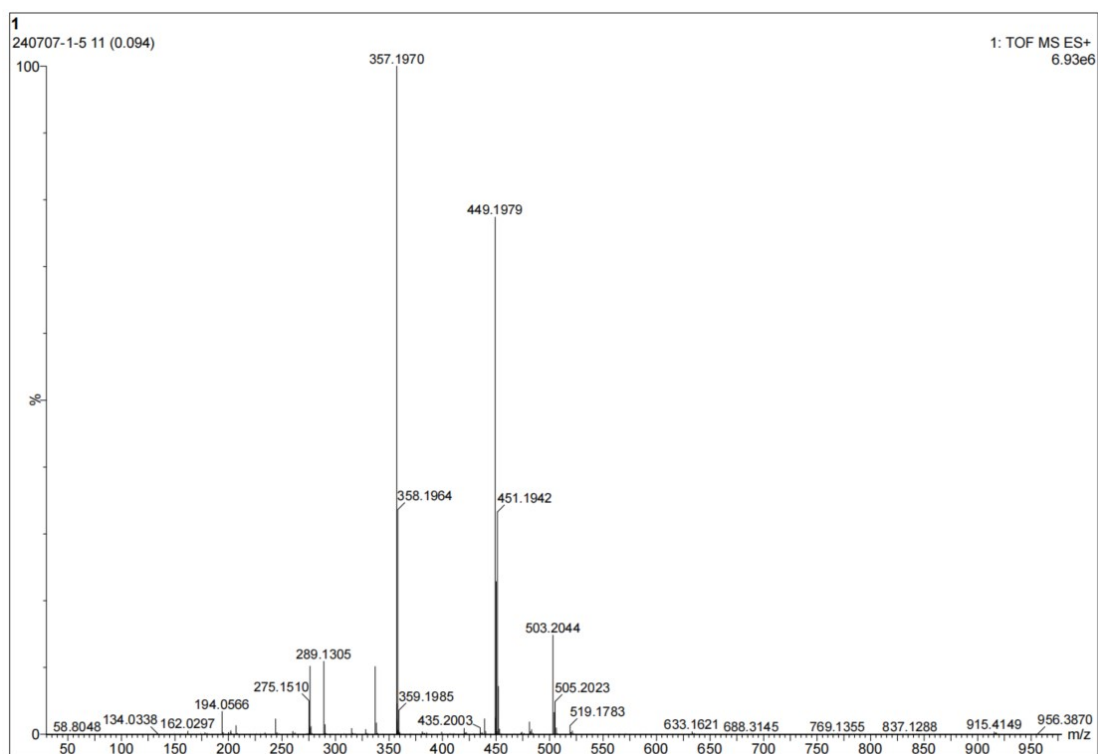


Fig. S22 HRMS spectra of **D1**

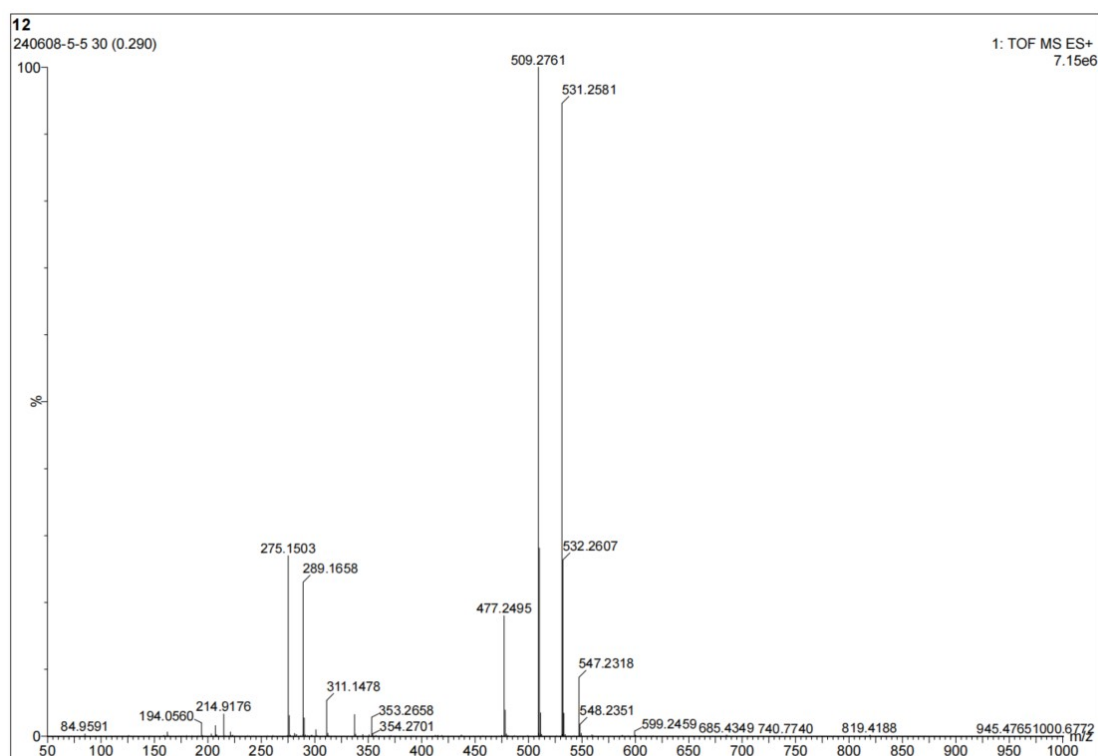


Fig. S23 HRMS spectra of **D2**

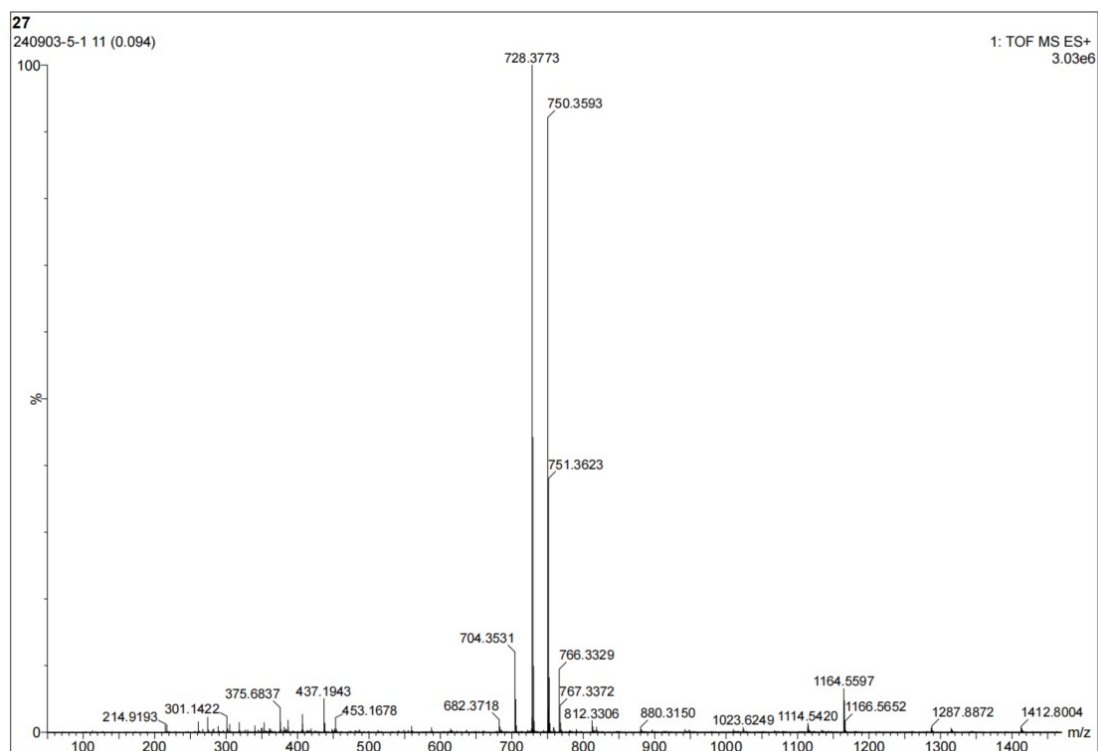


Fig. S24 HRMS spectra of **E1**

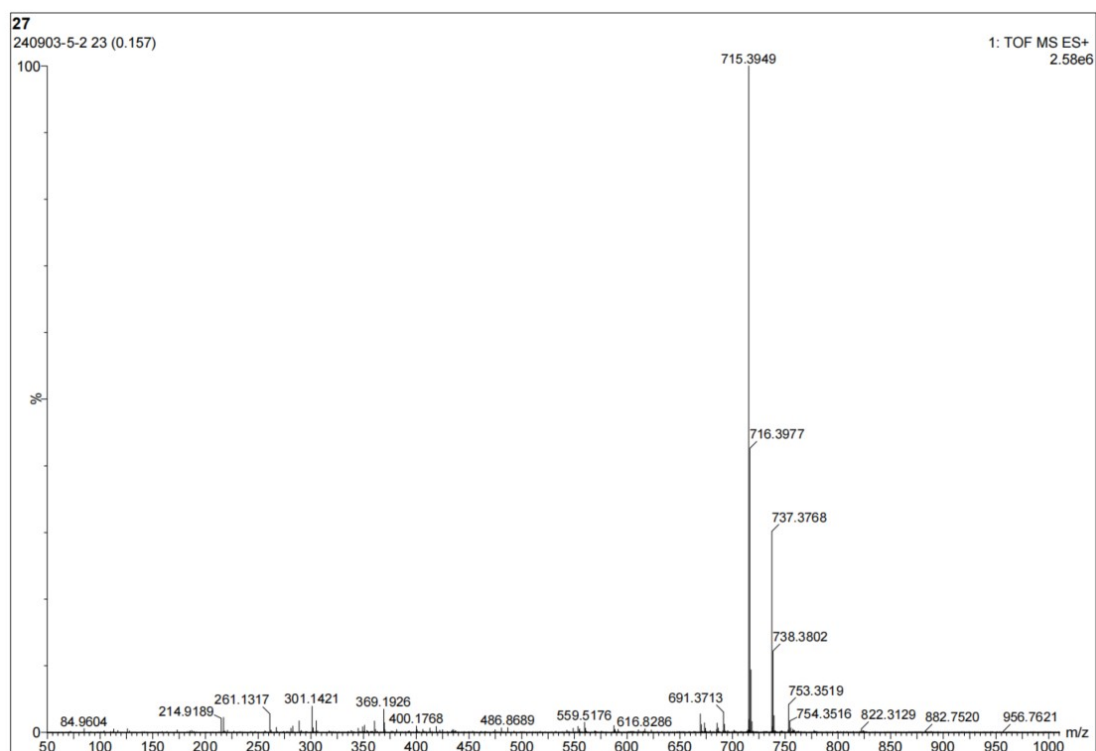


Fig. S25 HRMS spectra of **E2**

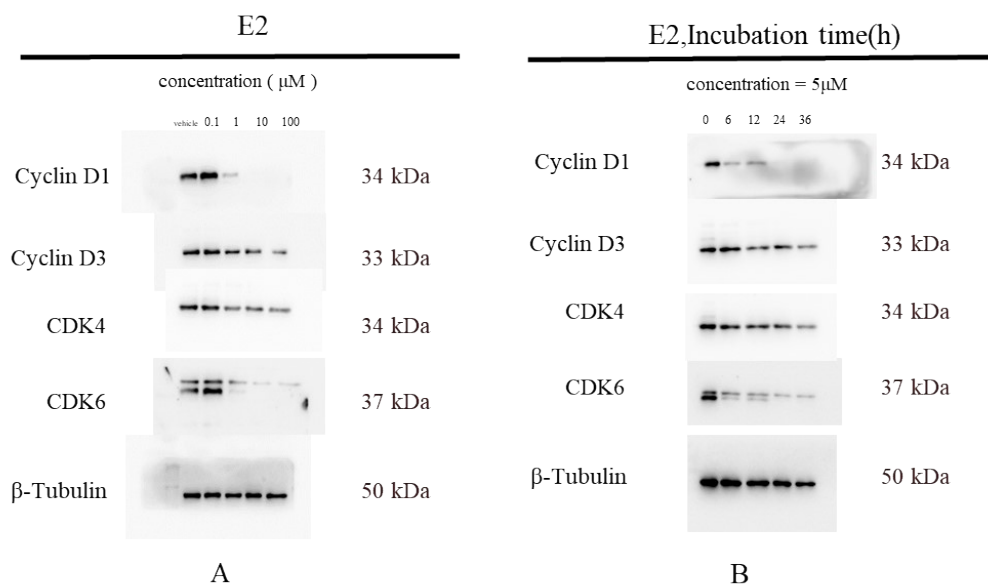


Fig. S26 The raw images of Western blot. Expression of Cyclin D1/3 and CDK4/6 in T47D cells following **E2** treatment. A) Changes in protein expression with different **E2** concentrations; B) Protein expression levels at various time intervals after treatment with 5 μ M **E2**.

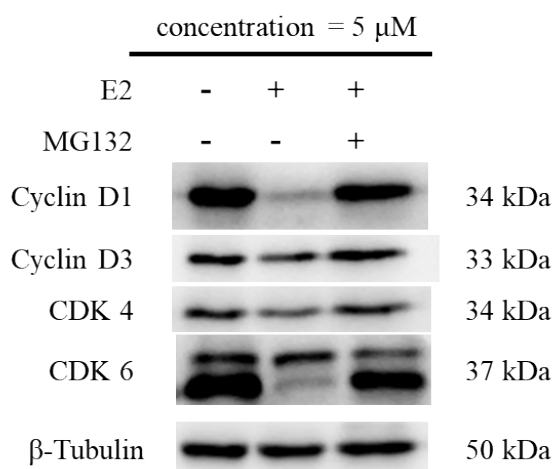


Fig. S27 The raw images of Western blot. Expression of Cyclin D1/3 and CDK4/6 in T47D cells after treatment with 5 μ M **E2** alone or in combination with MG132. (New)