Supplementary Data

The co-prodrugs of 7-Ethyl-10-hydroxycamptothecin and Vorinostat with in vitro hydrolysis and anticancer effects

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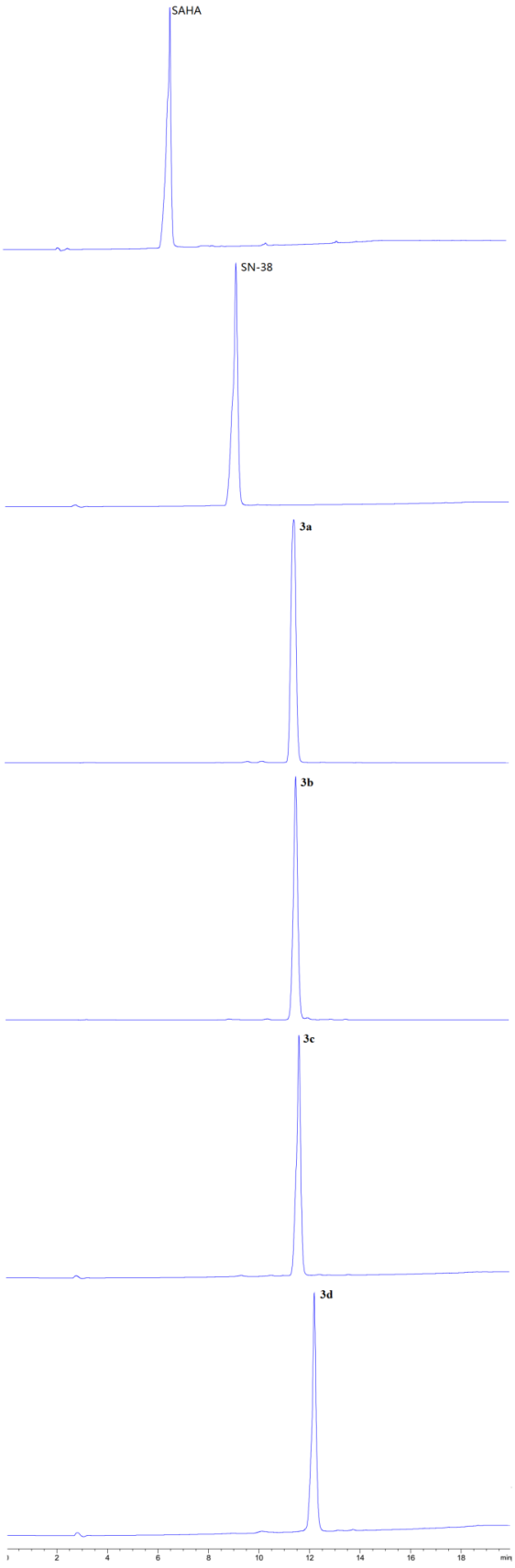
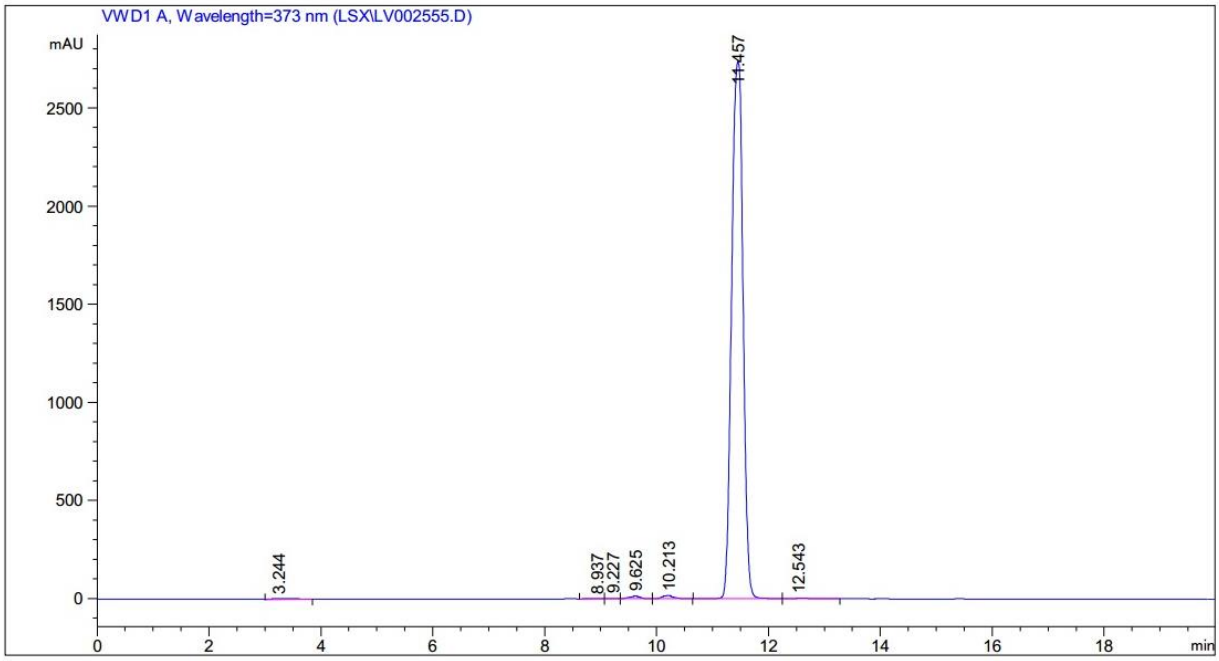
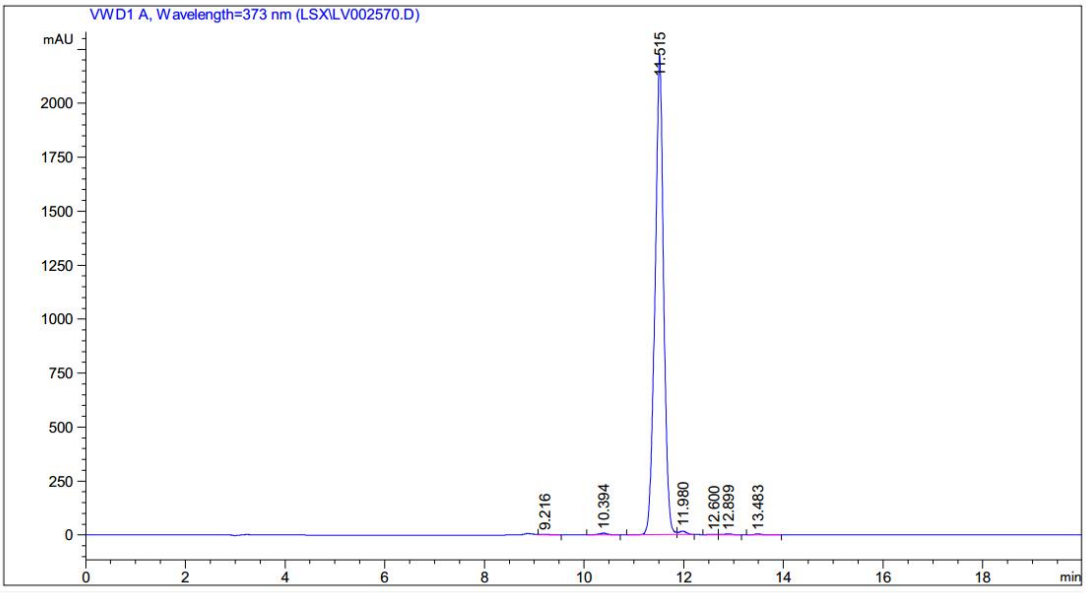


Figure S1. The overlay picture of HPLC retention time of SAHA、SN-38、**3a**、**3b**、**3c**、**3d.**



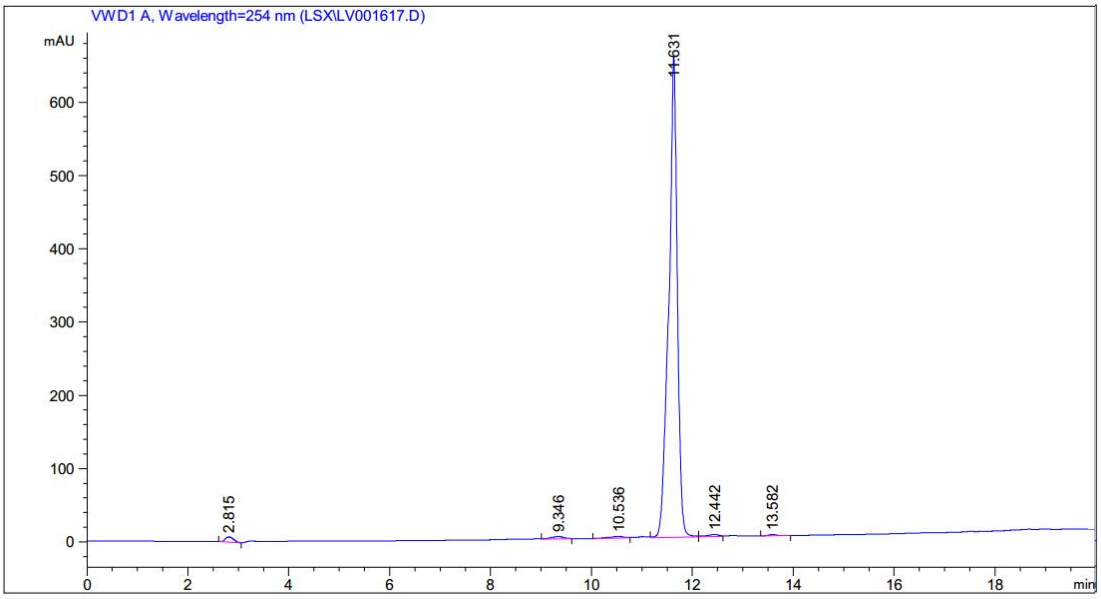
#	[min]		[min]	[mAU*s]	[mAU]	%
1	3.244	BB	0.2735	94.86101	4.58358	0.2413
2	8.937	BV	0.1715	30.58242	2.40693	0.0778
3	9.227	VV	0.1554	28.62679	2.50075	0.0728
4	9.625	VB	0.1868	187.48222	14.00325	0.4768
5	10.213	BB	0.1787	241.30128	17.94861	0.6137
6	11.457	BV	0.2244	3.86662e4	2739.37769	98.3445
7	12.543	VB	0.2998	68.03406	2.87062	0.1730
Total:				3.93171e4	2783.69143	

Figure S2: The purity of the final compounds **3a.**



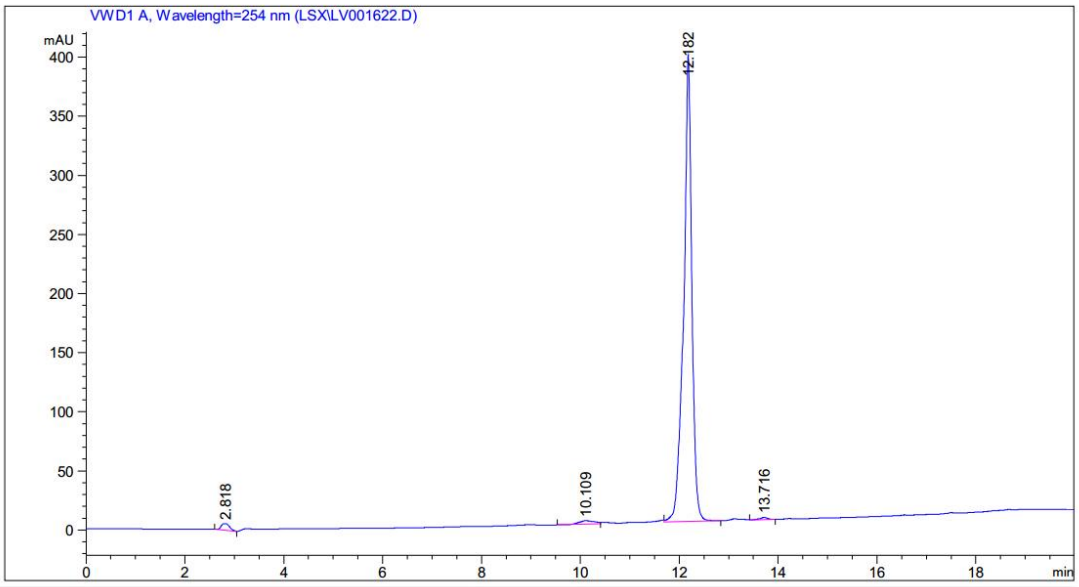
#	[min]		[min]	[mAU*s]	[mAU]	%
1	9.216	VV	0.1906	48.92215	3.44194	0.1808
2	10.394	BB	0.1681	106.21506	8.73083	0.3924
3	11.515	BV	0.1718	2.66035e4	2221.11255	98.2942
4	11.980	VB	0.1477	171.46278	16.65919	0.6335
5	12.600	BV	0.1563	20.19372	1.75247	0.0746
6	12.899	VB	0.1595	59.67665	5.22197	0.2205
7	13.483	BB	0.1394	55.20559	5.76381	0.2040
Total:				2.70652e4	2262.68276	

Figure S3: The purity of the final compounds **3b.**



#	[min]		[min]	[mAU*s]	[mAU]	%
1	2.815	BB	0.1859	76.86323	6.79039	0.9632
2	9.346	VB	0.2307	51.15326	3.07116	0.6410
3	10.536	BV	0.2714	49.32519	2.49529	0.6181
4	11.631	VV	0.1651	7733.13574	656.23962	96.9101
5	12.442	VV	0.2409	47.86642	2.81100	0.5999
6	13.582	BB	0.1553	21.35349	1.90769	0.2676
Total:				7979.69733	673.31516	

Figure S4: The purity of the final compounds **3c.**



#	[min]		[min]	[mAU*s]	[mAU]	%
1	2.818	BB	0.1820	64.26038	5.59793	1.3682
2	10.109	BV	0.2867	61.29953	2.87426	1.3052
3	12.182	VB	0.1609	4549.94922	394.15118	96.8750
4	13.716	VB	0.1579	21.21178	1.90047	0.4516
Total:				4696.72091	404.52384	

Figure S5: The purity of the final compounds **3d.**

^{1}H and ^{13}C NMR spectra of co-prodrug **3a**

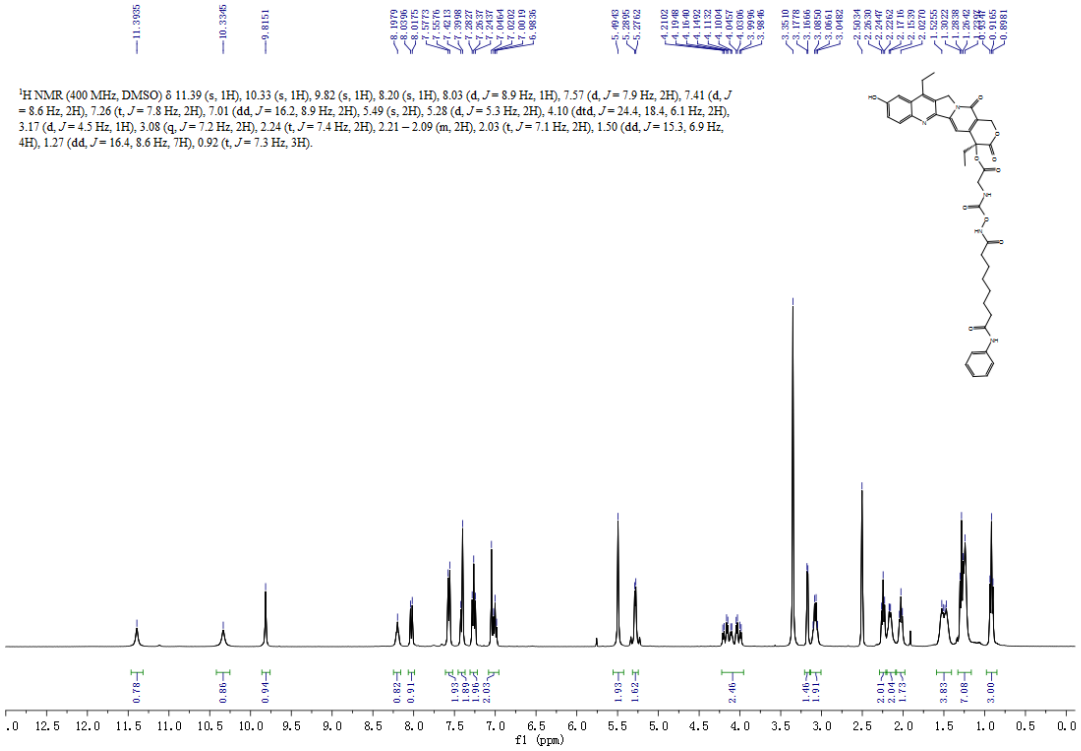


Figure S6: ^{1}H spectrum of co-prodrug **3a.**

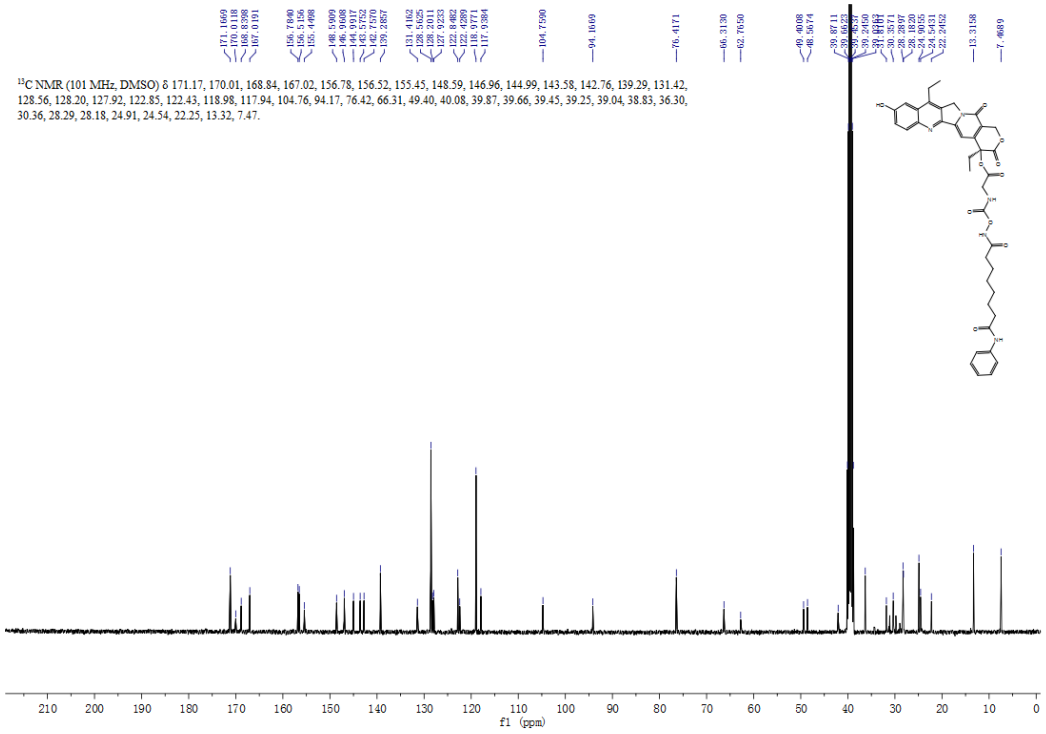


Figure S7: ^{13}C NMR spectrum of co-prodrug **3a.**

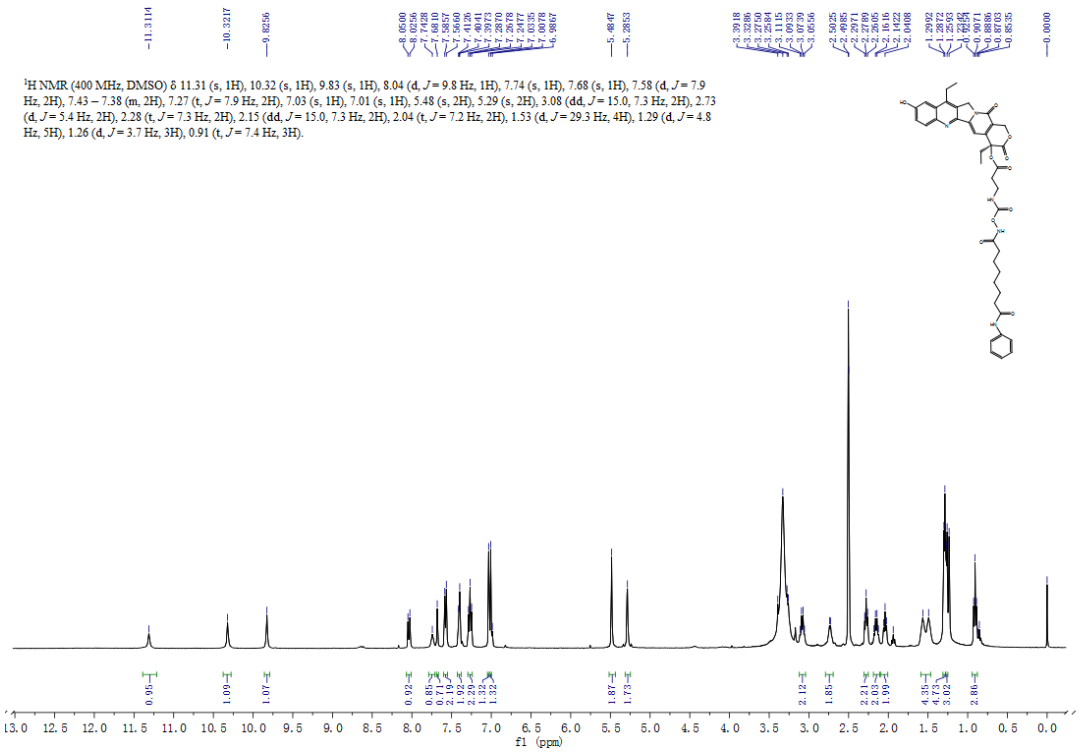


Figure S8: ^{1}H spectrum of co-prodrug **3b.**

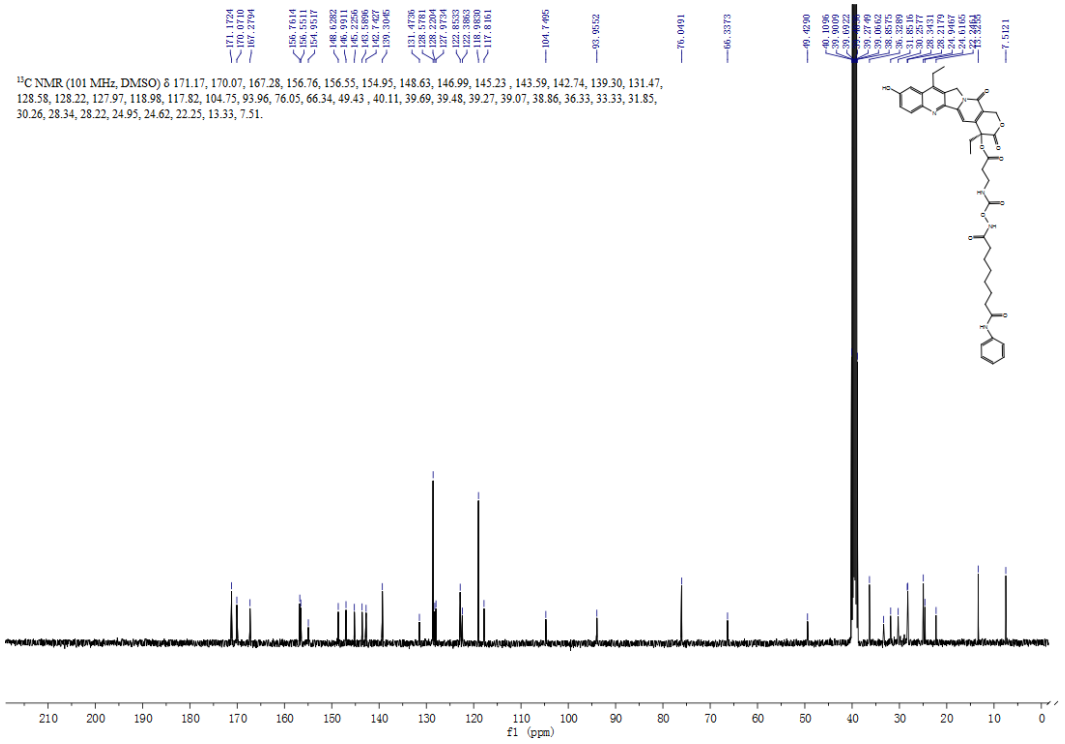
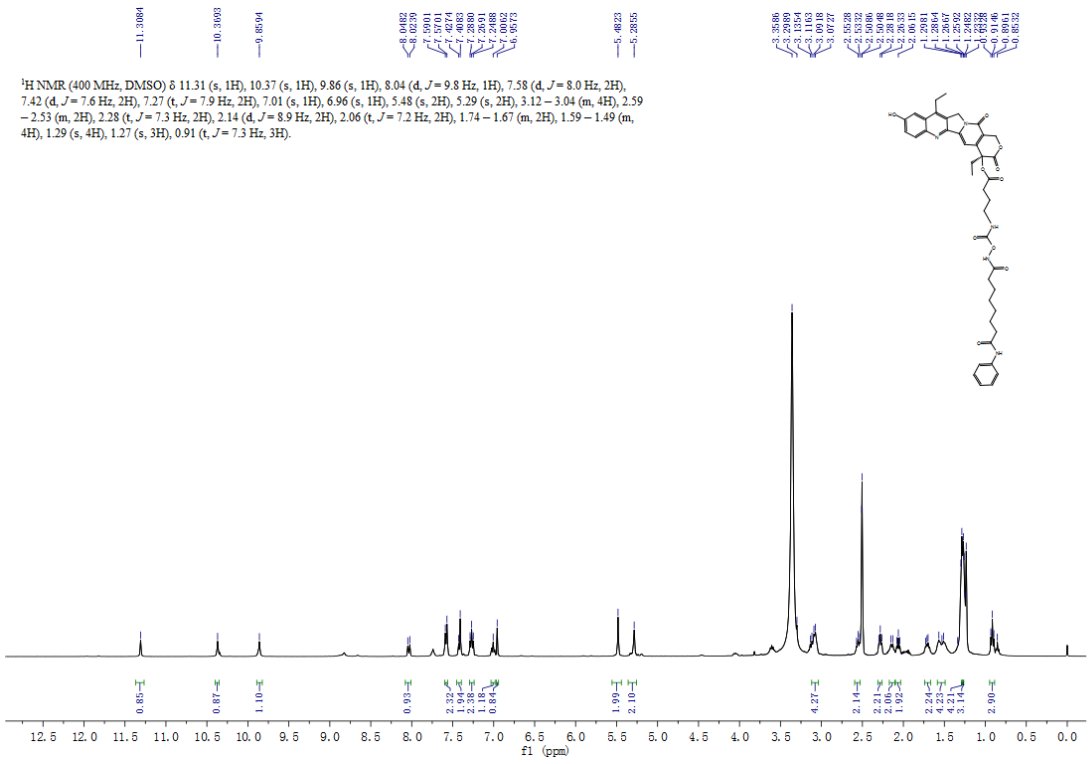
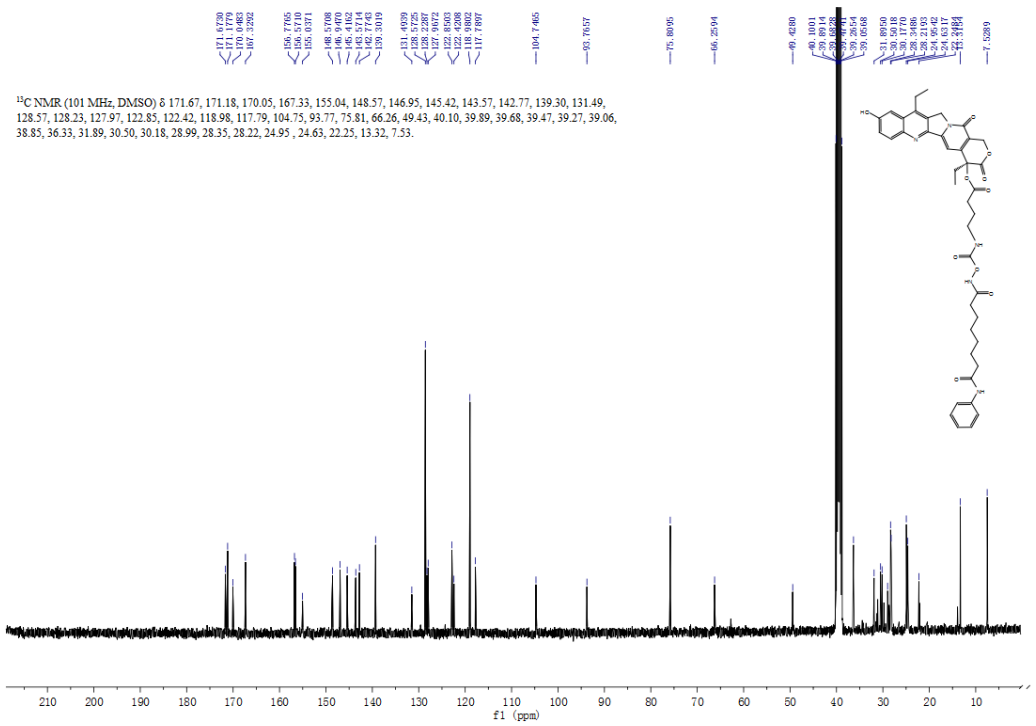


Figure S9: ^{13}C NMR spectrum of co-prodrug **3b.**



^{1}H NMR (400 MHz, DMSO) δ 11.31 (s, 1H), 10.37 (s, 1H), 9.86 (s, 1H), 8.04 (d, *J* = 9.8 Hz, 1H), 7.58 (d, *J* = 8.0 Hz, 2H), 7.42 (d, *J* = 7.6 Hz, 2H), 7.27 (t, *J* = 7.9 Hz, 2H), 7.01 (s, 1H), 6.96 (s, 1H), 5.48 (s, 2H), 5.29 (s, 2H), 3.12 – 3.04 (m, 4H), 2.59 – 2.53 (m, 2H), 2.28 (t, *J* = 7.3 Hz, 2H), 2.14 (d, *J* = 8.9 Hz, 2H), 2.06 (t, *J* = 7.2 Hz, 2H), 1.74 – 1.67 (m, 2H), 1.59 – 1.49 (m, 4H), 1.29 (s, 4H), 1.27 (s, 3H), 0.91 (t, *J* = 7.3 Hz, 3H).

Figure S10: ^{1}H spectrum of co-prodrug **3c.**



^{13}C NMR (101 MHz, DMSO) δ 171.67, 171.18, 170.05, 167.33, 155.04, 148.57, 146.95, 145.42, 143.57, 142.77, 139.30, 131.49, 128.57, 128.23, 127.97, 122.85, 122.42, 118.98, 117.79, 104.75, 93.77, 75.81, 66.26, 49.43, 40.10, 39.89, 39.68, 39.47, 39.27, 39.06, 38.85, 36.33, 31.89, 30.50, 30.18, 28.99, 28.35, 28.22, 24.95 , 24.63, 22.25, 13.32, 7.53.

Figure S11: ^{13}C NMR spectrum of co-prodrug **3c.**

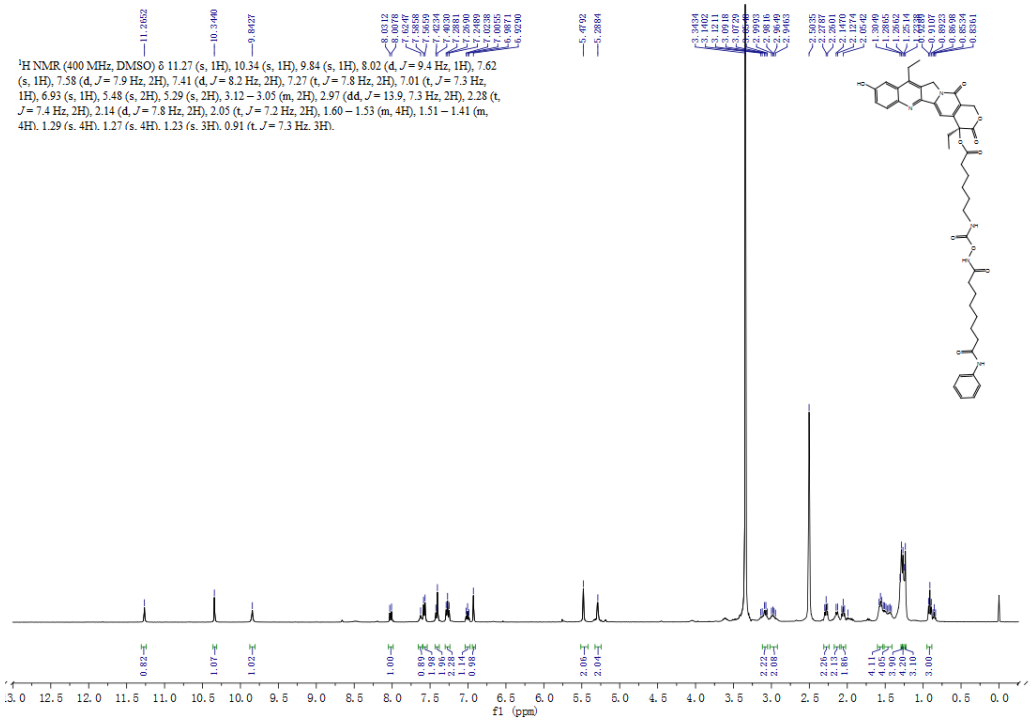


Figure S12: ^{1}H spectrum of co-prodrug **3d.**

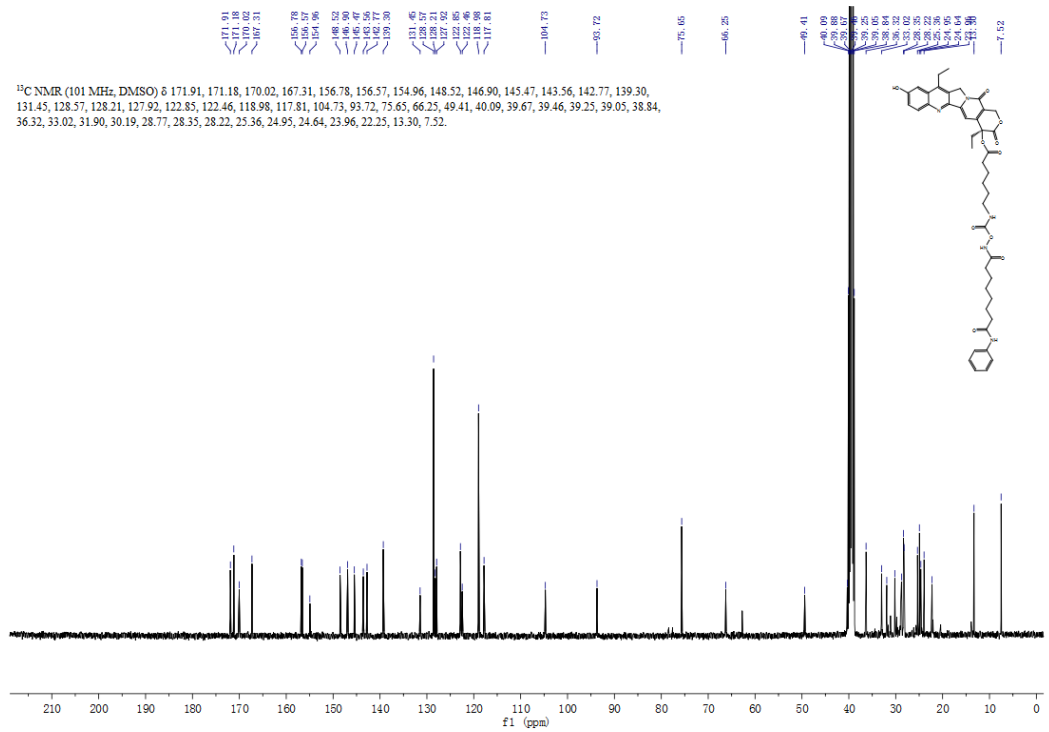


Figure S13: ^{13}C NMR spectrum of co-prodrug **3d.**