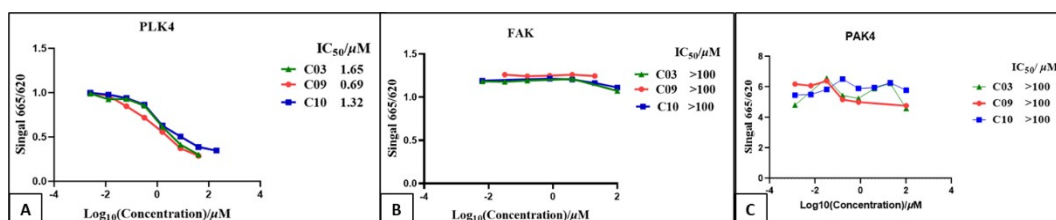


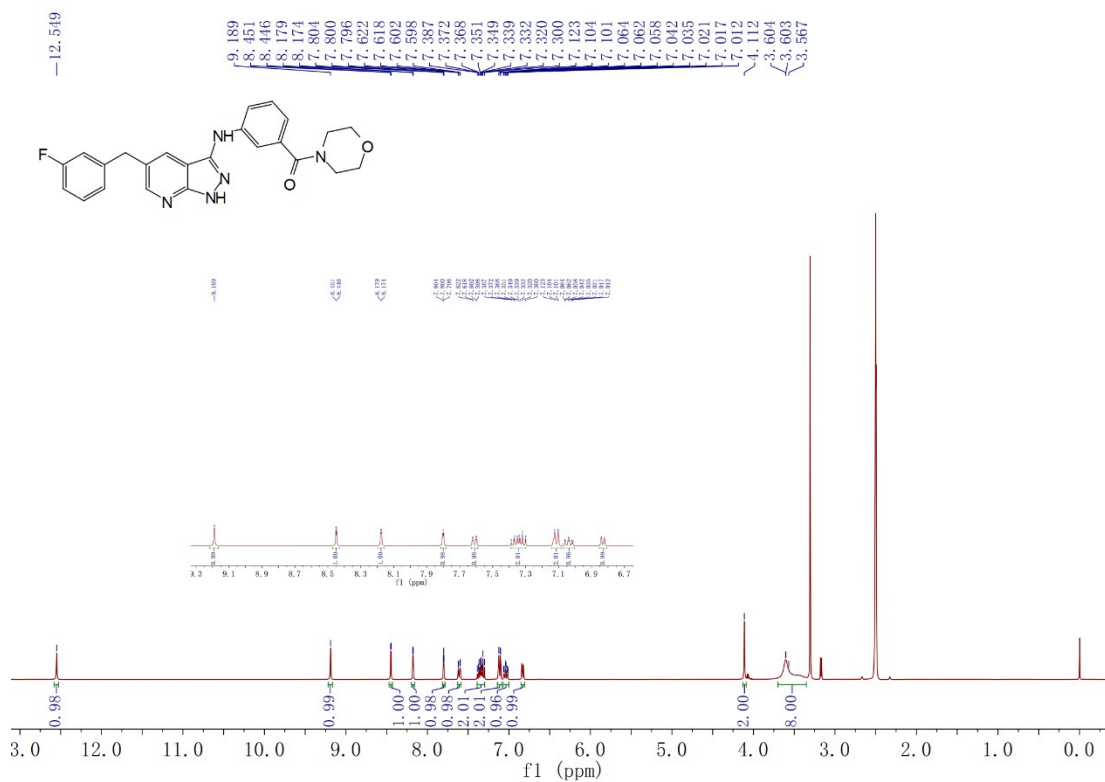
## Supporting information

### Design, synthesis and biological evaluation of pyrazolo[3,4-b]pyridine derivatives as TRKs inhibitors



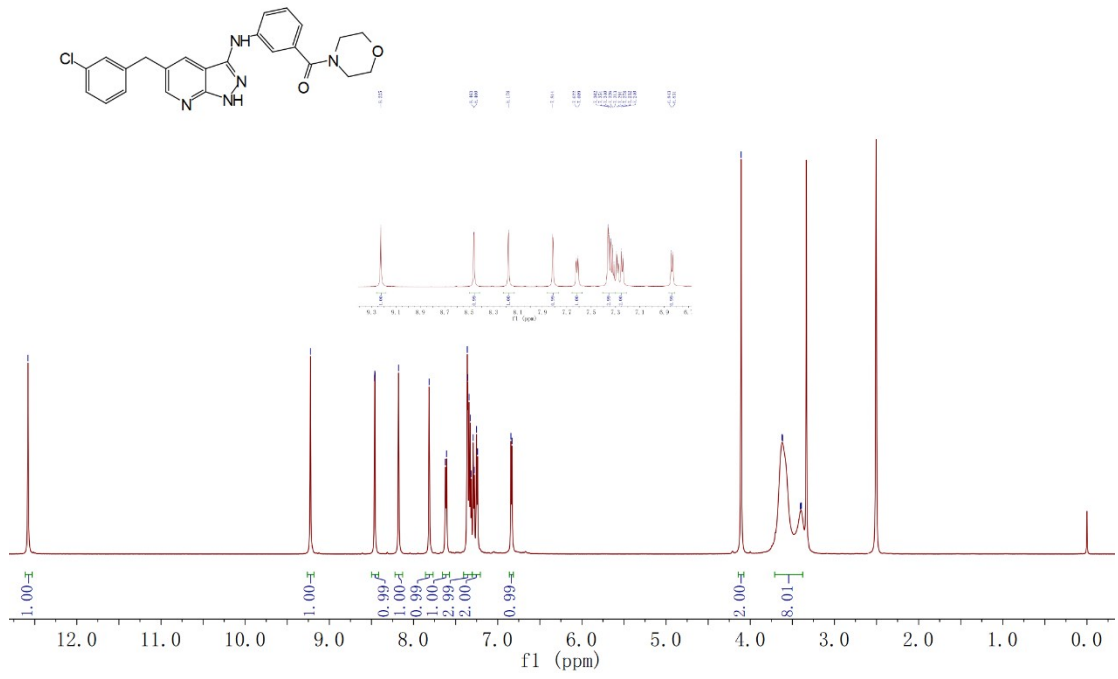
**Figure S1** Inhibitor activities of C03, C09 and C10 on various kinases: PLK4(A), FAK(B), PAK4(C).

<sup>1</sup>H-NMR spectra of compound referred in the article and the structure of compound is noted in the spectrum.

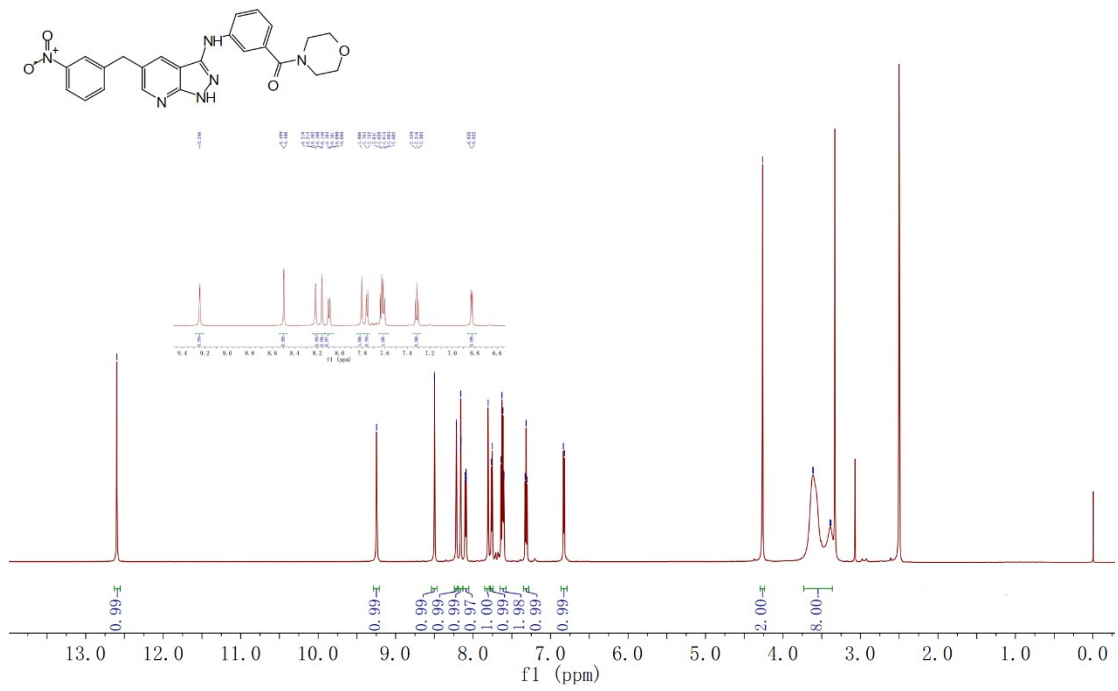


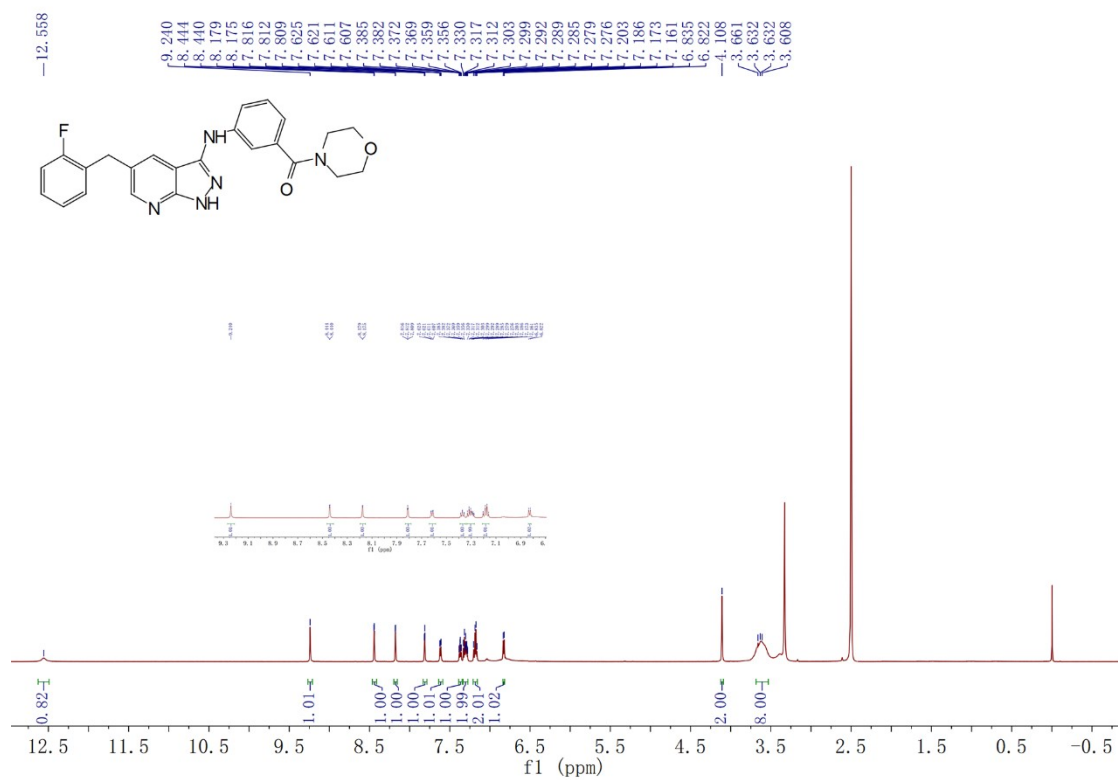
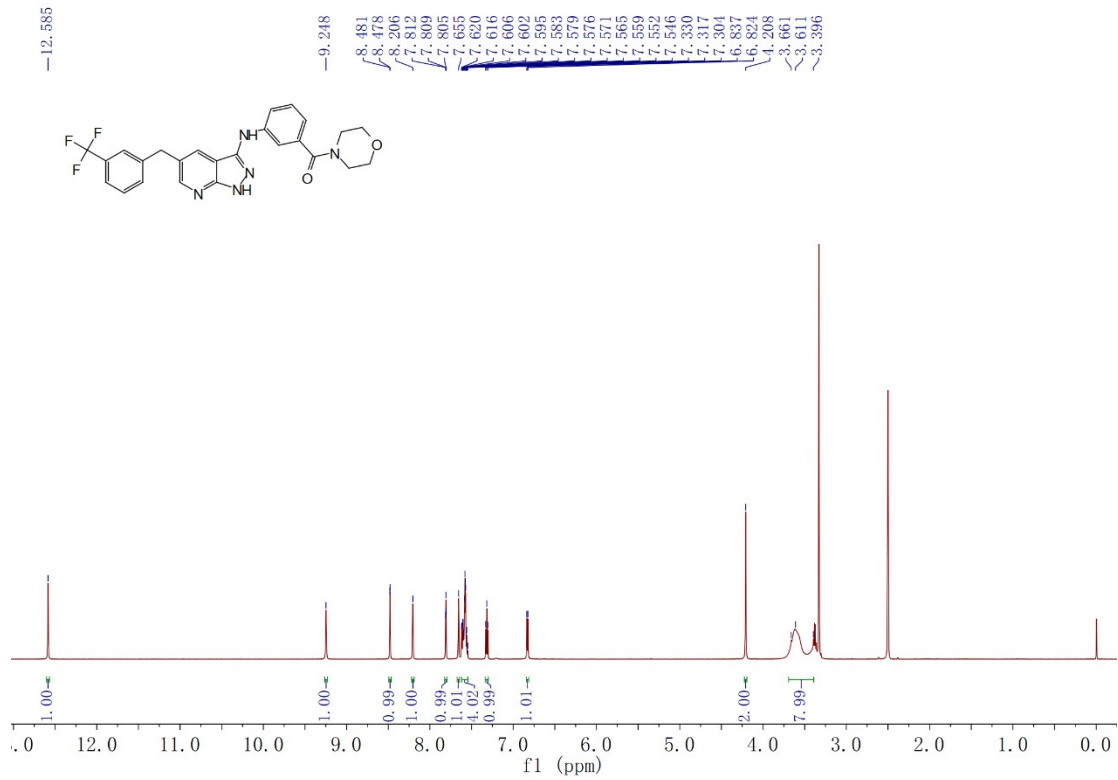


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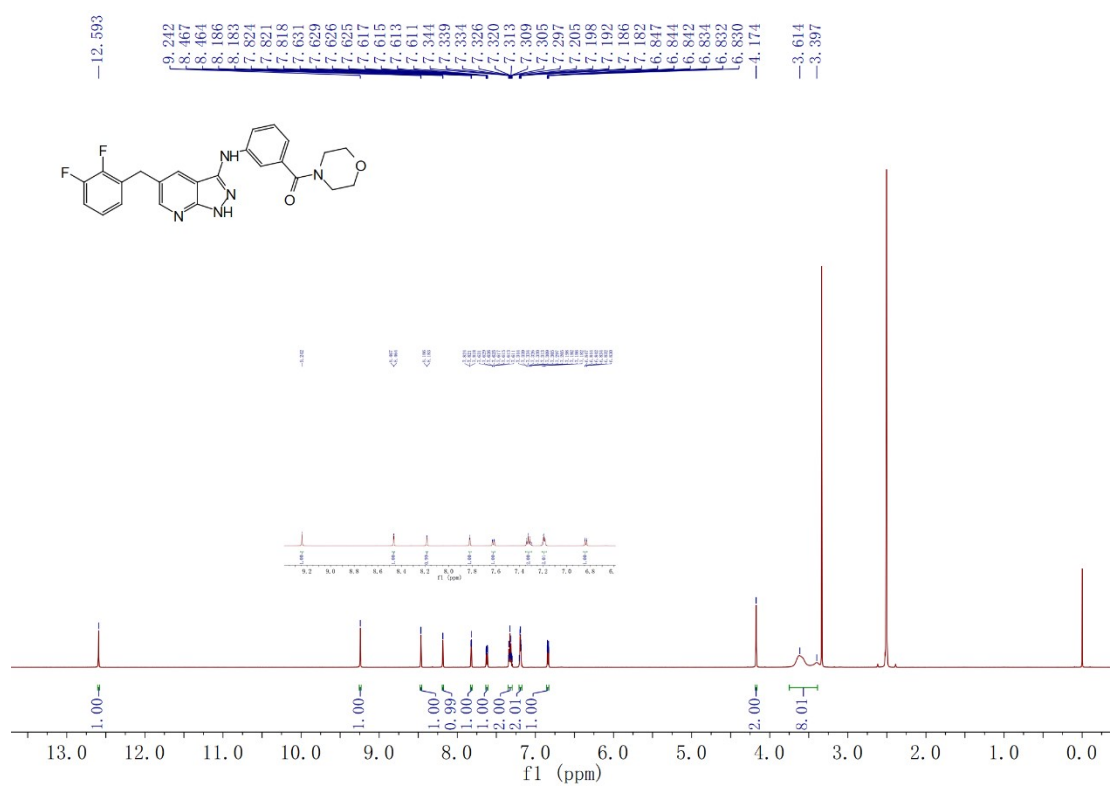
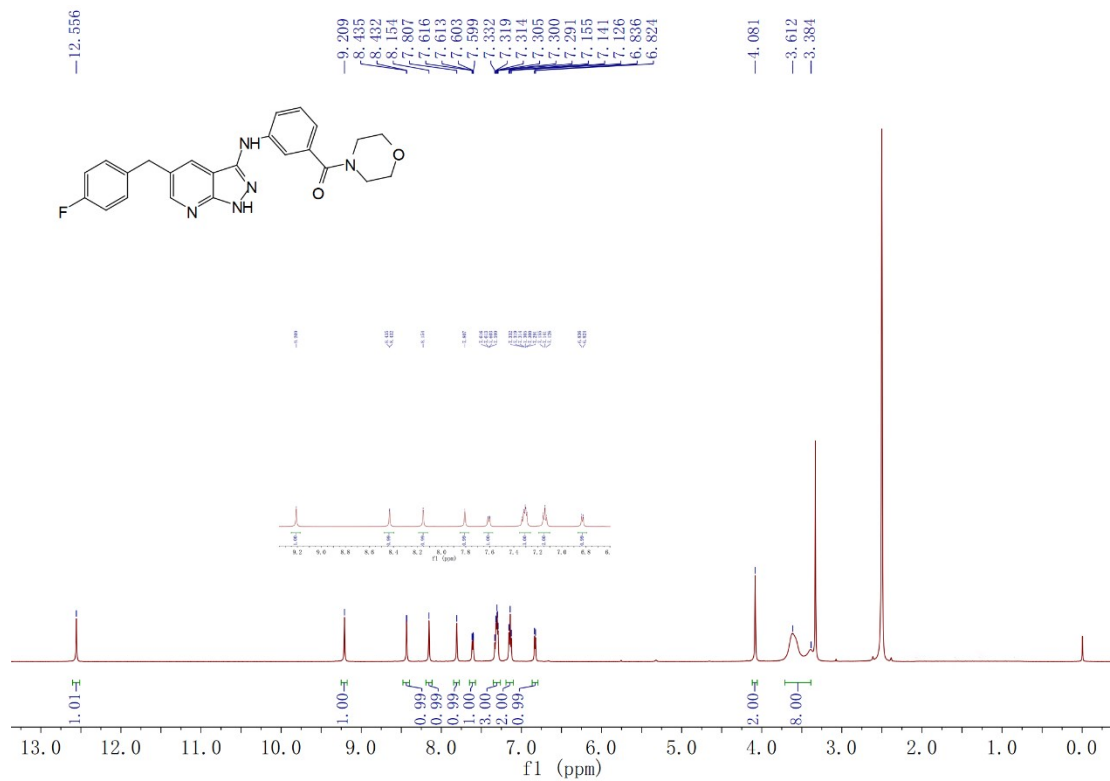


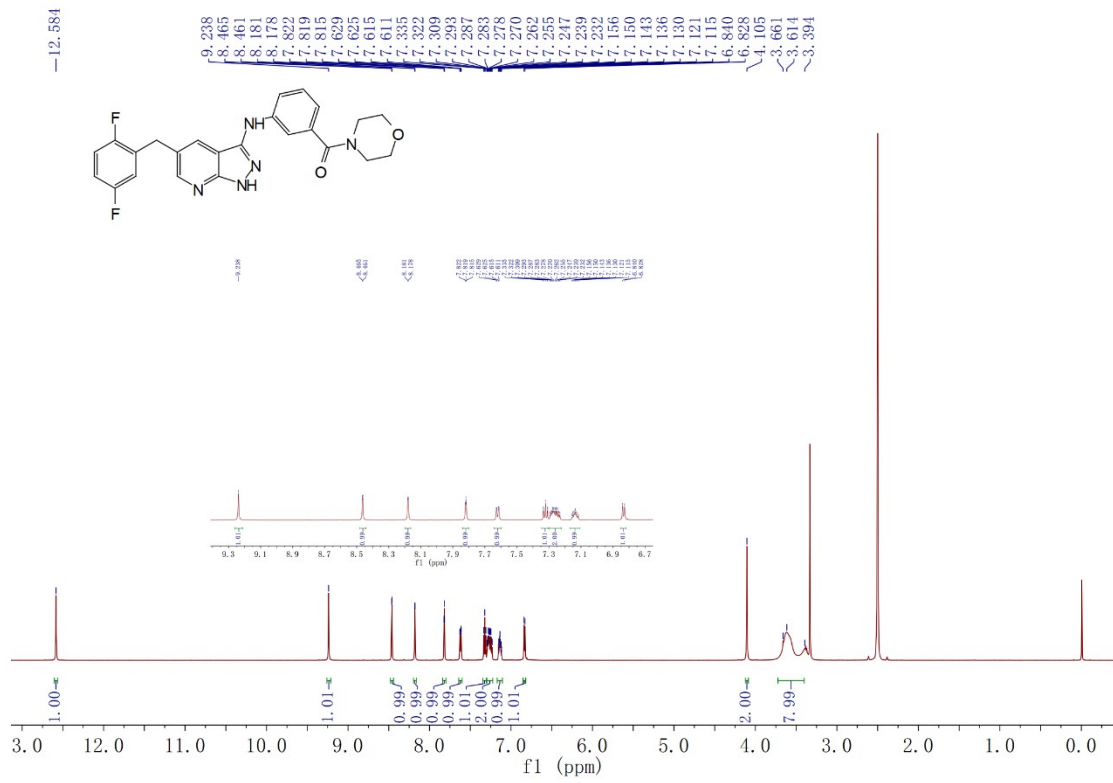
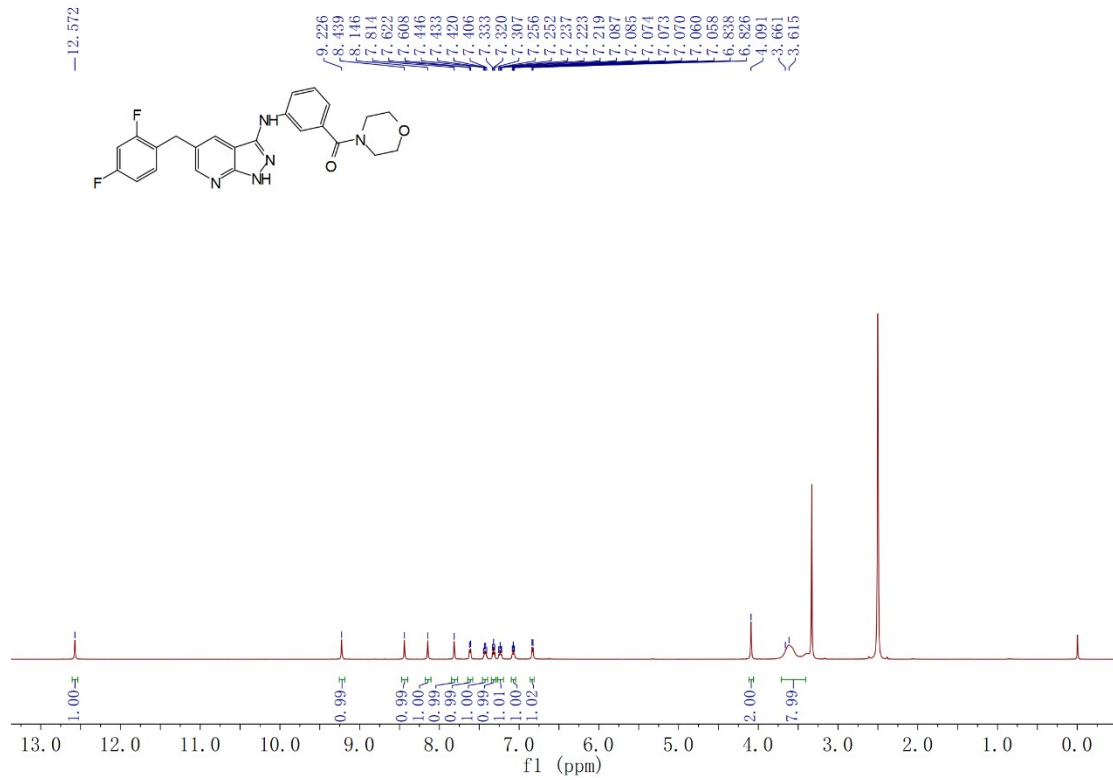
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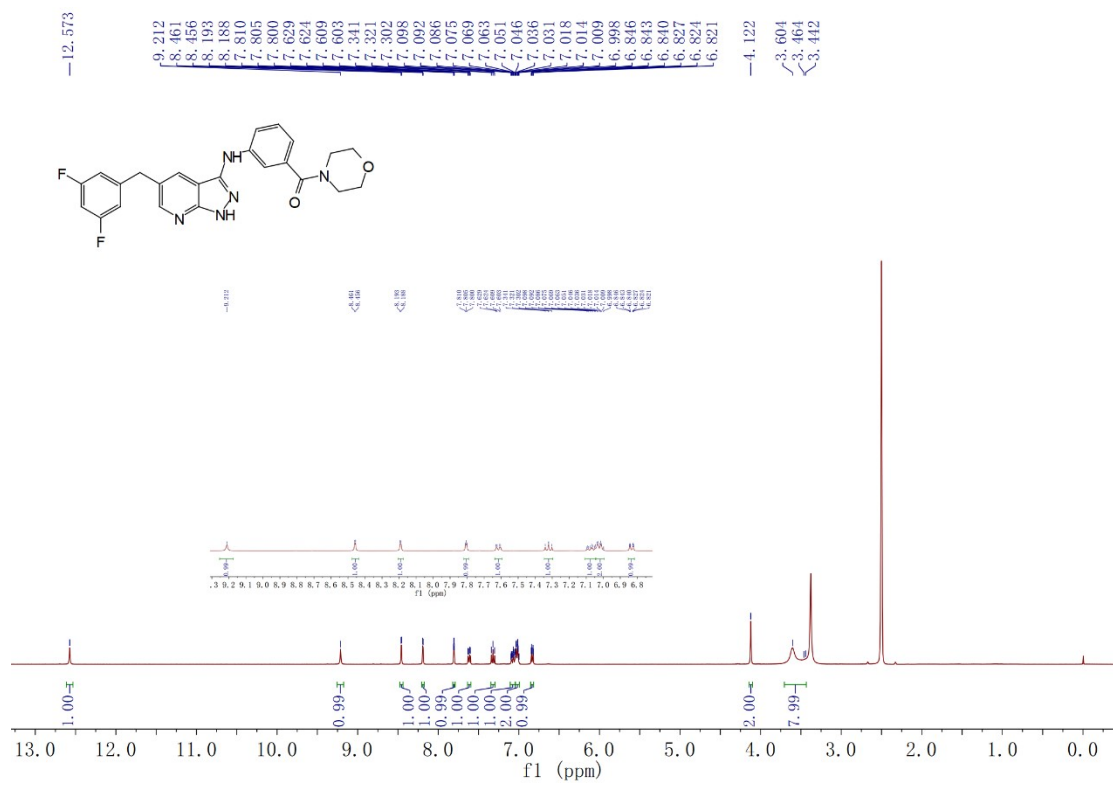
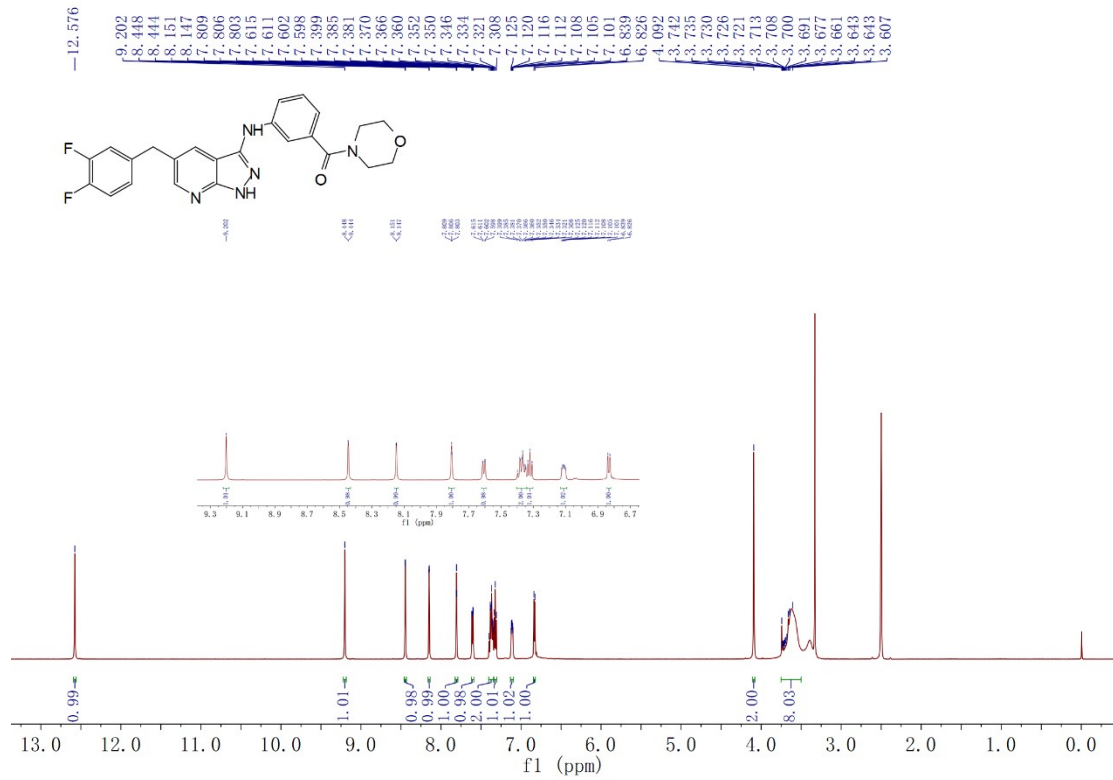


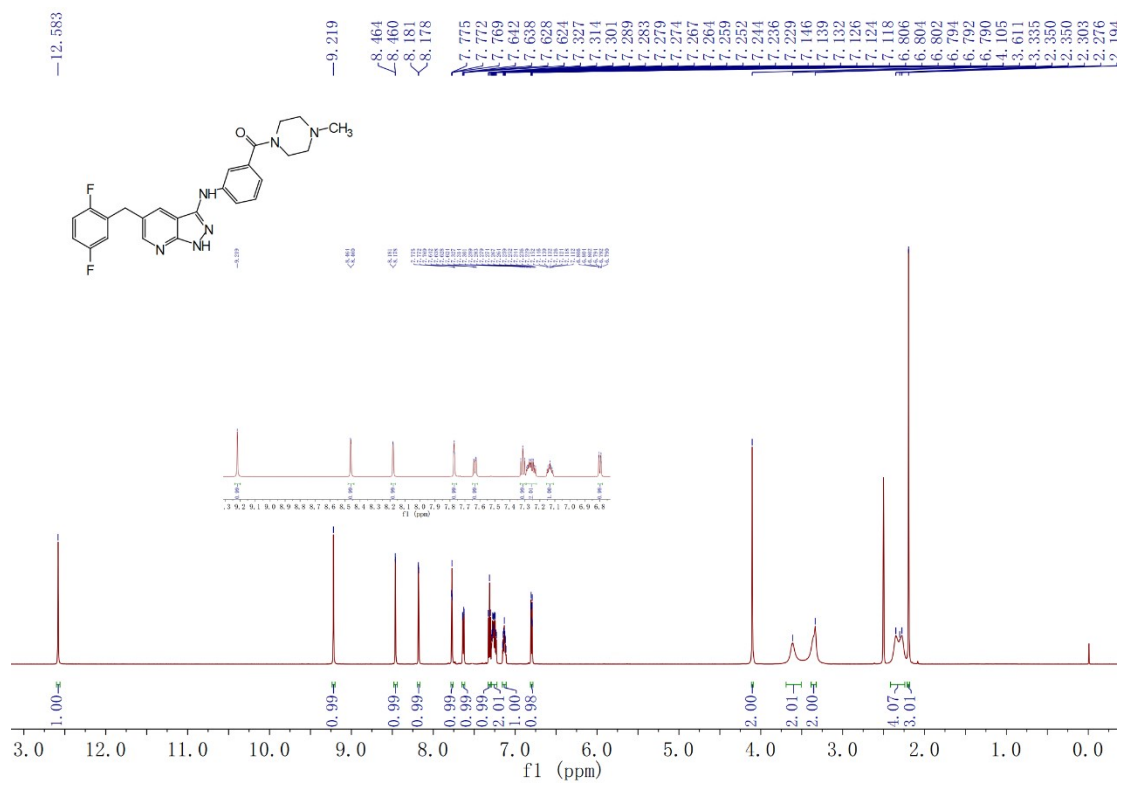
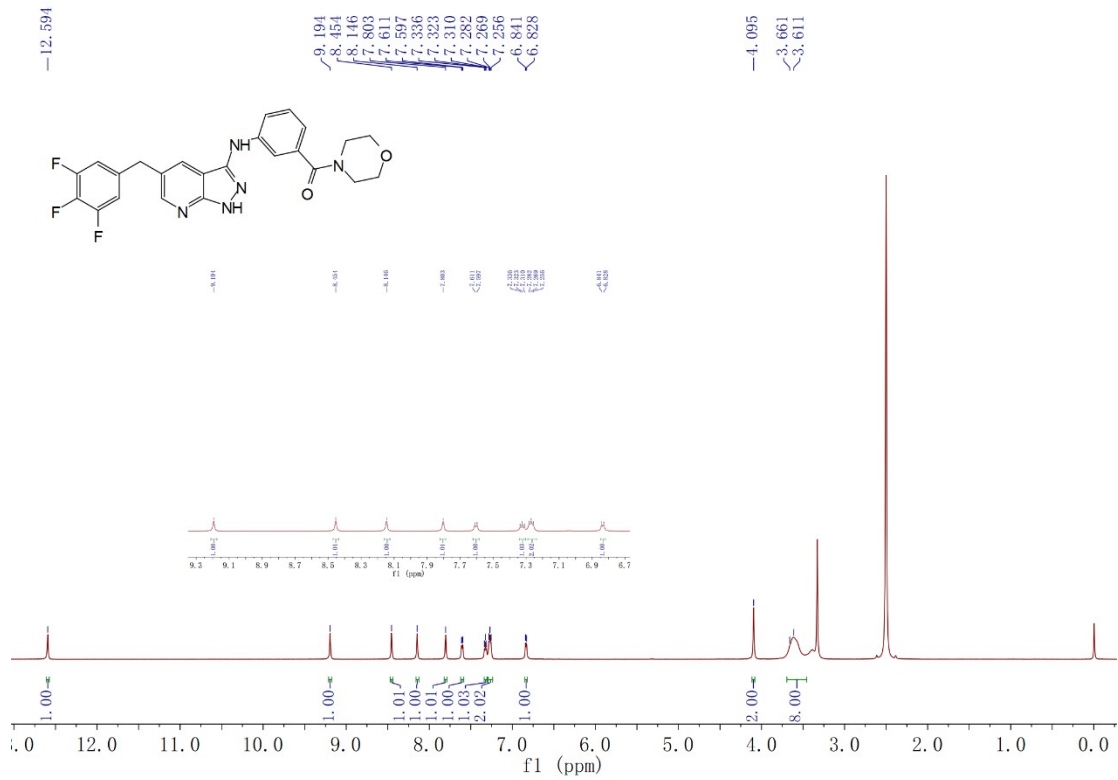


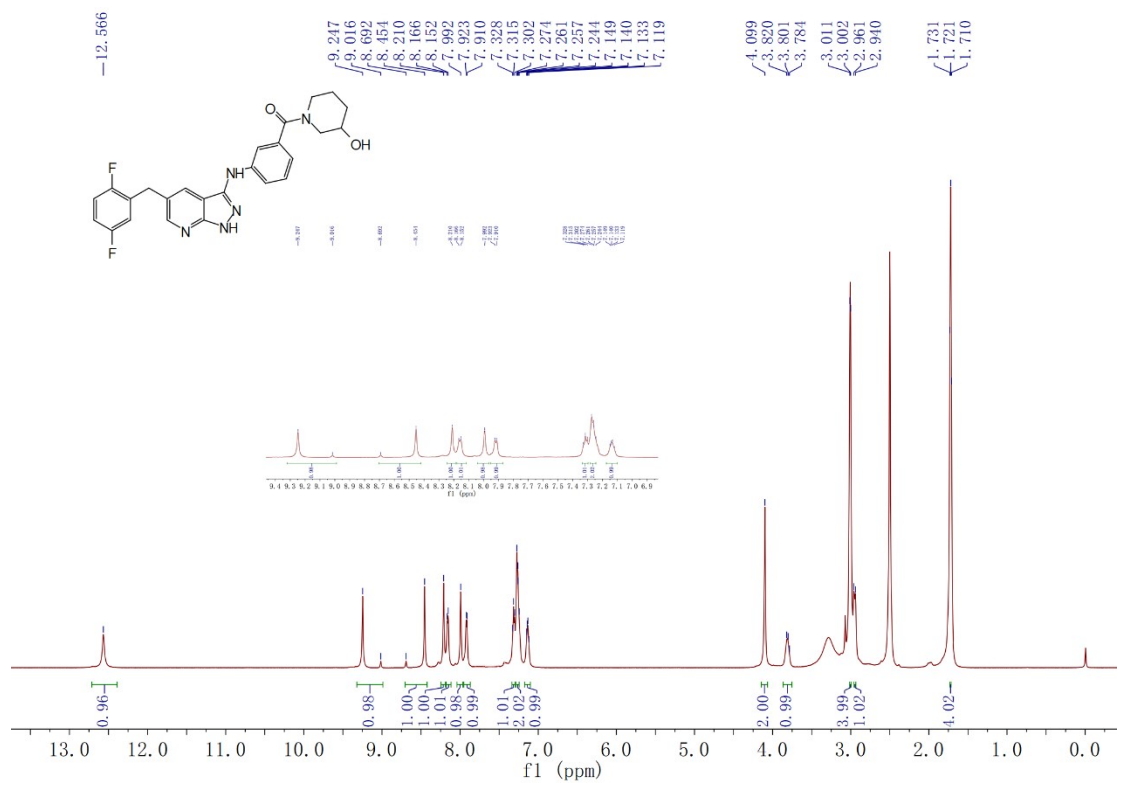
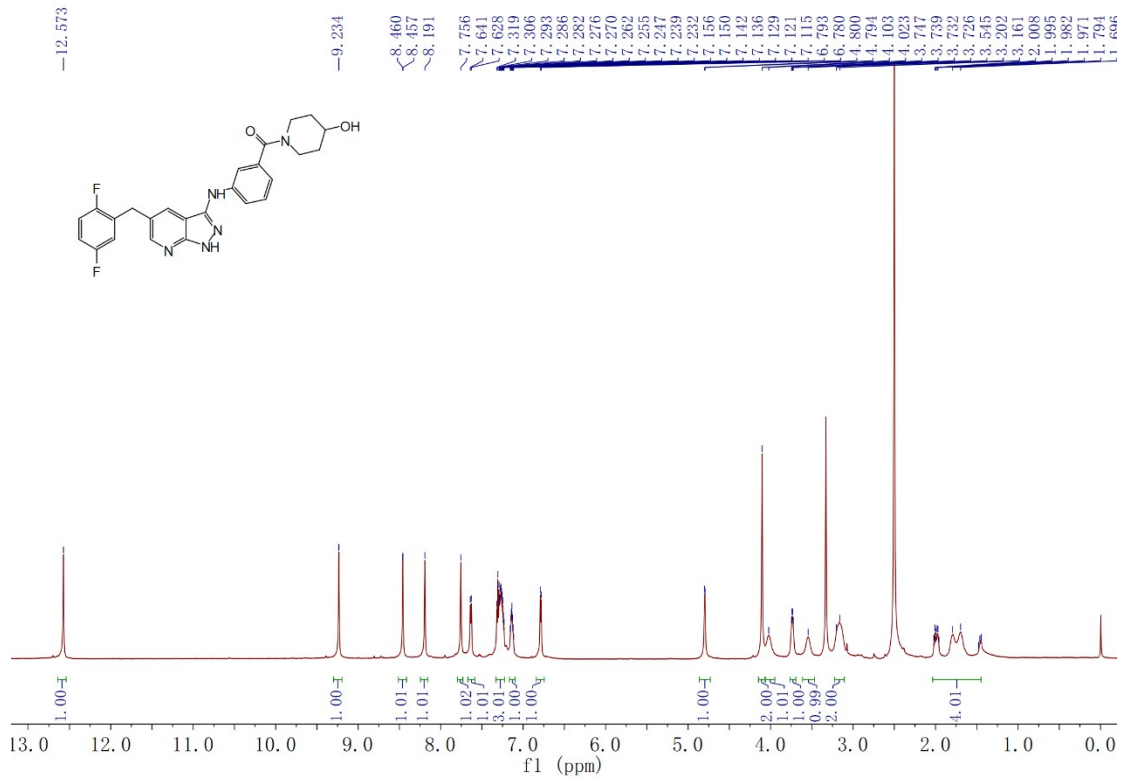


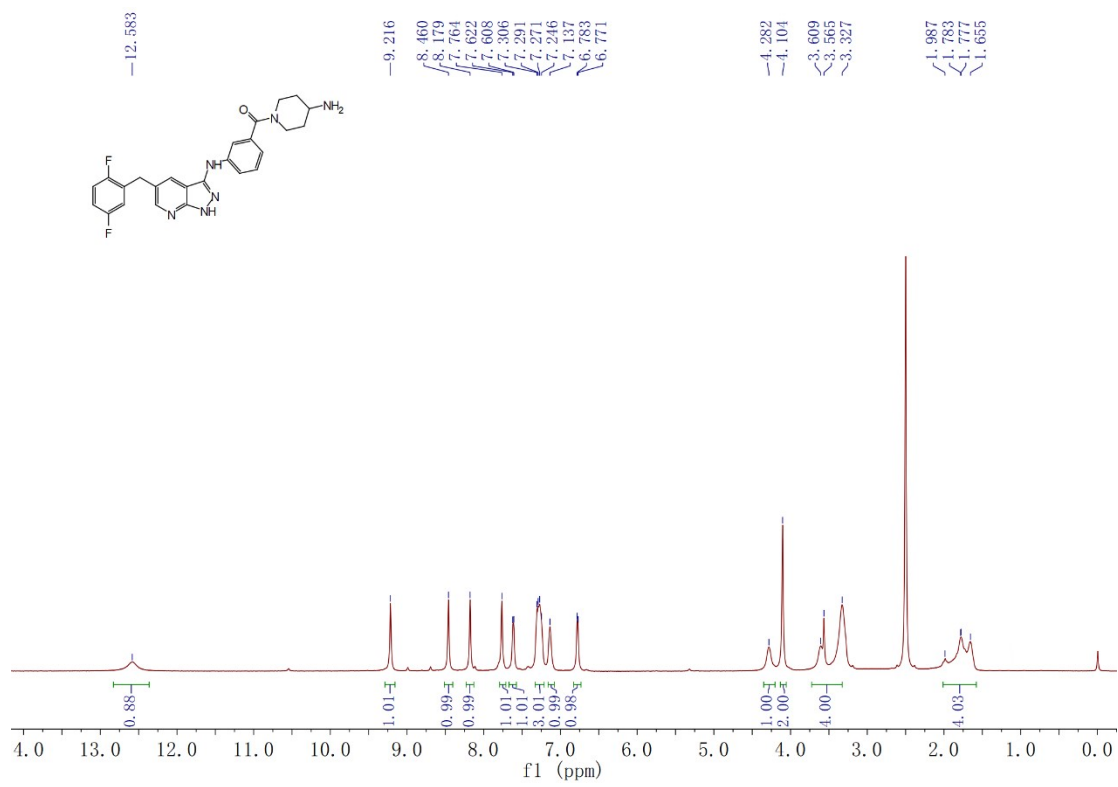
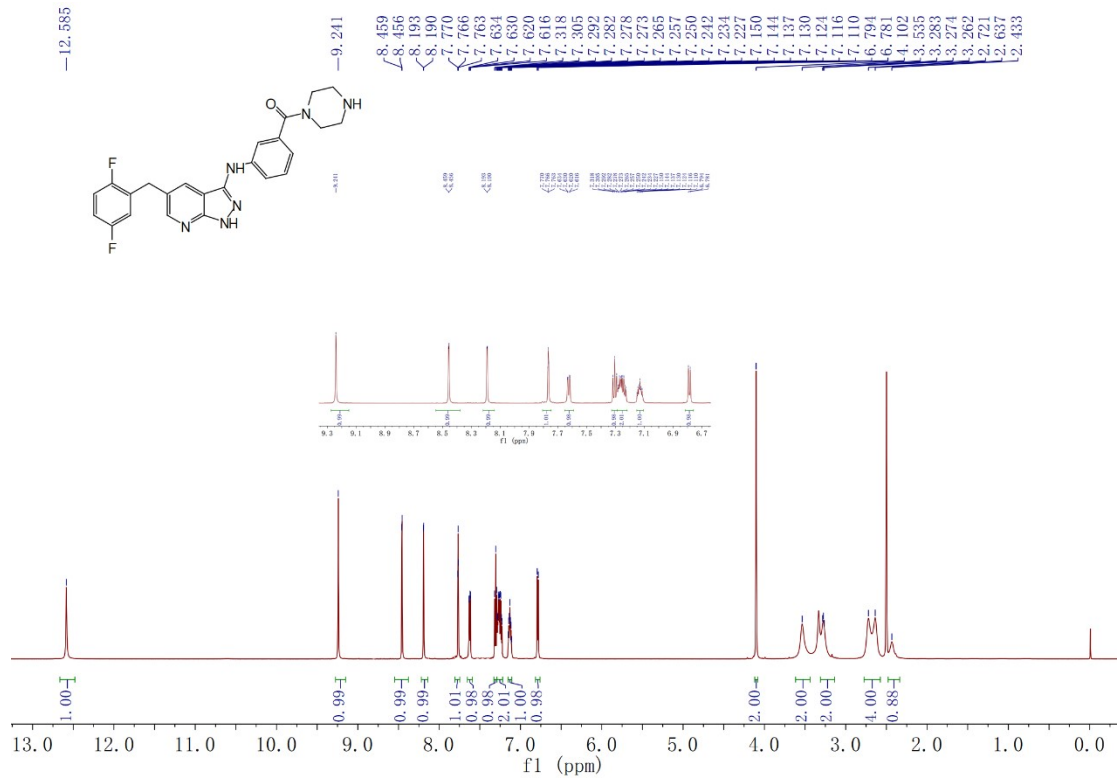


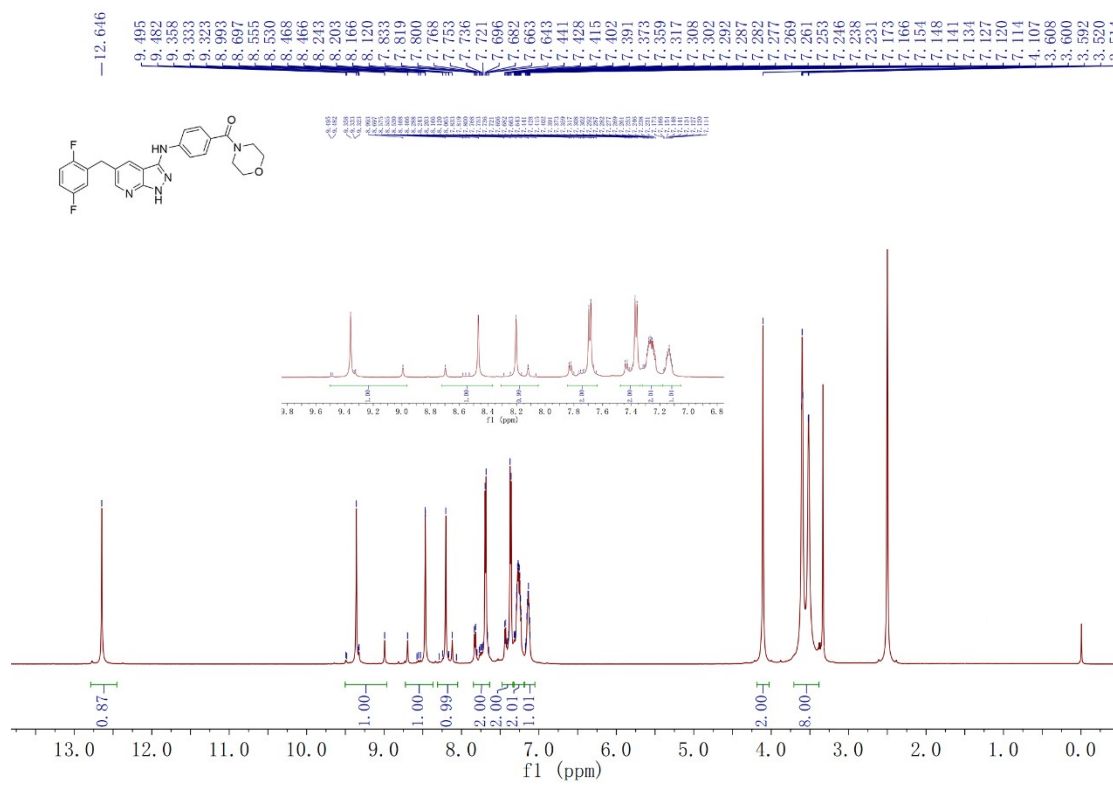
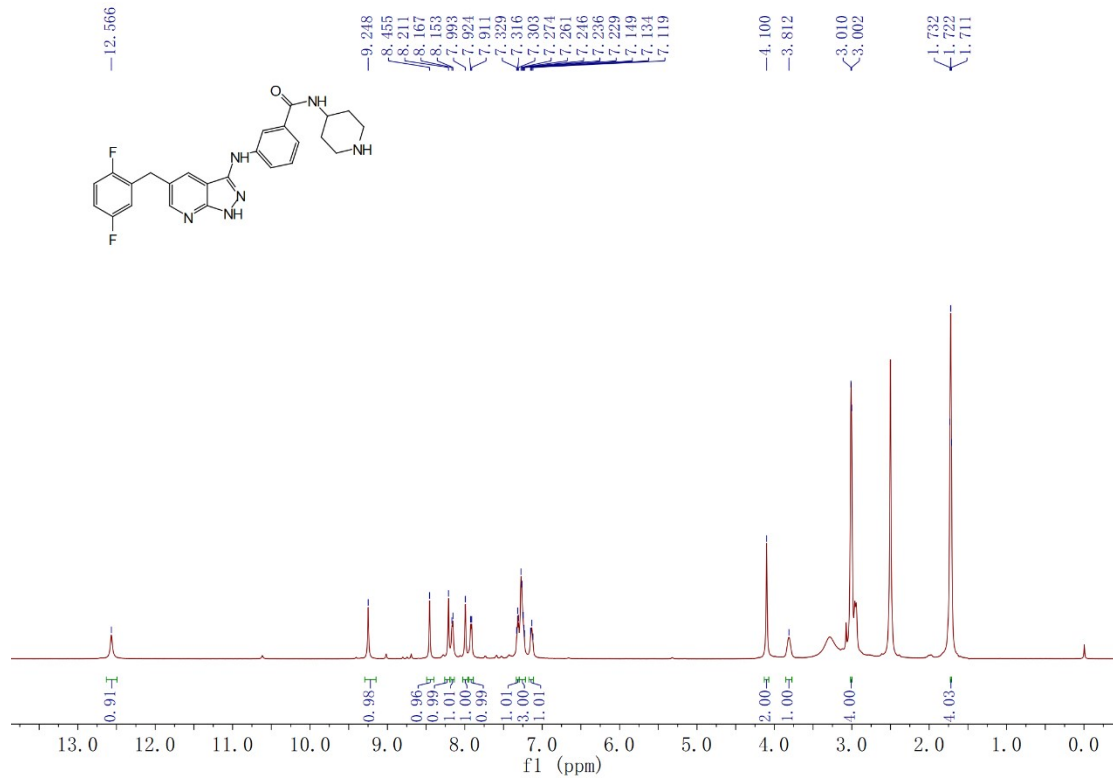


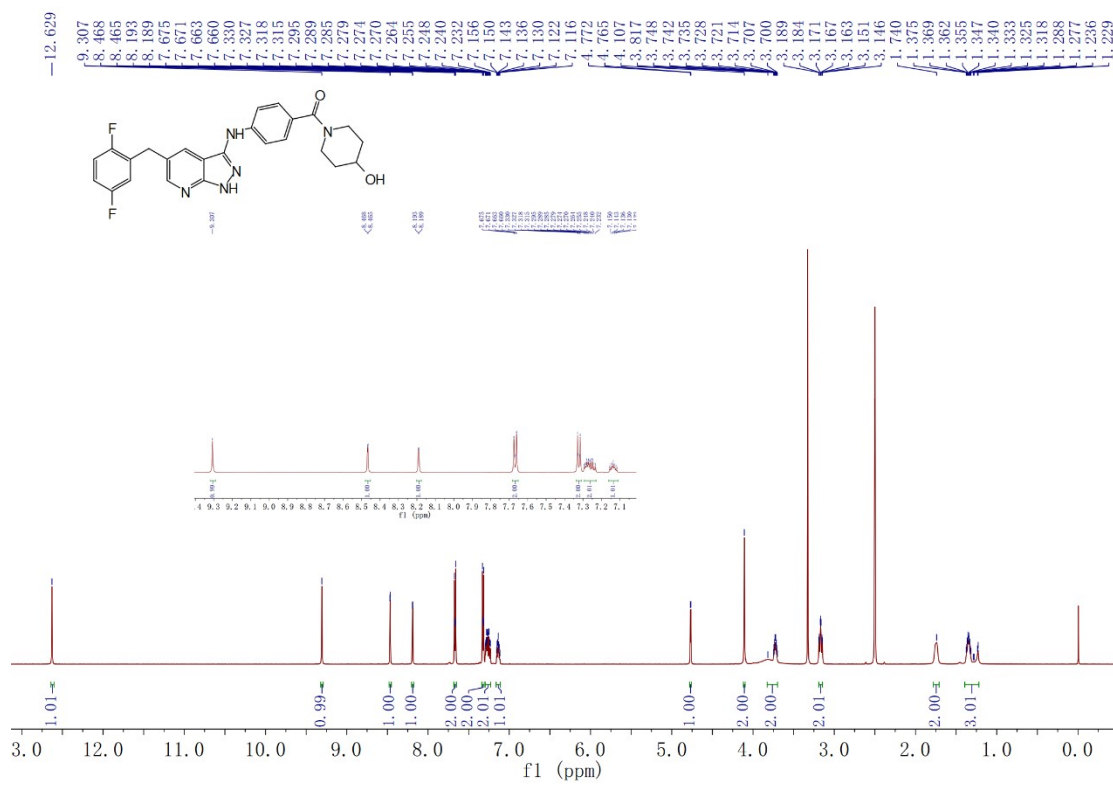
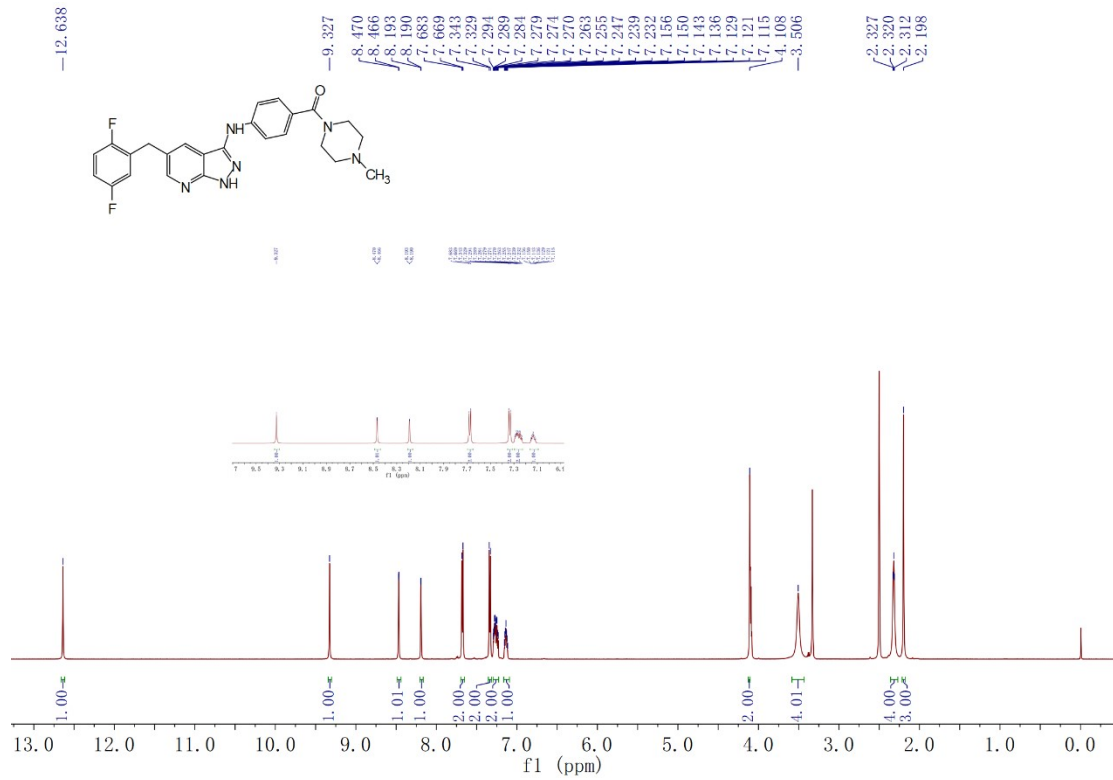




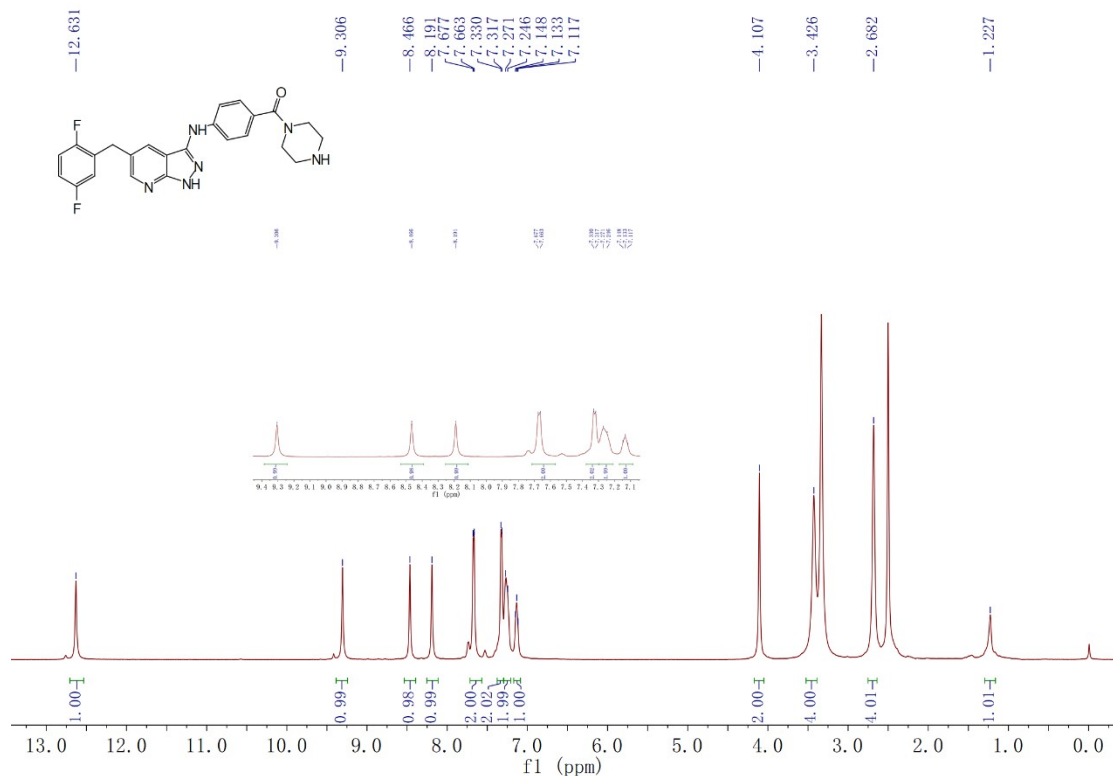
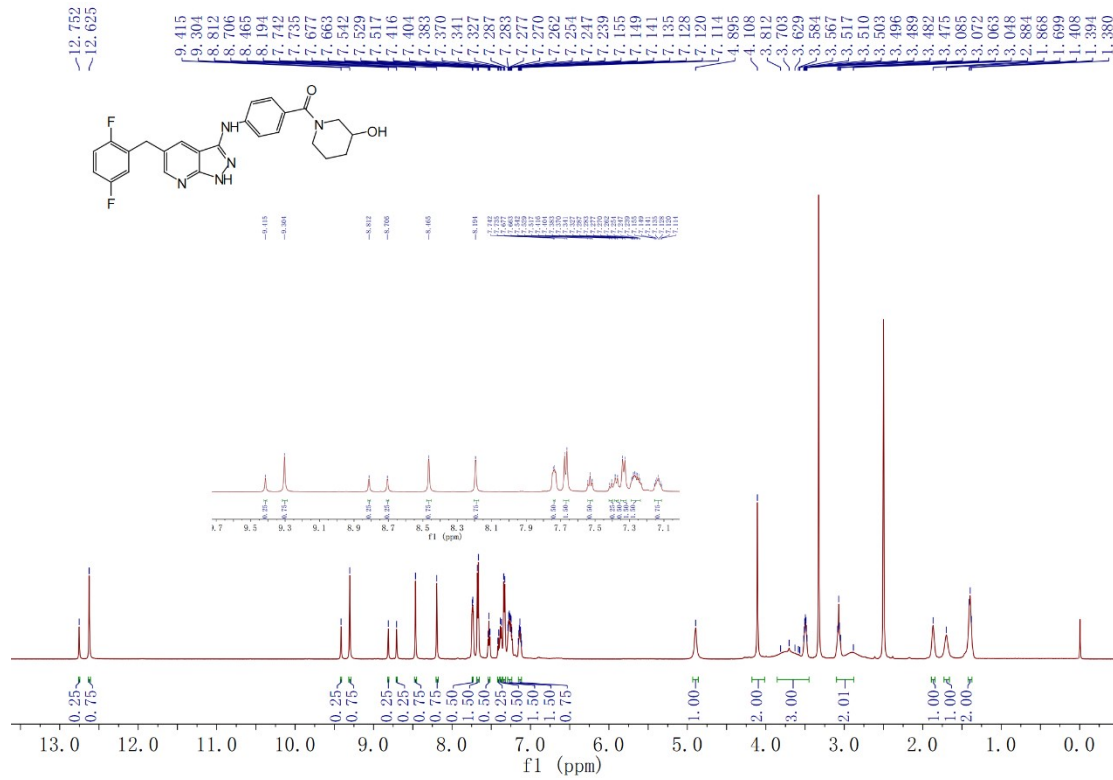


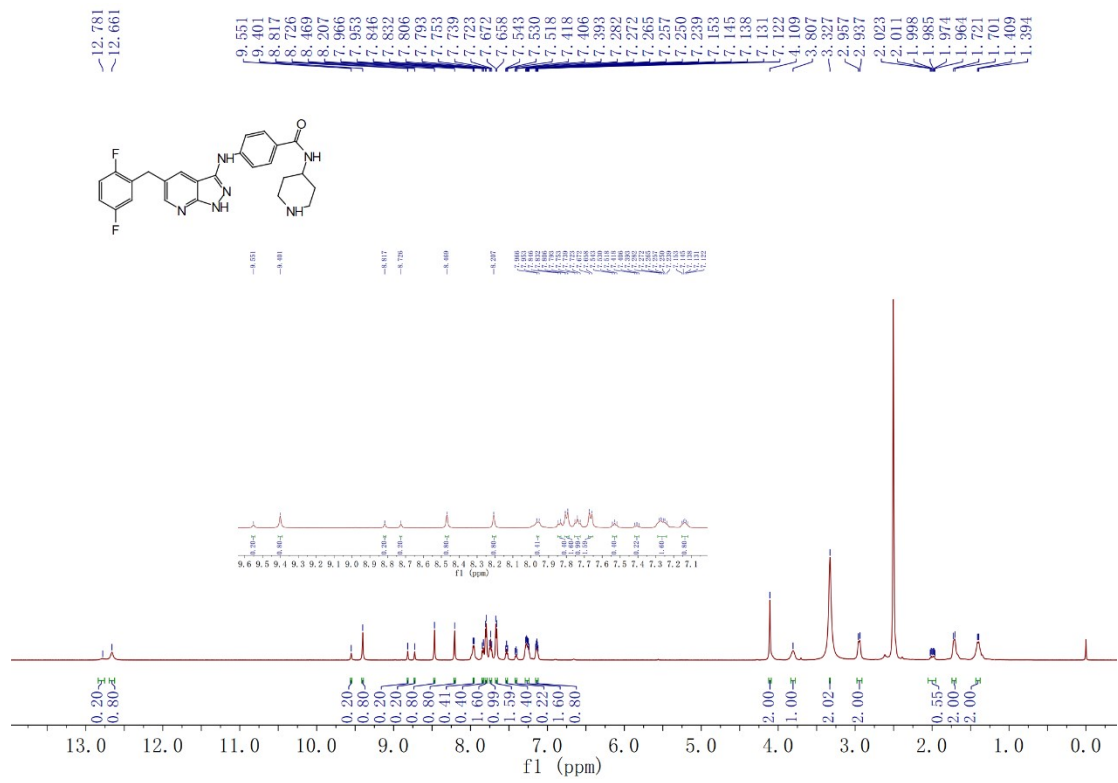
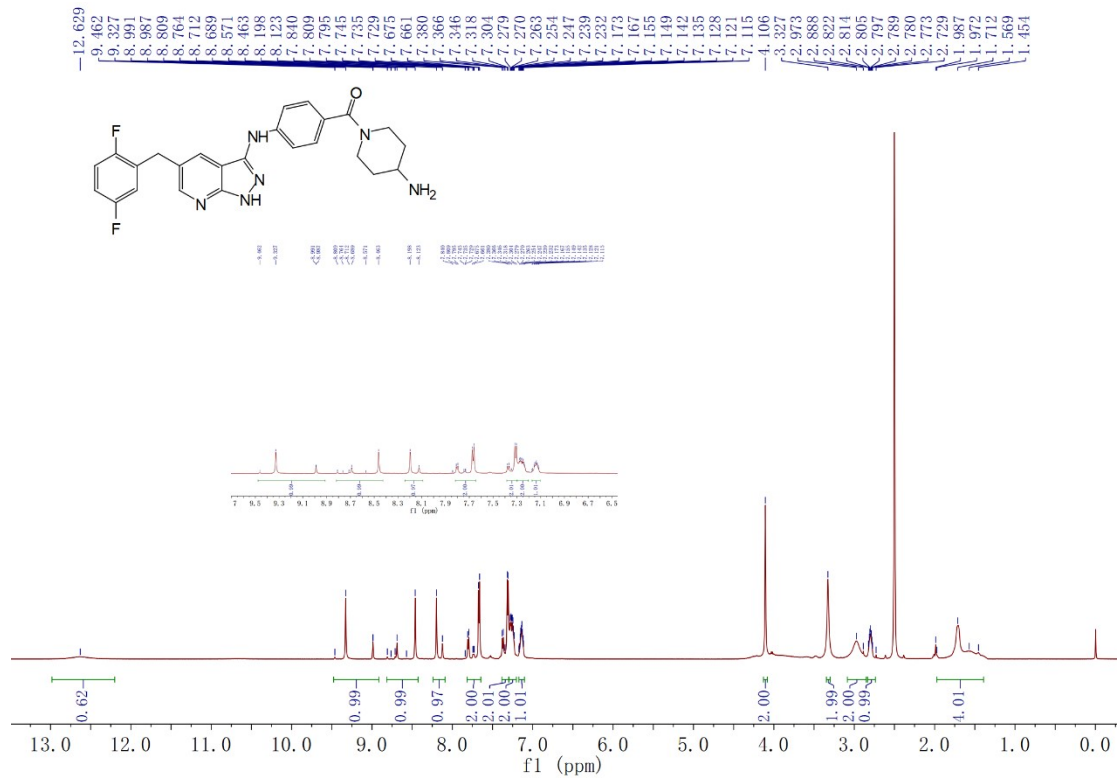


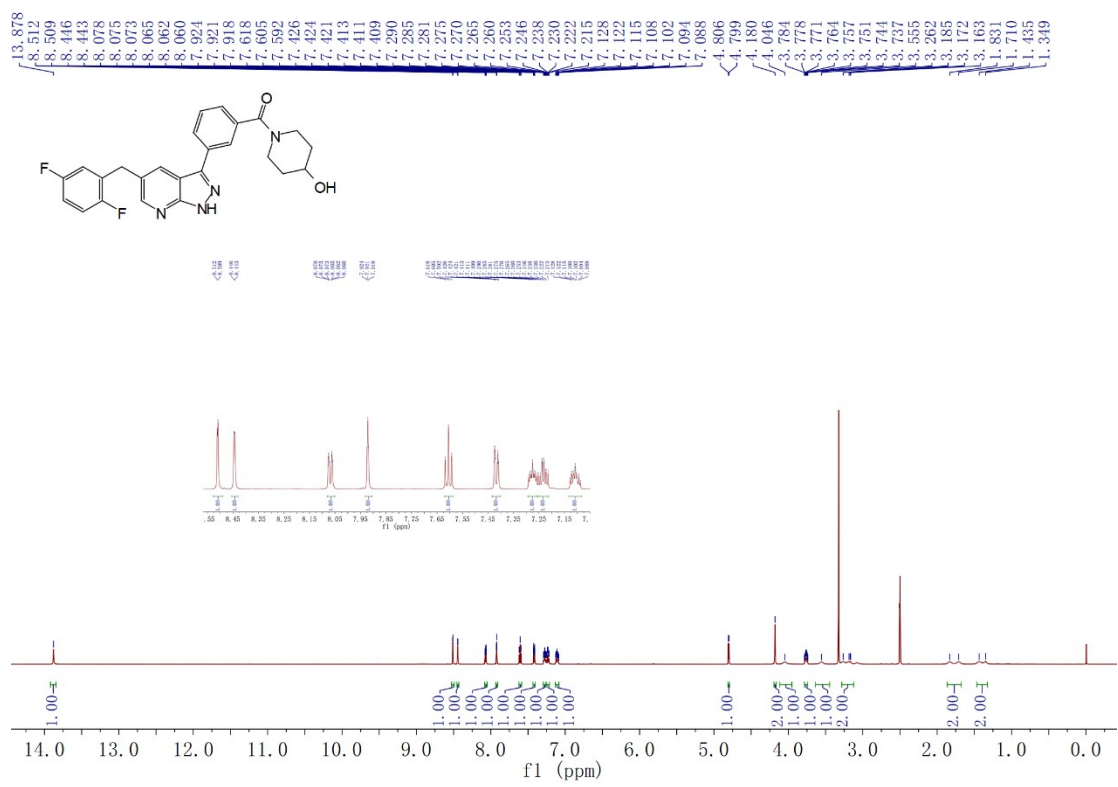
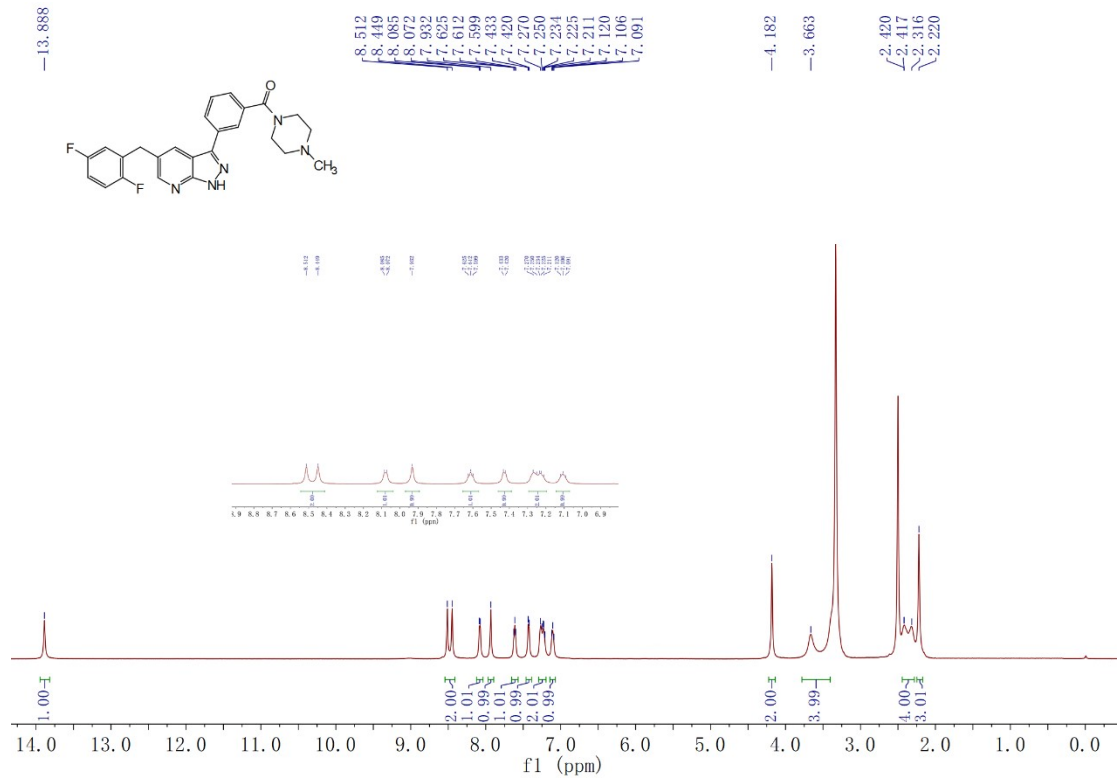


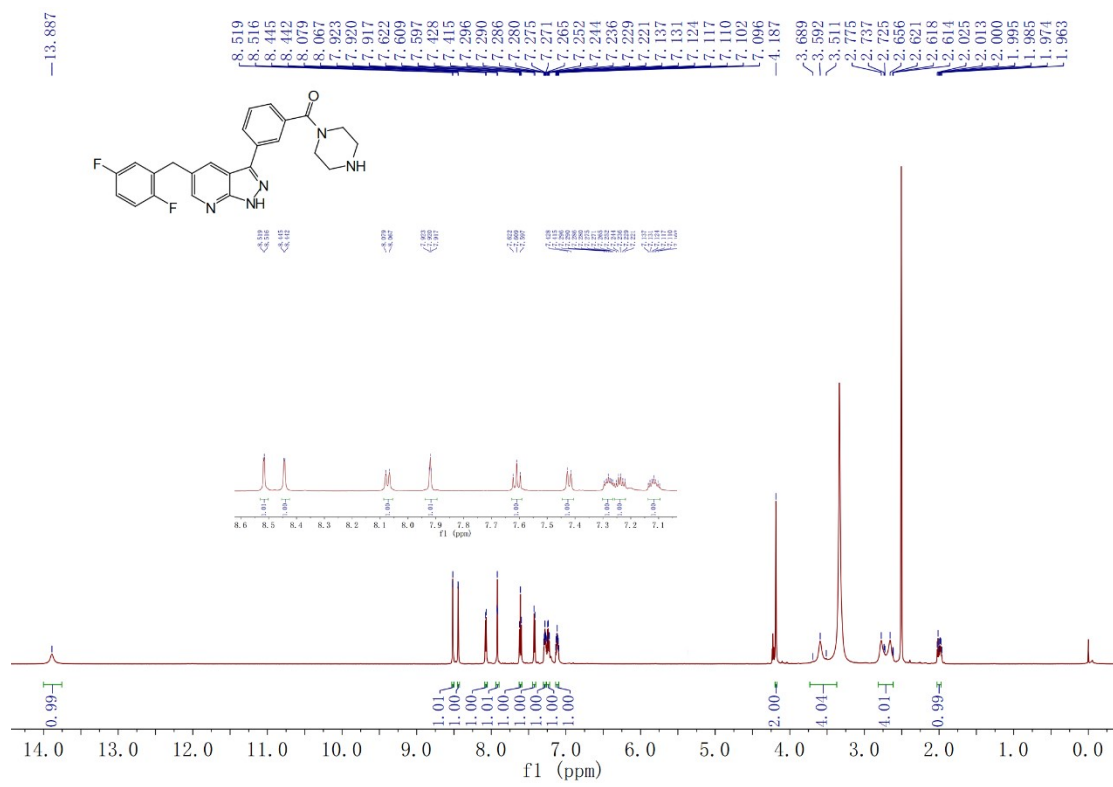
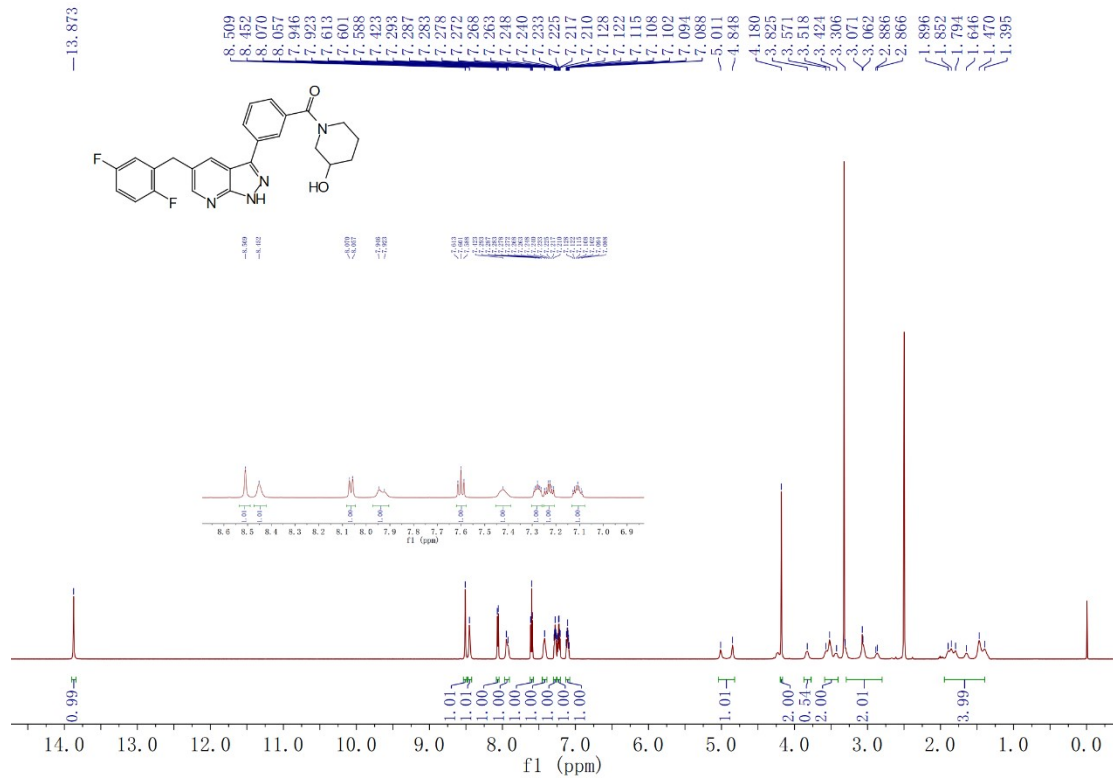




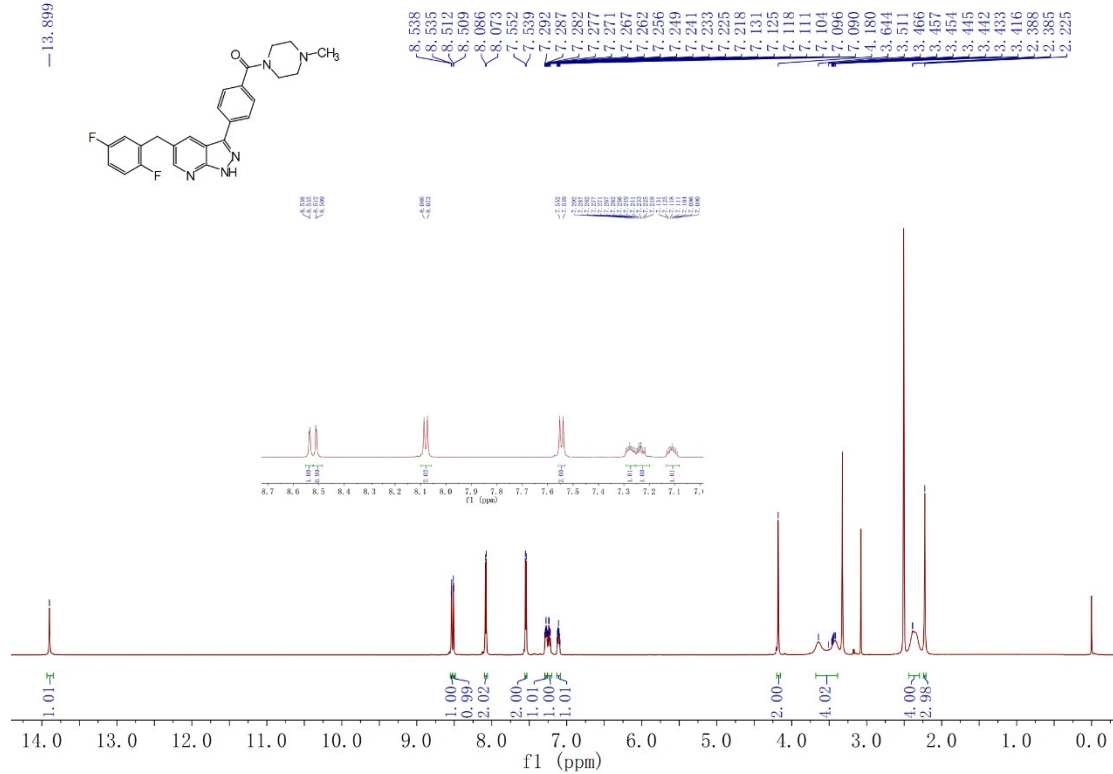




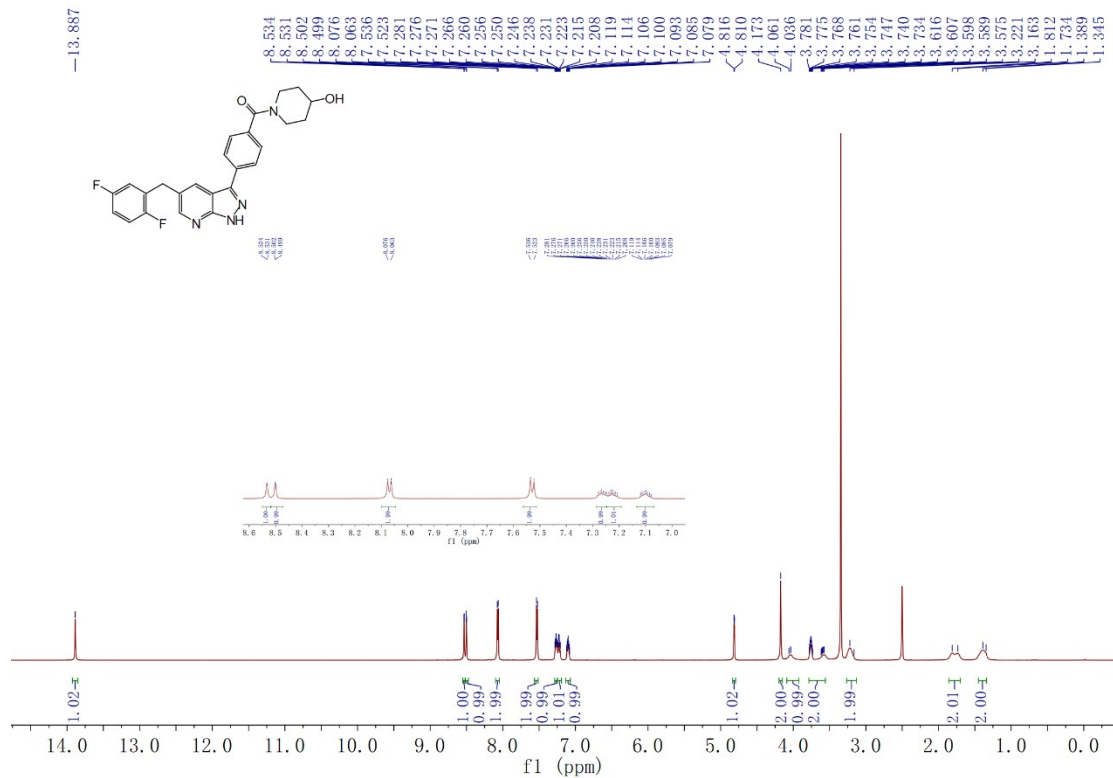




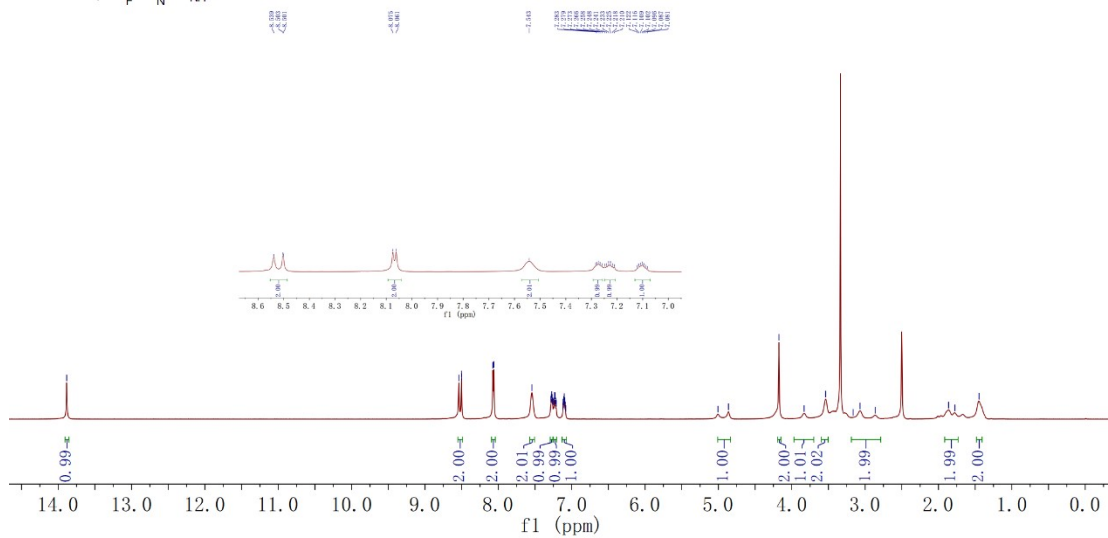
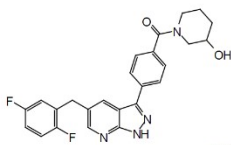
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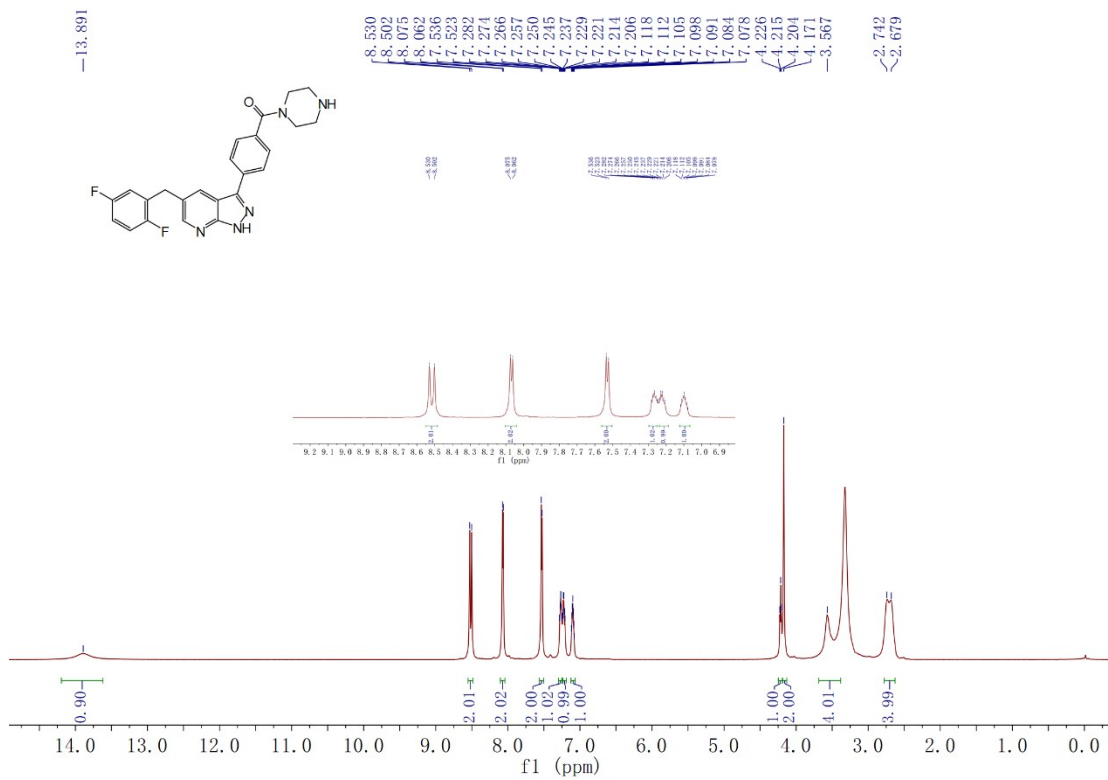
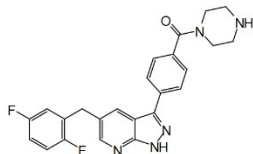
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-13.884



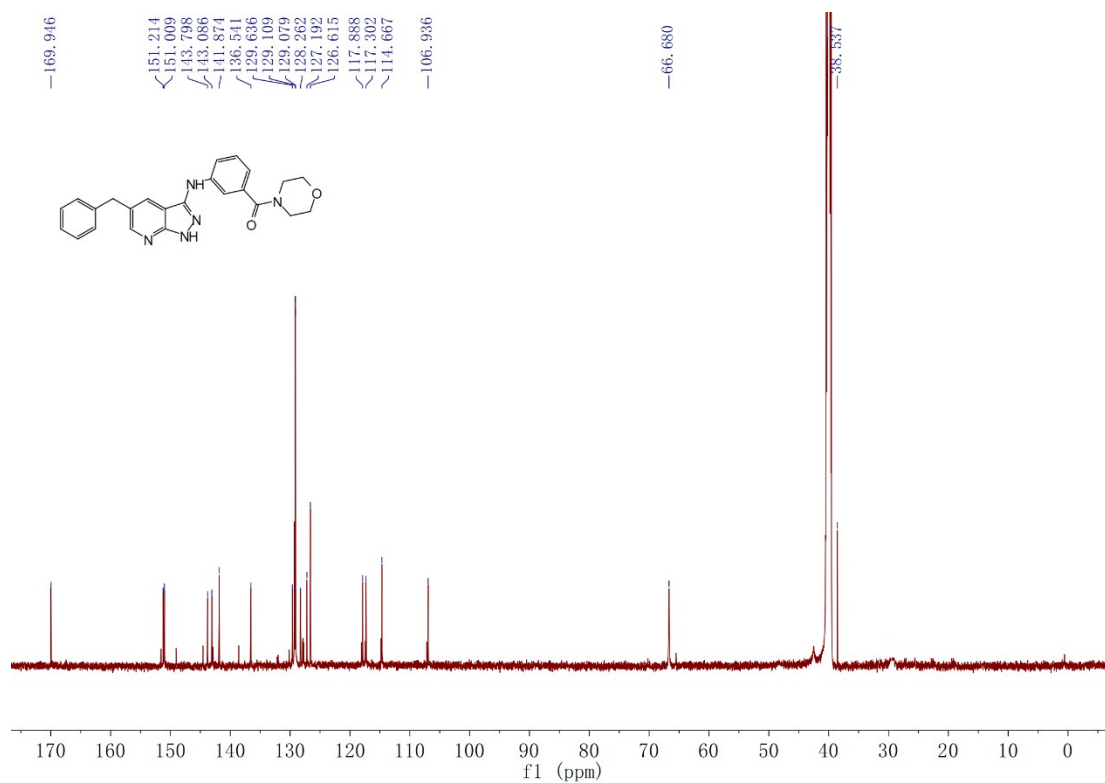
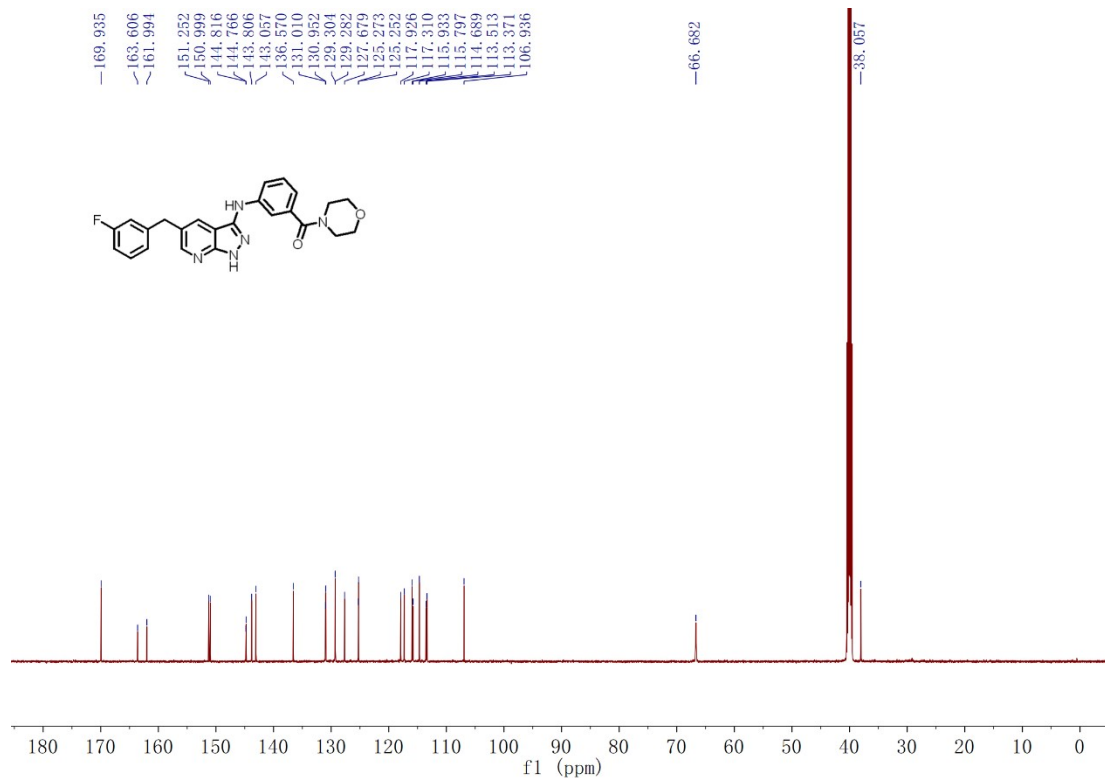
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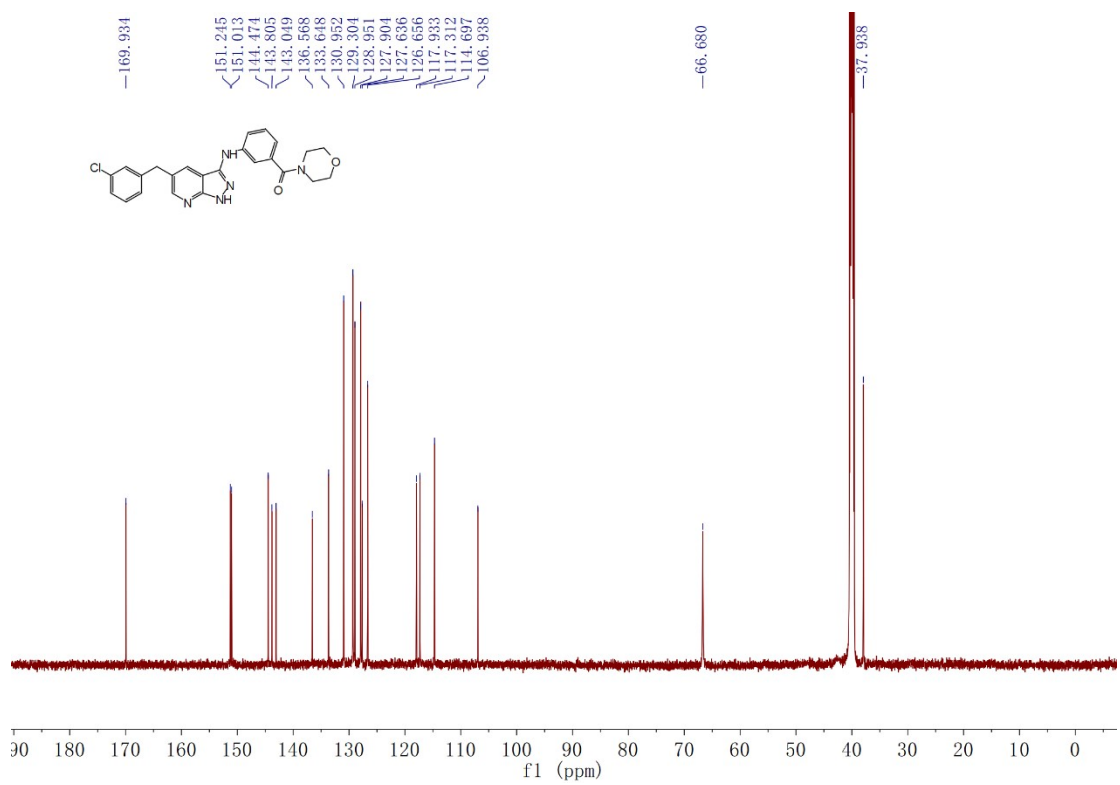
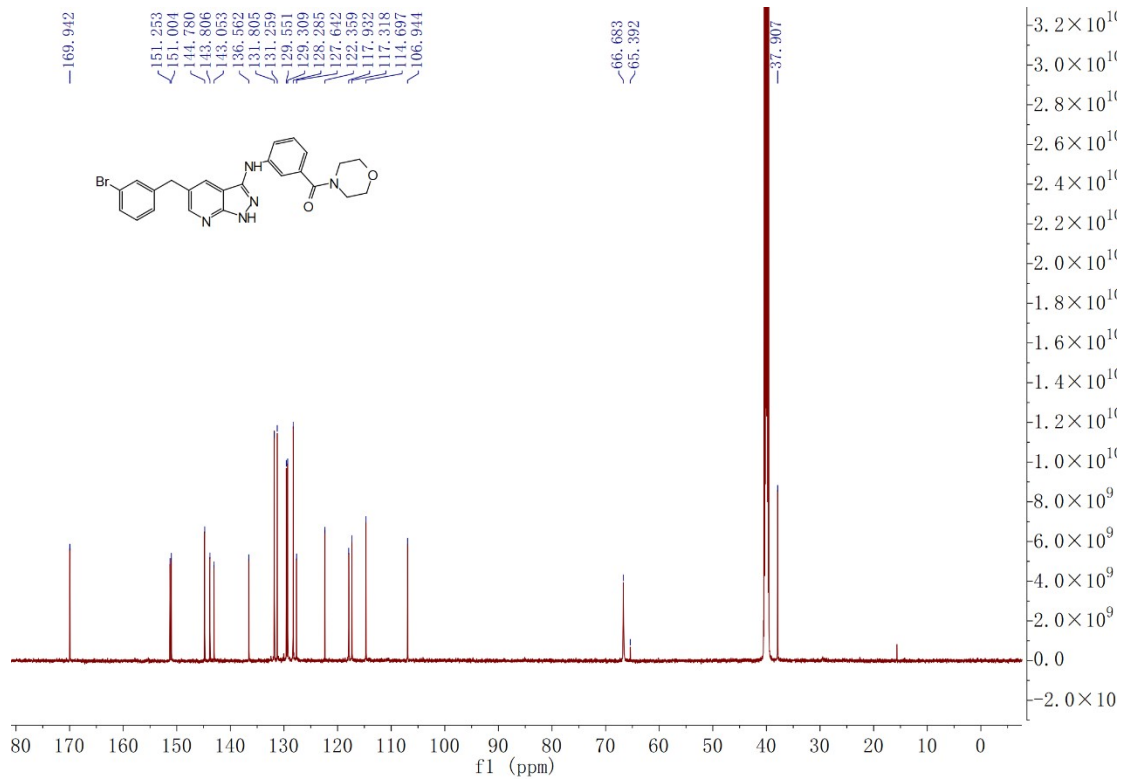


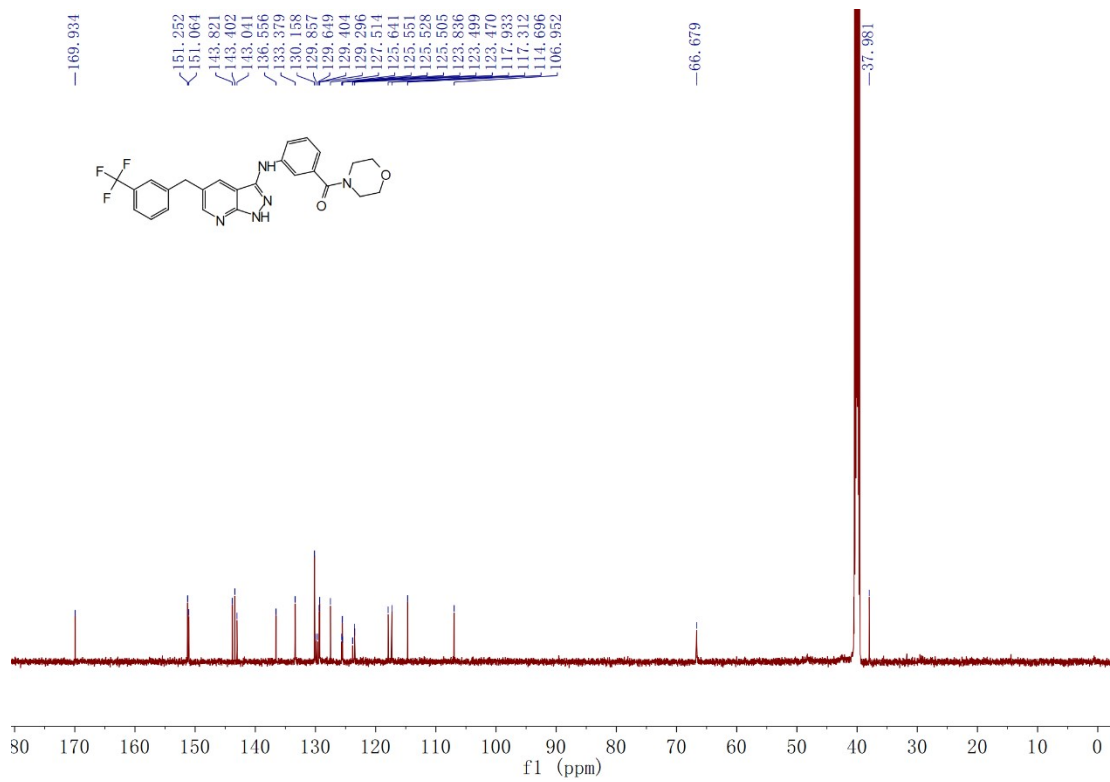
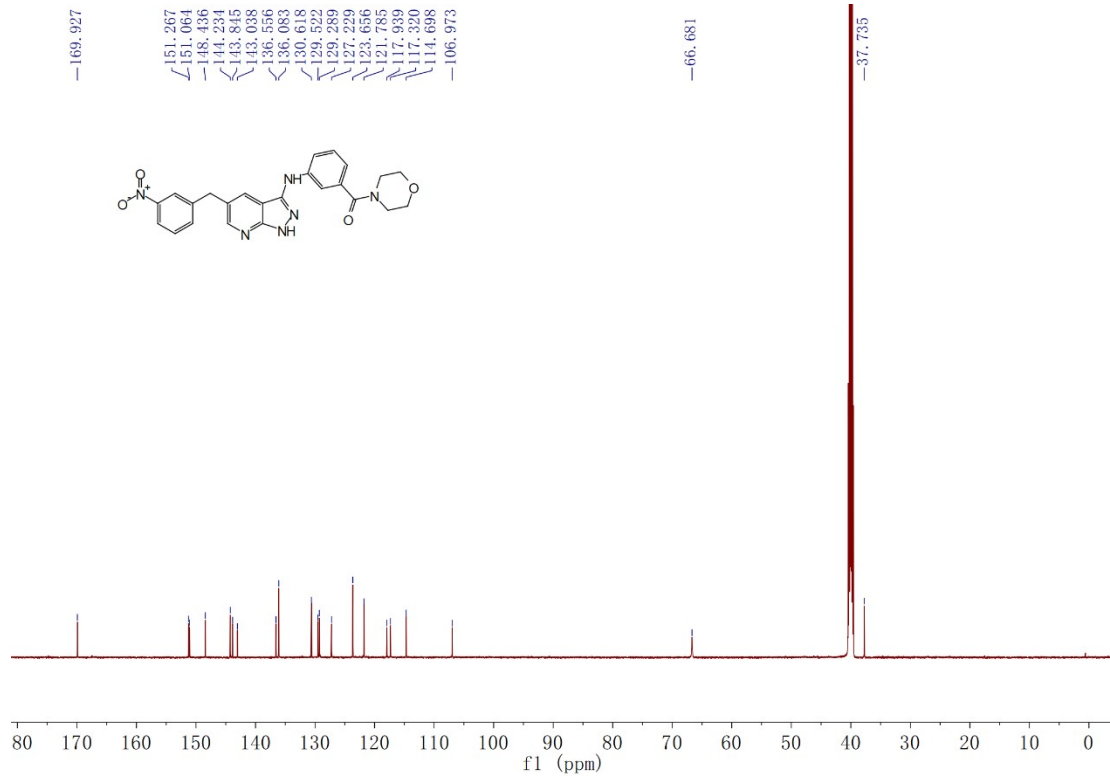


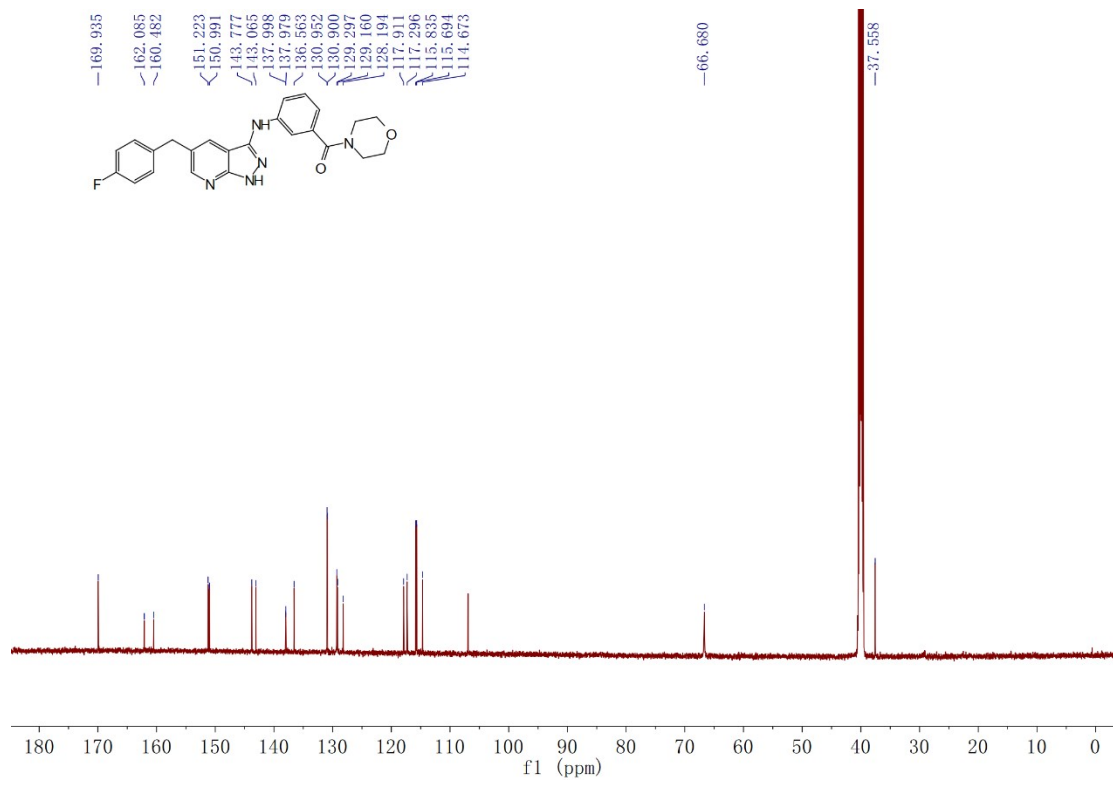
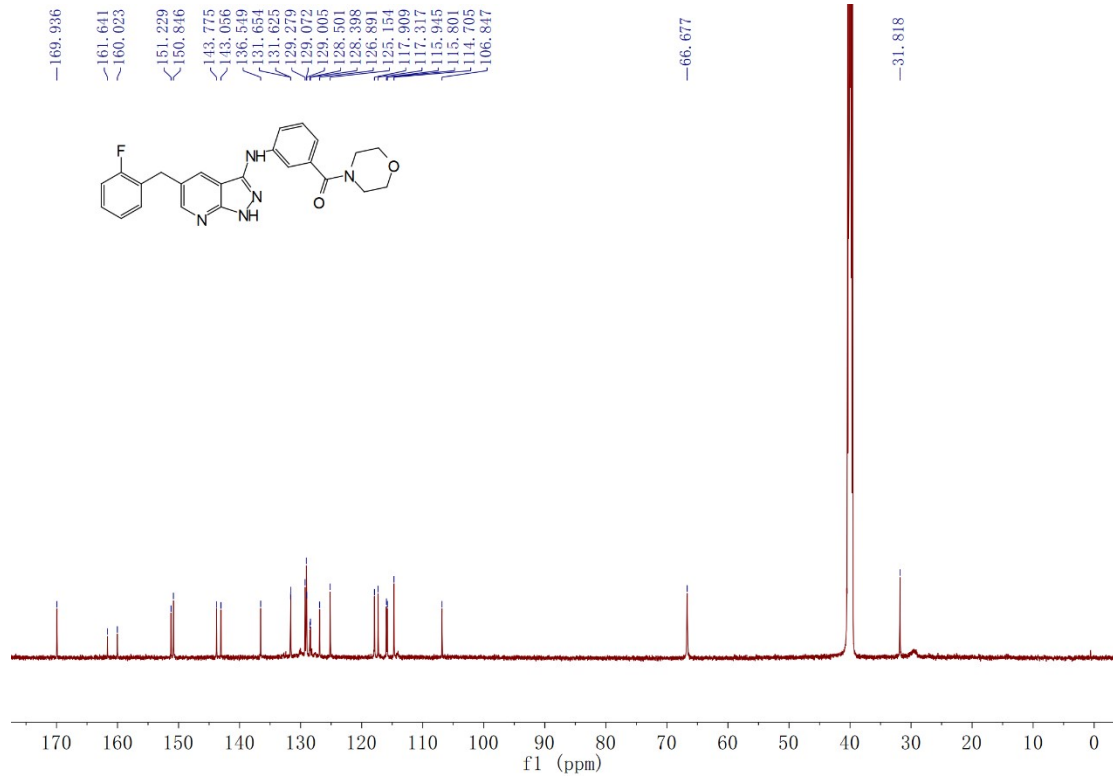
<sup>13</sup>C-NMR spectra of compound referred in the article and the structure of compound is noted in the spectrum.

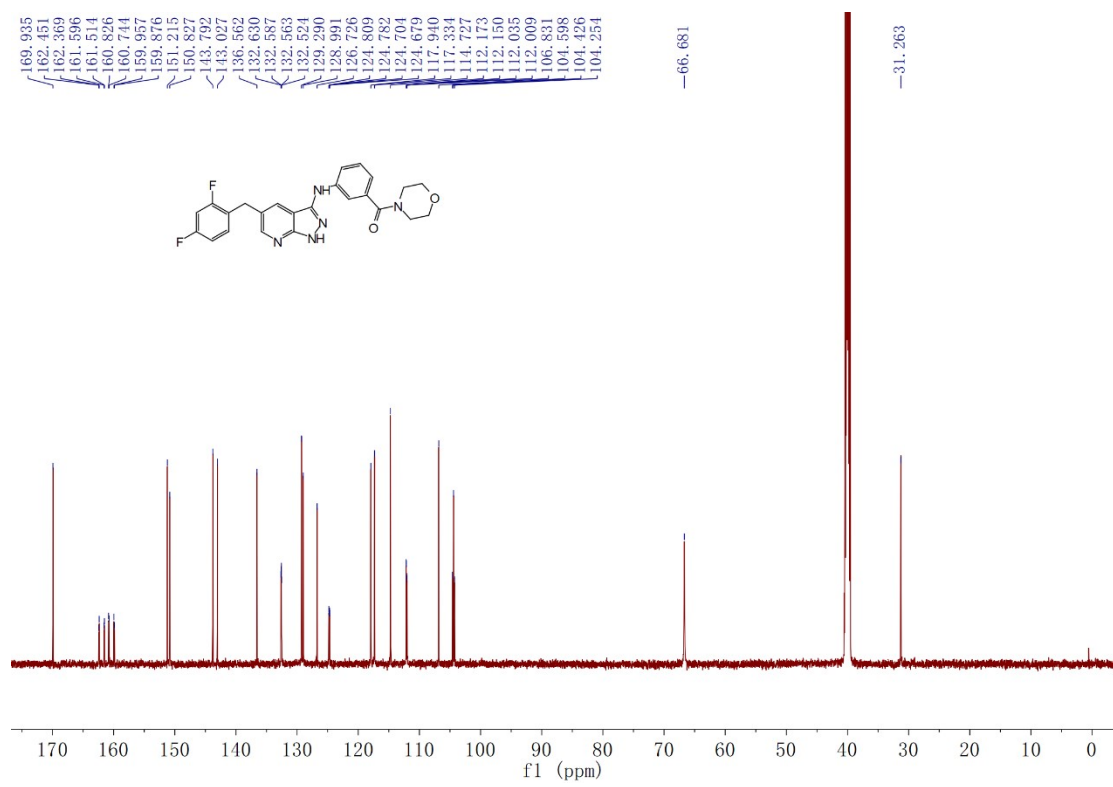
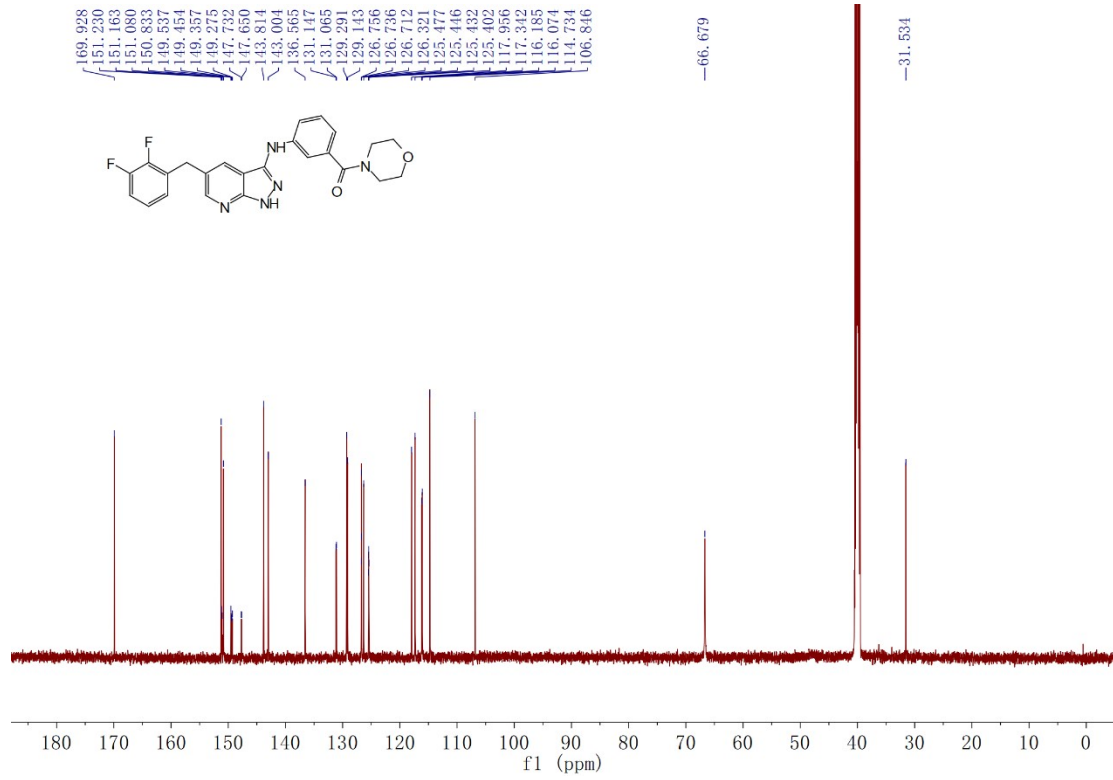


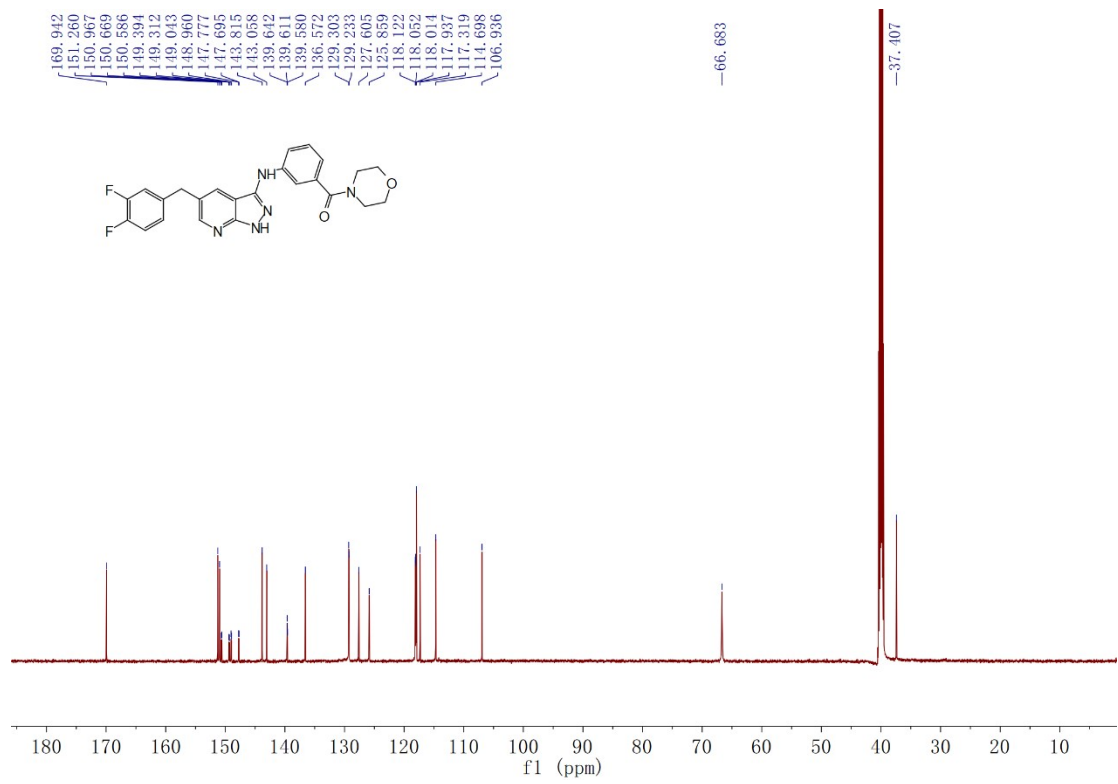
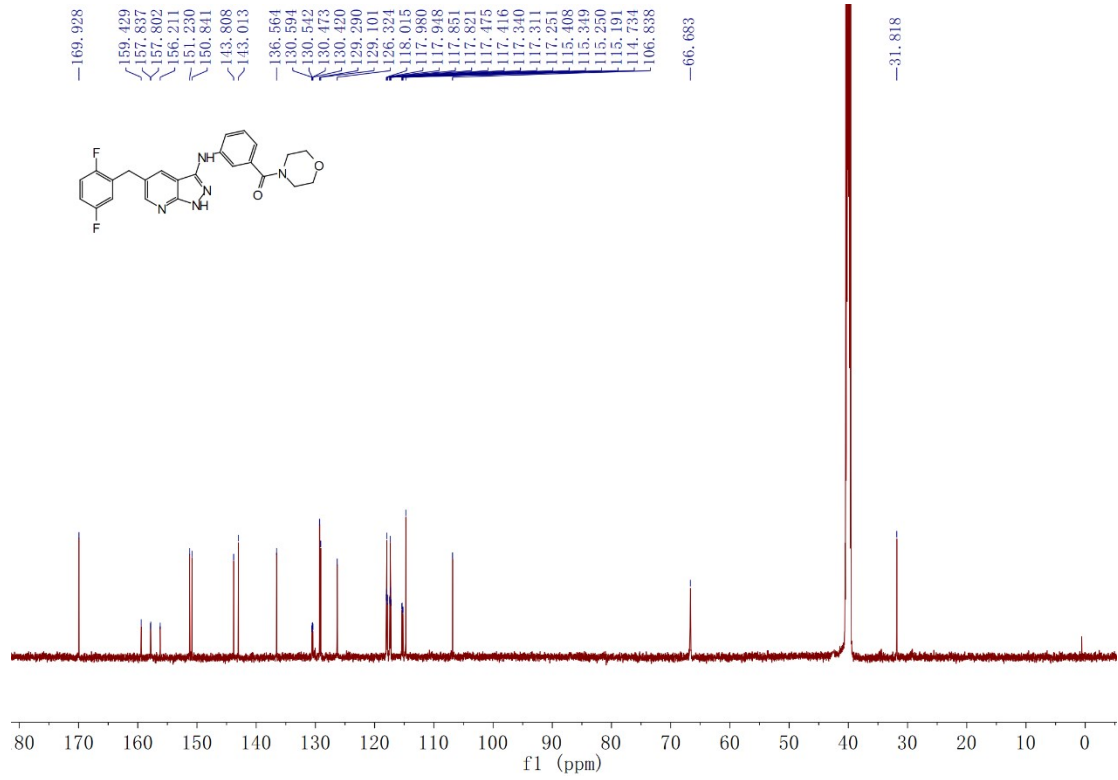


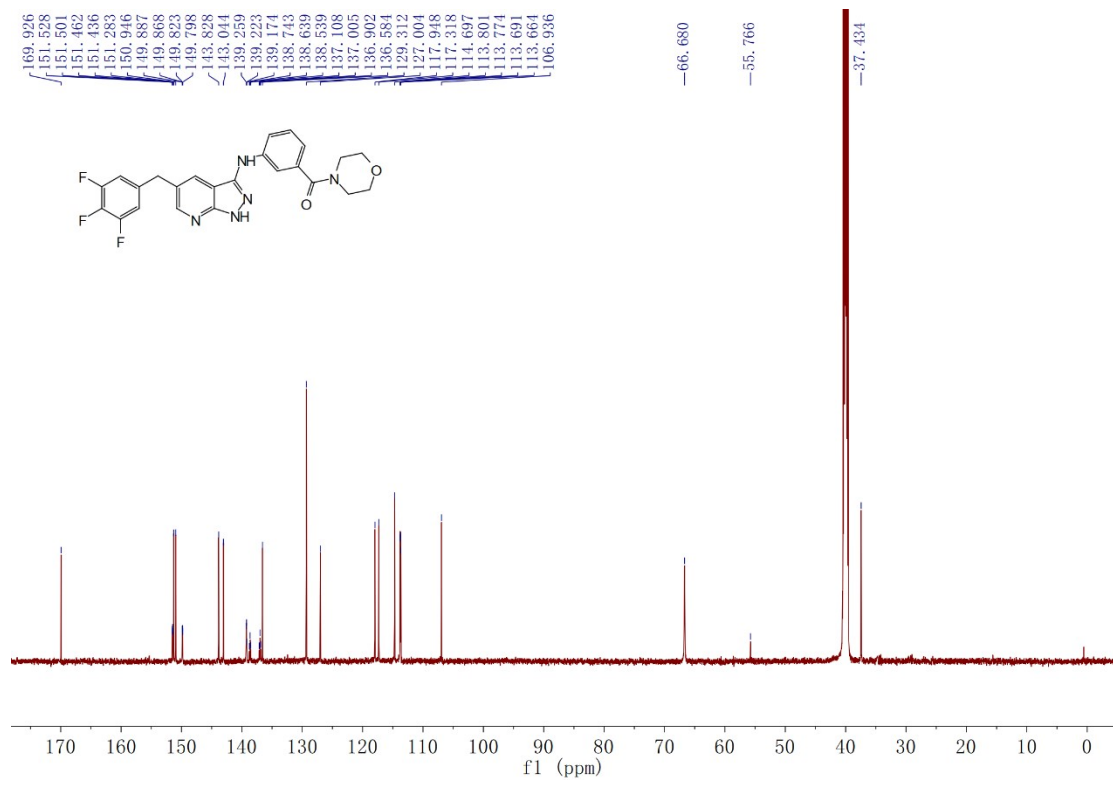
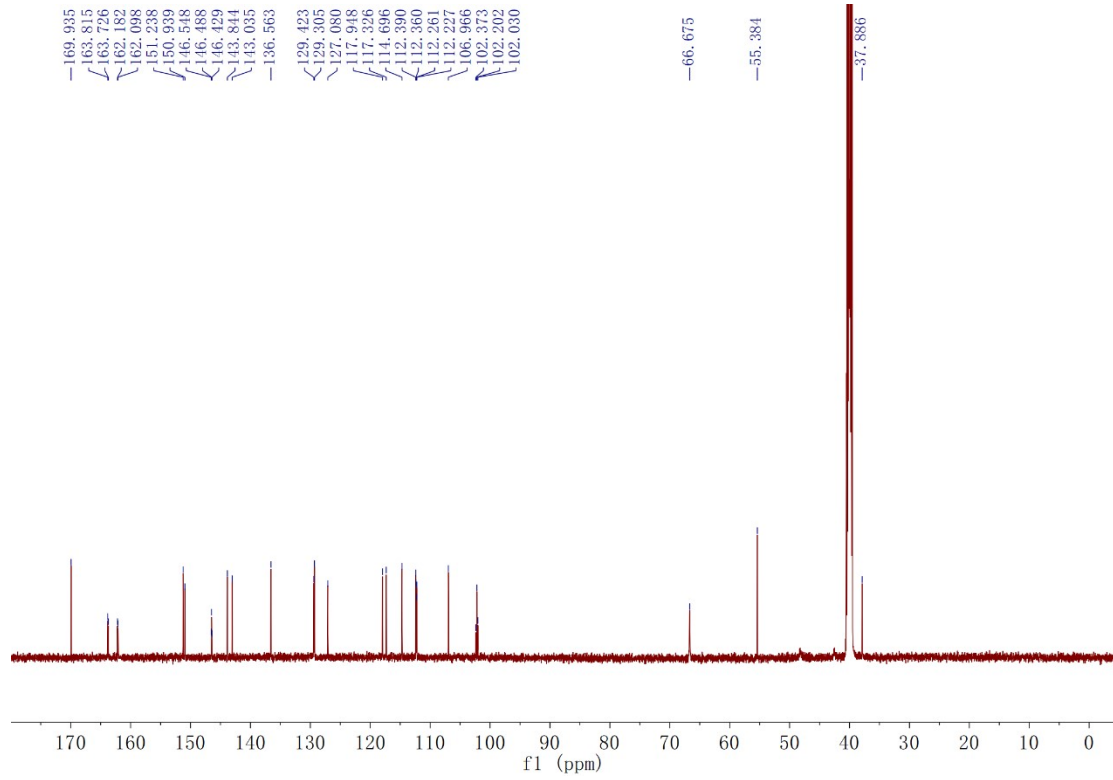


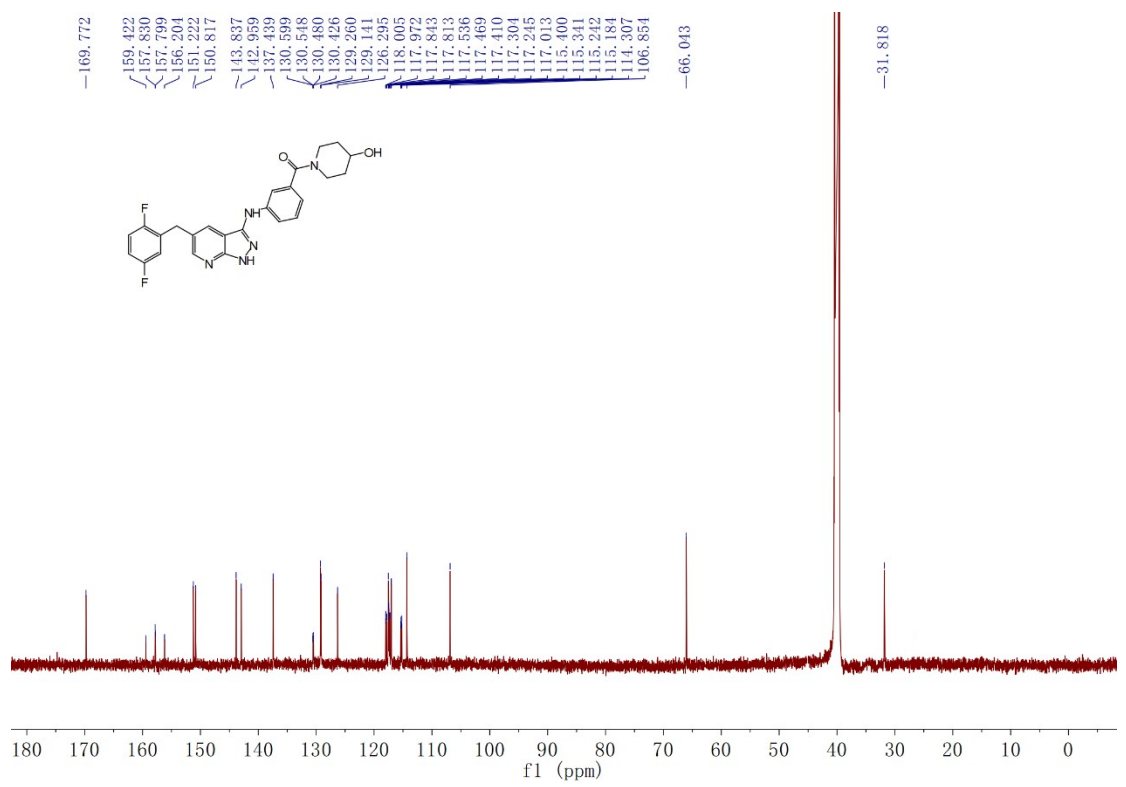
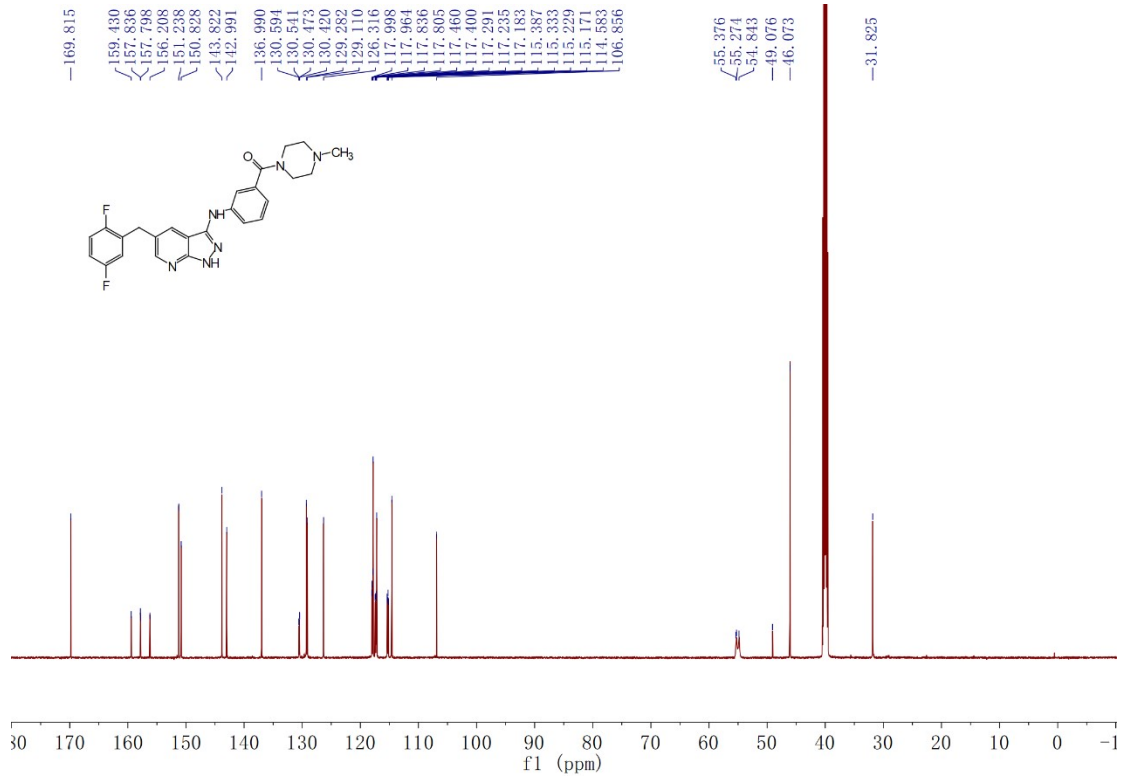


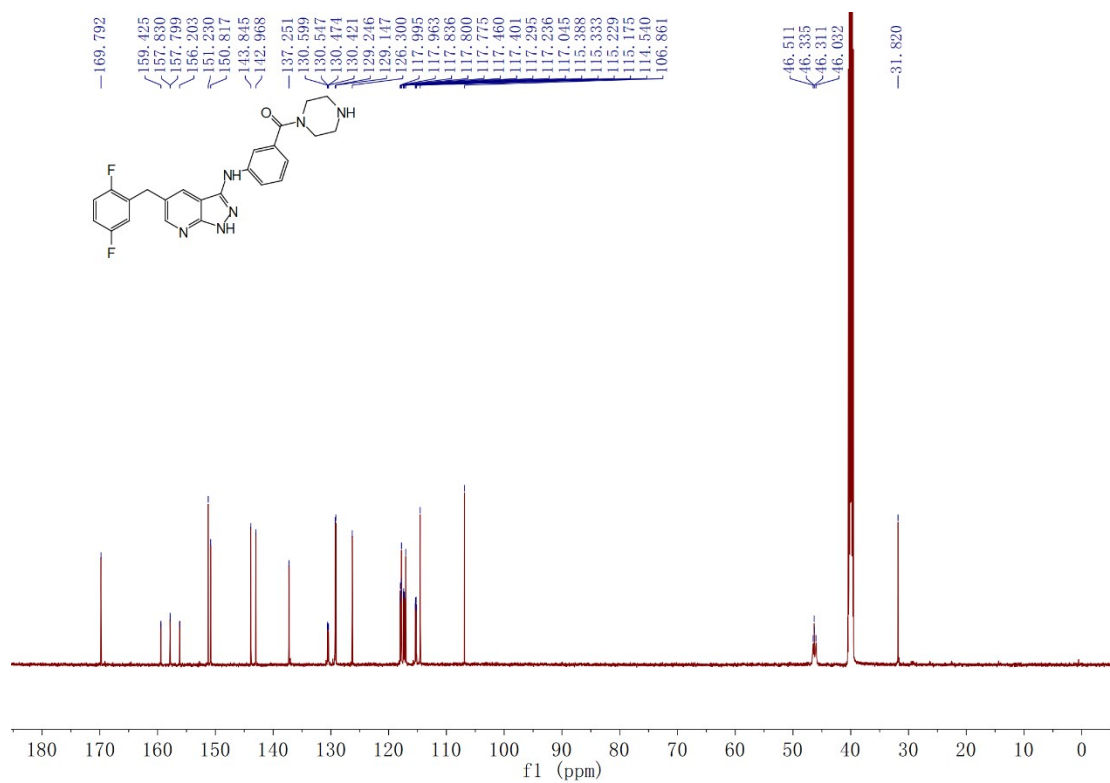
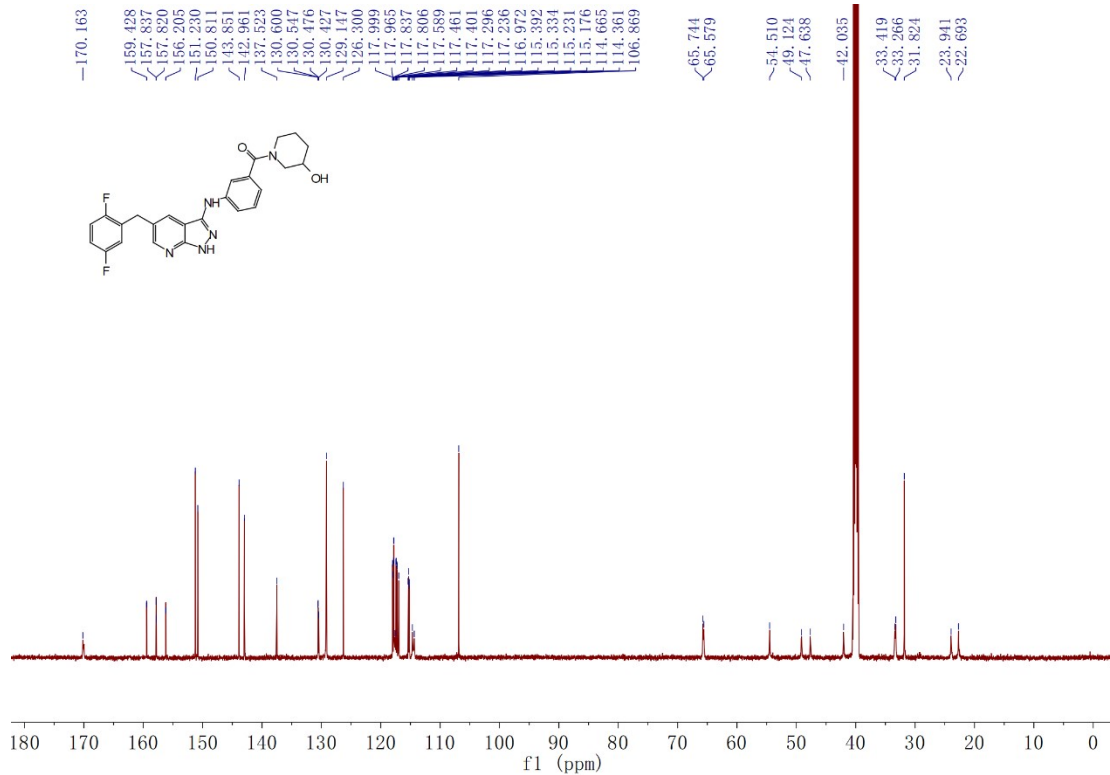




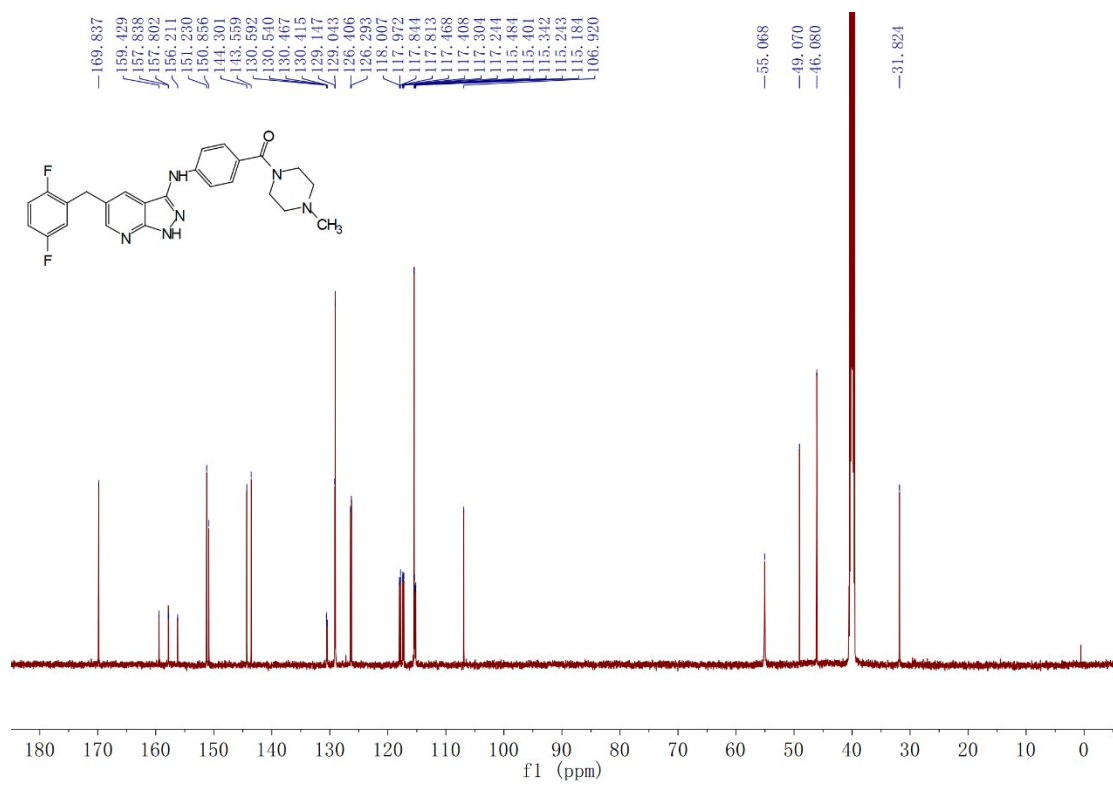
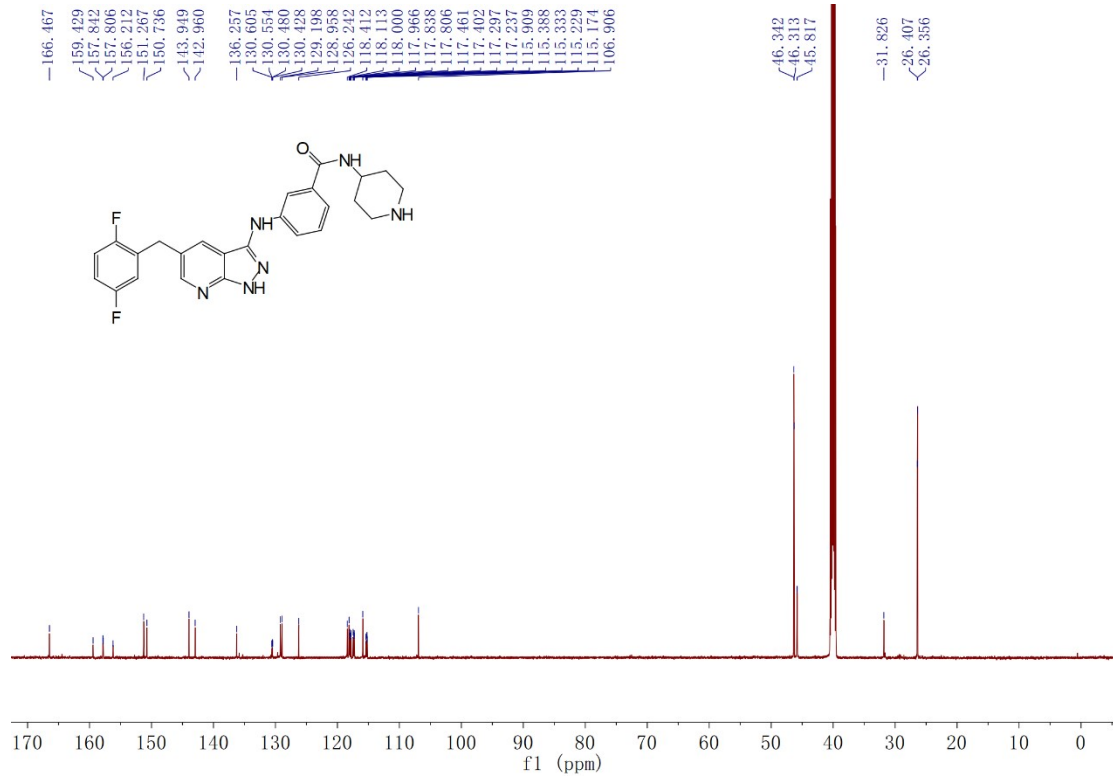


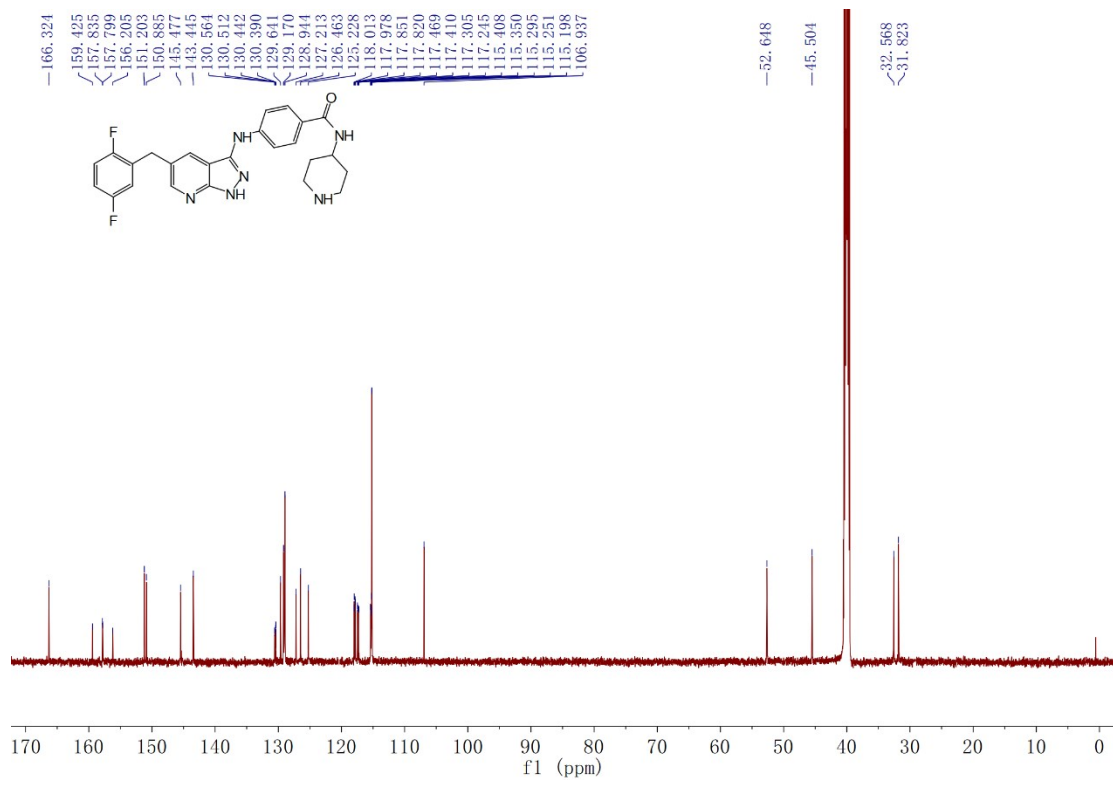
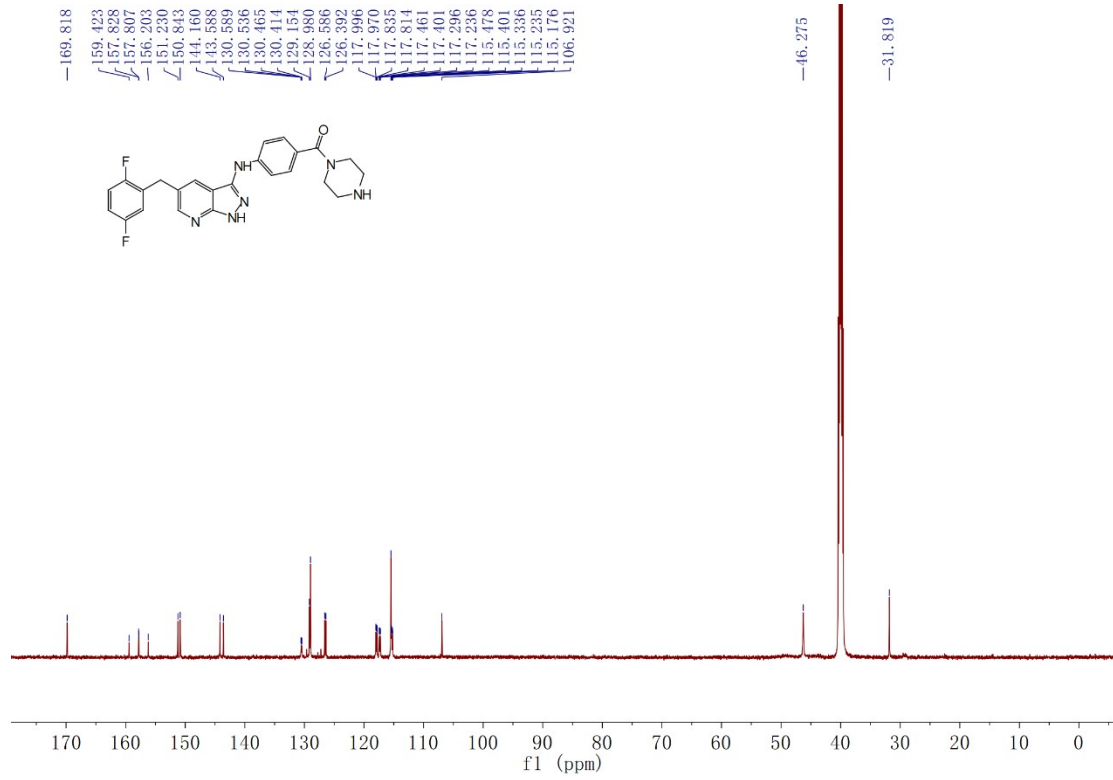


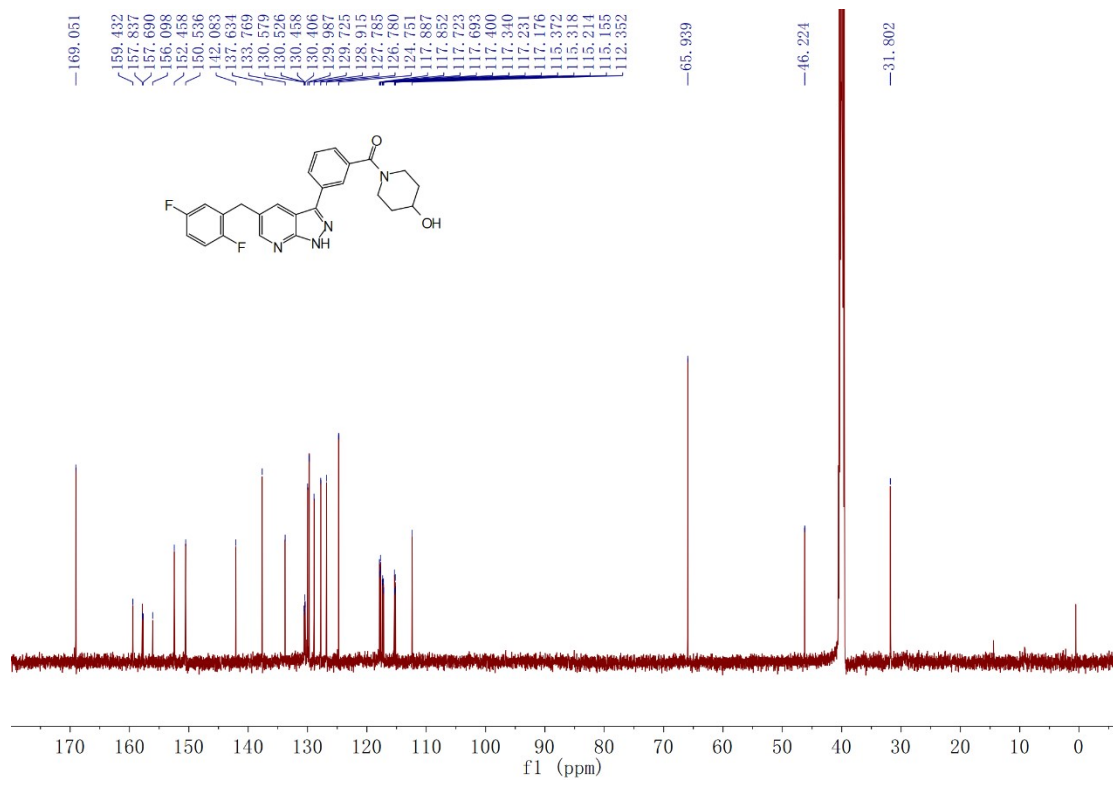
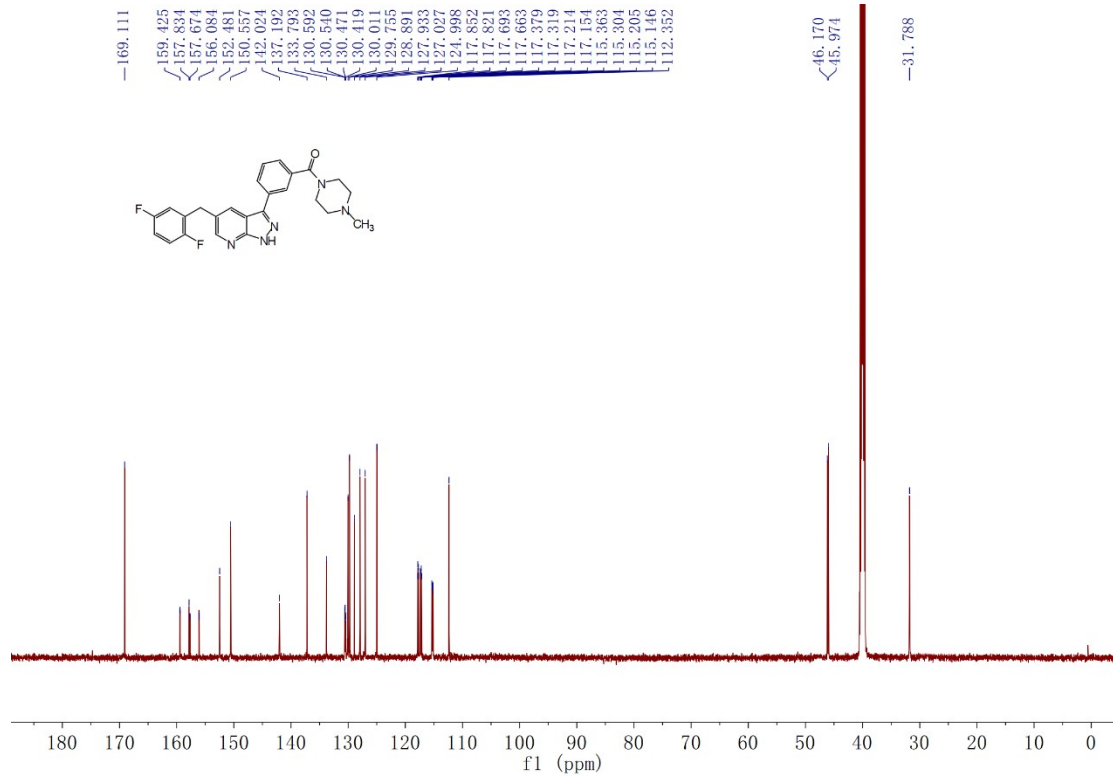


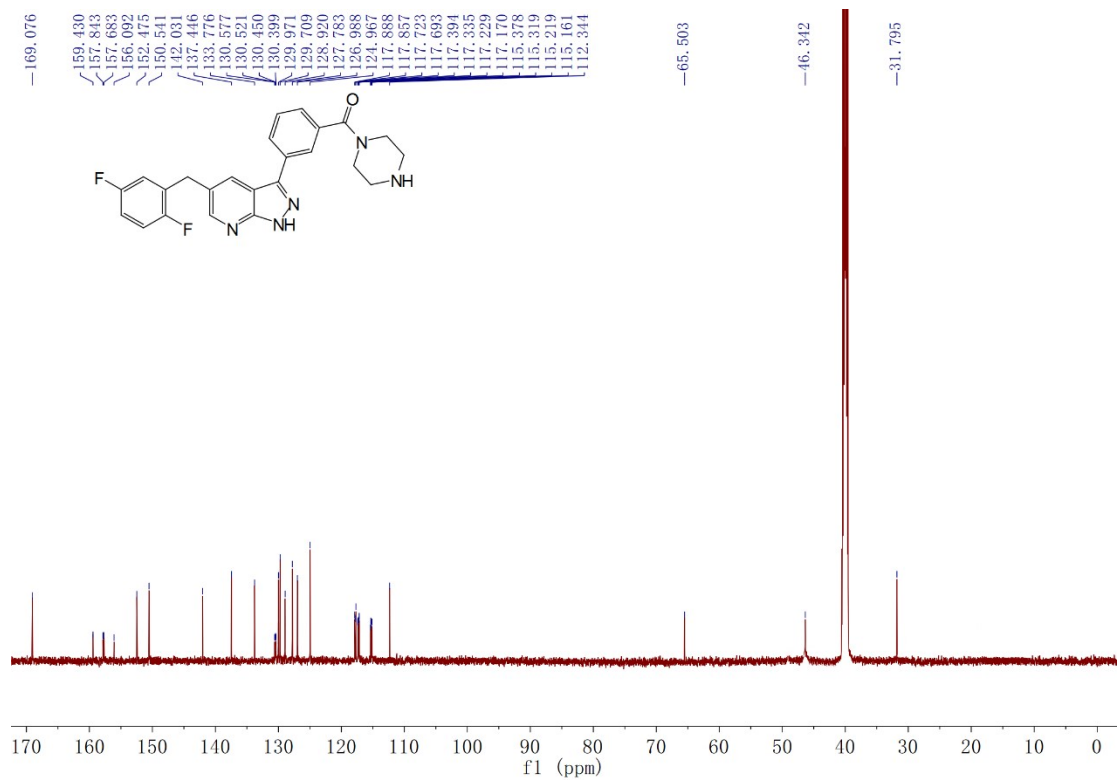
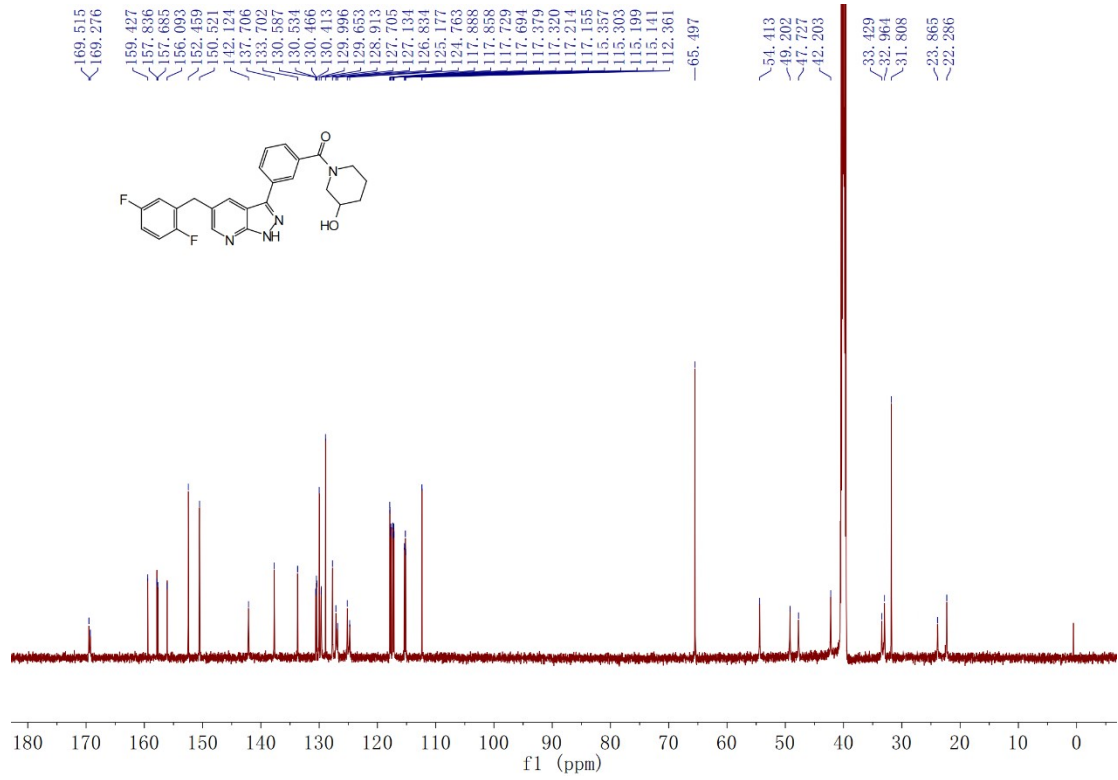


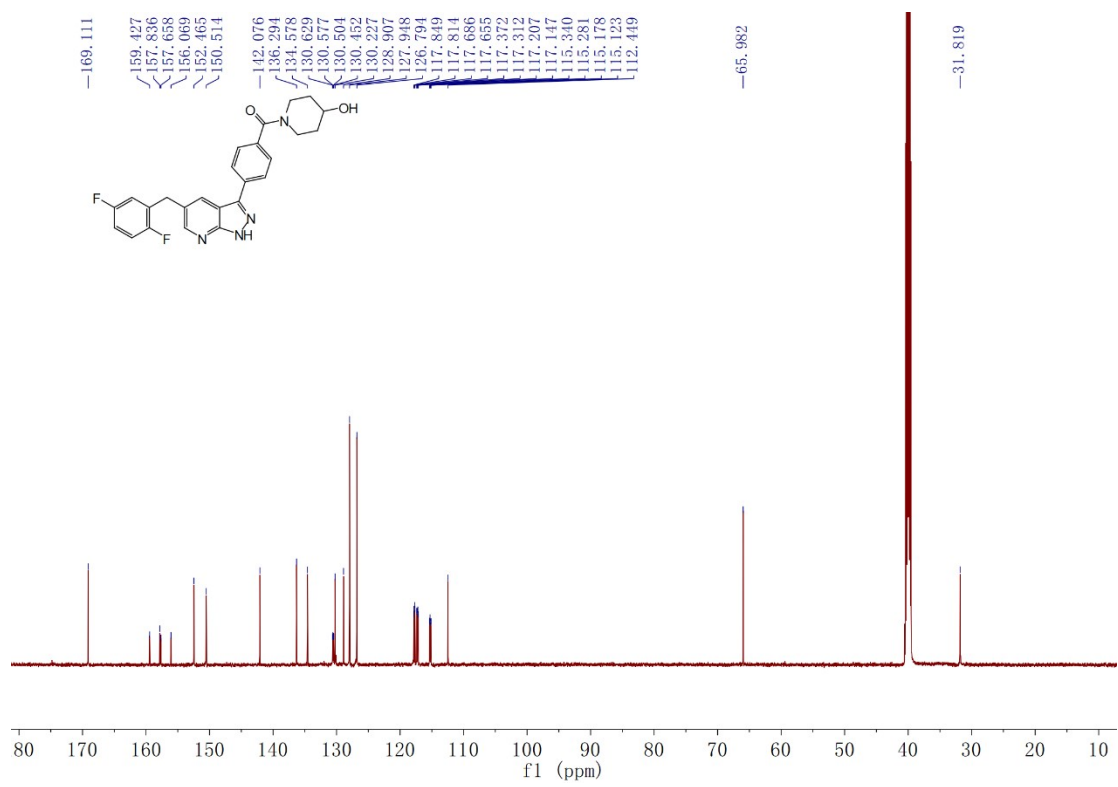
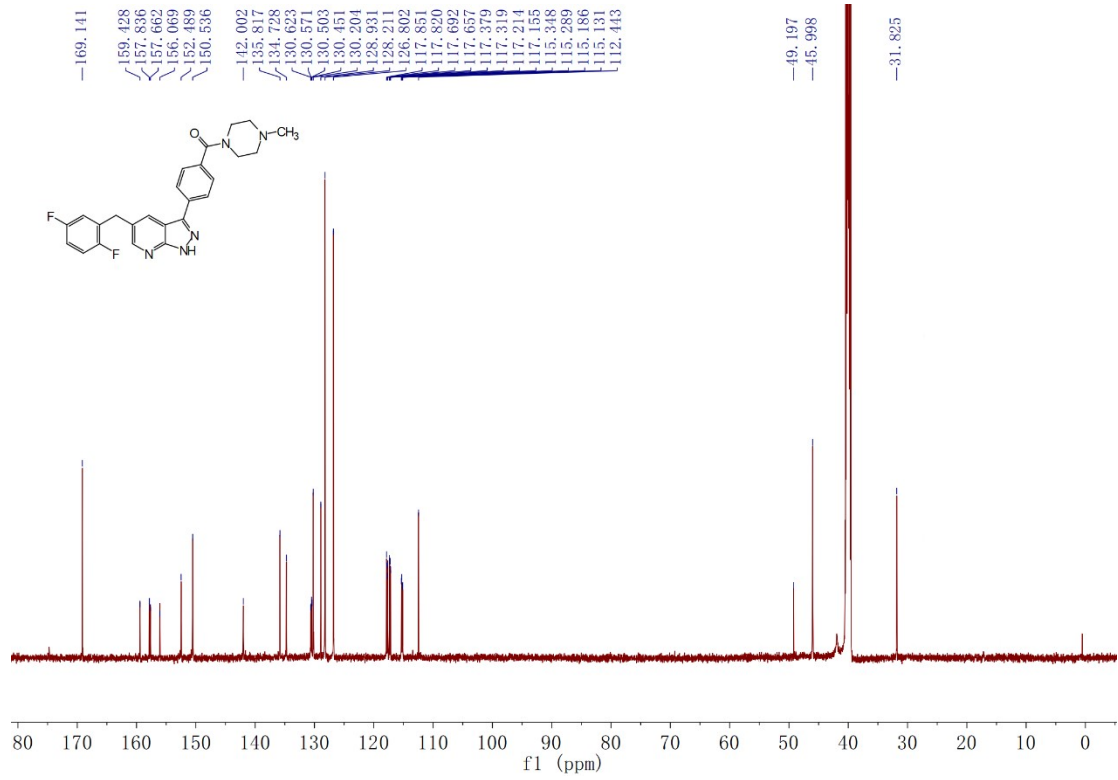


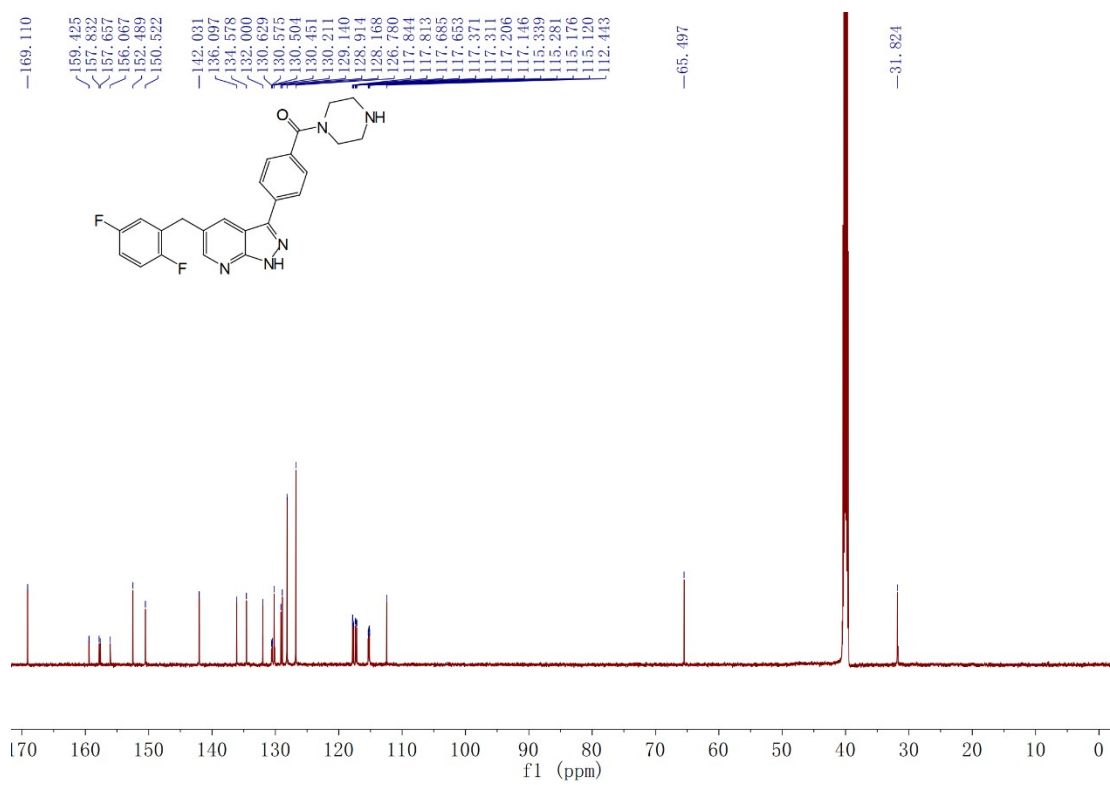
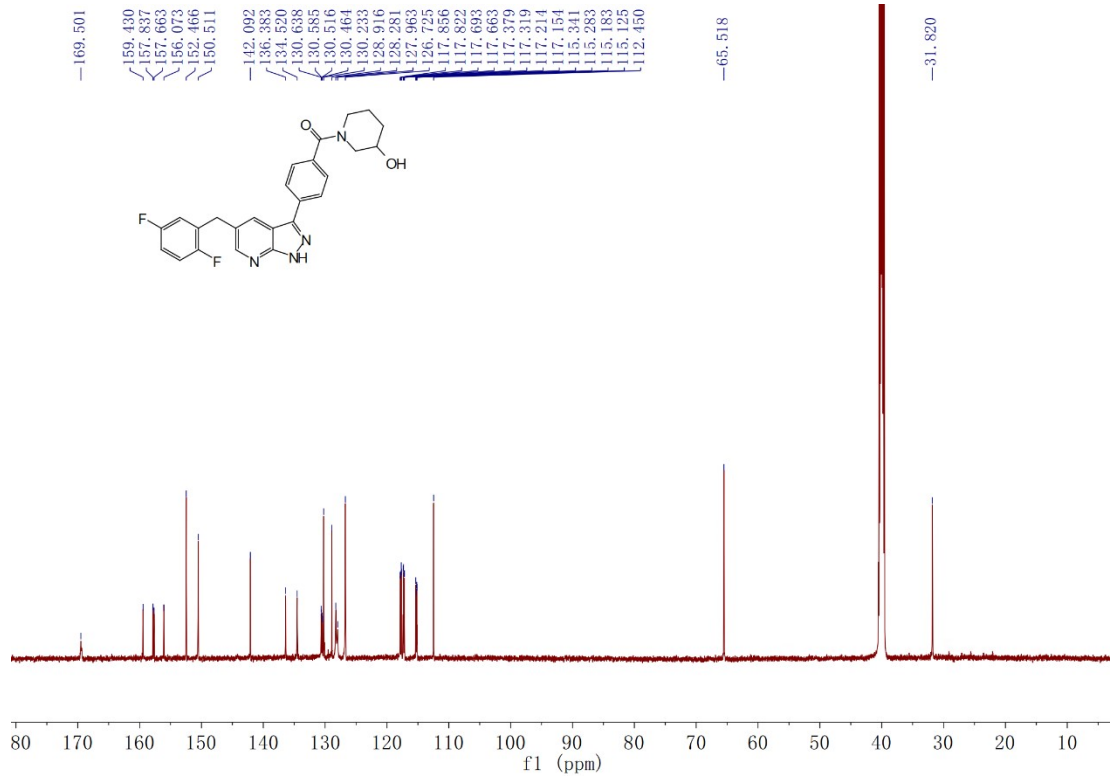


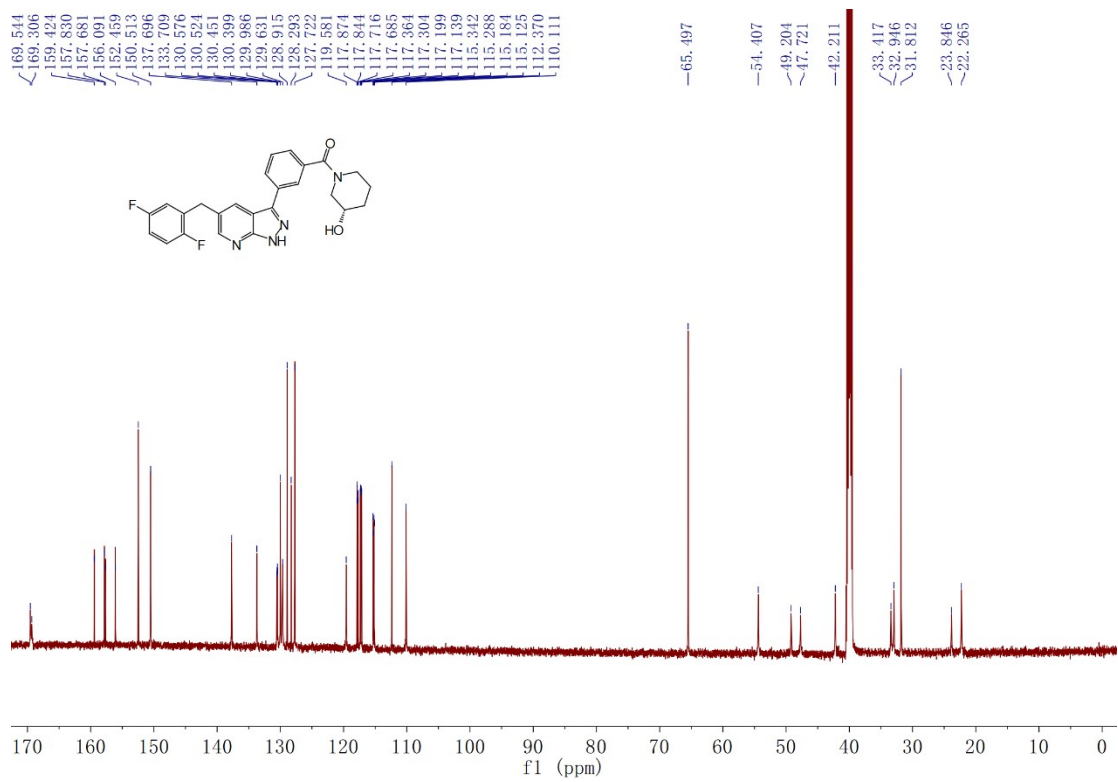
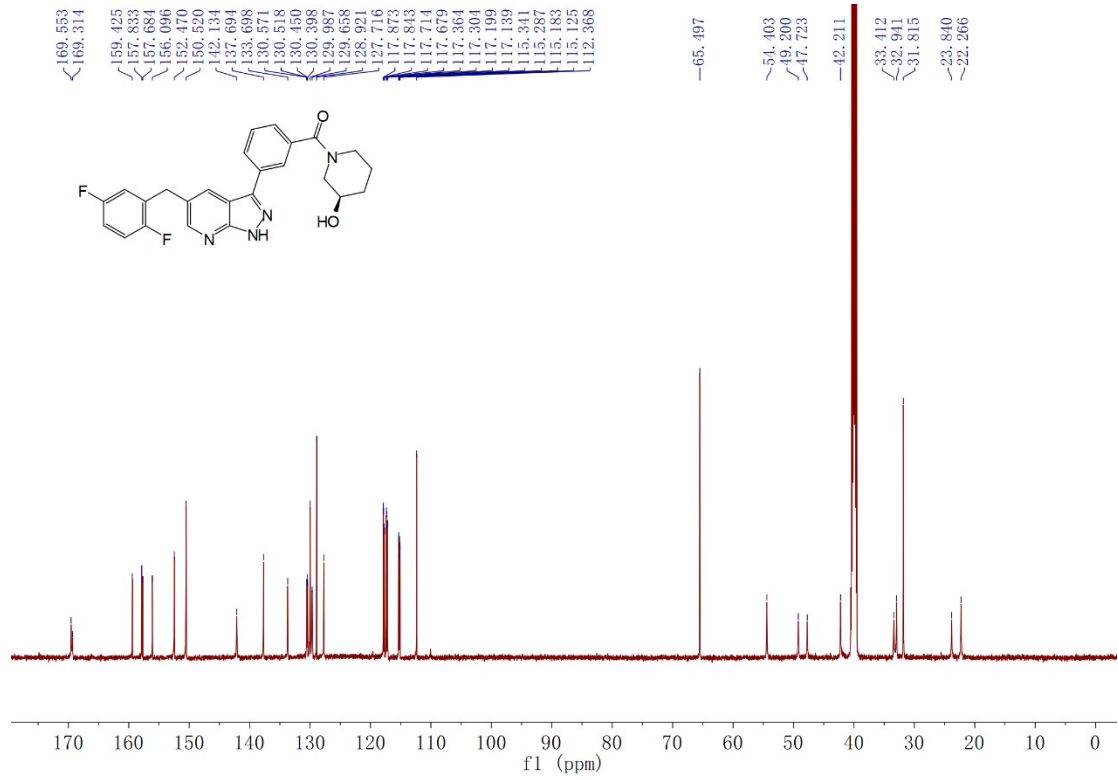




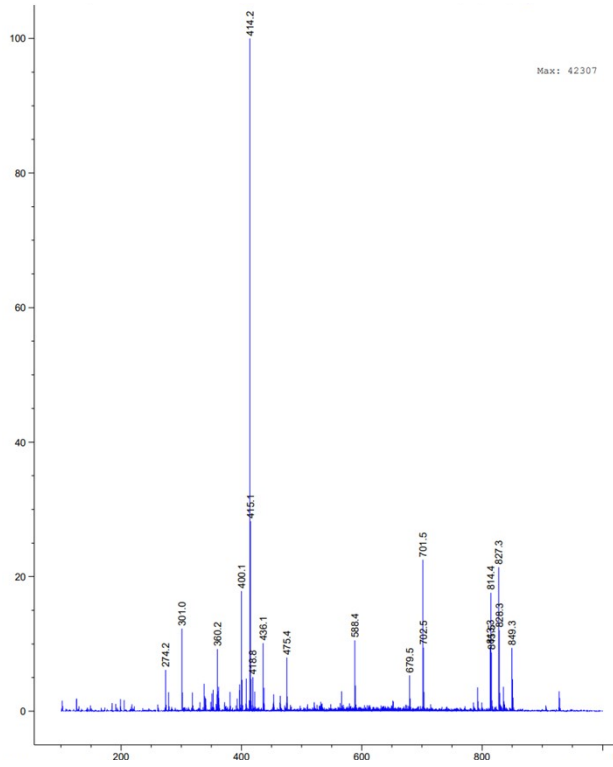




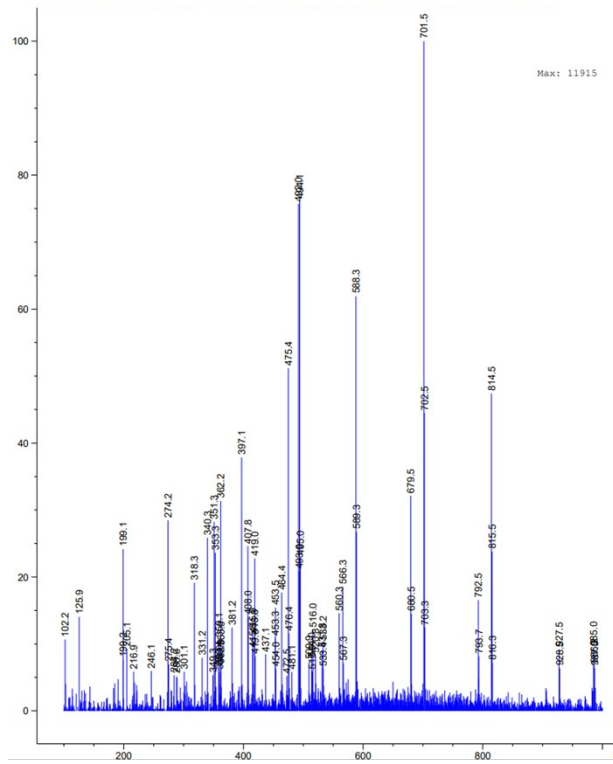




### LC-MS spectra of A02

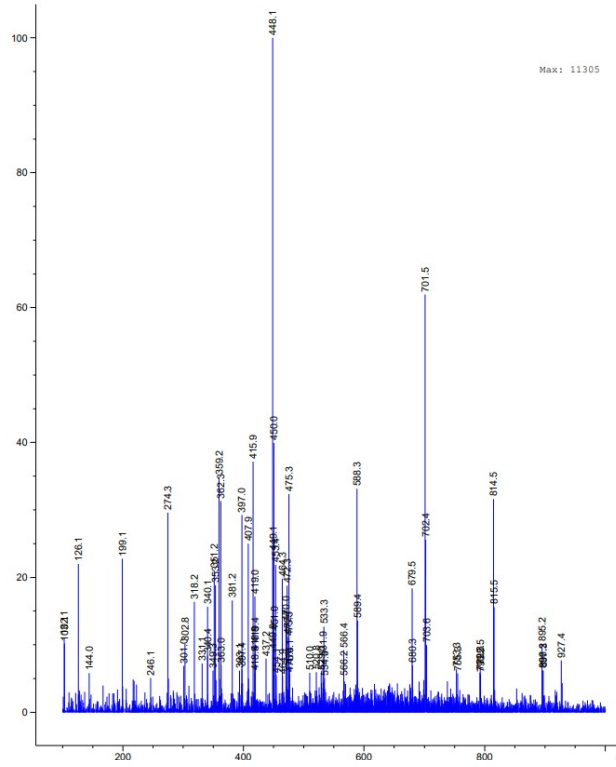


### LC-MS spectra of A03

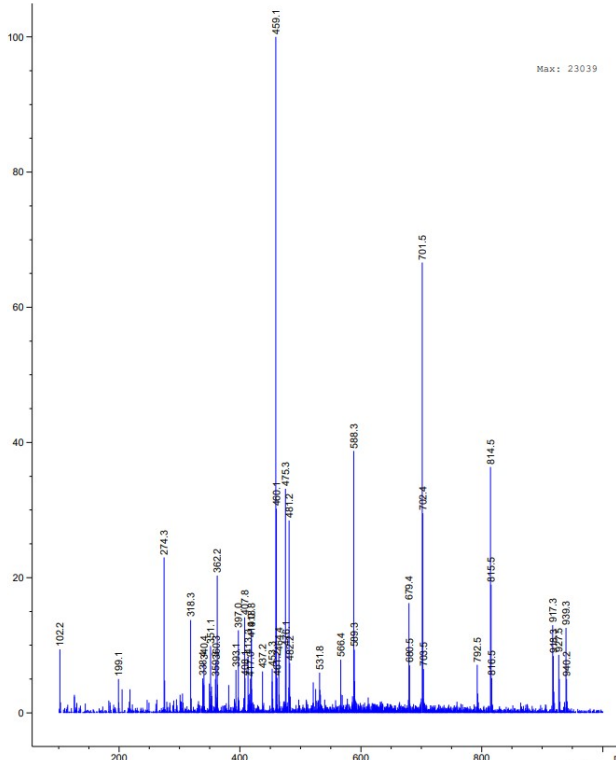




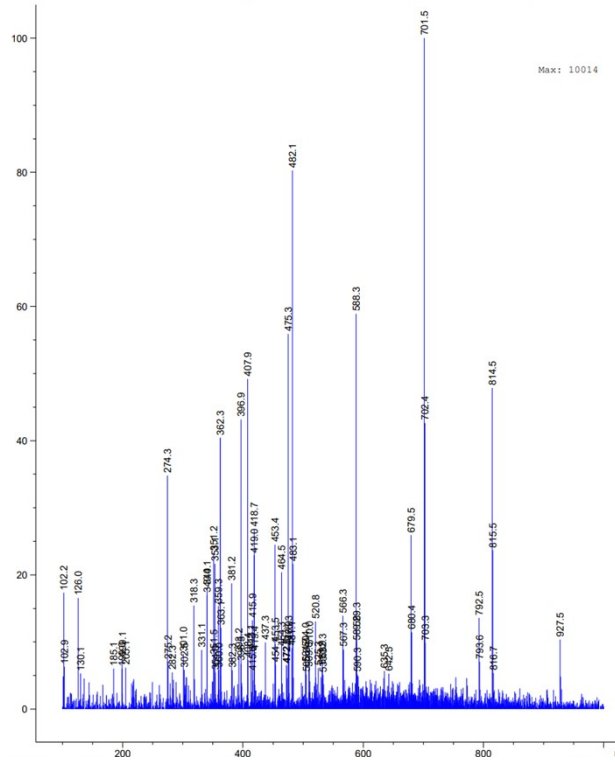
### LC-MS spectra of A04



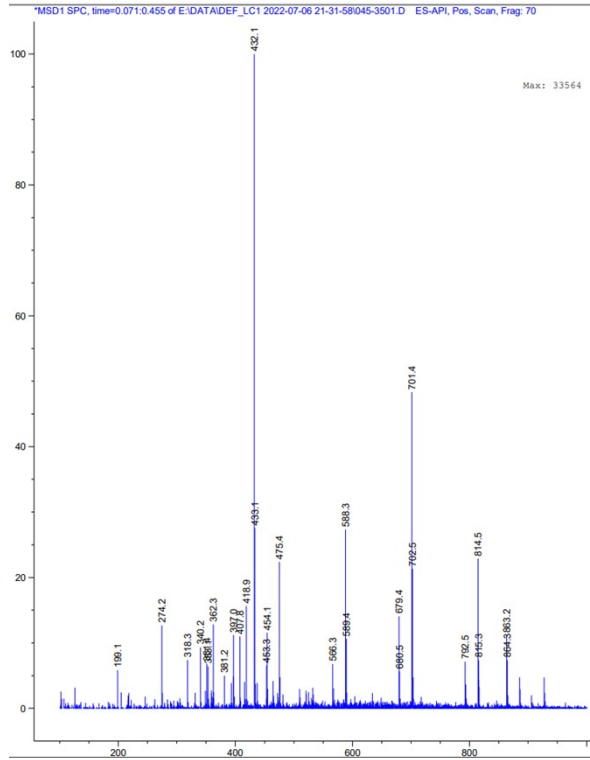
### LC-MS spectra of A05



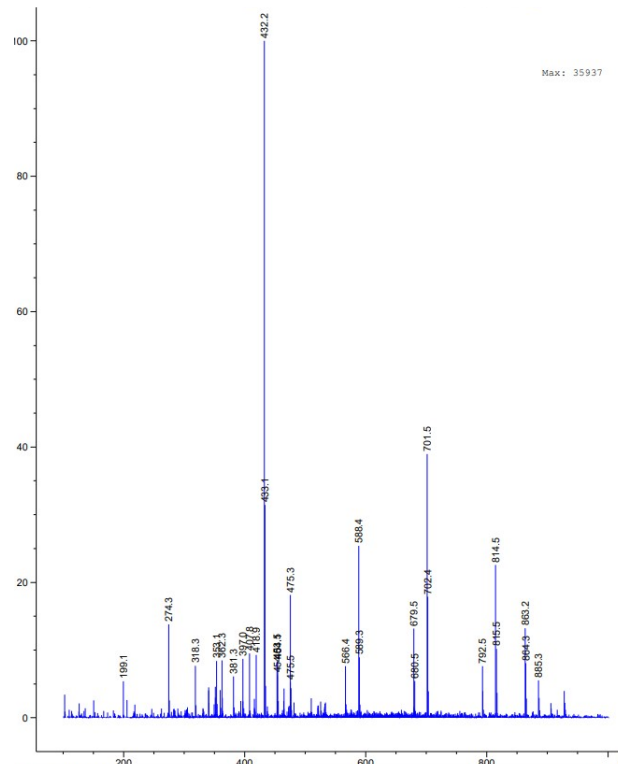
### LC-MS spectra of A06



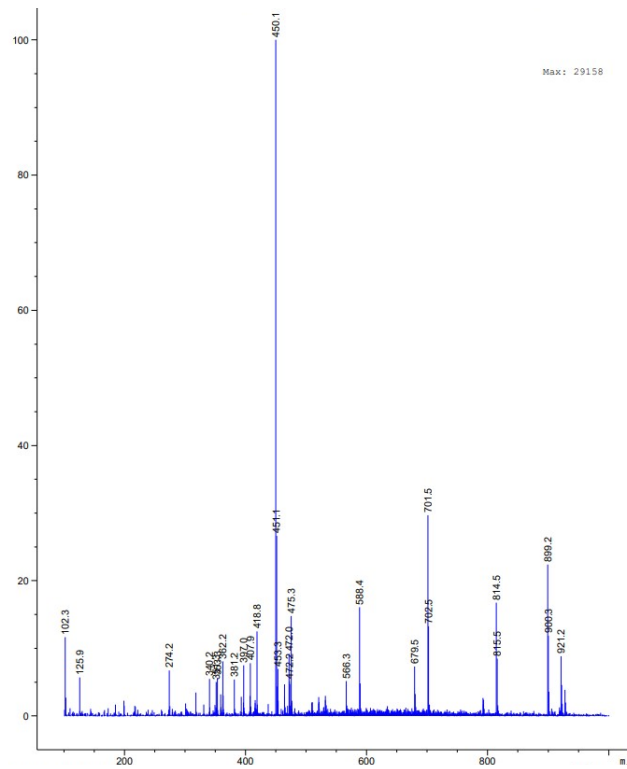
### LC-MS spectra of A07



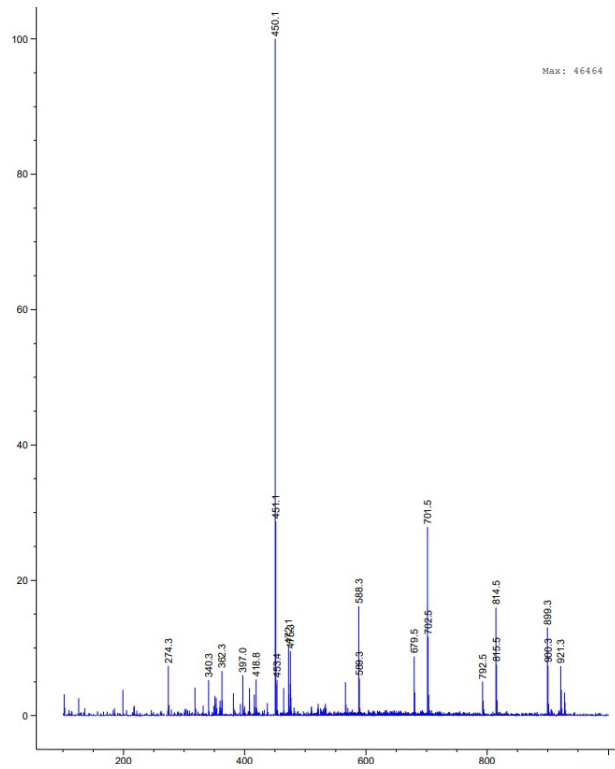
### LC-MS spectra of A08



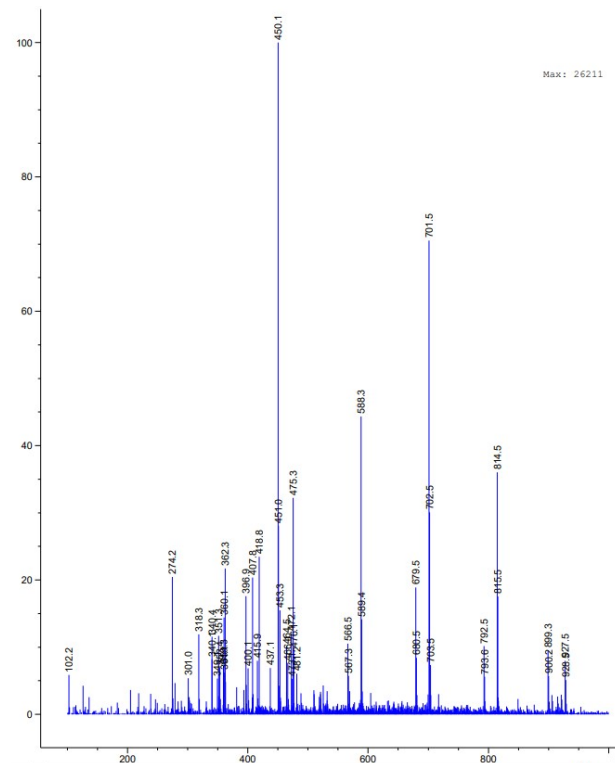
### LC-MS spectra of A09



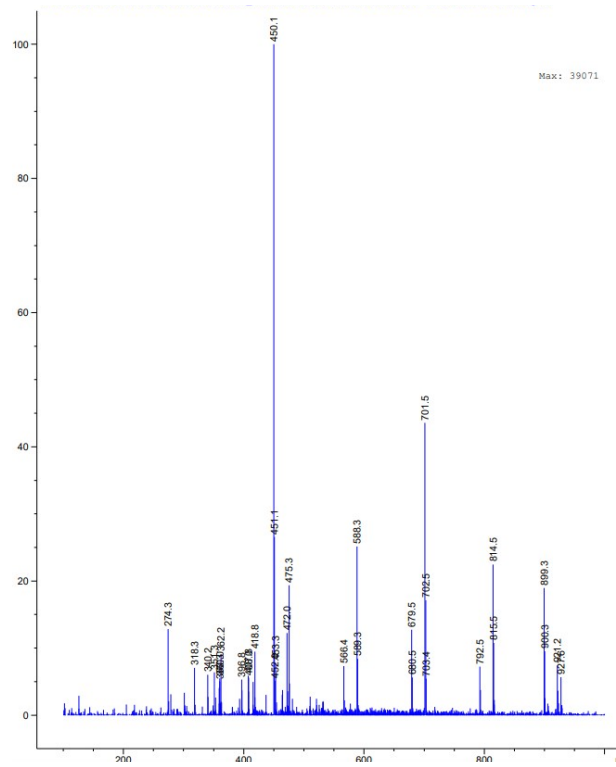
### LC-MS spectra of A10



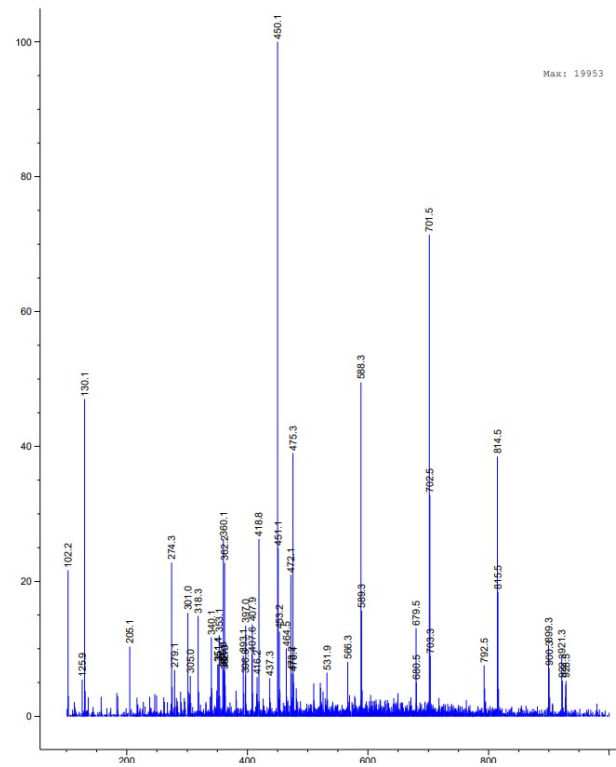
### LC-MS spectra of A12



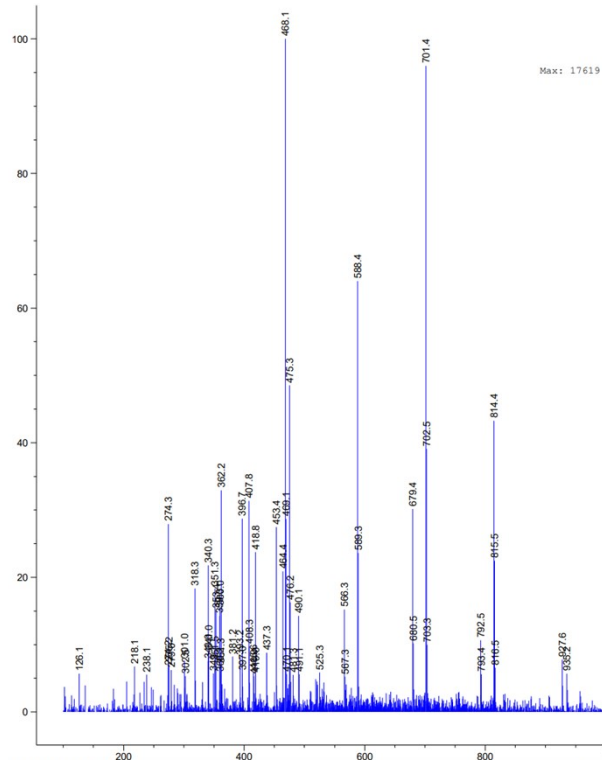
### LC-MS spectra of A13



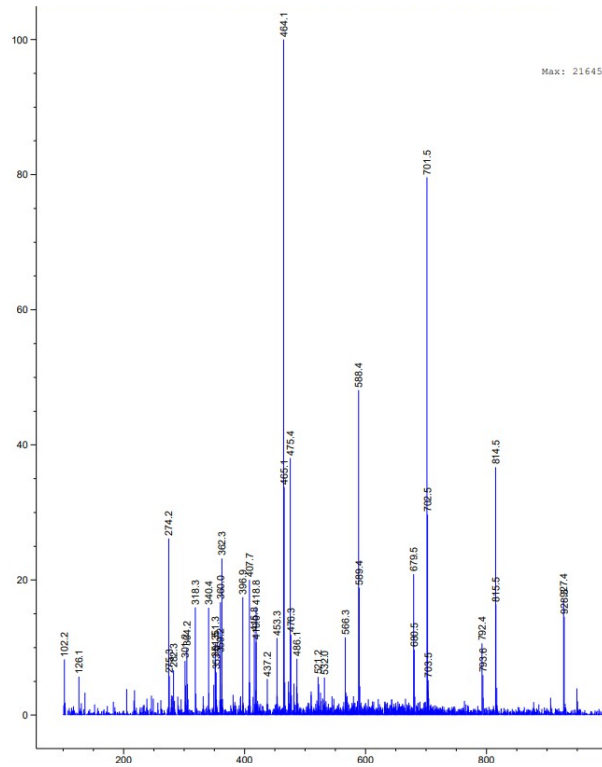
### LC-MS spectra of A14



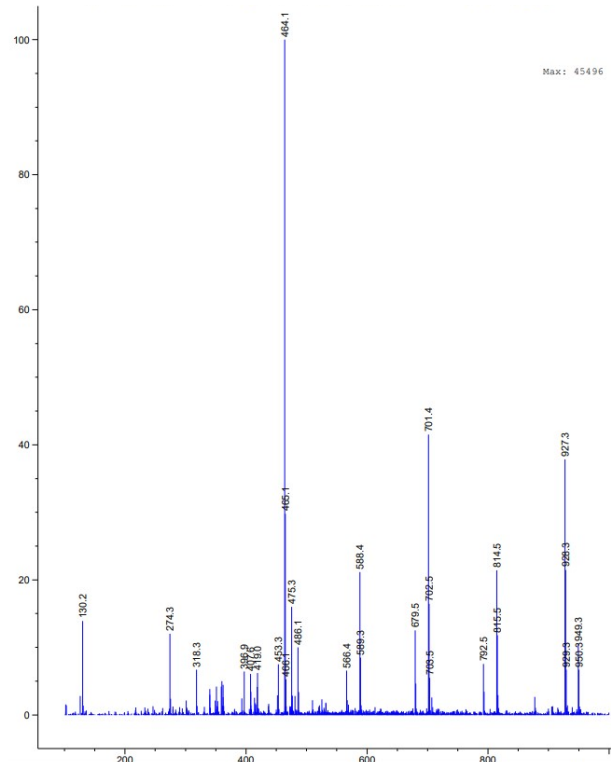
### LC-MS spectra of A15



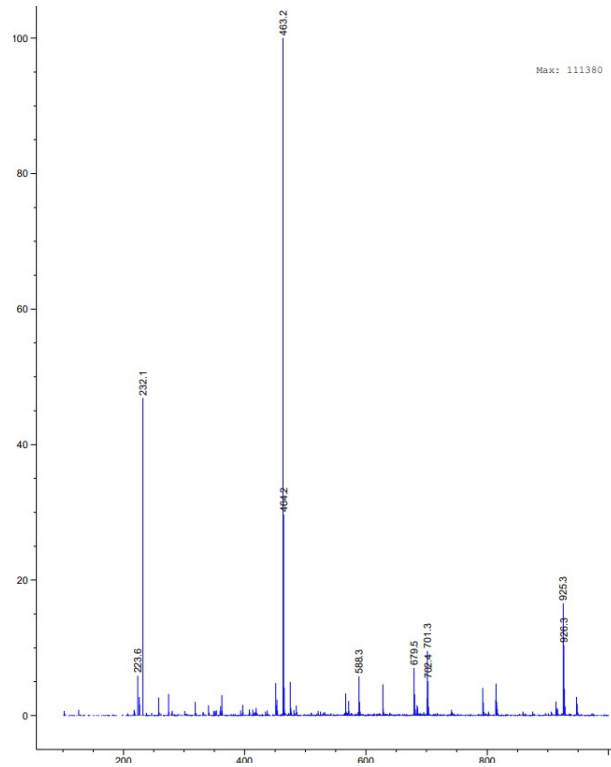
### LC-MS spectra of B02



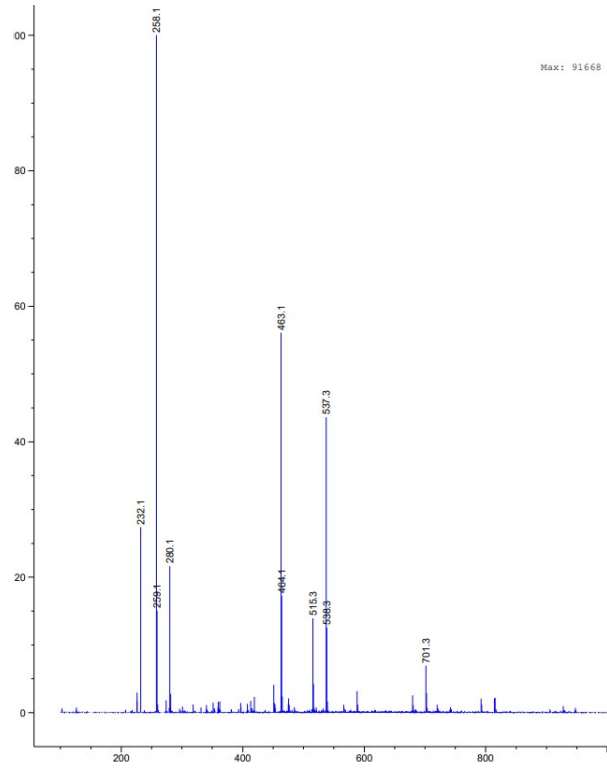
### LC-MS spectra of B03



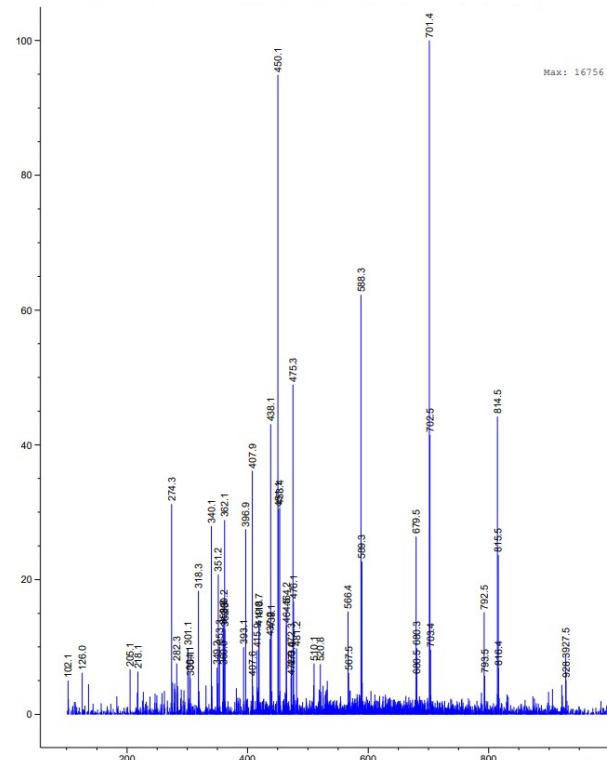
### LC-MS spectra of B05



### LC-MS spectra of B06

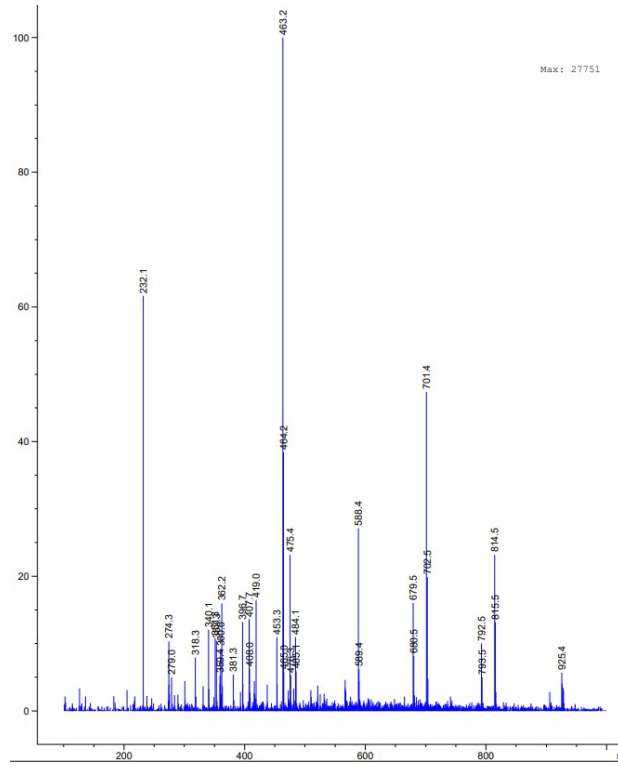


### LC-MS spectra of B07

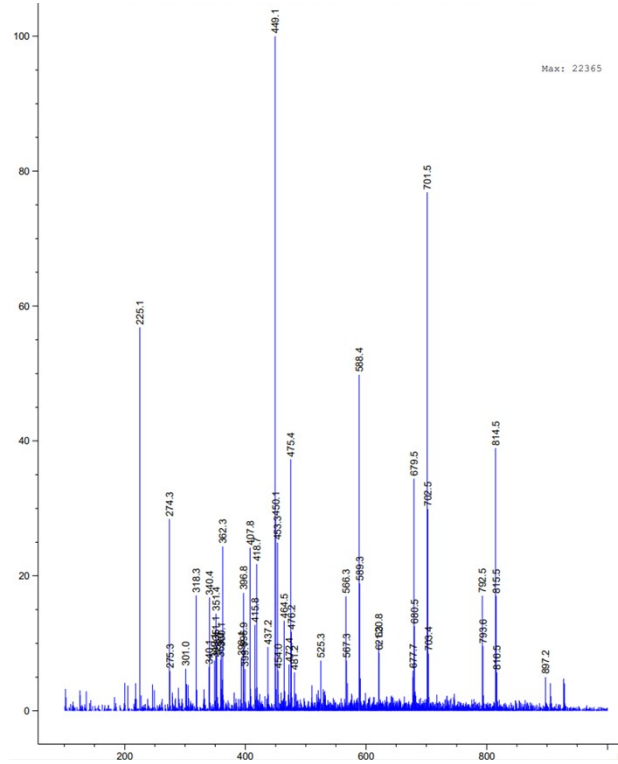




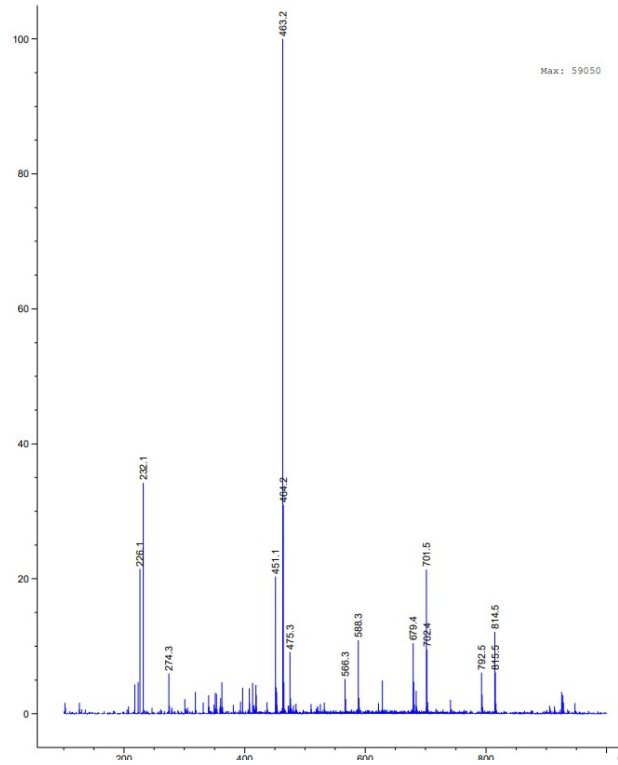
### LC-MS spectra of B08



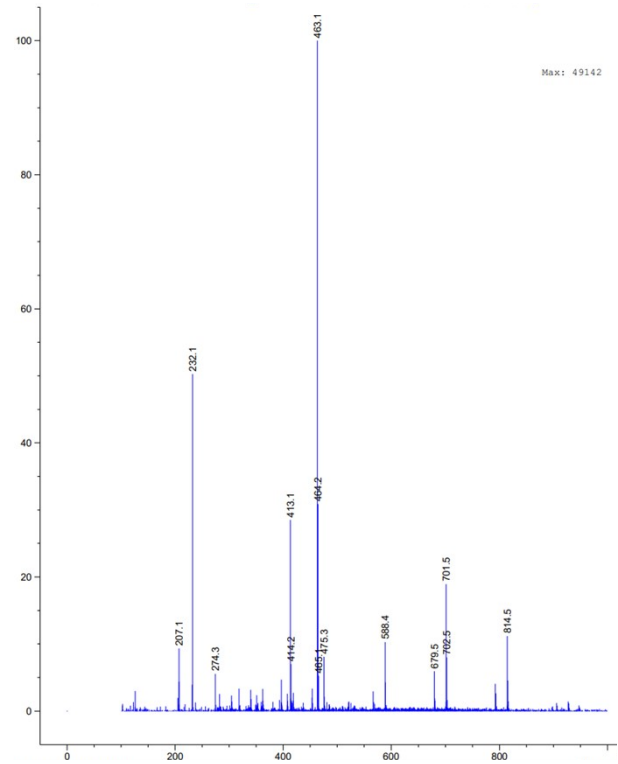
### LC-MS spectra of B11



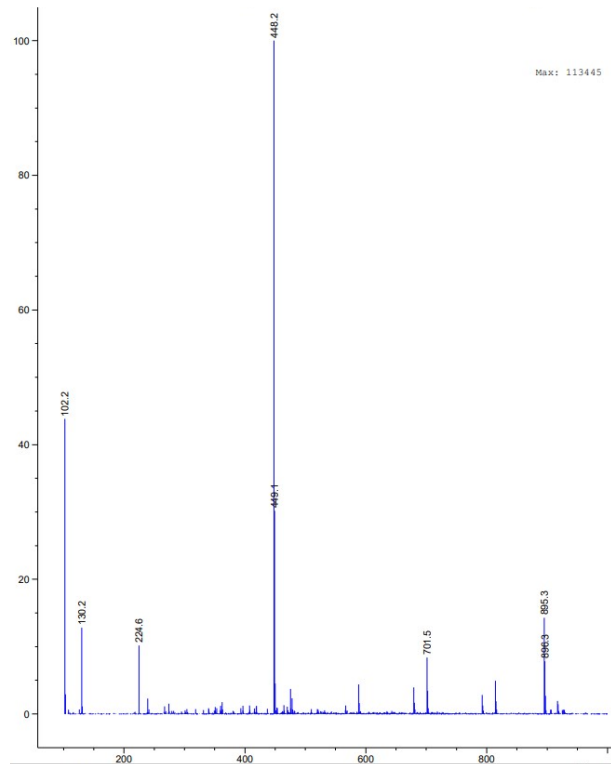
### LC-MS spectra of B12



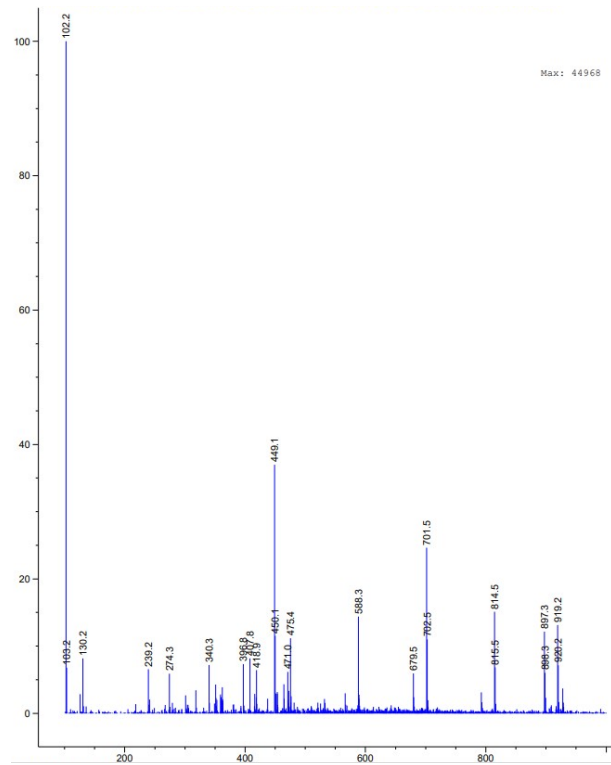
### LC-MS spectra of B13



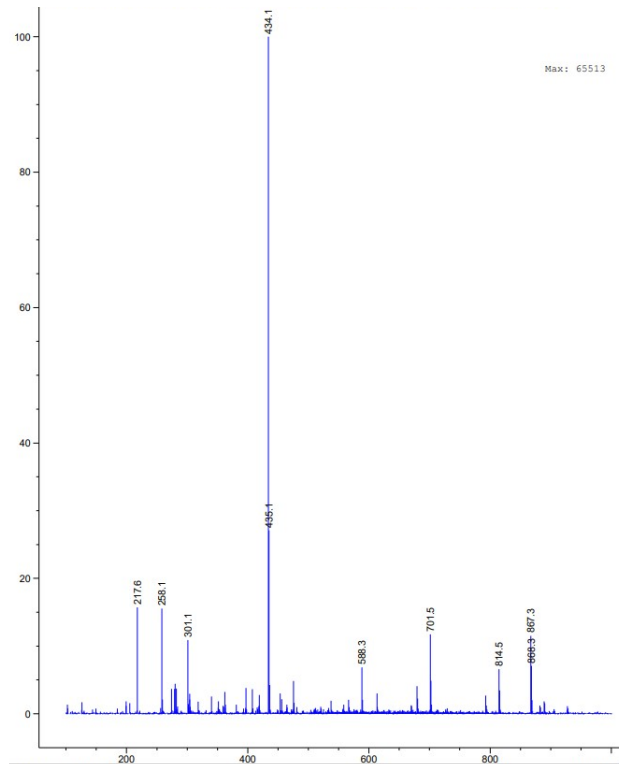
### LC-MS spectra of C01



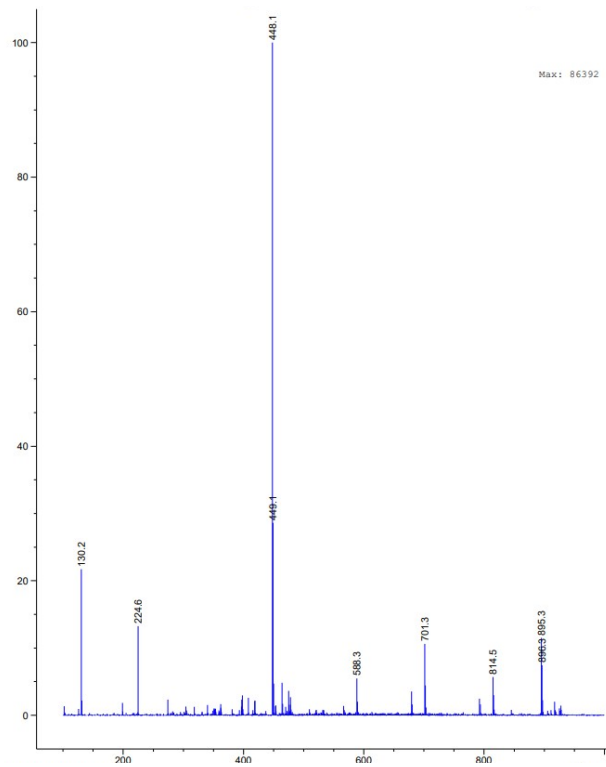
### LC-MS spectra of C02



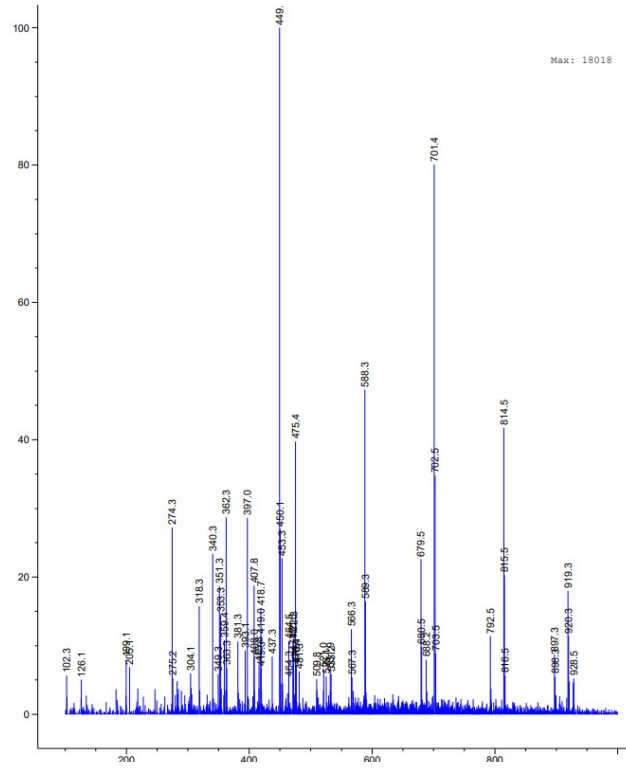
### LC-MS spectra of C04



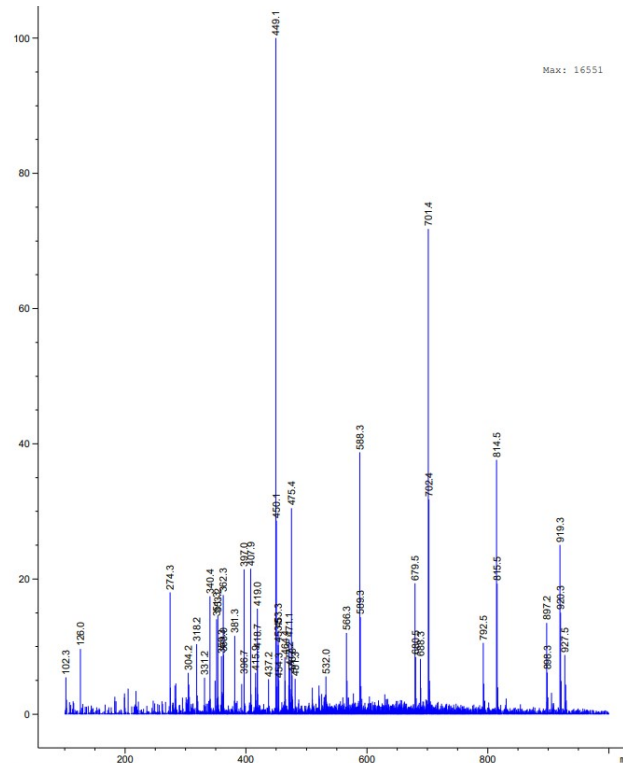
### LC-MS spectra of C05



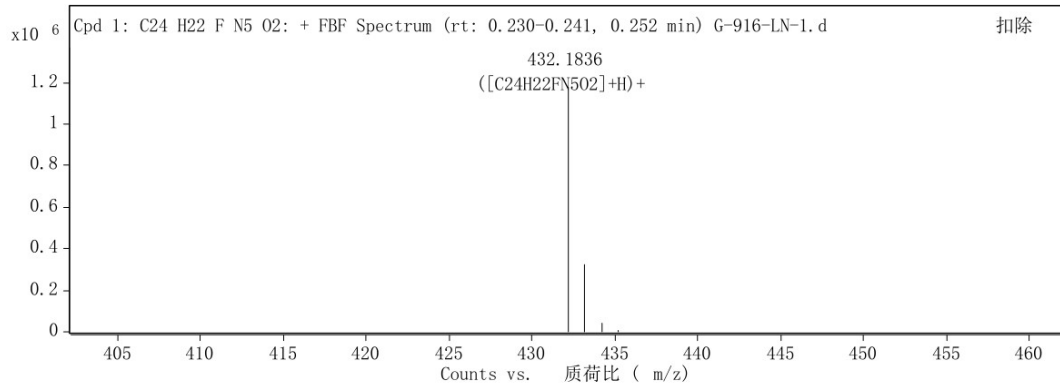
### LC-MS spectra of C06



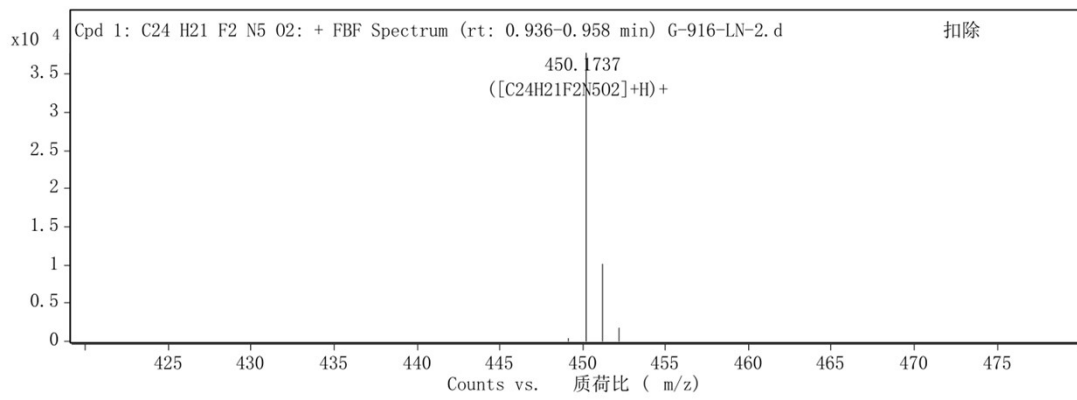
### LC-MS spectra of C07



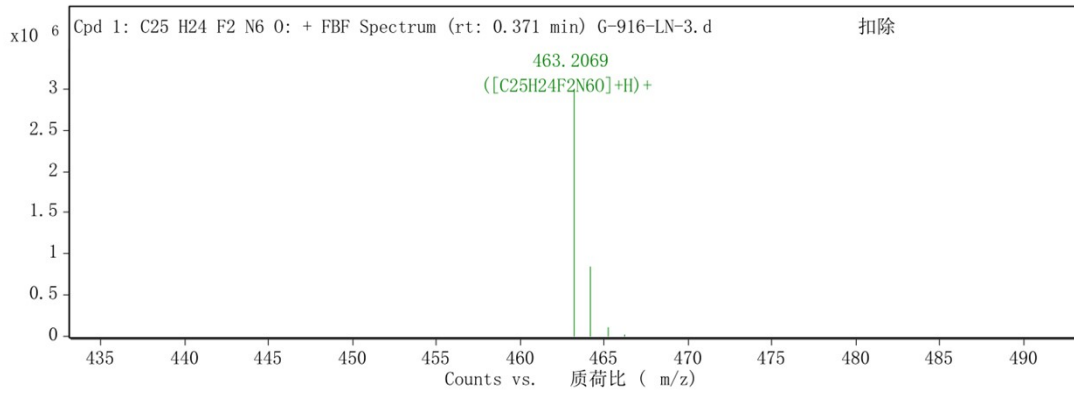
### HRMS spectra of A01



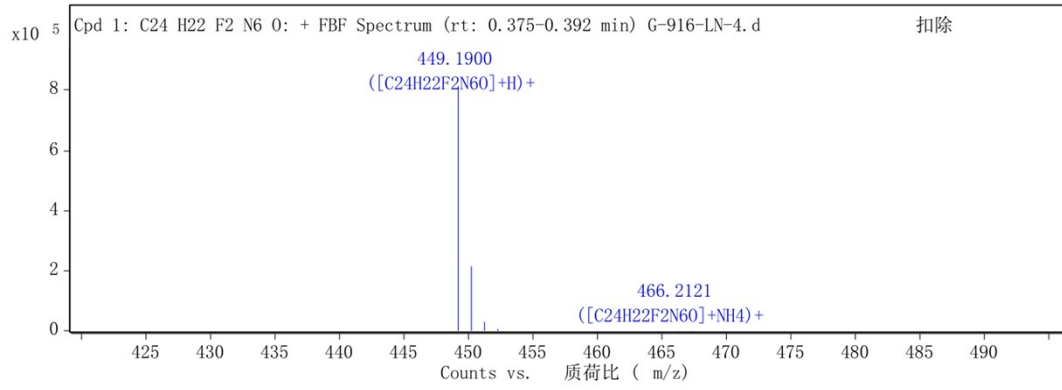
### HRMS spectra of A11



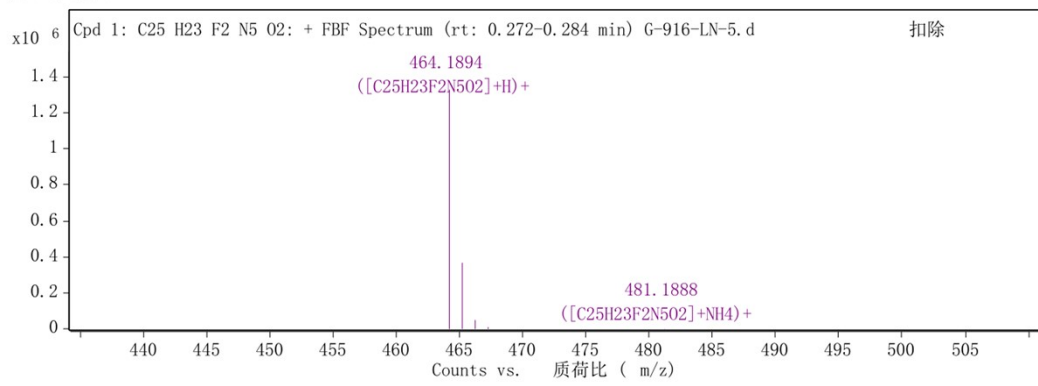
### HRMS spectra of B01



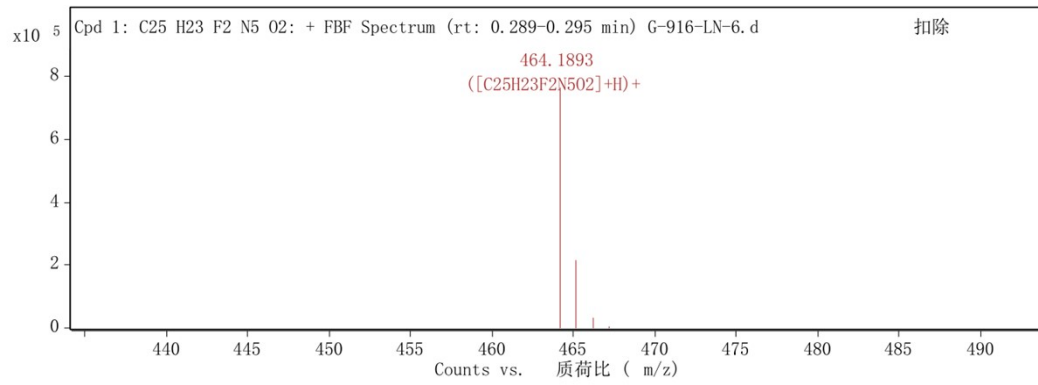
### HRMS spectra of B04



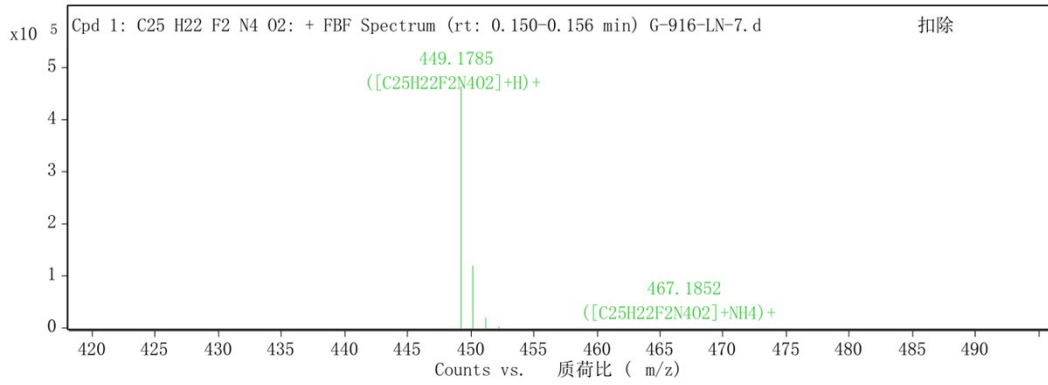
### HRMS spectra of B09



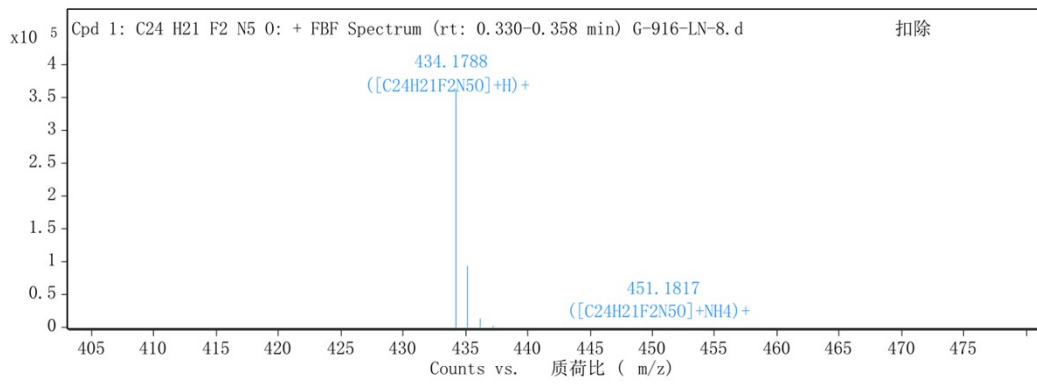
### HRMS spectra of B10



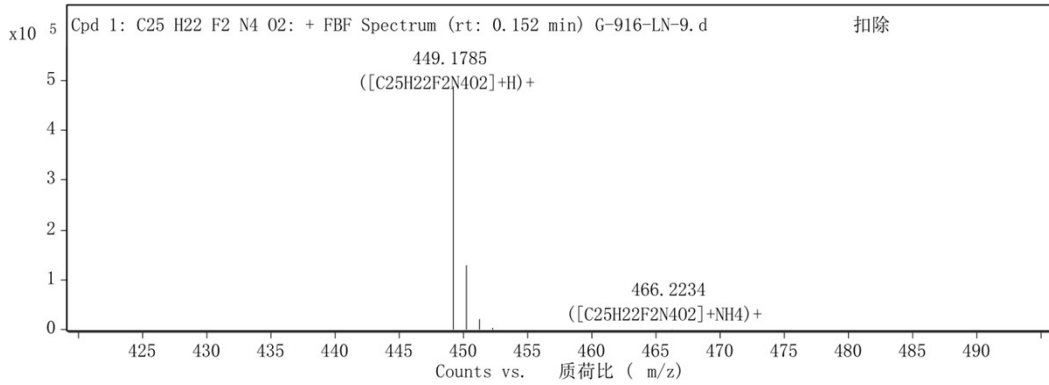
### HRMS spectra of C03



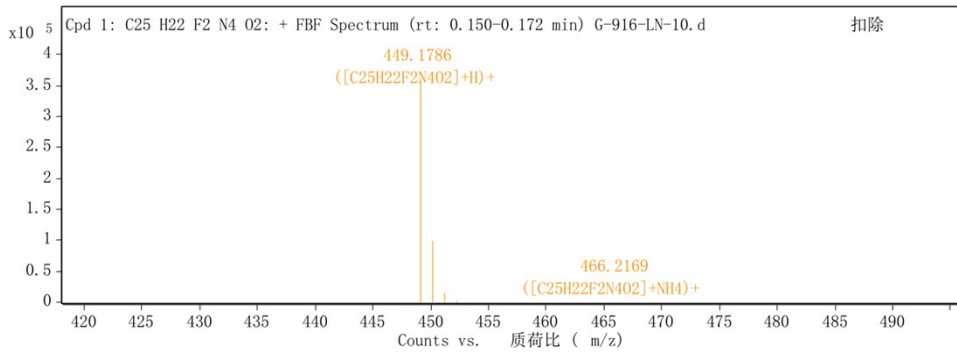
### HRMS spectra of C08



### HRMS spectra of C09

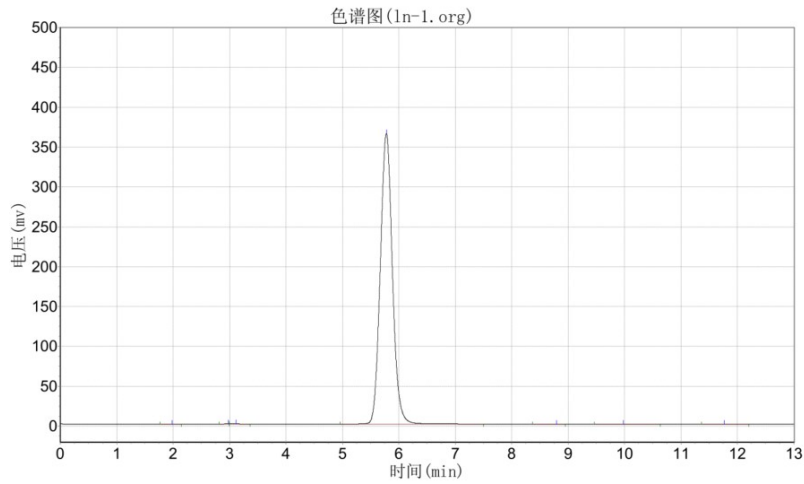


### HRMS spectra of C10





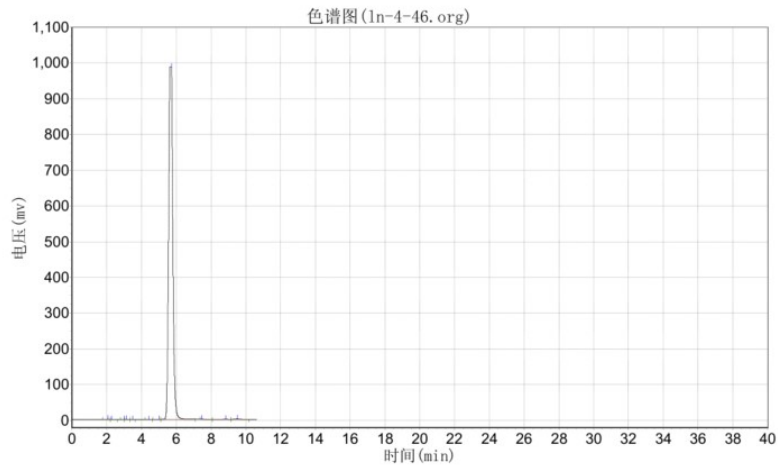
### HPLC spectra of A01



分析结果表

峰号	峰名	保留时间	峰高	峰面积	含量
1		1.982	136.087	1313.100	0.0241
2		2.973	374.121	2714.667	0.0497
3		3.115	632.545	5675.734	0.1040
4		5.782	364457.156	5435442.500	99.6057
5		8.798	135.853	4150.277	0.0761
6		9.982	189.721	7190.385	0.1318
7		11.765	19.040	474.600	0.0087
总计			365944.523	5456961.263	100.0000

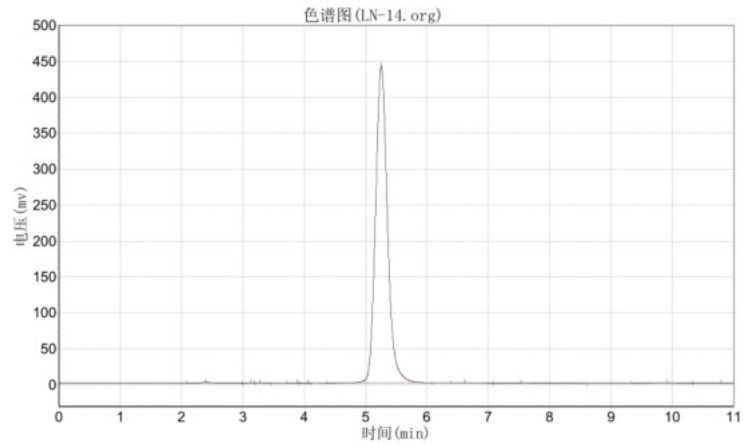
### HPLC spectra of A11



分析结果表

峰号	峰名	保留时间	峰高	峰面积	含量
1		2.073	807.110	8361.371	0.0501
2		2.282	335.860	3480.631	0.0209
3		2.998	383.758	2896.649	0.0174
4		3.132	606.242	5100.752	0.0306
5		3.498	71.053	632.200	0.0038
6		4.407	139.827	1604.800	0.0096
7		5.032	129.701	1062.234	0.0064
8		5.715	986237.000	16588757.000	99.4928
9		7.482	156.167	2624.900	0.0157
10		8.832	614.500	17304.801	0.1038
11		9.515	1823.250	41494.199	0.2489
总计			991304.467	16673319.538	100.0000

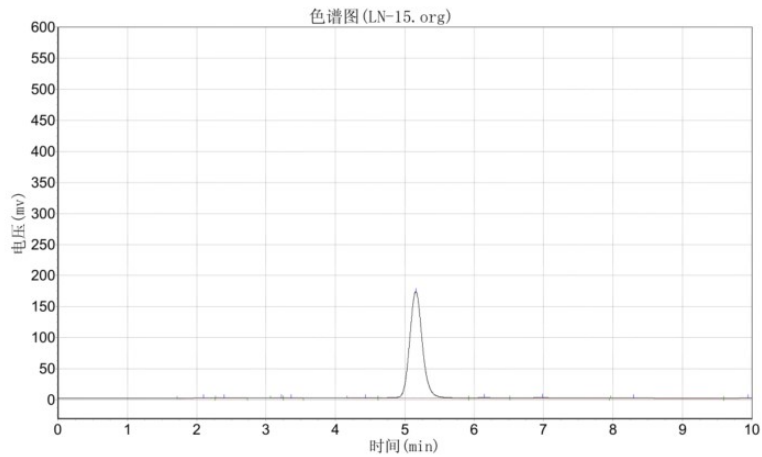
### HPLC spectra of A14



分析结果表

峰号	峰名	保留时间	峰高	峰面积	含量
1		2.398	1676.873	19713.301	0.3280
2		3.132	596.073	4702.146	0.0782
3		3.273	671.145	5509.754	0.0917
4		3.882	22.167	169.400	0.0028
5		4.065	43.913	286.650	0.0048
6		5.257	440323.500	5948345.500	98.9748
7		6.615	357.333	6245.800	0.1039
8		7.532	172.337	9160.700	0.1524
9		9.915	396.089	10543.617	0.1754
10		10.798	155.452	5282.578	0.0879
总计			444414.881	6009959.446	100.0000

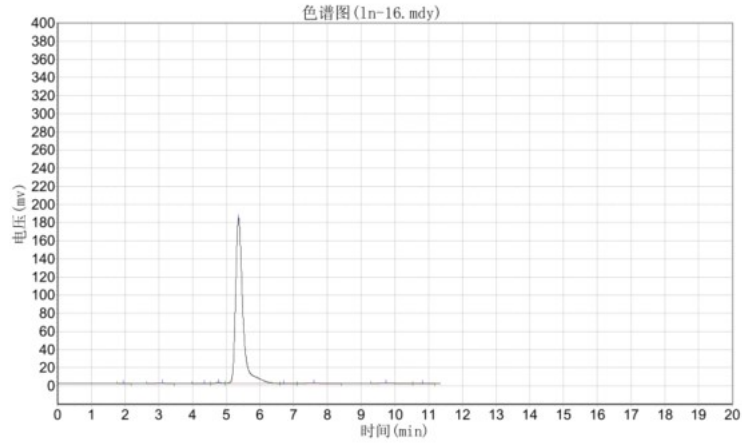
### HPLC spectra of A15



分析结果表

峰号	峰名	保留时间	峰高	峰面积	含量
1		2.098	249.049	2796.230	0.1217
2		2.398	173.131	2187.781	0.0952
3		3.223	389.000	2484.979	0.1082
4		3.357	553.895	4772.121	0.2077
5		4.432	398.166	6277.093	0.2732
6		5.165	171241.875	2191958.000	95.4105
7		6.148	1061.794	22830.611	0.9938
8		6.982	1078.187	39985.320	1.7405
9		8.298	682.068	19862.707	0.8646
10		9.948	278.469	4243.100	0.1847
总计			176105.634	2297397.942	100.0000

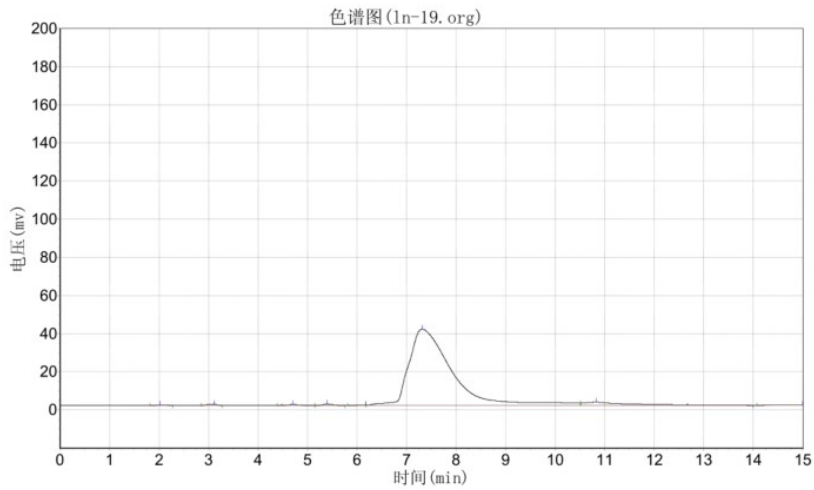
### HPLC spectra of B01



分析结果表

峰号	峰名	保留时间	峰高	峰面积	含量
1		1.940	137.417	1204.300	0.0429
2		3.115	594.735	7961.400	0.2838
3		4.340	127.180	1846.251	0.0658
4		4.765	1124.278	14753.274	0.5259
5		5.365	181548.531	2751846.500	98.0866
6		6.698	135.880	3401.748	0.1213
7		7.598	491.263	12747.550	0.4544
8		9.732	359.068	10812.500	0.3854
9		10.815	51.250	954.600	0.0340
总计			184569.602	2805528.123	100.0000

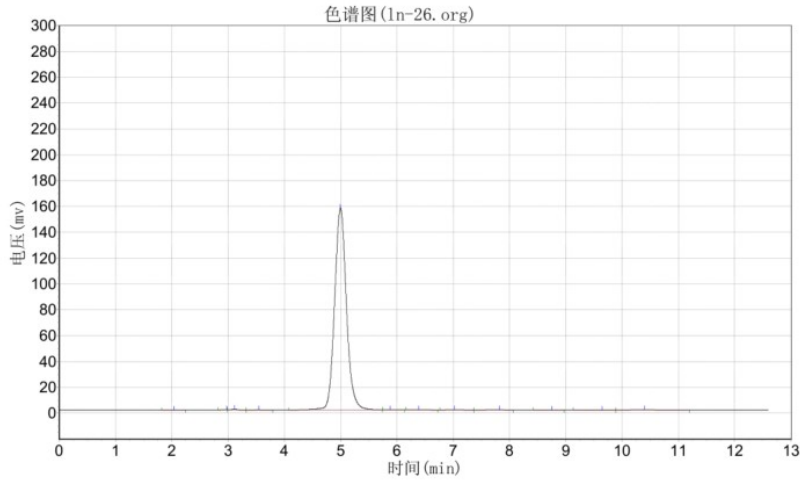
### HPLC spectra of B04



分析结果表

峰号	峰名	保留时间	峰高	峰面积	含量
1		2.015	304.286	2795.700	0.1116
2		3.115	578.846	6935.700	0.2768
3		4.707	483.637	6812.550	0.2719
4		5.398	660.167	8795.000	0.3510
5		6.165	149.305	1645.950	0.0657
6		7.315	39909.453	2367397.500	94.4840
7		10.832	1613.379	101968.641	4.0696
8		14.998	177.434	9255.900	0.3694
总计			43876.507	2505606.941	100.0000

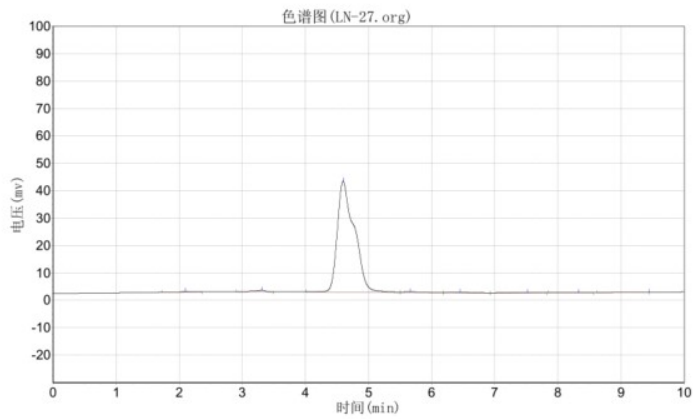
### HPLC spectra of B09



分析结果表

峰号	峰名	保留时间	峰高	峰面积	含量
1		2.040	136.333	1421.900	0.0614
2		2.973	360.500	2411.666	0.1042
3		3.115	627.083	5701.933	0.2464
4		3.540	114.250	1416.700	0.0612
5		4.998	156140.359	2281262.250	98.5710
6		5.882	253.278	4484.965	0.1938
7		6.382	265.443	4446.975	0.1921
8		7.015	103.785	1760.647	0.0761
9		7.815	101.857	1979.200	0.0855
10		8.748	72.606	1988.700	0.0859
11		9.648	69.750	1787.281	0.0772
12		10.398	167.323	5672.914	0.2451
总计			158412.568	2314335.132	100.0000

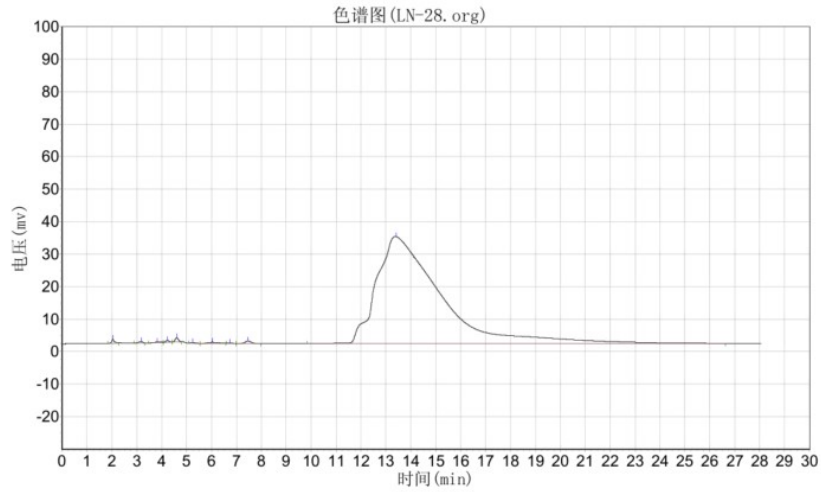
### HPLC spectra of B10



分析结果表

峰号	峰名	保留时间	峰高	峰面积	含量
1		2.098	280.118	2461.500	0.3120
2		3.307	580.657	7465.300	0.9463
3		4.598	40553.531	760400.250	96.3845
4		5.665	316.316	6821.784	0.8647
5		6.448	242.581	7130.052	0.9038
6		7.515	79.000	3865.600	0.4900
7		8.332	30.558	535.800	0.0679
8		9.448	0.000	243.500	0.0309
总计			42082.762	788923.786	100.0000

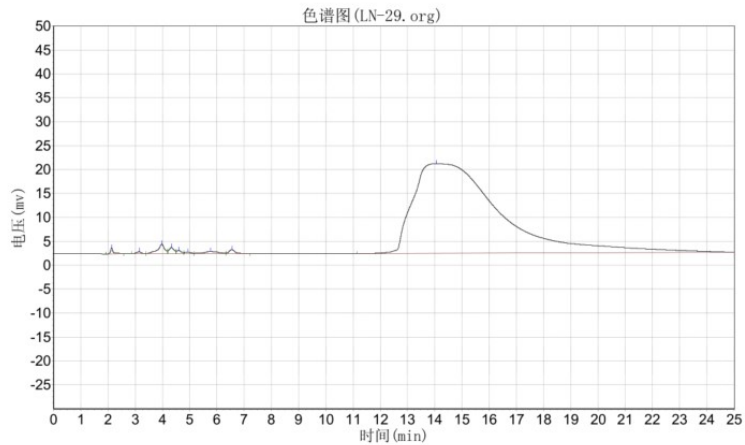
### HPLC spectra of B12



分析结果表

峰号	峰名	保留时间	峰高	峰面积	含量
1		2.040	1203.558	8578.000	0.1464
2		3.190	459.815	4830.900	0.0824
3		3.823	172.552	4021.620	0.0686
4		4.232	633.621	6471.182	0.1104
5		4.607	1308.500	12378.300	0.2112
6		5.248	215.357	3126.300	0.0533
7		6.048	380.349	12937.981	0.2208
8		6.732	161.326	2118.476	0.0361
9		7.465	805.814	12592.600	0.2149
10		13.398	32911.402	5793621.500	98.8558
总计			38252.292	5860676.858	100.0000

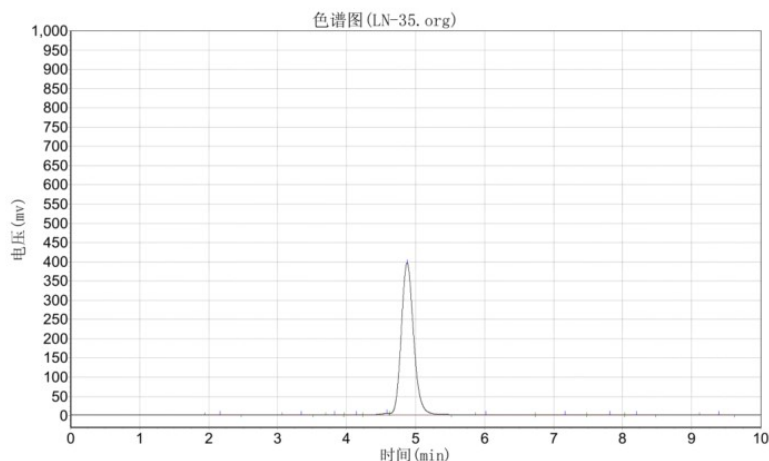
### HPLC spectra of B13



分析结果表

峰号	峰名	保留时间	峰高	峰面积	含量
1		2.132	1238.709	9109.450	0.2127
2		3.148	457.258	4762.700	0.1112
3		3.973	1967.302	34531.406	0.8063
4		4.332	1281.274	16869.643	0.3939
5		4.598	655.509	7408.124	0.1730
6		4.923	313.576	4807.850	0.1123
7		5.765	482.161	16605.604	0.3877
8		6.548	828.913	12079.869	0.2821
9		14.065	18776.463	4176613.500	97.5209
总计			26001.164	4282788.146	100.0000

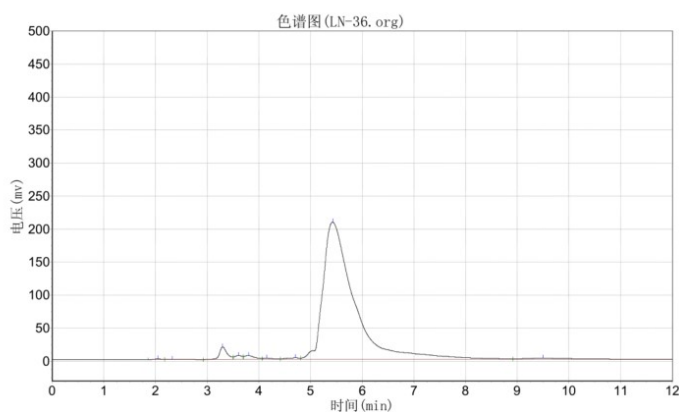
## HPLC spectra of C03



分析结果表

峰号	峰名	保留时间	峰高	峰面积	含量
1		2.165	589.984	5453.400	0.1106
2		3.340	537.389	6675.600	0.1353
3		3.823	58.871	475.600	0.0096
4		4.140	48.452	481.606	0.0098
5		4.582	3148.591	25386.006	0.5147
6		4.882	394368.375	4867269.500	98.6742
7		6.015	96.577	4766.800	0.0966
8		7.165	105.048	3653.240	0.0741
9		7.815	177.619	3760.626	0.0762
10		8.198	114.238	1849.428	0.0375
11		9.398	62.433	827.900	0.0168
12		10.565	597.000	12066.600	0.2446
总计			399904.577	4932666.306	100.0000

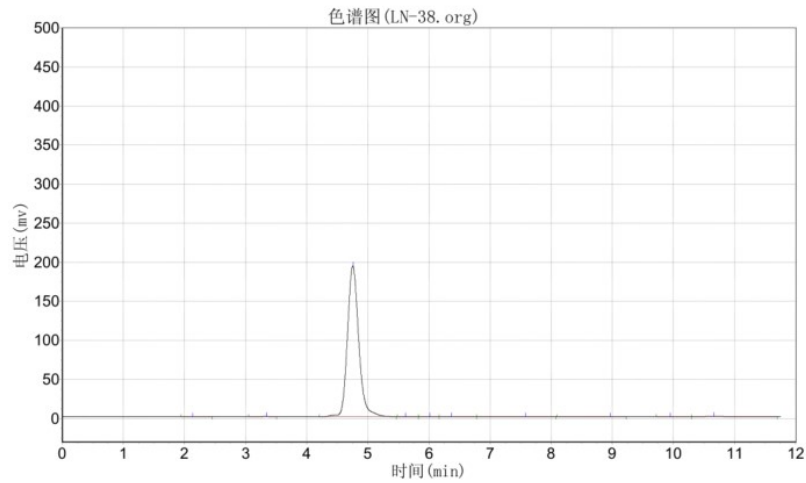
## HPLC spectra of C04



分析结果表

峰号	峰名	保留时间	峰高	峰面积	含量
1		2.040	1102.000	6372.500	0.0692
2		2.323	127.944	116.400	0.0013
3		3.298	19031.867	194359.172	2.1092
4		3.607	6092.179	61724.816	0.6698
5		3.798	5992.022	85812.719	0.9312
6		4.148	2034.431	30748.891	0.3337
7		4.707	2521.321	46376.102	0.5033
8		5.432	208091.594	8637461.000	93.7343
9		9.498	2004.392	151464.250	1.6437
10		12.665	24.905	399.100	0.0043
总计			247022.654	9214834.949	100.0000

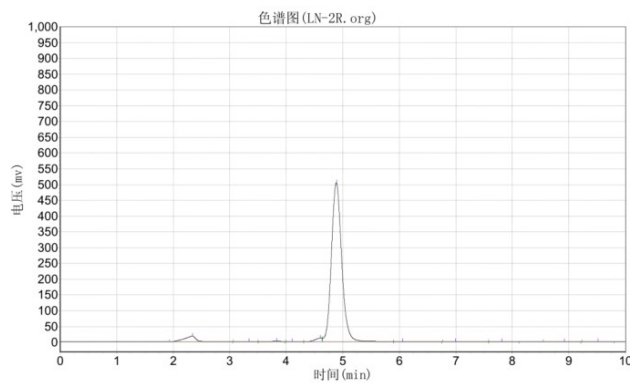
## HPLC spectra of C06



分析结果表

峰号	峰名	保留时间	峰高	峰面积	含量
1		2.132	281.403	2788.300	0.1097
2		3.340	543.000	6882.450	0.2707
3		4.757	193175.984	2485239.750	97.7620
4		5.615	416.990	6424.555	0.2527
5		6.015	261.165	4700.155	0.1849
6		6.365	431.068	8598.041	0.3382
7		7.582	116.462	6561.300	0.2581
8		8.965	93.352	3754.062	0.1477
9		9.948	126.347	3471.117	0.1365
10		10.665	576.157	13714.169	0.5395
总计			196021.929	2542133.899	100.0000

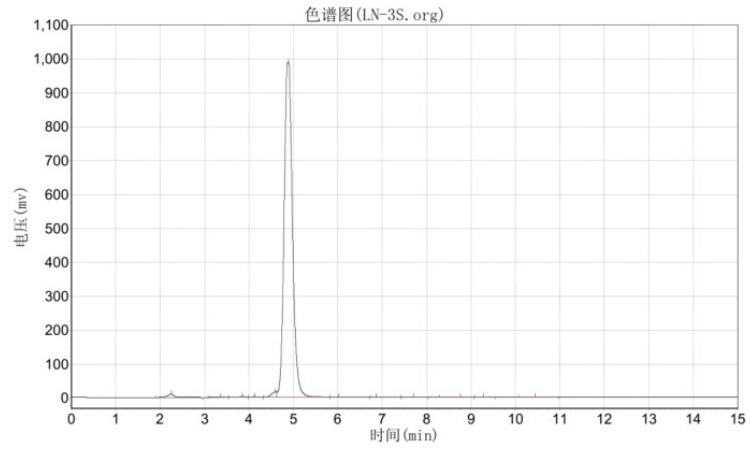
## HPLC spectra of C09



分析结果表

峰号	峰名	保留时间	峰高	峰面积	含量
1		2.340	17379.156	245322.703	3.6479
2		3.340	524.615	6622.700	0.0985
3		3.832	1445.513	14927.480	0.2220
4		4.107	687.536	8581.699	0.1276
5		4.607	10679.305	92501.703	1.3755
6		4.890	503338.531	6320089.500	93.9784
7		6.065	505.549	16517.752	0.2456
8		6.998	101.741	3588.817	0.0534
9		7.815	104.333	1986.480	0.0295
10		8.915	39.250	754.700	0.0112
11		9.515	61.000	895.700	0.0133
12		10.715	567.113	11539.700	0.1716
13		12.082	101.590	1719.300	0.0256
总计			535535.232	6725048.236	100.0000

## HPLC spectra of C10



分析结果表

峰号	峰名	保留时间	峰高	峰面积	含量
1		2.248	9778.341	96767.203	0.7367
2		3.357	501.571	6291.600	0.0479
3		3.848	1709.117	17271.279	0.1315
4		4.123	1365.545	16865.533	0.1284
5		4.590	15079.182	126360.711	0.9620
6		4.890	986478.375	12821212.000	97.6100
7		6.015	914.857	27677.355	0.2107
8		6.865	135.909	3863.098	0.0294
9		7.698	194.117	3416.573	0.0260
10		8.765	132.867	2495.665	0.0190
11		9.282	71.000	938.199	0.0071
12		10.448	622.057	11987.500	0.0913
总计			1016982.938	13135146.717	100.0000