

# Synthesis, anti-proliferative and proapoptotic activity of novel oleanolic acid azaheterocyclic derivative

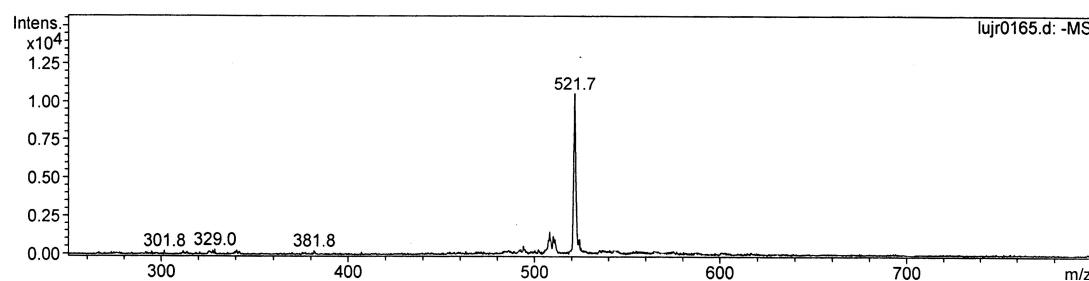
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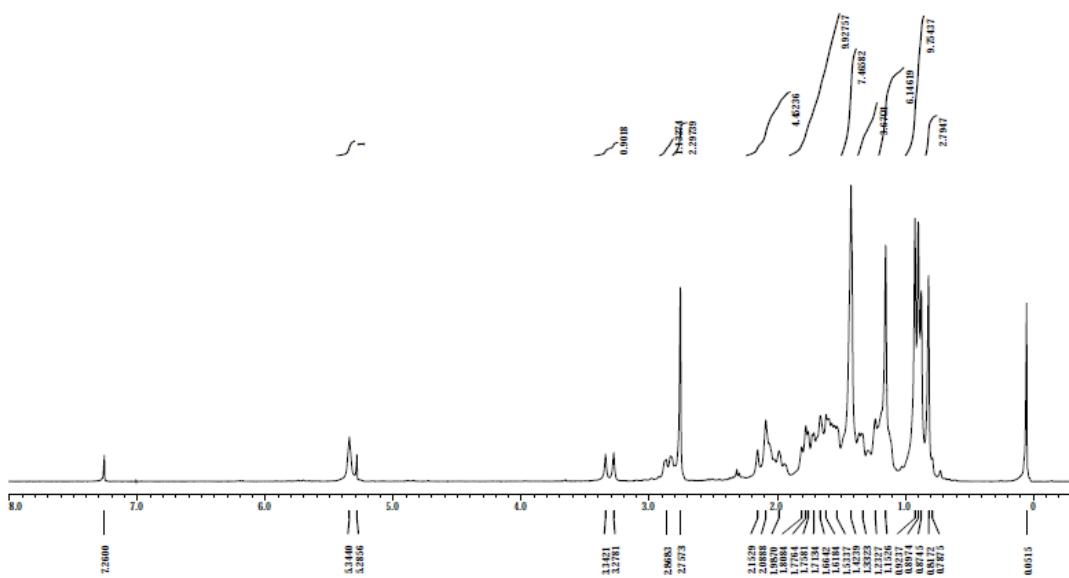
<sup>b</sup> Key Lab of Bioorganic Phosphorus Chemistry & Chemical Biology, Ministry of Education, Department of Chemistry, Tsinghua University, Beijing 100084, China, Fax: 86-10-62781695, E-mail: [juyong@tsinghua.edu.cn](mailto:juyong@tsinghua.edu.cn)

## Compound 7

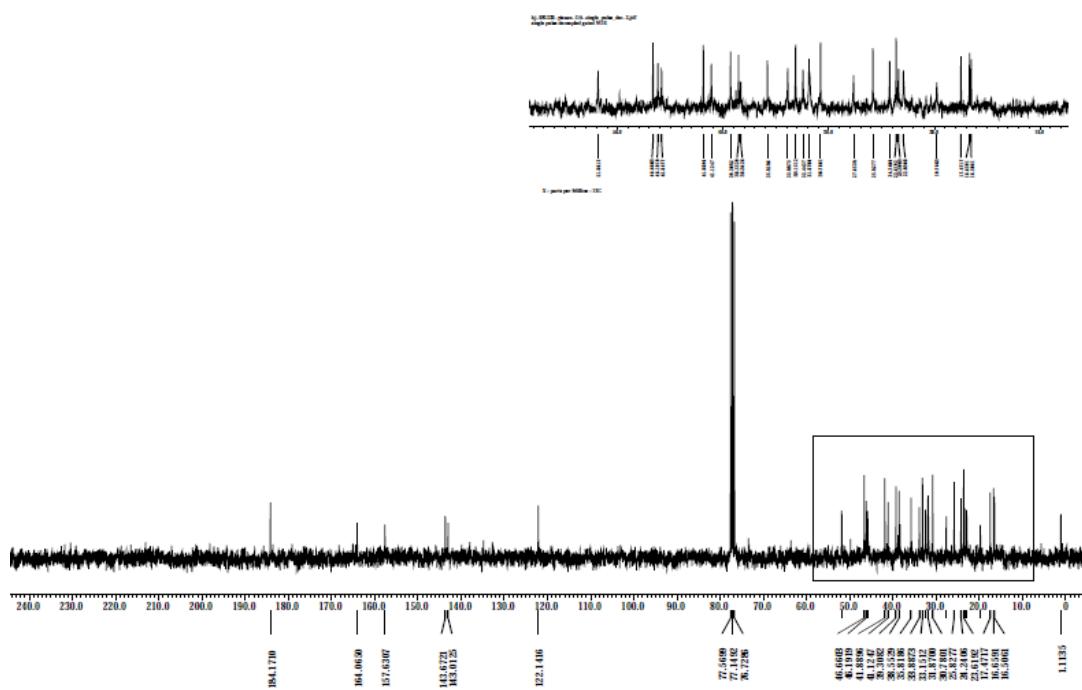
ESI-MS (-) Spectra of compound 7



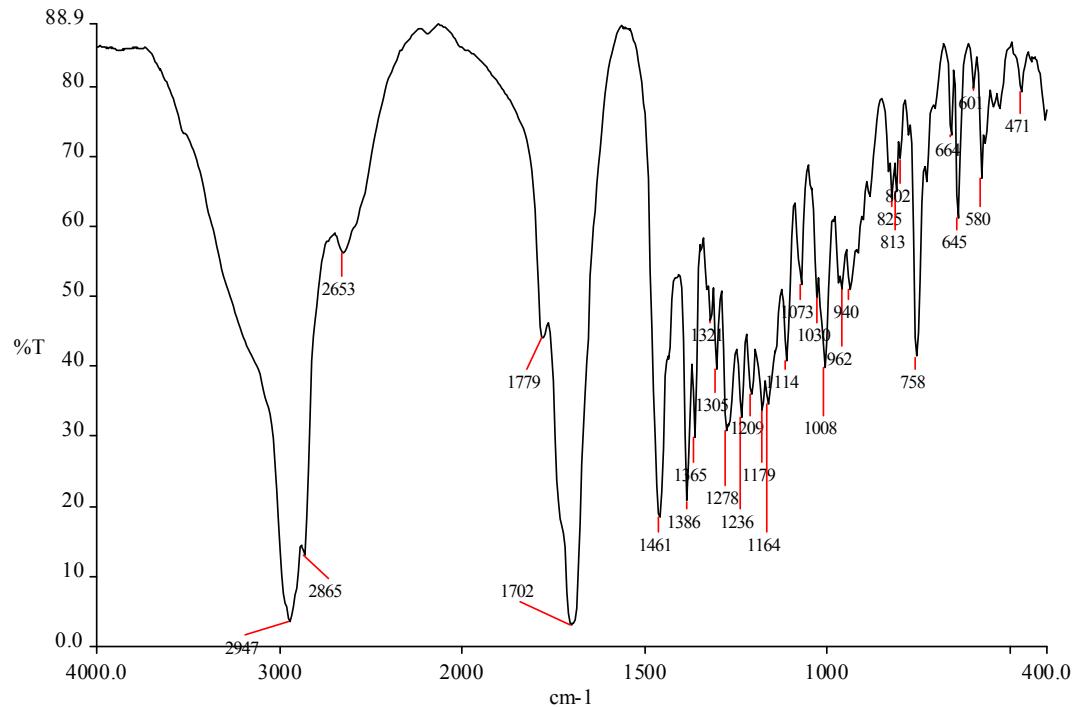
<sup>1</sup>H NMR Spectra (CDCl<sub>3</sub>) of compound 7 (300MHz)



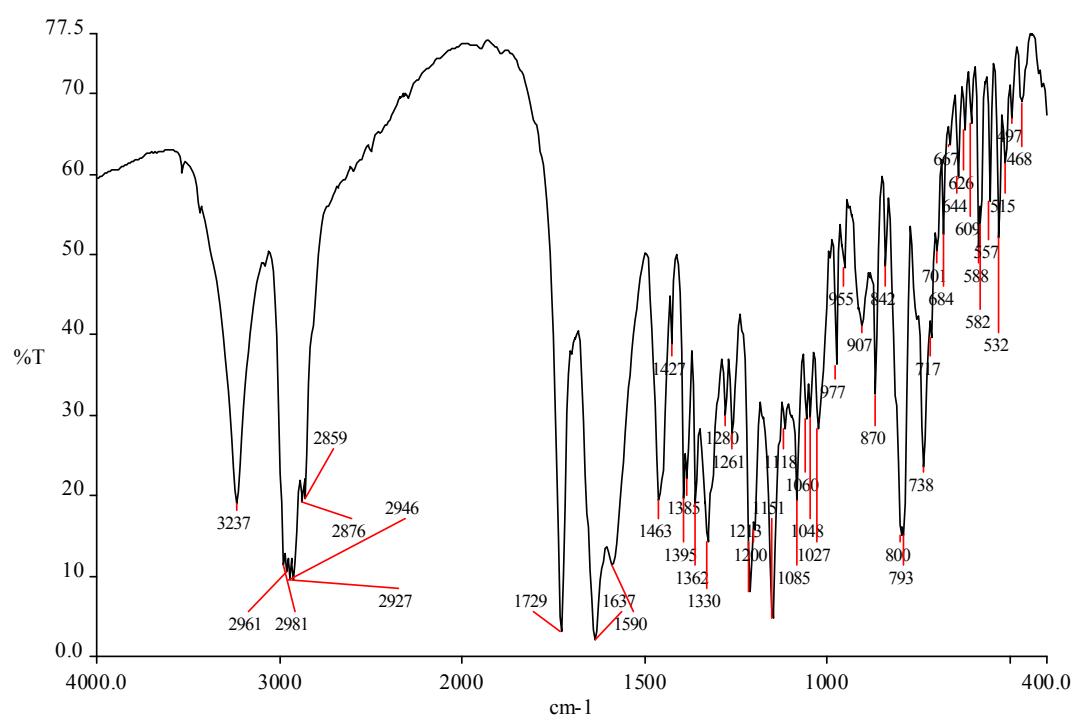
<sup>13</sup>C NMR Spectra (CDCl<sub>3</sub>) of compound 7 (75MHz)



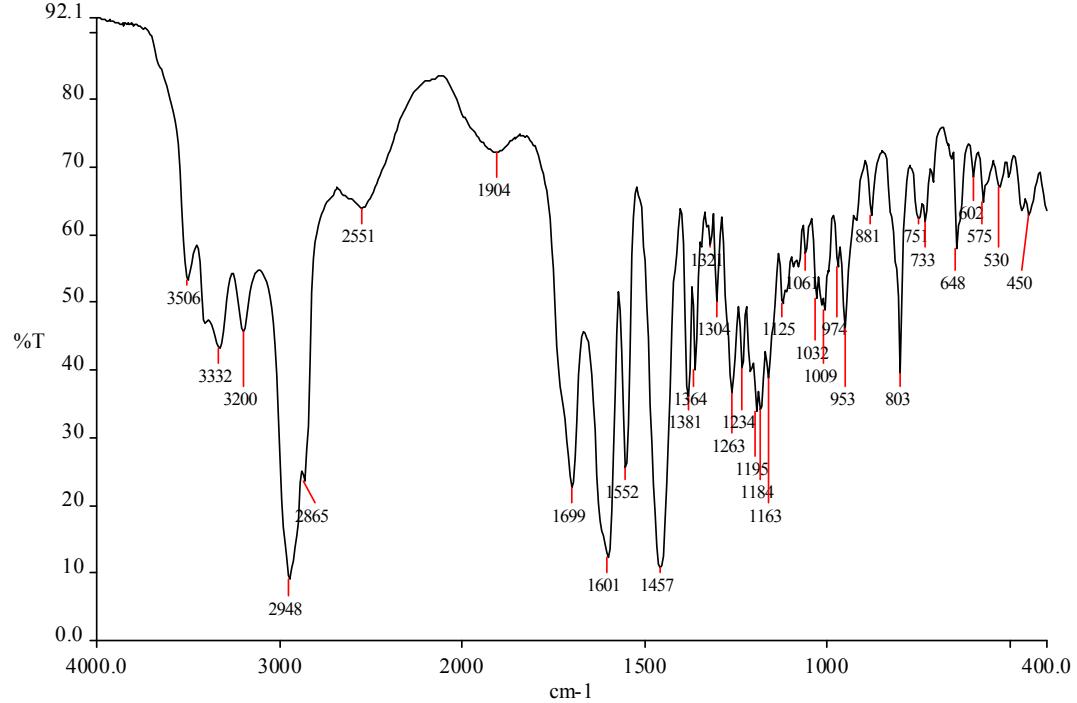
## IR spectra of compounds 2-9



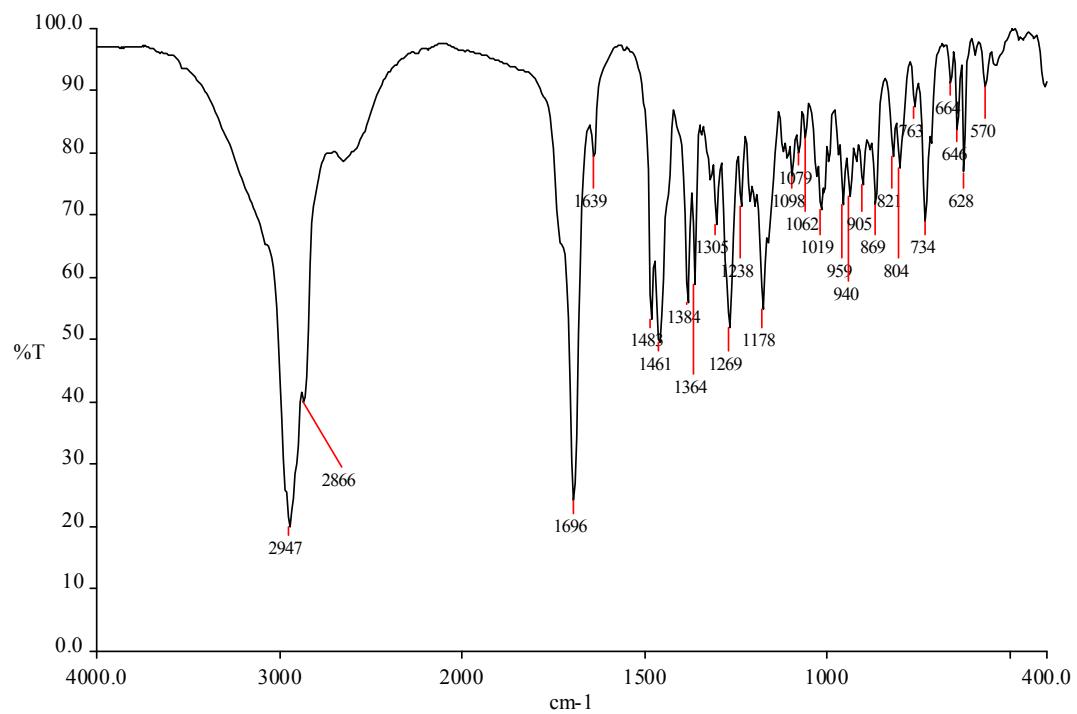
**Compound 2**



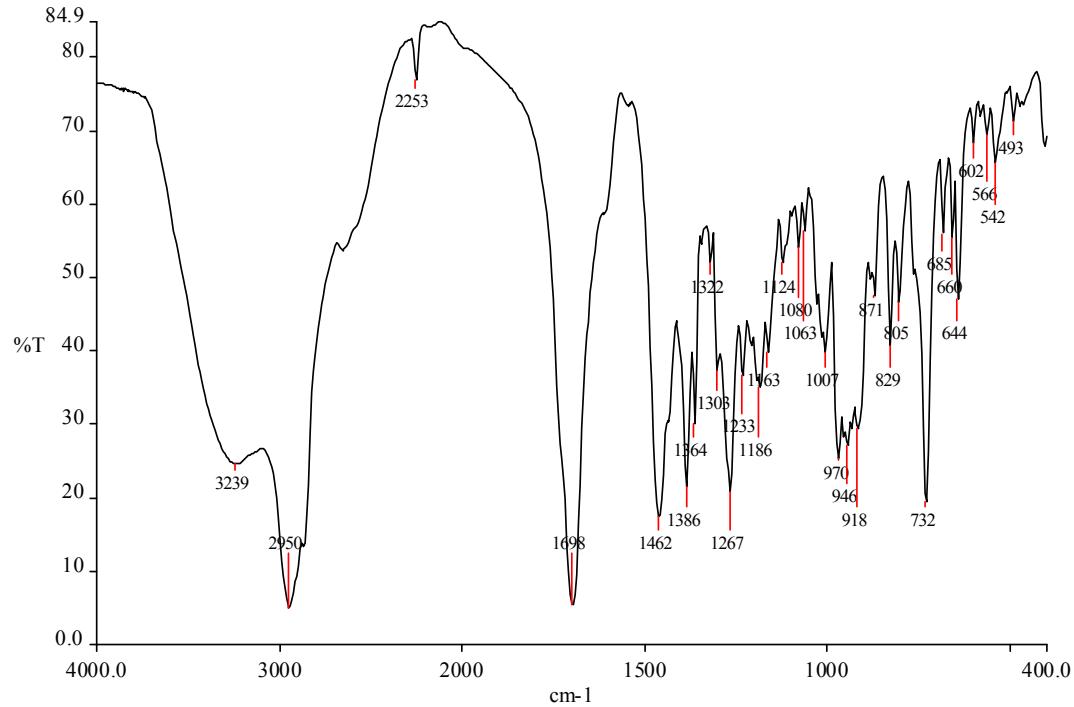
**Compound 3**



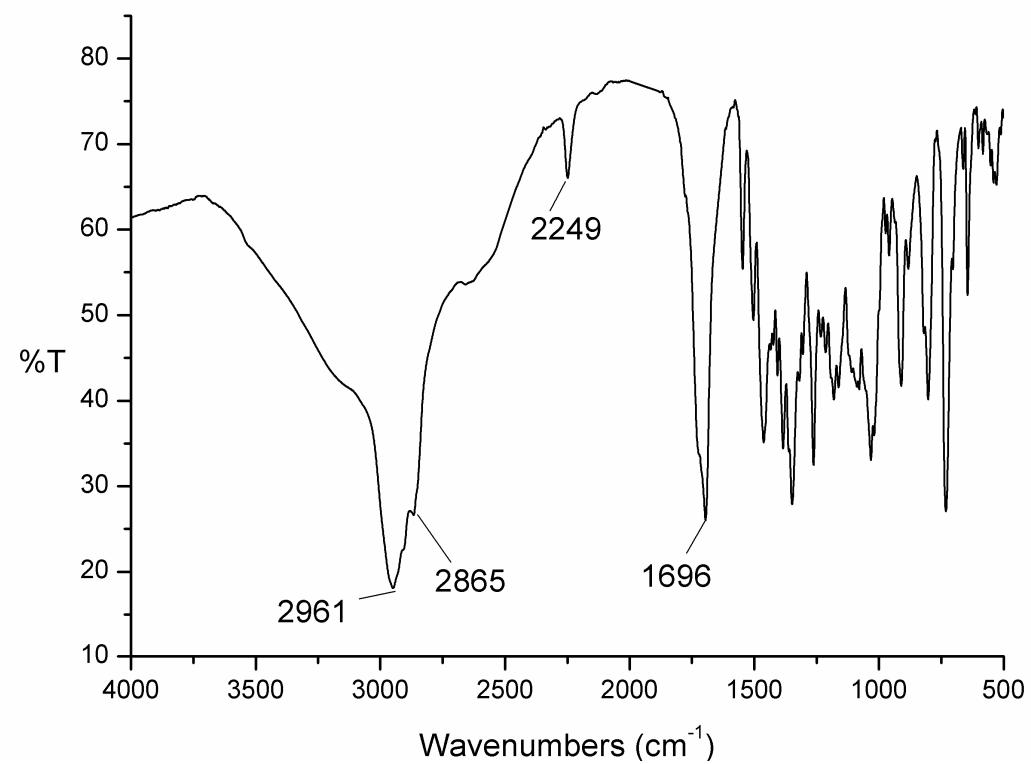
**Compound 4**



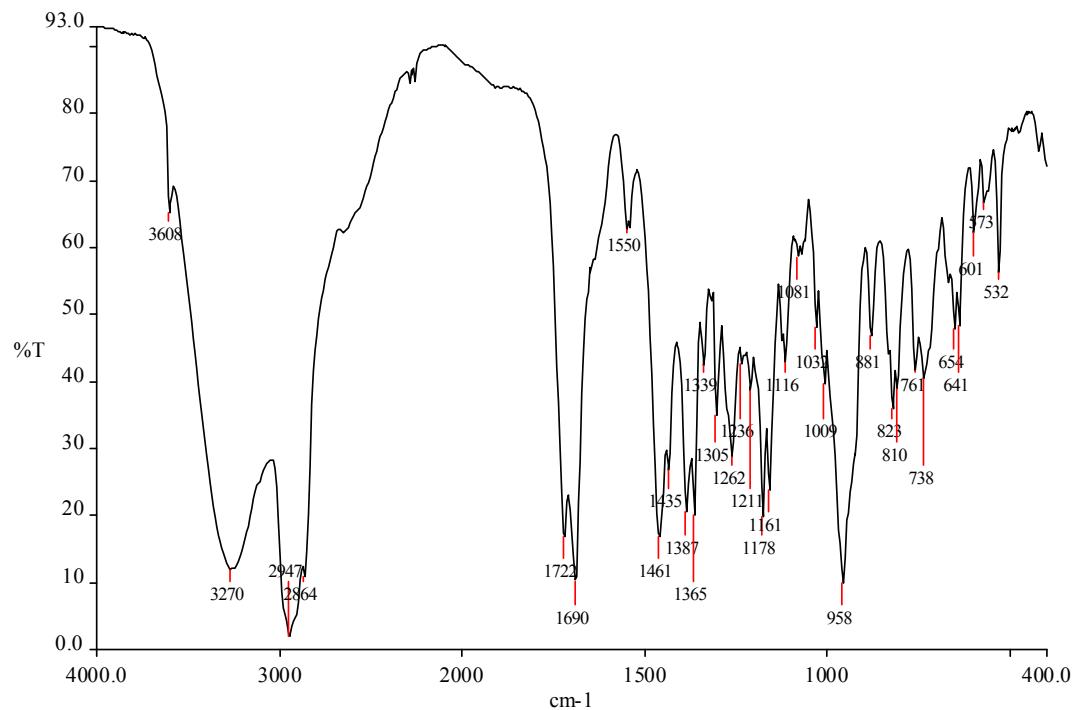
**Compound 5**



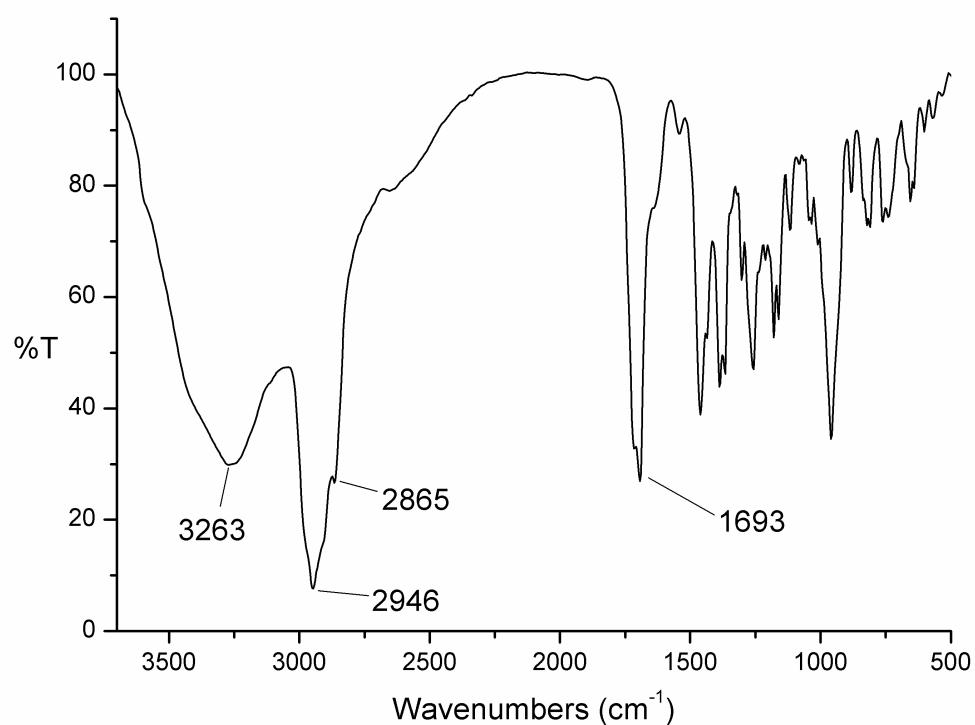
**Compound 6**



**Compound 7**



**Compound 8**



**Compound 9**

**Table 1S.** Inhibitory Ratio of Growth of Taxol on Two Cell Lines (%)

Dose μM	Inhibitory ratio of growth	
	BEL-7404	MDA-MB-231
0.00016	13.14±2.03	5.86±6.85
0.0016	25.31±6.21**	28.15±7.29**
0.016	58.76±5.27**	56.25±2.55**
0.16	68.57±3.16**	62.19±3.27**
1.6	72.62±3.58**	79.09±1.09**
16	79.29±3.99**	88.12±3.28**