

**Supporting Information of “Oleiferasaponin C<sub>6</sub> from the Seeds of Camellia oleifera Abel.: A novel Compound Inhibits Proliferation through Inducing Cell-Cycle Arrest and Apoptosis on Human Cancer Cell Lines *in vitro*”**

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Figure S1. Chemical structures of seven saponins

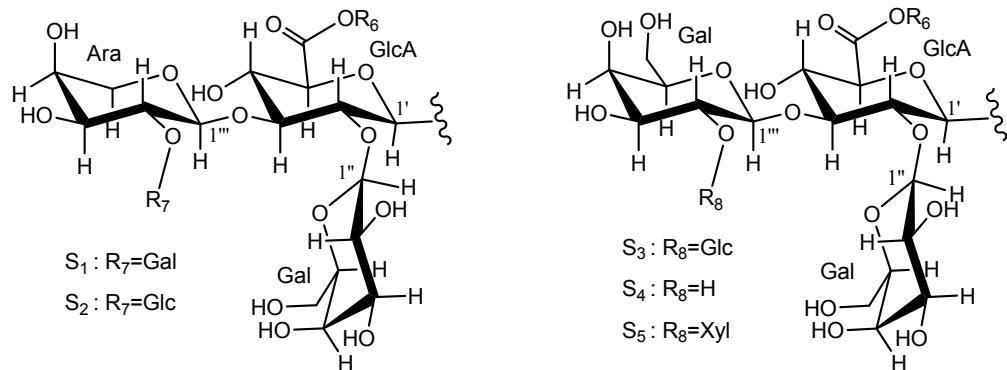
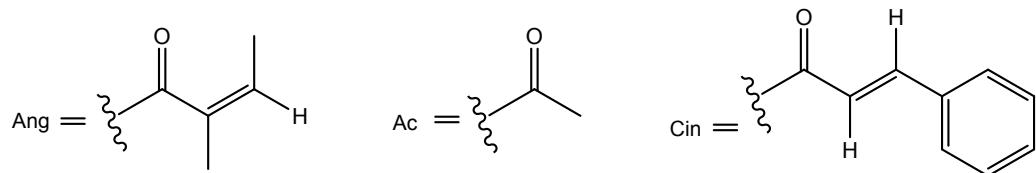
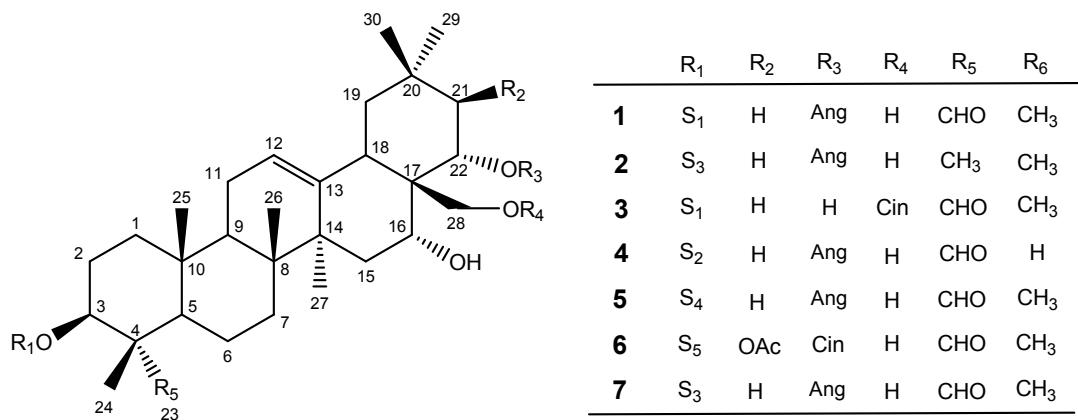


Figure S2. Positive ion mode HR-ESI-MS spectrum of oleiferasaponin C<sub>6</sub>.

20150424\_HESI+2-1-5 #21 RT: 0.32 AV: 1 NL: 2.80E6  
T: FTMS + c ESI Full ms [500.00-1500.00]

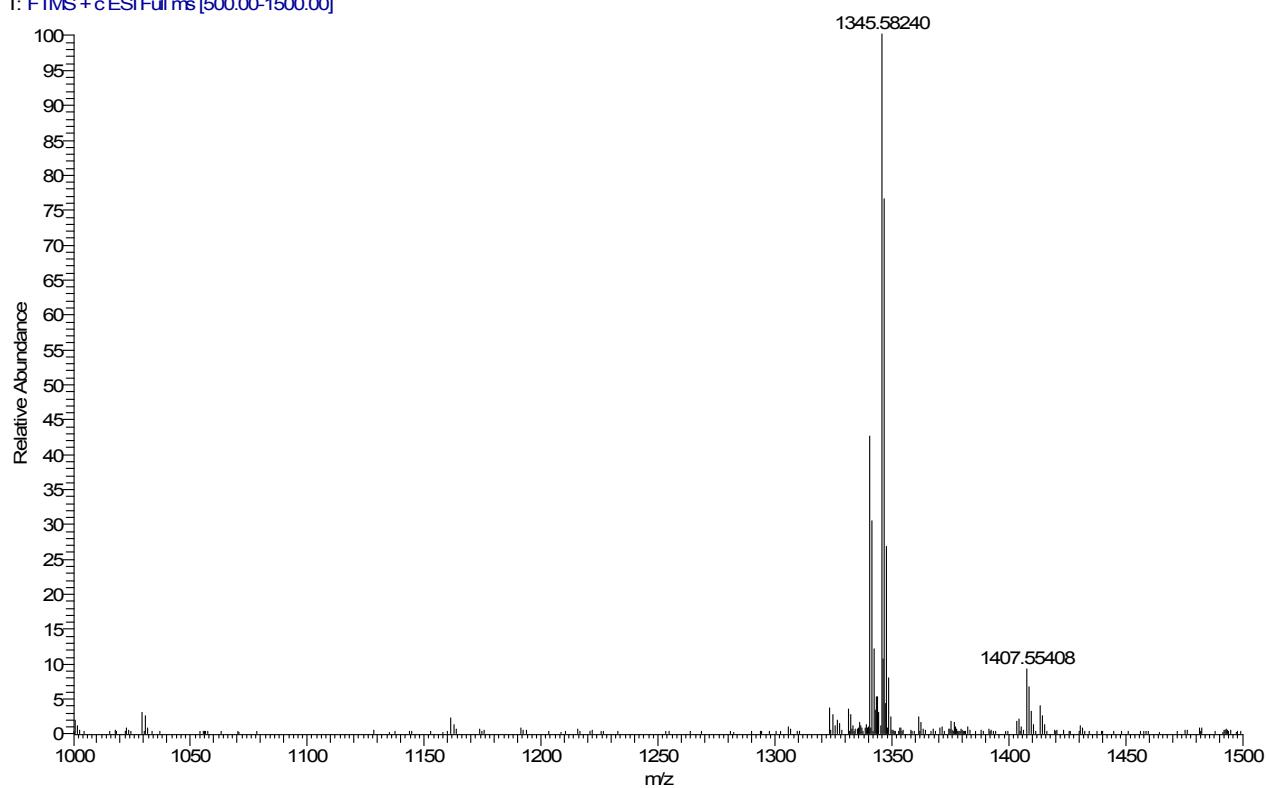


Figure S3.  $^1\text{H}$  NMR spectrum of oleiferasaponin C<sub>6</sub>.

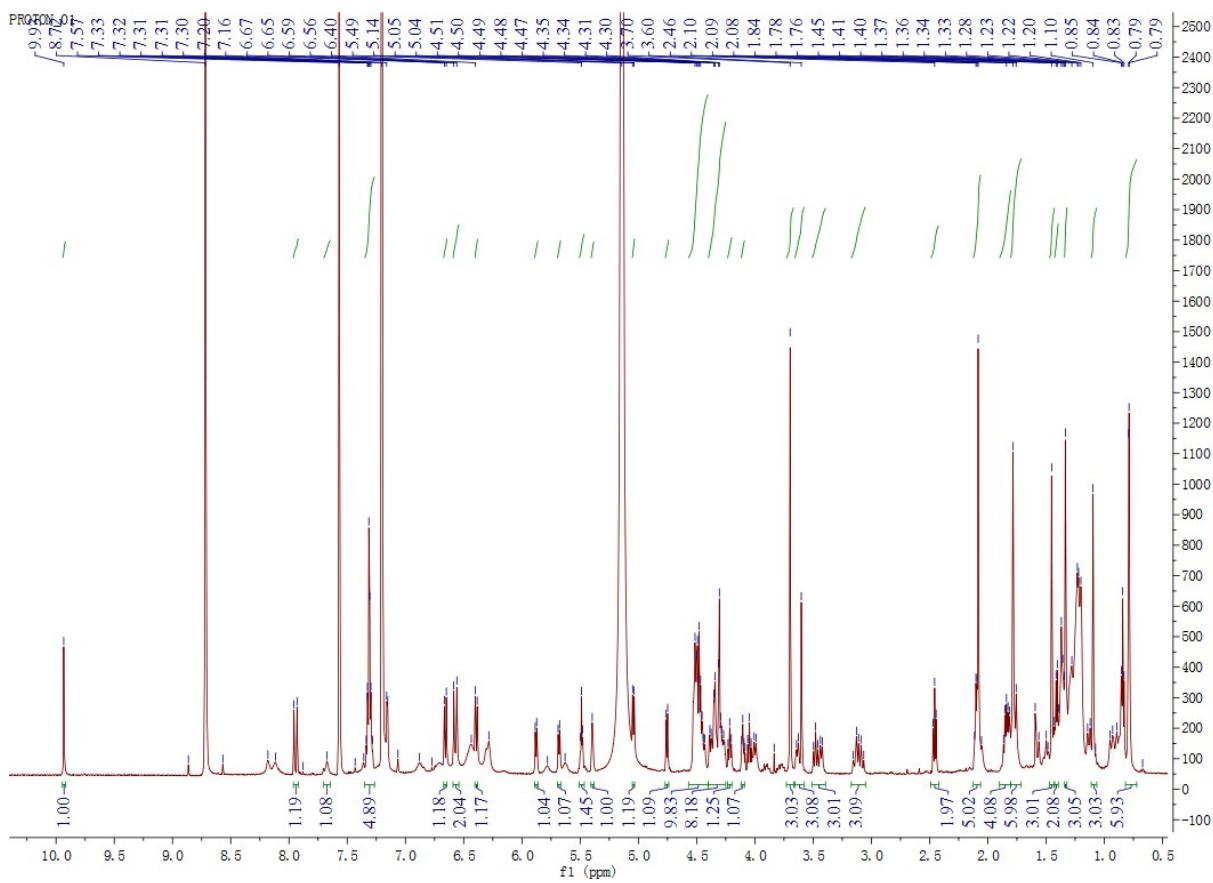


Figure S4.  $^{13}\text{C}$  NMR spectrum of oleiferasaponin C<sub>6</sub>

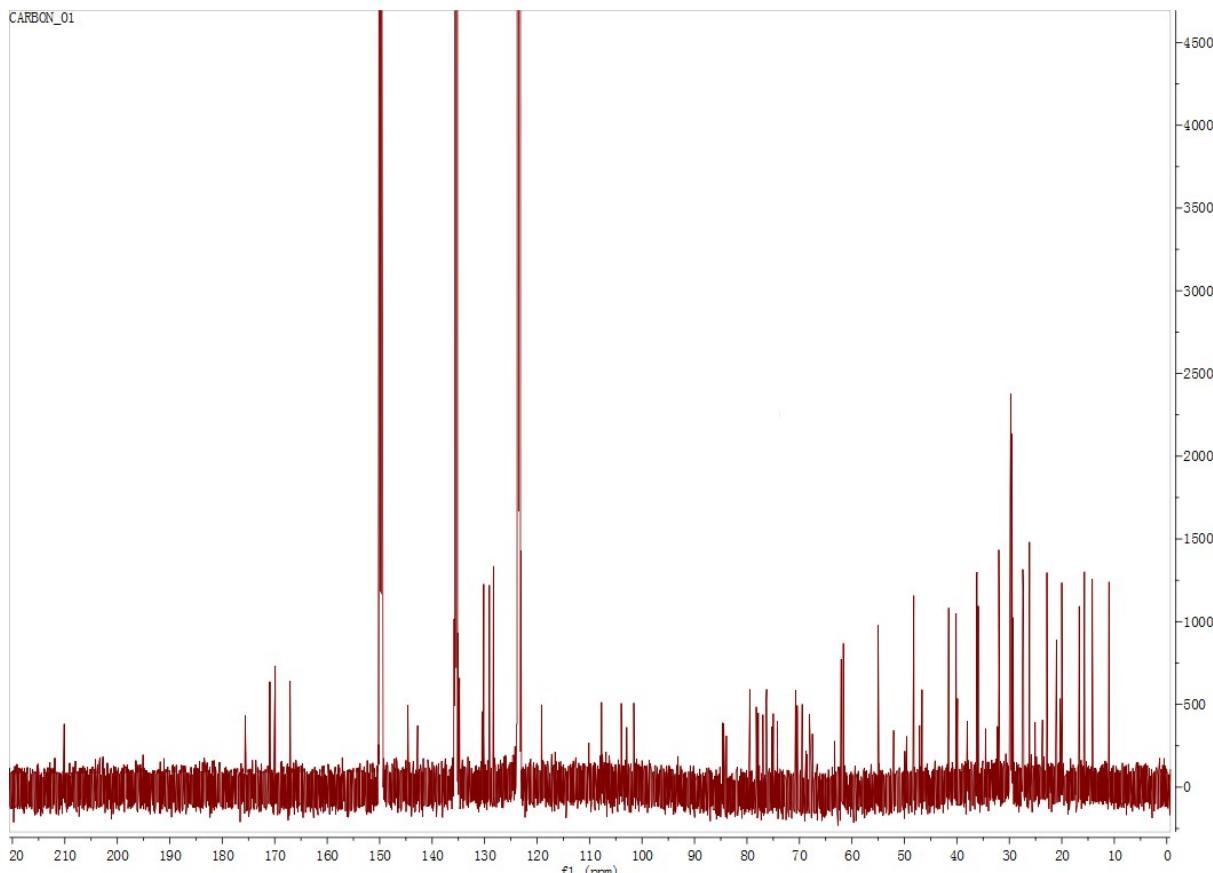


Figure S5.  $^1\text{H}$ - $^1\text{H}$  COSY spectrum of oleiferasaponin C<sub>6</sub>.

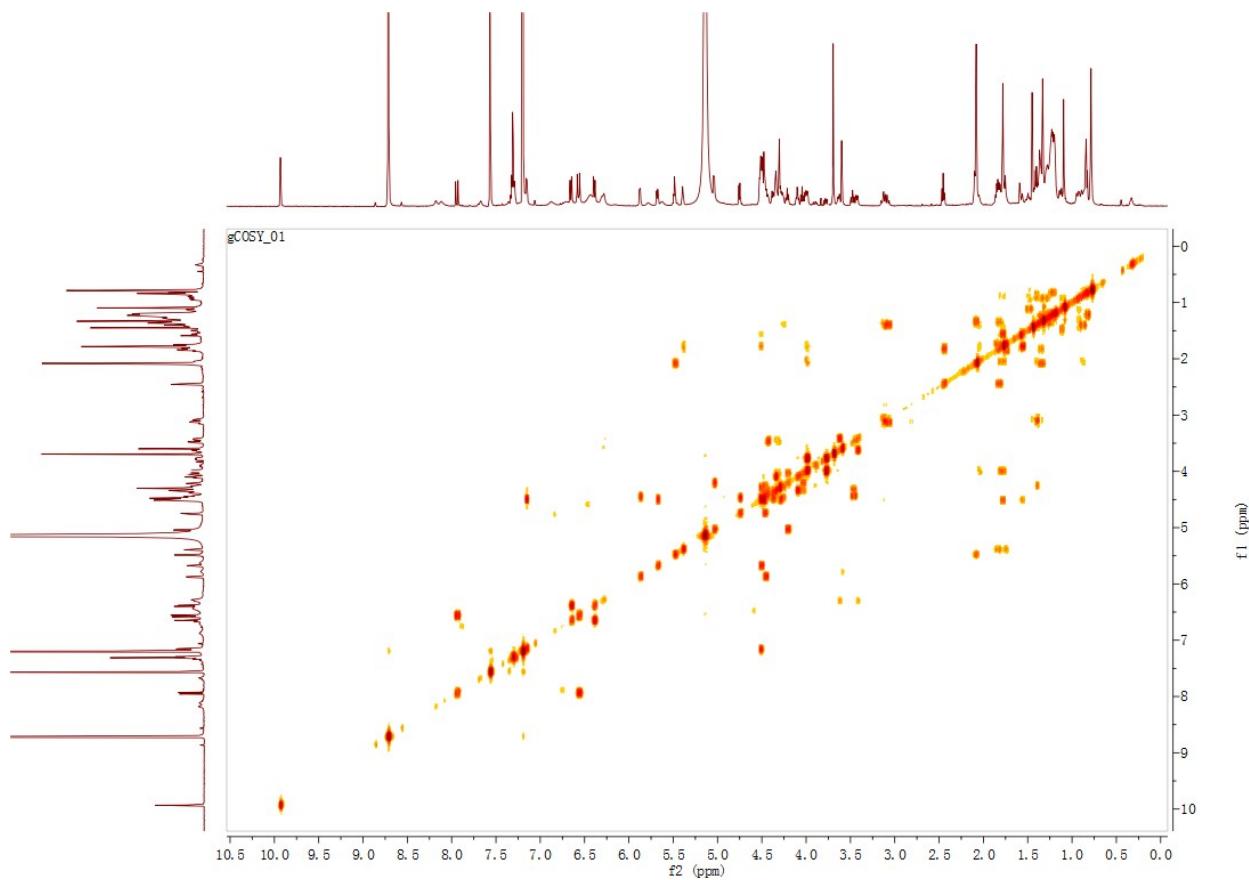


Figure S6. HSQC spectrum of oleiferasaponin C<sub>6</sub>.

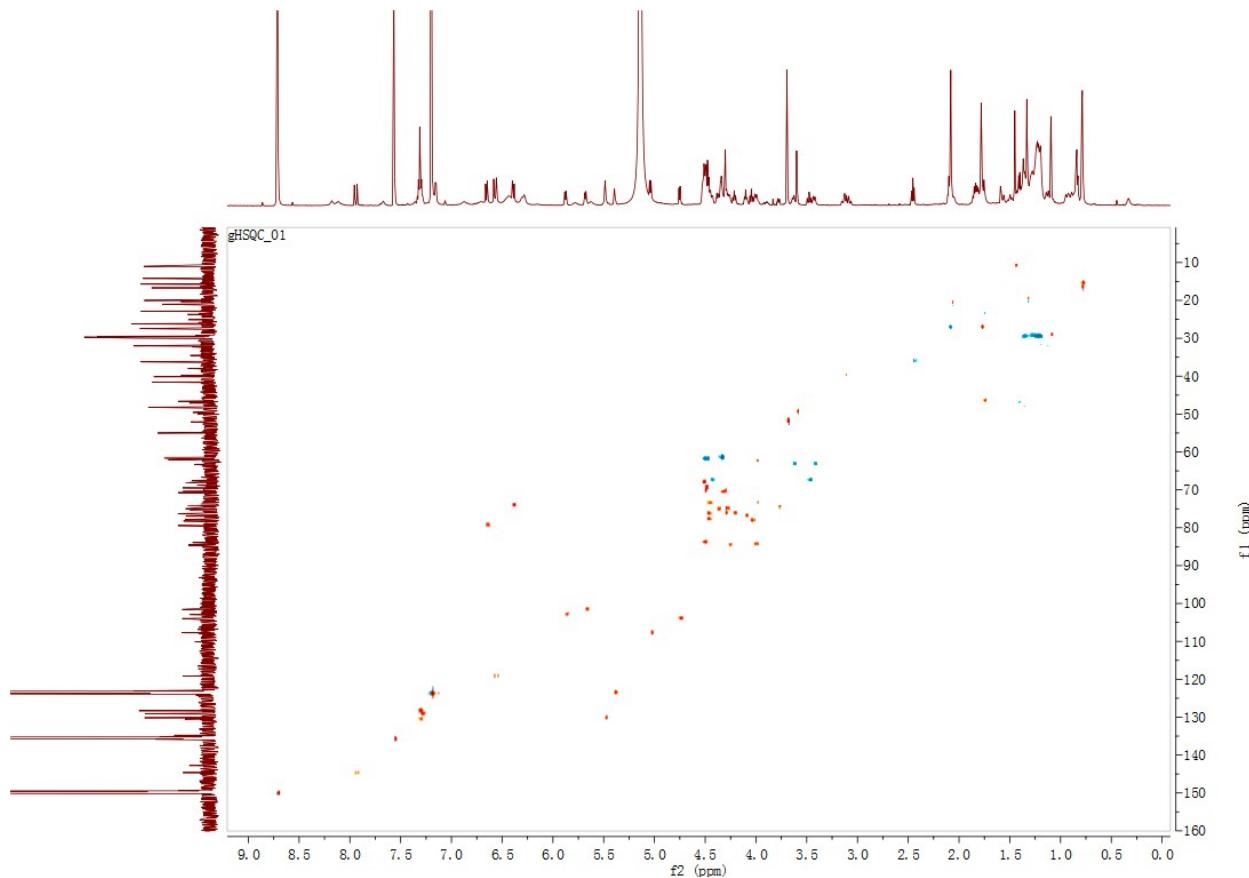


Figure S7. HMBC spectrum of oleiferasaponin C<sub>6</sub>.

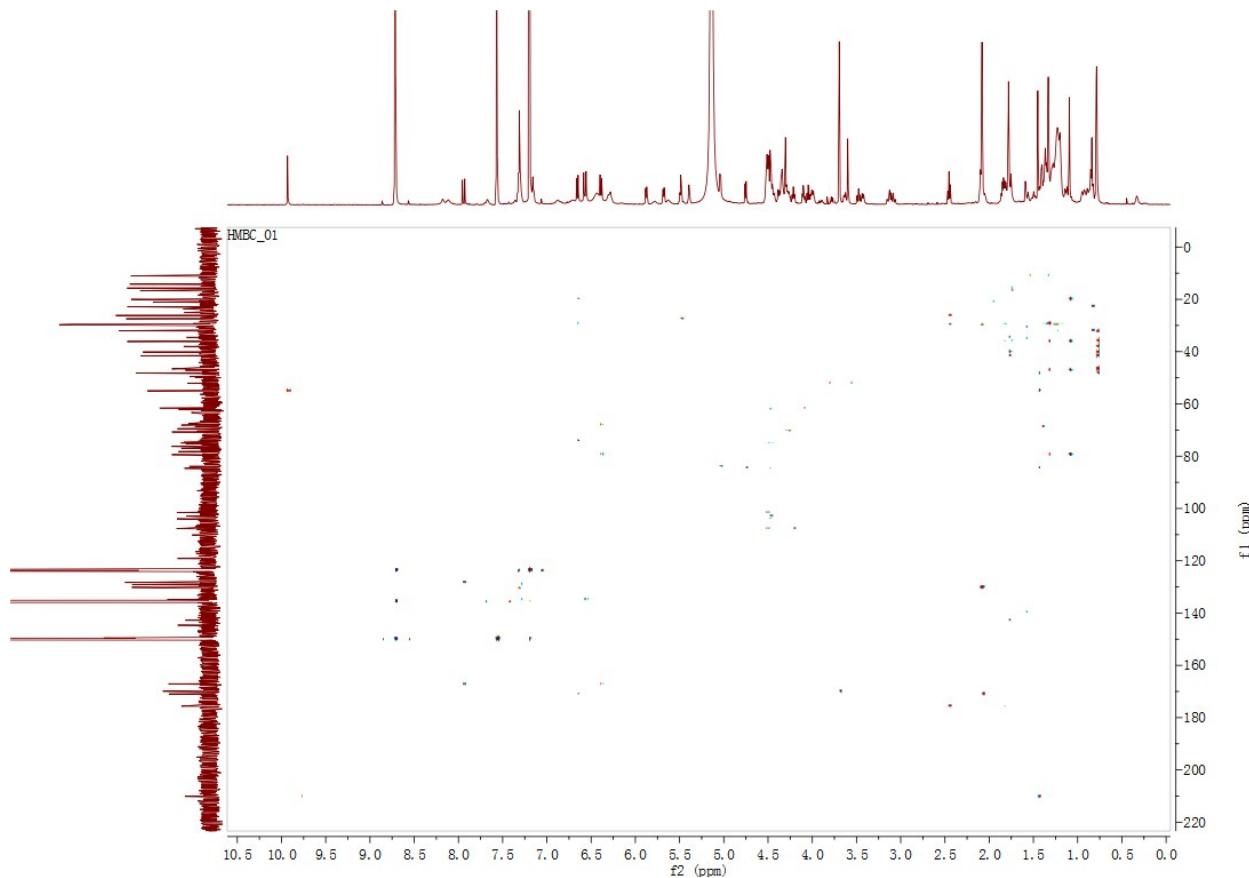


Figure S8. NOESY spectrum of oleiferasaponin C<sub>6</sub>.

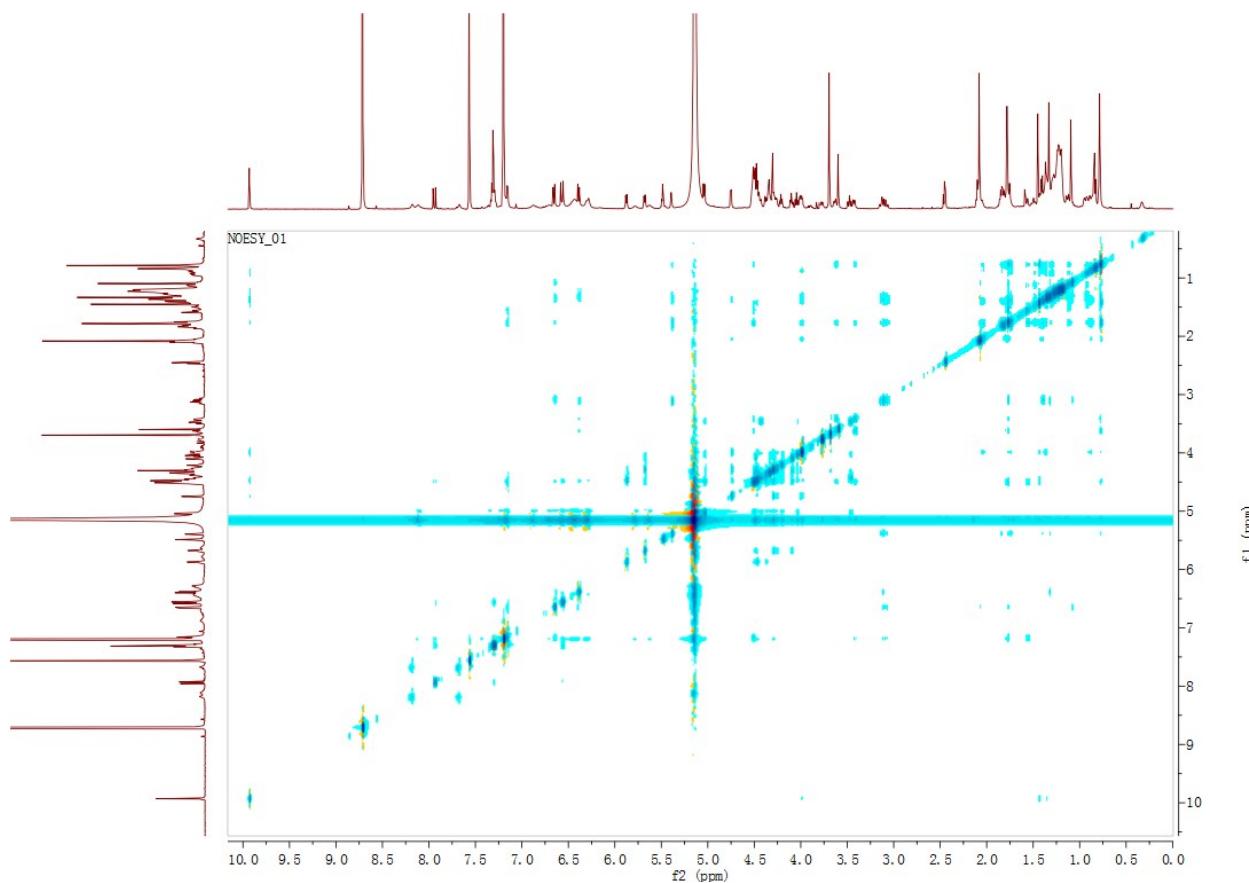


Figure S9. HPLC spectrum of oleiferasaponin C<sub>6</sub> and total saponins.

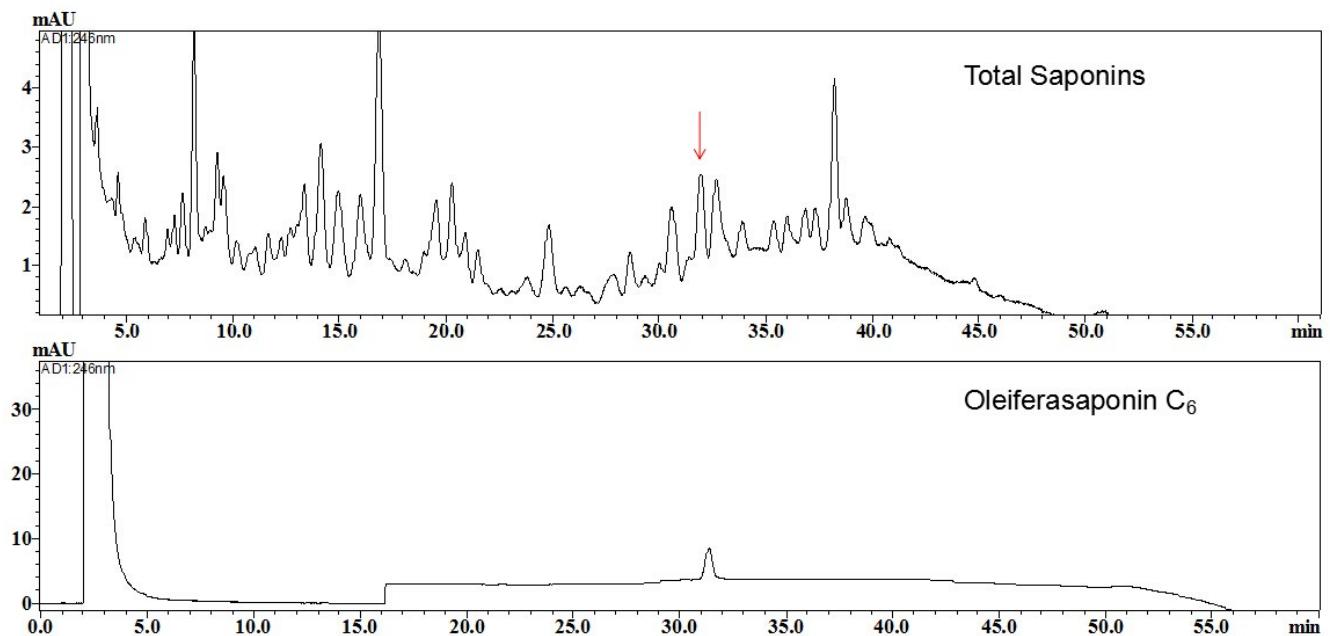


Figure S10. Antiproliferative activity of Oleiferasaponin C<sub>6</sub> against BEL-7402, BGC-823, MCF-7, HL-60 and KB cell lines. OSC<sub>6</sub> inhibits the viability of five human tumor cell lines for 72 h.

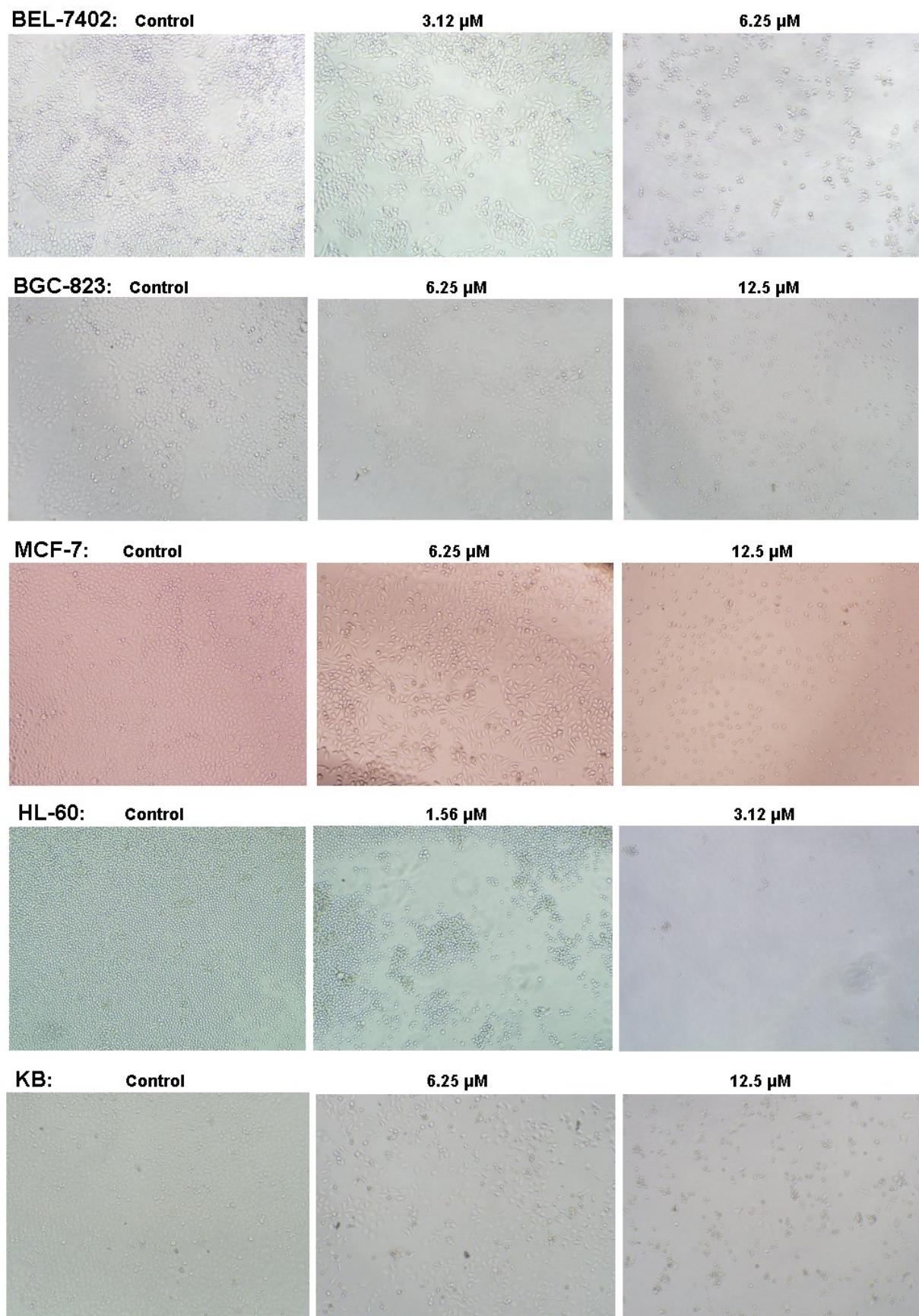


Table S1. Oleiferasaponin C<sub>6</sub> antiproliferative activity. BEL-7402, BGC-823, MCF-7, HL-60 and KB cell lines were treated with different concentrations of oleiferasaponin C<sub>6</sub> for 72 h. Taxol was used as a positive control.

Group	Cell lines (72 h)									
	BEL-7402		BGC-823		MCF-7		HL-60		KB	
	Mean±SD (n = 3)	Inhibition rate (%)								
Negative control	0.344±0.021	--	0.362±0.013	--	0.506±0.042	--	1.835±0.069	--	0.673±0.033	--
Positive control	0.112±0.005	89.13	0.065±0.008	85.84	0.068±0.006	92.06	0.226±0.008	91.74	0.114±0.003	92.96
50 μM	0.062±0.006	81.98	0.058±0.009	83.98	0.06±0.005	88.14	0.156±0.001	91.50	0.061±0.005	90.94
25 μM	0.065±0.003	81.10	0.061±0.003	83.15	0.062±0.005	87.75	0.154±0	91.61	0.064±0.006	90.49
12.5 μM	0.064±0.005	81.40	0.064±0.003	82.32	0.066±0.004	86.96	0.154±0.002	91.61	0.064±0.005	90.49
6.25 μM	0.076±0.011	77.91	0.18±0.003	50.28	0.423±0.021	16.40	0.163±0.013	91.12	0.368±0.04	45.32
3.125 μM	0.178±0.003	48.26	0.296±0.026	18.23	0.475±0.02	6.13	0.343±0.049	81.31	0.58±0.014	13.82
1.5625 μM	0.329±0.009	4.36	0.324±0.026	10.50	0.478±0.026	5.53	1.049±0.101	42.83	0.632±0.039	6.09
0.78125 μM	0.327±0.02	4.94	0.35±0.005	3.31	0.481±0.028	4.94	1.625±0.043	11.44	0.641±0.027	4.75
0.390625 μM	0.324±0.036	5.81	0.359±0.028	0.83	0.477±0.075	5.73	1.828±0.058	0.38	0.645±0.055	4.16
<b>IC<sub>50</sub></b>	<b>4.023 μM</b>		<b>6.001 μM</b>		<b>9.016 μM</b>		<b>1.876 μM</b>		<b>6.119 μM</b>	

Table S2. The IC<sub>50</sub> of triterpenoid saponins from the seeds of *Camellia oleifera* Abel. in five human cancer cell lines.

Compound	Cell Lines IC <sub>50</sub> ( μM, μg/mL )				
	BEL-7402	BGC-823	MCF-7	HL-60	KB
Camelliasaponin B <sub>1</sub>	17.649	25.788	12.995	18.071	16.544
Oleiferasaponin C <sub>1</sub>	6.641	12.766	5.567	7.930	12.215
Oleiferasaponin C <sub>2</sub>	9.601	13.558	11.223	4.590	12.995
Oleiferasaponin C <sub>3</sub>	>100	>100	>100	>100	>100
Oleiferasaponin C <sub>4</sub>	4.218	5.505	3.915	1.797	3.468
Oleiferasaponin C <sub>5</sub>	10.385	11.242	15.094	6.489	12.302
Oleiferasaponin C <sub>6</sub>	4.023	6.001	9.016	1.876	6.119
Total Saponins	11.023	5.981	10.611	12.546	19.761