

## Supplementary data

Table. S1 Combination dosage of Rgkl

No.	Chinese name	Latin name	Vegetal product	Family	Part used	Dose (g)
1	Danggui (DG)	<i>Angelica sinensis</i> (Oliv.) Diels	<i>Angelicae Sinensis Radix</i>	Apiaceae	Root	168
2	Chishao (CS)	<i>Paeonia lactiflora</i> Pall.	<i>Paeoniae Radix Rubra</i>	Ranunculaceae	Root	252
3	Sanqi (SQ)	<i>Panax notoginseng</i> (Burk.) F.H.Chen	<i>Notoginseng Radix et Rhizoma</i>	Araliaceae	Rhizome	101
4	Zelan (ZL)	<i>Lycopus lucidus</i> Turcz.var.hirtus Regel	<i>Lycopi Herba</i>	Asteraceae	Aboveground	168
5	Niuxi (NX)	<i>Achyranthes bidentata</i> Bl.	<i>Achyranthis Bidentatae Radix</i>	Amaranthaceae	Root	168
6	Nvzhenzi (NZZ)	<i>Ligustrum lucidum</i> Ait.	<i>Ligustri Fructus</i>	Oleaceae	Fruit	252
7	Huangqi (HQ)	<i>Astragalus membranaceus</i> (Fisch.) Bge.	<i>Astragali Radix</i>	Fabaceae	Root	252
8	Baizhu (BZ)	<i>Atractylodes macrocephala</i> Koidz.	<i>Atractylodis Macrocephalae Rhizoma</i>	Asteraceae	Rhizome	168
9	Fangji (FJ)	<i>Stephania tetrandra</i> S.Moore	<i>Stephaniae Tetrandrae Radix</i>	Menispermaceae	Root	101

**Table S2 Identification results of the blood components of Rgkl based on UPLC-Q-TOF-MS/MS**

No.	t <sub>R</sub> /min	Compound name	Molecular formula	M(Da)	Ion type	Error(ppm)	Characteristic Fragment	Source
1	13.03	Ferulic acid	C <sub>10</sub> H <sub>10</sub> O <sub>4</sub>	194.1800	[M+H] <sup>+</sup>	-0.2	163.0393, 177.1618 97.0282	A
2	9.85	Anisic acid	C <sub>8</sub> H <sub>8</sub> O <sub>3</sub>	152.0473	[M+H] <sup>+</sup>	-1.6	153.1274, 97.0649 69.0697, 77.0383 107.0849	A
3	3.13	Cinnamic acid	C <sub>9</sub> H <sub>8</sub> O <sub>2</sub>	148.0524	[M+H] <sup>+</sup>	-9.6	149.0241, 103.0543 77.0387, 121.0304 79.0543, 51.0228	A
4	25.03	Senkyunolide A	C <sub>12</sub> H <sub>16</sub> O <sub>2</sub>	192.2600	[M+H] <sup>+</sup>	1	193.1567, 79.0535 81.0326, 149.0204	A
5	18.28	Butylphthalide	C <sub>12</sub> H <sub>14</sub> O <sub>2</sub>	190.2400	[M+H] <sup>+</sup>	-1	107.0485, 77.0387 191.1078, 79.0532 145.1011	A
6	20.68	Osthole	C <sub>15</sub> H <sub>16</sub> O <sub>3</sub>	244.2900	[M+H] <sup>+</sup>	-9.1	245.1154, 245.1360 157.1000, 227.1789	A
7	18.28	Ligustilide/Z-Ligustilide	C <sub>12</sub> H <sub>14</sub> O <sub>2</sub>	190.2400	[M+H] <sup>+</sup>	-0.6	107.0491, 77.0373 191.1072, 79.0528 173.0962	A
8	24.62	Levistilide A	C <sub>24</sub> H <sub>28</sub> O <sub>4</sub>	380.4800	[M+H] <sup>+</sup>	-2.3	381.2188, 381.2602 381.2514, 363.1922	A
9	9.83	coniferyl ferulate	C <sub>20</sub> H <sub>20</sub> O <sub>6</sub>	355.1190	[M-H] <sup>-</sup>	0.8	295.0982, 159.0642	A
10	25.03	3-N-butyl-4,5-dihydrophthalide	C <sub>12</sub> H <sub>16</sub> O <sub>2</sub>	192.2540	[M+H] <sup>+</sup>	1	193.1567, 79.0535 81.0326, 149.0204	A

Continued Table S2

11	24.62	senkyunolide O	C <sub>24</sub> H <sub>28</sub> O <sub>4</sub>	380.4800	[M+H] <sup>+</sup>	-2.3	381.2386	A
12	24.15	Senkyunolide H	C <sub>12</sub> H <sub>16</sub> O <sub>4</sub>	224.1049	[M+H] <sup>+</sup>	-8.6	225.1025, 67.0529 225.1486, 207.0804 77.0366, 181.0750	A
13	19.87	4-Hydroxy-3-butylphthalide	C <sub>12</sub> H <sub>14</sub> O <sub>3</sub>	206.2400	[M+H] <sup>+</sup>	-2.3	207.0861, 91.0522 119.0158, 163.0390 95.0838, 161.0920	A
14	24.15	Senkyunolide I	C <sub>12</sub> H <sub>16</sub> O <sub>4</sub>	224.1049	[M+H] <sup>+</sup>	-8.6	225.1394, 67.0529 77.0366, 181.0750 91.0548, 209.0257	A
15	15.68	N-butylidenephthalide	C <sub>12</sub> H <sub>12</sub> O <sub>2</sub>	188.0837	[M+H] <sup>+</sup>	-5.4	161.0922, 115.0523 189.0913, 102.9563 77.0372, 171.0803	A
16	22.97	(Z)-3-(2-Hydroxybutylidene)isobenzofuran-1(3H)-one	C <sub>12</sub> H <sub>12</sub> O <sub>3</sub>	204.2200	[M-H] <sup>-</sup>	-2.6	100.9258, 73.2164 100.9353, 58.9722 104.9764, 116.9267	A
17	4.72	Paeoniflorin	C <sub>23</sub> H <sub>28</sub> O <sub>11</sub>	481.1704	[M+H] <sup>+</sup>	-0.1	105.0327, 197.0804 133.0637, 151.0739 179.0708, 319.1171	B
18	4.77	Albiflorin	C <sub>23</sub> H <sub>28</sub> O <sub>11</sub>	481.1702	[M+H] <sup>+</sup>	-0.4	197.0797, 133.0631 151.0746, 105.0328	B
19	23.93	Paeonilactone C	C <sub>17</sub> H <sub>18</sub> O <sub>6</sub>	318.3200	[M+H] <sup>+</sup>	9.60	319.1655, 301.1872 287.2012, 176.9942 57.0683, 122.9724	B

Continued Table S2

20	18.00	paeoniflorigenone	C <sub>17</sub> H <sub>18</sub> O <sub>6</sub>	319.1152	[M+H] <sup>+</sup>	9.6	319.1655, 79.0552 301.1481, 287.2012 57.0683, 122.9724	B
21	25.04	Queen Bee acid	C <sub>10</sub> H <sub>18</sub> O <sub>3</sub>	186.2500	[M+H] <sup>+</sup>	0.2	67.0539, 109.1009 55.0542, 155.1064 81.0695, 83.0837	B
22	24.36	oxypaeoniflora	C <sub>23</sub> H <sub>28</sub> O <sub>12</sub>	496.4600	[M+H] <sup>+</sup>	-9.50	497.3320, 425.2253 313.2676, 347.0169 210.9284, 151.0054	B
23	10.68	Vanillic acid	C <sub>8</sub> H <sub>8</sub> O <sub>4</sub>	169.0491	[M+H] <sup>+</sup>	-2.4	169.0739, 123.1163 107.0844, 113.0214 55.0551, 91.0533	B
24	9.94	mudanpioside E	C <sub>24</sub> H <sub>30</sub> O <sub>13</sub>	525.1609	[M-H] <sup>-</sup>	-0.9	121.0295, 165.0563 327.1083, 525.0259 449.1441, 119.0347	B
25	24.92	Hederagenin	C <sub>30</sub> H <sub>48</sub> O <sub>4</sub>	472.7100	[M-H] <sup>-</sup>	0.1	471.3506, 100.9327 99.0072, 453.3413 427.3609, 116.9268	B
26	7.60	(+)-paeonilactone B	C <sub>10</sub> H <sub>12</sub> O <sub>4</sub>	196.2000	[M-H] <sup>-</sup>	-1.7	160.8418, 96.9602 151.0765, 123.0435 195.0854, 179.0529	B
27	0.86	L-Glutamic acid	C <sub>5</sub> H <sub>9</sub> NO <sub>4</sub>	146.0458	[M-H] <sup>-</sup>	0	102.0564, 128.0352 128.0465, 146.0457	C, H
28	11.92	Kaempferol	C <sub>15</sub> H <sub>10</sub> O <sub>6</sub>	287.0493	[M+H] <sup>+</sup>	-19.6	113.0606, 111.1158 163.0710, 174.0983	C

Continued Table S2

29	28.37	Notoginsenoside T5	C <sub>41</sub> H <sub>68</sub> O <sub>12</sub>	753.4694	[M+H] <sup>+</sup>	-11.8	753.4782, 753.5128 753.5386, 753.4535	C
30	23.20	Ginsenoside Re	C <sub>48</sub> H <sub>82</sub> O <sub>18</sub>	945.5417	[M-H] <sup>-</sup>	-1.2	945.5371, 945.5724	C
31	23.20	Ginsenoside Rd	C <sub>48</sub> H <sub>82</sub> O <sub>18</sub>	945.5417	[M-H] <sup>-</sup>	-1.2	945.5371, 945.5724 945.5857,	C
32	28.20	Ginsenoside Rk3	C <sub>36</sub> H <sub>60</sub> O <sub>8</sub>	621.4328	[M+H] <sup>+</sup>	-5.2	621.4336	C
33	23.93	Falcarinol	C <sub>17</sub> H <sub>24</sub> O	245.1895	[M+H] <sup>+</sup>	-1.7	245.1877, 161.1341 245.1375, 55.0524	C
34	23.20	GYPENOSIDE-XVII	C <sub>48</sub> H <sub>82</sub> O <sub>18</sub>	945.5417	[M-H] <sup>-</sup>	-1.2	945.5371, 945.5724 945.5857	C
35	28.41	Diisooctyl phthalate	C <sub>24</sub> H <sub>38</sub> O <sub>4</sub>	391.2844	[M+H] <sup>+</sup>	0.3	149.0231, 167.0335 57.0700, 71.0847	C
36	14.49	Quercetin	C <sub>15</sub> H <sub>10</sub> O <sub>7</sub>	301.0383	[M-H] <sup>-</sup>	9.8	177.0932	C, D, G, I
37	24.93	Corosolic acid	C <sub>30</sub> H <sub>48</sub> O <sub>4</sub>	471.3467	[M-H] <sup>-</sup>	-2.5	61.9883, 100.9327 471.3747, 453.3335	D
38	15.27	1-(2-Hydroxy-5-methylphenyl) ethanone	C <sub>9</sub> H <sub>10</sub> O <sub>2</sub>	151.0752	[M+H] <sup>+</sup>	-0.6	95.0486, 93.0695 91.0539, 109.0638	D
39	11.92	Luteolin	C <sub>15</sub> H <sub>10</sub> O <sub>6</sub>	287.0493	[M+H] <sup>+</sup>	-19.6	269.0398, 287.0523 287.1434, 111.1158	D
40	26.49	apigenin-7-O-β-D-glucopyrano side	C <sub>21</sub> H <sub>20</sub> O <sub>10</sub>	431.1056	[M-H] <sup>-</sup>	16.8	91.0216, 415.0706 431.3148	D
41	24.84	Thymol	C <sub>10</sub> H <sub>14</sub> O	151.1117	[M+H] <sup>+</sup>	0.1	151.1118, 133.0927 95.0490, 81.0316	D

Continued Table S2

42	26.33	Ursolic acid acetate	C <sub>32</sub> H <sub>50</sub> O <sub>4</sub>	499.3765	[M+H] <sup>+</sup>	-3.2	499.3761	D, F
43	26.94	inokosterone	C <sub>27</sub> H <sub>44</sub> O <sub>7</sub>	481.3159	[M+H] <sup>+</sup>	-4.8	481.3138, 481.2922 481.2622, 481.338	E
44	11.81	Baicalin	C <sub>21</sub> H <sub>18</sub> O <sub>11</sub>	447.0933	[M+H] <sup>+</sup>	2.6	271.0601, 447.0932 447.7900, 73.0463 431.0876	E
45	16.31	Wogonin	C <sub>16</sub> H <sub>12</sub> O <sub>5</sub>	285.0760	[M+H] <sup>+</sup>	0.9	285.0756, 285.0991 169.0615, 155.0840 121.0976	E, G
46	0.88	Betaine	C <sub>5</sub> H <sub>11</sub> NO <sub>2</sub>	118.0861	[M+H] <sup>+</sup>	-0.9	58.0667, 59.0731 118.0919, 72.0851 57.0573	E
47	26.33	Oleanolic acid 3-acetate	C <sub>32</sub> H <sub>50</sub> O <sub>4</sub>	499.3761	[M+H] <sup>+</sup>	-3.2	499.3761	E, F
48	26.54	alpha-Spinasterol glucoside	C <sub>35</sub> H <sub>58</sub> O <sub>6</sub>	573.4152	[M-H] <sup>-</sup>	-1.5	59.0145, 573.4044 573.4186, 125.0613	E
49	13.95	Azelaic acid	C <sub>9</sub> H <sub>16</sub> O <sub>4</sub>	187.0974	[M-H] <sup>-</sup>	-0.6	125.0972, 187.0989 87.0666, 123.0818 169.0857	E
50	22.24	Caffeic acid	C <sub>9</sub> H <sub>8</sub> O <sub>4</sub>	181.0496	[M+H] <sup>+</sup>	0.4	181.1616, 139.0383 181.0472, 149.0228	F
51	10.29	olivetolic acid	C <sub>12</sub> H <sub>16</sub> O <sub>4</sub>	225.1101	[M+H] <sup>+</sup>	-9	225.1340, 209.0293 225.0865, 211.0095	F
52	21.75	Oleuropein	C <sub>25</sub> H <sub>32</sub> O <sub>13</sub>	539.1809	[M-H] <sup>-</sup>	7.3	539.1851, 152.9942 539.1628, 208.9344 385.1766	F

Continued Table S2

53	24.93	Maslinic acid	C <sub>30</sub> H <sub>48</sub> O <sub>4</sub>	471.3467	[M-H] <sup>-</sup>	-2.5	471.3465, 100.9327 471.3747, 112.985 453.3335	F
54	22.94	TILIROSIDE	C <sub>30</sub> H <sub>26</sub> O <sub>13</sub>	593.1373	[M-H] <sup>-</sup>	-0.1	121.0296, 593.1304 121.0379, 505.1128 525.1143	G
55	16.24	ISOMUCRONULATOL	C <sub>17</sub> H <sub>18</sub> O <sub>5</sub>	303.1204	[M+H] <sup>+</sup>	-7.5	303.1452, 303.1169 271.2647, 131.0837	G
56	16.30	Glycitein	C <sub>16</sub> H <sub>12</sub> O <sub>5</sub>	285.0760	[M+H] <sup>+</sup>	0.9	285.0756, 285.0991 169.0615, 79.0522	G
57	13.37	CALYCOSIN	C <sub>16</sub> H <sub>12</sub> O <sub>5</sub>	285.0757	[M+H] <sup>+</sup>	0.1	285.0750, 285.0892 285.1048, 185.0585	G
58	23.64	(6aR, 11aR)-3-hydroxy-9,10-dimethoxypterocarpan-7-O-β-D-glucoside	C <sub>23</sub> H <sub>26</sub> O <sub>10</sub>	463.1642	[M+H] <sup>+</sup>	9.5	407.0996, 463.1674 463.1842, 463.2638 275.0078	G
59	20.55	Pratensein 7-O-glucopyranoside	C <sub>22</sub> H <sub>22</sub> O <sub>11</sub>	461.1082	[M-H] <sup>-</sup>	-1.4	121.0286, 417.0826 461.1103, 104.9257 163.0404	G
60	23.81	7,2'-dihydroxy-3',4'-dimethoxysoflavane-7-O-glucoside	C <sub>23</sub> H <sub>28</sub> O <sub>10</sub>	463.1571	[M-H] <sup>-</sup>	-8.3	209.1176, 253.1086 135.0454, 209.1326	G

Continued Table S2

61	23.98	8beta-Methoxyatractylenolide I	C <sub>16</sub> H <sub>22</sub> O <sub>3</sub>	261.1495	[M-H] <sup>-</sup>	-0.3	217.1608	H
62	26.23	Icariside F2	C <sub>18</sub> H <sub>26</sub> O <sub>10</sub>	401.1417	[M-H] <sup>-</sup>	-9	116.9276, 116.9365 100.9329, 121.0282 112.9858	H
63	23.53	atractyloside B	C <sub>21</sub> H <sub>38</sub> O <sub>10</sub>	449.2430	[M-H] <sup>-</sup>	8.5	449.2441, 391.2861 313.2388	H
64	23.16	Atractylenolide II	C <sub>15</sub> H <sub>20</sub> O <sub>2</sub>	233.1534	[M+H] <sup>+</sup>	-0.7	233.1528, 217.1215	H
65	19.32	5-Hydroxymethylfurfural	C <sub>6</sub> H <sub>6</sub> O <sub>3</sub>	127.0386	[M+H] <sup>+</sup>	-2.6	53.0379, 99.0444 81.0336, 57.0334 55.017	H
66	17.97	Eudesma-4(15),7(11)-dien-8-one	C <sub>15</sub> H <sub>22</sub> O	219.1740	[M+H] <sup>+</sup>	-1.4	219.1727, 203.1400 219.1580, 121.0996 67.0555	H
67	0.88	Valine	C <sub>5</sub> H <sub>11</sub> NO <sub>2</sub>	118.0861	[M+H] <sup>+</sup>	-0.9	58.0667, 55.0549 59.0731, 118.0919 72.0851	H
68	0.91	D-Proline	C <sub>5</sub> H <sub>9</sub> NO <sub>2</sub>	116.0705	[M+H] <sup>+</sup>	-0.5	70.0715, 116.0745	H
69	19.33	Uridine	C <sub>9</sub> H <sub>12</sub> N <sub>2</sub> O <sub>6</sub>	245.0758	[M+H] <sup>+</sup>	-4	245.0768, 245.0856 245.0998, 245.1174 115.0397	H
70	27.91	Stearic acid	C <sub>18</sub> H <sub>36</sub> O <sub>2</sub>	285.2789	[M+H] <sup>+</sup>	0.4	285.2747, 285.2864 57.0693, 285.247 89.059	H

Continued Table S2

71	6.34	D-Tetraandrine	C <sub>38</sub> H <sub>42</sub> N <sub>2</sub> O <sub>6</sub>	623.3122	[M+H] <sup>+</sup>	1	623.3088, 594.3022 592.2617, 580.2717 192.0949, 176.1028	I
72	12.66	Cycleanine	C <sub>38</sub> H <sub>42</sub> N <sub>2</sub> O <sub>6</sub>	622.3042	[M+H] <sup>+</sup>	0	623.3129	I

**Note:** A: *Angelica sinensis* (Oliv.) Diels; B: *Paeonia sinjiangensis* K. Y. Pan; C: *Panax pseudo-ginseng* var. *notoginseng* (Burkill) Hoo et Tseng; D: *Lycopus maackianus* (Maxim. ex Herder) V. Komarov; E: *Achyranthes bidentata* Blume; F: *Ligustrum lucidum* W. T. Aiton; G: *Astragalus membranaceus* Moench; H: *Atractylodes macrocephala* Koidz.; I: *Sinomenium acutum* (Thunb.) Rehder & E. H. Wilson.

Table. S3 The top 18 active ingredients with degree in the ingredient - target network

No.	Compounds	Molecular formula	M (Da)	Degree
1	D-Tetraandrine	C <sub>38</sub> H <sub>42</sub> N <sub>2</sub> O <sub>6</sub>	622.75	77
2	Paeonilactone C	C <sub>17</sub> H <sub>18</sub> O <sub>6</sub>	318.32	72
3	Quercetin	C <sub>15</sub> H <sub>10</sub> O <sub>7</sub>	301.04	68
4	(Z)-3-(2-Hydroxybutylidene)isobenzofuran-1(3H)-one	C <sub>12</sub> H <sub>12</sub> O <sub>3</sub>	204.22	67
5	Levistilide A	C <sub>24</sub> H <sub>28</sub> O <sub>4</sub>	380.48	63
6	senkyunolide O	C <sub>24</sub> H <sub>28</sub> O <sub>4</sub>	380.48	63
7	inokosterone	C <sub>27</sub> H <sub>44</sub> O <sub>7</sub>	481.32	62
8	Maslinic acid	C <sub>30</sub> H <sub>48</sub> O <sub>4</sub>	471.35	62
9	Corosolic acid	C <sub>30</sub> H <sub>48</sub> O <sub>4</sub>	471.35	59
10	Ginsenoside Rk3	C <sub>36</sub> H <sub>60</sub> O <sub>8</sub>	621.43	58
11	Kaempferol	C <sub>15</sub> H <sub>10</sub> O <sub>6</sub>	287.05	58
12	CALYCOSIN	C <sub>16</sub> H <sub>12</sub> O <sub>5</sub>	285.08	58
13	coniferyl ferulate	C <sub>20</sub> H <sub>20</sub> O <sub>6</sub>	356.37	57
14	Luteolin	C <sub>15</sub> H <sub>10</sub> O <sub>6</sub>	287.05	57
15	Albiflorin	C <sub>23</sub> H <sub>28</sub> O <sub>11</sub>	480.46	55
16	Ferulic acid	C <sub>10</sub> H <sub>10</sub> O <sub>4</sub>	194.18	54

Continued Table. S3

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<b>17</b>	<b>Paeoniflorin</b>	<b>C<sub>23</sub>H<sub>28</sub>O<sub>11</sub></b>	<b>480.47</b>	<b>51</b>
<b>18</b>	Ligustilide/Z-Ligustilide	C <sub>12</sub> H <sub>14</sub> O <sub>2</sub>	190.24	48

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Figure S1 The positive and negative ion flow diagram marked by standard samples.

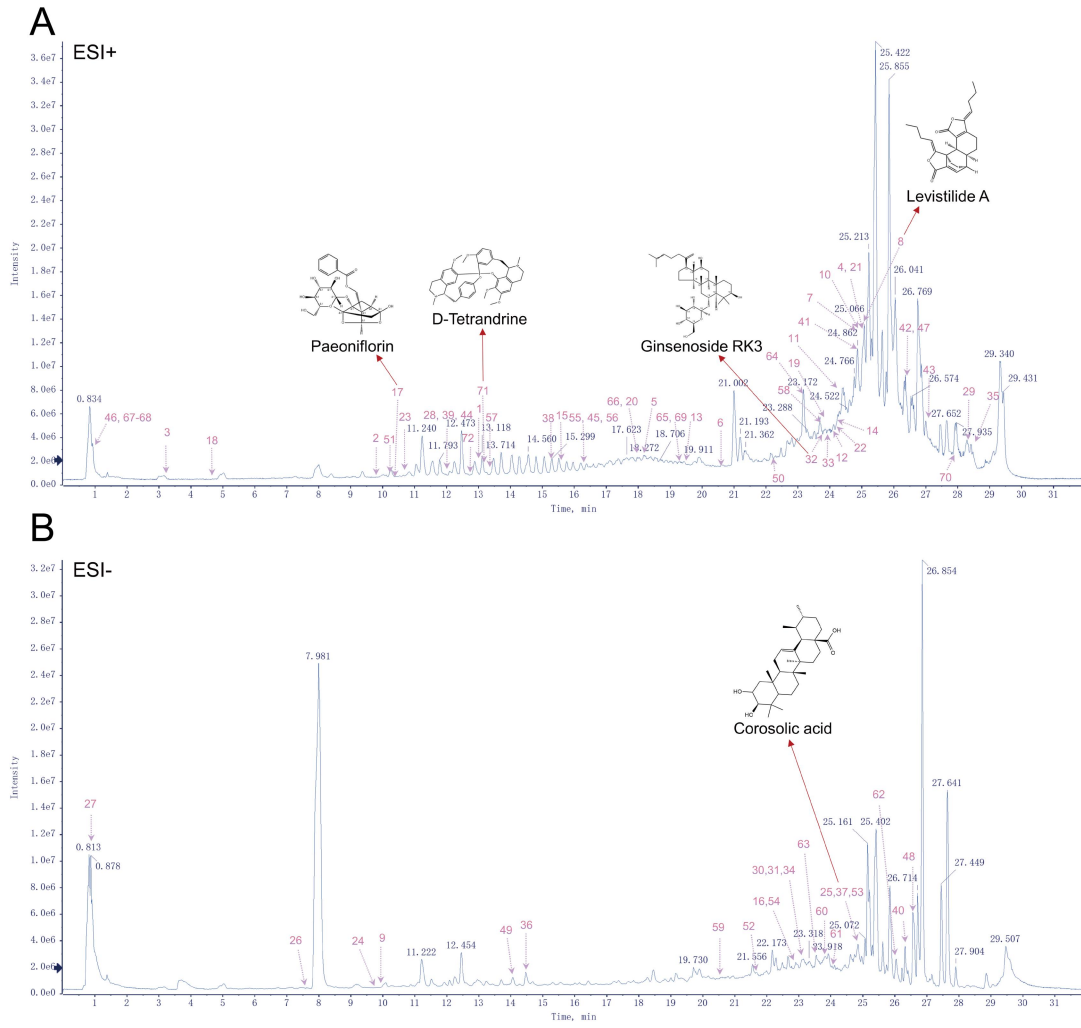


Figure S2

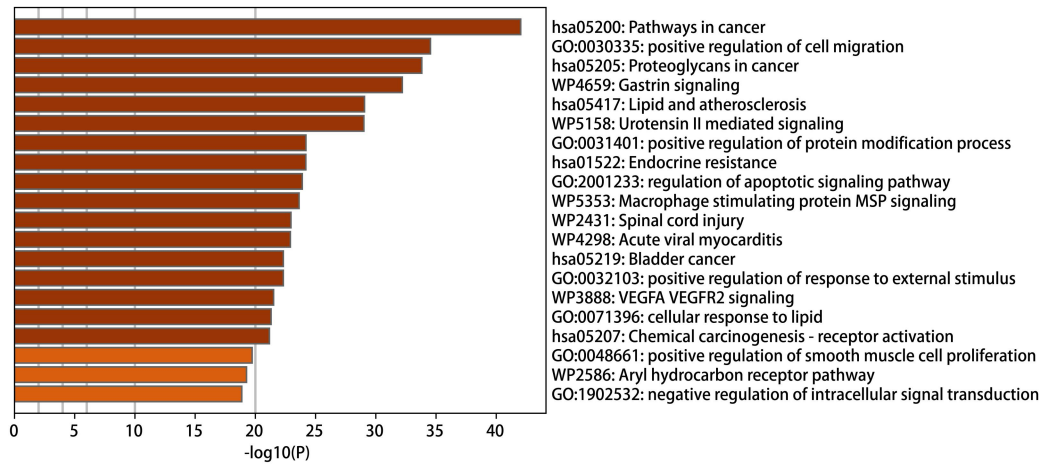


Figure S3

