

**Table S2. Characteristics of flavones from six *Scutellaria* hairy roots by UPLC-ESI-MS/MS**

Species	Retention (min)	Molecular Formula	Precursor Adduct	MS(error(ppm))	MS/MS fragments ions	Identification
<i>S.baicalensi</i>						
<i>s</i>						
1	7.08	C <sub>24</sub> H <sub>25</sub> O <sub>11</sub>	[M-H]-	461.0692(-3.04)	285.0388,239.0337,175.0240,136.9872,113.0238	Scutellarin
2	8.97	C <sub>22</sub> H <sub>20</sub> O <sub>10</sub>	[M+H]+	447.0890(1.12)	271.0580,253.0477,225.0529,169.0121,123.0068	Baicalin
3	10.37	C <sub>23</sub> H <sub>22</sub> O <sub>10</sub>	[M+H]+	461.1044(0.43)	285.0735,270.0502,186.0149,168.0045	Wogonoside
4	11.16	C <sub>15</sub> H <sub>10</sub> O <sub>5</sub>	[M+H]+	271.0580(0)	254.2462,169.0121,123.0068,100.0746	Baicalein
					268.0363,239.0335,184.0519,165.9898,163.0028,110.0	
5	12.69	C <sub>16</sub> H <sub>12</sub> O <sub>5</sub>	[M-H]-	283.0597(0.35)	003	Wogonin
<i>S.barbata</i>						
1	7.11	C <sub>24</sub> H <sub>25</sub> O <sub>11</sub>	[M-H]-	461.0706(0)	285.0388,239.0336,175.0239,136.9872,113.0238	Scutellarin
2	8.97	C <sub>22</sub> H <sub>20</sub> O <sub>10</sub>	[M+H]+	447.0887(0.44)	271.0580,253.0478,225.0528,169.0121,123.0068	Baicalin
3	10.36	C <sub>23</sub> H <sub>22</sub> O <sub>10</sub>	[M+H]+	461.1045(0.65)	285.0734,270.0501,186.0146,168.0042	Wogonoside
4	11.17	C <sub>15</sub> H <sub>10</sub> O <sub>5</sub>	[M+H]+	271.0581(0.37)	254.2461,169.0122,123.0068,100.0749	Baicalein
					268.0306,239.0331,184.0517,165.9898,163.0029,110.0	
5	12.68	C <sub>16</sub> H <sub>12</sub> O <sub>5</sub>	[M-H]-	283.0598(0.71)	003	Wogonin
<i>S.indica</i>						
1	7.12	C <sub>24</sub> H <sub>25</sub> O <sub>11</sub>	[M-H]-	461.0711(1.08)	285.0388,239.0336,175.0239,136.9872,113.0238	Scutellarin
2	8.6	C <sub>15</sub> H <sub>10</sub> O <sub>6</sub>	[M-H]-	285.0389(-3.16)	267.0313,239.0335,137.0235,117.0339	Scutellarein
3	8.98	C <sub>22</sub> H <sub>20</sub> O <sub>10</sub>	[M+H]+	447.0889(0.89)	271.0581,253.0478,225.0529,169.0121,123.0069	Baicalin
4	10.38	C <sub>23</sub> H <sub>22</sub> O <sub>10</sub>	[M+H]+	461.1040(-0.43)	285.0734,270.0502,186.0145,168.0041	Wogonoside
5	10.56	C <sub>15</sub> H <sub>10</sub> O <sub>5</sub>	[M+H]+	271.0582(0.74)	153.0172,119.0484	Apigenin
6	11.18	C <sub>15</sub> H <sub>10</sub> O <sub>5</sub>	[M+H]+	271.0580(0)	254.2460,169.0120,123.0068,100.0749	Baicalein

					268.0364,239.0339,184.0520,165.9898,163.0029,110.0	
7	12.69	C <sub>16</sub> H <sub>12</sub> O <sub>5</sub>	[M-H]-	283.0599(1.06)	003	Wogonin
8	12.88	C <sub>15</sub> H <sub>10</sub> O <sub>4</sub>	[M-H]-	253.0495(1.19)	209.0590,143.0493,107.0134	Chrysin
<i>S. strigilosa</i>						
1	9.89	C <sub>22</sub> H <sub>20</sub> O <sub>10</sub>	[M+H]+	447.0888(0.67)	271.0580,253.0477,225.0530,169.0121,123.0068	Baicalin
2	10.37	C <sub>23</sub> H <sub>22</sub> O <sub>10</sub>	[M+H]+	461.1043(0.22)	285.0734,270.0501,186.0146,168.0041	Wogonoside
					268.0363,239.0329,184.0518,165.9899,163.0027,109.9	
3	12.69	C <sub>16</sub> H <sub>12</sub> O <sub>5</sub>	[M-H]-	283.0599(1.06)	989	Wogonin
<i>S. obtusifolia</i>						
1	7.12	C <sub>24</sub> H <sub>25</sub> O <sub>11</sub>	[M-H]-	461.0724(3.9)	285.0389,239.0336,175.0393,136.9874,113.0238	Scutellarin
2	8.98	C <sub>22</sub> H <sub>20</sub> O <sub>10</sub>	[M+H]+	447.0886(0.22)	271.0580,253.0477,225.0528,169.0120,123.0068	Baicalin
3	10.38	C <sub>23</sub> H <sub>22</sub> O <sub>10</sub>	[M+H]+	461.1044(0.43)	285.0734,270.0501,186.0147,168.0043	Wogonoside
					268.0362,239.0336,184.0518,165.9898,163.0027,110.0	
4	12.69	C <sub>16</sub> H <sub>12</sub> O <sub>5</sub>	[M-H]-	283.0596(0)	003	Wogonin
5	12.88	C <sub>15</sub> H <sub>10</sub> O <sub>4</sub>	[M-H]-	253.0492(0)	209.0595,143.0493,107.0132	Chrysin
<i>S. altissima</i>						
1	7.11	C <sub>24</sub> H <sub>25</sub> O <sub>11</sub>	[M-H]-	461.0705(-0.22)	285.0389,239.0336,175.0241,136.9873,113.0239	Scutellarin
2	8.99	C <sub>22</sub> H <sub>20</sub> O <sub>10</sub>	[M+H]+	447.0890(1.12)	271.0581,253.0478,225.0532,169.0121,123.0068	Baicalin
3	10.38	C <sub>23</sub> H <sub>22</sub> O <sub>10</sub>	[M+H]+	461.1049(1.52)	285.0736,270.0503,186.0151,168.0041	Wogonoside
					268.0363,239.0338,184.0517,165.9899,163.0027,110.0	
4	12.69	C <sub>16</sub> H <sub>12</sub> O <sub>5</sub>	[M-H]-	283.0606 (3.53)	003	Wogonin