

Table S1. The information of lipid markers related with KYDS rats model identified in positive and negative mode.

| NO. | Rt/min  | m/z      | Metabolite name   | Scan | Proposed composition  | LIPID code     | Change trend |
|-----|---------|----------|---|------|---|----------------|--------------|
| 1   | 2.34    | 480.3071 | LysoPE(0:0/18:1(11Z))   | ESI+ | C <sub>23</sub> H <sub>46</sub> N <sub>7</sub> O <sub>7</sub> P | LMGP02050039   | ↑            |
| 2   | 3.6     | 414.2992 | N-Docosahexaenoyl GABA  | ESI+ | C <sub>26</sub> H <sub>59</sub> NO <sub>3</sub>                 | LMFA08020105   | ↓            |
| 3   | 4.57**  | 395.2774 | 15-HETE-G   | ESI+ | C <sub>23</sub> H <sub>38</sub> O <sub>5</sub>                  | LMGP06050010   | ↓            |
| 4   | 5.32*   | 468.344  | PE(O-18:0/0:0)  | ESI+ | C <sub>23</sub> H <sub>50</sub> N <sub>6</sub> O <sub>6</sub> P | LMGP02060003   | ↓            |
| 5   | 7.25    | 317.2473 | 5beta-pregnane-3,20-dione   | ESI+ | C <sub>21</sub> H <sub>32</sub> O <sub>2</sub>                  | LMST02030146   | ↓            |
| 6   | 7.42*   | 701.5579 | SM(d16:1/18:1)  | ESI+ | C <sub>39</sub> H <sub>77</sub> N <sub>2</sub> O <sub>6</sub> P | LMSP03010040   | ↓            |
| 7   | 7.95    | 510.3894 | PC(O-18:0/0:0)  | ESI+ | C <sub>26</sub> H <sub>56</sub> N <sub>6</sub> O <sub>6</sub> P | LMGP01060014   | ↓            |
| 8   | 8.98    | 355.2131 | 5-hydroperoxy-7-[3,5-epidioxy-2-(2-octenyl)-cyclopentyl]-6-heptenoic acid     | ESI+ | C <sub>19</sub> H <sub>30</sub> O <sub>6</sub>                  | LMFA01040028   | ↓            |
| 9   | 9.22    | 427.3198 | (25S)-3-oxo-cholest-1,4-dien-26-oic acid                                      | ESI+ | C <sub>28</sub> H <sub>42</sub> O <sub>3</sub>                  | LMST04030213   | ↓            |
| 10  | 9.3*    | 758.5694 | PC(16:0/18:2(9Z,12Z))   | ESI+ | C <sub>42</sub> H <sub>80</sub> N <sub>8</sub> O <sub>8</sub> P | LMGP01010594   | ↓            |
| 11  | 9.97*   | 235.169  | Sugeonol  | ESI+ | C <sub>15</sub> H <sub>22</sub> O <sub>2</sub>                  | LMPR0103450003 | ↑            |
| 12  | 10.59** | 149.0269 | 2-Oxo-4-methylthiobutanoic acid   | ESI+ | C <sub>5</sub> H <sub>8</sub> O <sub>3</sub> S                  | LMFA01060170   | ↑            |
| 13  | 10.59** | 391.2847 | 12α-Hydroxy-3-oxo-5β-cholan-24-oic Acid                                       | ESI+ | C <sub>24</sub> H <sub>38</sub> O <sub>4</sub>                  | LMST04010168   | ↑            |
| 14  | 10.59   | 803.583  | PG(18:1(9Z)/20:1(11Z))  | ESI+ | C <sub>44</sub> H <sub>83</sub> O <sub>10</sub> P               | LMGP04010958   | ↑            |
| 15  | 10.62** | 393.2997 | Allodeoxycholic acid  | ESI+ | C <sub>24</sub> H <sub>40</sub> O <sub>4</sub>                  | LMST04010044   | ↓            |
| 16  | 10.88   | 536.1779 | Davallioside A  | ESI+ | C <sub>25</sub> H <sub>29</sub> N <sub>6</sub> O <sub>12</sub>  | LMPK12020044   | ↓            |
| 17  | 11.11*  | 768.5892 | PC(P-16:0/20:3(5Z,8Z,11Z))  | ESI+ | C <sub>44</sub> H <sub>82</sub> N <sub>7</sub> O <sub>7</sub> P | LMGP01030129   | ↓            |
| 18  | 11.24   | 707.1791 | Kaempferol3-[2'',3'',5'''-triacetyl-alpha-L-arabinofuranosyl-(1->6)-glucoside | ESI+ | C <sub>32</sub> H <sub>34</sub> O <sub>18</sub>                 | LMPK12111800   | ↓            |
| 19  | 2.72*   | 343.0978 | Sanaganone  | ESI- | C <sub>22</sub> H <sub>16</sub> O <sub>4</sub>                  | LMPK12110058   | ↓            |
| 20  | 6.95    | 315.2325 | Pregnenolone  | ESI- | C <sub>21</sub> H <sub>32</sub> O <sub>2</sub>                  | LMST02030088   | ↑            |
| 21  | 8.93    | 506.3235 | PE(0:0/20:1(11Z))   | ESI- | C <sub>25</sub> H <sub>50</sub> N <sub>7</sub> O <sub>7</sub> P | LMGP02050046   | ↑            |
| 22  | 10.84   | 283.2588 | Linoleic acid(d4)   | ESI- | C <sub>18</sub> H <sub>28</sub> D <sub>4</sub> O <sub>2</sub>   | LMFA01030809   | ↑            |

Compared with model group, \* stands for significant difference (p<0.05), \*\*stands for very significant difference(p<0.01).

↑ ↓ stands for the relative content of ions which is increased or decreased.