**Table S6.** Key DMs selected in lipid-related and energy metabolism for three comparison groups. Three comparison group included LS vs. Con, LT vs. Con, LT vs. LS.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Comparison group** | **Formula** | **Compounds** | **VIP** | **P-value** | **Log2FC** | **Type** | **kegg\_map** |
| LS vs. Con | C18H32O2 | FFA(18:2) | 1.367 | 0.004 | -1.142 | down | ko00591,ko01040 |
|  | C18H36O2 | FFA(18:0) | 1.477 | 0.021 | 2.309 | up | ko00061,ko01040 |
|  | C20H36O2 | FFA(20:2) | 1.518 | 0.005 | -1.909 | down | ko01040 |
|  | C14H28O2 | FFA(14:0) | 1.285 | 0.025 | -1.061 | down | ko00061 |
|  | C18H30O2 | FFA(18:3) | 1.318 | 0.012 | -1.279 | down | ko00592,ko01040 |
|  | C20H32O5 | Prostaglandin E2 | 1.330 | 0.035 | 1.080 | up | ko00590,ko04923 |
|  | C18H28O2 | Stearidonic acid | 1.542 | 0.016 | -2.838 | down | ko00592 |
|  | C12H24O2 | FFA(12:0) | 1.551 | 0.019 | -2.905 | down | ko00061 |
|  | C4H6O4 | Succinic Acid | 1.645 | 0.001 | -1.651 | down | ko00020,ko00190,ko00620,ko00650 |
|  | C3H6O3 | L-Lactic Acid | 1.849 | 0.008 | -3.400 | down | ko00620 |
|  | C4H6O5 | D-Malic acid | 1.541 | 0.037 | -3.119 | down | ko00650 |
|  | C4H6O5 | (S)-Malate | 1.521 | 0.027 | -2.683 | down | ko00020,ko00620 |
| LT vs. Con | C12H20O4 | Traumatic acid | 1.720 | 0.030 | 3.325 | up | ko00592 |
|  | C5H9NO4 | L-Glutamic Acid | 1.653 | 0.018 | 1.041 | up | ko00650 |
|  | C12H24O2 | FFA(12:0) | 1.493 | 0.023 | -2.500 | down | ko00061 |
|  | C4H6O4 | Succinic Acid | 1.802 | 0.004 | -1.182 | down | ko00020,ko00190,ko00620,ko00650 |
|  | C10H13N5O4 | Adenosine | 1.630 | 0.008 | 7.415 | up | ko04923 |
| LS vs. LT | C8H11NO3 | L-Noradrenaline | 2.024 | 0.029 | 1.439 | up | ko04923 |
|  | C20H30O3 | 5-Oxo-ETE | 2.013 | 0.044 | 1.920 | up | ko00590 |
|  | C6H15NO3 | Triethanolamine | 2.174 | 0.025 | 2.559 | up | ko00564 |