**Table S2**. P-values for pairwise comparisons of lipid levels between males and females.

|  |  |  |  |
| --- | --- | --- | --- |
| **Lipid** **categories** | ***p* value**  **(MW versus FW)** | ***p* value**  **(MP versus FP)** | ***p* value**  **(MT versus FT)** |
| Total glycerolipids | 0.0002\*\*\* | 0.8182 | 0.6427 |
| TG | 0.0005\*\*\* | 0.8182 | 0.7109 |
| TG-O | 0.0005\*\*\* | 0.3939 | 0.7054 |
| DG | 0.0085\*\* | 0.8038 | 0.0555 |
| Total glycerophospholipids | 0.3429 | 0.0052\*\* | 0.2447 |
| PC | 0.8974 | 0.4174 | 0.0611 |
| PE | 0.1310 | 0.7205 | 0.6861 |
| PG | 0.0895 | 0.0633 | 0.1837 |
| PI | 0.2939 | 0.5887 | 0.9352 |
| PS | 0.1274 | 0.9372 | 0.8908 |
| PA | 0.0004\*\*\* | 0.0001\*\*\* | < 0.0001\*\*\*\* |
| LBPA | 0.2261 | 0.0290\* | 0.1358 |
| LPC | 0.2189 | 0.0010\*\* | 0.5887 |
| LPE | 0.1059 | 0.0657 | 0.0610 |
| LPI | 0.0649 | 0.0260 | 0.0000 |
| LPG | 0.9372 | 0.1534 | 0.1359 |
| Total sphingolipids | 0.0209\* | 0.6754 | 0.0182\* |
| SM | 0.0001\*\*\*\* | 0.6151 | 0.0810 |
| phSM | 0.3745 | 0.9372 | 0.8331 |
| Cer | 0.0001\*\*\* | 0.5399 | 0.1112 |

F, female; M, male; W, liver tissues of wild-type mice; P, peri-tumor tissues of Hras12V transgenic mice; T, HCC tissues of Hras12V transgenic mice; TG, triacylglycerol; TG-O, alkyldiacylglycerol; DG, diacylglycerol; PC, phosphatidylcholine; PE, phosphatidylethanolamine; PG, phosphatidylglycerol; PI, phosphatidylinositol; PS, phosphatidylserine; PA, phosphatidic acid; LBPA, lysobisphosphatidic acid; LPC, lysophosphatidylcholine; LPE, Lysophosphatidylethanolamine; LPI, Lysophosphatidylinositol; LPG, lysophosphatidylglycerol; SM, sphingomyelin; phSM, phytosphingosine; Cer, ceramide. \*, *p* < 0.05; \*\*, *p* < 0.01; \*\*\*, *p* < 0.001; \*\*\*\*, *p* < 0.0001. n = 6.