**Table S3.** Model assessment parameters.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Plot/Model** | **Data set** | **Number of components** | **Total systematic variation among the X-variables captured by the model (R2X[cum])** | **Total systematic variation among the Y-variables captured by the model (R2Y[cum])** | **Predictive ability of the model Q2[cum]** | **p-values calculated by CV-ANOVA** |
| Figure 1A/OPLS-DA | Lipidomic profile | 1 predictive2 orthogonal(1+2+0) | 0.393 | 0.959 | 0.787 | 0.00007 |
| Figure 1B/ OPLS-DA | Lipoprotein profile | 1 predictive2 orthogonal(1+2+0) | 0.741 | 0.792 | 0.611 | 0.007 |
| Figure 2/ PCA | De novo lipogenesis variables | 3 | 0.837 |  | 0.681 |  |
| Figure 3A and S5/OPLS-DA | Oxylipin profile | 1 predictive(1+0+0) | 0.337 | 0.758 | 0.71 | 0.000002 |
| Figure 3B/O2PLS | X = oxylipin profileY = EPA and DHA profile | 1 joint1 unique to X1 unique to Y(1+1+1) | 0.506 | 0.665 | 0.541 |  (Table S6) |
| Figure S2/ PCA | Lipidomic profile | 5 | 0.632 |  | 0.126 |  |
| Figure S3/ PCA | Oxylipin profile | 5 | 0.785 |  | 0.447 |  |
| Figure S4/ PCA | Lipoprotein profile | 3 | 0.761 |  | 0.555 |  |