



Figure S4 Corresponding group OPLS-DA simulation verification diagram

Note: The prediction parameters of the evaluation model include R^2X , R^2Y , and Q^2 , where R^2X and R^2Y represent the explanatory power of the constructed model to the X and Y matrices, and Q^2 represents the predictive ability of the model. The closer these three indicators are to 1, the more stable and reliable the model is. When $Q^2 > 0.5$, it can be considered an effective model, and when $Q^2 > 0.9$, it is an excellent model.