



**Supplementary Figure 4. Results for 16 fecal immune-related proteins in LASSO regression in the training set.** (A) Feature selection using LASSO regularization. The y-axis represents the LASSO coefficient curve for the 16 proteins, and the bottom x-axis represents the logarithm of the penalty coefficient ( $\lambda$ ). The top x-axis represents the number of proteins. (B) Identification of the best penalty coefficient ( $\lambda$ ) for the LASSO model by 10-fold cross-validation based on the minimum criterion.