

Expanded View Figures

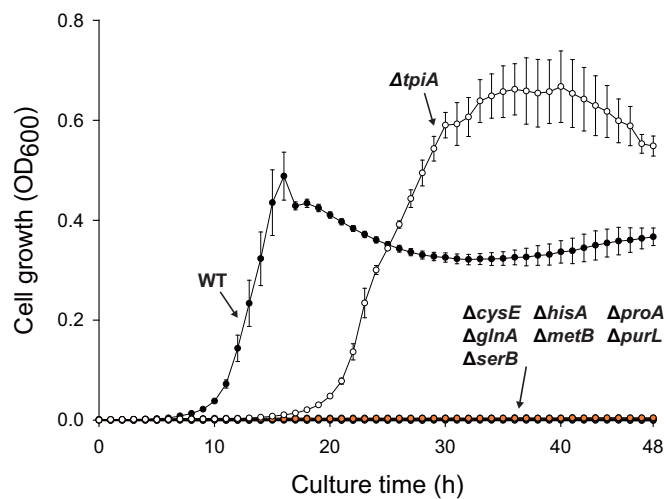


Figure EV1. Experimental validation of predicted beneficial reactions with missing deletions in the training data (Xylose condition).

The y axis denotes relative biomasses of gene-deletion mutants grown in the MOPS minimal medium supplemented with xylose as the sole carbon source for 48 h. Growth measurements are represented as the mean $\pm$ SEM from three independent cultivations.

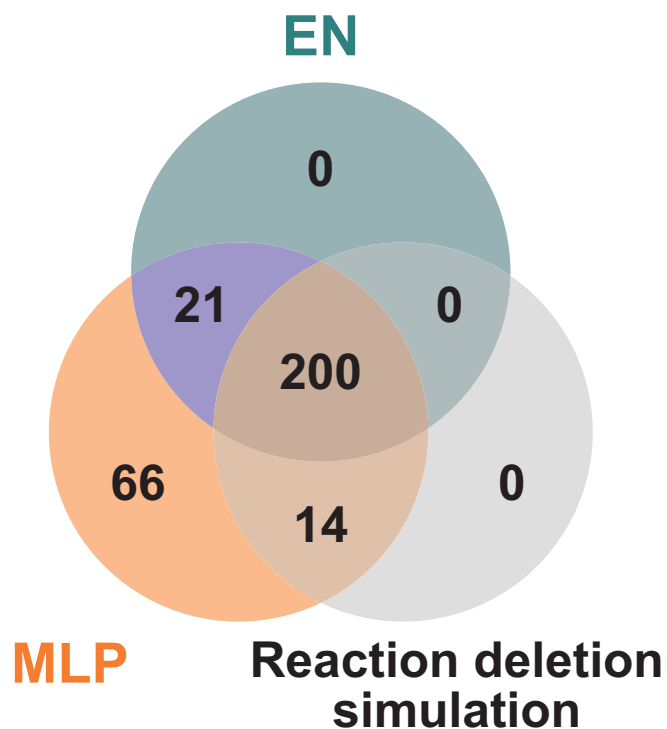


Figure EV2. Comparison of the predictions from the EN model, MLP model, and the single-reaction deletion simulation.

Metabolic reactions that were predicted to be beneficial for all 30 carbon conditions by the EN and MLP models were compared with essential reactions predicted from the simulation.

