

Description of Additional Supplementary Information File

File name: Supplementary data 1

Description: Phosphomutant strains

File name: Supplementary data 2

Description: Growth rates of phosphomutant and knockout strains

File name: Supplementary data 3

Description: Changes in metabolites for phosphomutant and knockout strains

File name: Supplementary data 4

Description: Local metabolic changes

File name: Supplementary data 5

Description: Spearman correlation of metabolic profiles

File name: Supplementary data 6

Description: Melting temperatures of purified enzymes

File name: Supplementary data 7

Description: *In vitro* activity of phosphomutants enzymes

File name: Supplementary data 8

Description: Oligonucleotides used to create genomic phosphomutants and mutant ASKA plasmids