

Supplementary Information for Nickel *et al.*

Table S1. Oligonucleotides used in this work.

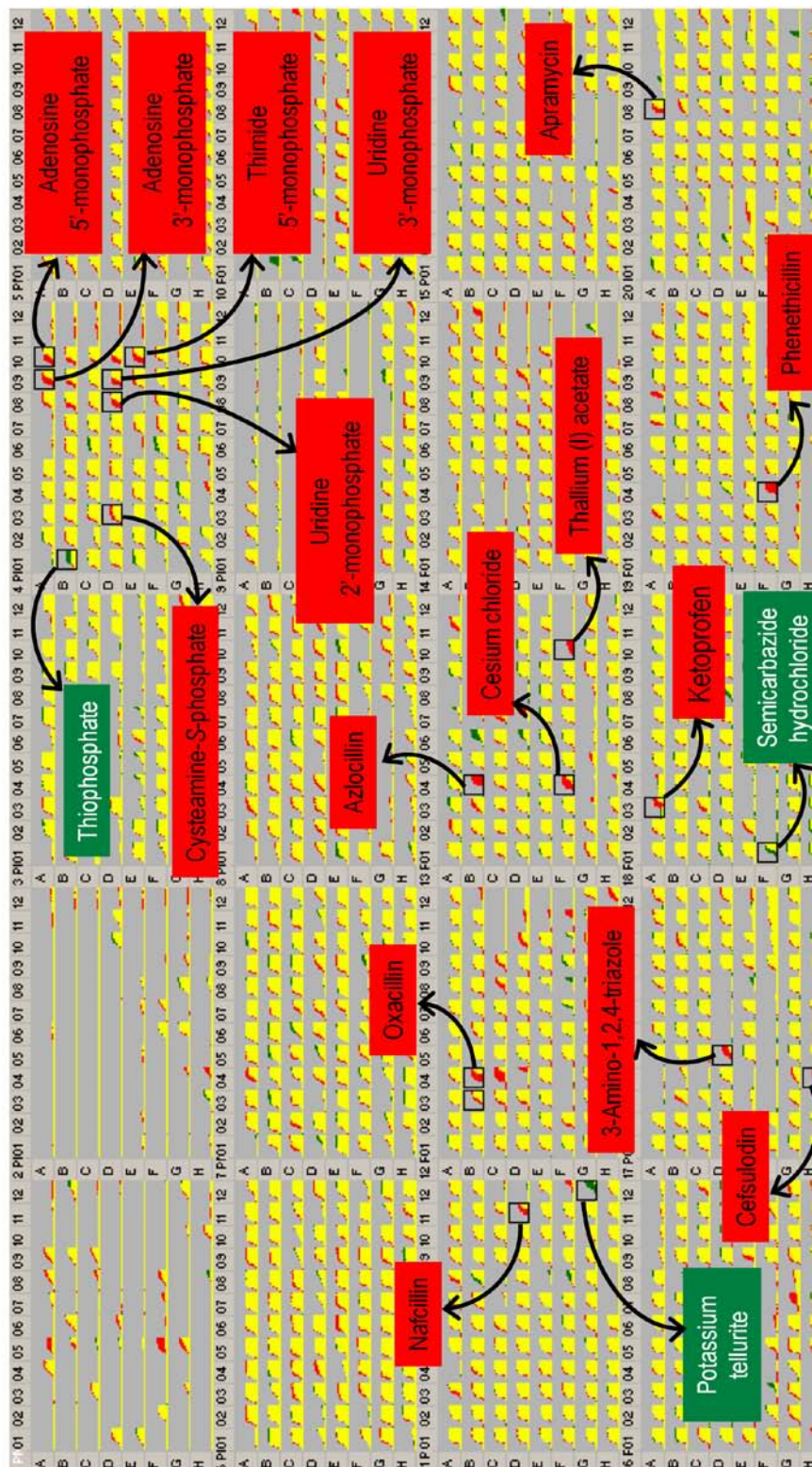
Oligonucleotide ^a	Sequence (5'→3')	Restriction enzyme
Δppk -TS1-F	CGG <u>AAT TCC</u> AGT CGG GCG TGA AAA TCG ACT TGG	<i>EcoRI</i>
Δppk -TS1-R ^b	GTT AAC GAC CGA GAA CAA CCA GAT CTC AGC GTA CGT TGA GGA CCG GGT T	
Δppk -TS2-F	GAT CTG GTT GTT CTC GGT CGT TAA C	
Δppk -TS2-R	CGT <u>CTA GAG</u> GAA GCG ATG TCG TCC AGA ACC GGA	<i>XbaI</i>
Δppk -TS1-F	CGG <u>AAT TCC</u> CAG ATT GAT ATC CAT GTA ACC GCG	<i>EcoRI</i>
Δppk -TS1-R ^b	CGG CTT CGT CCT CAG CGT ACG TTG ACT CTT CTG GGA GCT CCT GAG CAT CC	
Δppk -TS2-F	TCA ACG TAC GCT GAG GAC GAA GCC G	
Δppk -TS2-R	CGT <u>CTA GAG</u> CAC GAA ATC GGG CTG GAC ATT GCC	<i>XbaI</i>
pSW-F	GGA CGC TTC GCT GAA AAC TA	
pSW-R	AAC GTC GTG ACT GGG AAA AC	
P _{ppsS} -F	CCG <u>GGA ATT CGA</u> CAC CCT GTT CTC CAT CG	<i>EcoRI</i>
P _{ppsS} -R	CCG <u>CGG ATC CAA</u> GCG CGC AAA ATG CAC TTC	<i>BamHI</i>
<i>ppk</i> -F ^c	CGC GGG <u>AAT TCA</u> Gga aag gaT ATA ATG CTG CAG ACC CC	<i>EcoRI</i>
<i>ppk</i> -R	CGC GGG <u>GAT CCT</u> TAT CAG CGT ACG TTG AGG AC	<i>BamHI</i>

^a Recognition sites for the restriction enzymes indicated are underlined in the oligonucleotide sequence.

^b Complementary sequences added to the oligonucleotides in order to generate DNA fragments for gene deletion by sewing (cross-over) PCR are shown in red.

^c A Shine-Dalgarno motif (lowercase) was added to the sequence in the forward oligonucleotide used for *ppk* cloning, and the *ppk* start codon is highlighted in boldface.

Figure S1. Phenotypic changes detected by phenotypic microarray assays.



Significant changes (also shown in Table 1 in the main text) are enclosed in boxes and indicated by arrows. Yellow boxes indicate that respiration levels in the wild-type strain and that of the Δppk mutant was similar for the condition being tested. Red boxes indicate higher respiration rates of the wild-type strain than the mutant strain and, conversely, green boxes indicate higher respiration rates of the mutant strain as compared to the parental strain.