

Table S9. Gene essentiality data represented in Figure 6.

Gene	Wild-type GEI	Δ pSymAB GEI	$\log_{10}(\text{GEI ratio } [\Delta\text{pSymAB} / \text{wild-type}])$
Cytochrome C oxidase related proteins, defined medium			
<i>ctaC</i>	0.812	0.040	-1.313
<i>ctaD</i>	0.107	0.011	-0.979
<i>ctaB</i>	0.081	0.061	-0.123
<i>ctaG</i>	1.454	0.146	-0.999
<i>ctaE</i>	0.168	0.014	-1.091
<i>ccsA</i>	0.401	0.007	-1.775
<i>cycH</i>	2.037	1.559	-0.116
<i>cycJ</i>	1.344	0.658	-0.310
<i>cycK</i>	1.454	0.140	-1.016
<i>cycL</i>	1.077	0.252	-0.630
<i>ccmA</i>	0.990	0.131	-0.877
<i>ccmB</i>	1.664	0.130	-1.106
<i>ccmC</i>	1.265	0.272	-0.667
<i>ccmD</i>	1.367	0.011	-2.083
<i>ccmG</i>	2.368	0.264	-0.952
Proline biosynthesis, rich medium			
<i>proB1</i>	7.335	0.267	-1.438
<i>proA</i>	4.505	0.002	-3.285
<i>proC</i>	2.250	0.002	-2.964
Histidine biosynthesis, rich medium *			
<i>hisB</i>	2.530	0.010	-2.410
<i>smc04042</i>	0.600	0.062	-0.989
<i>hisD</i>	0.103	0.008	-1.089
Glycolysis and related proteins, rich medium			
<i>glk</i>	2.613	0.342	-0.883
<i>frk</i>	0.673	0.008	-1.950
<i>pgi</i>	0.001	0.001	0.000
<i>zwf</i>	0.235	0.001	-2.239
<i>pgl</i>	0.658	0.003	-2.362
<i>edd</i>	3.284	0.063	-1.720
<i>eda2</i>	1.903	0.698	-0.436
<i>gap</i>	1.300	0.002	-2.818
<i>pgk</i>	1.928	0.024	-1.902
<i>gpmA</i>	2.637	1.538	-0.234
<i>eno</i>	1.110	1.129	0.007
<i>pykA</i>	2.017	0.424	-0.678
<i>pyc</i>	4.409	0.223	-1.296
Periplasmic cyclic β -glucans biosynthesis, defined medium			
<i>feuN</i>	1.095	0.282	-0.590
<i>feuP</i>	0.938	0.003	-2.498
<i>feuQ</i>	10.855	0.012	-2.947
<i>ndvA</i>	1.434	0.001	-3.123
<i>ndvB</i>	3.218	0.129	-1.396

Arginine biosynthesis, rich medium			
<i>argB</i>	0.802	2.125	0.423
<i>argC</i>	0.636	3.618	0.755
<i>argD</i>	1.499	1.467	-0.010
<i>argJ</i>	3.118	4.134	0.122
<i>argF1</i>	0.012	1.776	2.168
<i>argG</i>	0.002	1.281	2.892
<i>argH1</i>	0.198	1.011	0.708
AICAR biosynthesis, rich medium			
<i>purF</i>	0.506	2.273	0.652
<i>purD</i>	0.716	2.770	0.588
<i>purN</i>	1.962	3.974	0.307
<i>smc00494</i>	0.469	2.774	0.772
<i>purL</i>	0.996	5.689	0.757
<i>purQ</i>	0.908	2.351	0.413
<i>purM</i>	1.060	3.070	0.462
<i>purE</i>	1.387	2.399	0.238
<i>purK</i>	2.029	3.562	0.244
<i>purC</i>	0.302	0.175	-0.237
<i>purB</i>	0.002	0.799	2.542
<i>purH</i>	0.624	0.705	0.053
UMP biosynthesis, rich medium			
<i>carA</i>	0.007	3.928	2.721
<i>carB</i>	0.001	1.930	3.130
<i>pyrB</i>	0.062	2.364	1.584
<i>smc01361</i>	0.417	2.793	0.826
<i>pyrC</i>	0.134	0.689	0.711
<i>pyrD</i>	0.193	2.700	1.146
<i>pyrE</i>	0.300	2.266	0.878
<i>pyrF</i>	0.323	4.956	1.185
LPS core oligosaccharide, defined medium			
<i>lpsC</i>	0.101	1.555	1.188
<i>lpsD</i>	1.154	2.969	0.410
<i>lpsE</i>	0.832	2.609	0.496

* Represents just the final steps of this process, from the conversion of imidazole-acetol-phosphate to L-histidine.