

Supplemental Table S1. Genes differentially expressed by change in growth rate.

Data from microarray analyses. Significantly regulated genes are $q < 0.05$ (bold). “NA” denotes non expressed or excluded genes. *Genes statistically differences in transcription between the lowest and the higher growth rates.

ID	Gene	Name	0.05/0.15		0.4/0.15	
			log ₂	qVal.	log ₂	qVal.
Biosynthesis of cofactors, prosthetic group, carriers						
EF0051	<i>ispE</i>	4-diphosphocytidyl-2-C-methyl-D-erythritol kinase	0.43	0.44	-1.43	0.01
EF1858	<i>panD</i>	Aspartate 1-decarboxylase	-1.64	0.04	-1.24	0.09
EF2776	<i>thiE</i>	Thiamine-phosphate pyrophosphorylase	2.21	0.04	0.73	0.62
EF2777		Hydroxyethylthiazole kinase	1.70	0.04	0.43	0.73
Cell envelope						
EF0025*		Membrane protein. putative	-1.00	0.02	0.60	0.02
EF0235		Membrane protein. putative	0.24	0.70	1.11	0.04
EF0370		Septation ring formation regulator EzrA	-1.31	0.01	-1.44	0.00
EF0490		LPX-motif cell wall anchor domain protein	2.07	0.00	3.05	0.00
EF0516		Transcriptional regulator, putative	0.58	0.49	1.59	0.04
EF0989	<i>mraW</i>	S-adenosyl-methyltransferase MraW	-0.50	0.32	-1.14	0.02
EF0991	<i>pbpC</i>	Penicillin-binding protein	-0.74	0.28	-1.69	0.03
EF1583		N-acetylmuramoyl-L-alanine amidase	-0.97	0.10	-1.29	0.02
EF1740		Penicillin-binding protein 1, putative	0.78	0.17	1.23	0.02
EF1751		Membrane protein. putative	-1.12	0.02	-0.54	0.22
EF2367		N-acetylmuramoyl-L-alanine amidase	-0.69	0.13	-1.29	0.01
EF2891		Glycosyl transferase, group 1	-0.77	0.13	-1.02	0.04
EFB0051		Membrane protein, putative	0.33	0.58	1.34	0.02
Cellular processes						
EF0439*		Immunity protein PlnM, putative	0.50	0.02	-1.00	0.00
EF0990		Cell division protein	-0.37	0.52	-1.29	0.01
EF1151		Cell division protein DivIVA	-1.19	0.17	-1.81	0.03
EF2052		Cell division protein FtsK	-1.61	0.02	-2.42	0.03
EF2387		ParA family chromosome partitioning ATPase	-1.08	0.02	-1.51	0.01
EF2739	<i>ahpC</i>	Alkyl hydroperoxide reductase	-1.59	0.02	-0.56	0.40
EFA0007		Ribosomal RNA adenine dimethylase family protein	-0.50	0.18	-1.52	0.00
EFA0042		Cell wall surface anchor signal protein	1.16	0.05	2.33	0.00
EFB0012	<i>prgC</i>	Surface protein PrgC	1.03	0.24	1.45	0.03
Conserved hypothetical protein						
EF0003		Conserved hypothetical protein	-1.00	0.01	-0.72	0.04
EF0145		Conserved hypothetical protein	1.10	0.05	1.50	0.03
EF0349		Conserved hypothetical protein	1.63	0.02	2.40	0.01
EF0350		Conserved hypothetical protein	1.49	0.04	2.56	0.00
EF0469		Conserved hypothetical protein	-1.19	0.01	-1.16	0.00
EF0486		Conserved hypothetical protein	2.00	0.02	2.46	0.00
EF0487		Conserved hypothetical protein	2.64	0.02	1.54	0.03
EF0491		Conserved hypothetical protein	2.17	0.00	3.42	0.00
EF0500		Conserved hypothetical protein	2.50	0.00	3.67	0.00
EF1026		Conserved hypothetical protein	-0.48	0.30	-1.35	0.00

EF1541*		Conserved hypothetical protein	-1.27	0.02	0.84	0.23
EF1682		Conserved hypothetical protein	-1.39	0.05	-1.37	0.05
EF1752		Conserved hypothetical protein	-1.42	0.01	-1.08	0.02
EF1753		Conserved hypothetical protein	-1.46	0.03	-1.3	0.04
EF1861		Conserved hypothetical protein	-1.51	0.04	-1.07	0.12
EF2281		Conserved hypothetical protein	-0.02	0.97	-1.33	0.00
EF2437		Conserved hypothetical protein	-3.35	0.00	-2.55	0.00
EF2604		Conserved hypothetical protein	0.62	0.35	1.67	0.01
EF2606		Conserved hypothetical protein	-1.06	0.02	-0.85	0.05
EF2770		Conserved hypothetical protein	2.19	0.01	1.05	0.27
EF2923		Conserved hypothetical protein	-0.31	0.60	-1.37	0.01
EF2965		Conserved hypothetical protein	-1.82	0.00	-0.65	0.18
EF3009		Conserved hypothetical protein	1.18	0.02	1.63	0.01
EF3115		Conserved hypothetical protein	-0.53	0.13	-1.22	0.00
EF3151		Conserved hypothetical protein	-0.58	0.24	-1.25	0.01
EFA0035		Conserved hypothetical protein	2.36	0.05	1.93	0.02
EFA0036		Conserved hypothetical protein	1.85	0.03	3.5	0
EFA0037		Conserved hypothetical protein	2.17	0.03	1.56	0.02
EFA0048		Conserved hypothetical protein	1.99	0.04	1.26	0.05
EFA0065		Conserved hypothetical protein	-1.32	0.02	-1.77	0.00
EFA0066		Conserved hypothetical protein	-0.95	0.01	-1.53	0.00
EFB0013		Conserved hypothetical protein	1.97	0.02	2.38	0.01
EFB0033		Conserved hypothetical protein	1.82	0.02	2.69	0.00
DNA metabolism						
EF0004		recF protein	-1.32	0.00	-1.02	0.01
EF0005		DNA gyrase, B subunit	-1.06	0.02	-0.86	0.04
EF0325		DNA polymerase I, putative	1.3	0.03	0.67	0.31
EF0499	<i>ssb-2</i>	Single-strand binding protein	1.29	0.04	1.95	0.01
EF0762	<i>uvrB</i>	Excinuclease ABC, subunit B	0.68	0.20	-1.29	0.01
EF1521	<i>dnaG</i>	DNA primase	-0.73	0.02	-1.68	0
EF2283*		Resolvase family site-specific recombinase	1.26	0.00	0.356	0.02
Energy metabolism						
EF0900	<i>aldE</i>	Aldehyde-alcohol dehydrogenase	-1.30	0.00	-1.00	0.01
EF0956	<i>malB/bopE</i>	Beta-phosphoglucomutase	1.20	0.03	0.31	0.67
EF1109		Iron-sulfur cluster binding protein	-2.12	0.03	-1.39	0.14
EF1125		Putative L-ascorbate 6-phosphate lactonase	-1.45	0.10	-2.54	0.00
EF1211	<i>npr</i>	NADH peroxidase	-1.10	0.01	-0.65	0.09
EF1356		Pyruvate dehydrogenase complex. E3 component.	-0.38	0.53	-1.22	0.02
	<i>lpdA</i>	Lipoamide dehydrogenase				
EF1568		Prephenate dehydratase	-1.53	0.02	-0.31	0.68
EF2058		Transport P-binding protein CydC, putative	-1.00	0.03	-0.20	0.70
EF2059		Transport P-binding protein CydD, putative	-1.34	0.01	-0.85	0.06
EF2559		Pyruvate flavodoxin/ferredoxin oxidoreductase	0.67	0.30	-1.19	0.05
EF2863		Beta-N-acetylglucosaminidase, putative	1.28	0.01	-0.17	0.75
EF3317		Oxaloacetate decarboxylase, alpha subunit	-0.02	0.96	1.01	0.01
EF3319	<i>citF</i>	Citrate lyase, alpha subunit	-0.17	0.75	1.00	0.03

EF3321	<i>cidD</i>	Citrate lyase, gamma subunit	-0.24	0.54	1.00	0.01
EF3322	<i>citC</i>	Citrate lyase ligase	-0.05	0.94	1.13	0.02
EF3324		Sodium ion-translocating decarboxylase, beta subunit	0.18	0.76	1.92	0.00
EF3325		Acetyl-CoA carboxylase biotin carboxyl carrier protein subunit	-0.17	0.83	1.50	0.02

Fatty acid and phospholipid metabolism

EF0779		Glycerophosphoryl diester phosphodiesterase family protein	0.44	0.32	1.10	0.01
EF1608		Cardiolipin synthetase, putative	0.70	0.12	1.79	0.00
EF2618		Carboxylesterase precursor, putative	-1.21	0.00	-0.99	0.01

Hypothetical protein

EF0083		Hypothetical protein	-1.56	0.03	0.54	0.43
EF0128		Hypothetical protein	-1.05	0.04	-1.30	0.01
EF0340		Hypothetical protein	1.46	0.10	2.31	0.03
EF0341		Hypothetical protein	1.49	0.07	2.04	0.04
EF0477		Hypothetical protein	-0.53	0.24	-1.59	0.00
EF0532		Hypothetical protein	-0.76	0.25	-1.34	0.04
EF0566		Hypothetical protein	-0.79	0.10	-1.40	0.02
EF0573		Hypothetical protein	1.71	0.01	NA	NA
EF0605		Hypothetical protein	-0.63	0.46	-2.23	0.00
EF0723		Hypothetical protein	0.41	0.35	1.09	0.01
EF0769		Hypothetical protein	-0.60	0.19	-1.12	0.01
EF0778		Hypothetical protein	0.66	0.22	1.25	0.02
EF0908		Hypothetical protein	0.97	0.06	1.77	0.00
EF1067		Hypothetical protein	-0.10	0.83	-1.22	0.00
EF1095		Hypothetical protein	0.57	0.49	1.73	0.02
EF1107		Hypothetical protein	-1.76	0.00	0.65	0.14
EF1262		Hypothetical protein	0.68	0.17	1.10	0.02
EF1263		Hypothetical protein	0.54	0.24	1.11	0.01
EF1309		Hypothetical protein	-1.28	0.02	-0.94	0.08
EF1315		Hypothetical protein	-0.98	0.04	0.32	0.52
EF1365		Hypothetical protein	0.76	0.14	1.32	0.01
EF1375		Hypothetical protein	1.06	0.01	1.32	0.00
EF1418		Hypothetical protein	-1.05	0.10	-2.48	0.00
EF1774		Hypothetical protein	0.40	0.43	1.08	0.02
EF1946		Hypothetical protein	-0.23	0.67	-1.09	0.02
EF1947		Hypothetical protein	-0.50	0.41	-1.35	0.02
EF2169		Hypothetical protein	0.40	0.67	1.83	0.02
EF2229		Hypothetical protein	1.4	0.04	0.63	0.44
EF2231		Hypothetical protein	2.01	0.00	0.97	0.13
EF2287		Hypothetical protein	1.58	0.03	1.17	0.16
EF2317		Hypothetical protein	0.45	0.51	-1.47	0.02
EF2366		Hypothetical protein	-0.64	0.13	-1.39	0.00
EF2368		Hypothetical protein	-1.01	0.04	-1.18	0.01
EF2466		Hypothetical protein	1.59	0.01	1.72	0.00
EF2467		Hypothetical protein	1.23	0.02	-0.43	0.42

EF2490	<i>cpsF</i>	Hypothetical protein	0.23	0.69	1.16	0.02
EF2518*		Hypothetical protein	-0.63	0.02	1.13	0.01
EF2588		Hypothetical protein	-0.08	0.89	1.16	0.01
EF2619		Hypothetical protein	-2.19	0.02	-2.91	0.05
EF2707		Hypothetical protein	0.79	0.33	2.22	0.02
EF2768		Hypothetical protein	2.40	0.01	1.10	0.29
EF2967		Hypothetical protein	2.13	0.04	3.06	0.01
EF3087		Hypothetical protein	1.92	0.00	2.46	0.00
EF3088		Hypothetical protein	1.85	0.00	2.41	0.00
EF3101		Hypothetical protein	1.15	0.05	1.61	0.02
EF3247		Hypothetical protein	0.69	0.17	1.07	0.03
EF3323		Hypothetical protein	0.5	0.04	2.32	0.00
EFA0017		Hypothetical protein	1.02	0.02	1.21	0.00
EFA0029		Hypothetical protein	1.72	0.08	1.99	0.01
EFA0050		Hypothetical protein	1.95	0.02	1.69	0.03
EFA0051		Hypothetical protein	1.9	0.03	2.12	0.02
EFB0015		Hypothetical protein	1.63	0.01	2.78	0.00
Mobile and extrachromosomal element functions						
EF0125		IS256 transposase	1.3	0.02	1.4	0.01
EF0351		Structural protein	1.59	0.03	1.99	0.02
EF0355	<i>atlB</i>	Endolysin	1.83	0.03	1.98	0.02
EF2145		Integrase, phage family	-1.5	0.00	-1.48	0.00
EF2173		ISEf1, transposase	1.51	0.02	1.39	0.03
EFA0001	<i>traA-1</i>	Replication-associated protein RepA	1.38	0.10	1.2	0.04
EFA0002	<i>traB-1</i>	Pheromone shutdown protein TraB	1.10	0.10	2.15	0.00
EFA0003	<i>traC-1</i>	traC protein	0.56	0.38	1.59	0.01
EFA0083	<i>repB-1</i>	Replication-associated protein RepB	0.58	0.32	1.25	0.02
EFB0063	<i>prgN</i>	Replication control protein PrgN	1.39	0.09	1.67	0.04
Protein fate						
EF0302		Aminopeptidase C	-0.59	0.26	-1.04	0.03
EF0306		Cro/CI family transcriptional regulator	-0.71	0.11	-1.01	0.02
EF1307	<i>grpE</i>	Heat shock protein GrpE	-1.49	0.03	-0.70	0.30
EF1308	<i>dnaK</i>	dnak protein	-1.31	0.04	-1.09	0.07
EF1763	<i>secA</i>	Preprotein translocase, SecA subunit	-1.73	0.04	-2.59	0.05
EF2634	<i>groES</i>	Chaperonin, 10 kDa	-1.29	0.02	-0.26	0.66
Protein synthesis						
EF0206	<i>rplC</i>	50S ribosomal protein L3	-1.18	0.00	-0.87	0.02
EF0633	<i>tryS-1</i>	Tyrosyl-tRNA synthetase	-0.68	0.17	1.19	0.01
EF1694	<i>npsP</i>	Ribosomal protein S16	-1.19	0.01	0.05	0.95
EF2715	<i>rplL</i>	Ribosomal protein L7/L12	-1.23	0.01	0.15	0.77
EF2716	<i>rplJ</i>	50S ribosomal protein L10	-1.32	0.02	-0.40	0.47
EF2731	<i>rpmG-2</i>	Ribosomal protein L33	-1.08	0.01	-1.47	0.00
Purines, pyrimidines, nucleosides, and nucleotides						
EF1714	<i>pyrD</i>	Dihydroorotate dehydrogenase	-1.44	0.03	-0.36	0.61
EF1715	<i>pyrDII</i>	Dihydroorotate dehydrogenase electron transfer subunit	-1.63	0.02	-0.61	0.38

EF1716	<i>carB</i>	Carbamoyl-phosphate synthase, large subunit	-1.72	0.02	-0.86	0.19
EF1717	<i>pyraA</i>	Carbamoyl-phosphate synthase, small subunit	-1.64	0.04	-0.85	0.27
EF1720		Uracil permease	-1.39	0.05	-0.48	0.50
Regulatory functions						
EF0129		Transcription regulator	-0.85	0.08	-1.36	0.01
EF0869		Cro/CI family transcriptional regulator	-0.67	0.13	-1.06	0.02
EF1297		PadR family transcriptional regulator	-1.05	0.12	-1.84	0.01
EF1306	<i>hrcA</i>	Heat-inducible transcription repressor HrcA	-1.64	0.01	-0.40	0.55
EF1357		AraC family transcriptional regulator	-0.28	0.68	-1.64	0.04
EF1579	<i>lexA</i>	LexA repressor	-0.51	0.16	-1.10	0.00
EF1709		GntR family sugar-binding transcriptional regulator	-1.31	0.01	-0.95	0.05
EF2291*		Cro/CI family transcriptional regulator	1.16	0.01	-0.86	0.03
EF2966		BglG family transcriptional antiterminator	-1.74	0.00	-0.22	0.70
EFA0071		PemK family protein	-0.75	0.05	-1.00	0.01
EFB0005.1		Transcriptional regulator, Cro/CI family	0.99	0.05	2.02	0.00
Signal transduction						
EF0406		PTS system, component	1.74	0.04	1.28	0.08
EF0958	<i>makT</i>	PTS system component	1.33	0.03	1.20	0.08
EF1126		PTS system component	-0.64	0.53	-2.3	0.02
EF2598		PTS system component	2.59	0.02	1.80	0.06
EFA0067		PTS system. IIABC components	1.13	0.02	0.06	0.97
Transcription						
EF2617	<i>vacB</i>	Ribonuclease R	-1.09	0.02	-0.80	0.07
EF2729	<i>nusG</i>	Transcription antitermination protein NusG	-2.24	0.00	-1.81	0.00
Transport and binding proteins						
EF0022		PTS system component	0.67	0.29	1.42	0.02
EF0246		Amino acid ABC transporter, ATP-binding protein	0.49	0.36	1.06	0.04
EF0431		TRAP dicarboxylate transporter DctM subunit, putative	2.13	0.02	1.67	0.04
EF0475	<i>feoA</i>	Ferrous iron transport protein A, putative	-0.45	0.52	-1.33	0.03
EF0909		Peptide ABC transporter, permease	0.30	0.56	1.09	0.02
EF0938		Sugar ABC transporter ATP-binding protein	-1.31	0.01	-0.69	0.11
EF1027		Putative transport protein SgaT protein	NA	NA	-2.5	0.02
EF1127	<i>ulaA</i>	PTS system ascorbate-specific transporter subunit IIC	-0.38	0.77	-2.5	0.02
EF1398		Molybdenum ABC transporter, permease protein	1.4	0.03	0.09	0.93
EF2232		Sugar ABC transporter, permease	1.97	0.01	1.44	0.16
EF2233		Sugar ABC transporter, permease	1.62	0.01	0.54	0.47
EF2394		ABC transporter ATP-binding protein	-0.46	0.21	-1.00	0.01
EF2650		Spermidine/putrescine ABC transporter, permease	0.35	0.53	1.05	0.04
EF2720		ABC transporter ATP-binding protein	-1.81	0.00	-1.22	0.02
EF2769		ABC transporter ATP-binding protein	2.51	0.00	0.70	0.44
EF2992		Major facilitator family transporter	1.14	0.02	0.43	0.46
EF3004		Sulfate permease family protein	0.55	0.20	1.41	0.01
EF3015		Serine/threonine transporter SstT	0.98	0.05	1.51	0.01
EF3099		Transporter accessory protein. putative	-0.13	0.93	-3.09	0.03

EF3108		Peptide ABC transporter, permease	0.08	0.87	1.00	0.02
EF3277		Cytosine permease, putative	1.46	0.01	2.57	0.00
EFA0014		Drug resistance transporter. putative	0.75	0.27	1.78	0.00
EFB0050		Toxin ABC transporter. ATP-binding/permease protein	0.02	0.98	1.17	0.03
Unknown function						
EF0468		lemA protein	-1.37	0.01	-1.05	0.04
EF0512		DNA-damage-inducible protein. putative	-0.79	0.03	-1.11	0.00
EF0796		Type 2 phosphatidic acid phosphatase family protein	1.20	0.08	1.57	0.02
EF0856		Aldo/keto reductase family protein	-1.11	0.02	-1.00	0.03
EF1025		CBS domain-containing protein	-0.64	0.24	-1.29	0.01
EF1108		Oxidoreductase, putative	-1.62	0.00	-0.84	0.07
EF1110		YkgG family protein	-1.52	0.01	-0.50	0.37
EF2214		Glyoxylase family protein	1.05	0.08	1.28	0.03
EF2436	<i>murQ</i>	N-acetylmuramic acid-6-phosphate etherase	-1.56	0.04	-1.49	0.04
EF2577		Aspartate/ornithine carbamoyltransferase family protein	1.04	0.03	0.32	0.51
EF2738	<i>ahpF</i>	Thioredoxin reductase	-1.43	0.01	-0.96	0.06
EF2756	<i>dinP</i>	DNA-damage-inducible protein P	-0.78	0.26	-1.34	0.04
EF2874		HAD superfamily hydrolase	-1.22	0.04	-1.17	0.04
EF2933		Redox-sensing transcriptional repressor Rex	-0.64	0.12	-0.95	0.02
EF3114		DAK2 domain-containing protein	-0.16	0.68	-1.00	0.01
EF3311	<i>gidA</i>	tRNA uridine 5-carboxymethylaminomethyl modification enzyme GidA	0.83	0.16	1.34	0.02
EFA0072		PemI family protein	-0.95	0.01	-1.48	0.00