

Table 5. Genes with significantly altered expression only in the *rpoS* mutant relative to WT (regulatory group 2).

ORF	Name	Description	Ratio, <i>rpoS</i> /WT	SE*	<i>P</i> [†]	Main role	Subrole	Potential to cross- hybridize [‡]	Paralog. family no.	Rank [§]	Taqman ratio [¶]
BB0039		Hypothetical protein	1.79	0.28	0.005	Hypothetical proteins				89	
BB0066		Hypothetical protein	0.73	0.06	0.005	Hypothetical proteins				33	
BB0070		Conserved hypothetical protein	0.68	0.05	8E-04	Hypothetical proteins - Conserved	Conserved			11	
BB0071		Hypothetical protein	0.70	0.08	0.024	Hypothetical proteins				25	
BB0090		V-type ATPase, subunit K, putative	0.69	0.07	0.007	Energy metabolism	ATP-proton motive force interconversion			15	
BB0103		Hypothetical protein	0.79	0.03	0.001	Hypothetical proteins				50	
BB0106		Hypothetical protein	1.45	0.15	0.005	Hypothetical proteins				67	
BB0132	greA	Transcription elongation factor	0.80	0.02	1E-04	Transcription	Transcription factors			52	
BB0183		Conserved hypothetical protein	0.77	0.04	0.003	Hypothetical proteins - Conserved	Conserved			46	
BB0214	efp	Translation elongation factor P	1.48	0.12	0.003	Protein synthesis	Translation factors			68	
BB0222	pgl	6-phosphogluconolactonase	0.71	0.02	2E-05	Energy metabolism	Pentose phosphate pathway			26	
BB0229	rpmE	Ribosomal protein L31	1.64	0.19	0.003	Protein synthesis	Ribosomal proteins: synthesis and modification			82	
BB0249		Phosphatidyltransferase	0.75	0.05	0.002	Fatty acid and phospholipid metabolism	Biosynthesis			36	
BB0250	dedA	DedA protein	0.75	0.05	0.003	Unknown function	General			38	
BB0256	rpsU	Ribosomal protein S21	1.67	0.25	0.013	Protein synthesis	Ribosomal proteins: synthesis and modification			86	
BB0273	fliR	Flagellar biosynthesis protein	0.73	0.03	1E-04	Cellular processes	Chemotaxis and motility			31	
BB0274	fliQ	Flagellar biosynthesis protein	0.78	0.03	6E-04	Cellular processes	Chemotaxis and motility			48	
BB0277	fliN	Flagellar motor switch protein	0.62	0.06	7E-04	Cellular processes	Chemotaxis and motility			4	
BB0280	motB	Flagellar motor rotation protein B	1.41	0.11	0.002	Cellular processes	Chemotaxis and motility			63	
BB0319	tpn38b	Exported protein	0.76	0.05	0.004	Cell envelope	Other			43	
BB0336		P26	1.49	0.12	0.004	Unknown function	General			70	
BB0340		Hypothetical protein	1.35	0.07	1E-04	Hypothetical proteins				59	
BB0376	metK	S-adenosylmethionine synthetase	0.70	0.07	0.009	Central intermediary metabolism	Other			20	
BB0418		Hypothetical protein	0.67	0.06	0.004	Hypothetical proteins				9	

BB0454		Lipopolysaccharide biosynthesis-related protein	0.74	0.04	3E-04	Unknown function	General			35	
BB0518	dnaK-2	Heat shock protein 70	1.40	0.15	0.021	Protein fate	Protein folding and stabilization	9		62	
BB0525		Conserved hypothetical protein	1.36	0.08	9E-04	Hypothetical proteins - Conserved	Conserved			60	
BB0565	cheW-2	Purine-binding chemotaxis protein	0.77	0.05	0.003	Cellular processes	Chemotaxis and motility	33		45	
BB0567	cheA-1	Chemotaxis histidine kinase	0.79	0.03	2E-04	Cellular processes	Chemotaxis and motility	134		49	
BB0575	pyrG	CTP synthase	0.73	0.05	8E-04	Purines, pyrimidines, nucleosides, and nucleotides	Pyrimidine ribonucleotide biosynthesis			34	
BB0581	recG	DNA recombinase	0.75	0.06	0.01	DNA metabolism	DNA replication, recombination, and repair	20		37	
BB0586	femA	FemA protein	0.80	0.04	0.006	Cell envelope	Biosynthesis of murein sacculus and peptidoglycan			51	
BB0587	metG	Methionyl-tRNA synthetase	0.70	0.04	1E-04	Protein synthesis	tRNA aminoacylation	126		23	
BB0606		Conserved hypothetical protein	0.77	0.06	0.012	Hypothetical proteins - Conserved	Conserved			44	
BB0614		Hypothetical protein	0.78	0.04	4E-04	Hypothetical proteins				47	
BB0618	cdd	Cytidine deaminase	1.77	0.14	3E-05	Purines, pyrimidines, nucleosides, and nucleotides	Salvage of nucleosides and nucleotides			88	1.24
BB0619		Conserved hypothetical protein	1.28	0.08	0.004	Hypothetical proteins - Conserved	Conserved			57	
BB0621	thiJ	4-methyl-5(b-hydroxyethyl)-thiazole monophosphate biosynthesis protein	2.49	0.30	2E-04	Biosynthesis of cofactors, prosthetic groups, and carriers	Thiamine			93	1.21
BB0628		Conserved hypothetical protein	1.67	0.13	8E-04	Hypothetical proteins - Conserved	Conserved			85	1.14
BB0638	nhaC-2	Na ⁺ /H ⁺ antiporter	0.72	0.07	0.011	Transport and binding proteins	Cations	135		28	
BB0639	potD	Spermidine/putrescine ABC transporter, spermidine/putrescine-binding periplasmic protein	0.68	0.06	0.002	Transport and binding proteins	Amino acids, peptides and amines			12	
BB0648		Serine/threonine kinase, putative	0.70	0.07	0.016	Protein fate	Protein modification and repair			21	
BB0663		Hypothetical protein	0.73	0.05	0.004	Hypothetical proteins				32	
BB0676	gph	Phosphoglycolate phosphatase	1.68	0.17	0.003	Energy metabolism	Sugars			87	

BB0680	mcp-4	Methyl-accepting chemotaxis protein	0.55	0.06	6E-04	Cellular processes	Chemotaxis and motility	13	1	
BB0696		Conserved hypothetical protein	0.72	0.08	0.021	Hypothetical proteins - Conserved	Conserved		29	
BB0728	nox	NADH oxidase, water-forming	0.71	0.08	0.018	Energy metabolism	Aerobic		27	0.87
BB0732	pbp-3	Penicillin-binding protein	0.75	0.06	0.006	Cell envelope	Biosynthesis of murein sacculus and peptidoglycan		39	
BB0754		ABC transporter, ATP-binding protein	0.69	0.06	0.004	Transport and binding proteins	Unknown substrate	4	19	
BB0758		Lipoprotein, putative	0.76	0.04	8E-04	Cell envelope	Other		41	
BB0791	tdk	Thymidine kinase	0.67	0.04	2E-05	Purines, pyrimidines, nucleosides, and nucleotides	Salvage of nucleosides and nucleotides		10	
BB0810		Virulence factor mviN protein (mviN)	0.68	0.06	0.005	Cellular processes	Pathogenesis		13	
BB0815		Conserved hypothetical protein	0.69	0.03	2E-04	Hypothetical proteins - Conserved	Conserved	45	17	
BB0840		Lipoprotein, putative	0.61	0.04	6E-04	Cell envelope	Other		2	0.98
BBA12		Conserved hypothetical protein	1.65	0.29	0.025	Hypothetical proteins - Conserved	Conserved		84	
BBA22		Hypothetical protein	1.50	0.19	0.018	Hypothetical proteins			71	
BBA23		Conserved hypothetical protein	1.56	0.17	0.004	Hypothetical proteins - Conserved	Conserved	144	77	
BBA24	dbpA	Decorin binding protein A	0.62	0.06	0.003	Cell envelope	Other	74	3	
BBB03		Hypothetical protein	0.67	0.07	0.013	Hypothetical proteins			7	
BBB13		Conserved hypothetical protein	0.70	0.06	0.006	Hypothetical proteins - Conserved	Conserved	49	22	
BBD06		Conserved hypothetical protein	0.72	0.06	0.005	Hypothetical proteins - Conserved	Conserved	73	30	
BBD13		Hypothetical protein	0.66	0.05	1E-03	Hypothetical proteins - Conserved	Conserved		6	
BBE22	pncA	Pyrazinamidase/nicotinamidase	2.17	0.19	4E-05	Cellular processes	Toxin production and resistance		92	1.19
BBE23.2		Hypothetical protein, authentic point mutation	1.98	0.27	0.006	Hypothetical proteins - Conserved	Conserved	32	91	
BBF32		Vls recombination cassettes Vls2-Vls16, authentic frameshift	1.90	0.22	0.002	Cell envelope	Other	170	90	
BBG06		Conserved hypothetical protein	1.58	0.10	2E-05	Hypothetical proteins - Conserved	Conserved	73	79	
BBG19		Hypothetical protein	0.85	0.02	4E-05	Hypothetical proteins		+	117	55
BBI11		Hypothetical protein	1.63	0.18	0.004	Hypothetical proteins			80	

BBI12		Hypothetical protein	1.51	0.14	0.006	Hypothetical proteins			73	
BBI18		Hypothetical protein	1.58	0.18	0.003	Hypothetical proteins			78	
BBI19		Conserved hypothetical protein	2.64	0.24	6E-05	Hypothetical proteins - Conserved	Conserved	73	94	
BBI21		Plasmid partition protein, putative	1.28	0.06	4E-04	Cellular processes	Cell division	32	56	
BBI36		Antigen, P35, putative	1.50	0.16	0.011	Cell envelope	Biosynthesis and degradation of surface polysaccharides and lipopolysaccharides	+	54	72
BBI41		Hypothetical protein	1.52	0.14	0.003	Hypothetical proteins		82	74	
BBJ25		Hypothetical protein	0.80	0.03	3E-04	Hypothetical proteins			53	
BBK36		Hypothetical protein	1.53	0.21	0.022	Hypothetical proteins		+	66	76
BBL39	erpA	ErpA protein	1.37	0.11	0.006	Cell envelope	Other		162	61
BBL40	erpB2	ErpB2 protein	0.69	0.08	0.018	Cell envelope	Other	+	163	18
BBM16		Hypothetical protein	0.76	0.05	0.008	Hypothetical proteins			157	40
BBN26		Outer surface protein, putative	0.81	0.04	0.003	Cell envelope	Other	+	143	54
BBN28	lp	Lipoprotein	0.65	0.06	0.006	Cell envelope	Other		113	5
BBO16		Hypothetical protein	1.49	0.16	0.011	Hypothetical proteins			157	69
BBO19		Conserved hypothetical protein	1.53	0.10	6E-05	Hypothetical proteins - Conserved	Conserved	+	139	75
BBO22		Conserved hypothetical protein	1.34	0.08	0.003	Hypothetical proteins - Conserved	Conserved	+	142	58
BBO23	blyA	Pore-forming hemolysin	1.64	0.19	0.005	Cellular processes	Toxin production and resistance	+	109	81
BBO33		Conserved hypothetical protein	0.69	0.05	0.004	Hypothetical proteins - Conserved	Conserved		49	16
BBO40	erpM	ErpM protein	0.67	0.07	0.008	Cell envelope	Other		163	8
BBP32		Plasmid partition protein, putative	0.69	0.04	0.001	Cellular processes	Cell division		32	14
BBQ27		Conserved hypothetical protein	1.65	0.17	0.003	Hypothetical proteins - Conserved	Conserved	+	140	83
BBQ53		Hypothetical protein	1.44	0.11	0.002	Hypothetical proteins			148	66
BBQ88		Hypothetical protein	1.43	0.12	0.005	Hypothetical proteins		+	76	65
BBR04		Hypothetical protein	1.43	0.13	0.006	Hypothetical proteins			148	64
BBS12		Hypothetical protein	0.70	0.08	0.021	Hypothetical proteins		+	153	24
BBS13		Hypothetical protein	0.76	0.05	0.009	Hypothetical proteins		+	154	42

*Standard Error.

†*t*-test *P*-value indicating significant difference from ratio of 1.0.

‡Probe for this ORF has ≥ 80% identity to another probe on the array.

§Rank order, from lowest to highest, of mutant/WT ratio.

¶Taqman ratio of *rpoS* mutant/WT.