

Table 8. Genes underexpressed in sigma factor mutants, but expressed or induced *in vivo*.

ORF	Name	Description	Main role	Subrole	Regulated by	Ref.
BB0038		Hypothetical protein	Hypothetical proteins		σ^{54}	1
BB0070		Conserved hypothetical protein	Hypothetical proteins - Conserved	Conserved	σ^S	1
BB0071		Hypothetical protein	Hypothetical proteins		σ^S	1
BB0376	metK	S-adenosylmethionine synthetase	Central intermediary metabolism	Other	σ^S	2
BB0404		Hypothetical protein	Hypothetical proteins		σ^{54}	3
BB0450	ntrA	RNA polymerase sigma-54 factor	Transcription	DNA-dependent RNA polymerase	σ^{54}	2
BB0565	cheW-2	Purine-binding chemotaxis protein	Cellular processes	Chemotaxis and motility	σ^S	4
BB0567	cheA-1	Chemotaxis histidine kinase	Cellular processes	Chemotaxis and motility	σ^S	4
BB0606		Conserved hypothetical protein	Hypothetical proteins - Conserved	Conserved	σ^S	1
BB0614		Hypothetical protein	Hypothetical proteins		σ^S	3
BB0680	mcp4	Methyl-accepting chemotaxis protein	Cellular processes	Chemotaxis and motility	σ^S	2
BB0681	mcp-5	Methyl-accepting chemotaxis protein	Cellular processes	Chemotaxis and motility	σ^{54}, σ^S	4
BB0686		Mevalonate pyrophosphate decarboxylase	Fatty acid and phospholipid metabolism	Biosynthesis	σ^{54}	3
BB0696		Conserved hypothetical protein	Hypothetical proteins - Conserved	Conserved	σ^S	1
BB0710	dnaG	DNA primase	DNA metabolism	DNA replication, recombination, and repair	σ^{54}	3
BB0758		Lipoprotein, putative	Cell envelope	Other	σ^S	1
BB0791	tdk	Thymidine kinase	Purines, pyrimidines, nucleosides, and nucleotides	Salvage of nucleosides and nucleotides	σ^S	2
BB0815		Conserved hypothetical protein	Hypothetical proteins - Conserved	Conserved	σ^S	1
BB0828	topA	DNA topoisomerase I	DNA metabolism	DNA replication, recombination, and repair	σ^S	1
BB0844		Hypothetical protein	Hypothetical proteins		σ^{54}, σ^S	2, 4, 1
BBA07	chpAI	ChpAI protein, putative	Regulatory functions	Other	σ^{54}	1
BBA24	dbpA	Decorin binding protein A	Cell envelope	Other	σ^S	1

BBA25	dbpB	Decorin binding protein B	Cell envelope	Other	σ^{54}, σ^S	3, 4, 1
BBA36		Lipoprotein	Cell envelope	Other	σ^{54}, σ^S	4, 1
BBA57		Hypothetical protein	Hypothetical proteins		σ^{54}	1
BBA60		Surface lipoprotein P27	Cell envelope	Other	σ^S	1
BBA64		Antigen, P35	Cell envelope	Biosynthesis and degradation of surface polysaccharides and lipopolysaccharides	σ^{54}, σ^S	2, 1
BBA65		Hypothetical protein	Hypothetical proteins		σ^{54}, σ^S	1
BBA66		Antigen, P35, putative	Cell envelope	Biosynthesis and degradation of surface polysaccharides and lipopolysaccharides	σ^{54}, σ^S	1
BBA72		Hypothetical protein	Hypothetical proteins		σ^{54}, σ^S	4
BBB06	celA	PTS system, cellobiose-specific IIB component	Transport and binding proteins	Carbohydrates, organic alcohols, and acids	σ^{54}	2
BBB09		Hypothetical protein	Hypothetical proteins		σ^{54}	1
BBB14		Hypothetical protein	Hypothetical proteins	Conserved	σ^{54}	1
BBB19	ospC	Outer surface protein C	Cell envelope	Other	σ^{54}, σ^S	2, 4, 1
BBF33	vlsE	Vmp-like sequence protein	Cell envelope	Other	σ^{54}	4, 1
BBG19		Hypothetical protein	Hypothetical proteins - Conserved	Conserved	σ^S	2
BBI42		Outer membrane protein, putative	Cell envelope	Other	σ^{54}	1
BBJ23		Hypothetical protein	Hypothetical proteins		σ^{54}	2, 4
BBL15		Hypothetical protein	Hypothetical proteins		σ^{54}	4
BBL19		Conserved hypothetical protein	Hypothetical proteins	Conserved	σ^{54}	3
BBL40	erpB2	ErpB2 protein	Cell envelope	Other	σ^S	4, 1
BBN19		Conserved hypothetical protein	Hypothetical proteins	Conserved	σ^{54}	3
BBN23	blyA	Pore-forming hemolysin	Cellular processes	Toxin production and resistance	σ^{54}	3
BBN28		Lipoprotein	Cell envelope	Other	σ^S	3
BBO04		Hypothetical protein	Hypothetical proteins		σ^{54}	3
BBO08		Conserved hypothetical protein	Hypothetical proteins	Conserved	σ^{54}	3
BBO33		Conserved hypothetical protein	Hypothetical proteins - Conserved	Conserved	σ^S	3
BBO36		Conserved hypothetical protein	Hypothetical proteins	Conserved	σ^{54}	3
BBO37		Conserved hypothetical protein	Hypothetical proteins	Conserved	σ^{54}	3
BBO39	erpL	ErpL protein	Cell envelope	Other	σ^{54}, σ^S	1
BBO43		Hypothetical protein	Hypothetical proteins		σ^{54}	3
BBP02		Hypothetical protein	Hypothetical proteins		σ^{54}	3

BBP09		Conserved hypothetical protein	Hypothetical proteins	Conserved	σ^{54}	3
BBP21		Conserved hypothetical protein	Hypothetical proteins	Conserved	σ^{54}	3
BBQ51		Hypothetical protein, authentic frameshift	Hypothetical proteins		σ^{54}	3
BBS41	ospG	Outer surface protein G	Cell envelope	Other	σ^{54}	1

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