TABLE S1. Listeria monocytogenes genes transcribed at higher levels<sup>a</sup> at 7°C compared to 37°C

Name <sup>b</sup>	Comp Proportions	Fold change <sup>d</sup> (7°C/37°C)		
Name	Gene Function <sup>c</sup>	Log phase	Stationary phase	
lmo0005 (recF)	RecF protein	2.14 ***	-	
lmo0013 (qoxA)	AA3-600 quinol oxidase subunit II	2.05 **	-	
lmo0019	unknown	-	5.10 ***	
lmo0042	similar to E. coli DedA protein	4.48 ***	-	
lmo0047	unknown	2.99 ***	2.82 *	
lmo0066	similar to toxin components	-	2.66 ***	
lmo0076	similar to E. coli Ada protein (O6-methylguanine-DNA methyltransferase)	-	2.68 ***	
lmo0114	similar to putative repressor C1 from lactococcal bacteriophage Tuc2009	-	2.02 ***	
lmo0117 (lmaB)	antigen B	7.36 ***	-	
lmo0118 (lmaA)	antigen A	5.08 ***	-	
lmo0119	unknown	5.98 ***	-	
lmo0120	unknown	6.12 ***	-	
lmo0121	similar to bacteriophage minor tail proteins	3.47 ***	_	
lmo0122	similar to bacteriophage minor tail proteins	5.17	2.03 ***	
		4 2 5 ***	2.03	
lmo0123	similar to protein gp18 from Bacteriophage A118	4.35 ***	-	
lmo0124	unknown	3.13 ***	-	
lmo0125	unknown	3.40 ***	-	
lmo0126	unknown	4.81 ***	-	
lmo0127	weakly similar to protein gp20 from Bacteriophage A118	3.50 ***	-	
lmo0129	similar to autolysin: N-acetylmuramoyl-L-alanine amidase	4.73 ***	-	
lmo0131	conserved hypothetical protein	-	2.89 ***	
lmo0133	similar to E. coli YjdI protein	-	2.60 ***	
lmo0134	similar to E. coli YjdJ protein	-	5.02 ***	
lmo0137	similar to oligopeptide ABC transporter, permease protein	-	2.11 ***	
lmo0193	unknown	4.22 ***	-	
lmo0194	ABC transporter, ATP-binding protein	4.47 ***	-	
lmo0195	similar to membrane protein (putative ABC transporter component)	4.20 ***	_	
lmo0200 (prfA)	listeriolysin positive regulatory protein	-	4.60 ***	
lmo0249 (rplA)	ribosomal protein L1	_	2.10 ***	
lmo0250 (rplJ)	ribosomal protein L10	_	2.34 ***	
lmo0251 (rplL)	ribosomal protein L12	_	2.54 ***	
lmo0256	conserved hypothetical protein	_	2.06 ***	
lmo0266	similar to transcriptional regulators		3.70 ***	
	similar to other proteins	<del>-</del>	4.63 ***	
lmo0267	•	-	3.59 ***	
lmo0268	similar to phosphoglycerate mutase	2.07 ***	3.39	
lmo0269	similar to transporter	2.07		
lmo0273	unknown	-	2.47 ***	
mo0283	similar to ABC transporter permease protein	2.81 ***	-	
lmo0284	similar to ABC transporter (ATP-binding protein)	2.24 ***	-	
lmo0285	putative lipoprotein	2.43 ***	-	
lmo0312	similar to unknown proteins	2.11 *	-	
lmo0321	similar to unknown proteins	2.49 ***	4.82 ***	
lmo0322	similar to unknown proteins	2.06 **	-	
lmo0352	highly similar to regulatory proteins (DeoR family)	2.12 ***	-	
lmo0361	similar to conserved hypothetical integral membrane protein	4.67 ***	-	
lmo0362	similar to conserved hypothetical protein	6.11 ***	_	
lmo0365	similar to conserved hypothetical protein	6.74 ***	_	
		7.20 ***	-	
lmo0366	conserved hypothetical protein, putative lipoprotein		-	
lmo0367	conserved hypothetical protein similar to <i>B. subtilis</i> YwbN protein	6.08 ***	-	
lmo0377	unknown	2.05 ***		
lmo0391	unknown	-	2.19	
lmo0433 (inlA)	Internalin A	-	2.05 ***	
lmo0484	unknown	4.37 ***	-	
lmo0485	unknown	2.48 ***		

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lmo0515	conserved hypothetical protein	2.76 ***	4.01 ***
lmo0518	similar to unknown protein similar to multidrug resistance protein	2.76 *** 4.47 ***	-
lmo0519 lmo0525	unknown	3.08 ***	-
lmo0525 lmo0540		3.08	3.48 ***
	similar to penicillin-binding protein	-	3.46
lmo0541	similar to ABC transporter (binding protein)	13.44 ***	***
lmo0553	unknown	-	2.28 ***
lmo0561	similar to phosphorybosil-AMP-cyclohydrolase (His12 protein)	-	2.94 ***
lmo0562	similar to phosphoribosyl-AMP cyclohydrolase (HisI1 protein)	-	4.71 ***
lmo0563	highly similar to cyclase HisF	-	3.47 ***
lmo0564	highly similar to phosphoribosylformimino-5-aminoimidazole carboxamide ribotide isomerase	-	3.47 ***
lmo0565	similar to amidotransferases	-	2.20 ***
lmo0570	similar histidinol phosphate phosphatase	-	2.14 ***
lmo0579	similar to unknown protein	-	2.32 ***
lmo0581	conserved hypothetical protein	2.27 ***	-
lmo0590	similar to a fusion of two types of conserved hypothetical	2.00 ***	_
	proteinconserved hypothetical		
lmo0592	unknown	2.15 **	-
lmo0593	similar to transport proteins (formate)	2.21 **	-
lmo0595	similar to O-acetylhomoserine sulfhydrylase	2.31 ***	-
lmo0596	similar to unknown proteins	2.26 **	-
lmo0597	similar to transcription regulator CRP/FNR family	5.18	-
lmo0599 lmo0600	conserved hypothetical protein unknown	2.86 *** 2.24 ***	-
lmo0604	similar to <i>B. subtilis</i> YvlA protein	5.22 ***	-
lmo0604 lmo0609	similar to <i>B. subtitis</i> TVIA protein similar to <i>E. coli</i> phage shock protein E	3.22	2.14 ***
11100009	similar to <i>E. con</i> plage snock protein E similar to internalin proteins, putative peptidoglycan bound protein	-	2.14
lmo0610	(LPXTG motif) unknown	-	4.41 *** 2.14 ***
lmo0623		-	2.92 ***
lmo0624	unknown similar to unknown proteins	2.16 ***	3.42 ***
lmo0625	unknown	2.10	7.19 ***
lmo0626	similar to unknown protein	-	2.85 ***
lmo0656	conserved hypothetical protein	2.30 ***	2.03
lmo0661	similar to unknown proteins	2.30	2.28 ***
lmo0665	unknown	2.02 ***	-
lmo0666	similar to unknown protein	2.98 ***	_
lmo0669	similar to oxidoreductase	2.70	2.04 ***
lmo0672	similar to unknown protein	2.64 ***	
lmo0680	similar to flagella-associated protein flhA	2.22 ***	_
lmo0681	similar to flagellar biosynthesis protein FlhF	2.20 **	_
lmo0683	similar to chemotactic methyltransferase CheR	2.37 **	_
lmo0684	unknown	2.24 **	_
lmo0685	similar to motility protein (flagellar motor rotation) MotA	2.51 **	-
lmo0686 (motB)	similar to motility protein (flagellar motor rotation) MotB	2.17 ***	-
lmo0687	unknown	2.69 ***	-
lmo0688	similar to unknown protein	2.43 ***	-
lmo0689	similar to CheA activity-modulating chemotaxis protein CheV	2.49 ***	-
lmo0734	similar to transcriptional regulator (LacI family)	2.34 ***	-
lmo0753	similar to transcription regulator Crp/Fnr family	-	3.05 ***
lmo0754	weakly similar to a bile acid 7-alpha dehydratase	-	4.37 ***
lmo0757	similar to hypothetical proteins	-	2.37 ***
lmo0759	unknown	_	2.97 ***
lmo0760	unknown	-	2.53 ***
lmo0778	unknown	2.92 ***	-
lmo0780	unknown	2.68 ***	-
	similar to mannose-specific phosphotransferase system (PTS)	-	4.26 ***
lmo0781	component IID	-	4.26 ***
lmo0782	similar to mannose-specific phosphotransferase system (PTS)	-	2.79 ***
	component IIC		

lmo0783	similar to mannose-specific phosphotransferase system (PTS) component IIB	-	5.29 ***
lmo0784	similar to mannose-specific phosphotransferase system (PTS) component IIA	-	4.63 ***
lmo0795	conserved hypothetical protein	2.22 ***	-
lmo0799	unknown	2.41 ***	-
lmo0800	similar to B. subtilis YqkB protein	-	5.35 ***
lmo0806	similar to transcription regulator	2.89 **	-
lmo0808	similar to spermidine/putrescine ABC transporter, permease protein	2.42 **	-
lmo0809	similar to spermidine/putrescine ABC transporter, permease protein	2.25 ***	-
lmo0810	similar to spermidine/putrescine-binding protein	2.17	-
lmo0811	similar to carbonic anhydrase	2.32 ***	-
lmo0818	similar to cation transporting ATPase	2.17 ***	-
lmo0823	similar to oxydoreductases	-	3.82 ***
lmo0830 (fbp)	highly similar to fructose-1,6-bisphosphatase	2.30 **	-
lmo0835	putative peptidoglycan bound protein (LPXTG motif)	2.37 *	-
lmo0836	similar to B. subtilis YrkR protein	2.56 ***	-
lmo0843	similar to B. subtilis protein YsdA	-	2.46 ***
lmo0844	conserved hypothetical protein	3.61 ***	-
lmo0850	hypothetical protein	2.57 ***	3.68 ***
lmo0851	unknown	-	2.10 ***
lmo0867	unknown	3.08 ***	-
lmo0869	unknown	2.00 **	-
lmo0873	Similar to transcriptional regulator (antiterminator)	-	2.03 ***
lmo0875	similar to PTS system, beta-glucoside enzyme IIB component	-	2.03 ***
lmo0894 (rsbW)	sigma-B activity negative regulator RsbW	-	2.07 ***
lmo0903	conserved hypothetical protein	4.50 ***	-
lmo0905	unknown	2.10 ***	3.08 ***
lmo0906	similar to glutathione Reductase	-	3.75 ***
lmo0907	similar to phosphoglycerate mutase	-	2.06 ***
lmo0910	unknown	-	2.22 ***
lmo0911	unknown	-	2.25 ***
lmo0912	similar to transporters (formate)	-	3.76 ***
lmo0913	similar to succinate semialdehyde dehydrogenase	-	2.70 ***
lmo0915	similar to phosphotransferase system enzyme IIC	-	2.06 ***
lmo0937	unknown	-	2.21 ***
lmo0939	unknown	-	2.47 ***
lmo0944	similar to B. subtilis YneR protein	2.04 ***	-
lmo0945	similar to C-terminal part of B. subtilis ComEC protein and to ComEA	-	2.51 ***
lmo0954	unknown	-	3.66 ***
lmo0955	unknown	-	2.13 ***
lmo0994	unknown	-	2.48 ***
lmo1000	similar to phytoene dehydrogenase	2.30 ***	-
lmo1001	similar to B. subtilis protein YkvS	4.41 ***	-
lmo1007	unknown	18.96 ***	-
lmo1015 (gbuB)	highly similar to glycine betaine ABC transporters (permease)	4.27 ***	-
lmo1016 (gbuC)	highly similar to glycine betaine ABC transporters (glycine betaine- binding protein)	3.85 ***	-
lmo1023	similar to a bacterial K(+)-uptake system	-	2.31 ***
lmo1056	unknown	2.02 ***	-
lmo1064	similar to membrane and transport proteins	2.35 ***	-
lmo1069	similar to B. subtilis YlaI protein	-	2.93 ***
lmo1091	similar to glysosyltransferases	-	2.39 ***
lmo1112	highly similar to TN916 ORF21	4.34 *	-
lmo1131	similar to ABC transporters, ATP-binding proteins	2.20 *	-
lmo1132	similar to ABC transporters, ATP-binding proteins	4.37 ***	-
lmo1137	unknown	5.23 **	-
lmo1145	similar to Salmonella enterica PduV protein	2.23 **	-
lmo1151	similar to Salmonella Typhimurium PduA protein	-	2.38 ***
lmo1172	similar to similar to two-component response regulator	2.22 ***	3.84 ***
lmo1173	similar to two-component sensor histidine kinase	2.13 **	3.75 ***

lmo1175 (eutB)	similar to ethanolamine ammonia-lyase, heavy chain	-	2.18 ***
lmo1176 (eutC)	similar to ethanolamine ammonia-lyase, light chain	-	2.39 ***
lmo1177	similar to putative carboxysome structural protein (eutL)	3.23 ***	-
lmo1179	similar to acetaldehyde dehydrogenase / alcohol dehydrogenase	-	4.19 ***
lmo1180	similar to putative carboxysome structural protein	-	3.90 ***
lmo1181	similar to cobalamin adenosyl transferase	5.08 **	2.10 **
lmo1182	similar to Salmonella enterica PduL protein	5.82 **	2.38 **
lmo1183	unknown	9.23 ***	2.10 **
lmo1184	similar to carbon dioxide concentrating mechanism protein	6.31 **	3.17 **
lmo1185	similar to Salmonella enterica PduT protein	5.68 ***	-
lmo1186	similar to ethanolamine utilization protein EutH - <i>E. coli</i>	2.70 **	2.02 **
lmo1231	similar to DNA polymerase beta, to B. subtilis YshC protein		2.38 ***
lmo1232	similar to MutS protein (MutS2)	_	2.17 ***
lmo1245	unknown	7.80 ***	-
lmo1246	similar to ATP-dependent RNA helicase (DEAD motif)	2.27 ***	-
lmo1249	unknown	2.65 *	-
lmo1252	similar to B. subtilis YxkD protein	3.15 ***	-
lmo1257	unknown	-	2.11 ***
lmo1340	similar to B. subtilis YqgU protein	-	7.34 ***
lmo1428 (opuCA)	similar to glycine betaine/carnitine/choline ABC transporter (ATP- binding protein)	2.16 ***	-
lmo1431	similar to ABC transporter (ATP-binding protein)	2.15	-
lmo1450	similar to ATP-dependent RNA helicase, DEAD-box family (deaD)	2.03 ***	-
lmo1479 (lepA)	highly similar to GTP-binding protein LepA	2.39 ***	-
lmo1485	similar to unknown proteins	2.05 ***	_
lmo1486	unknown	2.02 **	_
lmo1498	similar to O-methyltransferase	-	2.28 *
lmo1499	similar to unknown proteins	_	3.89 **
	similar to putative tRNA (5-methylaminomethyl-2-thiouridylate)-		
lmo1512	methyltransferase	-	2.28 ***
lmo1513	similar to iron-sulfur cofactor synthesis protein	_	2.54 ***
lmo1518	unknown	_	2.37 ***
lmo1519 (aspS)	aspartyl-tRNA synthetase	_	3.78 ***
lmo1526	similar to unknown proteins	2.62 ***	-
lmo1537	conserved GTP binding protein	2.01 ***	-
lmo1558	similar to hypothetical GTP binding protein	2.02 **	-
lmo1567 (citZ)	highly similar to citrate synthase subunit II	2.15 ***	_
lmo1568	similar to unknown proteins	2.08 ***	
lmo1583	similar to thiol peroxidases	2.08	-
lmo1617	similar to unto peroxidases  similar to multidrug-efflux transporter	2.14	-
		2.32 **	_
lmo1618	similar to transcription regulator MarR family	2.32	
lmo1649	unknown	-	2.44 ***
lmo1650	similar to hypothetical proteins	-	2.50 ***
lmo1690	similar to hypothetical proteins	-	2.19 ***
lmo1692	unknown	-	2.66 ***
lmo1713	similar to cell-shape determining proteins	2.31 ***	-
lmo1722	similar to ATP-dependent RNA helicases	2.24 ***	2.46 ***
lmo1762	unknown	2.71 ***	-
lmo1791	unknown	-	2.79 ***
lmo1826	unknown	2.07 ***	-
lmo1828	similar to conserved hypothetical protein	2.06 ***	-
lmo1829	similar to fibronectin binding proteins	2.23 ***	-
lmo1832 (pyrF)	highly similar to orotidine 5-phosphate decarboxylases	-	2.55 **
lmo1835 (pyrAB)	highly similar to carbamoyl-phosphate synthetase (catalytic subunit)	2.17 **	-
lmo1836 (pyrAa)	highly similar to carbamoyl-phosphate synthetase (glutaminase subunit)	2.39 **	-
lmo1838 (pyrB)	highly similar to aspartate carbamoyltransferase	2.36 **	-
lmo1840 (pyrR)	highly similar to pyrimidine operon regulatory protein	2.28 **	_
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lmo1843	similar to conserved hypothetical proteins	2.66 ***	-
lmo1844 (lsp)	highly similar to signal peptidase II	2.30 ***	-
lmo1845	similar to conserved hypothetical proteins	-	4.95 ***
lmo1864	similar to hemolysinIII proteins, putative integral membrane protein	2.76 ***	3.29 ***
lmo1865	similar to conserved hypothetical proteins	2.41 ***	-
lmo1868	similar to conserved hypothetical proteins	-	2.74 ***
lmo1870	similar to alkaline phosphatase	2.80 ***	-
lmo1887	similar to conserved hypothetical proteins	2.09 ***	-
lmo1891 (recU)	similar to DNA repair and homologous recombination protein	2.31 ***	-
lmo1936 (gpsA)	similar to NAD(P)H-dependent glycerol-3-phosphate dehydrogenase	2.23 **	2.64 ***
lmo1937	similar to unknown protein	2.24 **	-
lmo1951	similar to unknown proteins	-	2.22 ***
lmo1957 (fhuG)	similar to ferrichrome ABC transporter (permease)	2.29 ***	-
lmo1958 (fhuB)	similar to ferrichrome ABC transporter (permease)	3.11 ***	-
lmo1960 (fhuC)	similar to ferrichrome ABC transporter (ATP-binding protein)	3.84 ***	-
lmo1961	similar to oxidoreductases	2.25 ***	-
lmo1962	similar to transcription regulators (TetR family)	-	2.49 ***
lmo1963	similar to unknown proteins	-	2.78 ***
lmo1964	similar to ABC transporter, ATP-binding protein	-	2.68 ***
lmo1972	similar to pentitol PTS system enzyme II B component	-	2.50 ***
lmo1978	similar to glucose-6-phosphate 1-dehydrogenase	-	4.19 ***
lmo1984 ( <i>ilvB</i> )	similar to acetolactate synthase (acetohydroxy-acid synthase) (large subunit)	2.02 **	-
lmo1985 (ilvN)	similar to acetolactate synthase (acetohydroxy-acid synthase) (small subunit)	3.13 ***	-
lmo1986 (ilvC)	similar to ketol-acid reductoisomerase (acetohydroxy-acid isomeroreductase)	2.63 **	-
lmo1988 (leuB)	similar to 3-isopropylmalate dehydrogenase	2.69 *	-
lmo1990 (leuD)	similar to 3-isopropylmalate dehydratase (small subunit)	2.31 *	-
lmo1991 (ilvA)	similar to threonine dehydratase	2.31 **	-
lmo1992	similar to alpha-acetolactate decarboxylase	4.22 ***	5.73 ***
lmo1997	similar to PTS mannose-specific enzyme IIA component	-	3.42 ***
lmo1998	similar to opine catabolism protein	-	2.20 ***
lmo2006 (alsS)	similar to alpha-acetolactate synthase protein, AlsS	3.20 ***	-
lmo2057 (ctaB)	highly similar to heme A farnesyltransferase	2.17 ***	-
lmo2058 (ctaA)	similar to heme O oxygenase	2.23 ***	-
lmo2065	unknown	2.31 ***	-
lmo2071	unknown	2.22 ***	-
lmo2087	similar to unknown proteins	2.26 ***	-
lmo2114	similar to ABC transporter (ATP-binding protein)	2.06 ***	-
lmo2181	similar to unknown protein	2.73 ** 4.63 ***	-
lmo2185	unknown	4.63 8.36 ***	-
lmo2186 lmo2191	unknown similar to unknown proteins	2.46 ***	-
lmo2197	unknown	2.46	-
lmo2197	similar to unknown protein	5.95 ***	-
lmo2200	similar to transcription regulator	7.03 ***	-
lmo2210	unknown	5.07 ***	-
lmo2220	similar to S. aureus Cbf1 protein	-	2.08 ***
lmo2232	similar to unknown proteins	-	2.69 ***
lmo2256	similar to unknown proteins	-	5.75 ***
lmo2258	unknown	2.05 **	-
lmo2263	similar to unkown proteins	-	2.03 ***
lmo2269	unknown	-	8.56 ***
lmo2289	Protein gp14 [Bacteriophage A118]	-	2.19 ***
lmo2291	major tail shaft protein [Bacteriophage A118]	2.62 **	-
lmo2292	Portein gp11 [Bacteriophage A118]	2.10 *	-
	similar to putative terminase small subunit from Bacteriophage A118	-	2.21 ***
lmo2301			
lmo2301 lmo2303	Protein gp66 [Bacteriophage A118]	2.33 **	

Immo2334   similar to anti-reprosery (Bacteriophage A118)   6.68	lmo2304	Pactorionhago A119 and 5 protein	2.34 **	
Immo2324		Bacteriophage A118 gp65 protein		-
Imo2335 (frus)				-
Imm02336 (muB)		highly similar to phosphotransferase system (PTS) fructose-specific		-
Inno2337	11102555 (/1221)			
Inno2348				-
Imno2345   conserved hypothetical protein   2.36 "   -			20.71 ***	-
minc2347   minc2348   similar to amino acid ABC transporter (permease)   2.32 "		* *	-	3.20
Imm02348   similar to amino acid ABC-transporter (permease)		**		-
Imac2349		* * *		-
Immo2350   similar to B. subrilis Yuml protein   2.09 "   -	1			-
Inno2352   similar to LyaR family transcription regulator				
Imno2357   similar to unknown protein   -   2.14 "     1.25         1.25		<u>'</u>		
Inno2358				
Imo2360		*	-	
Imm02372			2.47.***	2.62
Imo2372		·		-
Imp.		<b>-</b>		-
Imo2378				-
Imo2378	lmo2375	_	3.70	-
Imo2399	lmo2378	and in pH homeostasis	2.40 ***	-
Imo2409	lmo2379	*	2.17 ***	-
Imo2432	lmo2380	1	2.14 ***	-
Imo2462	lmo2409	unknown	2.05 ***	-
Imo2462   mo2463   similar to dipeptidases	lmo2432	unknown	-	2.25 ***
Imo2463   similar to transport protein   2.18 "*     Imo2468 (clpP)   ATP-dependent Clp protease proteolytic subunit   2.87 "* -     Imo2480   similar to acetyltransferase   2.00 "* -     Imo2486   unknown   3.06 *   -     Imo2487   similar to B. subtilis YvIB protein   3.03 "*   4.71 "*     Imo2494   similar to negative regulator of phosphate regulon   3.05 "* -     Imo2495   similar to phosphate ABC transporter (ATP-binding protein)   4.10 "* -     Imo2498   similar to phosphate ABC transporter (permease protein)   2.63 " -     Imo2498   similar to hypothetical cell wall binding protein from B. subtilis   2.31 "*     Imo2522   similar to hypothetical cell wall binding protein from B. subtilis   -   2.31 "*     Imo2537   conserved hypothetical protein   2.54 "* -     Imo2567   unknown   3.02 " -     Imo2568   unknown   3.02 " -     Imo2569   similar to drug-export proteins   2.23 " -     Imo2602   conserved hypothetical protein   2.87 "*     Imo2603   unknown   2.23 " -     Imo2604   (rpnD)   ribosomal protein L15   ribosomal protein L30   -   2.92 "*     Imo2615 (rpsE)   ribosomal protein L18   ribosomal protein L18   ribosomal protein L5   ribosomal protein S5   -   3.09 "*     Imo2619 (rpsN)   ribosomal protein L18   -   3.10 "*     Imo2620 (rplE)   ribosomal protein L5   ribosomal protein L5   -   3.14 "*     Imo2621 (rplX)   ribosomal protein L5   -   3.14 "*     Imo2622 (rplN)   ribosomal protein L5   -   3.14 "*     Imo2623 (rspQ)   ribosomal protein L14   -   2.81 "*     Imo2624 (rpmC)   ribosomal protein L14   -   2.81 "*     Imo2625 (rplP)   ribosomal protein L16   -   2.66 "*     Imo2626 (rpsC)   ribosomal	lmo2454	unknown	-	3.56 ***
Imo2486   clpP   ATP-dependent Clp protease proteolytic subunit   2.87 "" -	lmo2462	similar to dipeptidases	-	2.68 ***
Imo2480   similar to acetyltransferase   2.00 ""   -	lmo2463	similar to transport protein	-	2.18 ***
Imo2486	lmo2468 (clpP)	ATP-dependent Clp protease proteolytic subunit	2.87 ***	-
Imo2487   similar to B. subtilis YvIB protein   3.03 " 4.71 "   Imo2494   similar to negative regulator of phosphate regulon   3.05 " -     Imo2495   similar to phosphate ABC transporter (ATP-binding protein)   4.10 " -	lmo2480		2.00 ***	-
Imo2494   similar to negative regulator of phosphate regulon   3.05 ***   - 1   1   1   1   1   1   1   1   1	lmo2486	unknown	3.06 *	-
Imo2495   similar to phosphate ABC transporter (ATP-binding protein)   4.10 *** - 1	lmo2487	similar to B. subtilis YvlB protein	3.03 ***	4.71 ***
Imo2498   similar to phosphate ABC transporter (permease protein)   2.63 *   -     Imo2522   similar to hypothetical cell wall binding protein from B. subtilis   -     2.31 ***     Imo2535 (atpB)   highly similar to H+-transporting ATP synthase chain a   -     2.11 ***     Imo2567   unknown     4.57 ***   -     Imo2568   unknown     3.02 **   -     Imo2569   similar to dipeptide ABC transporter (dipeptide-binding protein)   2.60 ***   -     Imo2588   similar to drug-export proteins   2.23 **   -     Imo2602   to conserved hypothetical protein     -   2.87 ***     Imo2613 (rplO)   tribosomal protein L15   -   2.41 ***     Imo2615 (rpsE)   ribosomal protein L30   -   2.92 ***     Imo2616 (rplR)   ribosomal protein L6   -   2.88 ***     Imo2617 (rplF)   ribosomal protein S8   -   3.09 ***     Imo2619 (rpsN)   ribosomal protein S1   -   3.10 ***     Imo2620 (rplE)   ribosomal protein L5   -   3.14 ***     Imo2620 (rplE)   ribosomal protein L14   -   2.81 ***     Imo2623 (rpsQ)   ribosomal protein L19   -   2.27 ***     Imo2625 (rplP)   ribosomal protein L10   -   2.60 ***     Imo2626 (rpsC)   ribosomal protein L16   -   2.60 ***	lmo2494	similar to negative regulator of phosphate regulon	3.05 ***	-
$\begin{array}{c} lmo2522 \\ lmo2535 \ (atpB) \\ lmo2557 \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ $	lmo2495	similar to phosphate ABC transporter (ATP-binding protein)	4.10 ***	-
$\begin{array}{c} \text{Imo2535} \ (appB) & \text{highly similar to H+-transporting ATP synthase chain a} \\ \text{Imo2567} & \text{conserved hypothetical protein} \\ \hline \\ \text{Imo2568} & \text{unknown} \\ \hline \\ \text{Imo2569} & \text{similar to dipeptide ABC transporter (dipeptide-binding protein)} \\ \hline \\ \text{Imo2569} & \text{similar to dipeptide ABC transporter (dipeptide-binding protein)} \\ \hline \\ \text{Imo2602} & \text{conserved hypothetical protein} \\ \hline \\ \text{Imo2603} & \text{unknown} \\ \hline \\ \text{Imo2613} \ (rplO) \\ \hline \\ \text{Imo2614} \ (rpmD) & \text{ribosomal protein L15} \\ \hline \\ \text{Imo2615} \ (rpsE) & \text{ribosomal protein L18} \\ \hline \\ \text{Imo2616} \ (rplF) & \text{ribosomal protein L18} \\ \hline \\ \text{Imo2617} \ (rplF) & \text{ribosomal protein L18} \\ \hline \\ \text{Imo2619} \ (rpsN) & \text{ribosomal protein S8} \\ \hline \\ \text{Imo2619} \ (rpsN) & \text{ribosomal protein L24} \\ \hline \\ \text{Imo2620} \ (rplE) & \text{ribosomal protein L14} \\ \hline \\ \text{Imo2622} \ (rplN) & \text{ribosomal protein L24} \\ \hline \\ \text{Imo2622} \ (rplN) & \text{ribosomal protein L14} \\ \hline \\ \text{Imo2622} \ (rplN) & \text{ribosomal protein L14} \\ \hline \\ \text{Imo2622} \ (rplN) & \text{ribosomal protein L14} \\ \hline \\ \text{Imo2622} \ (rplN) & \text{ribosomal protein L14} \\ \hline \\ \text{Imo2622} \ (rplN) & \text{ribosomal protein L14} \\ \hline \\ \text{Imo2622} \ (rplN) & \text{ribosomal protein L14} \\ \hline \\ \text{Imo2622} \ (rplN) & \text{ribosomal protein L14} \\ \hline \\ \text{Imo2622} \ (rplN) & \text{ribosomal protein L14} \\ \hline \\ \text{Imo2622} \ (rplN) & \text{ribosomal protein L14} \\ \hline \\ \text{Imo2622} \ (rplN) & \text{ribosomal protein L14} \\ \hline \\ \text{Imo2622} \ (rplN) & \text{ribosomal protein L19} \\ \hline \\ \text{Imo2625} \ (rplP) & \text{ribosomal protein L16} \\ \hline \\ \text{Imo2626} \ (rpsC) & \text{ribosomal protein L16} \\ \hline \\ \text{ribosomal protein L16} \\ \hline \\ \text{ribosomal protein L16} \\ \hline \\ \text{ribosomal protein L29} \\ \hline \\ \text{ribosomal protein L20} \\ \hline \\ \text{ribosomal protein L16} \\ \hline \\ \text{ribosomal protein L20} \\ \hline \\ \hline \\ \text{ribosomal protein L20} \\ \hline \\ \text{ribosomal protein L20} \\ \hline \\ ribosoma$	lmo2498	similar to phosphate ABC transporter (permease protein)	2.63 *	-
Imo2557   conserved hypothetical protein   2.54 "   -	lmo2522	similar to hypothetical cell wall binding protein from B. subtilis	-	2.31 ***
Imo2567	lmo2535 (atpB)	highly similar to H+-transporting ATP synthase chain a	-	2.11 ***
Imo2568	lmo2557	conserved hypothetical protein	2.54 ***	-
Imo2569   similar to dipeptide ABC transporter (dipeptide-binding protein)   2.60 *** -   -       Imo2602   conserved hypothetical protein   -   2.87 ***   -     Imo2603   unknown   -   2.28 ***   -     Imo2613 (rplO)   ribosomal protein L15   -   2.41 ***       Imo2614 (rpmD)   ribosomal protein L30   -   2.92 ***       Imo2615 (rpsE)   ribosomal protein L30   -   2.92 ***       Imo2616 (rplR)   ribosomal protein L18   -   3.09 ***       Imo2617 (rplF)   ribosomal protein L6   -   2.88 ***       Imo2618 (rpsH)   ribosomal protein S8   -   3.09 ***       Imo2619 (rpsN)   ribosomal protein L5   -   3.14 ***       Imo2620 (rplE)   ribosomal protein L24   -   2.73 ***       Imo2622 (rplN)   ribosomal protein L14   -   2.81 ***       Imo2623 (rpsQ)   ribosomal protein L19   -   2.42 ***       Imo2625 (rplP)   ribosomal protein L16   -   2.06 ***       Imo2626 (rpsC)   ribosomal protein L3   -   2.03 ***       Imo2	lmo2567	unknown	4.57 ***	-
Imo2602	lmo2568	unknown	3.02 **	-
Imo2602	lmo2569	similar to dipeptide ABC transporter (dipeptide-binding protein)	2.60 ***	-
Imo2603         unknown         -         2.28 ***           Imo2613 (rplO)         ribosomal protein L15         -         2.41 ***           Imo2614 (rpmD)         ribosomal protein L30         -         2.92 ***           Imo2615 (rpsE)         ribosomal protein S5         -         3.08 ***           Imo2616 (rplR)         ribosomal protein L18         -         3.09 ***           Imo2617 (rplF)         ribosomal protein S8         -         3.09 ***           Imo2618 (rpsH)         ribosomal protein S14         -         3.10 ***           Imo2619 (rpsN)         ribosomal protein L5         -         3.14 ***           Imo2620 (rplE)         ribosomal protein L24         -         2.73 ***           Imo2621 (rplX)         ribosomal protein S17         -         2.27 ***           Imo2623 (rpsQ)         ribosomal protein S17         -         2.27 ***           Imo2624 (rpmC)         ribosomal protein L29         -         2.42 ***           Imo2625 (rplP)         ribosomal protein L16         -         2.06 ***           Imo2626 (rpsC)         ribosomal protein S3         -         2.03 ***	lmo2588	similar to drug-export proteins	2.23 **	-
Imo2613 (rplO)   ribosomal protein L15   - 2.41 ""   Imo2614 (rpmD)   ribosomal protein L30   - 2.92 ""   Imo2615 (rpsE)   ribosomal protein S5   - 3.08 ""   Imo2616 (rplR)   ribosomal protein L18   - 3.09 ""   Imo2617 (rplF)   ribosomal protein L6   - 2.88 ""   Imo2618 (rpsH)   ribosomal protein S8   - 3.09 ""   Imo2619 (rpsN)   ribosomal protein S14   - 3.10 ""   Imo2620 (rplE)   ribosomal protein L5   - 3.14 ""   Imo2621 (rplX)   ribosomal protein L24   - 2.73 ""   Imo2622 (rplN)   ribosomal protein L14   - 2.81 ""   Imo2623 (rpsQ)   ribosomal protein S17   - 2.27 ""   Imo2624 (rpmC)   ribosomal protein L29   - 2.42 ""   Imo2625 (rplP)   ribosomal protein L16   - 2.06 ""   Imo2626 (rpsC)   ribosomal protein S3   - 2.03 ""   Imo2626 (rpsC)   I	lmo2602	conserved hypothetical protein	-	2.87 ***
Imo2614 (rpmD)   ribosomal protein L30   - 2.92 ""     Imo2615 (rpsE)   ribosomal protein S5   - 3.08 ""     Imo2616 (rplR)   ribosomal protein L18   - 3.09 ""     Imo2617 (rplF)   ribosomal protein L6   - 2.88 ""     Imo2618 (rpsH)   ribosomal protein S8   - 3.09 ""     Imo2619 (rpsN)   ribosomal protein S14   - 3.10 ""     Imo2620 (rplE)   ribosomal protein L5   - 3.14 ""     Imo2621 (rplX)   ribosomal protein L24   - 2.73 ""     Imo2622 (rplN)   ribosomal protein L14   - 2.81 ""     Imo2623 (rpsQ)   ribosomal protein S17   - 2.27 ""     Imo2624 (rpmC)   ribosomal protein L29   - 2.42 ""     Imo2625 (rplP)   ribosomal protein L16   - 2.06 ""     Imo2626 (rpsC)   ribosomal protein S3   - 2.03 ""	lmo2603	unknown	-	2.28 ***
Imo2615 (rpsE)   ribosomal protein S5   - 3.08 ***   Imo2616 (rplR)   ribosomal protein L18   - 3.09 ***   Imo2617 (rplF)   ribosomal protein L6   - 2.88 ***   Imo2618 (rpsH)   ribosomal protein S8   - 3.09 ***   Imo2619 (rpsN)   ribosomal protein S14   - 3.10 ***   Imo2620 (rplE)   ribosomal protein L5   - 3.14 ***   Imo2621 (rplX)   ribosomal protein L24   - 2.73 ***   Imo2622 (rplN)   ribosomal protein L14   - 2.81 ***   Imo2623 (rpsQ)   ribosomal protein S17   - 2.27 ***   Imo2624 (rpmC)   ribosomal protein L29   - 2.42 ***   Imo2625 (rplP)   ribosomal protein L16   - 2.06 ***   Imo2626 (rpsC)   ribosomal protein S3   - 2.03 ***	lmo2613 (rplO)	ribosomal protein L15	-	2.41 ***
Imo2616 (rplR)   ribosomal protein L18   - 3.09 ***   Imo2617 (rplF)   ribosomal protein L6   - 2.88 ***   Imo2618 (rpsH)   ribosomal protein S8   - 3.09 ***   Imo2619 (rpsN)   ribosomal protein S14   - 3.10 ***   Imo2620 (rplE)   ribosomal protein L5   - 3.14 ***   Imo2621 (rplX)   ribosomal protein L24   - 2.73 ***   Imo2622 (rplN)   ribosomal protein L14   - 2.81 ***   Imo2623 (rpsQ)   ribosomal protein S17   - 2.27 ***   Imo2624 (rpmC)   ribosomal protein L29   - 2.42 ***   Imo2625 (rplP)   ribosomal protein L16   - 2.06 ***   Imo2626 (rpsC)   ribosomal protein S3   - 2.03 ***	lmo2614 (rpmD)	ribosomal protein L30	-	2.92 ***
Imo2617 (rplF)   ribosomal protein L6   -   2.88 ***     Imo2618 (rpsH)   ribosomal protein S8   -   3.09 ***     Imo2619 (rpsN)   ribosomal protein S14   -   3.10 ***     Imo2620 (rplE)   ribosomal protein L5   -   3.14 ***     Imo2621 (rplX)   ribosomal protein L24   -   2.73 ***     Imo2622 (rplN)   ribosomal protein L14   -   2.81 ***     Imo2623 (rpsQ)   ribosomal protein S17   -   2.27 ***     Imo2624 (rpmC)   ribosomal protein L29   -   2.42 ***     Imo2625 (rplP)   ribosomal protein L16   -   2.06 ***     Imo2626 (rpsC)   ribosomal protein S3   -   2.03 ***	lmo2615 (rpsE)	ribosomal protein S5	-	3.08 ***
Imo2618 (rpsH)   ribosomal protein S8   - 3.09 ***   Imo2619 (rpsN)   ribosomal protein S14   - 3.10 ***   Imo2620 (rplE)   ribosomal protein L5   - 3.14 ***   Imo2621 (rplX)   ribosomal protein L24   - 2.73 ***   Imo2622 (rplN)   ribosomal protein L14   - 2.81 ***   Imo2623 (rpsQ)   ribosomal protein S17   - 2.27 ***   Imo2624 (rpmC)   ribosomal protein L29   - 2.42 ***   Imo2625 (rplP)   ribosomal protein L16   - 2.06 ***   Imo2626 (rpsC)   ribosomal protein S3   - 2.03 ***	lmo2616 (rplR)	ribosomal protein L18	-	3.09 ***
Imo2619 (rpsN)   ribosomal protein S14   - 3.10 ***   Imo2620 (rplE)   ribosomal protein L5   - 3.14 ***   Imo2621 (rplX)   ribosomal protein L24   - 2.73 ***   Imo2622 (rplN)   ribosomal protein L14   - 2.81 ***   Imo2623 (rpsQ)   ribosomal protein S17   - 2.27 ***   Imo2624 (rpmC)   ribosomal protein L29   - 2.42 ***   Imo2625 (rplP)   ribosomal protein L16   - 2.06 ***   Imo2626 (rpsC)   ribosomal protein S3   - 2.03 ***	lmo2617 (rplF)	ribosomal protein L6	-	2.88 ***
Imo2620 (rplE)   ribosomal protein L5   - 3.14 ***   Imo2621 (rplX)   ribosomal protein L24   - 2.73 ***   Imo2622 (rplN)   ribosomal protein L14   - 2.81 ***   Imo2623 (rpsQ)   ribosomal protein S17   - 2.27 ***   Imo2624 (rpmC)   ribosomal protein L29   - 2.42 ***   Imo2625 (rplP)   ribosomal protein L16   - 2.06 ***   Imo2626 (rpsC)   ribosomal protein S3   - 2.03 ***	lmo2618 (rpsH)	ribosomal protein S8	-	3.09 ***
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	lmo2619 (rpsN)	ribosomal protein S14	-	
$\begin{array}{llllllllllllllllllllllllllllllllllll$	lmo2620 (rplE)	ribosomal protein L5	-	3.14 ***
Imo2623 (rpsQ)   ribosomal protein S17   - 2.27 ***   Imo2624 (rpmC)   ribosomal protein L29   - 2.42 ***   Imo2625 (rplP)   ribosomal protein L16   - 2.06 ***   Imo2626 (rpsC)   ribosomal protein S3   - 2.03 ***	lmo2621 (rplX)	ribosomal protein L24	-	
Imo2624 (rpmC)   ribosomal protein L29   - 2.42 ***   Imo2625 (rplP)   ribosomal protein L16   - 2.06 ***   Imo2626 (rpsC)   ribosomal protein S3   - 2.03 ***	lmo2622 (rplN)	ribosomal protein L14	-	2.81 ***
Imo2625 (rplP)   ribosomal protein L16   - 2.06 ***	lmo2623 (rpsQ)	ribosomal protein S17	-	2.27 ***
lmo2626 ( <i>rpsC</i> ) ribosomal protein S3 - 2.03 ***	lmo2624 (rpmC)	ribosomal protein L29	-	
	lmo2625 (rplP)	ribosomal protein L16	-	
lmo2628 ( <i>rpIV</i> )   ribosomal protein S19	lmo2626 (rpsC)	ribosomal protein S3	-	
	lmo2628 (rplV)	ribosomal protein S19	-	2.01 ***

similar to Phosphotriesterase	-	2.34 ***
similar to hypothetical PTS enzyme IIC component	-	2.33 ***
similar to hypothetical PTS enzyme IIB component	-	2.52 ***
unknown	-	4.25 ***
conserved hypothetical protein	-	2.72 ***
similar to ribose 5-phosphate epimerase	-	4.30 ***
similar to cellobiose phosphotransferase enzyme IIB component	2.22 **	-
highly similar to Mg2+ transport ATPase	2.15 ***	-
similar to lysine decarboxylase	-	2.35 ***
similar to ABC transporter (ATP-binding protein)	-	2.10 ***
similar to beta-glucosidase	2.18 **	-
similar to hypothetical transcriptional regulator	3.01 ***	-
similar to lichenan operon transcription antiterminator licR	-	2.45 ***
bvrC	-	5.27 ***
beta-glucoside-specific phosphotransferase enzyme II ABC component	-	2.74 **
similar to GTPase	2.28 ***	-
similar to thioredoxin	-	5.56 ***
unknown	4.15 ***	-
	similar to hypothetical PTS enzyme IIC component similar to hypothetical PTS enzyme IIB component unknown conserved hypothetical protein similar to ribose 5-phosphate epimerase similar to cellobiose phosphotransferase enzyme IIB component highly similar to Mg2+ transport ATPase similar to lysine decarboxylase similar to ABC transporter (ATP-binding protein) similar to beta-glucosidase similar to hypothetical transcriptional regulator similar to lichenan operon transcription antiterminator licR bvrC beta-glucoside-specific phosphotransferase enzyme II ABC component similar to GTPase similar to thioredoxin	similar to hypothetical PTS enzyme IIC component similar to hypothetical PTS enzyme IIB component unknown  conserved hypothetical protein similar to ribose 5-phosphate epimerase similar to cellobiose phosphotransferase enzyme IIB component highly similar to Mg2+ transport ATPase similar to lysine decarboxylase similar to ABC transporter (ATP-binding protein) - similar to beta-glucosidase similar to hypothetical transcriptional regulator similar to lichenan operon transcription antiterminator licR bvrC beta-glucoside-specific phosphotransferase enzyme II ABC component similar to GTPase similar to GTPase similar to thioredoxin

 $^a$ Genes were considered to be up-regulated at 7°C if the fold change compared to 37°C was  $\geq 2.0$  with an adjusted p-value  $\leq 0.05$ 

<sup>&</sup>lt;sup>b</sup>Gene names are from ListiList (http://genolist.pasteur.fr/ListiList). Predicted operons are boxed. Operon predictions are from ListiList and Toledo-Arana et al., Nature 459:950-956, 2009.

<sup>&</sup>lt;sup>c</sup>gene functions were based on annotation provided by ListiList