

Supplementary Table 1. List of Protein Cellular Roles Based on COG Database Classifications

(an * by the functional description indicates proteins that were suggested as possible moonlighting proteins or mentioned in the context of cytoplasmic proteins moonlighting on the cell surface by the authors of the proteomics studies)

Group J: Translation, ribosomal structure and biogenesis²⁴

Author, Year	Species	Gram type	UniProt #	NCBI #	Gene Locus	Function description
Boonjakuakul, 2007	<i>B. quintana</i>	Negative	Q6G0F8		rplY	50S ribosomal protein L25
Boonjakuakul, 2007	<i>B. quintana</i>	Negative	Q6G0X5		rpsA	30S ribosomal protein S1
Mao, 2011	<i>C. acetobutylicum</i>	Positive		gi 15896369		30S ribosomal protein S8
Mao, 2011	<i>C. acetobutylicum</i>	Positive		gi 15895083		30S ribosomal protein S15
Mao, 2011	<i>C. acetobutylicum</i>	Positive		gi 15895036		50S ribosomal protein L19
Mao, 2011	<i>C. acetobutylicum</i>	Positive		gi 15896394		50S ribosomal protein L10
Mao, 2011	<i>C. acetobutylicum</i>	Positive		gi 15896348		30S ribosomal protein S9
Mao, 2011	<i>C. acetobutylicum</i>	Positive		gi 15896384		30S ribosomal protein S10
Mao, 2011	<i>C. acetobutylicum</i>	Positive		gi 15896354		50S ribosomal protein L17
Mao, 2011	<i>C. acetobutylicum</i>	Positive		gi 15894556		30S ribosomal protein S20 subunits
Mao, 2011	<i>C. acetobutylicum</i>	Positive		gi 15896349		50S ribosomal protein L13
Mao, 2011	<i>C. acetobutylicum</i>	Positive		gi 15896366		30S ribosomal protein S5
Mao, 2011	<i>C. acetobutylicum</i>	Positive		gi 15896374		30S ribosomal protein S17
Mao, 2011	<i>C. acetobutylicum</i>	Positive		gi 15896372		50S ribosomal protein L24
Mao, 2011	<i>C. acetobutylicum</i>	Positive		gi 15896379		30S ribosomal protein S19
Mao, 2011	<i>C. acetobutylicum</i>	Positive		gi 15895626		50S ribosomal protein L20
Mao, 2011	<i>C. acetobutylicum</i>	Positive		gi 15894570		30S ribosomal protein S21
Mao, 2011	<i>C. acetobutylicum</i>	Positive		gi 15896377		30S ribosomal protein S3
Mao, 2011	<i>C. acetobutylicum</i>	Positive		gi 15896365		50S ribosomal protein L30
Mao, 2011	<i>C. acetobutylicum</i>	Positive		gi 15896381	rplW	50S ribosomal protein L23
Mao, 2011	<i>C. acetobutylicum</i>	Positive		gi 15896393		50S ribosomal protein L7/L12
Mao, 2011	<i>C. acetobutylicum</i>	Positive		gi 15896383		50S ribosomal protein L3
Mao, 2011	<i>C. acetobutylicum</i>	Positive		gi 15896378		50S ribosomal protein L22
Mao, 2011	<i>C. acetobutylicum</i>	Positive		gi 15896388		30S ribosomal protein S7
Mao, 2011	<i>C. acetobutylicum</i>	Positive		gi 15896356		30S ribosomal protein S4
Mao, 2011	<i>C. acetobutylicum</i>	Positive		gi 15896380		50S ribosomal protein L2
Mao, 2011	<i>C. acetobutylicum</i>	Positive		gi 15896375		50S ribosomal protein L29
Mao, 2011	<i>C. acetobutylicum</i>	Positive		gi 15895063	rpsB	30S ribosomal protein S2

Mao, 2011	<i>C. acetobutylicum</i>	Positive		gi 15896395	rplA	50s ribosomal protein L1
Manfredi, 2011	<i>C. canimorsus</i>	Negative	F9YRQ8	340621193	Ccan_04150	50S ribosomal protein L21
Manfredi, 2011	<i>C. canimorsus</i>	Negative	F9YRT1	340621216	Ccan_04380	30S ribosomal protein S12
Manfredi, 2011	<i>C. canimorsus</i>	Negative	F9YS35	340621244	Ccan_04660	30S ribosomal protein S4
Manfredi, 2011	<i>C. canimorsus</i>	Negative	F9YS02	340622458	Ccan_16870	50S ribosomal protein L7/L12
Manfredi, 2011	<i>C. canimorsus</i>	Negative	F9YS04	340622460	Ccan_16890	50S ribosomal protein L1
Manfredi, 2011	<i>C. canimorsus</i>	Negative	F9YSG9	340622549	Ccan_17780	50S ribosomal protein L9
Bøhle, 2011	<i>E. faecalis</i>	Positive	Q839H0	29374845	EF0199	30S ribosomal protein S7
Bøhle, 2011	<i>E. faecalis</i>	Positive	Q839G5	29374850	EF0205	30S ribosomal protein S10
Bøhle, 2011	<i>E. faecalis</i>	Positive	Q839G4	29374851	EF0206	50S ribosomal protein L3
Bøhle, 2011	<i>E. faecalis</i>	Positive	Q839G3	29374852	EF0207	50S ribosomal protein L4
Bøhle, 2011	<i>E. faecalis</i>	Positive	Q839F9	29374856	EF0211	50S ribosomal protein L22
Bøhle, 2011	<i>E. faecalis</i>	Positive	Q839F2	29374863	EF0218	50S ribosomal protein L5
Bøhle, 2011	<i>E. faecalis</i>	Positive	Q839E9	29374866	EF0221	50S ribosomal protein L6
Bøhle, 2011	<i>E. faecalis</i>	Positive	Q839E8	29374867	EF0223	50S ribosomal protein L18
Bøhle, 2011	<i>E. faecalis</i>	Positive	Q839E5	29374870	EF0226	50S ribosomal protein L15
Bøhle, 2011	<i>E. faecalis</i>	Positive	Q839D8	29374878	EF0234	50S ribosomal protein L17
Bøhle, 2011	<i>E. faecalis</i>	Positive	Q837C7	29375500	EF0916	50S ribosomal protein L20
Bøhle, 2011	<i>E. faecalis</i>	Positive	Q836X4	29375553	EF0970	50S ribosomal protein L27
Bøhle, 2011	<i>E. faecalis</i>	Positive	Q833P5	29376426	EF1898	50S ribosomal protein L19
Bøhle, 2011	<i>E. faecalis</i>	Positive	Q831U9	29376895	EF2398	30S ribosomal protein S2
Bøhle, 2011	<i>E. faecalis</i>	Positive	Q830Q6	29377196	EF2718	50S ribosomal protein L1
Vecchiotti, 2012	<i>P. aeruginosa</i>	Negative	Q9HWE9	15599445	rpsH PA4249	30S ribosomal protein S8
Vecchiotti, 2012	<i>P. aeruginosa</i>	Negative	Q9HWC7	15599468	rplJ PA4272	50S ribosomal protein L10
Vecchiotti, 2012	<i>P. aeruginosa</i>	Negative	Q9HTN8	15600509	rpmB PA5316	50S ribosomal protein L28
Vecchiotti, 2012	<i>P. aeruginosa</i>	Negative	Q9HWE1	15599453	rpsC PA4257	30S ribosomal protein S3
Vecchiotti, 2012	<i>P. aeruginosa</i>	Negative	O82850	15598852	rpsB PA3656	30S ribosomal protein S2
Vecchiotti, 2012	<i>P. aeruginosa</i>	Negative	Q9HXP9	15598940	rpsP PA3745	30S ribosomal protein S16
Vecchiotti, 2012	<i>P. aeruginosa</i>	Negative	Q9HWD0	15599464	rpsL PA4268	30S ribosomal protein S12
Vecchiotti, 2012	<i>P. aeruginosa</i>	Negative	Q9HWF8	15599436	rpsK PA4240	30S ribosomal protein S11
Vecchiotti, 2012	<i>P. aeruginosa</i>	Negative	O52759	15599435	rpsD PA4239	30S ribosomal protein S4
Vecchiotti, 2012	<i>P. aeruginosa</i>	Negative	Q9HWE7	15599447	rplE PA4251	50S ribosomal protein L5
Vecchiotti, 2012	<i>P. aeruginosa</i>	Negative	Q9HVV2	15599629	rplM PA4433	50S ribosomal protein L13
Vecchiotti, 2012	<i>P. aeruginosa</i>	Negative	Q9I5V8	15595776	rpsU PA0579	30S ribosomal protein S21
Vecchiotti, 2012	<i>P. aeruginosa</i>	Negative	Q9HWF1	15599443	rplR PA4247	50S ribosomal protein L18

Vecchiotti, 2012	<i>P. aeruginosa</i>	Negative	Q9HWD7	15599457	rplW PA4261	50S ribosomal protein L23
Vecchiotti, 2012	<i>P. aeruginosa</i>	Negative	Q9HWE8	15599446	rpsN PA4250	30S ribosomal protein S14
Vecchiotti, 2012	<i>P. aeruginosa</i>	Negative	Q9HWE4	15599450	rpsQ PA4254	30S ribosomal protein S17
Vecchiotti, 2012	<i>P. aeruginosa</i>	Negative	Q9HWD8	15599456	rplB PA4260	50 S ribosomal protein L2
Vecchiotti, 2012	<i>P. aeruginosa</i>	Negative	Q9HWF3	15599441	rpmD PA4245	50S ribosomal protein L30
Vecchiotti, 2012	<i>P. aeruginosa</i>	Negative	Q9HXQ2	15598937	rplS PA3742	50S ribosomal protein L19
Vecchiotti, 2012	<i>P. aeruginosa</i>	Negative	Q9HZN4	15598166	rpmF PA2970	50S ribosomal protein L32
Vecchiotti, 2012	<i>P. aeruginosa</i>	Negative	Q9HZ71	15598358	rpsA PA3162	30S ribosomal protein S1
Vecchiotti, 2012	<i>P. aeruginosa</i>	Negative	Q9HWF2	15599442	rpsE PA4246	30S ribosomal protein S5
Han, 2012	<i>E. coli K-12</i>	Negative		gi 1790418	RplL	50S ribosomal subunit protein L7/L12
Han, 2012	<i>E. coli K-12</i>	Negative		gi 1787140	RpsA	30S ribosomal subunit protein S1
Han, 2012	<i>E. coli K-12</i>	Negative		gi 1786365	RpsB	30S ribosomal subunit protein S2
Gibson, 2010	<i>N. sennetsu</i>	Negative	Q2GCI4	88608048	NSE_0948	30S ribosomal protein S2
Rodriguez-Ortega 2006	<i>S. pyogenes</i>	Positive			spy0717	50S ribosomal protein L31
Rodriguez-Ortega 2006	<i>S. pyogenes</i>	Positive			spy1073	50S ribosomal protein L7/L12
Zhang, 2010	<i>S. oneidensis</i>	Negative	Q8EK75	24371821	SO_0223	50S ribosomal protein L7/L12
Zhang, 2010	<i>S. oneidensis</i>	Negative	Q8EK54	24371844	SO_0246	50S ribosomal protein L6
Zhang, 2010	<i>S. oneidensis</i>	Negative	Q8EAH5	24375415	SO_3927	50S ribosomal protein L9
Zhang, 2010	<i>S. oneidensis</i>	Negative	Q8E9M3	24375731	SO_4247	50S ribosomal protein L28
Hempel, 2011	<i>S. aureus</i>	Positive		57650829		50S ribosomal protein L22
Hempel, 2011	<i>S. aureus</i>	Positive		57650550		50S ribosomal protein L20
Hempel, 2011	<i>S. aureus</i>	Positive		57651414		50S ribosomal protein L1
Hempel, 2011	<i>S. aureus</i>	Positive		57652018		30S ribosomal protein S4
Hempel, 2011	<i>S. aureus</i>	Positive		57651422		30S ribosomal protein S7
Hempel, 2011	<i>S. aureus</i>	Positive		57650819		50S ribosomal protein L6
Hempel, 2011	<i>S. aureus</i>	Positive		57650817		30S ribosomal protein S5
Hempel, 2011	<i>S. aureus</i>	Positive		57651825		30S ribosomal protein S2
Hempel, 2011	<i>S. aureus</i>	Positive		57651415		50S ribosomal protein L10
Hempel, 2011	<i>S. aureus</i>	Positive		57650833		50S ribosomal protein L4
Hempel, 2011	<i>S. aureus</i>	Positive		57650802		50S ribosomal protein L13
Hempel, 2011	<i>S. aureus</i>	Positive		57650528		50S ribosomal protein L21
Hempel, 2011	<i>S. aureus</i>	Positive		57650431		30S ribosomal protein S1
Hempel, 2011	<i>S. aureus</i>	Positive		57651416		50S ribosomal protein L7/L12
Hempel, 2011	<i>S. aureus</i>	Positive		57650835		30S ribosomal protein S10
Hempel, 2011	<i>S. aureus</i>	Positive		57650831		50S ribosomal protein L2

Hempel, 2011	<i>S. aureus</i>	Positive		57650828		30S ribosomal protein S3
Hempel, 2011	<i>S. aureus</i>	Positive		57650822		50S ribosomal protein L5
Hempel, 2011	<i>S. aureus</i>	Positive		57650816		50S ribosomal protein L30
Hempel, 2011	<i>S. aureus</i>	Positive		57650832		50S ribosomal protein L23
Hempel, 2011	<i>S. aureus</i>	Positive		57650826		50S ribosomal protein L29
Hempel, 2011	<i>S. aureus</i>	Positive		57650815		50S ribosomal protein L15
Hempel, 2011	<i>S. aureus</i>	Positive		57650810		30S ribosomal protein S13
Hempel, 2011	<i>S. aureus</i>	Positive		57650809		30S ribosomal protein S11
Hempel, 2011	<i>S. aureus</i>	Positive		57650807		50S ribosomal protein L17
Hempel, 2011	<i>S. aureus</i>	Positive		57650801		30S ribosomal protein S9
Hempel, 2011	<i>S. aureus</i>	Positive		57652142		50S ribosomal protein L31
Hempel, 2011	<i>S. aureus</i>	Positive		57651421		30S ribosomal protein S12
Hempel, 2011	<i>S. aureus</i>	Positive		57650827		50S ribosomal protein L16
Hempel, 2011	<i>S. aureus</i>	Positive		57651413		50S ribosomal protein L11
Hempel, 2011	<i>S. aureus</i>	Positive		57651810		50S ribosomal protein L19
Hempel, 2011	<i>S. aureus</i>	Positive		57650818		50S ribosomal protein L18
Hempel, 2011	<i>S. aureus</i>	Positive		57650830		30S ribosomal protein S19
Hempel, 2011	<i>S. aureus</i>	Positive		57650042		50S ribosomal protein L25/general stress protein Ctc
Hempel, 2011	<i>S. aureus</i>	Positive		57651123		50S ribosomal protein L9
Boonjakuakul, 2007	<i>B. quintana</i>	Negative	Q6FZC0		<i>tufI</i>	Elongation factor Tu
Boonjakuakul, 2007	<i>B. quintana</i>	Negative	Q9XCM5		<i>tsf</i>	Elongation factor Ts
Boonjakuakul, 2007	<i>B. quintana</i>	Negative	Q6FZB9	49474407	<i>fusA</i>	Elongation factor G
Mao, 2011	<i>C. acetobutylicum</i>	Positive		gi 15896387		Elongation factor G (EF-G)
Mao, 2011	<i>C. acetobutylicum</i>	Positive		gi 15896386	<i>tufA</i>	Elongation factor Tu (EF-Tu)
Mao, 2011	<i>C. acetobutylicum</i>	Positive		gi 15895364	<i>efp</i>	Elongation factor P
Manfredi, 2011	<i>C. canimorsus</i>	Negative	F9YRT3	340621218	Ccan_04400	Elongation factor G
Manfredi, 2011	<i>C. canimorsus</i>	Negative	F9YS08	340622464	Ccan_16930	Elongation factor Tu
Bøhle, 2011	<i>E. faecalis</i>	Positive	Q839G9	29374846	EF0200	Elongation factor G
Bøhle, 2011	<i>E. faecalis</i>	Positive	Q839G8	29374847	EF0201	Elongation factor Tu*
Vecchiotti, 2012	<i>P. aeruginosa</i>	Negative	O82851	15598851	<i>tsf</i> PA3655	Elongation factor EF-Ts
Han, 2012	<i>E. coli K-12</i>	Negative		gi 1789737	<i>TufA</i>	Protein chain elongation factor EF-Tu (duplicate of TufB)
Gibson, 2010	<i>N. sennetsu</i>	Negative	Q2GEY8	88608486	NSE_0057	Polyribonucleotide nucleotidyltransferase (Pnp)
Gibson, 2010	<i>N. sennetsu</i>	Negative	Q2GCI5	88608372	NSE_0947	Translation elongation factor Ts (Tsf)
Gibson, 2010	<i>N. sennetsu</i>	Negative	Q2GD82	88608233	NSE_0687	Translation elongation factor G (FusA)
Zhang, 2010	<i>S. oneidensis</i>	Negative	Q8EK71	24371826	SO_0228	Elongation factor G 1 (EF-G 1)
Zhang, 2010	<i>S. oneidensis</i>	Negative	Q8EGH4	24373198	SO_1630	Elongation factor Ts
Hempel, 2011	<i>S. aureus</i>	Positive		57651424		Elongation factor Tu

Hempel, 2011	<i>S. aureus</i>	Positive		57651423		Elongation factor G
Hempel, 2011	<i>S. aureus</i>	Positive		57651827		Elongation factor Ts
Rodriguez-Ortega 2006	<i>S. pyogenes</i>	Positive			spy0611	Putative translation elongation factor EF-Tu
Boonjakuakul, 2007	<i>B. quintana</i>	Negative	Q6FZF1	49474375	alaS	Alanyl-tRNA synthetase
Boonjakuakul, 2007	<i>B. quintana</i>	Negative	Q6G036	49474113	serS	Seryl tRNA synthetase
Mao, 2011	<i>C. acetobutylicum</i>	Positive		gi 15895623		Phenylalanyl-tRNA synthetase beta chain
Mao, 2011	<i>C. acetobutylicum</i>	Positive		gi 15895624		Phenylalanyl-tRNA synthetase alpha chain
Mao, 2011	<i>C. acetobutylicum</i>	Positive		gi 15896444		Lysyl-tRNA synthetase (Lysine--tRNA ligase) (LysRS)
Mao, 2011	<i>C. acetobutylicum</i>	Positive		gi 15896289		Isoleucyl-tRNA synthetase (Isoleucine--tRNA ligase) (IleRS)
Mao, 2011	<i>C. acetobutylicum</i>	Positive		gi 15895665		Valyl-tRNA synthetase (Valine--tRNA ligase) (ValRS)
Bøhle, 2011	<i>E. faecalis</i>	Positive	P0DM33	29375234	EF0633	Tyrosine--tRNA ligase
Bøhle, 2011	<i>E. faecalis</i>	Positive	Q835J8	29375946	EF1379	Alanine--tRNA ligase
Vecchiatti, 2012	<i>P. aeruginosa</i>	Negative	Q9I553	15596100	alaS PA0903	Alanyl-tRNA synthetase AlaS
Vecchiatti, 2012	<i>P. aeruginosa</i>	Negative	Q51422	15596160	aspS PA0963	Aspartyl-tRNA synthetase AspS
Zhang, 2010	<i>S. oneidensis</i>	Negative	Q8EKS6	24371614	SO_0014	Glycine--tRNA ligase beta subunit
Zhang, 2010	<i>S. oneidensis</i>	Negative	Q8EFA0	24373645	SO_2085	Phenylalanine--tRNA ligase alpha subunit
Zhang, 2010	<i>S. oneidensis</i>	Negative	Q8EEE9	24373980	SO_2433	Aspartate--tRNA ligase
Zhang, 2010	<i>S. oneidensis</i>	Negative	Q8E9Y7	24375609	SO_4123	Arginine--tRNA ligase
Hempel, 2011	<i>S. aureus</i>	Positive		57651833		Prolyl-tRNA synthetase
Hempel, 2011	<i>S. aureus</i>	Positive		57651958		Glycyl-tRNA synthetase
Hempel, 2011	<i>S. aureus</i>	Positive		57652121		Aspartyl/glutamyl-tRNA amidotransferase subunit A
Hempel, 2011	<i>S. aureus</i>	Positive		57652120		Aspartyl/glutamyl-tRNA amidotransferase subunit B
Hempel, 2011	<i>S. aureus</i>	Positive		57651839		Translation initiation factor IF-2
Hempel, 2011	<i>S. aureus</i>	Positive		57650552		Translation initiation factor IF-3
Hempel, 2011	<i>S. aureus</i>	Positive		57651829		Ribosome recycling factor
Vecchiatti, 2012	<i>P. aeruginosa</i>	Negative	Q9I0A0	15597939	infC PA2743	Translation initiation factor IF-3
Vecchiatti, 2012	<i>P. aeruginosa</i>	Negative	Q9HV55	15599938	infB PA4744	Translation initiation factor IF-2

Group O: Post-translational modification, protein turnover, chaperones²⁴

Author, Year	Species	Gram type	UniProt #	NCBI #	Gene Locus	Function description
Boonjakuakul, 2007	<i>B. quintana</i>	Negative	Q6FZK6	49474320	tig	Trigger factor
Boonjakuakul, 2007	<i>B. quintana</i>	Negative	O33964	49474597	mopA	Chaperonin protein GroEL
Boonjakuakul, 2007	<i>B. quintana</i>	Negative	Q6G1F9	49473743	dnaK	Heat shock protein 70 Dna K
Boonjakuakul, 2007	<i>B. quintana</i>	Negative	Q6G134	49474627	clpB	ATP-dependent Clp protease
Boonjakuakul, 2007	<i>B. quintana</i>	Negative	Q6FYU6			Hypothetical protein BQ10800 (blast: peroxiredoxin)
Mao, 2011	<i>C. acetobutylicum</i>	Positive		gi 15896437		ATPase with chaperone activity ClpC, two ATP-binding domain
Mao, 2011	<i>C. acetobutylicum</i>	Positive		gi 15895960		60 kDa chaperonin (groEL protein)
Mao, 2011	<i>C. acetobutylicum</i>	Positive		gi 15893936		Molecular chaperone, DnaJ family
Manfredi, 2011	<i>C. canimorsus</i>	Negative	F9YU57	340622830	Ccan_20590	Thioredoxin
Böhle, 2011	<i>E. faecalis</i>	Positive	Q835R7	29375876	EF1308	Chaperone protein DnaK*
Vecchiatti, 2012	<i>P. aeruginosa</i>	Negative	Q9HV44	15599954	dnaJ PA4760	Chaperone protein DnaJ
Vecchiatti, 2012	<i>P. aeruginosa</i>	Negative	Q9HYX8	15598458	PA3262	Peptidyl-prolyl cis-trans isomerase
Vecchiatti, 2012	<i>P. aeruginosa</i>	Negative	Q9I2T9	15597000	lon PA1803	Lon protease
Vecchiatti, 2012	<i>P. aeruginosa</i>	Negative	Q9I2U0	15596999	clpX PA1802	Clp protease ClpX
Vecchiatti, 2012	<i>P. aeruginosa</i>	Negative	Q9I742	15595288	clpV1 PA0090	Protein ClpV
Gibson, 2010	<i>N. sennetsu</i>	Negative	Q2GDC6	88608250	NSE_0642	Heat shock protein 60 (GroEL)
Gibson, 2010	<i>N. sennetsu</i>	Negative	Q2GF34	88608598	NSE_0019	Heat shock protein 70 (DnaK)
Gibson, 2010	<i>N. sennetsu</i>	Negative	Q2GES7	88608018	NSE_0119	Heat shock protein ClpB protein
Zhang 2010	<i>S. oneidensis</i>	Negative	Q8EG20	24373359	SO_1793	Trigger factor
Zhang 2010	<i>S. oneidensis</i>	Negative	Q8EG18	24373361	SO_1795	ATP-dependent Clp protease ATP-binding subunit ClpX
Zhang 2010	<i>S. oneidensis</i>	Negative	Q8EG17	24373362	SO_1796	Lon protease
Zhang 2010	<i>S. oneidensis</i>	Negative	Q8EBE6	24375079	SO_3577	Chaperone protein ClpB
Zhang 2010	<i>S. oneidensis</i>	Negative	Q8E9U9	24375649	SO_4163	ATP-dependent protease ATPase subunit HslU
Hempel, 2011	<i>S. aureus</i>	Positive		57650701		Chaperonin GroEL
Hempel, 2011	<i>S. aureus</i>	Positive		57650109		ATP-dependent Clp protease proteolytic subunit
Hempel, 2011	<i>S. aureus</i>	Positive		57650105		Thioredoxin-disulfide reductase
Hempel, 2011	<i>S. aureus</i>	Positive		57650547		Trigger factor
Hempel, 2011	<i>S. aureus</i>	Positive		57651608		FeS assembly protein SufB
Hempel, 2011	<i>S. aureus</i>	Positive		57651754		Thioredoxin

Hempel, 2011	<i>S. aureus</i>	Positive		57651973		Molecular chaperone DnaK molecular chaperone DnaK
Hempel, 2011	<i>S. aureus</i>	Positive		57651604		FeS assembly ATPase SufC
Hempel, 2011	<i>S. aureus</i>	Positive		57652042		Thioredoxin

Group G: Carbohydrate transport and metabolism²⁴

Author, Year	Species	Gram type	UniProt #	NCBI #	Gene Locus	Function description
Boonjakuakul, 2007	<i>B. quintana</i>	Negative	Q6G0B6	49474016	ppdK	Pyruvate phosphate kinase
Mao, 2011	<i>C. acetobutylicum</i>	Positive		gi 15894114		Fructose-bisphosphate aldolase
Mao, 2011	<i>C. acetobutylicum</i>	Positive		gi 15893997	gapC	Glyceraldehyde-3-phosphate dehydrogenase (GAPDH)
Mao, 2011	<i>C. acetobutylicum</i>	Positive		gi 15894001		Enolase (2-phosphoglycerate dehydratase)
Mao, 2011	<i>C. acetobutylicum</i>	Positive		gi 15893999		Triosephosphate isomerase (TIM) (Triose-phosphate isomerase)
Mao, 2011	<i>C. acetobutylicum</i>	Positive		gi 15894627		Transketolase, TKT
Mao, 2011	<i>C. acetobutylicum</i>	Positive		gi 15893775		Phosphomannomutase
Mao, 2011	<i>C. acetobutylicum</i>	Positive		gi 15894231	tkt	Transketolase
Mao, 2011	<i>C. acetobutylicum</i>	Positive		gi 15893999	tpi	Triosephosphate isomerase
Manfredi, 2011	<i>C. canimorsus</i>	Negative	F9YV92	340621792	Ccan_10210	Glyceraldehyde-3-phosphate dehydrogenase A
Bøhle, 2011	<i>E. faecalis</i>	Positive	Q839H4	29374841	EF0195	2,3-bisphosphoglycerate-dependent phosphoglycerate mutase
Bøhle, 2011	<i>E. faecalis</i>	Positive	Q836R2	29375625	EF1046	Pyruvate kinase
Bøhle, 2011	<i>E. faecalis</i>	Positive	Q836E7	29375743	EF1167	Fructose-bisphosphate aldolase
Bøhle, 2011	<i>E. faecalis</i>	Positive	P0DM31	29376483	EF1961	Enolase*
Bøhle, 2011	<i>E. faecalis</i>	Positive	Q833I8	29376486	EF1964	Glyceraldehyde-3-phosphate dehydrogenase*
Han, 2012	<i>E. coli K-12</i>	Negative		gi 87082041	GatY	D-Tagatose 1,6-bisphosphate aldolase 2, catalytic subunit
Han, 2012	<i>E. coli K-12</i>	Negative		gi 1788411	GatZ	D-Tagatose 1,6-bisphosphate aldolase 2, catalytic subunit
Gibson, 2010	<i>N. sennetsu</i>	Negative	Q2GEE9	88608298	NSE_0254	Triosephosphate isomerase (TpiA)
Gibson, 2010	<i>N. sennetsu</i>	Negative	Q2GDX7	88608457	NSE_0434	Glyceraldehyde-3-phosphate dehydrogenase, type I (Gap)
Zhang 2010	<i>S. oneidensis</i>	Negative	Q8EIB3	24372517	SO_0930	Transketolase
Zhang 2010	<i>S. oneidensis</i>	Negative	Q8EIB0	24372520	SO_0933	Fructose-bisphosphate aldolase class II Calvin cycle subtype Fba
Zhang 2010	<i>S. oneidensis</i>	Negative	Q8EEN3	24373892	SO_2345	Glyceraldehyde-3-phosphate dehydrogenase
Zhang 2010	<i>S. oneidensis</i>	Negative	Q8EE96	24374035	SO_2491	Pyruvate kinase
Zhang 2010	<i>S. oneidensis</i>	Negative	Q8EBH1	24375051	SO_3547	Glucose-6-phosphate isomerase
Hempel, 2011	<i>S. aureus</i>	Positive		57650346		Transketolase
Hempel, 2011	<i>S. aureus</i>	Positive		57650568		Pyruvate kinase
Hempel, 2011	<i>S. aureus</i>	Positive		57650114		Glyceraldehyde 3-phosphate dehydrogenase
Hempel, 2011	<i>S. aureus</i>	Positive		57652341		Fructose-1,6-bisphosphate aldolase
Hempel, 2011	<i>S. aureus</i>	Positive		57650118		Phosphopyruvate hydratase
Hempel, 2011	<i>S. aureus</i>	Positive		57652147		Fructose-bisphosphate aldolase
Hempel, 2011	<i>S. aureus</i>	Positive		57652078		Transaldolase

Hempel, 2011	<i>S. aureus</i>	Positive		57651654		Glucose-6-phosphate isomerase
Hempel, 2011	<i>S. aureus</i>	Positive		57650466		6-phosphogluconate dehydrogenase
Hempel, 2011	<i>S. aureus</i>	Positive		57651024		Fructose-1,6-bisphosphatase
Rodriguez-Ortega 2006	<i>S. pyogenes</i>	Positive			Spy1586	Putative beta-galactosidase

Group C: Energy production and conversion²⁴

Author, Year	Species	Gram type	UniProt #	NCBI #	Gene locus	Function description
Boonjakuakul, 2007	<i>B. quintana</i>	Negative	Q6FYD2		sucD	Succinyl-coenzyme A synthetase alpha chain
Boonjakuakul, 2007	<i>B. quintana</i>	Negative	Q6FYD4		sucB	Dihydrolipoamide succinyltransferase
Boonjakuakul, 2007	<i>B. quintana</i>	Negative	Q6G169	49474128	pdhB	Pyruvate dehydrogenase E1 component beta subunit
Boonjakuakul, 2007	<i>B. quintana</i>	Negative	Q6G0V8	49473786	acnA	Aconitate hydratase
Mao, 2011	<i>C. acetobutylicum</i>	Positive		gi 15894267		Pyruvate-formate lyase
Mao, 2011	<i>C. acetobutylicum</i>	Positive		gi 15896832		Rubryerythrin
Mao, 2011	<i>C. acetobutylicum</i>	Positive		gi 15896341		Fumerate hydratase, subunit B (C-terminal domain of FumA E. coli) class I
Bøhle, 2011	<i>E. faecalis</i>	Positive	Q834N1	29376172	EF1613	Formate acetyltransferase
Vecchiotti, 2012	<i>P. aeruginosa</i>	Negative	Q59638	15600209	aceF aceB PA5016	Dihydrolipoyllysine-residue acetyltransferase
Han, 2012	<i>E. coli K-12</i>	Negative		gi 1790445	AceA	Isocitrate lyase
Gibson, 2010	<i>N. sennetsu</i>	Negative	Q2GEF1	88608589	NSE_0251	Succinyl-coenzyme A synthetase, β -subunit (SucC)
Gibson, 2010	<i>N. sennetsu</i>	Negative	Q2GDI7	88608632	NSE_0578	2-Oxoglutarate dehydrogenase (SucA)
Gibson, 2010	<i>N. sennetsu</i>	Negative	Q2GD40	88608282	NSE_0730	Citrate synthase (GltA)
Zhang 2010	<i>S. oneidensis</i>	Negative	Q8EGV1	24373064	SO_1490	Alcohol dehydrogenase II AdhB
Zhang 2010	<i>S. oneidensis</i>	Negative	Q8EGS3	414561917	SO_1521	Respiratory FAD-dependent D-lactate dehydrogenase Dld
Zhang 2010	<i>S. oneidensis</i>	Negative	Q8EFP4	24373490	SO_1926	Citrate synthase
Zhang 2010	<i>S. oneidensis</i>	Negative	Q8EFN9	24373495	SO_1931	Dihydrolipoyllysine-residue succinyltransferase component of 2-oxoglutarate dehydrogenase complex
Zhang 2010	<i>S. oneidensis</i>	Negative	Q8EFN7	24373497	SO_1933	Succinyl-CoA ligase [ADP-forming] subunit alpha
Zhang 2010	<i>S. oneidensis</i>	Negative	Q8EDW2	24374171	SO_2629	Isocitrate dehydrogenase NADP-dependent Icd
Zhang 2010	<i>S. oneidensis</i>	Negative	Q8ED58	24374439	SO_2912	Pyruvate formate-lyase PflB
Zhang 2010	<i>S. oneidensis</i>	Negative	Q8ED55	24374442	SO_2915	Acetate kinase
Zhang 2010	<i>S. oneidensis</i>	Negative	Q8EAP2	24375344	SO_3855	NAD-dependent malic enzyme
Hempel, 2011	<i>S. aureus</i>	Positive		57651814		Succinyl-CoA synthetase subunit beta
Hempel, 2011	<i>S. aureus</i>	Positive		57651815		Succinyl-CoA synthetase subunit alpha
Hempel, 2011	<i>S. aureus</i>	Positive		57651705		Dihydrolipoamide dehydrogenase
Hempel, 2011	<i>S. aureus</i>	Positive		57651723		Pyruvate carboxylase
Hempel, 2011	<i>S. aureus</i>	Positive		57650566		Citrate synthase
Hempel, 2011	<i>S. aureus</i>	Positive		57651869		Glycerol kinase
Hempel, 2011	<i>S. aureus</i>	Positive		57651914		2-oxoglutarate dehydrogenase E1 component

Hempel, 2011	<i>S. aureus</i>	Positive		57651703		Pyruvate dehydrogenase complex E1 component subunit beta
Hempel, 2011	<i>S. aureus</i>	Positive		57652009		Acetate kinase
Hempel, 2011	<i>S. aureus</i>	Positive		57651704		Branched-chain alpha-keto acid dehydrogenase E2

Group E: Amino acid transport and metabolism²⁴

Author, Year	Species	Gram type	UniProt #	NCBI #	Gene locus	Function description
Boonjakuakul, 2007	<i>B. quintana</i>	Negative	Q6G009	49474159	glyA	Serine hydroxymethyltransferase
Boonjakuakul, 2007	<i>B. quintana</i>	Negative	Q6G0I0	49473952	lysC	Aspartokinase, alpha and beta subunit
Mao, 2011	<i>C. acetobutylicum</i>	Positive		gi 15895916		Glutamine synthetase type III
Mao, 2011	<i>C. acetobutylicum</i>	Positive		gi 15896499	proA	Gamma-glutamyl phosphate reductase
Mao, 2011	<i>C. acetobutylicum</i>	Positive		gi 15893858	asd	Aspartate semialdehyde dehydrogenase
Manfredi, 2011	<i>C. canimorsus</i>	Negative	F9YQF7	340620981	Ccan_02030	Glycine cleavage system H protein
Gibson, 2010	<i>N. sennetsu</i>	Negative	Q2GEI3	88608618	NSE_0218	Serine hydroxymethyltransferase (GlyA)
Gibson, 2010	<i>N. sennetsu</i>	Negative	Q2GE57	88608432	NSE_0350	Glutamine synthetase, type I (GlnA)
Zhang 2010	<i>S. oneidensis</i>	Negative	P59301	24371874	SO_0276	Acetylglutamate kinase
Zhang 2010	<i>S. oneidensis</i>	Negative	Q8EJZ2	24371912	SO_0314	Ornithine decarboxylase SpeF
Zhang 2010	<i>S. oneidensis</i>	Negative	Q8EHU1	24372705	SO_1122	Gamma-glutamyl phosphate reductase
Zhang 2010	<i>S. oneidensis</i>	Negative	Q8EFB0	24373634	SO_2074	ATP phosphoribosyltransferase
Zhang 2010	<i>S. oneidensis</i>	Negative	Q8EEU9	24373817	SO_2264	Cysteine desulfurase IscS
Zhang 2010	<i>S. oneidensis</i>	Negative	K4PU16	414562022	SO_2304	Alanine dehydrogenase
Zhang 2010	<i>S. oneidensis</i>	Negative	Q8EEH8	24373951	SO_2404	3-phosphoshikimate 1-carboxyvinyltransferase
Zhang 2010	<i>S. oneidensis</i>	Negative	Q8EDI2	24374305	SO_2767	Asparagine synthase glutamine-hydrolyzing AsnB
Zhang 2010	<i>S. oneidensis</i>	Negative	Q8EBT6	24374923	SO_3413	Threonine synthase ThrC
Zhang 2010	<i>S. oneidensis</i>	Negative	Q8EBT4	24374925	SO_3415	Bifunctional aspartokinase I / homoserine dehydrogenase I ThrA
Zhang 2010	<i>S. oneidensis</i>	Negative	Q8EBN8	24374977	SO_3471	Serine hydroxymethyltransferase
Zhang 2010	<i>S. oneidensis</i>	Negative	Q8EAC1	24375473	SO_3986	Aspartokinase
Zhang 2010	<i>S. oneidensis</i>	Negative	Q8E976	24375890	SO_4410	Glutamine synthetase
Hempel, 2011	<i>S. aureus</i>	Positive		57650729		2-isopropylmalate synthase
Hempel, 2011	<i>S. aureus</i>	Positive		57650300		Glutamine synthetase
Hempel, 2011	<i>S. aureus</i>	Positive		57651389		Cysteine synthase
Hempel, 2011	<i>S. aureus</i>	Positive		57650731		Isopropylmalate isomerase large subunit
Hempel, 2011	<i>S. aureus</i>	Positive		57652135		Serine hydroxymethyltransferase
Hempel, 2011	<i>S. aureus</i>	Positive		57650377		Tryptophan synthase subunit alpha
Hempel, 2011	<i>S. aureus</i>	Positive		57650733		Threonine dehydratase
Hempel, 2011	<i>S. aureus</i>	Positive		57650732		Isopropylmalate isomerase small subunit
Hempel, 2011	<i>S. aureus</i>	Positive		57650151		Glycine cleavage system protein H

Group K: Transcription²⁴

Author, Year	Species	Gram type	UniProt #	NCBI #	Gene locus	Function description
Boonjakuakul, 2007	<i>B. quintana</i>	Negative	Q6FYB7		rho	Transcription terminator factor rho
Boonjakuakul, 2007	<i>B. quintana</i>	Negative	Q6FZL4		nusG	Transcription antitermination protein
Boonjakuakul, 2007	<i>B. quintana</i>	Negative	Q6FZE6		rpoA	DNA-directed RNA polymerase alpha chain
Boonjakuakul, 2007	<i>B. quintana</i>	Negative	Q6G0P0	49473872	nusA	N utilization substance protein A
Boonjakuakul, 2007	<i>B. quintana</i>	Negative	Q9KJM5	49474307	rpoB	DNA-directed RNA polymerase beta chain
Mao, 2011	<i>C. acetobutylicum</i>	Positive		gi 15896391		DNA-directed RNA polymerase subunit beta' (RNAP subunit beta')
Mao, 2011	<i>C. acetobutylicum</i>	Positive		gi 15896392		DNA-directed RNA polymerase subunit beta (RNAP subunit beta)
Bøhle, 2011	<i>E. faecalis</i>	Positive	Q82ZX2	29377389	EF2925	Cold shock-like protein CspLA
Vecchietti, 2012	<i>P. aeruginosa</i>	Negative	Q9HWC4	15599471	nusG PA4275	Transcription antitermination protein NusG
Vecchietti, 2012	<i>P. aeruginosa</i>	Negative	Q9HTV1	15600432	rho PA5239	Transcription termination factor Rho
Vecchietti, 2012	<i>P. aeruginosa</i>	Negative	P26480	15595773	rpoD PA0576	RNA polymerase sigma factor RpoD
Vecchietti, 2012	<i>P. aeruginosa</i>	Negative	Q9HV54	15599939	nusA PA4745	N utilization substance protein A NusA
Vecchietti, 2012	<i>P. aeruginosa</i>	Negative	O52760	15599434	rpoA PA4238	RNA polymerase subunit alpha RpoA
Zhang 2010	<i>S. oneidensis</i>	Negative	Q8EJQ7	24372001	SO_0405	Transcription termination factor Rho
Hempel, 2011	<i>S. aureus</i>	Positive		57652001		Transcription elongation factor GreA
Hempel, 2011	<i>S. aureus</i>	Positive		57651419		DNA-directed RNA polymerase subunit beta
Hempel, 2011	<i>S. aureus</i>	Positive		57650808		DNA-directed RNA polymerase subunit alpha
Hempel, 2011	<i>S. aureus</i>	Positive		57651824		Transcriptional repressor CodY
Hempel, 2011	<i>S. aureus</i>	Positive		57651418		DNA-directed RNA polymerase subunit beta
Hempel, 2011	<i>S. aureus</i>	Positive		57651836		Transcription elongation factor NusA
Hempel, 2011	<i>S. aureus</i>	Positive		57651902		CSD family cold shock protein

Group F: Nucleotide transport and metabolism²⁴

Author, Year	Species	Gram type	UniProt #	NCBI #	Gene locus	Function description
Boonjakuakul, 2007	<i>B. quintana</i>	Negative	Q6FZJ2		purC	Phosphoribosylaminoimidazole-succinocarboxamide synthase
Boonjakuakul, 2007	<i>B. quintana</i>	Negative	Q6FZJ4	49474332	purB	Adenylosuccinate lyase
Boonjakuakul, 2007	<i>B. quintana</i>	Negative	Q6G197	49473838	guaA	GMP synthase
Mao, 2011	<i>C. acetobutylicum</i>	Positive		gi 15895957		GMP synthase
Mao, 2011	<i>C. acetobutylicum</i>	Positive		gi 15894932		Bifunctional enzyme phosphoribosylformylglycinamidine (FGAM) synthase
Mao, 2011	<i>C. acetobutylicum</i>	Positive		gi 15894670		Phosphoribosylaminoimidazole-succinocarboxamide synthase
Mao, 2011	<i>C. acetobutylicum</i>	Positive		gi 15895097	purB	Adenylosuccinate lyase
Mao, 2011	<i>C. acetobutylicum</i>	Positive		gi 15896827	purA	Adenylosuccinate synthase
Mao, 2011	<i>C. acetobutylicum</i>	Positive		gi 15894160	xpt	Xanthine phosphoribosyltransferase
Mao, 2011	<i>C. acetobutylicum</i>	Positive		gi 15896133	upp	Uracil phosphoribosyltransferase
Mao, 2011	<i>C. acetobutylicum</i>	Positive		gi 15893771	nrdD	Oxygen-sensitive ribonucleoside triphosphate reductase nrdD
Bøhle, 2011	<i>E. faecalis</i>	Positive	Q839E3	29374872	EF0228	Adenylate kinase
Zhang 2010	<i>S. oneidensis</i>	Negative	Q8EHC7	24372879	SO_1301	Aspartate carbamoyltransferase PyrB
Zhang 2010	<i>S. oneidensis</i>	Negative	Q8EEG7	24373962	SO_2415	Ribonucleoside-diphosphate reductase
Zhang 2010	<i>S. oneidensis</i>	Negative	Q8EC57	24374798	SO_3287	Phosphoribosylformylglycinamidine synthase
Zhang 2010	<i>S. oneidensis</i>	Negative	Q8ECR8	24374586	SO_3064	Amidophosphoribosyltransferase
Hempel, 2011	<i>S. aureus</i>	Positive		57651386		Hypoxanthine phosphoribosyltransferase
Hempel, 2011	<i>S. aureus</i>	Positive		57650813		Adenylate kinase
Hempel, 2011	<i>S. aureus</i>	Positive		57651828		Uridylate kinase
Hempel, 2011	<i>S. aureus</i>	Positive		57652134		Uracil phosphoribosyltransferase

Group L: Replication, recombination and repair²⁴

Author, Year	Species	Gram type	UniProt #	NCBI #	Gene locus	Function description
Boonjakuakul, 2007	<i>B. quintana</i>	Negative	Q6FZF9		ssb	Single-strand binding protein
Boonjakuakul, 2007	<i>B. quintana</i>	Negative	Q6FZF0		recA	Recombinase A protein
Boonjakuakul, 2007	<i>B. quintana</i>	Negative	Q6G0V5	49473789	dnaN	DNA polymerase III, beta chain
Boonjakuakul, 2007	<i>B. quintana</i>	Negative	Q6G1I9	49473721	gyrB	DNA gyrase subunit B
Mao, 2011	<i>C. acetobutylicum</i>	Positive		gi 15893305		DNA gyrase subunit A
Mao, 2011	<i>C. acetobutylicum</i>	Positive		gi 15895224		Site-specific recombinases, DNA invertase Pin homolog
Mao, 2011	<i>C. acetobutylicum</i>	Positive		gi 15893421	dnaX	DNA-directed DNA polymerase, III chain (dnaX)
Han, 2012	<i>E. coli K-12</i>	Negative		gi 1789051	RecA	DNA strand exchange and recombination protein with protease and nuclease activity
Vecchietti, 2012	<i>P. aeruginosa</i>	Negative	Q9I7C2	15595202	gyrB PA0004	DNA gyrase subunit B
Zhang 2010	<i>S. oneidensis</i>	Negative	Q8EIQ4	24372372	SO_0783	Superfamily I DNA and RNA helicase
Zhang 2010	<i>S. oneidensis</i>	Negative	Q8EBS0	24374940	SO_3430	Protein RecA
Zhang 2010	<i>S. oneidensis</i>	Negative	Q8EA75	24375521	SO_4034	ATP-dependent RNA helicase DeaD
Zhang 2010	<i>S. oneidensis</i>	Negative	Q8E8J5	24376141	SO_4669	DNA polymerase I PolA
Hempel, 2011	<i>S. aureus</i>	Positive		57651951		DEAD/DEAH box helicase
Hempel, 2011	<i>S. aureus</i>	Positive		57651110		DNA polymerase III subunit beta
Hempel, 2011	<i>S. aureus</i>	Positive		57650428		DNA-binding protein HU
Hempel, 2011	<i>S. aureus</i>	Positive		57651855		recombinase A
Hempel, 2011	<i>S. aureus</i>	Positive		57650754		DEAD/DEAH box helicase

Group I: Lipid transport and metabolism²⁴

Author, Year	Species	Gram type	UniProt #	NCBI #	Gene locus	Function description
Mao, 2011	<i>C. cetobutylicum</i>	Positive		gi 15896127		Acetyl-CoA acetyltransferase
Mao, 2011	<i>C. cetobutylicum</i>	Positive		gi 15895965		3-hydroxybutyryl-CoA dehydrogenase
Mao, 2011	<i>C. cetobutylicum</i>	Positive		gi 15896803		Acetyl-CoA carboxylase beta subunit
Mao, 2011	<i>C. cetobutylicum</i>	Positive		gi 15895968	bcd	Acyl-CoA dehydrogenase, short-chain specific (SCAD)
Vecchietti, 2012	<i>P. aeruginosa</i>	Negative	Q9HXZ2	15598835	accA PA3639	Acetyl-coenzyme A carboxylase
Zhang 2010	<i>S. oneidensis</i>	Negative	Q8EFR9	24373462	SO_1897	Isovaleryl-CoA dehydrogenase LiuA
Hempel, 2011	<i>S. aureus</i>	Positive		57651057		Hydroxymethylglutaryl-CoA synthase

The other groups based on COG Classification²⁴

Author, Year	Species	Gram type	UniProt #	NCBI #	Gene locus	Function description	COG code ^a
Boonjakuakul, 2007	<i>B. quintana</i>	Negative	Q6G181	49473836	guaB	Inosine-5'-monophosphate dehydrogenase	T
Boonjakuakul, 2007	<i>B. quintana</i>	Negative	Q6G180	499492646	ntrX	Nitrogen regulation protein	T
Boonjakuakul, 2007	<i>B. quintana</i>	Negative	Q6G0R7	49473827	typA	GTP-binding protein TypA	T
Zhang 2010	<i>S. oneidensis</i>	Negative	Q8EJ49	24372215	SO_0624	cAMP-responsive regulator of catabolite repression Crp	T
Zhang 2010	<i>S. oneidensis</i>	Negative	Q8EHW1	24372685	SO_1101	S-ribosylhomocysteine lyase	T
Zhang 2010	<i>S. oneidensis</i>	Negative	Q8ED82	24374411	SO_2882	Serine protein kinase PrkA	T
Hempel, 2011	<i>S. aureus</i>	Positive		57652004		Universal stress protein	T
Hempel, 2011	<i>S. aureus</i>	Positive		57652008		Universal stress protein	T
Mao, 2011	<i>C. acetobutylicum</i>	Positive		gi 15893882	ribH	Riboflavin synthase beta chain	H
Zhang 2010	<i>S. oneidensis</i>	Negative	Q8EJM8	24372030	SO_0435	Uroporphyrinogen decarboxylase	H
Zhang 2010	<i>S. oneidensis</i>	Negative	Q8EIB4	24372516	SO_0929	S-adenosylmethionine synthase	H
Zhang 2010	<i>S. oneidensis</i>	Negative	Q8EH88	24372919	SO_1341	L-aspartate oxidase component of quinolinate synthetase NadB	H
Hempel, 2011	<i>S. aureus</i>	Positive		57651927		Lipoate-protein ligase A family protein	T
Hempel, 2011	<i>S. aureus</i>	Positive		57651396		Pyridoxal biosynthesis lyase PdxS	T
Hempel, 2011	<i>S. aureus</i>	Positive		57651672		Bifunctional 5,10-methylene-tetrahydrofolate dehydrogenase/ 5,10-methylene-tetrahydrofolate cyclohydrolase	T
Hempel, 2011	<i>S. aureus</i>	Positive		57650970		Biotin synthase	T
Zhang 2010	<i>S. oneidensis</i>	Negative	K4PSH5	414562066	SO_2756	Peroxiredoxin TsaA	V
Hempel, 2011	<i>S. aureus</i>	Positive		57652639		Alkyl hydroperoxide reductase subunit C	V
Hempel, 2011	<i>S. aureus</i>	Positive		57651946		superoxide dismutase	P
Hempel, 2011	<i>S. aureus</i>	Positive			SACOL 1952	Ferritins family protein	P
Boonjakuakul, 2007	<i>B. quintana</i>	Negative	Q6G0U6	49473798	fabB	3-Oxyacyl-(acyl-carrier-protein) synthase I	I, Q
Manfredi, 2011	<i>C. canimorsus</i>	Negative	F9YQW2	340621055	Ccan_02770	Acyl carrier protein	I, Q
Gibson 2010	<i>N. sennetsu</i>	Negative	Q2GDV8	88608089	NSE_0453	3-Oxoacyl-(acyl carrier protein) synthase II (FabF)	I, Q
Hempel, 2011	<i>S. aureus</i>	Positive		57650176		3-oxoacyl-ACP synthase	I, Q
Hempel, 2011	<i>S. aureus</i>	Positive		57651801		acyl carrier protein	I, Q
Boonjakuakul, 2007	<i>B. quintana</i>	Negative	Q6FZ64	49474483	carB	Carbamoyl-phosphate synthase large chain	E, F
Mao, 2011	<i>C. acetobutylicum</i>	Positive		gi 15895902		Carbamoyl-phosphate synthase	E, F

						large chain	
Zhang 2010	<i>S. oneidensis</i>	Negative	Q8E9E1	414562267	SO_4343	Serine-pyruvate aminotransferase AgxT	E, F
Mao, 2011	<i>C. acetobutylicum</i>	Positive		gi 15894106		Phosphoribosylpyrophosphate synthetase	F, E
Vecchiotti, 2012	<i>P. aeruginosa</i>	Negative	O87124	15596655	PA1458	CheA homolog	N, T
Han, 2012	<i>E. coli BL21</i>	Negative		gi 1788197	CheA	Fused chemotactic sensory histidine kinase in two-component regulatory system with CheB and CheY: sensory histidine kinase/signal sensing protein	N, T
Zhang 2010	<i>S. oneidensis</i>	Negative	Q8ECD6	24374719	SO_3207	Histidine kinase	N, T
Hempel, 2011	<i>S. aureus</i>	Positive		57650725		Dihydroxy-acid dehydratase	E, G
Hempel, 2011	<i>S. aureus</i>	Positive		57651691		Phosphocarrier protein HPr	T, G
Manfredi, 2011	<i>C. canimorsus</i>	Negative	F9YTR2	340622762	Ccan_19910	Branched-chain-amino-acid transaminase, Vegetative protein 85 homologue	E, H
Zhang 2010	<i>S. oneidensis</i>	Negative	Q8EET7	24373832	SO_2279	Acetolactate synthase	E, H
Zhang 2010	<i>S. oneidensis</i>	Negative	Q8E9D5	24375830	SO_4349	Ketol-acid reductoisomerase	E, H
Hempel, 2011	<i>S. aureus</i>	Positive		57650728		Ketol-acid reductoisomerase	E, H
Hempel, 2011	<i>S. aureus</i>	Positive		57650726		Acetolactate synthase large subunit	E, H
Hempel, 2011	<i>S. aureus</i>	Positive		57650371		Anthranilate synthase component I	E, H
Hempel, 2011	<i>S. aureus</i>	Positive		57650484		Acetyl-CoA carboxylase, biotin carboxyl carrier protein	H, I
Mao, 2011	<i>C. acetobutylicum</i>	Positive		gi 15893467		Response regulator, CheY-like receiver domain and HTH-type DNA binding domain	T, K
Mao, 2011	<i>C. acetobutylicum</i>	Positive		gi 15896682		DNA/RNA helicase, SNF2	K, L
Mao, 2011	<i>C. acetobutylicum</i>	Positive		gi 15894801		Fructokinase	K, G
Zhang 2010	<i>S. oneidensis</i>	Negative	Q8EIH7	24372451	SO_0862	D-3-phosphoglycerate dehydrogenase SerA	H, R
Hempel, 2011	<i>S. aureus</i>	Positive		57652022		D-3-phosphoglycerate dehydrogenase	H, R
Zhang 2010	<i>S. oneidensis</i>	Negative	Q8EGQ7	24373111	SO_1538	Isocitrate dehydrogenase NAD-dependent	C, E
Hempel, 2011	<i>S. aureus</i>	Positive		57650730		3-isopropylmalate dehydrogenase	C, E

COG categories²⁴

- C Energy production and conversion
- E Amino acid transport and metabolism
- F Nucleotide transport and metabolism
- G Carbohydrate transport and metabolism
- H Coenzyme transport and metabolism
- I Lipid transport and metabolism
- K Transcription

L	Replication, recombination and repair
N	Cell motility
P	Inorganic ion transport and metabolism
Q	Secondary metabolites biosynthesis, transport and catabolism
R	General function prediction only
T	Signal transduction mechanisms
V	Defense mechanisms

The Other Intracellular/Surface Moonlighting Protein Candidates that are not Included in
the COG Database

Author, Year	Species	Gram type	UniProt #	NCBI # or Reference sequence	Gene locus	Function description
Boonjakuak ul, 2007	<i>B. quintana</i>	Negative	Q6FZ43		ctrA	Cell cycle transcriptional regulator
Boonjakuak ul, 2007	<i>B. quintana</i>	Negative	Q6G0F7		prsA	Ribose-phosphate pyrophosphokinase
Boonjakuak ul, 2007	<i>B. quintana</i>	Negative	Q6G1E5		hrcA	Heat-inducible transcription repressor
Mao, 2011	<i>C. acetobutylicum</i>	Positive		gi 15896327		Phosphate butyryltransferase (Phosphotransbutyrylase)
Mao, 2011	<i>C. acetobutylicum</i>	Positive		gi 18266735		Pyruvate kinase
Mao, 2011	<i>C. acetobutylicum</i>	Positive		gi 3914324		Phosphoglycerate kinase alpha
Mao, 2011	<i>C. acetobutylicum</i>	Positive		gi 15895958		Inositol-5'-monophosphate dehydrogenase
Mao, 2011	<i>C. acetobutylicum</i>	Positive		gi 15895341	spo0A	Stage 0 sporulation protein A homolog
Mao, 2011	<i>C. acetobutylicum</i>	Positive		gi 15895023	plsX	Glycerol-3-phosphate acyltransferase PlsX
Mao, 2011	<i>C. acetobutylicum</i>	Positive		gi 15896376		50S ribosomal protein L16
Mao, 2011	<i>C. acetobutylicum</i>	Positive		gi 15896396		50S ribosomal protein L11
Vecchiatti, 2012	<i>P. aeruginosa</i>	Negative	P15276		algP algR3 PA5253	Transcriptional regulatory protein AlgP
Vecchiatti, 2012	<i>P. aeruginosa</i>	Negative	G3XCY4		amrZ PA3385	Alginate and motility regulator Z AmrZ
Gibson, 2010	<i>N. sennetsu</i>	Negative	Q2GDR7		NSE_0495	Heat shock protein HtpG
Zhang 2010	<i>S. oneidensis</i>	Negative	Q8EKR9	24371621	SO_0021	Fatty acid oxidation complex subunit alpha
Zhang 2010	<i>S. oneidensis</i>	Negative	Q8EK30		SO_0274	Phosphoenolpyruvate carboxylase
Zhang 2010	<i>S. oneidensis</i>	Negative	Q8EGS5	24373093	SO_1519	L-lactate dehydrogenase iron-sulfur cluster-binding protein LldF
Zhang 2010	<i>S. oneidensis</i>	Negative	Q8EGS4	24373094	SO_1520	L-lactate dehydrogenase complex protein LldE
Zhang 2010	<i>S. oneidensis</i>	Negative	Q8EAQ9	24375327	SO_3837	Ribose-phosphate pyrophosphokinase
Thein, 2010	<i>E. coli</i> BL21	Negative		253773763		Bifunctional acetaldehyde- CoA/alcohol dehydrogenase
Thein, 2010	<i>E. coli</i> BL21	Negative		253771754		Glycogen/starch/alpha-glucan phosphorylase
Thein, 2010	<i>E. coli</i> BL21	Negative		253775592		Transcription termination factor Rho
Thein, 2010	<i>E. coli</i> BL21	Negative		253775172		50S ribosomal protein L9
Thein, 2010	<i>E. coli</i> BL21	Negative		253771436		Chromosomal replication initiator protein DnaA
Thein, 2010	<i>E. coli</i> BL21	Negative		253771438		DNA replication and repair protein RecF
Thein, 2010	<i>E. coli</i> BL21	Negative		253771439		DNA gyrase, B subunit
Thein, 2010	<i>E. coli</i> BL21	Negative		253771451		Heat shock protein Hsp20

Thein, 2010	<i>E. coli</i> BL21	Negative		253771508		(p)ppGpp synthetase I, SpoT/RelA
Thein, 2010	<i>E. coli</i> BL21	Negative		253773135		Excinuclease ABC, C subunit
Thein, 2010	<i>E. coli</i> BL21	Negative		253771522		50S ribosomal protein L28
Thein, 2010	<i>E. coli</i> BL21	Negative		253771523		50S ribosomal protein L33
Thein, 2010	<i>E. coli</i> BL21	Negative		253771526		Three-deoxy-D-manno-octulosonic-acid transferase domain protein
Thein, 2010	<i>E. coli</i> BL21	Negative		253771540		2-amino-3-ketobutyrate coenzyme A ligase
Thein, 2010	<i>E. coli</i> BL21	Negative		253771541		L-threonine 3-dehydrogenase
Thein, 2010	<i>E. coli</i> BL21	Negative		253771605		Glycyl-tRNA synthetase, alpha subunit
Thein, 2010	<i>E. coli</i> BL21	Negative		253771606		Glycyl-tRNA synthetase, beta subunit
Thein, 2010	<i>E. coli</i> BL21	Negative		253771742		Glycogen/starch synthase, ADP-glucose type
Thein, 2010	<i>E. coli</i> BL21	Negative		253771745		FAD dependent oxidoreductase
Thein, 2010	<i>E. coli</i> BL21	Negative		253771755		4-alpha-glucanotransferase
Thein, 2010	<i>E. coli</i> BL21	Negative		253771768		Phosphoenolpyruvate carboxykinase (ATP)
Thein, 2010	<i>E. coli</i> BL21	Negative		253771813		Glutamine amidotransferase of anthranilate synthase
Thein, 2010	<i>E. coli</i> BL21	Negative		253771832		30S ribosomal protein S12
Thein, 2010	<i>E. coli</i> BL21	Negative		253771833		30S ribosomal protein S7
Thein, 2010	<i>E. coli</i> BL21	Negative		253771834		Translation elongation factor G
Thein, 2010	<i>E. coli</i> BL21	Negative		253771835		Translation elongation factor Tu
Thein, 2010	<i>E. coli</i> BL21	Negative		253771855		30S ribosomal protein S10
Thein, 2010	<i>E. coli</i> BL21	Negative		253771856		50S ribosomal protein L3
Thein, 2010	<i>E. coli</i> BL21	Negative		253771857		50S ribosomal protein L4
Thein, 2010	<i>E. coli</i> BL21	Negative		253771858		50S ribosomal protein L23
Thein, 2010	<i>E. coli</i> BL21	Negative		253771859		50S ribosomal protein L2
Thein, 2010	<i>E. coli</i> BL21	Negative		253771860		30S ribosomal protein S19
Thein, 2010	<i>E. coli</i> BL21	Negative		253771861		50S ribosomal protein L22
Thein, 2010	<i>E. coli</i> BL21	Negative		253771862		30S ribosomal protein S3
Thein, 2010	<i>E. coli</i> BL21	Negative		253771863		50S ribosomal protein L16
Thein, 2010	<i>E. coli</i> BL21	Negative		253771865		30S ribosomal protein S17
Thein, 2010	<i>E. coli</i> BL21	Negative		253771866		50S ribosomal protein L14
Thein, 2010	<i>E. coli</i> BL21	Negative		253771867		50S ribosomal protein L24
Thein, 2010	<i>E. coli</i> BL21	Negative		253771868		50S ribosomal protein L5
Thein, 2010	<i>E. coli</i> BL21	Negative		253771869		30S ribosomal protein S14
Thein, 2010	<i>E. coli</i> BL21	Negative		253771870		30S ribosomal protein S8
Thein, 2010	<i>E. coli</i> BL21	Negative		253771871		50S ribosomal protein L6
Thein, 2010	<i>E. coli</i> BL21	Negative		253771872		50S ribosomal protein L18
Thein, 2010	<i>E. coli</i> BL21	Negative		253771873		30S ribosomal protein S5
Thein, 2010	<i>E. coli</i> BL21	Negative		253771874		50S ribosomal protein L30
Thein, 2010	<i>E. coli</i> BL21	Negative		253771875		50S ribosomal protein L15

Thein, 2010	<i>E. coli</i> BL21	Negative		253771877		50S ribosomal protein L36
Thein, 2010	<i>E. coli</i> BL21	Negative		253771878		30S ribosomal protein S13
Thein, 2010	<i>E. coli</i> BL21	Negative		253771879		30S ribosomal protein S11
Thein, 2010	<i>E. coli</i> BL21	Negative		253771880		30S ribosomal protein S4
Thein, 2010	<i>E. coli</i> BL21	Negative		253771881		DNA-directed RNA polymerase, alpha subunit
Thein, 2010	<i>E. coli</i> BL21	Negative		253771882		50S ribosomal protein L17
Thein, 2010	<i>E. coli</i> BL21	Negative		253771914		Acetyl-CoA carboxylase, biotin carboxylase
Thein, 2010	<i>E. coli</i> BL21	Negative		253771915		Acetyl-CoA carboxylase, biotin carboxyl carrier protein
Thein, 2010	<i>E. coli</i> BL21	Negative		253771923		maf protein
Thein, 2010	<i>E. coli</i> BL21	Negative		253771924		Ribonuclease, Rne/Rng family
Thein, 2010	<i>E. coli</i> BL21	Negative		253771940		50S ribosomal protein L13
Thein, 2010	<i>E. coli</i> BL21	Negative		253771941		30S ribosomal protein S9
Thein, 2010	<i>E. coli</i> BL21	Negative		253771980		50S ribosomal protein L21
Thein, 2010	<i>E. coli</i> BL21	Negative		253771981		50S ribosomal protein L27
Thein, 2010	<i>E. coli</i> BL21	Negative		253771987		Ribosomal RNA large subunit methyltransferase J
Thein, 2010	<i>E. coli</i> BL21	Negative		253771993		Argininosuccinate synthase
Thein, 2010	<i>E. coli</i> BL21	Negative		253771995		NusA antitermination factor
Thein, 2010	<i>E. coli</i> BL21	Negative		253771996		Translation initiation factor IF-2
Thein, 2010	<i>E. coli</i> BL21	Negative		253771999		30S ribosomal protein S15
Thein, 2010	<i>E. coli</i> BL21	Negative		253772000		Polyribonucleotide nucleotidyltransferase
Thein, 2010	<i>E. coli</i> BL21	Negative		253772018		Uroporphyrin-III C/tetrapyrrole (Corrin/Porphyrin) methyltransferase
Thein, 2010	<i>E. coli</i> BL21	Negative		253772097		RNA polymerase, sigma 70 subunit, RpoD
Thein, 2010	<i>E. coli</i> BL21	Negative		253772099		30S ribosomal protein S21
Thein, 2010	<i>E. coli</i> BL21	Negative		253772110		Adenylate cyclase
Thein, 2010	<i>E. coli</i> BL21	Negative		253772112		rfaE bifunctional protein
Thein, 2010	<i>E. coli</i> BL21	Negative		253772132		DNA topoisomerase IV, B subunit
Thein, 2010	<i>E. coli</i> BL21	Negative		253772143		DNA topoisomerase IV, A subunit
Thein, 2010	<i>E. coli</i> BL21	Negative		253772151		2,5-didehydrogluconate reductase
Thein, 2010	<i>E. coli</i> BL21	Negative		253772220		S-adenosylmethionine synthetase
Thein, 2010	<i>E. coli</i> BL21	Negative		253772225		Transketolase
Thein, 2010	<i>E. coli</i> BL21	Negative		253772234		Phosphoglycerate kinase
Thein, 2010	<i>E. coli</i> BL21	Negative		253772235		Fructose-bisphosphate aldolase, class II
Thein, 2010	<i>E. coli</i> BL21	Negative		253772256		Glycine dehydrogenase
Thein, 2010	<i>E. coli</i> BL21	Negative		253772269		Lysyl-tRNA synthetase
Thein, 2010	<i>E. coli</i> BL21	Negative		253772290		PAS modulated sigma54 specific transcriptional regulator, Fis family
Thein, 2010	<i>E. coli</i> BL21	Negative		253772317		PTSINtr with GAF domain, PtsP
Thein, 2010	<i>E. coli</i> BL21	Negative		253772319		Thymidylate synthase

Thein, 2010	<i>E. coli</i> BL21	Negative		253772328		Amino-acid N-acetyltransferase
Thein, 2010	<i>E. coli</i> BL21	Negative		253772337		SAM-dependent methyltransferase-like protein
Thein, 2010	<i>E. coli</i> BL21	Negative		253772365		(p)ppGpp synthetase I, SpoT/RelA
Thein, 2010	<i>E. coli</i> BL21	Negative		253772370		Enolase
Thein, 2010	<i>E. coli</i> BL21	Negative		253772411		DNA mismatch repair protein MutS
Thein, 2010	<i>E. coli</i> BL21	Negative		253772418		Hydrogenase accessory protein HypB
Thein, 2010	<i>E. coli</i> BL21	Negative		253772440		Short-chain dehydrogenase/reductase SDR
Thein, 2010	<i>E. coli</i> BL21	Negative		253772446		recA protein
Thein, 2010	<i>E. coli</i> BL21	Negative		253772448		Alanyl-tRNA synthetase
Thein, 2010	<i>E. coli</i> BL21	Negative		253772497		30S ribosomal protein S16
Thein, 2010	<i>E. coli</i> BL21	Negative		253772498		16S rRNA processing protein RimM
Thein, 2010	<i>E. coli</i> BL21	Negative		253772500		50S ribosomal protein L19
Thein, 2010	<i>E. coli</i> BL21	Negative		253772512		ATP-dependent chaperone ClpB
Thein, 2010	<i>E. coli</i> BL21	Negative		253772518		Thioredoxin
Thein, 2010	<i>E. coli</i> BL21	Negative		253772519		tRNA/rRNA methyltransferase (SpoU)
Thein, 2010	<i>E. coli</i> BL21	Negative		253772524		DEAD/DEAH box helicase domain protein
Thein, 2010	<i>E. coli</i> BL21	Negative		253772534		Ribonuclease III
Thein, 2010	<i>E. coli</i> BL21	Negative		253772553		Glycine hydroxymethyltransferase
Thein, 2010	<i>E. coli</i> BL21	Negative		253772571		Inositol monophosphatase
Thein, 2010	<i>E. coli</i> BL21	Negative		253772574		cysteine desulfurase IscS
Thein, 2010	<i>E. coli</i> BL21	Negative		253772581		PepB aminopeptidase
Thein, 2010	<i>E. coli</i> BL21	Negative		253772588		Nucleoside-diphosphate kinase
Thein, 2010	<i>E. coli</i> BL21	Negative		253772589		radical SAM enzyme, Cfr family
Thein, 2010	<i>E. coli</i> BL21	Negative		253772591		1-hydroxy-2-methyl-2-(E)-butenyl 4-diphosphate synthase
Thein, 2010	<i>E. coli</i> BL21	Negative		253772592		Histidyl-tRNA synthetase
Thein, 2010	<i>E. coli</i> BL21	Negative		253772598		Inosine-5'-monophosphate dehydrogenase
Thein, 2010	<i>E. coli</i> BL21	Negative		253772599		Transcriptional regulator, XRE family
Thein, 2010	<i>E. coli</i> BL21	Negative		253772606		Ppx/GppA phosphatase
Thein, 2010	<i>E. coli</i> BL21	Negative		253772610		Uracil phosphoribosyltransferase
Thein, 2010	<i>E. coli</i> BL21	Negative		253772632		Phosphoribosylaminoimidazole-succinocarboxamide synthase
Thein, 2010	<i>E. coli</i> BL21	Negative		253772684		Phosphoenolpyruvate-protein phosphotransferase
Thein, 2010	<i>E. coli</i> BL21	Negative		253772690		DNA ligase, NAD-dependent
Thein, 2010	<i>E. coli</i> BL21	Negative		253772695		Glutamyl-tRNA synthetase
Thein, 2010	<i>E. coli</i> BL21	Negative		253772753		Beta-ketoacyl synthase
Thein, 2010	<i>E. coli</i> BL21	Negative		253772760		Acetyl-CoA carboxylase, carboxyl transferase, beta subunit
Thein, 2010	<i>E. coli</i> BL21	Negative		253772779		Phosphate acetyltransferase

Thein, 2010	<i>E. coli</i> BL21	Negative		253772780		Acetate kinase
Thein, 2010	<i>E. coli</i> BL21	Negative		253772786		Aminotransferase class I and II
Thein, 2010	<i>E. coli</i> BL21	Negative		253772820		Polysaccharide deacetylase
Thein, 2010	<i>E. coli</i> BL21	Negative		253772836		Glycerol-3-phosphate dehydrogenase, anaerobic, A subunit
Thein, 2010	<i>E. coli</i> BL21	Negative		253772843		Ribonucleoside-diphosphate reductase, alpha subunit
Thein, 2010	<i>E. coli</i> BL21	Negative		253772846		DNA gyrase, A subunit
Thein, 2010	<i>E. coli</i> BL21	Negative		253772856		Two component, sigma 54 specific, transcriptional regulator, Fis family
Thein, 2010	<i>E. coli</i> BL21	Negative		253772883		Two component transcriptional regulator, LuxR family
Thein, 2010	<i>E. coli</i> BL21	Negative		253772888		50S ribosomal protein L25
Thein, 2010	<i>E. coli</i> BL21	Negative		253772890		Pseudouridine synthase
Thein, 2010	<i>E. coli</i> BL21	Negative		253772921		GTP cyclohydrolase I
Thein, 2010	<i>E. coli</i> BL21	Negative		253772967		Hydroxyethylthiazole kinase
Thein, 2010	<i>E. coli</i> BL21	Negative		253772968		Phosphomethylpyrimidine kinase
Thein, 2010	<i>E. coli</i> BL21	Negative		253772976		D-tagatose-bisphosphate aldolase, class II, non-catalytic subunit
Thein, 2010	<i>E. coli</i> BL21	Negative		253772980		Alcohol dehydrogenase GroES domain protein
Thein, 2010	<i>E. coli</i> BL21	Negative		253773002		Uridine kinase
Thein, 2010	<i>E. coli</i> BL21	Negative		253773042		6-phosphogluconate dehydrogenase, decarboxylating
Thein, 2010	<i>E. coli</i> BL21	Negative		253773049		Histidinol-phosphatase
Thein, 2010	<i>E. coli</i> BL21	Negative		253773140		Ferroxidase
Thein, 2010	<i>E. coli</i> BL21	Negative		253773167		Arginyl-tRNA synthetase
Thein, 2010	<i>E. coli</i> BL21	Negative		253773189		Pyruvate kinase
Thein, 2010	<i>E. coli</i> BL21	Negative		253773190		Transcriptional regulator, RpiR family
Thein, 2010	<i>E. coli</i> BL21	Negative		253773192		Glucose-6-phosphate 1-dehydrogenase
Thein, 2010	<i>E. coli</i> BL21	Negative		253773214		ProQ activator of osmoprotectant transporter ProP
Thein, 2010	<i>E. coli</i> BL21	Negative		253773233		L-serine dehydratase 1
Thein, 2010	<i>E. coli</i> BL21	Negative		253773266		Glyceraldehyde-3-phosphate dehydrogenase, type I
Thein, 2010	<i>E. coli</i> BL21	Negative		253773281		Selenide, water dikinase
Thein, 2010	<i>E. coli</i> BL21	Negative		253773298		Acetylornithine and succinylornithine aminotransferase
Thein, 2010	<i>E. coli</i> BL21	Negative		253773326		Threonyl-tRNA synthetase
Thein, 2010	<i>E. coli</i> BL21	Negative		253773327		Translation initiation factor IF-3
Thein, 2010	<i>E. coli</i> BL21	Negative		253773328		50S ribosomal protein L35
Thein, 2010	<i>E. coli</i> BL21	Negative		253773329		50S ribosomal protein L20
Thein, 2010	<i>E. coli</i> BL21	Negative		253773333		Integration host factor, alpha subunit
Thein, 2010	<i>E. coli</i> BL21	Negative		253773340		Phospho-2-dehydro-3-deoxyheptonate aldolase
Thein, 2010	<i>E. coli</i> BL21	Negative		253773343		Phosphoenolpyruvate synthase

Thein, 2010	<i>E. coli</i> BL21	Negative		253773380		Cyclopropane-fatty-acyl-phospholipid synthase
Thein, 2010	<i>E. coli</i> BL21	Negative		253773403		Pyridoxamine 5'-phosphate oxidase
Thein, 2010	<i>E. coli</i> BL21	Negative		253773404		Tyrosyl-tRNA synthetase
Thein, 2010	<i>E. coli</i> BL21	Negative		253773420		Adenosine deaminase
Thein, 2010	<i>E. coli</i> BL21	Negative		253773433		Fumarate hydratase, class II
Thein, 2010	<i>E. coli</i> BL21	Negative		253773612		ATP-dependent helicase HrpA
Thein, 2010	<i>E. coli</i> BL21	Negative		253773712		Exoribonuclease II
Thein, 2010	<i>E. coli</i> BL21	Negative		253773729		DNA topoisomerase I
Thein, 2010	<i>E. coli</i> BL21	Negative		253773734		Pseudouridine synthase
Thein, 2010	<i>E. coli</i> BL21	Negative		253773739		Anthranilate phosphoribosyltransferase
Thein, 2010	<i>E. coli</i> BL21	Negative		253773763		D-tagatose-bisphosphate aldolase, class II, non-catalytic subunit
Thein, 2010	<i>E. coli</i> BL21	Negative		253773766		UTP-glucose-1-phosphate uridylyltransferase
Thein, 2010	<i>E. coli</i> BL21	Negative		253773794		Ribose-phosphate pyrophosphokinase
Thein, 2010	<i>E. coli</i> BL21	Negative		253773798		GTP-binding protein YchF
Thein, 2010	<i>E. coli</i> BL21	Negative		253773882		3-oxoacyl-(acyl-carrier-protein) synthase 2
Thein, 2010	<i>E. coli</i> BL21	Negative		253773884		3-oxoacyl-(acyl-carrier-protein) reductase
Thein, 2010	<i>E. coli</i> BL21	Negative		253773886		3-oxoacyl-(acyl-carrier-protein) synthase III
Thein, 2010	<i>E. coli</i> BL21	Negative		253773887		Fatty acid/phospholipid synthesis protein PlsX
Thein, 2010	<i>E. coli</i> BL21	Negative		253773888		50S ribosomal protein L32
Thein, 2010	<i>E. coli</i> BL21	Negative		253773891		Pseudouridine synthase, RluA family
Thein, 2011	<i>E. coli</i> BL21	Negative		253773892		Ribonuclease, Rne/Rng family
Thein, 2010	<i>E. coli</i> BL21	Negative		253773910		Ribosomal-protein-alanine N-acetyltransferase
Thein, 2010	<i>E. coli</i> BL21	Negative		253773956		Delta-1-pyrroline-5-carboxylate dehydrogenase
Thein, 2010	<i>E. coli</i> BL21	Negative		253774008		UvrD/REP helicase
Thein, 2010	<i>E. coli</i> BL21	Negative		253774041		Asparaginyl-tRNA synthetase
Thein, 2010	<i>E. coli</i> BL21	Negative		253774043		Aspartate transaminase
Thein, 2010	<i>E. coli</i> BL21	Negative		253774047		Chromosome segregation and condensation protein MukB domain protein
Thein, 2010	<i>E. coli</i> BL21	Negative		253774059		Integration host factor, beta subunit
Thein, 2010	<i>E. coli</i> BL21	Negative		253774060		30S ribosomal protein S1
Thein, 2010	<i>E. coli</i> BL21	Negative		253774068		Formate acetyltransferase
Thein, 2010	<i>E. coli</i> BL21	Negative		253774082		Transcriptional regulator, AsnC family
Thein, 2010	<i>E. coli</i> BL21	Negative		253774088		ATP-dependent Clp protease, ATP-binding subunit clpA
Thein, 2010	<i>E. coli</i> BL21	Negative		253774141		RNA-directed DNA polymerase
Thein, 2010	<i>E. coli</i> BL21	Negative		253774218		Excinuclease ABC, B subunit

Thein, 2010	<i>E. coli</i> BL21	Negative		253774281		Phosphoglycerate mutase 1 family
Thein, 2010	<i>E. coli</i> BL21	Negative		253774302		Succinyl-CoA synthetase, beta subunit
Thein, 2010	<i>E. coli</i> BL21	Negative		253774303		2-oxoglutarate dehydrogenase, E2 subunit, dihydrolipoamide succinyltransferase
Thein, 2010	<i>E. coli</i> BL21	Negative		253774304		2-oxoglutarate dehydrogenase, E1 subunit
Thein, 2010	<i>E. coli</i> BL21	Negative		253774310		Citrate synthase I
Thein, 2010	<i>E. coli</i> BL21	Negative		253774355		tRNA-i(6)A37 thiotransferase enzyme MiaB
Thein, 2010	<i>E. coli</i> BL21	Negative		253774372		Leucyl-tRNA synthetase
Thein, 2010	<i>E. coli</i> BL21	Negative		253774386		Lipoic acid synthetase
Thein, 2010	<i>E. coli</i> BL21	Negative		253774410		Peroxiredoxin
Thein, 2010	<i>E. coli</i> BL21	Negative		253774487		Peptidyl-prolyl cis-trans isomerase cyclophilin type
Thein, 2010	<i>E. coli</i> BL21	Negative		253774537		Heat shock protein Hsp90
Thein, 2010	<i>E. coli</i> BL21	Negative		253774569		Histone family protein DNA-binding protein
Thein, 2010	<i>E. coli</i> BL21	Negative		253774573		ATP-dependent Clp protease, ATP-binding subunit ClpX
Thein, 2010	<i>E. coli</i> BL21	Negative		253774574		ATP-dependent Clp protease, proteolytic subunit ClpP
Thein, 2010	<i>E. coli</i> BL21	Negative		253774592		Thiamine biosynthesis/tRNA modification protein ThiI
Thein, 2010	<i>E. coli</i> BL21	Negative		253774595		Deoxyxylulose-5-phosphate synthase
Thein, 2010	<i>E. coli</i> BL21	Negative		253774599		NusB antitermination factor
Thein, 2010	<i>E. coli</i> BL21	Negative		253774646		Porphobilinogen synthase
Thein, 2010	<i>E. coli</i> BL21	Negative		253774666		Transcriptional regulator, LacI family
Thein, 2010	<i>E. coli</i> BL21	Negative		253774731		Glutamate 5-kinase
Thein, 2010	<i>E. coli</i> BL21	Negative		253774738		Aminoacyl-histidine dipeptidase
Thein, 2010	<i>E. coli</i> BL21	Negative		253774778		Prolyl-tRNA synthetase
Thein, 2010	<i>E. coli</i> BL21	Negative		253774788		Acetyl-CoA carboxylase, carboxyl transferase, alpha subunit
Thein, 2010	<i>E. coli</i> BL21	Negative		253774789		DNA polymerase III, alpha subunit
Thein, 2010	<i>E. coli</i> BL21	Negative		253774793		Beta-hydroxyacyl-(acyl-carrier-protein) dehydratase FabZ
Thein, 2010	<i>E. coli</i> BL21	Negative		253774802		Uridylate kinase
Thein, 2010	<i>E. coli</i> BL21	Negative		253774803		Translation elongation factor Ts
Thein, 2010	<i>E. coli</i> BL21	Negative		253774804		30S ribosomal protein S2
Thein, 2010	<i>E. coli</i> BL21	Negative		253774807		2,3,4,5-tetrahydropyridine-2,6-dicarboxylate N-succinyltransferase
Thein, 2010	<i>E. coli</i> BL21	Negative		253774812		Deoxyguanosinetriphosphate triphosphohydrolase
Thein, 2010	<i>E. coli</i> BL21	Negative		253774818		Glutamate-1-semialdehyde-2,1-aminomutase
Thein, 2010	<i>E. coli</i> BL21	Negative		253774829		poly(A) polymerase
Thein, 2010	<i>E. coli</i> BL21	Negative		253774838		3-methyl-2-oxobutanoate hydroxymethyltransferase

Thein, 2010	<i>E. coli</i> BL21	Negative		253774851		Spermidine synthase
Thein, 2010	<i>E. coli</i> BL21	Negative		253774854		Aconitate hydratase 2
Thein, 2010	<i>E. coli</i> BL21	Negative		253774856		Dihydrolipoamide dehydrogenase
Thein, 2010	<i>E. coli</i> BL21	Negative		253774857		Pyruvate dehydrogenase complex dihydrolipoamide acetyltransferase
Thein, 2010	<i>E. coli</i> BL21	Negative		253774858		2-oxo-acid dehydrogenase E1 subunit, homodimeric type
Thein, 2010	<i>E. coli</i> BL21	Negative		253774859		Regulatory protein GntR HTH
Thein, 2010	<i>E. coli</i> BL21	Negative		253774874		UDP-3-0-acyl N-acetylglucosamine deacetylase
Thein, 2010	<i>E. coli</i> BL21	Negative		253774879		UDP-N-acetylmuramate/alanine ligase
Thein, 2010	<i>E. coli</i> BL21	Negative		253774888		S-adenosyl-methyltransferase MrkW
Thein, 2010	<i>E. coli</i> BL21	Negative		253774901		extracellular solute-binding protein family 5
Thein, 2010	<i>E. coli</i> BL21	Negative		253774911		SNF2-related protein
Thein, 2010	<i>E. coli</i> BL21	Negative		253774920		Dihydrofolate reductase
Thein, 2010	<i>E. coli</i> BL21	Negative		253774934		Carbamoyl-phosphate synthase, large subunit
Thein, 2010	<i>E. coli</i> BL21	Negative		253774935		Carbamoyl-phosphate synthase, small subunit
Thein, 2010	<i>E. coli</i> BL21	Negative		253774937		Dihydrodipicolinate reductase
Thein, 2010	<i>E. coli</i> BL21	Negative		253774942		Isoleucyl-tRNA synthetase
Thein, 2010	<i>E. coli</i> BL21	Negative		253774945		30S ribosomal protein S20
Thein, 2010	<i>E. coli</i> BL21	Negative		253774954		Chaperone protein DnaJ
Thein, 2010	<i>E. coli</i> BL21	Negative		253774955		Chaperone protein DnaK
Thein, 2010	<i>E. coli</i> BL21	Negative		253774960		Transaldolase
Thein, 2010	<i>E. coli</i> BL21	Negative		253774966		Aspartate kinase
Thein, 2010	<i>E. coli</i> BL21	Negative		253774980		Transcriptional regulator, XRE family
Thein, 2010	<i>E. coli</i> BL21	Negative		253775000		rRNA (guanine-N(2)-)-methyltransferase
Thein, 2010	<i>E. coli</i> BL21	Negative		253775029		Type I site-specific deoxyribonuclease
Thein, 2010	<i>E. coli</i> BL21	Negative		253775117		Leucyl aminopeptidase
Thein, 2010	<i>E. coli</i> BL21	Negative		253775119		Valyl-tRNA synthetase
Thein, 2010	<i>E. coli</i> BL21	Negative		253775135		Alpha, alpha-phosphotrehalase
Thein, 2010	<i>E. coli</i> BL21	Negative		253775137		Anaerobic ribonucleoside-triphosphate reductase
Thein, 2010	<i>E. coli</i> BL21	Negative		253775173		30S ribosomal protein S18
Thein, 2010	<i>E. coli</i> BL21	Negative		253775175		30S ribosomal protein S6
Thein, 2010	<i>E. coli</i> BL21	Negative		253775195		RNA methyltransferase, TrmH family, group 3
Thein, 2010	<i>E. coli</i> BL21	Negative		253775196		VacB and RNase II family 3'-5' exoribonuclease
Thein, 2010	<i>E. coli</i> BL21	Negative		253775198		Adenylosuccinate synthetase
Thein, 2010	<i>E. coli</i> BL21	Negative		253775202		GTP-binding proten HflX
Thein, 2010	<i>E. coli</i> BL21	Negative		253775203		RNA chaperone Hfq

Thein, 2010	<i>E. coli</i> BL21	Negative		253775229		Chaperonin GroEL
Thein, 2010	<i>E. coli</i> BL21	Negative		253775230		Chaperonin Cpn10
Thein, 2010	<i>E. coli</i> BL21	Negative		253775233		Aspartate ammonia-lyase
Thein, 2010	<i>E. coli</i> BL21	Negative		253775242		Lysyl-tRNA synthetase
Thein, 2010	<i>E. coli</i> BL21	Negative		253775303		Acetate/CoA ligase
Thein, 2010	<i>E. coli</i> BL21	Negative		253775313		Excinuclease ABC, A subunit
Thein, 2010	<i>E. coli</i> BL21	Negative		253775320		Replicative DNA helicase
Thein, 2010	<i>E. coli</i> BL21	Negative		253775357		Methionine synthase
Thein, 2010	<i>E. coli</i> BL21	Negative		253775358		Transcriptional regulator, IclR family
Thein, 2010	<i>E. coli</i> BL21	Negative		253775360		Isocitrate lyase
Thein, 2010	<i>E. coli</i> BL21	Negative		253775362		Homoserine O-succinyltransferase
Thein, 2010	<i>E. coli</i> BL21	Negative		253775370		Histone family protein DNA-binding protein
Thein, 2010	<i>E. coli</i> BL21	Negative		253775383		DNA-directed RNA polymerase, beta' subunit
Thein, 2010	<i>E. coli</i> BL21	Negative		253775384		DNA- directed RNA polymerase, beta subunit
Thein, 2010	<i>E. coli</i> BL21	Negative		253775385		50S ribosomal protein L7/L12
Thein, 2010	<i>E. coli</i> BL21	Negative		253775386		50S ribosomal protein L10
Thein, 2010	<i>E. coli</i> BL21	Negative		253775387		50S ribosomal protein L1
Thein, 2010	<i>E. coli</i> BL21	Negative		253775388		50S ribosomal protein L11
Thein, 2010	<i>E. coli</i> BL21	Negative		253775391		Translation elongation factor Tu
Thein, 2010	<i>E. coli</i> BL21	Negative		253775395		Glutamate racemase
Thein, 2010	<i>E. coli</i> BL21	Negative		253775405		Phosphoenolpyruvate carboxylase
Thein, 2010	<i>E. coli</i> BL21	Negative		253775430		Heat shock protein HslVU, ATPase subunit HslU
Thein, 2010	<i>E. coli</i> BL21	Negative		253775435		Glycerol kinase
Thein, 2010	<i>E. coli</i> BL21	Negative		253775436		Fructose-1,6-bisphosphatase, class II
Thein, 2010	<i>E. coli</i> BL21	Negative		253775496		Nitrogen metabolism transcriptional regulator, NtrC, Fis Family
Thein, 2010	<i>E. coli</i> BL21	Negative		253775545		5-methyltetrahydropteroyltriglutamate/homocysteine S-methyltransferase
Thein, 2010	<i>E. coli</i> BL21	Negative		253775594		Thioredoxin
Thein, 2010	<i>E. coli</i> BL21	Negative		253775597		ATP-dependent DNA helicase Rep
Thein, 2010	<i>E. coli</i> BL21	Negative		253775605		Acetolactate synthase, large subunit, biosynthetic type
Thein, 2010	<i>E. coli</i> BL21	Negative		253775621		Aspartate/ammonia ligase
Thein, 2010	<i>E. coli</i> BL21	Negative		253775657		Tryptophanase
Yu, 2012	<i>C. thermocellum</i>	Positive		gi 125975384		50S ribosomal protein L3
Yu, 2012	<i>C. thermocellum</i>	Positive		gi 125975203		50S ribosomal protein L1
Yu, 2012	<i>C. thermocellum</i>	Positive		gi 125975212		Elongation factor Tu(EF-Tu)*
Yu, 2012	<i>C. thermocellum</i>	Positive		gi 125974466		Alkyl hydroperoxide reductase
Yu, 2012	<i>C. thermocellum</i>	Positive		gi 125972577		Ribonucleotide-diphosphate reductase subunitalpha

Yu, 2012	<i>C. thermocellum</i>	Positive		gi 125972625		Iron-containing alcohol dehydrogenase
Yu, 2012	<i>C. thermocellum</i>	Positive		gi 125972661		Glyceraldehyde-3-phosphate dehydrogenase*
Yu, 2012	<i>C. thermocellum</i>	Positive		gi 125972662		Phosphoglycerate kinase*
Yu, 2012	<i>C. thermocellum</i>	Positive		gi 125972663		Triosephosphate isomerase*
Yu, 2012	<i>C. thermocellum</i>	Positive		gi 125972667		Enolase*
Yu, 2012	<i>C. thermocellum</i>	Positive		gi 125972703		Argininosuccinate synthase
Yu, 2012	<i>C. thermocellum</i>	Positive		gi 125972738		Phenylalanyl-tRNA synthetase, alpha subunit
Yu, 2012	<i>C. thermocellum</i>	Positive		gi 125972741		Glucose-6-phosphate isomerase*
Yu, 2012	<i>C. thermocellum</i>	Positive		gi 125972807		Isocitrate dehydrogenase
Yu, 2012	<i>C. thermocellum</i>	Positive		gi 125972816		Phosphoserine aminotransferase
Yu, 2012	<i>C. thermocellum</i>	Positive		gi 125972865		Malate dehydrogenase
Yu, 2012	<i>C. thermocellum</i>	Positive		gi 125972866		Malate dehydrogenase (NAD)
Yu, 2012	<i>C. thermocellum</i>	Positive		gi 125972868		6-phosphofructokinase*
Yu, 2012	<i>C. thermocellum</i>	Positive		gi 125972870		Fructose-bisphosphate aldolase*
Yu, 2012	<i>C. thermocellum</i>	Positive		gi 125972895		Glutamate dehydrogenase
Yu, 2012	<i>C. thermocellum</i>	Positive		gi 125972896		Bifunctional GMP synthase/glutamineamidotransferase protein
Yu, 2012	<i>C. thermocellum</i>	Positive		gi 125972939		Polynucleotide phosphorylase/polyadenylase
Yu, 2012	<i>C. thermocellum</i>	Positive		gi 125972944		Bifunctional acetaldehyde-CoA/alcohol dehydrogenase
Yu, 2012	<i>C. thermocellum</i>	Positive		gi 125973133		Phenylacetate-CoA ligase
Yu, 2012	<i>C. thermocellum</i>	Positive		gi 125973219		Oxaloacetate decarboxylase
Yu, 2012	<i>C. thermocellum</i>	Positive		gi 125973232		4-hydroxy-3-methylbut-2-enyl diphosphatereductase
Yu, 2012	<i>C. thermocellum</i>	Positive		gi 125973238		Aminotransferase, class V
Yu, 2012	<i>C. thermocellum</i>	Positive		gi 125973240		tRNA (5-methylaminomethyl-2-thiouridylate)-methyltransferase
Yu, 2012	<i>C. thermocellum</i>	Positive		gi 125973250		Chorismate synthase
Yu, 2012	<i>C. thermocellum</i>	Positive		gi 125973273		Aspartate aminotransferase
Yu, 2012	<i>C. thermocellum</i>	Positive		gi 125973382		3-methyl-2-oxobutanoate dehydrogenase
Yu, 2012	<i>C. thermocellum</i>	Positive		gi 125973418		Pantothenate synthetase
Yu, 2012	<i>C. thermocellum</i>	Positive		gi 125973439		Diaminopimelate dehydrogenase
Yu, 2012	<i>C. thermocellum</i>	Positive		gi 125973468		Orotidine 5'-phosphate decarboxylase
Yu, 2012	<i>C. thermocellum</i>	Positive		gi 125973478		Aspartate semialdehyde dehydrogenase
Yu, 2012	<i>C. thermocellum</i>	Positive		gi 125973520		Translation elongation factor Ts (EF-Ts)*
Yu, 2012	<i>C. thermocellum</i>	Positive		gi 125973521		SSU ribosomal protein S2P
Yu, 2012	<i>C. thermocellum</i>	Positive		gi 125973543		Acetate kinase
Yu, 2012	<i>C. thermocellum</i>	Positive		gi 125973544		Phosphotransacetylase
Yu, 2012	<i>C. thermocellum</i>	Positive		gi 125973550		DNA ligase, NAD-dependent

Yu, 2012	<i>C. thermocellum</i>	Positive		gi 125973573		Serine hydroxymethyltransferase
Yu, 2012	<i>C. thermocellum</i>	Positive		gi 125973608		Methenyltetrahydrofolate cyclohydrolase
Yu, 2012	<i>C. thermocellum</i>	Positive		gi 125973678		Phosphoglucosamine mutase
Yu, 2012	<i>C. thermocellum</i>	Positive		gi 125973726		Tryptophan synthase subunit beta
Yu, 2012	<i>C. thermocellum</i>	Positive		gi 125973761		Bifunctional phosphoribosylaminoimidazolecarboxamide formyl transferase/IMP cyclohydrolase
Yu, 2012	<i>C. thermocellum</i>	Positive		gi 125973776		6-phosphofructokinase*
Yu, 2012	<i>C. thermocellum</i>	Positive		gi 125973823		Pyruvate phosphate dikinase
Yu, 2012	<i>C. thermocellum</i>	Positive		gi 125973837		Molecular chaperone DnaK*
Yu, 2012	<i>C. thermocellum</i>	Positive		gi 125973926		Tryptophan synthase subunit beta
Yu, 2012	<i>C. thermocellum</i>	Positive		gi 125974068		Cystathionine gamma-lyase
Yu, 2012	<i>C. thermocellum</i>	Positive		gi 125974069		Cystathionine beta-synthase
Yu, 2012	<i>C. thermocellum</i>	Positive		gi 125974074		Nitrogenase
Yu, 2012	<i>C. thermocellum</i>	Positive		gi 125974075		Nitrogenase
Yu, 2012	<i>C. thermocellum</i>	Positive		gi 125974078		O-acetylhomoserine aminocarboxypropyltransferase
Yu, 2012	<i>C. thermocellum</i>	Positive		gi 125974082		Nitrogenase iron protein subunit NifH
Yu, 2012	<i>C. thermocellum</i>	Positive		gi 125974298		Translation elongation factor 2 (EF-2/EF-G)*
Yu, 2012	<i>C. thermocellum</i>	Positive		gi 125974299		3-deoxy-D-arabinoheptulosonate-7-phosphate synthase
Yu, 2012	<i>C. thermocellum</i>	Positive		gi 125974344		Cysteine synthase
Yu, 2012	<i>C. thermocellum</i>	Positive		gi 125974346		O-acetylhomoserine/O-acetylserine sulfhydrylase
Yu, 2012	<i>C. thermocellum</i>	Positive		gi 125974367		N-acetyl-gamma-glutamyl-phosphate reductase
Yu, 2012	<i>C. thermocellum</i>	Positive		gi 125974368		Acetylglutamate kinase
Yu, 2012	<i>C. thermocellum</i>	Positive		gi 125974371		Carbamoyl-phosphate synthase small subunit
Yu, 2012	<i>C. thermocellum</i>	Positive		gi 125974373		Ornithine carbamoyltransferase
Yu, 2012	<i>C. thermocellum</i>	Positive		gi 125974447		FAD-dependent pyridine nucleotide-disulphide oxidoreductase
Yu, 2012	<i>C. thermocellum</i>	Positive		gi 125974547		CRISPR-associated TM1812 family protein
Yu, 2012	<i>C. thermocellum</i>	Positive		gi 125974586		Methionyl-tRNA synthetase
Yu, 2012	<i>C. thermocellum</i>	Positive		gi 125974659		Transcription termination factor Rho
Yu, 2012	<i>C. thermocellum</i>	Positive		gi 125974668		UDP-glucose pyrophosphorylase
Yu, 2012	<i>C. thermocellum</i>	Positive		gi 125974696		3-isopropylmalate dehydratase large subunit
Yu, 2012	<i>C. thermocellum</i>	Positive		gi 125974736		Methionine adenosyltransferase
Yu, 2012	<i>C. thermocellum</i>	Positive		gi 125974841		Quinolinate synthetase A
Yu, 2012	<i>C. thermocellum</i>	Positive		gi 125974857		DNA polymerase III subunit beta
Yu, 2012	<i>C. thermocellum</i>	Positive		gi 125974866		Seryl-tRNA synthetase
Yu, 2012	<i>C. thermocellum</i>	Positive		gi 125974875		Pyruvate ferredoxin oxidoreductase,

						gamma subunit
Yu, 2012	<i>C. thermocellum</i>	Positive		gi 125974877		Pyruvate ferredoxin oxidoreductase, alpha subunit
Yu, 2012	<i>C. thermocellum</i>	Positive		gi 125975003		Ketol-acid reductoisomerase
Yu, 2012	<i>C. thermocellum</i>	Positive		gi 125975076		Peptide chain release factor 1
Yu, 2012	<i>C. thermocellum</i>	Positive		gi 125975111		UDP-N-acetylglucosamine pyrophosphorylase /glucosamine-1-phosphate N-acetyltransferase
Yu, 2012	<i>C. thermocellum</i>	Positive		gi 125975112		Ribose-phosphate pyrophosphokinase
Yu, 2012	<i>C. thermocellum</i>	Positive		gi 125975186		Transketolase subunit A
Yu, 2012	<i>C. thermocellum</i>	Positive		gi 125975195		Dihydroxyacid dehydratase
Yu, 2012	<i>C. thermocellum</i>	Positive		gi 125975207		DNA-directed RNA polymerase subunit beta
Yu, 2012	<i>C. thermocellum</i>	Positive		gi 125975211		Translation elongation factor 2 (EF-2/EF-G)*
Yu, 2012	<i>C. thermocellum</i>	Positive		gi 125975355		Phosphoenolpyruvate carboxykinase*
Yu, 2012	<i>C. thermocellum</i>	Positive		gi 125975373		Chaperonin GroEL*
Yu, 2012	<i>C. thermocellum</i>	Positive		gi 125975405		Adenylate kinase
Yu, 2012	<i>C. thermocellum</i>	Positive		gi 125975413		DNA-directed RNA polymerase, alpha subunit
Yu, 2012	<i>C. thermocellum</i>	Positive		gi 125975506		Methylcitrate synthase
Yu, 2012	<i>C. thermocellum</i>	Positive		gi 125975514		D-3-phosphoglycerate dehydrogenase
Yu, 2012	<i>C. thermocellum</i>	Positive		gi 125975571		Adenylosuccinate synthetase
Yu, 2012	<i>C. thermocellum</i>	Positive		gi 125975635		Pyruvate carboxyltransferase
Yu, 2012	<i>C. thermocellum</i>	Positive		gi 125975636		Aconitate hydratase
Sears, 2012	<i>R. typhi</i>	Negative	Q68XV6		RT0049	Elongation factor Ts, tfs
Sears, 2012	<i>R. typhi</i>	Negative	Q68XR2		RT0094	ATP-binding ClpB chaperone
Sears, 2012	<i>R. typhi</i>	Negative	Q8KTB2		RT0121	Elongation factor G, fusA
Sears, 2012	<i>R. typhi</i>	Negative	Q68XI2		RT0176	Chaperone protein DnaK
Sears, 2012	<i>R. typhi</i>	Negative	Q68XG5		RT0193	Excinuclease ABC subunit B, uvrB
Sears, 2012	<i>R. typhi</i>	Negative	O33582		RT0198	Methionyl-tRNA formyltransferase, fmt
Sears, 2012	<i>R. typhi</i>	Negative	Q68XE8		RT0212	Threonine--tRNA ligase, thrS
Sears, 2012	<i>R. typhi</i>	Negative	Q68XB3		RT0248	Ribonuclease E, rne
Sears, 2012	<i>R. typhi</i>	Negative	Q68XA9		RT0252	Pyruvate decarboxylase, pdhA
Sears, 2012	<i>R. typhi</i>	Negative	Q68WU5		RT0420	Succinyl-CoA synthetase subunit beta, sucC
Sears, 2012	<i>R. typhi</i>	Negative	Q68WR9		RT0447	Dihydrolipoamide dehydrogenase, pdhD1
Sears, 2012	<i>R. typhi</i>	Negative	Q68WN2		RT0488	30S ribosomal protein S15
Sears, 2012	<i>R. typhi</i>	Negative	Q68WM5		RT0495	tRNA delta(2)-isopentenylpyrophosphate transferase
Sears, 2012	<i>R. typhi</i>	Negative	Q68WK2		RT0521	Biotin-protein ligase, birA
Sears, 2012	<i>R. typhi</i>	Negative	Q68WF6		RT0569	DNA topoisomerase II subunit B, gyrB
Sears, 2012	<i>R. typhi</i>	Negative	Q68WE3		RT0584	D-alanine ligase, murF

Sears, 2012	<i>R. typhi</i>	Negative	Q68WD4		RT0593	Peptidyl-tRNA hydrolase, pth
Sears, 2012	<i>R. typhi</i>	Negative	O85754		RT0617	60 kDa chaperonin/chaperonin GroEL
Sears, 2012	<i>R. typhi</i>	Negative	Q68W91		RT0638	30S ribosomal protein S14, rpsN
Sears, 2012	<i>R. typhi</i>	Negative	Q8KT95		RT0653	Elongation factor Tu, tuf
Sears, 2012	<i>R. typhi</i>	Negative	Q68W74		RT0657	Fumarase C, fumC
Sears, 2012	<i>R. typhi</i>	Negative	Q68W66		RT0666	Dimethyladenosine transferase, ksgA
Sears, 2012	<i>R. typhi</i>	Negative	Q68W63		RT0669	Exodeoxyribonuclease VII large subunit, xseA
Sears, 2012	<i>R. typhi</i>	Negative	Q68W61		RT0671	Exodeoxyribonuclease III, xthA2
Sears, 2012	<i>R. typhi</i>	Negative	Q68W54		RT0678	Methionine--tRNA ligase, metG
Sears, 2012	<i>R. typhi</i>	Negative	Q68W53		RT0679	Thymidylate kinase, tmk
Sears, 2012	<i>R. typhi</i>	Negative	Q68W07		RT0728	Serine hydroxymethyltransferase, glyA
Sears, 2012	<i>R. typhi</i>	Negative	Q68VY6		RT0749	Acyl carrier protein, acpP
Sears, 2012	<i>R. typhi</i>	Negative	Q68VT2		RT0805	Site-specific tyrosine recombinase, xerC
Sears, 2012	<i>R. typhi</i>	Negative	Q68Y04		RT0817	Ferredoxin, fdxA
Sears, 2012	<i>R. typhi</i>	Negative	Q68VQ5		RT0847	RNA polymerase sigma factor, rpoD
Pornwiroon, 2009	<i>R. parkeri</i>	Negative		15892097		Elongation factor G
Pornwiroon, 2009	<i>R. parkeri</i>	Negative		34580431		Polyribonucleotide nucleotidyltransferase
Pornwiroon, 2009	<i>R. parkeri</i>	Negative		34580431		Polyribonucleotide nucleotidyltransferase
Pornwiroon, 2009	<i>R. parkeri</i>	Negative		34580814		DnaK protein
Pornwiroon, 2009	<i>R. parkeri</i>	Negative		15892891		Chaperonin GroEL
Pornwiroon, 2009	<i>R. parkeri</i>	Negative		34580862		Aminopeptidase A
Pornwiroon, 2009	<i>R. parkeri</i>	Negative		34581103		Trigger factor
Pornwiroon, 2009	<i>R. parkeri</i>	Negative		15893105		Recombinase A
Pornwiroon, 2009	<i>R. parkeri</i>	Negative		34580487		Succinyl-CoA synthetase alpha chain
Pornwiroon, 2009	<i>R. parkeri</i>	Negative		15892374		Thioredoxin peroxidase 1
Pornwiroon, 2009	<i>R. parkeri</i>	Negative		34581077		Transcription elongation factor EF
Portillo, 2011	<i>L. monocytogenes</i>	Positive	Q9AGE6		lmo2068	Class I heat-shock protein (chaperonin) GroEL (groEL)*
Portillo, 2011	<i>L. monocytogenes</i>	Positive	P0DJM2		lmo1473	Class I heat-shock protein (molecular chaperone) DnaK (dnaK)*
Portillo, 2011	<i>L. monocytogenes</i>	Positive	Q8Y4I1		lmo2459	Glyceraldehyde 3-phosphate dehydrogenase (gap)*
Portillo, 2011	<i>L. monocytogenes</i>	Positive	P64074		lmo2455	Enolase (eno)*
Portillo, 2011	<i>L. monocytogenes</i>	Positive	Q8Y6M7		lmo1657	Translation elongation factor (tsf)*

Portillo, 2011	<i>L. monocytogenes</i>	Positive	Q8Y8G1		lmo0943	Non-heme iron-binding ferritin (fri)
Portillo, 2011	<i>L. monocytogenes</i>	Positive	Q8Y6W1		lmo1570	Pyruvate kinases (pykA)
Portillo, 2011	<i>L. monocytogenes</i>	Positive	Q8Y498		lmo2556	Similar to fructose-1,6-bisphosphate aldolase (fbaA)
Portillo, 2011	<i>L. monocytogenes</i>	Positive	Q92A74		lmo1934	Similar to non-specific DNA-binding protein HU (hup)
Portillo, 2011	<i>L. monocytogenes</i>	Positive	Q8Y570		lmo2206	Chaperon protein ClpB
Portillo, 2011	<i>L. monocytogenes</i>	Positive	C6ZWF9		lmo1054	Pyruvate dehydrogenase (dihydrolipoamide acetyltransferase E2 subunit) (pdhC)
Portillo, 2011	<i>L. monocytogenes</i>	Positive	Q8YAC3		lmo0223	Cysteine synthase (cysK)
Portillo, 2011	<i>L. monocytogenes</i>	Positive	Q8Y440		lmo2632	50S ribosomal protein L3 (rplC)
Portillo, 2011	<i>L. monocytogenes</i>	Positive	P0DJP0		lmo1398	Recombination protein recA (recA)
Portillo, 2011	<i>L. monocytogenes</i>	Positive	P60426		lmo2629	50S ribosomal protein L2 (rplB)
Portillo, 2011	<i>L. monocytogenes</i>	Positive	Q8Y3P9		lmo2785	Catalase (kat)
Portillo, 2011	<i>L. monocytogenes</i>	Positive	Q8Y7L0		lmo1267	Trigger factor (prolyl isomerase) (tig)
Portillo, 2011	<i>L. monocytogenes</i>	Positive	Q8Y6W0		lmo1571	ATP-dependent 6-phosphofructokinase (pfk)
Portillo, 2011	<i>L. monocytogenes</i>	Positive	Q8Y4I2		lmo2458	Phosphoglycerate kinase (pgk)
Portillo, 2011	<i>L. monocytogenes</i>	Positive	Q8Y6T2		lmo1600	3-deoxy-D-arabino-heptulosonate 7-phosphate synthase (aroA)
Portillo, 2011	<i>L. monocytogenes</i>	Positive	Q8Y421		lmo2654	Translation elongation factor G (fus)*
Portillo, 2011	<i>L. monocytogenes</i>	Positive	Q8Y862		lmo1055	Dihydrolipoamide dehydrogenase, E3 subunit of pyruvate dehydrogenase complex (PdhD)
Portillo, 2011	<i>L. monocytogenes</i>	Positive	Q8Y6M6		lmo1658	30S ribosomal protein S2 (rpsB)
Portillo, 2011	<i>L. monocytogenes</i>	Positive	Q8Y9G8		lmo0560	Glutamate dehydrogenase
Portillo, 2011	<i>L. monocytogenes</i>	Positive	Q8Y458		lmo2597	50S ribosomal protein L13 (rplM)
Portillo, 2011	<i>L. monocytogenes</i>	Positive	Q8Y7H4		lmo1305	Transketolase (tkt)
Portillo, 2011	<i>L. monocytogenes</i>	Positive	Q8Y9I9		lmo0539	Tagatose-1,6-diphosphate aldolase
Portillo, 2011	<i>L. monocytogenes</i>	Positive	Q8Y6Y9		lmo1542	50S ribosomal protein L21 (rplU)
Portillo, 2011	<i>L. monocytogenes</i>	Positive	Q8Y5X5		lmo1928	Chorismate synthase (aroF)
Portillo, 2011	<i>L. monocytogenes</i>	Positive	Q926Y9		lmo2758	Inosine-monophosphate dehydrogenase (guaB)
Portillo, 2011	<i>L. monocytogenes</i>	Positive	Q8Y8D0		lmo0978	Branched-chain amino acid aminotransferase

Portillo, 2011	<i>L. monocytogenes</i>	Positive	Q8Y8N0		lmo0866	ATP-dependent RNA helicase
Portillo, 2011	<i>L. monocytogenes</i>	Positive	Q8Y446		lmo2615	30S ribosomal protein S5 (rpsE)
Portillo, 2011	<i>L. monocytogenes</i>	Positive	Q8Y4R7		lmo2367	Glucose-6-phosphate isomerase (pgi)
Portillo, 2011	<i>L. monocytogenes</i>	Positive	Q9AGE7		lmo2069	Class I heat-shock protein (chaperonin) GroES (groES)
Portillo, 2011	<i>L. monocytogenes</i>	Positive	Q8YAA3		lmo0251	50S ribosomal protein L12 (rplL)
Portillo, 2011	<i>L. monocytogenes</i>	Positive	Q8YAB6		lmo0232	Endopeptidase Clp ATP-binding chain C (clpC)
Portillo, 2011	<i>L. monocytogenes</i>	Positive	P66352		lmo2607	30S ribosomal protein S11 (rpsK)
Portillo, 2011	<i>L. monocytogenes</i>	Positive	Q8Y4M3		lmo2414	Aminotransferase
Portillo, 2011	<i>L. monocytogenes</i>	Positive	Q8Y6L1		lmo1673	Dihydroxynaphthoic acid synthetase (menB)
Portillo, 2011	<i>L. monocytogenes</i>	Positive	Q8YA96		lmo0259	RNA polymerase (beta subunit) (rpoC)
Portillo, 2011	<i>L. monocytogenes</i>	Positive	Q8Y846		lmo1072	Pyruvate carboxylase (pycA)
Portillo, 2011	<i>L. monocytogenes</i>	Positive	P33380		lmo0210	L-lactate dehydrogenase (ldh)
Portillo, 2011	<i>L. monocytogenes</i>	Positive	Q8Y7B0		lmo1376	6-phosphogluconate dehydrogenase
Portillo, 2011	<i>L. monocytogenes</i>	Positive	Q8Y722		lmo1504	Alanyl-tRNA synthetase (alaS)
Portillo, 2011	<i>L. monocytogenes</i>	Positive	P66699		lmo2606	RNA polymerase (alpha subunit) (rpoA)
Portillo, 2011	<i>L. monocytogenes</i>	Positive	Q8YAA4		lmo0249	50S ribosomal protein L1 (rplA)
Portillo, 2011	<i>L. monocytogenes</i>	Positive	P66330		lmo2633	30S ribosomal protein S10 (rpsJ)
Portillo, 2011	<i>L. monocytogenes</i>	Positive	Q8Y5W7		lmo1938	ribosomal protein S1 like protein
Portillo, 2011	<i>L. monocytogenes</i>	Positive	P66372		lmo2656	30S ribosomal protein S12 (rpsL)
Portillo, 2011	<i>L. monocytogenes</i>	Positive	Q9RQI6		lmo2468	ATP-dependent Clp protease proteolytic subunit (clpP)
Portillo, 2011	<i>L. monocytogenes</i>	Positive	P66611		lmo2655	30S ribosomal protein S7 (rpsG)
Portillo, 2011	<i>L. monocytogenes</i>	Positive	Q9RLT9		lmo0258	RNA polymerase (beta subunit) (rpoB)
Portillo, 2011	<i>L. monocytogenes</i>	Positive	Q8Y709		lmo1519	Aspartyl-tRNA synthetase (aspS)
Portillo, 2011	<i>L. monocytogenes</i>	Positive	P66042		lmo0250	50S ribosomal protein L10 (rplJ)
Portillo, 2011	<i>L. monocytogenes</i>	Positive	Q8Y6C5		lmo1765	Bifunctional phosphoribosylaminoimidazole carboxy formyl formyltransferase and inosine-monophosphate cyclohydrolase (purH)
Portillo, 2011	<i>L. monocytogenes</i>	Positive	Q8Y6V2		lmo1579	Alanine dehydrogenase

Portillo, 2011	<i>L. monocytogenes</i>	Positive	Q8Y6D3		lmo1754	Glutamyl-tRNA(Gln) amidotransferase (subunit B) (gatB)
Portillo, 2011	<i>L. monocytogenes</i>	Positive	Q8Y7Y1		lmo1138	ATP-dependent Clp protease proteolytic component
Portillo, 2011	<i>L. monocytogenes</i>	Positive	Q8Y7F6		lmo1325	Translation initiation factor IF-2 (infB)
Portillo, 2011	<i>L. monocytogenes</i>	Positive	P66054		lmo0248	50S ribosomal protein L11 (rplK)
Portillo, 2011	<i>L. monocytogenes</i>	Positive	O53083		lmo1787	50S ribosomal protein L19 (rplS)
Portillo, 2011	<i>L. monocytogenes</i>	Positive	Q8Y4I3		lmo2457	Triose phosphate isomerase (tpi)
Portillo, 2011	<i>L. monocytogenes</i>	Positive	Q8Y7J7		lmo1280	GTP-sensing transcriptional pleiotropic repressor CodY
Portillo, 2011	<i>L. monocytogenes</i>	Positive	Q8Y7F1		lmo1331	Polynucleotide phosphorylase (PNPase) (pnpA)
Portillo, 2011	<i>L. monocytogenes</i>	Positive	Q8Y6D2		lmo1755	Glutamyl-tRNA(Gln) amidotransferase (subunit A) (gatA)
Portillo, 2011	<i>L. monocytogenes</i>	Positive	Q8Y8I9		lmo0913	Succinate semialdehyde dehydrogenase
Portillo, 2011	<i>L. monocytogenes</i>	Positive	Q92AU6		lmo1711	Aminopeptidases
Portillo, 2011	<i>L. monocytogenes</i>	Positive	Q927L9		lmo2620	50S ribosomal protein L5 (rplE)
Portillo, 2011	<i>L. monocytogenes</i>	Positive	P66548		lmo2626	30S ribosomal protein S3 (rpsC)
Portillo, 2011	<i>L. monocytogenes</i>	Positive	Q8Y6T6		lmo1596	30S ribosomal protein S4 (rpsD)
Portillo, 2011	<i>L. monocytogenes</i>	Positive	P66484		lmo2628	30S ribosomal protein S19 (rpsS)
Portillo, 2011	<i>L. monocytogenes</i>	Positive	Q8Y822		lmo1096	GMP synthetase (guaA)
Portillo, 2011	<i>L. monocytogenes</i>	Positive	Q8YAB3		lmo0237	Glutamyl-tRNA synthetase (gltX)
Portillo, 2011	<i>L. monocytogenes</i>	Positive	Q8Y766		lmo1435	Dihydrodipicolinate synthase
Portillo, 2011	<i>L. monocytogenes</i>	Positive	Q8Y665		lmo1835	Carbamoyl-phosphate synthetase (catalytic subunit) (pyrAB)
Portillo, 2011	<i>L. monocytogenes</i>	Positive	Q8Y971		lmo0662	Phosphomethylpyrimidine kinase thiD (thiD)
Portillo, 2011	<i>L. monocytogenes</i>	Positive	Q8Y450		lmo2605	50S ribosomal protein L17 (rplQ)
Portillo, 2011	<i>L. monocytogenes</i>	Positive	Q8Y4G8		lmo2475	Phosphomannomutase and phosphoglucomutase
Portillo, 2011	<i>L. monocytogenes</i>	Positive	Q8Y6R4		lmo1620	Xaa-His dipeptidase
Portillo, 2011	<i>L. monocytogenes</i>	Positive	Q8Y7I0		lmo1299	Glutamine synthetases (glnA)
Portillo, 2011	<i>L. monocytogenes</i>	Positive	Q8Y6V0		lmo1581	Acetate kinase (ackA)
Portillo, 2011	<i>L. monocytogenes</i>	Positive	Q8Y583		lmo2188	Oligoendopeptidase
Portillo, 2011	<i>L. monocytogenes</i>	Positive	Q8Y7K9		lmo1268	ATP-dependent Clp protease ATP-binding subunit ClpX (clpX)

Portillo, 2011	<i>L. monocytogenes</i>	Positive	Q8Y6B1		lmo1780	Aminotripeptidase (peptidase T)
Portillo, 2011	<i>L. monocytogenes</i>	Positive	Q8Y6B8		lmo1773	Adenylosuccinate lyase (purB)
Portillo, 2011	<i>L. monocytogenes</i>	Positive	Q8Y5B2		lmo2155	Ribonucleoside-diphosphate reductase, subunit alpha
Portillo, 2011	<i>L. monocytogenes</i>	Positive	Q8Y6X9		lmo1552	Valyl-tRNA synthetase (valS)
Portillo, 2011	<i>L. monocytogenes</i>	Positive	Q8YAB8		lmo0228	Lysyl-tRNA synthetase (lysS)
Portillo, 2011	<i>L. monocytogenes</i>	Positive	P0A3L1		lmo1785	Translation initiation factor IF-3 (infC)
Portillo, 2011	<i>L. monocytogenes</i>	Positive	Q8Y915		lmo0727	L-glutamine-D-fructose-6-phosphate amidotransferase
Portillo, 2011	<i>L. monocytogenes</i>	Positive	Q8Y8A1		lmo1011	Tetrahydrodipicolinate succinylase
Portillo, 2011	<i>L. monocytogenes</i>	Positive	Q8Y789		lmo1403	DNA mismatch repair (recognition) (mutS)
Portillo, 2011	<i>L. monocytogenes</i>	Positive	Q8Y6N9		lmo1645	ATP-dependent dsDNA exonuclease SbcC
Portillo, 2011	<i>L. monocytogenes</i>	Positive	P66383		lmo2608	30S ribosomal protein S13 (rpsM)
Portillo, 2011	<i>L. monocytogenes</i>	Positive	Q8YAW1		lmo0002	DNA polymerase III, beta chain (dnaN)
Portillo, 2011	<i>L. monocytogenes</i>	Positive	P66103		lmo1783	50S ribosomal protein L20 (rplT)
Portillo, 2011	<i>L. monocytogenes</i>	Positive	Q8Y493		lmo2561	Arginyl-tRNA synthetase (argS)
Portillo, 2011	<i>L. monocytogenes</i>	Positive	Q8Y423		lmo2652	Transcriptional antiterminator
Portillo, 2011	<i>L. monocytogenes</i>	Positive	Q8Y7Q1		lmo1222	Phenylalanyl-tRNA synthetase beta subunit (pheT)
Portillo, 2011	<i>L. monocytogenes</i>	Positive	Q8Y7I4		lmo1293	Glycerol 3-phosphate dehydrogenase (glpD)
Portillo, 2011	<i>L. monocytogenes</i>	Positive	Q8Y447		lmo2613	50S ribosomal protein L15 (rplO)
Portillo, 2011	<i>L. monocytogenes</i>	Positive	Q8Y5N8		lmo2019	Isoleucyl-tRNA synthetase (ileS)
Portillo, 2011	<i>L. monocytogenes</i>	Positive	Q8Y7B3		lmo1373	Branched-chain alpha-keto acid dehydrogenase E1 subunit (2-oxoisovalerate dehydrogenase beta subunit)
Portillo, 2011	<i>L. monocytogenes</i>	Positive	Q8Y6T4		lmo1598	Tyrosyl-tRNA synthetase (tyrS)
Portillo, 2011	<i>L. monocytogenes</i>	Positive	P58695		lmo1896	Asparaginyl-tRNA synthetases (ansB)
Portillo, 2011	<i>L. monocytogenes</i>	Positive	Q8Y7F9		lmo1322	N utilization substance protein A (NusA protein) (nusA)
Portillo, 2011	<i>L. monocytogenes</i>	Positive	Q8Y6X2		lmo1559	Threonyl-tRNA synthetase (thrS)
Portillo, 2011	<i>L. monocytogenes</i>	Positive	Q8Y6Q0		lmo1634	Alcohol-acetaldehyde dehydrogenase
Portillo, 2011	<i>L. monocytogenes</i>	Positive	Q8Y4H1		lmo2471	NADH oxidase

Portillo, 2011	<i>L. monocytogenes</i>	Positive	P66461		lmo0046	30S ribosomal protein S18 (rpsR)
Portillo, 2011	<i>L. monocytogenes</i>	Positive	Q8YAR1		lmo0055	Adenylosuccinate synthetase (purA)
Portillo, 2011	<i>L. monocytogenes</i>	Positive	Q8Y764		lmo1437	Aspartate-semialdehyde dehydrogenase
Portillo, 2011	<i>L. monocytogenes</i>	Positive	Q8Y4I4		lmo2456	Phosphoglycerate mutase (pgm)
Portillo, 2011	<i>L. monocytogenes</i>	Positive	Q8YAR9		lmo0044	30S ribosomal protein S6 (rpsF)
Portillo, 2011	<i>L. monocytogenes</i>	Positive	Q8Y7G7		lmo1314	Ribosome recycling factors (frr)
Portillo, 2011	<i>L. monocytogenes</i>	Positive	Q8Y6Z2		lmo1538	Glycerol kinase
Portillo, 2011	<i>L. monocytogenes</i>	Positive	Q8Y4F5		lmo2489	Excinuclease ABC (subunit B) (uvrB)
Portillo, 2011	<i>L. monocytogenes</i>	Positive	Q8Y3W1		lmo2720	Acetate-CoA ligase
Portillo, 2011	<i>L. monocytogenes</i>	Positive	P60384		lmo2072	REX_LISMO Redox-sensing transcriptional repressor
Portillo, 2011	<i>L. monocytogenes</i>	Positive	Q8Y7G2		lmo1319	Prolyl-tRNA synthetase (proS)
Portillo, 2011	<i>L. monocytogenes</i>	Positive	Q8Y689		lmo1808	Malonyl CoA-acyl carrier protein transacylase (fabD)
Portillo, 2011	<i>L. monocytogenes</i>	Positive	Q8Y6X8		lmo1553	Glutamate-1-semialdehyde 2,1-aminotransferases (hemL)
Portillo, 2011	<i>L. monocytogenes</i>	Positive	P66623		lmo2618	30S ribosomal protein S8 (rpsH)
Portillo, 2011	<i>L. monocytogenes</i>	Positive	P0DJM1		lmo1472	Heat shock protein DnaJ (dnaJ)
Portillo, 2011	<i>L. monocytogenes</i>	Positive	Q8Y690		lmo1807	3-ketoacyl-acyl carrier protein reductase (fabG)
Portillo, 2011	<i>L. monocytogenes</i>	Positive	Q8Y730		lmo1493	Oligopeptidase
Portillo, 2011	<i>L. monocytogenes</i>	Positive	Q8Y838		lmo1080	Similar to <i>B. subtilis</i> minor teichoic acids biosynthesis protein GgaB
Portillo, 2011	<i>L. monocytogenes</i>	Positive	Q8Y4B2		lmo2539	Glycine hydroxymethyltransferase (glyA)
Portillo, 2011	<i>L. monocytogenes</i>	Positive	Q8Y5E6		lmo2118	Phosphoglucomutase
Portillo, 2011	<i>L. monocytogenes</i>	Positive	Q927L7		lmo2622	50S ribosomal protein L14 (rplN)
Portillo, 2011	<i>L. monocytogenes</i>	Positive	Q8Y664		lmo1836	Carbamoyl-phosphate synthetase (glutaminase subunit) (pyrAa)
Portillo, 2011	<i>L. monocytogenes</i>	Positive	Q8Y8A5		lmo1005	3-hydroxyisobutyrate dehydrogenase (<i>B. subtilis</i> YkwC protein)
Portillo, 2011	<i>L. monocytogenes</i>	Positive	Q8YAB1		lmo0239	Cysteinyl-tRNA synthetase (cysS)
Portillo, 2011	<i>L. monocytogenes</i>	Positive	Q927L2		lmo2627	50S ribosomal protein L22 (rplV)
Portillo, 2011	<i>L. monocytogenes</i>	Positive	Q8Y7C7		lmo1357	Acetyl-CoA carboxylase subunit (biotin carboxylase subunit)
Portillo, 2011	<i>L. monocytogenes</i>	Positive	Q8Y6W5		lmo1566	Isocitrate dehydrogenases (citC)

Portillo, 2011	<i>L. monocytogenes</i>	Positive	Q8Y6J6		lmo1688	Glucose 1-dehydrogenase
Portillo, 2011	<i>L. monocytogenes</i>	Positive	Q8Y606		lmo1897	Aspartate aminotransferases (aspB)
Portillo, 2011	<i>L. monocytogenes</i>	Positive	P61055		lmo2631	50S ribosomal protein L4 (rplD)
Portillo, 2011	<i>L. monocytogenes</i>	Positive	Q8Y708		lmo1520	Histidyl-tRNA synthetase (hisS)
Portillo, 2011	<i>L. monocytogenes</i>	Positive	Q8Y825		lmo1093	NH(3)-dependent NAD(+) synthetases, nitrogen regulatory protein
Portillo, 2011	<i>L. monocytogenes</i>	Positive	Q8Y5L9		lmo2038	UDP-N-acetylmuramoylalanyl-D-glutamate-2,6-diaminopimelate ligase (murE)
Portillo, 2011	<i>L. monocytogenes</i>	Positive	Q8YAR2		lmo0053	50S ribosomal protein L9 (rplI)
Portillo, 2011	<i>L. monocytogenes</i>	Positive	Q48793		lmo0199	Phosphoribosyl pyrophosphate synthetase (prs)
Portillo, 2011	<i>L. monocytogenes</i>	Positive	Q9ZEY0		lmo0265	Succinyldiaminopimelate desuccinylase
Portillo, 2011	<i>L. monocytogenes</i>	Positive	Q8Y964		lmo0669	Oxidoreductase
Portillo, 2011	<i>L. monocytogenes</i>	Positive	Q8Y8R6		lmo0829	Pyruvate-flavodoxin oxidoreductase (nifJ)
Portillo, 2011	<i>L. monocytogenes</i>	Positive	Q8Y837		lmo1081	Glucose-1-phosphate thymidyl transferase
Portillo, 2011	<i>L. monocytogenes</i>	Positive	Q8Y7Q2		lmo1221	Phenylalanyl-tRNA synthetase alpha subunit (pheS)
Portillo, 2011	<i>L. monocytogenes</i>	Positive	Q8Y6T0		lmo1603	Aminopeptidase
Portillo, 2011	<i>L. monocytogenes</i>	Positive	Q8Y6C1		lmo1769	Phosphoribosylformylglycinamide synthetase I (purQ)
Portillo, 2011	<i>L. monocytogenes</i>	Positive	Q8Y5V7		lmo1948	Two-component response regulator (ResD) (resD)
Portillo, 2011	<i>L. monocytogenes</i>	Positive	Q8Y5S0		lmo1986	Ketol-acid reductoisomerase (acetoxyhydroxy-acid isomeroreductase) (ilvC)
Portillo, 2011	<i>L. monocytogenes</i>	Positive	Q8Y5Q1		lmo2005	Oxidoreductase
Portillo, 2011	<i>L. monocytogenes</i>	Positive	Q8Y4U2		lmo2340	Similar to <i>Erwinia chrysanthemi</i> IndA protein
Schaumburg, 2004	<i>L. monocytogenes</i>	Positive	Q8YAD0		Lmo0214	mfd, transcription-repair coupling factor
Schaumburg, 2004	<i>L. monocytogenes</i>	Positive	Q8YAC3		Lmo0223	cysK, cysteine synthase
Schaumburg, 2004	<i>L. monocytogenes</i>	Positive	Q8Y862		Lmo1055	pdhD, dihydrolipoamide dehydrogenase, E3 subunit of pyruvate dehydrogenase complex
Schaumburg, 2004	<i>L. monocytogenes</i>	Positive	Q8Y7G7		Lmo1314	fir, ribosome recycling factors
Schaumburg, 2004	<i>L. monocytogenes</i>	Positive	P0DJM2		Lmo1473	dnaK, class I heat-shock protein (molecular chaperone) DnaK*
Schaumburg, 2004	<i>L. monocytogenes</i>	Positive	Q8Y6Q0		Lmo1634	Alcohol-acetaldehyde dehydrogenase

Schaumburg, 2004	<i>L. monocytogenes</i>	Positive	Q8Y6M7		Lmo1657	tsf, translation elongation factor
Schaumburg, 2004	<i>L. monocytogenes</i>	Positive	Q9AGE6		Lmo2068	groEL, class I heat-shock protein (chaperonin) GroEL*
Schaumburg, 2004	<i>L. monocytogenes</i>	Positive	Q8Y4L2		Lmo2425	Glycine cleavage system protein H
Schaumburg, 2004	<i>L. monocytogenes</i>	Positive	P64074		Lmo2455	eno, enolase*
Schaumburg, 2004	<i>L. monocytogenes</i>	Positive	Q8Y4I4		Lmo2456	pgm, phosphoglycerate mutase
Schaumburg, 2004	<i>L. monocytogenes</i>	Positive	Q8Y4I2		Lmo2458	pgk, phosphoglycerate kinase
Schaumburg, 2004	<i>L. monocytogenes</i>	Positive	Q8Y4I1		Lmo2459	Glyceraldehyde-3-phosphate dehydrogenase*
Schaumburg, 2004	<i>L. monocytogenes</i>	Positive	Q8Y498		Lmo2556	fbaA, fructose-1,6-bisphosphate aldolase type II
Schaumburg, 2004	<i>L. monocytogenes</i>	Positive	Q8Y422		Lmo2653	tufA, translation elongation factor EF-Tu*
Schaumburg, 2004	<i>L. monocytogenes</i>	Positive	Q8Y421		Lmo2654	fus, translation elongation factor G
Gómez-Gascón, 2012	<i>S. suis</i>	Positive		gi 253753118	SSU0320	GTP-sensing transcriptional pleiotropic repressor
Gómez-Gascón, 2012	<i>S. suis</i>	Positive		gi 253752830	SSU0008	Transcription-repair coupling factor
Gómez-Gascón, 2012	<i>S. suis</i>	Positive		gi 253752842	SSU0021	Ribose-phosphate pyrophosphokinase 1
Gómez-Gascón, 2012	<i>S. suis</i>	Positive		gi 253752848	SSU0027	Phosphoribosylformylglycinamidine synthase protein
Gómez-Gascón, 2012	<i>S. suis</i>	Positive		gi 253752858	SSU0037	Adenylosuccinate lyase
Gómez-Gascón, 2012	<i>S. suis</i>	Positive		gi 253752880	SSU0062	RecA recombinase (recombinase A)
Gómez-Gascón, 2012	<i>S. suis</i>	Positive		gi 253752886	SSU0069	30S ribosomal protein S10
Gómez-Gascón, 2012	<i>S. suis</i>	Positive		gi 253752887	SSU0070	50S ribosomal protein L3
Gómez-Gascón, 2012	<i>S. suis</i>	Positive		gi 253752888	SSU0071	50S ribosomal protein L4
Gómez-Gascón, 2012	<i>S. suis</i>	Positive		gi 253752889	SSU0072	50S ribosomal protein L23
Gómez-Gascón, 2012	<i>S. suis</i>	Positive		gi 253752890	SSU0073	50S ribosomal protein L2
Gómez-Gascón, 2012	<i>S. suis</i>	Positive		gi 253752892	SSU0075	50S ribosomal protein L22

2012						
Gómez-Gascón, 2012	<i>S. suis</i>	Positive		gi 253752893	SSU0076	30S ribosomal protein S3
Gómez-Gascón, 2012	<i>S. suis</i>	Positive		gi 253752894	SSU0077	50S ribosomal protein L16
Gómez-Gascón, 2012	<i>S. suis</i>	Positive		gi 253752895	SSU0078	50S ribosomal protein L29
Gómez-Gascón, 2012	<i>S. suis</i>	Positive		gi 253752897	SSU0080	50S ribosomal protein L14
Gómez-Gascón, 2012	<i>S. suis</i>	Positive		gi 253752898	SSU0081	50S ribosomal protein L24
Gómez-Gascón, 2012	<i>S. suis</i>	Positive		gi 253752899	SSU0082	50S ribosomal protein L5
Gómez-Gascón, 2012	<i>S. suis</i>	Positive		gi 253752902	SSU0085	30S ribosomal protein S8
Gómez-Gascón, 2012	<i>S. suis</i>	Positive		gi 253752904	SSU0088	50S ribosomal protein L6
Gómez-Gascón, 2012	<i>S. suis</i>	Positive		gi 253752905	SSU0089	50S ribosomal protein L18
Gómez-Gascón, 2012	<i>S. suis</i>	Positive		gi 253752906	SSU0090	30S ribosomal protein S5
Gómez-Gascón, 2012	<i>S. suis</i>	Positive		gi 253752907	SSU0091	50S ribosomal protein L30
Gómez-Gascón, 2012	<i>S. suis</i>	Positive		gi 253752908	SSU0092	50S ribosomal protein L15
Gómez-Gascón, 2012	<i>S. suis</i>	Positive		gi 253752910	SSU0094	Adenylate kinase
Gómez-Gascón, 2012	<i>S. suis</i>	Positive		gi 253752913	SSU0097	30S ribosomal protein S13
Gómez-Gascón, 2012	<i>S. suis</i>	Positive		gi 253752914	SSU0098	30S ribosomal protein S11
Gómez-Gascón, 2012	<i>S. suis</i>	Positive		gi 253752915	SSU0099	DNA-directed RNA polymerase alpha chain
Gómez-Gascón, 2012	<i>S. suis</i>	Positive		gi 253752916	SSU0100	50S ribosomal protein L17
Gómez-Gascón, 2012	<i>S. suis</i>	Positive		gi 253752935	SSU0120	Tyrosyl-tRNA synthetase

Gómez-Gascón, 2012	<i>S. suis</i>	Positive		gi 253752937	SSU0122	DNA-directed RNA polymerase beta chain
Gómez-Gascón, 2012	<i>S. suis</i>	Positive		gi 253752938	SSU0123	160 kD subunit/DNA-directed RNA polymerase beta' chain
Gómez-Gascón, 2012	<i>S. suis</i>	Positive		gi 253752955	SSU0142	tRNA-binding protein
Gómez-Gascón, 2012	<i>S. suis</i>	Positive		gi 253752959	SSU0146	10 kDa chaperonin
Gómez-Gascón, 2012	<i>S. suis</i>	Positive		gi 253752960	SSU0147	60 kDa chaperonin
Gómez-Gascón, 2012	<i>S. suis</i>	Positive		gi 253752961	SSU0148	30S ribosomal protein S12
Gómez-Gascón, 2012	<i>S. suis</i>	Positive		gi 253752962	SSU0149	30S ribosomal protein S7
Gómez-Gascón, 2012	<i>S. suis</i>	Positive		gi 253752963	SSU0151	Elongation factor G (EF-G)
Gómez-Gascón, 2012	<i>S. suis</i>	Positive		gi 253752965	SSU0153	Glyceraldehyde-3-phosphate dehydrogenase
Gómez-Gascón, 2012	<i>S. suis</i>	Positive		gi 253752966	SSU0154	Phosphoglycerate kinase
Gómez-Gascón, 2012	<i>S. suis</i>	Positive		gi 253752969	SSU0157	Glutamine synthetase
Gómez-Gascón, 2012	<i>S. suis</i>	Positive		gi 253752999	SSU0191	Formate acetyltransferase
Gómez-Gascón, 2012	<i>S. suis</i>	Positive		gi 253753027	SSU0223	Thioredoxin
Gómez-Gascón, 2012	<i>S. suis</i>	Positive		gi 253753038	SSU0234	NADP-specific glutamate dehydrogenase
Gómez-Gascón, 2012	<i>S. suis</i>	Positive		gi 253753062	SSU0261	Aldehyde-alcohol dehydrogenase
Gómez-Gascón, 2012	<i>S. suis</i>	Positive		gi 253753063	SSU0262	Threonine synthase
Gómez-Gascón, 2012	<i>S. suis</i>	Positive		gi 253753080	SSU0279	GrpE protein (HSP-70 cofactor)
Gómez-Gascón, 2012	<i>S. suis</i>	Positive		gi 253753081	SSU0280	Chaperone protein DnaK (heat shock protein 70)
Gómez-	<i>S. suis</i>	Positive		gi 253753082	SSU0281	Chaperone protein DnaJ

Gascón, 2012						
Gómez- Gascón, 2012	<i>S. suis</i>	Positive		gi 253753084	SSU0283	Amidase
Gómez- Gascón, 2012	<i>S. suis</i>	Positive		gi 253753106	SSU0306	Trigger factor (prolyl isomerase)
Gómez- Gascón, 2012	<i>S. suis</i>	Positive		gi 253753110	SSU0310	DNA-directed RNA polymerase, delta subunit
Gómez- Gascón, 2012	<i>S. suis</i>	Positive		gi 253753112	SSU0312	Fructose-bisphosphate aldolase
Gómez- Gascón, 2012	<i>S. suis</i>	Positive		gi 253753117	SSU0319	Aminotransferase
Gómez- Gascón, 2012	<i>S. suis</i>	Positive		gi 253753122	SSU0325	Glutamyl-tRNA amidotransferase subunit A
Gómez- Gascón, 2012	<i>S. suis</i>	Positive		gi 253753123	SSU0326	Glutamyl-tRNA amidotransferase subunit B
Gómez- Gascón, 2012	<i>S. suis</i>	Positive		gi 253753146	SSU0352	ATP-dependent protease ATP- binding subunit ClpL
Gómez- Gascón, 2012	<i>S. suis</i>	Positive		gi 253753147	SSU0353	4-alpha-glucanotransferase
Gómez- Gascón, 2012	<i>S. suis</i>	Positive		gi 253753148	SSU0354	Glycogen phosphorylase
Gómez- Gascón, 2012	<i>S. suis</i>	Positive		gi 253753172	SSU0379	DNA-directed RNA polymerase omega chain
Gómez- Gascón, 2012	<i>S. suis</i>	Positive		gi 253753176	SSU0383	Protein phosphatase
Gómez- Gascón, 2012	<i>S. suis</i>	Positive		gi 253753183	SSU0391	Cysteine synthase
Gómez- Gascón, 2012	<i>S. suis</i>	Positive		gi 253753187	SSU0395	Sigma 54 modulation protein
Gómez- Gascón, 2012	<i>S. suis</i>	Positive		gi 253753204	SSU0412	Valyl-tRNA synthetase
Gómez- Gascón, 2012	<i>S. suis</i>	Positive		gi 253753207	SSU0416	DEAD/DEAH box family helicase
Gómez- Gascón, 2012	<i>S. suis</i>	Positive		gi 253753211	SSU0420	Aspartate--ammonia ligase
Gómez- Gascón, 2012	<i>S. suis</i>	Positive		gi 253753229	SSU0441	isoleucyl-tRNA synthetase

2012						
Gómez-Gascón, 2012	<i>S. suis</i>	Positive		gi 253753232	SSU0244	ATP-dependent Clp protease ATP-binding subunit
Gómez-Gascón, 2012	<i>S. suis</i>	Positive		gi 253753236	SSU0448	Bifunctional 5,10-methylene-tetrahydrofolate dehydrogenase/ 5,10-methylene-tetrahydrofolate cyclohydrolase
Gómez-Gascón, 2012	<i>S. suis</i>	Positive		gi 253753244	SSU0458	Peptidase
Gómez-Gascón, 2012	<i>S. suis</i>	Positive		gi 253753256	SSU0470	Lysyl-tRNA synthetase
Gómez-Gascón, 2012	<i>S. suis</i>	Positive		gi 253753268	SSU0482	Elongation factor Tu (EF-Tu)
Gómez-Gascón, 2012	<i>S. suis</i>	Positive		gi 253753269	SSU0483	Triosephosphate isomerase
Gómez-Gascón, 2012	<i>S. suis</i>	Positive		gi 253753270	SSU0484	Haloacid dehalogenase-like hydrolase
Gómez-Gascón, 2012	<i>S. suis</i>	Positive		gi 253753280	SSU0494	6-phosphofructokinase
Gómez-Gascón, 2012	<i>S. suis</i>	Positive		gi 253753281	SSU0495	Pyruvate kinase
Gómez-Gascón, 2012	<i>S. suis</i>	Positive		gi 253753286	SSU0500	Glucosamine--fructose-6-phosphate aminotransferase
Gómez-Gascón, 2012	<i>S. suis</i>	Positive		gi 253753294	SSU0510	Pyrroline-5-carboxylate reductase
Gómez-Gascón, 2012	<i>S. suis</i>	Positive		gi 253753335	SSU0570	Asparaginyl-tRNA synthetase
Gómez-Gascón, 2012	<i>S. suis</i>	Positive		gi 253753346	SSU0582	Ornithine carbamoyltransferase
Gómez-Gascón, 2012	<i>S. suis</i>	Positive		gi 253753352	ssu0589	S-adenosylmethionine:tRNA ribosyltransferase-isomerase
Gómez-Gascón, 2012	<i>S. suis</i>	Positive		gi 253753353	SSU0591	Glucosamine-6-phosphate isomerase
Gómez-Gascón, 2012	<i>S. suis</i>	Positive		gi 253753360	SSU0598	D-alanyl carrier protein
Gómez-Gascón, 2012	<i>S. suis</i>	Positive		gi 253753382	SSU0621	Phosphoserine aminotransferase
Gómez-Gascón,	<i>S. suis</i>	Positive		gi 253753395	SSU0642	Type III restriction-modification system, restriction enzyme

2012						
Gómez-Gascón, 2012	<i>S. suis</i>	Positive		gi 253753396	SSU0644	Phosphomannomutase
Gómez-Gascón, 2012	<i>S. suis</i>	Positive		gi 253753400	SSU0648	Formate--tetrahydrofolate ligase
Gómez-Gascón, 2012	<i>S. suis</i>	Positive		gi 253753420	SSU0671	Aspartate-semialdehyde dehydrogenase
Gómez-Gascón, 2012	<i>S. suis</i>	Positive		gi 253753421	SSU0672	Dihydrodipicolinate synthase
Gómez-Gascón, 2012	<i>S. suis</i>	Positive		gi 253753428	SSU0680	Oligopeptidase
Gómez-Gascón, 2012	<i>S. suis</i>	Positive		gi 253753430	SSU0682	NADH oxidase
Gómez-Gascón, 2012	<i>S. suis</i>	Positive		gi 253753457	SSU0710	Topoisomerase IV subunit B
Gómez-Gascón, 2012	<i>S. suis</i>	Positive		gi 253753465	SSU0721	30S ribosomal protein S1
Gómez-Gascón, 2012	<i>S. suis</i>	Positive		gi 253753470	SSU0726	Thiamine biosynthesis protein
Gómez-Gascón, 2012	<i>S. suis</i>	Positive		gi 253753472	SSU0728	50S ribosomal protein L21
Gómez-Gascón, 2012	<i>S. suis</i>	Positive		gi 253753473	SSU0732	50S ribosomal protein L27
Gómez-Gascón, 2012	<i>S. suis</i>	Positive		gi 253753479	SSU0735	PyrR bifunctional protein [includes: pyrimidine operon regulatory protein; uracil phosphoribosyltransferase]
Gómez-Gascón, 2012	<i>S. suis</i>	Positive		gi 253753480	SSU0736	Aspartate carbamoyltransferase
Gómez-Gascón, 2012	<i>S. suis</i>	Positive		gi 253753482	SSU0738	Carbamoyl-phosphate synthase large chain
Gómez-Gascón, 2012	<i>S. suis</i>	Positive		gi 253753486	SSU0742	30S ribosomal protein S16
Gómez-Gascón, 2012	<i>S. suis</i>	Positive		gi 253753491	SSU0747	Homoserine dehydrogenase
Gómez-Gascón, 2012	<i>S. suis</i>	Positive		gi 253753502	SSU0760	GMP reductase
Gómez-Gascón, 2012	<i>S. suis</i>	Positive		gi 253753511	SSU0771	Dihydrodipicolinate reductase

Gómez-Gascón, 2012	<i>S. suis</i>	Positive		gi 253753515	SSU0775	Sugar kinase
Gómez-Gascón, 2012	<i>S. suis</i>	Positive		gi 253753525	SSU0785	GTP-binding protein LepA
Gómez-Gascón, 2012	<i>S. suis</i>	Positive		gi 253753530	SSU0790	Peptide chain release factor 1
Gómez-Gascón, 2012	<i>S. suis</i>	Positive		gi 253753556	SSU0816	GMP synthase [glutamine-hydrolyzing]
Gómez-Gascón, 2012	<i>S. suis</i>	Positive		gi 253753563	SSU0826	Phosphoglucomutase/phosphomannomutase family protein
Gómez-Gascón, 2012	<i>S. suis</i>	Positive		gi 253753582	SSU0845	50S ribosomal protein L7/L12
Gómez-Gascón, 2012	<i>S. suis</i>	Positive		gi 253753583	SSU0846	50S ribosomal protein L10
Gómez-Gascón, 2012	<i>S. suis</i>	Positive		gi 253753598	SSU0861	Dihydroorotase
Gómez-Gascón, 2012	<i>S. suis</i>	Positive		gi 253753601	SSU0864	Orotate phosphoribosyltransferase
Gómez-Gascón, 2012	<i>S. suis</i>	Positive		gi 253753648	SSU0918	Ribose-phosphate pyrophosphokinase 2
Gómez-Gascón, 2012	<i>S. suis</i>	Positive		gi 253753656	SSU0926	DNA gyrase subunit A
Gómez-Gascón, 2012	<i>S. suis</i>	Positive		gi 253753657	SSU0927	L-lactate dehydrogenase
Gómez-Gascón, 2012	<i>S. suis</i>	Positive		gi 253753663	SSU0936	Deoxyribose-phosphate aldolase
Gómez-Gascón, 2012	<i>S. suis</i>	Positive		gi 253753664	SSU0937	Thymidine phosphorylase
Gómez-Gascón, 2012	<i>S. suis</i>	Positive		gi 253753667	SSU0940	30S ribosomal protein S20
Gómez-Gascón, 2012	<i>S. suis</i>	Positive		gi 253753693	SSU0972	Haloacid dehalogenase-like hydrolase
Gómez-Gascón, 2012	<i>S. suis</i>	Positive		gi 253753694	SSU0973	Peptidase T
Gómez-Gascón, 2012	<i>S. suis</i>	Positive		gi 253753716	SSU0995	Phenylalanyl-tRNA synthetase beta chain
Gómez-	<i>S. suis</i>	Positive		gi 253753759	SSU1038	Phosphoenolpyruvate-protein

Gascón, 2012						phosphotransferase
Gómez-Gascón, 2012	<i>S. suis</i>	Positive		gi 253753760	SSU1039	Histidine-containing phosphocarrier protein (HPr)
Gómez-Gascón, 2012	<i>S. suis</i>	Positive		gi 253753765	SSU1044	Ribonucleoside-diphosphate reductase alpha chain
Gómez-Gascón, 2012	<i>S. suis</i>	Positive		gi 253753767	SSU1046	Ribonucleoside-diphosphate reductase beta chain
Gómez-Gascón, 2012	<i>S. suis</i>	Positive		gi 253753793	SSU1076	Alanyl-tRNA synthetase
Gómez-Gascón, 2012	<i>S. suis</i>	Positive		gi 253753799	SSU1082	Oligopeptidase
Gómez-Gascón, 2012	<i>S. suis</i>	Positive		gi 253753801	SSU1084	Methionyl-tRNA synthetase
Gómez-Gascón, 2012	<i>S. suis</i>	Positive		gi 253753812	SSU1095	Tagatose 1,6-diphosphate aldolase 2
Gómez-Gascón, 2012	<i>S. suis</i>	Positive		gi 253753821	SSU1104	50S ribosomal protein L20
Gómez-Gascón, 2012	<i>S. suis</i>	Positive		gi 253753823	SSU1106	Translation initiation factor IF-3
Gómez-Gascón, 2012	<i>S. suis</i>	Positive		gi 253753824	SSU1107	Cytidylate kinase
Gómez-Gascón, 2012	<i>S. suis</i>	Positive		gi 253753846	SSU1130	dTDP-glucose-4,6-dehydratase
Gómez-Gascón, 2012	<i>S. suis</i>	Positive		gi 253753849	SSU1133	Glucose-1-phosphate thymidyl transferase
Gómez-Gascón, 2012	<i>S. suis</i>	Positive		gi 253753855	SSU1139	Adenine phosphoribosyltransferase
Gómez-Gascón, 2012	<i>S. suis</i>	Positive		gi 253753873	SSU1159	Ribosome recycling factor
Gómez-Gascón, 2012	<i>S. suis</i>	Positive		gi 253753878	SSU1164	50S ribosomal protein L1
Gómez-Gascón, 2012	<i>S. suis</i>	Positive		gi 253753879	SSU1165	50S ribosomal protein L11
Gómez-Gascón, 2012	<i>S. suis</i>	Positive		gi 253753910	SSU1196	Threonyl-tRNA synthetase
Gómez-Gascón, 2012	<i>S. suis</i>	Positive		gi 253753916	SSU1202	Catabolite control protein A

2012						
Gómez-Gascón, 2012	<i>S. suis</i>	Positive		gi 253753963	SSU1255	RNA polymerase sigma factor RpoD
Gómez-Gascón, 2012	<i>S. suis</i>	Positive		gi 253753974	SSU1266	Purine nucleoside phosphorylase
Gómez-Gascón, 2012	<i>S. suis</i>	Positive		gi 253753977	SSU1269	Phosphopentomutase
Gómez-Gascón, 2012	<i>S. suis</i>	Positive		gi 253753990	SSU1283	Xaa-His dipeptidase
Gómez-Gascón, 2012	<i>S. suis</i>	Positive		gi 253753997	SSU1290	Phosphoglucosamine mutase
Gómez-Gascón, 2012	<i>S. suis</i>	Positive		gi 253754027	SSU1320	Enolase
Gómez-Gascón, 2012	<i>S. suis</i>	Positive		gi 253754034	SSU1327	DNA gyrase subunit B
Gómez-Gascón, 2012	<i>S. suis</i>	Positive		gi 253754055	SSU1348	50S ribosomal protein L31
Gómez-Gascón, 2012	<i>S. suis</i>	Positive		gi 253754073	SSU1366	ATP-dependent Clp protease proteolytic subunit
Gómez-Gascón, 2012	<i>S. suis</i>	Positive		gi 253754074	SSU1367	Uracil phosphoribosyltransferase
Gómez-Gascón, 2012	<i>S. suis</i>	Positive		gi 253754102	SSU1396	ADP-ribose pyrophosphatase
Gómez-Gascón, 2012	<i>S. suis</i>	Positive		gi 253754137	SSU1433	UDP-N-acetylglucosamine 1-carboxyvinyltransferase 2
Gómez-Gascón, 2012	<i>S. suis</i>	Positive		gi 253754139	SSU1435	S-adenosylmethionine synthetase
Gómez-Gascón, 2012	<i>S. suis</i>	Positive		gi 253754145	SSU1441	DNA polymerase III subunit gamma/tau
Gómez-Gascón, 2012	<i>S. suis</i>	Positive		gi 253754153	SSU1451	Phosphoglyceromutase
Gómez-Gascón, 2012	<i>S. suis</i>	Positive		gi 253754160	SSU1458	DNA-binding protein HU
Gómez-Gascón, 2012	<i>S. suis</i>	Positive		gi 253754169	SSU1467	Exodeoxyribonuclease VII large subunit
Gómez-Gascón, 2012	<i>S. suis</i>	Positive		gi 253754176	SSU1478	Manganese-dependent inorganic pyrophosphatase

Gómez-Gascón, 2012	<i>S. suis</i>	Positive		gi 253754177	SSU1479	Oligopeptidase
Gómez-Gascón, 2012	<i>S. suis</i>	Positive		gi 253754184	SSU1486	NH(3)-dependent NAD(+) synthetase
Gómez-Gascón, 2012	<i>S. suis</i>	Positive		gi 253754211	SSU1513	Tyrosine recombinase XerD
Gómez-Gascón, 2012	<i>S. suis</i>	Positive		gi 253754217	SSU1519	Pyridoxal-dependent decarboxylase
Gómez-Gascón, 2012	<i>S. suis</i>	Positive		gi 253754218	SSU1520	Aminopeptidase C
Gómez-Gascón, 2012	<i>S. suis</i>	Positive		gi 253754224	SSU1526	Transcription elongation factor
Gómez-Gascón, 2012	<i>S. suis</i>	Positive		gi 253754232	SSU1534	GTP-binding protein EngA
Gómez-Gascón, 2012	<i>S. suis</i>	Positive		gi 253754238	SSU1541	6-phosphogluconate dehydrogenase, decarboxylating
Gómez-Gascón, 2012	<i>S. suis</i>	Positive		gi 253754267	SSU1570	Glycyl-tRNA synthetase beta chain
Gómez-Gascón, 2012	<i>S. suis</i>	Positive		gi 253754284	SSU1587	Seryl-tRNA synthetase
Gómez-Gascón, 2012	<i>S. suis</i>	Positive		gi 253754293	SSU1598	Acetyl-coenzyme A carboxylase carboxyl transferase subunit beta
Gómez-Gascón, 2012	<i>S. suis</i>	Positive		gi 253754294	SSU1599	Biotin carboxylase subunit of acetyl-CoA carboxylase
Gómez-Gascón, 2012	<i>S. suis</i>	Positive		gi 253754296	SSU1601	Biotin carboxyl carrier protein of acetyl-CoA carboxylase
Gómez-Gascón, 2012	<i>S. suis</i>	Positive		gi 253754297	SSU1602	3-oxoacyl-[acyl-carrier-protein] synthase II
Gómez-Gascón, 2012	<i>S. suis</i>	Positive		gi 253754298	SSU1603	3-oxoacyl-[acyl-carrier protein] reductase
Gómez-Gascón, 2012	<i>S. suis</i>	Positive		gi 253754300	SSU1605	Enoyl-ACP reductase
Gómez-Gascón, 2012	<i>S. suis</i>	Positive		gi 253754301	SSU1606	Acyl carrier protein (ACP)
Gómez-Gascón, 2012	<i>S. suis</i>	Positive		gi 253754306	SSU1611	Aspartate kinase
Gómez-	<i>S. suis</i>	Positive		gi 253754318	SSU1623	Elongation factor P (EF-P)

Gascón, 2012						
Gómez- Gascón, 2012	<i>S. suis</i>	Positive		gi 253754319	SSU1624	Metallopeptidase
Gómez- Gascón, 2012	<i>S. suis</i>	Positive		gi 253754320	SSU1625	UvrABC system protein A (UvrA protein)
Gómez- Gascón, 2012	<i>S. suis</i>	Positive		gi 253754324	SSU1629	Single strand binding protein
Gómez- Gascón, 2012	<i>S. suis</i>	Positive		gi 253754325	ssu1630	30S ribosomal protein S6
Gómez- Gascón, 2012	<i>S. suis</i>	Positive		gi 253754329	SSU1634	Dihydrolipoamide dehydrogenase
Gómez- Gascón, 2012	<i>S. suis</i>	Positive		gi 253754330	SSU1635	Dihydrolipoamide acetyltransferase component of pyruvate dehydrogenase complex
Gómez- Gascón, 2012	<i>S. suis</i>	Positive		gi 253754331	SSU1636	Pyruvate dehydrogenase E1 component, beta subunit
Gómez- Gascón, 2012	<i>S. suis</i>	Positive		gi 253754332	SSU1637	Pyruvate dehydrogenase E1 component, alpha subunit
Gómez- Gascón, 2012	<i>S. suis</i>	Positive		gi 253754337	SSU1642	Translation initiation factor IF-2
Gómez- Gascón, 2012	<i>S. suis</i>	Positive		gi 253754340	SSU1645	N utilization substance protein A
Gómez- Gascón, 2012	<i>S. suis</i>	Positive		gi 253754371	SSU1679	Threonine dehydratase
Gómez- Gascón, 2012	<i>S. suis</i>	Positive		gi 253754372	SSU1680	Ketol-acid reductoisomerase
Gómez- Gascón, 2012	<i>S. suis</i>	Positive		gi 253754378	SSU1686	Dihydroxy-acid dehydratase
Gómez- Gascón, 2012	<i>S. suis</i>	Positive		gi 253754381	SSU1691	30S ribosomal protein S9
Gómez- Gascón, 2012	<i>S. suis</i>	Positive		gi 253754382	SSU1692	50S ribosomal protein L13
Gómez- Gascón, 2012	<i>S. suis</i>	Positive		gi 253754410	SSU1721	Polyribonucleotide nucleotidyltransferase
Gómez- Gascón, 2012	<i>S. suis</i>	Positive		gi 253754415	SSU1728	30S ribosomal protein S15
Gómez- Gascón, 2012	<i>S. suis</i>	Positive		gi 253754429	SSU1743	Aminopeptidase PepS

2012						
Gómez-Gascón, 2012	<i>S. suis</i>	Positive		gi 253754432	SSU1746	DNA polymerase III PolC-type
Gómez-Gascón, 2012	<i>S. suis</i>	Positive		gi 253754439	SSU1753	Prolyl-tRNA synthetase
Gómez-Gascón, 2012	<i>S. suis</i>	Positive		gi 253754444	SSU1758	Adenylosuccinate synthetase
Gómez-Gascón, 2012	<i>S. suis</i>	Positive		gi 253754452	SSU1766	Stress response-related Clp ATPase
Gómez-Gascón, 2012	<i>S. suis</i>	Positive		gi 253754456	SSU1770	Elongation factor Ts
Gómez-Gascón, 2012	<i>S. suis</i>	Positive		gi 253754457	SSU1771	30S ribosomal protein S2
Gómez-Gascón, 2012	<i>S. suis</i>	Positive		gi 253754490	SSU1804	ssDNA-binding protein
Gómez-Gascón, 2012	<i>S. suis</i>	Positive		gi 253754501	SSU1815	Glutamyl-tRNA synthetase
Gómez-Gascón, 2012	<i>S. suis</i>	Positive		gi 253754513	SSU1827	Glycerol-3-phosphate dehydrogenase
Gómez-Gascón, 2012	<i>S. suis</i>	Positive		gi 253754518	SSU1832	2,3,4,5-tetrahydropyridine-2,6-dicarboxylate N-succinyltransferase
Gómez-Gascón, 2012	<i>S. suis</i>	Positive		gi 253754522	SSU1836	Glucose-6-phosphate isomerase
Gómez-Gascón, 2012	<i>S. suis</i>	Positive		gi 253754525	SSU1839	Transketolase
Gómez-Gascón, 2012	<i>S. suis</i>	Positive		gi 253754549	SSU1863	Leucyl-tRNA synthetase
Gómez-Gascón, 2012	<i>S. suis</i>	Positive		gi 253754550	SSU1864	Endopeptidase O
Gómez-Gascón, 2012	<i>S. suis</i>	Positive		gi 253754581	SSU1903	Anaerobic ribonucleoside-triphosphate reductase
Gómez-Gascón, 2012	<i>S. suis</i>	Positive		gi 253754588	SSU1910	Arginyl-tRNA synthetase
Gómez-Gascón, 2012	<i>S. suis</i>	Positive		gi 253754601	SSU1923	Aspartyl-tRNA synthetase
Gómez-Gascón, 2012	<i>S. suis</i>	Positive		gi 253754613	SSU1935	30S ribosomal protein S4

Gómez-Gascón, 2012	<i>S. suis</i>	Positive		gi 253754626	SSU1948	L-serine dehydratase, beta chain
Gómez-Gascón, 2012	<i>S. suis</i>	Positive		gi 253754638	SSU1960	Inosine-5'-monophosphate dehydrogenase
Doro, 2009	<i>S. agalactiae</i>	Positive			SAN_1636	Peptidyl-prolyl cis-trans isomerase, cyclophilin-type
Doro, 2009	<i>S. agalactiae</i>	Positive			SAN_0083	ribosomal protein L2 (rplB)
Doro, 2009	<i>S. agalactiae</i>	Positive			SAN_0854	Translation elongation factor Tu (tuf)
Doro, 2009	<i>S. agalactiae</i>	Positive			SAN_1390	ribosomal protein L10
Le Maréchal, 2014	<i>P. freudenreichii</i>	Positive	A0A068V PW5		tuf	Elongation factor Tu*
Le Maréchal, 2014	<i>P. freudenreichii</i>	Positive	A0A068V PT4		groL1	60 kDa chaperonin 1*
Le Maréchal, 2014	<i>P. freudenreichii</i>	Positive	A0A068V RF4		hsp20 2	Heat shock protein 20 2
Le Maréchal, 2014	<i>P. freudenreichii</i>	Positive	A0A068V Q40		fusA	Elongation factor G (EF-G)
Le Maréchal, 2014	<i>P. freudenreichii</i>	Positive	A0A068V SD8			GTP phosphohydrolase
Le Maréchal, 2014	<i>P. freudenreichii</i>	Positive	A0A068V PN0		mdh	Malate dehydrogenase
Le Maréchal, 2014	<i>P. freudenreichii</i>	Positive	A0A068V TV4		sufB	FeS assembly protein SufB
Le Maréchal, 2014	<i>P. freudenreichii</i>	Positive	A0A068V RY7		mutA	Methylmalonyl-CoA mutase
Le Maréchal, 2014	<i>P. freudenreichii</i>	Positive	A0A068V X98		ppdk	Pyruvate phosphate dikinase
Le Maréchal, 2014	<i>P. freudenreichii</i>	Positive	A0A068V SE8		dnaN	DNA polymerase III, beta chain
Le Maréchal, 2014	<i>P. freudenreichii</i>	Positive	A0A068V TV7		tsf	Elongation factor Ts (EF-Ts)
Le Maréchal, 2014	<i>P. freudenreichii</i>	Positive	A0A068V U32		cys2	Cysteine synthase 2
Le Maréchal, 2014	<i>P. freudenreichii</i>	Positive	A0A068V V60			Inositol-1-phosphate synthase
Le Maréchal, 2014	<i>P. freudenreichii</i>	Positive	A0A068V S19			Translation factor SUA5
Le	<i>P. freudenreichii</i>	Positive	A0A068V		merA	Pyridine nucleotide-disulfide

Maréchal, 2014			RX2			oxidoreductase
Espino, 2014	<i>L. rhamnosus</i>	Positive		ref YP_003171088.1	LGG_01342	Elongation factor Tu (EF-TU)*
Espino, 2014	<i>L. rhamnosus</i>	Postive		ref YP_003171137.1	LGG_01391	DNA-binding protein HU
Espino, 2014	<i>L. rhamnosus</i>	Positive		ref YP_003172022.1	LGG_02276	50S ribosomal protein L7/L12
Espino, 2014	<i>L. rhamnosus</i>	Postive		ref YP_003172206.1	LGG_02460	50S ribosomal protein L17
Espino, 2014	<i>L. rhamnosus</i>	Positive		ref YP_003171374.1	LGG_01628	SSU/30S ribosomal protein S2P
Espino, 2014	<i>L. rhamnosus</i>	Postive		ref YP_003170681.1	LGG_00935	Triosephosphate isomerase*
Espino, 2014	<i>L. rhamnosus</i>	Positive		ref YP_003171985.1	LGG_01830	Chaperonin GroEL*
Espino, 2014	<i>L. rhamnosus</i>	Postive		ref YP_003171389.1	LGG_01643	SSU/30S ribosomal protein S16P
Espino, 2014	<i>L. rhamnosus</i>	Positive		ref YP_003172232.1	LGG_02486	50S ribosomal protein L4
Espino, 2014	<i>L. rhamnosus</i>	Postive		ref YP_003172214.1	LGG_02468	50S ribosomal protein L15
Espino, 2014	<i>L. rhamnosus</i>	Positive		ref YP_003172240.1	LGG_02494	SSU/30S ribosomal protein S7P
Espino, 2014	<i>L. rhamnosus</i>	Postive		ref YP_003172231.1	LGG_02485	50S ribosomal protein L23
Espino, 2014	<i>L. rhamnosus</i>	Positive		ref YP_003171121.1	LGG_01375	Pyruvate kinase*
Espino, 2014	<i>L. rhamnosus</i>	Postive		ref YP_003172023.1	LGG_02277	50S ribosomal protein L10
Espino, 2014	<i>L. rhamnosus</i>	Positive		ref YP_003172035.1	LGG_02289	50S ribosomal protein L11
Espino, 2014	<i>L. rhamnosus</i>	Postive		ref YP_003171884.1	LGG_01983	Phosphoglycerate mutase*
Espino, 2014	<i>L. rhamnosus</i>	Positive		ref YP_003172219.1	LGG_02473	SSU/30S ribosomal protein S8P
Espino, 2014	<i>L. rhamnosus</i>	Postive		ref YP_003172233.1	LGG_02487	50S ribosomal protein L3
Espino, 2014	<i>L. rhamnosus</i>	Positive		ref YP_003172239.1	LGG_02493	Protein Translation Elongation Factor G (EF-G)*
Espino, 2014	<i>L. rhamnosus</i>	Postive		ref YP_003172221.1	LGG_02475	50S ribosomal protein L5
Espino, 2014	<i>L. rhamnosus</i>	Positive		ref YP_003171434.1	LGG_01688	50S ribosomal protein L27
Espino, 2014	<i>L. rhamnosus</i>	Postive		ref YP_003171097.1	LGG_01351	Trigger factor
Espino, 2014	<i>L. rhamnosus</i>	Positive		ref YP_003171001.1	LGG_01255	SSU/30S ribosomal protein S4P
Espino, 2014	<i>L. rhamnosus</i>	Postive		ref YP_003171135.1	LGG_01389	SSU/30S ribosomal protein S1P
Espino, 2014	<i>L. rhamnosus</i>	Positive		ref YP_003172034.1	LGG_02288	50S ribosomal protein L1
Espino, 2014	<i>L. rhamnosus</i>	Postive		ref YP_003172216.1	LGG_02470	SSU/30S ribosomal protein S5P

Espino, 2014	<i>L. rhamnosus</i>	Positive		ref YP_003172241.1	LGG_02495	SSU/30S ribosomal protein S12P
Espino, 2014	<i>L. rhamnosus</i>	Positive		ref YP_003172224.1	LGG_02478	SSU/30S ribosomal protein S17P
Espino, 2014	<i>L. rhamnosus</i>	Positive		ref YP_003172217.1	LGG_02471	50S ribosomal protein L18
Espino, 2014	<i>L. rhamnosus</i>	Positive		ref YP_003172227.1	LGG_02481	SSU/30S ribosomal protein S3P
Espino, 2014	<i>L. rhamnosus</i>	Positive		ref YP_003172234.1	LGG_02488	SSU/30S ribosomal protein S10P
Espino, 2014	<i>L. rhamnosus</i>	Positive		ref YP_003171350.1	LGG_01604	Chaperone protein dnaK*
Espino, 2014	<i>L. rhamnosus</i>	Positive		ref YP_003172225.1	LGG_02479	50S ribosomal protein L29
Espino, 2014	<i>L. rhamnosus</i>	Positive		ref YP_003171436.1	LGG_01690	50S ribosomal protein L21
Espino, 2014	<i>L. rhamnosus</i>	Positive		ref YP_003172243.1	LGG_02551	DNA-directed RNA polymerase, delta subunit
Espino, 2014	<i>L. rhamnosus</i>	Positive		ref YP_003172212.1	LGG_02466	Adenylate kinase
Espino, 2014	<i>L. rhamnosus</i>	Positive		ref YP_003171921.1	LGG_02175	Asparagine synthase
Espino, 2014	<i>L. rhamnosus</i>	Positive		ref YP_003172228.1	LGG_02482	50S ribosomal protein L22
Espino, 2014	<i>L. rhamnosus</i>	Positive		ref YP_003172284.1	LGG_02538	ATP-dependent RNA helicase
Espino, 2014	<i>L. rhamnosus</i>	Positive		ref YP_003171083.1	LGG_01337	SSU/30S ribosomal protein S20P
Espino, 2014	<i>L. rhamnosus</i>	Positive		ref YP_003171491.1	LGG_01745	50S ribosomal protein L20
Espino, 2014	<i>L. rhamnosus</i>	Positive		ref YP_003172207.1	LGG_02461	DNA-directed RNA polymerase, subunit alpha
Espino, 2014	<i>L. rhamnosus</i>	Positive		ref YP_003171373.1	LGG_01627	Protein Translation Elongation Factor Ts (EF-Ts)
Espino, 2014	<i>L. rhamnosus</i>	Positive		ref YP_003172244.1	LGG_02498	DNA-directed RNA polymerase, beta chain
Espino, 2014	<i>L. rhamnosus</i>	Positive		ref YP_003172209.1	LGG_02463	SSU/30S ribosomal protein S13P
Espino, 2014	<i>L. rhamnosus</i>	Positive		ref YP_003170766.1	LGG_01020	Aspartyl/glutamyl-tRNA(Asn/Gln) amidotransferase subunit B
Espino, 2014	<i>L. rhamnosus</i>	Positive		ref YP_003170921.1	LGG_01175	Uracil phosphoribosyltransferase
Espino, 2014	<i>L. rhamnosus</i>	Positive		ref YP_003169868.1	LGG_00122	50S ribosomal protein L9
Espino, 2014	<i>L. rhamnosus</i>	Positive		ref YP_003169995.1	LGG_00249	Inosine-5'-monophosphate dehydrogenase
Espino, 2014	<i>L. rhamnosus</i>	Positive		ref YP_003171566.1	LGG_01820	Phosphoenolpyruvate-protein phosphotransferase
Espino, 2014	<i>L. rhamnosus</i>	Positive		ref YP_003171170.1	LGG_01424	Manganese-dependent inorganic pyrophosphatase
Espino, 2014	<i>L. rhamnosus</i>	Positive		ref YP_003170682.1	LGG_00936	Enolase*
Espino, 2014	<i>L. rhamnosus</i>	Positive		ref YP_003172226.1	LGG_02480	50S ribosomal protein L16

Espino, 2014	<i>L. rhamnosus</i>	Postive		ref YP_003172321.1	LGG_02575	Tagatose 1,6-diphosphate aldolase
Espino, 2014	<i>L. rhamnosus</i>	Positive		ref YP_003171639.1	LGG_01893	Seryl-tRNA synthetase
Espino, 2014	<i>L. rhamnosus</i>	Postive		ref YP_003170508.1	LGG_00762	Thioesterase family protein
Espino, 2014	<i>L. rhamnosus</i>	Positive		ref YP_003171385.1	LGG_01639	50S ribosomal protein L19
Espino, 2014	<i>L. rhamnosus</i>	Postive		ref YP_003169752.1	LGG_00006	DNA gyrase subunit A
Espino, 2014	<i>L. rhamnosus</i>	Positive		ref YP_003172584.1	LGG_02838	PTS system, mannose-specific IIAB component
Espino, 2014	<i>L. rhamnosus</i>	Postive		ref YP_003171463.1	LGG_01717	Phenylalanyl-tRNA synthetase, beta subunit
Espino, 2014	<i>L. rhamnosus</i>	Positive		ref YP_003172308.1	LGG_02562	UDP-N-acetylglucosamine pyrophosphorylase / N-acetylglucosamine-1-phosphate uridyltransferase
Espino, 2014	<i>L. rhamnosus</i>	Postive		ref YP_003170818.1	LGG_00608	Cold shock protein
Espino, 2014	<i>L. rhamnosus</i>	Positive		ref YP_003170917.1	LGG_01171	Peptide chain release factor 1
Espino, 2014	<i>L. rhamnosus</i>	Postive		ref YP_003172218.1	LGG_02472	50S ribosomal protein L6
Espino, 2014	<i>L. rhamnosus</i>	Positive		ref YP_003170254.1	LGG_00509	Dihydroxyacetone kinase
Espino, 2014	<i>L. rhamnosus</i>	Postive		ref YP_003170677.1	LGG_00931	ATP-dependent Clp protease proteolytic subunit
Espino, 2014	<i>L. rhamnosus</i>	Positive		ref YP_003174054.1	LC_01364	Trigger factor
Espino, 2014	<i>L. rhamnosus</i>	Postive		ref YP_003174957.1	LC_02267	LSU/50S ribosomal protein L7/L12P
Espino, 2014	<i>L. rhamnosus</i>	Positive		ref YP_003174094.1	LC_01404	SSU/30S ribosomal protein S1P
Espino, 2014	<i>L. rhamnosus</i>	Postive		ref YP_003174046.1	LC_01356	Elongation factor Tu (EF-TU)*
Espino, 2014	<i>L. rhamnosus</i>	Positive		ref YP_003174299.1	LC_01609	SSU/30S ribosomal protein S2P
Espino, 2014	<i>L. rhamnosus</i>	Postive		ref YP_003174970.1	LC_02280	LSU/50S ribosomal protein L11P
Espino, 2014	<i>L. rhamnosus</i>	Positive		ref YP_003174275.1	LC_01585	Chaperone protein dnaK*
Espino, 2014	<i>L. rhamnosus</i>	Postive		ref YP_003175184.1	LC_02494	Protein Translation Elongation Factor G (EF-G)*
Espino, 2014	<i>L. rhamnosus</i>	Positive		ref YP_003174080.1	LC_01390	Pyruvate kinase*
Espino, 2014	<i>L. rhamnosus</i>	Postive		ref YP_003175178.1	LC_02488	LSU/50S ribosomal protein L3P
Espino, 2014	<i>L. rhamnosus</i>	Positive		ref YP_003174424.1	LC_01734	Threonyl-tRNA synthetase
Espino, 2014	<i>L. rhamnosus</i>	Postive		ref YP_003174918.1	LC_01812	Chaperonin GroEL*
Espino, 2014	<i>L. rhamnosus</i>	Positive		ref YP_003173233.1	LC_00543	Aminopeptidase N

Espino, 2014	<i>L. rhamnosus</i>	Postive		ref YP_00317 5185.1	LC_02495	SSU/30S ribosomal protein S7P
Espino, 2014	<i>L. rhamnosus</i>	Positive		ref YP_00317 4969.1	LC_02279	LSU/50S ribosomal protein L1P
Espino, 2014	<i>L. rhamnosus</i>	Postive		ref YP_00317 4055.1	LC_01365	ATP-dependent Clp protease, ATP-binding subunit ClpX
Espino, 2014	<i>L. rhamnosus</i>	Positive		ref YP_00317 5193.1	LC_02503	ClpA/ClpB ATP-dependent Clp protease ATP-binding subunit
Espino, 2014	<i>L. rhamnosus</i>	Postive		ref YP_00317 5160.1	LC_02470	LSU/50S ribosomal protein L15P
Espino, 2014	<i>L. rhamnosus</i>	Positive		ref YP_00317 3676.1	LC_00986	Glyceraldehyde-3-phosphate dehydrogenase*
Espino, 2014	<i>L. rhamnosus</i>	Postive		ref YP_00317 5152.1	LC_02462	LSU/50S ribosomal protein L17P
Espino, 2014	<i>L. rhamnosus</i>	Positive		ref YP_00317 5191.1	LC_02500	DNA-directed RNA polymerase, beta chain
Espino, 2014	<i>L. rhamnosus</i>	Postive		ref YP_00317 3638.1	LC_00948	Protein translocase subunit secA*
Espino, 2014	<i>L. rhamnosus</i>	Positive		ref YP_00317 4131.1	LC_01441	Manganese-dependent inorganic pyrophosphatase
Espino, 2014	<i>L. rhamnosus</i>	Postive		ref YP_00317 3477.1	LC_00787	Catabolite control protein A
Espino, 2014	<i>L. rhamnosus</i>	Positive		ref YP_00317 4958.1	LC_02268	LSU/50S ribosomal protein L10P
Espino, 2014	<i>L. rhamnosus</i>	Postive		ref YP_00317 3679.1	LC_00989	Enolase*
Espino, 2014	<i>L. rhamnosus</i>	Positive		ref YP_00317 4184.1	LC_01494	Endopeptidase O*
Espino, 2014	<i>L. rhamnosus</i>	Postive		ref YP_00317 2933.1	LC_00243	Two-component response regulator
Espino, 2014	<i>L. rhamnosus</i>	Positive		ref YP_00317 3971.1	LC_01207	Rod shape-determining protein MreB
Espino, 2014	<i>L. rhamnosus</i>	Postive		ref YP_00317 2928.1	LC_01983	GTP-dependent nucleic acid-binding protein EngD [<i>L. rhamnosus</i> Lc 705]
Espino, 2014	<i>L. rhamnosus</i>	Positive		ref YP_00317 5273.1	LC_02583	Tagatose 1,6-diphosphate aldolase
Espino, 2014	<i>L. rhamnosus</i>	Postive		ref YP_00317 4387.1	LC_01697	Transcription elongation factor greA
Espino, 2014	<i>L. rhamnosus</i>	Positive		ref YP_00317 3823.1	LC_01133	UTP-glucose-1-phosphate uridylyltransferase
Espino, 2014	<i>L. rhamnosus</i>	Postive		ref YP_00317 4298.1	LC_01608	Protein Translation Elongation Factor Ts (EF-Ts)
Espino, 2014	<i>L. rhamnosus</i>	Positive		ref YP_00317 4919.1	LC_02229	10 kDa chaperonin GROES
Espino, 2014	<i>L. rhamnosus</i>	Postive		ref YP_00317 2837.1	LC_00147	D-alanine--D-alanine ligase
Espino, 2014	<i>L. rhamnosus</i>	Positive		ref YP_00317 3788.1	LC_01098	Aspartyl/glutamyl-tRNA(Asn/Gln) amidotransferase subunit A
Espino, 2014	<i>L. rhamnosus</i>	Postive		ref YP_00317 4835.1	LC_02145	2,3-bisphosphoglycerate-dependent phosphoglycerate mutase
Espino, 2014	<i>L. rhamnosus</i>	Positive		ref YP_00317 4492.1	LC_01802	Phosphoenolpyruvate--protein phosphotransferase
Espino, 2014	<i>L. rhamnosus</i>	Postive		ref YP_00317 3677.1	LC_00987	Phosphoglycerate kinase*

Espino, 2014	<i>L. rhamnosus</i>	Positive		ref YP_003172696.1	LC_00006	DNA gyrase subunit B
Espino, 2014	<i>L. rhamnosus</i>	Positive		ref YP_003173277.1	LC_00587	Cold shock protein
Espino, 2014	<i>L. rhamnosus</i>	Positive		ref YP_003173678.1	LC_00988	Triosephosphate isomerase*
Espino, 2014	<i>L. rhamnosus</i>	Positive		ref YP_003173451.1	LC_00761	Alanyl-tRNA synthetase
Espino, 2014	<i>L. rhamnosus</i>	Positive		ref YP_003174041.1	LC_01351	SSU/30S ribosomal protein S20P
Espino, 2014	<i>L. rhamnosus</i>	Positive		ref YP_003175165.1	LC_02475	SSU/30S ribosomal protein S8P
Espino, 2014	<i>L. rhamnosus</i>	Positive		ref YP_003173731.1	LC_01041	Glucosamine--fructose-6-phosphate aminotransferase, isomerizing
Espino, 2014	<i>L. rhamnosus</i>	Positive		ref YP_003174360.1	LC_01670	LSU/50S ribosomal protein L27P
Espino, 2014	<i>L. rhamnosus</i>	Positive		ref YP_003175162.1	LC_02472	SSU/30S ribosomal protein S5P
Espino, 2014	<i>L. rhamnosus</i>	Positive		ref YP_003173343.1	LC_00360	Phosphomethylpyrimidine kinase
Espino, 2014	<i>L. rhamnosus</i>	Positive		ref YP_003174285.1	LC_01595	Translation initiation factor IF-2
Espino, 2014	<i>L. rhamnosus</i>	Positive		ref YP_003175028.1	LC_02338	Aminopeptidase C
Espino, 2014	<i>L. rhamnosus</i>	Positive		ref YP_003173170.1	LC_00480	NADH peroxidase
Espino, 2014	<i>L. rhamnosus</i>	Positive		ref YP_003173730.1	LC_01040	Phosphoglucosamine mutase
Espino, 2014	<i>L. rhamnosus</i>	Positive		ref YP_003174897.1	LC_02207	Transcriptional regulator, xre family
Espino, 2014	<i>L. rhamnosus</i>	Positive		ref YP_003174848.1	LC_02158	Universal stress protein, UspA family
Espino, 2014	<i>L. rhamnosus</i>	Positive		ref YP_003174530.1	LC_01840	NH(3)-dependent NAD(+) synthetase
Espino, 2014	<i>L. rhamnosus</i>	Positive		ref YP_003175190.1	LC_02501	DNA-directed RNA polymerase, beta chain
Espino, 2014	<i>L. rhamnosus</i>	Positive		ref YP_003175155.1	LC_02465	SSU/30S ribosomal protein S13P
Espino, 2014	<i>L. rhamnosus</i>	Positive		ref YP_003173189.1	LC_00500	Dihydroxyacetone kinase
Espino, 2014	<i>L. rhamnosus</i>	Positive		ref YP_003174415.1	LC_01725	LSU/50S ribosomal protein L20P
Espino, 2014	<i>L. rhamnosus</i>	Positive		ref YP_003174185.1	LC_01495	Lipoate-protein ligase A
Espino, 2014	<i>L. rhamnosus</i>	Positive		ref YP_003174362.1	LC_01672	LSU/50S ribosomal protein L21P
Espino, 2014	<i>L. rhamnosus</i>	Positive		ref YP_003174567.1	LC_01877	Seryl-tRNA synthetase
Espino, 2014	<i>L. rhamnosus</i>	Positive		ref YP_003172705.1	LC_00015	Intracellular protease, PfpI family
Espino, 2014	<i>L. rhamnosus</i>	Positive		ref YP_003175179.1	LC_02489	SSU/30S ribosomal protein S10P
Espino, 2014	<i>L. rhamnosus</i>	Positive		ref YP_003174291.1	LC_01601	Prolyl-tRNA synthetase

Espino, 2014	<i>L. rhamnosus</i>	Postive		ref YP_003174031.1	LC_01341	GTP-binding protein TypA
Espino, 2014	<i>L. rhamnosus</i>	Positive		ref YP_003174026.1	LC_01336	Pyruvate dehydrogenase complex E2 component, dihydrolipoyllysine-residue acetyltransferase*
Espino, 2014	<i>L. rhamnosus</i>	Postive		ref YP_003175186.1	LC_02496	SSU/30S ribosomal protein S12P
Espino, 2014	<i>L. rhamnosus</i>	Positive		ref YP_003175166.1	LC_02476	LSU/50S ribosomal protein L5P
Espino, 2014	<i>L. rhamnosus</i>	Postive		ref YP_003174168.1	LC_01478	Pyrimidine operon regulatory protein, bifunctional protein pyrR
Espino, 2014	<i>L. rhamnosus</i>	Positive		ref YP_003174096.1	LC_01406	DNA-binding protein HU
Espino, 2014	<i>L. rhamnosus</i>	Postive		ref YP_003173852.1	LC_01162	Glucose-6-phosphate isomerase*
Espino, 2014	<i>L. rhamnosus</i>	Positive		ref YP_003175168.1	LC_02478	LSU/50S ribosomal protein L14P
Espino, 2014	<i>L. rhamnosus</i>	Postive		ref YP_003172702.1	LC_00012	SSU/30S ribosomal protein S6P
Espino, 2014	<i>L. rhamnosus</i>	Positive		ref YP_003173703.1	LC_01013	Hydrolase of the HAD superfamily
Espino, 2014	<i>L. rhamnosus</i>	Postive		ref YP_003173884.1	LC_01194	Uracil phosphoribosyltransferase
Espino, 2014	<i>L. rhamnosus</i>	Positive		ref YP_003173687.1	LC_00997	Exoribonuclease R
Espino, 2014	<i>L. rhamnosus</i>	Postive		ref YP_003175172.1	LC_02482	SSU/30S ribosomal protein S3P
Espino, 2014	<i>L. rhamnosus</i>	Positive		ref YP_003173734.1	LC_01044	Integrase
Espino, 2014	<i>L. rhamnosus</i>	Postive		ref YP_003175177.1	LC_02487	LSU/50S ribosomal protein L4P
Espino, 2014	<i>L. rhamnosus</i>	Positive		ref YP_003174230.1	LC_01540	GatB/YqeY domain protein
Espino, 2014	<i>L. rhamnosus</i>	Postive		ref YP_003174231.1	LC_01541	SSU/30S ribosomal protein S21P
Espino, 2014	<i>L. rhamnosus</i>	Positive		ref YP_003173460.1	LC_00770	Thioredoxin
Espino, 2014	<i>L. rhamnosus</i>	Postive		ref YP_003174707.1	LC_02017	Tyrosyl-tRNA synthetase
Espino, 2014	<i>L. rhamnosus</i>	Positive		ref YP_003175141.1	LC_02451	LSU/50S ribosomal protein L13P
Espino, 2014	<i>L. rhamnosus</i>	Postive		ref YP_003173411.1	LC_00721	Thiol peroxidase
Espino, 2014	<i>L. rhamnosus</i>	Positive		ref YP_003175259.1	LC_02870	Ribose-phosphate pyrophosphokinase
Espino, 2014	<i>L. rhamnosus</i>	Postive		ref YP_003173960.1	LC_01270	SSU/30S ribosomal protein S4P
Espino, 2014	<i>L. rhamnosus</i>	Positive		ref YP_003173674.1	LC_00984	ATP-dependent Clp protease proteolytic subunit
Espino, 2014	<i>L. rhamnosus</i>	Postive		ref YP_003175157.1	LC_02467	Translation initiation factor IF-1
Espino, 2014	<i>L. rhamnosus</i>	Positive		ref YP_003174793.1	LC_02103	Cyclopropane-fatty-acyl-phospholipid synthase
Espino, 2014	<i>L. rhamnosus</i>	Postive		ref YP_003175239.1	LC_02549	LSU/50S ribosomal protein L31P

Espino, 2014	<i>L. rhamnosus</i>	Positive		ref YP_003175175.1	LC_02485	LSU/50S ribosomal protein L2P
Espino, 2014	<i>L. rhamnosus</i>	Positive		ref YP_003174310.1	LC_01620	LSU/50S ribosomal protein L19P
Espino, 2014	<i>L. rhamnosus</i>	Positive		ref YP_003175176.1	LC_02486	LSU/50S ribosomal protein L23P
Espino, 2014	<i>L. rhamnosus</i>	Positive		ref YP_003173635.1	LC_00945	Ribosomal subunit interface protein
Espino, 2014	<i>L. rhamnosus</i>	Positive		ref YP_003174288.1	LC_01598	Transcription elongation factor NusA
Espino, 2014	<i>L. rhamnosus</i>	Positive		ref YP_003173659.1	LC_00969	Phosphoglucosmutase
Espino, 2014	<i>L. rhamnosus</i>	Positive		ref YP_003173967.1	LC_01277	Valyl-tRNA synthetase
Espino, 2014	<i>L. rhamnosus</i>	Positive		ref YP_003175167.1	LC_02477	LSU/50S ribosomal protein L24P
Espino, 2014	<i>L. rhamnosus</i>	Positive		ref YP_003175261.1	LC_02571	UDP-N-acetylglucosamine pyrophosphorylase / N-acetylglucosamine-1-phosphate uridyltransferase
Espino, 2014	<i>L. rhamnosus</i>	Positive		ref YP_003175170.1	LC_02480	LSU/50S ribosomal protein L29P
Espino, 2014	<i>L. rhamnosus</i>	Positive		ref YP_003173917.1	LC_02206	Universal stress protein family
Espino, 2014	<i>L. rhamnosus</i>	Positive		ref YP_003174123.1	LC_01433	ATP-dependent endopeptidase hsl ATP-binding subunit hslU
Espino, 2014	<i>L. rhamnosus</i>	Positive		ref YP_003174582.1	LC_02291	LSU/50S ribosomal protein L33P
Espino, 2014	<i>L. rhamnosus</i>	Positive		ref YP_003174268.1	LC_01578	Adenine phosphoribosyltransferase
Espino, 2014	<i>L. rhamnosus</i>	Positive		ref YP_003174491.1	LC_01801	Phosphoenolpyruvate-protein phosphotransferase
Espino, 2014	<i>L. rhamnosus</i>	Positive		ref YP_003174417.1	LC_01727	Translation initiation factor IF-3
Espino, 2014	<i>L. rhamnosus</i>	Positive		ref YP_003173609.1	LC_00919	Copper homeostasis protein CutC
Espino, 2014	<i>L. rhamnosus</i>	Positive		ref YP_003174378.1	LC_01688	Glucokinase
Espino, 2014	<i>L. rhamnosus</i>	Positive		ref YP_003174282.1	LC_01592	Ribosome-binding factor A
Espino, 2014	<i>L. rhamnosus</i>	Positive		ref YP_003174495.1	LC_01805	ClpA/ClpB ATP-dependent clp protease ATP-binding subunit
Espino, 2014	<i>L. rhamnosus</i>	Positive		ref YP_003174314.1	LC_01624	SSU/30S ribosomal protein S16P
Espino, 2014	<i>L. rhamnosus</i>	Positive		ref YP_003175163.1	LC_02473	LSU/50S ribosomal protein L18P
Espino, 2014	<i>L. rhamnosus</i>	Positive		ref YP_003175282.1	LC_02592	methionyl-tRNA synthetase / protein secretion chaperonin, CsaA
Espino, 2014	<i>L. rhamnosus</i>	Positive		ref YP_003174174.1	LC_01484	Nitroreductase family protein
Espino, 2014	<i>L. rhamnosus</i>	Positive		ref YP_003174493.1	LC_01803	Phosphocarrier protein HPr
Espino, 2014	<i>L. rhamnosus</i>	Positive		ref YP_003174033.1	LC_01343	Pyruvate carboxylase

Espino, 2014	<i>L. rhamnosus</i>	Positive		ref YP_003173001.1	LC_02133	NADH oxidase
Espino, 2014	<i>L. rhamnosus</i>	Postive		ref YP_003174218.1	LC_01528	Glycyl-tRNA synthetase, beta subunit
Espino, 2014	<i>L. rhamnosus</i>	Positive		ref YP_003175204.1	LC_02514	Lysyl-tRNA synthetase
Espino, 2014	<i>L. rhamnosus</i>	Postive		ref YP_003173843.1	LC_01153	Xanthine phosphoribosyltransferase
Espino, 2014	<i>L. rhamnosus</i>	Positive		ref YP_003174649.1	LC_01959	GMP synthase
Espino, 2014	<i>L. rhamnosus</i>	Postive		ref YP_003174287.1	LC_01597	Nucleic-acid-binding protein implicated in transcription termination
Espino, 2014	<i>L. rhamnosus</i>	Positive		ref YP_003174898.1	LC_02208	Protein tyrosine/serine phosphatase
Espino, 2014	<i>L. rhamnosus</i>	Postive		ref YP_003174399.1	LC_01709	Two-component response regulator
Espino, 2014	<i>L. rhamnosus</i>	Positive		ref YP_003175503.1	LC_02813	Acetyltransferase, gnat family
Espino, 2014	<i>L. rhamnosus</i>	Postive		ref YP_003174070.1	LC_01380	ATP-dependent chaperone ClpB
Espino, 2014	<i>L. rhamnosus</i>	Positive		ref YP_003172930.1	LC_00240	Inosine-5'-monophosphate dehydrogenase
Espino, 2014	<i>L. rhamnosus</i>	Postive		ref YP_003175174.1	LC_02484	SSU/30S ribosomal protein S19P
Espino, 2014	<i>L. rhamnosus</i>	Positive		ref YP_003174297.1	LC_01607	Uridylate kinase
Espino, 2014	<i>L. rhamnosus</i>	Postive		ref YP_003175009.1	LC_02319	Cysteinyl-tRNA synthetase
Espino, 2014	<i>L. rhamnosus</i>	Positive		ref YP_003175153.1	LC_02463	DNA-directed RNA polymerase, subunit alpha
Espino, 2014	<i>L. rhamnosus</i>	Postive		ref YP_003173673.1	LC_00983	Transcriptional regulator, MarR family
Espino, 2014	<i>L. rhamnosus</i>	Positive		ref YP_003174979.1	LC_02289	Transcription antitermination protein nusG
Espino, 2014	<i>L. rhamnosus</i>	Postive		ref YP_003174864.1	LC_02174	Asparagine synthase
Espino, 2014	<i>L. rhamnosus</i>	Positive		ref YP_003174236.1	LC_01546	Aspartyl-tRNA synthetase
Espino, 2014	<i>L. rhamnosus</i>	Postive		ref YP_003174728.1	LC_02038	dTDP-glucose 4,6-dehydratase
Espino, 2014	<i>L. rhamnosus</i>	Positive		ref YP_003174459.1	LC_01769	Arginyl-tRNA synthetase
Espino, 2014	<i>L. rhamnosus</i>	Postive		ref YP_003172918.1	LC_00228	Pyrrolidone-carboxylate peptidase
Espino, 2014	<i>L. rhamnosus</i>	Positive		ref YP_003174296.1	LC_01606	Ribosome-recycling factor
Espino, 2014	<i>L. rhamnosus</i>	Postive		ref YP_003173207.1	LC_00517	Fructose-bisphosphate aldolase
Espino, 2014	<i>L. rhamnosus</i>	Positive		ref YP_003173611.1	LC_00921	3-carboxymuconate cyclase
Espino, 2014	<i>L. rhamnosus</i>	Postive		ref YP_003174723.1	LC_02033	ATP-dependent Clp protease, ATP-binding subunit
Espino, 2014	<i>L. rhamnosus</i>	Positive		ref YP_003174804.1	LC_02114	Enoyl-(Acyl-carrier-protein) reductase II

Espino, 2014	<i>L. rhamnosus</i>	Postive		ref YP_003173614.1	LC_00924	GMP reductase
Espino, 2014	<i>L. rhamnosus</i>	Positive		ref YP_003172909.1	LC_00219	Pyridoxine 5'-phosphate oxidase V related favin-nucleotide-binding protein
Espino, 2014	<i>L. rhamnosus</i>	Postive		ref YP_003174181.1	LC_01491	Ribonucleoside-diphosphate reductase, alpha subunit*
Flores-Ramirez, 2014	<i>C. burnetii</i>	Negative	Q83F55		CBU_0094	Chaperone protein ClpB*
Flores-Ramirez, 2014	<i>C. burnetii</i>	Negative	Q83ET7		CBU_0221	Translation elongation factor Tu*
Flores-Ramirez, 2014	<i>C. burnetii</i>	Negative	Q83ET5		CBU_0225	Transcription antitermination protein NusG
Flores-Ramirez, 2014	<i>C. burnetii</i>	Negative	Q83ET4		CBU_0226	50S ribosomal protein L11*
Flores-Ramirez, 2014	<i>C. burnetii</i>	Negative	Q83ET3		CBU_0227	50S ribosomal protein L1*
Flores-Ramirez, 2014	<i>C. burnetii</i>	Negative	Q83ET2		CBU_0228	50S ribosomal protein L10*
Flores-Ramirez, 2014	<i>C. burnetii</i>	Negative	P0C8S4		CBU_0231	DNA directed RNA polymerase beta subunit
Flores-Ramirez, 2014	<i>C. burnetii</i>	Negative	Q83ET0		CBU_0232	DNA directed RNA polymerase beta subunit
Flores-Ramirez, 2014	<i>C. burnetii</i>	Negative	Q83ES8		CBU_0234	30S ribosomal protein S7*
Flores-Ramirez, 2014	<i>C. burnetii</i>	Negative	Q83ES7		CBU_0235	Translation elongation factor G*
Flores-Ramirez, 2014	<i>C. burnetii</i>	Negative	Q83ES6		CBU_0236	Translation elongation factor Tu*
Flores-Ramirez, 2014	<i>C. burnetii</i>	Negative	Q83ES4		CBU_0238	50S ribosomal protein L3*
Flores-Ramirez, 2014	<i>C. burnetii</i>	Negative	O85387		CBU_0243	50S ribosomal protein L22*
Flores-Ramirez, 2014	<i>C. burnetii</i>	Negative	O85388		CBU_0244	30S ribosomal protein S3*
Flores-Ramirez, 2014	<i>C. burnetii</i>	Negative	Q83ER9		CBU_0245	50S ribosomal protein L16*
Flores-Ramirez, 2014	<i>C. burnetii</i>	Negative	Q83EQ9		CBU_0255	30S ribosomal protein S5*

Flores-Ramirez, 2014	<i>C. burnetii</i>	Negative	Q83EQ8		CBU_0256	50S ribosomal protein L30*
Flores-Ramirez, 2014	<i>C. burnetii</i>	Negative	Q83EQ4		CBU_0261	30S ribosomal protein S11*
Flores-Ramirez, 2014	<i>C. burnetii</i>	Negative	Q83EQ3		CBU_0262	30S ribosomal protein S4*
Flores-Ramirez, 2014	<i>C. burnetii</i>	Negative	Q83EQ2		CBU_0263	DNA directed RNA polymerase alpha subunit
Flores-Ramirez, 2014	<i>C. burnetii</i>	Negative	Q83EP4		CBU_0271	Single strand binding protein
Flores-Ramirez, 2014	<i>C. burnetii</i>	Negative	Q83EL0		CBU_0309	Heat shock protein HtpG*
Flores-Ramirez, 2014	<i>C. burnetii</i>	Negative	Q83E67		CBU_0463	Dihydrolipoamide dehydrogenase
Flores-Ramirez, 2014	<i>C. burnetii</i>	Negative	Q83E58		CBU_0473	DNA binding protein HU
Flores-Ramirez, 2014	<i>C. burnetii</i>	Negative	Q83E58		CBU_0473	DNA binding protein HU putative
Flores-Ramirez, 2014	<i>C. burnetii</i>	Negative	Q83E45		CBU_0486	Ribonuclease Rne
Flores-Ramirez, 2014	<i>C. burnetii</i>	Negative	Q83E19		CBU_0517	Aspartate aminotransferase
Flores-Ramirez, 2014	<i>C. burnetii</i>	Negative	Q83E09		CBU_0528	30S ribosomal protein S1*
Flores-Ramirez, 2014	<i>C. burnetii</i>	Negative	Q83DX4		CBU_0568	PhoH family protein
Flores-Ramirez, 2014	<i>C. burnetii</i>	Negative	Q83DR6		CBU_0629	Proline dehydrogenase
Flores-Ramirez, 2014	<i>C. burnetii</i>	Negative	Q83DQ8		CBU_0638	Dehydrogenase E2 component acyltransferase
Flores-Ramirez, 2014	<i>C. burnetii</i>	Negative	Q83DM4		CBU_0675	Transaldolase putative
Flores-Ramirez, 2014	<i>C. burnetii</i>	Negative	Q93N67		CBU_0676	NAD dependent epimerase dehydratase
Flores-Ramirez, 2014	<i>C. burnetii</i>	Negative	B5U8Q1		CBU_0696	Pleiotropic regulatory protein
Flores-	<i>C. burnetii</i>	Negative	Q83DJ3		CBU_0737	Trigger factor

Ramirez, 2014						
Flores-Ramirez, 2014	<i>C. burnetii</i>	Negative	Q83D73		CBU_0867	50S ribosomal protein L9*
Flores-Ramirez, 2014	<i>C. burnetii</i>	Negative	Q83CY8		CBU_0963	Bacterioferritin comigratory protein
Flores-Ramirez, 2014	<i>C. burnetii</i>	Negative	Q83CQ4		CBU_1054	recA protein
Flores-Ramirez, 2014	<i>C. burnetii</i>	Negative	Q83CE9		CBU_1169	Heat shock protein Hsp20 family*
Flores-Ramirez, 2014	<i>C. burnetii</i>	Negative	Q9ZH99		CBU_1200	Isocitrate dehydrogenase NADP dependent
Flores-Ramirez, 2014	<i>C. burnetii</i>	Negative	Q83C87		CBU_1241	Malate dehydrogenase
Flores-Ramirez, 2014	<i>C. burnetii</i>	Negative	P42381		CBU_1289	Chaperone protein dnaJ*
Flores-Ramirez, 2014	<i>C. burnetii</i>	Negative	O87712		CBU_1290	Chaperone protein dnaK*
Flores-Ramirez, 2014	<i>C. burnetii</i>	Negative	Q83C41		CBU_1293	Heat shock protein GrpE*
Flores-Ramirez, 2014	<i>C. burnetii</i>	Negative	Q83C11		CBU_1325	Translation initiation factor IF 3
Flores-Ramirez, 2014	<i>C. burnetii</i>	Negative	Q83BV4		CBU_1383	Ribosome recycling factor
Flores-Ramirez, 2014	<i>C. burnetii</i>	Negative	Q9X5U8		CBU_1386	30S ribosomal protein S2*
Flores-Ramirez, 2014	<i>C. burnetii</i>	Negative	P53592		CBU_1397	Succinyl CoA synthetase beta subunit
Flores-Ramirez, 2014	<i>C. burnetii</i>	Negative	Q83BU7		CBU_1398	2 oxoglutarate dehydrogenase E2 component
Flores-Ramirez, 2014	<i>C. burnetii</i>	Negative	P51056		CBU_1399	2 oxoglutarate dehydrogenase E1 component
Flores-Ramirez, 2014	<i>C. burnetii</i>	Negative	Q83BS1		CBU_1432	Translation initiation factor IF 2*
Flores-Ramirez, 2014	<i>C. burnetii</i>	Negative	Q83BS0		CBU_1433	N utilization substance protein A
Flores-Ramirez,	<i>C. burnetii</i>	Negative	Q83BN9		CBU_1464	DNA binding protein HU beta

2014						
Flores-Ramirez, 2014	<i>C. burnetii</i>	Negative	Q83BM8		CBU_1475	Glutamyl tRNA Gln amidotransferase B subunit
Flores-Ramirez, 2014	<i>C. burnetii</i>	Negative	Q83BB6		CBU_1596	RNA polymerase sigma factor
Flores-Ramirez, 2014	<i>C. burnetii</i>	Negative	Q83B14		CBU_1706	Antioxidant AhpC Tsa family
Flores-Ramirez, 2014	<i>C. burnetii</i>	Negative	P19685		CBU_1708	Superoxide dismutase fe
Flores-Ramirez, 2014	<i>C. burnetii</i>	Negative	Q83B06		CBU_1716	Glycine cleavage system T protein
Flores-Ramirez, 2014	<i>C. burnetii</i>	Negative	P19421		CBU_1718	Chaperonin 60 kDa*
Flores-Ramirez, 2014	<i>C. burnetii</i>	Negative	P19422		CBU_1719	Chaperonin 10 kDa*
Flores-Ramirez, 2014	<i>C. burnetii</i>	Negative	Q83AZ9		CBU_1726	Acetyl CoA carboxylase biotin carboxylase
Flores-Ramirez, 2014	<i>C. burnetii</i>	Negative	Q83AY0		CBU_1747	Stringent starvation protein A
Flores-Ramirez, 2014	<i>C. burnetii</i>	Negative	Q83AX9		CBU_1748	30S ribosomal protein S9*
Flores-Ramirez, 2014	<i>C. burnetii</i>	Negative	Q83AV0		CBU_1778	Fructose 1, 6-bisphosphate aldolase class II*
Flores-Ramirez, 2014	<i>C. burnetii</i>	Negative	Q83AU5		CBU_1783	Glyceraldehyde 3 phosphate dehydrogenase type I*
Flores-Ramirez, 2014	<i>C. burnetii</i>	Negative	Q83AC1		CBU_1983	Universal stress protein A
Flores-Ramirez, 2014	<i>C. burnetii</i>	Negative	Q83A94		CBU_2012	Heat shock protein HslVU ATPase subunit HslU
Flores-Ramirez, 2014	<i>C. burnetii</i>	Negative	Q83A25		CBU_2086	Transcription termination factor Rho
Flores-Ramirez, 2014	<i>C. burnetii</i>	Negative	Q83A21		CBU_2090	Pyrroline 5 carboxylate reductase
Hempel, 2011	<i>S. aureus</i>	Positive		57652555		Hypothetical protein SACOL0281
Mao, 2011	<i>C. acetobutylicum</i>	Positive		gi 15895021		Predicted ZN-finger-like protein
Thein, 2010	<i>E. coli</i> BL21	Negative		253772354		Hypothetical protein ECBD_0934
Thein, 2010	<i>E. coli</i> BL21	Negative		253773077		Protein of unknown function

						DUF980
Thein, 2010	<i>E. coli</i> BL21	Negative		253774066		Protein of unknown function DUF181
Thein, 2010	<i>E. coli</i> BL21	Negative		253774378		Protein of unknown function DUF163
Thein, 2010	<i>E. coli</i> BL21	Negative		253775566		Protein of unknown function DUF484
Thein, 2010	<i>E. coli</i> BL21	Negative		253774003		Protein of unknown function methylase putative
Vecchiotti, 2012	<i>P. aeruginosa</i>	Negative	Q9HZ55		rluB PA3179	Putative ribosomal pseudouridine synthase B
Vecchiotti, 2012	<i>P. aeruginosa</i>	Negative	Q9I0A7		PA2735	Putative restriction-modification system protein
Yu, 2012	<i>C. thermocellum</i>	Positive		gi 125975004		Alpha-isopropylmalate/homocitrate synthasefamily transferase
Sears, 2012	<i>R. typhi</i>	Negative			RT0085	Conserved hypothetical protein
Sears, 2012	<i>R. typhi</i>	Negative	Q68XL9		RT0138	Conserved hypothetical protein
Sears, 2012	<i>R. typhi</i>	Negative			RT0329	Glycosyltransferase
Sears, 2012	<i>R. typhi</i>	Negative			RT0522	Conserved hypothetical protein with phospholipase A activity
Sears, 2012	<i>R. typhi</i>	Negative			RT0744	Conserved hypothetical protein
Sears, 2012	<i>R. typhi</i>	Negative			RT0857	Conserved hypothetical protein
Gibson, 2010	<i>N. sennetsu</i>	Negative	Q2GDT9		NSE_0472	Putative hydrolase
Pornwiroon, 2009	<i>R. parkeri</i>	Negative		15892591		Hypothetical protein RC0668
Pornwiroon, 2009	<i>R. parkeri</i>	Negative		34581459		Hypothetical WASP N-WASP MENA proteins
Portillo, 2011	<i>L. monocytogenes</i>	Positive	Q927Y2		lmo2511	Similar to conserved hypothetical proteins like to B. subtilis YvyD protein {Listeria monocytogenes EGD-e}
Portillo, 2011	<i>L. monocytogenes</i>	Positive	Q928M6		lmo2411	Similar to conserved hypothetical proteins {Listeria monocytogenes EGD-e}
Portillo, 2011	<i>L. monocytogenes</i>	Positive	Q8Y757		lmo1448	conserved hypothetical protein {Listeria monocytogenes EGD-e}
Portillo, 2011	<i>L. monocytogenes</i>	Positive	Q8Y9H0		lmo0558	conserved hypothetical protein {Listeria monocytogenes EGD-e}
Portillo, 2011	<i>L. monocytogenes</i>	Positive	Q8Y9E8		lmo0581	conserved hypothetical protein {Listeria monocytogenes EGD-e}
Portillo, 2011	<i>L. monocytogenes</i>	Positive	Q8YA68		lmo0291	conserved hypothetical protein similar to B. subtilis YycJ protein {Listeria monocytogenes EGD-e}
Portillo, 2011	<i>L. monocytogenes</i>	Positive	Q8YAD5		lmo0196	similar to B. subtilis SpoVG protein {Listeria monocytogenes EGD-e}
Portillo, 2011	<i>L. monocytogenes</i>	Positive	Q8Y859		lmo1059	unknown {Listeria monocytogenes EGD-e}
Portillo, 2011	<i>L. monocytogenes</i>	Positive	Q8Y6V1		lmo1580	similar to unknown protein {Listeria monocytogenes EGD-e}
Portillo, 2011	<i>L. monocytogenes</i>	Positive	Q8Y3P3		lmo2792	unknown {Listeria monocytogenes EGD-e}

Portillo, 2011	<i>L. monocytogenes</i>	Positive	P65770		lmo1586	similar to unknown proteins {Listeria monocytogenes EGD-e}
Portillo, 2011	<i>L. monocytogenes</i>	Positive	Q8Y8X7		lmo0765	unknown {Listeria monocytogenes EGD-e}
Portillo, 2011	<i>L. monocytogenes</i>	Positive	C6ZWF7		lmo1052	highly similar to pyruvate dehydrogenase (E1 alpha subunit) (pdhA) {Listeria monocytogenes EGD-e}
Portillo, 2011	<i>L. monocytogenes</i>	Positive	Q92F70		lmo0197	similar to B. subtilis SpoVG protein {Listeria monocytogenes EGD-e}
Portillo, 2011	<i>L. monocytogenes</i>	Positive	Q8Y614		lmo1888	similar to hypothetical proteins {Listeria monocytogenes EGD-e}
Portillo, 2011	<i>L. monocytogenes</i>	Positive	Q8YAB9		lmo0227	conserved hypothetical protein {Listeria monocytogenes EGD-e}
Schaumburg, 2004	<i>L. monocytogenes</i>	Positive	Q8Y859		Lmo1059	Unknown
Schaumburg, 2004	<i>L. monocytogenes</i>	Positive	Q8Y5N6		Lmo2021	Similar to unknown protein
Schaumburg, 2004	<i>L. monocytogenes</i>	Positive	Q927Y2		Lmo2511	Similar to conserved hypothetical proteins like to B. subtilis YvyD protein
Gómez-Gascón, 2012	<i>S. suis</i>	Positive		gi 253752994	SSU0184	Hypothetical protein SSU0184
Gómez-Gascón, 2012	<i>S. suis</i>	Positive		gi 253753154	SSU0360	Hypothetical protein SSU0360
Gómez-Gascón, 2012	<i>S. suis</i>	Positive		gi 253754023	SSU1316	Hypothetical protein SSU1316
Gómez-Gascón, 2012	<i>S. suis</i>	Positive		gi 253753008	SSU0200	Hypothetical protein SSU0200
Gómez-Gascón, 2012	<i>S. suis</i>	Positive		gi 253753133	SSU0336	Hypothetical protein SSU0336
Gómez-Gascón, 2012	<i>S. suis</i>	Positive		gi 253753136	SSU0342	Hypothetical protein SSU0342
Gómez-Gascón, 2012	<i>S. suis</i>	Positive		gi 253753224	SSU0436	Hypothetical protein SSU0436
Gómez-Gascón, 2012	<i>S. suis</i>	Positive		gi 253753230	SSU0442	Hypothetical protein SSU0442
Gómez-Gascón, 2012	<i>S. suis</i>	Positive		gi 253753690	SSU0969	Hypothetical protein SSU0969
Gómez-Gascón, 2012	<i>S. suis</i>	Positive		gi 253754022	SSU1315	Hypothetical protein SSU1315
Gómez-Gascón, 2012	<i>S. suis</i>	Positive		gi 253754270	SSU1573	Hypothetical protein SSU1573
Gómez-	<i>S. suis</i>	Positive		gi 253754624	SSU1946	Hypothetical protein SSU1946

Gascón, 2012						
Mao, 2011	<i>C. acetobutylicum</i>	Positive		gi 15895593		Diverged glycosyltransferase domain containing protein
Mao, 2011	<i>C. acetobutylicum</i>	Positive		gi 15894314		Flavoprotein
Mao, 2011	<i>C. acetobutylicum</i>	Positive		gi 15896881		Acetyltransferase (with duplicated domains), possibly RIMI-like protein
Mao, 2011	<i>C. acetobutylicum</i>	Positive		gi 15895080		Exopolyphosphatase family protein
Mao, 2011	<i>C. acetobutylicum</i>	Positive		gi 15896244		Predicted short-chain dehydrogenase
Thein, 2010	<i>E. coli BL21</i>	Negative		253771748		Transcriptional regulator, DeoR family
Thein, 2010	<i>E. coli BL21</i>	Negative		253771753		Transcriptional regulator, TetR family
Thein, 2010	<i>E. coli BL21</i>	Negative		253771816		Transcriptional regulator, Crp/Fnr family
Thein, 2010	<i>E. coli BL21</i>	Negative		253772002		DEAD/DEAH box helicase domain protein
Thein, 2010	<i>E. coli BL21</i>	Negative		253772595		Small GTP-binding protein
Thein, 2010	<i>E. coli BL21</i>	Negative		253773043		Nucleotide sugar dehydrogenase
Thein, 2010	<i>E. coli BL21</i>	Negative		253773357		FAD linked oxidase domain protein
Thein, 2010	<i>E. coli BL21</i>	Negative		253773720		Tetratricopeptide domain protein
Thein, 2010	<i>E. coli BL21</i>	Negative		253773765		Histone family protein nucleoid-structuring protein H-NS
Thein, 2010	<i>E. coli BL21</i>	Negative		253774185		Ferritin Dps family protein
Thein, 2010	<i>E. coli BL21</i>	Negative		253774339		SeqA family protein
Thein, 2010	<i>E. coli BL21</i>	Negative		253774351		ROK family protein
Thein, 2010	<i>E. coli BL21</i>	Negative		253774352		HAD-superfamily hydrolase, subfamily IIA
Thein, 2010	<i>E. coli BL21</i>	Negative		253774356		PhoH family protein
Thein, 2010	<i>E. coli BL21</i>	Negative		253774890		Transcriptional regulator, LacI family
Thein, 2010	<i>E. coli BL21</i>	Negative		253775400		Transcriptional regulator, LysR family
Thein, 2010	<i>E. coli BL21</i>	Negative		253775595		DEAD/DEAH box helicase domain protein
Yu, 2012	<i>C. thermocellum</i>	Positive		gi 125974878		Thiamine pyrophosphate enzyme-like TPP- binding
Yu, 2012	<i>C. thermocellum</i>	Positive		gi 125975482		Hydrogenase, Fe-only
Yu, 2012	<i>C. thermocellum</i>	Positive		gi 125975598		Pyruvate flavodoxin/ferredoxinoxidoreductase-like protein
Yu, 2012	<i>C. thermocellum</i>	Positive		gi 125972863		Hydrogenase, Fe-only
Yu, 2012	<i>C. thermocellum</i>	Positive		gi 125972951		Hydrogenase, Fe-only
Yu, 2012	<i>C. thermocellum</i>	Positive		gi 125974693		LexA DNA-binding region containing protein
Yu, 2012	<i>C. thermocellum</i>	Positive		gi 125975482		Hydrogenase, Fe-only
Yu, 2012	<i>C. thermocellum</i>	Positive		gi 125975598		Pyruvate flavodoxin/ferredoxinoxidoreductase-like protein
Flores-Ramirez,	<i>C. burnetii</i>	Negative	Q83AE7		CBU_1954	Hypothetical protein

2014						
Flores-Ramirez, 2014	<i>C. burnetii</i>	Negative	Q83DN9		CBU_0658	Hypothetical protein
Flores-Ramirez, 2014	<i>C. burnetii</i>	Negative	Q83AB4		CBU_1991	Conserved hypothetical protein
Flores-Ramirez, 2014	<i>C. burnetii</i>	Negative	Q83DM2		CBU_0681	Hypothetical protein
Flores-Ramirez, 2014	<i>C. burnetii</i>	Negative	Q83DR4		CBU_0632	Conserved hypothetical protein
Espino, 2014	<i>L. rhamnosus</i>	Positive		LC_00962	ref YP_003173652.1	Conserved protein
Espino, 2014	<i>L. rhamnosus</i>	Positive		LC_01945	ref YP_003174635.1	Conserved protein
Espino, 2014	<i>L. rhamnosus</i>	Positive		LC_02253	ref YP_003174943.1	Conserved protein
Espino, 2014	<i>L. rhamnosus</i>	Positive		LC_00655	ref YP_003173345.1	Conserved protein