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Supporting Information

Listeria monocytogenes **utilizes the ClpP1/2 proteolytic machinery for fine-tuned substrate degradation at elevated temperatures†**

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Important Note

The mass spectrometry proteomics data have been deposited to the ProteomeXchange Consortium via the PRIDE[1] partner repository with the dataset identifier PXD026605. The data can be accessed via the following credentials:

Username: reviewer_pxd026605@ebi.ac.uk

Password: wvSrARXV

1. Supplementary Figures

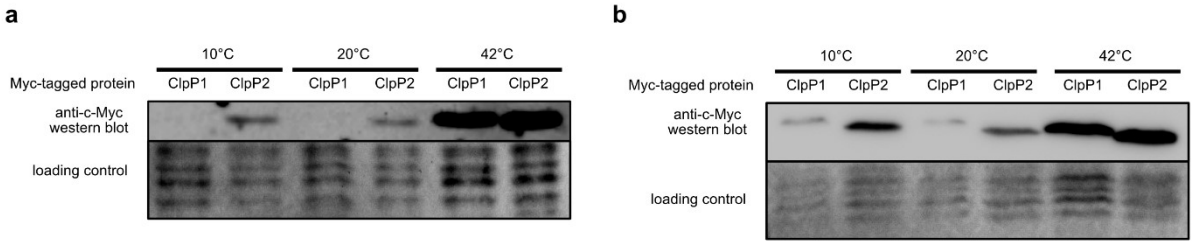

Figure S1 Increased expression of ClpP1 and ClpP2 in *L. monocytogenes* at elevated temperatures. a Western Blot of *L. monocytogenes clpP1::2×myc* and *clpP2::2×myc* cell lysates grown to stationary phase at 10 °C, 20 °C and 42 °C with an anti-c-Myc antibody. Lysates were adjusted to equal concentrations (4 mg/mL) after performing a BCA assay directly after lysis. The membrane was stained using Ponceau S as loading control. The experiment was independently repeated with qualitatively similar results (**b**). Full-sized western blot and gel images are depicted in Figure S7.

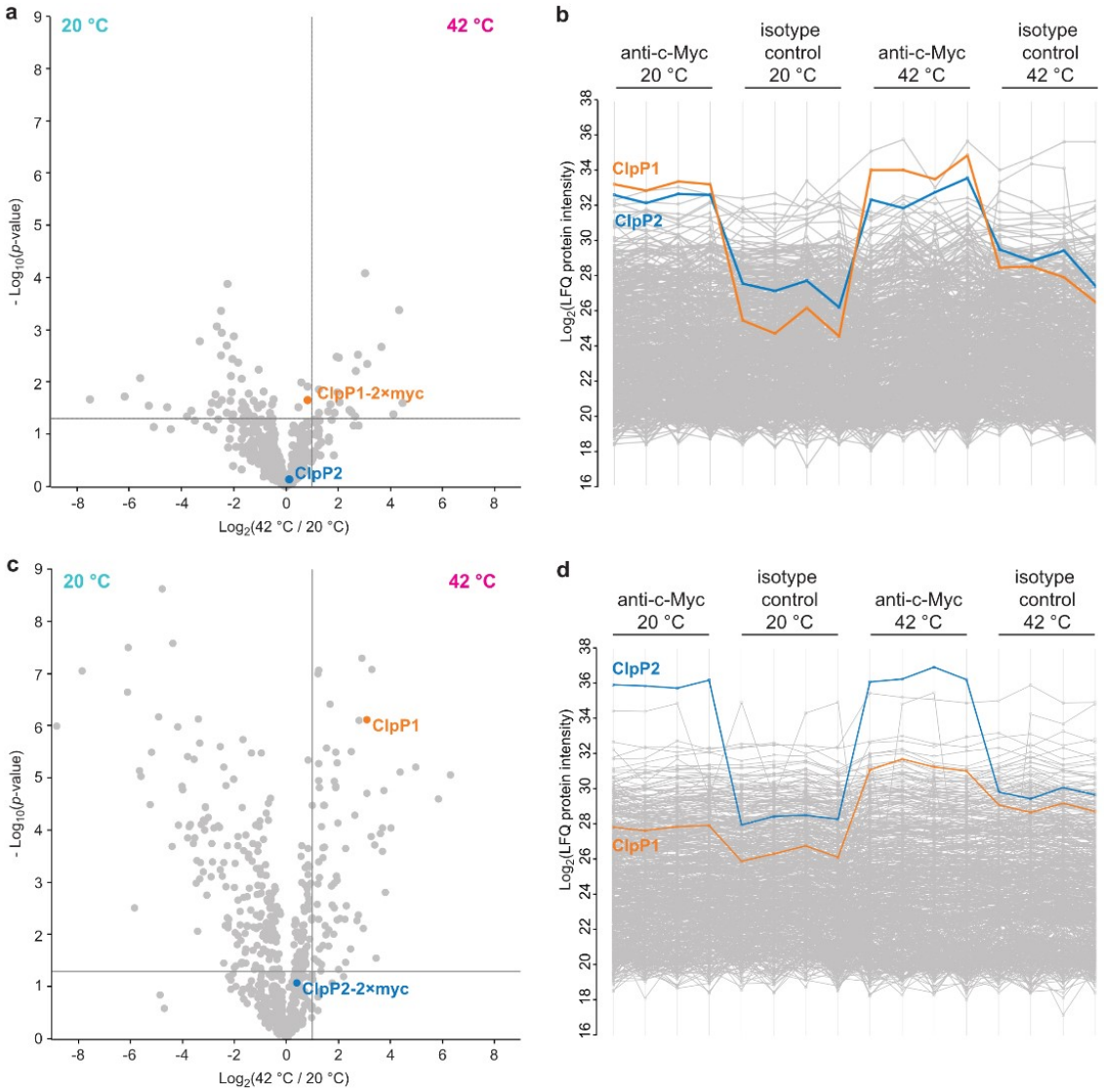

Figure S2 Intracellular heterooligomerization of ClpP1 and ClpP2 in *L. monocytogenes* demonstrated by crosslinking co-immunoprecipitation. a, c Volcano plots of co-IPs using ClpP1-2×myc (**a**) and ClpP2-2×myc (**c**) as baits after growing the *L. monocytogenes* cultures at 20 °C and 42 °C to stationary phase. − Log_{10} *p*-values from two-samples Student's *t*-test are plotted against log_2 ratios of label-free quantification (LFQ) protein intensities. The vertical grey lines show 2-fold enrichment at 42 °C compared to 20 °C, the horizontal grey lines show $–log_{10}$ t-test *p*-value = 1.3 (n = 4). **b, d** Profile plots showing the log_2 LFQ intensities of all measured proteins across all replicates after missing value imputation of the ClpP1-2×myc (**b**) and ClpP2-2×myc (**d**) XL-co-IP. ClpP1 and ClpP2 are highlighted with orange and blue, respectively. The lower number of enriched proteins obtained with the Myc-tagged ClpPs compared to the endogenous ClpPs using a polyclonal anti-ClpP antibody (Figure 7) could be attributed to the heterologous C-terminal 2×myc tag which is in close proximity to the hydrophobic pockets of ClpP and thus interfering with chaperone binding.

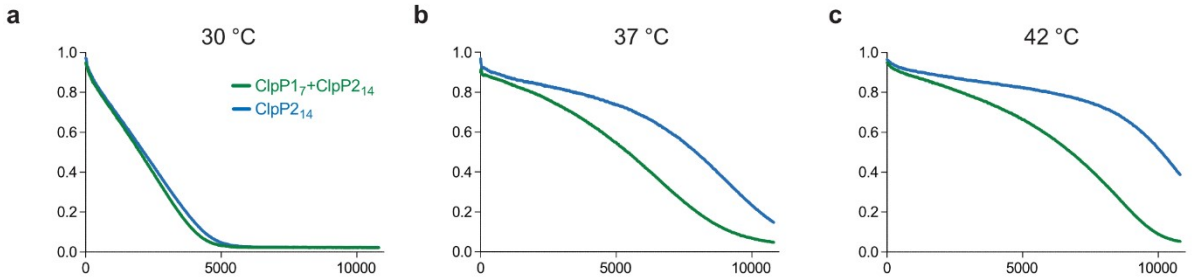

Figure S3 Replicate measurements of ClpP1$_7$ and ClpP2$_{14}$ protease activity at different temperatures. ClpP (green line: 0.1 µM ClpP2$_{14}$ and 0.2 µM ClpP1$_7$, blue line: 0.1 µM ClpP2$_{14}$) and 0.4 µM ClpX were pre-incubated for 30 min at 30 °C (**a**), 37 °C (**b**) and 42 °C (**c**), subsequently the degradation of 0.4 µM GFP-SsrA was measured. Means of triplicates are shown.

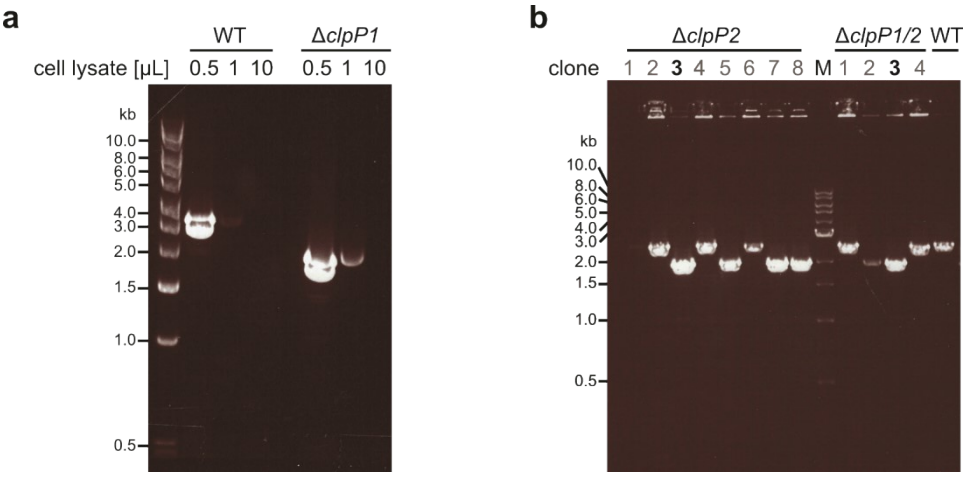

Figure S4 PCR analysis to validate *L. monocytogenes EGD-e* Δ*clpP* deletion mutants. (a) PCR of WT and Δ*clpP1* lysates. Primers clpP1_KO_A and clpP1_KO_D (Table 3) were used to test for successful deletion. A band of approx. 2500 bp is expected for the WT amplification and of approx. 2000 bp after successful deletion. (b) Colony PCR to identify Δ*clpP2* mutants. WT and Δ*clpP1* strains were used to introduce a Δ*clpP2* KO in order to obtain *L. monocytogenes* Δ*clpP2 and* Δ*clpP1/2*. Primers clpP2_KO_A and clpP2_KO_D (Table 3) were used to test for successful deletion. A band of approx. 2500 bp is expected for the WT amplification and of approx. 2000 bp after successful deletion. Colonies used for subsequent experimental studies are highlighted in bold.

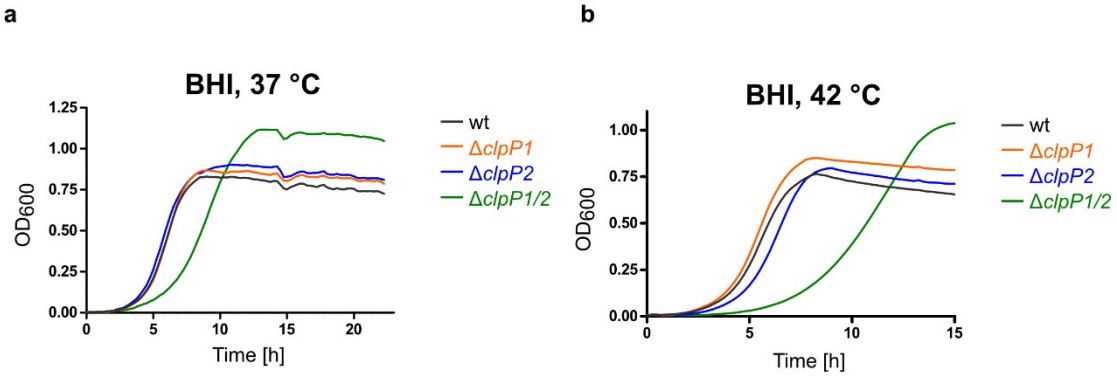

Figure S5 Growth curves of *Listeria monocytogenes* EGD-e (WT) and Δ*clpP* mutants. a Replicate growth curves of the Δ*clpP* mutants in BHI medium at 37 °C **b** Growth curves of the Δ*clpP* mutants in BHI medium at 42 °C. Means of triplicates are shown.

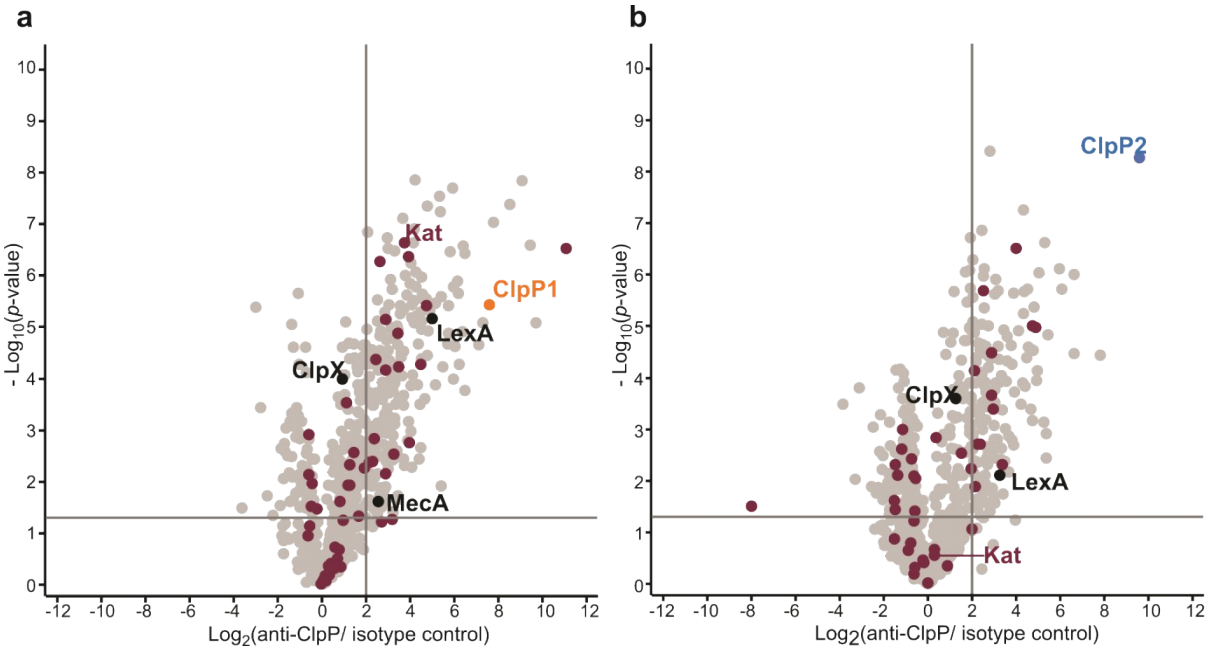

Figure S6 Co-immunoprecipitation of ClpP1 and ClpP2 in *L. monocytogenes* Δ*clpP* mutants at 42 °C. a, b Volcano plots of crosslinking co-IPs with anti-ClpP antibody in *L. monocytogenes* Δ*clpP2* (**a**) and Δ*clpP1* (**b**) at stationary phase (42 °C). − Log_{10} *p*-values from two-sample Student's *t*-test are plotted against log_2 ratios of LFQ protein intensities. The vertical grey lines show 4-fold enrichment, the horizontal grey lines show $–log_{10}$ t-test *p*-value = 1.3 (n = 4). Oxidoreductases are highlighted with purple. ClpP1 and ClpP2 are shown in orange and blue respectively.

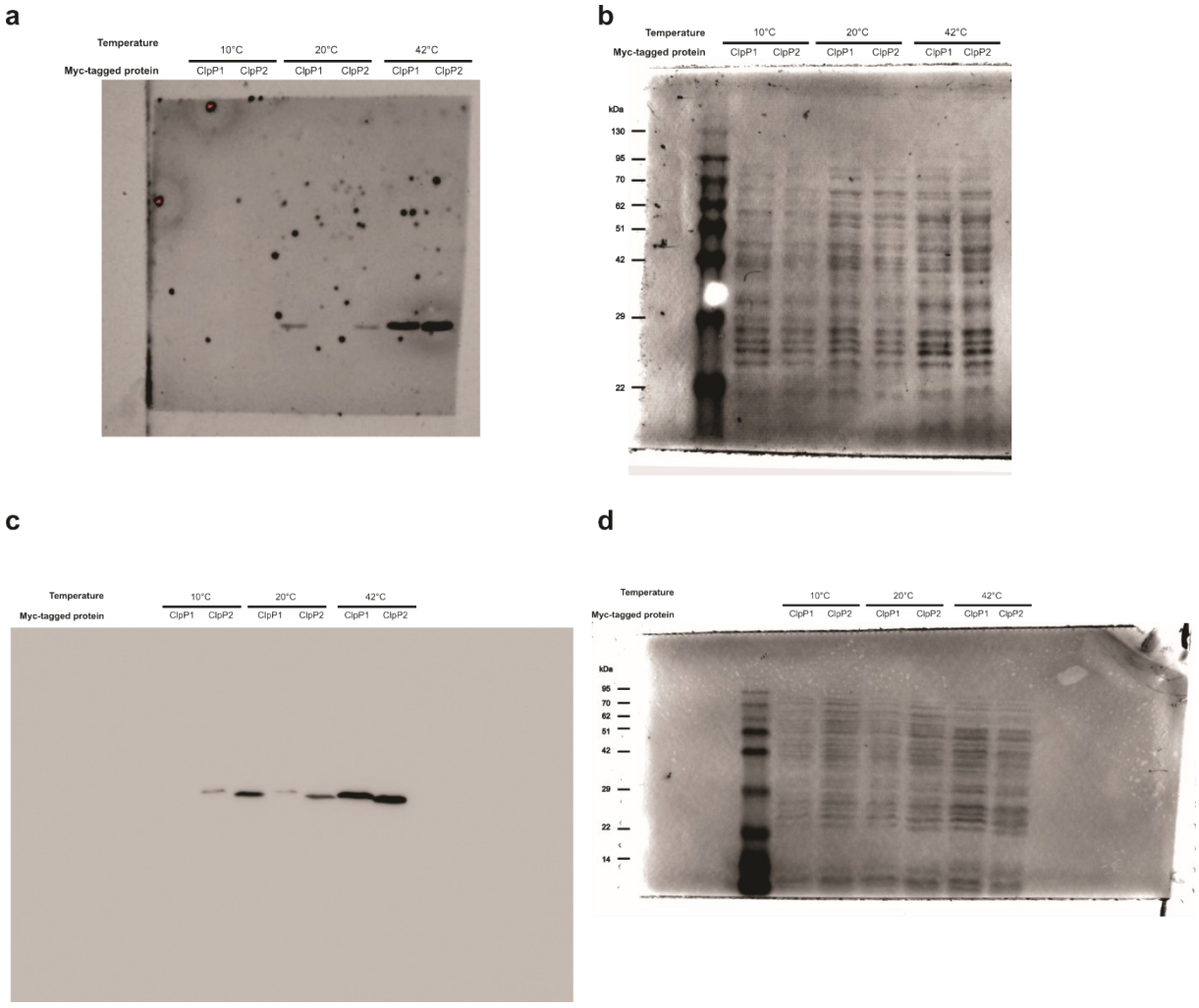

Figure S7 Full-sized Western Blot images used for Figure S1. (a,b) Chemiluminescent and Ponceau S-stained membrane image used for Fig S1a. (c,d) Chemiluminescent and Ponceau S-stained membrane image used for Figure S1b.

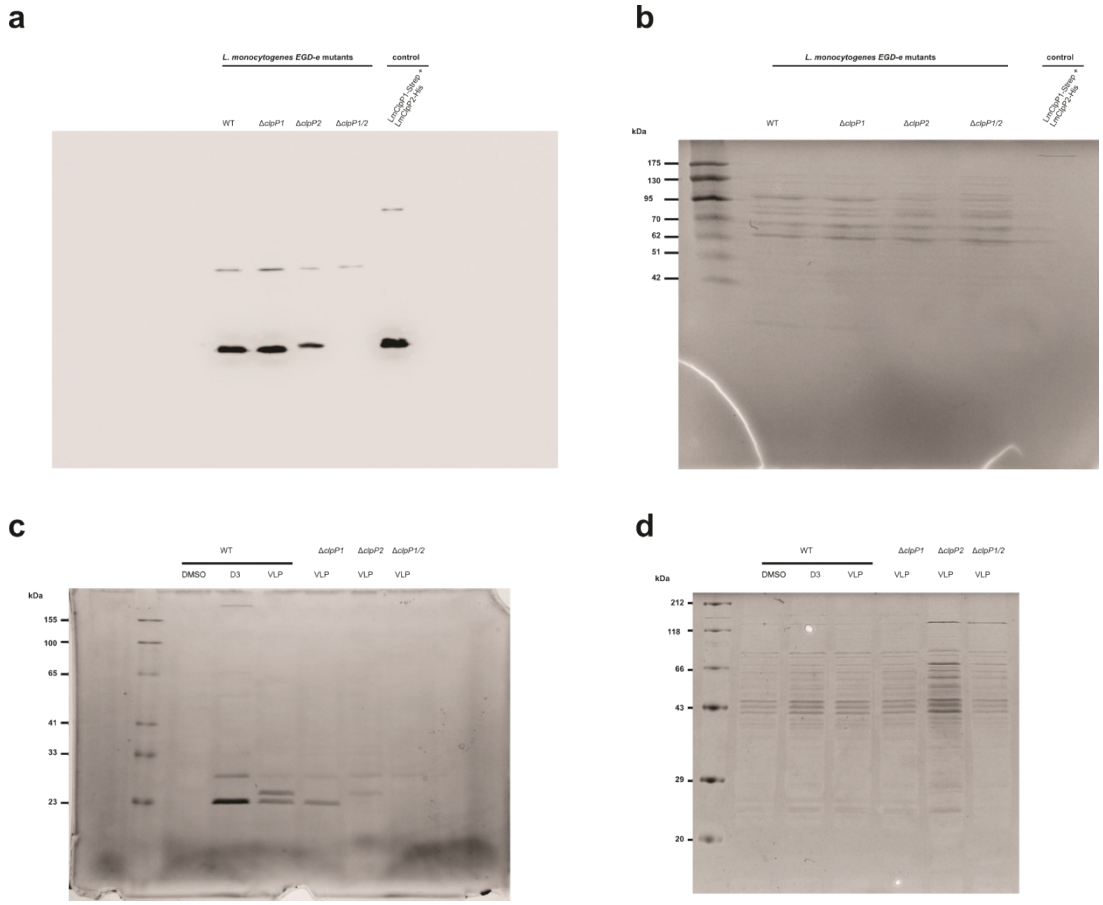

Figure S8 Full-sized Western Blot and gel images used for Figure 4b. (a,b) Chemiluminescent membrane image and Coomassie-stained gel used for Figure 4b, top panel. (c,d) Fluorescent and Coomassie-stained gel image used for Figure 4b, bottom panel.

2. Supplementary Tables

Table S1 Dysregulated proteins in Δ*clpP1* whole proteome at 37 °C in reference to wild type control.

Gene name	Uniprot ID	$\log_2$ ratio (Δ*clpP1*/WT)	$-\log_{10}$ t-test p-value (Δ*clpP1*/WT)
Upregulated proteins (37 °C)			
lmo2768	Q8Y3R5	2.10	1.75
lmo2326	Q8Y4V4	1.01	1.45
Downregulated proteins (37 °C)			
lmo0488	Q8Y9N7	-1.00	1.37
lmo2044	Q8Y5L4	-1.19	2.00
lmo2516	Q8Y4D4	-1.35	1.72
lmo1189	Q8Y7T2	-1.38	1.88
ispD	Q8YAB5	-1.41	1.82

Gene name	Uniprot ID	log_2 ratio (Δ*clpP1*/WT)	$-log_{10}$ t-test p-value (Δ*clpP1*/WT)
Upregulated proteins (37 °C)			
lmo2768	Q8Y3R5	2.10	1.75
lmo2326	Q8Y4V4	1.01	1.45
clpP	Q8Y7Y1	-8.63	6.80

Table S2 Dysregulated proteins in Δ*clpP1* whole proteome at 42 °C in reference to wild type control.

Gene name	Uniprot ID	log2 ratio (ΔclpP1/WT)	-log10 t-test p-value (ΔclpP1/WT)
Upregulated proteins (42 °C)			
lmo0375	Q8Y9Z2	2.93	2.45
fhuC	Q8Y5U5	2.25	2.18
lmo1307	Q8Y7H3	2.07	1.42
inlB	P25147	1.40	4.10
lmo2755	Q8Y3S6	1.24	1.66
hly	P13128	1.24	4.14
spl	Q7AP49	1.08	3.64
Downregulated proteins (42 °C)			
lmo2573	Q8Y482	-1.08	1.99
lmo0953	Q8Y8F1	-1.09	1.66
lmo2795	Q8Y3P0	-1.12	1.57
lmo2088	Q8Y5H4	-1.17	2.26
lmo0273	Q8YA86	-1.20	1.50
nifJ	Q8Y8R6	-1.24	1.94
ung2	Q8Y7P6	-1.32	1.65
cspD	Q92AD0	-1.43	1.96
lmo0913	Q8Y8I9	-1.52	3.79
lmo0887	Q8Y8L1	-1.53	2.08
lmo1642	Q8Y6P2	-1.63	2.04
lmo0612	Q8Y9C0	-1.66	1.43
lmo1868	Q8Y632	-1.79	3.25
msrA	Q8Y640	-1.99	1.91
lmo0927	Q8Y8H6	-2.07	3.33
lmo0253	Q8YAA1	-2.32	2.62
lmo2258	Q8Y520	-2.62	1.43
addB	Q8Y510	-2.72	1.91
lmo1505	Q8Y721	-2.77	2.92
lmo2685	Q927F6	-3.17	6.12
lmo2805	Q8Y3N0	-3.82	3.01
atpE	Q8Y4B7	-5.41	7.99
clpP	Q8Y7Y1	-10.65	6.87

Table S3 Significantly enriched GOBP terms of upregulated proteins in Δ*clpP2* and Δ*clpP12* whole proteomes compared to WT at 37 °C identified with aGOtool [2]. Terms unique for either whole proteome are highlighted in bold.

Δ*clpP2*/WT, 37 °C				Δ*clpP12*/WT, 37 °C			
Rank	**s value**	**-log$_{10}$ (p-value)**	**Description (GOBP)**	**Rank**	**s value**	**-log$_{10}$ (p-value)**	**Description (GOBP)**
1	0.074	1.90	regulation of transcription, DNA-templated	1	0.259	3.65	response to stimulus
2	0.069	1.82	response to stimulus	2	0.183	3.20	cellular response to stimulus
3	0.049	1.61	cellular response to stimulus	3	0.163	3.07	response to stress
4	0.036	1.62	response to chemical	4	0.138	2.54	regulation of transcription, DNA-templated
5	0.032	1.32	response to stress	5	0.102	2.45	**cellular response to stress**
6	0.027	1.63	response to inorganic substance	6	0.101	2.48	**cellular response to DNA damage stimulus**
7	0.027	1.63	cellular response to chemical stimulus	7	0.088	2.32	**DNA repair**
8	0.020	1.43	response to metal ion	8	0.087	2.15	**DNA metabolic process**
9	0.018	1.44	**cellular response to iron ion**	9	0.054	1.41	**regulation of cellular process**
10	0.018	1.33	glucose metabolic process	10	0.053	1.88	response to chemical
				11	0.031	1.69	**alpha-amino acid catabolic process**
				12	0.031	1.69	glucose metabolic process
				13	0.029	1.59	response to inorganic substance
				14	0.029	1.59	cellular response to chemical stimulus
				15	0.027	1.43	**DNA recombination**
				16	0.027	1.43	**monosaccharide metabolic process**
				17	0.019	1.33	response to metal ion
				18	0.017	1.50	**threonine catabolic process**
				19	0.014	1.33	**tetrahydrofolate interconversion**

Table S4 Significantly enriched UniProt keywords of upregulated proteins in Δ*clpP2* and Δ*clpP12* whole proteomes compared to WT at 37 °C identified with aGOtool [2]. Terms unique for either whole proteome are highlighted in bold.

Δ*clpP2*/WT, 37 °C				Δ*clpP12*/WT, 37 °C			
Rank	**s value**	**-log$_{10}$ (p-value)**	**Description (Keywords)**	**Rank**	**s value**	**-log$_{10}$ (p-value)**	**Description (Keywords)**
1	0.183	4.44	Iron-sulfur	1	0.245	4.47	Iron
2	0.168	3.83	Iron	2	0.242	4.89	Iron-sulfur
3	0.132	3.75	4Fe-4S	3	0.214	4.63	4Fe-4S
4	0.036	1.44	Transcription regulation	4	0.050	1.62	Transcription regulation
5	0.014	1.48	Organic radical	5	0.046	1.79	**DNA repair**
				6	0.044	1.42	**Oxidoreductase**
				7	0.020	1.71	Organic radical
				8	0.020	1.48	**Heme**

Table S5 Significantly enriched GOBP terms of downregulated proteins in Δ*clpP2* and Δ*clpP12* whole proteomes compared to WT at 37 °C identified with aGOtool [2]. Terms unique for either whole proteome are highlighted in bold.

Δ*clpP2*/WT, 37 °C				Δ*clpP12*/WT, 37 °C			
Rank	**s value**	**-log$_{10}$ (p-value)**	**Description (GOBP)**	**Rank**	**s value**	**-log$_{10}$ (p-value)**	**Description (GOBP)**
1	0.275	2.84	**organonitrogen compound biosynthetic process**	1	0.246	3.70	'de novo' UMP biosynthetic process
2	0.162	3.23	**nitrogen compound transport**	2	0.078	2.30	secondary alcohol metabolic process
3	0.129	1.72	**cellular biosynthetic process**	3	0.049	1.56	arginine biosynthetic process
4	0.119	2.07	**transport**	4	0.049	1.56	amino acid transport
5	0.115	1.60	**biosynthetic process**	5	0.049	1.56	pyrimidine nucleobase biosynthetic process
6	0.114	2.26	**organic substance transport**	6	0.039	1.32	**proteolysis**
7	0.110	1.56	**organic substance biosynthetic process**				
8	0.105	1.55	**organonitrogen compound metabolic process**				
9	0.070	2.47	**branched-chain amino acid biosynthetic process**				
10	0.070	2.72	'de novo' UMP biosynthetic process				

11	0.067	1.43	**cellular macromolecule biosynthetic process**
12	0.064	1.57	**peptide metabolic process**
13	0.063	1.59	**translation**
14	0.058	2.38	**isoleucine biosynthetic process**
15	0.054	1.81	**ribonucleoside monophosphate biosynthetic process**
16	0.046	1.84	**peptide transport**
17	0.045	1.98	**pathogenesis**
18	0.045	1.70	**cell wall macromolecule biosynthetic process**
19	0.044	2.17	**valine biosynthetic process**
20	0.043	1.64	**peptidoglycan-based cell wall biogenesis**
21	0.042	1.31	**cellular amino acid biosynthetic process**
22	0.042	1.33	**alpha-amino acid biosynthetic process**
23	0.040	2.01	amino acid transport
24	0.038	1.60	**peptidoglycan metabolic process**
25	0.030	1.50	**peptidoglycan biosynthetic process**
26	0.027	1.51	**protein transport**
27	0.024	1.41	**cellular localization**
28	0.019	1.35	arginine biosynthetic process
29	0.019	1.35	**threonine biosynthetic process**
30	0.019	1.35	pyrimidine nucleobase biosynthetic process
31	0.015	1.43	**methionine transport**
32	0.015	1.43	**pyridoxal phosphate biosynthetic process**
33	0.015	1.43	secondary alcohol metabolic process

Table S6 Significantly enriched UniProt keywords of downregulated proteins in in Δ*clpP2* and Δ*clpP12* whole proteomes compared to WT at 37 °C identified with aGOtool [2]. Terms unique for either whole proteome are highlighted in bold.

Δ*clpP2*/WT, 37 °C				Δ*clpP12*/WT, 37 °C			
Rank	**s value**	**-log$_{10}$ (p-value)**	**Description (Keywords)**	**Rank**	**s value**	**-log$_{10}$ (p-value)**	**Description (Keywords)**
1	0.814	5.45	Membrane	1	1.213	5.02	Transmembrane helix
2	0.778	5.42	**Transmembrane**	2	1.143	4.74	Membrane
3	0.708	5.12	Transmembrane helix	3	0.323	2.74	Transport
4	0.685	6.06	Transport	4	0.221	3.38	Pyrimidine biosynthesis
5	0.533	5.08	**Cell membrane**	5	0.133	1.74	Signal
6	0.498	5.25	Signal	6	0.058	1.78	**Peptidoglycan-anchor**
7	0.174	3.17	**Ribosomal protein**	7	0.053	1.66	Serine protease
8	0.094	2.83	**Lipoprotein**	8	0.053	1.66	**Cell wall**
9	0.075	2.60	**Palmitate**	9	0.049	1.56	**Decarboxylase**
10	0.058	2.38	Pyrimidine biosynthesis				
11	0.054	2.23	**Branched-chain amino acid biosynthesis**				
12	0.045	1.98	**Virulence**				
13	0.036	1.86	**Protein transport**				
14	0.028	1.42	**Cell wall biogenesis/degradation**				
15	0.028	1.80	**Threonine biosynthesis**				
16	0.024	1.63	**Amino-acid transport**				
17	0.022	1.32	**Peptidoglycan synthesis**				
18	0.021	1.48	Serine protease				

Table S7 Significantly enriched GOBP terms of upregulated proteins in Δ*clpP2* and Δ*clpP12* whole proteomes compared to WT at 42 °C identified with aGOtool [2]. Terms unique for either whole proteome are highlighted in bold.

Δ*clpP2*/WT, 42 °C				Δ*clpP12*/WT, 42 °C			
Rank	**s value**	**-log$_{10}$ (p-value)**	**Description (GOBP)**	**Rank**	**s value**	**-log$_{10}$ (p-value)**	**Description (GOBP)**
1	0.092	2.28	regulation of transcription, DNA-templated	1	0.159	3.11	regulation of transcription, DNA-templated
2	0.089	2.22	regulation of nucleobase-containing compound metabolic process	2	0.155	3.03	regulation of nucleobase-containing compound metabolic process
3	0.078	2.10	response to stimulus	3	0.152	2.94	**regulation of nitrogen compound metabolic process**
4	0.076	2.25	response to stress	4	0.151	2.96	**regulation of cellular**

							macromolecule biosynthetic process
5	0.056	2.03	cellular response to DNA damage stimulus	5	0.147	2.89	**regulation of primary metabolic process**
6	0.054	1.83	cellular response to stimulus	6	0.142	2.84	**regulation of gene expression**
7	0.054	1.63	regulation of macromolecule metabolic process	7	0.138	2.77	**regulation of cellular metabolic process**
8	0.054	1.86	DNA metabolic process	8	0.138	3.15	response to stress
9	0.050	1.86	cellular response to stress	9	0.134	2.72	regulation of macromolecule metabolic process
10	0.042	1.75	DNA repair	10	0.104	2.45	response to stimulus
11	0.020	1.59	arginine biosynthetic process	11	0.093	2.67	cellular response to DNA damage stimulus
12	0.014	1.34	**base-excision repair**	12	0.088	2.45	DNA metabolic process
13	0.012	1.45	**base-excision repair, AP site formation**	13	0.084	2.47	cellular response to stress
				14	0.074	2.17	cellular response to stimulus
				15	0.073	2.36	DNA repair
				16	0.053	1.52	**regulation of biological process**
				17	0.029	1.76	**response to external stimulus**
				18	0.025	1.64	**cellular response to extracellular stimulus**
				19	0.023	1.63	**SOS response**
				20	0.021	1.64	arginine biosynthetic process
				21	0.020	1.37	**DNA recombination**
				22	0.014	1.40	**nucleotide-excision repair**

Table S8 Significantly enriched UniProt keywords of upregulated proteins in Δ*clpP2* and Δ*clpP12* whole proteomes compared to WT at 42 °C identified with aGOtool [2]. Terms unique for either whole proteome are highlighted in bold.

Δ*clpP2*/WT, 42 °C				ΔclpP12/WT, 42 °C			
Rank	**s value**	**-log$_{10}$ (p-value)**	**Description (Keywords)**	**Rank**	**s value**	**-log$_{10}$ (p-value)**	**Description (Keywords)**
1	0.076	2.87	Iron-sulfur	1	0.049	2.23	Iron-sulfur
2	0.058	2.52	4Fe-4S	2	0.047	2.23	4Fe-4S
3	0.045	1.94	Iron	3	0.038	1.41	**DNA-binding**
4	0.040	1.89	DNA repair	4	0.038	1.75	Iron
5	0.031	1.42	**Transcription regulation**	5	0.033	1.68	DNA repair
6	0.028	1.31	**Transcription**	6	0.024	1.79	Arginine biosynthesis
7	0.023	1.74	Arginine biosynthesis	7	0.019	1.77	**Excision nuclease**

				8	0.019	1.77	**DNA excision**

Table S9 Significantly enriched GOBP terms of downregulated in Δ*clpP2* and Δ*clpP12* whole proteomes compared to WT at 42 °C identified with aGOtool [2]. Terms unique for either whole proteome are highlighted in bold.

ΔclpP2/WT, 42 °C				ΔclpP12/WT, 42 °C			
Rank	**s value**	**-log$_{10}$ (p-value)**	**Description (GOBP)**	**Rank**	**s value**	**-log$_{10}$ (p-value)**	**Description (GOBP)**
1	0.693	5.87	**cellular macromolecule biosynthetic process**	1	0.163	4.11	'de novo' UMP biosynthetic process
2	0.574	6.00	**translation**	2	0.115	2.01	transport
3	0.562	5.83	**peptide metabolic process**	3	0.094	2.05	**cellular catabolic process**
4	0.443	4.77	**cellular protein metabolic process**	4	0.084	2.32	**organic hydroxy compound metabolic process**
5	0.433	4.86	**amide biosynthetic process**	5	0.076	1.75	organic substance transport
6	0.328	3.38	**cellular macromolecule metabolic process**	6	0.072	2.08	pyrimidine-containing compound metabolic process
7	0.321	3.92	**cellular amide metabolic process**	7	0.058	1.81	**ribonucleoside monophosphate biosynthetic process**
8	0.320	3.13	**organonitrogen compound metabolic process**	8	0.050	2.03	**cellular carbohydrate catabolic process**
9	0.314	3.27	**organonitrogen compound biosynthetic process**	9	0.050	2.03	pathogenesis
10	0.301	3.58	**gene expression**	10	0.049	2.22	**glycerol catabolic process**
11	0.258	3.01	**cellular nitrogen compound biosynthetic process**	11	0.045	1.46	**small molecule catabolic process**
12	0.196	2.42	**macromolecule metabolic process**	12	0.044	2.05	pyrimidine nucleobase biosynthetic process
13	0.166	1.96	**cellular process**	13	0.042	1.48	**carbohydrate transport**
14	0.163	2.09	**cellular biosynthetic process**	14	0.037	1.63	nucleobase metabolic process
15	0.162	2.07	**organic substance biosynthetic process**	15	0.032	1.39	**cellular carbohydrate metabolic process**
16	0.092	3.31	'de novo' UMP biosynthetic process	16	0.032	1.46	**alcohol metabolic process**
17	0.090	1.40	**cellular metabolic process**	17	0.031	1.83	'de novo' pyrimidine nucleobase biosynthetic process

18	0.089	3.00	**pyrimidine ribonucleotide biosynthetic process**
19	0.077	1.37	**cellular nitrogen compound metabolic process**
20	0.076	1.60	**carbohydrate derivative metabolic process**
21	0.067	1.63	transport
22	0.066	2.58	pathogenesis
23	0.064	2.16	pyrimidine-containing compound metabolic process
24	0.061	2.17	**pyrimidine-containing compound biosynthetic process**
25	0.061	2.43	macromolecule localization
26	0.051	1.54	organic substance transport
27	0.050	1.91	**cell wall macromolecule biosynthetic process**
28	0.047	1.44	**cellular component biogenesis**
29	0.047	1.83	**peptidoglycan-based cell wall biogenesis**
30	0.044	1.95	**peptidoglycan biosynthetic process**
31	0.042	2.22	pyrimidine nucleobase biosynthetic process
32	0.039	1.51	**carbohydrate catabolic process**
33	0.035	1.47	**nitrogen compound transport**
34	0.034	1.49	**generation of precursor metabolites and energy**
35	0.030	1.59	**nucleoside diphosphate metabolic process**
36	0.030	1.59	nucleobase metabolic process
37	0.028	1.63	**protein transport**
38	0.025	1.52	**cellular localization**
39	0.022	1.42	**glycolytic process**

18	0.024	1.36	macromolecule localization
19	0.017	1.45	**pyridoxal phosphate biosynthetic process**
20	0.017	1.45	**lactose metabolic process**
21	0.017	1.45	**D-tagatose 6-phosphate catabolic process**
22	0.017	1.45	**positive regulation of catalytic activity**

40	0.021	1.48	**intracellular transport**
41	0.020	1.32	**ribonucleoprotein complex assembly**
42	0.020	1.32	**anion transport**
43	0.018	1.35	**ribosomal large subunit assembly**
44	0.018	1.35	**cellular protein localization**
45	0.017	1.50	'de novo' pyrimidine nucleobase biosynthetic process
46	0.017	1.50	**sulfur compound transport**
47	0.015	1.33	**establishment of protein localization to membrane**

Table S10 Significantly enriched UniProt keywords of downregulated proteins in Δ*clpP2* and Δ*clpP12* whole proteomes compared to WT at 42 °C identified with aGOtool [2]. Terms unique for either whole proteome are highlighted in bold.

Δ*clpP2*/WT, 42 °C				Δ*clpP12*/WT, 42 °C			
Rank	**s value**	**-log$_{10}$ (p-value)**	**Description (Keywords)**	**Rank**	**s value**	**-log$_{10}$ (p-value)**	**Description (Keywords)**
1	0.649	7.21	**Ribosomal protein**	1	0.667	6.04	Signal
2	0.306	3.30	Membrane	2	0.251	2.68	Membrane
3	0.260	3.08	**Transmembrane**	3	0.232	2.64	Transmembrane helix
4	0.253	3.76	Signal	4	0.221	3.07	Transport
5	0.231	2.88	Transmembrane helix	5	0.143	3.69	Pyrimidine biosynthesis
6	0.219	3.35	Transport	6	0.050	2.03	Virulence
7	0.116	2.80	**rRNA-binding**	7	0.049	2.22	**Peptidoglycan-anchor**
8	0.111	3.54	Pyrimidine biosynthesis	8	0.044	2.05	**Cell wall**
9	0.088	1.94	**Cell membrane**	9	0.040	1.71	**Lipoprotein**
10	0.076	1.90	**RNA-binding**	10	0.040	1.71	**Secreted**
11	0.066	2.58	Virulence	11	0.024	1.51	**Serine protease**
12	0.041	1.85	**Cell wall biogenesis/degradation**	12	0.017	1.45	**Lactose metabolism**
13	0.025	1.41	**Cell shape**	13	0.017	1.45	**Phosphopantetheine**
14	0.022	1.42	**Peptidoglycan synthesis**				
15	0.021	1.48	**Protein transport**				

Table S11 Additional proteins coenriched with ClpP1 and/or ClpP2 at 37 °C not meeting putative substrate criteria (log_2 LFQ ratio ≥2 and $-log_{10}$ t-test p-value ≥1.3 in the XL-co-IP experiment, log_2 LFQ ratio <1 or $-log_{10}$ t-test p-value <1.3 in the whole proteome experiment).

		XL-co-IP of Δ*clpP2*		Whole proteome of Δ*clpP1*		XL-co-IP of Δ*clpP1*		Whole proteome of Δ*clpP2*	
Gene name	**Uniprot ID**	**log_2 ratio (anti-ClpP/isotype control)**	**$-log_{10}$ t-test p-value (anti-ClpP/ isotype control)**	**log_2 ratio (Δ*clpP1*/WT)**	**$-log_{10}$ t-test p-value (Δ*clpP1*/WT)**	**log_2 ratio (anti-ClpP/isotype control)**	**$-log_{10}$ t-test p-value (anti-ClpP/ isotype control)**	**log_2 ratio (Δ*clpP2*/WT)**	**$-log_{10}$ t-test p-value (Δ*clpP2*/WT)**
Proteins coenriched with ClpP1 only									
cinA;lmo1397	Q8Y793	8.24	6.19	0.03	0.12	0.72	0.29	-0.41	2.95
mfd	Q8YAD0	7.08	4.46	0.01	0.03	0.54	0.16	-0.21	1.58
mcsB;lmo0231	Q48759	6.46	7.02	0.12	0.90	0.00	NaN	2.60	8.86
polC;lmo1320	Q8Y7G1	6.15	4.55	-0.03	0.15	2.29	1.82	1.20	7.57
lmo2755	Q8Y3S6	5.98	6.11	0.12	0.34	3.85	3.18	1.25	5.30
purL;lmo1769	Q8Y6C1	5.12	5.57	0.05	0.33	0.61	0.88	0.89	5.58
dltA;lmo0974	Q8Y8D4	5.11	4.79	-0.01	0.01	1.20	1.69	1.54	4.50
hemA;lmo1557	Q8Y6X4	5.00	6.00	0.41	0.39	0.00	NaN	4.07	5.27
lmo2182	Q8Y587	4.93	3.98	-0.19	0.14	2.81	1.76	1.16	1.87
lmo0640	Q8Y993	4.87	2.97	0.28	0.36	4.18	4.33	2.03	4.21
murC;lmo1605	Q8Y6S8	4.82	2.20	0.10	0.45	3.96	4.89	1.15	6.95
lmo1358	Q92BZ6	4.81	4.13	NaN	NaN	1.38	1.58	NaN	NaN
lmo0537	Q8Y9J1	4.77	1.48	-0.04	0.20	3.32	0.74	1.57	7.43
lmo1713	Q8Y6H3	4.71	5.50	0.00	0.00	0.00	NaN	1.23	5.30
lmo0227	Q8YAB9	4.61	4.78	0.17	0.30	0.00	NaN	4.47	9.72
lmo1737	Q8Y6F0	4.57	4.37	0.10	0.39	1.81	2.38	-0.55	3.91
glpD	Q8Y7I4	4.54	3.75	0.04	0.02	0.63	0.22	2.33	3.06

Table S11 continued

lmo0823	Q8Y8S1	4.51	3.42	0.22	1.58	4.73	5.68	1.57	9.49
lmo1881	Q8Y621	4.37	5.60	0.08	0.11	2.25	1.30	1.04	2.65
lmo1932	Q8Y5X2	4.35	3.57	0.13	0.22	2.75	3.01	1.17	3.49
lmo1667	Q8Y6L7	4.21	5.15	0.06	0.30	-0.19	0.09	0.53	2.76
murB;lmo1420	Q8Y776	4.19	5.02	-0.09	0.10	0.00	NaN	-0.06	0.08
tal1;lmo2743	Q8Y3T8	4.18	1.83	0.10	0.22	5.19	3.07	1.24	4.16
lmo2215	Q8Y561	4.17	5.80	0.07	0.41	1.72	2.09	0.93	7.65
lmo1363	Q8Y7C2	4.15	3.95	-0.07	0.19	1.28	0.80	0.15	0.64
lmo0728	Q8Y914	4.14	6.29	-0.01	0.01	0.00	NaN	1.38	3.85
lmo1384	Q8Y7A4	3.98	4.24	0.09	0.15	0.00	NaN	5.21	9.55
lmo0052	Q8YAR3	3.98	5.12	0.04	0.17	0.78	0.36	-0.15	1.09
lmo0597	Q8Y9D3	3.97	4.38	0.62	1.79	1.12	0.52	1.77	6.45
lmo1009	Q8Y8A3	3.94	5.03	-0.08	0.12	0.38	0.20	0.20	0.43
pflB	Q8Y786	3.92	4.11	0.00	0.00	3.69	3.15	2.81	8.02
lmo2815	Q8Y3M0	3.91	5.09	0.09	0.62	1.01	0.91	1.40	7.28
lmo0305	Q8YA56	3.88	2.95	0.03	0.06	0.19	0.10	0.72	2.78
lmo1576	Q8Y6V5	3.86	5.28	0.11	0.92	0.62	0.31	0.10	2.04
metE;lmo1681	Q8Y6K3	3.84	3.98	0.01	0.05	0.73	0.34	0.91	7.71
fbp;lmo0830	Q8Y8R5	3.81	6.40	-0.06	0.04	0.00	NaN	5.12	9.40
lmo0152	Q8YAH4	3.80	7.59	0.17	0.36	0.30	0.28	-1.45	5.14
lmo1077	Q8Y841	3.78	2.77	0.03	0.13	1.82	1.23	-0.62	5.42
lmo0234	Q48762	3.75	4.17	0.02	0.09	2.14	1.12	-0.42	3.05
lmo2712	Q8Y3W7	3.73	5.00	0.19	1.81	-0.21	0.20	0.36	1.69
lmo1400	Q8Y792	3.73	5.50	-0.38	0.25	0.00	NaN	2.66	3.47
pflA	Q8Y5Y6	3.71	4.84	0.19	0.39	0.00	NaN	1.32	4.28
tyrA	Q8Y5X9	3.69	3.11	0.03	0.17	1.92	1.41	-0.54	3.33
lmo2844	Q8Y3J1	3.62	4.37	-0.02	0.07	0.41	0.26	-0.07	0.20
sepF;lmo2030	Q8Y5M7	3.60	4.17	-0.01	0.02	0.00	NaN	4.00	11.78

Table S11 continued

lmo1582	Q8Y6U9	3.59	3.93	0.15	0.38	1.74	2.76	0.89	3.82
parB	Q8Y3P4	3.58	4.84	0.02	0.11	1.74	0.61	-0.21	1.29
lmo2643	Q8Y431	3.57	4.04	0.18	0.59	1.42	0.83	0.21	0.89
uvrA;lmo2488	Q8Y4F6	3.49	1.96	0.09	0.81	1.21	1.27	0.69	5.55
rpsU;lmo1469	P0DJP1	3.48	5.21	-0.13	0.14	0.00	NaN	-0.86	2.87
lmo1078	Q8Y840	3.48	3.13	-0.17	0.48	1.29	0.48	-0.56	3.04
lmo1066	Q8Y852	3.46	4.23	-0.05	0.09	1.52	1.45	-0.57	2.19
lmo2452	Q8Y4I7	3.42	4.43	0.39	1.42	0.00	NaN	2.61	6.91
dacA;cdaA;lmo2120	Q8Y5E4	3.42	4.84	0.07	0.14	2.19	1.24	-0.31	0.86
lmo1979	Q8Y5S6	3.39	3.92	0.11	0.19	0.10	0.07	0.42	1.24
gcvT;lmo1348	Q8Y7D5	3.36	4.69	0.01	0.03	1.47	0.86	0.51	5.01
lmo1634	Q8Y6Q0	3.33	3.57	-0.01	0.02	0.00	NaN	-0.55	0.82
dnaC	Q92FQ6	3.33	5.03	0.09	0.68	0.44	0.32	0.52	2.85
lmo1866	Q8Y634	3.33	4.96	0.02	0.06	0.06	0.05	1.06	6.25
cshB;lmo1450	Q8Y755	3.32	3.76	-0.18	1.50	1.30	1.08	-0.71	5.61
lmo0785	Q8Y8V7	3.29	3.58	0.03	0.10	0.00	NaN	1.53	6.73
lmo0841	Q8Y8Q5	3.29	3.11	0.06	0.10	1.73	1.63	0.33	1.26
purM;lmo1767	Q8Y6C3	3.27	3.34	0.17	0.51	1.66	1.05	0.55	2.17
lmo0825	Q8Y8R9	3.21	5.87	-0.04	0.19	1.68	1.10	-0.12	0.79
lmo0261	Q8YA94	3.21	5.61	0.12	1.05	0.00	NaN	0.51	3.23
prs2;lmo0509	Q8Y9L8	3.21	4.97	0.03	0.09	1.97	1.52	-0.72	4.29
lmo0556	Q8Y9H2	3.19	4.19	0.00	NaN	0.00	NaN	5.39	9.72
lmo2055	Q8Y5K5	3.17	4.39	-0.34	0.44	0.00	NaN	3.39	6.35
alr;dal;lmo0886	P0DJL8	3.17	5.71	0.03	0.08	0.00	NaN	0.44	3.49
dnaX	Q8Y3X5	3.16	2.74	-0.03	0.18	1.21	2.15	-0.46	1.83
lmo0554	Q8Y9H4	3.16	4.94	-0.07	0.19	1.61	1.14	-0.48	2.43
lmo2209	Q8Y567	3.13	3.66	0.06	0.15	0.29	0.25	1.10	4.53
lmo1710	Q92AU7	3.12	2.85	-0.13	0.39	0.51	0.22	-1.90	4.57

Table S11 continued

purD;lmo1764	Q8Y6C6	3.08	3.70	0.08	0.32	1.33	1.32	0.16	0.91
sul	Q8YAC2	3.07	3.64	0.05	0.15	0.84	0.41	0.11	0.42
lipL;lmo2566	Q8Y489	3.06	3.06	0.09	0.31	0.95	0.80	-0.44	2.41
ffh	Q8Y695	3.05	2.64	0.04	0.12	1.37	1.47	0.01	0.03
nnrD;lmo1622	Q8Y6R2	3.05	4.22	0.06	0.25	0.21	0.18	1.19	7.39
murG;lmo2035	Q8Y5M2	3.03	2.46	-0.03	0.15	1.69	2.16	-0.20	1.21
lmo1822	Q8Y677	3.02	4.52	0.05	0.16	1.92	1.95	-0.28	1.21
lmo0774	Q8Y8W8	3.02	4.76	-0.12	0.79	2.16	1.28	-0.47	4.42
lmo2657	Q8Y420	3.00	3.03	0.03	0.28	1.38	1.32	-0.42	4.37
fhuC	Q8Y5U5	2.99	3.00	0.15	0.08	1.05	0.85	3.98	4.47
buk;lmo1370	Q8Y7B6	2.99	4.44	0.06	0.27	0.72	0.58	1.10	6.65
lmo0010	Q8YAV3	2.99	4.68	-0.04	0.10	1.64	2.82	0.03	0.11
lmo0942	Q8Y8G2	2.97	4.74	0.04	0.09	1.72	2.32	-0.35	1.40
pepC;lmo2338	O69192	2.96	4.73	0.11	0.51	1.93	2.36	1.82	7.86
fhs;lmo1877	Q8Y624	2.94	5.83	-0.03	0.03	0.00	NaN	6.20	9.70
lmo1949	Q8Y5V6	2.91	3.87	0.11	0.39	1.55	2.72	-0.17	0.52
lmo0740	Q8Y902	2.90	3.08	-0.08	0.06	0.00	NaN	1.90	2.65
lmo0397	Q8Y9X1	2.88	4.90	-0.23	0.31	0.97	0.53	0.10	0.14
accD;lmo1573	Q8Y6V8	2.88	3.69	0.04	0.08	1.51	0.88	0.18	0.88
lmo1867	Q8Y633	2.86	3.61	0.05	0.09	0.00	NaN	3.03	9.31
murA2;murZ;lmo2552	Q8Y4A2	2.86	3.15	0.06	0.19	1.63	1.83	0.18	1.06
lmo2550	Q7AP48	2.86	2.87	0.04	0.11	1.07	1.23	-0.20	1.05
lmo0663	Q8Y970	2.84	3.86	0.05	0.24	1.55	2.32	-0.07	0.48
lmo0664	Q8Y969	2.83	4.94	-0.11	0.13	0.00	NaN	1.98	4.55
addA;lmo2267	Q8Y511	2.80	5.46	0.15	0.69	0.00	NaN	1.30	6.79
lmo0277	Q8YA82	2.79	4.51	0.02	0.06	1.60	1.92	0.51	2.62
ispE;lmo0190	Q8YAE1	2.74	2.86	0.10	0.44	0.34	0.26	0.18	0.43
dxr;lmo1317	Q8Y7G4	2.74	4.08	-0.07	0.34	-0.05	0.03	0.13	0.53

Table S11 continued

lmo1966	Q8Y5T9	2.74	4.90	-0.07	0.12	1.58	1.05	-0.39	1.09
pyrB;lmo1838	Q8Y662	2.74	3.53	0.00	NaN	1.07	1.36	0.28	0.43
prsA2;lmo2219	Q8Y557	2.73	3.40	-0.03	0.15	1.76	0.79	-0.23	1.60
dapA;lmo1435	Q8Y766	2.72	2.98	0.09	0.22	0.56	0.60	-0.48	2.36
parE	Q8Y7J1	2.71	4.66	-0.04	0.13	0.83	0.50	-0.56	3.99
lmo2565	Q8Y490	2.67	3.55	0.05	0.13	1.12	0.53	-0.26	0.94
lmo2374	Q8Y4R0	2.66	4.22	0.08	0.19	0.00	NaN	-0.19	1.02
rpmJ;lmo2609	P66290	2.65	1.81	NaN	NaN	0.00	NaN	NaN	NaN
lexA;lmo1302	Q8Y7H7	2.65	2.80	0.27	0.53	2.58	2.67	1.51	4.13
lmo0898	Q8Y8K3	2.64	3.85	-0.01	0.05	0.82	0.58	0.39	3.57
lmo1647	Q8Y6N7	2.63	3.11	0.12	0.35	0.09	0.07	-0.06	0.11
lmo1722	Q8Y6G5	2.61	3.52	-0.03	0.27	0.00	NaN	-0.49	4.40
dnaJ;lmo1472	P0DJM1	2.61	1.59	-0.01	0.04	1.72	0.89	-0.09	0.24
lmo0229	Q7AP89	2.59	2.90	0.17	0.72	1.71	1.52	2.77	9.08
recD2;lmo1509	Q8Y717	2.57	3.91	0.31	0.68	0.00	NaN	2.34	6.32
lmo1515	Q8Y711	2.57	4.00	0.15	0.58	3.25	4.95	1.42	4.70
ruvB;lmo1532	Q8Y6Z8	2.55	2.71	-0.07	0.19	0.07	0.03	0.90	3.52
topA	Q8Y7K2	2.55	1.98	0.06	0.45	0.36	0.32	0.12	0.86
tmk;lmo2693	Q8Y3Y6	2.54	3.10	0.16	0.45	1.47	3.32	0.02	0.05
lmo1825	Q8Y674	2.52	3.22	-0.03	0.15	1.91	1.23	-0.32	2.76
obg;lmo1537	Q8Y6Z3	2.51	3.14	-0.05	0.20	0.95	0.83	0.14	0.67
msrB;lmo1859	Q8Y641	2.46	2.78	0.11	0.22	0.65	0.39	-0.05	0.11
lmo0964	Q8Y8E0	2.46	4.00	0.10	0.15	0.00	NaN	4.44	8.81
pheA;lmo1536	Q8Y6Z4	2.45	5.02	0.02	0.04	0.92	1.08	-1.02	4.71
gbuB	Q7AP75	2.45	2.53	0.19	0.55	1.92	2.60	-1.09	0.62
fmt;lmo1823	Q8Y676	2.44	3.87	-0.09	0.45	1.77	2.29	-0.60	4.52
lmo2705	Q8Y3X4	2.42	2.56	0.24	0.93	0.85	0.88	-0.23	1.18
cydC	Q8Y3W3	2.40	4.26	0.04	0.14	1.86	1.97	-0.37	0.74

Table S11 continued

lmo0291	Q8YA68	2.37	4.38	0.36	0.90	0.00	NaN	5.79	11.19
lmo1813	Q8Y684	2.35	3.19	0.20	0.63	0.02	0.01	2.27	7.02
lmo1131	Q8Y7Y8	2.34	3.39	0.07	0.09	1.69	2.61	0.00	0.01
proB;lmo1260	Q93Q56	2.33	3.70	0.18	0.37	0.52	0.47	-0.88	3.94
lmo1281	Q8Y7J6	2.32	3.75	0.24	0.66	0.32	0.36	0.42	1.35
lmo1351	Q8Y7D2	2.32	2.94	-0.06	0.14	1.50	2.41	-0.96	3.56
tagH;lmo1075	Q8Y843	2.32	3.75	0.07	0.19	0.90	0.64	-0.12	0.42
lmo1940	Q8Y5W5	2.31	3.99	0.06	0.13	1.64	2.35	-0.84	3.42
nusG	Q8YAA6	2.27	3.55	0.10	0.34	1.20	0.47	-0.61	3.44
trpS;lmo2198	Q8Y577	2.26	3.43	-0.06	0.10	0.20	0.14	-0.29	0.64
prfA;lmo0200	P22262	2.25	3.36	0.04	0.20	1.22	3.67	0.71	5.10
lmo2317	Q8Y4W2	2.23	2.75	NaN	NaN	0.00	NaN	NaN	NaN
lmo0131	Q8YAJ4	2.22	2.39	0.03	0.16	0.00	NaN	1.46	7.78
mntH;lmo1424	Q8Y773	2.22	2.61	0.10	0.26	1.18	0.61	-1.75	6.20
ecfA2;cbiO2;lmo2600	Q8Y455	2.21	4.33	0.14	0.81	1.90	2.04	0.01	0.03
lmo1930	Q8Y5X3	2.20	2.60	-0.12	0.18	1.40	3.54	0.34	0.98
prmC;lmo2542	Q8Y4A9	2.20	3.81	0.01	0.03	0.00	NaN	-0.70	3.83
lmo0525	Q8Y9K2	2.18	1.71	0.17	1.29	-0.29	0.18	0.96	6.37
lmo0580	Q8Y9E9	2.18	1.88	-0.12	0.14	0.00	NaN	1.01	1.61
lmo2422	Q8Y4L5	2.18	2.64	0.00	0.01	0.52	0.37	-0.41	1.94
trpC;lmo1630	Q8Y6Q4	2.17	3.50	-0.12	0.23	1.55	1.68	0.13	0.25
lmo1645	Q8Y6N9	2.17	3.32	0.07	0.29	-0.38	0.35	0.45	4.09
pcrA	Q8Y6C9	2.17	3.24	0.12	1.14	0.79	0.63	-0.21	2.27
lmo2590	Q8Y465	2.16	2.72	0.23	1.04	0.00	NaN	1.27	6.52
topB	Q8Y3S5	2.16	3.90	0.05	0.20	0.00	NaN	0.37	2.76
def;lmo1051	Q8Y866	2.15	2.40	0.13	0.25	1.99	2.87	-0.92	3.39
rsbU	Q8Y8K7	2.14	1.93	-0.14	0.50	0.00	NaN	-0.36	1.73
relA	Q8Y706	2.14	3.23	-0.02	0.05	0.39	0.33	-0.69	3.22

Table S11 continued

lmo1507	Q8Y719	2.13	3.27	0.05	0.48	0.00	NaN	0.09	0.57
aroB;lmo1927	Q8Y5X6	2.13	4.30	-0.05	0.16	1.28	1.94	-0.43	2.65
metN2;lmo2419	Q8Y4L8	2.08	3.88	-0.01	0.02	0.71	0.53	-0.67	4.34
gcvPB;lmo1350	Q8Y7D3	2.08	1.69	0.01	0.03	2.20	2.84	1.39	7.33
lmo1910	Q8Y5Z3	2.08	2.27	0.10	0.34	0.00	NaN	0.01	0.04
clpB;lmo2206	Q8Y570	2.08	3.78	0.08	0.32	0.11	0.08	2.67	11.11
cshA;lmo0866	Q8Y8N0	2.08	2.19	-0.03	0.15	2.18	0.96	-0.63	5.18
mogR;lmo0674	P0DJO8	2.05	3.19	0.21	0.26	0.00	NaN	-0.47	0.92
gcvPA;lmo1349	Q8Y7D4	2.04	2.65	-0.03	0.10	1.41	0.92	1.35	7.24
coaX;lmo0221	Q8YAC5	2.03	2.07	-0.09	0.20	-0.54	0.65	0.41	1.93
lmo0163	Q8YAG3	2.01	3.91	0.29	1.16	0.07	0.05	1.92	7.60
Proteins coenriched with ClpP1 and ClpP2									
murD;lmo2036	Q8Y5M1	6.73	5.90	-0.03	0.12	4.36	2.43	-0.40	2.19
lmo0454	Q8Y9R9	6.42	4.30	0.09	0.33	2.89	3.15	0.81	4.31
trmFO;gid;lmo1276	Q8Y7K1	6.23	5.54	0.13	1.02	4.05	5.14	0.68	5.44
fabG	Q8Y690	6.20	6.11	-0.11	0.49	5.31	2.64	-0.15	0.59
carB;pyrAB;lmo1835	Q8Y665	5.99	3.85	-0.15	0.22	6.30	2.34	-1.33	3.62
lmo2592	Q8Y463	5.82	6.18	0.16	0.84	4.48	4.30	-0.31	1.92
lmo1067	Q8Y851	5.79	5.23	0.06	0.33	4.15	2.72	-0.88	6.56
ychF;lmo2779	Q926X1	5.78	4.62	0.04	0.24	4.28	2.11	-0.97	5.41
lmo1815	Q92AJ3	5.76	6.46	0.17	0.29	3.97	2.82	-1.11	3.16
lmo1636	Q8Y6P8	5.74	4.09	-0.09	0.34	4.56	4.47	0.61	2.87
metG;metS;lmo0177	Q8YAF2	5.67	5.79	0.07	0.30	5.13	2.35	-0.65	5.79
recN	Q8Y7B8	5.64	4.32	0.02	0.07	4.39	4.69	-0.04	0.19
thrS;lmo1559	Q8Y6X2	5.62	8.78	0.00	0.01	4.72	4.71	-0.66	3.67
gshAB;gshF;lmo2770	Q8Y3R3	5.57	7.21	0.09	0.43	4.89	4.99	0.29	2.94
lmo0319	Q7AP84	5.55	6.23	0.02	0.11	4.43	5.05	-0.49	3.47
hemL2;gsaB;lmo1685	Q8Y6J9	5.51	2.87	0.02	0.04	5.91	4.57	-0.55	3.11

Table S11 continued

lmo1235	Q8Y7N9	5.46	6.66	-0.04	0.27	3.98	2.94	-0.23	3.26
lmo1782	Q8Y6A9	5.44	3.09	0.09	0.81	2.73	3.35	0.00	0.01
glyS;lmo1458	Q8Y754	5.40	4.53	-0.03	0.18	5.52	3.00	-0.32	2.77
lmo2263	Q8Y515	5.40	6.43	-0.29	0.33	3.73	4.53	0.29	1.25
murI;racE;lmo1237	Q8Y7N7	5.39	7.76	0.02	0.07	5.37	4.91	-1.04	5.54
lmo0931	Q8Y8H3	5.39	5.78	0.14	0.69	3.68	1.63	0.12	0.42
lmo1081	Q8Y837	5.38	4.47	0.05	0.21	3.08	2.06	-0.22	1.26
purH;lmo1765	Q8Y6C5	5.33	4.80	0.13	0.71	3.65	3.55	0.24	1.63
lmo0977	Q8Y8D1	5.28	4.01	0.10	0.41	4.97	2.63	-0.22	1.60
lmo2677	Q8Y401	5.28	6.10	0.11	0.39	2.56	2.44	0.21	0.81
lmo2720	Q8Y3W1	5.24	4.17	0.08	0.43	3.63	2.06	0.81	4.19
lmo1726	Q8Y6G1	5.24	2.68	-0.04	0.14	5.15	2.98	0.04	0.31
lmo0521	Q8Y9K6	5.22	5.18	0.10	1.01	3.46	2.76	0.17	1.49
murE;lmo2038	Q8Y5L9	5.21	4.43	0.05	0.15	4.39	5.48	0.05	0.19
lmo1436	Q8Y765	5.20	2.67	0.03	0.08	4.25	1.83	-0.36	1.97
tsaD;gcp;lmo2075	Q8Y5I7	5.18	3.83	0.05	0.07	3.45	3.60	0.90	2.85
mreB	Q8Y6Y3	5.16	2.91	0.04	0.11	2.85	1.69	-0.61	3.34
cmk;lmo1939	Q8Y5W6	5.15	4.82	0.11	1.50	4.75	2.97	-0.96	5.18
lmo1744	Q8Y6E3	5.08	9.47	-0.11	0.75	3.35	4.30	-0.46	2.06
queA;lmo1531	Q8Y6Z9	5.08	3.94	0.15	0.88	3.19	4.47	0.08	0.44
pheT;lmo1222	Q8Y7Q1	5.07	4.46	-0.07	0.39	4.51	3.94	-0.68	4.97
lmo2155	Q8Y5B2	5.05	3.90	0.10	0.56	3.99	2.64	-0.33	2.85
lmo1652	Q8Y6N2	5.05	4.35	0.12	0.39	4.91	3.85	-0.84	3.42
lmo1812	Q8Y685	5.00	4.36	0.08	0.48	4.62	4.30	0.87	4.79
minD	Q8Y6Y7	5.00	5.65	0.02	0.06	2.71	1.71	-0.02	0.06
mnmE;trmE;lmo2811	Q8Y3M4	5.00	4.56	0.20	0.52	3.81	2.75	-0.09	0.26
ftsE	Q8Y4E0	5.00	6.01	0.05	0.09	3.05	2.55	0.34	1.37
lmo1935	Q8Y5X0	4.99	3.09	0.11	0.25	3.82	3.36	0.71	3.26

Table S11 continued

tyrS;lmo1598	Q8Y6T4	4.94	3.06	0.11	1.42	3.82	2.91	-0.21	2.91
nadK2;lmo1586	P65770	4.91	7.38	0.04	0.18	4.13	3.47	-0.13	0.96
azoR1;lmo0611	Q8Y9C1	4.90	2.49	0.11	0.41	5.26	3.68	-0.30	1.33
gyrB	Q8YAV7	4.88	2.93	0.06	0.26	4.20	4.30	-0.37	2.93
ecfA1;cbiO1;lmo2601	Q8Y454	4.87	3.09	0.16	0.44	3.90	3.24	0.54	2.23
lmo0773	Q8Y8W9	4.85	5.17	0.22	0.59	2.90	2.69	-0.62	3.29
lmo1717	Q8Y6G9	4.85	6.23	0.04	0.16	3.12	3.96	-0.75	4.59
lysS;lmo0228	Q8YAB8	4.84	5.41	0.10	1.52	5.72	2.23	-1.02	7.01
lmo0267	Q8YA92	4.82	4.28	0.21	0.88	4.82	4.77	-0.48	2.92
lmo1006	Q8Y8A4	4.82	5.38	0.00	0.00	4.17	4.87	-1.12	4.25
alaS;lmo1504	Q8Y722	4.78	3.93	0.07	0.23	5.19	2.52	-0.88	4.98
aroC;aroF;lmo1928	Q8Y5X5	4.74	5.44	-0.06	0.38	3.00	2.99	-0.46	4.65
lmo1080	Q8Y838	4.73	5.60	-0.03	0.20	2.46	2.33	0.04	0.25
lmo0387	Q8Y9Y0	4.70	2.82	-0.09	0.20	4.95	2.90	-0.60	1.78
lmo1084	Q8Y834	4.68	2.65	0.04	0.14	3.69	2.31	-0.12	0.60
recA;lmo1398	P0DJP0	4.63	3.08	0.10	0.41	3.63	2.25	-0.20	0.84
lmo1863	Q8Y637	4.63	5.04	0.04	0.12	3.71	4.15	-0.39	2.22
lmo1357	Q8Y7C7	4.63	3.00	0.05	0.15	4.51	2.18	-0.11	0.45
lmo1401	Q8Y791	4.61	5.68	0.04	0.16	2.26	1.68	-0.61	4.79
lmo2474	Q8Y4G9	4.59	4.33	0.18	1.76	2.10	1.51	0.32	3.28
lysA	Q8Y5V3	4.58	6.78	0.07	0.27	2.37	2.61	-0.59	4.11
lmo1820	Q8Y679	4.58	4.31	-0.04	0.26	3.19	2.22	-0.43	3.54
lmo1431	Q8Y770	4.52	5.02	0.10	0.34	3.98	2.62	-0.33	1.98
lmo1372	Q8Y7B4	4.51	3.60	0.02	0.11	6.13	3.15	0.22	1.39
lmo0287	Q8YA72	4.51	6.12	-0.02	0.05	3.93	2.66	-0.27	0.93
lmo1457	P67195	4.50	5.17	-0.02	0.09	2.80	2.33	0.06	0.25
pycA	Q8Y846	4.49	2.78	-0.02	0.15	5.66	2.03	0.04	0.25
lmo2114	Q8Y5F0	4.49	5.53	0.10	0.48	3.31	1.88	-0.75	4.63

Table S11 continued

lmo1057	Q8Y860	4.48	4.72	0.15	0.80	3.55	3.31	0.03	0.07
atpG;lmo2530	Q927W3	4.48	4.58	0.04	0.10	4.01	2.29	-0.17	0.65
asnS;lmo1896	P58695	4.47	5.35	-0.02	0.10	4.57	1.80	-0.61	4.23
rnr;lmo2449	Q8Y4J0	4.46	4.36	0.16	0.76	3.54	4.10	-0.65	6.19
mutS;lmo1403	Q8Y789	4.44	4.40	0.08	0.86	3.13	2.58	-0.43	2.74
qoxA	Q8YAV0	4.42	4.93	-0.09	1.24	3.94	2.25	0.59	5.44
nusA	Q8Y7F9	4.42	4.62	0.08	0.21	4.71	2.51	-0.62	2.74
proA;lmo1259	Q93Q55	4.41	5.08	0.05	0.17	3.37	2.45	-0.31	1.81
lmo0132	Q8YAJ3	4.39	4.49	0.07	0.49	2.39	2.19	0.90	5.40
rex;lmo2072	P60384	4.38	3.50	0.04	0.19	5.56	2.08	-0.15	1.06
lmo1389	Q8Y7A1	4.34	3.99	-0.07	0.29	3.39	4.66	-0.02	0.11
aspS;lmo1519	Q8Y709	4.33	5.34	-0.02	0.14	5.80	2.68	-0.75	6.03
hemB	Q8Y6X7	4.32	5.66	0.05	0.19	3.02	1.85	0.06	0.29
lmo1258	Q8Y7L7	4.30	5.31	0.06	0.16	2.22	2.36	0.52	2.79
ackA1;lmo1581	Q8Y6V0	4.29	6.35	0.10	0.19	4.12	2.28	-0.23	0.82
lmo1387	Q8Y7A2	4.28	2.45	-0.14	0.44	4.16	3.08	0.84	2.91
alsS	Q8Y5Q0	4.27	2.27	0.00	0.01	2.73	1.79	-2.59	7.76
lmo2401	Q8Y4N4	4.26	3.18	0.10	0.25	4.77	5.25	-0.18	0.57
lmo0965	Q8Y8D9	4.25	3.66	-0.05	0.17	3.21	2.28	0.64	3.34
citB	Q8Y6P3	4.24	3.28	0.13	1.18	3.77	2.56	0.31	2.20
lmo1513	Q8Y713	4.23	4.12	0.08	0.24	2.55	2.21	0.33	1.20
lmo1236	Q8Y7N8	4.16	3.49	-0.05	0.37	3.95	4.07	-0.53	3.84
resD	Q8Y5V7	4.15	3.51	0.01	0.04	4.77	4.73	0.37	1.98
ansB	Q8Y6M1	4.12	4.97	-0.03	0.08	3.79	2.41	-0.45	2.35
gpsA;lmo1936	Q8Y5W9	4.11	2.70	-0.06	0.22	4.25	3.17	-0.76	4.69
lmo1718	Q8Y6G8	4.08	3.76	0.02	0.09	4.22	3.28	-0.31	2.75
ddl;ddlA;lmo0855	Q8Y8P1	4.07	3.85	0.11	0.43	4.23	1.80	-0.94	6.16
lmo1414	Q8Y782	4.07	1.58	0.04	0.17	5.15	2.20	-0.36	2.33

Table S11 continued

thyA;lmo1874	Q8Y626	4.04	1.97	0.13	0.66	4.79	2.65	0.62	2.84
tarJ;lmo1087	Q8Y831	4.04	4.47	0.12	0.57	4.72	4.63	0.14	1.01
prfC;lmo0988	Q8Y8C0	4.04	4.22	0.07	0.25	4.41	4.05	-0.97	5.05
lmo0356	Q8YA10	4.03	3.00	-0.13	0.43	3.92	3.94	0.25	1.15
lmo2372	Q8Y4R2	4.02	3.31	-0.03	0.12	4.39	1.95	0.58	4.16
rpoZ;lmo1826	Q8Y673	4.02	4.44	0.01	0.01	2.71	1.63	-1.08	3.30
polA	Q8Y6W6	4.00	2.41	-0.02	0.08	4.65	5.14	0.29	1.85
lmo2031	Q8Y5M6	3.99	4.57	-0.02	0.07	3.14	3.61	-0.64	3.58
parA	Q926W7	3.98	7.30	0.13	0.64	4.62	4.66	0.21	1.29
dapF;lmo2018	Q8Y5N9	3.97	3.78	0.24	0.74	3.28	3.95	0.97	3.77
dat;daaA;lmo1619	P0DJL9	3.97	3.65	0.03	0.09	4.50	2.41	-0.66	3.39
rnj;lmo1434	Q8Y767	3.95	3.58	0.00	0.01	3.60	1.91	-0.30	2.18
RsbR	Q8Y8K9	3.93	4.16	0.09	0.18	4.50	2.61	-0.41	1.55
pyrH;smbA;lmo1313	P65927	3.93	4.72	0.04	0.05	4.02	5.01	-0.16	0.25
lmo1283	Q8Y7J4	3.90	4.17	-0.03	0.15	5.38	5.18	0.47	5.68
minC;lmo1545	Q8Y6Y6	3.90	4.68	-0.08	0.29	3.20	6.18	0.62	3.88
tkt	Q8Y7H4	3.89	4.70	-0.01	0.04	7.29	2.46	-0.39	3.14
lmo1919	Q8Y5Y4	3.89	3.15	0.01	0.02	3.43	2.01	0.10	0.24
lmo2262	Q8Y516	3.88	3.13	-0.01	0.03	3.22	3.95	-0.04	0.24
lepA;lmo1479	Q8Y742	3.87	5.79	0.04	0.13	2.45	2.75	-0.73	4.66
ileS;lmo2019	Q8Y5N8	3.87	3.61	-0.04	0.35	4.43	2.46	-0.32	2.24
lmo1705	Q8Y6H9	3.87	5.06	0.09	0.34	4.14	6.48	-0.83	5.55
mnmG;gidA;lmo2810	Q8Y3M5	3.85	5.09	0.08	0.64	2.96	3.08	0.26	3.81
aroE;lmo1490	Q8Y733	3.84	3.65	0.00	0.00	2.95	2.03	-0.55	4.34
metK;lmo1664	Q8Y6M0	3.84	1.72	0.03	0.08	4.68	4.56	-0.47	2.23
lmo1371	Q8Y7B5	3.82	4.98	0.10	0.44	4.12	4.43	0.90	4.61
menF	Q8Y6K8	3.81	4.51	0.13	0.91	2.32	1.99	-0.32	2.68
lmo2247	Q8Y529	3.81	2.46	0.09	0.71	4.52	4.70	0.76	5.43

Table S11 continued

purK	Q8Y6B7	3.79	3.78	0.17	0.55	4.35	5.06	0.36	1.35
lmo1092	Q8Y826	3.78	4.20	-0.08	0.42	2.80	3.59	0.00	0.00
lmo0110	Q8YAK8	3.77	5.28	0.09	0.37	3.32	3.83	0.92	4.92
lmo1992	Q8Y5R4	3.76	3.41	0.12	0.34	4.20	2.16	-1.85	6.96
lmo2406	Q8Y4N0	3.76	1.85	0.05	0.12	3.56	2.66	0.96	4.66
lmo0653	Q8Y980	3.76	5.51	0.00	0.01	3.16	1.67	-0.77	2.18
lmo2700	Q8Y3X9	3.76	5.40	0.04	0.20	5.06	2.31	0.42	2.22
parC	Q8Y7J0	3.75	4.58	0.06	0.29	2.45	3.65	-0.57	4.59
murF	Q8Y8P0	3.74	3.84	0.07	0.22	3.67	3.95	-1.21	6.39
lmo2390	Q8Y4P5	3.73	3.52	0.14	1.04	6.25	5.31	0.19	2.00
mutL;lmo1404	Q8Y788	3.72	6.64	-0.02	0.05	2.70	3.57	-0.38	1.79
mbl	Q8Y4C5	3.72	3.78	0.06	0.44	2.95	2.01	-0.59	4.75
lmo2824	Q8Y3L1	3.71	4.56	0.02	0.11	5.04	3.43	0.39	3.16
zwf;lmo1978	Q8Y5S7	3.69	2.62	0.10	0.80	5.03	2.40	-0.31	1.97
pnp;lmo1331	Q8Y7F1	3.69	1.36	0.09	1.07	2.73	1.96	-0.20	3.38
trpA;lmo1627	Q8Y6Q7	3.68	4.78	-0.15	0.16	2.89	3.41	-0.26	0.38
mnmA;trmU;lmo1512	Q8Y714	3.67	4.07	0.07	0.58	3.81	4.08	-0.15	1.19
lmo1611	Q8Y6S2	3.67	5.28	-0.05	0.25	6.21	2.50	-0.48	3.47
der;engA;lmo1937	Q8Y5W8	3.66	2.99	-0.01	0.05	2.74	3.48	-0.68	4.86
pdxT;lmo2102	Q8Y5G1	3.64	4.15	0.01	0.03	2.95	2.32	-1.09	5.25
lmo0935	Q8Y8G9	3.63	5.81	0.04	0.09	2.40	4.11	-0.32	1.61
purA;lmo0055	Q8YAR1	3.63	3.15	0.04	0.23	3.49	2.48	-0.23	3.23
hom	Q8Y4A4	3.62	4.82	-0.08	0.30	5.47	2.29	-1.23	6.01
pyrR;lmo1840	Q8Y660	3.62	4.53	-0.03	0.10	3.56	2.28	-0.59	2.77
gmk;lmo1827	Q8Y672	3.60	6.02	0.08	0.42	3.41	4.48	-0.62	3.45
lmo0906	Q8Y8J5	3.60	3.54	0.04	0.19	3.59	6.86	0.53	2.81
lmo2823	Q8Y3L2	3.59	2.97	0.04	0.09	3.04	4.50	0.53	2.33
lmo1855	Q8Y645	3.58	3.96	0.01	0.02	3.10	3.78	-0.80	3.79

Table S11 continued

lmo2403	Q8Y4N3	3.58	3.40	-0.08	0.40	2.51	3.83	-0.27	2.66
argS;lmo2561	Q8Y493	3.57	1.98	0.06	0.19	4.71	2.63	-0.53	3.29
gatB;lmo1754	Q8Y6D3	3.54	2.08	0.05	0.29	2.81	1.71	-0.21	2.36
lmo2518	Q8Y4D2	3.53	4.61	0.07	0.17	3.31	4.28	-0.72	3.16
apt;lmo1524	P0A2X5	3.53	6.37	0.00	0.01	2.24	3.85	-0.50	3.06
fruB	Q8Y4U5	3.53	2.98	0.10	0.17	3.66	2.31	-0.65	2.29
folD;lmo1360	Q8Y7C5	3.52	4.04	0.02	0.04	3.81	3.17	0.52	2.27
nadE;lmo1093	Q8Y825	3.51	1.53	-0.02	0.14	4.67	1.85	0.08	0.46
folA	Q8YAC1	3.51	3.56	0.29	1.07	3.29	3.62	0.02	0.05
lmo0407	Q8Y9W2	3.51	2.90	0.40	0.96	3.93	3.17	0.97	1.93
ezrA;lmo1594	Q8Y6T8	3.50	3.17	-0.04	0.22	4.44	3.80	-0.72	6.15
secA1;lmo2510	P47847	3.49	2.83	-0.04	0.38	2.85	2.73	-0.06	0.46
rnj;lmo1027	Q92CZ5	3.48	3.10	-0.06	0.35	3.44	1.80	-0.30	2.74
lmo2831	Q8Y3K4	3.47	3.53	0.08	0.34	3.58	3.86	-0.34	2.57
glmM;lmo2118	Q8Y5E6	3.46	5.97	0.05	0.54	5.93	2.72	-0.08	0.60
lmo2411	Q928M6	3.45	5.33	0.02	0.20	3.72	2.30	0.41	4.52
lmo1423	Q8Y774	3.44	1.99	0.03	0.20	2.82	1.99	0.01	0.06
lmo1354	Q8Y7C9	3.40	2.75	-0.03	0.16	5.24	2.43	0.05	0.16
pnp	Q8Y5V2	3.40	1.64	0.05	0.20	5.25	2.45	-0.32	1.70
ribC	Q8Y7F2	3.38	2.76	-0.10	0.33	2.69	2.94	0.16	0.44
lmo0970	Q8Y8D5	3.36	3.75	0.06	0.24	5.28	1.98	0.14	0.84
infB;lmo1325	Q8Y7F6	3.34	1.50	0.01	0.07	4.07	2.29	-0.40	5.25
lmo2194	Q8Y580	3.34	4.27	-0.02	0.10	4.27	6.75	-0.77	4.64
lmo1922	Q8Y5Y1	3.33	2.70	-0.10	0.35	5.06	2.78	-0.57	2.56
lmo1068	Q8Y850	3.32	3.74	-0.01	0.05	3.77	1.83	-1.56	6.61
lisR	Q92BX8	3.31	5.20	-0.01	0.01	2.63	2.05	0.17	0.84
ftsA	Q8Y5M4	3.30	4.08	0.01	0.06	4.01	2.21	-0.20	1.48
trpD;lmo1631	Q8Y6Q3	3.30	3.55	-0.42	0.30	2.15	3.12	0.92	1.06

Table S11 continued

dnaA;lmo0001	Q8YAW2	3.29	5.24	0.07	0.31	2.22	2.46	-0.18	1.50
lmo1493	Q8Y730	3.27	2.58	0.06	0.36	4.85	2.89	-0.06	0.55
lmo1886	Q8Y616	3.26	2.12	-0.06	0.33	5.57	2.69	0.11	0.78
lmo2577	Q8Y478	3.26	4.12	0.26	1.70	3.88	4.34	-0.22	1.59
lmo1814	Q8Y683	3.25	1.53	-0.06	0.19	4.42	2.92	-0.49	2.91
lmo1013	Q8Y899	3.25	3.19	0.22	0.87	2.67	1.82	-0.28	1.48
uvrB;lmo2489	Q8Y4F5	3.24	2.99	0.18	0.89	2.07	2.16	0.93	5.56
lmo1339	Q8Y7E4	3.22	2.31	0.00	0.00	2.79	2.97	-0.39	1.85
lmo1612	Q8Y6S1	3.21	6.76	-0.03	0.04	3.19	4.79	0.12	0.37
azoR2;lmo0786	Q8Y8V6	3.19	1.56	0.11	0.34	5.41	3.06	-0.85	3.53
lmo1005	Q8Y8A5	3.19	1.76	-0.08	0.54	2.57	2.80	-0.08	0.41
nagB;lmo0957	Q8Y8E7	3.18	4.71	0.06	0.28	3.66	5.62	-0.97	5.12
dapB;lmo1907	Q8Y5Z6	3.18	3.31	0.14	0.37	5.90	2.59	-0.10	0.32
tarI;lmo1086	Q8Y832	3.17	4.31	-0.03	0.17	4.08	2.39	0.01	0.02
proC;lmo0396	Q8Y9X2	3.16	3.29	0.03	0.12	2.28	1.48	-0.30	1.30
lmo1976	Q8Y5S9	3.16	5.47	-0.02	0.09	3.34	4.06	-0.75	5.65
panB;lmo1902	Q8Y601	3.15	2.43	0.05	0.06	4.91	2.60	-0.83	1.95
lmo0848	Q8Y8P8	3.14	4.89	0.11	0.73	2.75	4.74	-0.32	1.47
pdp	Q8Y5R3	3.13	2.07	0.01	0.02	3.36	3.88	-0.03	0.11
lmo0607	Q8Y9C5	3.13	3.54	-0.05	0.18	2.23	3.29	-0.68	3.75
plsX;lmo1809	Q8Y688	3.13	3.35	-0.06	0.15	3.45	4.08	-0.40	1.97
gltX;lmo0237	Q8YAB3	3.13	1.90	-0.05	0.25	4.46	1.68	-0.18	1.60
gatA;lmo1755	Q8Y6D2	3.13	3.40	0.03	0.16	5.86	1.72	-0.12	1.02
hisS;lmo1520	Q8Y708	3.09	2.63	0.08	0.34	3.48	1.97	-0.49	4.48
lmo1795	Q8Y6A0	3.05	6.42	0.22	1.07	2.11	1.92	-0.05	0.11
prmA;lmo1471	P0DJO9	3.04	1.93	-0.06	0.25	3.82	3.19	0.00	0.00
lmo1745	Q8Y6E2	3.01	3.98	0.00	0.01	2.05	2.73	-0.59	5.04
yhaM;lmo2220	Q8Y556	2.99	5.11	0.03	0.06	3.34	1.77	0.20	0.51

Table S11 continued

smc	Q8Y692	2.99	3.91	0.05	0.16	2.79	2.86	-0.12	0.43
lmo1946	Q8Y5V9	2.98	3.74	-0.10	0.58	2.60	4.65	0.67	3.79
menD;lmo1675	Q8Y6K9	2.98	4.71	0.04	0.20	2.09	1.55	-0.03	0.17
lmo0271	Q8YA88	2.97	3.25	0.07	0.45	4.06	3.91	-0.01	0.05
lmo1373	Q8Y7B3	2.96	4.41	0.02	0.06	4.30	3.43	0.23	1.63
leuS;lmo1660	Q8Y6M4	2.94	3.51	0.06	0.28	4.84	4.65	-0.43	3.19
prfB;lmo2509	Q8Y4D8	2.94	3.00	0.07	0.18	4.13	4.70	-0.78	3.60
rny;lmo1399	P0DJP2	2.93	3.60	0.12	0.32	3.90	2.04	-0.26	1.44
lmo0983	Q8Y8C5	2.91	5.26	-0.18	0.33	2.75	3.16	0.98	4.36
lmo2248	Q929C7	2.85	3.47	0.02	0.12	3.63	3.81	-0.86	6.74
lmo0241	Q92F34	2.84	3.20	0.11	0.36	3.58	2.12	-0.26	1.57
panC;lmo1901	Q8Y602	2.82	2.92	-0.02	0.02	2.03	3.27	-0.70	1.62
ligA;lmo1758	Q8Y6D0	2.78	3.71	0.05	0.15	3.76	5.03	-0.01	0.03
rph;lmo1238	Q8Y7N6	2.78	2.96	-0.04	0.12	3.66	2.11	-1.08	5.36
asd;lmo1437	Q8Y764	2.77	2.79	0.00	0.01	4.95	2.27	-0.16	0.52
lmo2537	Q8Y4B4	2.77	2.68	0.04	0.14	3.82	4.81	-0.53	3.29
lmo1967	Q8Y5T8	2.75	2.45	0.00	0.00	4.08	3.58	-0.09	0.19
carA;pyrAA;lmo1836	Q8Y664	2.73	2.98	0.14	0.16	3.46	2.15	-1.23	3.40
lmo1753	Q8Y6D4	2.72	3.03	-0.13	0.33	2.64	3.29	-0.75	3.47
lmo2462	Q8Y4H9	2.71	3.75	-0.11	0.76	3.46	3.59	-1.38	8.59
lmo1595	Q8Y6T7	2.71	1.56	0.27	0.54	3.37	4.03	-0.11	0.37
lmo2371	Q8Y4R3	2.70	1.83	0.09	0.32	4.07	2.16	0.55	4.36
lmo1254	Q8Y7M0	2.69	1.92	0.08	0.38	4.36	2.89	0.74	4.38
hslU;clpY;lmo1279	Q8Y7J8	2.68	2.09	-0.02	0.06	2.58	1.80	-0.22	1.26
rsbV;lmo0893	P0A4J8	2.68	1.38	-0.09	0.33	4.27	5.50	-0.28	1.79
lmo0553	Q8Y9H5	2.66	5.07	0.01	0.03	4.94	2.05	-0.12	0.33
ldh1;ldh;lmo0210	P33380	2.66	3.58	0.11	0.62	5.99	2.31	-0.89	5.91
comEB	Q8Y739	2.65	2.29	-0.28	1.07	2.38	2.58	-0.83	4.00

Table S11 continued

lmo2358	Q8Y4S4	2.64	2.81	0.02	0.05	2.71	1.80	0.10	0.30
era;lmo1462	Q8Y750	2.59	2.98	-0.13	0.40	2.11	3.16	-0.08	0.26
gbuA	Q7AP76	2.58	2.50	0.06	0.30	3.84	2.57	0.70	6.58
trpB;lmo1628	Q8Y6Q6	2.57	5.26	-0.08	0.10	2.39	3.59	-0.16	0.30
cysS;lmo0239	Q8YAB1	2.57	3.45	0.12	0.55	5.21	2.01	0.39	2.29
lmo2433	Q8Y4K5	2.56	1.36	-0.07	0.22	3.74	2.39	-0.57	2.79
rpoC;lmo0259	Q8YA96	2.51	2.76	0.03	0.16	3.73	1.71	-0.71	6.41
xpt;lmo1885	Q8Y617	2.50	4.25	0.10	0.15	3.77	3.77	-0.88	4.00
tagD	Q8Y829	2.49	2.63	0.11	0.53	2.23	2.66	-0.28	0.65
ccpA	Q8Y6T3	2.49	2.63	-0.02	0.05	5.10	1.87	-0.58	1.78
lmo2426	Q8Y4L1	2.48	2.11	-0.04	0.11	2.49	4.76	-0.49	1.46
mtnN;lmo1494	Q8Y729	2.47	2.45	0.05	0.18	3.48	4.49	-0.20	1.61
lmo1083	Q8Y835	2.44	4.26	0.06	0.31	5.42	2.14	0.00	0.00
ftsY;lmo1803	Q8Y693	2.40	2.78	0.11	0.38	2.57	4.04	-0.92	4.68
lmo1392	Q8Y798	2.40	2.83	-0.12	0.46	3.35	2.61	-0.13	0.48
aroD;lmo0491	Q8Y9N4	2.36	3.85	0.12	0.40	2.57	2.14	-0.41	3.35
lmo1467	Q7AP63	2.36	3.18	-0.01	0.03	2.93	3.54	0.24	0.79
lmo0494	Q8Y9N1	2.34	2.32	-0.15	0.55	3.27	5.28	-0.34	0.41
lmo1257	Q92CE7	2.33	2.99	0.15	0.67	3.31	3.67	-1.84	6.12
lmo2450	Q8Y4I9	2.33	3.36	0.19	0.98	3.08	4.41	-0.71	4.16
argR;lmo1367	Q8Y7B9	2.32	2.24	0.17	1.10	2.13	2.64	0.13	0.44
lmo0608	Q8Y9C4	2.30	3.11	0.04	0.22	2.15	3.74	-0.42	3.38
lmo1082	Q8Y836	2.29	1.51	-0.08	0.60	3.78	2.15	-0.16	1.85
lmo2487	Q8Y4F7	2.28	2.93	-0.18	1.41	3.21	2.72	-0.72	5.05
lmo2853	Q8Y3I3	2.26	4.23	-0.05	0.21	4.22	2.09	-0.22	0.63
lmo2208	Q8Y568	2.25	3.24	-0.03	0.29	2.26	2.48	-0.86	8.13
lmo1012	Q8Y8A0	2.24	1.38	-0.11	0.91	5.93	4.06	0.37	2.76
psuG;lmo2340	Q8Y4U2	2.23	3.74	0.10	0.23	5.72	2.66	-0.21	0.66

Table S11 continued

fumC;citG;lmo2225	Q8Y551	2.23	1.46	0.08	0.30	3.49	6.26	0.00	0.01
lmo1022	Q8Y892	2.22	2.57	0.02	0.05	3.06	5.45	-0.46	2.86
lmo2515	Q927X8	2.20	1.58	-0.06	0.28	3.36	1.75	-0.28	1.68
lmo1217	Q8Y7Q5	2.17	3.49	0.05	0.11	7.28	2.69	0.03	0.07
lmo2389	Q8Y4P6	2.15	2.72	0.03	0.20	2.98	1.34	0.27	2.89
valS;lmo1552	Q8Y6X9	2.13	2.22	-0.05	0.36	5.53	3.12	-0.51	5.36
pheS;lmo1221	Q8Y7Q2	2.13	3.36	0.05	0.18	2.77	3.40	-0.61	4.08
sigA;rpoD;lmo1454	P52331	2.13	2.21	0.14	0.67	3.29	3.32	-0.41	1.95
lmo0847	Q8Y8P9	2.12	2.78	0.03	0.18	2.82	1.62	-0.55	5.48
accA;lmo1572	Q8Y6V9	2.11	2.36	0.06	0.29	3.35	3.69	0.35	2.75
rpoB;lmo0258	Q9RLT9	2.09	2.36	0.03	0.27	3.47	2.21	-0.40	4.81
lmo2089	Q8Y5H3	2.07	3.73	0.08	0.52	4.18	1.69	0.65	4.18
deoB;drm;lmo1954	Q8Y5V1	2.07	3.22	0.05	0.23	4.62	2.50	-0.55	3.42
lmo0341	Q8YA24	2.06	2.82	0.20	0.99	3.54	4.30	-0.37	2.06
Proteins coenriched with ClpP2 only									
lmo2167	Q8Y5A2	0.00	NaN	-0.07	0.14	7.27	5.36	0.03	0.04
lmo1579	Q8Y6V2	1.10	1.06	-0.01	0.03	6.77	2.05	0.96	5.45
lmo0560	Q8Y9G8	1.60	2.99	0.05	0.26	6.70	2.26	-0.68	5.97
cadA;lmo1100	P58414	3.81	0.91	-0.02	0.04	6.28	1.35	-1.58	5.33
lmo1510	Q8Y716	1.91	1.19	0.10	0.19	6.26	3.40	-0.41	1.15
guaA;lmo1096	Q8Y822	1.11	0.87	0.04	0.24	5.99	2.07	-1.07	7.08
pyrC;lmo1837	Q8Y663	0.09	0.04	-0.17	0.25	5.89	2.85	-1.65	4.17
thrC	Q8Y4A5	1.39	0.94	0.18	0.76	5.79	2.87	-1.28	5.24
lmo2569	Q8Y486	1.63	0.39	-0.06	0.21	5.62	1.55	-1.08	4.51
lmo0191	Q8YAE0	1.44	1.28	0.12	0.55	5.59	2.54	0.17	0.56
proS;lmo1319	Q8Y7G2	0.85	1.71	0.07	0.27	5.52	2.12	-0.23	1.31
mntB;lmo1849	Q8Y651	1.84	2.61	-0.02	0.09	5.41	1.82	-0.37	3.33
fabH;lmo2202	Q8Y573	1.58	3.70	0.07	0.36	5.40	1.76	-0.54	2.98

Table S11 continued

lmo2113	Q8Y5F1	0.09	0.06	0.27	1.91	5.36	4.58	0.28	1.31
hslO;lmo0222	Q8YAC4	1.72	2.38	-0.02	0.04	5.36	5.36	-0.26	1.01
lmo0907	Q8Y8J4	1.50	2.25	0.00	0.00	5.35	2.79	-0.09	0.36
lmo1376	Q8Y7B0	-0.37	0.33	0.04	0.31	5.26	2.23	-0.41	5.09
glnA	Q8Y7I0	-0.62	1.10	0.16	2.72	5.25	1.94	0.00	0.01
lmo2475	Q8Y4G8	0.49	0.50	0.06	0.36	5.24	3.41	0.63	5.93
lmo0982	Q8Y8C6	-0.76	1.29	0.11	0.75	5.14	2.46	0.11	0.47
dnaN	Q8YAW1	1.65	3.58	0.01	0.03	5.10	1.73	-0.49	3.07
deoD;lmo1856	Q8Y644	-0.39	0.53	0.16	0.74	5.09	2.31	0.01	0.02
lmo0534	Q8Y9J3	0.00	NaN	0.10	0.95	5.01	4.89	-0.86	3.71
glyA;lmo2539	Q8Y4B2	0.09	0.06	0.14	0.41	4.97	1.99	0.96	3.96
lmo0978	Q8Y8D0	1.79	3.90	-0.01	0.05	4.92	2.02	0.18	0.92
hfq;lmo1295	Q92C58	1.22	1.14	NaN	NaN	4.89	3.45	NaN	NaN
ami	Q8Y496	0.00	NaN	0.03	0.15	4.87	3.21	-0.56	3.99
lmo2491	Q8Y4F3	1.57	0.97	0.21	0.83	4.83	5.99	0.26	1.19
lmo2413	Q8Y4M4	0.00	NaN	0.02	0.05	4.75	3.41	0.01	0.03
fabD	Q8Y689	0.26	0.17	0.02	0.09	4.65	3.17	-0.23	1.48
lmo2192	Q8Y581	1.87	1.97	0.18	0.41	4.54	1.66	0.23	0.63
pyrF;lmo1832	P58641	1.72	1.02	-0.38	0.36	4.52	2.60	-1.25	1.78
lmo0098	Q8YAM0	1.55	1.97	-0.13	0.21	4.52	1.72	-0.57	1.67
citC	Q8Y6W5	0.49	1.44	0.12	0.42	4.51	5.28	0.88	6.07
tpx;lmo1583	Q8Y6U8	0.49	0.43	0.15	0.15	4.48	2.59	-0.06	0.06
lmo0078	Q8YAN9	2.11	0.98	0.01	0.02	4.44	5.02	-0.50	3.06
pfkA;pfk;lmo1571	Q8Y6W0	-1.27	2.28	-0.09	0.48	4.42	2.08	-0.03	0.05
lmo1688	Q8Y6J6	1.83	3.84	0.10	0.23	4.38	2.10	0.53	2.11
pyrG;lmo2559	Q8Y495	0.32	0.28	0.02	0.12	4.36	1.65	-0.40	3.20
rsfS;lmo1486	Q92BM7	0.00	NaN	-0.09	0.13	4.35	2.34	0.62	1.59
aroA;aroE;lmo1923	Q8Y5Y0	1.45	1.74	0.00	0.01	4.33	5.23	-0.62	5.99

Table S11 continued

glmS;lmo0727	Q8Y915	0.40	1.22	0.01	0.05	4.32	2.21	0.28	1.98
aspB	Q8Y606	1.57	1.17	0.05	0.14	4.32	2.80	-0.32	2.09
lmo1017	Q8Y897	1.58	0.73	0.03	0.14	4.31	2.25	0.28	2.62
codY;lmo1280	Q8Y7J7	1.53	2.16	-0.03	0.13	4.23	2.13	-0.43	3.54
lmo1603	Q8Y6T0	0.72	0.47	0.13	0.70	4.22	2.53	-0.36	2.30
cydA	Q927C3	1.48	0.87	0.31	0.75	4.18	5.70	-1.03	3.46
lmo0592	Q8Y9D8	1.19	1.90	-0.03	0.04	4.17	2.53	0.46	1.03
lmo2638	Q8Y435	1.68	2.18	0.15	0.43	4.17	1.58	-0.81	3.87
pepT;lmo1780	Q8Y6B1	-0.96	1.15	0.04	0.24	4.14	1.82	0.87	6.78
lmo0595	Q8Y9D5	0.00	NaN	0.09	0.37	4.13	3.55	-0.64	3.30
lmo1858	Q8Y642	-0.39	0.25	0.01	0.04	4.13	3.30	0.25	1.40
lmo1621	Q8Y6R3	-0.76	0.70	0.04	0.11	4.13	2.42	-0.02	0.08
lmo1684	Q8Y6K0	1.36	0.84	0.15	0.94	4.12	2.31	-0.18	0.83
lmo2354	Q8Y4S8	1.52	0.85	0.11	0.25	4.11	3.88	-0.10	0.33
gyrA	Q8YAV6	2.39	0.71	0.06	0.24	4.08	3.21	-0.29	2.27
qoxB	Q8YAU9	1.25	1.01	-0.01	0.04	4.07	3.92	0.42	1.19
lmo0759	Q8Y8Y3	1.36	1.02	0.25	0.55	4.04	4.80	0.43	1.47
tilS/hprT;lmo0219	Q8YAC7	1.32	0.82	0.09	0.19	4.01	2.50	-0.33	1.25
lmo1711	Q92AU6	0.30	0.27	0.01	0.03	3.94	1.84	0.64	3.62
lmo2188	Q8Y583	-0.21	0.13	0.06	0.38	3.94	2.09	0.78	4.47
serC;lmo2825	Q8Y3L0	1.74	1.29	0.11	1.08	3.93	3.29	0.56	5.16
lmo1620	Q8Y6R4	-1.27	3.86	0.06	0.24	3.91	2.80	0.31	2.51
atpD2;lmo2529	Q8Y4C1	1.55	3.45	0.09	0.39	3.89	2.54	0.00	0.01
secD;secF;lmo1527	Q8Y703	2.35	1.10	-0.02	0.08	3.87	4.61	-0.24	2.11
lmo1415	Q8Y781	-0.55	0.57	0.00	0.01	3.85	1.95	-0.32	2.13
lmo2193	Q7AP53	2.94	1.23	0.14	0.32	3.84	1.68	0.08	0.20
ade;adeC;lmo1742	Q8Y6E5	0.00	NaN	0.09	0.19	3.83	3.81	-0.21	0.49
lmo0392	Q92EP8	1.84	3.77	0.12	0.77	3.83	2.35	0.13	1.25

Table S11 continued

lmo2692	Q8Y3Y7	0.00	NaN	0.02	0.03	3.80	1.45	-0.13	0.21
aroA	Q8Y6T2	0.17	0.14	0.11	0.36	3.80	1.42	-1.16	5.38
dps;flp;fri;lmo0943	Q8Y8G1	0.35	0.64	0.05	0.27	3.74	4.22	-1.02	7.24
lmo1393	Q8Y797	1.75	2.51	0.03	0.27	3.73	1.78	0.06	0.41
trxB;lmo2478	O32823	1.26	3.21	0.07	0.19	3.70	2.92	-0.29	1.01
rpoA;lmo2606	P66699	1.15	2.61	-0.04	0.31	3.70	2.50	-0.74	6.49
ptsI;lmo1003	O31149	1.40	2.15	0.04	0.10	3.65	3.38	-0.12	0.32
lmo2201	Q8Y574	1.34	2.74	-0.02	0.14	3.64	2.53	0.31	4.24
ldh2;lmo1534	Q8Y6Z6	1.72	0.81	-0.06	0.24	3.61	2.85	0.49	3.73
stp;lmo1821	Q8Y678	1.07	0.56	-0.04	0.24	3.61	4.91	-0.30	1.30
lmo2414	Q8Y4M3	1.92	3.51	0.03	0.10	3.56	1.96	0.08	0.49
lmo1578	Q8Y6V3	1.58	2.52	0.03	0.05	3.52	2.30	-0.02	0.04
lmo2195	Q8Y579	1.47	0.86	0.01	0.06	3.47	1.77	-0.79	3.46
lemA	Q8Y8E2	1.50	3.46	0.01	0.02	3.47	1.62	-0.91	5.54
pgi;lmo2367	Q8Y4R7	-1.35	2.36	-0.02	0.09	3.46	2.18	-0.41	2.38
lmo1240	Q8Y7N4	0.00	NaN	0.10	0.45	3.44	1.66	-1.27	6.06
ppaC;lmo1448	Q8Y757	-0.29	0.29	0.00	0.00	3.41	2.87	-0.48	2.64
hemL1;lmo1553	Q8Y6X8	1.90	2.14	0.03	0.12	3.32	2.45	0.32	2.24
pta	Q8Y5G0	-0.25	0.46	0.04	0.09	3.32	1.33	-0.19	0.55
lmo0185	Q8YAE5	1.98	3.35	0.05	0.17	3.31	3.38	-0.15	0.68
lmo2792	Q8Y3P3	1.96	3.98	0.07	0.12	3.31	1.74	0.31	1.00
rpsP;lmo1797	Q8Y699	1.29	0.48	0.15	0.24	3.31	3.65	-0.60	1.08
ndk;lmo1929	Q8Y5X4	-0.15	0.05	0.09	0.67	3.29	2.54	-0.28	2.08
lmo2399	Q8Y4N6	0.00	NaN	-0.30	0.49	3.26	2.17	0.06	0.06
lmo0437	Q8Y9T6	0.00	NaN	0.26	2.29	3.25	3.61	-2.04	7.26
lmo1395	Q8Y795	0.90	0.77	-0.01	0.01	3.25	4.63	-0.18	0.18
lmo1374	Q8Y7B2	1.24	0.39	-0.06	0.26	3.24	3.98	-0.07	0.25
gap	Q8Y4I1	-0.99	2.87	0.09	0.47	3.14	3.06	-0.44	2.95

Table S11 continued

fruA	Q8Y4U6	0.77	2.37	0.03	0.04	3.12	2.27	-0.86	3.12
lmo1255	Q8Y7L9	1.19	1.48	-0.05	0.06	3.11	2.27	0.26	0.37
serS;lmo2747	Q8Y3T4	-0.02	0.01	0.05	0.29	3.11	1.86	-0.02	0.07
lmo0936	Q8Y8G8	1.91	2.38	0.03	0.10	3.09	3.48	-0.23	1.38
fusA;fus;lmo2654	Q8Y421	1.82	3.64	0.04	0.09	3.08	2.86	-0.97	4.96
lmo1739	Q8Y6E8	0.00	NaN	-0.03	0.05	3.04	3.99	-1.65	3.86
PdhD	Q8Y862	0.99	3.23	-0.07	0.13	3.04	2.79	-0.35	1.31
menB	Q8Y6L1	0.16	0.23	0.04	0.22	2.99	2.48	0.15	1.08
glmU;lmo0198	Q8YAD4	1.71	3.65	0.13	0.58	2.99	3.03	0.05	0.31
rpsR;lmo0046	P66461	0.30	1.05	-0.09	0.15	2.98	4.07	-0.57	1.47
hslV;clpQ;lmo1278	Q8Y7J9	0.43	0.33	-0.12	0.32	2.97	2.70	-0.47	1.94
lmo1738	Q8Y6E9	0.00	NaN	-0.02	0.06	2.96	1.79	-2.63	8.06
lmo1356	Q8Y7C8	0.73	0.32	0.04	0.05	2.95	3.53	-0.84	3.07
purB	Q8Y6B8	1.83	1.19	0.14	0.67	2.95	2.32	-0.17	1.17
namA;lmo2471	Q8Y4H1	-1.00	1.23	0.01	0.02	2.94	1.84	0.61	3.42
PdhB	Q8Y864	1.38	3.03	0.06	0.22	2.91	2.27	-0.47	2.04
lmo2767	Q8Y3R6	1.48	3.29	0.08	0.15	2.89	2.17	-0.73	2.16
hemE;lmo2212	Q8Y564	-0.36	0.28	0.09	0.24	2.88	1.57	0.53	2.80
pdxS;lmo2101	Q8Y5G2	0.80	1.94	0.14	0.90	2.87	2.52	-1.10	6.51
ssb2;lmo2308;ssb1;lmo0045	Q8YAR8;Q8Y4X1	1.48	1.67	-0.11	0.15	2.87	1.64	0.09	0.16
prs1;lmo0199	Q48793	1.08	1.96	0.04	0.10	2.87	1.31	-0.14	0.54
rsbW;lmo0894	Q8Y8K6	0.22	0.31	0.10	0.18	2.84	1.70	0.76	2.38
cysK	Q8YAC3	0.26	0.61	-0.04	0.12	2.81	3.68	-0.61	3.15
glyQ;lmo1459	Q8Y753	1.09	2.50	0.02	0.04	2.80	2.06	-0.80	3.73
rbfA;lmo1327	Q8Y7F4	0.00	NaN	0.03	0.12	2.76	2.90	-1.05	5.41
lmo2216	Q8Y560	1.48	1.10	-0.14	0.37	2.72	2.89	0.64	2.44
lmo1818	Q8Y681	-0.44	0.77	0.02	0.04	2.67	1.64	0.01	0.03
ftsH	Q8YAC6	0.88	1.30	0.03	0.17	2.65	1.70	-0.05	0.44

Table S11 continued

clpX;lmo1268	Q8Y7K9	1.84	4.21	-0.01	0.06	2.62	3.19	0.74	6.05
pykA	Q8Y6W1	-1.24	2.84	0.02	0.10	2.61	1.74	0.18	1.58
lmo0406	Q8Y9W3	0.00	NaN	-0.13	0.20	2.51	2.38	-0.06	0.10
atpA2;lmo2531	Q8Y4C0	1.44	4.06	-0.04	0.15	2.47	2.41	-0.29	1.88
lmo0281	Q8YA78	1.90	5.45	0.10	0.43	2.40	3.42	0.33	1.33
lmo2077	Q8Y5I5	0.00	NaN	-0.02	0.03	2.37	3.16	0.56	1.70
lmo0613	Q8Y9B9	0.57	0.19	0.06	0.09	2.34	2.61	-1.14	3.74
lmo0533	Q8Y9J4	0.00	NaN	0.40	1.49	2.33	3.44	-1.24	3.15
lmo0888	Q8Y8L0	-0.13	0.10	0.12	0.59	2.32	3.29	-0.22	1.20
lmo1701	Q8Y6I3	0.00	NaN	-0.04	0.11	2.31	2.80	-0.86	4.27
nusB;lmo1359	Q8Y7C6	0.72	0.42	0.01	0.02	2.31	4.47	-0.67	2.04
lmo1691	Q8Y6J3	-1.58	3.31	0.03	0.13	2.30	3.42	0.04	0.13
rimM;lmo1793	Q8Y6A2	0.00	NaN	0.00	0.01	2.29	2.18	-0.33	1.66
lmo1065	Q8Y853	2.20	1.19	0.11	0.53	2.28	1.41	0.11	0.45
rpsE;lmo2615	Q8Y446	0.80	4.11	-0.20	1.37	2.28	2.69	-0.68	2.98
lmo2115	Q8Y5E9	0.49	0.26	0.01	0.02	2.27	2.79	-1.57	5.75
lmo2636	Q8Y437	0.00	NaN	-0.01	0.02	2.25	2.44	-0.95	4.08
thrB;lmo2545	Q8Y4A6	1.74	3.25	0.16	0.51	2.23	2.31	-1.43	5.42
rpmF2;lmo2047	P66207	0.73	1.24	-0.18	0.05	2.21	5.84	-1.83	0.69
atpH;lmo2532	Q8Y4B9	0.00	NaN	0.14	0.49	2.20	2.93	-0.50	3.14
lmo0278	Q8YA81	1.99	2.72	-0.01	0.04	2.19	4.06	-0.10	0.56
lmo0813	Q8Y8T1	1.43	1.84	0.09	0.81	2.17	2.86	-0.67	3.66
lmo0758	Q8Y8Y4	1.07	0.64	0.10	0.30	2.14	4.45	0.31	1.88
lmo1604	Q8Y6S9	1.20	1.46	0.14	0.30	2.14	1.31	0.19	0.60
thiI;lmo1592	Q8Y6U0	1.97	2.60	0.11	0.33	2.13	1.58	-0.89	5.35
lmo1231	Q8Y7P2	1.71	3.05	0.04	0.28	2.12	2.58	-0.17	1.51
lmo0775	Q8Y8W7	0.00	NaN	0.03	0.05	2.09	3.23	0.12	0.35
pdhA	Q8Y865	1.22	2.81	-0.13	0.66	2.08	1.99	-0.77	4.81

Table S11 continued

lmo0208	P0A4Q8	1.54	4.46	0.03	0.03	2.08	2.89	0.28	0.45
lmo0273	Q8YA86	1.94	1.91	-0.04	0.09	2.07	3.48	-0.28	1.42
lmo1637	Q8Y6P7	0.81	0.67	0.03	0.09	2.05	2.92	0.10	0.40
lmo2674	Q8Y404	-0.51	0.96	-0.06	0.51	2.05	1.64	-0.19	0.67
rplW;lmo2630	Q8Y441	0.28	0.35	-0.10	0.41	2.04	1.65	-0.39	1.63
rplS;lmo1787	O53083	-0.23	0.55	-0.19	0.61	2.00	1.46	-1.19	6.53

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Table S12 Additional proteins coenriched with ClpP1 and/or ClpP2 at 42 °C not meeting putative substrate criteria (log_2 LFQ ratio ≥2 and $-log_{10}$ t-test p-value ≥1.3 in the XL-co-IP experiment, log_2 LFQ ratio <1 or $-log_{10}$ t-test p-value <1.3 in the whole proteome experiment).

		XL-co-IP of Δ*clpP2*		Whole proteome of Δ*clpP1*		XL-co-IP of Δ*clpP1*		Whole proteome of Δ*clpP2*	
Gene name	**Uniprot ID**	**log_2 ratio (anti-ClpP/isotype control)**	**$-log_{10}$ t-test p-value (anti-ClpP/ isotype control)**	**log_2 ratio (Δ*clpP1*/WT)**	**$-log_{10}$ t-test p-value (Δ*clpP1*/WT)**	**log_2 ratio (anti-ClpP/isotype control)**	**$-log_{10}$ t-test p-value (anti-ClpP/ isotype control)**	**log_2 ratio (Δ*clpP2*/WT)**	**$-log_{10}$ t-test p-value (Δ*clpP2*/WT)**
Proteins coenriched with ClpP1 only									
lmo2113	Q8Y5F1	11.07	6.52	0.15	1.19	-7.99	1.51	-0.67	6.00
lmo2723	Q8Y3V8	9.41	6.59	0.14	0.14	0.00	NaN	4.34	9.06
lmo0537	Q8Y9J1	9.06	7.84	0.00	NaN	0.00	NaN	3.56	4.43
polC	Q8Y7G1	8.50	7.38	-0.68	0.40	0.00	NaN	3.83	3.81
hrcA	P0DJM4	7.09	4.66	0.12	0.58	3.37	3.38	1.71	7.91
lmo0230	Q8YAB7	6.49	6.42	0.46	0.97	0.00	NaN	4.03	9.05
lmo1866	Q8Y634	6.48	3.78	-0.19	1.08	0.00	NaN	1.75	8.90
lmo1384	Q8Y7A4	6.37	4.92	-0.39	0.52	0.00	NaN	8.02	12.32
lmo1684	Q8Y6K0	6.22	4.28	0.02	0.02	1.62	0.90	-0.17	0.50
fhs	Q8Y624	6.19	5.66	-0.36	1.85	0.00	NaN	3.41	9.96
lmo0485	Q8Y9P0	6.02	4.64	0.99	0.59	0.07	0.05	7.80	6.71
lmo0964	Q8Y8E0	5.96	5.78	-0.14	0.71	0.00	NaN	3.83	11.37
mcsB	Q48759	5.94	3.99	-0.07	0.31	6.07	5.72	2.23	10.21
hemH	Q8Y565	5.92	7.71	-0.06	0.59	-0.47	0.97	0.38	4.09
lmo0898	Q8Y8K3	5.82	6.47	-0.21	0.81	0.00	NaN	1.91	8.58
lmo0229	Q7AP89	5.71	4.68	-0.24	0.47	2.39	3.16	4.39	10.71
lmo0931	Q8Y8H3	5.49	4.23	0.06	0.54	-0.94	0.43	-0.30	2.25
yhaM	Q8Y556	5.38	7.23	-0.01	0.07	0.00	NaN	-0.87	4.98

Table S12 continued

fbp	Q8Y8R5	5.31	7.54	0.04	0.02	0.00	NaN	7.33	7.82
lmo1875	Q8Y625	5.14	5.47	-0.24	0.33	0.00	NaN	3.70	7.41
uvrB	Q8Y4F5	5.13	3.89	0.01	0.03	2.98	3.08	1.97	6.96
lexA	Q8Y7H7	4.99	5.17	-0.78	1.08	3.25	2.10	2.48	8.72
lmo1067	Q8Y851	4.87	5.32	-0.08	0.35	0.57	0.45	-0.85	5.65
lmo1713	Q8Y6H3	4.79	4.93	-0.05	0.03	2.85	4.37	1.73	1.90
prfC	Q8Y8C0	4.77	7.36	0.16	0.43	1.31	3.24	0.60	3.56
lmo0785	Q8Y8V7	4.77	4.45	-0.33	0.31	4.32	7.26	2.89	6.81
lmo1393	Q8Y797	4.75	5.54	-0.10	0.78	-1.49	0.64	0.39	3.68
lmo0983	Q8Y8C5	4.72	5.42	-0.15	0.44	0.00	NaN	2.13	8.65
lmo0305	Q8YA56	4.56	5.56	-0.69	0.75	0.00	NaN	0.94	3.94
lmo1431	Q8Y770	4.54	5.64	-0.67	0.66	0.00	NaN	5.43	7.07
murC	Q8Y6S8	4.53	5.12	0.20	0.80	0.19	0.19	0.22	1.22
mnmA	Q8Y714	4.53	4.96	-0.31	1.74	-1.27	0.72	-0.01	0.03
queA	Q8Y6Z9	4.50	4.39	-0.08	0.30	-0.33	0.16	0.39	3.59
lmo0454	Q8Y9R9	4.47	2.66	-0.27	1.78	3.79	2.79	1.18	9.30
dps	Q8Y8G1	4.47	4.27	-0.09	0.25	0.90	0.35	-1.66	4.94
lmo2720	Q8Y3W1	4.43	3.50	0.15	0.47	-0.19	0.11	1.55	6.46
recN	Q8Y7B8	4.40	2.44	-0.07	0.33	-0.11	0.05	0.93	8.22
lmo2828	Q8Y3K7	4.25	5.78	0.36	1.57	0.00	NaN	2.18	8.01
lmo1084	Q8Y834	4.25	5.22	-0.01	0.02	-0.82	0.37	0.16	1.53
lmo2166	Q8Y5A3	4.24	6.06	0.07	0.23	1.10	1.04	-0.21	1.45
metE	Q8Y6K3	4.21	7.85	-0.52	0.28	0.00	NaN	2.67	3.62
glmU	Q8YAD4	4.19	6.90	-0.04	0.24	-0.25	0.66	-0.23	3.32
pepC	O69192	4.19	5.52	-0.16	0.14	0.00	NaN	5.17	10.63
pflB	Q8Y786	4.13	6.64	-0.26	1.35	1.28	1.47	1.70	7.93
pheT	Q8Y6S6	4.10	4.08	-0.01	0.04	-2.08	1.05	0.27	1.71
addA	Q8Y511	4.08	5.18	-0.31	0.16	3.01	1.70	5.54	6.48

Table S12 continued

lmo1921	Q8Y5Y2	4.06	2.29	-0.60	0.64	0.00	NaN	7.75	10.22
lmo1782	Q8Y6A9	4.02	3.86	-0.09	0.43	0.00	NaN	0.22	1.21
lmo1825	Q8Y674	3.99	5.85	0.04	0.23	2.22	1.09	-0.56	5.50
lmo1922	Q8Y5Y1	3.92	3.18	-0.11	0.62	1.45	1.10	0.42	3.56
lmo0227	Q8YAB9	3.92	6.37	-0.29	1.39	2.95	3.39	4.01	11.10
lmo1867	Q8Y633	3.89	2.81	-0.74	1.32	0.00	NaN	4.48	7.63
kat	Q8Y3P9	3.75	6.64	-0.22	1.12	0.31	0.56	2.67	7.93
ssb1;ssb2	Q8YAR8;Q8Y4X1	3.71	3.68	-0.22	0.71	-0.39	0.28	-1.67	6.63
nusA	Q8Y7F9	3.71	2.45	0.06	0.52	-0.36	0.41	-0.45	6.51
tyrS	Q8Y6T4	3.69	5.35	0.03	0.13	1.53	0.84	-0.14	1.23
obg	Q8Y6Z3	3.69	4.53	-0.46	0.38	0.00	NaN	1.61	5.92
tal1	Q8Y3T8	3.62	4.07	-0.08	0.11	0.86	0.32	-0.66	2.07
lmo1217	Q8Y7Q5	3.58	4.51	0.00	0.00	0.00	NaN	-0.12	0.51
lmo0291	Q8YA68	3.55	5.26	-0.20	0.12	0.00	NaN	6.14	7.83
minC	Q8Y6Y6	3.54	5.42	0.09	0.33	1.34	1.58	0.15	1.34
glpD	Q8Y7I4	3.49	4.23	0.11	0.40	2.13	1.89	1.09	5.05
lmo2759	Q8Y3S3	3.44	1.74	0.03	0.16	-0.56	0.22	0.61	6.39
pyrH	P65927	3.44	3.54	0.03	0.17	2.53	1.28	-0.48	5.06
fabH	Q8Y573	3.44	1.67	0.05	0.21	0.70	0.62	-0.02	0.09
lmo2168	Q8Y5A1	3.43	4.66	-0.23	0.52	0.00	NaN	3.09	7.62
msrB	Q8Y641	3.43	4.88	-0.30	1.40	0.00	NaN	0.74	3.66
mnmG	Q8Y3M5	3.42	5.03	-0.18	1.99	0.44	0.86	0.29	3.67
lmo1814	Q8Y683	3.38	4.17	-0.03	0.15	1.54	1.34	-0.49	4.08
rpsQ	Q927L6	3.34	3.51	-0.03	0.03	-0.72	2.67	0.75	3.81
topB	Q8Y3S5	3.32	4.26	0.02	0.01	0.00	NaN	5.96	5.54
addB	Q8Y510	3.30	3.12	-2.72	1.91	0.00	NaN	5.61	4.17
trpD	Q8Y6Q3	3.30	3.92	0.52	0.24	2.61	3.73	2.86	2.51
lmo1414	Q8Y782	3.29	3.23	-0.14	0.35	0.40	0.52	-0.22	0.96

Table S12 continued

hslV	Q8Y7J9	3.27	6.49	0.11	0.32	1.10	0.59	-0.53	2.96
deoC	Q8Y5R1	3.27	4.10	0.09	0.39	0.00	NaN	1.81	8.20
lmo0978	Q8Y8D0	3.22	1.41	-0.31	1.72	0.31	1.12	-0.40	4.89
purL	Q8Y6C1	3.22	4.78	-0.91	1.92	0.00	NaN	2.50	7.48
pheT	Q8Y7Q1	3.21	2.90	-0.05	0.21	1.03	0.54	-0.86	6.22
lmo1812	Q8Y685	3.21	3.76	-0.31	0.62	0.00	NaN	0.19	0.93
pcrA	Q8Y6C9	3.20	2.42	0.07	0.40	0.91	0.74	0.00	0.01
glyS	Q8Y754	3.19	2.71	0.14	0.79	1.33	1.64	-0.47	5.16
lmo0823	Q8Y8S1	3.15	5.00	-0.04	0.19	-0.76	0.38	0.99	6.87
murD	Q8Y5M1	3.13	3.07	-0.04	0.24	-0.09	0.03	-0.44	5.06
opuCA	Q7AP65	3.12	5.92	-0.21	2.44	1.95	1.03	-0.47	5.68
smc	Q8Y692	3.11	3.98	0.11	0.71	0.00	NaN	0.34	3.07
mutS	Q8Y789	3.10	3.25	-0.08	0.53	1.28	0.71	-0.60	6.71
lmo2048	Q8Y5L1	3.07	3.06	0.01	0.06	-1.48	0.93	-0.77	4.59
lmo1028	Q92CZ4	3.05	4.34	0.11	0.51	-2.03	1.15	-1.04	5.95
citB	Q8Y6P3	3.04	3.72	0.04	0.18	-0.24	0.09	0.32	2.94
lmo1283	Q8Y7J4	3.02	5.44	0.07	0.32	-0.85	0.45	0.48	3.92
lmo2707	Q8Y3X2	3.01	4.54	0.16	0.57	-0.69	0.79	-0.98	3.47
lmo0356	Q8YA10	3.00	2.61	0.10	0.48	0.84	0.29	-0.01	0.17
lmo1609	Q8Y6S4	2.99	2.25	-1.21	0.56	-0.27	0.14	-0.11	0.57
lmo1078	Q8Y840	2.98	6.53	-0.14	0.99	1.14	4.87	-0.55	4.87
menE	P58730	2.95	6.73	-0.91	0.88	0.00	NaN	2.92	3.93
lmo2426	Q8Y4L1	2.94	3.42	0.02	0.04	-1.06	0.71	-0.51	2.42
lmo1457	P67195	2.93	4.76	0.23	1.79	1.90	4.96	0.20	2.66
lmo2712	Q8Y3W7	2.92	2.39	0.00	NaN	2.61	4.62	1.41	3.25
lmo2437	Q8Y4K1	2.92	5.14	-0.67	1.49	0.00	NaN	2.38	5.28
lmo0273	Q8YA86	2.91	2.94	-1.20	1.50	0.00	NaN	1.57	7.63
lmo1634	Q8Y6Q0	2.90	5.16	-0.01	0.01	0.00	NaN	-3.50	8.97

Table S12 continued

lmo0774	Q8Y8W8	2.87	1.91	0.08	0.27	0.45	0.27	-0.57	3.76
ecfA2	Q8Y455	2.87	2.49	0.16	0.73	1.04	1.07	-0.53	5.62
lmo1710	Q92AU7	2.85	3.31	0.06	0.13	1.96	3.64	-1.23	5.51
lmo2411	Q928M6	2.84	5.29	0.07	0.74	0.31	1.68	-0.37	4.34
iap	P21171	2.80	4.47	0.44	1.56	0.00	NaN	1.42	6.58
lmo1813	Q8Y684	2.80	1.84	-0.36	1.24	3.15	2.81	1.30	7.18
lmo0387	Q8Y9Y0	2.80	1.62	0.27	1.07	-3.30	2.03	0.25	1.09
mbl	Q8Y4C5	2.78	2.72	0.10	0.42	1.89	3.90	-1.32	10.06
lmo0267	Q8YA92	2.77	4.33	-0.08	0.28	0.00	NaN	0.45	2.83
ruvB	Q8Y6Z8	2.77	4.22	0.10	0.35	0.00	NaN	0.95	6.59
purH	Q8Y6C5	2.75	3.60	-0.16	0.69	0.00	0.00	0.28	2.52
lmo0287	Q8YA72	2.72	3.93	0.04	0.32	-1.11	0.55	-0.13	0.91
prmA	P0DJO9	2.70	3.02	-0.02	0.06	1.71	2.56	0.30	2.26
map	Q8Y6H5	2.70	1.50	-0.08	0.36	0.80	2.13	-0.48	3.65
tilS/hprT	Q8YAC7	2.68	4.92	-0.14	1.10	0.73	0.39	-0.77	5.92
lmo1087	Q8Y831	2.68	1.71	-0.04	0.14	0.22	0.33	0.25	1.80
serS	Q8Y3T4	2.68	2.95	-0.05	0.16	-3.09	3.80	-0.88	5.16
dat	P0DJL9	2.67	4.93	-0.18	0.89	0.00	NaN	0.09	0.37
dapF	Q8Y5N9	2.64	1.75	0.03	0.11	-0.89	0.80	0.44	5.31
recD2	Q8Y717	2.63	3.63	-0.30	0.19	0.00	NaN	4.01	4.92
lmo1022	Q8Y892	2.62	4.55	-0.34	3.00	0.94	0.52	-0.25	1.93
azoR2	Q8Y8V6	2.62	6.27	0.14	0.61	-1.50	0.87	-1.37	7.34
lmo2217	Q8Y559	2.61	2.50	0.11	0.32	-0.99	0.67	-0.33	3.12
lmo0241	Q92F34	2.61	4.84	-0.09	0.52	0.13	0.04	-0.99	5.88
trmFO	Q8Y7K1	2.59	1.52	-0.23	1.25	1.58	3.76	0.04	0.26
gshAB	Q8Y3R3	2.57	4.17	-0.23	0.66	0.00	NaN	1.25	7.13
mecA	Q9RGW9	2.56	1.62	0.19	0.23	0.00	NaN	3.91	7.26
lmo2358	Q8Y4S4	2.51	3.14	-0.22	1.30	0.00	NaN	1.54	8.56

Table S12 continued

tsaD	Q8Y5I7	2.51	5.54	-0.02	0.07	1.90	2.94	0.36	2.91
hemL2	Q8Y6J9	2.50	2.16	0.04	0.14	-0.21	0.10	-0.15	1.06
clpE	Q8Y8B1	2.50	5.11	0.27	1.23	0.33	1.71	5.63	13.27
lmo2031	Q8Y5M6	2.50	4.33	-0.13	0.77	0.00	NaN	-0.69	4.32
dltA	Q8Y8D4	2.46	3.72	1.44	0.75	0.00	NaN	3.52	2.47
ligA	Q8Y6D0	2.45	4.31	-0.08	0.50	0.00	NaN	-0.10	0.71
lmo0936	Q8Y8G8	2.40	3.04	-0.09	0.59	1.28	0.93	-0.56	4.51
rimM	Q8Y6A2	2.39	3.67	-0.02	0.07	0.00	NaN	-0.15	0.86
lmo0941	Q8Y8G3	2.38	2.63	0.01	0.01	0.00	NaN	1.64	5.69
lmo1083	Q8Y835	2.37	3.00	-0.10	0.59	0.54	0.20	-0.47	3.62
rsmH	Q8Y5L7	2.36	2.07	-0.14	0.64	0.00	NaN	0.07	0.52
pnp	Q8Y5V2	2.36	2.78	-0.18	0.61	-0.43	0.41	-1.23	6.01
deoB	Q8Y5V1	2.36	4.43	-0.28	1.06	-0.76	0.40	-0.69	3.28
gcvPB	Q8Y7D3	2.36	2.83	-0.52	0.91	0.00	NaN	0.85	2.16
lmo0884	Q8Y8L3	2.35	3.56	-0.12	0.79	0.19	0.13	0.21	1.70
lmo1042	Q8Y875	2.33	3.49	-0.25	0.29	0.00	NaN	4.17	6.29
lmo1543	Q8Y6Y8	2.33	2.88	-0.45	0.60	0.00	NaN	0.63	1.32
atpG	Q927W3	2.32	1.58	-0.04	0.12	1.64	1.02	-0.34	3.39
aspS	Q8Y709	2.32	1.51	0.07	0.36	0.23	0.56	-1.18	7.40
lmo2590	Q8Y465	2.31	2.90	0.08	0.19	0.00	NaN	1.01	5.03
isdG	Q92EH3	2.31	2.40	0.00	NaN	0.00	NaN	5.63	7.43
lmo2853	Q8Y3I3	2.28	3.49	0.23	1.26	-0.95	2.84	-0.38	2.25
lmo0483	Q8Y9P1	2.27	4.56	-0.23	1.04	-1.17	0.85	-0.77	3.38
cysS	Q8YAB1	2.26	1.92	-0.02	0.21	-1.32	0.47	-0.95	9.51
lmo1680	Q8Y6K4	2.23	2.78	0.01	0.02	1.12	2.01	0.48	1.52
lmo1239	Q8Y7N5	2.22	3.53	-0.17	0.53	0.00	NaN	-0.41	3.09
lmo1231	Q8Y7P2	2.20	4.29	-0.15	1.82	0.00	NaN	-0.24	2.73
lmo1223	Q8Y7Q0	2.20	2.99	-0.59	0.65	1.12	1.18	0.47	2.72

Table S12 continued

murI	Q8Y7N7	2.19	3.08	-0.13	0.57	1.37	2.24	-1.22	8.61
pheS	Q8Y7Q2	2.18	2.70	-0.05	0.16	-0.12	0.06	-0.88	6.74
upp	Q8Y4B3	2.18	4.37	-0.02	0.11	0.21	0.33	-0.97	7.04
ychF	Q926X1	2.15	4.05	0.00	0.01	-0.21	0.14	-0.98	9.29
lmo1514	Q8Y712	2.13	2.17	0.18	0.09	0.00	NaN	3.47	3.90
metG	Q8YAF2	2.13	1.65	-0.05	0.32	0.19	0.07	-0.86	6.30
msrA	Q8Y640	2.13	2.38	-1.99	1.91	0.00	NaN	3.51	8.70
lmo1091	Q8Y827	2.13	2.08	0.14	0.49	0.69	0.55	-0.27	0.96
lmo1336	Q8Y7E7	2.12	4.43	-0.62	0.44	0.00	NaN	1.71	6.78
ami	Q8Y496	2.11	2.16	-0.18	0.66	0.00	NaN	-0.96	6.42
lmo0557	Q8Y9H1	2.08	4.55	0.00	NaN	0.00	NaN	6.49	8.77
nrdR	Q8Y6W9	2.08	2.46	-0.12	0.45	0.39	0.17	-0.42	2.92
lmo0811	Q8Y8T3	2.07	6.84	0.13	0.24	-0.82	3.41	3.78	9.29
lmo0191	Q8YAE0	2.05	1.61	0.05	0.18	-1.04	0.31	-0.54	2.99
hisC	Q8Y5X8	2.05	4.96	0.02	0.02	0.00	NaN	5.10	9.41

Proteins coenriched with ClpP1 and ClpP2 only

nadK2	P65770	9.68	5.08	-0.07	0.20	6.63	4.47	-0.73	3.71
lmo1021	Q8Y893	7.77	7.04	-0.24	1.04	5.97	6.12	-0.79	3.18
parB	Q8Y3P4	7.30	5.09	0.08	0.58	7.79	4.44	-0.20	2.39
lmo1576	Q8Y6V5	6.41	6.58	-0.08	0.12	3.53	3.01	-0.23	0.66
lmo1389	Q8Y7A1	6.15	5.89	0.00	0.00	4.95	4.14	-0.10	0.43
lepA	Q8Y742	5.73	5.42	-0.07	0.35	3.31	4.05	-0.30	2.86
mfd	Q8YAD0	5.72	4.88	0.01	0.03	4.51	5.72	0.06	0.83
mutL	Q8Y788	5.41	5.60	-0.04	0.13	4.23	3.48	0.50	4.77
ansB	Q8Y6M1	5.39	1.92	0.01	0.02	2.45	3.44	-0.31	3.39
noc	Q8Y3P1	4.65	3.61	0.14	0.81	5.29	6.62	0.02	0.11

Table S12 continued

dnaC	Q92FQ6	4.51	5.97	0.05	0.18	5.03	6.04	0.61	3.88
prs2	Q8Y9L8	4.47	5.30	0.03	0.09	2.43	6.86	-0.46	4.57
lmo2473	P58588	4.35	4.67	-0.13	0.56	3.01	2.80	0.38	3.32
mnmE	Q8Y3M4	4.31	3.88	0.02	0.05	2.81	1.41	0.14	0.87
lmo2263	Q8Y515	4.17	5.09	-0.52	0.70	4.38	5.67	0.02	0.02
lmo1258	Q8Y7L7	4.07	5.44	0.04	0.07	2.91	1.86	0.95	6.75
gyrB	Q8YAV7	4.04	2.99	-0.04	0.19	4.94	3.95	-0.86	7.75
proA	Q93Q55	3.95	2.77	-0.08	0.57	4.74	5.01	-0.35	3.03
dnaA	Q8YAW2	3.84	5.63	0.32	1.80	2.04	5.56	-0.48	3.32
aroA	Q8Y5Y0	3.77	6.00	-0.22	0.80	2.49	3.00	0.91	4.93
murE	Q8Y5L9	3.75	2.32	-0.08	0.34	2.65	1.91	0.21	1.87
rnj	Q8Y767	3.69	3.49	-0.08	0.58	2.03	2.87	-0.47	5.17
dnaX	Q8Y3X5	3.65	7.11	0.10	0.34	3.02	5.62	0.38	2.48
ribC	Q8Y7F2	3.59	3.52	0.13	0.75	2.73	4.21	0.26	2.07
lmo2247	Q8Y529	3.58	4.42	0.03	0.16	2.66	2.67	0.11	0.78
parE	Q8Y7J1	3.47	3.59	-0.07	0.31	2.58	1.58	-0.56	4.66
lmo1577	Q8Y6V4	3.44	4.97	-0.32	0.98	2.43	5.04	-0.94	3.91
lmo1235	Q8Y7N9	3.40	2.60	-0.05	0.31	3.89	2.69	-0.80	6.37
lmo1721	Q8Y6G6	3.27	4.24	-0.12	0.59	2.47	4.64	-0.23	1.61
gcvPA	Q8Y7D4	3.25	2.54	-0.41	0.87	2.88	4.49	0.65	2.03
pnp	Q8Y7F1	3.24	4.86	0.04	0.24	2.66	2.44	-0.55	4.97
lmo1611	Q8Y6S2	3.21	4.90	-0.05	0.17	2.08	2.40	-0.24	1.24
rpmG1	P66219	3.19	5.73	0.07	0.14	2.28	4.67	-2.08	5.60
lmo1647	Q8Y6N7	3.09	4.12	0.20	0.80	2.84	1.84	0.04	0.21
lmo1285	Q8Y7J2	2.96	3.85	-0.10	0.22	2.29	3.13	-1.04	3.81
azoR1	Q8Y9C1	2.90	2.16	0.11	0.49	4.86	4.97	0.73	6.13
proC	Q8Y9X2	2.89	4.18	-0.14	0.63	3.99	6.51	-0.73	6.47
thrB	Q8Y4A6	2.84	4.44	-0.11	0.30	3.87	5.64	-1.24	4.90

Table S12 continued

lmo0282	Q8YA77	2.81	4.30	0.16	0.63	2.92	2.60	0.51	2.14
parA	Q926W7	2.80	2.97	-0.01	0.05	3.39	1.74	-0.04	0.35
dnaE	Q8Y6V7	2.78	3.20	-0.06	0.26	4.12	4.91	-0.27	2.67
rnj	Q92CZ5	2.73	2.49	-0.06	0.28	3.32	2.64	-0.56	5.49
lmo2114	Q8Y5F0	2.73	3.80	-0.08	0.55	2.73	2.54	-0.11	0.50
tagH	Q8Y843	2.65	1.89	-0.05	0.17	4.72	3.16	-0.19	1.52
lmo2215	Q8Y561	2.51	1.39	-0.22	0.63	3.19	5.69	0.89	4.40
lmo2390	Q8Y4P5	2.45	4.37	-0.01	0.04	3.35	2.32	0.78	7.09
tdk	Q8Y4A7	2.42	2.64	-0.11	0.64	2.03	2.62	-1.01	6.84
lmo0857	Q8Y8N9	2.40	2.78	0.12	0.31	3.32	2.41	0.11	0.12
trpB	Q8Y6Q6	2.38	1.48	0.10	0.27	3.07	5.91	-0.94	3.92
lmo0663	Q8Y970	2.38	2.60	-0.03	0.09	3.08	2.81	0.14	1.12
lmo1612	Q8Y6S1	2.36	2.95	-0.13	0.31	3.01	3.77	0.33	2.70
lmo1976	Q8Y5S9	2.31	1.92	-0.01	0.02	5.36	2.91	-0.73	4.53
lmo2557	Q8Y497	2.28	3.69	-0.16	1.32	3.57	3.93	-0.27	1.31
ispE	Q8YAE1	2.20	3.04	0.24	1.15	4.29	3.90	0.06	0.19
dnaB	Q8Y6X0	2.17	2.44	-0.10	0.51	3.04	2.44	0.18	1.72
radA	Q48761	2.10	3.75	0.23	1.59	3.43	4.92	0.25	1.21
ecfA1	Q8Y454	2.00	4.28	0.01	0.03	3.49	2.38	0.22	2.10

Proteins coenriched with ClpP2 only

lmo2646	Q8Y429	0.00	NaN	-0.67	1.07	5.45	4.83	-0.28	0.89
thiM	Q8YA46	0.00	NaN	-0.14	0.25	5.35	2.44	-0.43	1.55
lmo2643	Q8Y431	1.69	0.91	-0.05	0.16	5.26	3.14	-0.04	0.14
lmo1529	Q8Y701	-0.90	0.47	0.27	1.22	4.64	3.39	-0.40	2.58
lmo0737	Q8Y905	0.00	NaN	-0.03	0.05	4.47	4.38	-4.93	6.86
lmo0641	Q8Y992	0.96	1.24	-0.03	0.08	4.40	3.84	-3.70	6.17

Table S12 continued

lmo1652	Q8Y6N2	0.00	NaN	0.42	0.63	4.32	5.24	-0.24	0.33
lmo0352	Q8YA14	1.62	1.24	-0.05	0.21	3.90	3.73	-0.96	7.13
aroB	Q8Y5X6	0.00	NaN	-0.04	0.18	3.78	4.63	0.46	4.94
lmo1919	Q8Y5Y4	0.97	4.08	-0.07	0.45	3.66	2.18	-0.36	2.58
lmo1358	Q92BZ6	1.73	1.43	0.24	1.03	3.65	2.87	-0.02	0.06
lmo2404	Q8Y4N2	0.00	NaN	0.21	0.95	3.60	4.80	0.46	3.02
rpmG2	P66221	1.18	0.80	NaN	NaN	3.60	4.32	NaN	NaN
lmo2554	Q8Y4A0	0.00	NaN	0.78	1.14	3.27	3.92	0.41	0.51
lmo1511	Q8Y715	0.00	NaN	-0.11	0.19	3.22	4.36	0.19	1.11
lmo0052	Q8YAR3	1.71	1.37	0.13	0.63	3.17	4.60	-0.11	0.93
lmo2337	Q8Y4U4	0.96	1.50	0.02	0.12	3.07	3.91	-0.37	2.12
lmo1930	Q8Y5X3	0.00	NaN	0.00	0.00	3.05	3.52	-0.10	0.25
lmo1081	Q8Y837	1.61	3.88	-0.10	0.39	3.05	1.58	0.02	0.07
dxr	Q8Y7G4	0.17	0.09	-0.11	0.61	2.87	3.66	0.32	2.10
lmo0763	Q8Y8X9	0.00	NaN	-0.15	0.28	2.84	3.63	0.36	2.23
accA	Q8Y6V9	1.63	1.91	0.00	0.00	2.82	1.50	-0.05	0.32
glmS	Q8Y915	0.56	2.58	0.00	0.01	2.82	8.40	0.77	9.09
polA	Q8Y6W6	1.57	1.94	-0.02	0.10	2.75	3.65	0.39	4.26
fruA	Q8Y4U6	0.52	2.19	-0.16	1.23	2.75	5.01	-0.70	4.98
lmo0847	Q8Y8P9	0.00	NaN	0.05	0.41	2.71	4.43	-0.68	6.63
lmo0739	Q8Y903	0.00	NaN	-0.11	0.32	2.69	2.32	-2.10	6.13
lmo2486	Q8Y4F8	0.45	0.37	-0.35	1.71	2.68	3.44	-1.05	5.33
rny	P0DJP2	1.47	1.69	0.06	0.58	2.62	3.18	0.07	0.63
lmo2769	Q8Y3R4	0.00	NaN	-0.15	0.21	2.60	3.91	-0.38	1.76
lmo1369	Q8Y7B7	1.26	0.93	0.04	0.12	2.60	1.95	0.28	1.33
lmo2194	Q8Y580	0.00	NaN	-0.03	0.08	2.59	2.10	-1.24	5.67
lmo0077	Q8YAP0	0.00	NaN	-0.53	0.49	2.58	3.54	-0.66	2.88
birA	Q8Y5Z9	0.77	1.52	0.10	0.65	2.56	3.86	-0.30	2.24

Table S12 continued

plsX	Q8Y688	0.90	2.01	-0.06	0.22	2.55	5.36	-0.88	5.69
lmo1373	Q8Y7B3	1.24	4.40	-0.16	0.73	2.54	6.12	0.00	0.01
lmo0967	Q92D54	0.00	NaN	0.09	0.70	2.53	1.77	-0.05	0.55
lmo1219	Q8Y7Q3	0.00	NaN	-0.13	0.38	2.52	5.98	-1.09	5.47
hom	Q8Y4A4	1.65	1.34	0.13	0.94	2.52	5.69	-1.31	7.81
ftsK	Q8Y7A3	1.49	2.94	0.27	1.12	2.51	3.49	-0.66	6.72
lmo2738	Q8Y3U3	1.27	2.76	NaN	NaN	2.48	4.49	NaN	NaN
tagD	Q8Y829	1.87	1.18	0.38	1.04	2.46	3.52	0.10	0.21
lmo0826	Q8Y8R8	0.00	NaN	-0.46	0.49	2.46	4.07	-1.07	4.22
lmo1351	Q8Y7D2	1.60	1.13	0.06	0.26	2.40	1.59	-1.23	7.33
lmo2705	Q8Y3X4	1.90	2.22	0.62	2.36	2.38	1.34	-0.11	0.34
lmo1057	Q8Y860	0.82	1.62	-0.07	0.10	2.36	2.71	-0.64	2.11
lmo0317	Q8YA45	0.00	NaN	0.52	0.44	2.35	1.67	0.26	0.13
hly	P13128	0.83	0.96	1.24	4.14	2.35	4.55	-1.57	5.03
lmo1395	Q8Y795	1.95	4.33	0.01	0.03	2.33	2.07	0.04	0.24
lmo0292	Q8YA67	0.00	NaN	-0.55	1.77	2.27	1.65	-0.89	4.55
hemL1	Q8Y6X8	1.22	0.74	0.01	0.02	2.26	1.47	-0.23	2.98
fni	Q8Y7A5	0.00	NaN	0.02	0.08	2.25	2.37	-0.09	0.61
ilvC	Q8Y5S0	0.00	NaN	-0.88	0.45	2.24	2.71	-2.24	0.99
metN1	Q8YA75	0.00	NaN	0.32	1.54	2.23	1.47	-1.41	5.53
lmo1741	Q8Y6E6	0.00	NaN	0.11	0.44	2.20	4.39	-0.45	3.89
lipL	Q8Y489	0.00	NaN	0.07	0.26	2.18	4.32	-0.74	4.17
lmo2258	Q8Y520	0.00	NaN	-2.62	1.43	2.15	1.89	-5.01	5.42
lmo0667	Q8Y966	0.54	1.53	-0.18	0.78	2.14	3.33	0.96	5.11
lmo1066	Q8Y852	0.93	0.66	0.09	0.34	2.14	3.39	-0.30	1.51
lmo1401	Q8Y791	0.22	0.13	-0.10	0.56	2.13	3.90	-0.59	6.22
lmo0825	Q8Y8R9	0.97	1.26	-0.09	0.50	2.09	4.14	-0.05	0.27
dnaJ	P0DJM1	1.21	2.87	0.04	0.12	2.09	4.88	-0.08	0.26

Table S12 continued

lmo2550	Q7AP48	0.00	NaN	-0.09	0.22	2.06	2.16	-0.36	1.13
rpsE	Q8Y446	0.38	0.97	0.18	1.15	2.04	6.29	-1.14	6.91
lmo1438	Q8Y763	0.00	NaN	-0.14	0.65	2.03	2.92	-0.95	6.67
lmo2474	Q8Y4G9	1.35	2.37	0.16	0.97	2.02	5.08	-0.18	1.10

3. Supplementary References

1. Y. Perez-Riverol, A. Csordas, J. Bai, M. Bernal-Llinares, S. Hewapathirana, D. J. Kundu, A. Inuganti, J. Griss, G. Mayer, M. Eisenacher, E. Perez, J. Uszkoreit, J. Pfeuffer, T. Sachsenberg, S. Yilmaz, S. Tiwary, J. Cox, E. Audain, M. Walzer, A. F. Jarnuczak, T. Ternent, A. Brazma and J. A. Vizcaino, *Nucleic Acids Res*, 2019, **47**, D442-D450.
2. C. Schölz, D. Lyon, J. C. Refsgaard, L. J. Jensen, C. Choudhary and B. T. Weinert, *Nature Methods*, 2015, **12**, 1003-1004.