

### Consolidated list of up-regulated proteins expressed at different Cr (VI) concentrations at time points

Cr (VI) concentration	6 h	9 h	12 h	18 h	24 h	36 h
	ComA2 family protein	2-isopropylmalate synthase	50S ribosomal protein L36	1-(5-phosphoribosyl)-5-amino-4-imidazole-carboxylate carboxylase	23S rRNA (uracil-5)-methyltransferase RumA	2-dehydropantoate 2-reductase
	choline transporter	50S ribosomal protein L28	NAD(P)H-dependent oxidoreductase	2-isopropylmalate synthase	ATP-dependent Clp protease ATP-binding subunit ClpX	50S ribosomal protein L33
	dihydrofolate reductase	50S ribosomal protein L33	dihydrofolate reductase	30S ribosomal protein S14	DNA polymerase III subunit alpha	CDP-glycerol--poly(glycerophosphate) glycerophosphotransferase
	hypothetical protein XA21_07930	ATP-dependent Clp protease ATP-binding subunit ClpX	hypothetical protein BSF33_09680	30S ribosomal protein S21	DNA polymerase III subunit gamma/tau	DNA polymerase III subunit gamma/tau
	methionine--tRNA ligase	ATPase	magnesium transporter CorA	4-aminobutyrate--2-oxoglutarate transaminase	DNA-binding response regulator	Glutamyl endopeptidase precursor, serine proteinase SspA
	pathogenicity island protein	DNA mismatch repair protein MutS	polysaccharide biosynthesis protein	ATP-dependent DNA helicase RecG	Ferredoxin-dependent glutamate synthase	GntR family transcriptional regulator

DNA polymerase III subunit alpha	recombination/mobilization protein (plasmid)	CDP-glycerol:glycerophosphate glycerophosphotransferase	GNAT family N-acetyltransferase	dihydroxy-acid dehydratase
GNAT family N-acetyltransferase	transposase A (plasmid)	D-ribose ABC transporter substrate-binding protein	Short-chain dehydrogenase/reductase SDR	glutamate synthase
HAD family hydrolase		DNA polymerase X family	Siderophore biosynthesis protein	hypothetical protein
NAD synthetase		GTP-binding protein	alkyl hydroperoxide reductase	hypothetical protein, partial
NAD-dependent succinate-semialdehyde dehydrogenase		HAD family hydrolase	amino acid ABC transporter permease	methionine ABC transporter substrate-binding protein
Short-chain dehydrogenase/reductase SDR		Mercuric ion reductase	beta-galactosidase	methionine--tRNA ligase
Uncharacterised protein		N-acetylmuramic acid-6-phosphate etherase	deoxyribose-phosphate aldolase	pathogenicity island protein
asparagine--tRNA ligase		NAD(P)H-dependent oxidoreductase	formyltetrahydrofolate deformylase	preprotein translocase subunit YajC
class II fumarate hydratase		Short-chain dehydrogenase/reductase SDR	glutamate ligase	sodium:proton antiporter
deoxyribose-phosphate aldolase		VOC family protein	lipase	sulfate adenylyltransferase

100 mg L-1

dihydrofolate  
reductase

excinuclease ABC  
subunit B

glutamate ligase

hsp90-like protein

hypothetical protein  
AXY36\_09940  
hypothetical protein,  
partial

lipoyl synthase

magnesium  
transporter CorA  
major facilitator  
superfamily protein

mercuric reductase

methicillin resistance  
protein  
methionine--tRNA  
ligase

nitroreductase

oxidoreductase

acetyl-CoA  
carboxylase  
carboxyltransferase  
subunit alpha

alanine racemase

alkyl hydroperoxide  
reductase

alpha,alpha-  
phosphotrehalase

asparagine--tRNA  
ligase

chorismate synthase

damage-inducible  
protein CinA  
dihydroorotate  
dehydrogenase

elongation factor Ts

glutamate synthase  
subunit alpha

hsp90-like protein

hypothetical protein  
A4A82\_06020

hypothetical protein  
A4A82\_09210

hypothetical protein  
A4A82\_13105

magnesium  
transporter CorA

pathogenicity island  
protein

phosphoglyceromuta  
se

recombination/mobili  
zation protein  
(plasmid)

sulfate  
adenyltransferase

valine--tRNA ligase

transcriptional  
regulator

universal stress  
protein

preprotein  
translocase subunit  
YajC  
proline:sodium  
symporter PutP  
succinate  
dehydrogenase  
sulfate  
adenyltransferase  
tRNA uridine(34) 5-  
carboxymethylamino  
methyl synthesis  
enzyme MnmG  
urease subunit  
gamma

hypothetical protein  
AXY36\_05920

hypothetical protein  
AXY36\_09360

hypothetical protein  
AXY36\_09955

hypothetical protein  
BSF33\_09455

hypothetical protein  
RES11\_06070

hypothetical protein  
RES11\_07055

hypothetical protein  
UF66\_0386

hypothetical protein  
UF66\_0831

hypothetical protein  
XA21\_08735

hypothetical protein  
XA21\_11195

hypothetical protein  
XA21\_11670

lysyl-tRNA  
synthetase

multidrug ABC  
transporter ATP-

binding protein  
multidrug transporter

nicotinate  
phosphoribosyltransf  
erase  
nitronate  
monooxygenase  
phosphogluconate  
dehydrogenase  
(NADP(+)-  
dependent,  
decarboxylating)  
phosphoribosylamino  
imidazolesuccinocar  
boxamide synthase  
proline:sodium  
symporter PutP  
putative resolvase  
(plasmid)  
pyruvate  
decarboxylase  
recombinase RmuC  
recombination/mobili  
zation protein  
(plasmid)  
restriction  
endonuclease subunit  
M  
sodium-independent  
anion transporter  
sodium:proton  
antiporter

succinate-semialdehyde dehydrogenase (NADP(+)) sulfate adenylyltransferase tRNA (adenosine(37)-N6)-dimethylallyltransferase MiaA trehalose operon repressor

2,5-diketo-D-gluconic acid reductase	3-oxoacyl-ACP synthase	2-oxoglutarate dehydrogenase E1	1,4-dihydroxy-2-naphthoyl-CoA synthase	3-oxoacyl-ACP synthase	1,4-dihydroxy-2-naphthoyl-CoA synthase
23S rRNA methylase (plasmid)	30S ribosomal protein S10	23S rRNA (adenine(2058)-N(6))-methyltransferase Erm(B)	2-deoxyribose-5-phosphate aldolase	30S ribosomal protein S10	2,3-bisphosphoglycerate-independent phosphoglycerate mutase
2-isopropylmalate synthase	50S ribosomal protein L1	23S rRNA (uracil-5-)-methyltransferase RumA	2-oxoglutarate ferredoxin oxidoreductase subunit alpha	30S ribosomal protein S13	3-hexulose-6-phosphate synthase
30S ribosomal protein S20	50S ribosomal protein L11	30S ribosomal protein S15	3-hexulose-6-phosphate synthase	30S ribosomal protein S16	30S ribosomal protein S11
50S ribosomal protein L32	50S ribosomal protein L30	30S ribosomal protein S16	3-hydroxyacyl-CoA dehydrogenase	30S ribosomal protein S18	30S ribosomal protein S13

50S ribosomal protein L36	ABC transporter, ATP-binding protein	30S ribosomal protein S17	3-methyl-2-oxobutanoate hydroxymethyltransferase	30S ribosomal protein S19	30S ribosomal protein S15
acetoin utilization protein	ATP-dependent Zn metalloproteinase	30S ribosomal protein S19	3-oxoacyl-ACP synthase	30S ribosomal protein S3	30S ribosomal protein S16
antibiotic ABC transporter ATP-binding protein	DNA gyrase subunit A	30S ribosomal protein S20	3-oxoacyl-[acyl-carrier protein] reductase	30S ribosomal protein S4	30S ribosomal protein S20
arginine--tRNA ligase	DNA helicase	30S ribosomal protein S8	30S ribosomal protein S1	30S ribosomal protein S5	30S ribosomal protein S3
ATPase	DNA-directed RNA polymerase subunit beta'	50S ribosomal protein L10	30S ribosomal protein S10	30S ribosomal protein S6	30S ribosomal protein S4
bifunctional N-acetylglucosamine-1-phosphate uridyltransferase/glucosamine-1-phosphate acetyltransferase	GTP-binding protein TypA	50S ribosomal protein L23	30S ribosomal protein S11	30S ribosomal protein S7	30S ribosomal protein S5
chloramphenicol acetyltransferase	Glutamyl endopeptidase precursor, serine proteinase SspA	50S ribosomal protein L27	30S ribosomal protein S13	30S ribosomal protein S8	30S ribosomal protein S7
chorismate synthase	PTS system N-acetylglucosamine-specific IIBC component	50S ribosomal protein L3	30S ribosomal protein S15	4-oxalocrotonate tautomerase	30S ribosomal protein S8

deoxyribose-phosphate aldolase	PolC-type DNA polymerase III	50S ribosomal protein L30	30S ribosomal protein S16	5'(3')-deoxyribonucleotidase	30S ribosomal protein S9
diacetyl reductase	Serine protease	50S ribosomal protein L31	30S ribosomal protein S18	50S ribosomal protein L1	50S ribosomal protein L1
D-lactate dehydrogenase	UDP-N-acetylglucosamine 1-carboxyvinyltransferase	50S ribosomal protein L33	30S ribosomal protein S19	50S ribosomal protein L10	50S ribosomal protein L10
DNA polymerase IV	UDP-N-acetylmuramoylalanyl-D-glutamyl-2, 6-diaminopimelate--D-alanyl-D-alanine ligase	8-amino-7-oxononanoate synthase	30S ribosomal protein S2	50S ribosomal protein L13	50S ribosomal protein L13
DNA polymerase X family	aminoglycoside acetyltransferase and aminoglycoside phosphotransferase (plasmid)	ATP synthase FOF1 subunit delta	30S ribosomal protein S3	50S ribosomal protein L14	50S ribosomal protein L16
Ferredoxin-dependent glutamate synthase	arsenate reductase	ATP-dependent Clp protease proteolytic subunit	30S ribosomal protein S4	50S ribosomal protein L17	50S ribosomal protein L17
glutamate synthase subunit alpha	beta-ketoacyl-[acyl-carrier-protein] synthase II	CDP-glycerol--poly(glycerophosphate) glycerophosphotransferase	30S ribosomal protein S5	50S ribosomal protein L18	50S ribosomal protein L18
glycerol phosphate lipoteichoic acid synthase	carbamoyl phosphate synthase large subunit	CTP synthetase	30S ribosomal protein S6	50S ribosomal protein L21	50S ribosomal protein L24



GNAT family N-acetyltransferase	cation:proton antiporter	D-alanine aminotransferase	30S ribosomal protein S7	50S ribosomal protein L22	50S ribosomal protein L25
GntR family transcriptional regulator	cell division protein FtsW	DNA-directed RNA polymerase subunit beta	30S ribosomal protein S8	50S ribosomal protein L24	50S ribosomal protein L27
HAD family hydrolase	cysteine synthase	NAD kinase	30S ribosomal protein S9	50S ribosomal protein L25	50S ribosomal protein L4
helicase-exonuclease AddAB subunit AddB	cytochrome aa3 quinol oxidase subunit II	Phosphate acetyltransferase	4-oxalocrotonate tautomerase	50S ribosomal protein L27	50S ribosomal protein L5
hypothetical protein	ferrichrome ABC transporter substrate-binding protein	RNA-binding protein S1	5'(3')-deoxyribonucleotidase	50S ribosomal protein L29	50S ribosomal protein L7/L12
hypothetical protein A4A82_12595	formate dehydrogenase accessory protein	RecX family transcriptional regulator	50S ribosomal protein L1	50S ribosomal protein L3	ABC transporter ATP-binding protein
hypothetical protein RES10_12085	fructose-bisphosphate aldolase	Translation elongation factor Ts	50S ribosomal protein L10	50S ribosomal protein L31	ATP synthase F0F1 subunit alpha
hypothetical protein UF66_0386	glycerol-3-phosphate dehydrogenase	UDP-N-acetyl-D-galactosamine dehydrogenase	50S ribosomal protein L13	50S ribosomal protein L33	ATP-dependent Clp protease proteolytic subunit
hypothetical protein UF66_0428	glycine cleavage system protein H	UDP-N-acetylglucosamine 1-carboxyvinyltransferase	50S ribosomal protein L15	50S ribosomal protein L4	ATP-dependent Zn metalloproteinase
hypothetical protein UF66_1428	glyoxalase	Universal stress protein family	50S ribosomal protein L17	50S ribosomal protein L5	D-alanine aminotransferase
hypothetical protein UF66_2233	hydroxymethylglutaryl-CoA synthase	aconitate hydratase	50S ribosomal protein L18	50S ribosomal protein L6	DNA gyrase subunit A

hypothetical protein XA21_10855	hypothetical protein (plasmid)	adenylate kinase	50S ribosomal protein L19	8-amino-7-oxononanoate synthase	DNA polymerase X family
hypothetical protein XA21_11705	hypothetical protein A4A82_06020	alanine racemase	50S ribosomal protein L21	ATP-dependent Clp protease proteolytic subunit	DNA starvation/stationary phase protection protein
hypothetical protein XA22_02880	hypothetical protein A4A82_10410	aldehyde dehydrogenase	50S ribosomal protein L22	ATP-dependent Zn metalloproteinase CDP-glycerol:poly(glycerol phosphate) glycerophosphotransferase	DNA-binding protein
hypothetical protein XA22_11305	hypothetical protein A4A82_12170	alpha/beta hydrolase	50S ribosomal protein L23		DNA-binding response regulator
intracellular protease amidase	hypothetical protein AXY36_00580	aminoacyltransferase	50S ribosomal protein L24	CTP synthetase	DNA-directed RNA polymerase subunit alpha
MarR family transcriptional regulator	hypothetical protein AXY36_07260	bacillithiol biosynthesis cysteine-adding enzyme BshC	50S ribosomal protein L29	Cell division protein FtsK	DNA-directed RNA polymerase subunit beta
monooxygenase	hypothetical protein AXY36_09795	ornithine acetyltransferase/N-acetylglutamate synthase	50S ribosomal protein L3	D-alanine aminotransferase	DNA-directed RNA polymerase subunit beta'
multidrug transporter	hypothetical protein BSF33_00215	catabolite control protein A	50S ribosomal protein L4	D-ribose transporter subunit RbsB	F0F1 ATP synthase subunit beta
Nif3-like dinuclear metal center hexameric protein	hypothetical protein BSF33_10120	cell division protein FtsZ	50S ribosomal protein L5	DNA helicase	FMN reductase (NADPH)

non-canonical purine NTP pyrophosphatase	hypothetical protein BZ166_05325	cell division protein GpsB	50S ribosomal protein L6	DNA methyltransferase	Fe-S cluster assembly protein SufD
peptide chain release factor 2	inosine-5-monophosphate dehydrogenase	dephospho-CoA kinase	50S ribosomal protein L7/L12	DNA polymerase X family	GTPase ObgE
phosphopantothenoyl cysteine decarboxylase	malate dehydrogenase (acceptor)	dihydroxy-acid dehydratase	ABC transporter ATP-binding protein	DNA-directed RNA polymerase subunit alpha	LysR family transcriptional regulator
phosphopentomutase	methyltransferase	enoyl-ACP reductase	ABC transporter, ATP-binding protein	DNA-directed RNA polymerase subunit beta	NAD(P)H-dependent oxidoreductase
pyruvate decarboxylase	mobilization protein C (plasmid)	esterase	ATP synthase F0F1 subunit gamma	DNA-directed RNA polymerase subunit beta'	NADH dehydrogenase
recombination/mobilization protein (plasmid)	octanoyltransferase	ferritin	ATP-dependent DNA helicase	Domain of uncharacterised function (DUF334)	PTS glucose transporter subunit IIA
restriction endonuclease subunit S	peptidylprolyl isomerase	fructose-bisphosphate aldolase	CDP-glycerol:poly(glycerophosphate) glycerophosphotransferase	Fe-S cluster assembly ATPase SufC	Phosphate acetyltransferase
RNA-binding transcriptional accessory protein	proline dehydrogenase	gamma-aminobutyrate permease	CtsR family transcriptional regulator	Fe-S cluster assembly protein SufB	RecX family transcriptional regulator
Serine protease	pyridoxamine 5-phosphate oxidase	glucosamine-6-phosphate isomerase	D-alanine aminotransferase	Fe-S cluster assembly protein SufD	Serine protease

Short-chain dehydrogenase/reductase SDR	pyruvate decarboxylase	glucose-6-phosphate isomerase	D-alanyl-lipoteichoic acid biosynthesis protein DltD	GTP-binding protein TypA	Translation elongation factor Ts
sucrose-6-phosphate hydrolase	pyruvate dehydrogenase (acetyl-transferring) E1 component subunit alpha	glutamine-hydrolyzing GMP synthase	DNA gyrase subunit A	Phosphate acetyltransferase	UDP-N-acetyl-D-galactosamine dehydrogenase
sulfate adenylyltransferase	pyruvate kinase	glutamyl-tRNA amidotransferase	DNA primase	RecX family transcriptional regulator	UDP-N-acetylglucosamine 1-carboxyvinyltransferase
sulfite reductase	recombinase A	glutamyl-tRNA reductase	DNA-binding protein	UDP-N-acetyl-D-galactosamine dehydrogenase	UDP-glucose 4-epimerase
tail protein	recombination/mobilization protein (plasmid)	glutamyl-tRNA synthetase	DNA-damage repair protein	UDP-N-acetylglucosamine 1-carboxyvinyltransferase	acetate kinase
transporter	restriction endonuclease	glycerol dehydrogenase	DNA-directed RNA polymerase subunit beta	Urease beta subunit	aconitate hydratase
transporter associated domain protein	ribulose-phosphate 3-epimerase	glycerol-3-phosphate cytidyltransferase	Fe-S cluster assembly ATPase SufC	adenylate kinase	acyl carrier protein
tRNA (adenosine(37)-N6)-dimethylallyltransferase MiaA	short-chain dehydrogenase	hydroxymethylpyrimidine/phosphomethylpyrimidine kinase	GTP cyclohydrolase FolE2	adenylosuccinate synthase	alkaline shock protein 23
urease subunit gamma	short-chain fatty acids transporter	hypothetical protein A4A82_03560	GTPase ObgE	aldo keto reductase	aminoacyltransferase

uroporphyrin-III methyltransferase	stage V sporulation protein G	hypothetical protein A4A82_06020	Holliday junction resolvase RecU	aminoacyltransferase	anti-anti-sigma factor
	succinyl-CoA:3-ketoacid-coenzyme A transferase subunit B	hypothetical protein A4A82_08725	NADH dehydrogenase	aminopeptidase	aspartyl/glutamyl-tRNA amidotransferase subunit A
	transaldolase	hypothetical protein A4A82_09265	NADH-dependent flavin oxidoreductase	anti-anti-sigma factor	beta-ketoacyl-[acyl-carrier-protein] synthase II
	transcription termination/antitermination protein NusG	hypothetical protein A4A82_11275	Na <sup>+</sup> /H <sup>+</sup> antiporter subunit D	anti-sigma B factor RsbW	branched-chain alpha-keto acid dehydrogenase subunit E2
	transcriptional repressor CodY	hypothetical protein A4A82_12595	PTS glucose transporter subunit IIA	aspartate alpha-decarboxylase	cell division protein FtsZ
	transketolase	hypothetical protein AXY36_01150	PTS mannose transporter subunit IIA	aspartate--tRNA ligase	cell division protein GpsB
	transposon DNA-invertase	hypothetical protein AXY36_06780	Putative cytosolic protein	aspartyl/glutamyl-tRNA amidotransferase subunit A	citrate synthase
	triose-phosphate isomerase	hypothetical protein AXY36_09715	RNA degradosome polyphosphate kinase	beta-ketoacyl-ACP reductase	cysteine synthase
	type I glyceraldehyde-3-phosphate dehydrogenase	hypothetical protein BSF33_00215	RepU (plasmid)	carbamate kinase	dihydrolipoyl dehydrogenase

ureidoglycolate dehydrogenase	hypothetical protein BSF33_00755	Repressor CsoR of the copZA operon	cell division protein FtsZ	dihydroxyacetone kinase subunit L
virulence factor	hypothetical protein BSF33_08575	Ribonuclease III family protein	cysteine desulfurase	elongation factor G
	hypothetical protein RES9_02285	Rrf2 family transcriptional regulator	cysteine--tRNA ligase	elongation factor P
	hypothetical protein UF66_2233	TIGR01440 family protein	cytidine deaminase	elongation factor Ts
	hypothetical protein XA21_07930	Type I restriction-modification system, DNA-methyltransferase subunit M	dephospho-CoA kinase	elongation factor Tu
	hypothetical protein XA22_10040	UDP-N-acetylglucosamine 1-carboxyvinyltransferase	elongation factor P	enolase
inosine-5-monophosphate dehydrogenase		UDP-N-acetylmuramoylalanyl-D-glutamyl-2, 6-diaminopimelate--D-alanyl-D-alanine ligase	enoyl-ACP reductase	enoyl-ACP reductase
inositol monophosphatase		UDP-glucose 4-epimerase	excinuclease ABC subunit A	formate dehydrogenase accessory protein
iron ABC transporter substrate-binding protein		UTP-glucose-1-phosphate uridylyltransferase	fructose-bisphosphate aldolase	fructose-bisphosphate aldolase

isoprenyl transferase	Urease beta subunit	glucose-6-phosphate isomerase	general stress protein
malate dehydrogenase (acceptor)	[acyl-carrier-protein] S-malonyltransferase	glutamine-hydrolyzing GMP synthase	glucose-6-phosphate isomerase
manganese ABC transporter substrate-binding protein	acetyl-CoA acetyltransferase	glutamyl-tRNA amidotransferase	glutamine--fructose-6-phosphate aminotransferase
metal-dependent hydrolase	acetyltransferase	glyceraldehyde-3-phosphate dehydrogenase, partial	glutamyl-tRNA amidotransferase
molecular chaperone GrpE	addiction module antitoxin RelB	glycerol-3-phosphate dehydrogenase	glutamyl-tRNA synthetase
multidrug ABC transporter ATP-binding protein	adenylate kinase	glyoxalase	glycerol-3-phosphate cytidyltransferase
nitrate reductase	alanine--tRNA ligase	heptaprenyl pyrophosphate synthase subunit A	glycerol-3-phosphate dehydrogenase
peptidase	aldo/keto reductase	histidine--tRNA ligase	glycine C-acetyltransferase
peptidase M23	alkaline shock protein 23	hydroxymethylglutaryl-CoA synthase	glycine--tRNA ligase
peptidase M24	aminopeptidase	hydroxymethylpyrimidine/phosphomethylpyrimidine kinase	histidine ammonia-lyase
phage protein	anti-anti-sigma factor	hypothetical protein A4A82_03560	histidine kinase

200 mg L-1

phosphoglucosamine mutase	anti-sigma B factor RsbW	hypothetical protein A4A82_03720	hydroxymethylglutaryl-CoA synthase
putative transmembrane protein	antitermination protein NusB	hypothetical protein A4A82_09265	hydroxymethylpyrimidine/phosphomethylpyrimidine kinase
putative transporter	arginine--tRNA ligase	hypothetical protein A4A82_10890	hypothetical protein A4A82_01085
pyridoxamine 5-phosphate oxidase	aspartate alpha-decarboxylase	hypothetical protein AXY36_00580	hypothetical protein A4A82_02240
recombinase RecA	aspartate--tRNA ligase	hypothetical protein AXY36_01150	hypothetical protein A4A82_03560
recombinase RecB	bifunctional 5,10-methylene-tetrahydrofolate dehydrogenase/5,10-methylene-tetrahydrofolate cyclohydrolase	hypothetical protein AXY36_02580	hypothetical protein A4A82_04210
serine/threonine protein kinase	branched-chain alpha-keto acid dehydrogenase subunit E2	hypothetical protein AXY36_02715	hypothetical protein A4A82_06020
short-chain dehydrogenase	capsule biosynthesis protein CapA	hypothetical protein AXY36_05930	hypothetical protein A4A82_07220
single-stranded DNA-binding protein	cell division protein DivIVA	hypothetical protein AXY36_07260	hypothetical protein A4A82_08725
stage V sporulation protein G	cell-cycle regulation protein HIT	hypothetical protein AXY36_09715	hypothetical protein A4A82_09265
teichoic acid biosynthesis protein	citrate synthase	hypothetical protein AXY36_09795	hypothetical protein A4A82_11275



thiol reductase thioredoxin	class I fructose- bisphosphate aldolase	hypothetical protein BSF33_00215	hypothetical protein AXY36_01150
thioredoxin	class II fumarate hydratase	hypothetical protein BSF33_00540	hypothetical protein AXY36_06600
transcription termination/antitermi nation protein NusG	co-chaperone GroES	hypothetical protein BSF33_04620	hypothetical protein BSF33_04470
transcriptional repressor CcpN	cold-shock protein	hypothetical protein BSF33_05765	hypothetical protein BSF33_08575
transposon DNA- invertase	cysteine synthase	hypothetical protein BSF33_13140	hypothetical protein BSF33_11000
trigger factor	cysteine--tRNA ligase	hypothetical protein RES9_02285	hypoxanthine phosphoribosyltransf erase
universal stress protein	dihydrofolate reductase	hypothetical protein XA22_13145	inosine-5- monophosphate dehydrogenase
uridylate kinase	dihydrolipoamide succinyltransferase	hypoxanthine phosphoribosyltransf erase	lipase
virulence factor	elongation factor G	imidazole glycerol phosphate synthase subunit HisH	malate:quinone oxidoreductase
	elongation factor P	lipid hydroperoxide peroxidase	malonyl CoA-acyl carrier protein transacylase
	elongation factor Tu	membrane protein	manganese ABC transporter substrate- binding protein

fructose-bisphosphate aldolase	metal-dependent hydrolase	molecular chaperone DnaK
glucose-6-phosphate isomerase	molecular chaperone DnaK	multidrug ABC transporter ATP-binding protein
glycine C-acetyltransferase	ornithine--oxo-acid transaminase	nucleoside-diphosphate kinase
glycine--tRNA ligase	peptidase	oligoribonuclease
heptaprenyl pyrophosphate synthase subunit A	peptidase M28	peptidase
histidine--tRNA ligase	phosphogluconate dehydrogenase (NADP(+)-dependent, decarboxylating)	permease
histidinol-phosphate aminotransferase	phosphoribosylformylglycinamidine synthase II	peroxiredoxin
hypothetical protein A4A82_02240	phosphotransacetylase	phosphoenolpyruvate-protein phosphotransferase
hypothetical protein A4A82_04790	putative N-carbamoyl-beta-alanine amidohydrolase	phosphoglycerate kinase
hypothetical protein A4A82_05255	putative transporter	phosphopantothenoyl cysteine decarboxylase

hypothetical protein A4A82_06335	pyruvate, phosphate dikinase	phosphopyruvate hydratase
hypothetical protein A4A82_07220	quinone oxidoreductase	putative phage/plasmid primase
hypothetical protein A4A82_08725	reactive intermediate/imine deaminase	putative transporter
hypothetical protein A4A82_08945	redox-regulated ATPase YchF	pyridoxamine 5- phosphate oxidase
hypothetical protein A4A82_09030	ribosomal protein L7Ae	pyruvate decarboxylase pyruvate dehydrogenase (acetyl-transferring) E1 component subunit alpha
hypothetical protein A4A82_09265	ribosome recycling factor	
hypothetical protein A4A82_10890	ribulose-phosphate 3- epimerase	pyruvate kinase
hypothetical protein AXY36_00580	scaffolding protein	pyruvate oxidase
hypothetical protein AXY36_01585	sodium-independent anion transporter	recombinase A
hypothetical protein AXY36_02415	stage V sporulation protein G	recombinase RecA
hypothetical protein AXY36_02580	thioredoxin-disulfide reductase	recombinase RecB
hypothetical protein AXY36_06600	threonine synthase	recombination/mobili zation protein (plasmid)

hypothetical protein AXY36_07245	transaldolase	redox-regulated ATPase YchF
hypothetical protein AXY36_09935	transcription termination/antitermi nation protein NusA	ribose-phosphate pyrophosphokinase
hypothetical protein BSF33_04620	transketolase	ribosome recycling factor
hypothetical protein BSF33_04630	translation initiation factor IF-1	serine/threonine protein kinase
hypothetical protein BSF33_05765	transposase	single-stranded DNA- binding protein
hypothetical protein RES10_10450	trigger factor	sodium-independent anion transporter
hypothetical protein RES11_04470	type I glyceraldehyde- 3-phosphate dehydrogenase	succinate dehydrogenase flavoprotein subunit
hypothetical protein RES11_09065	uridylate kinase	succinyl-CoA:3- ketoacid-coenzyme A transferase subunit B
hypothetical protein RES9_11625		teichoic acid biosynthesis protein F2
hypothetical protein UF66_0089		thiol reductase thioredoxin
hypothetical protein UF66_2291		transaldolase
hypothetical protein XA21_08605		transcriptional repressor CodY

hypothetical protein  
XA21\_11860  
hypothetical protein  
XA22\_07340  
inosine-5-  
monophosphate  
dehydrogenase  
lipase  
lipid hydroperoxide  
peroxidase  
malate  
dehydrogenase  
(acceptor)  
malate:quinone  
oxidoreductase  
manganese-  
dependent inorganic  
pyrophosphatase  
mannitol-1-  
phosphate 5-  
dehydrogenase  
metal-dependent  
hydrolase  
methionine sulfoxide  
reductase  
molecular chaperone  
DnaK  
molecular chaperone  
GrpE  
molecular chaperone  
Hsp33

transketolase  
translation initiation  
factor IF-1  
transposon DNA-  
invertase  
trigger factor  
triose-phosphate  
isomerase  
type I glutamate--  
ammonia ligase  
universal stress  
protein UspA  
uracil  
phosphoribosyltransf  
erases

monooxygenase  
o-succinylbenzoate  
synthase  
ornithine--oxo-acid  
aminotransferase  
peptidase M28  
permease  
phage tail protein  
phosphoenolpyruvate  
synthase regulatory  
protein  
phosphoglucosamine  
mutase  
phosphoglyceromuta  
se  
phosphotransacetylas  
e  
polysaccharide  
biosynthesis protein  
preprotein  
translocase subunit  
YajC  
primosomal protein  
N'  
putative DNA-  
binding protein,  
YbaB family  
putative  
phage/plasmid  
primase

pyridoxamine 5-  
phosphate oxidase  
quinone  
oxidoreductase  
ribonuclease R  
ribonucleotide-  
diphosphate  
reductase subunit  
beta  
ribosomal RNA  
small subunit  
methyltransferase H  
ribosomal protein  
L7Ae  
ribosome biogenesis  
GTPase Der  
ribosome biogenesis  
GTPase YqeH  
ribosome recycling  
factor  
ribulose-phosphate 3-  
epimerase  
serine  
hydroxymethyltransf  
erases  
sigma-54 modulation  
protein  
signal recognition  
particle  
stage V sporulation  
protein G

succinate--CoA  
ligase subunit beta  
sulfurtransferase  
FdhD  
sulfite reductase  
subunit beta

superoxide dismutase

tRNA uridine(34) 5-  
carboxymethylamino  
methyl synthesis  
enzyme MnmG  
thioredoxin  
thymidylate kinase  
thymidylate synthase  
transaldolase  
transcriptional  
repressor CodY  
transketolase  
translation initiation  
factor IF-1  
translation initiation  
factor IF-2  
translation initiation  
factor IF-3  
transposon DNA-  
invertase  
trigger factor  
two-component  
response regulator,  
LytR



type I glutamate--  
ammonia ligase

type I glyceraldehyde-  
3-phosphate  
dehydrogenase

universal stress  
protein UspA  
uracil  
phosphoribosyltransf  
erase  
urease subunit alpha  
uridylate kinase  
valine--tRNA ligase

1,4-dihydroxy-2-naphthoyl-CoA synthase	2-oxoglutarate ferredoxin oxidoreductase subunit alpha	histidine ammonia-lyase	3-ketoacyl-CoA thiolase	GTP pyrophosphokinase	2-dehydro-3-deoxyphosphogluconate aldolase
2,3-bisphosphoglycerate-independent phosphoglycerate mutase	CTP synthetase	hypothetical protein A4A82_08960	CoA-transferase	alpha/beta hydrolase	DNA primase
2,4-dienoyl-CoA reductase	alpha/beta hydrolase	hypothetical protein AXY36_09720	DNA repair protein	ornithine acetyltransferase/N-acetylglutamate synthase	Rrf2 family transcriptional regulator
2-deoxyribose-5-phosphate aldolase	dephospho-CoA kinase	ribonuclease HIII	F0F1 ATP synthase subunit C	hypothetical protein XA21_11670	cobalt ABC transporter ATPase
2-oxoglutarate dehydrogenase E1	metal-dependent hydrolase	ring-cleaving dioxygenase	FAD-dependent oxidoreductase	parM protein	lipoate-protein ligase A

2-oxoglutarate ferredoxin oxidoreductase subunit alpha	peptidase	sodium:proton antiporter	Fis family transcriptional regulator	putative transcriptional regulator (plasmid)
23S rRNA (uracil-5-)-methyltransferase RumA	recombinase RecB	sulfate permease	GTP-binding protein TypA	spermidine/putrescine ABC transporter permease
3-hexulose-6-phosphate synthase	scaffolding protein		Homoserine dehydrogenase	succinyl-CoA:3-ketoacid-coenzyme A transferase subunit B
3-methyl-2-oxobutanoate hydroxymethyltransferase	tRNA methyltransferase		L-lactate dehydrogenase	sulfate permease
3-oxoacyl-[acyl-carrier protein] reductase			L-serine dehydratase, iron-sulfur-dependent subunit alpha	
30S ribosomal protein S1			Major myo-inositol transporter IolT	
30S ribosomal protein S11			MobA/MobL family protein	
30S ribosomal protein S15			PTS beta-glucoside transporter subunit IIBC	
30S ribosomal protein S19			RNA helicase	
30S ribosomal protein S2			RND transporter	

30S ribosomal  
protein S3

30S ribosomal  
protein S5

30S ribosomal  
protein S6

30S ribosomal  
protein S7

5'(3')-  
deoxyribonucleotidas  
e

50S ribosomal  
protein L1

50S ribosomal  
protein L10

50S ribosomal  
protein L14

50S ribosomal  
protein L15

50S ribosomal  
protein L19

50S ribosomal  
protein L22

50S ribosomal  
protein L24

acyl-CoA  
dehydrogenase

aldehyde  
dehydrogenase

family protein  
bifunctional

riboflavin  
kinase/FMN

adenyltransferase  
damage-inducible  
protein DinB

formate  
dehydrogenase

glutamate synthase

glycerophosphodiester  
phosphodiesterase

heme ABC  
transporter ATP-  
binding protein

hypothetical protein  
(plasmid)

hypothetical protein  
BSF33\_09115

hypothetical protein  
RES9\_02800

hypothetical protein  
XA22\_13430

50S ribosomal  
protein L25

50S ribosomal  
protein L29

50S ribosomal  
protein L30

50S ribosomal  
protein L6

50S ribosomal  
protein L7/L12

6-phosphogluconate  
dehydrogenase

8-amino-7-  
oxononanoate  
synthase

ABC transporter  
(plasmid)

ABC transporter  
ATP-binding protein  
ATP synthase F0F1  
subunit B

ATP synthase F0F1  
subunit alpha

ATP synthase F0F1  
subunit delta

lactonase

nitric oxide reductase  
activation protein  
NorQ

peptidase M24

peptide chain release  
factor 3

phenylalanine--tRNA  
ligase subunit beta

phosphoenolpyruvate  
carboxykinase [ATP]

phosphoglycerate  
dehydrogenase

phosphopyruvate  
hydratase

serine protease SplE

site-specific integrase

sporulation regulator  
WhiA

teichoic acid  
biosynthesis protein  
B

ATP-dependent Clp  
protease proteolytic  
subunit  
ATP-dependent  
DNA helicase  
ATP-dependent Zn  
metallopeptidase  
ArsR family  
transcriptional  
regulator  
CDP-glycerol--  
poly(glycerophosphat  
e)  
glycerophosphotransf  
erase  
CDP-  
glycerol:poly(glycero  
phosphate)  
glycerophosphotransf  
erase  
CoA-transferase  
D-alanine  
aminotransferase  
D-alanine--D-alanine  
ligase  
DNA gyrase subunit  
A  
DNA helicase  
DNA polymerase III  
subunit beta

thiamine-phosphate  
pyrophosphorylase

tranposase B

transcription  
termination factor  
Rho

type I methionyl  
aminopeptidase

DNA-binding protein

DNA-directed RNA  
polymerase subunit  
beta

FOF1 ATP synthase  
subunit beta

FOF1 ATP synthase  
subunit epsilon

FAD-dependent  
oxidoreductase

Fe-S cluster  
assembly protein

SufB

Fis family  
transcriptional  
regulator

GTP cyclohydrolase  
FolE2

GTP-binding protein

TypA

GTPase ObgE

IMP dehydrogenase

L-proline 3-  
hydroxylase

Mobile element  
protein

Molybdenum  
cofactor biosynthesis  
protein A

NAD-dependent  
dehydratase  
NADH  
dehydrogenase  
NADP-dependent  
oxidoreductase  
NIF3 protein  
Oligoendopeptidase  
F  
Oligopeptide ABC  
transporter,  
periplasmic  
oligopeptide-binding  
protein OppA  
PTS glucose  
transporter subunit  
IIA  
PTS mannose  
transporter subunit  
IIA  
PadR family  
transcriptional  
regulator  
Phage lysin, N-  
acetylmuramoyl-L-  
alanine amidase  
Phosphate  
acetyltransferase  
Replication-  
associated protein

ThiJ/PfpI family  
protein  
Translation  
elongation factor Ts  
UDP-N-acetyl-D-  
galactosamine  
dehydrogenase  
UDP-N-  
acetylmuramate--  
alanine ligase  
UDP-N-  
acetylmuramoylalanine  
1-D-glutamyl-2, 6-  
diaminopimelate--D-  
alanyl-D-alanine  
ligase  
UDP-glucose 4-  
epimerase  
Uncharacterised  
protein  
Urease beta subunit  
YigZ family protein  
[acyl-carrier-protein]  
S-malonyltransferase  
acetate kinase  
acetyl-CoA  
carboxylase biotin  
carboxylase subunit  
aconitate hydratase  
acyl carrier protein



acyl-CoA  
dehydrogenase  
adenylate kinase  
adenylosuccinate  
synthase  
alanine  
dehydrogenase  
  
alanine--tRNA ligase  
  
alcohol  
dehydrogenase  
aldehyde  
dehydrogenase  
aldo/keto reductase  
alkaline shock  
protein 23  
aminopeptidase  
anthranilate synthase  
component I  
  
anti-anti-sigma factor  
  
arginine repressor  
arsenate reductase  
aspartate alpha-  
decarboxylase  
aspartyl/glutamyl-  
tRNA  
amidotransferase  
subunit A  
beta-ketoacyl-ACP  
reductase

beta-ketoacyl-[acyl-  
carrier-protein]  
synthase II  
branched-chain alpha-  
keto acid  
dehydrogenase E1  
branched-chain alpha-  
keto acid  
dehydrogenase  
subunit E2  
cadmium resistance  
protein  
cell division protein  
DivIVA  
cell division protein  
FtsA  
cell division protein  
FtsZ  
cell division protein  
GpsB  
chorismate mutase  
citrate synthase  
cysteine desulfurase  
cysteine synthase  
cysteine--tRNA  
ligase  
cytochrome aa3  
quinol oxidase  
subunit II  
dehydrogenase  
deoxycytidine kinase

**300 mg L-1**

dephospho-CoA  
kinase  
diaminopimelate  
decarboxylase  
dihydrolipoamide  
succinyltransferase  
dihydrolipoyl  
dehydrogenase  
dihydroxy-acid  
dehydratase  
dihydroxyacetone  
kinase subunit L  
elongation factor G  
elongation factor P  
elongation factor Tu  
endopeptidase Clp  
ATP-binding subunit  
C  
enolase  
  
enoyl-ACP reductase  
  
excinuclease ABC  
subunit A  
excinuclease ABC  
subunit B  
exported protein  
ferrichrome ABC  
transporter substrate-  
binding protein  
ferritin

formate--  
tetrahydrofolate  
ligase  
fructose-  
biphosphate  
aldolase  
  
general stress protein  
  
glucosamine-6-  
phosphate isomerase  
  
glucose-6-phosphate  
isomerase  
  
glutamate  
dehydrogenase  
glutamate synthase  
glutamate-1-  
semialdehyde  
aminotransferase  
glutamine--fructose-  
6-phosphate  
aminotransferase  
glutamine-  
hydrolyzing GMP  
synthase  
  
glycerol-3-phosphate  
cytidyltransferase  
  
glycine C-  
acetyltransferase

glycine cleavage  
system protein T

glycine  
dehydrogenase  
glycine  
dehydrogenase  
subunit 2

glycine--tRNA ligase

glycine/betaine ABC  
transporter permease

heme-binding protein

hsp90-like protein  
hydroxymethylglutar  
yl-CoA synthase  
hydroxymethylpyrimi  
dine/phosphomethylp  
yrimidine kinase

hypothetical protein  
A4A82\_02240

hypothetical protein  
A4A82\_03560

hypothetical protein  
A4A82\_03720

hypothetical protein  
A4A82\_03930

hypothetical protein  
A4A82\_06020

hypothetical protein  
A4A82\_07220  
hypothetical protein  
A4A82\_08945  
hypothetical protein  
A4A82\_09030  
hypothetical protein  
A4A82\_12170  
hypothetical protein  
A4A82\_12600  
hypothetical protein  
AXY36\_02415  
hypothetical protein  
AXY36\_02580  
hypothetical protein  
AXY36\_03305  
hypothetical protein  
AXY36\_06600  
hypothetical protein  
AXY36\_06780  
hypothetical protein  
BSF33\_00215  
hypothetical protein  
BSF33\_00755  
hypothetical protein  
BSF33\_04620  
hypothetical protein  
BSF33\_05765  
hypothetical protein  
BSF33\_08575

hypothetical protein  
BSF33\_12980  
hypothetical protein  
BZ166\_05325  
hypothetical protein  
RES10\_10450  
hypothetical protein  
RES10\_11420  
hypothetical protein  
RES11\_04470  
hypothetical protein  
RES11\_09065  
hypothetical protein  
RES9\_02285  
hypothetical protein  
RES9\_11625  
hypothetical protein  
UF66\_1532  
hypothetical protein  
UF66\_2021  
hypothetical protein  
XA21\_11805  
hypothetical protein  
XA21\_11860  
hypothetical protein  
XA21\_13400  
hypothetical protein  
XA22\_10040  
hypoxanthine  
phosphoribosyltransf  
erase

iron ABC transporter  
substrate-binding  
protein  
isoleucine--tRNA  
ligase  
isoleucyl-tRNA  
synthetase, partial  
lactate  
dehydrogenase  
late competence  
protein ComEC  
leucyl  
aminopeptidase  
lipid hydroperoxide  
peroxidase  
lipoate--protein  
ligase  
long-chain fatty acid--  
CoA ligase  
malate  
dehydrogenase  
malate:quinone  
oxidoreductase  
manganese ABC  
transporter substrate-  
binding protein  
mannitol-1-  
phosphate 5-  
dehydrogenase  
metal-dependent  
hydrolase



methionine ABC  
transporter substrate-  
binding protein  
methionine sulfoxide  
reductase  
molecular chaperone  
DnaK  
molecular chaperone  
Hsp33  
nitronate  
monooxygenase  
nuclease SbcCD  
subunit C  
nucleoside-  
diphosphate kinase  
oligoribonuclease  
oxidoreductase  
peptidase  
peptidase M28  
phosphoenolpyruvate  
carboxykinase  
phosphoenolpyruvate  
synthase regulatory  
protein  
phosphoglycerate  
kinase  
phosphoglyceromuta  
se  
phosphonate ABC  
transporter ATP-  
binding protein

polynucleotide  
phosphorylase  
preprotein  
translocase subunit  
SecA  
protein rlx  
pseudouridine  
synthase  
putative DNA-  
binding protein,  
YbaB family  
putative alpha-  
acetolactate  
decarboxylase  
putative  
phage/plasmid  
primase  
pyrimidine-  
nucleoside  
phosphorylase  
pyruvate  
dehydrogenase  
(acetyl-transferring)  
E1 component  
subunit alpha  
pyruvate oxidase  
pyruvate, phosphate  
dikinase  
recombinase A  
recombinase RecB  
recombinase XerD

ribonuclease J  
ribose-phosphate  
pyrophosphokinase  
ribosomal protein  
L7Ae  
ribosome biogenesis  
GTPase Der  
ribosome recycling  
factor  
ribulose-phosphate 3-  
epimerase  
scaffolding protein  
serine  
hydroxymethyltransf  
erase  
short-chain  
dehydrogenase  
sigma-54 modulation  
protein  
signal recognition  
particle  
succinate  
dehydrogenase  
flavoprotein subunit  
succinate--CoA  
ligase subunit alpha  
succinate--CoA  
ligase subunit beta  
superoxide dismutase

teichoic acid  
biosynthesis protein  
thiol reductase  
thioredoxin  
thioredoxin  
thioredoxin-disulfide  
reductase  
thymidine  
phosphorylase  
thymidylate kinase  
transcription  
elongation factor  
GreA  
transcriptional  
repressor CodY  
transketolase  
translation initiation  
factor IF-2  
translation initiation  
factor IF-3  
transposase  
trigger factor  
two-component  
response regulator,  
LytR  
type I glutamate--  
ammonia ligase  
type I methionyl  
aminopeptidase  
universal stress  
protein UspA

uracil phosphoribosyltransf erase uridylate kinase uroporphyrinogen decarboxylase virulence factor						
50S ribosomal protein L28	gamma- aminobutyrate	50S ribosomal protein L32	30S ribosomal protein S17	50S ribosomal protein L11	30S ribosomal protein S17	
DNA polymerase III subunit alpha	glucokinase	DNA polymerase III subunit gamma/tau	50S ribosomal protein L11	50S ribosomal protein L23	30S ribosomal protein S19	
alkyl hydroperoxide reductase	hypothetical protein BSF33_00540	beta-ketoacyl-[acyl- carrier-protein] synthase II	50S ribosomal protein L14	50S ribosomal protein L30	30S ribosomal protein S2	
esterase	phosphotransacetylase	class I fructose- bisphosphate aldolase	50S ribosomal protein L30	6-phosphogluconate dehydrogenase	50S ribosomal protein L11	
multidrug ABC transporter ATP- binding protein		formate dehydrogenase accessory protein	6-phosphogluconate dehydrogenase	Glutamyl endopeptidase precursor, serine proteinase SspA	50S ribosomal protein L14	
nitroreductase			ABC transporter (plasmid)	NAD(P)-dependent oxidoreductase	50S ribosomal protein L15	
peptidase M23			ATP-dependent Clp protease ATP- binding subunit ClpX	beta-ketoacyl-[acyl- carrier-protein] synthase II	50S ribosomal protein L23	

**100 + 200 mg  
L-1**

phosphogluconate  
dehydrogenase  
(NADP(+)-  
dependent,  
decarboxylating)  
sulfurtransferase  
FdhD

ATP-dependent Clp  
protease proteolytic  
subunit

glucokinase

50S ribosomal  
protein L3

DNA  
methyltransferase  
DNA-directed RNA  
polymerase subunit  
alpha

hsp90-like protein

50S ribosomal  
protein L30

Ferredoxin-  
dependent glutamate  
synthase

multidrug ABC  
transporter ATP-  
binding protein

50S ribosomal  
protein L6

Glutamyl  
endopeptidase  
precursor, serine  
proteinase SspA

phosphoglucosamine  
mutase

6-phosphogluconate  
dehydrogenase

N-acetyltransferase  
NAD(P)-dependent  
oxidoreductase

polysaccharide  
biosynthesis protein

ATP-dependent Clp  
protease ATP-  
binding subunit ClpX

cell division protein  
FtsA

pyridoxamine 5-  
phosphate oxidase

deoxyribose-  
phosphate aldolase  
hypothetical protein  
RES9\_02285

deoxyribose-  
phosphate aldolase

recombinase RecA

transcription  
elongation factor  
GreA

lipid hydroperoxide  
peroxidase

glucokinase

malate  
dehydrogenase  
(acceptor)

hypothetical protein  
A4A82\_12595

phosphoglucosamine  
mutase  
prephenate  
dehydrogenase

				hypothetical protein AXY36_08620		type I glyceraldehyde- 3-phosphate dehydrogenase
				methionine--tRNA ligase putative transporter teichoic acid biosynthesis protein transcription elongation factor GreA urease subunit gamma		
	1-pyrroline-5- carboxylate dehydrogenase	1,4-dihydroxy-2- naphthoyl-CoA synthase	DNA primase	30S ribosomal protein S20	1,4-dihydroxy-2- naphthoyl-CoA synthase	30S ribosomal protein S6
	2-oxoisovalerate dehydrogenase	5'(3')- deoxyribonucleotidas e	hypothetical protein RES9_02800	50S ribosomal protein L25	acyl carrier protein	5'- methylthioadenosine/ S- adenosylhomocystein e nucleosidase
	3-hydroxyacyl-CoA dehydrogenase	Oligoendopeptidase F	translation initiation factor IF-1	acetate--CoA ligase	hypothetical protein A4A82_08725	50S ribosomal protein L21
	30S ribosomal protein S10	acetate kinase		acyl carrier protein		50S ribosomal protein L29
	30S ribosomal protein S16	aldehyde dehydrogenase		adenylosuccinate synthase		50S ribosomal protein L31
	30S ribosomal protein S17	aminoacyltransferase		aldehyde dehydrogenase		50S ribosomal protein L36

30S ribosomal protein S18	aminopeptidase	arsenate reductase	cold-shock protein
30S ribosomal protein S9	enoyl-ACP reductase	aspartate aminotransferase	superoxide dismutase
4,4'-diaponeurosporenoate glycosyltransferase	glucose-6-phosphate isomerase	ATP-dependent Clp protease ATP-binding subunit ClpC	
50S ribosomal protein L18	glycerol kinase	D-alanine--D-alanine ligase	
50S ribosomal protein L21	hypothetical protein AXY36_04620	dihydroxy-acid dehydratase	
50S ribosomal protein L33	multidrug ABC transporter ATP-binding protein	DNA helicase	
50S ribosomal protein L4	oligoribonuclease	DNA starvation/stationary phase protection protein	
ATP synthase F0F1 subunit gamma	phosphoenolpyruvate-protein phosphotransferase	DNA-directed RNA polymerase subunit beta'	
ATP-dependent Clp protease ATP-binding subunit ClpX	preprotein translocase subunit SecA	excinuclease ABC subunit A	
DNA starvation/stationary phase protection protein	putative phage/plasmid primase	ferrichrome ABC transporter substrate-binding protein	



DNA-directed RNA  
polymerase subunit beta'  
Glutamyl  
endopeptidase  
precursor, serine  
proteinase SspA  
Lanthionine  
biosynthesis protein  
LanL  
Major myo-inositol  
transporter IolT  
UDP-N-  
acetylglucosamine 1-  
carboxyvinyltransfer  
ase  
acetate--CoA ligase  
acetyl-CoA  
acetyltransferase  
alanine racemase  
aminoacyltransferase  
autolysin  
beta-galactosidase

pyruvate oxidase

Fe-S cluster  
assembly protein  
SufB

glutamate  
dehydrogenase

glutamine  
amidotransferase

glutamine--fructose-  
6-phosphate  
aminotransferase

glutamine-  
hydrolyzing GMP  
synthase

glutaryl-CoA  
dehydrogenase

glycerol-3-phosphate  
cytidyltransferase

glyoxalase  
GTPase Era  
hypothetical protein  
A4A82\_03560  
hypothetical protein  
AXY36\_04520

200 + 300 mg  
L-1

bifunctional 5,10-  
methylene-  
tetrahydrofolate  
dehydrogenase/5,10-  
methylene-  
tetrahydrofolate  
cyclohydrolase  
catabolite control  
protein A  
  
catalase  
  
class I fructose-  
biphosphate  
aldolase  
class II fumarate  
hydratase  
  
glucokinase  
  
glutamyl-tRNA  
synthetase  
glutaryl-CoA  
dehydrogenase  
  
glycerol kinase  
  
glycerol-3-phosphate  
dehydrogenase  
  
glyoxalase  
hydroxyacid  
dehydrogenase

hypothetical protein  
BSF33\_12980

intracellular protease  
amidase  
iron citrate ABC  
transporter substrate-  
binding protein

isoleucine--tRNA  
ligase

long-chain fatty acid--  
CoA ligase  
NAD-dependent  
dehydratase

NIF3 protein

peptidase

prolyl-tRNA  
synthetase

protein rlx

pyruvate oxidase

recombinase RecA

hypothetical protein  
AXY36\_00580  
hypothetical protein  
AXY36\_07855  
hypothetical protein  
BSF33\_00540  
hypothetical protein  
BSF33\_09115  
isocitrate  
dehydrogenase  
magnesium  
transporter CorA  
malate  
dehydrogenase  
(acceptor)  
ornithine--oxo-acid  
aminotransferase  
phosphoenolpyruvate-  
protein  
phosphotransferase  
phosphotransacetylase  
preprotein  
translocase subunit  
YajC

recombinase XerD

RLX protein

scaffolding protein

short-chain

dehydrogenase

thiol reductase

thioredoxin

thioredoxin-disulfide

reductase

transcription

termination/antitermi

nation protein NusG

UDP-N-

acetylmuramate--

alanine ligase

Uncharacterised

protein

undecaprenyldiphosp

ho-

muramoylpentapepti

de beta-N-

acetylglucosaminyltr

ansferase

virulence factor

pyridoxamine 5-phosphate oxidase  
pyruvate kinase  
single-stranded DNA-binding protein  
stage V sporulation protein G  
transaldolase  
transcriptional regulator  
triose-phosphate isomerase  
type I glyceraldehyde-3-phosphate dehydrogenase  
urease subunit alpha

**100 + 300 mg  
L-1**

alkyl hydroperoxide reductase

3-hydroxy-3-methylglutaryl-CoA reductase

elongation factor Ts

epimerase

phosphopyruvate hydratase

esterase

glycosyl transferase family 2

octanoyltransferase

polyribonucleotide nucleotidyltransferase

				succinate dehydrogenase		
<b>100 + 200 + 300 mg L-1</b>	30S ribosomal protein S13	6-phosphogluconate dehydrogenase	elongation factor Ts	50S ribosomal protein L33	octanoyltransferase	30S ribosomal protein S10
	alpha/beta hydrolase	elongation factor Ts	NAD(P)-dependent oxidoreductase	autolysin	prephenate dehydrogenase	50S ribosomal protein L22
	asparagine--tRNA ligase	hypothetical protein	octanoyltransferase	cell division protein GpsB		NAD(P)-dependent oxidoreductase
	DNA methyltransferase	hypothetical protein RES9_02285	phosphopyruvate hydratase	enoyl-ACP reductase		octanoyltransferase
	DNA-directed RNA polymerase subunit alpha	NAD(P)-dependent oxidoreductase	prephenate dehydrogenase	hypothetical protein A4A82_03720		polysaccharide biosynthesis protein
	lysine--tRNA ligase	peptidase M23	sulfurtransferase FdhD	hypothetical protein AXY36_01150		
	manganese- dependent inorganic pyrophosphatase	phosphogluconate dehydrogenase (NADP(+)- dependent, decarboxylating)		hypothetical protein RES9_02285		
	NAD(P)-dependent oxidoreductase	prephenate dehydrogenase		prephenate dehydrogenase		
	octanoyltransferase	recombinase RecA		sulfurtransferase		
	phosphoglucosamine mutase					
	prephenate dehydrogenase					
	recombinase RecA					
	universal stress protein					