

Table S1.

Gene Number	Annotation	Gene	Entry Vector Constructed	Entry Vector Sequence Correct	Localized and Sequence-verified C-terminal Fusion	Localization w/ C-terminal Tag	Localized and Sequence-verified N-terminal Fusion	Localization w/ N-terminal Tag	Protein Localized as Both N- or C-terminal Fusion
CC0001	ATP/GTP-binding protein		Y	Y	N		N		N
CC0002	Septum formation protein Maf		Y	Y	N		N		N
CC0003	Shikimate 5-dehydrogenase		Y	Y	N		N		N
CC0004	Dephospho-CoA kinase		Y	Y	N		N		N
CC0005	DNA polymerase III, epsilon chain	dnaQ	Y	Y	N		N		N
CC0006	Enoyl-CoA hydratase		Y	Y	N		N		N
CC0007	SSU ribosomal protein S20P		Y	Y	N		N		N
	Chromosomal replication initiator protein								
CC0008	dnaA	dnaA	Y	Y	N		N		N
CC0009	Alkylated DNA repair protein alkB	alkB	N	N	N		N		N
CC0010	Chaperone protein dnaK	dnaK	Y	Y	Y	Central - Focus	N		N
CC0011	Chaperone protein dnaJ	dnaJ	N	N	N		N		N
CC0012	DNA mismatch repair protein mutS	mutS	Y	Y	Y	Middle OR Pole	Y	Middle OR Pole	Y
CC0013	[protein-P1I] uridylyltransferase		N	N	N		N		N
CC0014	Molybdenum cofactor biosynthesis protein C	moaC	Y	Y	N		N		N
CC0015	Molybdenum cofactor biosynthesis protein B	moaB	Y	Y	N		N		N
CC0016	Molybdopterin converting factor, large subunit	moaE	Y	Y	N		N		N
	Molybdopterin converting factor, small subunit								
CC0017	subunit	moaD	Y	Y	N		N		N
CC0018	Molybdenum cofactor biosynthesis protein A	moaA	Y	Y	N		N		N
	Molybdopterin-guanine dinucleotide biosynthesis protein A								
CC0019	biosynthesis protein A		Y	Y	N		N		N
CC0020	Hypothetical protein		Y	Y	N		N		N
	Putative aerobic-type carbon monoxide dehydrogenase, large subunit coxL								
CC0021	Putative aerobic-type carbon monoxide dehydrogenase, small subunit coxS		Y	Y	N		N		N
CC0022	dehydrogenase, small subunit coxS		Y	Y	N		N		N
CC0023	Putative periplasmic protein Uroporphyrin-III C-methyltransferase / Precorrin-2 dehydrogenase / Sirohydrochlorin ferrochelatase		Y	Y	N		N		N
CC0024	ferrochelatase		Y	Y	N		N		N
CC0025	Transporter		Y	Y	N		N		N
CC0026	PAS-family sensor histidine kinase		N	N	N		N		N
CC0027	2OG-Fe(II) oxygenase		Y	Y	N		N		N
CC0028	TonB-dependent receptor		Y	Y	N		N		N
CC0029	Lysine exporter protein		Y	Y	N		N		N
CC0030	Ribonuclease		Y	Y	N		N		N
CC0031	Toxin protein vapC	vapC	Y	Y	N		N		N
CC0032	Antitoxin protein vapB	vapB	Y	Y	N		N		N
CC0033			Y	Y	N		N		N
	Polyribonucleotide nucleotidyltransferase / Polynucleotide adenyllyltransferase								
CC0034	Polynucleotide adenyllyltransferase		Y	Y	N		N		N
CC0035	SSU ribosomal protein S15P		N	N	N		N		N
CC0036	tRNA pseudouridine synthase B		Y	Y	N		N		N
CC0037	Ribosome-binding factor A		Y	Y	N		N		N
CC0038	Esterase Lipase Family Protein		Y	Y	N		N		N
CC0039	Hypothetical protein		Y	Y	N		N		N
CC0040	Hypothetical protein		N	N	N		N		N
CC0041	Hypothetical protein		Y	Y	N		N		N
	Bacterial Protein Translation Initiation Factor 2 (IF-2)								
CC0042	Hypothetical cytosolic protein / LSU ribosomal protein L7AE		N	N	N		N		N
CC0043	ribosomal protein L7AE		N	N	N		N		N

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CC0044	N utilization substance protein A		Y	N	N		N		N
CC0045	Hypothetical cytosolic protein		N	N	N		N		N
CC0046			Y	Y	N		N		N
CC0047	Inorganic pyrophosphatase		Y	Y	Y	Middle OR Pole	N		N
CC0048	Conserved Hypothetical protein		Y	N	N		N		N
CC0049	tRNA G46) methyltransferase		Y	Y	N		N		N
CC0050	S-adenosylmethionine synthetase	metK	Y	Y	Y	Varied Focus	Y	Varied Focus	Y
CC0051	HTH transcriptional regulator	hipB	Y	Y	N		N		N
CC0052	Apolipoprotein N-acyltransferase		N	N	N		N		N
CC0053	Magnesium and cobalt efflux protein corC	corC	Y	Y	N		N		N
CC0054	Predicted metal-dependent hydrolase		Y	Y	N		N		N
CC0055	Phosphate starvation-inducible protein phoH	phoH	Y	Y	N		N		N
CC0056	tRNA 2-methylthioadenosine synthase		N	N	N		N		N
CC0057	Ferric uptake regulation protein		Y	Y	N		N		N
CC0058	Ribosomal-protein-S18-alanine acetyltransferase		Y	Y	N		N		N
CC0059	Glycoprotease family protein		Y	Y	N		N		N
CC0060	Conserved hypothetical protein		Y	Y	N		N		N
CC0061	Oxygen-insensitive NADH nitroreductase		Y	Y	N		N		N
CC0062	Mitochondrial type Fe-S cluster assembly protein NFU		Y	Y	N		N		N
CC0063	Cytochrome p450		Y	Y	N		N		N
CC0064	Tryptophanyl-tRNA synthetase	trpS	Y	Y	N		N		N
CC0065	Virulence factor mviN	mviN	Y	Y	N		N		N
CC0066	Methyl-accepting chemotaxis protein		Y	Y	N		Y	Polar	N
CC0067	Hypothetical protein		Y	Y	N		N		N
CC0068	Rieske (2Fe-2S) domain protein		Y	Y	N		N		N
CC0069	Hypothetical cytosolic protein		Y	N	N		N		N
CC0070	Glycerol-3-phosphate dehydrogenase [NAD+]		N	N	N		N		N
CC0071	O-sialoglycoprotein endopeptidase		Y	Y	N		N		N
CC0072	Porphobilinogen deaminase		N	N	N		N		N
CC0073	Uroporphyrinogen-III synthase		Y	Y	N		N		N
CC0074	Conserved hypothetical protein		Y	Y	N		Y	Middle OR Pole	N
CC0075	HemY domain membrane protein		Y	N	N		N		N
CC0076	Enoyl-CoA hydratase / Delta-cis-delta-trans-enoyl-CoA isomerase / 3-hydroxyacyl-CoA dehydrogenase / 3-hydroxybutyryl-CoA epimerase		Y	Y	N		N		N
CC0077	3-ketoacyl-CoA thiolase		Y	Y	N		N		N
CC0078	Hypothetical protein		Y	Y	N		N		N
CC0079	Acyl-CoA dehydrogenase, long-chain specific		Y	Y	N		N		N
CC0080	Acyl-CoA dehydrogenase		Y	Y	N		N		N
CC0081	Transcriptional regulator, MerR family		Y	Y	N		N		N
CC0082	LexA-related transcriptional repressor		Y	Y	N		N		N
CC0083	Hypothetical protein		Y	N	N		N		N
CC0084	Class 1 lysyl-tRNA synthetase	lysS	Y	Y	N		N		N
CC0085	Phosphoglucosyltransferase / Phosphomannomutase		N	N	N		N		N
CC0086	Phosphoribosylaminoimidazolecarboxamide formyltransferase / IMP cyclohydrolase	purH	Y	Y	N		N		N
CC0087	Dienelactone hydrolase-related protein		N	N	N		N		N
CC0088	NAD-specific glutamate dehydrogenase		Y	N	N		N		N

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CC0089	Conserved membrane spanning protein		Y	Y	N		N		N
CC0090	HerA helicase-related ATPase		Y	Y	N		N		N
CC0091	MHYT/PAS-family GGDEF/EAL protein		Y	Y	N		N		N
CC0092	UDP-glucose 4-epimerase		Y	Y	N		N		N
CC0093	Transporter, drug/metabolite exporter family		Y	Y	N		N		N
CC0094	Short chain dehydrogenase		Y	N	N		N		N
CC0095	Probable UDP-N-acetyl-D-mannosaminuronic acid transferase		N	N	N		N		N
CC0096	Quinone oxidoreductase		N	N	N		N		N
CC0097	L-asparaginase		Y	Y	N		N		N
CC0098	Conserved hypothetical protein		Y	Y	N		N		N
CC0099	Hypothetical protein		N	N	N		N		N
CC0100	Hypothetical cytosolic protein		Y	Y	N		Y	MidBand	N
CC0101	Ribulose-phosphate 3-epimerase		Y	N	N		N		N
CC0102	16S rRNA mC 967 methyltransferase RsmB	rsmB	Y	Y	N		N		N
CC0103	Hypothetical cytosolic protein		Y	N	N		N		N
CC0104	Gamma-glutamyltranspeptidase		Y	Y	N		N		N
CC0105	Orotidine 5'-phosphate decarboxylase		N	N	N		N		N
CC0106	MarC family integral membrane protein		Y	Y	N		Y	Patchy/Spotty	N
CC0107	2-polyprenyl-6-methoxyphenol hydroxylase		N	N	N		N		N
CC0108	conserved cytosolic protein		Y	Y	N		N		N
CC0109	ATP-dependent endopeptidase Lon		Y	Y	N		N		N
CC0110	Thioredoxin		Y	Y	N		N		N
CC0111	DNA-binding protein		Y	Y	N		N		N
CC0112	Conserved hypothetical protein		Y	Y	N		N		N
CC0113	Glyoxalase family protein		Y	Y	N		N		N
CC0114	Hypothetical protein		Y	Y	N		N		N
CC0115	Transcriptional regulators, MarR/EmrR family		Y	Y	N		N		N
CC0116	TolB protein		Y	N	N		N		N
CC0117	Phosphoglucosamine mutase		N	N	N		N		N
CC0118	Glucosamine--fructose-6-phosphate aminotransferase [isomerizing]		Y	Y	N		N		N
CC0119	Porphyrin biosynthesis protein		Y	Y	N		Y	Central - Focus	N
CC0120	Putative transcriptional regulator		Y	Y	N		N		N
CC0121	Hypothetical acetyltransferase		Y	N	N		N		N
CC0122	Hypothetical protein		Y	Y	N		N		N
CC0123	Conserved hypothetical protein		Y	Y	N		N		N
CC0124	3-hydroxyacyl CoA dehydrogenase		Y	Y	N		N		N
CC0125	Conserved hypothetical protein		Y	N	N		N		N
CC0126	Transporter, LysE family		Y	N	N		N		N
CC0127	Glutathione S-transferase		Y	Y	N		N		N
CC0128	Hypothetical protein		Y	Y	N		N		N
CC0129	Argininosuccinate synthase		Y	Y	N		N		N
CC0130	Hypothetical protein		Y	Y	N		N		N
CC0131	Kup system potassium uptake protein		Y	Y	Y	Patchy/Spotty	N		N
CC0132	Rrf2 family protein		Y	Y	N		N		N
CC0133	Ketoacyl reductase hetN	hetN	Y	Y	N		Y	Patchy/Spotty	N
CC0134	Radical SAM family enzyme		Y	Y	N		N		N
CC0135	surface protein		Y	Y	N		N		N
CC0136	Endopeptidase degP	degP	Y	Y	N		N		N
CC0137	AmpG protein		Y	Y	N		N		N
CC0138	Hybrid two-component histidine kinase/receiver protein shkA	shkA	Y	Y	N		N		N

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CC0139	Iron(III) dicitrate transport protein fecA ATPase related to magnesium chelatase	fecA	Y	Y	N		N		N
CC0140	subunit ChII	chII	N	N	N		N		N
CC0141	Glutathione synthetase		N	N	N		N		N
CC0142	Tetratricopeptide repeat family protein		Y	N	N		N		N
CC0143	Endonuclease		Y	Y	N		N		N
CC0144	Tetrapyrrole (Corrin/Porphyrin) methylase family protein		Y	Y	N		N		N
CC0145	Oxygen-independent coproporphyrinogen-III oxidase		Y	N	N		N		N
CC0146	Xanthosine triphosphate pyrophosphatase		Y	Y	N		N		N
CC0147	Glutathione S-transferase		Y	Y	N		N		N
CC0148	Hypothetical protein		Y	Y	N		N		N
CC0149	Conserved hypothetical protein		Y	Y	N		N		N
CC0150	Transcriptional regulator, Cro/C1 family		Y	N	N		N		N
CC0151	PDZ domain family protein		Y	Y	N		N		N
CC0152	Ribonuclease PH		Y	N	N		N		N
CC0153	Heat-inducible transcription repressor hrcA	hrcA	Y	Y	N		Y	Pole	N
CC0154	GrpE protein	grpE	N	N	N		N		N
CC0155	Hypothetical protein		Y	Y	N		N		N
CC0156	DNA polymerase III, beta chain		Y	Y	Y	Central - Focus	Y	Central - Focus	Y
CC0157	Transcriptional regulator, ArsR family		Y	Y	N		N		N
CC0158	Glyoxalase family protein		Y	Y	N		N		N
CC0159	DNA replication and repair protein recF	recF	N	N	N		N		N
CC0160	DNA gyrase subunit B		N	N	N		N		N
CC0161	Methyl-accepting chemotaxis protein		Y	Y	Y	Pole	Y	Pole	Y
CC0162	Hypothetical protein		Y	Y	N		N		N
CC0163	Conserved hypothetical protein		Y	Y	N		N		N
CC0164	Chain length regulator (capsular polysaccharide biosynthesis) / Tyrosine-protein kinase (capsular polysaccharide biosynthesis)		Y	N	N		N		N
CC0165	O-antigen polymerase		Y	Y	N		N		N
CC0166	Polyisoprenylphosphate hexose-1-phosphotransferase pssY	pssY	Y	Y	N		N		N
CC0167	Hypothetical protein		Y	Y	N		N		N
CC0168	Bis(5'-nucleosyl)-tetrakisphosphate (symmetrical)		Y	Y	N		N		N
CC0169	Putative capsule polysaccharide export protein precursor		Y	Y	N		N		N
CC0170	Hypothetical protein		Y	N	N		N		N
CC0171	TonB-dependent receptor		N	N	N		N		N
CC0172	General secretion pathway protein C		Y	Y	N		N		N
CC0173	General secretion pathway protein D		Y	N	N		N		N
CC0174	General secretion pathway protein E		Y	Y	N		N		N
CC0175	General secretion pathway protein F		Y	Y	N		N		N
CC0176	General secretion pathway protein G		Y	Y	N		N		N
CC0177	General secretion pathway protein H		Y	Y	N		N		N
CC0178	General secretion pathway protein I		Y	Y	N		N		N
CC0179	General secretion pathway protein J		Y	Y	N		N		N
CC0180	General secretion pathway protein K		N	N	N		N		N
CC0181	General secretion pathway protein L		Y	Y	N		N		N
CC0182	General secretion pathway protein M		Y	Y	Y	Patchy/Spotty	Y	Patchy/Spotty	Y

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CC0183	General secretion pathway protein N		Y	Y	N		N		N
CC0184	Peptidase family A24		Y	Y	N		N		N
CC0185	TonB-dependent receptor		Y	Y	N		N		N
CC0186	Guanine-hypoxanthine permease		Y	Y	N		N		N
CC0187	NUP-family purine nucleoside permease		N	N	N		N		N
CC0188	ABC transporter ATP-binding protein		N	N	N		N		N
CC0189	Hypothetical cytosolic protein		Y	N	N		N		N
CC0190	Acyl-CoA hydrolase		Y	Y	N		N		N
CC0191	N-acetylglutamate synthase domain protein		Y	N	N		N		N
CC0192	Long-chain-fatty-acid--CoA ligase		Y	Y	N		N		N
CC0193	3-isopropylmalate dehydrogenase		Y	Y	N		N		N
CC0194	Hypothetical cytosolic protein		Y	Y	N		N		N
CC0195	3-isopropylmalate dehydratase small subunit		Y	Y	N		N		N
CC0196	3-isopropylmalate dehydratase large subunit		Y	Y	N		N		N
CC0197	LSU ribosomal protein L19P		Y	Y	N		N		N
CC0198	tRNA (Guanine-N1) -methyltransferase		Y	Y	N		N		N
CC0199	Hypothetical protein		Y	Y	N		N		N
CC0200	2OG-Fe(II) oxygenase superfamily protein		Y	Y	N		N		N
CC0201	Outer membrane protein		Y	Y	Y	Patchy/Spotty	N		N
CC0202	DesA-family fatty acid desaturase		N	N	N		N		N
CC0203	Sterol desaturase family protein		Y	Y	N		N		N
CC0204	Glutathione-regulated potassium-efflux system protein kefB	kefB	Y	Y	N		N		N
CC0205	NAD(P)H oxidoreductase yheR		Y	Y	N		N		N
CC0206	Succinyl-CoA:3-ketoacid-coenzyme A transferase subunit A		Y	Y	N		N		N
CC0207	Succinyl-CoA:3-ketoacid-coenzyme A transferase subunit B		Y	Y	N		N		N
CC0208	Probable transcriptional regulator syrB	syrB	Y	Y	N		N		N
CC0209	Undecaprenyl-phosphomannose:protein mannosyltransferase		N	N	N		N		N
CC0210	TonB-dependent receptor		Y	Y	N		N		N
CC0211	Agmatine deiminase		Y	Y	N		N		N
CC0212	N-carbamoylputrescine amidase		Y	Y	N		N		N
CC0213	Ribosomal-protein-alanine acetyltransferase		Y	Y	N		N		N
CC0214	TonB-dependent receptor		Y	Y	N		N		N
CC0215	Hypothetical cytosolic protein		Y	N	N		N		N
CC0216	Conserved hypothetical protein		Y	Y	N		N		N
CC0217	Thiol:disulfide interchange protein DsbD		Y	Y	N		N		N
CC0218	Hypothetical protein		Y	N	N		N		N
CC0219	Hypothetical protein		Y	Y	N		N		N
CC0220	Thiol-disulfide isomerase and thioredoxins		Y	Y	N		N		N
CC0221	Hypothetical protein		Y	Y	N		N		N
CC0222	Glucose-6-phosphate isomerase / Glucose-6-phosphate 1-epimerase		N	N	N		N		N
CC0223	Esterase Lipase Family Protein		Y	Y	N		N		N
CC0224	Conserved hypothetical protein (putative porin)		Y	Y	N		N		N
CC0225	Hypothetical protein		Y	Y	N		N		N
CC0226	Hypothetical protein		Y	Y	N		N		N
CC0227	Methyltransferase		Y	N	N		N		N
CC0228	Hypothetical membrane spanning protein		Y	Y	Y	Patchy/Spotty	N		N
CC0229	CAAX amino terminal protease family protein		Y	Y	N		N		N

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CC0230	Ribosomal large subunit pseudouridine synthase B		Y	Y	N		N		N
CC0231	tRNA-specific adenosine deaminase		Y	Y	N		N		N
CC0232	Hypothetical protein		Y	Y	N		N		N
CC0233	UDP-N-acetylglucosamine 4,6-dehydratase		Y	Y	N		N		N
CC0234	WecE-family cell wall biogenesis enzyme		Y	Y	N		N		N
CC0235	Hypothetical protein		Y	Y	N		N		N
CC0236	Conserved hypothetical protein		Y	Y	N		N		N
CC0237	Two-component response regulator chvI	chvI	Y	N	N		N		N
CC0238	Two-component sensor histidine kinase chvG		Y	Y	Y	Patchy/Spotty	Y	Patchy/Spotty	Y
CC0239	HPR(SER) kinase / phosphatase		N	N	N		N		N
CC0240	PTS system, IIA component		Y	Y	N		N		N
CC0241	Phosphocarrier protein HPr		N	N	N		N		N
CC0242	Hypothetical protein		Y	Y	N		N		N
CC0243	Hypothetical protein		Y	Y	N		N		N
CC0244	Hydrolase (HAD superfamily)		Y	Y	N		N		N
CC0245	Pterin-4-alpha-carbinolamine dehydratase		Y	Y	N		N		N
CC0246	Cyclohexanol dehydrogenase		Y	Y	N		N		N
CC0247	Two-component receiver protein		Y	Y	N		N		N
CC0248	Sensor histidine protein kinase		Y	Y	N		Y	Patchy/Spotty	N
CC0249	SCO1/SenC family protein		Y	Y	N		N		N
CC0250	Poly(3-hydroxyalkanoate) depolymerase		Y	Y	Y	Central - Focus	Y	Patchy/Spotty	Y
CC0251	Zinc metalloprotease		Y	Y	N		N		N
CC0252	Multimodular transpeptidase-transglycosylase PBP 1A		Y	Y	N		N		N
CC0253	Aspartate-semialdehyde dehydrogenase		Y	Y	N		N		N
CC0254	RarD family membrane permease		Y	Y	N		N		N
CC0255	Esterase		Y	Y	N		N		N
CC0256	Pyridoxine kinase		Y	Y	N		N		N
CC0257	Adenosylhomocysteinase		Y	Y	N		N		N
CC0258	Hypothetical protein		N	N	N		N		N
CC0259	Glutathione S-transferase		Y	Y	N		N		N
CC0260	Ribonucleoside-diphosphate reductase beta chain		Y	N	N		N		N
CC0261	Ketopantoate reductase PanE/ApbA family protein		Y	Y	N		N		N
CC0262	Hypothetical protein		Y	Y	N		N		N
CC0263	C4-dicarboxylate transport protein		Y	N	N		N		N
CC0264	AMP nucleosidase		Y	Y	N		N		N
CC0265	3-ketoacyl-CoA thiolase		Y	Y	N		N		N
CC0266	MutT-like protein		N	N	N		N		N
CC0267	DNA polymerase III subunit gamma/tau		Y	Y	N		N		N
CC0268	Hypothetical transcriptional regulatory protein		Y	Y	N		N		N
CC0269	Recombination protein recR	recR	Y	Y	N		N		N
CC0270	Hypothetical protein		Y	Y	N		N		N
CC0271	RmuC family protein		Y	Y	N		N		N
CC0272	Peptide deformylase		Y	Y	N		N		N
CC0273	Transposase		Y	Y	N		N		N
CC0274	Hypothetical protein		Y	Y	N		N		N
CC0275	Succinyl-diaminopimelate desuccinylase		Y	Y	N		N		N
CC0276	Glutaminase		Y	Y	N		Y	Middle AND Pole	N
CC0277	NAD(P)H dehydrogenase [quinone]		Y	N	N		N		N
CC0278	tRNA pseudouridine synthase A		Y	Y	N		N		N

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CC0279	Methionyl-tRNA formyltransferase		Y	Y	N		N		N
CC0280	Conserved cell surface protein		Y	Y	N		N		N
CC0281	2,3,4,5-tetrahydropyridine-2-carboxylate N-succinyltransferase		Y	Y	N		N		N
CC0282	Hydrolase (HAD superfamily)		Y	Y	N		N		N
CC0283	Acetylglutamate kinase		Y	Y	N		N		N
CC0284	Two-component receiver domain protein lovR	lovR	Y	Y	N		N		N
CC0285	Photosensory histidine protein kinase lovK	lovK	Y	Y	N		N		N
CC0286	Sulfate-binding protein		Y	Y	N		N		N
CC0287	Hypothetical protein		N	N	N		N		N
CC0288	Autotransporter protein		N	N	N		N		N
CC0289	Phosphate regulon sensor protein phoR	phoR	Y	Y	Y	Patchy/Spotty	Y	Patchy/Spotty	Y
CC0290	Phosphate transport system permease protein pstC	pstC	Y	Y	N		N		N
CC0291	Phosphate transport system permease protein pstA	pstA	Y	Y	N		N		N
CC0292	Phosphate transport ATP-binding protein pstB	pstB	Y	N	N		N		N
CC0293	Phosphate transport system protein phoU	phoU	Y	Y	N		N		N
CC0294	Phosphate regulon response regulator PhoB	phoB	Y	Y	N		N		N
CC0295	Two-component response regulator		Y	Y	N		N		N
CC0296	Hypothetical protein		Y	N	N		N		N
CC0297	Phosphoribosylamine--glycine ligase		Y	Y	N		N		N
CC0298	Glyoxalase superfamily protein		Y	Y	N		N		N
CC0299	Phosphotransferase family protein		Y	N	N		N		N
CC0300	Parathion hydrolase		Y	Y	Y	Patchy/Spotty	N		N
CC0301	Tetraacyldisaccharide 4'-kinase		Y	Y	N		N		N
CC0302	3-deoxy-D-manno-octulosonic-acid transferase		Y	Y	N		N		N
CC0303	Cobalt-zinc-cadmium resistance protein czcD	czcD	Y	Y	N		N		N
CC0304	Hypothetical lipoprotein		Y	Y	N		N		N
CC0305	Phospholipid-lipopolysaccharide ABC transporter		Y	Y	N		N		N
CC0306	Hypothetical protein		Y	Y	N		N		N
CC0307	Hypothetical cytosolic protein		Y	Y	N		N		N
CC0308	Myo-inositol-1(or 4)-monophosphatase		Y	Y	N		N		N
CC0309	Microcin-processing peptidase 1 (PmbA)	pmbA	Y	Y	N		N		N
CC0310	Hypothetical membrane spanning protein		Y	Y	N		N		N
CC0311	Hypothetical protein		Y	Y	N		N		N
CC0312	Hypothetical protein		Y	Y	N		N		N
CC0313	3-polyprenyl-4-hydroxybenzoate decarboxylase		Y	Y	Y	Patchy/Spotty	Y	Patchy/Spotty	Y
CC0314	Glutamate 5-kinase		Y	Y	N		N		N
CC0315	GTP-binding protein CgtA (probably involved in DNA repair)	cgtA	Y	Y	N		N		N
CC0316	Hypothetical protein		Y	Y	N		N		N
CC0317	Acetyltransferase, GNAT family		Y	Y	N		N		N
CC0318	LSU ribosomal protein L27P		Y	Y	N		N		N
CC0319	LSU ribosomal protein L21P		Y	Y	N		N		N
CC0320	Conserved hypothetical protein		Y	Y	N		N		N
CC0321	Low-affinity zinc transport protein		Y	Y	N		N		N
CC0322	ToIR protein		Y	Y	N		N		N
CC0323	Vegetatible incompatibility protein HET-E-1		Y	N	N		N		N

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CC0324	Nitrobenzoate nitroreductase		Y	Y	N		N		N
CC0325	Monofunctional biosynthetic peptidoglycan transglycosylase		Y	Y	N		N		N
CC0326	Ribosomal-protein-alanine acetyltransferase		Y	Y	N		N		N
CC0327	Molybdenum-pterin binding protein mopB	mopB	N	N	N		N		N
CC0328	Molybdate-binding protein		Y	N	N		N		N
CC0329	Molybdenum transport system permease protein modB		N	N	N		N		N
CC0330	LytTr DNA-binding domain		Y	Y	N		N		N
CC0331	Hypothetical protein		Y	N	N		N		N
CC0332	Hypothetical secreted protein		Y	Y	N		N		N
CC0333	Lignostilbene-alpha,beta-dioxygenase		Y	Y	N		N		N
CC0334	Transcriptional regulator, TetR family		Y	Y	N		Y	Patchy/Spotty	N
CC0335	TonB-dependent receptor		N	N	N		N		N
CC0336	Transporter		Y	Y	N		N		N
CC0337	Succinyl-CoA synthetase beta chain		Y	Y	N		N		N
CC0338	Succinyl-CoA synthetase alpha chain	sucD	Y	Y	N		N		N
CC0339	2-oxoglutarate dehydrogenase E1 component	odhA	N	N	N		N		N
CC0340	Dihydrolipoamide succinyltransferase component (E2) of 2-oxoglutarate dehydrogenase complex	odhB	Y	N	N		N		N
CC0341	IroE protein		N	N	N		N		N
CC0342	Dihydrolipoamide dehydrogenase		Y	Y	N		N		N
CC0343	Probable chemoreceptor Y4FA		Y	Y	Y	Pole	N		N
CC0344	Integrase/recombinase (XerC/CodV family)		N	N	N		N		N
CC0345	Hypothetical protein		Y	Y	N		N		N
CC0346	Primosomal protein N'		Y	Y	N		N		N
CC0347	Integral membrane protein		Y	Y	N		N		N
CC0348	O-antigen acetylase		Y	Y	N		N		N
CC0349	Hypothetical protein		Y	Y	N		N		N
CC0350	Hypothetical protein with pentapeptide repeats		N	N	N		N		N
CC0351	Outer membrane protein		Y	Y	N		N		N
CC0352	secretory tripeptidyl aminopeptidase		Y	Y	N		N		N
CC0353	Delta3,5-delta2,4-dienoyl-CoA isomerase precursor		Y	Y	N		N		N
CC0354	SH3 domain-containing cell surface protein		Y	Y	N		N		N
CC0355	Putative hydrolase		Y	Y	N		N		N
CC0356	Conserved hypothetical protein		N	N	N		N		N
CC0357	Zinc uptake regulation protein		Y	Y	N		N		N
CC0358	Acid phosphatase		Y	Y	N		N		N
CC0359	Deoxyhypusine synthase		Y	Y	N		N		N
CC0360	Ornithine decarboxylase		Y	Y	N		N		N
CC0361	Phosphonates transport ATP-binding protein phnC		Y	Y	N		N		N
CC0362	Phosphonates-binding protein		Y	N	N		N		N
CC0363	Phosphonates transport system permease protein phnE		Y	N	N		N		N
CC0364	Magnesium and cobalt efflux protein corC homolog		Y	Y	N		N		N
CC0365	ATP synthase B chain		Y	Y	N		N		N
CC0366	ATP synthase B' chain		N	N	N		N		N



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CC0367	ATP synthase C chain		Y	Y	N		N		N
CC0368	ATP synthase A chain		Y	Y	Y	Patchy/Spotty	N		N
CC0369	Putative ATP synthase protein I		Y	Y	N		N		N
CC0370			Y	Y	N		N		N
CC0371	Conserved hypothetical protein		Y	Y	N		N		N
CC0372	Hypothetical membrane spanning protein		N	N	N		N		N
CC0373	Chromosome partition protein smc		N	N	N		N		N
CC0374	Thiol:disulfide interchange protein dsbA		N	N	N		N		N
CC0375	Thiol:disulfide interchange protein dsbA		Y	Y	N		N		N
CC0376	Hypothetical cytosolic protein		Y	Y	N		N		N
CC0377	A/G-specific adenine DNA glycosylase		N	N	N		N		N
CC0378	Adenine-specific methyltransferase ccrM	ccrM	Y	Y	N		N		N
CC0379	Ribonuclease HII		N	N	N		N		N
CC0380	Glucan endo-1,3-beta-glucosidase		Y	Y	N		N		N
CC0381	Multidrug resistance protein		Y	Y	Y	Patchy/Spotty	N		N
CC0382	DNA-3-methyladenine glycosylase		Y	Y	Y	Middle OR Pole	N		N
CC0383	Hypothetical protein		Y	Y	N		N		N
CC0384	Esterase Lipase Family Protein		Y	Y	N		N		N
CC0385	Aminomethyltransferase family protein		N	N	N		N		N
CC0386	ADP-heptose-LPS heptosyltransferase		Y	Y	N		N		N
CC0387	Conserved hypothetical protein		Y	Y	N		N		N
CC0388	Dihydroorotase		Y	Y	N		N		N
CC0389	RNA polymerase sigma factor		Y	Y	Y	Middle OR Pole	Y	Middle OR Pole	Y
CC0390	Hypothetical cytosolic protein		Y	Y	N		N		N
CC0391	Feruloyl-CoA synthetase		Y	Y	N		N		N
CC0392	Conserved hypothetical protein		N	N	N		N		N
CC0393	Acetolactate synthase		Y	Y	N		N		N
CC0394	Hypothetical protein		Y	Y	N		N		N
CC0395	Zinc metallohydrolase, glyoxalase II family		N	N	N		N		N
CC0396	Transcriptional regulator, MarR family		Y	Y	N		N		N
CC0397	Delta(3)-cis-delta(2)-trans-enoyl-CoA isomerase		Y	N	N		N		N
CC0398	Short chain dehydrogenase		Y	Y	N		N		N
CC0399	Hypothetical protein		Y	Y	N		N		N
CC0400	Short chain dehydrogenase		Y	Y	N		N		N
CC0401	DNA transformation protein tfoX	tfoX	Y	Y	N		N		N
CC0402	Diamine acetyltransferase		Y	Y	N		N		N
CC0403	Macrolide-efflux protein		Y	Y	N		N		N
CC0404	Hypothetical protein		Y	Y	N		N		N
CC0405	Acetyltransferase		Y	Y	N		N		N
CC0406	Hypothetical protein		Y	Y	N		N		N
CC0407	CoA pyrophosphatase		Y	Y	N		N		N
CC0408	Poly(A) polymerase / tRNA-nucleotidyltransferase		N	N	N		N		N
CC0409	GMP synthase [glutamine-hydrolyzing]		Y	Y	N		N		N
CC0410	Hypothetical protein		Y	Y	N		N		N
CC0411	Hypothetical protein		Y	Y	N		N		N
CC0412	Hypothetical protein		Y	Y	N		N		N
CC0413	Hypothetical protein		Y	Y	N		N		N
CC0414	Fasciclin domain cell surface protein		Y	Y	N		N		N
CC0415	Hypothetical protein		Y	Y	N		N		N
CC0416	Dihydroneopterin aldolase		Y	Y	N		N		N
CC0417	3-oxoacyl-[acyl-carrier protein] reductase		Y	N	N		N		N

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CC0418	Phosphohydrolase (MutT/nudix family protein)		Y	Y	N		N		N
CC0419	Aldehyde dehydrogenase		Y	Y	N		N		N
CC0420	Hypothetical protein		Y	Y	N		N		N
CC0421	Hypothetical cytosolic protein		Y	Y	N		N		N
CC0422	Hypothetical protein		Y	Y	N		N		N
CC0423	Hypothetical protein		Y	Y	N		N		N
CC0424	Transcriptional regulator, AsnC family		Y	Y	N		N		N
CC0425	Conserved membrane-spanning protein		Y	Y	N		N		N
CC0426	Amino acid permease		Y	Y	N		N		N
CC0427	Acyl-CoA dehydrogenase, short-chain specific		Y	Y	N		N		N
CC0428	Methyl-accepting chemotaxis protein		N	N	N		N		N
CC0429	Hypothetical protein		Y	Y	N		N		N
CC0430	Methyl-accepting chemotaxis protein		Y	Y	Y	Pole	Y	Varied Focus	Y
CC0431	Virus Protein		Y	Y	N		Y	Pole	N
CC0432	Chemotaxis receiver domain protein cheYI	cheYI	Y	Y	N		N		N
CC0433	Chemotaxis histidine kinase protein cheAI	cheAI	N	N	N		N		N
CC0434	Chemotaxis protein cheW	cheW	Y	N	N		N		N
CC0435	Chemotaxis protein methyltransferase		Y	Y	N		Y	Pole	N
CC0436	Receiver domain-glutamate methylesterase cheBI		Y	Y	N		N		N
CC0437	Chemotaxis receiver domain protein cheYII	cheYII	Y	Y	N		N		N
CC0438	Chemotaxis protein cheD	cheD	Y	Y	N		N		N
CC0439	cheU protein	cheU	Y	Y	N		N		N
CC0440	CheYIII	cheYIII	Y	Y	N		N		N
CC0441	cheE protein	cheE	Y	Y	N		N		N
CC0442	TonB-dependent receptor		Y	N	N		N		N
CC0443	N-acetylglucosamine-6-phosphate deacetylase		Y	Y	N		N		N
CC0444	Glucosamine-6-phosphate deaminase		Y	Y	N		N		N
CC0445	Transcriptional regulator, GntR family		Y	Y	N		N		N
CC0446	N-acetyl-glucosamine/N-acetyl-chitin oligosaccharide outer membrane transporter nagA	nagA	Y	Y	N		N		N
CC0447	Beta-N-acetylhexosaminidase		Y	N	N		N		N
CC0448	Phosphoenolpyruvate-protein phosphotransferase / Phosphocarrier protein HPr / PTS system, glucose-specific IIA subunit		Y	Y	N		N		N
CC0449	PTS system, N-acetylglucosamine-specific IIBC component		N	N	N		N		N
CC0450	Na <sup>+</sup> /H <sup>+</sup> antiporter nhaA	nhaA	N	N	N		N		N
CC0451	Zn-dependent hydrolase, glyoxalase II family		Y	N	N		N		N
CC0452	Hypothetical protein		N	N	N		N		N
CC0453	Ribosomal large subunit pseudouridine synthase D		Y	Y	N		N		N
CC0454	TonB-dependent receptor		Y	Y	N		N		N
CC0455	Alkaline phosphatase		Y	Y	N		N		N
CC0456	Transporter, LysE family		Y	N	N		N		N
CC0457	Phosphoribosyl-AMP cyclohydrolase		Y	Y	N		N		N
CC0458	Hypothetical protein		Y	Y	N		N		N
CC0459	GTP cyclohydrolase I		Y	Y	N		N		N

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CC0460	CysteinyI-tRNA synthetase putative polyketide cyclase-dehydrase/lipid		Y	Y	N		N		N
CC0461	transport protein		Y	Y	N		N		N
CC0462	transport protein		Y	Y	N		Y	Middle OR Pole	N
CC0463	Hypothetical cytosolic protein		Y	Y	N		N		N
CC0464	ThreonyI-tRNA synthetase		Y	Y	N		N		N
CC0465	Putative rhamnosyl transferase		Y	Y	N		N		N
CC0466	Hypothetical protein		Y	Y	N		N		N
CC0467	Hydroxymethylglutaryl-CoA lyase		Y	Y	N		N		N
CC0468	Glucosyltransferase		Y	Y	N		N		N
CC0469	Glycosyl transferase family protein		N	N	N		N		N
CC0470	Conserved hypothetical protein		Y	Y	N		Y	Patchy/Spotty	N
CC0471	23S rRNA methyltransferase Ubiquinol-cytochrome c reductase iron-sulfur subunit		Y	Y	N		N		N
CC0472			Y	Y	N		N		N
CC0473	Cytochrome b		Y	Y	N		N		N
CC0474	Cytochrome c1		Y	Y	N		N		N
CC0475	Conserved hypothetical protein		Y	N	N		N		N
CC0476	Phosphoglycerate mutase family		Y	Y	Y	Patchy/Spotty	N		N
CC0477	Carboxymethylenebutenolidase		N	N	N		N		N
CC0478	Carboxymethylenebutenolidase GTP-binding protein, probable translation factor		Y	Y	N		N		N
CC0479			Y	Y	N		N		N
CC0480	Hypothetical protein		Y	Y	N		N		N
CC0481	Pirin		Y	Y	N		N		N
CC0482	5-methyltetrahydropteroyltriI glutamate-- homocysteine methyltransferase		N	N	N		N		N
CC0483	Integral membrane protein		Y	Y	N		N		N
CC0484	Peptidyl-tRNA hydrolase		N	N	N		N		N
CC0485	LSU ribosomal protein L25P		Y	Y	N		N		N
CC0486	Conserved hypothetical protein		Y	Y	Y	Patchy/Spotty	N		N
CC0487	Ribose-phosphate pyrophosphokinase		Y	Y	N		N		N
CC0488	Hypothetical protein		Y	Y	N		N		N
CC0489	Conserved hypothetical protein DUF497		Y	Y	N		N		N
CC0490	Multicopper polyphenol oxidase		N	N	N		N		N
CC0491	Conserved hypothetical cytosolic protein		N	N	N		N		N
CC0492	Prolipoprotein diacylglyceryl transferase		Y	Y	N		N		N
CC0493	Hypothetical protein		Y	Y	N		N		N
CC0494	Conserved hypothetical protein		Y	Y	N		Y	Patchy/Spotty	N
CC0495	Pyrraline-5-carboxylate reductase		Y	Y	Y	Pole	Y	Pole	Y
CC0496	conserved hypothetical protein		Y	Y	N		N		N
CC0497	LSU ribosomal protein L10P		Y	Y	N		N		N
CC0498	LSU ribosomal protein L12P (L7/L12)		Y	Y	N		Y	Stalk	N
CC0499	hypothetical protein (RDD superfamily)		Y	Y	N		N		N
CC0500	Secreted polysaccharide polymerase hfsI	hfsI	Y	Y	N		N		N
CC0501	Conserved hypothetical protein		Y	Y	N		N		N
CC0502	hypothetical protein		Y	Y	N		N		N
CC0503	DNA-directed RNA polymerase beta chain		Y	N	N		N		N
CC0504	DNA-directed RNA polymerase beta' chain		Y	Y	N		Y	Pole	N
CC0505	Methyl-accepting chemotaxis protein		N	N	N		N		N
CC0506	Salicylate hydroxylase		Y	Y	N		N		N
CC0507	Coproporphyrinogen III oxidase		Y	N	N		N		N
CC0508	Hypothetical protein		N	N	N		N		N

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CC0509	Hypothetical protein		Y	Y	Y	Patchy/Spotty	Y	Patchy/Spotty	Y
CC0510	Methyl-accepting chemotaxis protein		N	N	N		N		N
CC0511	Acetyl-CoA acetyltransferase		Y	Y	N		N		N
CC0512	Acetoacetyl-CoA reductase		Y	Y	N		N		N
CC0513	PurR-related transcriptional regulator		Y	Y	N		N		N
CC0514	Transposase		N	N	N		N		N
CC0515	Transposase		N	N	N		N		N
CC0516	Transcriptional regulator, LacI family		Y	N	N		N		N
CC0517	Hypothetical protein		Y	Y	N		N		N
CC0518	Cupin superfamily protein		Y	Y	N		N		N
CC0519	Hydroxyacylglutathione hydrolase		Y	Y	N		N		N
CC0520	Methyltransferase		Y	Y	N		N		N
CC0521	Nitrogen regulatory protein P-II		Y	Y	N		N		N
CC0522	Phospholipase D		Y	Y	N		N		N
CC0523	Endonuclease/Exonuclease/phosphatase family protein		Y	Y	N		N		N
CC0524	Methyltransferase		Y	Y	N		N		N
CC0525	Homoserine O-acetyltransferase		Y	Y	N		N		N
CC0526	Phosphohistidine phosphatase sixA	sixA	Y	Y	N		N		N
CC0527	Conserved hypothetical cytosolic protein		Y	Y	N		N		N
CC0528	Dihydroorotate dehydrogenase		N	N	N		N		N
CC0529	SNARE-associated family membrane protein		Y	Y	N		N		N
CC0530	Sensory transduction protein kinase cenK	cenK	N	N	N		N		N
CC0531	Gamma-glutamyltranspeptidase		Y	Y	N		N		N
CC0532	Starvation sensing protein rspA	rspA	Y	Y	N		N		N
CC0533	Hypothetical protein		Y	Y	N		N		N
CC0534	N-acetylglucosamine-6-phosphate deacetylase		Y	Y	N		N		N
CC0535	Glucosamine-6-phosphate deaminase		Y	N	N		N		N
CC0536	Transcriptional regulator, GntR family		Y	Y	N		Y	Patchy/Spotty	N
CC0537	Phosphoenolpyruvate-protein phosphotransferase / Phosphocarrier protein HPr / PTS system, glucose-specific IIA subunit		Y	Y	N		N		N
CC0538	PTS system, N-acetylglucosamine-specific IIBC component		Y	Y	N		N		N
CC0539	TonB-dependent receptor		Y	Y	N		N		N
CC0540	Alpha-N-acetylglucosaminidase		Y	N	N		N		N
CC0541	Hypothetical protein		Y	Y	N		N		N
CC0542	Oligopeptide-binding protein oppA	oppA	Y	Y	N		N		N
CC0543	Hypothetical protein		Y	Y	N		N		N
CC0544	Conserved hypothetical protein		Y	N	N		N		N
CC0545	Endonuclease		Y	N	N		N		N
CC0546	Conserved hypothetical protein		Y	Y	N		N		N
CC0547	Conserved hypothetical protein		Y	Y	N		N		N
CC0548	Hypothetical protein		Y	N	N		N		N
CC0549	Hypothetical protein		Y	Y	N		N		N
CC0550	Hypothetical protein		Y	Y	Y	Patchy/Spotty	N		N
CC0551	Hypothetical protein		Y	Y	N		N		N
CC0552	Hypothetical response regulator receiver protein		N	N	N		N		N
CC0553	secretory tripeptidyl aminopeptidase		Y	Y	N		N		N
CC0554	Hypothetical protein		Y	Y	N		N		N

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CC0555	FixC-family flavoprotein dehydrogenase		Y	Y	N		N		N
CC0556	Catalase		Y	Y	N		N		N
CC0557	Hypothetical protein		Y	Y	N		N		N
CC0558	Conserved hypothetical protein		Y	Y	N		N		N
CC0559	Conserved hypothetical protein		Y	Y	N		N		N
CC0560	FecR family protein		N	N	N		N		N
CC0561	RpoE-family sigma factor		Y	Y	N		N		N
CC0562	TonB-dependent receptor		N	N	N		N		N
CC0563	TonB-dependent receptor		Y	Y	N		N		N
CC0564	Hypothetical protein		Y	N	N		N		N
CC0565	Conserved hypothetical protein		Y	Y	N		N		N
CC0566	MoxR-like ATPases		N	N	N		N		N
CC0567	Hypothetical exported protein		Y	N	N		N		N
CC0568	Integral membrane protein		N	N	N		N		N
CC0569	Hypothetical membrane spanning protein		Y	Y	N		N		N
CC0570	Conserved hypothetical membrane protein		Y	N	N		N		N
CC0571	TonB-dependent receptor		Y	Y	N		N		N
CC0572	Polygalacturonase		Y	Y	N		N		N
CC0573	Transcriptional repressor		Y	Y	N		N		N
CC0574	Hypothetical protein		N	N	N		N		N
CC0575	Beta-lactamase		Y	Y	N		N		N
CC0576	L-asparaginase		Y	Y	N		N		N
CC0577	Cyanophycinase		Y	Y	N		N		N
CC0578	Short-chain fatty acids transporter		Y	N	N		N		N
CC0579	TonB-dependent outer membrane receptor		Y	Y	N		N		N
CC0580	Transcriptional regulator		Y	Y	N		Y	Patchy/Spotty	N
CC0581	Arginine N-succinyltransferase, beta chain		Y	Y	N		N		N
CC0582	Succinylglutamic semialdehyde dehydrogenase		Y	Y	N		N		N
CC0583	Succinylarginine dihydrolase		Y	Y	N		N		N
CC0584	Acetylmethionine aminotransferase / Succinylmethionine aminotransferase		Y	Y	N		N		N
CC0585	Conserved domain hypothetical protein		Y	Y	N		N		N
CC0586	PAS-family sensor histidine kinase		Y	Y	N		N		N
CC0587	Hypothetical protein with pentapeptide repeats		Y	N	N		N		N
CC0588	Two-component receiver domain protein		Y	Y	N		N		N
CC0589	Methyl-accepting chemotaxis protein		Y	Y	Y	Pole	N		N
CC0590	Hypothetical protein		Y	Y	N		N		N
CC0591	Chemotaxis protein cheY	cheY	Y	Y	N		N		N
CC0592	Hypothetical protein		Y	Y	N		N		N
CC0593	Methyl-accepting chemotaxis protein		Y	Y	Y	Patchy/Spotty	N		N
CC0594	chemotaxis histidine kinase protein CheAII	cheAII	Y	Y	N		N		N
CC0595	Chemotaxis protein cheW	cheW	Y	Y	Y	Variable Focus	N		N
CC0596	Chemotaxis receiver domain protein cheYII	cheYII	Y	Y	N		N		N
CC0597	Receiver domain-glutamate methyltransferase								
CC0598	cheBII	cheBII	Y	Y	N		N		N
CC0599	Chemotaxis protein methyltransferase		Y	Y	N		N		N
CC0599	Hypothetical protein		Y	Y	N		N		N
CC0600	Hypothetical protein		Y	Y	N		N		N
CC0601	Tetratricopeptide repeat family protein		N	N	N		N		N
CC0602	heme:hemopexin-binding protein		Y	Y	N		N		N
CC0603	heme:hemopexin-binding protein		Y	Y	N		N		N

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CC0604	Hypothetical protein		Y	Y	N		N		N
CC0605	Hypothetical protein		Y	N	N		N		N
CC0606	Hypothetical protein		Y	Y	N		N		N
CC0607	Hypothetical protein		Y	Y	N		N		N
CC0608	Conserved hypothetical protein		Y	Y	N		N		N
CC0609	Nitrate binding protein nrtA	nrtA	Y	Y	N		N		N
CC0610	Nitrate transport permease protein nrtB	nrtB	Y	N	N		N		N
CC0611	Nitrate transport ATP-binding protein nrtD	nrtD	Y	Y	N		N		N
CC0612	Nitrate response regulator NasT	nasT	Y	Y	N		N		N
CC0613	ABC family transporter protein		N	N	N		N		N
CC0614	Nitrate transporter		N	N	N		N		N
CC0615	Nitrite reductase [NAD(P)H] catalytic subunit / Assimilatory nitrate reductase electron-transfer subunit		Y	Y	N		N		N
CC0616	Nitrite reductase [NAD(P)H] small subunit	nasE	N	N	N		N		N
CC0617	Assimilatory nitrate reductase catalytic subunit	nasC	N	N	N		N		N
CC0618	Uroporphyrin-III C-methyltransferase		Y	Y	N		N		N
CC0619	Conserved hypothetical protein		Y	Y	N		N		N
CC0620	Type I restriction-modification system methylation subunit		Y	Y	N		N		N
CC0621	Type I restriction-modification system specificity subunit		Y	Y	N		N		N
CC0622	5-methylcytosine-specific restriction enzyme MRR		Y	Y	N		Y	MidBand	N
CC0623	Type I restriction-modification system restriction subunit		Y	Y	N		N		N
CC0624	Transposase		Y	Y	N		N		N
CC0625	Transposase		Y	Y	N		N		N
CC0626	Hypothetical protein		Y	Y	N		N		N
CC0627	Hypothetical protein		Y	Y	Y	Middle OR Pole	N		N
CC0628	C4-dicarboxylate transport protein		Y	Y	N		N		N
CC0629	GAF-family sensor histidine kinase		Y	Y	N		N		N
CC0630	Response regulator receiver domain		Y	Y	N		N		N
CC0631	Capsular polysaccharide biosynthesis protein		Y	Y	N		N		N
CC0632	Capsular polysaccharide biosynthesis protein		Y	Y	N		N		N
CC0633	Hypothetical protein		N	N	N		N		N
CC0634	O-antigen export system ATP-binding protein		Y	N	N		N		N
CC0635	Teichoic acid translocation permease protein tagG	tagG	Y	Y	Y	Patchy/Spotty	Y	Patchy/Spotty	Y
CC0636	Conserved hypothetical protein		Y	Y	N		N		N
CC0637	Transcriptional regulator, AraC family		Y	N	N		N		N
CC0638	NAD(FAD)-utilizing dehydrogenases		N	N	N		N		N
CC0639	Hypothetical cytosolic protein		Y	Y	N		Y	Middle OR Pole	N
CC0640	LSU ribosomal protein L1P		Y	Y	N		N		N
CC0641	LSU ribosomal protein L11P		Y	Y	N		N		N
CC0642	Transposase		Y	Y	Y	Patchy/Spotty	N		N
CC0643	2-hydroxychromene-2-carboxylate isomerase		Y	Y	N		N		N
CC0644	Short chain dehydrogenase		Y	Y	N		N		N
CC0645	Transcriptional regulator, MarR family		Y	N	N		N		N
CC0646	Hypothetical protein		Y	Y	N		N		N
CC0647	Transcriptional activator chrR		N	N	N		N		N
CC0648	RNA polymerase sigma factor		Y	Y	N		N		N

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CC0649	Peptidase family S41 protein		Y	Y	N		N		N
CC0650	Conserved hypothetical protein		Y	Y	N		N		N
CC0651	Conserved hypothetical protein		Y	Y	N		N		N
CC0652	PAS-family hybrid histidine kinase/receiver protein		N	N	N		N		N
CC0653	CarD-like transcriptional regulator		Y	Y	N		N		N
CC0654	Ferredoxin		Y	Y	N		N		N
CC0655	PAS-family GGDEF/EAL protein		Y	Y	N		N		N
CC0656	Heat shock protein 15		N	N	N		N		N
CC0657	ATP-dependent DNA helicase		N	N	N		N		N
CC0658	Metal-dependent hydrolase		Y	N	N		N		N
CC0659	O6-methylguanine-DNA methyltransferase		Y	Y	Y	Middle OR Pole	N		N
CC0660	Hypothetical protein		Y	N	N		N		N
CC0661	LSU ribosomal protein L28P		Y	Y	N		N		N
CC0662			Y	Y	N		N		N
CC0663	Ferrichrome receptor fcuA	fcuA	Y	Y	N		N		N
CC0664			Y	Y	N		N		N
CC0665	Cold shock protein		N	N	N		N		N
CC0666	Hypothetical protein		Y	Y	N		N		N
CC0667	Hypothetical protein		Y	N	N		N		N
CC0668	Hypothetical protein		Y	Y	N		N		N
CC0669	Hypothetical protein		Y	Y	N		N		N
CC0670	Hypothetical protein		Y	Y	N		N		N
CC0671	Hypothetical membrane associated protein		Y	N	N		N		N
CC0672	Cobaltochelataze cobT subunit		Y	Y	N		N		N
CC0673	Hypothetical protein		Y	Y	N		N		N
CC0674	Conserved hypothetical protein		N	N	N		N		N
CC0675	Conserved hypothetical protein		Y	N	N		N		N
CC0676	Hypothetical protein		Y	Y	N		N		N
CC0677	Hypothetical protein		N	N	N		N		N
CC0678	Hypothetical protein		Y	Y	N		N		N
CC0679	abortive infection protein		Y	Y	N		N		N
CC0680	Hypothetical protein		Y	Y	N		N		N
CC0681			Y	Y	N		N		N
CC0682			Y	Y	N		N		N
CC0683	Type I secretion adaptor protein hlyD	hlyD	Y	N	N		N		N
CC0684	Type I protein secretion ATP-binding protein / Type I protein secretion transmembrane subunit / Type I secretion processing peptidase		Y	Y	N		N		N
CC0685	chaperonin GroEL		Y	Y	N		N		N
CC0686	chaperonin GroES		N	N	N		N		N
CC0687	Glyoxalase family protein		Y	Y	N		N		N
CC0688	Hypothetical protein		Y	Y	N		N		N
CC0689	O6-methylguanine-DNA methyltransferase		Y	Y	N		N		N
CC0690	Acyl-CoA dehydrogenase		Y	Y	N		N		N
CC0691	Ribosomal-protein-alanine acetyltransferase		Y	Y	N		N		N
CC0692	Hypothetical protein		Y	Y	N		N		N
CC0693	Hypothetical protein		Y	N	N		N		N
CC0694	Transcriptional regulator skgA	skgA	Y	Y	N		N		N
CC0695	DNA mismatch repair protein mutL	mutL	Y	Y	N		N		N
CC0696	GumN superfamily protein		Y	Y	N		N		N
CC0697	GumN superfamily protein		N	N	N		N		N

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CC0698	GumN superfamily protein		Y	Y	N		N		N
CC0699	Conserved hypothetical protein		Y	Y	N		N		N
CC0700	Lipoprotein signal peptidase		Y	Y	N		N		N
CC0701	Isoleucyl-tRNA synthetase		N	N	N		N		N
CC0702	Endopeptidase degP	degP	Y	Y	N		N		N
CC0703	Riboflavin kinase / FMN adenyltransferase		N	N	N		N		N
CC0704	3-hydroxybutyryl-CoA dehydratase		Y	Y	N		N		N
CC0705	Hydrolase (HAD superfamily)		N	N	N		N		N
CC0706	NnrU		Y	Y	N		N		N
CC0707	Hypothetical cytosolic protein		Y	N	N		N		N
CC0708	alkB protein		Y	Y	N		N		N
CC0709	ADA regulatory protein / O6-methylguanine-DNA methyltransferase		Y	N	N		N		N
CC0710			N	N	N		N		N
CC0711	Ferrous iron transport protein A		Y	Y	N		N		N
CC0712	Ferrous iron transport protein B		Y	Y	N		N		N
CC0713	Transcriptional regulator		N	N	N		N		N
CC0714	Hypothetical membrane spanning protein		Y	N	N		N		N
CC0715	3-hydroxybutyryl-CoA dehydrogenase		Y	Y	N		N		N
CC0716	Lysien 2,3-aminomutase		Y	Y	N		N		N
CC0717	Hypothetical membrane associated protein		Y	Y	N		N		N
CC0718	Tellurium resistance protein terB	terB	Y	Y	N		N		N
CC0719	Hypothetical protein		Y	Y	N		N		N
CC0720	Lysyl-tRNA synthetase		Y	Y	N		N		N
CC0721	Protein Translation Elongation Factor P (EF-P)		Y	Y	N		N		N
CC0722	TonB-dependent receptor		Y	Y	N		N		N
CC0723	Two component sensor histidine kinase		Y	Y	Y	Patchy/Spotty	N		N
CC0724			Y	Y	N		N		N
CC0725	Hypothetical protein		Y	Y	N		N		N
CC0726	Electron transfer flavoprotein alpha-subunit		Y	N	N		N		N
CC0727	Electron transfer flavoprotein beta-subunit		Y	Y	N		N		N
CC0728	Hypothetical protein		Y	Y	N		N		N
CC0729	Cobalamin adenosyltransferase family protein		Y	Y	N		N		N
CC0730	Conserved hypothetical protein		N	N	N		N		N
CC0731	Hypothetical protein		Y	Y	N		N		N
CC0732	Transcriptional regulator, TetR family		Y	Y	N		N		N
CC0733	Transcriptional regulator, TetR family		Y	Y	N		Y	Patchy/Spotty	N
CC0734	Hypothetical protein		Y	N	N		N		N
CC0735	Hypothetical protein		Y	Y	N		N		N
CC0736	Carboxypeptidase S		N	N	N		N		N
CC0737	3-chlorobenzoate-3,4-dioxygenase oxygenase subunit		N	N	N		N		N
CC0738	Aspartate aminotransferase		Y	N	N		N		N
CC0739	OAR protein precursor		N	N	N		N		N
CC0740	PAS family GGDEF/EAL protein		Y	Y	N		N		N
CC0741	GTP-binding protein TypA/BipA		Y	Y	N		N		N
CC0742	Hypothetical protein		Y	Y	N		N		N
CC0743	N-formylglutamate deformylase		Y	Y	N		N		N
CC0744	Two-component receiver protein cpdR	cpdR	Y	Y	N		Y	Pole	N
CC0745	Aminobenzoyl-glutamate transport protein		Y	Y	N		N		N
CC0746	Secreted protease precursor sapA	sapA	Y	Y	N		N		N



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CC0747	Heat resistant agglutinin tRNA (5-aminomethyl-2-thiouridylate) methyltransferase / tRNA (5-carboxymethylaminomethyl-2-thiouridylate)		N	N	N		N		N
CC0748	oxidase TrmC		Y	Y	N		N		N
CC0749	Hypothetical protein		N	N	N		N		N
CC0750	Chemotaxis motA protein	motA	Y	Y	N		N		N
CC0751	Transporter, MFS superfamily		Y	N	N		N		N
CC0752	Hypoxia transcriptional regulator fixK	fixK	Y	Y	N		N		N
CC0753	hypoxia negative feedback regulator fixT	fixT	Y	Y	N		N		N
CC0754	Hypothetical protein		Y	Y	N		N		N
CC0755	Glycosyltransferase		N	N	N		N		N
CC0756	Phosphatidylglycerol glycosyltransferase		Y	Y	N		N		N
CC0757	Conserved membrane spanning protein		N	N	N		N		N
CC0758	Two-component response regulator fixJ	fixJ	Y	Y	N		N		N
CC0759	Oxygen sensory histidine kinase fixL	fixL	Y	Y	N		N		N
CC0760	ABC transporter, ATP-binding protein cydC	cydC	Y	Y	N		N		N
CC0761	ABC transporter, ATP-binding protein cydD	cydD	Y	N	N		N		N
CC0762	Cytochrome bd-type quinol oxidase, subunit 1 cydA	cydA	Y	Y	N		N		N
CC0763	Cytochrome bd-type quinol oxidase, subunit 2 cydB	cydB	N	N	N		N		N
CC0764	Chemotaxis protein cheW		Y	Y	Y	Pole	Y	Middle OR Pole	Y
CC0765	Hypothetical protein		Y	Y	N		N		N
CC0766	GTP-binding protein YihA	YihA	Y	Y	N		N		N
CC0767	Inner membrane protein translocase component yidC	yidC	Y	Y	N		N		N
CC0768	Ribonuclease P protein component		Y	Y	N		N		N
CC0769	LSU ribosomal protein L34P		Y	Y	N		N		N
CC0770	Quinone oxidoreductase		N	N	N		N		N
CC0771	Acetyl esterase		Y	Y	N		N		N
CC0772	Transcriptional regulator, TetR family		Y	Y	N		N		N
CC0773	Hypothetical cytosolic protein		Y	N	N		N		N
CC0774	Dimethylaniline monooxygenase [N-oxide forming]		Y	Y	N		N		N
CC0775	Hypothetical protein		N	N	N		N		N
CC0776	Lignostilbene-alpha,beta-dioxygenase		Y	Y	N		N		N
CC0777	L-sorbose dehydrogenase [FAD]		Y	Y	N		N		N
CC0778	Glutathione S-transferase		N	N	N		N		N
CC0779	3-ketoacyl-CoA thiolase		Y	Y	N		N		N
CC0780	Hypothetical protein		Y	Y	N		N		N
CC0781	Hypothetical protein		Y	N	N		N		N
CC0782	Hypothetical protein		Y	Y	N		N		N
CC0783	Galactonate operon transcriptional repressor		N	N	N		N		N
CC0784	2-dehydro-3-deoxy-6-phosphogalactonate aldolase		Y	Y	N		Y	Pole	N
CC0785	2-dehydro-3-deoxygalactonokinase		Y	Y	N		N		N
CC0786			N	N	N		N		N
CC0787	Tryptophan halogenase		Y	Y	N		N		N
CC0788	Beta-galactosidase		Y	Y	N		N		N
CC0789	Alpha-glucosidase		N	N	N		N		N
CC0790	Transcriptional regulators, LysR family		Y	Y	N		N		N
CC0791	Trp repressor binding protein		Y	Y	N		N		N

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CC0792	Flagellin		Y	Y	N		N		N
CC0793	Flagellin		Y	Y	N		N		N
CC0794	Flagellin		Y	Y	N		N		N
CC0795	Alpha-L-fucosidase		Y	Y	N		N		N
CC0796	Alpha-glucosidase		N	N	N		N		N
CC0797	Glucan 1,4-beta-glucosidase		Y	Y	N		N		N
CC0798	Sialic acid-specific 9-O-acetyltransferase		Y	Y	N		N		N
CC0799	Para-nitrobenzyl esterase		Y	N	N		N		N
CC0800	Hypothetical protein		Y	Y	N		N		N
CC0801	Mannanase precursor frameshift		N	N	N		N		N
CC0802	toxin protein relE-1	relE-1	Y	Y	N		N		N
CC0803	antitoxin protein relB-1	relB-1	Y	N	N		N		N
CC0804	Proline dehydrogenase / Delta-1-pyrroline-5-carboxylate dehydrogenase		N	N	N		N		N
CC0805	Leucine-responsive regulatory protein		Y	Y	N		N		N
CC0806	Outer membrane efflux protein		Y	Y	Y	Patchy/Spotty	N		N
CC0807	Cation/multidrug efflux pump acrB2	acrB2	N	N	N		N		N
CC0808	Periplasmic multidrug efflux lipoprotein precursor		N	N	N		N		N
CC0809	Transcriptional regulator		Y	N	N		N		N
CC0810	3-isopropylmalate dehydrogenase		Y	Y	N		N		N
CC0811	Metallo-beta-lactamase protein		N	N	N		N		N
CC0812	Rhamnogalacturonan acetyltransferase		Y	Y	Y	Patchy/Spotty	N		N
CC0813	Beta-xylosidase		Y	Y	N		N		N
CC0814	Glucose/fructose transport protein		Y	Y	N		N		N
CC0815	TonB-dependent receptor		Y	Y	N		N		N
CC0816	acetyltransferase, GNAT family		N	N	N		N		N
CC0817	Hypothetical protein		Y	Y	N		N		N
CC0818	Hypothetical protein		Y	Y	N		N		N
CC0819	xylonate dehydratase xylD	xylD	Y	Y	N		N		N
CC0820	xylonolactonase xylC	xylC	Y	Y	N		N		N
CC0821	xylose dehydrogenase xylB	xylB	Y	Y	N		N		N
CC0822	alpha-ketoglutaric semialdehyde dehydrogenase xylA	xylA	Y	Y	N		N		N
CC0823	2-hydroxyhepta-2,4-diene-1,7-dioate isomerase		N	N	N		N		N
CC0824	Hypothetical protein		Y	Y	N		N		N
CC0825	Hypothetical protein		N	N	N		N		N
CC0826	DNA modification methyltransferase-related protein		N	N	N		N		N
CC0827	Hypothetical cytosolic protein		Y	Y	N		N		N
CC0828	Carbon-nitrogen hydrolase family protein		Y	Y	N		N		N
CC0829	Glutaredoxin		Y	Y	N		N		N
CC0830	Amidophosphoribosyltransferase family protein		Y	Y	N		N		N
CC0831	Biotin synthesis protein bioC	bioC	Y	Y	N		N		N
CC0832	FliP/FliN pilin component protein		Y	Y	N		N		N
CC0833	7,8-dihydro-8-oxoguanine-triphosphatase		Y	Y	N		N		N
CC0834	Hypothetical protein		Y	Y	N		N		N
CC0835	ATP-dependent RNA helicase		N	N	N		N		N
CC0836	PAS-family sensor histidine kinase		Y	Y	N		N		N
CC0837	Conserved hypothetical protein		Y	Y	N		N		N
CC0838	ABC transporter ATP-binding protein		Y	Y	N		N		N

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CC0839	Hypothetical protein		N	N	N		N		N
CC0840	3-demethylubiquinone 3-methyltransferase		Y	Y	N		N		N
CC0841	Hypothetical protein		Y	Y	N		N		N
CC0842	Hypothetical protein		Y	Y	N		N		N
CC0843	Aspartokinase		Y	Y	N		N		N
CC0844	Hypothetical protein		Y	Y	N		N		N
CC0845	Conserved hypothetical protein		Y	Y	N		N		N
CC0846	Conserved hypothetical protein		Y	Y	Y	Patchy/Spotty	Y	Patchy/Spotty	Y
CC0847	Poly(3-hydroxyalkanoate) depolymerase		N	N	N		N		N
CC0848	Transporter, drug/metabolite exporter family Phosphoenolpyruvate-protein phosphotransferase		N	N	N		N		N
CC0849	Hypothetical transcriptional regulatory protein		Y	Y	N		N		N
CC0850	1-hydroxy-2-methyl-2-(E)-butenyl 4-diphosphate synthase		Y	Y	N		N		N
CC0851	Conserved hypothetical protein		Y	Y	N		N		N
CC0852	Conserved hypothetical protein		Y	N	N		N		N
CC0853	Hypothetical protein		Y	Y	N		N		N
CC0854	Ribosomal large subunit pseudouridine synthase F		Y	Y	N		N		N
CC0855	Bacterial Peptide Chain Release Factor 1 (RF-1)		Y	Y	N		N		N
CC0856	CHASE4-family GGDEF/EAL protein		Y	N	N		N		N
CC0857	Conserved hypothetical protein		Y	Y	N		N		N
CC0858	inositol ABC transporter, periplasmic inositol-binding protein ibpA	ibpA	Y	Y	N		N		N
CC0859	inositol transport ATP-binding protein iatA	iatA	Y	Y	N		N		N
CC0860	inositol ABC transport system, permease protein iatP	iatP	N	N	N		N		N
CC0861	Hypothetical protein		N	N	N		N		N
CC0862	Conserved hypothetical protein		Y	Y	N		N		N
CC0863	3-oxoacyl-[acyl-carrier-protein] synthase III		Y	Y	N		N		N
CC0864	3-oxoacyl-[acyl-carrier-protein] synthase III		Y	N	N		N		N
CC0865	Conserved hypothetical protein		Y	Y	N		N		N
CC0866	Erythromycin esterase family protein		N	N	N		N		N
CC0867	Hypothetical ATP-binding protein		Y	Y	N		N		N
CC0868	6-aminohexanoate-dimer hydrolase		Y	N	N		N		N
CC0869	Hypothetical protein		Y	Y	N		N		N
CC0870	Acetyltransferase		Y	Y	N		N		N
CC0871	Xylene monooxygenase electron transfer component		Y	Y	N		N		N
CC0872	toxin protein parE-1	parE-1	Y	Y	N		N		N
CC0873	antitoxin protein parD-1	parD-1	Y	Y	N		N		N
CC0874	Peptide release factor-glutamine N5-methyltransferase		Y	Y	N		N		N
CC0875	Hypothetical cytosolic protein		Y	Y	N		N		N
CC0876	Zinc metalloprotease		Y	Y	N		N		N
CC0877	ClpB protein	clpB	Y	Y	N		N		N
CC0878	Hypothetical protein		Y	Y	N		N		N
CC0879	Transcriptional regulators, MarR/EmrR family		N	N	N		N		N
CC0880	Conserved hypothetical protein		Y	Y	N		N		N
CC0881	Acyl CoA thioesterase		N	N	N		N		N
CC0882	Hypothetical protein		Y	Y	N		N		N
CC0883									

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CC0884	Transcriptional regulator, GntR family Diaminohydroxyphosphoribosylaminopyrimidine deaminase / 5-amino-6-(5-phosphoribosylamino)uracil reductase		N	N	N		N		N
CC0885	Riboflavin synthase alpha chain		N	N	N		N		N
CC0886	GTP cyclohydrolase II / 3,4-dihydroxy-2-butanone-4-phosphate synthase		Y	Y	N		N		N
CC0887	6,7-dimethyl-8-ribityllumazine synthase		N	N	N		N		N
CC0888	Hypothetical peptidase		Y	Y	Y	Patchy/Spotty	N		N
CC0889	Conserved hypothetical protein		Y	Y	N		N		N
CC0890	Transcriptional regulator		N	N	N		N		N
CC0891	Conserved hypothetical protein		Y	Y	N		N		N
CC0892	Acetyltransferase		Y	Y	N		N		N
CC0893	Acetyl-CoA acetyltransferase		Y	N	N		N		N
CC0894	Transcriptional regulator, MarR family		Y	Y	N		N		N
CC0895	Sensory transduction protein kinase		Y	N	N		N		N
CC0896	tRNA (5-methylaminomethyl-2-thiouridylate)-methyltransferase		Y	N	N		N		N
CC0897	flagellar hook-associated protein flgL	flgL	Y	Y	N		N		N
CC0898	flagellar hook-associated protein flaN	flaN	Y	Y	Y	Central - Focus	N		N
CC0899	Chemotaxis motD protein		N	N	N		N		N
CC0900	Basal-body rod modification protein flgD	flgD	Y	Y	N		N		N
CC0901	Flagellar hook protein flgE	flgE	Y	Y	N		N		N
CC0902	Hypothetical protein		Y	Y	N		N		N
CC0903	Hypothetical protein		Y	Y	N		N		N
CC0904	Flagellar M-ring protein flIF	flIF	Y	Y	N		Y	Middle OR Pole	N
CC0905	Flagellar motor switch protein flIG	flIG	Y	Y	Y	Pole	Y	Pole	Y
CC0906	FliE protein	flbE	N	N	N		N		N
CC0907	Flagellar motor switch protein flIN	flIN	N	N	N		N		N
CC0908	AAA-family response regulator flbD	flbD	Y	Y	N		N		N
CC0909	Flagellar biosynthesis protein flhA	flhA	Y	Y	N		N		N
CC0910	Porin O precursor		Y	Y	N		N		N
CC0911	Hypothetical protein		Y	Y	N		N		N
CC0912	Transcriptional regulator, TetR family		Y	Y	N		N		N
CC0913	Hypothetical protein		Y	Y	N		N		N
CC0914	Transcriptional regulator, MarR family		Y	Y	N		N		N
CC0915	Organic hydroperoxide resistance protein		Y	Y	N		N		N
CC0916	Chaperone protein dnaJ		N	N	N		N		N
CC0917	Pyridoxamine 5'-phosphate oxidase		Y	Y	N		N		N
CC0918	Transcriptional regulator, TetR family		Y	Y	N		N		N
CC0919	Gluconate kinase		N	N	N		N		N
CC0920	Two component sensor histidine kinase		Y	Y	Y	Patchy/Spotty	N		N
CC0921	Long-chain-fatty-acid--CoA ligase		N	N	N		N		N
CC0922	Hydroxyacylglutathione hydrolase		Y	Y	N		N		N
CC0923	Hypothetical phosphatase		Y	Y	N		N		N
CC0924	OAR protein precursor		Y	Y	N		N		N
CC0925	Hypothetical protein		Y	Y	N		N		N
CC0926	Signal peptide peptidase sppA	sppA	Y	Y	N		N		N
CC0927	Transposase		Y	Y	N		N		N
CC0928	Transposase		Y	Y	N		N		N
CC0929	Periplasmic efflux protein, lipoprotein precursor		N	N	N		N		N

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CC0931	ABC-type transport system involved in lipoprotein release, permease component lolE	lolE	Y	Y	N		N		N
CC0932	ABC-type transport system involved in lipoprotein release, ATPase component lolD	lolD	Y	Y	N		N		N
CC0933	Transcriptional regulator hybrid sensor histidine kinase/receiver protein		Y	Y	N		N		N
CC0934	Phosphinothricin N-acetyltransferase		N	N	N		N		N
CC0935	Protease II		Y	Y	N		N		N
CC0936	General stress protein 17O		Y	N	N		N		N
CC0937	Hypothetical protein		Y	Y	N		N		N
CC0938	Isopenicillin N epimerase		Y	Y	N		N		N
CC0939	acyl esterase protein		N	N	N		N		N
CC0940	General stress protein 17O		Y	Y	N		N		N
CC0941	Nodulation protein N		Y	Y	N		N		N
CC0942	Conserved hypothetical protein		N	N	N		N		N
CC0943	Long-chain-fatty-acid--CoA ligase		Y	Y	N		N		N
CC0944	Oxidoreductase, GMC family		N	N	N		N		N
CC0945	Putative cytochrome P450 YJIB		Y	Y	N		N		N
CC0946	Enoyl-CoA hydratase		Y	Y	N		N		N
CC0947	Conserved hypothetical protein		Y	Y	N		N		N
CC0948	Transcriptional regulator		Y	Y	N		N		N
CC0949	Conserved hypothetical protein		Y	Y	N		N		N
CC0950	Flagellar biosynthetic protein fliP	fliP	Y	Y	N		N		N
CC0951	Hypothetical protein		N	N	N		N		N
CC0952	Flagellar basal-body rod protein flgB	flgB	Y	Y	N		N		N
CC0953	Flagellar basal-body rod protein flgC	flgC	Y	Y	N		N		N
CC0954	Flagellar hook-basal body complex protein fliE	fliE	Y	N	N		N		N
CC0955	Hypothetical protein		Y	N	N		N		N
CC0956	Urocanate hydratase		N	N	N		N		N
CC0957	N-formylglutamate deformylase		Y	Y	N		N		N
CC0958	Histidine ammonia-lyase		Y	Y	N		N		N
CC0959	Imidazolonepropionase		Y	Y	N		N		N
CC0960	Atrazine chlorohydrolase		N	N	N		N		N
CC0961	Histidine utilization repressor		N	N	N		N		N
CC0962	Regulatory protein		Y	Y	N		N		N
CC0963	Multicopper oxidase PcoA		Y	Y	N		N		N
CC0964	Copper resistance protein B		Y	Y	N		N		N
CC0965	AMP-(fatty)acid ligases		Y	Y	N		N		N
CC0966	D-galactose 1-dehydrogenase		Y	Y	N		N		N
CC0967	Beta-glucosidase		Y	N	N		N		N
CC0968	Transcriptional regulator, Lacl family		Y	Y	Y	Patchy/Spotty	Y	Patchy/Spotty	Y
CC0969	TonB-dependent receptor		Y	Y	N		N		N
CC0970	Tryptophan halogenase		Y	Y	N		N		N
CC0971	Tryptophan halogenase		Y	Y	Y	Pole	N		N
CC0972	Hypothetical protein		Y	Y	N		N		N
CC0973	Hypothetical protein		Y	Y	N		N		N
CC0974	Hypothetical protein		Y	Y	N		N		N
CC0975	Acetyltransferase		Y	N	N		N		N
CC0976	Cytosol aminopeptidase		Y	Y	N		N		N
CC0977	Alpha-L-rhamnosidase		Y	N	N		N		N
CC0978									

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CC0979	Peptidyl-prolyl cis-trans isomerase		Y	Y	N		N		N
CC0980	Transporter		Y	Y	N		N		N
CC0981	RNA polymerase ECF-type sigma factor		Y	Y	N		N		N
CC0982	FecR family protein		N	N	N		N		N
CC0983	TonB-dependent outer membrane receptor		N	N	N		N		N
CC0984	Gamma-glutamyltranspeptidase		Y	Y	N		N		N
CC0985			N	N	N		N		N
CC0986	Transcriptional regulator, GntR family		Y	N	N		N		N
CC0987	Glyoxalase family protein		Y	Y	N		N		N
CC0988	Hexuronate transporter		Y	Y	N		N		N
CC0989	Beta-xylosidase / Alpha-L-arabinofuranosidase		Y	N	N		N		N
CC0990	Hypothetical protein		Y	Y	N		N		N
CC0991	TonB-dependent receptor		Y	Y	N		N		N
CC0992	Hypothetical protein		Y	Y	N		N		N
CC0993	Transcriptional regulator		Y	Y	N		N		N
CC0994	Conserved hypothetical cytosolic protein		Y	Y	N		N		N
CC0995	Peptide methionine sulfoxide reductase msrA		Y	Y	N		N		N
CC0996	TonB-dependent receptor		Y	N	N		N		N
CC0997	Hypothetical protein		N	N	N		N		N
CC0998	ABC transporter ATP-binding protein		Y	Y	N		N		N
CC0999	TonB-dependent receptor		N	N	N		N		N
CC1000	SapC family protein		Y	Y	N		N		N
CC1001	Acetyltransferase		Y	Y	N		N		N
CC1002	Tryptophan halogenase		Y	Y	N		N		N
CC1003	Hypothetical glycosyl transferase		Y	Y	N		N		N
CC1004	Methyltransferase		Y	Y	N		N		N
CC1005	STS1		Y	Y	N		N		N
CC1006	Transcriptional regulator		Y	Y	N		N		N
CC1007	S-layer protein rsaA	rsaA	Y	N	N		N		N
CC1008	Type I protein secretion ATP-binding protein	rsaD	Y	Y	N		Y	Patchy/Spotty	N
CC1009	Type I secretion adaptor protein rsaE	rsaE	Y	Y	N		N		N
CC1010	GDP-mannose 4,6 dehydratase		Y	Y	N		N		N
CC1011	Putative UDP-perosamine 4-acetyl transferase		Y	Y	N		N		N
CC1012	Perosamine synthetase		Y	Y	N		N		N
CC1013	Glycosyltransferase		Y	Y	N		N		N
CC1014	Glycosyltransferase		Y	Y	N		N		N
CC1015	Type I secretion outer membrane protein	rsaFa	Y	Y	N		N		N
CC1016	Mannosyltransferase		Y	Y	N		N		N
CC1017	Methyltransferase		Y	Y	Y	Central - Focus	N		N
CC1018	Hypothetical protein		Y	Y	N		N		N
CC1019	Alpha-ketoglutarate permease		Y	Y	N		N		N
CC1020	Hypothetical protein		Y	N	N		N		N
CC1021	zinc-finger protein		Y	Y	N		N		N
CC1022	Entericidin B homolog		Y	N	N		N		N
CC1023	Cell division protein ftsZ	ftsZ	Y	Y	Y	Patchy/Spotty	N		N
CC1024	Beta/Gamma crystallin domain protein		Y	N	N		N		N
CC1025	Penicillin acylase		Y	Y	N		N		N
CC1026	Methyltransferase		Y	Y	N		N		N
CC1027	Hypotetical protein		Y	N	N		N		N

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CC1028	Hypothetical protein		Y	N	N		N		N
CC1029	Conserved hypothetical protein		Y	N	N		N		N
CC1030	Hypothetical protein		N	N	N		N		N
CC1031	Hypothetical protein		Y	Y	N		N		N
CC1032	Hypothetical protein		Y	Y	N		N		N
CC1033	DNA-cytosine methyltransferase		Y	Y	N		N		N
CC1034	GTP-binding protein lepA	lepA	N	N	N		N		N
CC1035	Conserved hypothetical protein		Y	Y	N		N		N
CC1036	Hypothetical membrane spanning protein		Y	Y	Y	Patchy/Spotty	Y	Patchy/Spotty	Y
CC1037	Conserved protein		Y	N	N		N		N
CC1038	Conserved protein		Y	Y	N		N		N
CC1039	Peptide methionine sulfoxide reductase		Y	Y	N		N		N
CC1040	Hypothetical protein		N	N	N		N		N
CC1041	Hypothetical protein		Y	Y	Y	Pole	Y	Pole	Y
CC1042	Hypothetical protein		Y	Y	N		N		N
CC1043	Phenylalanyl-tRNA synthetase beta chain		Y	N	N		N		N
CC1044	Phenylalanyl-tRNA synthetase alpha chain		Y	Y	N		N		N
CC1045	LSU ribosomal protein L20P		Y	Y	N		N		N
CC1046	LSU ribosomal protein L35P		Y	Y	N		N		N
CC1047	Tetracycline resistance protein		N	N	N		N		N
CC1048	Acylamino-acid-releasing enzyme		Y	Y	N		N		N
CC1049	Bacterial Protein Translation Initiation Factor 3 (IF-3)		N	N	N		N		N
CC1050	Hypothetical membrane spanning protein		Y	Y	N		N		N
CC1051	ADP-heptose--LPS heptosyltransferase		N	N	N		N		N
CC1052	Glycosyltransferase		Y	Y	N		N		N
CC1053	Alpha/beta hydrolase family protein		Y	Y	N		N		N
CC1054	antitoxin protein parD-2	parD-2	Y	Y	N		N		N
CC1055	Nucleoside-diphosphate-sugar epimerases		Y	Y	N		N		N
CC1056	Hypothetical cytosolic protein		Y	Y	N		N		N
CC1057	2-dehydro-3-deoxygluconokinase		Y	Y	N		N		N
CC1058	DnaA-related protein		Y	Y	N		N		N
CC1059	Hypothetical protein		Y	Y	N		N		N
CC1060	Rhodanese-related sulfurtransferases		N	N	N		N		N
CC1061	SufE protein		Y	Y	N		N		N
CC1062	Two component sensor histidine kinase		Y	Y	N		N		N
CC1063	Histidine protein kinase divJ	divJ	Y	Y	N		Y	Pole	N
CC1064	Conserved hypothetical protein		Y	Y	N		N		N
CC1065	Conserved hypothetical protein		Y	Y	N		N		N
CC1066	Hypothetical protein		Y	Y	N		N		N
CC1067	Hypothetical protein		Y	Y	N		N		N
CC1068	Conserved hypothetical protein		Y	Y	N		N		N
CC1069	Bacterial Peptide Chain Release Factor 3 (RF-3)		N	N	N		N		N
CC1070	Bacterial Peptide Chain Release Factor 3 (RF-3)		Y	Y	N		N		N
CC1071	Histidinol-phosphate aminotransferase		Y	Y	N		N		N
CC1072	Ribonuclease H		Y	Y	N		N		N
CC1073	Hypothetical protein		Y	Y	N		N		N
CC1074	Hypothetical protein		Y	Y	N		N		N
CC1075	Flagellar biosynthetic protein fliQ	fliQ	Y	N	N		N		N
CC1076	flagellar biosynthesis protein fliR	fliR	Y	Y	N		N		N
CC1077	Flagellar biosynthetic protein fliB	fliB	Y	Y	N		N		N

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CC1078	Sensory transduction histidine kinase/receiver protein cckA	cckA	Y	Y	Y	Pole	Y	Pole	Y
CC1079	Conserved hypothetical protein		N	N	N		N		N
CC1080	LuxR family transcriptional regulator		Y	Y	N		N		N
CC1081	Hypothetical protein		Y	N	N		N		N
CC1082	Conserved hypothetical protein		Y	Y	N		N		N
CC1083	Ribosomal-protein-alanine acetyltransferase		Y	N	N		N		N
CC1084	Hypothetical protein		Y	Y	N		N		N
CC1085	Hypothetical cytosolic protein		Y	Y	N		N		N
CC1086	Sensory box/GGDEF family protein		Y	Y	N		N		N
CC1087	RecA protein		Y	Y	N		N		N
CC1088			Y	Y	N		N		N
CC1089	Translation initiation inhibitor		Y	Y	N		N		N
CC1090	Cytochrome c oxidase polypeptide II		Y	Y	N		N		N
CC1091	Amine oxidase [flavin-containing]		Y	Y	N		N		N
CC1092	Acetyltransferase		Y	Y	N		N		N
CC1093	TonB-dependent outer membrane receptor		N	N	N		N		N
CC1094	Hypothetical protein		Y	Y	N		N		N
CC1095	Transcriptional regulator, DeoR family		N	N	N		N		N
CC1096	Protein involved in external DNA uptake		Y	Y	N		N		N
CC1097	Chromate transport protein		Y	Y	N		N		N
CC1098	Hypothetical protein		Y	Y	N		Y	Patchy/Spotty	N
CC1099	TonB-dependent outer membrane receptor		N	N	N		N		N
CC1100	Hypothetical protein		Y	Y	N		N		N
CC1101	Protoporphyrinogen oxidase		N	N	N		N		N
CC1102	Hypothetical protein		Y	Y	N		N		N
CC1103	Transporter, MFS superfamily		Y	Y	N		N		N
CC1104	Proton/sodium-glutamate symport protein		Y	Y	N		N		N
CC1105	Beta-glucosidase		Y	N	N		N		N
CC1106	Ice nucleation protein		Y	N	N		N		N
CC1107	O-linked GLCNAC transferase		Y	Y	Y	Central - Focus	Y	Central - Focus	Y
CC1108	Hypothetical protein		N	N	N		N		N
CC1109	Hypothetical cytosolic protein		Y	N	N		N		N
CC1110	Acyl-CoA dehydrogenase		N	N	N		N		N
CC1111	3-ketoacyl-CoA thiolase		N	N	N		N		N
CC1112	Hypothetical protein		Y	Y	N		N		N
CC1113	TonB-dependent receptor		N	N	N		N		N
CC1114	histidine phosphotransferase shpA	shpA	Y	Y	N		N		N
CC1115	Hypothetical protein		Y	Y	N		N		N
CC1116	Chorismate mutase		Y	Y	N		N		N
CC1117	Transcriptional regulators, LysR family		Y	Y	N		N		N
CC1118	Uroporphyrin-III C-methyltransferase		Y	Y	N		N		N
CC1119	Sulfite reductase (Ferredoxin)		Y	Y	N		N		N
CC1120	Oxidoreductase		Y	Y	N		N		N
CC1121	Phosphoadenosine phosphosulfate reductase		Y	Y	N		N		N
CC1122	Penicillin acylase		Y	Y	N		N		N
CC1123	Conserved hypothetical protein		Y	Y	N		N		N
CC1124	Glutathione S-transferase		N	N	N		N		N
CC1125	Conserved hypothetical protein		Y	Y	N		N		N
CC1126	Phosphohydrolase (MutT/nudix family protein)		Y	Y	N		N		N
CC1127	Hypothetical protein		Y	Y	N		N		N



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CC1128	Conserved hypothetical protein		Y	Y	N		N		N
CC1129	RNA polymerase ECF-type sigma factor		Y	Y	N		N		N
CC1130	FecR family protein		Y	N	N		N		N
CC1131	TonB-dependent receptor		Y	N	N		N		N
CC1132	Hypothetical protein		Y	Y	N		N		N
CC1133	Transporter, MFS superfamily		Y	Y	N		N		N
CC1134	Fructokinase		Y	N	N		N		N
CC1135	Amylosucrase		Y	Y	N		N		N
CC1136	TonB-dependent receptor		Y	Y	N		N		N
CC1137	Transcriptional regulator, LacI family		Y	Y	N		N		N
CC1138	Iron-regulated outer membrane virulence protein precursor		Y	Y	N		N		N
CC1139	Zinc finger protein		Y	N	N		N		N
CC1140	dTDP-4-dehydrorhamnose reductase		Y	Y	N		N		N
CC1141	Glucose-1-phosphate thymidyltransferase		Y	Y	N		N		N
CC1142	TonB-dependent receptor		Y	N	N		N		N
CC1143	Hypothetical protein		N	N	N		N		N
CC1144	Membrane alanine aminopeptidase		Y	Y	N		N		N
CC1145	TonB-dependent receptor		Y	Y	N		N		N
CC1146	dTDP-glucose 4,6-dehydratase		Y	Y	Y	Pole	N		N
CC1147	ABC transporter ATP-binding protein		Y	Y	N		N		N
CC1148	ABC transporter permease protein		Y	Y	N		N		N
CC1149	Two-component sensor kinase yocF	yocF	N	N	N		N		N
CC1150	Two-component response regulator yocG	yocG	Y	Y	N		N		N
CC1151	L-lactate dehydrogenase (FMN-linked)		N	N	N		N		N
CC1152	Nucleotidyltransferase family protein		Y	Y	N		N		N
CC1153	Conserved hypothetical protein		Y	Y	N		N		N
CC1154	dATP pyrophosphohydrolase		N	N	N		N		N
CC1155	Hypothetical membrane spanning protein		Y	Y	N		N		N
CC1156	Hypothetical membrane spanning protein		Y	Y	N		N		N
CC1157	Histidine triad (HIT) protein		Y	Y	N		N		N
CC1158	Phosphohydrolase, lcc family		Y	Y	N		Y	Patchy/Spotty	N
CC1159	Phosphatidylglycerophosphate synthase		N	N	N		N		N
CC1160	Sphingosine kinase/diacylglycerol kinase-related protein		Y	Y	N		N		N
CC1161	Hypothetical cytosolic protein		N	N	N		N		N
CC1162	Serine palmitoyltransferase		Y	Y	N		N		N
CC1163	Acyl carrier protein		Y	Y	N		N		N
CC1164	NADH-ubiquinone oxidoreductase		N	N	N		N		N
CC1165	Acyl-CoA synthetase		Y	Y	N		N		N
CC1166	O-antigen and teichoic acid membrane transport protein		Y	Y	N		N		N
CC1167	Glycerophosphotransferase-related protein		Y	Y	N		N		N
CC1168	Conserved hypothetical protein		N	N	N		N		N
CC1169	nitrilotriacetate monooxygenase		Y	Y	N		N		N
CC1170	Pyrazinamidase / Nicotinamidase		Y	N	N		N		N
CC1171	2-hydroxychromene-2-carboxylate isomerase		Y	N	N		N		N
CC1172	Sulfatase family protein		Y	Y	N		N		N
CC1173	NIRV family protein		Y	N	N		N		N
CC1174	Hypothetical cytosolic protein		N	N	N		N		N
CC1175			Y	Y	N		N		N
CC1176	Metal-dependent hydrolase		Y	Y	N		N		N
CC1177	Hypothetical transcriptional regulatory protein		Y	Y	N		N		N

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CC1178	Hypothetical cytosolic protein		N	N	N		N		N
CC1179	hypothetical protein		Y	Y	N		N		N
CC1180	EF-hand domain protein		N	N	N		N		N
CC1181	Two-component sensor histidine kinase		Y	Y	N		N		N
CC1182	Two-component response regulator		Y	Y	N		N		N
CC1183	Zn-dependent hydrolase, glyoxalase II family		Y	Y	N		N		N
CC1184	Amino acid permease		Y	Y	N		N		N
CC1185	ATP-dependent helicase hrpB		Y	Y	N		N		N
CC1186	Hypothetical protein		Y	Y	N		N		N
CC1187	23S rRNA methyltransferase		Y	Y	N		Y	Pole	N
CC1188	Methyltransferase		Y	Y	N		N		N
CC1189	N-acetylglucosaminyltransferase		Y	Y	N		N		N
CC1190	Transcriptional regulator, TetR family		Y	Y	N		N		N
CC1191	ABC transporter periplasmic binding protein		Y	Y	N		N		N
CC1192	Transporter		N	N	N		N		N
CC1193	Transporter		Y	Y	N		N		N
CC1194	Soluble lytic murein transglycosylase		Y	Y	N		N		N
CC1195	Dihydrodipicolinate synthase	dapA	Y	Y	N		N		N
CC1196	SsrA-binding protein		Y	Y	N		N		N
CC1197	Hypothetical protein		Y	Y	N		N		N
CC1198	Hypothetical cytosolic protein		Y	Y	N		N		N
CC1199	Permease		N	N	N		N		N
CC1200	Permease		Y	Y	N		N		N
CC1201	Class II Aldolase and Adducin proteins		Y	Y	N		N		N
CC1202	Conserved hypothetical protein		Y	Y	N		N		N
CC1203	Periplasmic multidrug efflux lipoprotein precursor		Y	Y	N		N		N
CC1204	Cation/multidrug efflux pump acrB	acrB3	Y	N	N		N		N
CC1205	Pyruvate dehydrogenase E1 component		Y	N	N		N		N
CC1206	Transposase		Y	Y	N		N		N
CC1207	Hypothetical protein		Y	Y	N		N		N
CC1208	Hypothetical protein		Y	Y	N		N		N
CC1209	Hypothetical protein		Y	Y	N		N		N
CC1210	Cytochrome c		Y	Y	N		N		N
CC1211	Hypothetical protein		Y	Y	N		N		N
CC1212	Hypothetical protein		Y	Y	N		N		N
CC1213	Transcriptional regulator, MarR family		Y	Y	N		N		N
CC1214	Peptidyl-tRNA hydrolase family protein		Y	Y	N		N		N
CC1215	EMG2 protein		Y	Y	N		N		N
CC1216	piperideine-6-carboxylate dehydrogenase		Y	Y	N		N		N
CC1217	Methylenetetrahydrofolate dehydrogenase (NADP+) / Methenyltetrahydrofolate cyclohydrolase		Y	Y	N		N		N
CC1218	Cytochrome c5		Y	Y	N		N		N
CC1219	D-sorbitol oxidase		N	N	N		N		N
CC1220	histidine phosphotransferase domain protein		Y	N	N		N		N
CC1221	ATP-NAD kinase		Y	Y	N		N		N
CC1222	Conserved hypothetical protein		Y	Y	N		N		N
CC1223	Glycerol kinase		Y	Y	N		N		N
CC1224	Gluconolactonase		Y	Y	N		N		N
CC1225	NAD-dependent oxidoreductase		Y	Y	N		N		N
CC1226	Endo-1,4-beta-xylanase		Y	N	N		N		N
CC1227	Proline iminopeptidase		N	N	N		N		N

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CC1228	Low temperature requirement protein A		N	N	N		N		N
CC1229	Epoxide hydrolase		Y	Y	N		N		N
CC1230	Multidrug resistance transporter, Bcr family		Y	Y	N		N		N
CC1231	Hypothetical membrane spanning protein		Y	Y	N		N		N
CC1232	Hypothetical protein		N	N	N		N		N
CC1233	Phosphotransferase family protein		N	N	N		N		N
CC1234	Hypothetical protein		Y	Y	N		N		N
CC1235	Hypothetical protein		Y	N	N		N		N
CC1236	Transposase		Y	N	N		N		N
CC1237	Integral membrane protein		Y	N	N		N		N
CC1238	Hypothetical protein		Y	N	N		N		N
CC1239	23S rRNA Gm2251 methyltransferase		Y	Y	N		N		N
CC1240	Protein Translation Elongation Factor Tu (EF-TU)		Y	Y	N		N		N
CC1241	Conserved hypothetical protein		Y	Y	N		N		N
CC1242	Formate dehydrogenase accessory protein fdhD	fdhD	Y	Y	N		N		N
CC1243	NAD-dependent formate dehydrogenase alpha subunit		N	N	N		N		N
CC1244	Conserved hypothetical protein		N	N	N		N		N
CC1245	Conserved hypothetical protein		Y	Y	N		N		N
CC1246	Hypothetical protein		Y	Y	N		N		N
CC1247	SSU ribosomal protein S10P		Y	Y	N		N		N
CC1248	LSU ribosomal protein L3P		Y	Y	N		N		N
CC1249	LSU ribosomal protein L1E (= L4P)		Y	Y	N		Y	Patchy/Spotty	N
CC1250	LSU ribosomal protein L23P		Y	N	N		N		N
CC1251	LSU ribosomal protein L2P		Y	Y	N		N		N
CC1252	SSU ribosomal protein S19P		Y	Y	N		N		N
CC1253	LSU ribosomal protein L22P		Y	Y	N		N		N
CC1254	SSU ribosomal protein S3P		Y	Y	N		N		N
CC1255	LSU ribosomal protein L16P		Y	Y	N		N		N
CC1256	LSU ribosomal protein L29P		Y	Y	N		N		N
CC1257	SSU ribosomal protein S17P		Y	Y	N		N		N
CC1258	LSU ribosomal protein L14P		Y	Y	N		N		N
CC1259	LSU ribosomal protein L24P		Y	Y	N		N		N
CC1260	LSU ribosomal protein L5P		Y	Y	N		N		N
CC1261	SSU ribosomal protein S14P		N	N	N		N		N
CC1262	SSU ribosomal protein S8P		Y	Y	N		N		N
CC1263	LSU ribosomal protein L6P		Y	Y	N		Y	Patchy/Spotty	N
CC1264	LSU ribosomal protein L18P		Y	Y	N		N		N
CC1265	SSU ribosomal protein S5P		Y	Y	N		N		N
CC1266	LSU ribosomal protein L30P		Y	Y	N		N		N
CC1267	LSU ribosomal protein L15P		Y	Y	N		N		N
CC1268	Protein translocase subunit secY		Y	Y	Y	Patchy/Spotty	N		N
CC1269	Adenylate kinase / Nucleoside-diphosphate kinase		Y	Y	N		N		N
CC1270	SSU ribosomal protein S13P		Y	Y	N		N		N
CC1271	SSU ribosomal protein S11P		Y	Y	N		N		N
CC1272	DNA-directed RNA polymerase alpha chain		Y	N	N		N		N
CC1273	LSU ribosomal protein L17P		Y	Y	N		N		N
CC1274	Hypothetical protein		Y	Y	N		N		N
CC1275	Conserved hypothetical protein		Y	Y	N		Y	Patchy/Spotty	N
CC1276	Transporter		Y	Y	N		N		N

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CC1277	phosphodiesterase I / nucleotide pyrophosphatase		Y	Y	N		N		N
CC1278	GMC family oxidoreductase		Y	N	N		N		N
CC1279	Glyoxalase family protein		Y	Y	N		N		N
CC1280	Transcriptional regulator, ArsR family		N	N	N		N		N
CC1281	Tetracycline resistance protein		Y	Y	N		N		N
CC1282	Endopeptidase degP		Y	Y	N		N		N
CC1283	ATPase, AAA family		Y	Y	N		N		N
CC1284	Ribosomal large subunit pseudouridine synthase C		Y	Y	N		N		N
CC1285	Conserved hypothetical protein		Y	Y	N		N		N
CC1286	Short chain dehydrogenase		Y	Y	N		N		N
CC1287	Outer membrane protein		Y	Y	N		N		N
CC1288	Conserved hypothetical protein		Y	Y	N		N		N
CC1289			Y	Y	N		N		N
CC1290	Hypothetical protein		N	N	N		N		N
CC1291	Transposase		Y	N	N		N		N
CC1292	Transposase		Y	N	N		N		N
CC1293	Two-component response regulator protein		Y	Y	N		N		N
CC1294	Two component sensor histidine kinase		Y	N	N		N		N
CC1295	3-phytase / 6-phytase		Y	Y	N		N		N
CC1296	Myo-inositol 2-dehydrogenase idhA	idhA	Y	Y	N		N		N
CC1297	Transcriptional regulator iolR	iolR	Y	Y	Y	Patchy/Spotty	Y	Patchy/Spotty	Y
CC1298	5-dehydro-2-deoxygluconokinase iolC	iolC	Y	Y	N		N		N
CC1299	myo-inositol catabolism protein iolD	iolD	Y	Y	N		N		N
CC1300	myo-inositol catabolism protein iolE	iolE	Y	Y	N		N		N
CC1301	myo-inositol catabolism protein iolB	iolB	Y	Y	N		N		N
CC1302	Malonate-semialdehyde dehydrogenase iolA	iolA	Y	Y	N		N		N
CC1303	Hypothetical protein		Y	Y	N		N		N
CC1304	Alkaline phosphatase synthesis two-component response regulator phoP	phoP	N	N	N		N		N
CC1305	Sensor protein phoQ	phoQ	Y	Y	N		N		N
CC1306	NIFR3-like protein		Y	Y	N		N		N
CC1307	Aspartyl protease perP	perP	Y	Y	N		N		N
CC1308	Putative Fe-S protein		Y	Y	N		N		N
CC1309	Nicotinate-nucleotide--dimethylbenzimidazole phosphoribosyltransferase		Y	Y	N		N		N
CC1310	Acyl-CoA dehydrogenase		Y	Y	N		N		N
CC1311	Acyl-CoA dehydrogenase, short-chain specific		Y	N	N		N		N
CC1312	Hypothetical protein		Y	Y	N		N		N
CC1313	Lysine decarboxylase family		Y	Y	N		N		N
CC1314	Putative ABC transporter C8C9.18 in chromosome I		N	N	N		N		N
CC1315	Lactoylglutathione lyase		Y	Y	N		N		N
CC1316	Glutathione S-transferase		Y	Y	N		N		N
CC1317	Protein-L-isoaspartate O-methyltransferase		Y	Y	N		N		N
CC1318	Type I secretion outer membrane protein								
CC1318	rsaFb	rsaFb	Y	Y	Y	Patchy/Spotty	N		N
CC1319	pole-organizing protein popZ	popZ	Y	Y	Y	Bipolar and Unipolar	Y	Bipolar and Unipolar	Y
CC1320	Valyl-tRNA synthetase		N	N	N		N		N
CC1321	Long-chain-fatty-acid--CoA ligase		Y	Y	N		N		N
CC1322	Conserved hypothetical protein		Y	Y	N		N		N

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CC1323	Amidase family protein Putative cell adhesion protein (contact		Y	N	N		N		N
CC1324	hemolysin TlyA-related)		N	N	N		N		N
CC1325	Conserved hypothetical protein		Y	Y	Y	Patchy/Spotty	N		N
CC1326	tRNA (Uracil-5-) -methyltransferase		Y	Y	N		N		N
CC1327	Methyltransferase		Y	N	N		N		N
CC1328	Acetyltransferase		Y	Y	N		N		N
CC1329	RNA polymerase sigma factor		Y	Y	N		N		N
CC1330	Radical SAM superfamily protein Glycosyltransferase involved in cell wall		Y	Y	N		Y	Middle OR Pole	N
CC1331	biogenesis		Y	Y	N		N		N
CC1332	Soluble lytic murein transglycosylase		Y	N	N		N		N
CC1333	Uracil DNA glycosylase superfamily protein Electron transfer flavoprotein-ubiquinone		N	N	N		N		N
CC1334	oxidoreductase		Y	Y	Y	Patchy/Spotty	Y	Patchy/Spotty	Y
CC1335	Tetratricopeptide repeat family protein 4-diphosphocytidyl-2-C-methyl-D-erythritol		Y	Y	N		N		N
CC1336	kinase		Y	Y	N		N		N
CC1337	Peptidyl-prolyl cis-trans isomerase Ammonium transporter / Methylammonium		N	N	N		N		N
CC1338	transporter		Y	N	N		N		N
CC1339	Nitrogen regulatory protein GlnK		Y	N	N		N		N
CC1340	Hypothetical protein		N	N	N		N		N
CC1341	Glycyl-tRNA synthetase alpha chain		Y	Y	N		N		N
CC1342	Glycyl-tRNA synthetase beta chain		Y	Y	N		N		N
CC1343	Hypothetical cytosolic protein		N	N	N		N		N
CC1344	Predicted metal-dependent hydrolase		Y	Y	N		N		N
CC1345	hypothetical protein Phosphohydrolase (MutT/nudix family		Y	N	N		N		N
CC1346	protein)		Y	Y	N		Y	Middle OR Pole	N
CC1347	Delta-aminolevulinic acid dehydratase		Y	Y	N		N		N
CC1348	Cyclohexanone monooxygenase		Y	Y	N		Y	Middle OR Pole	N
CC1349	hypothetical protein Acyl-CoA dehydrogenase, short-chain		Y	Y	N		N		N
CC1350	specific		N	N	N		N		N
CC1351	Phosphoglycerate mutase family protein		Y	Y	N		N		N
CC1352	3-hydroxyisobutyryl-CoA hydrolase		Y	Y	N		N		N
CC1353	Methyltransferase		Y	Y	N		N		N
CC1354	3-hydroxyisobutyrate dehydrogenase		Y	Y	N		N		N
CC1355	5-aminolevulinic acid synthase		Y	Y	N		N		N
CC1356	Transcriptional regulator		Y	Y	Y	Patchy/Spotty	N		N
CC1357	Serine hydroxymethyltransferase		Y	Y	N		N		N
CC1358	Putative regulatory protein		Y	Y	Y	Middle OR Pole	Y	Pole	Y
CC1359	6,7-dimethyl-8-ribityllumazine synthase		Y	Y	N		N		N
CC1360	N utilization substance protein B		Y	Y	N		N		N
CC1361	Thiamine-monophosphate kinase		Y	N	N		N		N
CC1362	hypothetical protein		Y	Y	N		N		N
CC1363	H <sup>+</sup> translocating pyrophosphatase		Y	Y	N		N		N
CC1364	Chemotaxis receiver domain protein cheYIII		Y	Y	N		N		N
CC1365	Lipoprotein (SmpA/OmlA family) Ubiquinol-cytochrome C reductase		Y	Y	Y	Patchy/Spotty	N		N
CC1366	chaperone		Y	Y	N		N		N
CC1367	Hypothetical protein		Y	Y	N		N		N

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CC1368	Fatty acid/phospholipid synthesis protein plsX		Y	Y	N		Y	Pole	N
CC1369	3-oxoacyl-[acyl-carrier-protein] synthase III		Y	Y	N		N		N
CC1370	Integration host factor alpha-subunit		Y	Y	N		N		N
CC1371	Transcriptional regulator, MerR family		Y	Y	N		N		N
CC1372	Hypothetical protein		Y	Y	N		N		N
CC1373	Transglycosylase associated protein		Y	Y	N		N		N
CC1374	Heme O monooxygenase (ferredoxin)		Y	N	N		N		N
CC1375	dTDP-glucose 4,6-dehydratase		Y	Y	N		N		N
CC1376	LSU ribosomal protein L13P		Y	Y	N		N		N
CC1377	SSU ribosomal protein S9P		Y	Y	N		N		N
CC1378	N-acetyl-gamma-glutamyl-phosphate reductase		Y	Y	N		N		N
CC1379	Hypothetical protein		N	N	N		N		N
CC1380	Poly(3-hydroxyalkanoate) polymerase		Y	Y	Y	Central - Focus	Y	Central - Focus	Y
CC1381	Hypothetical protein		Y	Y	N		N		N
CC1382	Putative aminotransferase aatC		Y	Y	N		N		N
CC1383	Homoserine dehydrogenase		Y	Y	N		N		N
CC1384	Fructose-1,6-bisphosphatase	glpX	Y	Y	N		N		N
CC1385	Fructose-1,6-bisphosphatase		Y	Y	N		N		N
CC1386	Single-stranded-DNA-specific exonuclease recJ	recJ	Y	Y	N		N		N
CC1387	Cold shock protein cspD	cspD	Y	Y	N		N		N
CC1388	Hypothetical protein		Y	Y	N		N		N
CC1389	Electron transport complex I subunit, NADH-ubiquinone oxidoreductase		Y	Y	N		N		N
CC1390	tRNA-Arg-TCT		Y	Y	N		N		N
CC1391	Hypothetical protein		Y	Y	N		N		N
CC1392	Hypothetical protein		Y	Y	N		N		N
CC1393	Hypothetical protein		Y	Y	N		N		N
CC1394	Hypothetical protein		Y	N	N		N		N
CC1395	Hypothetical protein		Y	Y	N		N		N
CC1396	Lactate 2-monooxygenase		Y	Y	N		N		N
CC1397	3-deoxy-7-phosphoheptulonate synthase		Y	N	N		N		N
CC1398	Hypothetical protein		Y	Y	N		N		N
CC1399	Methyl-accepting chemotaxis protein		Y	Y	N		N		N
CC1400	Hypothetical protein		Y	Y	N		N		N
CC1401	Cytochrome cbb3 oxidase subunit I ccoN	ccoN	Y	Y	Y	Patchy/Spotty	N		N
CC1402	Cytochrome cbb3 oxidase, cytochrome c subunit ccoO	ccoO	Y	Y	N		N		N
CC1403	Cytochrome cbb3 oxidase, subunit ccoQ	ccoQ	Y	Y	N		N		N
CC1404	Cytochrome cbb3 oxidase, diheme subunit, membrane-bound ccoP	ccoP	Y	Y	N		N		N
CC1405	Polyferredoxin protein fixG	fixG	Y	Y	Y	Patchy/Spotty	Y	Patchy/Spotty	Y
CC1406	Cation pump-linked membrane protein fixH	fixH	Y	Y	N		N		N
CC1407	E1-E2 cation pump ATPase fixI	fixI	Y	Y	N		Y	Patchy/Spotty	N
CC1408	Cytochrome cbb3 oxidase maturation protein ccoS	ccoS	Y	Y	N		N		N
CC1409	OmpW family outer membrane protein ompW	ompW	Y	Y	N		N		N
CC1410	GRP-family transcription regulator ftrB	ftrB	Y	Y	N		N		N
CC1411	Oxygen-independent coproporphyrinogen-III oxidase hemN	hemN	Y	Y	N		N		N
CC1412	Transcriptional regulator		Y	Y	N		N		N
CC1413	Tetratricopeptide repeat family protein		Y	Y	N		Y	Patchy/Spotty	N

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CC1414	Hypothetical protein		Y	Y	N		N		N
CC1415	Conserved hypothetical protein		Y	Y	N		N		N
CC1416			Y	Y	N		N		N
CC1417	Hypothetical protein		Y	Y	N		N		N
CC1418	Aldose 1-epimerase		Y	Y	N		N		N
CC1419	Hypothetical protein		Y	Y	N		Y	Middle OR Pole	N
CC1420	Transcriptional regulator, GntR family		Y	Y	N		Y	Central - Focus	N
CC1421	Galactonate dehydratase		Y	Y	N		N		N
CC1422	Alpha-L-arabinofuranosidase		Y	Y	N		N		N
CC1423	NAD(FAD)-utilizing dehydrogenases		Y	Y	N		N		N
CC1424	Cystathionine beta-lyase		Y	N	N		N		N
CC1425	3-mercaptopyruvate sulfurtransferase		Y	Y	N		N		N
CC1426	Cysteine synthase		Y	Y	N		N		N
CC1427	Cyclopropane-fatty-acyl-phospholipid synthase		Y	Y	N		N		N
CC1428	Deoxyribodipyrimidine photolyase		Y	Y	N		N		N
CC1429	2-dehydro-3-deoxyphosphooctonate aldolase		Y	Y	N		N		N
CC1430	ADP-L-glycero-D-manno-heptose-6-epimerase		Y	Y	N		Y	Varied Focus	N
CC1431	DNA-dependent DNA polymerase III alpha chain		Y	Y	N		Y	Middle OR Pole	N
CC1432	Acetyl-CoA acetyltransferase		Y	Y	N		N		N
CC1433	Conserved hypothetical protein		N	N	N		N		N
CC1434	Protein kinase C-like superfamily protein		Y	Y	N		N		N
CC1435	Phosphotransferase family protein		Y	N	N		N		N
CC1436	Conserved membrane spanning protein		Y	N	N		N		N
CC1437	ATP-dependent DNA helicase recG		N	N	N		N		N
CC1438	Hypothetical protein		Y	Y	Y	MidBand	Y	MidBand	Y
CC1439	Cystine transport ATP-binding protein		Y	Y	N		N		N
CC1440	Cystine transport system permease protein		Y	Y	N		N		N
CC1441	Cystine-binding protein		Y	Y	N		N		N
CC1442	3-oxoacyl-[acyl-carrier-protein] synthase III		Y	Y	N		N		N
CC1443	Hypothetical protein		Y	Y	N		N		N
CC1444	Sterol desaturase family protein		Y	Y	N		N		N
CC1445	Hypothetical protein		Y	Y	N		N		N
CC1446	C4-dicarboxylate-binding protein		Y	Y	N		N		N
CC1447	DICARBOXYLATE TRANSPORTER		Y	Y	N		N		N
CC1448	C4-dicarboxylate transporter large subunit		Y	Y	N		N		N
CC1449	NAD(P)H-dependent quinone reductase		Y	Y	N		N		N
CC1450	Hypothetical protein		Y	Y	N		N		N
CC1451	Hypothetical protein		Y	Y	N		N		N
CC1452	Universal stress protein family		Y	N	N		N		N
CC1453	Conserved hypothetical protein		Y	Y	N		N		N
CC1454	Hypothetical exported protein		Y	Y	N		N		N
CC1455	ATP-dependent protease subunit		Y	Y	N		N		N
CC1456	Acetyltransferase		Y	Y	N		N		N
CC1457	FibA protein		Y	Y	N		N		N
CC1458	FibT protein		Y	Y	N		N		N
CC1459	FlaF protein		N	N	N		N		N
CC1460	Flagellin		Y	Y	N		N		N
CC1461	Flagellin		Y	N	N		N		N
CC1462	Hypothetical protein		Y	Y	N		Y	Pole	N
CC1463	Flagellin		Y	Y	N		N		N

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CC1464	Acetyltransferase		Y	Y	N		N		N
CC1465	Regulatory protein flaY		Y	Y	N		N		N
CC1466	Hypothetical protein		Y	Y	N		N		N
CC1467	Hypothetical protein		Y	Y	N		N		N
CC1468	Single-strand DNA binding protein		Y	Y	N		N		N
CC1469	Hypothetical protein		Y	Y	N		N		N
CC1470	Acetyltransferase		Y	Y	N		N		N
CC1471	Pyruvate,phosphate dikinase		Y	N	N		N		N
CC1472	Pirin		Y	Y	N		N		N
CC1473	Hypothetical protein		N	N	N		N		N
CC1474	Transcriptional regulators, LysR family		Y	Y	N		N		N
CC1475	Ice nucleation protein		Y	N	N		N		N
CC1476	Chaperone protein dnaK		Y	Y	N		N		N
CC1477	NAD(FAD)-utilizing dehydrogenases		N	N	N		N		N
CC1478	PHNF PROTEIN		Y	Y	N		Y	Patchy/Spotty	N
CC1479			Y	Y	N		N		N
CC1480	Methionyl-tRNA synthetase		Y	Y	N		N		N
CC1481	Transporter		N	N	N		N		N
CC1482	Sulfate adenylyltransferase subunit 1 / Adenylylsulfate kinase		Y	Y	N		N		N
CC1483	Sulfate adenylyltransferase subunit 2		Y	Y	N		N		N
CC1484	hypothetical protein		Y	Y	N		N		N
CC1485	polar localization protein tipN		N	N	N		N		N
CC1486	Undecaprenyl-phosphate beta-N-acetyl-D-fucosaminephosphotransferase		Y	Y	N		N		N
CC1487	D-mannonate oxidoreductase		N	N	N		N		N
CC1488	Altronate hydrolase		Y	Y	N		N		N
CC1489	Transcriptional regulator, LacI family		Y	Y	N		N		N
CC1490	Uronate isomerase		Y	Y	N		N		N
CC1491	4-deoxy-L-threo-5-hexosulose-uronate ketol-isomerase		Y	Y	N		N		N
CC1492	2-deoxy-D-gluconate 3-dehydrogenase		Y	Y	N		N		N
CC1493	Phosphoenolpyruvate carboxylase		N	N	N		N		N
CC1494	Hypothetical protein		Y	Y	N		N		N
CC1495	4-Hydroxy-2-oxoglutarate aldolase / 2-dehydro-3-deoxyphosphogluconate aldolase		Y	Y	N		N		N
CC1496	2-dehydro-3-deoxygluconokinase		Y	Y	N		N		N
CC1497			Y	Y	N		N		N
CC1498	Conserved hypothetical protein		Y	Y	N		N		N
CC1499	Proline iminopeptidase		Y	Y	N		N		N
CC1500	Na(+)/H(+) antiporter		Y	Y	N		N		N
CC1501	Hypothetical transcriptional regulatory protein		N	N	N		N		N
CC1502	Penicillin-binding protein		Y	N	N		N		N
CC1503	Arsenate reductase		Y	Y	N		N		N
CC1504	Aquaporin / Glycerol uptake facilitator protein		Y	Y	Y	Patchy/Spotty	Y	Patchy/Spotty	Y
CC1505	Transcriptional regulator, ArsR family		Y	Y	N		N		N
CC1506	Arsenic resistance protein ArsH		Y	Y	N		N		N
CC1507	Hypothetical exported protein		Y	Y	N		N		N
CC1508	Transporter		Y	Y	N		N		N
CC1509	2-keto-4-pentenoate hydratase family protein		Y	Y	N		N		N
CC1510	Beta-lactamase repressor		Y	Y	N		N		N
CC1511	cell wall degradation protein		Y	Y	N		N		N
CC1512	M15 superfamily membrane peptidase		Y	Y	N		N		N



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CC1513	Hypothetical protein		Y	N	N		N		N
CC1514	Hypothetical protein		N	N	N		N		N
CC1515	Phosphate-binding protein		Y	N	N		N		N
	Multimodular transpeptidase-								
CC1516	transglycosylase PBP 1A		Y	N	N		N		N
CC1517	Ferrichrome-iron receptor		Y	N	N		N		N
CC1518	Transporter		Y	Y	N		N		N
	Hypothetical ABC transporter permease								
CC1519	protein		Y	Y	N		N		N
	Hypothetical ABC transporter permease								
CC1520	protein		Y	N	N		N		N
CC1521	acyltransferase 3		N	N	N		N		N
CC1522	NAD-dependent DNA ligase		Y	Y	N		N		N
CC1523	DNA polymerase III alpha subunit		Y	Y	N		N		N
	SN-glycerol-3-phosphate transport ATP-								
CC1524	binding protein <i>ugpC</i>		Y	Y	N		N		N
CC1525	Xaa-Pro aminopeptidase		N	N	N		N		N
CC1526	Ribosomal protein L11 methyltransferase		Y	Y	N		N		N
CC1527	Hypothetical protein		Y	Y	N		N		N
CC1528	DNA helicase II		Y	Y	N		N		N
CC1529	Tryptophan halogenase		Y	Y	N		N		N
CC1530	Hypothetical protein		Y	Y	N		N		N
CC1531	Hypothetical protein		Y	Y	N		N		N
CC1532	Conserved hypothetical protein		Y	Y	N		N		N
CC1533	Glutathione S-transferase		Y	Y	N		N		N
CC1534	Aspartate aminotransferase		Y	Y	N		N		N
CC1535	Hypothetical protein		Y	Y	N		N		N
	NADPH-dependent FMN reductase family								
CC1536	protein		Y	Y	N		N		N
CC1537	Chromosome partitioning protein <i>parA</i>		Y	Y	Y	Pole - Indeterminate	N		N
CC1538	Hypothetical membrane spanning protein		Y	N	N		N		N
CC1539	Transcriptional regulator, TetR family		Y	Y	N		N		N
CC1540	alkyl sulfatase		Y	Y	N		N		N
CC1541	2-isopropylmalate synthase		N	N	N		N		N
CC1542	Transporter, drug/metabolite exporter family		Y	Y	N		N		N
CC1543	Rod shape-determining protein <i>mreB</i>	<i>mreB</i>	Y	Y	N		Y	Patchy/Spotty	N
CC1544	Rod shape-determining protein <i>mreC</i>	<i>mreC</i>	Y	Y	N		Y	Patchy/Spotty	N
CC1545	Conserved hypothetical protein		Y	Y	N		N		N
CC1546	Cell elongation specific D,D-transpeptidase		Y	Y	N		Y	Patchy/Spotty	N
CC1547	Rod shape-determining protein <i>rodA</i>	<i>rodA</i>	N	N	N		N		N
CC1548	Acetyltransferase		Y	N	N		N		N
CC1549	Uracil-DNA glycosylase		Y	Y	N		N		N
CC1550	Hypothetical cytosolic protein		Y	Y	N		N		N
	2-amino-4-hydroxy-6-								
	hydroxymethylidihydropteridine								
CC1551	pyrophosphokinase		Y	Y	N		N		N
CC1552	DNA-directed RNA polymerase omega chain		Y	Y	N		Y	Middle OR Pole	N
CC1553	ppGpp hydrolase-synthetase <i>relA/spoT</i>	<i>spoT</i>	Y	Y	Y	Middle OR Pole	Y	Middle OR Pole	Y
	Phosphohydrolase (MutT/nudix family								
CC1554	protein)		Y	Y	N		N		N
CC1555	Orotate phosphoribosyltransferase		Y	N	N		N		N
CC1556	Aminobenzoyl-glutamate utilization protein B		Y	Y	N		N		N

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CC1557	Pyridoxal phosphate biosynthetic protein pdxJ		Y	Y	N		N		N
CC1558	Holo-[acyl-carrier protein] synthase		Y	Y	N		N		N
CC1559	Signal peptidase I		Y	Y	N		N		N
CC1560	Ribonuclease III		Y	N	N		N		N
CC1561	Hypothetical protein		Y	Y	N		N		N
CC1562	GTP-binding protein era		Y	Y	N		N		N
CC1563	N-hydroxyarylamine O-acetyltransferase		Y	Y	N		N		N
CC1564	DNA repair protein recO		Y	Y	N		N		N
CC1565	Alkaline phosphatase		N	N	N		N		N
CC1566	Topoisomerase IV subunit A		Y	Y	N		Y	Patchy/Spotty	N
CC1567	Beta-lactamase family protein		Y	Y	N		N		N
CC1568	Beta-lactamase family protein		Y	Y	N		N		N
CC1569	Quinone oxidoreductase		N	N	N		N		N
CC1570	2-Nitropropane dioxygenase family protein		Y	N	N		N		N
CC1571	Gluconate 5-dehydrogenase		Y	Y	N		N		N
CC1572	Arginine-tRNA-protein transferase		Y	Y	N		N		N
CC1573	Chemotaxis motB protein		Y	Y	N		N		N
CC1574	3-hydroxyisobutyrate dehydrogenase		Y	Y	N		N		N
CC1575	Dethiobiotin synthetase		N	N	N		N		N
CC1576	8-amino-7-oxononanoate synthase		Y	Y	N		N		N
CC1577	Adenosylmethionine-8-amino-7-oxononanoate aminotransferase		Y	Y	N		N		N
CC1578	Transporter, drug/metabolite exporter family		Y	Y	N		N		N
CC1579	Superoxide dismutase [Cu-Zn]		Y	Y	N		N		N
CC1580	DNA gyrase subunit A		N	N	N		N		N
CC1581	Phosphopantetheine adenyltransferase		N	N	N		N		N
CC1582	Peptidyl-prolyl cis-trans isomerase		Y	Y	N		N		N
CC1583	Peptidyl-prolyl cis-trans isomerase		Y	Y	N		N		N
CC1584	Peptidyl-prolyl cis-trans isomerase		Y	Y	N		Y	Middle OR Pole	N
CC1585	Endonuclease/Exonuclease/phosphatase family protein		Y	Y	N		N		N
CC1586	Hypothetical protein		Y	Y	N		N		N
CC1587	S-adenosylmethionine:tRNA ribosyltransferase-isomerase		Y	Y	N		N		N
CC1588	Queuine tRNA-ribosyltransferase		Y	Y	N		N		N
CC1589	Conserved hypothetical protein		Y	Y	N		N		N
CC1590	Hypothetical protein		N	N	N		N		N
CC1591	Potassium-transporting ATPase A chain		Y	Y	N		N		N
CC1592	Potassium-transporting ATPase B chain		Y	Y	N		N		N
CC1593	Potassium-transporting ATPase C chain		Y	Y	N		N		N
CC1594	Osmosensitive K+ channel histidine kinase kdpD		N	N	N		N		N
CC1595	Two-component response regulator kdpE		Y	Y	N		N		N
CC1596	Sulfate transport system permease protein cysT		Y	Y	N		N		N
CC1597	Sulfate transport system permease protein cysW		Y	Y	N		N		N
CC1598	Sulfate transport ATP-binding protein cysA		Y	Y	N		N		N
CC1599	diguanylate receptor protein dgrA		Y	Y	N		N		N
CC1600	Transglutaminase-like enzymes, putative cysteine proteases		Y	Y	N		N		N
CC1601	Hypothetical protein		Y	Y	Y	Middle OR Pole	N		N

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CC1602	Hypothetical cytosolic protein		Y	Y	N		N		N
CC1603	Outer membrane protein		Y	Y	N		N		N
CC1604	Hypothetical Outer Membrane Protein		N	N	N		N		N
CC1605	Carboxypeptidase G2 precursor		Y	Y	N		N		N
CC1606	Arginine N-succinyltransferase, beta chain Succinylglutamic semialdehyde		Y	Y	N		N		N
CC1607	dehydrogenase		Y	Y	N		N		N
CC1608	Succinylarginine dihydrolase		Y	Y	N		N		N
CC1609	RimI-like acetyltransferase Hypothetical response regulator receiver		N	N	N		N		N
CC1610	protein		Y	Y	N		N		N
CC1611	Hypothetical acetyltransferase		Y	Y	N		N		N
CC1612	Phenylalanine-4-hydroxylase		Y	Y	N		N		N
CC1613	Hemimethylated DNA-binding protein yccV		Y	Y	N		N		N
CC1614	Exopolyphosphatase		N	N	N		N		N
CC1615	23S rRNA Um2552 2'-O-methyltransferase		Y	Y	N		N		N
CC1616	Potassium channel protein		Y	N	N		N		N
CC1617	Inosine-5'-monophosphate dehydrogenase		Y	Y	N		N		N
CC1618	Hypothetical membrane spanning protein		Y	Y	N		N		N
CC1619	16S rRNA m(5)C 967 methyltransferase		Y	Y	N		N		N
CC1620	GMP synthase [glutamine-hydrolyzing]		Y	Y	N		N		N
CC1621	Transcriptional regulators, LysR family 7 beta-(4- carboxybutanamido)cephalosporanic acid		Y	Y	N		Y	Patchy/Spotty	N
CC1622	acylase		Y	Y	N		N		N
CC1623	TonB-dependent outer membrane receptor		Y	Y	N		N		N
CC1624	Aminobenzoyl-glutamate transport protein		Y	Y	N		N		N
CC1625	Capsule biosynthesis protein capA Cycloisomaltooligosaccharide		Y	Y	N		N		N
CC1626	glucanotransferase precursor		Y	Y	N		N		N
CC1627	Transcriptional regulator, LacI family		Y	Y	Y	Patchy/Spotty	Y	Patchy/Spotty	Y
CC1628	Nucleoside permease NUPG		Y	Y	N		N		N
CC1629	Xylose isomerase family protein		Y	Y	N		N		N
CC1630	NAD-dependent oxidoreductase		Y	Y	N		N		N
CC1631	lolE-related protein		Y	Y	N		N		N
CC1632	Cytochrome c		Y	Y	N		N		N
CC1633	Conserved hypothetical protein (1080)		Y	Y	N		N		N
CC1634	dehydrogluconate dehydrogenase		Y	Y	N		N		N
CC1635	Conserved hypothetical protein		Y	Y	N		N		N
CC1636	Conserved hypothetical protein		Y	Y	N		N		N
CC1637	Hypothetical protein		N	N	N		N		N
CC1638	GMC family oxidoreductase		Y	N	N		N		N
CC1639	Transcriptional regulator		Y	Y	N		N		N
CC1640	Beta-lactamase repressor		Y	Y	N		N		N
CC1641	2'-5' RNA ligase		Y	Y	N		N		N
CC1642	Arsenate reductase		Y	Y	N		N		N
CC1643	Phosphoglycolate phosphatase		N	N	N		N		N
CC1644	Hypothetical protein		Y	Y	N		N		N
CC1645	Hypothetical protein Extracytoplasmic function alternative sigma		Y	Y	Y	Patchy/Spotty	N		N
CC1646	factor		Y	N	N		N		N
CC1647	Hypothetical protein		N	N	N		N		N
CC1648	Hypothetical protein		Y	Y	N		N		N

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CC1649	RNA polymerase sigma-E factor		Y	Y	N		Y		N
CC1650	Hypothetical protein		Y	Y	N		N	Patchy/Spotty	N
	3-methyl-2-oxobutanoate hydroxymethyltransferase		Y	Y	N		N		N
CC1651	hydroxymethyltransferase		Y	Y	N		N		N
CC1652	Hypothetical membrane associated protein		Y	Y	N		N		N
CC1653	PQQ enzyme repeat family protein		Y	Y	Y	Patchy/Spotty	N		N
CC1654	GTP-binding protein		Y	Y	N		N		N
CC1655	Methyl-accepting chemotaxis protein		Y	Y	Y	Pole	Y	Pole	Y
CC1656	Short chain dehydrogenase		Y	N	N		N		N
	Transporter, Sodium/bile acid symporter family		Y	Y	N		N		N
CC1657	family		Y	Y	N		N		N
CC1658	Amidophosphoribosyltransferase		Y	Y	Y	Middle OR Pole	N		N
CC1659	Colicin V production protein		Y	Y	N		N		N
CC1660	DNA repair protein RadA		Y	Y	N		N		N
CC1661	Alanine racemase		Y	Y	N		N		N
CC1662	MarC family integral membrane protein		Y	Y	N		N		N
CC1663	Paal thioesterase family protein		Y	Y	N		N		N
CC1664	Transcriptional regulator, TetR family		N	N	N		N		N
CC1665	Replicative DNA helicase		Y	Y	N		Y	Middle OR Pole	N
CC1666	TonB-dependent outer membrane receptor		Y	Y	N		N		N
CC1667	LSU ribosomal protein L9P		Y	Y	N		N		N
CC1668	SSU ribosomal protein S18P		Y	Y	N		N		N
CC1669	SSU ribosomal protein S6P		Y	Y	N		N		N
CC1670	Hypothetical protein		Y	Y	N		N		N
CC1671	Sterol desaturase family protein		Y	Y	N		N		N
CC1672	Transcriptional regulator		Y	Y	N		N		N
CC1673	Thioredoxin peroxidase		Y	Y	N		N		N
	Malonyl-CoA-[acyl-carrier-protein] transacylase		N	N	N		N		N
CC1674	transacylase		N	N	N		N		N
CC1675	3-oxoacyl-[acyl-carrier protein] reductase		Y	N	N		N		N
CC1676	Methyltransferase		Y	Y	N		N		N
CC1677	Acyl carrier protein		N	N	N		N		N
CC1678	3-oxoacyl-[acyl-carrier-protein] synthase		Y	Y	N		N		N
CC1679	Hypothetical membrane associated protein		Y	N	N		N		N
CC1680	Protein yicC		Y	Y	N		N		N
CC1681	Guanylate kinase		Y	Y	N		N		N
CC1682	Transglycosylase associated protein		Y	Y	N		N		N
CC1683	Two component sensor histidine kinase		Y	Y	Y	Pole	N		N
CC1684	Hypothetical protein		Y	Y	N		N		N
CC1685	Dimethyladenosine transferase		Y	Y	N		N		N
	4-hydroxythreonine-4-phosphate dehydrogenase		Y	N	N		N		N
CC1686	dehydrogenase		Y	N	N		N		N
CC1687			N	N	N		N		N
CC1688	Peptidyl-prolyl cis-trans isomerase		N	N	N		N		N
CC1689	Organic solvent tolerance protein		Y	Y	N		N		N
CC1690	Hypothetical membrane spanning protein		Y	Y	N		N		N
CC1691	Hypothetical membrane spanning protein		Y	Y	N		N		N
CC1692	Cytosol aminopeptidase		Y	Y	N		N		N
CC1693	DNA polymerase III, chi subunit		Y	Y	N		N		N
CC1694	Hypothetical protein		Y	Y	N		N		N
CC1695	Conserved hypothetical protein		Y	Y	Y	Patchy/Spotty	N		N
CC1696	Cytochrome C family protein		Y	Y	N		N		N
CC1697	Hypothetical protein		Y	Y	N		N		N

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CC1698	ABC transporter ATP-binding protein		Y	Y	N		N		N
CC1699	Nucleoside diphosphate kinase		Y	Y	N		N		N
CC1700	Hypothetical membrane spanning protein		Y	Y	N		N		N
CC1701	SNARE-associated family membrane protein		Y	Y	N		N		N
CC1702	Phosphoribosylglycinamide formyltransferase		Y	Y	N		N		N
CC1703	Phosphoribosylformylglycinamide cyclo-ligase		Y	N	N		N		N
CC1704	Ribonuclease D		Y	Y	N		N		N
CC1705	hybrid sensor histidine kinase/receiver domain protein		Y	Y	Y	Patchy/Spotty	Y	Patchy/Spotty	Y
CC1706	Penicillin-binding protein		N	N	N		N		N
CC1707	Hypothetical protein		Y	Y	N		N		N
CC1708	Exopolyphosphatase		Y	Y	N		N		N
CC1709	Hypothetical protein		Y	Y	N		N		N
CC1710	Polyphosphate kinase		Y	Y	N		Y	Pole	N
CC1711	DnaA-related protein		Y	Y	Y	Varied Focus	Y	Varied Focus	Y
CC1712	Hypothetical protein		Y	Y	Y	Middle OR Pole	N		N
CC1713	Hypothetical protein		Y	Y	N		N		N
CC1714			Y	Y	N		N		N
CC1715	Protein ecsC		Y	Y	Y	Patchy/Spotty	N		N
CC1716	Transposase		Y	N	N		N		N
CC1717			Y	N	N		N		N
CC1718	Acetyltransferase, GNAT family		Y	Y	N		N		N
CC1719	Protein translocase subunit secG		N	N	N		N		N
CC1720	CTP synthase		Y	Y	Y	Line	Y	Line	Y
CC1721	LSU ribosomal protein L32P		Y	Y	N		N		N
CC1722	Hypothetical protein		Y	Y	N		N		N
CC1723	Enoyl-CoA hydratase/isomerase family		Y	N	N		N		N
CC1724	Enolase		Y	Y	N		N		N
CC1725	Septum formation initiator		Y	Y	N		N		N
CC1726	Pyruvate dehydrogenase E1 component alpha subunit		Y	Y	N		Y	Patchy/Spotty	N
CC1727	Pyruvate dehydrogenase E1 component beta subunit		Y	Y	Y	Middle OR Pole	Y	Middle OR Pole	Y
CC1728	Hypothetical protein		Y	Y	N		N		N
CC1729	Dihydrolipoamide acetyltransferase component of pyruvate dehydrogenase complex		Y	Y	N		N		N
CC1730	Glutathione peroxidase		Y	Y	N		N		N
CC1731	Dihydrolipoamide dehydrogenase		Y	Y	N		N		N
CC1732	Ferritin-like domain protein		Y	N	N		N		N
CC1733	Acyl-acyl carrier protein synthetase		Y	Y	N		Y	Patchy/Spotty	N
CC1734	Lysophospholipase L2		Y	Y	N		N		N
CC1735	Lipoic acid synthetase		Y	Y	Y	Middle OR Pole	N		N
CC1736	Hypothetical cytosolic protein		Y	Y	N		N		N
CC1737	Putative competence-damage protein		Y	N	N		N		N
CC1738	2-C-methyl-D-erythritol 4-phosphate cytidyltransferase / 2-C-methyl-D-erythritol 2,4-cyclodiphosphate synthase		Y	N	N		N		N
CC1739	tRNA-dihydrouridine synthase		Y	Y	N		N		N
CC1740	Nitrogen regulation protein ntrB		Y	Y	N		N		N
CC1741	Nitrogen assimilation regulatory protein		Y	Y	Y	Pole	N		N
CC1742	Nitrogen regulation protein ntrY		Y	Y	N		N		N

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CC1743	Nitrogen assimilation regulatory protein ntrX		Y	Y	Y	Pole	N		N
CC1744	D-alanine aminotransferase		Y	Y	N		N		N
CC1745	RNA-binding protein, Hfq family		Y	N	N		N		N
CC1746	GTP-binding protein hflX		Y	Y	N		N		N
CC1747	MazG protein		Y	Y	N		N		N
CC1748	Melibiose carrier protein		N	N	N		N		N
CC1749			Y	N	N		N		N
CC1750	Vitamin B12 receptor		Y	Y	N		N		N
	Adenosylcobyrinic acid synthase (glutamine-hydrolysing)		Y	N	N		N		N
CC1751			Y	N	N		N		N
CC1752	Conserved hypothetical protein		Y	N	N		N		N
CC1753	Transcriptional regulator		Y	Y	N		N		N
CC1754	TonB-dependent receptor		Y	Y	N		N		N
CC1755	TRYPTOPHAN HALOGENASE		N	N	N		N		N
CC1756	Beta-glucosidase		N	N	N		N		N
CC1757	Glucosylceramidase		Y	Y	N		N		N
CC1758	Oxidoreductase		Y	Y	N		N		N
CC1759	ABC transporter ATP-binding protein		Y	Y	N		N		N
	Acyl-CoA thioesterase I / Lysophospholipase (3.1.1.5)		Y	Y	N		N		N
CC1760			Y	Y	N		N		N
CC1761	Transposase		Y	Y	N		N		N
CC1762			Y	Y	N		N		N
CC1763	Transcriptional regulator, MerR family		Y	Y	N		N		N
CC1764	Isocitrate lyase		Y	Y	N		N		N
CC1765	Malate synthase		Y	Y	N		N		N
	DNA integration/recombination/inversion protein		Y	Y	N		N		N
CC1766			Y	Y	N		N		N
CC1767	Two-component response regulator protein		Y	Y	N		N		N
CC1768	Two-component sensor histidine kinase		Y	Y	N		N		N
	Cytochrome c oxidase assembly protein								
CC1769	Surf1		Y	Y	N		N		N
CC1770	Quinol cytochrome oxidase polypeptide IV	qoxD	Y	Y	N		N		N
CC1771	Quinol cytochrome oxidase polypeptide III	qoxC	Y	Y	N		N		N
CC1772	Quinol cytochrome oxidase polypeptide I	qoxB	Y	N	N		N		N
CC1773	Quinol cytochrome oxidase polypeptide II	qoxA	Y	Y	N		N		N
CC1774	Major facilitator superfamily transporter		Y	Y	N		N		N
CC1775	Hypothetical protein		Y	Y	N		N		N
CC1776	Transcriptional regulator, GntR family		Y	Y	N		N		N
CC1777	Superoxide dismutase		Y	Y	N		N		N
CC1778	Ferrichrome-iron receptor		Y	Y	N		N		N
CC1779	Transcriptional regulator, AraC family		N	N	N		N		N
CC1780	Transcriptional regulator, AraC family		Y	Y	N		N		N
CC1781	TonB-dependent receptor		Y	Y	N		N		N
CC1782	Rare lipoprotein B precursor		Y	Y	N		N		N
CC1783	Hypothetical protein		N	N	N		N		N
CC1784	Hypothetical protein		Y	Y	N		N		N
CC1785	Outer membrane efflux protein		Y	Y	N		N		N
CC1786	Transcriptional regulator, TetR family		Y	Y	N		N		N
	Periplasmic multidrug efflux lipoprotein precursor		Y	Y	N		N		N
CC1787			Y	Y	N		N		N
CC1788	Cation/multidrug efflux pump acrB4	acrB4	Y	Y	N		N		N
CC1789	Hypothetical protein		Y	Y	N		N		N
CC1790	Hypothetical protein		Y	Y	N		N		N

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CC1791	TonB-dependent receptor		N	N	N		N		N
CC1792	Transcriptional repressor		N	N	N		N		N
CC1793	Hypothetical protein		Y	N	N		N		N
CC1794			Y	Y	N		N		N
CC1795	Hypothetical protein		Y	Y	N		N		N
CC1796	Transposase		Y	N	N		N		N
CC1797			Y	N	N		N		N
CC1798	Acyl-CoA dehydrogenase, short-chain specific		Y	Y	N		N		N
CC1799	Cyclohexanone monooxygenase		Y	Y	N		N		N
CC1800	Acyl-CoA thioesterase II		Y	Y	N		N		N
CC1801	Long-chain-fatty-acid--CoA ligase		Y	Y	N		N		N
CC1802	NADH dehydrogenase		Y	Y	N		N		N
CC1803	3-oxoacyl-[acyl-carrier protein] reductase		Y	Y	N		N		N
CC1804	Hypothetical protein		Y	Y	N		N		N
CC1805	Gluconolactonase		Y	Y	N		N		N
CC1806	Acyl-CoA dehydrogenase		Y	Y	N		N		N
CC1807	Acyl-CoA dehydrogenase, short-chain specific		N	N	N		N		N
CC1808	Short chain dehydrogenase		Y	Y	N		N		N
CC1809	TonB-dependent receptor		Y	Y	N		N		N
CC1810			Y	Y	N		N		N
CC1811	Hypothetical protein		Y	Y	N		N		N
CC1812	Transcriptional regulator		N	N	N		N		N
CC1813	Enoyl-CoA hydratase/isomerase family protein		Y	Y	N		N		N
CC1814	Enoyl-CoA hydratase/carnithine racemase		Y	Y	N		N		N
CC1815									
CC1816	Short chain dehydrogenase		Y	N	N		N		N
CC1817	Gamma-hexachlorocyclohexane dehydrochlorinase		Y	Y	N		N		N
CC1818	Cyclohexanone monooxygenase		Y	Y	N		N		N
CC1819	Transporter		Y	Y	N		N		N
CC1820	Hypothetical protein		Y	Y	N		N		N
CC1821	Metal-dependent hydrolase		Y	Y	N		N		N
CC1822	DNase, TatD family		Y	Y	N		N		N
CC1823	DNA polymerase III, delta' subunit		Y	Y	N		N		N
CC1824	Thymidylate kinase		Y	Y	N		N		N
CC1825	Lipoprotein		N	N	N		N		N
CC1826	Nickel-responsive regulator NikR		Y	Y	N		N		N
CC1827	Hypothetical cytosolic protein		Y	Y	N		N		N
CC1828	Hypothetical cytosolic protein		Y	Y	N		N		N
CC1829	Urea carboxylase		N	N	N		N		N
CC1830	Allophanate hydrolase		N	N	N		N		N
CC1831	ABC transporter ATP-binding protein		Y	Y	N		N		N
CC1832	Transporter		Y	Y	N		N		N
CC1833	ABC transporter substrate-binding protein		Y	Y	N		N		N
CC1834	Glyoxalase family protein		Y	Y	N		N		N
CC1835	Protein ydhR precursor		Y	Y	N		N		N
CC1836	Transcriptional regulator, MarR family		Y	N	N		N		N
CC1837	16S rRNA m(2)G 1207 methyltransferase		Y	Y	N		N		N
CC1838	Ribosomal small subunit pseudouridine synthase A		Y	Y	N		N		N

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CC1839			N	N	N		N		N
CC1840	Ribonuclease BN		Y	Y	N		N		N
CC1841	Alpha-methylacyl-CoA racemase		Y	Y	N		N		N
CC1842	Two-component response regulator		N	N	N		N		N
CC1843	FrnE protein		Y	Y	N		N		N
CC1844	Transcription-repair coupling factor		N	N	N		N		N
CC1845	TPR repeat containing protein		Y	Y	N		N		N
CC1846	SAM-dependent methyltransferase		Y	Y	N		Y	Patchy/Spotty	N
CC1847	ATP-dependent RNA helicase		Y	N	N		N		N
CC1848	Capsular polysaccharide biosynthesis protein		N	N	N		N		N
CC1849	Coniferyl aldehyde dehydrogenase		Y	Y	N		N		N
CC1850	Two-component response regulator		Y	Y	Y	Pole	N		N
CC1851	Enoyl-CoA hydratase		Y	N	N		N		N
CC1852	Hypothetical membrane protein		Y	Y	N		N		N
CC1853	Conserved hypothetical protein		Y	Y	N		N		N
CC1854	ADP-heptose LPS heptosyltransferase		N	N	N		N		N
CC1855	Transcriptional regulator, TetR family 1-acyl-sn-glycerol-3-phosphate acyltransferase		Y	Y	N		N		N
CC1856			N	N	N		N		N
CC1857	Hypothetical protein		Y	Y	N		N		N
CC1858	HesB protein family		Y	Y	N		N		N
CC1859	Hypothetical cytosolic protein		Y	Y	N		N		N
CC1860	Cysteine desulfurase / Selenocysteine lyase		Y	Y	N		N		N
CC1861	SufD protein		Y	Y	N		N		N
CC1862	ATP-dependent transporter sufC		Y	Y	N		N		N
CC1863	ADP-ribosylglycohydrolase		Y	Y	N		N		N
CC1864	ABC transporter-associated protein sufB Cysteine desulfhydrase / Selenocysteine lyase		Y	Y	N		Y	Middle OR Pole	N
CC1865			Y	N	N		N		N
CC1866	Rrf2 family protein		Y	Y	N		N		N
CC1867	Alpha/beta hydrolase		Y	Y	N		N		N
CC1868	Hypothetical cytosolic protein		Y	Y	N		N		N
CC1869	Hypothetical protein		Y	N	N		N		N
CC1870	Tyrosyl-tRNA synthetase		Y	Y	N		N		N
CC1871	Thioredoxin peroxidase		Y	Y	N		N		N
CC1872	Peptidoglycan-specific endopeptidase, M23 family		N	N	N		N		N
CC1873	Hypothetical cytosolic protein Bacterial Peptide Chain Release Factor 2 (RF-2)		Y	Y	Y	Patchy/Spotty	N		N
CC1874	Multimodular transpeptidase-transglycosylase PBP 1A		N	N	N		N		N
CC1875			Y	Y	N		N		N
CC1876	N-acetylmuramoyl-L-alanine amidase		N	N	N		N		N
CC1877	Ribonuclease E		N	N	N		N		N
CC1878	Zinc metalloprotease		Y	Y	N		N		N
CC1879	Outer membrane protein		N	N	N		N		N
CC1880	Thiazole biosynthesis protein thiG	thiG	Y	Y	N		N		N
CC1881	ThiS protein	thiS	Y	Y	N		N		N
CC1882	3-dehydroquininate dehydratase Biotin carboxyl carrier protein of acetyl-CoA carboxylase		Y	N	N		N		N
CC1883			Y	Y	N		N		N
CC1884	Biotin carboxylase		Y	Y	N		N		N



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CC1885	Leucyl/phenylalanyl-tRNA--protein transferase		Y	Y	N		N		N
CC1886	Conserved hypothetical protein		Y	Y	N		N		N
CC1887	NADH dehydrogenase		N	N	N		N		N
CC1888	Hypothetical protein		Y	Y	N		N		N
CC1889	Vitamin B12-dependent ribonucleotide reductase		Y	Y	N		N		N
CC1890	Hypothetical protein with pentapeptide repeats		Y	Y	N		N		N
CC1891	Hypothetical protein with pentapeptide repeats		Y	Y	N		N		N
CC1892	Aspartyl-tRNA synthetase		Y	Y	N		N		N
CC1893	Triosephosphate isomerase		Y	Y	N		N		N
CC1894	Peptidyl-prolyl cis-trans isomerase		Y	Y	N		N		N
CC1895	Anthranilate synthase component I		Y	Y	N		N		N
CC1896	Hypothetical protein		Y	Y	N		N		N
CC1897	Anthranilate synthase component II / Para-aminobenzoate synthase glutamine amidotransferase component II		Y	Y	N		N		N
CC1898	Anthranilate phosphoribosyltransferase		Y	Y	N		N		N
CC1899	Indole-3-glycerol phosphate synthase		N	N	N		N		N
CC1900	1-acyl-sn-glycerol-3-phosphate acyltransferase		Y	Y	N		N		N
CC1901	Methyltransferase		Y	Y	N		N		N
CC1902	LexA repressor		Y	Y	N		N		N
CC1903	Methylisocitrate lyase		Y	Y	N		N		N
CC1904	DNA translocation competence protein ComA		Y	Y	N		N		N
CC1905	Glutamyl-tRNA synthetase		Y	Y	N		N		N
CC1906	Citrate synthase		Y	N	N		N		N
CC1907	Homolog of the cytoplasmic domain of flagellar protein flhB		Y	Y	N		N		N
CC1908	ABC transporter ATP-binding protein		Y	Y	N		N		N
CC1909	Lipid-A-disaccharide synthase		Y	Y	N		N		N
CC1910	Hypothetical protein		Y	Y	Y	Central - Focus	Y	Central - Focus	Y
CC1911	Acyl-[acyl-carrier-protein]--UDP-N-acetylglucosamine O-acyltransferase		Y	Y	N		N		N
CC1912	(3R)-hydroxymyristoyl-[acyl carrier protein] dehydratase		Y	Y	N		N		N
CC1913	UDP-3-O-[3-hydroxymyristoyl] glucosamine N-acyltransferase		Y	Y	N		N		N
CC1914	Hypothetical outer membrane protein		Y	Y	N		N		N
CC1915	Outer membrane protein assembly factor yaeT		Y	Y	N		N		N
CC1916	Membrane endopeptidase, M50 family mmpA	mmpA	Y	Y	N		N		N
CC1917	1-deoxy-D-xylulose 5-phosphate reductoisomerase		N	N	N		N		N
CC1918	Phosphatidate cytidyltransferase		Y	Y	N		N		N
CC1919	Undecaprenyl pyrophosphate synthetase		Y	Y	N		N		N
CC1920	Ribosome Recycling Factor (RRF)		Y	Y	N		N		N
CC1921	Uridylate kinase		Y	Y	N		N		N
CC1922	Protein Translation Elongation Factor Ts (EF-Ts)		Y	N	N		N		N
CC1923	SSU ribosomal protein S2P		Y	Y	N		N		N

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CC1924	Phosphoserine phosphatase		Y	Y	N		N		N
CC1925	Methyltransferase		Y	Y	N		N		N
CC1926	DNA polymerase III alpha subunit		N	N	N		N		N
CC1927	Hypothetical protein		Y	Y	N		N		N
CC1928	Inosine-uridine preferring nucleoside hydrolase		Y	Y	Y	Middle OR Pole	N		N
CC1929	Lipoprotein releasing system ATP-binding protein lolD		Y	Y	N		N		N
CC1930	Lipoprotein releasing system transmembrane protein lolE		Y	Y	N		N		N
CC1931	Prolyl-tRNA synthetase		Y	Y	N		N		N
CC1932	Hypothetical membrane associated protein		Y	Y	N		N		N
CC1933	Methylmalonyl CoA epimerase		Y	Y	N		N		N
CC1934	Metal-dependent hydrolase		Y	Y	N		N		N
CC1935	Pantothenate kinase / Bvg accessory factor		Y	Y	N		N		N
CC1936	Biotin operon repressor / Biotin--[acetyl-CoA-carboxylase] synthetase		Y	Y	N		N		N
CC1937	NADH-quinone oxidoreductase chain N	nuoN	Y	Y	N		N		N
CC1938	NADH-quinone oxidoreductase chain M	nuoM	Y	Y	N		N		N
CC1939	NADH-quinone oxidoreductase chain L	nuoL	Y	Y	N		N		N
CC1940	NADH-quinone oxidoreductase chain K	nuoK	Y	Y	N		N		N
CC1941	NADH-quinone oxidoreductase chain J	nuoJ	Y	Y	N		N		N
CC1942	NADH-quinone oxidoreductase chain I	nuoI	Y	Y	N		N		N
CC1943	hypothetical protein		N	N	N		N		N
CC1944			Y	Y	N		N		N
CC1945	NADH-quinone oxidoreductase chain H	nuoH	Y	Y	N		N		N
CC1946	NADH-quinone oxidoreductase chain G	nuoG	Y	Y	N		N		N
CC1947	NADH-quinone oxidoreductase chain F	nuoF	Y	Y	N		N		N
CC1948	hypothetical protein		Y	Y	N		N		N
CC1949	hypothetical protein		N	N	N		N		N
CC1950	NADH-quinone oxidoreductase chain E	nuoE	Y	Y	N		N		N
CC1951	NTF2 enzyme family protein		Y	N	N		N		N
CC1952	NADH-quinone oxidoreductase chain D	nuoD	Y	Y	N		N		N
CC1953	hypothetical protein		Y	Y	Y	Stalk	Y	Stalk	Y
CC1954	NADH-quinone oxidoreductase chain C	nuoC	Y	Y	N		N		N
CC1955	NADH-quinone oxidoreductase chain B	nuoB	Y	Y	N		N		N
CC1956	NADH-quinone oxidoreductase chain A	nuoA	Y	Y	N		N		N
CC1957	Luciferase-like monooxygenase		Y	Y	N		N		N
CC1958	Glycosyltransferase		Y	Y	N		N		N
CC1959	DNA-binding protein HU		Y	Y	N		N		N
CC1960	ATP-dependent endopeptidase Lon		Y	Y	N		N		N
CC1961	ATP-dependent endopeptidase clp ATP-binding subunit clpX	clpX	Y	Y	N		Y	Middle OR Pole	N
CC1962	Phosphoserine phosphatase		Y	Y	N		N		N
CC1963	ATP-dependent endopeptidase clp proteolytic subunit clpP	clpP	Y	Y	Y	Pole	N		N
CC1964	Trigger factor, ppiase		Y	Y	N		N		N
CC1965	Sugar kinase		Y	Y	N		N		N
CC1966	Phosphoglycerate mutase		Y	Y	N		N		N
CC1967	Acetyl-coenzyme A synthetase		Y	Y	N		N		N
CC1968	Nitrogen regulatory protein P-II		Y	Y	N		N		N
CC1969	Glutamine synthetase		Y	Y	N		N		N
CC1970	TonB-dependent receptor		Y	N	N		N		N

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CC1971	ABM superfamily monooxygenase protein		Y	N	N		N		N
CC1972	Dihydroorotase		Y	Y	N		N		N
CC1973	Dihydroorotase		Y	Y	N		N		N
CC1974	Topoisomerase IV subunit B		Y	Y	N		N		N
CC1975	Propionyl-CoA carboxylase carboxyltransferase subunit conserved hypothetical protein, YnfA/UPF0060 family		Y	Y	N		N		N
CC1976	Chaperone, ATP12 family protein		Y	N	N		N		N
CC1978	Hypothetical protein		Y	Y	N		N		N
CC1979	Hypothetical protein		Y	Y	N		N		N
CC1980	Ribosomal large subunit pseudouridine synthase C		Y	Y	N		N		N
CC1981	CrcB family protein		Y	Y	N		N		N
CC1982	hypothetical protein		Y	Y	Y	Pole	Y	Pole	Y
CC1983	DNA repair protein recN		Y	Y	N		Y	Central - Focus	N
CC1984	Lipoprotein, ComL family		Y	Y	N		N		N
CC1985	UDP-3-O-[3-hydroxymyristoyl] N-acetylglucosamine deacetylase		Y	Y	N		N		N
CC1986	Acylamino-acid-releasing enzyme		Y	N	N		N		N
CC1987	Phytoene synthase family protein		Y	Y	N		N		N
CC1988	Conserved membrane spanning protein		Y	Y	N		N		N
CC1989	Mth938-like membrane protein		Y	N	N		N		N
CC1990	Protein translocase subunit secF		Y	Y	N		N		N
CC1991	Protein translocase subunit secD		Y	Y	N		N		N
CC1992	Protein translocase subunit YajC		Y	N	N		N		N
CC1993	ATP-dependent protease subunit		Y	Y	N		N		N
CC1994	Transcriptional regulator		N	N	N		N		N
CC1995	IAA acetyltransferase		Y	Y	N		N		N
CC1996	Peptidoglycan-specific endopeptidase, M23 family		Y	Y	Y	Middle AND Pole	N		N
CC1997	Protein-L-isoaspartate O-methyltransferase		Y	N	N		N		N
CC1998	Acid phosphatase surE		N	N	N		N		N
CC1999	Seryl-tRNA synthetase	serS	Y	Y	N		N		N
CC2000	PE-PGRS-family protein		Y	Y	N		N		N
CC2001	Sec-independent protein translocase protein tatC		Y	Y	N		N		N
CC2002	Sec-independent protein translocase protein tatB		Y	N	N		N		N
CC2003	Sec-independent protein translocase protein tatA		Y	Y	Y	Middle OR Pole	N		N
CC2004	Chromosome segregation and condensation protein B scpB	scpB	Y	Y	N		N		N
CC2005	Chromosome segregation and condensation protein fusion scpAB		Y	Y	N		N		N
CC2006	Anhydromuramoyl-peptide exo-beta-N-acetylglucosaminidase		Y	Y	N		N		N
CC2007	sporulation domain-containing protein		N	N	N		N		N
CC2008	Deoxyguanosinetriphosphate triphosphohydrolase		Y	Y	N		N		N
CC2009	HesB protein family		N	N	N		N		N
CC2010	hypothetical protein		Y	Y	N		N		N
CC2011	Exodeoxyribonuclease III		Y	Y	N		N		N

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CC2012	conserved hypothetical protein		Y	N	N		N		N
CC2013	Transporter, LysE family		N	N	N		N		N
CC2014	Hypothetical cytosolic protein		Y	Y	N		N		N
CC2015	NAD-dependent oxidoreductase		Y	Y	N		N		N
CC2016	Putative NADP-dependent oxidoreductase		Y	Y	N		N		N
CC2017	conserved hypothetical protein		Y	N	N		N		N
CC2018	Periplasmic glucan glucosyltransferase		Y	Y	N		N		N
	Molybdopterin-guanine dinucleotide								
CC2019	biosynthesis protein A		Y	Y	N		N		N
CC2020	Na <sup>+</sup> driven multidrug efflux pump		Y	Y	N		N		N
CC2021	Conserved hypothetical protein		Y	Y	N		N		N
CC2022	Glyoxalase family protein		Y	Y	N		N		N
CC2023	Glycosyl hydrolase		Y	N	N		N		N
CC2024	Hypothetical cytosolic protein		Y	Y	N		N		N
CC2025	Conserved hypothetical protein		N	N	N		N		N
CC2026	Conserved hypothetical protein		Y	Y	N		N		N
CC2027	TonB-dependent outer membrane receptor		Y	Y	N		N		N
CC2028	TolB protein precursor/tail-specific protease		Y	Y	N		N		N
CC2029	Thiamine biosynthesis protein thiC	thiC	Y	Y	N		N		N
CC2030	hypothetical protein		Y	Y	N		N		N
CC2031	PilF-related tetratricopeptide repeat protein		Y	Y	N		N		N
CC2032	D-cysteine desulphydrase		Y	Y	N		N		N
CC2033	Aspartate racemase		Y	Y	N		N		N
CC2034	hypothetical protein		Y	N	N		N		N
CC2035	Secreted pectate lyase-family protein		Y	Y	N		N		N
	putative capsule polysaccharide biosynthesis								
CC2036	protein		Y	Y	N		N		N
CC2037	Polyketide cyclase/lipid transport protein		Y	Y	N		N		N
CC2038	ATP-dependent helicase, DinG family		N	N	N		N		N
CC2039	Tetratricopeptide repeat family protein		Y	Y	N		N		N
CC2040	ATP-dependent helicase		N	N	N		N		N
CC2041	putative ICC-like phosphoesterases		Y	Y	N		N		N
CC2042	Transposase		Y	N	N		N		N
CC2043	Conserved hypothetical protein		Y	N	N		N		N
CC2044			Y	Y	N		N		N
CC2045	polar development protein podJ	podJ	N	N	N		N		N
CC2046	Conserved hypothetical protein		Y	Y	N		N		N
CC2047	Oxacillin resistance-associated protein fmtC		Y	Y	N		N		N
CC2048			Y	Y	N		N		N
CC2049	Acyl-CoA dehydrogenase		Y	Y	N		N		N
	Acyl-CoA dehydrogenase, short-chain								
CC2050	specific		Y	Y	N		N		N
CC2051	Pyruvate kinase		Y	N	N		N		N
CC2052	Glucan 1,4-beta-glucosidase	celD	Y	Y	N		N		N
CC2053	Transcriptional regulator, LacI family		Y	Y	N		N		N
CC2054	Glucokinase	glk	Y	Y	N		N		N
CC2055	Phosphogluconate dehydratase	edd	N	N	N		N		N
CC2056	6-phosphogluconolactonase	pgl	Y	Y	N		N		N
CC2057	Glucose-6-phosphate 1-dehydrogenase	zwf	Y	Y	N		N		N
CC2058	Endoglucanase H		N	N	N		N		N
CC2059	Hypothetical protein		Y	N	N		N		N
CC2060	polar flagellum positioning protein pflI	pflI	Y	Y	Y	Bipolar and Unipolar	N		N
CC2061	Flagellar motor switch protein fliM	fliM	Y	Y	N		N		N

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CC2062	Flagellar filL protein	filL	Y	Y	N		N		N
CC2063	Flagellar basal-body rod protein flgF	flgF	Y	Y	N		N		N
CC2064	Flagellar basal-body rod protein flgG	flgG	Y	Y	N		N		N
	Flagella basal body P ring formation protein								
CC2065	flgA	flgA	N	N	N		N		N
CC2066	Flagellar L-ring protein flgH	flgH	N	N	N		N		N
CC2067	hypothetical protein		Y	Y	N		N		N
CC2068	1-deoxy-D-xylulose 5-phosphate synthase	dxs	N	N	N		N		N
	Dimethylallyltransferase / Geranyltransferase		Y	Y	N		N		N
CC2069	Exodeoxyribonuclease VII small subunit		Y	Y	Y	Middle OR Pole	Y	Middle OR Pole	Y
CC2071	phosphoglycerate mutase		Y	N	N		N		N
CC2072	Acetylspermidine deacetylase		Y	N	N		N		N
	Protease synthase and sporulation negative regulatory protein PAI 1		Y	N	N		N		N
CC2073	Hypothetical protein		Y	Y	N		N		N
CC2074	Conserved hypothetical protein		Y	Y	N		N		N
CC2075	Transcriptional regulator		Y	Y	N		N		N
CC2076	Putative rhamnosyl transferase		N	N	N		N		N
CC2077	hypothetical protein		Y	Y	N		N		N
CC2078	hypothetical protein		Y	Y	N		N		N
CC2079	Transcriptional regulator, TetR family		Y	Y	N		N		N
CC2080	hypothetical protein		Y	Y	N		N		N
CC2081	Leucine dehydrogenase		Y	Y	N		N		N
CC2082	Esterase/Lipase		Y	Y	N		N		N
CC2083	Uracil DNA glycosylase superfamily protein		Y	Y	N		N		N
CC2084	Glutathione S-transferase		Y	Y	N		N		N
CC2085	hypothetical protein		Y	Y	N		N		N
CC2086	Thioesterase superfamily protein		Y	N	N		N		N
CC2087	Glutathione S-transferase		Y	Y	N		Y	Middle OR Pole	N
CC2088	Nucleoside permease nupC		Y	Y	N		N		N
CC2089	Transporter		Y	Y	N		N		N
CC2090	ABC transporter ATP-binding protein		Y	Y	N		N		N
CC2091	Multidrug resistance efflux pump		Y	Y	N		Y	Patchy/Spotty	N
CC2092	Short-chain alcohol dehydrogenase		Y	Y	N		N		N
CC2093	Long-chain fatty acid transport protein precursor		Y	N	N		N		N
CC2094	Iron-sulfur cluster assembly/repair protein		Y	Y	N		N		N
CC2095	ApbC		Y	Y	N		N		N
	Phosphatase/phosphohexomutase family protein		Y	Y	N		N		N
CC2096	Phosphoserine phosphatase		Y	Y	N		N		N
CC2097	tRNA delta(2)-isopentenylpyrophosphate transferase		Y	Y	Y	Bipolar and Unipolar	Y	Bipolar and Unipolar	Y
CC2098	competence damage-inducible protein cinA		Y	Y	N		N		N
CC2099	Acetolactate synthase large subunit		Y	Y	N		N		N
CC2100	Acetolactate synthase small subunit		Y	Y	N		N		N
CC2101	Hypothetical protein		Y	Y	N		N		N
CC2102	Hypothetical cytosolic protein		Y	Y	N		N		N
CC2103	Peptidase, C13 family		N	N	N		N		N
CC2104	Penicillin-binding protein		Y	N	N		N		N
CC2105	Hypothetical protein		Y	Y	N		N		N
CC2106	Hypothetical protein		Y	Y	N		N		N
CC2107	Hypothetical protein		Y	Y	N		N		N

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CC2108	Hypothetical protein		Y	Y	N		Y	Middle OR Pole	N
CC2109	Fumarate hydratase		Y	Y	N		N		N
CC2110	Acetyltransferase		Y	Y	N		N		N
CC2111	Hypothetical membrane spanning protein		Y	Y	N		N		N
CC2112	hypothetical protein Farnesyl pyrophosphate synthetase / Geranyltranstransferase / Farnesyltransferase / Decaprenyl		Y	Y	N		N		N
CC2113	diphosphate synthase		N	N	N		N		N
CC2114	Methyltransferase		Y	Y	N		N		N
CC2115	cytochrome c-family protein		Y	Y	N		N		N
CC2116			Y	Y	N		N		N
CC2117	Hypothetical exported protein		Y	Y	N		N		N
CC2118	Conserved hypothetical protein		Y	Y	N		N		N
CC2119	Hypothetical exported protein		Y	Y	N		N		N
CC2120	Ketol-acid reductoisomerase / 2- dehydropanoate 2-reductase		Y	Y	N		N		N
CC2121	Conserved hypothetical protein		Y	N	N		N		N
CC2122			Y	Y	N		N		N
CC2123	Conserved hypothetical protein		Y	Y	N		N		N
CC2124	Thymidylate synthase		Y	Y	N		N		N
CC2125	Quinone oxidoreductase		N	N	N		N		N
CC2126	Dihydrofolate reductase		Y	Y	N		N		N
CC2127	Conserved hypothetical protein		N	N	N		N		N
CC2128	ANTIBIOTIC-INDUCED PROTEIN, Drp35		Y	Y	N		N		N
CC2129	NADH dehydrogenase		Y	N	N		N		N
CC2130	hypothetical protein		Y	Y	N		N		N
CC2131	Acyl-CoA dehydrogenase		N	N	N		N		N
CC2132	ABM family monooxygenase		Y	Y	N		N		N
CC2133	hypothetical protein		Y	Y	N		N		N
CC2134	DnaJ-like protein djIA		Y	Y	N		N		N
CC2135			N	N	N		N		N
CC2136	Beta-glucosidase		Y	N	N		N		N
CC2137	Methionine synthase I meth 5-methyltetrahydrofolate--homocysteine methyltransferase homocysteine-binding subunit		N	N	N		N		N
CC2138	Beta-lactamase, type II		Y	Y	N		N		N
CC2139	Methylenetetrahydrofolate reductase		Y	Y	N		N		N
CC2140	Transcriptional regulator, ArsR family / SAM- dependent methyltransferase		Y	Y	N		N		N
CC2141	Glyoxalase family protein		Y	Y	N		N		N
CC2142	Transcriptional regulator, LysR family		Y	Y	N		N		N
CC2143	NTF2 enzyme family protein		Y	Y	N		N		N
CC2144			Y	Y	Y	Variable Focus	N		N
CC2145	putative carboxymuconolactone decarboxylase family protein		Y	Y	N		N		N
CC2146	Gluconate 2-dehydrogenase		Y	N	N		N		N
CC2147	ABC transporter ATP-binding protein		Y	Y	N		N		N
CC2148	TonB-dependent receptor		Y	Y	N		N		N
CC2149	Signal peptidase I		Y	Y	N		N		N
CC2150	hypothetical protein		Y	Y	N		N		N
CC2151	Putative secreted protein		N	N	N		N		N
CC2152									

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CC2153	Polysaccharide deacetylase family		Y	Y	N		N		N
CC2154	Xaa-Pro dipeptidyl-peptidase		Y	Y	N		N		N
CC2155	hypothetical protein		Y	N	N		N		N
CC2156	Hypothetical cytosolic protein		Y	Y	N		N		N
	Glycerophosphoryl diester phosphodiesterase		Y	Y	N		N		N
CC2157			Y	Y	N		N		N
CC2158	Translation initiation inhibitor		Y	Y	N		N		N
CC2159	PHB granule-associated protein, phasin2		Y	Y	N		N		N
CC2160			Y	Y	Y	Patchy/Spotty	Y	Patchy/Spotty	Y
	D-alanyl-D-alanine serine-type carboxypeptidase		Y	Y	N		N		N
CC2161			Y	Y	N		N		N
CC2162	Aminotransferase class I family		N	N	N		N		N
CC2163	Molecular chaperones (DnaJ family)		Y	Y	N		N		N
CC2164	division plane positioning ATPase mipZ		Y	Y	N		N		N
CC2165	Pantoate--beta-alanine ligase		Y	Y	N		Y	Bipolar and Unipolar	N
CC2166	hypothetical protein		Y	Y	N		N		N
CC2167	Hypothetical cytosolic protein		Y	Y	N		N		N
	Methylcrotonyl-CoA carboxylase biotin-containing subunit		Y	Y	N		N		N
CC2168			Y	Y	N		N		N
CC2169	Methylglutaconyl-CoA hydratase		Y	Y	N		N		N
	Methylcrotonyl-CoA carboxylase carboxyl transferase subunit		Y	Y	N		N		N
CC2170			Y	Y	N		N		N
CC2171	cAMP/cGMP binding protein		Y	Y	N		N		N
CC2172	Isovaleryl-CoA dehydrogenase		N	N	N		N		N
CC2173	lysozyme-family localization factor spmX	spmX	N	N	N		N		N
CC2174	Mg2+ transporter mgtE		Y	Y	N		Y	Patchy/Spotty	N
CC2175	Flagellar motor switch protein fliN	fliN	N	N	N		N		N
CC2176	Lipoate-protein ligase B		N	N	N		N		N
CC2177	hypothetical protein		Y	Y	N		N		N
CC2178	Conserved membrane protein, DUF805		Y	Y	N		N		N
	Propionyl-CoA carboxylase biotin-containing subunit		Y	Y	Y	Middle OR Pole	N		N
CC2179			Y	Y	N		N		N
CC2180	Laminin G Domain protein		N	N	N		N		N
CC2181	Protein glcG		Y	Y	Y	Patchy/Spotty	N		N
CC2182	ThiJ/Pfpl family		Y	Y	N		N		N
CC2183	Peptide methionine sulfoxide reductase msrB		Y	Y	N		N		N
CC2184	Glutathione S-transferase GST		N	N	N		N		N
CC2185	Hypothetical protein		N	N	N		N		N
CC2186	Laminin G Domain protein		Y	Y	N		N		N
CC2187	L-aminopeptidase/D-esterase dmpA		N	N	N		N		N
CC2188	Transcriptional regulator, MarR family		Y	Y	Y	Patchy/Spotty	N		N
CC2189	hypothetical protein		Y	Y	N		N		N
CC2190	hypothetical protein		Y	N	N		N		N
CC2191	Glutathione peroxidase		Y	Y	N		N		N
CC2192	EF-Hand domain protein		Y	Y	N		N		N
CC2193	Hypothetical membrane spanning protein		Y	Y	N		N		N
CC2194	Hemin receptor		Y	N	N		N		N
	Putative membrane-associated alkaline phosphatase		Y	Y	N		N		N
CC2195			Y	Y	N		N		N
CC2196	Disulfide bond formation protein B		Y	Y	N		N		N
	2-polyprenyl-3-methyl-6-methoxy-1,4-benzoquinol hydroxylase		Y	Y	N		N		N
CC2197			Y	Y	N		N		N
CC2198	Membrane alanine aminopeptidase		Y	Y	N		N		N

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CC2199	Conserved hypothetical protein		N	N	N		N		N
CC2200	HNH endonuclease family protein		Y	Y	N		N		N
CC2201	DNA-3-methyladenine glycosylase II		Y	Y	Y	Middle OR Pole	N		N
CC2202	Transcription elongation factor greB		Y	Y	N		N		N
CC2203	hypothetical protein		Y	Y	N		N		N
CC2204	Transcriptional regulator, TetR family		Y	Y	N		N		N
CC2205	tRNA synthetases class I, catalytic domain		Y	Y	N		N		N
CC2206	Transcriptional regulators, MarR/EmrR family		Y	Y	N		N		N
CC2207	Hypothetical protein		Y	Y	N		N		N
CC2208	Hypothetical protein		Y	Y	N		N		N
CC2209	Acetyltransferase		Y	Y	N		N		N
CC2210	Thiol:disulfide interchange protein tlpA		Y	Y	N		N		N
CC2211	Argininosuccinate lyase		Y	Y	N		N		N
CC2212	hypothetical protein		Y	N	N		N		N
CC2213	Diaminopimelate decarboxylase Hypoxanthine-guanine		Y	Y	N		N		N
CC2214	phosphoribosyltransferase		Y	Y	N		N		N
CC2215	MJ0042 family finger-like domain protein		Y	N	N		N		N
CC2216	Cell division ATP-binding protein ftsE		Y	Y	N		N		N
CC2217	Cell division protein ftsX		Y	Y	N		N		N
CC2218	Hypothetical protein 1-acyl-sn-glycerol-3-phosphate		Y	Y	N		N		N
CC2219	acyltransferase		Y	Y	N		N		N
CC2220	Cation transport protein chaC		Y	Y	N		N		N
CC2221	Conserved hypothetical protein		Y	Y	N		N		N
CC2222	chorismate mutase-family protein		Y	Y	N		N		N
CC2223	Histidinol-phosphate aminotransferase Arogenate dehydrogenase / Prephenate		Y	Y	N		N		N
CC2224	dehydrogenase		N	N	N		N		N
CC2225	Conserved hypothetical protein		N	N	N		N		N
CC2226	EF hand domain protein		Y	N	N		N		N
CC2227	cellulose 1,4-beta-cellobiosidase		Y	Y	N		N		N
CC2228	Hypothetical cytosolic protein		Y	Y	N		N		N
CC2229	SLA2 protein		Y	Y	N		N		N
CC2230	alpha/beta hydrolase-family protein		N	N	N		N		N
CC2231	hypothetical protein		Y	Y	N		N		N
CC2232	Transcriptional regulator, Cro/Ci family		Y	Y	N		N		N
CC2233	Conserved hypothetical protein		Y	Y	N		N		N
CC2234	Conserved hypothetical protein		Y	Y	N		N		N
CC2235	hypothetical protein		N	N	N		N		N
CC2236	hypothetical protein		Y	Y	N		N		N
CC2237	Deoxycytidine triphosphate deaminase		N	N	N		N		N
CC2238	O-succinylhomoserine sulfhydrylase		Y	Y	N		N		N
CC2239	ApaG protein		Y	Y	N		N		N
CC2240	Hypothetical protein		Y	Y	N		N		N
CC2241	Heat shock protein 33 hsp33	hsp33	Y	Y	N		N		N
CC2242	Ornithine carbamoyltransferase Acetylmornithine aminotransferase /		N	N	N		N		N
CC2243	Succinyldiaminopimelate aminotransferase		Y	N	N		N		N
CC2244	ABC transporter permease protein		Y	Y	N		N		N
CC2245	Hypothetical protein		Y	N	N		N		N
CC2246	Exodeoxyribonuclease VII large subunit		Y	Y	Y	Central - Focus	Y	Central - Focus	Y
CC2247	Hypothetical protein		Y	Y	N		N		N



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CC2248	Peptidoglycan-specific endopeptidase, M23 family		Y	Y	N		N		N
CC2249	chemotaxis receiver protein cheYIII		N	N	N		N		N
CC2250	Lipid A biosynthesis lauroyl acyltransferase		Y	Y	N		N		N
CC2251	Transcriptional regulator of stalk biogenesis staR	staR	Y	Y	N		N		N
CC2252	Myo-inositol-1(or 4)-monophosphatase		N	N	N		N		N
CC2253	Lysophospholipase L2		Y	Y	N		N		N
CC2254	Nonspecific lipid-transfer protein		N	N	N		N		N
CC2255	hypothetical protein		Y	Y	N		N		N
CC2256			N	N	N		N		N
CC2257	Methyltransferase		Y	Y	N		N		N
CC2258	Small heat shock protein		Y	Y	N		N		N
CC2259	Hypothetical protein with pentapeptide repeats		Y	Y	N		N		N
CC2260	Hypothetical protein with pentapeptide repeats		N	N	N		N		N
CC2261	Phosphoglycerate mutase		N	N	N		N		N
CC2262	Hypothetical protein		Y	Y	N		N		N
CC2263	Arabinose-5-phosphate isomerase		N	N	N		N		N
CC2264	Phosphomannomutase		Y	Y	N		N		N
CC2265	Acetyltransferase, GNAT family		Y	Y	N		N		N
CC2266	Bark storage protein A precursor		Y	Y	N		N		N
CC2267	Dabb-family alpha/beta stress response protein		Y	Y	N		N		N
CC2268	Uracil phosphoribosyltransferase		Y	Y	N		N		N
CC2269	Membrane-bound aldehyde dehydrogenase, large subunit		Y	Y	N		N		N
CC2270	Membrane-bound aldehyde dehydrogenase iron-sulfur protein		Y	Y	N		N		N
CC2271	Phosphohydrolase (MutT/nudix family protein)		Y	Y	N		N		N
CC2272	Endonuclease III		Y	N	N		N		N
CC2273	D-alanyl-D-alanine dipeptidase		Y	Y	N		N		N
CC2274	Malonate-semialdehyde dehydrogenase (acylating) / Methylmalonate-semialdehyde dehydrogenase (acylating)		Y	Y	N		N		N
CC2275	FMN reductase		N	N	N		N		N
CC2276	Conserved hypothetical protein		N	N	N		N		N
CC2277	beta-D-Glcp beta-1,4-glucosyltransferase		Y	Y	N		N		N
CC2278	polysaccharide biosynthesis protein celD		Y	Y	N		N		N
CC2279	GAF domain-containing proteins		Y	Y	N		N		N
CC2280	hypothetical protein		N	N	N		N		N
CC2281	Methyl-accepting chemotaxis protein		Y	Y	Y	Pole	N		N
CC2282	Glucosylase		Y	Y	N		N		N
CC2283	Cytoplasmic membrane maltose transporter malY	malY	Y	Y	N		N		N
CC2284	Maltose transport transcriptional repressor mall	mall	Y	Y	N		N		N
CC2285	Alpha-glucosidase		N	N	N		N		N
CC2286	Alpha-amylase		Y	Y	N		N		N
CC2287	TonB-dependent maltose outer membrane transporter malA	malA	Y	Y	N		N		N

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CC2288	Tryptophan halogenase		Y	Y	N		N		N
CC2289	hypothetical protein		Y	Y	N		N		N
CC2290	Transposase		Y	N	N		N		N
CC2291	Transposase		Y	N	N		N		N
CC2292	hypothetical protein		Y	Y	N		N		N
CC2293	hypothetical protein		Y	Y	N		N		N
CC2294	Hypothetical protein		Y	Y	Y	Patchy/Spotty	N		N
CC2295	Aspartate 1-decarboxylase		Y	Y	N		N		N
CC2296	hypothetical protein		N	N	N		N		N
CC2297	membrane peptidase, M23 family		Y	N	N		N		N
CC2298	Lipase		Y	Y	N		N		N
CC2299	Very-long-chain acyl-CoA synthetase		Y	Y	N		N		N
CC2300	3-deoxy-7-phosphoheptulonate synthase		Y	Y	N		N		N
CC2301	O-antigen ligase related enzyme		N	N	N		N		N
CC2302	Glutathione reductase		Y	Y	N		N		N
CC2303	Ribose 5-phosphate isomerase		Y	Y	N		N		N
	Glucosamine-1-phosphate acetyltransferase / UDP-N-acetylglucosamine								
CC2304	pyrophosphorylase		Y	Y	N		N		N
CC2305	Phosphoglycolate phosphatase		Y	N	N		N		N
CC2306	Oxidoreductase		Y	Y	N		N		N
CC2307	Hypothetical cytosolic protein		Y	Y	N		N		N
CC2308	hypothetical protein		Y	N	N		N		N
CC2309	Glutathione S-transferase		Y	Y	N		N		N
CC2310	hypothetical protein		N	N	N		N		N
CC2311	Hypothetical membrane associated protein		Y	Y	Y	Middle OR Pole	N		N
CC2312	Transcriptional regulator, DeoR family		Y	N	N		N		N
CC2313	Endo-1,4-beta-xylanase		Y	Y	N		N		N
CC2314	23S rRNA methyltransferase		Y	N	N		N		N
CC2315	Transporter, MFS superfamily		Y	Y	N		N		N
CC2316	Transcriptional regulator		Y	Y	N		N		N
CC2317	Methyl-accepting chemotaxis protein		Y	Y	Y	Pole	N		N
CC2318	ABC transporter permease protein		Y	Y	N		N		N
CC2319	ABC transporter ATP-binding protein		Y	Y	N		N		N
	ABC membrane transporter, periplasmic component								
CC2320	membrane lipoprotein		Y	Y	N		N		N
CC2321	membrane lipoprotein		N	N	N		N		N
CC2322	Hypothetical protein		Y	Y	N		N		N
CC2323	Conserved hypothetical protein		Y	Y	N		Y	Pole	N
	hybrid sensor histidine kinase/receiver protein								
CC2324	protein		Y	Y	N		N		N
CC2325	Alpha-methylacyl-CoA racemase		N	N	N		N		N
CC2326	Putative lytic transglycosylase pleA	pleA	Y	Y	N		N		N
CC2327	TonB protein		Y	N	N		N		N
CC2328	Acyl-CoA dehydrogenase		Y	Y	N		N		N
CC2329	DadA-related amino acid oxidase		Y	N	N		N		N
CC2330	HTH transcriptional regulator		Y	Y	N		Y	Patchy/Spotty	N
CC2331	DNA-binding protein HU		N	N	N		N		N
	Biotin synthase related domain containing protein								
CC2332	protein		Y	Y	N		N		N
CC2333	Uracil DNA glycosylase superfamily protein		Y	Y	N		N		N
CC2334	tRNA-His-GTG		N	N	N		N		N
CC2335	TonB accessory protein exbD	exbD	Y	Y	N		N		N

Gene Number	Annotation	Gene exbB	Entry Vector Constructed	Entry Vector Sequence Correct	Localized and Sequence- verified C- terminal Fusion	Localization w/ C- terminal Tag	Localized and Sequence- verified N- terminal Fusion	Localization w/ N- terminal Tag	Protein Localized as Both N- or C- terminal Fusion
CC2336	TonB accessory protein exbB		Y	Y	N		N		N
CC2337	Hypothetical secreted protein		Y	Y	N		N		N
CC2338	Transcriptional regulator, TetR family		Y	Y	N		N		N
CC2339			Y	Y	N		N		N
CC2340	non-essential pilus assembly protein		Y	Y	N		N		N
CC2341	ribonuclease, CafA family		Y	Y	N		N		N
CC2342	Septum formation protein Maf Bacterial Protein Translation Initiation Factor 1 (IF-1)		N	N	N		N		N
CC2343			Y	Y	N		N		N
CC2344	Arsenate reductase		Y	Y	N		N		N
CC2345	Conserved hypothetical cytosolic protein		Y	Y	N		N		N
CC2346	Histidinol dehydrogenase Cytosine/uracil/thiamine/allantoin permease family protein		Y	Y	N		N		N
CC2347			N	N	N		N		N
CC2348	hypothetical protein		Y	Y	N		N		N
CC2349	Hypothetical cytosolic protein UDP-N-acetylglucosamine 1- carboxyvinyltransferase		Y	Y	N		N		N
CC2350			Y	Y	N		N		N
CC2351	hypothetical protein		Y	Y	N		N		N
CC2352	Transcriptional regulators, LysR family		Y	Y	N		Y	Patchy/Spotty	N
CC2353	Quinone oxidoreductase		Y	Y	N		N		N
CC2354	Transporter, MFS superfamily		Y	Y	N		N		N
CC2355	Transcriptional regulator		N	N	N		N		N
CC2356	HTH DNA-binding protein		Y	Y	N		N		N
CC2357	Beta-xylosidase		Y	Y	N		N		N
CC2358	Carboxymethylenebutenolidase N(4)-(beta-N-acetylglucosaminy)-L- asparaginase		Y	Y	N		N		N
CC2359			Y	Y	N		N		N
CC2360	Copper homeostasis protein cutC		Y	Y	N		N		N
CC2361	Glutathionylspermidine synthase family		Y	Y	N		N		N
CC2362	putative alpha helical protein		Y	Y	Y	Variable Focus Middle OR Pole	N		N
CC2363	Hypothetical protein		Y	Y	Y		N		N
CC2364	Conserved hypothetical protein		Y	Y	N		N		N
CC2365	surface protein		Y	Y	N		N		N
CC2366	surface protein		Y	Y	N		N		N
CC2367	hypothetical protein		Y	Y	N		N		N
CC2368	Protein tyrosine phosphatase		Y	N	N		N		N
CC2369	N-methylhydantoinase (ATP-hydrolyzing)		N	N	N		N		N
CC2370	Conserved integral membrane protein		Y	Y	N		N		N
CC2371	Ribonuclease III Nitropropane dioxygenase / Trans-enoyl-CoA reductase family		N	N	N		N		N
CC2372			Y	Y	N		N		N
CC2373	Methylmalonyl-CoA mutase beta subunit		Y	Y	N		N		N
CC2374	Methylmalonyl-CoA mutase alpha subunit		Y	Y	N		N		N
CC2375	conserved hypothetical protein		Y	Y	N		N		N
CC2376	hypothetical protein		Y	Y	N		N		N
CC2377	Hypothetical protein		Y	N	N		N		N
CC2378	UDP-N-acetylglucosamine 4-epimerase		Y	Y	N		N		N
CC2379	UDP-glucose 6-dehydrogenase		Y	Y	N		N		N
CC2380			Y	Y	N		N		N
CC2381			Y	Y	N		N		N
CC2382	UDP-glucose 6-dehydrogenase		Y	Y	N		N		N
CC2383	UDP-glucose 4-epimerase		Y	Y	N		N		N

Gene Number	Annotation	Gene	Entry Vector Constructed	Entry Vector Sequence Correct	Localized and Sequence-verified C-terminal Fusion	Localization w/ C-terminal Tag	Localized and Sequence-verified N-terminal Fusion	Localization w/ N-terminal Tag	Protein Localized as Both N- or C-terminal Fusion
CC2384	polyisoprenylphosphate hexose-1-phosphotransferase pssZ	pssZ	Y	Y	N		N		N
CC2385	hypothetical protein		Y	N	N		N		N
CC2386	protein hipA		Y	Y	N		N		N
CC2387	DNA integration/recombination/inversion protein		Y	Y	N		N		N
CC2388	Cobalt-zinc-cadmium resistance protein czcC		Y	Y	N		N		N
CC2389	Cobalt-zinc-cadmium resistance protein czcB		Y	Y	N		N		N
CC2390	Cobalt-zinc-cadmium resistance protein czcA		Y	N	N		N		N
CC2391	Transcriptional regulator, MarR family		Y	Y	N		N		N
CC2392	Transcriptional regulator vanR		Y	Y	N		N		N
CC2393	Vanillate demethylase oxygenase subunit A		N	N	N		N		N
CC2394	Vanillate demethylase oxidoreductase subunit vanB		N	N	N		N		N
CC2395	Dihydrolipoamide acetyltransferase component of acetoin cleaving system		Y	Y	N		N		N
CC2396	Aryl-alcohol dehydrogenase		Y	N	N		N		N
CC2397	Benzaldehyde dehydrogenase [NAD+]		Y	Y	N		N		N
CC2398	TonB-dependent receptor		Y	Y	N		N		N
CC2399	Transcriptional regulator, AraC family		N	N	N		N		N
CC2400	4-coumarate--CoA ligase		Y	Y	N		N		N
CC2401	Trans-feruloyl-CoA hydratase		Y	Y	N		N		N
CC2402	Vanillin dehydrogenase		Y	Y	N		N		N
CC2403	Transcriptional regulator, AraC family		Y	Y	N		N		N
CC2404	4-hydroxybenzoate 3-monooxygenase acetate/3-ketoacid CoA transferase, subunit A		Y	Y	N		N		N
CC2405	acetate/3-ketoacid CoA transferase, subunit B		Y	N	N		N		N
CC2406	3-ketoacyl-CoA thiolase		Y	Y	N		N		N
CC2407	Protocatechuate 3,4-dioxygenase beta chain		N	N	N		N		N
CC2408	Protocatechuate 3,4-dioxygenase alpha chain		Y	Y	N		N		N
CC2409	3-carboxy-cis,cis-muconate cycloisomerase		Y	Y	N		N		N
CC2410	3-oxoadipate enol-lactonase / 4-carboxymuconolactone decarboxylase		N	N	N		N		N
CC2411	4-hydroxybenzoate transporter		Y	Y	N		N		N
CC2412			Y	N	N		N		N
CC2413			N	N	N		N		N
CC2414	Hypothetical protein		Y	Y	N		N		N
CC2415	Hypothetical protein		Y	Y	N		N		N
CC2416	Type IV secretory pathway, VirB2 protein		Y	N	N		N		N
CC2417			Y	Y	N		N		N
CC2418	Type IV secretory pathway, VirB3 protein		N	N	N		N		N
CC2419	Type IV secretory pathway, VirB4 ATPase		Y	Y	N		N		N
CC2420	Type IV secretory pathway, VirB6 channel protein		N	N	N		N		N
CC2421	Type IV secretory pathway, VirB9 channel protein		N	N	N		N		N
CC2422	Type IV secretory pathway, VirB10 channel protein		Y	Y	N		N		N
CC2423	Type IV secretory pathway, VirB11 ATPase		N	N	N		N		N
CC2424	Transposase		Y	Y	N		N		N

Gene Number	Annotation	Gene	Entry Vector Constructed	Entry Vector Sequence Correct	Localized and Sequence-verified C-terminal Fusion	Localization w/ C-terminal Tag	Localized and Sequence-verified N-terminal Fusion	Localization w/ N-terminal Tag	Protein Localized as Both N- or C-terminal Fusion
CC2425	polyisoprenylphosphate hexose-1-phosphotransferase hfsE	hfsE	Y	Y	N		N		N
CC2426	oligosaccharide translocase/flippase hfsF	hfsF	Y	Y	N		N		N
CC2427	glycosyltransferase hfsG	hfsG	N	N	N		N		N
CC2428	oligosaccharide deacetylase hfsH	hfsH	Y	Y	N		N		N
CC2429	polysaccharide polymerase hfsC	hfsC	Y	Y	N		N		N
CC2430	Polysaccharide autokinase-related protein hfsB	hfsB	Y	Y	N		N		N
CC2431	Frameshifted variant of holdfast synthesis gene hfsA	hfsA	Y	Y	N		N		N
CC2432	polysaccharide secretin protein hfsD	hfsD	Y	Y	N		N		N
CC2433	Hypothetical cytosolic protein		N	N	N		N		N
CC2434	Glutathione S-transferase		Y	Y	N		N		N
CC2435	Conserved hypothetical protein		Y	Y	N		N		N
CC2436	Aspartyl/glutamyl-tRNA(Asn/Gln) amidotransferase subunit B		Y	Y	N		N		N
CC2437	Aspartyl/glutamyl-tRNA(Asn/Gln) amidotransferase subunit A		Y	Y	N		N		N
CC2438	Aspartyl/glutamyl-tRNA(Asn/Gln) amidotransferase subunit C		Y	Y	N		N		N
CC2439	Endonuclease involved in recombination		Y	Y	N		N		N
CC2440	hypothetical protein		Y	Y	N		N		N
CC2441	hypothetical protein		Y	N	N		N		N
CC2442	hypothetical protein		Y	Y	N		N		N
CC2443	Aspartate carbamoyltransferase		Y	Y	N		N		N
CC2444	Dihydroorotase		N	N	N		N		N
CC2445	hypothetical protein		Y	Y	N		N		N
CC2446	Hypothetical membrane spanning protein		N	N	N		N		N
CC2447	DNA processing protein		Y	N	N		N		N
CC2448	SAM-dependent methyltransferase		Y	Y	N		N		N
CC2449	proline-rich hypothetical protein		N	N	N		N		N
CC2450	hypothetical protein		Y	Y	N		N		N
CC2451	hypothetical protein		N	N	N		N		N
CC2452	DNA topoisomerase I		Y	Y	N		N		N
CC2453	Ribonuclease R		Y	Y	N		N		N
CC2454	Endoglucanase E		Y	Y	N		N		N
CC2455	Aspartate aminotransferase		Y	Y	N		N		N
CC2456	N-acyl-L-amino acid amidohydrolase		Y	Y	N		N		N
CC2457	Phosphohydrolase (MutT/nudix family protein)		Y	Y	N		N		N
CC2458	hypothetical protein		Y	Y	N		N		N
CC2459	LSU ribosomal protein L33P		Y	Y	N		N		N
CC2460	hypothetical protein		Y	Y	N		N		N
CC2461	Alkaline phosphatase		Y	Y	N		N		N
CC2462	GGDEF/response regulator protein pleD	pleD	Y	Y	N		N		N
CC2463	Response regulator receiver protein divK	divK	Y	Y	Y	Bipolar and Unipolar	N		N
CC2464	Conserved hypothetical protein		Y	Y	N		N		N
CC2465	Glucokinase		N	N	N		N		N
CC2466	DNA polymerase IV-kappa dinB		Y	Y	N		N		N
CC2467	ATP-dependent Clp protease adaptor protein ClpS	clpS	Y	Y	N		N		N
CC2468	ATP-dependent clp protease ATP-binding subunit clpA	clpA	Y	Y	N		N		N

Gene Number	Annotation	Gene	Entry Vector Constructed	Entry Vector Sequence Correct	Localized and Sequence-verified C-terminal Fusion	Localization w/ C-terminal Tag	Localized and Sequence-verified N-terminal Fusion	Localization w/ N-terminal Tag	Protein Localized as Both N- or C-terminal Fusion
CC2469	Conserved hypothetical protein		Y	Y	Y	Patchy/Spotty	N		N
CC2470	Adenosine 5'-monophosphoramidase		Y	Y	N		N		N
CC2471	hypothetical protein		Y	Y	N		N		N
CC2472	Acyl-CoA thioesterase II		Y	Y	N		N		N
CC2473	Enantioselective peptide amidase		Y	N	N		N		N
CC2474	NTF2 enzyme family protein		Y	Y	N		N		N
CC2475	glycine-rich hypothetical protein		Y	N	N		N		N
CC2476	hypothetical protein		Y	Y	N		N		N
CC2477	Sel1 repeat domain protein		Y	Y	N		N		N
CC2478	Acyl-CoA dehydrogenase		Y	Y	N		N		N
CC2479	Acyl-CoA dehydrogenase, short-chain specific		Y	Y	N		N		N
CC2480	Conserved hypothetical protein		Y	Y	N		Y	Patchy/Spotty	N
CC2481	Membrane alanine aminopeptidase		N	N	N		N		N
CC2482	Sensory transduction histidine kinase pleC	pleC	Y	Y	Y	Pole	N		N
CC2483	LAO/AO transport system kinase		N	N	N		N		N
CC2484	Glutathione S-transferase		Y	N	N		N		N
CC2485	Transporter		Y	Y	N		N		N
CC2486	Transporter		Y	Y	N		N		N
CC2487	Adenylosuccinate lyase		Y	Y	N		N		N
CC2488	proline hydroxylase		N	N	N		N		N
CC2489	Hypothetical cytosolic protein		Y	Y	N		N		N
CC2490	Hypothetical cytosolic protein		Y	Y	N		N		N
CC2491	Phosphoribosylamidoimidazole-succinocarboxamide synthase		Y	Y	N		N		N
CC2492	Phosphoribosylformylglycinamide synthase, purS component		Y	N	N		N		N
CC2493	TetR family transcriptional regulator		Y	N	N		N		N
CC2494	Cytochrome P450-terp		Y	Y	N		N		N
CC2495	Rubredoxin		Y	Y	N		N		N
CC2496	hypothetical protein		Y	Y	N		N		N
CC2497	Phosphoribosylformylglycinamide synthase		Y	Y	N		N		N
CC2498	hypothetical protein		Y	N	N		N		N
CC2499	hypothetical protein		Y	Y	N		N		N
CC2500	Phosphoribosylformylglycinamide synthase		Y	N	N		N		N
CC2501	PAS-family sensor histidine kinase		Y	Y	N		N		N
CC2502	Aminopeptidase		Y	Y	N		N		N
CC2503	bolA-related transcriptional regulator		Y	N	N		N		N
CC2504	Conserved hypothetical protein		Y	Y	N		N		N
CC2505	Glutaredoxin		Y	Y	N		N		N
CC2506	Thioesterase		Y	Y	N		N		N
CC2507	hypothetical protein		Y	N	N		N		N
CC2508			Y	Y	N		N		N
CC2509	Endopeptidase htpX		N	N	N		N		N
CC2510	Hypothetical protein		Y	N	N		N		N
CC2511	Conserved hypothetical protein		Y	Y	N		N		N
CC2512	toxin protein relE-2		Y	Y	N		N		N
CC2513	antitoxin protein relB-2		Y	Y	N		N		N
CC2514			Y	Y	N		N		N
CC2515	S-formylglutathione hydrolase		Y	Y	N		N		N
CC2516	Glutathione-dependent formaldehyde dehydrogenase		Y	Y	N		N		N
CC2517	Transcriptional regulators, LysR family		Y	Y	N		N		N

Gene Number	Annotation	Gene	Entry Vector Constructed	Entry Vector Sequence Correct	Localized and Sequence-verified C-terminal Fusion	Localization w/ C-terminal Tag	Localized and Sequence-verified N-terminal Fusion	Localization w/ N-terminal Tag	Protein Localized as Both N- or C-terminal Fusion
CC2518	Phosphatidylserine decarboxylase		Y	Y	N		N		N
CC2519	host cell attachment protein, COG5622		Y	Y	N		N		N
CC2520	RRNA methylase, SpoU family hybrid sensor histidine kinase/receiver domain protein		Y	Y	N		N		N
CC2521			N	N	N		N		N
CC2522	Isocitrate dehydrogenase [NADP]		Y	Y	N		N		N
CC2523	Conserved hypothetical protein		Y	N	N		N		N
CC2524	Putative malonate transporter		N	N	N		N		N
CC2525			Y	Y	N		N		N
CC2526	Glyoxalase family protein		Y	Y	N		N		N
CC2527	Transcriptional regulator, AraC family		Y	Y	N		N		N
CC2528			Y	Y	N		N		N
CC2529	Alanyl-tRNA synthetase		Y	Y	N		N		N
CC2530	Rieske (2Fe-2S) domain protein		Y	Y	N		N		N
CC2531	Fumarylacetoacetase		Y	Y	N		N		N
CC2532	Homogentisate 1,2-dioxygenase		Y	Y	N		N		N
CC2533	4-hydroxyphenylpyruvate dioxygenase		Y	Y	N		N		N
CC2534	Histidinol-phosphate aminotransferase		N	N	N		N		N
CC2535	Transcriptional regulator, AsnC family		Y	Y	N		N		N
CC2536	stomatin/prohibitin-related protein		Y	Y	N		Y	Patchy/Spotty	N
CC2537	Conserved hypothetical protein		Y	Y	N		N		N
CC2538	CAAX amino terminal protease family		Y	Y	N		N		N
CC2539	M61 glycyI aminopeptidase		Y	Y	N		N		N
CC2540	Cell division protein ftsZ	ftsZ	Y	Y	Y	MidBand	N		N
CC2541	Cell division protein ftsA	ftsA	Y	N	N		N		N
CC2542	Cell division protein ftsQ	ftsQ	Y	Y	N		N		N
CC2543	D-alanine--D-alanine ligase		Y	Y	N		N		N
CC2544	Aminopeptidase		Y	Y	Y	Patchy/Spotty	N		N
CC2545	UDP-N-acetylenolpyruvoylglucosamine reductase		Y	Y	N		N		N
CC2546	UDP-N-acetylmuramate--alanine ligase		Y	Y	Y	Line	N		N
CC2547	hypothetical protein		Y	Y	N		N		N
CC2548	putative ATP-binding protein		Y	Y	N		N		N
CC2549	Putative heme-binding protein		Y	Y	N		N		N
CC2550	Hypothetical exported protein		Y	N	N		N		N
CC2551	UDP-N-acetylglucosamine--N-acetylmuramyl- (pentapeptide) pyrophosphoryl-undecaprenol N-acetylglucosamine transferase		Y	Y	Y	MidBand	Y	MidBand	Y
CC2552	Cell division protein ftsW		Y	Y	N		N		N
CC2553	hypothetical protein		Y	Y	N		N		N
CC2554	PAS-family sensor histidine kinase		Y	Y	N		N		N
CC2555	Chloride channel protein		Y	Y	N		N		N
CC2556	UDP-N-acetylmuramoylalanine--D-glutamate ligase		Y	Y	N		N		N
CC2557			N	N	N		N		N
CC2558	UDP-N-acetylmuramoyl-tripeptide--D-alanyl-D-alanine ligase		Y	Y	N		N		N
CC2559	UDP-N-acetylmuramoylalanine-D-glutamate--2,6-diaminopimelate ligase		Y	Y	N		N		N
CC2560	Division specific D,D-transpeptidase / Cell division protein ftsI	ftsI	Y	Y	N		N		N
CC2561	putative cell division protein		Y	Y	N		N		N
CC2562	S-adenosyl-methyltransferase mraW		N	N	N		N		N

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CC2563	Cell division protein mraZ		Y	N	N		N		N
CC2564	Transcriptional regulator		Y	N	N		N		N
CC2565	alpha/beta hydrolase family protein		Y	Y	N		N		N
CC2566	Transcriptional regulator		Y	Y	N		N		N
CC2567	Anhydro-N-acetylmuramyl-tripeptide amidase		Y	Y	N		N		N
CC2568	Transporter, drug/metabolite exporter family		Y	Y	N		N		N
CC2569	Cyclohexanone monooxygenase		Y	Y	N		N		N
CC2570	Sensory transduction protein kinase		Y	Y	N		N		N
CC2571	hypothetical protein		Y	Y	N		N		N
CC2572	NTF2 enzyme family protein		Y	Y	N		N		N
CC2573	Transcriptional regulator, AraC family		Y	Y	Y	Middle OR Pole	N		N
CC2574			Y	Y	N		N		N
CC2575	3-hydroxybutyryl-CoA dehydratase		N	N	N		N		N
CC2576	two-component receiver domain protein		Y	Y	N		N		N
CC2577	Pyridoxamine 5'-phosphate oxidase family protein		Y	Y	N		N		N
CC2578	Peptidase, M16 family		Y	Y	N		N		N
CC2579	Aminopeptidase		Y	Y	N		N		N
CC2580	DnaK suppressor protein dksA	dksA	Y	Y	N		N		N
CC2581	flagellar assembly regulator fliX	fliX	Y	Y	N		N		N
CC2582	Flagellar P-ring protein flgI	flgI	N	N	N		N		N
CC2583	Chemotactic signal-response protein cheL		Y	Y	N		N		N
CC2584	Flagellar basal-body protein flbY	flbY	Y	Y	N		N		N
CC2585	Ribosomal protein L11 methyltransferase		Y	Y	Y	Middle OR Pole	N		N
CC2586	Hypothetical protein		Y	Y	N		N		N
CC2587	ABC transporter ATP-binding protein		Y	Y	N		N		N
CC2588	hypothetical protein		Y	Y	N		N		N
CC2589	hypothetical protein		Y	Y	N		N		N
CC2590	Excinuclease ABC subunit A		Y	Y	Y	Patchy/Spotty	N		N
CC2591	Transposase		Y	N	N		N		N
CC2592	Transposase		Y	N	N		N		N
CC2593	Conserved hypothetical protein		Y	Y	N		N		N
CC2594	Glutathione S-transferase		Y	Y	N		N		N
CC2595	Conserved transmembrane protein		Y	Y	N		N		N
CC2596	Conserved transmembrane protein		Y	N	N		N		N
CC2597	Conserved transmembrane protein		N	N	N		N		N
CC2598	Glucose inhibited division protein A		Y	Y	N		N		N
CC2599	Ribosomal-protein-alanine acetyltransferase		N	N	N		N		N
CC2600	FAD dependent oxidoreductase		Y	Y	N		Y	Patchy/Spotty	N
CC2601	Cyclopropane fatty acid synthase and related methyltransferases		Y	Y	N		Y	Patchy/Spotty	N
CC2602	Hypothetical protein		Y	Y	N		N		N
CC2603	N-carbamoyl-L-amino acid hydrolase		Y	Y	N		N		N
CC2604	Serine-pyruvate aminotransferase		N	N	N		N		N
CC2605	Chitooligosaccharide deacetylase		Y	N	N		N		N
CC2606	Urate oxidase		Y	N	N		N		N
CC2607	Hypothetical membrane spanning protein		Y	Y	N		N		N
CC2608	Transcriptional regulator, TetR family		N	N	N		N		N
CC2609	Hypothetical exported protein		N	N	N		N		N
CC2610	Iron-regulated protein frpC		Y	Y	N		N		N
CC2611	Acetamidase		Y	Y	N		N		N
CC2612	hypothetical protein		N	N	N		N		N



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CC2613	Glutamyl-tRNA(Gln) amidotransferase subunit A		Y	Y	N		N		N
CC2614	Hypothetical protein		Y	Y	N		N		N
CC2615	Inosine-uridine preferring nucleoside hydrolase		Y	Y	N		N		N
CC2616	Guanine deaminase		Y	Y	Y	Pole	N		N
CC2617	XdhC protein (assists in molybdopterin insertion into xanthine dehydrogenase)		Y	Y	N		N		N
CC2618	Xanthine dehydrogenase large subunit		N	N	N		N		N
CC2619	Xanthine dehydrogenase small subunit		Y	Y	N		N		N
CC2620	Urate oxidase		Y	Y	N		N		N
CC2621	NADP-dependent malic enzyme		Y	Y	N		N		N
CC2622	Cold shock protein		N	N	N		N		N
CC2623	tRNA-Met-CAT		Y	Y	N		N		N
CC2624			Y	N	N		N		N
CC2625	Rrf2 family protein		Y	Y	N		N		N
CC2626	CBS domain containing protein		Y	Y	N		N		N
CC2627	Integral membrane protein (Rhomboid family)		Y	Y	N		N		N
CC2628	holdfast attachment protein hfaA	hfaA	Y	Y	N		Y	Patchy/Spotty	N
CC2629	holdfast attachment protein hfaB	hfaB	Y	Y	Y	Patchy/Spotty	N		N
CC2630	holdfast attachment protein hfaD	hfaD	N	N	N		N		N
CC2631	ABC transporter ATP-binding protein uup		N	N	N		N		N
CC2632	MASE1-family sensor histidine kinase		Y	Y	N		N		N
CC2633	ABC transporter substrate-binding protein		Y	Y	N		N		N
CC2634	Maltose/maltodextrin transport ATP-binding protein malK	malK	N	N	N		N		N
CC2635	Taurine transport system permease protein tauC	tauC	Y	Y	N		N		N
CC2636	hypothetical protein		N	N	N		N		N
CC2637	Conserved hypothetical protein		N	N	N		N		N
CC2638	Peptidase, M16 family		N	N	N		N		N
CC2639	Conserved hypothetical protein		Y	N	N		N		N
CC2640	Hypothetical protein		Y	Y	N		N		N
CC2641	Oxidoreductase		N	N	N		N		N
CC2642	Choline dehydrogenase		N	N	N		N		N
CC2643	Putative acetyltransferase/acyltransferase		Y	Y	N		N		N
CC2644	PhoH protein		Y	Y	N		N		N
CC2645	hypothetical protein		N	N	N		N		N
CC2646	oligopeptide transporter		Y	N	N		N		N
CC2647	Glutathione S-transferase		Y	Y	N		N		N
CC2648	Acetyltransferase		Y	Y	N		N		N
CC2649	Hypothetical protein		Y	Y	N		N		N
CC2650	Glutaminy-peptide cyclotransferase		Y	Y	N		N		N
CC2651	Serine acetyltransferase		Y	Y	N		Y	Bipolar and Unipolar	N
CC2652	Phosphohydrolase (MutT/nudix family protein)		Y	Y	N		N		N
CC2653	Nitroreductase family		Y	Y	N		N		N
CC2654	Queuosine biosynthesis protein QueF		Y	Y	N		N		N
CC2655	Granaticin polyketide synthase putative ketoacyl reductase 2		Y	Y	N		N		N
CC2656	Transposase		Y	N	N		N		N
CC2657	Transposase		Y	N	N		N		N
CC2658	Hypothetical protein		Y	Y	N		N		N

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CC2659	Oxalate/formate antiporter		Y	Y	N		N		N
CC2660	TonB dependent receptor		Y	Y	N		N		N
CC2661	Transcriptional regulator, GntR family		Y	N	N		N		N
CC2662	Transcriptional regulator, TetR family		Y	Y	N		N		N
CC2663	Conserved hypothetical protein		Y	Y	N		N		N
CC2664	ABC transporter substrate-binding protein		Y	N	N		N		N
CC2665	Conserved hypothetical protein		Y	Y	N		N		N
CC2666	Hypothetical protein		Y	Y	N		N		N
CC2667			Y	Y	N		Y	Pole	N
CC2668	ABC transporter permease protein		Y	Y	Y	Patchy/Spotty	N		N
CC2669	ABC transporter ATP-binding protein		N	N	N		N		N
	GAF/PAS-family histidine kinase/receiver protein		Y	Y	N		N		N
CC2670			Y	Y	N		N		N
CC2671	Aminoacyl peptidase		Y	Y	N		N		N
CC2672	Parathion hydrolase		Y	Y	Y	Patchy/Spotty	N		N
CC2673	Transcriptional regulator		Y	Y	N		N		N
CC2674	Putative competence-damage protein		Y	Y	N		N		N
CC2675	Sugar fermentation stimulation protein A		Y	Y	N		N		N
CC2676	hypothetical protein		Y	Y	N		N		N
CC2677	Methionine aminopeptidase		N	N	N		N		N
CC2678	hypothetical protein		Y	Y	N		N		N
CC2679			Y	Y	N		N		N
CC2680	DNA repair protein radC		Y	Y	N		N		N
CC2681	Transposase		Y	Y	N		N		N
CC2682	hypothetical protein		Y	N	N		N		N
CC2683	Conserved hypothetical protein		Y	Y	N		N		N
CC2684	Conserved hypothetical protein		Y	Y	N		N		N
CC2685	Conjugal transfer protein trbI		Y	Y	N		N		N
CC2686	Conjugal transfer protein TrbG		Y	Y	Y	Patchy/Spotty	N		N
CC2687	Conjugal transfer protein trbF		Y	Y	N		N		N
CC2688	Conjugal transfer protein trbL		Y	Y	N		N		N
CC2689	Transposase		Y	N	N		N		N
CC2690	Transposase		Y	N	N		N		N
CC2691	Methyl-accepting chemotaxis protein		Y	Y	N		N		N
CC2692	hypothetical protein		Y	Y	N		N		N
CC2693	hypothetical protein		Y	Y	N		N		N
	Adenosylcobyrinic acid synthase (glutamine-hydrolysing)		N	N	N		N		N
CC2694			N	N	N		N		N
CC2695	Vitamin B12 receptor		Y	Y	N		N		N
CC2696	Hypothetical protein		Y	Y	N		N		N
CC2697	hypothetical protein		Y	Y	N		N		N
CC2698	hypothetical protein		Y	Y	N		N		N
CC2699	hypothetical protein		Y	Y	N		N		N
CC2700	Two-component response regulator		Y	Y	N		N		N
CC2701	Conserved hypothetical protein		Y	Y	N		N		N
CC2702	Hypothetical protein		Y	Y	N		N		N
CC2703	Guanylate cyclase		Y	Y	N		N		N
CC2704	hypothetical protein		Y	Y	N		Y	Bipolar and Unipolar	N
CC2705	Transcriptional regulator, Xre family		Y	Y	N		N		N
CC2706	Transcriptional regulator, Xre family		Y	Y	N		N		N
CC2707	RNA polymerase ECF-type sigma factor		Y	N	N		N		N
CC2708	FecR family protein		N	N	N		N		N
CC2709	TonB-dependent outer membrane receptor		N	N	N		N		N

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CC2710	Acylamino-acid-releasing enzyme Asparagine synthetase [glutamine-hydrolyzing]		N	N	N		N		N
CC2711			Y	Y	N		N		N
CC2712	Conserved hypothetical protein		Y	Y	N		N		N
CC2713	hypothetical protein		Y	Y	N		N		N
CC2714	putative GntR-family transcriptional regulator		N	N	N		N		N
CC2715	hypothetical protein		Y	Y	N		N		N
CC2716	HTH/XRE-family transcriptional regulator		Y	Y	N		N		N
CC2717	Conserved hypothetical protein		Y	Y	N		N		N
CC2718	Conserved hypothetical protein		Y	N	N		N		N
CC2719	hypothetical protein		N	N	N		N		N
CC2720			Y	Y	N		N		N
CC2721	Nickel-cobalt-cadmium resistance protein nccC		N	N	N		N		N
CC2722	Nickel-cobalt-cadmium resistance protein nccB		Y	Y	N		N		N
CC2723	hypothetical protein		Y	Y	N		N		N
CC2724	AcrB-family cation/multidrug efflux pump		N	N	N		N		N
CC2725	Hypothetical protein Lead, cadmium, zinc and mercury transporting ATPase		Y	Y	Y	Pole	N		N
CC2726	Glutaredoxin		Y	Y	N		N		N
CC2727			Y	Y	N		N		N
CC2728			Y	N	N		N		N
CC2729	Transposase		Y	N	N		N		N
CC2730	Ice nucleation protein		Y	Y	N		N		N
CC2731	hypothetical protein		Y	Y	N		N		N
CC2732	retrotransposon-related protein		Y	Y	N		N		N
CC2733	hypothetical protein		Y	Y	N		N		N
CC2734	possible IS element		Y	Y	N		N		N
CC2735	hipA-related phosphatidylinositol 3/4-kinase		Y	Y	N		N		N
CC2736	Transcriptional regulator, MerR family		Y	Y	N		N		N
CC2737	hypothetical protein		Y	Y	N		N		N
CC2738	hypothetical protein		Y	Y	N		N		N
CC2739	Transposase		Y	Y	N		N		N
CC2740	Antisense sRNA to IS1111A transposase		Y	Y	Y	Patchy/Spotty	N		N
CC2741	Transposase		Y	N	N		N		N
CC2742	Transposase		Y	N	N		N		N
CC2743	Transposase		Y	Y	N		N		N
CC2744	DNA repair protein radC		Y	Y	N		N		N
CC2745	Conserved hypothetical protein		Y	Y	N		N		N
CC2746	Microsomal dipeptidase		Y	Y	N		N		N
CC2747	Hypothetical membrane spanning protein		Y	Y	N		N		N
CC2748	Molybdopterin dependent oxidoreductase		Y	Y	N		N		N
CC2749	Conserved hypothetical protein		N	N	N		N		N
CC2750	Conserved hypothetical protein		N	N	N		N		N
CC2751	RNA polymerase ECF-type sigma factor		Y	Y	N		N		N
CC2752	EF hand domain protein Glutamate-ammonia-ligase		Y	Y	Y	Patchy/Spotty	N		N
CC2753	adenylyltransferase		Y	N	N		N		N
CC2754	Transcriptional regulator		Y	Y	N		N		N
CC2755	two-component sensor histidine kinase		N	N	N		N		N
CC2756	toxin protein parE-3	parE-3	Y	Y	N		N		N
CC2757	Two-component response regulator		Y	Y	N		N		N

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CC2758	Endopeptidase degP		Y	Y	N		N		N
CC2759	Cytochrome c-type biogenesis protein ccmH		Y	Y	N		N		N
CC2760	Heme chaperone--apocytochrome heme-lyase		Y	Y	N		N		N
CC2761	Cytochrome c-type biogenesis heme chaperone		Y	Y	N		N		N
CC2762	Cytochrome c-type biogenesis protein ccmI		Y	Y	N		N		N
CC2763	Alpha/beta hydrolase family protein		Y	N	N		N		N
CC2764	hypothetical protein		N	N	N		N		N
CC2765	two-component sensor histidine kinase		N	N	N		N		N
CC2766	Two-component response regulator		Y	Y	N		N		N
CC2767	hypothetical protein		Y	Y	N		N		N
CC2768	hypothetical glycine-rich protein		Y	N	N		N		N
CC2769	hypothetical protein		Y	Y	N		N		N
CC2770	hipA-family phosphatidylinositol 3/4-kinase		Y	Y	N		N		N
CC2771	Conserved hypothetical protein		Y	Y	N		N		N
CC2772	Chaperone protein dnaJ		N	N	N		N		N
CC2773	Phage Host Specificity Protein		N	N	N		N		N
CC2774	Phage Host Specificity Protein		Y	Y	N		N		N
CC2775	Spr-family cell wall-associated hydrolase		Y	N	N		N		N
CC2776	Phage protein		Y	Y	N		N		N
CC2777	Phage protein		Y	N	N		N		N
CC2778	Conserved membrane protein		Y	Y	Y	Patchy/Spotty	N		N
CC2779	phage tail length tape measure-related protein		Y	Y	N		N		N
CC2780	gene transfer agent (GTA) protein		Y	Y	N		N		N
CC2781	Phage protein		Y	Y	N		N		N
CC2782	gene transfer agent (GTA)-related protein		N	N	N		N		N
CC2783	Phage Prohead Protease		N	N	N		N		N
CC2784			N	N	N		N		N
CC2785	Glyoxalase/Bleomycin resistance protein, dioxygenase superfamily		Y	Y	N		N		N
CC2786	Phage Prohead Protease		Y	Y	N		N		N
CC2787	Conserved hypothetical protein		Y	Y	N		N		N
CC2788	Portal protein		Y	Y	N		N		N
CC2789	genetic exchange protein, putative		Y	N	N		N		N
CC2790	Phage DNA Packaging Protein		Y	Y	N		N		N
CC2791	oxoglutarate semialdehyde dehydrogenase		Y	Y	N		N		N
CC2792	Cytochrome C6, putative		Y	Y	N		N		N
CC2793	Amine oxidase [flavin-containing]		Y	Y	N		N		N
CC2794	Transcriptional regulator, TetR family		Y	N	N		N		N
CC2795	Isochorismatase family protein		N	N	N		N		N
CC2796	Translation initiation inhibitor		Y	Y	N		N		N
CC2797	Hydrolase/acyltransferase family protein		Y	Y	N		N		N
CC2798	nitrilotriacetate monooxygenase		Y	Y	N		N		N
CC2799	Peptidyl-prolyl cis-trans isomerase		Y	Y	N		N		N
CC2800	hypothetical protein		Y	N	N		N		N
CC2801	Beta-galactosidase		Y	Y	N		N		N
CC2802	Beta-xylosidase / Alpha-L-arabinofuranosidase		Y	Y	N		N		N
CC2803	Endo-1,4-beta-xylanase		N	N	N		N		N
CC2804	TonB-dependent receptor		Y	Y	N		N		N
CC2805	Tryptophan halogenase		Y	Y	N		N		N

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CC2806	Tryptophan halogenase		Y	Y	N		N		N
CC2807	Tryptophan halogenase		Y	Y	N		N		N
CC2808	Tryptophan halogenase		Y	Y	N		N		N
CC2809	N-acyl-L-amino acid amidohydrolase		Y	N	N		N		N
CC2810	Methyl-accepting chemotaxis protein		Y	Y	N		N		N
CC2811	Xylan alpha-1,2-glucuronosidase		Y	Y	N		N		N
CC2812	Starvation sensing protein rspA		Y	N	N		N		N
CC2813	Transcriptional regulator, GntR family		Y	Y	N		N		N
CC2814	Hypothetical cytosolic protein		Y	Y	N		N		N
CC2815	Acyltransferase family protein		N	N	N		N		N
CC2816	Transposase		Y	N	N		N		N
CC2817	Hydrolase (HAD superfamily)		Y	Y	N		N		N
CC2818	Tetratricopeptide repeat (TPR) protein		N	N	N		N		N
CC2819	TonB-dependent receptor		Y	Y	N		N		N
CC2820	hypothetical protein		Y	Y	N		N		N
CC2821	Conserved hypothetical protein		Y	Y	N		N		N
CC2822			Y	N	N		N		N
CC2823	Zinc metalloprotease		Y	Y	N		N		N
CC2824	Microcin-processing peptidase 1 (PmbA)		Y	Y	N		N		N
CC2825	Conserved hypothetical protein		Y	Y	N		N		N
CC2826	MoxR-like ATPases		N	N	N		N		N
CC2827	MoxR protein		N	N	N		N		N
CC2828	Conserved hypothetical protein		N	N	N		N		N
CC2829	membrane-anchored conserved hypothetical protein		Y	N	N		N		N
CC2830	membrane-anchored conserved hypothetical protein		N	N	N		N		N
CC2831	hypothetical protein		Y	Y	N		N		N
CC2832	TonB-dependent receptor		Y	N	N		N		N
CC2833	Hypothetical cytosolic protein		Y	Y	N		N		N
CC2834	Carbamoyl-phosphate synthase small chain		Y	Y	N		N		N
CC2835	hypothetical protein		Y	Y	N		N		N
CC2836	Short chain dehydrogenase		Y	Y	N		N		N
CC2837	Sorbitol dehydrogenase		Y	Y	N		N		N
CC2838	Hypothetical cytosolic protein		Y	N	N		N		N
CC2839	figE-related flagellar hook protein		N	N	N		N		N
CC2840	Aminopeptidase		Y	N	N		N		N
CC2841	Conserved hypothetical protein		N	N	N		N		N
CC2843	Methyl-accepting chemotaxis protein		Y	Y	N		N		N
CC2843	Glutathione S-transferase		Y	Y	N		N		N
CC2844	hypothetical protein		Y	Y	N		N		N
CC2845	Outer membrane protein A		Y	Y	N		N		N
CC2846	Conserved hypothetical protein		Y	Y	N		N		N
CC2847	Methyl-accepting chemotaxis protein		Y	Y	Y	Pole	Y	Pole	Y
CC2848	Transcription elongation factor greA	greA	Y	Y	N		N		N
CC2849	Hypothetical protein		N	N	N		N		N
CC2850	hypothetical protein		Y	Y	N		N		N
CC2851	hypothetical protein		N	N	N		N		N
CC2852	PAS-family sensor histidine kinase		N	N	N		N		N
CC2853	spsF-related cytidyltransferase		N	N	N		N		N
CC2854	spsG-related polysaccharide biosynthesis protein		N	N	N		N		N
CC2855	hypothetical protein		Y	Y	N		N		N

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CC2856	Hypothetical protein		Y	Y	N		N		N
CC2857	Hypothetical protein		Y	Y	N		N		N
CC2858	hypothetical protein		Y	N	N		N		N
CC2859			Y	Y	N		N		N
CC2860	N-acetylglucosaminide beta-1,6-N-acetylglucosaminyltransferase		Y	Y	N		N		N
CC2861	11-cis retinol dehydrogenase		Y	Y	N		N		N
CC2862	Putative permease		Y	N	N		N		N
CC2863	Rhodanese-related sulfurtransferases		Y	Y	N		N		N
CC2864	Transcriptional regulator, ArsR family		Y	Y	N		N		N
CC2865	hypothetical protein		Y	N	N		N		N
CC2866	Zn-dependent hydrolase, glyoxalase II family		Y	N	N		N		N
CC2867	HTH DNA-binding protein, vapI		N	N	N		N		N
CC2868	N-acetylneuraminate synthase		Y	Y	N		N		N
CC2869	Hypothetical protein		Y	Y	N		N		N
CC2870	Conserved hypothetical protein		N	N	N		N		N
CC2871	Thioredoxin reductase		Y	Y	N		N		N
CC2872	Cell wall hydrolase family protein		Y	Y	N		N		N
	Non-specific DNA-binding protein Dps / Iron-binding ferritin-like antioxidant protein /								
CC2873	Ferroxidase		Y	Y	Y	Pole	N		N
CC2874	PAS-family sensor histidine kinase		Y	N	N		N		N
CC2875	hypothetical protein		Y	Y	N		N		N
CC2876	Transcriptional regulator, TetR family		Y	Y	N		N		N
CC2877	Hypothetical membrane spanning protein		Y	Y	N		N		N
CC2878	Conserved hypothetical protein		Y	Y	N		N		N
CC2879	antitoxin protein relB-3	relB-3	Y	Y	N		N		N
CC2880	toxin protein relE-3	relE-3	Y	Y	N		N		N
CC2881	Excinuclease ABC subunit C		Y	Y	N		N		N
CC2882	hypothetical protein		N	N	N		N		N
CC2883	RNA polymerase ECF-type sigma factor sigU	sigU	Y	Y	N		N		N
CC2884	Two-component sensor histidine kinase		Y	Y	N		N		N
	Cysteine desulhydrase / Selenocysteine lyase		N	N	N		N		N
CC2885			N	N	N		N		N
CC2886	Tryptophan 2,3-dioxygenase		Y	Y	N		N		N
CC2887	Transcriptional regulator, AsnC family		N	N	N		N		N
CC2888	Porin		N	N	N		N		N
	Polyprenyl-phosphate beta-D-glucosyltransferase		Y	Y	N		N		N
CC2889			Y	Y	N		N		N
CC2890	Monosaccharide translocase (flippase type)		Y	Y	N		N		N
CC2891	Methyltransferase		Y	Y	N		Y	Patchy/Spotty	N
CC2892	phage-related conserved hypothetical protein		Y	Y	N		N		N
CC2893	hypothetical protein		N	N	N		N		N
	Glyoxalase/Bleomycin resistance protein, dioxygenase superfamily		Y	Y	N		N		N
CC2894			Y	Y	N		N		N
CC2895	hypothetical protein		Y	Y	N		N		N
CC2896	hypothetical protein		Y	N	N		N		N
CC2897	Transposase		Y	N	N		N		N
CC2898	Hypothetical membrane spanning protein		Y	Y	N		N		N
CC2899	NADH-ubiquinone oxidoreductase		Y	Y	N		N		N
CC2900	Carbamoyl-phosphate synthase large chain		Y	N	N		N		N
CC2901	Glutathione S-transferase		Y	Y	N		N		N
CC2902	Patatin family phospholipase domain protein		N	N	N		N		N

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CC2903	Cold shock protein		Y	Y	N		N		N
CC2904	Conserved hypothetical protein		N	N	N		N		N
CC2905	Hypothetical protein		Y	Y	N		N		N
CC2906	Conserved hypothetical protein		Y	Y	N		N		N
CC2907			Y	Y	N		N		N
CC2908	CDP-diacylglycerol--glycerol-3-phosphate 3-phosphatidyltransferase		Y	Y	N		N		N
CC2909	Two component sensor histidine kinase		Y	Y	N		N		N
CC2910	Hypothetical cytosolic protein		N	N	N		N		N
CC2911	Conserved hypothetical protein		Y	Y	N		N		N
CC2912	Quinolinate synthetase A		Y	Y	N		N		N
CC2913	L-aspartate oxidase		Y	Y	N		N		N
CC2914	Putative PD-(D/E)xK nuclease family protein Nicotinate-nucleotide pyrophosphorylase		Y	Y	N		N		N
CC2915	[carboxylating]		Y	Y	N		N		N
CC2916	Conserved hypothetical protein		N	N	N		N		N
CC2917	Outer membrane lipoprotein Blc		Y	Y	N		N		N
CC2918	Peroxioredoxin Peroxioredoxin reductase (NAD(P)H) / NADH oxidase H2O2-forming		Y	Y	N		N		N
CC2919			Y	Y	Y	Pole	N		N
CC2920	Hypothetical protein		Y	Y	N		N		N
CC2921	Hypothetical transcriptional regulatory protein		Y	N	N		N		N
CC2922	Hydrogenase, cytochrome b-type subunit		Y	Y	N		N		N
CC2923	TonB-dependent receptor		Y	N	N		N		N
CC2924	Conserved hypothetical protein		Y	Y	N		N		N
CC2925	Hypothetical protein		Y	Y	N		N		N
CC2926			Y	Y	N		N		N
CC2927	Transporter		N	N	N		N		N
CC2928	TonB-dependent receptor		Y	Y	N		N		N
CC2929	Branched-chain amino acid aminotransferase		Y	Y	N		N		N
CC2930	Transcriptional regulator, MarR family		Y	Y	N		N		N
CC2931	Two-component response regulator petR		Y	N	N		N		N
CC2932	Two-component sensor histidine kinase		Y	Y	N		N		N
CC2933	Prephenate dehydratase 3-deoxy-manno-octulosonate cytidyltransferase		Y	Y	N		N		N
CC2934			Y	Y	N		N		N
CC2935	Cytochrome c Gamma-D-glutamyl-meso-diaminopimelate peptidase		N	N	N		N		N
CC2936			Y	N	N		N		N
CC2937	Cytosol aminopeptidase		N	N	N		N		N
CC2938	Tetratricopeptide repeat family protein		Y	N	N		N		N
CC2939	Hypothetical protein		Y	Y	N		N		N
CC2940	Tyrosine phenol-lyase		Y	Y	N		N		N
CC2941	TadB-related pilus assembly protein		N	N	N		N		N
CC2942	Pilus assembly ATPase CpaF	cpaF	Y	Y	N		Y	Pole	N
CC2943	Pilus assembly ATPase cpaE	cpaE	Y	N	N		N		N
CC2944	Pilus assembly protein CpaD Outer membrane pilus secretion channel	cpaD	Y	Y	Y	Pole	N		N
CC2945	cpaC	cpaC	Y	Y	N		N		N
CC2946	Pilus assembly protein CpaB	cpaB	Y	Y	Y	Patchy/Spotty	N		N
CC2947	Pilus assembly prepilin peptidase CpaA	cpaA	Y	Y	N		N		N
CC2948	Type IV pilin protein pilA	pilA	Y	N	N		N		N
CC2949	CpaC-related secretion pathway protein		N	N	N		N		N

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CC2950	TadG-related pilus assembly protein		Y	Y	N		N		N
CC2951	TadE-related pilus assembly protein		Y	Y	N		N		N
CC2952	4-amino-4-deoxychorismate lyase		Y	N	N		N		N
CC2953	Para-aminobenzoate synthetase component I		Y	N	N		N		N
CC2954	Transporter, MFS superfamily		N	N	N		N		N
CC2955	Protein tyrosine phosphatase		Y	N	N		N		N
CC2956	hypothetical protein		Y	N	N		N		N
CC2957	Acyltransferase		N	N	N		N		N
CC2958	Dioxygenase		Y	Y	N		N		N
CC2959	Transcriptional regulator, AraC family		N	N	N		N		N
CC2960	Transcriptional regulator, AraC family		N	N	N		N		N
CC2961	Hypothetical cytosolic protein		Y	Y	N		N		N
CC2962	Glyoxalase family protein		Y	Y	N		N		N
CC2963	Carbon-nitrogen hydrolase		Y	Y	N		N		N
CC2964	Hypothetical membrane spanning protein		N	N	N		N		N
CC2965	Conserved hypothetical protein		Y	Y	N		N		N
CC2966	3-oxoacyl-[acyl-carrier protein] reductase		Y	Y	N		N		N
CC2967	Cell wall hydrolase family protein		Y	Y	N		N		N
CC2968	Conserved hypothetical protein		Y	Y	N		N		N
CC2969	Transcriptional regulator, PadR family		Y	Y	N		N		N
CC2970	Cytochrome c family protein		Y	Y	N		N		N
CC2971	GAF/PAS-family sensor histidine kinase		Y	Y	Y	Central - Focus	N		N
CC2972	Transcriptional regulator, MarR family		Y	Y	N		N		N
CC2973	Glutathione S-transferase		Y	Y	N		N		N
CC2974	Hypothetical protein		Y	Y	N		N		N
CC2975	4-oxalocrotonate tautomerase		Y	Y	N		N		N
CC2976	Flagellin		Y	Y	N		N		N
CC2977	Hypothetical transcriptional regulatory protein		Y	N	N		N		N
CC2978	Hypothetical protein		Y	Y	N		N		N
CC2979	C factor cell-cell signaling protein		Y	Y	N		N		N
CC2980	Hypothetical protein		Y	Y	N		Y	Middle OR Pole	N
CC2981	Excinuclease ABC subunit B		Y	N	N		N		N
CC2982	Hypothetical protein		N	N	N		N		N
CC2983	Hypothetical protein		Y	Y	N		N		N
CC2984	toxin protein parE-4	parE-4	Y	Y	N		N		N
CC2985	antitoxin protein parD-4	parD_4	Y	Y	N		N		N
CC2986	Hypothetical protein		Y	Y	N		N		N
CC2987			Y	Y	N		N		N
CC2988	hybrid sensor histidine kinase/receiver domain protein		Y	Y	Y	Patchy/Spotty	N		N
CC2989	Hypothetical protein		Y	Y	N		N		N
CC2990	Nitropropane dioxygenase / Trans-enoyl-CoA reductase family		Y	Y	N		N		N
CC2991	Hypothetical exported protein		Y	Y	N		N		N
CC2992	H-NOX family heme binding protein		Y	Y	N		N		N
CC2993	Two-component sensor histidine kinase		Y	Y	N		N		N
CC2994	Hypothetical protein		Y	Y	Y	Patchy/Spotty	N		N
CC2995	Acetyl-coenzyme A carboxylase carboxyl transferase subunit alpha		N	N	N		N		N
CC2996	Hypothetical protein		Y	Y	N		N		N
CC2997	CYTOCHROME P450 IVA5		Y	Y	N		N		N
CC2998	OsmC-like protein		Y	Y	N		N		N
CC2999	MalyI-CoA lyase		Y	Y	N		Y	Middle OR Pole	N



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CC3000	Mechanosensitive ion channel		Y	N	N		N		N
CC3001	TonB-dependent receptor		N	N	N		N		N
CC3002	Aldo/keto reductase family protein		Y	Y	N		N		N
CC3003	Conserved hypothetical protein		N	N	N		N		N
CC3004	Hypothetical protein		Y	Y	N		N		N
CC3005	PhnA protein		N	N	N		N		N
CC3006	Integrase/recombinase (XerD/RipX family)		Y	N	N		N		N
CC3007	Hypothetical protein		Y	Y	N		N		N
CC3008	Shikimate kinase		Y	Y	N		N		N
CC3009	3-dehydroquinate synthase		Y	Y	N		N		N
CC3010	Molecular chaperones (DnaJ family)		Y	Y	N		N		N
CC3011	BolA protein		Y	Y	N		N		N
CC3012	Cytidine deaminase		Y	Y	N		N		N
CC3013	TonB-dependent outer membrane receptor		Y	Y	N		N		N
CC3014	Hypothetical protein		Y	Y	N		N		N
CC3015	Two-component receiver domain protein		Y	Y	N		N		N
CC3016	Hypothetical protein		Y	Y	Y	Middle OR Pole	N		N
CC3017	Magnesium and cobalt efflux protein corB		Y	Y	N		N		N
CC3018			Y	Y	N		Y	Patchy/Spotty	N
CC3019	Membrane-associated phospholipid phosphatase		Y	Y	N		N		N
CC3020	Hypothetical protein		Y	Y	N		N		N
CC3021	Cobaltochelata cobS subunit		Y	Y	N		N		N
CC3022	Hypothetical cytosolic protein		Y	Y	Y	Stalk	Y	Pole	Y
CC3023	Hypothetical protein		Y	Y	N		N		N
CC3024	Hypothetical protein		Y	Y	N		N		N
CC3025	Chemotaxis protein cheW		Y	Y	N		Y	Varied Focus	N
CC3026	Hypothetical protein		Y	Y	N		N		N
CC3027	Conserved membrane spanning protein		Y	Y	N		N		N
CC3028	Transcriptional regulator, ArsR family		Y	Y	N		N		N
CC3029	NAD/MYCOTHOL-DEPENDENT FORMALDEHYDE DEHYDROGENASE		Y	Y	N		N		N
CC3030	Melibiose carrier protein		Y	N	N		N		N
CC3031	Non-hemolytic phospholipase C		Y	Y	N		N		N
CC3032	Aminoacyl-histidine dipeptidase		N	N	N		N		N
CC3033	Transporter, drug/metabolite exporter family		Y	Y	N		N		N
CC3034	Peptidoglycan-specific endopeptidase, M23 family		Y	Y	N		N		N
CC3035	Cell cycle response regulator ctrA	ctrA	Y	Y	N		Y	Pole	N
CC3036	LytR/AlgR-family transcriptional regulator		N	N	N		N		N
CC3037	Predicted transcriptional regulator, antitoxin protein higA	higA	Y	N	N		N		N
CC3038	toxin protein higB	higB	Y	Y	N		N		N
CC3039	Predicted diene lactone hydrolase		Y	Y	N		N		N
CC3040	Flagellum-specific ATP synthase fliL	fliL	Y	Y	N		N		N
CC3041	Flagellar export protein FliJ	fliJ	Y	N	N		N		N
CC3042	Endo-1,4-beta-xylanase		Y	Y	N		N		N
CC3043	Peroxidase / Catalase katG		Y	N	N		N		N
CC3044	Dihydroxy-acid dehydratase		Y	Y	N		N		N
CC3045	Transcriptional regulators, LysR family		Y	N	N		N		N
CC3046	Phosphoserine phosphatase		Y	Y	N		N		N
CC3047	RNA polymerase sigma factor rpoD		Y	Y	N		N		N
CC3048	PAS-family sensor histidine kinase		Y	Y	N		N		N

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CC3049	DNA primase	dnaG	Y	Y	N		N		N
CC3050	hypothetical protein		Y	Y	N		N		N
CC3051	M61 glycyI aminopeptidase		Y	Y	Y	Middle OR Pole	N		N
CC3052	Hypothetical protein		Y	Y	N		N		N
CC3053	Hypothetical cytosolic protein		N	N	N		N		N
CC3054	Beta-glucosidase / Beta-xylosidase		Y	Y	N		N		N
CC3055	Hypothetical protein		Y	N	N		N		N
CC3056	Hypothetical protein		Y	N	N		N		N
CC3057	Hypothetical protein		Y	N	N		N		N
CC3058	PAS-family sensor histidine kinase/receiver protein		Y	N	N		N		N
CC3059	Transporter		Y	Y	N		N		N
CC3060	Hypothetical periplasmic protein		N	N	N		N		N
CC3061	Hypothetical membrane spanning protein		Y	Y	N		N		N
CC3062	Iron-sulfur cluster assembly/repair protein								
CC3062	ApbE		Y	Y	N		N		N
CC3063	Sulfite reductase [NADPH] flavoprotein alpha-component		Y	Y	N		N		N
CC3064	Molybdopterin-guanine dinucleotide biosynthesis protein A		N	N	N		N		N
CC3065	transcriptional regulator xylR		Y	Y	N		Y	MidBand	N
CC3066	Glutamate N-acetyltransferase / Amino-acid acetyltransferase		Y	Y	N		N		N
CC3067	Peptidyl-prolyl cis-trans isomerase		N	N	N		N		N
CC3068	Protein translocase subunit secA		Y	Y	N		N		N
CC3069	Methylenomycin A resistance protein		Y	Y	N		N		N
CC3070	Transcriptional regulator, ArsR family		Y	Y	N		N		N
CC3071	Hypothetical protein		Y	Y	N		N		N
CC3072	Hypothetical protein		Y	Y	N		N		N
CC3073	Conserved hypothetical protein		Y	Y	N		N		N
CC3074	Conserved hypothetical protein		Y	Y	N		N		N
CC3075	hybrid sensor histidine kinase/receiver domain protein		Y	Y	N		N		N
CC3076	3-oxoacyl-[acyl-carrier protein] reductase		Y	Y	N		N		N
CC3077	Hypothetical cytosolic protein		Y	Y	N		N		N
CC3078	Permease		Y	Y	N		N		N
CC3079	Hypothetical cytosolic protein		Y	Y	N		N		N
CC3080	Nucleotidyltransferase		N	N	N		N		N
CC3081	Methylmalonyl-CoA mutase homolog MeaA		Y	Y	N		N		N
CC3082	Transcriptional regulator, MerR family		Y	Y	Y	Patchy/Spotty	N		N
CC3083	NADH-dependent flavin oxidoreductase		N	N	N		N		N
CC3084	enoyl-CoA hydratase/isomerase		Y	Y	N		N		N
CC3085	Alcohol dehydrogenase		Y	Y	N		N		N
CC3086	Beta-lactamase family protein		N	N	N		N		N
CC3087	Acyl-CoA dehydrogenase		Y	Y	N		N		N
CC3088	Glutathione S-transferase		Y	Y	N		N		N
CC3089	Conserved hypothetical protein		Y	Y	N		Y	Middle OR Pole	N
CC3090	Cysteine/acetylserine efflux protein		N	N	N		N		N
CC3091	Epoxide hydrolase		Y	Y	N		N		N
CC3092	Hypothetical protein		Y	Y	N		N		N
CC3093	Low-specificity L-threonine aldolase		N	N	N		N		N
CC3094	Sensory box/GGDEF family protein		Y	N	N		N		N
CC3095	Transposase		Y	Y	N		N		N

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CC3096	Lactoylglutathione lyase		Y	Y	N		N		N
CC3097	Integral membrane protein		Y	Y	N		N		N
CC3098	RNA polymerase sigma-32 factor		Y	Y	N		N		N
CC3099	Alpha/beta hydrolase family protein		Y	Y	N		N		N
CC3100	Two-component response regulator		N	N	N		N		N
CC3101	Conserved hypothetical protein hybrid sensor histidine kinase/receiver domain protein		Y	Y	N		N		N
CC3102	Adenylosuccinate synthetase		Y	Y	N		N		N
CC3103	Conserved hypothetical protein		N	N	N		N		N
CC3104	Conserved hypothetical protein		Y	Y	N		N		N
CC3105	Threo-3-hydroxyaspartate ammonia-lyase		Y	Y	N		N		N
CC3106	Alanine racemase		N	N	N		N		N
CC3107	Aminopeptidase		Y	Y	N		N		N
CC3108	L-serine dehydratase		Y	Y	N		N		N
CC3109	Hypothetical protein		Y	Y	N		N		N
CC3110	Hypothetical membrane spanning protein		Y	Y	N		N		N
CC3111	Acetyl-coenzyme A synthetase		Y	Y	N		N		N
CC3112	Transcriptional regulator, MarR family		N	N	N		N		N
CC3113	L-Ala-D/L-Glu racemase		N	N	N		N		N
CC3114	Hypothetical protein		Y	Y	N		N		N
CC3115	Conserved hypothetical protein, putative zinc finger		Y	Y	N		N		N
CC3116	ARO8 family aminotransferase/HTH DNA-binding protein		N	N	N		N		N
CC3117	Hypothetical protein		Y	Y	N		N		N
CC3118	Transcriptional regulator, TetR family		Y	Y	N		N		N
CC3119	Periplasmic multidrug efflux lipoprotein precursor		Y	Y	N		N		N
CC3120	Cation/multidrug efflux pump acrB5	acrB5	Y	N	N		N		N
CC3121	Phytoene dehydrogenase		Y	Y	N		N		N
CC3122	Ring hydroxylating dioxygenase, alpha-subunit		Y	Y	N		N		N
CC3123	Transcriptional regulator, TetR family		N	N	N		N		N
CC3124	Hypothetical protein		Y	Y	Y	Pole	N		N
CC3125	Parathion hydrolase		N	N	N		N		N
CC3126	Putative arginine/agmatin antiporter		Y	Y	Y	Patchy/Spotty	N		N
CC3127	TonB-dependent receptor		N	N	N		N		N
CC3128	Tetratricopeptide repeat family protein		Y	N	N		N		N
CC3129	FAD dependent oxidoreductase		Y	Y	N		N		N
CC3130	Glutamine synthetase		Y	Y	N		N		N
CC3131	toxin protein relE-4	relE-4	Y	Y	N		N		N
CC3132	Gamma-aminobutyrate aminotransferase		Y	Y	N		N		N
CC3133	Glutamine amidotransferase, class I		N	N	N		N		N
CC3134	Spermidine/putrescine transport ATP-binding protein potA		N	N	N		N		N
CC3135	Spermidine/putrescine transport system permease protein potC		Y	Y	N		N		N
CC3136	Transporter		Y	Y	N		N		N
CC3137	Spermidine/putrescine-binding protein		Y	Y	N		N		N
CC3138	Glutamine synthetase		Y	Y	N		N		N
CC3139	Glutamate-1-semialdehyde 2,1-aminomutase		Y	N	N		N		N
CC3140	Succinate-semialdehyde dehydrogenase [NADP+]		Y	Y	N		N		N

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CC3141	Aldehyde dehydrogenase		Y	Y	N		N		N
CC3142	Transcriptional regulator		Y	Y	N		Y	Middle OR Pole	N
CC3143	Omega-amino acid-pyruvate aminotransferase		Y	Y	N		N		N
CC3144	Hypothetical protein		Y	Y	N		N		N
CC3145	Methyl-accepting chemotaxis protein		Y	Y	N		Y	Pole	N
CC3146	TonB-dependent receptor		Y	Y	N		N		N
CC3147	TonB-dependent receptor		Y	Y	N		N		N
CC3148	EAL-domain diguanylate phosphodiesterase		Y	Y	N		N		N
CC3149	Hypothetical protein		N	N	N		N		N
CC3150	Hypothetical transcriptional regulatory protein		Y	Y	N		N		N
CC3151	Conserved hypothetical protein		Y	Y	N		N		N
CC3152	pectate lyase		Y	Y	N		N		N
CC3153	Conserved hypothetical protein		Y	Y	N		N		N
CC3154	Chorismate synthase		Y	Y	N		N		N
CC3155	Chemotaxis receiver domain protein cheYIII		Y	Y	Y	Pole	N		N
CC3156	Hypothetical protein		Y	Y	N		N		N
CC3157	Hypothetical cupin 2 domain containing protein		Y	Y	N		N		N
CC3158	Queuosine biosynthesis protein queD		Y	Y	N		N		N
CC3159	Queuosine biosynthesis protein QueE		Y	Y	N		N		N
CC3160	Queuosine biosynthesis protein QueC		Y	Y	N		N		N
CC3161	TonB-dependent receptor		N	N	N		N		N
CC3162	CBS pair-family sensor histidine kinase/receiver domain protein		N	N	N		N		N
CC3163	Hypothetical protein		Y	Y	N		N		N
CC3164	Hypothetical transcriptional regulatory protein		Y	Y	N		N		N
CC3165	diguanylate receptor protein dgrB		Y	Y	N		N		N
CC3166			Y	Y	N		N		N
CC3167	Glucokinase		N	N	N		N		N
CC3168	Methionine gamma-lyase		N	N	N		N		N
CC3169	Transcriptional regulator, AsnC family		Y	Y	N		N		N
CC3170	Two-component sensor histidine kinase		Y	Y	N		N		N
CC3171	Hypothetical protein		Y	Y	N		N		N
CC3172	Glycerophosphoryl diester phosphodiesterase		Y	Y	N		N		N
CC3173	Glycosyltransferase		Y	Y	N		N		N
CC3174	Aminobutyraldehyde dehydrogenase		Y	Y	N		N		N
CC3175	Short chain dehydrogenase		Y	Y	N		N		N
CC3176	Pyruvate ferredoxin/flavodoxin oxidoreductase family protein		N	N	N		N		N
CC3177	Transcriptional regulator, AsnC family		Y	Y	Y	Pole	N		N
CC3178	Pirin		Y	Y	N		N		N
CC3179	Putative metal-dependent hydrolase		Y	Y	N		N		N
CC3180	Adenosine deaminase		Y	Y	N		N		N
CC3181	Magnesium and cobalt transport protein corA		Y	Y	N		N		N
CC3182	Hypothetical transporter		Y	Y	N		N		N
CC3183	Hypothetical transcriptional regulatory protein		N	N	N		N		N
CC3184	YcfA superfamily protein		Y	Y	N		Y	Middle OR Pole	N
CC3185	Hypothetical protein		Y	Y	N		N		N
CC3186	Conserved hypothetical protein		Y	Y	N		N		N
CC3187	Conserved hypothetical protein		N	N	N		N		N
CC3188	Long-chain-fatty-acid-CoA ligase		Y	N	N		N		N

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CC3189	Enoyl-CoA hydratase / Delta(3)-cis-delta(2)-trans-enoyl-CoA isomerase / 3-hydroxyacyl-CoA dehydrogenase / 3-hydroxybutyryl-CoA epimerase		Y	Y	N		N		N
CC3190	Beta-lactamase family protein		Y	Y	N		Y	Patchy/Spotty	N
CC3191	PAS-family sensor histidine kinase		Y	Y	N		N		N
CC3192	Transcriptional regulator, TetR family		Y	Y	N		N		N
CC3193	Conserved hypothetical protein		Y	Y	N		N		N
CC3194	TonB-dependent outer membrane receptor		Y	Y	N		Y	Middle OR Pole	N
CC3195	Outer membrane protein oprM		N	N	N		N		N
CC3196	Multidrug resistance efflux pump, periplasmic component		Y	N	N		N		N
CC3197	Cation/multidrug efflux pump acrB	acrB	N	N	N		N		N
CC3198	Nitrate/nitrite sensor histidine kinase narX	narX	Y	Y	Y	Patchy/Spotty	Y	Patchy/Spotty	Y
CC3199	Protein Translation Elongation Factor Tu (EF-TU)		Y	N	N		N		N
CC3200	Protein Translation Elongation Factor G (EF-G)		Y	N	N		N		N
CC3201	SSU ribosomal protein S7P		Y	Y	N		N		N
CC3202	SSU ribosomal protein S12P		Y	Y	N		N		N
CC3203	Hypothetical protein		Y	Y	Y	Patchy/Spotty	N		N
CC3204	Homoserine O-acetyltransferase		Y	Y	N		N		N
CC3205	Transcription antitermination protein nusG		Y	Y	N		N		N
CC3206	Protein translocase subunit secE		N	N	N		N		N
CC3207	Hypothetical protein		Y	Y	N		N		N
CC3208	Ferredoxin--NADP reductase		Y	Y	N		N		N
CC3209	Molybdopterin biosynthesis MoeA protein		N	N	N		N		N
CC3210	UDP-N-acetylglucosamine 4,6-dehydratase / UDP-D-quinovosamine 4-dehydrogenase		Y	Y	Y	Patchy/Spotty	N		N
CC3211	DNA polymerase III alpha subunit		N	N	N		N		N
CC3212	Hypothetical cytosolic protein		Y	Y	N		N		N
CC3213	Conserved hypothetical protein		N	N	N		N		N
CC3214	Biotin carboxylase		Y	N	N		N		N
CC3215	D-3-phosphoglycerate dehydrogenase		Y	Y	N		N		N
CC3216	Phosphoserine aminotransferase		N	N	N		N		N
CC3217	Hypothetical protein		Y	Y	N		N		N
CC3218	Hypothetical protein		Y	Y	N		N		N
CC3219	Two-component sensor histidine kinase		Y	Y	Y	Bipolar and Unipolar	N		N
CC3220	Hypothetical protein		Y	Y	N		N		N
CC3221	Putative epimerase		Y	Y	N		N		N
CC3222	Hypothetical protein		Y	Y	N		N		N
CC3223	Phosphomethylpyrimidine kinase / Hydroxymethylpyrimidine kinase		Y	Y	N		N		N
CC3224	Dihydropteroate synthase		N	N	N		N		N
CC3225	PAS-family sensor histidine kinase		Y	Y	N		Y	Pole	N
CC3226	Cell division protein ftsH	ftsH	N	N	N		N		N
CC3227	PP-loop family cell cycle control ATPase		N	N	N		N		N
CC3228	Tol system periplasmic component YbgF	ybgF	N	N	N		N		N
CC3229	Peptidoglycan-associated lipoprotein pal	pal	Y	Y	Y	Patchy/Spotty	N		N
CC3230	TolB protein	tolB	Y	Y	Y	Patchy/Spotty	N		N
CC3231	TolA protein	tolA	Y	Y	N		N		N
CC3232	TolR protein	tolR	Y	N	N		N		N
CC3233	TolQ protein	tolQ	N	N	N		N		N

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CC3234	Short-chain acyl-CoA hydrolase		Y	Y	N		N		N
CC3235	Hypothetical protein		Y	Y	N		N		N
CC3236	Holliday junction DNA helicase ruvB	ruvB	Y	Y	N		N		N
CC3237	Holliday junction DNA helicase ruvA	ruvA	Y	Y	N		N		N
CC3238	Crossover junction endodeoxyribonuclease ruvC	ruvC	Y	Y	N		N		N
CC3239	N-acyl-L-amino acid amidohydrolase		Y	Y	Y	Patchy/Spotty	N		N
CC3240	Hypothetical protein		Y	Y	N		Y	Patchy/Spotty	N
CC3241	Hypothetical protein		Y	Y	N		N		N
CC3242	Phosphoribosylamidoimidazole-succinocarboxamide synthase		N	N	N		N		N
CC3243	Hypothetical cytosolic protein		Y	Y	N		N		N
CC3244	Hypothetical protein		Y	Y	N		N		N
CC3245	5-formyltetrahydrofolate cyclo-ligase		Y	Y	N		N		N
CC3246	Acylamino-acid-releasing enzyme		Y	Y	N		N		N
CC3247	Hypothetical cytosolic protein		N	N	N		N		N
CC3248	Glyceraldehyde 3-phosphate dehydrogenase		Y	Y	N		N		N
CC3249	Phosphoglycerate kinase		N	N	N		N		N
CC3250	Fructose-bisphosphate aldolase		Y	Y	N		N		N
CC3251	Hypothetical protein		Y	Y	N		N		N
CC3252	ECF-family RNA polymerase sigma factor		Y	Y	N		N		N
CC3253	ECF-family RNA polymerase sigma factor		Y	Y	N		N		N
CC3254	Hypothetical protein		Y	Y	N		N		N
CC3255	Hypothetical protein		Y	Y	N		N		N
CC3256	Hypothetical protein		Y	Y	N		N		N
CC3257	DoxX family protein		Y	Y	N		N		N
CC3258	chemotaxis receiver domain protein cheYIII		Y	Y	N		N		N
CC3259	Hypothetical CheE protein		Y	Y	N		N		N
CC3260	Hypothetical protein		Y	Y	Y	Middle AND Pole	N		N
CC3261	Acetyltransferase		N	N	N		N		N
CC3262	Bacterioferritin		Y	Y	N		N		N
CC3263	Bacterioferritin-associated ferredoxin		Y	Y	N		N		N
CC3264	Thiamin-phosphate pyrophosphorylase		Y	N	N		N		N
CC3265	Hypothetical protein		Y	Y	N		N		N
CC3266	RNA polymerase sigma-J factor		Y	Y	N		N		N
CC3267	Conserved hypothetical protein		Y	Y	N		N		N
CC3268	Conserved hypothetical protein		Y	Y	N		N		N
CC3269	Myo-inositol-1(or 4)-monophosphatase		N	N	N		N		N
CC3270	Transcriptional regulator, Cro/Ci family		Y	Y	N		N		N
CC3271	Hypothetical protein		Y	Y	N		N		N
CC3272	Glycerophosphoryl diester phosphodiesterase		Y	N	N		N		N
CC3273	Hypothetical cytosolic protein		Y	Y	N		N		N
CC3274	Multidrug/protein/lipid ABC transporter family, ATP-binding and permease protein		Y	Y	N		N		N
CC3275	LSU ribosomal protein L31P		Y	Y	N		N		N
CC3276	Hypothetical cytosolic protein		Y	Y	N		N		N
CC3277	Multimodular transpeptidase-transglycosylase PBP 1A		Y	Y	Y	Patchy/Spotty	N		N
CC3278	Aspartate racemase		N	N	N		N		N
CC3279	Lantibiotic export permease protein		Y	N	N		N		N
CC3280	Lantibiotic transport ATP-binding protein		N	N	N		N		N
CC3281	Hypothetical protein		Y	Y	N		N		N

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CC3282	Transcriptional regulator, Cro/C1 family Phosphoribosylaminoimidazole carboxylase		N	N	N		N		N
CC3283	NCAIR mutase subunit Phosphoribosylaminoimidazole carboxylase		Y	Y	N		N		N
CC3284	carboxyltransferase subunit		Y	Y	N		N		N
CC3285	Two-component response regulator		N	N	N		N		N
CC3286	Two-component receiver domain protein Trypsin-like serine proteases, typically		Y	Y	N		N		N
CC3287	periplasmic, contain C-terminal PDZ domain		Y	Y	N		N		N
CC3288	Hypothetical cytosolic protein		Y	Y	N		N		N
CC3289	Conserved hypothetical protein 3-octaprenyl-4-hydroxybenzoate carboxy-		Y	N	N		N		N
CC3290	lyase		Y	Y	N		N		N
CC3291	Hypothetical protein		Y	Y	N		N		N
CC3292	Hypothetical cytosolic protein		Y	Y	N		N		N
CC3293	Quinone oxidoreductase		N	N	N		N		N
CC3294	Hypothetical protein		Y	Y	N		N		N
CC3295	regulator of CtrA degradation rcdA	rcdA	Y	Y	N		Y	Pole	N
CC3296	Hypothetical protein		Y	Y	Y	Patchy/Spotty	N		N
CC3297	SSU ribosomal protein S21P		Y	N	N		N		N
CC3298	Sodium export permease protein		Y	Y	N		N		N
CC3299	ABC transporter ATP-binding protein		Y	Y	N		N		N
CC3300	Putative hydrolase		N	N	N		N		N
CC3301	Peptidoglycan-specific endopeptidase, M23 family		Y	Y	N		N		N
CC3302	Hypothetical protein		Y	Y	Y	Middle OR Pole	Y	Middle OR Pole	Y
CC3303	NAD(P) transhydrogenase subunit beta		Y	Y	N		N		N
CC3304	NAD(P) transhydrogenase alpha subunit		Y	Y	N		N		N
CC3305	NAD(P) transhydrogenase alpha subunit		Y	Y	N		N		N
CC3306	Hypothetical protein		Y	Y	N		N		N
CC3307	Hypothetical glycosyltransferase family 9 protein		Y	Y	N		N		N
CC3308	Hydrolase		Y	Y	N		N		N
CC3309	Thioesterase superfamily protein		Y	Y	N		N		N
CC3310	RNA polymerase ECF-type sigma factor		Y	Y	N		N		N
CC3311	Hypothetical protein		Y	Y	N		N		N
CC3312	2-polyprenylphenol 6-hydroxylase accessory protein ubiB		Y	N	N		N		N
CC3313	Oligoendopeptidase F		Y	Y	N		N		N
CC3314	Conserved hypothetical protein		Y	Y	N		N		N
CC3315	AAA-family response regulator tacA		Y	Y	Y	Pole	N		N
CC3316	Hypothetical protein		Y	Y	N		N		N
CC3317	Hypothetical protein		N	N	N		N		N
CC3318	Hypothetical protein		Y	Y	N		N		N
CC3319	Hypothetical cytosolic protein		Y	N	N		N		N
CC3320	Hydrolase (HAD superfamily)		Y	Y	N		N		N
CC3321	LSU ribosomal protein L36P		Y	Y	N		N		N
CC3322	Membrane-bound lytic murein transglycosylase B		Y	Y	N		N		N
CC3323	Aldose 1-epimerase		Y	Y	N		N		N
CC3324	Hypothetical protein		N	N	N		N		N
CC3325	Two-component response regulator		Y	Y	N		N		N

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CC3326	Putative peptidoglycan binding domain / FecR protein		Y	Y	N		N		N
CC3327	Phosphate regulon sensor protein phoR		N	N	N		N		N
CC3328	Hypothetical protein		Y	Y	N		N		N
CC3329	Hypothetical protein		Y	Y	N		N		N
CC3330	Hypothetical protein		Y	Y	N		N		N
CC3331	Hypothetical cytosolic protein		Y	Y	N		N		N
CC3332	Transposase		N	N	N		N		N
CC3333	Transposase		Y	N	N		N		N
CC3334	Hypothetical cytosolic protein		Y	Y	N		N		N
CC3335			Y	Y	N		N		N
CC3336	TonB-dependent receptor		Y	Y	N		N		N
CC3337	Aminopeptidase		N	N	N		N		N
CC3338	Feruloyl-CoA synthetase		Y	Y	Y	Pole	N		N
CC3339	Hypothetical protein		N	N	N		N		N
CC3340	Hypothetical protein		Y	Y	N		N		N
CC3341	Methyltransferase		N	N	N		N		N
CC3342	possible IS element		Y	Y	N		N		N
CC3343	Transcriptional regulator		Y	Y	N		N		N
CC3344	UDP-2,3-diacetylglucosamine hydrolase		Y	Y	N		N		N
CC3345	Glycosyltransferase		Y	N	N		N		N
CC3346	Lipase		N	N	N		N		N
CC3347	Hypothetical protein		Y	Y	N		N		N
CC3348	Hypothetical protein		Y	Y	N		N		N
CC3349	Methyl-accepting chemotaxis protein		Y	Y	N		Y	Pole	N
CC3350	Hypothetical protein		Y	Y	Y	Patchy/Spotty	N		N
CC3351	Hypothetical protein		Y	Y	N		N		N
CC3352	Glycine dehydrogenase [decarboxylating]		Y	N	N		N		N
CC3353	Glycine dehydrogenase [decarboxylating]		Y	Y	N		N		N
CC3354	Glycine cleavage system H protein		Y	Y	N		N		N
CC3355	Aminomethyltransferase		Y	Y	N		N		N
CC3356	Hypothetical cytosolic protein		Y	Y	N		N		N
CC3357	Hypothetical protein		Y	Y	N		N		N
CC3358	Methyl-accepting chemotaxis protein		Y	Y	N		Y	Pole	N
CC3359	Arginyl-tRNA synthetase		N	N	N		N		N
CC3360	Hypothetical protein		N	N	N		N		N
CC3361	4-hydroxy-3-methylbut-2-enyl diphosphate reductase		Y	Y	N		N		N
CC3362	Hypothetical protein		Y	Y	N		N		N
CC3363	death on curing toxin protein doc	doc	Y	N	N		N		N
CC3364	Homoserine kinase		Y	N	N		N		N
CC3365	Ribonuclease HI		Y	Y	Y	Central - Focus	N		N
CC3366	Rhodanese-related sulfurtransferases		Y	Y	N		N		N
CC3367	AraC-family transcription regulator ftrA		N	N	N		N		N
CC3368	Transcriptional regulator, MarR family		Y	Y	N		N		N
CC3369			Y	Y	N		N		N
CC3370	Conserved hypothetical protein		Y	Y	Y	Central - Focus	N		N
CC3371	DNA integration/recombination/inversion protein		Y	Y	N		N		N
CC3372	ABC transporter permease protein		Y	Y	N		N		N
CC3373	ABC transporter ATP-binding protein		N	N	N		N		N
CC3374	Hypothetical protein		Y	Y	Y	Patchy/Spotty	N		N



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CC3375	Membrane protease family, stomatin/prohibitin homologs		Y	N	N		N		N
CC3376	Conserved hypothetical protein		Y	Y	N		N		N
CC3377	Hypothetical protein		Y	Y	N		N		N
CC3378	Hypothetical protein		Y	Y	N		Y	Middle OR Pole	N
CC3379	Nitropropane dioxygenase / Trans-enoyl-CoA reductase family		N	N	N		N		N
CC3380	3-oxoacyl-[acyl-carrier protein] reductase		Y	Y	N		N		N
CC3381	Transporter		Y	Y	N		N		N
CC3382	Phosphohydrolase (MutT/nudix family protein)		Y	Y	N		N		N
CC3383	Serine protease		Y	Y	N		N		N
CC3384	D-beta-hydroxybutyrate dehydrogenase		Y	Y	N		N		N
CC3385	Hypothetical cytosolic protein		Y	Y	N		N		N
CC3386	Hypothetical protein		Y	Y	N		N		N
CC3387	Transcriptional regulators, MarR/EmrR family		N	N	N		N		N
CC3388	Hypothetical protein		N	N	N		N		N
CC3389	FAD/FMN-containing dehydrogenases		Y	Y	N		N		N
CC3390	Sua5/YciO/YrdC/YwC family protein		N	N	N		N		N
CC3391	Ycel/cytochrome b561 periplasmic protein		Y	Y	N		N		N
CC3392	Ycel-family periplasmic protein		Y	Y	N		N		N
CC3393	Acyl-CoA dehydrogenase		Y	Y	N		N		N
CC3394	Peroxiredoxin		Y	Y	N		N		N
CC3395	Transcriptional regulator, algH		Y	N	N		N		N
CC3396	GGDEF/EAL diguanylate cyclase-phosphodiesterase		Y	Y	N		N		N
CC3397	Ribosomal-protein-S5-alanine acetyltransferase		Y	N	N		N		N
CC3398	Zinc protease		Y	Y	N		N		N
CC3399	Threonine synthase		Y	Y	Y	Pole	N		N
CC3400	Cytochrome c oxidase assembly protein Surf1	Surf1	Y	N	N		N		N
CC3401	Zinc-finger protein		Y	Y	N		N		N
CC3402	Cytochrome c oxidase subunit III coxC	coxC	Y	Y	N		N		N
CC3403	Cytochrome c oxidase assembly protein ctaG	ctaG	Y	Y	N		N		N
CC3404	Hypothetical protein		Y	Y	N		N		N
CC3405	Protoheme IX farnesyltransferase coxE	coxE	N	N	N		N		N
CC3406	Cytochrome c oxidase polypeptide I coxA	coxA	Y	Y	N		N		N
CC3407	Cytochrome c oxidase polypeptide II coxB	coxB	Y	Y	N		N		N
CC3408	Transcriptional regulator, PadR family		N	N	N		N		N
CC3409	Hypothetical protein		Y	N	N		N		N
CC3410	Hypothetical membrane associated protein		Y	Y	N		N		N
CC3411	Microcin-processing peptidase 2 (TldD)		Y	Y	N		N		N
CC3412	Hypothetical protein		Y	Y	N		N		N
CC3413	Di-/tripeptide transporter		Y	Y	N		N		N
CC3414	Glutamate--cysteine ligase		Y	Y	N		N		N
CC3415	surface protein		Y	Y	N		N		N
CC3416	Polyphosphate kinase		Y	Y	N		Y	Central - Focus	N
CC3417	hypothetical protein		Y	Y	N		N		N
CC3418	Carboxypeptidase S1		Y	Y	Y	Patchy/Spotty	N		N
CC3419	Transporter		Y	Y	N		N		N
CC3420	Multidrug resistance ABC transporter ATP-binding and permease protein		Y	N	N		N		N

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CC3421	4-hydroxybenzoate polyprenyltransferase		N	N	N		N		N
CC3422	Fatty acid desaturase		Y	Y	N		N		N
CC3423	Ribosomal protein L11 methyltransferase		Y	Y	N		N		N
CC3424	Glyoxalase family protein		Y	N	N		N		N
CC3425	NADH-ubiquinone oxidoreductase		Y	N	N		N		N
CC3426	Conserved hypothetical protein		Y	Y	N		N		N
CC3427	Integral membrane protein		Y	Y	N		N		N
CC3428	2,5-diketo-D-gluconic acid reductase		Y	Y	N		N		N
CC3429	Hypothetical protein		Y	Y	N		N		N
CC3430	Gamma-glutamyl phosphate reductase		N	N	N		N		N
CC3431	Nicotinate-nucleotide adenyltransferase		N	N	N		N		N
CC3432	iojap protein family		Y	Y	N		N		N
CC3433	Hypothetical cytosolic protein		Y	Y	N		N		N
CC3434	Peptidoglycan-specific endopeptidase, M23 family		Y	Y	N		N		N
CC3435	Carboxy-terminal processing protease precursor		Y	Y	Y	Patchy/Spotty	N		N
CC3436	TonB-dependent receptor		Y	Y	N		N		N
CC3437	Hypothetical protein		Y	Y	N		N		N
CC3438			Y	Y	N		N		N
CC3439	Hypothetical protein		N	N	N		N		N
CC3440	Conserved hypothetical protein		Y	Y	N		N		N
CC3441	Bis(5'-nucleosyl)-tetraphosphatase (asymmetrical)		Y	Y	Y	Patchy/Spotty	Y	Patchy/Spotty	Y
CC3442	Esterase Lipase Family Protein		Y	Y	N		N		N
CC3443	Quaternary ammonium compound-resistance protein		Y	Y	N		N		N
CC3444	Conserved hypothetical protein		Y	Y	N		N		N
CC3445	ATP synthase epsilon chain		N	N	N		N		N
CC3446	Hypothetical protein		Y	Y	N		N		N
CC3447	ATP synthase beta chain		Y	Y	N		Y	Patchy/Spotty	N
CC3448	ATP synthase gamma chain		Y	Y	N		N		N
CC3449	ATP synthase alpha chain		Y	Y	N		Y	Patchy/Spotty	N
CC3450	ATP synthase delta chain		Y	Y	N		N		N
CC3451	Hypothetical protein		Y	N	N		N		N
CC3452	Hypothetical protein		Y	Y	N		N		N
CC3453			Y	Y	N		N		N
CC3454	Acyl-CoA dehydrogenase		Y	Y	N		N		N
CC3455	LemA protein		Y	Y	Y	Patchy/Spotty	N		N
CC3456	Hypothetical membrane spanning protein		Y	Y	N		N		N
CC3457	Conserved hypothetical protein		Y	Y	N		N		N
CC3458	CAAX amino terminal protease family		Y	Y	N		N		N
CC3459	Hypothetical cytosolic protein		Y	Y	N		N		N
CC3460	D-aminoacylase		Y	Y	N		N		N
CC3461	TonB-dependent receptor		N	N	N		N		N
CC3462	3-ketoacyl-CoA thiolase		Y	N	N		N		N
CC3463	Hypothetical protein		N	N	N		N		N
CC3464	DNA polymerase I		N	N	N		N		N
CC3465	ATP-dependent DNA helicase recQ		Y	Y	Y	Central - Focus	N		N
CC3466	Hypothetical protein		N	N	N		N		N
CC3467	Hypothetical protein		Y	Y	N		N		N
CC3468	Transporter, drug/metabolite exporter family		Y	Y	N		N		N

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CC3469	3'(2'),5'-bisphosphate nucleotidase / Myo-inositol 1-(4-)phosphatase		Y	N	N		N		N
CC3470	Histidine phosphotransferase chpT	chpT	Y	Y	N		Y	Pole	N
CC3471	chemotaxis receiver domain protein cheYIV		Y	Y	N		N		N
CC3472	Chemotaxis protein methyltransferase		Y	Y	N		N		N
CC3473	Entericidin B homolog		Y	Y	Y	Patchy/Spotty	N		N
CC3474	Two-component sensor histidine kinase		Y	N	N		N		N
CC3475	RNA polymerase ECF-type sigma factor sigT	sigT	Y	Y	N		N		N
CC3476	Conserved hypothetical protein		Y	Y	N		N		N
CC3477	Hybrid sigma factor/two-component receiver protein phyR	phyR	Y	Y	N		N		N
CC3478	Outer membrane lipoprotein Blc		Y	Y	N		N		N
CC3479			N	N	N		N		N
CC3480	SIR2 family protein		N	N	N		N		N
CC3481	ubiquinone/menaquinone biosynthesis methyltransferase ubiE	ubiE	Y	N	N		N		N
CC3482	Conserved hypothetical protein		Y	Y	N		N		N
CC3483	Acetylglutamate kinase		Y	Y	N		N		N
CC3484	Two-component sensor histidine kinase divL		Y	Y	N		N		N
CC3485	Aspartate-semialdehyde dehydrogenase		Y	Y	N		N		N
CC3486	Integral membrane protein		Y	Y	N		N		N
CC3487	Conserved membrane protein (hemolysin III homolog)		Y	N	N		N		N
CC3488	Patatin family phospholipase domain protein		N	N	N		N		N
CC3489	Beta-lactamase family protein		Y	Y	N		N		N
CC3490	Hypothetical protein		Y	Y	N		N		N
CC3491	Hypothetical protein		Y	Y	N		N		N
CC3492	Hypothetical protein		Y	Y	N		N		N
CC3493	Ribonucleoside-diphosphate reductase alpha chain		Y	Y	N		N		N
CC3494	Hypothetical protein		N	N	N		N		N
CC3495	Methyltransferase		Y	Y	N		N		N
CC3496	Glutathione-regulated potassium-efflux system protein kefC		Y	Y	N		N		N
CC3497	Hypothetical transcriptional regulatory protein		Y	Y	N		N		N
CC3498	3-hydroxybutyryl-CoA dehydratase		Y	Y	N		N		N
CC3499	Hypothetical protein		Y	Y	N		N		N
CC3500	Sensory transduction protein kinase		Y	N	N		N		N
CC3501	Sulfite reductase [NADPH] flavoprotein alpha-component		Y	Y	N		N		N
CC3502	Hypothetical exported protein		Y	Y	N		N		N
CC3503	SCO1/SenC family protein		N	N	N		N		N
CC3504	Zinc metalloprotease		Y	Y	N		N		N
CC3505	Conserved hypothetical protein		Y	Y	N		N		N
CC3506	Transcriptional regulator, AraC family		N	N	N		N		N
CC3507	Beta-lactamase repressor		Y	Y	N		N		N
CC3508	Transcriptional regulator		N	N	N		N		N
CC3509	Sodium bicarbonate cotransporter		Y	Y	N		N		N
CC3510	Transcriptional regulators, LysR family		Y	Y	N		N		N
CC3511	ATP phosphoribosyltransferase		N	N	N		N		N
CC3512	Probable ATP phosphoribosyltransferase regulatory subunit		N	N	N		N		N
CC3513	Histidyl-tRNA synthetase		Y	Y	N		N		N

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CC3514	Hypothetical protein		Y	Y	N		N		N
CC3515	Hypothetical protein		Y	Y	N		N		N
CC3516	Hypothetical protein		Y	N	N		N		N
CC3517	Hypothetical protein		N	N	N		N		N
CC3518	Hypothetical cytosolic protein		Y	Y	N		N		N
CC3519	Hypothetical membrane spanning protein		Y	Y	N		N		N
CC3520	Hypothetical protein		Y	N	N		N		N
CC3521	Biotin synthase		Y	N	N		N		N
CC3522	Putative adenylate cyclase family		N	N	N		N		N
CC3523			N	N	N		N		N
CC3524	Ferredoxin, 2Fe-2s		Y	Y	N		N		N
CC3525	Ferredoxin--NAD(+) reductase		N	N	N		N		N
CC3526	Succinate dehydrogenase iron-sulfur protein		Y	Y	N		N		N
CC3527	Succinate dehydrogenase flavoprotein subunit		Y	Y	N		N		N
CC3528	Succinate dehydrogenase membrane anchor subunit		Y	Y	N		N		N
CC3529	Succinate dehydrogenase cytochrome B-556 subunit	sdhC	Y	Y	N		N		N
CC3530	Phosphohydrolase (MutT/nudix family protein)		Y	Y	N		N		N
CC3531	ATPase		Y	Y	N		N		N
CC3532			Y	Y	N		N		N
CC3533	Probable sulfolipid biosynthesis protein sqdA		Y	Y	N		N		N
CC3534	ATP/GTP hydrolase		Y	Y	N		N		N
CC3535	Ser/Thr kinase-related phosphotransferase		Y	Y	N		N		N
CC3536	Mannose-1-phosphate guanyltransferase		Y	N	N		N		N
CC3537	ATP-dependent nuclease subunit B		N	N	N		N		N
CC3538	ATP-dependent nuclease subunit A		N	N	N		N		N
CC3539	Thioredoxin		N	N	N		N		N
CC3540	Hypothetical protein		Y	Y	N		N		N
CC3541	Folypolyglutamate synthase / Dihydrofolate synthase		N	N	N		N		N
CC3542	Acetyl-coenzyme A carboxylase carboxyl transferase subunit beta		Y	Y	Y	Patchy/Spotty	Y	Patchy/Spotty	Y
CC3543	Tryptophan synthase alpha chain		Y	Y	N		N		N
CC3544	Tryptophan synthase beta chain		Y	Y	N		N		N
CC3545	N-(5'-phosphoribosyl)anthranilate isomerase		Y	Y	N		N		N
CC3546	Usg protein		Y	Y	N		N		N
CC3547	Hypothetical protein		Y	Y	N		N		N
CC3548	Hypothetical protein		Y	Y	N		N		N
CC3549	NADP-dependent malic enzyme		Y	Y	N		N		N
CC3550	Dihydrodipicolinate reductase		Y	Y	N		N		N
CC3551	Conserved hypothetical protein		N	N	N		N		N
CC3552	Hypothetical cytosolic protein		Y	Y	N		N		N
CC3553	Conserved hypothetical protein		Y	Y	N		N		N
CC3554	Cell cycle regulated sRNA		Y	Y	N		N		N
CC3555	Outer membrane protein		Y	Y	N		N		N
CC3556	Predicted phosphohydrolases, lcc family		N	N	N		N		N
CC3557	Superoxide dismutase		Y	Y	N		N		N
CC3558	Hypothetical protein		Y	Y	Y	Patchy/Spotty	Y	Patchy/Spotty	Y
CC3559	Hypothetical protein		Y	Y	Y	Patchy/Spotty	Y	Patchy/Spotty	Y
CC3560	PAS-family sensor histidine kinase		Y	Y	N		N		N

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CC3561	GNAT acetyltransferase protein		Y	Y	N		N		N
CC3562	CoA-transferase family III protein		Y	Y	N		N		N
CC3563	Hypothetical protein		Y	N	N		N		N
CC3564	Paal thioesterase family protein		Y	Y	N		N		N
CC3565	Aminopeptidase N		N	N	N		N		N
CC3566	ABC transporter ATP-binding protein		Y	Y	N		N		N
CC3567	Fumarylpyruvate hydrolase		Y	Y	N		N		N
CC3568	Maleylpyruvate isomerase		Y	Y	N		N		N
CC3569	Carbonic anhydrase		Y	Y	N		N		N
CC3570	Multimodular transpeptidase-transglycosylase		Y	Y	N		N		N
CC3571	Alpha2 macroglobulin domain-containing extracellular protein		N	N	N		N		N
CC3572	Carbonic anhydrase		Y	Y	N		N		N
CC3573	Transcriptional regulator, AsnC family		Y	Y	N		N		N
CC3574	Alanine dehydrogenase		N	N	N		N		N
CC3575	Spore coat polysaccharide biosynthesis protein spsF		Y	Y	N		N		N
CC3576	lolS protein		Y	N	N		N		N
CC3577	Xanthine and CO dehydrogenases maturation factor, XdhC/CoxF family		N	N	N		N		N
CC3578	Creatinine amidohydrolase family protein		Y	Y	N		N		N
CC3579	Transcriptional regulator		N	N	N		N		N
CC3580	Aldehyde dehydrogenase		Y	Y	N		N		N
CC3581	Acetyl-coenzyme A synthetase		Y	Y	N		N		N
CC3582	Hypothetical cyclase/dehydrase		Y	Y	N		N		N
CC3583	Hypothetical protein		Y	Y	N		N		N
CC3584	Peptidase, M16 family		N	N	N		N		N
CC3585	Large-conductance mechanosensitive channel		Y	Y	Y	Patchy/Spotty	Y	Patchy/Spotty	Y
CC3586	Integration host factor beta-subunit		Y	Y	N		N		N
CC3587	SSU ribosomal protein S1P		Y	Y	N		N		N
CC3588	Cytidylate kinase		N	N	N		N		N
CC3589	3-phosphoshikimate 1-carboxyvinyltransferase		N	N	N		N		N
CC3590	Hypothetical protein		Y	Y	N		N		N
CC3591	tRNA-Ala-GGC		Y	Y	N		N		N
CC3592	Small heat shock protein		Y	Y	Y	Varied Focus	Y	Varied Focus	Y
CC3593	Conserved hypothetical protein		N	N	N		N		N
CC3594	Transposase		Y	N	N		N		N
CC3595	Transposase		Y	N	N		N		N
CC3596	Nitrogen regulatory IIA protein		Y	N	N		N		N
CC3597	Ribosome-associated factor Y		Y	Y	N		N		N
CC3598	Hypothetical protein		Y	Y	N		N		N
CC3599	RNA polymerase sigma-54 factor rpoN		Y	Y	N		N		N
CC3600	ABC transporter ATP-binding protein		Y	Y	N		N		N
CC3601	Protein yhbN precursor		Y	N	N		N		N
CC3602	Conserved hypothetical protein		Y	Y	N		N		N
CC3603	Ribonuclease D		Y	Y	N		N		N
CC3604	NADH-ubiquinone oxidoreductase subunit		N	N	N		N		N
CC3605	Undecaprenyl-diphosphatase (Bacitracin resistance protein)		Y	Y	Y	Patchy/Spotty	N		N
CC3606	Glutamate synthase [NADPH] small chain		N	N	N		N		N

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CC3607	Glutamate synthase [NADPH] large chain		N	N	N		N		N
CC3608			Y	Y	N		N		N
CC3609	Hypothetical membrane associated protein		N	N	N		N		N
CC3610	ATP-dependent DNA ligase		N	N	N		N		N
CC3611	Transcriptional regulator		Y	Y	N		N		N
CC3612	Small-conductance mechanosensitive channel mcsS	mcsS	Y	Y	N		N		N
CC3613	Hypothetical protein		Y	Y	N		N		N
CC3614	Transaldolase-like protein		Y	Y	N		N		N
CC3615	dTDP-4-dehydrorhamnose reductase		Y	N	N		N		N
CC3616	Histidinol-phosphatase		Y	N	N		N		N
CC3617	Mannose-6-phosphate isomerase		Y	Y	N		N		N
CC3618	Mannose-1-phosphate guanylyltransferase (GDP)		Y	Y	N		N		N
CC3619	Glutamine-dependent NAD(+) synthetase		Y	Y	Y	Pole	N		N
CC3620	Transketolase		Y	Y	N		N		N
CC3621	Hypothetical YGGT family protein		Y	Y	N		N		N
CC3622	YggU superfamily protein		N	N	N		N		N
CC3623	hybrid histidine kinase/receiver domain protein		Y	Y	N		N		N
CC3624	Very short patch repair endonuclease		Y	Y	N		Y	Patchy/Spotty	N
CC3625	Cysteine synthase		Y	Y	N		N		N
CC3626	DNA-cytosine methyltransferase		Y	Y	N		N		N
CC3627	Hypothetical membrane protein		N	N	N		N		N
CC3628	Beta-lactamase family protein		Y	Y	N		N		N
CC3629	dTDP-glucose 4,6-dehydratase		Y	Y	N		N		N
CC3630	Formyltetrahydrofolate deformylase		Y	Y	N		N		N
CC3631	Acetylornithine deacetylase		Y	Y	N		N		N
CC3632	Glycosyltransferase		Y	Y	N		N		N
CC3633	dTDP-4-dehydrorhamnose 3,5-epimerase		N	N	N		N		N
CC3634	2-hydroxy-6-oxo-6-phenylhexa-2,4-dienoate hydrolase		Y	Y	N		N		N
CC3635	Threonine dehydratase		N	N	N		N		N
CC3636	Peptidyl-prolyl cis-trans isomerase		Y	Y	N		N		N
CC3637	UTP--glucose-1-phosphate uridylyltransferase		Y	Y	N		N		N
CC3638	iron-sulfur cluster-binding protein		N	N	N		N		N
CC3639	Glutathione S-transferase family protein		Y	Y	Y	MidBand	Y	MidBand	Y
CC3640	D-glycero-D-manno-heptose-7-phosphate 1-kinase / D-glycero-D-manno-heptose-1-phosphate adenyllyltransferase		Y	Y	N		N		N
CC3641	Cobalt-zinc-cadmium resistance protein czcD		Y	Y	N		N		N
CC3642	Citrate synthase		Y	Y	N		N		N
CC3643	Citrate synthase		N	N	N		N		N
CC3644	mRNA 3'-end processing factor		Y	Y	N		N		N
CC3645	Hypothetical cytosolic protein		Y	Y	N		N		N
CC3646	Hypothetical cytosolic protein		Y	Y	N		N		N
CC3647	Hypothetical protein		Y	Y	N		N		N
CC3648	Deacetylase		Y	N	N		N		N
CC3649	Acyl-CoA thioesterase		Y	Y	N		N		N
CC3650	Phosphohydrolase (MutT/nudix family protein)		Y	Y	N		N		N
CC3651	16S rRNA processing protein rimM		Y	Y	N		N		N

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CC3652	SSU ribosomal protein S16P		Y	Y	N		N		N
CC3653	Signal recognition particle GTPase, SRP	Srp	Y	Y	N		N		N
CC3654	Hypothetical protein		Y	Y	Y	Bipolar and Unipolar	N		N
CC3655	Malate dehydrogenase		N	N	N		N		N
CC3656	dehydrogenase with MaoC-like domain / dehydrogenase with MaoC-like domain		Y	Y	N		N		N
CC3657	HIT1 protein		Y	Y	N		N		N
CC3658	Conserved hypothetical protein		Y	N	N		N		N
CC3659	Citrate lyase beta chain / Citryl-CoA lyase subunit		Y	N	N		N		N
CC3660	Conserved hypothetical protein		Y	Y	N		N		N
CC3661	2'-5' RNA ligase		Y	Y	N		N		N
CC3662	Tas protein		Y	Y	N		N		N
CC3663	Integral membrane protein		Y	Y	N		N		N
CC3664	Hypothetical cytosolic protein		N	N	N		N		N
CC3665			Y	Y	N		N		N
CC3666	Hypothetical exported protein		Y	Y	N		N		N
CC3667	Aconitate hydratase		N	N	N		N		N
CC3668	Heme exporter protein A		Y	Y	N		N		N
CC3669	Heme exporter protein B		N	N	N		N		N
CC3670	Transporter		N	N	N		N		N
CC3671	Hypothetical protein		Y	Y	N		N		N
CC3672	Heme chaperone heme-lyase		Y	Y	N		N		N
CC3673	Hypothetical heme exporter protein CcmD		Y	Y	Y	Central - Focus	N		N
CC3674	Thiol:disulfide interchange protein tlpA		N	N	N		N		N
CC3675	Hypothetical protein		Y	Y	N		N		N
CC3676	Hypothetical protein		Y	Y	N		N		N
CC3677	Transcriptional regulator, MarR family		Y	N	N		N		N
CC3678	Intracellular septation protein		Y	Y	N		N		N
CC3679	Cell division protein ftsY		N	N	N		N		N
CC3680	Hypothetical membrane spanning protein		Y	Y	N		N		N
CC3681	Tellurium resistance protein terB		Y	Y	N		N		N
CC3682	Tellurium resistance protein terC		Y	Y	N		N		N
CC3683	Hypothetical protein		Y	Y	N		N		N
CC3684	tRNA 2-methylthioadenosine synthase homolog		Y	Y	N		N		N
CC3685	Short chain dehydrogenase		Y	Y	N		N		N
CC3686	Diaminopimelate epimerase		Y	Y	N		N		N
CC3687	Prolyl endopeptidase family		Y	Y	N		N		N
CC3688	Hypothetical prolyl oligopeptidase family protein		Y	Y	N		N		N
CC3689	Hypothetical cellulose biosynthesis protein		Y	Y	N		N		N
CC3690	CelD		Y	Y	N		N		N
CC3691	Hypothetical cytosolic protein		Y	Y	N		N		N
CC3692	Transcriptional regulator		Y	Y	N		N		N
CC3693	Outer membrane lipoprotein		Y	Y	N		N		N
CC3694	Organic solvent resistance transport system Ttg2D protein		Y	Y	N		N		N
CC3695	Organic solvent resistance transport system Ttg2C protein		Y	Y	N		N		N
CC3696	Organic solvent resistance transport system permease		Y	Y	N		N		N

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CC3696	Organic solvent resistance transport system ATP-binding protein		Y	Y	N		N		N
CC3697	Transcriptional regulator, LysR family		Y	Y	N		N		N
CC3698	Peroxiredoxin reductase AhpD (NAD(P)H) intermediate filament-like cell shape determinant creS	creS	Y	Y	Y	Line	Y	Line	Y
CC3700	Conserved hypothetical protein		Y	Y	N		N		N
CC3701	GumN superfamily protein		N	N	N		N		N
CC3702	Peptidyl-dipeptidase DCP		Y	Y	N		N		N
CC3703	Glutamate racemase		Y	Y	N		N		N
CC3704	Cell division protein ftsK	ftsK	N	N	N		N		N
CC3705	Outer-membrane lipoproteins carrier protein		Y	Y	N		N		N
CC3706	Exodeoxyribonuclease III		Y	N	N		N		N
CC3707	Formamidopyrimidine-DNA glycosylase		N	N	N		N		N
CC3708	Ubiquinone/menaquinone biosynthesis methyltransferase ubiE		Y	Y	N		N		N
CC3709	2-polyprenylphenol 6-hydroxylase accessory protein ubiB	ubiB	Y	Y	Y	Patchy/Spotty	Y	Patchy/Spotty	Y
CC3710			Y	Y	N		N		N
CC3711	Hypothetical protein		Y	Y	N		N		N
CC3712	Phosphopantothienylcysteine decarboxylase / Phosphopantothenate--cysteine ligase		Y	N	N		N		N
CC3713	Deoxyuridine 5'-triphosphate nucleotidohydrolase		Y	Y	N		N		N
CC3714	Multidrug resistance protein A		N	N	N		N		N
CC3715	Multidrug resistance protein B		Y	Y	N		N		N
CC3716	Transcriptional regulator, TetR family		Y	Y	N		N		N
CC3717	Enoyl-[acyl-carrier protein] reductase (NADH)		Y	Y	N		N		N
CC3718	Tetratricopeptide repeat family protein		Y	Y	N		N		N
CC3719	3-oxoacyl-[acyl-carrier-protein] synthase		Y	N	N		N		N
CC3720	3-hydroxydecanoyl-[acyl-carrier-protein] dehydratase		Y	Y	N		N		N
CC3721	Hypothetical protein		Y	Y	N		N		N
CC3722	gluconate 2-dehydrogenase / glyoxylate reductase / hydroxypyruvate reductase		Y	Y	Y	Middle AND Pole	N		N
CC3723	Acylamino-acid-releasing enzyme		Y	Y	N		N		N
CC3724	Succinyl-CoA:coenzyme A transferase		Y	Y	N		N		N
CC3725	Alpha/beta hydrolase fold protein		Y	Y	N		N		N
CC3726	Molybdopterin biosynthesis MoeB protein		Y	N	N		N		N
CC3727	ATP-dependent endopeptidase hsl proteolytic subunit hslV		Y	Y	N		N		N
CC3728	ATP-dependent endopeptidase hsl ATP-binding subunit hslU		Y	Y	Y	Middle OR Pole	Y	Middle OR Pole	Y
CC3729	ADA regulatory protein / O6-methylguanine-DNA methyltransferase		Y	Y	N		N		N
CC3730	Hypothetical membrane spanning protein		Y	Y	N		N		N
CC3731	Endonuclease III		Y	Y	N		N		N
CC3732	Transporter		Y	Y	N		N		N
CC3733	Fructokinase		Y	Y	Y	Patchy/Spotty	N		N
CC3734	Imidazoleglycerol-phosphate dehydratase		Y	Y	N		N		N
CC3735	Imidazole glycerol phosphate synthase, glutamine amidotransferase subunit		Y	Y	N		N		N



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CC3736	1-(5-phosphoribosyl)-5-[[5-phosphoribosylamino)methylideneamino]imidazole-4-carboxamide isomerase		Y	N	N		N		N
CC3737	Imidazole glycerol phosphate synthase, cyclase subunit		Y	Y	N		N		N
CC3738	Phosphoribosyl-ATP pyrophosphatase		N	N	N		N		N
CC3739	MuttS related protein		N	N	N		N		N
CC3740	Membrane-bound lytic murein transglycosylase A		N	N	N		N		N
CC3741	Transporter		N	N	N		N		N
CC3742	Protein translocase subunit secB		Y	Y	N		N		N
CC3743	Two-component response regulator cenR	cenR	Y	Y	N		N		N
CC3744	Hypothetical cytosolic protein		Y	Y	N		N		N
CC3745	Pyridoxal 5'-phosphate dependent enzyme class III		Y	Y	N		N		N
CC3746	Regulatory protein tenI		Y	Y	N		N		N
CC3747	Hypothetical protein		Y	Y	N		N		N
CC3748	Hypothetical cytosolic protein		Y	Y	N		N		N
CC3749	Leucyl-tRNA synthetase		Y	Y	N		N		N
CC3750	Hypothetical periplasmic protein		Y	Y	N		N		N
CC3751	DNA polymerase III, delta subunit		Y	Y	N		N		N
CC3752	Chromosome partitioning protein parB	parB	Y	Y	Y	Middle AND Pole	Y	Middle AND Pole	Y
CC3753	Chromosome partitioning protein parA	parA	Y	Y	Y	Bipolar and Unipolar	Y	Bipolar and Unipolar	Y
CC3754	Methyltransferase gidB	gidB	Y	Y	N		N		N
CC3755	Glucose inhibited division protein A	gidA	Y	Y	N		N		N
CC3756	tRNA (5-carboxymethylaminomethyl-2-thiouridylate) synthase	trmE	Y	Y	N		N		N
CC3757	Conserved hypothetical protein		Y	Y	Y	Middle OR Pole	Y	Middle OR Pole	Y
CC3758	Carboxymethylenebutenolidase		Y	Y	N		N		N
CC3759	Quinone oxidoreductase	qor	N	N	N		N		N
CC3760	Transcription termination factor rho	rho	Y	Y	Y	Patchy/Spotty	Y	Patchy/Spotty	Y
CC3761	Hypothetical membrane spanning protein		Y	Y	N		N		N
CC3762	Ferrochelataase	hemH	Y	Y	N		N		N
CC3763	Uroporphyrinogen decarboxylase	hemE	Y	Y	N		N		N
Total			3184	2786	187		165		63
Percent of Total Correct Entry Vectors			N/A	N/A	6.7		5.9		2.3
Percent of Total Proteins			84.6	74.0	5.0		4.4		1.7