

Table S1. Predicted RNA and protein coding genes (CDSs) in the composite genome of *C. subterraneum*.

Gene ID	Strand	Start	End	Product	COG category	Protein size (aa)	arCOG No.	COG No.
CDS CSUB_C0001	+	62	1252	archaeal cell division control protein orc1/cdc6	L	396	arCOG00467	COG1474
CDS CSUB_C0002	-	1236	2465	replication factor C large subunit	L	409	arCOG00470	COG0470
CDS CSUB_C0003	-	2462	3445	replication factor C small subunit	L	327	arCOG00469	COG0470
CDS CSUB_C0004	-	3468	4202	TatD DNase family protein	L	244	arCOG00891	COG0084
CDS CSUB_C0005	+	4177	4542	hypothetical protein	S	121		
CDS CSUB_C0006	+	4545	5204	conserved hypothetical protein	R	219	arCOG00497	COG2220
CDS CSUB_C0007	+	5210	5662	hypothetical protein	S	150		
CDS CSUB_C0008	-	5651	6082	conserved hypothetical protein	S	143		
CDS CSUB_C0009	-	6054	6323	conserved hypothetical protein	S	89		
CDS CSUB_C0010	-	6316	6723	hypothetical protein	S	135	arCOG05897	
CDS CSUB_C0011	+	6752	7228	hypothetical protein	S	158	arCOG04705	COG2098
CDS CSUB_C0012	-	7152	8264	molecular chaperone DnaJ	O	370	arCOG04771	COG0484
CDS CSUB_C0013	-	8267	10045	molecular chaperone DnaK	O	592	arCOG03060	COG0443
CDS CSUB_C0014	-	10133	10627	molecular chaperone GrpE	O	164	arCOG04772	COG0576
tRNA CSUB_T01	+	10708	10812	tRNA-Arg				
CDS CSUB_C0015	+	10950	12401	hypothetical protein	S	483		
CDS CSUB_C0016	-	12388	13455	conserved hypothetical protein	R	355	arCOG01395	COG1817
CDS CSUB_C0017	+	13554	14540	UDP-N-acetylglucosamine-dolichyl-phosphate N-acetylglucosaminophosphotransferase	M	328	arCOG03199	COG0472
CDS CSUB_C0018	+	14537	14803	hypothetical protein	S	88		
CDS CSUB_C0019	+	14775	15821	hypothetical protein	S	348		
CDS CSUB_C0020	+	15833	16819	dehydrogenase	R	328	arCOG01622	COG0673
tRNA CSUB_T02	-	16825	16900	tRNA-Pro				
CDS CSUB_C0021	-	16942	17580	hypothetical protein	T	212	arCOG01173	COG0467
CDS CSUB_C0022	-	17740	18096	hypothetical protein	S	118		
CDS CSUB_C0023	-	18374	19219	hypothetical protein	S	281		
CDS CSUB_C0024	+	19578	20285	hypothetical protein	S	235		
CDS CSUB_C0025	+	21199	24258	type II restriction enzyme, methylase subunit	V	1019	arCOG02635	COG1002
CDS CSUB_C0026	+	24242	27322	helicase domain-containing protein	K	1026	arCOG04818	COG0553
CDS CSUB_C0027	-	27475	27801	hypothetical protein	S	108		
CDS CSUB_C0028	+	28106	28510	hypothetical protein	S	134		
CDS CSUB_C0029	-	28820	29095	conserved hypothetical protein	S	91		
CDS CSUB_C0030	-	29596	30312	hypothetical protein	S	238		
CDS CSUB_C0033-1	+	31206	31625	transposase	L	139	arCOG02134	COG3316
CDS CSUB_C0034	+	31867	32742	cobyrinic acid a,c-diamide synthase	D	291	arCOG00586	COG1192
CDS CSUB_C0035	+	32745	33152	hypothetical protein	S	135		
CDS CSUB_C0037	+	35245	36705	hypothetical protein	S	486		
CDS CSUB_C0038	-	36729	36992	hypothetical protein	S	87		
CDS CSUB_C0039	-	37175	37612	hypothetical protein	S	145		
CDS CSUB_C0040	-	37615	38910	conserved hypothetical protein	R	431	arCOG03233	COG4938
CDS CSUB_C0041	-	39340	40257	conserved hypothetical protein	S	305	arCOG04291	COG1801
CDS CSUB_C0042	+	40296	41462	conserved hypothetical protein	S	388	arCOG04291	COG1801
CDS CSUB_C0043	+	41587	42075	hypothetical protein	S	162		
CDS CSUB_C0044	-	42347	44851	hypothetical protein	S	834		
CDS CSUB_C0045	+	44842	45156	hypothetical protein	S	104		
CDS CSUB_C0046	+	45165	46376	threonine synthase	E	403	arCOG01434	COG0498
CDS CSUB_C0047	+	46405	49293	conserved hypothetical protein	S	962		
CDS CSUB_C0048	+	49395	50858	glyceraldehyde-3-phosphate dehydrogenase (NADP)	C	487	arCOG01252	COG1012
tRNA CSUB_T03	+	50901	50975	tRNA-Met				
CDS CSUB_C0049-1	-	51356	51865	transposase	L	169	arCOG02134	COG3316
CDS CSUB_C0050	+	52341	53393	conserved hypothetical protein	S	350		
CDS CSUB_C0051	-	54161	54553	hypothetical protein	V	130		
CDS CSUB_C0052	-	55191	55547	conserved hypothetical protein	S	118	arCOG02219	COG1487
CDS CSUB_C0053	-	55544	55771	conserved hypothetical protein	S	75	arCOG07247	
CDS CSUB_C0054	-	55855	56457	transcriptional regulator	K	200	arCOG01580	COG1522
CDS CSUB_C0055	-	56497	56706	conserved hypothetical protein	S	69		
CDS CSUB_C0056	-	56715	59252	Cu2+-exporting ATPase	P	845	arCOG01576	COG2217
CDS CSUB_C0057	-	59297	59464	Cu2+-exporting ATPase	S	55	arCOG04507	COG3350
CDS CSUB_C0058	+	59866	60096	conserved hypothetical protein	S	76	arCOG02218	
CDS CSUB_C0059	-	60423	61010	conserved hypothetical protein	S	195	arCOG01507	COG4904
CDS CSUB_C0060	-	61018	64479	molybdopterin oxidoreductase, molybdopterin binding subunit	C	1153	arCOG01491	COG0243
CDS CSUB_C0061	-	64472	65647	molybdopterin oxidoreductase, membrane subunit	S	391	arCOG02024	COG4881
CDS CSUB_C0062	-	65656	66327	molybdopterin oxidoreductase, iron-sulfur binding subunit	C	223	arCOG01500	COG0437
CDS CSUB_C0063	-	66504	66932	small subunit ribosomal protein S12	J	142	arCOG04255	COG0048
CDS CSUB_C0064	-	66980	68023	molybdenum cofactor biosynthesis protein A	H	347	arCOG00930	COG2896
CDS CSUB_C0065	-	68033	69382	cytochrome b/b6 domain-containing protein	C	449	arCOG01721	COG1290
CDS CSUB_C0066	+	69462	70409	aspartate carbamoyltransferase catalytic subunit	F	315	arCOG00911	COG0540
CDS CSUB_C0067	-	70389	71684	hypothetical protein	S	431		
CDS CSUB_C0068	-	71718	72692	pyruvate ferredoxin oxidoreductase, beta subunit	C	324	arCOG01601	COG1013
CDS CSUB_C0069	-	72689	73921	pyruvate ferredoxin oxidoreductase, alpha subunit	C	410	arCOG01608	COG0674
CDS CSUB_C0070	-	73914	74798	pyruvate ferredoxin oxidoreductase, gamma subunit	C	294	arCOG01604	COG1144
CDS CSUB_C0071	+	74892	77003	acetyl-CoA synthetase (ADP-forming), alpha and beta subunit	C	703	arCOG01340	COG1042
tRNA CSUB_T04	+	77030	77105	tRNA-Pro				
CDS CSUB_C0072	+	77152	77742	hypothetical protein	S	196		
CDS CSUB_C0073	+	77747	78619	conserved hypothetical protein	S	290		
CDS CSUB_C0074	+	78577	79638	hypothetical protein	S	353		
CDS CSUB_C0075	+	79628	81259	hypothetical protein	S	543		
CDS CSUB_C0076	+	81309	82163	lysine biosynthesis enzyme LysX	H	284	arCOG01589	COG0189
CDS CSUB_C0077	-	82129	82659	peptidase, zinc-dependent	R	176	arCOG00458	COG1913
CDS CSUB_C0078	+	82682	83257	conserved hypothetical protein	F	191	arCOG01038	COG1936
CDS CSUB_C0079	+	83326	85113	ABC transporter ATP-binding protein	R	595	arCOG00187	COG1245
CDS CSUB_C0080	+	85163	87343	AAA family ATPase	O	726	arCOG01308	COG0464
CDS CSUB_C0081	+	87453	88073	cell division protein ERCT-III/CdvB	N	206	arCOG00452	COG5491
CDS CSUB_C0082	-	88085	88972	iron complex ABC transporter substrate-binding protein	P	295	arCOG04233	COG0614
CDS CSUB_C0083	+	89031	89798	undecaprenyl-diphosphatase	I	255	arCOG04761	COG1968
CDS CSUB_C0084	-	89795	90400	conserved hypothetical protein	R	201	arCOG04150	COG1094
CDS CSUB_C0085	-	90406	91203	RIO kinase I	T	265	arCOG01180	COG1718
CDS CSUB_C0086	-	91418	92023	acylphosphatase	C	201	arCOG01674	COG1254
CDS CSUB_C0087-1	-	92122	92388	transposase	L	88	arCOG02134	COG3316
tRNA CSUB_T05	-	92453	92579	tRNA-Tyr				
CDS CSUB_C0088	-	92557	93147	hypothetical protein	S	196		
CDS CSUB_C0089	-	93126	93740	electron transport protein SCO1/SenC	R	204	arCOG00313	COG1999
CDS CSUB_C0090	+	93869	96373	ribonucleoside-diphosphate reductase alpha chain	F	834	arCOG04276	COG0209
CDS CSUB_C0091	+	96405	96842	osmotically inducible protein OsmC	R	145		
CDS CSUB_C0092	+	96835	97365	conserved hypothetical protein	S	176	arCOG03116	COG1430
CDS CSUB_C0093	-	97354	98754	Fe-S cluster assembly protein SuFB	O	466	arCOG01715	COG0719
CDS CSUB_C0094	-	98833	101112	xanthine dehydrogenase	C	759	arCOG01167	COG1529
CDS CSUB_C0095	+	101186	102334	aminotransferase	E	382	arCOG00082	COG0075
CDS CSUB_C0096	+	102338	102775	conserved hypothetical protein	I	145	arCOG00774	COG2030
CDS CSUB_C0097	+	102801	103520	threonyl/alanyl tRNA synthetase	R	239	arCOG01254	COG2872
CDS CSUB_C0098	-	106284	107507	GTPase	J	407	arCOG00357	COG0012
CDS CSUB_C0099	-	107551	108423	sugar kinase	G	290	arCOG00018	COG0063
CDS CSUB_C0100	+	108472	109233	hypothetical protein	S	253		
CDS CSUB_C0101	+	109226	109516	archaea-specific DNA-binding protein Alba	K	96	arCOG01753	COG1581
CDS CSUB_C0102	+	109663	110214	small GTP-binding protein	R	183		
CDS CSUB_C0103	+	110204	111226	hypothetical protein	S	340		
CDS CSUB_C0104	+	111254	112300	conserved hypothetical protein	S	348		

CDS	CSUB_C0105	+	112304	113098	voltage-gated potassium channel	P	264	arCOG01964	COG1226
CDS	CSUB_C0106	+	113101	114225	major facilitator superfamily MFS	G	374	arCOG00130	COG0477
CDS	CSUB_C0107	+	114255	115205	threonine dehydratase	E	316	arCOG01431	COG1171
CDS	CSUB_C0108	+	115247	115582	translation initiation factor eIF-1A	J	111	arCOG01179	COG0361
CDS	CSUB_C0109	-	115579	117159	elongation factor EF-1 alpha subunit	R	526	arCOG01562	COG5258
CDS	CSUB_C0110	-	117159	117401	transcriptional regulator, AsnC	K	80	arCOG01117	COG1522
CDS	CSUB_C0111	-	117441	117803	regulatory protein, AsnC/Lrp family	K	120	arCOG01117	COG1522
CDS	CSUB_C0112	-	117803	118054	AsnC family transcriptional regulator	K	83	arCOG01117	COG1522
CDS	CSUB_C0113	-	118061	119497	glutamine synthetase	E	478	arCOG01909	COG0174
CDS	CSUB_C0114	-	119990	120382	conserved hypothetical protein	S	130	arCOG03749	COG4243
CDS	CSUB_C0115	-	120379	120972	thiol-disulfide oxidoreductase	O	197	arCOG03562	COG0526
CDS	CSUB_C0116	+	121063	122463	drug resistance transporter EmrB/QacA subfamily	G	466	arCOG00143	COG0477
CDS	CSUB_C0117	+	122491	124131	CTP synthetase	F	546	arCOG00463	COG0504
CDS	CSUB_C0118	-	124128	125393	ABC-2 type transport system permease	C	421	arCOG01462	COG1668
CDS	CSUB_C0119	-	125390	126112	ABC-2 type transport system ATP-binding protein	V	240	arCOG00194	COG1131
CDS	CSUB_C0120	+	126151	127002	conserved hypothetical protein	G	283	arCOG03425	COG0697
tRNA	CSUB_T06	+	127030	127103	tRNA-Asn				
CDS	CSUB_C0121	-	127152	128027	type I restriction enzyme R protein N terminal domain protein	S	291		
CDS	CSUB_C0122	+	128100	128519	nitrogen fixation protein NifU	C	139	arCOG02077	COG0822
CDS	CSUB_C0123	+	128547	129713	metal-dependent phosphohydrolase	R	388	arCOG04430	COG1078
CDS	CSUB_C0124	-	129886	130089	glutamyl-tRNA(Gln) amidotransferase subunit D	E	67	arCOG01924	COG0252
CDS	CSUB_C0125	-	130647	131513	hypothetical protein	S	288		
CDS	CSUB_C0126	+	131705	132115	hypothetical protein	S	136		
CDS	CSUB_C0127	-	132140	132742	dTMP kinase	F	200	arCOG01891	COG0125
CDS	CSUB_C0128	+	132772	134463	dihydroxy-acid dehydratase	E	563	arCOG04045	COG0129
CDS	CSUB_C0129	+	134527	134808	conserved hypothetical protein	S	93	arCOG04308	COG1698
CDS	CSUB_C0130	+	134869	136266	citrate transporter	P	465	arCOG00238	COG1055
CDS	CSUB_C0131	+	136593	137423	chorismate mutase / prephenate dehydratase	E	276	arCOG00255	COG0077
CDS	CSUB_C0132	-	137406	138305	6-phosphogluconate dehydrogenase NAD-binding	I	299	arCOG00247	COG2084
CDS	CSUB_C0133	+	138381	139076	hypothetical protein	S	231		
CDS	CSUB_C0134	-	139066	139215	CopG/Arc/MeJ family transcriptional regulator	K	49	arCOG01009	COG3609
CDS	CSUB_C0135	+	139321	140976	thermosome subunit alpha	O	551	arCOG01257	COG0459
CDS	CSUB_C0136	+	140957	141214	DNA-directed RNA polymerase subunit K	K	85	arCOG01268	COG1758
CDS	CSUB_C0137	+	141207	141404	hypothetical protein	S	65		
CDS	CSUB_C0138	+	141482	142576	conserved hypothetical protein	S	364	arCOG04253	COG1415
CDS	CSUB_C0139	-	142573	143646	myo-inositol-1-phosphate synthase	I	357	arCOG04213	COG1260
CDS	CSUB_C0140	-	143697	144014	PadR family transcriptional regulator	K	105	arCOG00001	COG1695
CDS	CSUB_C0141	-	144241	146214	enoyl-CoA hydratase	I	657	arCOG00249	COG1250
CDS	CSUB_C0142	-	146480	147709	cysteine desulfurase / selenocysteine lyase	O	409	arCOG00065	COG0520
CDS	CSUB_C0143	-	147752	149578	threonyl-tRNA synthetase	J	608	arCOG00401	COG0441
CDS	CSUB_C0144	+	149798	150082	conserved hypothetical protein	K	94	arCOG00823	COG2002
CDS	CSUB_C0145	+	150069	150434	conserved hypothetical protein	V	121	arCOG00713	COG1848
CDS	CSUB_C0146	+	150955	151437	bacterioferritin	R	160	arCOG01093	COG2406
CDS	CSUB_C0147	+	151728	152294	hypothetical protein	S	188		
CDS	CSUB_C0148	+	152331	152594	hypothetical protein	S	87		
CDS	CSUB_C0149	+	152994	154232	GTP-binding protein HBX	R	412	arCOG00353	COG2262
CDS	CSUB_C0150	+	154222	154686	RNA binding PUA domain protein	O	154	arCOG00991	COG1370
CDS	CSUB_C0151	+	154713	155081	nascent polypeptide-associated complex protein Nac	K	122	arCOG04061	COG1308
CDS	CSUB_C0152	-	155070	156677	hypothetical protein	S	535		
CDS	CSUB_C0153	+	156666	157667	ornithine carbamoyltransferase	E	333	arCOG00912	COG0078
CDS	CSUB_C0154	+	157892	158800	hypothetical protein	J	302		
CDS	CSUB_C0155	+	158836	159324	large subunit ribosomal protein L11	S	162	arCOG04372	COG0080
CDS	CSUB_C0156	+	159324	159980	large subunit ribosomal protein L1	J	218	arCOG04289	COG0081
CDS	CSUB_C0157	+	160038	160901	large subunit ribosomal protein L10	J	287	arCOG04288	COG0244
CDS	CSUB_C0158	-	160872	163601	alanyl-tRNA synthetase	J	909	arCOG01255	COG0013
CDS	CSUB_C0159	-	163649	165097	hypothetical protein	S	482		
CDS	CSUB_C0160	-	165147	165884	ABC-2 type transport system ATP-binding protein	V	245	arCOG00194	COG1131
CDS	CSUB_C0161	-	165927	166238	large subunit ribosomal protein L12	J	103	arCOG04287	COG2058
CDS	CSUB_C0162	+	166386	167486	conserved hypothetical protein	S	366	arCOG04253	COG1415
CDS	CSUB_C0163	-	167483	167773	elongation factor EF-1 beta subunit	J	96	arCOG01988	COG2092
CDS	CSUB_C0164	-	167775	168674	conserved hypothetical protein	H	299	arCOG01872	COG0746
CDS	CSUB_C0165	-	168671	169198	molybdopterin-guanine dinucleotide biosynthesis protein B	H	175	arCOG00532	COG1763
CDS	CSUB_C0167	+	169500	170174	ribose 5-phosphate isomerase A	G	224	arCOG01122	COG0120
CDS	CSUB_C0168	+	170207	170791	conserved hypothetical protein	S	194	arCOG01644	COG2245
CDS	CSUB_C0169	-	170788	171507	hypothetical protein	K	239	arCOG02037	COG1378
CDS	CSUB_C0170	+	171581	172285	ubiquinone/menaquinone biosynthesis methyltransferase	H	234	arCOG04348	COG2226
CDS	CSUB_C0171	+	172325	173782	conserved hypothetical protein	S	485		
CDS	CSUB_C0172	+	173784	174641	4-hydroxybenzoate octaprenyltransferase	H	285	arCOG00478	COG0382
CDS	CSUB_C0173	-	174634	175794	hypothetical protein	S	386		
CDS	CSUB_C0174	-	175827	176705	circadian clock protein KaiC	T	292	arCOG01171	COG0467
CDS	CSUB_C0175	+	176734	177468	hypothetical protein	S	244		
CDS	CSUB_C0176	+	177465	178340	conserved hypothetical protein	H	291	arCOG04238	COG1767
CDS	CSUB_C0177	-	178345	178635	hypothetical protein	S	96	arCOG05413	
CDS	CSUB_C0178	-	178617	178946	transcriptional regulator, ArsR family	K	109	arCOG00731	COG0640
CDS	CSUB_C0179	-	178975	179769	cyclase family protein	E	264	arCOG02462	COG1878
CDS	CSUB_C0180	-	179815	181017	formyl-CoA transferase	C	400	arCOG02304	COG1804
CDS	CSUB_C0181	+	181086	181883	3-hydroxybutyryl-CoA dehydratase	I	265	arCOG00239	COG1024
CDS	CSUB_C0182	-	181884	182468	conserved hypothetical protein	J	194	arCOG04130	COG1491
CDS	CSUB_C0183	-	182482	182838	DNA-directed RNA polymerase subunit F	K	118	arCOG01016	COG1460
CDS	CSUB_C0184	-	182842	183129	large subunit ribosomal protein L21e	J	95	arCOG04129	COG2139
CDS	CSUB_C0185	-	183173	184492	conserved hypothetical protein	J	439	arCOG01015	COG1258
CDS	CSUB_C0186	-	184485	185885	signal recognition particle, subunit SRP54	U	466	arCOG01228	COG0541
CDS	CSUB_C0187	+	185854	186810	UDP-glucose 4-epimerase	M	318	arCOG01369	COG0451
tRNA	CSUB_T07	+	186801	186874	tRNA-Ala				
tRNA	CSUB_T08	+	187064	187138	tRNA-Met				
CDS	CSUB_C0188	+	187200	187952	conserved hypothetical protein	S	250		
tRNA	CSUB_T09	+	187952	188025	tRNA-Gly				
CDS	CSUB_C0189	-	188007	188990	conserved hypothetical protein	L	327	arCOG03156	COG3780
CDS	CSUB_C0190	+	189359	190729	glycosyl transferase group 1	M	456	arCOG01408	COG0438
CDS	CSUB_C0191	+	190726	191493	small conductance mechanosensitive ion channel, MscS family	M	255	arCOG01568	COG0668
CDS	CSUB_C0192	+	191548	192435	methionyl aminopeptidase	J	295	arCOG01001	COG0024
CDS	CSUB_C0193	-	192428	192604	conserved hypothetical protein	S	58	arCOG03770	
CDS	CSUB_C0194	-	192646	193794	conserved hypothetical protein	S	382	arCOG04181	COG4046
CDS	CSUB_C0195	-	193818	195638	DNA topoisomerase IA	L	606	arCOG01527	COG0550
CDS	CSUB_C0196	-	195642	196172	hypothetical protein	S	176		
tRNA	CSUB_T10	+	196258	196352	tRNA-Phe				
CDS	CSUB_C0197	-	196513	197313	3-oxoacyl-[acyl-carrier protein] reductase	I	266	arCOG01259	COG1028
CDS	CSUB_C0198	+	197412	198083	methylated-DNA [protein]-cysteine S-methyltransferase	L	223	arCOG02724	COG0350
CDS	CSUB_C0199	-	198371	198625	conserved hypothetical protein	O	84	arCOG06207	COG3526
CDS	CSUB_C0200	+	198766	200670	quinoprotein alcohol dehydrogenase	S	634		
CDS	CSUB_C0201	-	201545	202153	hypothetical protein	S	202		
CDS	CSUB_C0202	-	202163	202639	hypothetical protein	S	158		
CDS	CSUB_C0203	+	203212	204324	ABC transporter ATP-binding protein	G	370	arCOG00175	COG3839
CDS	CSUB_C0204	+	204401	205345	conserved hypothetical protein	P	314	arCOG01803	COG0715
CDS	CSUB_C0205	-	205342	207036	iron complex ABC transporter permease	P	564	arCOG00163	COG1178
CDS	CSUB_C0206	-	207043	208392	iron complex ABC transporter substrate-binding protein	P	449	arCOG00227	COG1840
CDS	CSUB_C0207	+	208367	209074	hypothetical protein	S	235		

CDS	CSUB_C0208	-	209061	209687	pyrroloquinoline-quinone synthase	H	208		
CDS	CSUB_C0209	-	209684	210553	hypothetical protein	S	289		
CDS	CSUB_C0210	+	210645	211124	conserved hypothetical protein	S	159		
CDS	CSUB_C0211	+	211137	212204	sugar ABC transporter ATP-binding protein	G	355	arCOG00175	COG3839
CDS	CSUB_C0212	+	212201	213085	multiple sugar ABC transporter permease	G	294	arCOG00157	COG1175
CDS	CSUB_C0213	+	213082	213921	multiple sugar ABC transporter permease	G	279	arCOG00159	COG0395
CDS	CSUB_C0214	-	214134	215336	kelch repeat protein	S	400	arCOG05978	
CDS	CSUB_C0215	+	215339	215818	hypothetical protein	S	159		
CDS	CSUB_C0216	-	215831	218047	quinoprotein alcohol dehydrogenase	S	738		
CDS	CSUB_C0217	-	218112	218891	short-chain dehydrogenase/reductase	R	259	arCOG01263	COG0300
CDS	CSUB_C0218	+	218984	219835	hypothetical protein	S	283		
CDS	CSUB_C0219	+	219841	220350	hypothetical protein	S	169		
CDS	CSUB_C0220	+	220347	220862	hypothetical protein	S	171		
CDS	CSUB_C0221	+	220841	222319	multiple sugar ABC transporter substrate-binding protein	G	492	arCOG00151	COG1653
CDS	CSUB_C0222	+	222462	222914	hypothetical protein	S	150		
CDS	CSUB_C0223	-	222911	224266	major facilitator superfamily MFS	G	451	arCOG00143	COG0477
CDS	CSUB_C0224	-	224355	226247	quinoprotein alcohol dehydrogenase	S	630		
CDS	CSUB_C0225	+	226351	227265	ABC transporter ATP-binding protein	V	304	arCOG00194	COG1131
CDS	CSUB_C0226	+	227274	228101	ABC-2 type transport system permease	R	275	arCOG02440	COG1277
CDS	CSUB_C0227	-	228079	230067	conserved hypothetical protein	S	662		
CDS	CSUB_C0228	+	230098	230490	hypothetical protein	S	130		
CDS	CSUB_C0229	+	230609	231025	conserved hypothetical protein	S	138	arCOG03426	COG2510
CDS	CSUB_C0230	+	231062	232504	methylmalonate-semialdehyde dehydrogenase	C	480	arCOG01252	COG1012
CDS	CSUB_C0231	+	232504	233112	conserved hypothetical protein	S	202		
CDS	CSUB_C0232	-	233109	234077	branched-chain amino acid ABC transporter permease	E	322	arCOG01273	COG4177
CDS	CSUB_C0233	-	234071	234943	branched-chain amino acid ABC transporter permease	E	290	arCOG00924	COG0410
CDS	CSUB_C0234	-	234944	235663	branched-chain amino acid ABC transporter ATP-binding protein	E	239	arCOG00926	COG0411
CDS	CSUB_C0235	-	235641	236387	branched-chain amino acid ABC transporter ATP-binding protein	E	405	arCOG01201	COG0683
CDS	CSUB_C0236	-	236426	237643	branched-chain amino acid ABC transporter substrate-binding protein	E	328	arCOG02410	COG2141
CDS	CSUB_C0237	-	237676	238662	luciferase family protein	C	394		
CDS	CSUB_C0238	-	238662	239846	amidohydrolase	R	759		
CDS	CSUB_C0239	-	239871	242177	molybdopterin binding oxidoreductase large subunit	C	211	arCOG01167	COG1529
CDS	CSUB_C0240	+	242286	243035	conserved hypothetical protein	S	249	arCOG04715	COG2968
CDS	CSUB_C0241	+	243075	243932	conserved hypothetical protein	G	285	arCOG00271	COG0697
CDS	CSUB_C0242	-	243914	244903	ornithine cyclodeaminase	E	329	arCOG01035	COG2423
CDS	CSUB_C0243	+	244935	247214	hypothetical protein	R	759		
CDS	CSUB_C0244	-	247133	247768	adenine phosphoribosyltransferase	F	211	arCOG00029	COG0461
CDS	CSUB_C0245	-	247790	248911	major facilitator superfamily MFS	G	373	arCOG00130	COG0477
CDS	CSUB_C0246	+	248981	250123	acyl-CoA dehydrogenase	I	380	arCOG04350	COG1960
CDS	CSUB_C0247	-	250120	251097	ornithine cyclodeaminase	E	325	arCOG01035	COG2423
CDS	CSUB_C0248	-	251099	252409	phenylacetate-CoA ligase	H	436	arCOG02620	COG1541
CDS	CSUB_C0249	+	252504	253469	fumarylacetoacetate hydrolase family protein	Q	321	arCOG00235	COG0179
CDS	CSUB_C0250	+	253471	254676	carboxyltransferase	E	401	arCOG02092	COG0119
CDS	CSUB_C0251	+	254649	255725	pyruvate dehydrogenase E1 component subunit alpha	C	358	arCOG01054	COG1071
CDS	CSUB_C0252	+	255722	256582	conserved hypothetical protein	K	286	arCOG01875	COG1475
CDS	CSUB_C0253	-	256551	257483	D-3-phosphoglycerate dehydrogenase	H	310	arCOG01754	COG0111
CDS	CSUB_C0254	+	257583	257867	small subunit ribosomal protein S26e	J	94	arCOG04305	COG4830
CDS	CSUB_C0255	+	257924	258892	peptidase M48	O	322	arCOG01331	COG0501
CDS	CSUB_C0256	-	258879	260333	prolyl-tRNA synthetase	J	484	arCOG00402	COG0442
CDS	CSUB_C0257	+	260623	260928	conserved hypothetical protein	S	101	arCOG04024	
CDS	CSUB_C0258	+	260925	261143	conserved hypothetical protein	S	72	arCOG02270	COG5428
CDS	CSUB_C0259	+	261445	262128	V-type H <sup>+</sup> -transporting ATPase subunit D	C	227	arCOG04101	COG1394
CDS	CSUB_C0260	+	262278	262913	hypothetical protein	S	211		
CDS	CSUB_C0261	+	262962	263372	conserved hypothetical protein	O	136	arCOG03743	COG5550
CDS	CSUB_C0262	+	263464	263871	conserved hypothetical protein	S	135	arCOG01191	COG2250
CDS	CSUB_C0263	+	263841	264296	conserved hypothetical protein	R	151	arCOG01204	COG1708
CDS	CSUB_C0264	+	264336	265202	UTP-glucose-1-phosphate uridylyltransferase	M	288	arCOG00665	COG1210
CDS	CSUB_C0265	+	265199	266512	UDP-glucose 6-dehydrogenase	M	437	arCOG00253	COG1004
CDS	CSUB_C0266	+	266509	267474	glycosyl transferase family 1	M	321	arCOG01403	COG0438
CDS	CSUB_C0267	+	267530	268474	conserved hypothetical protein	M	314	arCOG01403	COG0438
CDS	CSUB_C0268	+	268716	269723	conserved hypothetical protein	M	335	arCOG01369	COG0451
CDS	CSUB_C0269	-	269748	270377	conserved hypothetical protein	Q	209	arCOG01774	COG0500
CDS	CSUB_C0270	-	270433	271923	conserved hypothetical protein	S	496	arCOG02216	
CDS	CSUB_C0271	+	272205	273071	conserved hypothetical protein	M	288	arCOG01410	COG0438
CDS	CSUB_C0272	+	273305	274408	glycosyl transferases group 1	M	367	arCOG01403	COG0438
CDS	CSUB_C0273	+	274434	275399	NAD-dependent epimerase/dehydratase	M	321	arCOG01369	COG0451
CDS	CSUB_C0274	-	275456	275749	conserved hypothetical protein	S	97	arCOG01192	COG2250
CDS	CSUB_C0275	-	275835	276356	DNA polymerase beta domain protein	R	173	arCOG01203	COG1708
CDS	CSUB_C0276	-	276477	276632	small subunit ribosomal protein S30e	J	51	arCOG04293	COG4919
CDS	CSUB_C0277	-	276701	277996	hypothetical protein	S	431		
CDS	CSUB_C0278	-	278083	278721	hypothetical protein	S	212		
CDS	CSUB_C0279	-	278817	279209	hypothetical protein	S	130		
CDS	CSUB_C0280	+	279441	280619	pre-mRNA processing ribonucleoprotein, binding region	J	392	arCOG01923	COG1498
CDS	CSUB_C0281	+	280616	281311	fibrillar-like pre-rRNA processing protein	J	231	arCOG00078	COG1889
CDS	CSUB_C0282	+	281316	281885	ribonuclease HII	L	189	arCOG04121	COG0164
CDS	CSUB_C0283	+	281964	282488	nucleotide kinase	F	174	arCOG01034	COG1618
CDS	CSUB_C0284	+	282548	283648	tRNA (guanine-N2-)-methyltransferase	J	366	arCOG01219	COG1867
CDS	CSUB_C0285	-	283599	284273	ribosomal RNA large subunit methyltransferase E FtsJ	J	224	arCOG00079	COG0293
CDS	CSUB_C0286	-	284275	284622	conserved hypothetical protein	K	115	arCOG04153	COG1522
CDS	CSUB_C0287	-	284669	285376	transcription initiation factor TFIIIB	K	235	arCOG01981	COG1405
CDS	CSUB_C0288	-	285460	285708	RNA-binding protein	J	82	arCOG02466	COG3277
CDS	CSUB_C0289	-	285698	285985	signal recognition particle subunit SRP19	U	95	arCOG01217	COG1400
CDS	CSUB_C0290	-	285982	286371	small subunit ribosomal protein S8e	J	129	arCOG04154	COG2007
CDS	CSUB_C0291	-	286301	286897	segregation and condensation protein B	K	198	arCOG02613	COG1386
CDS	CSUB_C0292	-	286890	287579	segregation and condensation protein A	L	229	arCOG02610	COG1354
CDS	CSUB_C0293	-	287566	290925	chromosome segregation protein SMC	D	1119	arCOG00371	COG1196
CDS	CSUB_C0294	+	291270	292133	hypothetical protein	E	287	arCOG01000	COG0006
CDS	CSUB_C0295	-	292130	292912	undecaprenyl pyrophosphate synthetase	I	260	arCOG01532	COG0020
CDS	CSUB_C0296	-	292920	294104	conserved hypothetical protein	R	394	arCOG04151	COG2237
CDS	CSUB_C0297	-	294828	295217	DNA polymerase beta subunit	R	129	arCOG02106	COG1708
CDS	CSUB_C0298	-	295214	295624	hypothetical protein	S	136	arCOG02109	COG2445
CDS	CSUB_C0299	+	295711	296064	hypothetical protein	S	117		
CDS	CSUB_C0300	+	296099	296518	small subunit ribosomal protein S19	J	139	arCOG04099	COG0185
CDS	CSUB_C0301	+	296611	296898	hypothetical protein	S	95		
CDS	CSUB_C0302	-	296926	297651	large subunit ribosomal protein L2	J	241	arCOG04067	COG0090
CDS	CSUB_C0303	-	297663	297923	large subunit ribosomal protein L23	J	86	arCOG04072	COG0089
CDS	CSUB_C0304	-	297920	298738	large subunit ribosomal protein L4e	J	272	arCOG04071	COG0088
CDS	CSUB_C0305	-	298742	299704	large subunit ribosomal protein L3	J	320	arCOG04070	COG0087
CDS	CSUB_C0306	+	299736	300269	hypothetical protein	S	177		
CDS	CSUB_C0307	+	300474	301673	hypothetical protein	E	399	arCOG00071	COG0367
CDS	CSUB_C0308	+	301670	302137	conserved hypothetical protein	R	155	arCOG04311	COG1896
CDS	CSUB_C0309	+	302166	303239	DNA primase, large subunit	L	357	arCOG03013	COG2219
CDS	CSUB_C0310	+	303271	304413	conserved hypothetical protein	G	380	arCOG00130	COG0477
CDS	CSUB_C0311	-	304693	305304	superoxide dismutase	P	203	arCOG04147	COG0605
CDS	CSUB_C0312	-	305346	306311	hypothetical protein	G	321	arCOG00130	COG0477
CDS	CSUB_C0313	-	306618	307820	hypothetical protein	S	400		
CDS	CSUB_C0314	+	307901	308554	endonuclease III	L	217	arCOG00459	COG0177



CDS	CSUB_C0418	-	405884	406588	adenine phosphoribosyltransferase, fused to N-terminal DNA-binding	F	234	arCOG00031	COG0503
CDS	CSUB_C0419	+	406678	408861	molybdenum hydroxylase family protein, large subunit	C	727	arCOG01167	COG1529
CDS	CSUB_C0420	-	408842	409306	molybdenum hydroxylase family protein, small subunit	C	154	arCOG01925	COG2080
CDS	CSUB_C0421	-	409293	410162	molybdenum hydroxylase family protein, medium subunit	C	289	arCOG01926	COG1319
CDS	CSUB_C0422	+	410209	411651	dihydropyrimidinase	F	480	arCOG00689	COG0044
CDS	CSUB_C0423	+	411648	412502	conserved hypothetical protein	R	284	arCOG01728	COG1355
CDS	CSUB_C0424	+	412499	413458	mevalonate kinase	I	319	arCOG01028	COG1577
CDS	CSUB_C0425	+	413455	414237	acetylglutamate kinase	R	260	arCOG00860	COG1608
CDS	CSUB_C0426	+	414239	415315	isopentenyl-diphosphate delta-isomerase	H	358	arCOG00613	COG1304
CDS	CSUB_C0427	-	415290	417014	glutamyl-tRNA synthetase	J	574	arCOG04302	COG0008
CDS	CSUB_C0428	+	417130	417501	large subunit ribosomal protein L7Ae	J	123	arCOG01751	COG1358
CDS	CSUB_C0429	+	417513	417734	small subunit ribosomal protein S28e	J	73	arCOG04314	COG2053
CDS	CSUB_C0430	+	417742	417915	large subunit ribosomal protein L24e	J	57	arCOG01950	COG2075
CDS	CSUB_C0431	+	417923	418339	nucleoside diphosphate kinase	F	138	arCOG04313	COG0105
CDS	CSUB_C0432	+	418364	419602	translation initiation factor eIF-2 gamma subunit	J	412	arCOG01563	COG5257
CDS	CSUB_C0433	+	419631	419990	conserved hypothetical protein	R	119	arCOG04312	COG1412
CDS	CSUB_C0434	+	420037	420600	DNA-directed RNA polymerase subunit E'	K	187	arCOG00675	COG1095
CDS	CSUB_C0435	+	420590	420781	DNA-directed RNA polymerase subunit E''	K	63	arCOG04077	COG2093
CDS	CSUB_C0436	+	420774	421280	conserved hypothetical protein	S	168	arCOG04076	COG1909
CDS	CSUB_C0437	-	421270	421428	small subunit ribosomal protein S27Ae	J	52	arCOG04183	COG1998
CDS	CSUB_C0438	-	421425	421724	small subunit ribosomal protein S24e	J	99	arCOG04182	COG2004
CDS	CSUB_C0439	-	421702	422127	small subunit ribosomal protein S6e	J	141	arCOG01946	COG2125
CDS	CSUB_C0440	-	422167	424413	translation initiation factor IF-2 unclassified subunit	J	748	arCOG01560	COG0532
CDS	CSUB_C0441	+	424474	425454	O-sialoglycoprotein endopeptidase	L	326	arCOG01183	COG0533
CDS	CSUB_C0442	+	425439	426083	Mn2+-dependent serine/threonine protein kinase	T	214	arCOG01185	COG3642
CDS	CSUB_C0443	+	426070	426648	nucleoside-triphosphatase	F	192	arCOG04184	COG0127
CDS	CSUB_C0444	+	426653	427087	small subunit ribosomal protein S15	J	144	arCOG04185	COG0184
CDS	CSUB_C0445	+	427084	428550	archaea-specific RecJ-like exonuclease	L	488	arCOG00427	COG0608
CDS	CSUB_C0446	+	428528	428776	hypothetical protein	S	82		
CDS	CSUB_C0447	+	428803	429423	small subunit ribosomal protein S3Ae	J	206	arCOG04186	COG1890
CDS	CSUB_C0448	+	429424	429753	conserved hypothetical protein	S	109	arCOG05763	COG4003
CDS	CSUB_C0449	-	429750	430958	translation-associated GTPase	J	402	arCOG00357	COG0012
CDS	CSUB_C0450	-	430961	431392	large subunit ribosomal protein L15e	J	143	arCOG04209	COG1632
CDS	CSUB_C0451	+	431467	431868	conserved hypothetical protein	J	133	arCOG01042	COG1325
CDS	CSUB_C0452	+	431850	432461	hypothetical protein	J	203	arCOG00307	COG1603
CDS	CSUB_C0453	+	432451	432759	hypothetical protein	J	102	arCOG01365	COG1369
CDS	CSUB_C0454	+	432744	433415	conserved hypothetical protein	R	223	arCOG02766	COG1266
CDS	CSUB_C0455	-	433365	434228	sec-independent protein translocase protein TatC	U	287	arCOG01919	COG0805
CDS	CSUB_C0456	-	434266	434559	sec-independent protein translocase protein TatA	U	97	arCOG02694	COG1826
CDS	CSUB_C0457	-	434604	435374	3-oxoacyl-[acyl-carrier protein] reductase	I	256	arCOG01259	COG1028
CDS	CSUB_C0458	+	435429	435914	small subunit ribosomal protein S13	J	161	arCOG01722	COG0099
CDS	CSUB_C0459	-	435961	437031	5-methyltetrahydropteroylriglutamate-homocysteine methyltransferase	E	356	arCOG01876	COG0620
CDS	CSUB_C0460	-	437028	437975	methylcobalamin:homocysteine methyltransferase	E	315	arCOG01877	COG0620
CDS	CSUB_C0461	-	437977	438987	thioredoxin reductase (NADPH)	O	336	arCOG01296	COG0492
CDS	CSUB_C0462	-	439006	439998	phosphate uptake regulator	P	330	arCOG00318	COG0704
CDS	CSUB_C0463	+	440088	440546	large subunit ribosomal protein L22	J	152	arCOG04098	COG0091
CDS	CSUB_C0464	+	440543	441154	small subunit ribosomal protein S3	J	203	arCOG04097	COG0092
CDS	CSUB_C0465	+	441135	441335	large subunit ribosomal protein L29	J	66	arCOG00785	COG0255
CDS	CSUB_C0466	+	441332	441571	ribonuclease P subunit P29	A	79		
CDS	CSUB_C0467	+	441568	441897	small subunit ribosomal protein S17	J	109	arCOG04096	COG0186
CDS	CSUB_C0468	+	441902	442336	large subunit ribosomal protein L14	J	144	arCOG04095	COG0093
CDS	CSUB_C0469	+	442347	442706	large subunit ribosomal protein L24	J	119	arCOG04094	COG0198
CDS	CSUB_C0470	+	442703	443419	small subunit ribosomal protein S4e	J	238	arCOG04093	COG1471
CDS	CSUB_C0471	+	443401	443925	large subunit ribosomal protein L5	J	174	arCOG04092	COG0094
CDS	CSUB_C0472	+	443922	444083	small subunit ribosomal protein S14	J	53	arCOG00782	COG0199
CDS	CSUB_C0473	+	444095	444478	small subunit ribosomal protein S8	J	127	arCOG04091	COG0096
CDS	CSUB_C0474	+	444468	445010	large subunit ribosomal protein L6	J	180	arCOG04090	COG0097
CDS	CSUB_C0475	+	445003	445389	large subunit ribosomal protein L32e	J	128	arCOG00781	COG1717
CDS	CSUB_C0476	+	445392	445832	large subunit ribosomal protein L19e	J	146	arCOG04089	COG2147
CDS	CSUB_C0477	+	445829	446407	large subunit ribosomal protein L18	J	192	arCOG04088	COG0256
CDS	CSUB_C0478	+	446400	447014	small subunit ribosomal protein S5	J	204	arCOG04087	COG0098
CDS	CSUB_C0479	+	447017	447427	large subunit ribosomal protein L30	J	136	arCOG04086	COG1841
CDS	CSUB_C0480	+	447482	447904	large subunit ribosomal protein L15	J	140	arCOG00779	COG0200
CDS	CSUB_C0481	+	447901	449334	preprotein translocase subunit SecY	U	477	arCOG04169	COG0201
CDS	CSUB_C0482	+	449336	449878	hypothetical protein	S	180	arCOG02673	COG1422
CDS	CSUB_C0483	-	450034	450636	cytidylate kinase	F	200	arCOG01037	COG1102
CDS	CSUB_C0484	+	450700	451023	large subunit ribosomal protein L14e	J	107	arCOG04167	COG2163
CDS	CSUB_C0485	+	451270	451992	conserved hypothetical protein	J	240	arCOG00987	COG0130
tRNA	CSUB_T15	+	452026	452112	tRNA-Ser				
CDS	CSUB_C0486	+	452200	452586	signal-transduction protein	G	128	arCOG00632	COG0477
CDS	CSUB_C0487	+	452651	453607	peptide/nickel ABC transporter ATPase subunit	E	318	arCOG00184	COG4608
CDS	CSUB_C0488	-	453599	454279	hypothetical protein	S	226		
CDS	CSUB_C0489	+	454509	454751	hypothetical protein	S	80		
CDS	CSUB_C0490	+	454845	456566	conserved hypothetical protein	S	573	arCOG00372	
CDS	CSUB_C0491	+	456563	459079	peptide/nickel ABC transporter substrate-binding protein	R	838	arCOG01672	COG3889
CDS	CSUB_C0492	-	459076	459951	hypothetical protein	S	291		
CDS	CSUB_C0493	-	460000	461046	peptide/nickel ABC transporter permease	E	348	arCOG00751	COG0601
CDS	CSUB_C0494	-	461043	462008	peptide/nickel ABC transporter ATP-binding protein	E	321	arCOG00181	COG0444
CDS	CSUB_C0495	-	462011	463411	peptide/nickel ABC transporter permease	E	466	arCOG00749	COG1173
CDS	CSUB_C0496	-	463435	463755	hypothetical protein	S	106		
CDS	CSUB_C0497	-	463752	464891	archaeal cell division control protein orc1/cdc6	L	379	arCOG00467	COG1474
CDS	CSUB_C0498	-	464921	465187	conserved hypothetical protein	S	88		
CDS	CSUB_C0499	-	465513	465806	hypothetical protein	S	97		
CDS	CSUB_C0500	+	465900	467078	FAD dependent oxidoreductase	E	392	arCOG00755	COG0665
CDS	CSUB_C0501	+	467835	468848	hypothetical protein	S	337		
CDS	CSUB_C0502	+	469516	470076	conserved hypothetical protein	I	186	arCOG04106	COG0575
CDS	CSUB_C0503	-	470073	470528	hypothetical protein	S	151		
CDS	CSUB_C0504	-	470525	471832	adenosylhomocysteinease	H	435	arCOG04137	COG0499
CDS	CSUB_C0505	+	471898	472332	translation initiation factor eIF-2 beta subunit	J	144	arCOG01640	COG1601
CDS	CSUB_C0506	+	472419	472706	conserved hypothetical protein	S	95	arCOG04051	COG2412
CDS	CSUB_C0507	+	472716	473057	conserved hypothetical protein	R	113	arCOG01084	COG1694
CDS	CSUB_C0508	-	473011	474309	3-hydroxy-3-methylglutaryl-CoA reductase	I	432	arCOG04260	COG1257
CDS	CSUB_C0509	-	474334	474954	conserved hypothetical protein	S	206	arCOG02103	
CDS	CSUB_C0510	-	474989	475897	signal recognition particle receptor	U	302	arCOG01227	COG0552
CDS	CSUB_C0511	-	475904	476344	prefoldin subunit alpha	O	146	arCOG01341	COG1730
CDS	CSUB_C0512	-	476378	477046	translation initiation factor eIF-6	J	222	arCOG04176	COG1976
CDS	CSUB_C0513	-	477058	477339	large subunit ribosomal protein L31e	J	93	arCOG04473	COG2097
CDS	CSUB_C0514	-	477430	478683	conserved hypothetical protein	S	417		
CDS	CSUB_C0515	-	478696	479562	cyclase family protein	E	288	arCOG02462	COG1878
CDS	CSUB_C0516	+	479561	481111	conserved hypothetical protein	S	516		
CDS	CSUB_C0517	+	481108	481263	hypothetical protein	S	51		
CDS	CSUB_C0518	-	481246	482052	hypothetical protein	S	268		
CDS	CSUB_C0519	+	482116	482856	hypothetical protein	S	246		
CDS	CSUB_C0520	+	483002	485224	molybdenum hydroxylase family protein, large subunit	C	740	arCOG01167	COG1529
CDS	CSUB_C0521	-	485274	486677	propionyl-CoA carboxylase beta chain	I	467	arCOG02705	COG4799
CDS	CSUB_C0522	+	486809	489172	molybdenum hydroxylase family protein, large subunit	C	787	arCOG01167	COG1529
CDS	CSUB_C0523	+	489175	490044	molybdenum hydroxylase family protein, medium subunit	C	289	arCOG01926	COG1319

CDS	CSUB_C0524	+	490034	490501	molybdenum hydroxylase family protein, small subunit	C	155	arCOG01925	COG2080
CDS	CSUB_C0525	-	490504	490833	molybdopterin converting factor, small subunit	H	109	arCOG00536	COG1977
CDS	CSUB_C0526	+	490896	492149	cytosine deaminase	F	417	arCOG00697	COG0402
CDS	CSUB_C0527	+	492183	493742	sugar ABC transporter ATP-binding protein	R	519	arCOG00186	COG3845
CDS	CSUB_C0528	+	493735	494811	sugar ABC transporter permease	R	358	arCOG00260	COG4603
CDS	CSUB_C0529	+	494808	495701	sugar ABC transporter permease	R	297	arCOG00261	COG1079
CDS	CSUB_C0530	-	495716	497125	conserved hypothetical protein	R	469	arCOG00257	COG1744
CDS	CSUB_C0531	+	497405	498427	basic membrane lipoprotein	R	340	arCOG00257	COG1744
CDS	CSUB_C0532	+	498452	499984	sugar ABC transporter ATP-binding protein	R	510	arCOG00186	COG3845
CDS	CSUB_C0533	+	499989	502136	sugar ABC transporter permease	R	715	arCOG00261	COG1079
CDS	CSUB_C0534-1	+	502395	503435	cytosine deaminase	F	346	arCOG00697	COG0402
tRNA	CSUB_T16	-	503442	503515	tRNA-Thr				
CDS	CSUB_C0535	-	503726	504592	hypothetical protein	S	288		
CDS	CSUB_C0536	-	505177	506412	glutamate dehydrogenase (NAD(P)+)	E	411	arCOG01352	COG0334
CDS	CSUB_C0537	+	506500	506937	conserved hypothetical protein	S	145	arCOG06027	COG3189
CDS	CSUB_C0538	+	506972	507442	conserved hypothetical protein	S	156	arCOG00761	COG1720
CDS	CSUB_C0539	-	507593	507994	conserved hypothetical protein	S	133	arCOG03427	COG2510
CDS	CSUB_C0540	-	508073	509305	conserved hypothetical protein	S	410	arCOG04269	COG1602
CDS	CSUB_C0541	-	509305	510906	ATPase	R	533	arCOG04116	COG1855
tRNA	CSUB_T17	-	510882	510997	tRNA-Leu				
CDS	CSUB_C0542	+	511314	511721	conserved hypothetical protein	J	135	arCOG00985	COG2016
CDS	CSUB_C0543	+	511759	512832	ATP-binding protein involved in chromosome partitioning	D	357	arCOG00585	COG0489
CDS	CSUB_C0544	-	512996	514159	conserved hypothetical protein	R	387	arCOG00601	COG0517
CDS	CSUB_C0545	+	514334	514981	conserved hypothetical protein	S	215	arCOG03794	COG3601
CDS	CSUB_C0546	-	514959	515972	Zn-dependent alcohol dehydrogenases	E	337	arCOG01459	COG1063
CDS	CSUB_C0547	-	516334	516711	acylphosphatase	C	125	arCOG01674	COG1254
tRNA	CSUB_T18	-	516756	516853	tRNA-Ser				
CDS	CSUB_C0548	-	516880	517716	conserved hypothetical protein	S	278	arCOG04069	COG2106
CDS	CSUB_C0549	-	517759	518181	conserved hypothetical protein	R	140	arCOG04055	COG1371
CDS	CSUB_C0550	+	518266	518634	conserved hypothetical protein	S	122	arCOG01191	COG2250
CDS	CSUB_C0551	+	518631	518966	conserved hypothetical protein	R	111	arCOG01205	COG1708
CDS	CSUB_C0552	-	518963	520021	hypothetical protein	S	352		
CDS	CSUB_C0553	-	520156	527916	hypothetical protein	S	2586		
CDS	CSUB_C0554	-	528713	529165	conserved hypothetical protein	V	150	arCOG00727	COG4113
CDS	CSUB_C0555	-	529135	529377	conserved hypothetical protein	S	80	arCOG02218	
CDS	CSUB_C0556	+	530151	530375	hypothetical protein	K	74	arCOG02681	COG1753
CDS	CSUB_C0557	+	530376	530768	conserved hypothetical protein	V	130	arCOG02219	COG1487
CDS	CSUB_C0558	-	531117	532208	hypothetical protein	S	363		
CDS	CSUB_C0559	-	532205	533401	site-specific DNA-methyltransferase (adenine-specific)	L	398	arCOG00890	COG0863
CDS	CSUB_C0560	+	533583	534155	phosphoribosyl transferase domain protein	F	190	arCOG00031	COG0503
tRNA	CSUB_T19	+	534190	534304	tRNA-Gln				
CDS	CSUB_C0561	+	534667	534948	hypothetical protein	S	93		
CDS	CSUB_C0562	+	534945	535160	PIIT protein domain protein	R	71		
CDS	CSUB_C0563	-	535174	536136	2-dehydro-3-deoxygluconokinase	G	320	arCOG00014	COG0524
CDS	CSUB_C0564	-	536139	537026	dihydrodipicolinate synthetase	E	295	arCOG04172	COG0329
CDS	CSUB_C0565	+	537219	537995	3-oxoacyl-[acyl-carrier protein] reductase	I	258	arCOG01259	COG1028
CDS	CSUB_C0566	+	537996	539285	conserved hypothetical protein	E	429	arCOG01107	COG0624
CDS	CSUB_C0567	+	539288	541627	molybdenum hydroxylase family protein, large subunit	C	779	arCOG01167	COG1529
CDS	CSUB_C0568	+	541684	542874	conserved hypothetical protein	E	396		
CDS	CSUB_C0569	+	542871	543659	orotidine-5'-phosphate decarboxylase	F	262	arCOG00081	COG0284
CDS	CSUB_C0570	+	543687	545264	1-pyrroline-5-carboxylate dehydrogenase	C	525	arCOG01252	COG1012
CDS	CSUB_C0571	+	545328	546329	coenzyme F420-dependent N5,N10-methylenetetrahydrodipicolinate reductase	C	333	arCOG02410	COG2141
CDS	CSUB_C0572	+	546363	547610	branched-chain amino acid ABC transporter substrate-binding protein	E	415	arCOG01020	COG0683
CDS	CSUB_C0573	+	547611	548465	branched-chain amino acid ABC transporter permease	E	284	arCOG01270	COG0559
CDS	CSUB_C0574	+	548452	549399	branched-chain amino acid ABC transporter permease	E	315	arCOG01274	COG4177
CDS	CSUB_C0575	-	549400	550095	branched-chain amino acid ABC transporter ATP-binding protein	E	231	arCOG00924	COG0410
CDS	CSUB_C0576	-	550082	550840	neutral amino acid ABC transporter ATP-binding protein	E	252	arCOG00925	COG0411
CDS	CSUB_C0577	+	550985	551371	conserved hypothetical protein	S	128	arCOG01191	COG2250
CDS	CSUB_C0578	+	551355	551675	DNA polymerase beta domain protein region	R	106	arCOG01205	COG1708
CDS	CSUB_C0579	+	552778	552945	hypothetical protein	S	55		
CDS	CSUB_C0580	+	552945	553208	conserved hypothetical protein	K	87	arCOG01665	COG2026
tRNA	CSUB_T20	-	553233	553305	tRNA-Gln				
CDS	CSUB_C0581	-	553331	553633	conserved hypothetical protein	S	100	arCOG04140	COG1888
CDS	CSUB_C0582	+	553854	555332	phytoene dehydrogenase	Q	492	arCOG01521	COG1233
CDS	CSUB_C0583	+	555333	556217	phytoene synthase	I	294	arCOG02936	COG1562
CDS	CSUB_C0584	+	556208	557074	UbiA prenyltransferase	H	288	arCOG00478	COG0382
CDS	CSUB_C0585	+	557084	557611	conserved hypothetical protein	S	175	arCOG05626	
CDS	CSUB_C0586	-	557606	558094	conserved hypothetical protein	S	162	arCOG04298	COG1839
CDS	CSUB_C0587	-	558127	559191	octaprenyl-diphosphate synthase	H	354	arCOG01726	COG0142
CDS	CSUB_C0588	-	559227	560000	NADPH-flavin oxidoreductase	C	257	arCOG00288	COG0778
CDS	CSUB_C0589	-	560037	561122	cell division protein FtsZ	D	361	arCOG02201	COG0206
CDS	CSUB_C0590	-	561115	561423	conserved hypothetical protein	S	102		
CDS	CSUB_C0591	+	561456	561824	conserved hypothetical protein	L	122	arCOG01486	COG1658
CDS	CSUB_C0592	-	561821	563866	glutamine amidotransferase class-II domain protein	E	681	arCOG00095	COG0067
CDS	CSUB_C0593	-	563863	564813	glutamate synthase (NADPH/NADH) large chain	E	316	arCOG00619	COG0069
CDS	CSUB_C0594-1	-	564806	566041	glutamate synthase (NADPH/NADH) large chain	E	411	arCOG00619	COG0069
CDS	CSUB_C0595	+	566217	567044	conserved hypothetical protein	R	275	arCOG02050	COG0730
CDS	CSUB_C0596	+	567065	567397	hypothetical protein	S	110		
CDS	CSUB_C0597	+	567434	568291	Rieske (2Fe-2S) domain-containing protein	C	285	arCOG01720	COG0723
tRNA	CSUB_T21	+	568325	568409	tRNA-Leu				
CDS	CSUB_C0598	-	568391	569032	hypothetical protein	S	213		
CDS	CSUB_C0599	-	569035	570012	DNA methylase N-4/N-6	L	325	arCOG00129	COG0863
CDS	CSUB_C0600	-	570074	570355	thioredoxin	V	93		
CDS	CSUB_C0601	-	570381	571013	conserved hypothetical protein	S	210	arCOG03119	
CDS	CSUB_C0602	+	571069	572421	hydroxypyruvate reductase	G	450	arCOG04170	COG2379
CDS	CSUB_C0603	-	572414	573451	deoxyhypusine synthase	O	345	arCOG04142	COG1899
CDS	CSUB_C0604	-	573474	574028	oxidoreductase	R	184	arCOG02431	COG1611
CDS	CSUB_C0605	-	574363	577890	reverse gyrase	L	1175	arCOG01526	COG1110
CDS	CSUB_C0606	-	578169	579596	3-isopropylmalate/(R)-2-methylmalate dehydratase large subunit	E	475	arCOG01698	COG0065
CDS	CSUB_C0607	-	579627	580436	conserved hypothetical protein	R	269		
CDS	CSUB_C0608	+	580545	581492	hypothetical protein	S	315		
CDS	CSUB_C0609	+	581511	582968	ABC transporter ATP-binding protein	R	485		
CDS	CSUB_C0610	+	582974	583354	hypothetical protein	S	126		
CDS	CSUB_C0611	-	583425	583844	hypothetical protein	S	139		
CDS	CSUB_C0612	-	583841	584977	hypothetical protein	S	378		
CDS	CSUB_C0613	+	584976	585227	hypothetical protein	S	83		
CDS	CSUB_C0614	+	585243	585872	phage head maturation protease	R	209		
CDS	CSUB_C0615	+	585877	586827	hypothetical protein	S	316		
CDS	CSUB_C0616	+	586866	587687	hypothetical protein	S	273		
CDS	CSUB_C0617	+	587684	588052	hypothetical protein	S	122		
CDS	CSUB_C0618	+	588285	589208	serine protease	O	307	arCOG00702	COG1404
CDS	CSUB_C0619	+	589231	590121	hypothetical protein	S	296		
CDS	CSUB_C0620	+	590126	590482	hypothetical protein	R	118		
CDS	CSUB_C0621	+	590628	590951	phage-related protein	S	107		
CDS	CSUB_C0622	+	590987	591550	nuclease	L	187	arCOG03193	COG1525
CDS	CSUB_C0623	+	591817	594180	conserved hypothetical protein	S	787		
CDS	CSUB_C0624	+	594177	596042	hypothetical protein	S	621		

CDS	CSUB_C0625	+	596039	596707	hypothetical protein	S	222		
CDS	CSUB_C0626	+	596720	597265	hypothetical protein	S	181		
CDS	CSUB_C0627	+	597237	597449	hypothetical protein	S	70		
CDS	CSUB_C0628	+	597433	598752	prophage MuMc02, terminase, ATPase subunit	R	439		
CDS	CSUB_C0629	+	599051	599896	oxidoreductase	R	281	arCOG01619	COG0656
CDS	CSUB_C0630	+	599893	600765	ABC-2 type transport system permease	V	290	arCOG01467	COG0842
CDS	CSUB_C0631	-	600762	601760	antibiotic ABC transporter ATP-binding protein	V	332	arCOG00194	COG1131
CDS	CSUB_C0632	-	601757	602281	transcriptional regulator, PadR family	K	174	arCOG00002	COG1695
CDS	CSUB_C0633	+	602477	602785	conserved hypothetical protein	S	102	arCOG07723	
CDS	CSUB_C0634	-	602864	603253	conserved hypothetical protein	R	129	arCOG00516	COG3467
CDS	CSUB_C0635	+	603513	605006	conserved hypothetical protein	S	497		
CDS	CSUB_C0636	-	605003	605734	nucleotidyl transferase	M	243	arCOG00663	COG1208
CDS	CSUB_C0637	-	605929	607140	iron ABC transporter ATP-binding protein	P	403	arCOG00198	COG1120
CDS	CSUB_C0638	-	607131	608132	iron complex ABC transporter permease	P	333	arCOG01007	COG0609
CDS	CSUB_C0639	-	608133	609371	iron complex ABC transporter substrate-binding protein	P	412	arCOG03417	COG0614
CDS	CSUB_C0640	+	609443	610279	molybdenum hydroxylase family protein, medium subunit	C	278	arCOG01926	COG1319
CDS	CSUB_C0641	+	610287	610742	molybdenum hydroxylase family protein, small subunit	C	151	arCOG01925	COG2080
CDS	CSUB_C0642	+	610739	612094	molybdenum hydroxylase family protein, large subunit	C	451	arCOG01167	COG1529
CDS	CSUB_C0643	+	612106	613116	molybdenum hydroxylase family protein, large subunit	C	336	arCOG01167	COG1529
CDS	CSUB_C0644	+	613143	613955	metal-dependent hydrolase	R	270	arCOG00497	COG2220
CDS	CSUB_C0645	+	613955	614335	conserved hypothetical protein	S	126		
CDS	CSUB_C0646	-	614332	614889	hypothetical protein	S	185		
CDS	CSUB_C0647	-	614896	615987	maltooligosaccharide ABC transporter ATP-binding protein	G	363	arCOG00175	COG3839
CDS	CSUB_C0648	-	615993	616256	hypothetical protein	S	87		
CDS	CSUB_C0649	-	616257	617339	sugar ABC transporter ATP-binding protein	G	360	arCOG00175	COG3839
CDS	CSUB_C0650	-	617340	618248	multiple sugar ABC transporter permease	G	302	arCOG00159	COG0395
CDS	CSUB_C0651	-	618251	619126	multiple sugar ABC transporter permease	G	291	arCOG00157	COG1175
CDS	CSUB_C0652	-	619162	620838	multiple sugar ABC transporter substrate-binding protein	G	558	arCOG00151	COG1653
CDS	CSUB_C0653	+	620927	622405	aldehyde dehydrogenase	C	492	arCOG01252	COG1012
CDS	CSUB_C0654	-	622380	623306	fumarylacetoacetate (FAA) hydrolase	R	308	arCOG00236	COG3970
CDS	CSUB_C0655	-	623313	624275	NAD-dependent epimerase/dehydratase	M	320	arCOG04468	COG0451
CDS	CSUB_C0656	+	624368	625123	2,4-dihydroxyhept-2-ene-1,7-dioic acid aldolase	G	251	arCOG04974	COG3836
CDS	CSUB_C0657	+	625177	625941	hypothetical protein	R	254	arCOG00348	COG2047
CDS	CSUB_C0658	-	625954	626193	hypothetical protein	S	79		
CDS	CSUB_C0659	-	626270	628486	hypothetical protein	S	738		
CDS	CSUB_C0660	-	628557	630668	conserved hypothetical protein	R	703	arCOG02044	COG1287
CDS	CSUB_C0661	+	630794	632509	hypothetical protein	S	571		
CDS	CSUB_C0662	-	632598	632999	translation initiation inhibitor	J	133	arCOG01630	COG0251
CDS	CSUB_C0663	-	633023	634156	conserved hypothetical protein	E	377	arCOG01000	COG0006
CDS	CSUB_C0664	-	634240	635331	maltooligosaccharide ABC transporter ATP-binding protein	G	363	arCOG00175	COG3839
CDS	CSUB_C0665	-	635649	636524	multiple sugar ABC transporter permease	G	291	arCOG00159	COG0395
CDS	CSUB_C0666	-	636521	637387	multiple sugar ABC transporter permease	G	288	arCOG00157	COG1175
CDS	CSUB_C0667	-	637401	638924	hypothetical protein	S	507		
CDS	CSUB_C0668	+	639045	640145	alanine racemase domain protein	M	366	arCOG06677	COG0787
CDS	CSUB_C0669	+	640399	641397	F420-dependent alcohol dehydrogenase	C	332	arCOG02410	COG2141
CDS	CSUB_C0670	+	641456	642358	conserved hypothetical protein	G	300	arCOG00271	COG0697
CDS	CSUB_C0671	-	642369	643442	N5,N10-methylenetetrahydromethanopterin reductase	C	357	arCOG02410	COG2141
CDS	CSUB_C0672	-	643467	645053	thermosome alpha subunit	O	528	arCOG01257	COG0459
CDS	CSUB_C0673	-	645218	646516	enolase	G	432	arCOG01169	COG0148
CDS	CSUB_C0674	-	646566	647546	aminoglycoside phosphotransferase	R	326		
CDS	CSUB_C0675	-	647557	648558	oxidoreductase	R	333	arCOG01622	COG0673
CDS	CSUB_C0676	-	648688	649557	conserved hypothetical protein	S	289		
CDS	CSUB_C0677	+	649772	650539	creatinine amidohydrolase	R	255	arCOG04536	COG1402
CDS	CSUB_C0678	-	650543	651577	microsomal peptidase	E	344	arCOG04083	COG2355
CDS	CSUB_C0679	+	651763	653331	hypothetical protein	S	522		
CDS	CSUB_C0680	+	653341	654228	multiple sugar ABC transporter permease	G	295	arCOG00157	COG1175
CDS	CSUB_C0681	+	654225	655127	multiple sugar ABC transporter permease	G	300	arCOG00159	COG0395
CDS	CSUB_C0682	-	655131	656219	maltooligosaccharide ABC transportor ATP-binding protein	G	362	arCOG00175	COG3839
CDS	CSUB_C0683	-	656212	657306	maltooligosaccharide ABC transporter ATP-binding protein	G	364	arCOG00175	COG3839
CDS	CSUB_C0684	-	657350	658441	oxidoreductase domain protein	R	363	arCOG01622	COG0673
CDS	CSUB_C0685	+	658528	659547	oxidoreductase domain protein	R	339	arCOG01622	COG0673
CDS	CSUB_C0686	+	659544	660551	oxidoreductase domain protein	R	335	arCOG01622	COG0673
CDS	CSUB_C0687	-	660544	661203	dimethylmenaquinone methyltransferase	H	219	arCOG00117	COG0684
CDS	CSUB_C0688	+	661316	662293	ornithine cyclodeaminase	E	325	arCOG01035	COG2423
CDS	CSUB_C0689	+	662457	662849	hypothetical protein	S	130		
CDS	CSUB_C0690	-	662838	663482	DNA repair protein RadB	L	214	arCOG00417	COG0468
CDS	CSUB_C0691	+	663566	663874	conserved hypothetical protein	S	102	arCOG00398	COG2411
tRNA	CSUB_T22	+	663904	663977	tRNA-Gly				
tRNA	CSUB_T23	+	664069	664183	tRNA-Leu				
CDS	CSUB_C0692	+	664648	664896	conserved hypothetical protein	O	82	arCOG02062	COG0425
CDS	CSUB_C0693	+	664897	665319	conserved hypothetical protein	R	140	arCOG02064	COG2210
CDS	CSUB_C0694	-	665320	665760	conserved hypothetical protein	S	146		
CDS	CSUB_C0695	-	665806	666756	hypothetical protein	S	316		
CDS	CSUB_C0696	+	666878	668191	conserved hypothetical protein	S	437		
CDS	CSUB_C0697	+	668231	668800	conserved hypothetical protein	R	189	arCOG04409	COG2410
CDS	CSUB_C0698	-	668801	669826	glyoxalase/bleomycin resistance protein/dioxygenase	E	341	arCOG03101	COG0346
CDS	CSUB_C0699	-	670282	670794	hypothetical protein	S	170		
CDS	CSUB_C0700	-	671215	673200	hypothetical protein	S	661		
CDS	CSUB_C0701	-	673531	674226	hypothetical protein	S	231		
CDS	CSUB_C0702	-	674833	675375	thiamine S protein	R	180		
CDS	CSUB_C0703	-	675430	675852	conserved hypothetical protein	R	140	arCOG01138	COG1310
CDS	CSUB_C0704	-	675849	676757	cysteine synthase B	E	302	arCOG01430	COG0031
CDS	CSUB_C0705	-	676768	676983	conserved hypothetical protein	S	71	arCOG07514	
CDS	CSUB_C0706	-	677033	677641	DNA-binding protein	K	202	arCOG02271	COG3413
CDS	CSUB_C0707	+	677735	679192	nitrite reductase (NO-forming)	R	485		
CDS	CSUB_C0708	+	679189	679779	electron transport protein SCO1/SenC	R	196	arCOG00313	COG1999
CDS	CSUB_C0709	-	679870	680520	hypothetical protein	S	216		
CDS	CSUB_C0710	-	680748	681533	hypothetical protein	S	261	arCOG01466	
CDS	CSUB_C0711	-	681520	682293	ABC-2 type transport system permease	V	257	arCOG01465	COG0842
CDS	CSUB_C0712	-	682290	683234	ABC transporter ATP-binding protein	V	314	arCOG00194	COG1131
CDS	CSUB_C0713	-	683282	683896	HTH DNA binding domain protein	K	204	arCOG02271	COG3413
CDS	CSUB_C0714	+	683987	685000	copper-containing oxidoreductase	Q	337	arCOG03914	COG2132
CDS	CSUB_C0715	+	685000	685434	blue (type 1) copper domain protein	C	144	arCOG02926	COG3794
CDS	CSUB_C0716	+	685431	686375	hypothetical protein	S	314		
CDS	CSUB_C0717	-	686347	686802	hypothetical protein	S	151		
CDS	CSUB_C0718	+	686896	687582	conserved hypothetical protein	S	228	arCOG07057	
CDS	CSUB_C0719	+	687583	687975	conserved hypothetical protein	S	130		
CDS	CSUB_C0720	+	688001	688453	conserved hypothetical protein	R	150	arCOG03913	COG3019
CDS	CSUB_C0721	+	688607	689539	hypothetical protein	S	310		
CDS	CSUB_C0722	+	689563	689868	hypothetical protein	S	101		
CDS	CSUB_C0723	-	690377	691243	hypothetical protein	S	288		
CDS	CSUB_C0724	+	691435	691839	hypothetical protein	S	134		
CDS	CSUB_C0725	+	691945	692328	conserved hypothetical protein	R	127	arCOG04217	COG4900
CDS	CSUB_C0727	+	693741	694640	conserved hypothetical protein	L	299	arCOG03156	COG3780
CDS	CSUB_C0728	+	694977	695336	conserved hypothetical protein	R	119	arCOG00578	COG1645
CDS	CSUB_C0729	+	695926	697191	archaeal cell division control protein orc1/cdc6	L	421	arCOG00467	COG1474
CDS	CSUB_C0730	-	697165	697788	deoxyribonuclease V	L	207	arCOG00929	COG1515

CDS	CSUB_C0731	-	697938	698450	conserved hypothetical protein	Q	170	arCOG03773	COG0500
CDS	CSUB_C0732	+	698486	699142	conserved hypothetical protein	R	218	arCOG04066	COG2413
CDS	CSUB_C0733	+	699157	700635	inosine monophosphate dehydrogenase	F	492	arCOG00612	COG0516
CDS	CSUB_C0734	+	700632	701873	adenylosuccinate synthase	F	413	arCOG04387	COG1014
CDS	CSUB_C0735	+	701870	703234	adenylosuccinate lyase	F	454	arCOG01747	COG0015
CDS	CSUB_C0736	-	703215	704549	zinc-dependent protease, TldD/PmbA family	R	444	arCOG00322	COG0312
CDS	CSUB_C0737	+	704634	706151	hypothetical protein	S	505		
CDS	CSUB_C0738	-	706129	707154	conserved hypothetical protein	R	341	arCOG01831	COG1665
CDS	CSUB_C0739	-	707157	708056	conserved hypothetical protein	R	299	arCOG01831	COG1665
CDS	CSUB_C0740	+	708149	708709	pyruvate ferredoxin oxidoreductase, gamma subunit	C	186	arCOG01603	COG1014
CDS	CSUB_C0741	+	708696	708956	pyruvate ferredoxin oxidoreductase, delta subunit	C	86	arCOG01605	COG1144
CDS	CSUB_C0742	+	708956	710128	pyruvate ferredoxin oxidoreductase, alpha subunit	C	390	arCOG01608	COG0674
CDS	CSUB_C0743	+	710125	711060	pyruvate ferredoxin oxidoreductase, beta subunit	C	311	arCOG01601	COG1013
CDS	CSUB_C0744	-	711018	711401	conserved hypothetical protein	S	127	arCOG02994	COG1917
CDS	CSUB_C0745	+	711556	711915	hypothetical protein	S	119		
CDS	CSUB_C0746	+	711921	712313	hypothetical protein	S	130		
CDS	CSUB_C0747	+	712360	713646	hydroxymethylpyrimidine transporter	F	428	arCOG03447	COG1457
CDS	CSUB_C0748	-	713696	714448	DNA primase large subunit	L	250	arCOG03013	COG2219
CDS	CSUB_C0749	+	715371	718463	type II restriction enzyme, methylase subunit	V	1030	arCOG02635	COG1002
CDS	CSUB_C0750	+	718447	721500	DNA/RNA helicase	K	1017	arCOG04818	COG0553
CDS	CSUB_C0751	-	722145	722543	hypothetical protein	S	132		
CDS	CSUB_C0752	-	722558	723358	hypothetical protein	V	266	arCOG01935	COG4006
CDS	CSUB_C0753	+	724178	724357	hypothetical protein	S	59		
CDS	CSUB_C0754	+	724354	725112	hypothetical protein	S	252		
CDS	CSUB_C0755	-	725258	726892	hypothetical protein	S	544		
CDS	CSUB_C0756	-	727696	728319	hypothetical protein	S	207		
CDS	CSUB_C0757	-	728853	729050	hypothetical protein	S	65		
CDS	CSUB_C0758	+	729250	729654	conserved hypothetical protein	S	134		
CDS	CSUB_C0759	+	729699	730571	protoheme IX farnesyltransferase	O	290	arCOG00479	COG0109
CDS	CSUB_C0760	-	730568	731893	dihydroorotase	F	441	arCOG00689	COG0044
CDS	CSUB_C0761	+	731932	734244	molybdenum hydroxylase family protein, large subunit	C	770	arCOG01167	COG1529
CDS	CSUB_C0762	+	734252	736546	molybdenum hydroxylase family protein, large subunit	C	764	arCOG01167	COG1529
CDS	CSUB_C0763	+	736578	737615	isocitrate dehydrogenase	C	345	arCOG01163	COG0473
CDS	CSUB_C0764	+	737906	739621	succinate dehydrogenase flavoprotein subunit	C	571	arCOG00571	COG1053
CDS	CSUB_C0765	+	739626	740096	succinate dehydrogenase cytochrome b-556 subunit	C	156	arCOG02244	COG2009
CDS	CSUB_C0766	+	740093	740446	succinate dehydrogenase subunit	C	117	arCOG00462	COG2142
CDS	CSUB_C0767	+	740458	741171	succinate dehydrogenase iron-sulfur protein	C	237	arCOG00962	COG0479
CDS	CSUB_C0768	+	741175	742098	hypothetical protein	S	307		
CDS	CSUB_C0769	-	742073	742585	phosphopantetheine adenylyltransferase	F	170	arCOG01221	COG1986
CDS	CSUB_C0770	+	742855	743169	hypothetical protein	S	104		
CDS	CSUB_C0771	+	743298	744116	hypothetical protein	S	272		
CDS	CSUB_C0772	+	744167	745039	conserved hypothetical protein	K	290	arCOG00381	
CDS	CSUB_C0773	-	745047	746315	actin/actin family protein	R	422	arCOG05583	COG5277
CDS	CSUB_C0774	-	746348	746914	hypothetical protein	S	188		
CDS	CSUB_C0775	-	747019	747948	conserved hypothetical protein	M	309	arCOG01568	COG0668
CDS	CSUB_C0776	+	747975	748595	conserved hypothetical protein	S	206	arCOG01091	COG1814
CDS	CSUB_C0777	-	748585	749622	methylthioribose-1-phosphate isomerase	J	345	arCOG01123	COG0182
CDS	CSUB_C0778	+	749694	750836	FAD-dependent pyridine nucleotide-disulphide oxidoreductase	R	380	arCOG01064	COG0446
CDS	CSUB_C0779	-	750838	753567	aconitate hydratase	C	909	arCOG01697	COG1048
CDS	CSUB_C0780	+	753664	755907	hypothetical protein	S	747		
CDS	CSUB_C0781	-	755904	758054	hypothetical protein	K	716		
CDS	CSUB_C0782	-	758107	758433	conserved hypothetical protein	K	108	arCOG01863	COG1813
CDS	CSUB_C0783	-	758449	759114	ribosome biogenesis protein	S	221	arCOG04122	COG1756
CDS	CSUB_C0784	+	759182	759511	ribonuclease P subunit RPR2	J	109	arCOG02410	COG2023
CDS	CSUB_C0785	+	759668	760099	small subunit ribosomal protein S19e	J	143	arCOG01344	COG2238
CDS	CSUB_C0786	-	760329	760973	phosphoribosyltransferase	R	214	arCOG00041	COG1926
CDS	CSUB_C0787	-	761031	762668	spermine synthase	E	545		
CDS	CSUB_C0788	+	762751	762975	DNA-directed RNA polymerase subunit P	K	74	arCOG04341	COG1996
CDS	CSUB_C0789	+	763275	764228	resolvase related protein	R	317		
CDS	CSUB_C0790	+	764474	765217	conserved hypothetical protein	M	247	arCOG01568	COG0668
CDS	CSUB_C0791	-	765214	765897	conserved hypothetical protein	S	227		
CDS	CSUB_C0792	+	766015	766263	conserved hypothetical protein	C	82	arCOG01706	COG0508
CDS	CSUB_C0793	-	766268	767266	pyruvate dehydrogenase E1 component subunit beta	C	332	arCOG01052	COG0022
CDS	CSUB_C0794	-	767277	768260	pyruvate dehydrogenase E1 component subunit alpha	C	327	arCOG01054	COG1071
CDS	CSUB_C0795	-	768420	769340	UDP-glucose 4-epimerase	M	306	arCOG01369	COG0451
CDS	CSUB_C0796	-	769327	770358	glycosyl transferase family 1	M	343	arCOG01403	COG0438
CDS	CSUB_C0797	+	770493	770708	small subunit ribosomal protein S17e	J	71	arCOG01885	COG1383
CDS	CSUB_C0798	-	770691	771668	conserved hypothetical protein	S	325		
CDS	CSUB_C0799	+	771707	772741	flap endonuclease I	L	344	arCOG04050	COG0258
CDS	CSUB_C0800	-	772943	775123	AAA family ATPase	O	726	arCOG01308	COG0464
CDS	CSUB_C0801	+	775258	775587	ArsR family transcriptional regulator	K	109	arCOG01679	COG0640
CDS	CSUB_C0802	+	775655	776281	conserved hypothetical protein	S	208	arCOG03794	COG3601
CDS	CSUB_C0803	+	776350	777351	DNA repair protein Rada	L	333	arCOG00415	COG0468
CDS	CSUB_C0804	-	777354	778715	pyruvate kinase	G	453	arCOG04120	COG0469
CDS	CSUB_C0805	-	778712	779665	3-hydroxybutyryl-CoA dehydrogenase	I	317	arCOG00249	COG1250
CDS	CSUB_C0806	+	779733	780611	F420-dependent N5,N10-methylenetetrahydromethanopterin reductase	C	292	arCOG02410	COG2141
CDS	CSUB_C0807	-	780608	781852	ABC-2 type transport system permease	V	414	arCOG01463	COG0842
CDS	CSUB_C0808	-	781849	782799	ABC transporter ATP-binding protein	V	316	arCOG00194	COG1131
CDS	CSUB_C0809	+	782842	783273	conserved hypothetical protein	S	143	arCOG01191	COG2250
CDS	CSUB_C0810	+	783270	783578	DNA polymerase beta subunit	R	102	arCOG01199	COG1708
CDS	CSUB_C0811-1	+	783678	783941	hypothetical conserved protein	S	87	arCOG01423	COG5493
CDS	CSUB_C0811-2	+	783914	784273	hypothetical conserved protein	S	119	arCOG01422	COG5493
CDS	CSUB_C0812	+	784281	784925	3-isopropylmalate/(R)-2-methylmalate dehydratase small subunit	E	214	arCOG02230	COG0066
CDS	CSUB_C0813	+	784944	785408	conserved hypothetical protein	Q	154	arCOG01631	COG0500
CDS	CSUB_C0814	-	785405	786382	ketol-acid reductoisomerase	E	325	arCOG04465	COG0059
CDS	CSUB_C0815	-	786410	786649	hypothetical protein	S	79		
CDS	CSUB_C0816	-	786646	788376	acetolactate synthase I/II/III large subunit	E	576	arCOG01998	COG0028
CDS	CSUB_C0817	-	788373	789896	2-isopropylmalate synthase	E	507	arCOG02092	COG0119
CDS	CSUB_C0818	-	790025	791587	DNA topoisomerase VI subunit B	L	520	arCOG01165	COG1389
CDS	CSUB_C0819	-	791621	792595	AAA family ATPase	R	324	arCOG03169	COG1672
CDS	CSUB_C0820	-	792629	794029	6-phosphogluconate dehydrogenase	G	466	arCOG00248	COG1023
CDS	CSUB_C0821	-	794068	794385	transcriptional regulator, ArsR family	K	105	arCOG01680	COG0640
CDS	CSUB_C0822	-	794382	795575	FAD-dependent pyridine nucleotide-disulphide oxidoreductase	R	397	arCOG01064	COG0446
CDS	CSUB_C0823	-	795579	795824	conserved hypothetical protein	O	81	arCOG02062	COG0425
CDS	CSUB_C0824	-	795836	796336	conserved hypothetical protein	R	166	arCOG02064	COG2210
CDS	CSUB_C0825	-	796410	798029	DNA topoisomerase IB	L	539		
CDS	CSUB_C0826	-	798131	798562	nuclear ribonucleoprotein	K	143	arCOG00999	COG1958
CDS	CSUB_C0827	-	798615	799919	citrate transporter	P	434	arCOG00238	COG1055
CDS	CSUB_C0828	+	799962	800918	methyltransferase	J	318	arCOG00033	COG2520
CDS	CSUB_C0829	-	800897	801280	hypothetical protein	S	127		
CDS	CSUB_C0830	-	801277	801789	hypothetical protein	S	170		
CDS	CSUB_C0831	+	801807	803177	histidinol dehydrogenase	E	456	arCOG04352	COG0141
CDS	CSUB_C0832	-	803174	803737	DNA-3-methyladenine glycosylase	L	187	arCOG04295	COG2094
CDS	CSUB_C0833	-	803742	804344	DNA polymerase bacteriophage-type	L	200	arCOG00905	COG1573
CDS	CSUB_C0834	+	804405	804875	peroxiredoxin Q/BCP	O	156	arCOG00310	COG1225
CDS	CSUB_C0835	-	804841	805245	sterol-binding domain protein	I	134	arCOG01843	COG3255
CDS	CSUB_C0836	+	805279	805878	CDP-diacylglycerol-glycerol-3-phosphate 3-phosphatidyltransferase	I	199	arCOG00670	COG0558



CDS	CSUB_C0837	+	805883	806350	conserved hypothetical protein	S	155	arCOG00761	COG1720
CDS	CSUB_C0838	-	806335	806688	hypothetical protein	S	117		
CDS	CSUB_C0839	-	806721	807143	glycine cleavage system H protein	E	140	arCOG01303	COG0509
CDS	CSUB_C0840	+	807305	807502	hypothetical protein	S	65		
CDS	CSUB_C0841	+	807581	808702	acetylmethine deacetylase	E	373	arCOG01107	COG0624
CDS	CSUB_C0842	-	808697	809356	conserved hypothetical protein	S	219		
CDS	CSUB_C0843	+	809593	810789	glutamine- $\gamma$ -scyllo-inositol transaminase	M	398	arCOG00118	COG0399
CDS	CSUB_C0844	-	810786	811343	hypothetical protein	S	185		
CDS	CSUB_C0845	-	811357	811944	transcriptional regulator, HxIR family	K	195	arCOG01057	COG1733
CDS	CSUB_C0846	+	812010	812633	conserved hypothetical protein	T	207	arCOG04078	COG2346
CDS	CSUB_C0847	-	812638	812970	conserved hypothetical protein	S	110	arCOG05529	
CDS	CSUB_C0848	-	813018	814310	zinc-dependent protease, TldD/PmbA family	R	430	arCOG00321	COG0312
CDS	CSUB_C0849	+	814561	815064	large subunit ribosomal protein L10e	J	167	arCOG04113	COG0197
CDS	CSUB_C0850	+	815069	815473	ribonuclease HI	L	134	arCOG02942	COG0328
CDS	CSUB_C0851	+	815672	816448	pyruvate dehydrogenase E2 component (dihydropyruvate acetyltransferase)	C	258	arCOG01706	COG0508
CDS	CSUB_C0852	+	816473	817498	5-formaminoimidazole-4-carboxamide-1-( $\beta$ )-D-ribofuranosyl 5'-monophosphate synthetase	F	341	arCOG04346	COG1759
CDS	CSUB_C0853	+	817504	818496	5-formaminoimidazole-4-carboxamide-1-( $\beta$ )-D-ribofuranosyl 5'-monophosphate synthetase	F	330	arCOG04346	COG1759
CDS	CSUB_C0854	+	818523	820010	conserved hypothetical protein	L	495	arCOG00282	COG0433
CDS	CSUB_C0855	+	819997	821277	conserved hypothetical protein	S	426		
CDS	CSUB_C0856	-	821274	823163	glutamyl-tRNA(Gln) amidotransferase subunit E	J	629	arCOG01719	COG2511
CDS	CSUB_C0857	-	823156	824511	glutamyl-tRNA(Gln) amidotransferase subunit D	E	451	arCOG01924	COG0252
CDS	CSUB_C0858	-	824565	824849	conserved hypothetical protein	R	94	arCOG01208	COG1708
CDS	CSUB_C0859	-	824876	825556	uridylylase kinase	F	226	arCOG00858	COG0528
CDS	CSUB_C0860	+	825649	826035	conserved hypothetical protein	S	128		
CDS	CSUB_C0861	+	826044	826571	conserved hypothetical protein	V	175	arCOG00717	COG2405
CDS	CSUB_C0862	-	826580	829255	Ca <sup>2+</sup> -transporting ATPase	P	891	arCOG01578	COG0474
CDS	CSUB_C0863	+	829408	829635	conserved hypothetical protein	K	75	arCOG02217	
CDS	CSUB_C0864	+	829622	830035	conserved hypothetical protein	V	137	arCOG00726	COG4113
CDS	CSUB_C0865	+	830165	831430	peptide chain release factor eRF subunit 1	J	421	arCOG01742	COG1503
CDS	CSUB_C0866	+	831432	831782	hypothetical protein	S	116		
CDS	CSUB_C0867	-	831751	832494	fructose-bisphosphate aldolase, class I	G	247	arCOG04044	COG1830
CDS	CSUB_C0868	+	832562	833698	pyruvate formate-lyase activating enzyme	O	378	arCOG00936	COG1180
CDS	CSUB_C0869	+	833726	834424	2-haloacetal dehalogenase	R	232	arCOG02291	COG1011
CDS	CSUB_C0870	+	834609	836153	methionyl-tRNA synthetase	J	514	arCOG00810	COG0143
CDS	CSUB_C0871	-	836147	836410	hypothetical protein	S	87		
CDS	CSUB_C0872	+	836491	837210	Biotin operon repressor BirA	H	239	arCOG01940	COG0340
CDS	CSUB_C0873	+	837245	837958	5-methylthioadenosine phosphorylase	F	237	arCOG01324	COG2820
CDS	CSUB_C0874	+	838060	838881	hypothetical protein	S	273		
CDS	CSUB_C0875	-	838899	839909	simple sugar transporter permease	R	336	arCOG00261	COG1079
CDS	CSUB_C0876	-	839891	840967	ABC transporter permease	R	358	arCOG00260	COG4603
CDS	CSUB_C0877	-	840992	842479	basic membrane protein A	R	495	arCOG00258	COG1744
CDS	CSUB_C0878	-	842522	843361	conserved hypothetical protein	R	279	arCOG01982	COG0434
CDS	CSUB_C0879	-	843393	844277	ribokinase	G	294	arCOG00014	COG0524
CDS	CSUB_C0880	+	844355	844753	cytidine deaminase	F	132	arCOG04173	COG0295
CDS	CSUB_C0881	+	844767	845702	inosine/uridine-preferring nucleoside hydrolase	F	311	arCOG04558	COG1957
CDS	CSUB_C0882	+	845758	846447	deoxyribose-phosphate aldolase	F	229	arCOG04320	COG0274
CDS	CSUB_C0883	+	846449	847372	ribokinase	G	307	arCOG00014	COG0524
CDS	CSUB_C0884	+	847381	848199	uridine phosphorylase	F	272	arCOG01324	COG2820
CDS	CSUB_C0885	-	848176	848997	conserved hypothetical protein	R	273	arCOG01982	COG0434
CDS	CSUB_C0886	+	849060	850595	simple sugar ABC transporter ATP-binding protein	R	511	arCOG00186	COG3845
CDS	CSUB_C0887	+	850635	851999	2-methylcitrate dehydratase	R	454	arCOG04285	COG2079
CDS	CSUB_C0888	+	851996	853090	citrate synthase	C	364	arCOG04237	COG0372
CDS	CSUB_C0889	-	853087	854247	tryptophanyl-tRNA synthetase	J	386	arCOG01887	COG0180
CDS	CSUB_C0890	-	854512	855183	sulfate ABC transporter ATP-binding protein	G	223	arCOG05705	COG3839
CDS	CSUB_C0891	-	855185	855880	sulfate ABC transporter permease	O	231	arCOG00164	COG0555
CDS	CSUB_C0892	-	855887	856774	conserved hypothetical protein	P	295	arCOG05704	COG0725
CDS	CSUB_C0893	+	856769	857317	molybdate transport system regulatory protein	R	182	arCOG00223	COG2005
CDS	CSUB_C0894	+	857591	858643	aspartate-semialdehyde dehydrogenase	E	350	arCOG00494	COG0136
CDS	CSUB_C0895	+	858648	859436	fructose-bisphosphate aldolase, class I	G	262	arCOG04044	COG1830
CDS	CSUB_C0896	+	859433	860434	3-dehydroquinase synthase	E	333	arCOG04353	COG1465
CDS	CSUB_C0897	+	860431	861123	3-dehydroquinase dehydratase I	E	230	arCOG02097	COG0710
CDS	CSUB_C0898	+	861180	861962	shikimate 5-dehydrogenase	E	260	arCOG01033	COG0169
CDS	CSUB_C0899	+	861959	862822	shikimate kinase	E	287	arCOG01025	COG1685
CDS	CSUB_C0900	+	862803	864092	3-phosphoshikimate 1-carboxyvinyltransferase	E	429	arCOG04134	COG0128
CDS	CSUB_C0901	+	864115	864345	hypothetical protein	S	76		
CDS	CSUB_C0902	+	864364	864861	hypothetical protein	S	165		
CDS	CSUB_C0903	+	864923	865663	conserved hypothetical protein	S	246		
CDS	CSUB_C0904	+	865663	866583	conserved hypothetical protein	R	306	arCOG04263	COG1829
CDS	CSUB_C0905	-	866590	867360	conserved hypothetical protein	R	256	arCOG04303	COG1634
CDS	CSUB_C0906	-	867338	868231	conserved hypothetical protein	S	297	arCOG04301	COG1469
CDS	CSUB_C0907	+	868315	870069	ATP-dependent DNA ligase	L	584	arCOG01347	COG1793
CDS	CSUB_C0908	+	870071	870298	hypothetical protein	S	75		
CDS	CSUB_C0909	-	870528	871319	transcriptional regulator, TmB-like	K	263	arCOG02037	COG1378
CDS	CSUB_C0910	-	871309	871821	conserved hypothetical protein	S	170	arCOG07487	COG4708
CDS	CSUB_C0911	-	871887	873233	hypothetical protein	S	448		
CDS	CSUB_C0912	+	873556	873760	conserved hypothetical protein	S	134	arCOG01191	COG2250
CDS	CSUB_C0913	+	873744	874046	conserved hypothetical protein	R	100	arCOG01205	COG1708
CDS	CSUB_C0914	+	874134	875828	Fe-S oxidoreductase	R	564	arCOG00933	COG1964
CDS	CSUB_C0915	-	875975	877108	DNA repair protein RadA/Sms	R	377		
CDS	CSUB_C0916	-	877458	877727	hypothetical protein	S	89		
CDS	CSUB_C0917	-	877763	879031	hypothetical protein	S	422		
CDS	CSUB_C0918	-	879440	880456	hypothetical protein	S	338		
CDS	CSUB_C0919	+	880553	881200	hypothetical protein	S	215		
CDS	CSUB_C0920	+	881811	882035	conserved hypothetical protein	K	74	arCOG02681	COG1753
CDS	CSUB_C0921	+	882162	882377	hypothetical protein	V	71	arCOG02219	COG1487
CDS	CSUB_C0922-1	+	883064	883474	transposase	L	136	arCOG03585	COG3547
CDS	CSUB_C0923	-	884216	884578	4a-hydroxytetrahydrobiopterin dehydratase	H	120	arCOG02939	COG2154
CDS	CSUB_C0924-2	-	884685	884885	transposase	L	66	arCOG02134	COG3316
CDS	CSUB_C0924-1	-	884857	885243	transposase	L	128	arCOG02134	COG3316
CDS	CSUB_C0925	+	885407	886483	anthranilate phosphoribosyltransferase	E	358	arCOG02012	COG0547
CDS	CSUB_C0926	+	886506	887204	indole-3-glycerol-phosphate synthase	E	232	arCOG01088	COG0134
CDS	CSUB_C0927	+	887206	887829	phosphoribosylanthranilate isomerase	E	207	arCOG01983	COG0135
CDS	CSUB_C0928	+	888210	889487	tryptophan synthase beta subunit	R	425	arCOG01432	COG1350
CDS	CSUB_C0929	-	889477	890241	tryptophan synthase alpha subunit	E	254	arCOG01086	COG0159
CDS	CSUB_C0930	+	890825	892486	conserved hypothetical protein	S	553		
CDS	CSUB_C0931	+	893244	893510	conserved hypothetical protein	S	88		
CDS	CSUB_C0932	+	893491	893871	conserved hypothetical protein	V	126	arCOG05297	COG2402
CDS	CSUB_C0933	-	894473	896317	conserved hypothetical protein	S	614		
CDS	CSUB_C0934	+	898062	898811	conserved hypothetical protein	S	249	arCOG03847	
CDS	CSUB_C0935	-	899738	901801	hypothetical protein	S	687		
CDS	CSUB_C0936	-	902367	902762	hypothetical protein	S	131		
CDS	CSUB_C0937	-	903185	904177	DNA primase large subunit	L	330	arCOG03013	COG2219
CDS	CSUB_C0938-2	-	904639	905217	DNA excision repair protein ERCC-2	K	192	arCOG00770	COG1199
CDS	CSUB_C0938-1	-	905270	906361	DNA excision repair protein ERCC-2	K	363	arCOG00770	COG1199
CDS	CSUB_C0939	-	906384	907787	conserved hypothetical protein	R	467		
CDS	CSUB_C0940	-	907849	908112	hypothetical protein	S	87		
CDS	CSUB_C0941	-	908333	909094	hypothetical protein	S	253		

CDS	CSUB_C0942	+	910576	911082	hypothetical protein	S	168		
CDS	CSUB_C0943	-	911487	913763	exonuclease SbcC	L	758	arCOG00368	COG0419
CDS	CSUB_C0944	-	913760	914893	metallopheoesterase	L	377	arCOG00397	COG0420
CDS	CSUB_C0945	-	914890	916380	conserved hypothetical protein	L	496	arCOG00280	COG0433
CDS	CSUB_C0946	-	916377	917249	conserved hypothetical protein	S	290		
CDS	CSUB_C0947-1	+	917712	917903	transposase, IS4 family	L	63	arCOG02754	COG3039
CDS	CSUB_C0948	+	918014	918505	hypothetical protein	S	163		
CDS	CSUB_C0949	+	918516	918851	hypothetical protein	S	111		
CDS	CSUB_C0950	+	919367	920194	hypothetical protein	S	275		
CDS	CSUB_C0951	-	920975	923059	ERCC4-like helicase	L	694	arCOG00872	COG1111
CDS	CSUB_C0952	+	923366	923656	conserved hypothetical protein	L	96	arCOG00919	COG1591
CDS	CSUB_C0953	-	923718	924035	conserved hypothetical protein	S	105		
CDS	CSUB_C0954	-	924068	924562	conserved hypothetical protein	S	164	arCOG01644	COG2245
CDS	CSUB_C0955	-	925339	925956	probable transcription initiation factor IIB	K	205	arCOG01981	COG1405
CDS	CSUB_C0956	-	926007	926432	hypothetical protein	S	141		
CDS	CSUB_C0957	-	926467	927948	hypothetical protein	L	493	arCOG00280	COG0433
CDS	CSUB_C0958	-	927942	928889	hypothetical protein	S	315		
CDS	CSUB_C0959	-	928929	930455	hypothetical protein	S	508		
CDS	CSUB_C0960	-	930430	930813	conserved hypothetical protein	S	127	arCOG07603	
CDS	CSUB_C0961	-	930854	931159	hypothetical protein	S	101		
CDS	CSUB_C0962	-	931188	931661	hypothetical protein	S	157		
CDS	CSUB_C0963	-	931671	932147	hypothetical protein	S	158	arCOG03777	
CDS	CSUB_C0964	+	932708	933094	hypothetical protein	S	128		
CDS	CSUB_C0965	-	933407	934204	1H-3-hydroxy-4-oxoquinoline 2,4-dioxygenase	R	265	arCOG01648	COG0596
CDS	CSUB_C0966	+	934346	934621	conserved hypothetical protein	S	91		
CDS	CSUB_C0967	+	934582	935004	conserved hypothetical protein	V	140	arCOG00727	COG4113
CDS	CSUB_C0968	-	935080	935466	hypothetical protein	E	128	arCOG01876	COG0620
CDS	CSUB_C0969	-	935471	935692	hypothetical protein	O	73	arCOG03686	COG1765
CDS	CSUB_C0970	+	935988	936374	HEPN domain-containing protein	S	128	arCOG01191	COG2250
CDS	CSUB_C0971	+	936364	936792	DNA polymerase beta domain protein	R	142	arCOG01204	COG1708
CDS	CSUB_C0972	+	937404	939326	D-alanine-D-alanine ligase	Q	640	arCOG01791	COG0500
CDS	CSUB_C0973	-	939407	939763	DNA polymerase beta subunit	R	118	arCOG01205	COG1708
CDS	CSUB_C0974	-	939738	940130	HEPN domain-containing protein	S	130	arCOG01191	COG2250
CDS	CSUB_C0975	-	940236	940916	conserved hypothetical protein	R	226	arCOG00036	COG2102
CDS	CSUB_C0976	-	941041	941640	conserved hypothetical protein	R	199	arCOG01506	COG3381
CDS	CSUB_C0977	-	941658	942647	molybdopterin oxidoreductase subunit	S	329		
CDS	CSUB_C0978	-	942659	943813	molybdopterin oxidoreductase Fe-S binding subunit	C	384	arCOG01501	COG1140
CDS	CSUB_C0979	-	943815	945938	molybdopterin oxidoreductase molybdopterin binding subunit, C-terminal	C	707		
CDS	CSUB_C0980	-	945952	947292	molybdopterin oxidoreductase molybdopterin binding subunit, N-terminal	C	446	arCOG01497	COG5013
CDS	CSUB_C0981	-	947364	948041	bacterio-opsin activator HTH domain protein	K	225	arCOG02279	COG3413
CDS	CSUB_C0982	-	948273	949793	mercuric reductase	C	506	arCOG01068	COG1249
CDS	CSUB_C0983	-	949993	950379	transcriptional regulator, HxIR family	K	128	arCOG01057	COG1733
CDS	CSUB_C0984	+	950400	951818	hypothetical protein	L	472	arCOG00367	COG1630
CDS	CSUB_C0985	+	951916	953403	conserved hypothetical protein	L	495	arCOG00280	COG0433
CDS	CSUB_C0986	+	953405	954556	exonuclease SbcCD, D subunit	L	383	arCOG00397	COG0420
CDS	CSUB_C0987	+	954550	956853	exonuclease SbcCD, C subunit	L	767	arCOG00368	COG0419
CDS	CSUB_C0988	-	956850	957569	phosphohydrolase	S	239	arCOG01443	COG2254
CDS	CSUB_C0989	-	957550	959163	CRISPR-associated helicase Cas3	V	537	arCOG01444	COG1203
CDS	CSUB_C0990	-	959150	959812	hypothetical protein	S	220		
CDS	CSUB_C0991	-	959868	960329	hypothetical protein	S	153		
CDS	CSUB_C0992	-	960323	961081	CRISPR-associated protein, Cas5 family	V	252	arCOG02670	COG1688
CDS	CSUB_C0993	-	961078	962160	CRISPR-associated autoregulator, DevR family	V	360	arCOG04192	COG1857
CDS	CSUB_C0994	-	962162	962557	conserved hypothetical protein	V	131	arCOG03823	
CDS	CSUB_C0995	+	962597	963253	CRISPR-associated protein, Cas3 family	K	218	arCOG01446	COG0640
CDS	CSUB_C0996	+	963269	964150	CRISPR-associated protein	V	293	arCOG01439	COG5551
CDS	CSUB_C0997	+	964147	965109	CRISPR-associated protein Cas1	V	320	arCOG01452	COG1518
CDS	CSUB_C0998	+	965114	965416	CRISPR-associated protein Cas2	V	100	arCOG04194	COG1343
CDS	CSUB_C0999	+	965413	966009	CRISPR-associated protein Cas4	V	198	arCOG00786	COG1468
CDS	CSUB_C1000	-	970004	970912	CRISPR-associated RAMP family protein	V	302	arCOG02658	COG1337
CDS	CSUB_C1001	-	970917	972032	hypothetical protein	S	371	arCOG06024	
CDS	CSUB_C1002	-	972029	972670	CRISPR-associated RAMP family protein	V	213	arCOG02659	COG1337
CDS	CSUB_C1003	-	972667	975252	conserved hypothetical protein	V	861	arCOG02668	COG1353
CDS	CSUB_C1004	-	975249	976199	conserved hypothetical protein	V	316	arCOG02660	COG1337
CDS	CSUB_C1005	-	976183	977073	CRISPR-associated RAMP family protein	V	296	arCOG02658	COG1337
CDS	CSUB_C1006	-	977074	977793	CRISPR-associated RAMP family protein	V	239	arCOG02658	COG1337
CDS	CSUB_C1007	-	977790	978164	conserved hypothetical protein	S	124	arCOG07256	
CDS	CSUB_C1008	-	978509	980056	hypothetical protein	S	515		
CDS	CSUB_C1009	-	980685	980927	hydrogenase maturation protein HypF	O	80	arCOG01187	COG0068
CDS	CSUB_C1010	-	981082	981711	thiamine-phosphate pyrophosphorylase	H	209	arCOG01089	COG0352
CDS	CSUB_C1011	-	981695	982393	thiamine biosynthesis protein ThiG	H	232		
CDS	CSUB_C1012	-	982477	982692	thiamine biosynthesis protein ThiS	H	71		
CDS	CSUB_C1013-2	-	982685	983278	glycine oxidase	E	197	arCOG00755	COG0665
CDS	CSUB_C1013-1	-	983223	983816	glycine oxidase	R	197	arCOG00754	COG0579
CDS	CSUB_C1014	+	984006	984905	DsbA oxidoreductase	Q	299	arCOG02869	COG2761
CDS	CSUB_C1015	+	984890	985624	dithiol-disulfide isomerase	Q	244	arCOG02869	COG2761
CDS	CSUB_C1016	+	985609	986400	hypothetical protein	S	263		
CDS	CSUB_C1017	+	986633	987061	hydrogenase nickel incorporation protein HypA	R	142	arCOG04426	COG0375
CDS	CSUB_C1018	+	987054	987818	ATP-binding protein involved in chromosome partitioning	D	254	arCOG00585	COG0489
CDS	CSUB_C1019	+	987870	988997	4Fe-4S ferredoxin, iron-sulfur binding protein	C	375	arCOG05128	COG1145
CDS	CSUB_C1020	+	988994	989482	transcriptional regulator, Crp/Fnr family	K	162		
CDS	CSUB_C1021	+	989479	990333	oxidoreductase FAD(NAD(P))-binding subunit	H	284	arCOG02199	COG0543
CDS	CSUB_C1022	+	990330	991091	NADH ubiquinone oxidoreductase 20 kDa subunit	C	253	arCOG02472	COG1941
CDS	CSUB_C1023	+	991088	992374	nickel-dependent hydrogenase large subunit	C	428	arCOG01549	COG3259
CDS	CSUB_C1024	+	992334	992816	hydrogenase maturation protease	C	160	arCOG04429	COG0680
CDS	CSUB_C1025	-	992821	995136	hydrogenase maturation protein HypF	O	771	arCOG01187	COG0068
CDS	CSUB_C1026	+	995226	996380	hydrogenase expression/formation protein HypD	O	384	arCOG04428	COG0409
CDS	CSUB_C1027	+	996382	996690	hydrogenase expression/formation protein HypC	O	102	arCOG04427	COG0298
CDS	CSUB_C1028	+	996696	997721	hydrogenase expression/formation protein HypE	O	341	arCOG00636	COG0309
CDS	CSUB_C1029	-	997718	998596	conserved hypothetical protein	S	292		
CDS	CSUB_C1030	-	998642	999568	purine nucleosidase	F	308	arCOG04558	COG1957
CDS	CSUB_C1031	+	999683	1000294	conserved hypothetical protein	S	203		
CDS	CSUB_C1032	+	1000345	1001154	cobalt/nickel ABC transporter permease	P	269	arCOG02250	COG0619
CDS	CSUB_C1033	+	1001161	1002048	cobalt/nickel ABC transporter ATP-binding protein	P	295	arCOG00202	COG1122
CDS	CSUB_C1034	+	1002045	1002878	cobalt/nickel ABC transporter ATP-binding protein	P	277	arCOG00202	COG1122
CDS	CSUB_C1035	+	1002882	1003844	ribokinase	G	320	arCOG00014	COG0524
CDS	CSUB_C1036	+	1003936	1005510	2-isopropylmalate synthase	E	524	arCOG02092	COG0119
CDS	CSUB_C1037	-	1005476	1005868	translation initiation factor eIF-5A	J	130	arCOG04277	COG0231
CDS	CSUB_C1038	-	1005908	1006585	ATP-binding protein	R	225	arCOG00035	COG2102
CDS	CSUB_C1039	+	1006648	1007772	succinyl-CoA synthetase beta subunit	C	374	arCOG01337	COG0045
CDS	CSUB_C1040	+	1007780	1008655	succinyl-CoA synthetase alpha subunit	C	291	arCOG01339	COG0074
CDS	CSUB_C1041	+	1008652	1009443	protein phosphatase	T	263	arCOG01143	COG0639
CDS	CSUB_C1042	+	1009445	1010323	metallo-beta-lactamase protein	R	292	arCOG00505	COG0491
CDS	CSUB_C1043	+	1010356	1011285	malate dehydrogenase	C	309	arCOG00246	COG0039
CDS	CSUB_C1044	+	1011312	1011446	conserved hypothetical protein	S	44		
CDS	CSUB_C1045	+	1011440	1012786	peptidase M20	E	448	arCOG01110	COG0624
CDS	CSUB_C1046	+	1012791	1013693	conserved hypothetical protein	S	300	arCOG01096	COG1814
CDS	CSUB_C1047	+	1014102	1015274	saccharopine dehydrogenase (NAD+, L-lysine forming)	E	390	arCOG00243	COG1748

CDS	CSUB_C1048	+	1015290	1016411	conserved hypothetical protein	E	373	arCOG01107	COG0624
CDS	CSUB_C1049	+	1016423	1017811	glutamate-1-semialdehyde-2,1-aminomutase	H	462	arCOG00918	COG0001
CDS	CSUB_C1050	+	1017857	1018927	spermidine/putrescine ABC transporter ATP-binding protein	E	356	arCOG00177	COG3842
CDS	CSUB_C1051	+	1018933	1019793	spermidine/putrescine ABC transporter permease	E	286	arCOG00161	COG1176
CDS	CSUB_C1052	+	1019808	1020563	spermidine/putrescine ABC transporter permease	E	286	arCOG00162	COG1177
CDS	CSUB_C1053	-	1020564	1021724	spermidine/putrescine ABC transporter substrate-binding protein	E	351	arCOG00220	COG0687
CDS	CSUB_C1054	-	1021833	1022996	saccharopine dehydrogenase	E	387	arCOG00243	COG1748
CDS	CSUB_C1055	-	1023017	1025308	molybdenum hydroxylase family protein large subunit	C	763	arCOG01167	COG1529
CDS	CSUB_C1056	+	1025394	1026731	aminotransferase	E	445	arCOG00916	COG0160
CDS	CSUB_C1057	+	1026979	1028316	glutamate-1-semialdehyde-2,1-aminomutase	H	445	arCOG00918	COG0001
CDS	CSUB_C1058	-	1028300	1029601	4-aminobutyrate aminotransferase	E	433	arCOG00915	COG0160
CDS	CSUB_C1059	+	1029690	1030658	beta-lactamase domain protein	R	322	arCOG00498	COG0491
CDS	CSUB_C1060	+	1030776	1031588	conserved hypothetical protein	T	270	arCOG07602	
CDS	CSUB_C1061	+	1031602	1031910	conserved hypothetical protein	S	102	arCOG07603	
CDS	CSUB_C1062	+	1032168	1032623	conserved hypothetical protein	M	151	arCOG01568	COG0668
CDS	CSUB_C1063	-	1032620	1033894	threonine synthase	E	424	arCOG01434	COG0498
CDS	CSUB_C1064	-	1033895	1034887	conserved hypothetical protein	C	330	arCOG00570	COG0644
CDS	CSUB_C1065	+	1035017	1035550	hypothetical protein	S	177	arCOG00551	COG1711
CDS	CSUB_C1066	+	1035531	1037552	minichromosome maintenance protein Mem	L	673	arCOG00439	COG1241
CDS	CSUB_C1067	+	1037621	1039756	DEAD/DEAH box helicase	L	711	arCOG00553	COG1204
CDS	CSUB_C1068	-	1039740	1040231	dual specificity protein phosphatase	T	163	arCOG03413	COG2453
CDS	CSUB_C1069	-	1040235	1040966	hypothetical protein	S	243		
CDS	CSUB_C1070	-	1040967	1041182	hypothetical protein	S	71		
CDS	CSUB_C1071	+	1041201	1042067	ribose-phosphate pyrophosphokinase	F	288	arCOG00067	COG0462
CDS	CSUB_C1072	+	1042076	1043092	methyltransferase	L	338	arCOG00047	COG1041
CDS	CSUB_C1073	+	1043094	1043999	ribonuclease Z	R	301	arCOG00501	COG1234
CDS	CSUB_C1074	-	1044001	1044381	conserved hypothetical protein	S	126	arCOG01043	COG1931
CDS	CSUB_C1075	-	1044378	1044794	signal-transduction protein	R	138	arCOG00606	COG0517
CDS	CSUB_C1076	+	1044902	1045558	dTMP kinase	F	218	arCOG01891	COG0125
CDS	CSUB_C1077	+	1045551	1046102	2'-5' RNA ligase	J	183	arCOG01736	COG1514
CDS	CSUB_C1078	+	1046099	1047460	tRNA nucleotidyltransferase	J	453	arCOG00249	COG1746
CDS	CSUB_C1079	+	1047472	1048176	serine/threonine protein kinase	T	234	arCOG01182	COG2112
CDS	CSUB_C1080	+	1048195	1049589	glycolate oxidase	C	464	arCOG00337	COG0277
CDS	CSUB_C1081	+	1049571	1050461	glucokinase	K	296	arCOG04280	COG1940
CDS	CSUB_C1082	+	1050497	1051000	transcriptional regulator, AsnC family	K	167		
CDS	CSUB_C1083	+	1051044	1051517	conserved hypothetical protein	R	157	arCOG02017	COG1853
CDS	CSUB_C1084	-	1051507	1052829	aspartyl-tRNA synthetase	J	440	arCOG00406	COG0017
CDS	CSUB_C1085	-	1052835	1053371	transcription elongation factor NusA	K	178	arCOG01761	COG0195
CDS	CSUB_C1086	-	1053402	1053686	archaea-specific DNA-binding protein Alba	K	94	arCOG01753	COG1581
CDS	CSUB_C1087	+	1053784	1053945	large subunit ribosomal protein L40e	J	53	arCOG00409	COG1552
tRNA	CSUB_T24	+	1053957	1054030	tRNA-Val				
CDS	CSUB_C1088	+	1054253	1055470	DNA primase small subunit	L	405	arCOG04110	COG1467
CDS	CSUB_C1089	+	1055548	1056006	signal-transduction protein	R	152	arCOG00606	COG0517
CDS	CSUB_C1090	+	1056054	1056602	conserved hypothetical protein	L	182	arCOG00551	COG1711
CDS	CSUB_C1091	-	1056594	1057715	hypothetical protein	R	373	arCOG04127	COG1341
CDS	CSUB_C1092	-	1057718	1058374	hypothetical protein	S	218		
CDS	CSUB_C1093	+	1058395	1058652	conserved hypothetical protein	R	85	arCOG04136	COG4888
CDS	CSUB_C1094	+	1058633	1059388	geranylgeranyl glyceryl phosphate synthase-like protein	R	251	arCOG01085	COG1646
tRNA	CSUB_T25	+	1059370	1059467	tRNA-Lys				
CDS	CSUB_C1095	+	1059636	1059866	DNA-directed RNA polymerase subunit H	K	76	arCOG04258	COG2012
CDS	CSUB_C1096	+	1059869	1063222	DNA-directed RNA polymerase subunit B	K	1117	arCOG01762	COG0085
CDS	CSUB_C1097	+	1063219	1066983	DNA-directed RNA polymerase subunit A'	K	1254	arCOG04257	COG0086
CDS	CSUB_C1098	+	1066986	1067306	large subunit ribosomal protein L30e	J	106	arCOG01752	COG1911
CDS	CSUB_C1099	+	1067291	1067725	N utilization substance protein A	K	144	arCOG01760	COG0195
CDS	CSUB_C1100	+	1067766	1068137	conserved hypothetical protein	R	123		
CDS	CSUB_C1101	-	1068079	1068843	FKBP-type peptidylprolyl isomerase	O	254	arCOG00980	COG1047
CDS	CSUB_C1102	+	1068944	1069606	proteasome beta subunit	O	220	arCOG00970	COG0638
CDS	CSUB_C1103	+	1069617	1071524	beta-lactamase domain protein	R	635	arCOG00543	COG1782
CDS	CSUB_C1104	+	1071562	1071786	small nuclear ribonucleoprotein	K	74	arCOG00998	COG1958
CDS	CSUB_C1105	+	1071886	1072068	hypothetical protein	S	60		
CDS	CSUB_C1106	+	1072058	1072258	plasmid stabilization system protein	K	66	arCOG01663	COG2026
CDS	CSUB_C1107	+	1072465	1072632	large subunit ribosomal protein L37e	J	55	arCOG04126	COG2126
tRNA	CSUB_T26	+	1072672	1072802	tRNA-Leu				
CDS	CSUB_C1108	-	1072817	1073311	hypothetical protein	S	164		
CDS	CSUB_C1109	-	1073308	1075236	glycosyl transferase family 2	M	642	arCOG01389	COG1215
CDS	CSUB_C1110	+	1075330	1076100	hypothetical protein	S	256		
CDS	CSUB_C1111	+	1076088	1077467	anaerobic magnesium-protoporphyrin IX monomethyl ester cyclase	C	459	arCOG01356	COG1032
CDS	CSUB_C1112	-	1077451	1078116	hypothetical protein	S	221		
CDS	CSUB_C1113	-	1078089	1079294	hypothetical protein	S	401		
CDS	CSUB_C1114	-	1079295	1079735	hypothetical protein	S	146		
CDS	CSUB_C1115	-	1079837	1080415	imidazoleglycerol-phosphate dehydratase	E	192	arCOG04398	COG0131
CDS	CSUB_C1116	-	1080390	1081400	ATP phosphoribosyltransferase	E	336	arCOG02208	COG0040
CDS	CSUB_C1117	+	1081478	1082071	glutamine amidotransferase	E	197	arCOG00089	COG0118
CDS	CSUB_C1118	-	1082061	1082381	phosphoribosyl-AMP cyclohydrolase	E	106	arCOG02676	COG0139
CDS	CSUB_C1119	-	1082378	1083142	imidazoleglycerol-phosphate synthase cyclase	E	254	arCOG00617	COG0107
CDS	CSUB_C1120	-	1083162	1083887	phosphoribosylformimino-5-aminoimidazole carboxamide ribotide isomerase	E	241	arCOG00618	COG0106
CDS	CSUB_C1121	-	1083920	1084324	hypothetical protein	S	134		
CDS	CSUB_C1122	+	1084516	1085370	hypothetical protein	S	284		
CDS	CSUB_C1123	+	1085748	1086689	conserved hypothetical protein	S	313	arCOG05870	
CDS	CSUB_C1124	+	1086696	1087514	circadian clock protein KaiC	T	272	arCOG01171	COG0467
CDS	CSUB_C1125	+	1087554	1090964	DNA polymerase II large subunit, family D	L	1136	arCOG04447	COG1933
CDS	CSUB_C1126	+	1090967	1091233	conserved hypothetical protein	K	88	arCOG00731	COG0640
CDS	CSUB_C1127	-	1091230	1091400	preprotein translocase subunit Sec61 beta	U	56	arCOG02958	COG4023
CDS	CSUB_C1128	-	1091440	1092396	conserved hypothetical protein	J	318	arCOG00545	COG1236
CDS	CSUB_C1129	+	1092470	1094227	conserved hypothetical protein	S	585	arCOG04351	COG3356
CDS	CSUB_C1130	-	1094230	1094496	hypothetical protein	S	88		
CDS	CSUB_C1131	+	1094604	1094888	archaea-specific DNA-binding protein Alba	K	94	arCOG01753	COG1581
CDS	CSUB_C1132	+	1094920	1096140	acyl-CoA dehydrogenase	I	406	arCOG04310	COG1960
CDS	CSUB_C1133	-	1096130	1096951	NAD+ synthase	H	273	arCOG00069	COG0171
CDS	CSUB_C1134	+	1097010	1098131	hypothetical protein	S	373	arCOG00385	
CDS	CSUB_C1135	-	1098121	1099281	molybdopterin biosynthesis protein MoeB	H	386	arCOG01676	COG0476
CDS	CSUB_C1136	+	1099422	1100108	ABC transporter ATP-binding protein	V	228	arCOG00922	COG1136
CDS	CSUB_C1137	+	1100105	1102030	conserved hypothetical protein	M	641	arCOG02089	COG1361
CDS	CSUB_C1138	+	1102027	1103283	conserved hypothetical protein	V	418	arCOG02312	COG0577
CDS	CSUB_C1139	+	1103372	1104631	conserved hypothetical protein	R	419	arCOG01115	COG1571
CDS	CSUB_C1140	-	1104628	1105434	conserved hypothetical protein	R	268	arCOG01688	COG1719
CDS	CSUB_C1141	-	1105495	1106487	phosphate uptake regulator	P	330	arCOG00318	COG0704
CDS	CSUB_C1142	+	1106596	1107885	isocitrate lyase	C	429	arCOG00583	COG2224
CDS	CSUB_C1143	+	1107889	1109466	malate synthase	G	525		
CDS	CSUB_C1144	+	1109488	1110621	conserved hypothetical protein	L	377	arCOG00048	COG0116
CDS	CSUB_C1145	-	1110607	1111155	conserved hypothetical protein	S	182		
CDS	CSUB_C1146	+	1111257	1111832	hypothetical protein	S	191		
CDS	CSUB_C1147	+	1111899	1112462	20S proteasome beta subunit	O	187	arCOG00970	COG0638
CDS	CSUB_C1148	+	1112466	1113155	20S proteasome alpha subunit	O	229	arCOG00971	COG0638
CDS	CSUB_C1149	-	1113150	1113383	regulatory protein, AsnC/Lrp family	K	77	arCOG01117	COG1522
CDS	CSUB_C1150	+	1113474	1114130	beta-lactamase domain protein	R	218	arCOG00504	COG0491
CDS	CSUB_C1151	+	1114127	1114822	uracil-DNA glycosylase superfamily protein	L	231	arCOG00905	COG1573

CDS	CSUB_C1152	-	1114764	1115930	major facilitator superfamily MFS	G	388	arCOG00130	COG0477
CDS	CSUB_C1153	-	1115927	1117003	conserved hypothetical protein	S	358		
CDS	CSUB_C1154	+	1117091	1118212	threonine synthase	E	373	arCOG01434	COG0498
CDS	CSUB_C1155	+	1118213	1119313	conserved hypothetical protein	G	366	arCOG00130	COG0477
CDS	CSUB_C1156	-	1119310	1120350	phosphate regulatory protein	P	346	arCOG00318	COG0704
CDS	CSUB_C1157	-	1120445	1121974	conserved hypothetical protein	C	509	arCOG00288	COG0778
CDS	CSUB_C1158	-	1122007	1123203	thiamine biosynthesis protein ThiI	H	398	arCOG00038	COG0301
CDS	CSUB_C1159	+	1123269	1124759	betaine-aldehyde dehydrogenase	C	496	arCOG01252	COG1012
CDS	CSUB_C1160	+	1124801	1125232	hypothetical protein	S	143		
CDS	CSUB_C1161	-	1125221	1125817	multiple antibiotic resistance protein	U	198	arCOG01997	COG2095
CDS	CSUB_C1162	-	1125854	1126360	conserved hypothetical protein	S	168		
CDS	CSUB_C1163	-	1126370	1127005	cytochrome c oxidase subunit III	C	211	arCOG04650	COG1845
CDS	CSUB_C1164	-	1127235	1128074	translation initiation factor eIF-2B	J	279	arCOG01124	COG1184
CDS	CSUB_C1165	-	1128071	1129093	alcohol dehydrogenase	C	340	arCOG01458	COG0604
CDS	CSUB_C1166	-	1129102	1129914	amidohydrolase	R	270	arCOG00062	COG0388
CDS	CSUB_C1167	-	1129926	1130777	deoxyribonuclease IV	L	283	arCOG01894	COG0648
CDS	CSUB_C1168	-	1134600	1135580	glyoxalase family protein	R	326	arCOG06106	COG2514
CDS	CSUB_C1169	-	1135878	1136447	signal peptidase, type I	U	189	arCOG01739	COG0681
CDS	CSUB_C1170	-	1136460	1139195	hypothetical protein	S	911		
CDS	CSUB_C1171	-	1139279	1139827	conserved hypothetical protein	S	182	arCOG05463	
CDS	CSUB_C1172	-	1139868	1141238	carbohydrate kinase	G	456	arCOG00025	COG1070
CDS	CSUB_C1173	+	1141314	1141976	uracil phosphoribosyltransferase	F	220	arCOG04128	COG0035
CDS	CSUB_C1174	+	1142022	1143677	3-oxosteroid 1-dehydrogenase	C	551		
tRNA	CSUB_T27	-	1143677	1143748	tRNA-Cys				
CDS	CSUB_C1175	-	1143782	1144000	conserved hypothetical protein	S	72		
CDS	CSUB_C1176	+	1144061	1144486	regulatory protein, ArsR	K	141	arCOG05900	COG3355
CDS	CSUB_C1177	-	1144751	1146472	Fe-S oxidoreductase	C	573	arCOG01357	COG1032
CDS	CSUB_C1178	+	1146549	1146953	phage shock protein C, PspC	K	134	arCOG03456	COG1983
CDS	CSUB_C1179	-	1146969	1147511	hypothetical protein	S	180		
CDS	CSUB_C1180	+	1147556	1148524	homoserine dehydrogenase	E	322	arCOG01351	COG0460
CDS	CSUB_C1181	+	1148577	1149980	aspartate kinase	E	467	arCOG00861	COG0527
CDS	CSUB_C1182	+	1150102	1150644	hypothetical protein	S	180		
CDS	CSUB_C1183	-	1150641	1151063	hypothetical protein	S	140		
CDS	CSUB_C1184	-	1151557	1151787	conserved hypothetical protein	S	76	arCOG02270	COG5428
CDS	CSUB_C1185	-	1151778	1152062	conserved hypothetical protein	S	94	arCOG04024	
CDS	CSUB_C1186	+	1152108	1152302	hypothetical protein	S	64		
CDS	CSUB_C1187	-	1152393	1153007	conserved hypothetical protein	M	204	arCOG01573	COG0668
CDS	CSUB_C1188	+	1153144	1154259	metalloprotease	M	371	arCOG04064	COG0750
CDS	CSUB_C1189	-	1154266	1155192	ATPase	D	308	arCOG00042	COG0037
CDS	CSUB_C1190	+	1155301	1156077	FdhD/NarQ family/nitrate assimilation protein	C	258	arCOG04358	COG1526
CDS	CSUB_C1191	+	1156324	1157586	molybdopterin biosynthesis protein MoeA	H	420	arCOG00216	COG0303
CDS	CSUB_C1192	+	1157599	1159557	molybdopterin biosynthesis protein MoeA	H	652	arCOG00217	COG0303
CDS	CSUB_C1193	+	1159554	1160324	thiosulfate sulfurtransferase	P	256	arCOG02019	COG2897
CDS	CSUB_C1194	+	1160362	1161243	hypothetical protein	S	293		
CDS	CSUB_C1195	-	1161240	1162007	hypothetical protein	O	255	arCOG05634	COG3058
CDS	CSUB_C1196	+	1162166	1165231	formate dehydrogenase alpha subunit	C	1021	arCOG01491	COG0243
CDS	CSUB_C1197	+	1165233	1166252	formate dehydrogenase beta subunit	C	339	arCOG01503	COG0437
CDS	CSUB_C1198	+	1166254	1167126	formate-dependent nitrite reductase complex, transmembrane protein	P	290	arCOG02027	COG3301
CDS	CSUB_C1199	-	1167123	1167740	hypothetical protein	S	205		
CDS	CSUB_C1201	-	1167891	1168271	hypothetical protein	S	126		
CDS	CSUB_C1202	-	1168278	1169090	hypothetical protein	S	270		
tRNA	CSUB_T28	+	1169456	1169529	tRNA-Ala				
CDS	CSUB_C1203	+	1169587	1170960	deoxyribodipyrimidine photo-lyase	L	457	arCOG02840	COG0415
tRNA	CSUB_T29	-	1170942	1171016	tRNA-Glu				
CDS	CSUB_C1204	-	1171068	1171535	GCN5-related N-acetyltransferase	K	155	arCOG00826	COG0454
CDS	CSUB_C1205	-	1171537	1172859	malate dehydrogenase (oxaloacetate-decarboxylating)	C	440	arCOG00853	COG0281
CDS	CSUB_C1206	+	1172938	1174947	Fe-S oxidoreductase	C	669	arCOG00332	COG0247
CDS	CSUB_C1207	+	1174963	1175778	electron transfer flavoprotein beta subunit	C	271	arCOG00446	COG2086
CDS	CSUB_C1208	+	1175775	1176716	electron transfer flavoprotein alpha subunit	C	313	arCOG00447	COG2025
CDS	CSUB_C1209	+	1176720	1177328	hypothetical protein	H	202	arCOG01872	COG0746
CDS	CSUB_C1210	+	1177331	1178311	hydrogenase expression/formation protein HypE	O	326	arCOG00636	COG0309
CDS	CSUB_C1211	+	1178349	1178858	nitroreductase	C	169	arCOG00288	COG0778
CDS	CSUB_C1212	-	1178861	1179397	conserved hypothetical protein	R	178	arCOG00264	COG2041
CDS	CSUB_C1213	+	1179442	1182630	isoleucyl-tRNA synthetase	J	102	arCOG00807	COG0060
CDS	CSUB_C1214	+	1182641	1183303	hypothetical protein	S	260		
CDS	CSUB_C1215	+	1183344	1183577	small nuclear ribonucleoprotein	K	77	arCOG00998	COG1958
CDS	CSUB_C1216	+	1183637	1184866	S-adenosylmethionine synthetase	E	409	arCOG01678	COG1812
CDS	CSUB_C1217	-	1184863	1185585	conserved hypothetical protein	L	240	arCOG01304	COG1637
CDS	CSUB_C1218	-	1185590	1186930	hypothetical protein	S	446		
CDS	CSUB_C1219	-	1186936	1188435	elongator complex protein 3	K	499	arCOG01361	COG1243
CDS	CSUB_C1220	-	1188439	1189344	F420-dependent N5,N10-methylenetetrahydromethanopterin reductase	C	301	arCOG02410	COG2141
CDS	CSUB_C1221	-	1189592	1190416	conserved hypothetical protein	R	274	arCOG01648	COG0596
CDS	CSUB_C1222	+	1190517	1191224	conserved hypothetical protein	R	235	arCOG01848	COG0110
CDS	CSUB_C1223	+	1191293	1191601	translation initiation factor SUII	J	102	arCOG04223	COG0023
CDS	CSUB_C1224	-	1191598	1192521	transcription initiation factor THIB	K	307	arCOG01981	COG1405
CDS	CSUB_C1225	+	1192666	1194093	cysteinyI-tRNA synthetase	J	475	arCOG00486	COG0215
CDS	CSUB_C1226	+	1194101	1194811	nucleotidyl transferase	M	236	arCOG00663	COG1208
CDS	CSUB_C1227	-	1194780	1195292	ribosomal-protein-alanine N-acetyltransferase	R	170	arCOG00833	COG0456
CDS	CSUB_C1228	-	1195331	1196038	metallophosphoesterase	R	235	arCOG01156	COG1408
CDS	CSUB_C1229	+	1196085	1197086	thioesterase superfamily protein	I	333	arCOG00773	COG1607
CDS	CSUB_C1230	+	1197067	1198062	FMN-dependent monooxygenase	C	331	arCOG02410	COG2141
CDS	CSUB_C1231	+	1198098	1200761	pyruvate phosphate dikinase	G	887	arCOG01111	COG0574
CDS	CSUB_C1232	-	1200758	1201174	conserved hypothetical protein	S	138	arCOG04038	
CDS	CSUB_C1233	+	1201306	1202076	proliferating cell nuclear antigen PCNA	L	256	arCOG00488	COG0592
tRNA	CSUB_T30	+	1202109	1202184	tRNA-Pro				
CDS	CSUB_C1234	+	1202258	1203352	metalloprotease	M	364	arCOG00609	COG0750
CDS	CSUB_C1235	-	1203293	1204357	hypothetical protein	S	354		
CDS	CSUB_C1236	+	1204387	1205028	nitroreductase	C	213	arCOG00288	COG0778
CDS	CSUB_C1237	+	1205022	1205954	LPPG:Fo 2-phospho-L-lactate transferase	S	310	arCOG04395	COG0391
CDS	CSUB_C1238	+	1205951	1206541	hypothetical protein	R	196	arCOG04472	COG1920
CDS	CSUB_C1239	-	1206473	1207852	hypothetical protein	S	459		
tRNA	CSUB_T31	-	1207874	1207947	tRNA-Gly				
CDS	CSUB_C1240	-	1207992	1209245	beta-lactamase domain protein	J	417	arCOG00541	COG1236
CDS	CSUB_C1241	-	1209290	1209532	hypothetical protein	S	80		
CDS	CSUB_C1242	+	1209562	1210515	deoxyhypusine synthase	O	317	arCOG04142	COG1899
CDS	CSUB_C1243	-	1210518	1211738	aspartate kinase	E	406	arCOG00861	COG0527
CDS	CSUB_C1244	-	1211836	1214106	aldehyde oxidase and xanthine dehydrogenase, molybdopterin binding	C	756	arCOG01167	COG1529
CDS	CSUB_C1245	-	1214103	1214975	molybdopterin dehydrogenase FAD-binding	C	290	arCOG01926	COG1319
CDS	CSUB_C1246	-	1214972	1215442	carbon-monoxide dehydrogenase small subunit	C	156	arCOG01925	COG2080
CDS	CSUB_C1247	-	1215482	1216000	heat repeat-containing PBS lyase	S	172	arCOG04006	COG1413
CDS	CSUB_C1248	+	1216059	1216328	conserved hypothetical protein	H	89	arCOG00537	COG1977
CDS	CSUB_C1249	+	1216330	1216863	conserved hypothetical protein	R	177		
CDS	CSUB_C1250	-	1216856	1217440	translation factor	J	194	arCOG01952	COG0009
CDS	CSUB_C1251	-	1217460	1217783	hypothetical protein	S	107		
CDS	CSUB_C1252	-	1217795	1218727	branched-chain amino acid aminotransferase	E	310	arCOG02297	COG0115
CDS	CSUB_C1253	-	1218745	1219389	conserved hypothetical protein	O	214	arCOG01218	COG0526
CDS	CSUB_C1254	-	1219421	1220608	aminotransferase	E	395	arCOG00082	COG0075

CDS	CSUB_C1255	-	1220645	1220938	conserved hypothetical protein	R	97	arCOG01845	COG2151
CDS	CSUB_C1256	+	1220989	1221318	V-type H <sup>+</sup> -transporting ATPase subunit G	C	109		
CDS	CSUB_C1257	+	1221325	1222380	V-type H <sup>+</sup> -transporting ATPase subunit C	C	351	arCOG02459	COG1527
CDS	CSUB_C1258	-	1222339	1222650	SirA family protein	O	103	arCOG02062	COG0425
CDS	CSUB_C1259	+	1222766	1223959	conserved hypothetical protein	R	397	arCOG05632	COG2391
CDS	CSUB_C1260	+	1223985	1225091	conserved hypothetical protein	C	368	arCOG04329	COG2441
CDS	CSUB_C1261	-	1225077	1226012	beta-ribofuranosylaminobenzene 5'-phosphate synthase	R	311	arCOG01026	COG1907
CDS	CSUB_C1262	-	1226009	1226632	hypothetical protein	R	207	arCOG04458	COG2457
CDS	CSUB_C1263	-	1226629	1227765	pyruvate dehydrogenase E2 component (dihydropyridine acetyltransferase)	C	378	arCOG01706	COG0508
CDS	CSUB_C1264	-	1227772	1228941	conserved hypothetical protein	G	389	arCOG00130	COG0477
CDS	CSUB_C1265	-	1228948	1231026	conserved hypothetical protein	O	692	arCOG02007	COG1331
CDS	CSUB_C1266	+	1231072	1232163	tyrosyl-tRNA synthetase	F	363	arCOG01886	COG0162
CDS	CSUB_C1267	+	1232300	1235386	ribonucleoside-diphosphate reductase alpha chain	J	1028	arCOG04276	COG0209
CDS	CSUB_C1268	+	1235429	1236889	multicomponent Na <sup>+</sup> :H <sup>+</sup> antiporter subunit D	C	486	arCOG01537	COG0651
CDS	CSUB_C1269	+	1236921	1238018	DNA topoisomerase VI subunit A	L	365	arCOG04143	COG1697
CDS	CSUB_C1270	+	1238015	1238800	metallophosphoesterase	R	261	arCOG01150	COG1407
CDS	CSUB_C1271	+	1238797	1239141	conserved hypothetical protein	S	114	arCOG01121	COG5431
CDS	CSUB_C1272	-	1239138	1239506	conserved hypothetical protein	S	122	arCOG02999	COG1917
CDS	CSUB_C1273	+	1239577	1240713	hypothetical protein	S	378		
CDS	CSUB_C1274	-	1240797	1241711	homoserine kinase	E	304	arCOG01027	COG0083
CDS	CSUB_C1275	-	1241718	1242737	3-isopropylmalate dehydrogenase	C	339	arCOG01163	COG0473
CDS	CSUB_C1276	+	1242792	1244060	pyruvate formate lyase activating enzyme	C	422	arCOG00934	COG1313
CDS	CSUB_C1277	+	1244080	1244661	conserved hypothetical protein	S	193	arCOG03765	
CDS	CSUB_C1278	+	1244748	1245284	conserved hypothetical protein	S	178	arCOG01471	COG3945
CDS	CSUB_C1279	-	1245281	1246489	hypothetical protein	S	402		
tRNA	CSUB_T32	-	1246533	1246606	tRNA-Asp				
CDS	CSUB_C1280	+	1246753	1249482	peptide/nickel ABC transporter substrate-binding protein	E	909	arCOG01672	COG3889
CDS	CSUB_C1281	+	1249529	1250593	peptide/nickel ABC transporter permease	E	354	arCOG00751	COG0601
CDS	CSUB_C1282	+	1250593	1251999	peptide/nickel ABC transporter permease	E	468	arCOG00749	COG1173
CDS	CSUB_C1283	+	1252207	1253190	peptide/nickel ABC transporter ATP-binding protein	E	327	arCOG00181	COG0444
CDS	CSUB_C1284	+	1253194	1254189	peptide/nickel ABC transporter ATP-binding protein	E	331	arCOG00184	COG4608
CDS	CSUB_C1285	+	1254214	1254936	hypothetical protein	S	240		
CDS	CSUB_C1286	-	1254945	1256432	multicomponent Na <sup>+</sup> :H <sup>+</sup> antiporter subunit D	C	495	arCOG01537	COG0651
CDS	CSUB_C1287	+	1256550	1257956	hypothetical protein	S	468		
CDS	CSUB_C1288	-	1257949	1259862	NADH dehydrogenase I subunit L	C	637	arCOG01539	COG1009
CDS	CSUB_C1289	+	1259946	1260278	conserved hypothetical protein	P	110	arCOG04231	COG1324
CDS	CSUB_C1290	+	1260253	1260792	conserved hypothetical protein	R	179	arCOG03705	COG1547
CDS	CSUB_C1291	+	1260827	1261558	conserved hypothetical protein	S	243	arCOG05752	COG4720
CDS	CSUB_C1292	-	1261548	1262321	Fe-S cluster assembly ATP-binding protein SufC	O	257	arCOG04236	COG0396
CDS	CSUB_C1293	+	1262384	1263787	conserved hypothetical protein	J	467	arCOG00547	COG0595
CDS	CSUB_C1294	-	1263784	1264479	conserved hypothetical protein	S	231	arCOG01907	COG2013
CDS	CSUB_C1295	-	1264513	1266387	arginyl-tRNA synthetase	J	624	arCOG00487	COG0018
CDS	CSUB_C1296	+	1266443	1266982	conserved hypothetical protein	S	179	arCOG02864	COG2322
CDS	CSUB_C1297	+	1267021	1268178	GTP-binding protein	R	385	arCOG00358	COG1163
CDS	CSUB_C1298	+	1268213	1268509	V-type H <sup>+</sup> -transporting ATPase subunit F	C	98	arCOG04102	COG1436
CDS	CSUB_C1299	+	1268551	1269150	V-type H <sup>+</sup> -transporting ATPase subunit E	C	199	arCOG00869	COG1390
CDS	CSUB_C1300	+	1269153	1269956	5'-nucleotidase SurE	R	267	arCOG02303	COG0496
CDS	CSUB_C1301	+	1270025	1270498	hypothetical protein	S	157		
CDS	CSUB_C1302	-	1270495	1270926	transcriptional regulator, AsnC family	K	143	arCOG01580	COG1522
CDS	CSUB_C1303	+	1270982	1272049	N-acetyl-gamma-glutamyl-phosphate reductase	E	355	arCOG00495	COG0002
CDS	CSUB_C1304	+	1272080	1272874	acetylglutamate/acetylaminoadipate kinase	E	264	arCOG00862	COG0548
CDS	CSUB_C1305	+	1272995	1273171	lysine biosynthesis protein LysW	E	58	arCOG01588	
CDS	CSUB_C1306	+	1273175	1274020	lysine biosynthesis protein LysX	H	281	arCOG01589	COG0189
CDS	CSUB_C1307	+	1274017	1275198	acetylornithine aminotransferase	E	393	arCOG00914	COG4992
CDS	CSUB_C1308	-	1275175	1276386	conserved hypothetical protein	R	403	arCOG01229	COG2403
CDS	CSUB_C1309	+	1276603	1277667	acetyl-lysine deacetylase	E	354	arCOG01107	COG0624
CDS	CSUB_C1310	-	1277656	1279089	argininosuccinate lyase	E	477	arCOG01748	COG0165
CDS	CSUB_C1311	-	1279093	1280277	argininosuccinate synthase	E	394	arCOG00112	COG0137
CDS	CSUB_C1312	-	1280310	1280720	conserved hypothetical protein	S	136		
CDS	CSUB_C1313	-	1280725	1281075	DNA-binding protein	R	116	arCOG04179	COG2118
CDS	CSUB_C1314	-	1281105	1281806	conserved hypothetical protein	J	233	arCOG00989	COG0343
CDS	CSUB_C1315	+	1281881	1283440	queuine tRNA-ribosyltransferase	J	519	arCOG00989	COG0343
tRNA	CSUB_T33	+	1283472	1283545	tRNA-Val				
CDS	CSUB_C1316	+	1283581	1284447	acylphosphatase	C	288	arCOG01674	COG1254
CDS	CSUB_C1317	+	1284489	1285613	hypothetical protein	S	374		
CDS	CSUB_C1318	+	1285763	1286200	conserved hypothetical protein	S	145	arCOG03871	
CDS	CSUB_C1319	-	1286853	1288238	hypothetical protein	N	461	arCOG01808	COG2064
CDS	CSUB_C1320	-	1288231	1289109	hypothetical protein	S	292		
CDS	CSUB_C1321	-	1289135	1290712	type II secretion system protein E	N	525	arCOG01817	COG0630
CDS	CSUB_C1322	-	1290730	1291068	conserved hypothetical protein	E	112	arCOG01459	COG1063
CDS	CSUB_C1323	+	1291153	1291593	UspA domain protein	T	146	arCOG02053	COG0589
CDS	CSUB_C1324	-	1291586	1292038	conserved hypothetical protein	S	150	arCOG04234	
CDS	CSUB_C1325	-	1292055	1292858	zinc ABC transporter permease	P	267	arCOG01006	COG1108
CDS	CSUB_C1326	-	1292855	1293610	zinc ABC transporter ATP-binding protein	P	251	arCOG00201	COG1121
CDS	CSUB_C1327	-	1293594	1294514	hypothetical protein	P	306	arCOG01005	COG0803
CDS	CSUB_C1328	-	1294499	1294927	metal dependent repressor, DtxR family	K	142	arCOG02100	COG1321
CDS	CSUB_C1329	+	1295060	1295503	ADP-ribose pyrophosphatase	L	147	arCOG01073	COG0494
CDS	CSUB_C1330	-	1295487	1296446	thiamine monophosphate kinase	H	319	arCOG00638	COG0611
CDS	CSUB_C1331	-	1296452	1297174	dolichol-phosphate mannosyltransferase	M	240	arCOG00895	COG0463
CDS	CSUB_C1332	-	1297179	1297853	hypothetical protein	S	224		
CDS	CSUB_C1333	-	1297878	1298303	thioesterase superfamily protein	R	141		
CDS	CSUB_C1334	-	1298300	1298713	conserved hypothetical protein	R	137	arCOG01283	COG1545
CDS	CSUB_C1335	-	1298716	1299897	thiolase	I	393	arCOG01281	COG0183
CDS	CSUB_C1336	-	1299922	1302315	carbon-monoxide dehydrogenase large subunit	C	797	arCOG01167	COG1529
CDS	CSUB_C1337	-	1302332	1303501	acyl-CoA dehydrogenase	I	389	arCOG04350	COG1960
CDS	CSUB_C1338	+	1303586	1304986	tryptophan synthase beta subunit	R	466	arCOG01432	COG1350
CDS	CSUB_C1339	-	1304983	1305672	ERCC4-type nuclease	L	229	arCOG04206	COG1948
CDS	CSUB_C1340	+	1305739	1307067	branched-chain amino acid ABC transporter substrate-binding protein	E	442	arCOG01020	COG0683
CDS	CSUB_C1341	+	1307069	1307935	branched-chain amino acid ABC transporter permease	E	288	arCOG01270	COG0559
CDS	CSUB_C1342	+	1307935	1308870	branched-chain amino acid ABC transporter permease	E	311	arCOG01274	COG4177
CDS	CSUB_C1343	+	1308851	1309567	branched-chain amino acid ABC transporter ATP-binding protein	E	238	arCOG00926	COG0411
CDS	CSUB_C1344	+	1309568	1310284	branched-chain amino acid ABC transporter ATP-binding protein	E	238	arCOG00924	COG0410
CDS	CSUB_C1345	-	1310269	1311612	amidohydrolase	F	447	arCOG00695	COG0402
CDS	CSUB_C1346	-	1312173	1312811	homing endonuclease I-ApeI	L	212	arCOG03156	COG3780
tRNA	CSUB_R01-3	-	1313269	1313299	23S ribosomal RNA				
CDS	CSUB_C1347	-	1313313	1314401	homing endonuclease I-ApeII	L	362		
tRNA	CSUB_R01-2	-	1314432	1315250	23S ribosomal RNA				
CDS	CSUB_C1348	-	1315213	1315938	homing endonuclease	L	241	arCOG03158	COG1372
tRNA	CSUB_R01-1	-	1315942	1317166	23S ribosomal RNA				
CDS	CSUB_C1349	-	1317542	1318924	dehydrogenase (flavoprotein)-like protein	C	460	arCOG00570	COG0644
CDS	CSUB_C1350	+	1319055	1320098	pyruvate dehydrogenase E1 component subunit alpha	C	347	arCOG01054	COG1071
CDS	CSUB_C1351	-	1320082	1320489	conserved hypothetical protein	R	135	arCOG01288	COG1545
CDS	CSUB_C1352	-	1320492	1321127	conserved hypothetical protein	R	211	arCOG01287	COG1545
CDS	CSUB_C1353	-	1321124	1322278	acetyl-CoA C-acetyltransferase	I	384	arCOG01280	COG0183
CDS	CSUB_C1354	-	1322285	1323385	acetyl-CoA C-acetyltransferase	I	366	arCOG01279	COG0183
CDS	CSUB_C1355	-	1323396	1324538	acyl-CoA dehydrogenase	I	380	arCOG04350	COG1960
CDS	CSUB_C1356	+	1324596	1325228	hypothetical protein	S	210		

CDS	CSUB_C1357	-	1325312	1327312	acetoacetyl-CoA synthetase	I	666	arCOG06112	COG0365
tRNA	CSUB_T34	-	1327328	1327402	tRNA-Arg				
CDS	CSUB_C1358	+	1327460	1328071	hypothetical protein	S	203		
CDS	CSUB_C1359	+	1328023	1328739	cell division protein ERCT-III/CdvB	N	238	arCOG00452	COG5491
CDS	CSUB_C1360	+	1328774	1331710	leucyl-tRNA synthetase	J	978	arCOG00809	COG0495
CDS	CSUB_C1361	+	1331707	1332063	hypothetical protein	S	118	arCOG01669	COG3370
CDS	CSUB_C1362	-	1332060	1332488	conserved hypothetical protein	R	142	arCOG01204	COG1708
CDS	CSUB_C1363	-	1332495	1332824	conserved hypothetical protein	S	109	arCOG01191	COG2250
CDS	CSUB_C1364	+	1332958	1334019	sulfonate/nitrate/taurine ABC transporter substrate-binding protein	S	353		
CDS	CSUB_C1365	+	1334053	1334838	sulfonate/nitrate/taurine ABC transporter ATP-binding protein	P	261	arCOG00193	COG1116
CDS	CSUB_C1366	+	1334839	1335618	sulfonate/nitrate/taurine ABC transporter permease	P	259	arCOG00169	COG0600
tRNA	CSUB_T35	+	1335660	1335734	tRNA-Arg				
CDS	CSUB_C1367	-	1335804	1336211	conserved hypothetical protein	S	135	arCOG01921	COG2083
CDS	CSUB_C1368	+	1336274	1336582	hypothetical protein	S	102		
CDS	CSUB_C1369	+	1336619	1337005	translation initiation inhibitor	J	128	arCOG01630	COG0251
CDS	CSUB_C1370	-	1336983	1339109	conserved hypothetical protein	C	708	arCOG00336	COG0247
CDS	CSUB_C1371	-	1339106	1339690	conserved hypothetical protein	C	194	arCOG00335	COG1139
CDS	CSUB_C1372	+	1339772	1340140	conserved hypothetical protein	S	122	arCOG04124	COG2835
CDS	CSUB_C1373	-	1340124	1341581	conserved hypothetical protein	M	485	arCOG01389	COG1215
tRNA	CSUB_T36	-	1341615	1341687	tRNA-His				
CDS	CSUB_C1374	-	1341724	1342470	dimethyladenosine tRNA methyltransferase	J	248	arCOG04131	COG0030
CDS	CSUB_C1375	-	1342452	1342769	hypothetical protein	S	105		
CDS	CSUB_C1376	+	1342829	1343371	Appr-1-p processing enzyme family	R	180	arCOG04225	COG2110
CDS	CSUB_C1377	-	1343316	1343840	hypothetical protein	S	174		
CDS	CSUB_C1378	-	1343843	1344154	Rieske (2Fe-2S) type ferredoxin	P	103	arCOG02853	COG2146
CDS	CSUB_C1379	+	1344236	1345222	thioredoxin reductase (NADPH)	O	328	arCOG01296	COG0492
CDS	CSUB_C1380	-	1345186	1345548	ferredoxin	P	120	arCOG02852	COG2146
CDS	CSUB_C1381	+	1345575	1346123	methyltransferase	Q	182	arCOG02703	COG0500
CDS	CSUB_C1382	-	1346120	1347598	DNA polymerase II small subunit, family D	L	492	arCOG04455	COG1311
CDS	CSUB_C1383	+	1347649	1348965	hypothetical protein	S	438		
CDS	CSUB_C1384	+	1349068	1349319	hypothetical protein	S	83		
tRNA	CSUB_T37	+	1349357	1349431	tRNA-Met				
CDS	CSUB_C1385	-	1349440	1350186	branched-chain amino acid ABC transporter ATP-binding protein	E	248	arCOG00924	COG0410
CDS	CSUB_C1386	-	1350164	1350898	branched-chain amino acid ABC transporter ATP-binding protein	E	244	arCOG00926	COG0411
CDS	CSUB_C1387	-	1350895	1351860	branched-chain amino acid ABC transporter permease	E	321	arCOG01274	COG4177
CDS	CSUB_C1388	-	1351864	1352742	branched-chain amino acid ABC transporter permease	E	292	arCOG01270	COG0559
CDS	CSUB_C1389	-	1352778	1354067	branched-chain amino acid ABC transporter substrate-binding protein	E	429	arCOG01020	COG0683
CDS	CSUB_C1390	+	1354205	1355536	hypothetical protein	G	443	arCOG00018	COG0063
CDS	CSUB_C1391	-	1355517	1356800	seryl-tRNA synthetase	J	427	arCOG00403	COG0172
CDS	CSUB_C1392	-	1356840	1358081	conserved hypothetical protein	V	413	arCOG02312	COG0577
CDS	CSUB_C1393	-	1358068	1359537	hypothetical protein	M	489	arCOG02091	COG1361
CDS	CSUB_C1394	-	1359513	1360037	hypothetical protein	M	174	arCOG02089	COG1361
CDS	CSUB_C1395	-	1360034	1360744	lipoprotein-releasing system ATP-binding protein	V	236	arCOG00922	COG1136
CDS	CSUB_C1396	-	1360752	1362098	glycine hydroxymethyltransferase	E	448	arCOG00070	COG0112
CDS	CSUB_C1397	+	1362346	1363623	glutamate-1-semialdehyde-2,1-aminomutase	H	425	arCOG00918	COG0001
CDS	CSUB_C1398	-	1363603	1364136	NUDIX hydrolase	L	177	arCOG01072	COG0494
CDS	CSUB_C1399	-	1364126	1365541	Fe-S cluster assembly protein SuFB	O	471	arCOG01715	COG0719
CDS	CSUB_C1400	+	1365573	1365989	hypothetical protein	S	138		
CDS	CSUB_C1401	+	1366086	1366862	cell division protein ERCT-III/CdvB	N	258	arCOG00452	COG5491
CDS	CSUB_C1402	-	1366859	1368001	AAA family ATPase Vps4/CdvC	O	380	arCOG01307	COG0464
CDS	CSUB_C1403	+	1368156	1369910	conserved hypothetical protein	D	584	arCOG00371	COG1196
CDS	CSUB_C1404	+	1369888	1370652	hypothetical protein	S	254		
CDS	CSUB_C1405	+	1370645	1371220	hypothetical protein	R	191		
CDS	CSUB_C1406	-	1371213	1374068	ATP-dependent helicase	S	951	arCOG00557	COG1201
CDS	CSUB_C1407	-	1374043	1374615	hypothetical protein	S	190		
CDS	CSUB_C1408	-	1374670	1375875	acyl-CoA dehydrogenase	I	401	arCOG01707	COG1960
CDS	CSUB_C1409	-	1375918	1376286	hypothetical protein	S	122		
CDS	CSUB_C1410	-	1376358	1377986	thermosome beta subunit	O	542	arCOG01257	COG0459
CDS	CSUB_C1411	-	1378033	1378272	archaeal histone	L	79	arCOG02144	COG2036
CDS	CSUB_C1412	+	1378444	1379283	hypothetical protein	S	279		
CDS	CSUB_C1413	+	1379314	1379910	adenylate kinase	F	198	arCOG01039	COG2019
CDS	CSUB_C1414	-	1379907	1380617	tRNA (adenine-N1-)-methyltransferase	J	236	arCOG00978	COG2519
CDS	CSUB_C1415	+	1380824	1383424	hypothetical protein	S	866		
CDS	CSUB_C1416	+	1383424	1384506	chorismate synthase	E	360	arCOG04133	COG0082
CDS	CSUB_C1417	+	1384577	1384855	4a-hydroxytetrahydrobiopterin dehydratase	H	92	arCOG02939	COG2154
CDS	CSUB_C1418	-	1384841	1385851	phosphate uptake regulator	P	336	arCOG00318	COG0704
CDS	CSUB_C1419	+	1386020	1387063	phosphate ABC transporter substrate-binding protein	P	347	arCOG00213	COG0226
CDS	CSUB_C1420	+	1387074	1388000	phosphate ABC transporter permease	P	308	arCOG00167	COG0573
CDS	CSUB_C1421	+	1388201	1388875	phosphate ABC transporter permease	P	224	arCOG00168	COG0581
CDS	CSUB_C1422	+	1388916	1389707	phosphate ABC transporter ATP-binding protein	P	263	arCOG00231	COG1117
CDS	CSUB_C1423	+	1389715	1390347	phosphate uptake regulator	P	210	arCOG00232	COG0704
CDS	CSUB_C1424	+	1390307	1390735	metal-dependent protease, PADI/JA B1 superfamily	R	142	arCOG01139	COG1310
CDS	CSUB_C1425	-	1390732	1391412	triosephosphate isomerase	G	226	arCOG01087	COG0149
CDS	CSUB_C1426	+	1391484	1392854	glycine dehydrogenase subunit 1	E	456	arCOG00077	COG0403
CDS	CSUB_C1427	+	1392854	1394380	glycine dehydrogenase subunit 2	E	508	arCOG00076	COG1003
CDS	CSUB_C1428	+	1394358	1395440	glycine cleavage system aminomethyltransferase	E	360	arCOG00756	COG0404
CDS	CSUB_C1429	-	1395409	1396221	hypothetical protein	S	270	arCOG05074	
CDS	CSUB_C1430	+	1396154	1397689	hypothetical protein	S	511		
CDS	CSUB_C1431	+	1397725	1398957	electron transfer flavoprotein beta subunit	C	410	arCOG00448	COG2086
CDS	CSUB_C1432	+	1398938	1400032	electron transfer flavoprotein alpha subunit	C	364	arCOG00447	COG2025
CDS	CSUB_C1433	+	1400025	1401713	electron transfer flavoprotein-quinone oxidoreductase	C	562	arCOG00570	COG0644
CDS	CSUB_C1434	+	1401776	1402627	thiosulfate sulfurtransferase	P	283	arCOG02019	COG2897
CDS	CSUB_C1435	+	1402624	1403280	conserved hypothetical protein	E	218	arCOG01303	COG0509
CDS	CSUB_C1436	-	1403277	1403813	tRNA-intron endonuclease	J	178	arCOG01701	COG1676
CDS	CSUB_C1437	-	1403825	1404490	conserved hypothetical protein	P	221	arCOG02640	COG1392
CDS	CSUB_C1438	+	1404564	1405160	molybdopterin-guanine dinucleotide biosynthesis protein A	R	198	arCOG01873	COG2068
CDS	CSUB_C1439	-	1405131	1406060	hypothetical protein	S	309		
CDS	CSUB_C1440	+	1406134	1407951	glucosamine-fructose-6-phosphate aminotransferase (isomerizing)	M	605	arCOG00057	COG0449
CDS	CSUB_C1441	+	1407986	1408447	hypothetical protein	S	153	arCOG02727	COG1673
CDS	CSUB_C1442	-	1408438	1409799	ferredoxin-dependent glutamate synthase	E	453	arCOG00619	COG0069
CDS	CSUB_C1443	-	1409796	1410839	asparaginyl-tRNA synthetase	J	347	arCOG00409	COG0017
CDS	CSUB_C1444	-	1410851	1411345	hypothetical protein	S	164		
CDS	CSUB_C1445	-	1411350	1412840	hypothetical protein	N	496	arCOG01809	COG1955
CDS	CSUB_C1446	-	1412837	1414498	archaeal flagellar protein FlaF	N	553	arCOG01817	COG0630
CDS	CSUB_C1447	-	1414504	1415205	archaeal flagellar protein FlaH	N	233	arCOG04148	COG2874
CDS	CSUB_C1448	-	1415202	1415699	hypothetical protein	S	165		
CDS	CSUB_C1449	-	1415707	1416195	conserved hypothetical protein	N	162	arCOG01822	COG3354
CDS	CSUB_C1450	-	1416192	1416812	hypothetical protein	S	206		
CDS	CSUB_C1451	+	1417036	1417545	archaeal flagellin FlaB	N	169	arCOG01829	COG1681
CDS	CSUB_C1452	+	1417652	1418320	hypothetical protein	S	222		
CDS	CSUB_C1453	-	1418317	1418829	ATP-cobalamin adenosyltransferase	H	170	arCOG00489	COG2096
CDS	CSUB_C1454	-	1418826	1419953	branched-chain amino acid ABC transporter permease	E	375	arCOG01273	COG4177
CDS	CSUB_C1455	-	1419950	1420888	branched-chain amino acid ABC transporter permease	E	312	arCOG01269	COG0559
CDS	CSUB_C1456	+	1421003	1422334	branched-chain amino acid ABC transporter substrate-binding protein	E	443	arCOG01021	COG0683
CDS	CSUB_C1457	+	1422371	1423132	branched-chain amino acid ABC transporter ATP-binding protein	E	253	arCOG00925	COG0411
CDS	CSUB_C1458	+	1423135	1423836	branched-chain amino acid ABC transporter ATP-binding protein	E	233	arCOG00924	COG0410
CDS	CSUB_C1459	-	1423829	1424449	HAD-superfamily hydrolase	R	206	arCOG02291	COG1011

CDS	CSUB_C1460	-	1424446	1425456	glyceraldehyde-3-phosphate dehydrogenase	G	336	arCOG00493	COG0057
CDS	CSUB_C1461	-	1425453	1426673	phosphoglycerate kinase	G	406	arCOG00496	COG0126
tRNA	CSUB_T38	+	1426751	1426824	tRNA-Ala				
CDS	CSUB_C1462	+	1426858	1427979	glucose sorbose dehydrogenase	G	373	arCOG02796	COG2133
CDS	CSUB_C1463	-	1427969	1428226	hypothetical protein	S	85		
CDS	CSUB_C1464	-	1428255	1428506	hypothetical protein	S	83		
CDS	CSUB_C1465	+	1428524	1430992	aminopeptidase N	E	822	arCOG02969	COG0308
CDS	CSUB_C1466	-	1431076	1431474	signal-transduction protein	R	132	arCOG00606	COG0517
CDS	CSUB_C1467	-	1431494	1432288	4-nitrophenyl phosphatase	G	264	arCOG04221	COG0647
CDS	CSUB_C1468	-	1432296	1432745	transcriptional regulator, Irp family	K	149	arCOG01580	COG1522
CDS	CSUB_C1469	+	1432851	1433903	conserved hypothetical protein	I	350	arCOG01767	COG3425
CDS	CSUB_C1470	+	1433908	1435062	acetyl-CoA C-acetyltransferase	V	384	arCOG01278	COG0183
CDS	CSUB_C1471	+	1435040	1435462	nucleic-acid-binding protein	I	140	arCOG01285	COG1545
CDS	CSUB_C1472	-	1435459	1436253	hypothetical protein	S	264		
CDS	CSUB_C1473	-	1436285	1436893	26S proteasome regulatory subunit N11-like protein	R	202		
CDS	CSUB_C1474	+	1437034	1437297	ubiquitin-like protein	O	87		
CDS	CSUB_C1475	+	1437269	1437775	ubiquitin-conjugating enzyme E2-like protein	O	168		
CDS	CSUB_C1476	+	1437775	1438959	ubiquitin-activating enzyme E1-like protein	O	394		
CDS	CSUB_C1477	+	1438943	1439170	hypothetical protein	S	75		
CDS	CSUB_C1478	+	1439172	1439483	hypothetical protein	S	103		
CDS	CSUB_C1479	-	1439478	1440332	hypothetical protein	S	284	arCOG00372	
CDS	CSUB_C1480	+	1440379	1441131	hypothetical protein	S	250		
CDS	CSUB_C1481	+	1441143	1442591	glycyl-tRNA synthetase	J	482	arCOG00405	COG0423
CDS	CSUB_C1482	+	1442613	1442987	NADH dehydrogenase I subunit A	C	124	arCOG01557	COG0838
CDS	CSUB_C1483	+	1442992	1444023	NADH dehydrogenase I subunit H	C	343	arCOG01546	COG1005
CDS	CSUB_C1484	-	1444020	1444376	hypothetical protein	S	118		
CDS	CSUB_C1485	-	1444379	1445287	hypothetical protein	C	302	arCOG01543	COG1143
CDS	CSUB_C1486	-	1445578	1447152	cytochrome c oxidase subunit I	C	524	arCOG01237	COG0843
CDS	CSUB_C1487	-	1447149	1447565	cytochrome c oxidase subunit II	C	138	arCOG01235	COG1622
CDS	CSUB_C1488	-	1447570	1447803	conserved hypothetical protein	S	77	arCOG07020	
CDS	CSUB_C1489	-	1447796	1448254	cytochrome AA3 controlling protein	O	152	arCOG03103	COG1612
CDS	CSUB_C1490	-	1448282	1449169	luciferase family protein	C	295	arCOG02410	COG2141
CDS	CSUB_C1491	-	1449166	1450527	phosphomethylpyrimidine kinase	H	453	arCOG00020	COG0351
CDS	CSUB_C1492	-	1450514	1451779	conserved hypothetical protein	S	421		
CDS	CSUB_C1493	-	1451791	1452345	conserved hypothetical protein	S	184	arCOG04316	
CDS	CSUB_C1494	-	1452342	1452923	conserved hypothetical protein	S	193	arCOG04317	COG4732
CDS	CSUB_C1495	-	1453109	1453375	conserved hypothetical protein	M	88	arCOG00894	COG0463
CDS	CSUB_C1496	-	1453380	1454471	DNA polymerase IV	L	363	arCOG04582	COG0389
CDS	CSUB_C1497	+	1454525	1455478	acetoin utilization protein AcuC	R	317	arCOG00324	COG0123
CDS	CSUB_C1498	+	1455462	1456094	conserved hypothetical protein	L	210	arCOG00928	COG1628
CDS	CSUB_C1499	-	1456026	1457075	bifunctional protein GlmU	M	349	arCOG00666	COG1208
CDS	CSUB_C1500	+	1457117	1458124	diphthine synthase	J	335	arCOG04161	COG1798
CDS	CSUB_C1501	+	1458121	1458576	glycerol-3-phosphate cytidylyltransferase	M	151	arCOG01222	COG0615
CDS	CSUB_C1502	-	1458669	1459268	riboflavin kinase, archaea type	K	199	arCOG01904	COG1339
CDS	CSUB_C1503	-	1459349	1459954	proteasome beta subunit	O	201	arCOG00970	COG0638
CDS	CSUB_C1504	+	1460040	1461122	RNA 3'-terminal phosphate cyclase	J	360	arCOG04125	COG0430
CDS	CSUB_C1505	+	1461141	1461656	nicotinamide-nucleotide adenylyltransferase	H	171	arCOG00972	COG1056
CDS	CSUB_C1506	-	1461640	1462431	conserved hypothetical protein	S	263	arCOG04309	COG1912
CDS	CSUB_C1507	+	1462465	1462821	peptidyl-tRNA hydrolase, PTH2 family	J	118	arCOG04228	COG1990
CDS	CSUB_C1508	+	1462833	1463516	rhomboid family protein	E	227	arCOG01768	COG0705
CDS	CSUB_C1509	+	1463707	1464213	NADH dehydrogenase I subunit B	C	168	arCOG01554	COG0377
CDS	CSUB_C1510	+	1464213	1464698	NADH dehydrogenase I subunit C	C	161	arCOG01551	COG0852
CDS	CSUB_C1511	+	1464711	1465928	NADH dehydrogenase I subunit D	C	405	arCOG01548	COG0649
CDS	CSUB_C1512	-	1465931	1468414	DNA polymerase I, family B	L	827	arCOG00328	COG0417
CDS	CSUB_C1513	-	1468439	1469326	agmatinase	E	295	arCOG01700	COG0010
CDS	CSUB_C1514	+	1469374	1471587	hypothetical protein	S	737		
CDS	CSUB_C1515	-	1471580	1472035	conserved hypothetical protein	S	151	arCOG02285	COG3270
CDS	CSUB_C1516	-	1472045	1473007	tRNA and rRNA cytosine-C5-methylases	J	320	arCOG00973	COG0144
CDS	CSUB_C1517	-	1472974	1473597	N-glycosylase/DNA lyase	L	207	arCOG04357	COG1059
CDS	CSUB_C1518	-	1473594	1475060	conserved hypothetical protein	L	488	arCOG00280	COG0433
CDS	CSUB_C1519	-	1475068	1476156	hypothetical protein	S	362		
CDS	CSUB_C1520	+	1476157	1476561	conserved hypothetical protein	S	134		
CDS	CSUB_C1521	-	1476531	1477010	hypothetical protein	S	159		
CDS	CSUB_C1522	-	1477011	1477481	hypothetical protein	S	156		
CDS	CSUB_C1523	+	1477519	1477797	conserved hypothetical protein	K	92	arCOG04189	COG5625
CDS	CSUB_C1524	-	1477798	1478007	hypothetical protein	S	69		
CDS	CSUB_C1525	-	1478032	1479231	coenzyme F420-dependent hydrogenase beta subunit	C	399	arCOG02650	COG1035
CDS	CSUB_C1526	-	1479270	1479812	conserved hypothetical protein	S	180	arCOG07179	
tRNA	CSUB_T39	-	1479835	1479909	tRNA-Ile				
CDS	CSUB_C1527	+	1480023	1480448	ferredoxin	C	141	arCOG04548	COG1146
CDS	CSUB_C1528	+	1480483	1481163	conserved hypothetical protein	R	226	arCOG04250	COG3382
tRNA	CSUB_T40	-	1481167	1481241	tRNA-Glu				
CDS	CSUB_C1529	+	1481323	1481778	conserved hypothetical protein	R	151	arCOG00606	COG0517
CDS	CSUB_C1530	-	1481770	1483542	aldehyde:ferredoxin oxidoreductase	C	590	arCOG00706	COG2414
CDS	CSUB_C1531	+	1483599	1484570	aldo/keto reductase	R	323	arCOG01618	COG0656
CDS	CSUB_C1532	+	1484605	1485438	hypothetical protein	S	277		
CDS	CSUB_C1533	-	1485418	1485753	hypothetical protein	S	111		
CDS	CSUB_C1534	-	1485840	1486217	hypothetical protein	S	125		
CDS	CSUB_C1535	-	1486224	1486628	hypothetical protein	S	134		
CDS	CSUB_C1536	-	1486715	1487116	hypothetical protein	O	133	arCOG01832	COG0071
CDS	CSUB_C1537	-	1487123	1487872	conserved hypothetical protein	R	249	arCOG00347	COG1938
CDS	CSUB_C1538	+	1487963	1489966	acetyl-CoA synthetase	I	667	arCOG04201	COG0365
CDS	CSUB_C1539	+	1489956	1490681	5-formyltetrahydrofolate cyclo-ligase	H	241	arCOG00474	COG0212
CDS	CSUB_C1540	-	1490662	1491678	mannose-6-phosphate isomerase / glucose-6-phosphate isomerase	G	338	arCOG00052	COG0166
CDS	CSUB_C1541	-	1491703	1492497	competence/damage-inducible protein CinA	R	264	arCOG00215	COG1058
CDS	CSUB_C1542	-	1492503	1493156	conserved hypothetical protein	R	217	arCOG01145	COG2129
CDS	CSUB_C1543	+	1493236	1493814	hypothetical protein	R	192	arCOG00606	COG0517
CDS	CSUB_C1544	+	1493811	1494755	D-isomer specific 2-hydroxyacid dehydrogenase, NAD-binding	C	314	arCOG01756	COG1052
tRNA	CSUB_T41	+	1494783	1494890	tRNA-Ser				
CDS	CSUB_C1545	-	1494946	1495296	transcriptional regulator, MarR family	K	116	arCOG01057	COG1733
CDS	CSUB_C1546	+	1495332	1495844	conserved hypothetical protein	S	170		
CDS	CSUB_C1547	+	1495883	1496389	DtxR family iron dependent repressor	K	168	arCOG02100	COG1321
CDS	CSUB_C1548	+	1496453	1497841	2-isopropylmalate synthase	E	462	arCOG02092	COG0119
CDS	CSUB_C1549	-	1497838	1498260	signal-transduction protein	R	140	arCOG00606	COG0517
CDS	CSUB_C1550	+	1498262	1498564	large subunit ribosomal protein L44e	J	100	arCOG04109	COG1631
CDS	CSUB_C1551	+	1498608	1498808	small subunit ribosomal protein S27e	J	66	arCOG04108	COG2051
CDS	CSUB_C1552	+	1498801	1499565	translation initiation factor eIF-2 alpha subunit	J	254	arCOG04107	COG1093
CDS	CSUB_C1553	-	1499552	1499884	hypothetical protein	S	110		
CDS	CSUB_C1554	+	1499929	1500681	hypothetical protein	R	250	arCOG02050	COG0730
CDS	CSUB_C1555	-	1500676	1501308	peptidase M50	R	210	arCOG00614	COG1994
CDS	CSUB_C1556	+	1501501	1501926	conserved hypothetical protein	O	141	arCOG01832	COG0071
CDS	CSUB_C1557	+	1501930	1503519	ATP dependent DNA ligase I	L	529	arCOG01347	COG1793
CDS	CSUB_C1558	+	1503586	1504161	hypothetical protein	S	191		
CDS	CSUB_C1559	+	1504369	1504734	methionyl-tRNA synthetase	R	121	arCOG01136	COG0073
CDS	CSUB_C1560	+	1504768	1506057	asparaginyl-tRNA synthetase	J	429	arCOG00407	COG0017
CDS	CSUB_C1561	+	1506054	1506608	conserved hypothetical protein	J	184	arCOG00109	COG2890
CDS	CSUB_C1562	+	1506618	1508492	basic amino acid/polyamine antiporter, APA family	E	624	arCOG00009	COG0531

CDS	CSUB_C1563	+	1508494	1508769	transcriptional regulator, AsnC family	K	91	arCOG01580	COG1522
CDS	CSUB_C1564	-	1509037	1510275	molybdopterin biosynthesis protein MoeA	H	412	arCOG00216	COG0303
CDS	CSUB_C1565	+	1510332	1511183	carbon monoxide dehydrogenase F protein	R	283	arCOG01929	COG1975
CDS	CSUB_C1566	-	1511152	1512300	VWA containing CoxE family protein	O	382	arCOG06502	COG3552
CDS	CSUB_C1567	+	1512303	1513172	ATPase	R	289	arCOG00441	COG0714
CDS	CSUB_C1568	-	1513265	1514140	molybdopterin dehydrogenase FAD-binding	C	291	arCOG01926	COG1319
CDS	CSUB_C1569	+	1514151	1514690	(2Fe-2S)-binding domain protein	C	179	arCOG01925	COG2080
CDS	CSUB_C1570	+	1514695	1515150	carbon monoxide dehydrogenase subunit G like protein	C	151	arCOG01927	COG3427
CDS	CSUB_C1571	+	1515206	1517392	elongation factor EF-2	J	728	arCOG01559	COG0480
CDS	CSUB_C1572	-	1517396	1518295	conserved hypothetical protein	S	299	arCOG01159	COG1340
CDS	CSUB_C1573	-	1518292	1519062	conserved hypothetical protein	R	256	arCOG01225	COG1100
CDS	CSUB_C1574	+	1519276	1520607	aspartyl-tRNA(Asn)/glutamyl-tRNA(Gln) amidotransferase subunit A	J	443	arCOG01717	COG0154
CDS	CSUB_C1575	+	1520898	1521632	proteasome alpha subunit	O	244	arCOG00971	COG0638
CDS	CSUB_C1576	+	1521644	1522342	conserved hypothetical protein	J	232	arCOG04187	COG1500
CDS	CSUB_C1577	+	1522344	1523015	exosome complex component RRP4	J	223	arCOG00678	COG1097
CDS	CSUB_C1578	+	1522984	1523724	exosome complex component RRP41	J	246	arCOG01575	COG0689
CDS	CSUB_C1579	+	1523733	1524548	exosome complex component RRP42	J	271	arCOG01574	COG2123
CDS	CSUB_C1580	+	1524532	1524762	large subunit ribosomal protein L37Ac	J	76	arCOG04208	COG1997
CDS	CSUB_C1581	+	1524763	1525014	conserved hypothetical protein	S	83	arCOG04414	COG2892
CDS	CSUB_C1582	+	1525007	1525372	prefoldin beta subunit	O	121	arCOG01342	COG1382
CDS	CSUB_C1583	+	1525417	1526424	conserved hypothetical protein	R	335	arCOG01565	COG0618
CDS	CSUB_C1584	+	1526428	1527276	cobalt/nickel ABC transporter ATP-binding protein	P	282	arCOG00188	COG1122
CDS	CSUB_C1585	+	1527281	1528087	cobalt/nickel ABC transporter ATP-binding protein	P	268	arCOG00202	COG1122
CDS	CSUB_C1586	+	1528074	1528871	cobalt/nickel ABC transporter permease	P	265	arCOG02250	COG0619
CDS	CSUB_C1587	-	1528868	1529431	transcription initiation factor TFIIID TATA-box-binding protein	K	187	arCOG01764	COG2101
CDS	CSUB_C1588	-	1529454	1530131	lipoyl(octanoyl) transferase	H	225	arCOG01942	COG0321
CDS	CSUB_C1589	-	1530118	1531497	dihydroliipoamide dehydrogenase	C	459	arCOG01068	COG1249
CDS	CSUB_C1590	-	1531511	1532485	2-oxoisovalerate dehydrogenase E1 component, beta subunit	C	324	arCOG01052	COG0022
CDS	CSUB_C1591	-	1532491	1533366	lipoic acid synthetase	H	291	arCOG00660	COG0320
CDS	CSUB_C1592	+	1533433	1533876	NUDX hydrolase	L	147	arCOG01078	COG0494
CDS	CSUB_C1593	+	1533903	1535600	hypothetical protein	S	565		
CDS	CSUB_C1594	+	1535644	1535943	conserved hypothetical protein	S	99	arCOG05464	
CDS	CSUB_C1595	+	1535943	1536707	F420-O-gamma-glutamyl ligase	H	254	arCOG02714	COG1478
CDS	CSUB_C1596	+	1536781	1537401	conserved hypothetical protein	S	206	arCOG03727	
CDS	CSUB_C1597	+	1537403	1537894	histidine triad (HIT) protein (hit)	F	163	arCOG00419	COG0537
CDS	CSUB_C1598	-	1537872	1538885	tRNA-modifying enzyme	C	337	arCOG04174	COG0731
CDS	CSUB_C1599	+	1538935	1539804	conserved hypothetical protein	G	289	arCOG00016	COG0524
CDS	CSUB_C1600	-	1539743	1540051	conserved hypothetical protein	S	102	arCOG04886	
CDS	CSUB_C1601	-	1540476	1540928	S-adenosylmethionine decarboxylase	E	150	arCOG00279	COG1586
CDS	CSUB_C1602	+	1541062	1541502	molybdenum cofactor biosynthesis protein E	H	146	arCOG00534	COG0314
CDS	CSUB_C1603	+	1541484	1541813	molybdenum cofactor biosynthesis protein D	H	109	arCOG00536	COG1977
CDS	CSUB_C1604	-	1541774	1542292	dCTP deaminase	F	172	arCOG04048	COG0717
CDS	CSUB_C1605	-	1542317	1543105	conserved hypothetical protein	R	262	arCOG00500	COG1234
CDS	CSUB_C1606	-	1543102	1543626	molybdenum cofactor biosynthesis protein B	H	174	arCOG00214	COG0521
CDS	CSUB_C1607	-	1543613	1544041	molybdenum cofactor biosynthesis protein C	H	142	arCOG01530	COG0315
CDS	CSUB_C1608	-	1544100	1544543	small subunit ribosomal protein S11	J	147	arCOG04240	COG0100
CDS	CSUB_C1609	-	1544588	1545100	small subunit ribosomal protein S4	J	170	arCOG04239	COG0522
CDS	CSUB_C1610	+	1545168	1546307	geranylgeranyl reductase	C	379	arCOG00570	COG0644
CDS	CSUB_C1611	-	1546282	1547592	peptidase M20	E	436	arCOG01110	COG0624
CDS	CSUB_C1612	+	1547679	1548269	isochorismatase	Q	196	arCOG01943	COG1335
CDS	CSUB_C1613	+	1548266	1549477	nicotinate phosphoribosyltransferase	H	403	arCOG01481	COG1488
CDS	CSUB_C1614	-	1549467	1550864	fumarate hydratase, class II	C	465	arCOG01749	COG0114
CDS	CSUB_C1615	-	1550895	1551926	glycerol-1-phosphate dehydrogenase [NAD(P)]	C	343	arCOG00982	COG0371
CDS	CSUB_C1616	+	1551979	1552809	conserved hypothetical protein	S	276	arCOG00021	COG1992
CDS	CSUB_C1617	-	1552907	1553278	conserved hypothetical protein	R	123	arCOG00017	COG2522
CDS	CSUB_C1618	-	1553324	1554127	conserved hypothetical protein	S	267	arCOG01616	COG1650
CDS	CSUB_C1619	+	1554160	1555011	SAM-dependent methyltransferase	R	283	arCOG00054	COG2521
CDS	CSUB_C1620	+	1555038	1556666	lysyl-tRNA synthetase, class I	J	542	arCOG00485	COG1384
CDS	CSUB_C1621	+	1556663	1557091	replication factor A1	L	142	arCOG01510	COG1599
CDS	CSUB_C1622	-	1557084	1558352	membrane-bound serine protease NfeD	O	422	arCOG01910	COG1030
CDS	CSUB_C1623	-	1558349	1559161	membrane protease subunit	O	270	arCOG01915	COG0330
CDS	CSUB_C1624	+	1559380	1560735	conserved hypothetical protein	S	451		
CDS	CSUB_C1625	+	1560742	1561119	hypothetical protein	S	125		
CDS	CSUB_C1626	+	1561119	1561547	conserved hypothetical protein	L	142	arCOG00919	COG1591
CDS	CSUB_C1627	+	1561537	1561983	transcriptional regulator, AsnC family	K	148	arCOG01580	COG1522
CDS	CSUB_C1628	+	1562144	1563319	serine hydroxymethyltransferase	E	391	arCOG00070	COG0112
CDS	CSUB_C1629	+	1563332	1564294	diphosphomevalonate decarboxylase	I	320	arCOG02937	COG3407
CDS	CSUB_C1630	+	1564337	1564510	hypothetical protein	S	57		
CDS	CSUB_C1631	-	1564507	1564782	conserved hypothetical protein	K	91	arCOG01055	COG3432
CDS	CSUB_C1632	-	1564766	1565395	hypothetical protein	S	209		
CDS	CSUB_C1633	-	1565413	1565913	hypothetical protein	S	166		
CDS	CSUB_C1634	-	1565953	1566921	2-oxoglutarate ferredoxin oxidoreductase subunit beta	C	322	arCOG01599	COG1013
CDS	CSUB_C1635	-	1566932	1568887	2-oxoglutarate ferredoxin oxidoreductase subunit alpha	C	651	arCOG01606	COG0674
CDS	CSUB_C1636	-	1568938	1569513	small heat shock protein HSP20	O	191	arCOG01833	COG0071
CDS	CSUB_C1637	+	1569571	1570725	glycosyl transferase family 2	M	384	arCOG01390	COG0463
CDS	CSUB_C1638	-	1570706	1571653	modification methyltransferase	L	315	arCOG00890	COG0863
CDS	CSUB_C1639	-	1571837	1572349	protease I	R	170	arCOG00769	COG0693
CDS	CSUB_C1640	+	1572372	1572725	conserved hypothetical protein	R	117	arCOG01845	COG2151
CDS	CSUB_C1641	+	1572761	1575088	valyl tRNA-synthetase	J	775	arCOG00808	COG0525
CDS	CSUB_C1642	+	1575085	1575573	conserved hypothetical protein	F	162	arCOG01075	COG1051
CDS	CSUB_C1643	-	1575500	1576720	hypothetical protein	S	406		
CDS	CSUB_C1644	+	1576823	1577686	hypothetical protein	S	287		
CDS	CSUB_C1645	+	1577713	1578558	protoheme IX farnesyltransferase	O	281	arCOG00479	COG0109
CDS	CSUB_C1646	-	1578553	1579263	sugar fermentation stimulation protein A	R	236	arCOG04115	COG1489
CDS	CSUB_C1647	-	1579250	1580392	citrate synthase	C	380	arCOG04237	COG0372
CDS	CSUB_C1648	-	1580430	1582136	long-chain-fatty-acid-CoA ligase	I	568	arCOG00856	COG0318
CDS	CSUB_C1649	+	1582209	1582571	conserved hypothetical protein	S	120		
CDS	CSUB_C1650	-	1582548	1583330	SAM-dependent methyltransferase	J	260	arCOG00033	COG2520
CDS	CSUB_C1651	+	1583395	1583760	small subunit ribosomal protein S25c	J	121	arCOG04327	COG4901
CDS	CSUB_C1652	-	1583729	1584103	conserved hypothetical protein	S	124	arCOG04488	COG2164
CDS	CSUB_C1653	-	1584100	1585329	phosphoglycerate mutase	G	409	arCOG01696	COG3635
CDS	CSUB_C1654	+	1585399	1586361	DNA repair protein RadA	L	320	arCOG00415	COG0468
CDS	CSUB_C1655	+	1586362	1586730	hypothetical protein	S	122		
CDS	CSUB_C1656	-	1586702	1586977	hypothetical protein	R	91		
CDS	CSUB_C1657	+	1587044	1588930	conserved hypothetical protein	K	628	arCOG01695	COG1293
CDS	CSUB_C1658	+	1588936	1589526	CBS-domain-containing protein	R	196	arCOG00606	COG0517
CDS	CSUB_C1659	+	1589523	1589960	conserved hypothetical protein	R	145	arCOG04290	COG1656
CDS	CSUB_C1660	+	1589968	1590618	conserved hypothetical protein	S	216	arCOG01336	COG2078
CDS	CSUB_C1661	+	1590551	1591699	glycosyltransferase family 28	G	382	arCOG01393	COG1819
CDS	CSUB_C1662	+	1591749	1592267	conserved hypothetical protein	S	172	arCOG05379	COG4754
CDS	CSUB_C1663	-	1592251	1593012	sulfonate/nitrate/taurine ABC transporter ATP binding protein	P	253	arCOG00193	COG1116
CDS	CSUB_C1664	-	1593051	1594604	sulfonate/nitrate/taurine ABC transporter permease	P	517	arCOG00174	COG4986
CDS	CSUB_C1665	-	1594632	1595570	octapentyl-diphosphate synthase	H	312	arCOG01726	COG0142
CDS	CSUB_C1666	-	1595612	1596019	thioredoxin I	O	135	arCOG01972	COG0526
CDS	CSUB_C1667	+	1596098	1596382	hypothetical protein	S	94		
tRNA	CSUB_T42	+	1596424	1596497	tRNA-Thr				
CDS	CSUB_C1668	-	1596502	1597584	histidinol-phosphate aminotransferase	E	360	arCOG04273	COG0079



tRNA	CSUB_T43	+	1597664	1597738	tRNA-Lys						
CDS	CSUB_C1669	+	1598082	1598588	transcription factor E	K	168	arCOG04270	COG1675		
CDS	CSUB_C1670	+	1598585	1599151	conserved hypothetical protein	R	188	arCOG01857	COG1303		
CDS	CSUB_C1671	-	1599110	1601149	V-type H <sup>+</sup> -transporting ATPase subunit I	C	679	arCOG04138	COG1269		
CDS	CSUB_C1672	+	1601261	1601509	hypothetical protein	S	82				
CDS	CSUB_C1673	+	1601506	1601766	hypothetical protein	S	86				
CDS	CSUB_C1674	+	1601768	1602085	NADH dehydrogenase I subunit K	P	105	arCOG03072	COG1006		
CDS	CSUB_C1675	-	1602082	1602738	hypothetical protein	S	218				
CDS	CSUB_C1676	-	1602735	1603493	calcineurin superfamily phosphohydrolase	R	252	arCOG01153	COG1409		
CDS	CSUB_C1677	+	1603594	1604037	coenzyme A-binding protein	R	147	arCOG04227	COG1832		
CDS	CSUB_C1678	+	1604074	1605156	pyruvate formate-lyase activating enzyme	O	360	arCOG00946	COG1180		
tRNA	CSUB_T44	-	1605156	1605281	tRNA-Thr						
CDS	CSUB_C1679	-	1605595	1606407	hypothetical protein	S	270				
CDS	CSUB_C1680	+	1607046	1608452	hypothetical protein	F	468	arCOG01883	COG1351		
CDS	CSUB_C1681	+	1608449	1608919	6-pyruvoyl tetrahydrobiopterin synthase	H	156	arCOG02172	COG0720		
CDS	CSUB_C1682	+	1608916	1609566	transcription regulator ExsB related protein	R	216	arCOG00039	COG0603		
CDS	CSUB_C1683	+	1609602	1610405	NAD <sup>+</sup> kinase	H	267	arCOG01348	COG0061		
CDS	CSUB_C1684	+	1610392	1610898	conserved hypothetical protein	V	168	arCOG00721	COG1439		
CDS	CSUB_C1685	-	1610885	1611439	conserved hypothetical protein	S	184	arCOG02008	COG3371		
CDS	CSUB_C1686	+	1611549	1612082	hypothetical protein	S	177				
CDS	CSUB_C1687	+	1612130	1612510	hypothetical protein	S	126				
CDS	CSUB_C1688	+	1612558	1614090	GMP synthase (glutamine-hydrolysing)	F	510	arCOG00085	COG0519		
CDS	CSUB_C1689	-	1614092	1614898	enoyl-CoA hydratase	I	268	arCOG00239	COG1024		
CDS	CSUB_C1690	-	1614951	1615478	hypothetical protein	S	175				
CDS	CSUB_C1691	+	1615633	1616031	S-adenosylmethionine decarboxylase	E	132	arCOG00279	COG1586		
CDS	CSUB_C1692	+	1616024	1616935	spermidine synthase	S	303	arCOG00050	COG0421		
CDS	CSUB_C1693	-	1616974	1617618	phosphonate ABC transporter permease	P	214	arCOG00173	COG3639		
CDS	CSUB_C1694	-	1617748	1618464	phosphonate ABC transporter ATP-binding protein	L	238	arCOG00206	COG3638		
CDS	CSUB_C1695	-	1618466	1619422	phosphonate ABC transporter substrate-binding protein	P	318	arCOG01805	COG3221		
CDS	CSUB_C1696	+	1619529	1620272	conserved hypothetical protein	R	247	arCOG00017	COG2522		
CDS	CSUB_C1697	-	1620238	1621071	manganese/iron ABC transporter permease	P	277	arCOG01006	COG1108		
CDS	CSUB_C1698	-	1621062	1621817	ABC transporter ATP-binding protein	P	251	arCOG00201	COG1121		
CDS	CSUB_C1699	-	1621814	1622737	manganese/iron ABC transporter substrate-binding protein	P	307	arCOG01005	COG0803		
CDS	CSUB_C1700	+	1622837	1623985	DNA primase	L	382	arCOG04281	COG3358		
CDS	CSUB_C1701	-	1623968	1625047	conserved hypothetical protein	R	359	arCOG01741	COG1537		
CDS	CSUB_C1702	+	1625132	1625830	maleate isomerase	Q	232	arCOG02004	COG3473		
CDS	CSUB_C1703	+	1625837	1627888	N-methylhydantoinase A	E	683	arCOG01511	COG0145		
CDS	CSUB_C1704	+	1627885	1629453	N-methylhydantoinase B	E	522	arCOG01512	COG0146		
CDS	CSUB_C1705	+	1629474	1630082	small subunit ribosomal protein S7	J	202	arCOG04254	COG0049		
CDS	CSUB_C1706	-	1630079	1631647	phosphoenolpyruvate carboxylase	G	522	arCOG04435	COG1892		
CDS	CSUB_C1707	-	1631650	1632624	simple sugar ABC transporter permease	R	324	arCOG00261	COG1079		
CDS	CSUB_C1708	-	1632621	1633685	simple sugar transporter permease	R	354	arCOG00260	COG4603		
CDS	CSUB_C1709	-	1633686	1635218	simple sugar transporter ATP-binding protein	R	510	arCOG00186	COG3845		
CDS	CSUB_C1710	-	1635263	1636612	simple sugar ABC transporter substrate-binding protein	R	449	arCOG00257	COG1744		
CDS	CSUB_C1711	-	1636643	1638433	adenine deaminase	F	596	arCOG00693	COG1001		
CDS	CSUB_C1712	+	1638503	1639510	F420-dependent N5,N10-methylenetetrahydrodromethanopterin reductase	C	335	arCOG02410	COG2141		
CDS	CSUB_C1713	+	1639514	1640746	conserved hypothetical protein	F	410	arCOG00695	COG0402		
CDS	CSUB_C1714	+	1640879	1641712	carbon monoxide dehydrogenase medium subunit	C	277	arCOG01926	COG1319		
CDS	CSUB_C1715	+	1641719	1642174	carbon-monoxide dehydrogenase small subunit	C	151	arCOG01925	COG2080		
CDS	CSUB_C1716	+	1642171	1644495	carbon-monoxide dehydrogenase large subunit	C	774	arCOG01167	COG1529		
CDS	CSUB_C1717	+	1644750	1645046	conserved hypothetical protein	E	98	arCOG01199	COG1708		
CDS	CSUB_C1718	+	1645209	1646228	ornithine carbamoyltransferase	R	339	arCOG00912	COG0078		
CDS	CSUB_C1719	-	1646225	1647181	carbamate kinase	E	318	arCOG00863	COG0549		
CDS	CSUB_C1720	-	1647199	1648443	threonine synthase	E	414	arCOG01434	COG0498		
CDS	CSUB_C1721	-	1648448	1648879	conserved hypothetical protein	R	143	arCOG01688	COG1719		
CDS	CSUB_C1722	-	1648953	1649981	cysteine synthase A	E	342	arCOG01430	COG0031		
CDS	CSUB_C1723	-	1649978	1650871	ornithine carbamoyltransferase	E	297	arCOG00912	COG0078		
CDS	CSUB_C1724	-	1651080	1652333	conserved hypothetical protein	H	417	arCOG00480	COG1575		
CDS	CSUB_C1725	-	1652402	1652845	hypothetical protein	S	147				
CDS	CSUB_C1726	-	1652927	1654033	major facilitator superfamily MFS	G	368	arCOG00130	COG0477		
CDS	CSUB_C1727	-	1654071	1655471	V-type H <sup>+</sup> -transporting ATPase subunit B	C	466	arCOG00865	COG1156		
CDS	CSUB_C1728	-	1655468	1657258	V-type H <sup>+</sup> -transporting ATPase subunit A	C	596	arCOG00868	COG1155		
CDS	CSUB_C1729	+	1657361	1658338	ABC transporter ATP-binding protein	V	325	arCOG00194	COG1131		
CDS	CSUB_C1730	+	1658316	1659134	ABC-2 type transport system protein	V	272	arCOG01465	COG0842		
CDS	CSUB_C1731	+	1659125	1659964	conserved hypothetical protein	S	279				
CDS	CSUB_C1732	+	1659997	1661016	L-iditol 2-dehydrogenase	E	339	arCOG01459	COG1063		
CDS	CSUB_C1733	-	1661013	1662113	dehydrogenase	E	366	arCOG01459	COG1063		
rRNA	CSUB_R02	-	1662154	1663645	16S ribosomal RNA						
CDS	CSUB_C1734	+	1663852	1664370	conserved hypothetical protein	S	172	arCOG04332	COG2606		
CDS	CSUB_C1735	+	1664741	1665472	conserved hypothetical protein	R	243	arCOG02050	COG0730		
CDS	CSUB_C1736	-	1665571	1666071	hypothetical protein	S	166				
tRNA	CSUB_T45	+	1666774	1666874	tRNA-Trp						
CDS	CSUB_C1737	+	1666940	1667638	transcriptional regulator	K	232	arCOG04060	COG1709		
CDS	CSUB_C1738	-	1667628	1668065	hypothetical protein	S	145				
CDS	CSUB_C1739	-	1668066	1670861	conserved hypothetical protein	E	931	arCOG06128	COG1615		
CDS	CSUB_C1740	+	1670938	1672623	acetolactate synthase I/II/III large subunit	S	561	arCOG03657	COG0028		
CDS	CSUB_C1741	-	1672607	1674145	conserved hypothetical protein	S	512				
CDS	CSUB_C1742	+	1674219	1675541	hypothetical protein	S	440				
CDS	CSUB_C1743	+	1675548	1676702	hypothetical protein	S	384				
CDS	CSUB_C1744	-	1676699	1677127	hypothetical protein	S	142				
CDS	CSUB_C1745	-	1677146	1679539	carbon monoxide dehydrogenase large subunit	C	797	arCOG01167	COG1529		
CDS	CSUB_C1746	-	1679553	1680224	conserved hypothetical protein	S	223	arCOG01879			
CDS	CSUB_C1747	+	1680279	1680572	MazG nucleotide pyrophosphohydrolase	R	97	arCOG01084	COG1694		
CDS	CSUB_C1748	-	1680569	1680802	sec-independent protein translocase protein TatA	U	77	arCOG02694	COG1826		
tRNA	CSUB_T46	+	1680857	1680930	tRNA-Val						