

Supplementary Table S1. List of the genes categorized into orthologous group shared among 6 bacilli

I.D.	GK gene	position (from)	position (to)	category	product
ACHSKI-1	GK0001	88	1440	3.1	chromosomal replication initiator protein
ACHSKI-2	GK0002	1613	2749	3.1	DNA-directed DNA polymerase III (EC 2.7.7.7) beta subunit
ACHSKI-3	GK0003	2947	3168	5	unknown conserved protein
ACHSKI-4	GK0004	3180	4298	3.3	DNA replication and repair protein
ACHSKI-5	GK0005	4351	6267	3.4	DNA gyrase subunit B
ACHSKI-6	GK0006	6418	8874	3.4	DNA gyrase subunit A
ACHSKI-7	GK0009	16969	18435	2.3	inositol-monophosphate dehydrogenase (EC 1.1.1.205)
ACHSKI-8	GK0010	18540	19898	1.1	serine-type D-Ala-D-Ala carboxypeptidase (EC 3.4.16.4)
ACHSKI-9	GK0011	20029	20913	4.2	superoxide-inducible protein (protein required for pyridoxine synthesis)
ACHSKI-10	GK0012	20938	21528	2.2	2-deoxy-scyllo-inosose synthase 20kDa subunit
ACHSKI-11	GK0013	21813	23087	3.7.2	seryl-tRNA synthetase (EC 6.1.1.11)
ACHSKI-12	GK0014	23309	24595	1.8	spore peptidoglycan hydrolase (N-acetylglucosaminidase)
ACHSKI-13	GK0016	26394	26891	5	unknown conserved protein
ACHSKI-14	GK0017	27312	28991	3.1	DNA-directed DNA polymerase III (EC 2.7.7.7) gamma and tau subunits
ACHSKI-15	GK0018	29015	29341	5	unknown conserved protein
ACHSKI-16	GK0019	29351	29947	3.3	DNA repair and genetic recombination protein
ACHSKI-17	GK0020	29959	30195	5	unknown conserved protein
ACHSKI-18	GK0021	30274	30537	1.8	inhibitor of the pro-sigma K processing machinery
ACHSKI-19	GK0022	36442	36648	5	unknown conserved protein
ACHSKI-20	GK0023	36819	38252	2.2	lysine decarboxylase
ACHSKI-21	GK0024	38267	38911	2.3	thymidylate kinase (EC 2.7.4.9)
ACHSKI-22	GK0025	38997	39983	3.1	DNA-directed DNA polymerase III (EC 2.7.7.7) delta' subunit
ACHSKI-23	GK0026	39998	40825	1.6	signal peptidase II
ACHSKI-24	GK0027	40877	41203	5	unknown conserved protein
ACHSKI-25	GK0028	41267	42013	5	unknown conserved protein
ACHSKI-26	GK0029	42029	42940	5	unknown conserved protein
ACHSKI-27	GK0030	42957	43256	3.5.2	transition state regulator
ACHSKI-28	GK0031	43653	45605	3.7.2	methionyl-tRNA synthetase (Methionine--tRNA ligase) (EC 6.1.1.10)
ACHSKI-29	GK0032	45742	46512	2.3	deoxyribonuclease
ACHSKI-30	GK0033	46713	47918	5	unknown conserved protein
ACHSKI-31	GK0034	48191	48739	5	unknown conserved protein
ACHSKI-32	GK0035	48732	49613	4.2	dimethyladenosine transferase (EC 2.1.1.-)
ACHSKI-33	GK0036	49753	50652	5	unknown conserved protein
ACHSKI-34	GK0037	50835	51092	4.6	veg protein
ACHSKI-35	GK0038	51379	51537	1.8	small acid-soluble spore protein (minor alpha/beta-type SASP)
ACHSKI-36	GK0039	51760	52632	2.1.1	4-diphosphocytidyl-2-C-methyl-D-erythritol kinase (4-(cytidine-5'-diphospho)-2-C-methyl-D-erythritol kinase)
ACHSKI-37	GK0040	52688	53509	3.5.2	transcriptional repressor of the purine operon
ACHSKI-38	GK0041	53553	53927	3.7.3	translation initiation inhibitor
ACHSKI-39	GK0042	54053	54343	1.8	stage V sporulation protein G
ACHSKI-40	GK0043	54476	55852	1.1	UDP-N-acetylglucosamine pyrophosphorylase (EC 2.7.7.23)
ACHSKI-41	GK0044	55913	56812	2.3	ribose-phosphate pyrophosphokinase (phosphoribosyl pyrophosphate synthetase)
ACHSKI-42	GK0046	57583	58143	1.8	stage V sporulation protein C (peptidyl-tRNA hydrolase)
ACHSKI-43	GK0048	58574	62107	3.5.3	transcription-repair coupling factor
ACHSKI-44	GK0049	62316	62852	3.5.2	stage V sporulation protein T (transcriptional regulator)
ACHSKI-45	GK0050	63128	64678	1.2	amino acid transporter
ACHSKI-46	GK0051	64685	66145	5	unknown conserved protein
ACHSKI-47	GK0052	66159	66440	5	unknown conserved protein
ACHSKI-48	GK0053	66542	66868	5	unknown conserved protein
ACHSKI-49	GK0054	66865	67497	5	unknown conserved protein
ACHSKI-50	GK0055	67514	67885	1.7	cell-division initiation protein
ACHSKI-51	GK0056	68004	68402	2.3	polyribonucleotide nucleotidyltransferase

ACHSKI-52	GK0057	68934	71414	1.8	stage II sporulation protein E (serine phosphatase)
ACHSKI-53	GK0060	73226	74620	5	unknown conserved protein
ACHSKI-54	GK0061	74634	75215	2.3	hypoxanthine-guanine phosphoribosyltransferase (EC 2.4.2.8)
ACHSKI-55	GK0062	75273	77171	1.7	cell-division protein and general stress protein (class III heat-shock)
ACHSKI-56	GK0063	77299	78075	5	unknown conserved protein
ACHSKI-57	GK0064	78084	78974	4.1	chaperonin (heat shock protein 33) (HSP33)
ACHSKI-58	GK0065	79061	79987	2.2	cysteine synthase (O-acetyl-L-serine sulphydrylase) (EC 4.2.99.8)
ACHSKI-59	GK0067	81538	82104	2.5	para-aminobenzoate synthases component II (EC 4.1.3.-)
ACHSKI-60	GK0069	82985	83836	2.5	dihydropteroate synthase (EC 2.5.1.15)
ACHSKI-61	GK0070	83844	84188	2.5	dihydroneopterin aldolase (EC 4.1.2.25)
ACHSKI-62	GK0071	84189	84716	2.5	7,8-dihydro-6-hydroxymethylpterin pyrophosphokinase (2-amino-4-hydroxy-6-hydroxymethyldihydropteridine pyrophosphokinase) (EC 2.7.6.3)
ACHSKI-63	GK0074	85998	87482	3.7.2	lysyl-tRNA synthetase (lysine--tRNA ligase) (EC 6.1.1.6)
ACHSKI-64	GK0075	95070	95531	3.5.2	transcriptional regulator
ACHSKI-65	GK0076	95547	96095	5	unknown conserved protein
ACHSKI-66	GK0077	96101	97192	2.2	creatine kinase (EC 2.7.3.2)
ACHSKI-67	GK0078	97189	99621	4.1	ATP-dependent Clp protease (ATPase subunit)
ACHSKI-68	GK0079	99699	101072	3.2	DNA repair protein
ACHSKI-69	GK0080	101381	102475	5	unknown conserved protein
ACHSKI-70	GK0083	103876	105348	3.7.2	glutamyl-tRNA synthetase (glutamate--tRNA ligase) (EC 6.1.1.17)
ACHSKI-71	GK0084	105717	106391	2.2	serine O-acetyltransferase (EC 2.3.1.30)
ACHSKI-72	GK0085	106369	107769	3.7.2	cysteinyl-tRNA synthetase (EC 6.1.1.16)
ACHSKI-73	GK0086	107779	108201	5	unknown conserved protein
ACHSKI-74	GK0087	108201	108938	3.6	tRNA/tRNA methyltransferase
ACHSKI-75	GK0088	108942	109454	5	unknown conserved protein
ACHSKI-76	GK0089	109524	110174	3.5.1	DNA-directed RNA polymerase sigma-H factor (sigma-30)
ACHSKI-77	GK0091	110454	110639	1.6	preprotein translocase subunit
ACHSKI-78	GK0092	110752	111285	3.5.4	transcription antitermination factor
ACHSKI-79	GK0093	111520	111945	3.7.1	50S ribosomal protein L11 (BL11)
ACHSKI-80	GK0094	112126	112827	3.7.1	50S ribosomal protein L1
ACHSKI-81	GK0095	113086	113586	3.7.1	50S ribosomal protein L10
ACHSKI-82	GK0096	113638	114009	3.7.1	50S ribosomal protein L7/L12 (BL13)
ACHSKI-83	GK0097	113939	114724	5	unknown conserved protein
ACHSKI-84	GK0098	115138	118710	3.5.3	DNA-directed RNA polymerase beta subunit
ACHSKI-85	GK0099	118803	122402	3.5.3	DNA-directed RNA polymerase beta' subunit
ACHSKI-86	GK0101	122882	123304	3.7.1	30S ribosomal protein S12
ACHSKI-87	GK0102	123344	123814	3.7.1	30S ribosomal protein S7 (BS7)
ACHSKI-88	GK0103	123995	126073	3.7.4	translation elongation factor G (EF-G)
ACHSKI-89	GK0104	126202	127389	3.7.4	translation elongation factor Tu (EF-Tu)
ACHSKI-90	GK0105	127686	127994	3.7.1	30S ribosomal protein S10 (BS13)
ACHSKI-91	GK0106	128015	128656	3.7.1	50S ribosomal protein L3
ACHSKI-92	GK0107	128686	129309	3.7.1	50S ribosomal protein L4
ACHSKI-93	GK0108	129309	129596	3.7.1	50S ribosomal protein L23
ACHSKI-94	GK0109	129624	130454	3.7.1	50S ribosomal protein L2
ACHSKI-95	GK0110	130488	130766	3.7.1	30S ribosomal protein S19 (BS19)
ACHSKI-96	GK0111	130785	131126	3.7.1	50S ribosomal protein L22
ACHSKI-97	GK0112	131130	131786	3.7.1	30S ribosomal protein S3 (BS2)
ACHSKI-98	GK0113	131789	132214	3.7.1	50S ribosomal protein L16
ACHSKI-99	GK0114	132214	132414	3.7.1	50S ribosomal protein L29
ACHSKI-100	GK0115	132439	132702	3.7.1	30S ribosomal protein S17
ACHSKI-101	GK0116	132752	133120	3.7.1	50S ribosomal protein L14
ACHSKI-102	GK0117	133157	133468	3.7.1	50S ribosomal protein L24
ACHSKI-103	GK0118	133496	134035	3.7.1	50S ribosomal protein L5
ACHSKI-104	GK0119	134065	134250	3.7.1	30S ribosomal protein S14

ACHSKI-105	GK0120	134290	134682	3.7.1	30S ribosomal protein S8
ACHSKI-106	GK0121	134715	135251	3.7.1	50S ribosomal protein L6
ACHSKI-107	GK0122	135285	135647	3.7.1	50S ribosomal protein L18
ACHSKI-108	GK0123	135667	136167	3.7.1	30S ribosomal protein S5
ACHSKI-109	GK0124	136181	136369	3.7.1	50S ribosomal protein L30
ACHSKI-110	GK0125	136394	136834	3.7.1	50S ribosomal protein L15
ACHSKI-111	GK0126	136834	138126	1.6	preprotein translocase subunit
ACHSKI-112	GK0127	138170	138823	2.3	adenylate kinase (ATP-AMP transphosphorylase)
ACHSKI-113	GK0129	139683	139901	3.7.3	translation initiation factor IF-I
ACHSKI-114	GK0130	139938	140051	3.7.1	50S ribosomal protein L36
ACHSKI-115	GK0131	140072	140437	3.7.1	30S ribosomal protein S13
ACHSKI-116	GK0132	140463	140852	3.7.1	30S ribosomal protein S11
ACHSKI-117	GK0133	141003	141947	3.5.3	DNA-directed RNA polymerase alpha subunit (EC 2.7.7.6)
ACHSKI-118	GK0134	142048	142410	3.7.1	50S ribosomal protein L17
ACHSKI-119	GK0135	142528	143367	1.2	ABC transporter (ATP-binding protein)
ACHSKI-120	GK0136	143343	144215	1.2	ABC transporter (ATP-binding protein)
ACHSKI-121	GK0137	144208	145005	1.2	cobalt transporter
ACHSKI-122	GK0139	145974	146411	3.7.1	50S ribosomal protein L13
ACHSKI-123	GK0140	146432	146824	3.7.1	30S ribosomal protein S9
ACHSKI-124	GK0142	147451	148167	1.1	germination-specific N-acetylmuramoyl-L-alanine amidase (cell wall hydrolase) (autolysin) (EC 3.5.1.28)
ACHSKI-125	GK0143	148362	149378	1.7	ATPase involved in chromosome partitioning
ACHSKI-126	GK0144	149464	149931	1.9	spore germination protein precursor (C-term divided by IS)
ACHSKI-127	GK0147	152132	152731	1.8	KinB signaling pathway activation protein
ACHSKI-128	GK0148	152867	153622	2.1.1	polysaccharide deacetylase
ACHSKI-129	GK0150	162033	162596	3.5.1	DNA-directed RNA polymerase ECF-type sigma factor (sigma-W)
ACHSKI-130	GK0152	163295	164116	5	unknown conserved protein
ACHSKI-131	GK0153	164109	165347	5	unknown conserved protein
ACHSKI-132	GK0154	165375	166724	2.1.2	phosphoglucomutase (glycolysis)
ACHSKI-133	GK0155	167275	169077	2.2	L-glutamine-D-fructose-6-phosphate amidotransferase (EC 2.6.1.16)
ACHSKI-134	GK0182	191206	192108	5	unknown conserved protein
ACHSKI-135	GK0186	195130	196542	1.2	amino acid permease
ACHSKI-136	GK0187	196638	198185	2.2	aldehyde dehydrogenase
ACHSKI-137	GK0188	198302	199501	2.2	ornithine aminotransferase (EC 2.6.1.13)
ACHSKI-138	GK0189	199459	200766	2.2	NAD-specific glutamate dehydrogenase (NAD-GDH) (EC 1.4.1.2)
ACHSKI-139	GK0199	209987	211528	4.1	aldehyde dehydrogenase
ACHSKI-140	GK0202	213404	214111	3.9	protein-disulfide isomerase
ACHSKI-141	GK0203	214222	214686	5	unknown conserved protein
ACHSKI-142	GK0208	217071	218150	1.2	ABC transporter (ATP-binding protein)
ACHSKI-143	GK0212	222927	224264	1.2	K+ uptake transporter (Trk family)
ACHSKI-144	GK0214	226590	227228	5	unknown conserved protein
ACHSKI-145	GK0218	230190	231011	4.2	bacitracin resistance protein
ACHSKI-146	GK0219	231312	232385	1.1	UDP-N-acetylglucosamine-N-acetylmuramyl-(pentapeptide) pyrophosphoryl N-acetylglucosamine transferase (EC 2.4.1.-)
ACHSKI-147	GK0223	235403	236506	1.1	D-alanine-D-alanine ligase (EC 6.3.2.4)
ACHSKI-148	GK0224	236513	237889	1.1	UDP-N-acetylmuramoylalanyl-D-glutamyl-2,6-diaminopimelate-D-alanyl-D-alanyl ligase (EC 6.3.2.15)
ACHSKI-149	GK0226	238745	240148	3.6	ATP-dependent RNA helicase
ACHSKI-150	GK0227	240160	240777	5	unknown conserved protein
ACHSKI-151	GK0228	240891	241280	2.4	holo-[acyl-carrier protein] synthase
ACHSKI-152	GK0229	241360	242316	5	unknown conserved protein
ACHSKI-153	GK0232	243902	244183	5	unknown conserved protein
ACHSKI-154	GK0233	244188	244538	5	unknown conserved protein
ACHSKI-155	GK0234	244804	246969	5	unknown conserved protein
ACHSKI-156	GK0235	247191	247640	5	unknown conserved protein
ACHSKI-157	GK0236	255641	256099	5	unknown conserved protein

ACHSKI-158	GK0237	256096	256836	3.8	glycoprotein endopeptidase
ACHSKI-159	GK0238	256796	257248	3.8	ribosomal-protein (S18)-alanine acetyltransferase
ACHSKI-160	GK0239	257230	258258	3.8	glycoprotein endopeptidase
ACHSKI-161	GK0240	258581	260506	1.2	ABC transporter (ATP-binding protein)
ACHSKI-162	GK0242	261108	261749	5	unknown conserved protein
ACHSKI-163	GK0245	262866	263042	5	unknown conserved protein
ACHSKI-164	GK0246	263042	263776	5	unknown conserved protein
ACHSKI-165	GK0248	264136	264417	3.9	chaperonin (GroES protein)
ACHSKI-166	GK0249	264522	266138	3.9	chaperonin (GroEL protein)
ACHSKI-167	GK0250	266579	267949	2.1.3	fumarate hydratase (EC 4.2.1.2)
ACHSKI-168	GK0251	268139	269095	2.1.1	methanol dehydrogenase regulatory protein (MoxR protein)
ACHSKI-169	GK0252	269098	270273	5	unknown conserved protein
ACHSKI-170	GK0253	270270	272432	5	unknown conserved protein
ACHSKI-171	GK0254	272636	274168	2.3	GMP synthetase (glutamine amidotransferase) (EC 6.3.5.2)
ACHSKI-172	GK0255	274459	275784	5	unknown conserved protein
ACHSKI-173	GK0257	282792	283280	2.3	phosphoribosylaminoimidazole carboxylase I (EC 4.1.1.21) catalytic chain
ACHSKI-174	GK0258	283273	284421	2.3	phosphoribosylaminoimidazole carboxylase II (EC 4.1.1.21) carbon dioxide-fixation chain
ACHSKI-175	GK0259	284418	285713	2.3	adenylosuccinate lyase (glutamyl-tRNA synthetase regulatory factor) (EC 4.3.2.2)
ACHSKI-176	GK0260	285789	286517	2.3	phosphoribosylaminoimidazole succinocarboxamide synthetase
ACHSKI-177	GK0261	286505	286759	2.3	phosphoribosylformylglycinamide (FGAM) synthase (EC 6.3.5.3) PurS component
ACHSKI-178	GK0262	286756	287442	2.3	phosphoribosylformylglycinamide (FGAM) synthase (EC 6.3.5.3) component I (glutamine amidotransferase domain)
ACHSKI-179	GK0263	287426	289654	2.3	phosphoribosylformylglycinamide (FGAM) synthase (EC 6.3.5.3) component II (synthetase domain)
ACHSKI-180	GK0264	289630	291042	2.3	phosphoribosylpyrophosphate amidotransferase (EC 2.4.2.14)
ACHSKI-181	GK0265	291166	292206	2.3	phosphoribosylaminoimidazole synthetase (phosphoribosylformylglycinamide cyclo-ligase) (EC 6.3.3.1)
ACHSKI-182	GK0266	292203	292835	2.3	phosphoribosylglycinamide formyltransferase (EC 2.1.2.2)
ACHSKI-183	GK0267	292798	294336	2.3	phosphoribosylaminoimidazolecarboxamide formyltransferase; IMP cyclohydrolase (bifunctional purine biosynthesis protein)
ACHSKI-184	GK0268	294360	295652	2.3	phosphoribosylglycinamide synthetase (glycinamide ribonucleotide synthetase) (phosphoribosylglycinamide synthetase)
ACHSKI-185	GK0271	296304	298049	2.3	adenine deaminase
ACHSKI-186	GK0274	299625	300344	5	unknown conserved protein
ACHSKI-187	GK0275	300373	302547	3.1	ATP-dependent DNA helicase
ACHSKI-188	GK0276	302568	304580	3.1	DNA ligase (polydeoxyribonucleotide synthase [NAD+]) (EC 6.5.1.2.)
ACHSKI-189	GK0277	304577	305800	5	unknown conserved protein
ACHSKI-190	GK0278	305976	306533	5	unknown conserved protein
ACHSKI-191	GK0281	308438	308728	3.7.2	aspartyl/glutamyl-tRNA(Asn/Gln) amidotransferase (EC 6.3.5.-) subunit C (Glu-ADT subunit C)
ACHSKI-192	GK0282	308741	310198	3.7.2	aspartyl/glutamyl-tRNA(Asn/Gln) amidotransferase (EC 6.3.5.-) subunit A (Glu-ADT subunit A)
ACHSKI-193	GK0283	310212	311642	3.7.2	aspartyl/glutamyl-tRNA(Asn/Gln) amidotransferase (EC 6.3.5.-) subunit B (Asp/Glu-ADT subunit B)
ACHSKI-194	GK0324	357073	358305	1.2	drug-efflux transporter
ACHSKI-195	GK0325	358505	359158	5	unknown conserved protein
ACHSKI-196	GK0340	372826	374343	4.6	epidermal surface antigen
ACHSKI-197	GK0341	374486	375406	5	unknown conserved protein
ACHSKI-198	GK0342	375484	376857	3.6	RNA methyltransferase
ACHSKI-199	GK0352	390071	392209	1.2	cadmium transporting ATPase
ACHSKI-200	GK0367	407719	409242	5	unknown conserved protein
ACHSKI-201	GK0376	421731	422906	1.2	multidrug-efflux transporter
ACHSKI-202	GK0386	432162	432860	5	unknown conserved protein
ACHSKI-203	GK0393	438585	439307	5	unknown conserved protein
ACHSKI-204	GK0394	439304	440734	5	unknown conserved protein
ACHSKI-205	GK0395	440750	441469	2.1.1	glycolate oxidase
ACHSKI-206	GK0396	441586	442311	3.5.2	transcriptional regulator (GntR family)
ACHSKI-207	GK0398	442773	444446	1.2	L-lactate permease
ACHSKI-208	GK0400	446057	446509	5	unknown conserved protein
ACHSKI-209	GK0402	449312	449683	5	unknown conserved protein
ACHSKI-210	GK0404	450659	451300	2.5	siroheme synthase

ACHSKI-211	GK0407	453580	454233	5	unknown conserved protein
ACHSKI-212	GK0408	454247	454594	5	unknown conserved protein
ACHSKI-213	GK0412	456063	456809	5	unknown conserved protein
ACHSKI-214	GK0414	457745	458356	2.2	adenylylsulfate kinase (EC 2.7.1.25)
ACHSKI-215	GK0415	458369	459529	2.7	sulfate adenylyltransferase (EC 2.7.7.4)
ACHSKI-216	GK0416	459803	460510	2.2	phosphoadenylyl-sulfate reductase (thioredoxin-dependent) (EC 1.8.4.8)
ACHSKI-217	GK0418	460870	461094	5	unknown conserved protein
ACHSKI-218	GK0419	461432	461932	3.8	protein-tyrosine phosphatase
ACHSKI-219	GK0420	461984	462817	1.2	transporter
ACHSKI-220	GK0423	464714	465766	1.2	H ⁺ /Ca ²⁺ exchanger
ACHSKI-221	GK0424	465919	466707	5	unknown conserved protein
ACHSKI-222	GK0425	466737	467861	5	unknown conserved protein
ACHSKI-223	GK0427	469797	470612	2.1.1	modulation protein
ACHSKI-224	GK0432	474774	475505	5	unknown conserved protein
ACHSKI-225	GK0433	475502	476536	1.3	two-component sensor histidine kinase
ACHSKI-226	GK0434	476529	477161	3.5.2	two-component response regulator
ACHSKI-227	GK0438	479971	480738	3.5.2	transcriptional activator
ACHSKI-228	GK0451	493741	494658	1.7	cell-division inhibitor
ACHSKI-229	GK0452	494752	495561	5	unknown conserved protein
ACHSKI-230	GK0453	495730	496071	5	unknown conserved protein
ACHSKI-231	GK0456	496645	497628	5	unknown conserved protein
ACHSKI-232	GK0463	504639	505739	3.2	adenine glycosylase
ACHSKI-233	GK0464	505736	505960	5	unknown conserved protein
ACHSKI-234	GK0468	507592	508125	5	unknown conserved protein
ACHSKI-235	GK0469	508463	509362	1.2	ABC transporter (permease) dipeptide
ACHSKI-236	GK0470	509623	510456	5	unknown conserved protein
ACHSKI-237	GK0471	510585	511871	2.5	glutamate-1-semialdehyde 2,1-aminomutase 2 (GSA) (EC 5.4.3.8)
ACHSKI-238	GK0475	514988	515941	1.4	L-lactate dehydrogenase (EC 1.1.1.27)
ACHSKI-239	GK0477	516583	517059	4.2	bacterioferritin comigratory protein
ACHSKI-240	GK0478	517290	517742	3.5.2	transcriptional regulator (Fur family)
ACHSKI-241	GK0479	517767	518120	5	unknown conserved protein
ACHSKI-242	GK0482	529468	530610	5	unknown conserved protein
ACHSKI-243	GK0483	530672	531535	5	unknown conserved protein
ACHSKI-244	GK0484	531556	532029	3.6	rRNA methylase
ACHSKI-245	GK0486	532355	534250	3.8	serine protein kinase (EC 2.7.1.37)
ACHSKI-246	GK0487	534559	535743	5	unknown conserved protein
ACHSKI-247	GK0539	562303	567996	4.4	bacteriophage-related protein
ACHSKI-248	GK0559	582498	584075	1.3	two-component sensor histidine kinase
ACHSKI-249	GK0561	585409	586851	1.2	C ₄ -dicarboxylate transporter (permease)
ACHSKI-250	GK0562	587134	587961	2.1.1	plant-metabolite dehydrogenase
ACHSKI-251	GK0563	588109	588801	5	unknown conserved protein
ACHSKI-252	GK0567	592090	592563	5	unknown conserved protein
ACHSKI-253	GK0568	592560	592997	3.9	protein-disulfide oxidoreductase
ACHSKI-254	GK0570	593734	595491	2.1.1	phosphomannomutase (EC 5.4.2.8)
ACHSKI-255	GK0574	597020	597817	1.8	stage V sporulation protein R (involved in spore cortex synthesis)
ACHSKI-256	GK0585	609473	611611	1.2	cadmium-transporting ATPase
ACHSKI-257	GK0589	614664	615086	4.2	arsenate reductase
ACHSKI-258	GK0603	628278	628868	1.8	stage V sporulation protein R
ACHSKI-259	GK0604	629154	630500	1.4	cytochrome bd-type ubiquinol oxidase subunit I
ACHSKI-260	GK0605	630497	631525	1.4	cytochrome bd-type ubiquinol oxidase subunit II
ACHSKI-261	GK0608	632275	632595	3.9	chaperone
ACHSKI-262	GK0612	634701	636776	4.1	carbon starvation protein
ACHSKI-263	GK0614	637124	638050	2.5	thiamine biosynthesis protein

ACHSKI-264	GK0615	638190	639857	2.1.1	exo-alpha-1,4-glucoSIDase (EC 3.2.1.20)
ACHSKI-265	GK0616	639913	640449	5	unknown conserved protein
ACHSKI-266	GK0617	640667	641872	1.2	antibiotic resistance protein (antibiotic efflux protein)
ACHSKI-267	GK0629	652611	652823	1.8	small acid-soluble spore protein
ACHSKI-268	GK0631	653438	654550	1.2	ABC transporter (ATP-binding protein) sugar
ACHSKI-269	GK0635	656474	657640	5	unknown conserved protein
ACHSKI-270	GK0636	657634	658983	5	unknown conserved protein
ACHSKI-271	GK0638	660053	661129	5	unknown conserved protein
ACHSKI-272	GK0640	662461	662820	5	unknown conserved protein
ACHSKI-273	GK0644	665910	666809	1.2	ABC transporter (ATP-binding protein) (Na ⁺ exclusion)
ACHSKI-274	GK0645	666802	668031	1.2	ABC transporter (permease) (Na ⁺ exclusion)
ACHSKI-275	GK0646	668150	669127	5	unknown conserved protein
ACHSKI-276	GK0648	669392	669580	5	unknown conserved protein
ACHSKI-277	GK0656	673645	674490	1.6	post-translocation molecular chaperone
ACHSKI-278	GK0657	674568	674999	4.1	Hit-like protein (cell-cycle regulation histidine triad)
ACHSKI-279	GK0658	675456	676193	1.2	ABC transporter (ATP-binding protein)
ACHSKI-280	GK0660	677554	678954	5	unknown conserved protein
ACHSKI-281	GK0661	679153	680196	2.5	uroporphyrinogen decarboxylase (EC 4.1.1.37)
ACHSKI-282	GK0663	681156	682595	2.5	protoporphyrinogen IX /coproporphyrinogen III oxidase
ACHSKI-283	GK0667	684798	685532	5	unknown conserved protein
ACHSKI-284	GK0672	690289	691152	2.2	D-alanine aminotransferase (EC 2.6.1.21)
ACHSKI-285	GK0673	691340	692056	1.2	branched-chain amino acid transporter
ACHSKI-286	GK0680	696188	696736	1.6	signal peptidase I (SPase I) (EC 3.4.21.89)
ACHSKI-287	GK0681	696991	700494	3.3	ATP-dependent deoxyribonuclease subunit B
ACHSKI-288	GK0682	700495	704223	3.3	ATP-dependent deoxyribonuclease subunit A
ACHSKI-289	GK0696	715211	716113	5	unknown conserved protein
ACHSKI-290	GK0697	716258	716611	5	unknown conserved protein
ACHSKI-291	GK0700	720525	722372	2.2	asparagine synthetase (glutamine-hydrolyzing) (EC 6.3.5.4)
ACHSKI-292	GK0703	724811	726577	2.1.1	alpha-cyclodextrinase
ACHSKI-293	GK0705	728167	729447	1.2	maltose/maltodextrin transport system (permease)
ACHSKI-294	GK0706	729447	730289	1.2	maltose/maltodextrin transport system (permease)
ACHSKI-295	GK0708	731915	732934	3.5.2	transcriptional regulator involved in carbon catabolite control
ACHSKI-296	GK0713	738736	739599	2.1.1	oxidoreductase (short-chain dehydrogenase:reductase family)
ACHSKI-297	GK0716	740061	743471	2.5	5-methyltetrahydrofolate--homocysteine S-methyltransferase (EC 2.1.1.13)
ACHSKI-298	GK0717	743464	745311	5	unknown conserved protein
ACHSKI-299	GK0727	753849	754997	4.1	1,3 propanediol dehydrogenase (EC 1.1.1.202)
ACHSKI-300	GK0731	759990	761000	2.1.1	alcohol dehydrogenase (EC 1.1.1.1)
ACHSKI-301	GK0738	764694	766073	3.5.2	transcriptional regulator (GntR family)
ACHSKI-302	GK0747	772471	773277	5	unknown conserved protein
ACHSKI-303	GK0750	774725	776851	1.2	cation-transporting ATPase
ACHSKI-304	GK0753	778357	778659	5	unknown conserved protein
ACHSKI-305	GK0767	790787	791851	1.8	nitrite reductase (EC 1.7.99.3)
ACHSKI-306	GK0791	819343	820575	2.2	arginine biosynthesis bifunctional enzyme
ACHSKI-307	GK0792	820588	821364	2.2	acetylglutamate kinase (EC 2.7.2.8)
ACHSKI-308	GK0793	821361	822521	2.2	N-acetylmethionine aminotransferase (EC 2.6.1.11)
ACHSKI-309	GK0796	826792	827730	2.2	ornithine carbamoyltransferase (EC 2.1.3.3)
ACHSKI-310	GK0798	827915	828094	5	unknown conserved protein
ACHSKI-311	GK0804	832788	833720	2.4	3-oxoacyl-[acyl-carrier protein] synthase (EC 2.3.1.41)
ACHSKI-312	GK0805	833761	834999	2.4	3-oxoacyl-[acyl-carrier protein] synthase (EC 2.3.1.41)
ACHSKI-313	GK0808	836376	837116	5	unknown conserved protein
ACHSKI-314	GK0809	837178	838164	3.7.2	tryptophan-tRNA synthetase (EC 6.1.1.2)
ACHSKI-315	GK0817	845606	846004	5	unknown conserved protein
ACHSKI-316	GK0818	846054	846710	5	unknown conserved protein

ACHSKI-317	GK0819	846924	847604	1.10	negative regulator of genetic competence
ACHSKI-318	GK0820	847701	849209	2.4	cardiolipin synthetase (EC 2.7.8.-)
ACHSKI-319	GK0821	849398	850726	5	unknown conserved protein
ACHSKI-320	GK0822	850732	852549	2.2	thimet oligoendopeptidase (EC 3.4.24.15)
ACHSKI-321	GK0824	853186	854079	5	unknown conserved protein
ACHSKI-322	GK0825	854072	854485	5	unknown conserved protein
ACHSKI-323	GK0826	854588	855211	4.4	lytic transglycosylase
ACHSKI-324	GK0827	855208	855801	5	unknown conserved protein
ACHSKI-325	GK0829	856452	857090	5	unknown conserved protein
ACHSKI-326	GK0830	857087	857902	2.5	inorganic polyphosphate/ATP-NAD kinase (EC 2.7.1.23)
ACHSKI-327	GK0832	858967	859704	2.3	diadenosine tetraphosphatase
ACHSKI-328	GK0833	859911	861086	1.7	stage V sporulation protein E
ACHSKI-329	GK0834	861285	862061	2.4	enoyl-[acyl-carrier-protein] reductase [NADH] (EC 1.3.1.9)
ACHSKI-330	GK0839	866821	867777	2.1.1	NDP-sugar epimerase
ACHSKI-331	GK0840	867774	869057	2.1.1	NDP-sugar dehydrogenase
ACHSKI-332	GK0857	878578	879438	5	unknown conserved protein
ACHSKI-333	GK0862	880786	881043	5	unknown conserved protein
ACHSKI-334	GK0863	881161	881595	5	unknown conserved protein
ACHSKI-335	GK0864	881597	882118	5	unknown conserved protein
ACHSKI-336	GK0865	882217	882945	5	unknown conserved protein
ACHSKI-337	GK0891	914005	914919	3.5.2	transcriptional regulator (LysR family)
ACHSKI-338	GK0900	921847	922554	1.4	cytochrome c biogenesis protein (holocytochrome-c synthase) (EC 4.4.1.17)
ACHSKI-339	GK0901	922746	923057	5	unknown conserved protein
ACHSKI-340	GK0902	923075	925471	1.2	heavy metal-transporting ATPase
ACHSKI-341	GK0903	925493	925696	1.2	mercuric ion-binding protein
ACHSKI-342	GK0904	925915	927501	1.8	multicopper oxidase
ACHSKI-343	GK0910	933792	934808	1.2	ABC-transporter (ATP-binding protein)
ACHSKI-344	GK0911	935267	937624	2.3	ribonucleoside-diphosphate reductase alpha subunit (EC 1.17.4.1)
ACHSKI-345	GK0912	937735	938775	2.3	ribonucleoside-diphosphate reductase beta subunit (EC1.17.4.1)
ACHSKI-346	GK0913	939236	939772	5	unknown conserved protein
ACHSKI-347	GK0918	942714	943628	1.1	UDP-N-acetylenolpyruvoylglucosamine reductase (EC 1.1.1.158)
ACHSKI-348	GK0928	951180	952715	1.2	sodium:solute symporter
ACHSKI-349	GK0930	953374	954789	1.2	amino acid transporter
ACHSKI-350	GK0937	958195	959439	1.2	multidrug resistance protein
ACHSKI-351	GK0944	963210	965426	1.3	two-component sensor histidine kinase
ACHSKI-352	GK0951	972454	973266	5	unknown conserved protein
ACHSKI-353	GK0952	973364	974551	2.2	aspartate aminotransferase (EC 2.6.1.-)
ACHSKI-354	GK0964	986864	987382	5	unknown conserved protein
ACHSKI-355	GK0969	992850	993530	5	unknown conserved protein
ACHSKI-356	GK0975	1000474	1001148	4.2	aluminum resistance protein
ACHSKI-357	GK0976	1001145	1001582	2.5	6-pyruvoyl tetrahydrobiopterin synthase
ACHSKI-358	GK0977	1001582	1002316	2.5	coenzyme PQQ synthesis
ACHSKI-359	GK0978	1002369	1002866	5	unknown conserved protein
ACHSKI-360	GK0986	1007324	1008616	1.3	two-component sensor histidine kinase (EC 2.7.3.-)
ACHSKI-361	GK0990	1011237	1012094	3.5.2	transcription antiterminator
ACHSKI-362	GK0991	1012327	1014345	1.2	PTS system, glucose-specific enzyme II, A component
ACHSKI-363	GK0995	1016306	1016572	2.1.1	phosphocarrier protein (Histidine-containing protein)
ACHSKI-364	GK0996	1016572	1018293	1.2	phosphoenolpyruvate-protein phosphotransferase (EC 2.7.3.9)
ACHSKI-365	GK1023	1048979	1051831	2.1.3	2-oxoglutarate dehydrogenase complex E1 component (EC 1.2.4.2)
ACHSKI-366	GK1024	1051863	1053131	2.1.3	2-oxoglutarate dehydrogenase complex E2 component (dihydroliipoamide transsuccinylase) (EC 2.3.1.61)
ACHSKI-367	GK1026	1053572	1054357	2.4	3-oxoacyl-(acyl carrier protein) reductase
ACHSKI-368	GK1041	1069101	1070504	5	unknown conserved protein
ACHSKI-369	GK1045	1073156	1074373	5	unknown conserved protein

ACHSKI-370	GK1048	1075087	1075560	5	unknown conserved protein
ACHSKI-371	GK1049	1075757	1076467	2.2	tetrahydrodipicolinate succinylase (EC 2.3.1.117)
ACHSKI-372	GK1050	1076527	1077660	2.2	hippurate hydrolase
ACHSKI-373	GK1052	1078127	1078789	1.2	potassium transport system NAD-binding component
ACHSKI-374	GK1053	1078861	1080528	5	unknown conserved protein
ACHSKI-375	GK1054	1080525	1080740	5	unknown conserved protein
ACHSKI-376	GK1056	1081204	1081980	5	unknown conserved protein
ACHSKI-377	GK1057	1082033	1082587	3.8	peptide deformylase 2 (PDF 2) N-formylmethionylaminoacyl-tRNA deformylase (EC 3.5.1.88)
ACHSKI-378	GK1058	1083115	1084224	2.1.2	dehydrogenase E1 component, alpha subunit (lipoamide) (EC 1.2.4.1)
ACHSKI-379	GK1059	1084228	1085205	2.1.2	dehydrogenase E1 component, beta subunit (lipoamide) (EC 1.2.4.1)
ACHSKI-380	GK1060	1085278	1086582	2.1.2	dihydrolipoamide acetyltransferase component of pyruvate dehydrogenase complex (E2)(EC 2.3.1.12)
ACHSKI-381	GK1061	1086587	1087999	2.1.2	dihydrolipoamide dehydrogenase (E3 component of pyruvate complex) (EC 1.8.1.4)
ACHSKI-382	GK1067	1092197	1092385	5	unknown conserved protein
ACHSKI-383	GK1068	1092491	1093285	2.1.1	myo-inositol-1(or 4)-monophosphatase (Inositol-1-phosphatase) (I-1-Pase)
ACHSKI-384	GK1070	1093625	1095469	3.7.4	GTP-binding elongation factor EF-G
ACHSKI-385	GK1071	1095560	1095868	5	unknown conserved protein
ACHSKI-386	GK1076	1098818	1099324	5	unknown conserved protein
ACHSKI-387	GK1077	1099487	1099774	5	unknown conserved protein
ACHSKI-388	GK1078	1099900	1101111	1.7	cell-division protein
ACHSKI-389	GK1079	1101174	1104617	2.1.2	pyruvate carboxylase (EC 6.4.1.1)
ACHSKI-390	GK1080	1104783	1105736	1.4	heme O oxygenase
ACHSKI-391	GK1081	1106117	1107046	1.4	heme O synthetase
ACHSKI-392	GK1082	1107124	1108194	1.4	cytochrome c oxidase subunit II
ACHSKI-393	GK1083	1108217	1110088	1.4	cytochrome c oxidase subunit I
ACHSKI-394	GK1084	1110088	1110708	1.4	cytochrome c oxidase subunit III
ACHSKI-395	GK1085	1110713	1111045	1.4	cytochrome c oxidase subunit IV
ACHSKI-396	GK1086	1111148	1112050	5	unknown conserved protein
ACHSKI-397	GK1087	1112099	1112554	5	unknown conserved protein
ACHSKI-398	GK1089	1112991	1113350	5	unknown conserved protein
ACHSKI-399	GK1091	1114075	1115082	5	unknown conserved protein
ACHSKI-400	GK1092	1115151	1115546	5	unknown conserved protein
ACHSKI-401	GK1093	1115559	1115792	5	unknown conserved protein
ACHSKI-402	GK1095	1116342	1116788	5	unknown conserved protein
ACHSKI-403	GK1096	1116805	1117074	5	unknown conserved protein
ACHSKI-404	GK1098	1117919	1118515	5	unknown conserved protein
ACHSKI-405	GK1099	1118481	1118975	1.1	lipopolysaccharide core biosynthesis (Pantetheine-phosphate adenyltransferase) (Dephospho-CoA pyrophosphorylase)
ACHSKI-406	GK1100	1119115	1120350	5	unknown conserved protein
ACHSKI-407	GK1102	1121267	1122286	5	unknown conserved protein
ACHSKI-408	GK1104	1123789	1124328	5	unknown conserved protein
ACHSKI-409	GK1105	1124474	1124647	3.7.1	50S ribosomal protein L32 (Ribosomal protein I) (BL37)
ACHSKI-410	GK1107	1125639	1126217	5	unknown conserved protein
ACHSKI-411	GK1110	1127669	1129297	5	unknown conserved protein
ACHSKI-412	GK1111	1129576	1130508	5	unknown conserved protein
ACHSKI-413	GK1112	1130604	1130960	1.7	cell division protein
ACHSKI-414	GK1113	1130967	1133177	1.1	penicillin-binding protein 2B
ACHSKI-415	GK1114	1133249	1135183	1.1	penicillin-binding protein (sporulation specific penicillin-binding protein)
ACHSKI-416	GK1115	1135297	1136766	1.1	UDP-N-acetylmuramoylananine-D-glutamate-2,6- diaminopimelate ligase (EC 6.3.2.13)
ACHSKI-417	GK1117	1137203	1138177	1.1	phospho-N-acetylmuramoyl-pentapeptide transferase (EC 2.7.8.13)
ACHSKI-418	GK1118	1138178	1139533	1.1	UDP-N-acetylmuramoylalanine D-glutamate ligase (D-glutamic acid adding enzyme) (EC 6.3.2.9)
ACHSKI-419	GK1119	1139587	1140687	1.8	stage V sporulation protein E
ACHSKI-420	GK1120	1140900	1141685	1.7	cell-division initiation protein (septum formation)
ACHSKI-421	GK1124	1143675	1144943	1.7	cell division protein (septum formation)
ACHSKI-422	GK1125	1144971	1146104	1.7	cell-division initiation protein (septum formation)

ACHSKI-423	GK1126	1146482	1147396	1.8	protease (sporulation sigma-E factor processing peptidase)
ACHSKI-424	GK1127	1147449	1148168	3.5.1	RNA polymerase sigma-E factor precursor (Sigma-29) (Stage II sporulation protein GB)
ACHSKI-425	GK1128	1148289	1149068	3.5.1	RNA polymerase sporulation-specific sigma factor (sigma-G)
ACHSKI-426	GK1130	1149656	1150480	5	unknown conserved protein
ACHSKI-427	GK1131	1150477	1151151	5	unknown conserved protein
ACHSKI-428	GK1132	1151165	1151593	5	unknown conserved protein
ACHSKI-429	GK1133	1151597	1151869	5	unknown conserved protein
ACHSKI-430	GK1134	1151992	1152765	5	unknown conserved protein
ACHSKI-431	GK1135	1152844	1153356	1.7	cell-division initiation protein (septum placement)
ACHSKI-432	GK1136	1153728	1156502	3.7.2	isoleucyl-tRNA synthetase (EC 6.1.1.5)
ACHSKI-433	GK1145	1163955	1164419	1.6	signal peptidase II (EC 3.4.23.36)
ACHSKI-434	GK1147	1165519	1166058	3.5.2	pyrimidine operon regulatory protein; uracil phosphoribosyltransferase (EC 2.4.2.9)
ACHSKI-435	GK1148	1166217	1167515	1.2	uracil transport protein (uracil permease)
ACHSKI-436	GK1149	1167685	1168611	2.3	aspartate carbamoyltransferase (EC 2.1.3.2)
ACHSKI-437	GK1150	1168574	1169860	2.3	dihydroorotase (EC 3.5.2.3)
ACHSKI-438	GK1151	1169863	1170957	2.3	carbamoyl-phosphate synthase (glutamine-hydrolyzing) (EC 6.3.5.5)
ACHSKI-439	GK1152	1170950	1174147	2.3	carbamoyl-phosphate synthase (glutamine-hydrolyzing) (EC 6.3.5.5)
ACHSKI-440	GK1153	1174144	1174917	2.3	dihydroorotate dehydrogenase electron transfer subunit
ACHSKI-441	GK1154	1174914	1175855	2.3	dihydroorotate dehydrogenase, catalytic subunit (Dihydroorotate oxidase) (EC 1.3.3.1)
ACHSKI-442	GK1155	1175827	1176561	2.3	orotidine-5'-phosphate decarboxylase (EC 4.1.1.23)
ACHSKI-443	GK1157	1176947	1177570	2.3	orotate phosphoribosyltransferase (EC 2.4.2.10)
ACHSKI-444	GK1163	1181658	1183397	4.1	fibrinectin/fibrinogen-binding protein
ACHSKI-445	GK1164	1183713	1186385	1.2	calcium-transporting ATPase
ACHSKI-446	GK1166	1187406	1187669	5	unknown conserved protein
ACHSKI-447	GK1167	1187681	1188298	2.3	Guanylate kinase (EC 2.7.4.8)
ACHSKI-448	GK1168	1188301	1188501	3.5.1	DNA-directed RNA polymerase omega subunit(Transcriptase omega chain)
ACHSKI-449	GK1169	1188551	1189756	2.5	pantothenate metabolism flavoprotein
ACHSKI-450	GK1170	1189753	1192158	3.1	primosomal replication factor Y (primosomal protein N')
ACHSKI-451	GK1172	1192655	1193614	3.7.3	methionyl-tRNA formyltransferase
ACHSKI-452	GK1173	1193601	1194935	3.6	RNA-binding Sun protein
ACHSKI-453	GK1174	1194940	1196037	5	unknown conserved protein
ACHSKI-454	GK1175	1196043	1196792	3.8	serine/threonine phosphatase
ACHSKI-455	GK1176	1196798	1198768	3.8	serine/threonine-protein kinase (EC 2.7.1.-)
ACHSKI-456	GK1177	1198773	1199654	5	unknown conserved protein
ACHSKI-457	GK1178	1199651	1200313	2.1.1	ribulose-phosphate 3-epimerase (EC 5.1.3.1)
ACHSKI-458	GK1181	1201324	1201509	3.7.1	50S ribosomal protein L28
ACHSKI-459	GK1182	1201738	1202100	5	unknown conserved protein
ACHSKI-460	GK1183	1202123	1203787	5	unknown conserved protein
ACHSKI-461	GK1184	1203861	1204523	2.2	L-serine dehydratase (L-serine deaminase) (EC 4.3.1.17) beta chain
ACHSKI-462	GK1185	1204597	1205481	2.2	L-serine dehydratase (L-serine deaminase) (EC 4.3.1.17) alpha chain
ACHSKI-463	GK1186	1205478	1207526	3.3	ATP-dependent DNA helicase (EC 3.6.1.-)
ACHSKI-464	GK1187	1207825	1208421	5	unknown conserved protein
ACHSKI-465	GK1188	1208405	1209388	2.4	fatty acid/phospholipid biosynthesis
ACHSKI-466	GK1189	1209410	1210351	2.4	malonyl CoA-acyl carrier protein transacylase (EC 2.3.1.39)
ACHSKI-467	GK1190	1210356	1211099	2.4	3-ketoacyl-acyl carrier protein reductase (EC 1.1.1.100)
ACHSKI-468	GK1191	1211161	1211394	2.4	acyl carrier protein
ACHSKI-469	GK1192	1211574	1212314	3.6	dsRNA-specific ribonuclease (EC 3.1.26.3)
ACHSKI-470	GK1193	1212543	1216106	3.4	chromosome segregation ATPases (SMC)
ACHSKI-471	GK1194	1216126	1217112	1.6	signal recognition particle GTPase (docking protein)
ACHSKI-472	GK1195	1217285	1217617	5	unknown conserved protein
ACHSKI-473	GK1196	1217634	1218974	1.6	signal recognition particle GTPase
ACHSKI-474	GK1197	1219069	1219341	3.7.1	30S ribosomal protein S16
ACHSKI-475	GK1198	1219353	1219589	3.6	RNA-binding protein

ACHSKI-476	GK1200	1220071	1220598	3.6	16S rRNA processing protein
ACHSKI-477	GK1201	1220598	1221332	3.6	tRNA (guanine-N(1)-)-methyltransferase (MIG-methyltransferase) (EC 2.1.1.31)
ACHSKI-478	GK1202	1221465	1221827	3.7.1	50S ribosomal protein L19
ACHSKI-479	GK1203	1221948	1222502	1.6	type I signal peptidase
ACHSKI-480	GK1204	1222521	1223381	5	unknown conserved protein
ACHSKI-481	GK1205	1223467	1224249	3.1	ribonuclease HII (EC 3.1.26.4)
ACHSKI-482	GK1208	1226215	1227375	2.1.3	succinyl-CoA synthetase (EC 6.2.1.5) beta subunit (succinate-CoA ligase beta subunit)
ACHSKI-483	GK1209	1227393	1228295	2.1.3	succinyl-CoA synthetase (EC 6.2.1.5) alpha subunit
ACHSKI-484	GK1211	1229577	1231652	3.4	DNA topoisomerase I (EC 5.99.1.2) (omega-protein) (relaxing enzyme) (untwisting enzyme)
ACHSKI-485	GK1212	1231781	1232650	4.4	integrase/recombinase
ACHSKI-486	GK1213	1232674	1233216	4.1	proteasome protease subunit
ACHSKI-487	GK1214	1233231	1234628	4.1	ATP-dependent protease ATPase subunit
ACHSKI-488	GK1215	1234645	1235424	3.5.2	transcription pleiotropic repressor
ACHSKI-489	GK1216	1235621	1236010	1.5	flagellar basal-body rod protein
ACHSKI-490	GK1217	1236014	1236466	1.5	flagellar basal-body rod protein
ACHSKI-491	GK1220	1238463	1239482	1.5	flagellar motor switch protein
ACHSKI-492	GK1222	1240265	1241533	1.5	flagellar-specific ATP synthase
ACHSKI-493	GK1226	1243839	1244267	1.5	flagellar hook capping protein
ACHSKI-494	GK1227	1244297	1245088	1.5	flagellar hook protein
ACHSKI-495	GK1231	1246794	1247975	1.5	flagellar motor switch protein
ACHSKI-496	GK1232	1248001	1248360	3.5.2	two-component response regulator involved in modulation of flagellar
ACHSKI-497	GK1234	1249029	1249697	1.5	flagellar biosynthetic protein
ACHSKI-498	GK1235	1249713	1249982	1.5	flagellar protein required for flagellar formation
ACHSKI-499	GK1236	1249989	1250762	1.5	flagellar biosynthetic protein
ACHSKI-500	GK1237	1250764	1251846	1.5	flagellar biosynthetic protein
ACHSKI-501	GK1249	1262583	1263290	3.7.1	30S ribosomal protein S2
ACHSKI-502	GK1250	1263448	1264332	3.7.4	translation elongation factor Ts (EF-Ts)
ACHSKI-503	GK1251	1264401	1265123	2.3	uridylate kinase (EC 2.7.4.-)
ACHSKI-504	GK1252	1265126	1265683	3.7.5	ribosome recycling factor
ACHSKI-505	GK1253	1265766	1266539	2.4	undecaprenyl pyrophosphate synthetase (UPP synthetase) (EC 2.5.1.31)
ACHSKI-506	GK1254	1266536	1267330	2.4	CDP-diglyceride synthase (phosphatidate cytidyltransferase) (EC 2.7.7.41)
ACHSKI-507	GK1258	1271567	1275901	3.1	DNA-directed DNA polymerase III (EC 2.7.7.7) alpha chain
ACHSKI-508	GK1259	1276146	1276619	5	unknown conserved protein
ACHSKI-509	GK1260	1276644	1277795	3.5.4	transcription termination-antitermination factor
ACHSKI-510	GK1261	1277809	1278099	5	unknown conserved protein
ACHSKI-511	GK1262	1278089	1278397	3.7.1	ribosomal protein (L7AE family)
ACHSKI-512	GK1263	1278411	1280540	3.7.3	translation initiation factor IF-2
ACHSKI-513	GK1264	1280625	1280903	5	unknown conserved protein
ACHSKI-514	GK1265	1280964	1281302	3.7.3	ribosome-binding factor A
ACHSKI-515	GK1267	1282302	1283288	2.5	riboflavin kinase (EC 2.7.1.26) (flavokinase); FAD synthetase (EC 2.7.7.2) (FAD pyrophosphorylase)
ACHSKI-516	GK1268	1283376	1283645	3.7.1	30S ribosomal protein S15
ACHSKI-517	GK1269	1283786	1285957	2.3	polyribonucleotide nucleotidyltransferase (polynucleotide phosphorylase) (EC 2.7.7.8)
ACHSKI-518	GK1270	1286045	1287028	2.1.1	deacetylase
ACHSKI-519	GK1271	1286982	1288262	3.8	processing protease
ACHSKI-520	GK1272	1288325	1288567	5	unknown conserved protein
ACHSKI-521	GK1273	1288760	1289665	1.8	dipicolinate synthase subunit A
ACHSKI-522	GK1274	1289662	1290267	1.8	dipicolinate synthase subunit B
ACHSKI-523	GK1275	1290361	1291422	2.2	aspartate-semialdehyde dehydrogenase (EC 1.2.1.11)
ACHSKI-524	GK1276	1291443	1292696	2.2	aspartate kinase I (EC 2.7.2.4)
ACHSKI-525	GK1277	1292732	1293577	2.2	dihydrodipicolinate synthase (EC 4.2.1.52)
ACHSKI-526	GK1279	1295535	1296275	5	unknown conserved protein
ACHSKI-527	GK1281	1296605	1298935	1.8	DNA translocase (stage III sporulation protein E)
ACHSKI-528	GK1282	1299145	1299876	3.5.2	transcriptional regulator (GntR family)

ACHSKI-529	GK1287	1304867	1306162	5	unknown conserved protein
ACHSKI-530	GK1288	1306143	1307432	5	unknown conserved protein
ACHSKI-531	GK1289	1307460	1308203	2.4	3-oxoacyl- acyl-carrier protein reductase
ACHSKI-532	GK1290	1308266	1308514	5	unknown conserved protein
ACHSKI-533	GK1291	1308646	1309437	5	unknown conserved protein
ACHSKI-534	GK1292	1309464	1310357	5	unknown conserved protein
ACHSKI-535	GK1293	1310438	1311016	2.4	CDP-diacylglycerol--glycerol-3-phosphate 3-phosphatidyltransferase (phosphatidylglycerophosphate synthase) (PGP synthase) (EC 2.7.8.5)
ACHSKI-536	GK1294	1311044	1312288	1.10	competence-damaged protein
ACHSKI-537	GK1295	1312466	1312771	6	unknown
ACHSKI-538	GK1297	1316667	1318223	5	unknown conserved protein
ACHSKI-539	GK1298	1318325	1319119	5	unknown conserved protein
ACHSKI-540	GK1299	1319248	1319508	1.8	stage V sporulation protein S
ACHSKI-541	GK1303	1323513	1325108	5	unknown conserved protein
ACHSKI-542	GK1304	1325086	1325517	5	unknown conserved protein
ACHSKI-543	GK1305	1325741	1326289	1.8	outer spore coat protein
ACHSKI-544	GK1306	1326404	1329094	3.2	DNA mismatch repair protein
ACHSKI-545	GK1307	1329109	1331001	3.2	DNA mismatch repair protein
ACHSKI-546	GK1312	1335966	1336913	3.6	tRNA delta(2)-isopentenylpyrophosphate transferase (IPP transferase)
ACHSKI-547	GK1313	1336948	1337175	4.4	host factor-I protein
ACHSKI-548	GK1324	1348986	1350233	4.1	GTP-binding protein protease modulator
ACHSKI-549	GK1325	1350247	1351518	4.2	aluminum resistance protein
ACHSKI-550	GK1328	1353434	1354057	3.5.2	transcription repressor of SOS regulon
ACHSKI-551	GK1330	1354535	1355188	4.5	resolvase
ACHSKI-552	GK1331	1355318	1355548	5	unknown conserved protein
ACHSKI-553	GK1332	1355667	1357673	2.1.2	transketolase (EC 2.2.1.1)
ACHSKI-554	GK1333	1357926	1358363	5	unknown conserved protein
ACHSKI-555	GK1334	1358453	1358665	5	unknown conserved protein
ACHSKI-556	GK1336	1360619	1362397	1.2	ABC transporter (ATP-binding protein)
ACHSKI-557	GK1339	1362803	1363510	1.4	cytochrome c biogenesis protein
ACHSKI-558	GK1341	1364143	1364616	5	unknown conserved protein
ACHSKI-559	GK1342	1364806	1365240	5	unknown conserved protein
ACHSKI-560	GK1347	1368103	1370718	2.1.3	aconitate hydratase (citrate hydro-lyase) (aconitase) (EC 4.2.1.3)
ACHSKI-561	GK1349	1370966	1371439	5	unknown conserved protein
ACHSKI-562	GK1351	1372704	1373369	5	unknown conserved protein
ACHSKI-563	GK1359	1378193	1379011	1.2	glycerol uptake facilitator
ACHSKI-564	GK1360	1379061	1380551	2.1.1	glycerol kinase (ATP:glycerol 3-phosphotransferase) (EC 2.7.1.30)
ACHSKI-565	GK1408	1437964	1438860	3.5.2	transcriptional regulator (LysR family)
ACHSKI-566	GK1409	1439090	1440919	2.7	sulfite reductase (EC 1.8.1.2) flavoprotein subunit
ACHSKI-567	GK1410	1440945	1442666	2.7	sulfite reductase (EC 1.8.1.2) hemoprotein beta-component
ACHSKI-568	GK1427	1463577	1464929	2.5	adenosylmethionine-8-amino-7-oxononanoate aminotransferase
ACHSKI-569	GK1431	1468293	1472852	2.2	glutamate synthase large subunit (EC 1.4.1.13)
ACHSKI-570	GK1437	1479501	1480229	3.5.2	transcriptional regulator (Sir2 family)
ACHSKI-571	GK1438	1480372	1480923	4.1	intracellular proteinase
ACHSKI-572	GK1442	1484391	1485125	5	unknown conserved protein
ACHSKI-573	GK1448	1490454	1490963	5	unknown conserved protein
ACHSKI-574	GK1461	1501487	1502299	1.2	ABC transport er(ATP-binding protein) iron(III) dicitrate
ACHSKI-575	GK1466	1506208	1506846	2.1.2	phosphoglycerate mutase (EC 5.4.2.1)
ACHSKI-576	GK1470	1510679	1511083	2.5	6-pyruvoyltetrahydropterin synthase (PTP synthase) (EC 4.2.3.12)
ACHSKI-577	GK1478	1517620	1520325	6	unknown
ACHSKI-578	GK1480	1520704	1521444	3.5.2	transcriptional regulator
ACHSKI-579	GK1493	1534029	1534964	5	unknown conserved protein
ACHSKI-580	GK1498	1538807	1539241	5	unknown conserved protein
ACHSKI-581	GK1500	1540137	1540811	5	unknown conserved protein

ACHSKI-582	GK1501	1540735	1541775	5	unknown conserved protein
ACHSKI-583	GK1502	1541772	1542542	4.2	lactam utilization protein
ACHSKI-584	GK1509	1549629	1550438	2.5	hydroxyethylthiazole kinase (EC 2.7.1.50)
ACHSKI-585	GK1510	1550457	1551257	2.5	phosphomethylpyrimidine kinase (EC 2.7.4.7)
ACHSKI-586	GK1511	1551263	1551928	2.5	thiamine-phosphate diphosphorylase (EC 2.5.1.3)
ACHSKI-587	GK1517	1554731	1556092	2.2	subtilisin-type proteinase (EC 3.4.21.-)
ACHSKI-588	GK1525	1561104	1562027	2.2	cysteine synthase (EC 4.2.99.8)
ACHSKI-589	GK1534	1573125	1574342	2.1.3	malate dehydrogenase (malic enzyme) (EC 1.1.1.38)
ACHSKI-590	GK1541	1580889	1581185	5	unknown conserved protein
ACHSKI-591	GK1543	1581829	1582971	5	unknown conserved protein
ACHSKI-592	GK1544	1583094	1585031	3.2	ATP-dependent helicase
ACHSKI-593	GK1553	1593033	1596824	5	unknown conserved protein
ACHSKI-594	GK1561	1599772	1599999	1.8	thioredoxin-like protein
ACHSKI-595	GK1562	1600116	1600532	5	unknown conserved protein
ACHSKI-596	GK1565	1601304	1601594	5	unknown conserved protein
ACHSKI-597	GK1585	1616585	1617514	5	unknown conserved protein (N_term)
ACHSKI-598	GK1589	1619043	1620410	5	unknown conserved protein
ACHSKI-599	GK1599	1629820	1631172	2.5	biotin carboxylase (EC 6.3.4.14)
ACHSKI-600	GK1601	1631427	1632326	2.4	hydroxymethylglutaryl-CoA lyase
ACHSKI-601	GK1602	1632341	1633123	2.4	enoyl-CoA hydratase
ACHSKI-602	GK1603	1633150	1634847	2.1.1	propionyl-CoA carboxylase
ACHSKI-603	GK1607	1636395	1638107	1.2	multidrug resistance protein
ACHSKI-604	GK1619	1649080	1649577	5	unknown conserved protein (C_term truncated)
ACHSKI-605	GK1624	1652972	1654591	1.9	spore germination protein
ACHSKI-606	GK1625	1654588	1655796	1.9	spore germination protein
ACHSKI-607	GK1627	1657234	1658631	6	unknown
ACHSKI-608	GK1630	1659995	1661731	1.2	ABC transporter (ATP-binding protein)
ACHSKI-609	GK1631	1661712	1663520	1.2	ABC transporter (ATP-binding protein)
ACHSKI-610	GK1632	1663680	1664327	5	unknown conserved protein
ACHSKI-611	GK1633	1664333	1665343	5	unknown conserved protein
ACHSKI-612	GK1652	1680429	1681178	1.4	nitro/flavin reductase (EC 1.19.6.-)
ACHSKI-613	GK1653	1681368	1682111	3.5.2	transcriptional regulatory (Sir2 family)
ACHSKI-614	GK1676	1703349	1704671	4.2	nitric oxide synthase
ACHSKI-615	GK1685	1709751	1710530	2.4	enoyl-CoA hydratase (EC 4.2.1.17)
ACHSKI-616	GK1694	1717945	1719309	1.2	amino acid permease
ACHSKI-617	GK1696	1721408	1721890	5	unknown conserved protein
ACHSKI-618	GK1697	1721880	1723322	5	unknown conserved protein
ACHSKI-619	GK1716	1743550	1744026	5	unknown conserved protein
ACHSKI-620	GK1737	1763762	1764997	1.4	flavo-hemoglobin
ACHSKI-621	GK1743	1769795	1770244	5	unknown conserved protein
ACHSKI-622	GK1750	1777714	1780158	3.4	DNA topoisomerase IV (EC 5.99.1.-) subunit A
ACHSKI-623	GK1751	1780218	1782155	3.4	DNA topoisomerase IV (EC 5.99.1.-) subunit B
ACHSKI-624	GK1752	1782316	1782735	5	unknown conserved protein
ACHSKI-625	GK1763	1796438	1798060	2.3	5'-nucleotidase
ACHSKI-626	GK1766	1799546	1800139	5	unknown conserved protein
ACHSKI-627	GK1770	1803050	1803622	5	unknown conserved protein
ACHSKI-628	GK1774	1806586	1807029	5	unknown conserved protein
ACHSKI-629	GK1775	1807209	1807703	2.5	dihydrofolate reductase (EC 1.5.1.3)
ACHSKI-630	GK1776	1807717	1808511	2.3	thymidylate synthetase (EC 2.1.1.45)
ACHSKI-631	GK1778	1809382	1809966	5	unknown conserved protein
ACHSKI-632	GK1784	1814534	1815685	5	unknown conserved protein
ACHSKI-633	GK1785	1815712	1816188	4.1	glutathione peroxidase
ACHSKI-634	GK1787	1816888	1817796	2.2	homoserine O-succinyltransferase (EC 2.3.1.46)

ACHSKI-635	GK1804	1830501	1831325	5	unknown conserved protein
ACHSKI-636	GK1814	1838410	1839297	2.4	glycerophosphoryl diester phosphodiesterase (EC 3.1.4.46)
ACHSKI-637	GK1817	1843449	1844021	6	unknown
ACHSKI-638	GK1838	1867004	1868875	1.2	PTS system, fructose-specific enzyme II, BC component
ACHSKI-639	GK1839	1868900	1869811	2.1.1	fructose-1-phosphate kinase (EC 2.7.1.56)
ACHSKI-640	GK1840	1869808	1870560	3.5.2	transcriptional regulator (DeoR family)
ACHSKI-641	GK1857	1885157	1886476	1.2	PTS system, cellobiose-specific enzyme II, C component
ACHSKI-642	GK1871	1897420	1898607	4.1	alcohol dehydrogenase
ACHSKI-643	GK1872	1898683	1899717	2.1.1	oxidoreductase
ACHSKI-644	GK1906	1943990	1944676	2.1.1	L-ribulose-5-phosphate 4-epimerase (phosphoribulose isomerase) (EC 5.1.3.4)
ACHSKI-645	GK1914	1954643	1955407	2.4	enoyl-CoA hydratase (3-hydroxybutyryl-CoA dehydratase)
ACHSKI-646	GK1921	1962837	1963394	2.1.1	maltose transacetylase (maltose O-acetyltransferase) (EC 2.3.1.79)
ACHSKI-647	GK1940	1980405	1980671	6	unknown
ACHSKI-648	GK1941	1980829	1982394	2.1.1	gluconokinase (EC 2.7.1.12)
ACHSKI-649	GK1947	1987673	1989763	3.5.2	transcriptional regulator
ACHSKI-650	GK1952	1994534	1995721	4.1	alcohol dehydrogenase
ACHSKI-651	GK2000	2044347	2045828	4.1	aldehyde dehydrogenase
ACHSKI-652	GK2003	2048432	2049025	5	unknown conserved protein
ACHSKI-653	GK2013	2058546	2059856	2.1.1	glycolate oxidase iron-sulfur subunit
ACHSKI-654	GK2014	2059856	2061265	2.1.1	glycolate oxidase subunit
ACHSKI-655	GK2037	2083095	2084612	4.1	aldehyde dehydrogenase
ACHSKI-656	GK2038	2084630	2085403	2.4	enoyl-CoA hydratase subunit II (phenylacetic acid catabolism)
ACHSKI-657	GK2046	2091006	2092685	2.2	dihydroxy-acid dehydratase (EC 4.2.1.9)
ACHSKI-658	GK2048	2093206	2094330	2.2	gamma-glutamyl kinase (glutamate 5-kinase) (EC 2.7.2.11)
ACHSKI-659	GK2049	2094327	2095571	2.2	gamma-glutamyl phosphate reductase (glutamate-5-semialdehyde dehydrogenase) (EC 1.2.1.41)
ACHSKI-660	GK2056	2101952	2102518	2.2	shikimate kinase (EC 2.7.1.71)
ACHSKI-661	GK2067	2111023	2111319	5	unknown conserved protein
ACHSKI-662	GK2080	2119206	2119913	1.4	cytochrome c biogenesis protein
ACHSKI-663	GK2082	2121043	2122302	5	unknown conserved protein
ACHSKI-664	GK2083	2122872	2123900	1.4	cytochrome bd-type ubiquinol oxidase subunit II
ACHSKI-665	GK2084	2123897	2125243	1.4	cytochrome bd-type ubiquinol oxidase subunit I
ACHSKI-666	GK2128	2168777	2169949	2.5	8-amino-7-oxononanoate synthase (EC 2.3.1.47)
ACHSKI-667	GK2140	2180874	2182115	2.2	leucyl aminopeptidase II (EC 3.4.11.1)
ACHSKI-668	GK2151	2198845	2199627	5	unknown conserved protein
ACHSKI-669	GK2153	2201987	2203645	2.1.1	glycerol-3-phosphate dehydrogenase (EC 1.1.99.5)
ACHSKI-670	GK2154	2203804	2204358	3.5.2	transcriptional antiterminator of glycerol uptake operon
ACHSKI-671	GK2156	2204547	2205944	1.3	two-component sensor histidine kinase
ACHSKI-672	GK2157	2205941	2206615	3.5.2	two-component response regulator
ACHSKI-673	GK2165	2209697	2210080	5	unknown conserved protein
ACHSKI-674	GK2167	2210664	2211266	3.3	recombination protein U (penicillin-binding protein related factor A)
ACHSKI-675	GK2168	2211300	2213990	1.1	penicillin-binding protein 1A/1B (PBP1) (penicillin-insensitive transglycosylase (peptidoglycan TGase); penicillin-sensitive transpeptidase
ACHSKI-676	GK2169	2214094	2214765	3.2	endonuclease III (DNA-(apurinic or apyrimidinic site) lyase)
ACHSKI-677	GK2170	2214869	2215570	3.1	chromosome replication initiation protein
ACHSKI-678	GK2171	2215638	2216933	3.7.2	asparaginyl-tRNA synthetase (EC 6.1.1.22)
ACHSKI-679	GK2172	2217161	2218342	2.2	aspartate transaminase (transaminase A) (EC 2.6.1.1)
ACHSKI-680	GK2173	2218364	2218840	5	unknown conserved protein
ACHSKI-681	GK2177	2222130	2222513	2.5	aspartate 1-decarboxylase precursor (aspartate alpha-decarboxylase) (EC 4.1.1.11)
ACHSKI-682	GK2178	2222495	2223397	2.5	pantothenate synthetase (pantoate--beta-alanine ligase) (EC 6.3.2.1)
ACHSKI-683	GK2179	2223394	2224233	2.5	ketopantoate hydroxymethyltransferase (3-methyl-2-oxobutanoate hydroxymethyltransferase) (EC 2.1.2.11)
ACHSKI-684	GK2180	2224500	2225489	3.5.2	biotin [acetyl-CoA carboxylase] synthetase (EC 6.3.4.15) ; transcriptional repressor of the biotin operon
ACHSKI-685	GK2181	2225447	2226661	3.6	tRNA nucleotidyltransferase (EC 2.7.7.19)
ACHSKI-686	GK2182	2226658	2227794	5	unknown conserved protein
ACHSKI-687	GK2184	2228507	2228941	2.1.1	methylglyoxal synthase (EC 4.2.99.11)

ACHSKI-688	GK2185	2228973	2229770	2.2	dihydrodipicolinate reductase
ACHSKI-689	GK2186	2229767	2230102	5	unknown conserved protein
ACHSKI-690	GK2187	2230262	2231134	5	unknown conserved protein
ACHSKI-691	GK2189	2232411	2233031	5	unknown conserved protein
ACHSKI-692	GK2190	2233110	2233874	1.4	menaquinol-cytochrome-c reductase (EC 1.10.2.-) cytochrome b/c subunit
ACHSKI-693	GK2191	2233924	2234598	1.4	menaquinol-cytochrome-c reductase (EC 1.10.2.-) cytochrome b subunit
ACHSKI-694	GK2192	2234602	2235111	1.4	menaquinol-cytochrome-c reductase (EC 1.10.2.-) iron-sulfur subunit (Rieske iron-sulfur protein)
ACHSKI-695	GK2193	2235256	2235711	5	unknown conserved protein
ACHSKI-696	GK2194	2235729	2236334	5	unknown conserved protein
ACHSKI-697	GK2195	2236391	2237647	5	unknown conserved protein
ACHSKI-698	GK2196	2237918	2239201	2.2	3-phosphoshikimate 1-carboxyvinyltransferase (5-enolpyruvylshikimate-3-phosphate synthase) (EPSP synthase) (EC 2.5.1.19)
ACHSKI-699	GK2197	2239229	2240341	2.2	prephenate dehydrogenase (EC 1.3.1.12)
ACHSKI-700	GK2198	2240420	2241517	2.2	histidinol-phosphate aminotransferase(EC 2.6.1.9); tyrosine/phenylalanine aminotransferase (EC 2.6.1.5)
ACHSKI-701	GK2199	2241549	2242355	2.2	tryptophan synthase (EC 4.2.1.20) alpha chain
ACHSKI-702	GK2200	2242339	2243556	2.2	tryptophan synthase (EC 4.2.1.20) beta chain
ACHSKI-703	GK2201	2243903	2244547	2.2	phosphoribosyl anthranilate isomerase (EC 5.3.1.24)
ACHSKI-704	GK2202	2244534	2245310	2.2	indole-3-glycerol-phosphate synthase (EC 4.1.1.48)
ACHSKI-705	GK2203	2245303	2246322	2.2	anthranilate phosphoribosyltransferase (EC 2.4.2.18)
ACHSKI-706	GK2204	2246316	2247842	2.2	anthranilate synthase (EC 4.1.3.27) component I
ACHSKI-707	GK2206	2248454	2249554	2.2	3-dehydroquinate synthase (EC 4.2.3.4)
ACHSKI-708	GK2207	2249557	2250723	2.2	chorismate synthase (5-enolpyruvylshikimate-3-phosphate phospholyase) (EC 4.2.3.5)
ACHSKI-709	GK2208	2250823	2251593	1.5	chemotactic methyltransferase (EC 2.1.1.-)
ACHSKI-710	GK2209	2251666	2252115	2.3	nucleoside-diphosphate kinase (EC 2.7.4.6)
ACHSKI-711	GK2210	2252214	2253176	2.5	heptaprenyl diphosphate synthase component II (spore germination protein C3)
ACHSKI-712	GK2211	2253192	2253896	2.5	2-heptaprenyl-1,4-naphthoquinone methyltransferase (menaquinone biosynthesis methyltransferase)
ACHSKI-713	GK2212	2253901	2254692	2.5	heptaprenyl diphosphate synthase component I (spore germination protein C1)
ACHSKI-714	GK2215	2255728	2256000	3.4	DNA-binding protein HU (DNA-binding protein II)
ACHSKI-715	GK2217	2256773	2258251	1.8	stage IV sporulation protein A (spore cortex formation and coat assembly)
ACHSKI-716	GK2218	2258408	2259130	5	unknown conserved protein
ACHSKI-717	GK2220	2259532	2260566	2.1.1	NAD(P)H-dependent glycerol-3-phosphate dehydrogenase (EC 1.1.1.8)
ACHSKI-718	GK2221	2260776	2262086	4.6	GTP-binding protein
ACHSKI-719	GK2223	2262470	2263372	5	unknown conserved protein
ACHSKI-720	GK2225	2264403	2265566	3.7.1	30S ribosomal protein S1
ACHSKI-721	GK2226	2265746	2266339	2.4	1-acylglycerol-3-phosphate O-acyltransferase (EC 2.3.1.51)
ACHSKI-722	GK2227	2266336	2267010	2.3	cytidylate kinase (cytidine monophosphate kinase)
ACHSKI-723	GK2230	2268165	2269505	1.8	sporulation protein
ACHSKI-724	GK2231	2269524	2270318	1.9	sporulation specific N-acetylmuramoyl-L-alanine amidase (spore cortex-lytic enzyme) (EC 3.5.1.28)
ACHSKI-725	GK2233	2271175	2272146	2.2	L-asparaginase (L-asparagine amidohydrolase) (EC 3.5.1.1)
ACHSKI-726	GK2234	2272365	2273357	1.4	thioredoxin reductase
ACHSKI-727	GK2235	2273447	2274718	2.2	NAD-specific glutamate dehydrogenase (NAD-GDH)
ACHSKI-728	GK2236	2274879	2275469	1.10	negative regulator of competence
ACHSKI-729	GK2242	2278312	2278896	5	unknown conserved protein
ACHSKI-730	GK2243	2278880	2280403	3.3	ATP-dependent DNA helicase
ACHSKI-731	GK2244	2280391	2281437	5	unknown conserved protein
ACHSKI-732	GK2247	2282870	2284402	2.2	phosphoglycerate dehydrogenase (EC 1.1.1.95)
ACHSKI-733	GK2248	2284664	2285476	2.2	histidinol phosphatase (EC 3.1.3.15)
ACHSKI-734	GK2257	2291967	2292545	5	unknown conserved protein
ACHSKI-735	GK2275	2308824	2309555	3.5.2	transcriptional regulator (GntR family)
ACHSKI-736	GK2276	2309552	2310313	2.1.1	N-acetylglucosamine-6-phosphate isomerase (EC 3.5.99.6)
ACHSKI-737	GK2277	2310304	2311506	2.1.1	N-acetylglucosamine-6-phosphate deacetylase (EC 3.5.1.25)
ACHSKI-738	GK2278	2311646	2313439	1.3	two-component sensor histidine kinase
ACHSKI-739	GK2279	2313439	2314164	3.5.2	two-component response regulator
ACHSKI-740	GK2280	2314261	2315448	1.4	cytochrome c biogenesis protein

ACHSKI-741	GK2281	2315435	2317099	1.4	cytochrome c biogenesis protein
ACHSKI-742	GK2282	2317113	2317637	1.4	thioredoxin (cytochrome c biogenesis)
ACHSKI-743	GK2284	2318644	2319177	1.8	spore maturation protein
ACHSKI-744	GK2285	2319177	2319773	1.8	spore maturation protein
ACHSKI-745	GK2286	2319766	2320914	1.1	D-alanyl-D-alanine carboxypeptidase (EC 3.4.16.4)
ACHSKI-746	GK2290	2323355	2324008	5	unknown conserved protein
ACHSKI-747	GK2291	2324184	2325098	5	unknown conserved protein
ACHSKI-748	GK2293	2325696	2326052	5	unknown conserved protein
ACHSKI-749	GK2294	2326173	2326637	2.5	riboflavin synthase beta subunit (EC 2.5.1.9)
ACHSKI-750	GK2295	2326658	2327854	2.5	GTP cyclohydrolase II (EC 3.5.4.25); 3,4-dihydroxy-2-butanone 4-phosphate synthase (EC 5.4.99.-)
ACHSKI-751	GK2296	2327872	2328516	2.5	riboflavin synthase alpha subunit (EC 2.5.1.9)
ACHSKI-752	GK2297	2328471	2329613	2.5	riboflavin-specific deaminase (EC 3.5.4.26); 5-amino-6-(5-phosphoribosylamino)uracil reductase (EC 1.1.1.193)
ACHSKI-753	GK2298	2330115	2330555	3.8	peptidyl-prolyl cis-trans isomerase (rotamase) (EC 5.2.1.8)
ACHSKI-754	GK2299	2330741	2331619	5	unknown conserved protein
ACHSKI-755	GK2300	2331691	2333010	2.2	diaminopimelate decarboxylase (EC 4.1.1.20)
ACHSKI-756	GK2301	2333324	2334802	1.8	stage V sporulation protein AF
ACHSKI-757	GK2308	2338646	2339398	3.5.1	RNA polymerase sporulation-specific sigma factor (sigma-F) (Stage II sporulation protein AC)
ACHSKI-758	GK2309	2339412	2339852	1.8	anti-sigma F factor (serine kinase) (stage II sporulation factor AB)
ACHSKI-759	GK2310	2339853	2340203	1.8	anti-sigma F factor antagonist (stage II sporulation protein AA)
ACHSKI-760	GK2311	2340329	2341504	1.1	D-alanyl-D-alanine carboxypeptidase (penicillin binding protein) (EC 3.4.16.4)
ACHSKI-761	GK2312	2341671	2342972	2.3	pyrimidine-nucleoside phosphorylase (PYNP) (EC 2.4.2.2)
ACHSKI-762	GK2313	2342978	2343814	2.3	purine nucleoside phosphorylase (PNP) (EC 2.4.2.1)
ACHSKI-763	GK2314	2343844	2345031	2.3	phosphopentomutase (EC 5.4.2.7)
ACHSKI-764	GK2315	2345163	2346059	4.4	integrase/recombinase
ACHSKI-765	GK2317	2346379	2346831	3.5.2	transcriptional regulator (Fur family) (ferric uptake regulator)
ACHSKI-766	GK2318	2346929	2347594	1.8	stage II sporulation protein M
ACHSKI-767	GK2320	2348994	2349557	2.1.1	ADP-ribose pyrophosphatase (EC 3.6.1.13)
ACHSKI-768	GK2321	2349676	2350596	5	unknown conserved protein
ACHSKI-769	GK2331	2355970	2356869	2.2	pyrroline-5-carboxylate reductase (EC 1.5.1.2)
ACHSKI-770	GK2332	2357010	2358032	1.4	NADH-dependent flavin oxidoreductase
ACHSKI-771	GK2333	2358029	2358952	5	unknown conserved protein
ACHSKI-772	GK2340	2367169	2367855	3.5.2	two-component response regulator
ACHSKI-773	GK2341	2367855	2368859	1.3	two-component sensor histidine kinase
ACHSKI-774	GK2342	2368953	2369708	1.2	ABC transporter (ATP-binding protein)
ACHSKI-775	GK2343	2369705	2371630	1.2	ABC transporter (permease)
ACHSKI-776	GK2344	2371796	2373205	2.1.2	6-phosphogluconate dehydrogenase (EC 1.1.1.44)
ACHSKI-777	GK2347	2374241	2375365	2.2	tripeptidase
ACHSKI-778	GK2350	2377476	2377898	4.6	lactoylglutathione lyase (EC 4.4.1.5)
ACHSKI-779	GK2353	2378818	2379792	5	unknown conserved protein
ACHSKI-780	GK2368	2396025	2396462	5	unknown conserved protein
ACHSKI-781	GK2376	2406113	2407456	2.4	branched-chain alpha-keto acid dehydrogenase E2 subunit (lipoamide acyltransferase) (EC 2.3.1.-)
ACHSKI-782	GK2377	2407634	2408617	2.4	branched-chain alpha-keto acid dehydrogenase E1 component beta chain (2-oxoisovalerate dehydrogenase beta subunit) (EC 1.2.4.4)
ACHSKI-783	GK2378	2408631	2409626	2.4	branched-chain alpha-keto acid dehydrogenase E1 component alpha chain (2-oxoisovalerate dehydrogenase alpha subunit) (EC 1.2.4.4)
ACHSKI-784	GK2379	2409696	2411117	2.4	branched-chain alpha-keto acid dehydrogenase E3 component (dihydrolipoamide dehydrogenase) (EC 1.8.1.4)
ACHSKI-785	GK2381	2412316	2413419	2.4	leucine dehydrogenase (EC 1.4.1.9)
ACHSKI-786	GK2383	2414484	2416547	3.5.2	sigma L-dependent transcriptional regulator
ACHSKI-787	GK2385	2417011	2417739	2.4	glycerophosphodiester phosphodiesterase
ACHSKI-788	GK2387	2418153	2418932	3.5.2	stage 0 sporulation protein A (two-component response regulator)
ACHSKI-789	GK2388	2419356	2420651	1.8	stage IV sporulation protein B
ACHSKI-790	GK2390	2422773	2423222	3.5.2	arginine repressor
ACHSKI-791	GK2391	2423279	2424127	5	unknown conserved protein
ACHSKI-792	GK2393	2426271	2427164	2.4	geranyltranstransferase (farnesyl-diphosphate synthase) (EC 2.5.1.10)
ACHSKI-793	GK2394	2427168	2427380	2.3	exodeoxyribonuclease VII small subunit (exonuclease VII small subunit) (EC 3.1.11.6)

ACHSKI-794	GK2395	2427395	2428741	2.3	exodeoxyribonuclease VII large subunit (EC 3.1.11.6)
ACHSKI-795	GK2396	2428753	2429607	2.5	methylenetetrahydrofolate dehydrogenase (EC 1.5.1.5); methenyltetrahydrofolate cyclohydrolase (EC 3.5.4.9)
ACHSKI-796	GK2397	2429667	2430059	3.5.4	transcription termination factor
ACHSKI-797	GK2398	2430252	2430653	5	unknown conserved protein
ACHSKI-798	GK2399	2430664	2432019	2.4	acetyl-CoA carboxylase subunit (biotin carboxylase subunit) (EC 6.4.1.2)
ACHSKI-799	GK2400	2432035	2432568	2.4	acetyl-CoA carboxylase subunit (biotin carboxyl carrier subunit)
ACHSKI-800	GK2401	2432713	2433264	1.8	stage III sporulation protein AH
ACHSKI-801	GK2402	2433288	2433920	1.8	stage III sporulation protein AG
ACHSKI-802	GK2403	2433928	2434539	1.8	stage III sporulation protein AF
ACHSKI-803	GK2404	2434550	2435713	1.8	stage III sporulation protein AE
ACHSKI-804	GK2405	2435727	2436113	1.8	stage III sporulation protein AD
ACHSKI-805	GK2406	2436135	2436341	1.8	stage III sporulation protein AC
ACHSKI-806	GK2407	2436357	2436869	1.8	stage III sporulation protein AB
ACHSKI-807	GK2408	2436866	2437786	1.8	stage III sporulation protein AA
ACHSKI-808	GK2410	2438306	2438863	3.7.4	translation elongation factor P
ACHSKI-809	GK2411	2438891	2439952	3.8	Xaa-Pro dipeptidase
ACHSKI-810	GK2412	2440213	2440743	5	unknown conserved protein
ACHSKI-811	GK2414	2441888	2442244	5	unknown conserved protein
ACHSKI-812	GK2415	2442323	2443204	5	unknown conserved protein
ACHSKI-813	GK2416	2443292	2443717	3.5.2	transcriptional regulator (manganese transport regulator)
ACHSKI-814	GK2420	2449150	2449986	2.4	lipoate protein ligase
ACHSKI-815	GK2421	2450196	2450570	5	unknown conserved protein
ACHSKI-816	GK2423	2452128	2453624	2.2	glycine cleavage system P-protein, glycine dehydrogenase [decarboxylating] subunit 2 (Glycine decarboxylase) (EC 1.4.4.2)
ACHSKI-817	GK2424	2453593	2454939	2.2	glycine cleavage system P-protein, glycine dehydrogenase [decarboxylating] subunit 1 (Glycine decarboxylase) (EC 1.4.4.2)
ACHSKI-818	GK2425	2454975	2456069	2.2	glycine cleavage system T protein, aminomethyltransferase (EC 2.1.2.10)
ACHSKI-819	GK2426	2456564	2458228	3.3	DNA/RNA helicases (SNF2 family)
ACHSKI-820	GK2427	2458215	2459009	5	unknown conserved protein
ACHSKI-821	GK2428	2459112	2459291	5	unknown conserved protein
ACHSKI-822	GK2432	2460536	2460973	5	unknown conserved protein
ACHSKI-823	GK2433	2460963	2461259	1.10	DNA transport machinery (exogenous DNA-binding protein)
ACHSKI-824	GK2434	2461462	2462478	1.10	DNA transport machinery
ACHSKI-825	GK2435	2462487	2463560	1.10	DNA transport machinery
ACHSKI-826	GK2437	2464610	2464852	5	unknown conserved protein
ACHSKI-827	GK2439	2466391	2467023	5	unknown conserved protein
ACHSKI-828	GK2442	2468749	2469702	2.1.1	glucokinase (EC 2.7.1.2)
ACHSKI-829	GK2449	2474876	2475448	2.5	5-formyltetrahydrofolate cyclo-ligase
ACHSKI-830	GK2454	2478466	2479284	1.2	ABC transporter (ATP-binding protein) phosphate
ACHSKI-831	GK2455	2479606	2481720	1.1	peptidoglycan biosynthesis (penicillin-binding protein 2A)
ACHSKI-832	GK2456	2481793	2483085	5	unknown conserved protein
ACHSKI-833	GK2457	2483228	2483842	4.2	manganese superoxide dismutase (EC 1.15.1.1)
ACHSKI-834	GK2460	2484990	2485763	5	unknown conserved protein
ACHSKI-835	GK2461	2485802	2486725	1.2	ABC transporter (permease) phosphate
ACHSKI-836	GK2462	2486727	2487623	1.2	ABC transporter (permease) phosphate
ACHSKI-837	GK2463	2487680	2488570	1.2	ABC transporter (phosphate-binding protein)
ACHSKI-838	GK2465	2488870	2489184	5	unknown conserved protein
ACHSKI-839	GK2467	2490449	2490796	5	unknown conserved protein
ACHSKI-840	GK2469	2491498	2491917	3.5.2	transcriptional regulator (Fur family)
ACHSKI-841	GK2470	2491914	2492747	1.2	ABC transporter (permease) metal (zinc)
ACHSKI-842	GK2471	2492773	2493540	1.2	ABC transporter (ATP-binding protein) metal (zinc)
ACHSKI-843	GK2473	2494600	2494860	5	unknown conserved protein
ACHSKI-844	GK2474	2494881	2495780	3.2	endonuclease IV
ACHSKI-845	GK2475	2495822	2497132	3.6	ATP-dependent RNA helicase
ACHSKI-846	GK2478	2499214	2500335	5	unknown conserved protein

ACHSKI-847	GK2479	2500332	2501036	5	unknown conserved protein
ACHSKI-848	GK2480	2501181	2501543	1.4	cytochrome c
ACHSKI-849	GK2482	2502241	2503368	3.5.1	RNA polymerase major sigma-43 factor (sigma-A)
ACHSKI-850	GK2483	2503403	2505199	3.1	DNA primase (EC 2.7.7.-)
ACHSKI-851	GK2484	2505733	2506533	5	unknown conserved protein
ACHSKI-852	GK2485	2506556	2507149	5	unknown conserved protein
ACHSKI-853	GK2486	2507252	2508040	3.3	DNA repair protein (recombination protein O)
ACHSKI-854	GK2488	2508317	2509225	4.6	GTP-binding protein
ACHSKI-855	GK2489	2509218	2509640	2.3	cytidine deaminase (EC 3.5.4.5)
ACHSKI-856	GK2490	2509740	2510093	2.4	diacylglycerol kinase (EC 2.7.1.107)
ACHSKI-857	GK2491	2510093	2510563	5	unknown conserved protein
ACHSKI-858	GK2492	2510560	2512662	5	unknown conserved protein
ACHSKI-859	GK2493	2512712	2513674	2.6	phosphate starvation-induced protein
ACHSKI-860	GK2494	2513677	2514864	1.8	stage IV sporulation protein
ACHSKI-861	GK2495	2514880	2515167	5	unknown conserved protein
ACHSKI-862	GK2496	2515266	2515712	5	unknown conserved protein
ACHSKI-863	GK2497	2515742	2515915	3.7.1	30S ribosomal protein S21
ACHSKI-864	GK2498	2516100	2517035	1.2	Na ⁺ :phosphate symporter
ACHSKI-865	GK2499	2517032	2517853	2.3	deoxyribose-phosphate aldolase (EC 4.1.2.4)
ACHSKI-866	GK2500	2517841	2519190	5	unknown conserved protein
ACHSKI-867	GK2501	2519267	2520043	5	unknown conserved protein
ACHSKI-868	GK2502	2520061	2520999	3.8	ribosomal protein L11 methyltransferase (EC 2.1.1.-)
ACHSKI-869	GK2503	2521005	2522153	4.1	chaperone protein (heat shock protein)
ACHSKI-870	GK2504	2522283	2524106	3.9	chaperone protein (heat shock protein 70) (HSP70)
ACHSKI-871	GK2505	2524130	2524771	4.1	chaperone protein (heat shock protein) (HSP-70 cofactor)
ACHSKI-872	GK2506	2524870	2525904	3.5.2	transcription repressor of class I heat shock genes
ACHSKI-873	GK2507	2525988	2527127	2.5	coproporphyrinogen III oxidase (EC 1.3.3.3)
ACHSKI-874	GK2508	2527202	2529031	4.6	GTP-binding protein
ACHSKI-875	GK2510	2529640	2530839	1.8	stage II sporulation protein P (septal wall dissolution protein)
ACHSKI-876	GK2511	2530914	2532032	1.9	spore protease (germination protease precursor) (EC 3.4.99.-)
ACHSKI-877	GK2512	2532216	2532485	3.7.1	30S ribosomal protein S20
ACHSKI-878	GK2513	2532557	2533603	5	unknown conserved protein
ACHSKI-879	GK2515	2534094	2536343	1.10	late competence protein (DNA uptake)
ACHSKI-880	GK2516	2536340	2536810	1.10	late competence protein (DNA binding and uptake)
ACHSKI-881	GK2517	2536940	2537563	1.10	late competence protein (DNA binding and uptake)
ACHSKI-882	GK2519	2538856	2539599	5	unknown conserved protein
ACHSKI-883	GK2520	2539596	2539952	5	unknown conserved protein
ACHSKI-884	GK2521	2539949	2540527	5	unknown conserved protein
ACHSKI-885	GK2522	2540436	2541086	2.5	nicotinate-nucleotide adenyllyltransferase (EC 2.7.7.18)
ACHSKI-886	GK2523	2541126	2541419	5	unknown conserved protein
ACHSKI-887	GK2524	2541423	2542253	2.2	shikimate 5-dehydrogenase (EC 1.1.1.25)
ACHSKI-888	GK2525	2542276	2543385	5	unknown conserved protein
ACHSKI-889	GK2526	2543388	2543903	5	unknown conserved protein
ACHSKI-890	GK2527	2544231	2544371	5	unknown conserved protein
ACHSKI-891	GK2534	2549860	2551128	1.2	proton/sodium:glutamate symporter
ACHSKI-892	GK2542	2555732	2556439	2.3	nucleoside phosphorylase (5'-methylthioadenosine nucleosidase (EC 3.2.2.16); S-adenosylhomocysteine nucleosidase (EC 3.2.2.9))
ACHSKI-893	GK2545	2557615	2558280	5	unknown conserved protein
ACHSKI-894	GK2547	2560198	2560674	3.5.3	transcription elongation factor
ACHSKI-895	GK2548	2560785	2561420	2.3	uridine kinase (EC 2.7.1.48)
ACHSKI-896	GK2551	2563635	2564288	2.5	caffeoyl-CoA O-methyltransferase
ACHSKI-897	GK2552	2564726	2565817	5	unknown conserved protein
ACHSKI-898	GK2553	2566060	2566359	5	unknown conserved protein
ACHSKI-899	GK2554	2566375	2566791	5	unknown conserved protein

ACHSKI-900	GK2555	2566796	2567062	5	unknown conserved protein
ACHSKI-901	GK2556	2567130	2569793	3.7.2	alanyl-tRNA synthetase (EC 6.1.1.7)
ACHSKI-902	GK2557	2570112	2571173	5	unknown conserved protein
ACHSKI-903	GK2561	2572144	2574504	3.3	ATP-dependent exonuclease V
ACHSKI-904	GK2562	2574524	2575186	5	unknown conserved protein
ACHSKI-905	GK2563	2575277	2576392	3.6	tRNA (5-methylaminomethyl-2-thiouridylate)-methyltransferase (EC 2.1.1.61)
ACHSKI-906	GK2564	2576407	2577549	4.6	iron-sulfur cofactor synthesis
ACHSKI-907	GK2565	2577577	2577993	5	unknown conserved protein
ACHSKI-908	GK2566	2578013	2578237	6	unknown
ACHSKI-909	GK2567	2578278	2579573	5	unknown conserved protein
ACHSKI-910	GK2568	2579681	2580541	3.5.2	transcriptional regulator (TetR/AcrR family)
ACHSKI-911	GK2569	2580639	2583686	5	unknown conserved protein
ACHSKI-912	GK2570	2583868	2584518	3.5.2	transcriptional activator
ACHSKI-913	GK2572	2585841	2587613	3.7.2	aspartyl-tRNA synthetase (EC 6.1.1.12)
ACHSKI-914	GK2573	2587618	2588898	3.7.2	histidyl-tRNA synthetase (EC 6.1.1.21)
ACHSKI-915	GK2577	2591974	2592432	3.7.2	D-tyrosyl-tRNA(Tyr) deacylase
ACHSKI-916	GK2578	2592456	2594654	2.3	GTP pyrophosphokinase (ppGpp synthetase) (EC 2.7.6.5)
ACHSKI-917	GK2579	2594803	2595315	2.3	adenine phosphoribosyltransferase (EC 2.4.2.7)
ACHSKI-918	GK2580	2595350	2597671	3.3	single-strand DNA-specific exonuclease
ACHSKI-919	GK2582	2598774	2601026	1.6	preprotein translocase subunits D and F
ACHSKI-920	GK2583	2601139	2601471	5	unknown conserved protein
ACHSKI-921	GK2584	2601538	2603100	1.8	stage V sporulation protein B (spore cortex synthesis)
ACHSKI-922	GK2585	2603167	2603550	5	unknown conserved protein
ACHSKI-923	GK2586	2603714	2603986	5	unknown conserved protein
ACHSKI-924	GK2587	2604010	2605152	3.6	tRNA-guanine transglycosylase (EC 2.4.2.29)
ACHSKI-925	GK2588	2605170	2606198	3.6	S-adenosylmethionine tRNA ribosyltransferase (EC 5.4.99.-)
ACHSKI-926	GK2591	2606821	2607822	3.3	holliday junction DNA helicase
ACHSKI-927	GK2592	2607848	2608432	3.3	Holliday junction DNA helicase
ACHSKI-928	GK2594	2609241	2609999	5	unknown conserved protein
ACHSKI-929	GK2596	2610970	2611710	2.5	NH(3)-dependent NAD+ synthetase (EC 6.3.5.1)
ACHSKI-930	GK2598	2612673	2614229	6	unknown
ACHSKI-931	GK2604	2619820	2620668	2.2	prephenate dehydratase (EC 4.2.1.51)
ACHSKI-932	GK2606	2621150	2622448	1.8	Spo0B-associated GTP-binding protein
ACHSKI-933	GK2607	2622672	2623220	1.8	stage 0 sporulation protein B (sporulation initiation phosphoprotein)
ACHSKI-934	GK2608	2623392	2623682	3.7.1	50S ribosomal protein L27 (BL30)
ACHSKI-935	GK2609	2623698	2624027	5	unknown conserved protein
ACHSKI-936	GK2610	2624030	2624338	3.7.1	50S ribosomal protein L21
ACHSKI-937	GK2611	2624820	2625668	1.8	protease (stage IV sporulation protein FB)
ACHSKI-938	GK2612	2625673	2626440	1.8	inhibitor of SpoIVFB (stage IV sporulation protein FA)
ACHSKI-939	GK2613	2626704	2627507	1.7	ATPase involved in chromosome partitioning
ACHSKI-940	GK2614	2627510	2628193	1.7	septum formation inhibitor (cell-division inhibitor)
ACHSKI-941	GK2615	2628243	2628761	1.1	cell-shape determining protein
ACHSKI-942	GK2616	2628758	2629624	1.1	cell-shape determining protein
ACHSKI-943	GK2617	2629644	2630666	1.1	cell-shape determining protein
ACHSKI-944	GK2618	2630824	2631504	3.2	DNA repair protein
ACHSKI-945	GK2620	2632552	2633667	6	unknown
ACHSKI-946	GK2625	2636496	2637242	1.10	signal peptidase (late competence protein)
ACHSKI-947	GK2637	2651351	2652700	2.5	folyl-polyglutamate synthetase (EC 6.3.2.17)
ACHSKI-948	GK2638	2652884	2655526	3.7.2	valyl-tRNA synthetase (EC 6.1.1.9)
ACHSKI-949	GK2640	2656228	2657259	5	unknown conserved protein
ACHSKI-950	GK2641	2657304	2658353	5	unknown conserved protein
ACHSKI-951	GK2642	2658472	2659761	2.5	glutamate-1-semialdehyde 2,1-aminotransferase (EC 5.4.3.8)
ACHSKI-952	GK2643	2659778	2660752	2.5	delta-aminolevulinic acid dehydratase (porphobilinogen synthase) (EC 4.2.1.24)

ACHSKI-953	GK2644	2660753	2661523	2.5	uroporphyrinogen III cosynthase (EC 4.2.1.75)
ACHSKI-954	GK2645	2661523	2662452	2.5	porphobilinogen deaminase (hydroxymethylbilane synthase) (EC 4.3.1.8)
ACHSKI-955	GK2646	2662468	2663286	2.5	negative effector of the concentration of HemaA
ACHSKI-956	GK2647	2663297	2664661	2.5	glutamyl-tRNA reductase (EC 1.2.1.-)
ACHSKI-957	GK2649	2665355	2665942	4.6	GTP-binding protein
ACHSKI-958	GK2650	2665939	2668266	4.1	ATP-dependent Lon protease (EC 3.4.21.53)
ACHSKI-959	GK2652	2670330	2671595	4.1	ATP-dependent Clp protease ATP-binding subunit (class III heat-shock protein)
ACHSKI-960	GK2653	2671826	2673112	3.9	trigger factor (prolyl isomerase)
ACHSKI-961	GK2654	2673277	2674230	5	unknown conserved protein
ACHSKI-962	GK2655	2674462	2675055	2.2	3-isopropylmalate dehydratase small subunit (EC 4.2.1.33)
ACHSKI-963	GK2656	2675152	2676567	2.2	3-isopropylmalate dehydratase large subunit (EC 4.2.1.33)
ACHSKI-964	GK2657	2676588	2677703	2.2	3-isopropylmalate dehydrogenase (EC 1.1.1.85)
ACHSKI-965	GK2658	2677721	2679268	2.2	2-isopropylmalate synthase (EC 4.1.3.12)
ACHSKI-966	GK2659	2679255	2680280	2.2	ketol-acid reductoisomerase (EC 1.1.1.86)
ACHSKI-967	GK2660	2680383	2680901	2.2	acetolactate synthase (acetohydroxy-acid synthase) small subunit (EC 4.1.3.18)
ACHSKI-968	GK2661	2680880	2682670	2.2	acetolactate synthase large subunit (EC 4.1.3.18)
ACHSKI-969	GK2664	2686016	2686522	5	unknown conserved protein
ACHSKI-970	GK2665	2686519	2687133	5	unknown conserved protein
ACHSKI-971	GK2666	2687130	2687903	3.6	ribonuclease PH (EC 2.7.7.56)
ACHSKI-972	GK2667	2688052	2689125	1.9	germination (cortex hydrolysis) and sporulation (stage II, multiple polar septa)
ACHSKI-973	GK2668	2689230	2690024	1.1	glutamate racemase (EC 5.1.1.3)
ACHSKI-974	GK2669	2690034	2690465	3.5.2	transcriptional regulator (MarR family)
ACHSKI-975	GK2670	2690686	2690910	3.5.2	transcriptional regulator
ACHSKI-976	GK2671	2691144	2691905	2.1.3	succinate dehydrogenase (iron-sulfur protein) (EC 1.3.99.1)
ACHSKI-977	GK2672	2691907	2693664	2.1.3	succinate dehydrogenase (flavoprotein subunit) (EC 1.3.99.1)
ACHSKI-978	GK2673	2693834	2694442	2.1.3	succinate dehydrogenase (cytochrome b558 subunit) (EC 1.3.99.1)
ACHSKI-979	GK2674	2694687	2695139	5	unknown conserved protein
ACHSKI-980	GK2675	2695188	2696960	3.2	excinuclease ABC (subunit C) (EC 4.1.99.3)
ACHSKI-981	GK2682	2703653	2704597	2.1.1	nucleotide sugar epimerase
ACHSKI-982	GK2685	2706313	2706630	1.4	thioredoxin (TRX)
ACHSKI-983	GK2687	2707825	2708601	1.4	electron transfer flavoprotein beta subunit
ACHSKI-984	GK2688	2708667	2709440	2.4	enoyl-CoA hydratase (EC 4.2.1.17)
ACHSKI-985	GK2689	2709466	2710053	3.5.2	transcriptional regulator (TetR/AcrR family)
ACHSKI-986	GK2690	2710118	2711818	2.4	long chain acyl-CoA synthetase
ACHSKI-987	GK2692	2712080	2712493	5	unknown conserved protein
ACHSKI-988	GK2694	2714878	2716602	3.2	DNA-dependent DNA polymerase beta chain
ACHSKI-989	GK2695	2716693	2717232	5	unknown conserved protein
ACHSKI-990	GK2696	2717225	2717500	5	unknown conserved protein
ACHSKI-991	GK2699	2720079	2723243	5	unknown conserved protein
ACHSKI-992	GK2700	2723240	2723692	3.5.2	transcriptional regulator (MarR family)
ACHSKI-993	GK2701	2723970	2725250	2.6	alkaline phosphatase (EC 3.1.3.1)
ACHSKI-994	GK2702	2725562	2725912	5	unknown conserved protein
ACHSKI-995	GK2703	2725912	2726301	5	unknown conserved protein
ACHSKI-996	GK2706	2728613	2731027	3.7.2	phenylalanyl-tRNA synthetase beta subunit (EC 6.1.1.20)
ACHSKI-997	GK2707	2731049	2732083	3.7.2	phenylalanyl-tRNA synthetase alpha subunit (EC 6.1.1.20)
ACHSKI-998	GK2709	2732886	2733641	3.6	rRNA methylase (EC 2.1.1.-)
ACHSKI-999	GK2712	2735162	2735371	5	unknown conserved protein
ACHSKI-1000	GK2713	2735400	2736488	5	unknown conserved protein
ACHSKI-1001	GK2715	2737083	2737334	5	unknown conserved protein
ACHSKI-1002	GK2716	2737392	2737751	3.7.1	50S ribosomal protein L20
ACHSKI-1003	GK2717	2737777	2737977	3.7.1	50S ribosomal protein L35
ACHSKI-1004	GK2718	2737991	2738710	3.7.3	translation initiation factor IF-3
ACHSKI-1005	GK2719	2738930	2740888	3.7.2	threonyl-tRNA synthetase (EC 6.1.1.3)

ACHSKI-1006	GK2720	2741224	2742099	5	unknown conserved protein
ACHSKI-1007	GK2721	2742433	2743374	3.1	primosome component (helicase loader)
ACHSKI-1008	GK2722	2743386	2744771	3.1	chromosome replication initiation/membrane attachment protein
ACHSKI-1009	GK2723	2744877	2745335	5	unknown conserved protein
ACHSKI-1010	GK2725	2745930	2746304	2.2	S-adenosylmethionine decarboxylase (EC 4.1.1.50)
ACHSKI-1011	GK2726	2746618	2747646	2.1.2	glyceraldehyde-3-phosphate dehydrogenase (EC 1.2.1.12)
ACHSKI-1012	GK2727	2747763	2748368	5	unknown conserved protein
ACHSKI-1013	GK2728	2748396	2749220	3.2	formamidopyrimidine-DNA glycosidase (EC 3.2.2.23)
ACHSKI-1014	GK2730	2749550	2752186	3.1	DNA-directed DNA polymerase I (POL I) (EC 2.7.7.7)
ACHSKI-1015	GK2731	2752340	2754088	1.3	two-component sensor histidine kinase (phosphate regulation)
ACHSKI-1016	GK2732	2754081	2754788	3.5.2	two-component response regulator (phosphate regulation)
ACHSKI-1017	GK2734	2755549	2756487	2.1.3	malate dehydrogenase (EC 1.1.1.37)
ACHSKI-1018	GK2735	2756514	2757785	2.1.3	isocitrate dehydrogenase (EC 1.1.1.42)
ACHSKI-1019	GK2736	2757858	2758976	2.1.3	citrate synthase II (EC 4.1.3.7)
ACHSKI-1020	GK2738	2759819	2760937	5	unknown conserved protein
ACHSKI-1021	GK2739	2761080	2762843	2.1.2	pyruvate kinase (EC 2.7.1.40)
ACHSKI-1022	GK2740	2762871	2763830	2.1.2	6-phosphofructokinase (Phosphofructokinase) (Phosphohexokinase) (EC 2.7.1.11)
ACHSKI-1023	GK2741	2764010	2764987	2.4	acetyl CoA carboxylase alpha subunit (EC 6.4.1.2)
ACHSKI-1024	GK2742	2764972	2765844	2.4	acetyl-CoA carboxylase beta subunit (EC 6.4.1.2)
ACHSKI-1025	GK2744	2766627	2769902	3.1	DNA-directed DNA polymerase III alpha subunit
ACHSKI-1026	GK2746	2770356	2770859	5	unknown conserved protein
ACHSKI-1027	GK2747	2771012	2771959	5	unknown conserved protein
ACHSKI-1028	GK2748	2772060	2772368	5	unknown conserved protein
ACHSKI-1029	GK2749	2772453	2773760	5	unknown conserved protein
ACHSKI-1030	GK2750	2773878	2774558	5	unknown conserved protein
ACHSKI-1031	GK2751	2774698	2775792	3.8	Xaa-Pro dipeptidase
ACHSKI-1032	GK2756	2778777	2780198	2.2	argininosuccinate lyase (arginosuccinase) (EC 4.3.2.1)
ACHSKI-1033	GK2757	2780219	2781439	2.2	argininosuccinate synthase (citrulline--aspartate ligase) (EC 6.3.4.5)
ACHSKI-1034	GK2772	2797314	2798810	2.5	NAD-dependent aldehyde dehydrogenase (EC 1.2.1.3)
ACHSKI-1035	GK2785	2810988	2812178	2.1.1	acetate kinase (acetokinase) (EC 2.7.2.1)
ACHSKI-1036	GK2786	2812558	2813547	5	unknown conserved protein
ACHSKI-1037	GK2787	2813667	2814167	4.2	thiol peroxidase (EC 1.11.1.-) (superoxide-inducible protein 8)
ACHSKI-1038	GK2788	2814292	2814756	5	unknown conserved protein
ACHSKI-1039	GK2789	2814768	2815457	5	unknown conserved protein
ACHSKI-1040	GK2792	2817170	2817973	5	unknown conserved protein
ACHSKI-1041	GK2793	2818137	2819729	2.1.1	acetate-CoA ligase (EC 6.2.1.1)
ACHSKI-1042	GK2794	2819867	2820070	1.8	small acid-soluble spore protein (major alpha-type SASP)
ACHSKI-1043	GK2795	2820152	2821357	2.5	protein involved in thiamine biosynthesis
ACHSKI-1044	GK2796	2821362	2822507	4.6	cysteine desulfurase (EC 4.4.1.-)
ACHSKI-1045	GK2798	2822886	2824589	1.7	septation ring formation regulator
ACHSKI-1046	GK2799	2824785	2825609	2.2	histidinol phosphatase (EC 3.1.3.15)
ACHSKI-1047	GK2800	2825702	2826178	5	unknown conserved protein
ACHSKI-1048	GK2801	2826234	2828054	1.3	two-component sensor histidine kinase
ACHSKI-1049	GK2802	2828404	2829006	3.7.1	30S ribosomal protein S4
ACHSKI-1050	GK2803	2829053	2830312	3.7.2	tyrosyl-tRNA synthetase (Tyrosine--tRNA ligase) (EC 6.1.1.1)
ACHSKI-1051	GK2806	2833839	2835554	2.1.1	acetyl-CoA synthetase (EC 6.2.1.1)
ACHSKI-1052	GK2807	2835729	2836361	2.1.1	acetoin utilization protein
ACHSKI-1053	GK2808	2836454	2837098	2.1.1	acetoin utilization protein
ACHSKI-1054	GK2809	2837095	2838264	2.1.1	acetoin utilization protein
ACHSKI-1055	GK2810	2838428	2839420	3.5.2	transcriptional regulator involved in carbon catabolite control
ACHSKI-1056	GK2811	2839623	2840705	2.2	3-deoxy-D-arabino-heptulosonate 7-phosphate synthase (EC 4.1.2.15) ; chorismate mutase (EC 5.4.99.5)
ACHSKI-1057	GK2814	2841663	2842076	5	unknown conserved protein
ACHSKI-1058	GK2815	2842223	2843527	1.1	UDP-N-acetyl muramate-alanine ligase (EC 6.3.2.8)

ACHSKI-1059	GK2816	2843681	2846035	1.8	DNA translocase (stage III sporulation protein E)
ACHSKI-1060	GK2817	2846142	2846747	5	unknown conserved protein
ACHSKI-1061	GK2818	2846768	2847565	5	unknown conserved protein
ACHSKI-1062	GK2820	2848352	2849428	5	unknown conserved protein
ACHSKI-1063	GK2821	2849545	2849844	5	unknown conserved protein
ACHSKI-1064	GK2822	2849839	2850687	5	unknown conserved protein
ACHSKI-1065	GK2823	2850768	2851421	5	unknown conserved protein
ACHSKI-1066	GK2825	2852009	2852701	5	unknown conserved protein
ACHSKI-1067	GK2827	2853245	2855401	2.1.1	pullulanase (EC 3.2.1.68)
ACHSKI-1068	GK2829	2856453	2857031	5	unknown conserved protein
ACHSKI-1069	GK2830	2857028	2858221	1.2	maltose permease
ACHSKI-1070	GK2835	2861543	2863168	1.2	transporter involved in the export of O-antigen and teichoic acid
ACHSKI-1071	GK2836	2863281	2864591	5	unknown conserved protein
ACHSKI-1072	GK2841	2867041	2867355	5	unknown conserved protein
ACHSKI-1073	GK2842	2867413	2869830	3.7.2	leucyl-tRNA synthetase (EC 6.1.1.4)
ACHSKI-1074	GK2846	2872361	2872948	5	unknown conserved protein
ACHSKI-1075	GK2848	2874444	2874992	5	unknown conserved protein
ACHSKI-1076	GK2849	2875015	2876226	2.2	S-adenosylmethionine synthetase (EC 2.5.1.6)
ACHSKI-1077	GK2850	2876689	2878275	2.1.2	phosphoenolpyruvate carboxykinase (EC 4.1.1.49)
ACHSKI-1078	GK2858	2885869	2886336	5	unknown conserved protein
ACHSKI-1079	GK2861	2887337	2887777	4.1	starvation-induced protein controlled by sigma-B (general stress protein 20U)
ACHSKI-1080	GK2863	2888514	2888990	1.3	autoinducer-2 production protein (EC 3.13.1.-) (AI-2 synthesis protein)
ACHSKI-1081	GK2864	2889204	2889449	5	unknown conserved protein
ACHSKI-1082	GK2865	2889553	2890539	1.2	ABC transporter (Mn/Zn-binding (lipo)protein) (surface adhesin A) Mn/Zn
ACHSKI-1083	GK2878	2904413	2905222	5	unknown conserved protein
ACHSKI-1084	GK2889	2913249	2914796	2.2	pyrroline-5 carboxylate dehydrogenase (EC 1.5.1.12)
ACHSKI-1085	GK2923	2956938	2957489	5	unknown conserved protein
ACHSKI-1086	GK2924	2957620	2958969	2.1.2	glucose-6-phosphate isomerase A (phosphoglucose isomerase A) (EC 5.3.1.9)
ACHSKI-1087	GK2926	2960794	2961027	5	unknown conserved protein
ACHSKI-1088	GK2927	2961131	2961496	3.6	polyribonucleotide nucleotidyltransferase
ACHSKI-1089	GK2931	2963741	2964916	2.2	aminotransferase
ACHSKI-1090	GK2944	2973996	2974601	2.5	protein involved in biotin metabolism
ACHSKI-1091	GK2949	2979128	2979766	5	unknown conserved protein
ACHSKI-1092	GK2950	2979994	2980311	5	unknown conserved protein
ACHSKI-1093	GK2953	2981329	2982543	1.4	NADH dehydrogenase (EC 1.6.99.3)
ACHSKI-1094	GK2954	2982829	2983827	1.4	thioredoxin reductase
ACHSKI-1095	GK2956	2984512	2984877	5	unknown conserved protein
ACHSKI-1096	GK2957	2985029	2985901	2.2	diaminopimelate epimerase
ACHSKI-1097	GK2959	2986446	2987516	1.4	NADH dehydrogenase (EC 1.6.99.3)
ACHSKI-1098	GK2960	2987555	2987908	5	unknown conserved protein
ACHSKI-1099	GK2961	2987993	2988235	4.6	nitrogen fixation protein (NifU protein)
ACHSKI-1100	GK2962	2988472	2989386	2.2	homoserine kinase (EC 2.7.1.39)
ACHSKI-1101	GK2963	2989383	2990444	2.2	threonine synthase (EC 4.2.3.1)
ACHSKI-1102	GK2964	2990444	2991742	2.2	homoserine dehydrogenase (EC 1.1.1.3)
ACHSKI-1103	GK2965	2991835	2992809	2.1.1	2-hydroxyacid dehydrogenase
ACHSKI-1104	GK2966	2992955	2993956	5	unknown conserved protein
ACHSKI-1105	GK2967	2994246	2994743	5	unknown conserved protein
ACHSKI-1106	GK2968	2994827	2995597	5	unknown conserved protein
ACHSKI-1107	GK2969	2995622	2996059	5	unknown conserved protein
ACHSKI-1108	GK2972	2996987	2997271	5	unknown conserved protein
ACHSKI-1109	GK2973	2997375	2998061	5	unknown conserved protein
ACHSKI-1110	GK2974	2998184	2999119	2.5	lipoic acid synthetase (lipoate synthase)
ACHSKI-1111	GK2975	2999247	3000236	5	unknown conserved protein

ACHSKI-1112	GK2981	3005755	3006501	5	unknown conserved protein
ACHSKI-1113	GK2982	3006555	3006857	5	unknown conserved protein
ACHSKI-1114	GK2984	3008319	3009221	5	unknown conserved protein
ACHSKI-1115	GK2985	3009245	3010093	5	unknown conserved protein
ACHSKI-1116	GK2991	3016503	3017900	5	unknown conserved protein
ACHSKI-1117	GK2992	3017907	3018356	4.6	nitrogen fixation protein NifU
ACHSKI-1118	GK2993	3018346	3019566	2.2	cysteine desulfurase (EC 4.4.1.-)
ACHSKI-1119	GK2994	3019563	3020873	5	unknown conserved protein
ACHSKI-1120	GK2995	3020891	3021670	1.2	ABC transporter (ATP-binding protein)
ACHSKI-1121	GK2996	3021903	3022265	5	unknown conserved protein
ACHSKI-1122	GK2997	3022762	3023613	1.2	ABC transporter (substrate binding protein) (lipoprotein) amino acid
ACHSKI-1123	GK2998	3023629	3024297	1.2	ABC transporter (permease)
ACHSKI-1124	GK2999	3024287	3025315	1.2	ABC transporter (ATP-binding protein)
ACHSKI-1125	GK3001	3026079	3026396	1.4	thioredoxin
ACHSKI-1126	GK3004	3027163	3027546	2.2	protein H involved in glycine cleavage system
ACHSKI-1127	GK3005	3027643	3028008	4.2	arsenate reductase
ACHSKI-1128	GK3006	3028086	3029870	2.4	acetyl-CoA dehydrogenase
ACHSKI-1129	GK3007	3030008	3031180	2.4	acetyl-CoA acyltransferase
ACHSKI-1130	GK3008	3031208	3033595	2.4	3-hydroxyacyl-CoA dehydrogenase
ACHSKI-1131	GK3010	3034150	3035067	2.2	proline dehydrogenase
ACHSKI-1132	GK3012	3035505	3035840	5	unknown conserved protein
ACHSKI-1133	GK3027	3047926	3048573	3.5.2	transcriptional regulator
ACHSKI-1134	GK3028	3048613	3050124	4.1	5-carboxy-2-hydroxymuconate semialdehyde dehydrogenase
ACHSKI-1135	GK3043	3064195	3064662	3.8	ssrA RNA (tmRNA)-binding protein
ACHSKI-1136	GK3044	3064744	3067020	2.3	ribonuclease R
ACHSKI-1137	GK3045	3067043	3067783	4.2	carboxylesterase (EC 3.1.1.1)
ACHSKI-1138	GK3046	3067858	3068094	1.6	protein translocation subunit
ACHSKI-1139	GK3054	3073536	3074828	2.1.2	enolase (2-phosphoglycerate dehydratase) (EC 4.2.1.11)
ACHSKI-1140	GK3055	3074870	3076405	2.1.2	2,3-bisphosphoglycerate-independent phosphoglycerate mutase (Phosphoglyceromutase) (EC 5.4.2.1)
ACHSKI-1141	GK3058	3078528	3079535	2.1.2	glyceraldehyde-3-phosphate dehydrogenase (phosphorylating) (EC 1.2.1.12)
ACHSKI-1142	GK3059	3079578	3080597	3.5.2	transcriptional regulator (central glycolytic gene regulator)
ACHSKI-1143	GK3061	3081017	3082324	3.5.1	RNA polymerase sigma-54 factor (sigma-L)
ACHSKI-1144	GK3062	3083634	3084224	4.1	ATP-dependent Clp protease proteolytic subunit (class III heat-shock protein)
ACHSKI-1145	GK3063	3084351	3084608	2.1.1	phosphotransferase system phosphocarrier protein HPr
ACHSKI-1146	GK3064	3084623	3085585	5	unknown conserved protein
ACHSKI-1147	GK3065	3085706	3086659	5	unknown conserved protein
ACHSKI-1148	GK3066	3086656	3087552	5	unknown conserved protein
ACHSKI-1149	GK3068	3088385	3089341	1.4	thioredoxin reductase (EC 1.8.1.9)
ACHSKI-1150	GK3069	3089417	3090889	5	unknown conserved protein
ACHSKI-1151	GK3071	3091686	3092444	2.2	imidazoleglycerol-phosphate synthase (EC 4.1.3.-)
ACHSKI-1152	GK3072	3092441	3093178	2.2	phosphoribosylformimino-5-aminoimidazole carboxamide ribotide isomerase (EC 5.3.1.16)
ACHSKI-1153	GK3073	3093178	3093813	2.2	imidazole glycerol phosphate synthase subunit (EC 2.4.2.-)
ACHSKI-1154	GK3074	3094044	3094631	2.2	imidazoleglycerol-phosphate dehydratase (EC 4.2.1.19)
ACHSKI-1155	GK3075	3094635	3095909	2.2	histidinol dehydrogenase (EC 1.1.1.23)
ACHSKI-1156	GK3076	3096260	3096883	2.2	ATP phosphoribosyltransferase (EC 2.4.2.17)
ACHSKI-1157	GK3077	3097062	3098246	3.7.2	histidyl-tRNA synthetase (EC 6.1.1.21)
ACHSKI-1158	GK3078	3098794	3099291	2.1.1	acetyltransferase
ACHSKI-1159	GK3079	3099288	3099956	4.6	phosphoglycolate phosphatase
ACHSKI-1160	GK3081	3100991	3101803	3.8	prolipoprotein diacylglyceryl transferase (Spore germination protein)
ACHSKI-1161	GK3082	3101863	3102798	3.8	HPr(Ser/Thr) kinase/phosphatase (EC 2.7.1.-)
ACHSKI-1162	GK3083	3103047	3103409	5	unknown conserved protein
ACHSKI-1163	GK3085	3103967	3106834	3.2	excinuclease ABC subunit A
ACHSKI-1164	GK3086	3106842	3108818	3.2	excinuclease ABC subunit B

ACHSKI-1165	GK3088	3109306	3110478	5	unknown conserved protein
ACHSKI-1166	GK3092	3114710	3116158	2.2	carboxy-terminal processing protease
ACHSKI-1167	GK3100	3123667	3124560	1.7	cell-division protein
ACHSKI-1168	GK3101	3124541	3125236	1.7	cell-division ATP-binding protein
ACHSKI-1169	GK3102	3125496	3125831	1.4	cytochrome c551
ACHSKI-1170	GK3107	3128689	3131202	1.6	preprotein translocase subunit (ATPase, RNA helicase)
ACHSKI-1171	GK3109	3132017	3132568	3.7.1	ribosomal protein S30EA
ACHSKI-1172	GK3113	3134717	3135118	1.5	flagellar protein
ACHSKI-1173	GK3114	3135321	3136823	1.5	flagellar hook-associated protein 2 (filament cap protein)
ACHSKI-1174	GK3128	3149909	3150904	1.8	dTDP-glucose 4,6-dehydratase (EC 4.2.1.46)
ACHSKI-1175	GK3131	3153652	3154545	1.5	flagellin protein
ACHSKI-1176	GK3137	3157103	3158698	1.5	flagellar hook-associated protein 1 (HAP1)
ACHSKI-1177	GK3141	3160064	3160501	5	unknown conserved protein
ACHSKI-1178	GK3143	3162418	3162843	1.5	protein involved in flagellar biosynthesis (flhS-related protein)
ACHSKI-1179	GK3146	3166313	3167005	1.10	late competence protein
ACHSKI-1180	GK3147	3167002	3168393	1.10	late competence protein
ACHSKI-1181	GK3149	3169253	3170098	5	unknown conserved protein
ACHSKI-1182	GK3150	3170354	3171028	3.5.2	two-component response regulator (extracellular proteinase response regulator)
ACHSKI-1183	GK3152	3172423	3173064	5	unknown conserved protein
ACHSKI-1184	GK3193	3227079	3227708	5	unknown conserved protein
ACHSKI-1185	GK3202	3236185	3237108	3.5.2	transcriptional regulator (TetR/AcrR family)
ACHSKI-1186	GK3212	3247429	3248772	2.1.1	6-phospho-beta-glucosidase (EC 3.2.1.86)
ACHSKI-1187	GK3220	3257400	3258386	5	unknown conserved protein
ACHSKI-1188	GK3222	3259148	3259567	4.2	arsenate reductase (arsenical pump modifier)
ACHSKI-1189	GK3227	3263000	3263944	1.2	ABC transporter (permease) ribose
ACHSKI-1190	GK3228	3263941	3265425	1.2	ABC transporter (ATP-binding protein) ribose
ACHSKI-1191	GK3229	3265456	3265866	1.2	ABC transporter (permease) ribose
ACHSKI-1192	GK3230	3265866	3266759	2.1.1	ribokinase (EC 2.7.1.15)
ACHSKI-1193	GK3231	3266756	3267745	3.5.2	transcriptional repressor of the ribose operon
ACHSKI-1194	GK3233	3268259	3268711	5	unknown conserved protein
ACHSKI-1195	GK3242	3277875	3279083	2.2	N-acyl-L-amino acid amidohydrolase (L-aminoacylase)
ACHSKI-1196	GK3251	3287220	3288404	2.2	N-acyl-L-amino acid amidohydrolase (L-aminoacylase) (EC 3.5.1.14)
ACHSKI-1197	GK3254	3291409	3292782	2.1.1	NDP-sugar dehydrogenase
ACHSKI-1198	GK3269	3310798	3311685	1.1	UTP-glucose-1-phosphate uridylyltransferase (Uridine diphosphoglucose pyrophosphorylase) (general stress protein 33) (EC 2.7.7.9)
ACHSKI-1199	GK3297	3338225	3339967	2.1.1	phosphomannomutase (EC 5.4.2.8)
ACHSKI-1200	GK3299	3341644	3342933	1.1	O-antigen transporter
ACHSKI-1201	GK3300	3343043	3343336	6	unknown
ACHSKI-1202	GK3317	3363539	3364798	1.1	O-antigen transporter
ACHSKI-1203	GK3319	3365152	3365826	1.1	sugar transferase involved in lipopolysaccharide synthesis
ACHSKI-1204	GK3320	3365841	3366725	1.1	UTP-glucose-1-phosphate uridylyltransferase (EC 2.7.7.9)
ACHSKI-1205	GK3324	3369979	3370920	3.5.2	attenuator role for lytABC and lytR expression
ACHSKI-1206	GK3326	3371797	3372504	4.1	involved in capsular polysaccharide biosynthesis
ACHSKI-1207	GK3327	3372485	3373228	4.1	involved in capsular polysaccharide biosynthesis
ACHSKI-1208	GK3329	3373888	3374325	2.4	hydroxymyristoyl-[acyl carrier protein] dehydratase (EC 4.2.1.-)
ACHSKI-1209	GK3331	3374712	3375533	1.5	flagellar hook-basal body protein
ACHSKI-1210	GK3332	3375552	3376382	1.5	flagellar basal-body rod protein
ACHSKI-1211	GK3333	3376723	3377724	1.1	cell shape determining protein (MreB-like protein)
ACHSKI-1212	GK3334	3377831	3378094	3.5.2	transcriptional regulator of sigma-E/sigma-K-dependent gene (stage III sporulation protein D)
ACHSKI-1213	GK3339	3382278	3383165	1.8	stage II sporulation protein
ACHSKI-1214	GK3340	3383354	3384385	1.8	stage II sporulation protein D
ACHSKI-1215	GK3341	3384953	3386257	1.1	UDP-N-acetylglucosamine 1-carboxyvinyltransferase (EC 2.5.1.7)
ACHSKI-1216	GK3342	3386289	3387044	5	unknown conserved protein
ACHSKI-1217	GK3346	3389421	3390998	1.4	NADH:ubiquinone oxidoreductase subunit 4 (chain M) (EC 1.6.5.3)

ACHSKI-1218	GK3347	3390995	3392857	1.4	NADH:ubiquinone oxidoreductase subunit 5 (chain L) (EC 1.6.5.3)
ACHSKI-1219	GK3357	3399099	3399500	1.4	F0F1-type ATP synthase epsilon chain (EC 3.6.3.14)
ACHSKI-1220	GK3358	3399523	3400944	1.4	F0F1-type ATP synthase beta chain (EC 3.6.3.14)
ACHSKI-1221	GK3359	3400972	3401829	1.4	F0F1-type ATP synthase gamma chain (EC 3.6.3.14)
ACHSKI-1222	GK3360	3401897	3403405	1.4	F0F1-type ATP synthase alpha chain (EC 3.6.3.14)
ACHSKI-1223	GK3361	3403430	3403966	1.4	F0F1-type ATP synthase delta chain (EC 3.6.3.14)
ACHSKI-1224	GK3362	3403963	3404496	1.4	F0F1-type ATP synthase B chain (EC 3.6.3.14)
ACHSKI-1225	GK3363	3404617	3404835	1.4	F0F1-type ATP synthase C chain (EC 3.6.3.14)
ACHSKI-1226	GK3364	3404907	3405620	1.4	F0F1-type ATP synthase A chain (EC 3.6.3.14)
ACHSKI-1227	GK3365	3405638	3406021	1.4	F0F1-type ATP synthase i subunit (EC 3.6.3.14)
ACHSKI-1228	GK3368	3406851	3407480	2.3	uracil phosphoribosyltransferase (EC 2.4.2.9)
ACHSKI-1229	GK3369	3407632	3408870	2.2	serine hydroxymethyltransferase (EC 2.1.2.1)
ACHSKI-1230	GK3370	3408963	3409529	5	unknown conserved protein
ACHSKI-1231	GK3373	3412168	3412614	3.8	protein-tyrosine-phosphatase (EC 3.1.3.48)
ACHSKI-1232	GK3374	3412869	3413420	5	unknown conserved protein
ACHSKI-1233	GK3375	3413833	3414882	5	unknown conserved protein
ACHSKI-1234	GK3376	3415030	3415917	1.8	stage II sporulation protein R (pro-sigma-E processing factor)
ACHSKI-1235	GK3377	3415953	3416834	2.5	protoporphyrinogen oxidase
ACHSKI-1236	GK3378	3416824	3417900	3.7.5	peptide chain release factor 1 (RF-1) in translation
ACHSKI-1237	GK3380	3418772	3419395	2.3	thymidine kinase (EC 2.7.1.21)
ACHSKI-1238	GK3381	3419559	3419759	3.7.1	50S ribosomal protein L31
ACHSKI-1239	GK3382	3420017	3421291	3.5.4	transcriptional terminator
ACHSKI-1240	GK3383	3421544	3422506	5	unknown conserved protein
ACHSKI-1241	GK3384	3422541	3423827	1.1	UDP-N-acetylglucosamine 1-carboxyvinyltransferase (EC 2.5.1.7)
ACHSKI-1242	GK3385	3423960	3424601	2.1.2	transaldolase (EC 2.2.1.2)
ACHSKI-1243	GK3386	3424677	3425540	2.1.2	fructose-bisphosphate aldolase (EC 4.1.2.13)
ACHSKI-1244	GK3389	3426938	3428533	2.3	CTP synthetase (UTP--ammonia ligase) (EC 6.3.4.2)
ACHSKI-1245	GK3390	3428694	3429251	3.5.3	DNA-directed RNA polymerase (EC 2.7.7.6) delta subunit
ACHSKI-1246	GK3393	3433797	3434939	2.4	acyl-CoA dehydrogenase (EC 1.3.99.3)
ACHSKI-1247	GK3394	3435464	3436597	2.4	acyl-CoA dehydrogenase (EC 1.3.99.-)
ACHSKI-1248	GK3395	3436831	3437682	2.4	3-hydroxybutyryl-CoA dehydrogenase (EC 1.1.1.157)
ACHSKI-1249	GK3397	3438005	3439183	2.4	acetyl-CoA acetyltransferase (EC 2.3.1.9)
ACHSKI-1250	GK3398	3439333	3441435	1.4	iron-sulphur oxidoreductase
ACHSKI-1251	GK3401	3443334	3445007	3.7.2	arginyl-tRNA synthetase (EC 6.1.1.19)
ACHSKI-1252	GK3402	3445011	3445442	5	unknown conserved protein
ACHSKI-1253	GK3404	3446206	3447081	2.2	agmatinase (EC 3.5.3.11)
ACHSKI-1254	GK3406	3448178	3450223	1.1	penicillin-binding protein
ACHSKI-1255	GK3407	3450355	3450870	5	unknown conserved protein
ACHSKI-1256	GK3411	3452496	3453794	5	unknown conserved protein
ACHSKI-1257	GK3413	3454342	3454995	5	unknown conserved protein
ACHSKI-1258	GK3414	3455134	3455985	5	unknown conserved protein
ACHSKI-1259	GK3415	3456185	3457165	2.1.1	phosphotransacetylase (EC 2.3.1.8)
ACHSKI-1260	GK3416	3457423	3458169	5	unknown conserved protein
ACHSKI-1261	GK3418	3458956	3459540	5	unknown conserved protein
ACHSKI-1262	GK3419	3459736	3460107	5	unknown conserved protein
ACHSKI-1263	GK3421	3461092	3461781	3.2	uracil-DNA glycosylase (EC 3.2.2.-)
ACHSKI-1264	GK3422	3462169	3462519	4.1	stage II sporulation protein AA (anti-anti-sigma factor,antagonist of SpoIIAB)
ACHSKI-1265	GK3423	3462516	3463004	4.1	anti-sigma B factor (Ser/Thr protein kinase)
ACHSKI-1266	GK3424	3462964	3463734	3.5.1	DNA-directed RNA polymerase sigma-37 factor (sigma-B)
ACHSKI-1267	GK3425	3463784	3465694	5	unknown conserved protein
ACHSKI-1268	GK3436	3476701	3477561	1.2	ABC transporter (substrate-binding protein) phosphate
ACHSKI-1269	GK3437	3477635	3478570	1.2	ABC transporter (permease) phosphate
ACHSKI-1270	GK3438	3478567	3479463	1.2	ABC transporter (permease) phosphate

ACHSKI-1271	GK3446	3488187	3488681	1.2	PTS system, glucose-specific enzyme II, A component
ACHSKI-1272	GK3452	3494743	3496200	1.2	sodium/proline symporter (osmoregulation)
ACHSKI-1273	GK3453	3496608	3497429	1.2	ABC transporter (substrate-binding protein) amino acid
ACHSKI-1274	GK3456	3499061	3499360	1.4	cytochrome aa3 quinol oxidase subunit IV
ACHSKI-1275	GK3457	3499362	3499976	1.4	cytochrome aa3 quinol oxidase subunit III
ACHSKI-1276	GK3458	3499980	3501926	1.4	cytochrome aa3 quinol oxidase subunit I
ACHSKI-1277	GK3459	3501944	3502849	1.4	cytochrome aa3 quinol oxidase subunit II
ACHSKI-1278	GK3461	3504076	3505464	1.2	amino acid transporter
ACHSKI-1279	GK3463	3507176	3508702	1.4	Rieske [2Fe-2S] iron-sulfur protein
ACHSKI-1280	GK3465	3509980	3511134	2.1.1	glycerate kinase (EC 2.7.1.31)
ACHSKI-1281	GK3467	3513448	3513927	5	unknown conserved protein
ACHSKI-1282	GK3469	3514220	3515440	4.1	serine protease Do
ACHSKI-1283	GK3471	3516343	3517125	5	unknown conserved protein
ACHSKI-1284	GK3472	3517112	3518440	5	unknown conserved protein
ACHSKI-1285	GK3473	3518433	3520262	1.3	two-component sensor histidine kinase
ACHSKI-1286	GK3474	3520269	3520982	3.5.2	two-component response regulator
ACHSKI-1287	GK3475	3521171	3522457	2.3	adenylosuccinate synthase (EC 6.3.4.4)
ACHSKI-1288	GK3476	3522675	3524039	3.1	replicative DNA helicase
ACHSKI-1289	GK3477	3524117	3524566	3.7.1	50S ribosomal protein L9 (BL17)
ACHSKI-1290	GK3478	3524563	3526539	5	unknown conserved protein
ACHSKI-1291	GK3479	3526586	3527512	5	unknown conserved protein
ACHSKI-1292	GK3480	3527648	3527884	3.7.1	30S ribosomal protein S18 (BS21)
ACHSKI-1293	GK3481	3527982	3528476	3.1	single-strand DNA-binding protein
ACHSKI-1294	GK3482	3528507	3528794	3.7.1	30S ribosomal protein S6 (BS9)
ACHSKI-1295	GK3483	3529009	3530109	5	unknown conserved protein
ACHSKI-1296	GK3486	3532637	3533542	5	unknown conserved protein
ACHSKI-1297	GK3487	3533729	3534352	5	unknown conserved protein
ACHSKI-1298	GK3488	3534425	3535126	5	unknown conserved protein
ACHSKI-1299	GK3489	3535181	3536050	1.8	stage 0 sporulation protein J (antagonist of Soj)
ACHSKI-1300	GK3490	3536043	3536804	1.8	sporulation initiation inhibitor protein
ACHSKI-1301	GK3491	3536930	3537775	5	unknown conserved protein
ACHSKI-1302	GK3492	3537935	3538651	1.7	glucose-inhibited division protein
ACHSKI-1303	GK3493	3538675	3540564	1.7	glucose-inhibited division protein
ACHSKI-1304	GK3494	3540583	3541971	4.2	thiophen/furan oxidation protein
ACHSKI-1305	GK3495	3542316	3542972	1.8	SpoIII-associated protein
ACHSKI-1306	GK3496	3542969	3543733	1.8	stage III sporulation protein J
ACHSKI-1307	GK3497	3543806	3544171	3.6	ribonuclease P (protein component)
ACHSKI-1308	GK3498	3544251	3544385	3.7.1	50S ribosomal protein L34
