

Supplementary Table S3. List of house-keeping genes used in the AutoMLST analysis

TIGRFAMs Accession No.	Name	Mainrole category	Function
TIGR00133	gatB	Protein synthesis	aspartyl/glutamyl-tRNA(Asn/Gln) amidotransferase, B subunit
TIGR01798	cit_synth_I	Energy metabolism	citrate (Si)-synthase
TIGR00138	rsmG_gidB	Protein synthesis	16S rRNA (guanine(527)-N(7))-methyltransferase RsmG
TIGR01816	sdhA_forward	Energy metabolism	succinate dehydrogenase, flavoprotein subunit
TIGR01520	FruBisAldo_II_A	Energy metabolism	fructose-bisphosphate aldolase, class II
TIGR00036	dapB	Amino acid biosynthesis	4-hydroxy-tetrahydrodipicolinate reductase
TIGR01529	argR_whole	Regulatory functions	arginine repressor
TIGR00763	lon	Protein fate	endopeptidase La
TIGR02692	tRNA_CCA_actino	Protein synthesis	CCA tRNA nucleotidyltransferase
TIGR00338	serB	Amino acid biosynthesis	phosphoserine phosphatase SerB
TIGR00963	secA	Protein fate	preprotein translocase, SecA subunit
TIGR01127	ilvA_1Cterm	Amino acid biosynthesis	threonine ammonia-lyase
TIGR00459	aspS_bact	Protein synthesis	aspartate--tRNA ligase
TIGR00755	ksgA	Protein synthesis	ribosomal RNA small subunit methyltransferase A
TIGR00754	bfr	Transport and binding proteins	bacterioferritin
TIGR02504	NrdJ_Z	Purines, pyrimidines, nucleosides, and nucleotides	ribonucleoside-diphosphate reductase, adenosylcobalamin-dependent
TIGR00521	coaBC_dfp	Biosynthesis of cofactors, prosthetic groups, and carriers	phosphopantothencysteine decarboxylase / phosphopantothenate--cysteine ligase
TIGR03594	GTPase_EngA	Protein synthesis	ribosome-associated GTPase EngA
TIGR00088	trmD	Protein synthesis	tRNA (guanine(37)-N(1))-methyltransferase
TIGR00086	smpB	Protein synthesis	SsrA-binding protein
TIGR00615	recR	DNA metabolism	recombination protein RecR
TIGR01039	atpD	Energy metabolism	ATP synthase F1, beta subunit
TIGR01134	purF	Purines, pyrimidines, nucleosides, and nucleotides	amidophosphoribosyltransferase
TIGR01137	cysta_beta	Amino acid biosynthesis	cystathionine beta-synthase
TIGR00690	rpoZ	Transcription	DNA-directed RNA polymerase, omega subunit
TIGR01032	rplT_bact	Protein synthesis	ribosomal protein bL20
TIGR00019	prfA	Protein synthesis	peptide chain release factor 1
TIGR01978	sufC	Biosynthesis of cofactors, prosthetic groups, and carriers	FeS assembly ATPase SufC
TIGR01225	hutH	Energy metabolism	histidine ammonia-lyase
TIGR00554	panK_bact	Biosynthesis of cofactors, prosthetic groups, and carriers	pantothenate kinase
TIGR02127	pyrF_sub2	Purines, pyrimidines, nucleosides, and nucleotides	orotidine 5'-phosphate decarboxylase
TIGR01302	IMP_dehydrog	Purines, pyrimidines, nucleosides, and nucleotides	inosine-5'-monophosphate dehydrogenase
TIGR03800	PLP_synth_Pdx2	Biosynthesis of cofactors, prosthetic groups, and carriers	pyridoxal 5'-phosphate synthase, glutaminase subunit Pdx2
TIGR01029	rpsG_bact	Protein synthesis	ribosomal protein uS7
TIGR01024	rplS_bact	Protein synthesis	ribosomal protein bL19

TIGR00382	clpX	Protein fate	ATP-dependent Clp protease, ATP-binding subunit ClpX
TIGR00065	ftsZ	Cellular processes	cell division protein FtsZ
TIGR00064	ftsY	Protein fate	signal recognition particle-docking protein FtsY
TIGR00060	L18_bact	Protein synthesis	ribosomal protein uL18
TIGR00062	L27	Protein synthesis	ribosomal protein bL27
TIGR01394	TypA_BipA	Regulatory functions	GTP-binding protein TypA/BipA
TIGR00639	PurN	Purines, pyrimidines, nucleosides, and nucleotides	phosphoribosylglycinamide formyltransferase
TIGR00436	era	Protein synthesis	GTP-binding protein Era
TIGR00302	TIGR00302	Purines, pyrimidines, nucleosides, and nucleotides	phosphoribosylformylglycinamide synthase, purS protein
TIGR00431	TruB	Protein synthesis	tRNA pseudouridine(55) synthase
TIGR01980	sufB	Biosynthesis of cofactors, prosthetic groups, and carriers	FeS assembly protein SufB
TIGR00263	trpB	Amino acid biosynthesis	tryptophan synthase, beta subunit
TIGR01011	rpsB_bact	Protein synthesis	ribosomal protein uS2
TIGR01855	IMP_synth_hisH	Amino acid biosynthesis	imidazole glycerol phosphate synthase, glutamine amidotransferase subunit
TIGR02067	his_9_HisN	Amino acid biosynthesis	histidinol-phosphatase
TIGR01083	nth	DNA metabolism	endonuclease III
TIGR00577	fpg	DNA metabolism	DNA-formamidopyrimidine glycosylase
TIGR03705	poly_P_kin	Central intermediary metabolism	polyphosphate kinase 1
TIGR01169	rplA_bact	Protein synthesis	ribosomal protein uL1
TIGR00482	TIGR00482	Biosynthesis of cofactors, prosthetic groups, and carriers	nicotinate (nicotinamide) nucleotide adenylyltransferase
TIGR01994	SUF_scaf_2	Biosynthesis of cofactors, prosthetic groups, and carriers	SUF system FeS assembly protein, NifU family
TIGR01009	rpsC_bact	Protein synthesis	ribosomal protein uS3
TIGR00168	infC	Protein synthesis	translation initiation factor IF-3
TIGR00042	TIGR00042	DNA metabolism	non-canonical purine NTP pyrophosphatase, RdgB/HAM1 family
TIGR02970	succ_dehyd_cytB	Energy metabolism	succinate dehydrogenase, cytochrome b556 subunit
TIGR00048	rRNA_mod_RlmN	Protein synthesis	23S rRNA (adenine(2503)-C(2))-methyltransferase
TIGR00508	bioA	Biosynthesis of cofactors, prosthetic groups, and carriers	adenosylmethionine-8-amino-7-oxononanoate transaminase
TIGR02075	pyrH_bact	Purines, pyrimidines, nucleosides, and nucleotides	UMP kinase
TIGR00416	sms	DNA metabolism	DNA repair protein RadA
TIGR02386	rpoC_TIGR	Transcription	DNA-directed RNA polymerase, beta' subunit
TIGR00651	pta	Energy metabolism	phosphate acetyltransferase
TIGR00713	hemL	Biosynthesis of cofactors, prosthetic groups, and carriers	glutamate-1-semialdehyde-2,1-aminomutase
TIGR01171	rplB_bact	Protein synthesis	ribosomal protein uL2
TIGR00959	ffh	Protein fate	signal recognition particle protein
TIGR01455	glmM	Central intermediary metabolism	phosphoglucosamine mutase
TIGR01071	rplO_bact	Protein synthesis	ribosomal protein uL15
TIGR00952	S15_bact	Protein synthesis	ribosomal protein uS15
TIGR01632	L11_bact	Protein synthesis	ribosomal protein uL11

TIGR00518	alaDH	Energy metabolism	alanine dehydrogenase
TIGR00468	pheS	Protein synthesis	phenylalanine--tRNA ligase, alpha subunit
TIGR01736	FGAM_synth_II	Purines, pyrimidines, nucleosides, and nucleotides	phosphoribosylformylglycinamide synthase II
TIGR01737	FGAM_synth_I	Purines, pyrimidines, nucleosides, and nucleotides	phosphoribosylformylglycinamide synthase I
TIGR00420	trmU	Protein synthesis	tRNA (5-methylaminomethyl-2-thiouridylate)-methyltransferase
TIGR01066	rplM_bact	Protein synthesis	ribosomal protein uL13
TIGR01063	gyrA	DNA metabolism	DNA gyrase, A subunit
TIGR02729	Obg_CgtA	Protein synthesis	Obg family GTPase CgtA
TIGR00670	asp_carb_tr	Purines, pyrimidines, nucleosides, and nucleotides	aspartate carbamoyltransferase
TIGR03263	guanyl_kin	Purines, pyrimidines, nucleosides, and nucleotides	guanylate kinase
TIGR03635	uS17_bact	Protein synthesis	ribosomal protein uS17
TIGR00184	purA	Purines, pyrimidines, nucleosides, and nucleotides	adenylosuccinate synthase
TIGR00343	TIGR00343	Biosynthesis of cofactors, prosthetic groups, and carriers	pyridoxal 5'-phosphate synthase, synthase subunit Pdx1