

Locus_tag ^a			Gene	Product
CB9615	Sakai	EDL933		
G2583_0001	ECs0001	Z0001	thrL	thr operon leader peptide
G2583_0002	ECs0002	Z0002	thrA	Aspartokinase I, homoserine dehydrogenase I
G2583_0003	ECs0003	Z0003	thrB	Homoserine kinase
G2583_0004	ECs0004	Z0004	thrC	Threonine synthase
G2583_0005	ECs0005	Z0005	yaaX	conserved hypothetical protein
G2583_0006	ECs0006	Z0006	yaaA	UPF0246 protein yaaA
G2583_0007	ECs0007	Z0007	yaaJ	inner membrane transport protein
G2583_0008	ECs0008	Z0008	talB	Transaldolase 1
G2583_0009	ECs0009	Z0009	mog	Molybdopterin biosynthesis mog protein
G2583_0010	ECs0010	Z0010	yaaH	membrane protein, GPR1/FUN34/yaaH family
G2583_0011	ECs0012	Z0011	yaaW	hypothetical protein
G2583_0012	ECs0011	Z0012	htgA	Positive regulator for sigma 32 heat shock promoters
G2583_0013	ECs0013	Z0013	yaal	UPF0412 protein yaal precursor
G2583_0014	ECs0014	Z0014	dnaK	Chaperone protein dnaK
G2583_0015	ECs0015	Z0015	dnaJ	Chaperone protein DnaJ
G2583_0016	ECs0016	Z0016	mokC	Gef protein
G2583_0017	ECs0017	Z0018	nhaA	Sodium/proton antiporter nhaA
G2583_0018	ECs0018	Z0019	nhaR	DNA-binding transcriptional activator
G2583_0019	ECs0019	Z0020	-	hypothetical protein
G2583_0019	ECs0020	Z0020	-	hypothetical protein
G2583_0019	ECs0021	Z0021	-	hypothetical protein
G2583_0020	ECs0022	Z0022	yehB	Putative usher protein
G2583_0021	ECs0023	Z0023	yehC	Gram-negative pilus assembly chaperone
G2583_0022	ECs0024	Z0024	stcA	Putative type-1 fimbrial protein
G2583_0023	ECs0025	Z0025	-	hypothetical protein
G2583_0024	ECs0026	Z0027	rpsT	30S ribosomal protein S20
G2583_0025	ECs0027	Z0028	yaaY	hypothetical protein
G2583_0026	ECs0028	Z0029	ribF	Riboflavin biosynthesis protein ribF
G2583_0027	ECs0029	Z0030	ileS	Isoleucyl-tRNA synthetase
G2583_0028	ECs0030	Z0031	lspA	Lipoprotein signal peptidase
G2583_0029	ECs0031	Z0033	fkpB	FKBP-type 16 kDa peptidyl-prolyl cis-trans isomerase
G2583_0030	ECs0032	Z0034	ispH	4-hydroxy-3-methylbut-2-enyl diphosphate reductase
G2583_0031	ECs0033	Z0035	rihC	Non-specific ribonucleoside hydrolase rihC
G2583_0032	ECs0034	Z0036	dapB	Dihydrodipicolinate reductase
G2583_0033	ECs0035	Z0037	carA	Carbamoylphosphate synthase small subunit
G2583_0034	ECs0036	Z0038	carB	Carbamoyl-phosphate synthase large chain
G2583_0035		Z0039	-	hypothetical protein
G2583_0036	ECs0037	Z0040	caiF	DNA-binding transcriptional activator CaiF
G2583_0037	ECs0038	Z0041	caiE	Carnitine operon protein caiE
G2583_0038	ECs0039	Z0042	caiD	Crotonobetainyl CoA hydratase
G2583_0039	ECs0040	Z0043	caiC	Putative crotonobetaine/carnitine-CoA ligase
G2583_0040	ECs0041	Z0044	caiB	Crotonobetainyl-CoA:carnitine CoA-transferase
G2583_0041	ECs0042	Z0045	caiA	Crotonobetainyl-CoA dehydrogenase
G2583_0042	ECs0043	Z0046	caiT	L-carnitine/gamma-butyrobetaine antiporter

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CB9615	Sakai	EDL933		
G2583_0043	ECs0044	Z0047	fixA	conserved hypothetical protein
G2583_0044	ECs0045	Z0048	fixB	hypothetical protein
G2583_0045	ECs0046	Z0049	fixC	PAPS (adenosine 3'-phosphate 5'-phosphosulfate) 3'(2'),5'-bisphosphate nucleotidase
G2583_0046	ECs0047	Z0050	fixX	Ferredoxin-like protein fixX
G2583_0047	ECs0048	Z0051	yaaU	Major facilitator family transporter
G2583_0048	ECs0049	Z0052	kefF	Glutathione-regulated potassium-efflux system ancillary protein kefF
G2583_0049	ECs0050	Z0053	kefC	Glutathione-regulated potassium-efflux system protein kefC (K+)/H(+) antiporter)
G2583_0050	ECs0051	Z0055	folA	Dihydrofolate reductase
G2583_0051	ECs0052	Z0056	-	putative antitoxin of gyrase inhibiting toxin-antitoxin system
G2583_0052	ECs0053	Z0057	-	CcdB protein
G2583_0053	ECs0054	Z0058	apaH	Bis(5'-nucleosyl)-tetrphosphatase, symmetrical
G2583_0054	ECs0055	Z0059	apaG	ApaG
G2583_0055	ECs0056	Z0060	ksgA	Dimethyladenosine transferase (S-adenosylmethionine-6-N', N'-adenosyl(rRNA) dimethyltransferase)
G2583_0056	ECs0057	Z0061	pdxA	4-hydroxythreonine-4-phosphate dehydrogenase
G2583_0057	ECs0058	Z0062	surA	Chaperone surA precursor
G2583_0058	ECs0059	Z0063	imp	LPS-assembly protein precursor
G2583_0059	ECs0060	Z0064	djlA	putative oxidoreductase Fe-S binding subunit
G2583_0060	ECs0061	Z0065	yabP	hypothetical protein
G2583_0061	ECs0062	Z0066	rluA	Ribosomal large subunit pseudouridine synthase A
G2583_0062	ECs0063	Z0067	hepA	RNA polymerase-associated protein rapA
G2583_0063	ECs0064	Z0068	polB	DNA polymerase II
G2583_0064	ECs0065	Z0069	araD	L-ribulose-5-phosphate 4-epimerase
G2583_0065	ECs0066	Z0070	araA	L-arabinose isomerase
G2583_0066	ECs0067	Z0072	araB	Ribulokinase
G2583_0067	ECs0068	Z0073	araC	arabinose operon regulatory protein
G2583_0068	ECs0069	Z0074	yabl	hypothetical protein
G2583_0069	ECs0070	Z0075	thiQ	Thiamine import ATP-binding protein thiQ
G2583_0070	ECs0071	Z0076	thiP	Thiamine/thiamine pyrophosphate ABC transporter, permease protein
G2583_0071	ECs0072	Z0077	tbpA	Thiamin/thiamin pyrophosphate ABC transporter, periplasmic thiamin/thiamin pyrophosphate-binding
G2583_0072	ECs0073	Z0078	-	hypothetical protein
G2583_0073	ECs0074	Z0079	sgrR	putative transport protein
G2583_0074			-	ncRNA
G2583_0075	ECs0075	Z0080	leuD	3-isopropylmalate dehydratase small subunit
G2583_0076	ECs0076	Z0081	leuC	3-isopropylmalate dehydratase large subunit
G2583_0077	ECs0077	Z0082	leuB	3-isopropylmalate dehydrogenase
G2583_0078	ECs0078	Z0083	leuA	2-isopropylmalate synthase
G2583_0079	ECs0079	Z0084	leuL	leader; Amino acid biosynthesis: Leucine

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CB9615	Sakai	EDL933		
G2583_0080	ECs0080	Z0086	leuO	leucine transcriptional activator
G2583_0081	ECs0081	Z0087	ilvI	Acetolactate synthase
G2583_0082	ECs0082	Z0088	ilvH	Acetolactate synthase III, valine sensitive, small subunit
G2583_0083	ECs0083	Z0089	fruL	fruR leader peptide
G2583_0084	ECs0084	Z0090	fruR	Fructose repressor
G2583_0085	ECs0085	Z0091	mraZ	hypothetical protein
G2583_0086	ECs0086	Z0092	mraW	S-adenosyl-L-methionine-dependent methyltransferase mraW
G2583_0087	ECs0087	Z0093	ftsL	Cell division protein ftsL
G2583_0088	ECs0088	Z0094	ftsI	Peptidoglycan synthetase ftsI precursor
G2583_0089	ECs0089	Z0095	murE	UDP-N-acetylmuramoyl-L-alanyl-D-glutamate--2, 6- diaminopimelate ligase
G2583_0090	ECs0090	Z0096	murF	UDP-N-acetylmuramoyl-tripeptide--D-alanyl-D-alanine ligase
G2583_0091	ECs0091	Z0097	mraY	Phospho-N-acetylmuramoyl-pentapeptide-transferase
G2583_0092	ECs0092	Z0098	murD	UDP-N-acetylmuramoylalanine--D-glutamate ligase
G2583_0093	ECs0093	Z0099	ftsW	Cell division protein ftsW
G2583_0094	ECs0094	Z0100	murG	UDP-N-acetylglucosamine--N-acetylmuramyl- (pentapeptide) pyrophosphoryl-undecaprenol N- acetylglucosamine transferase
G2583_0095	ECs0095	Z0101	murC	UDP-N-acetylmuramate--L-alanine ligase
G2583_0096	ECs0096	Z0102	ddlB	D-alanine--D-alanine ligase B
G2583_0097	ECs0097	Z0103	ftsQ	Cell division protein FtsQ
G2583_0098	ECs0098	Z0104	ftsA	Cell division protein ftsA
G2583_0099	ECs0099	Z0105	ftsZ	Cell division protein ftsZ
G2583_0100	ECs0100	Z0106	lpxC	UDP-3-O-[3-hydroxymyristoyl] N-acetylglucosamine deacetylase
G2583_0101	ECs0101	Z0107	secM	Secretion monitor protein
G2583_0102	ECs0102	Z0108	secA	preprotein translocase subunit SecA
G2583_0103	ECs0103	Z0109	mutT	7,8-dihydro-8-oxoguanine-triphosphatase
G2583_0104	ECs0104	Z0110	-	hypothetical protein
G2583_0105	ECs0105	Z0111	yacG	Uncharacterized protein conserved in bacteria
G2583_0106	ECs0106	Z0112	yacF	UPF0289 protein yacF
G2583_0107	ECs0107	Z0113	coaE	Dephospho-CoA kinase
G2583_0108	ECs0108	Z0114	guaC	GMP reductase
G2583_0109	ECs0109	Z0115	-	hypothetical protein
G2583_0110	ECs0110	Z0116	hofC	Type IV pilus assembly protein PilC
G2583_0111	ECs0111	Z0117	hofB	GspE family protein HofB
G2583_0112	ECs0112	Z0118	ppdD	Prelipin peptidase dependent protein
G2583_0113	ECs0113	Z0119	nadC	Nicotinate-nucleotide pyrophosphorylase
G2583_0114	ECs0114	Z0120	ampD	N-acetylmuramoyl-L-alanine amidase
G2583_0115	ECs0115	Z0121	ampE	regulatory protein AmpE
G2583_0116	ECs0116	Z0122	aroP	Aromatic amino acid transport protein
G2583_0117	ECs0117	Z0123	pdhR	transcriptional regulator, GntR family

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CB9615	Sakai	EDL933		
G2583_0118	ECs0118	Z0124	aceE	Pyruvate dehydrogenase E1 component
G2583_0119	ECs0119	Z0125	aceF	Dihydrolipoyllysine-residue acetyltransferase
G2583_0120	ECs0120	Z0126	lpd	Pyruvate/2-oxoglutarate dehydrogenase complex, dihydrolipoamide dehydrogenase (E3) component, and related enzymes
G2583_0121	ECs0121	Z0127	yacH	hypothetical protein
G2583_0122	ECs0122	Z0128	acnB	Aconitate hydratase 2
G2583_0123	ECs0123	Z0129	yacL	hypothetical protein
G2583_0124	ECs0124	Z0130	speD	S-adenosylmethionine decarboxylase proenzyme
G2583_0125	ECs0125	Z0131	speE	Spermidine synthase
G2583_0126	ECs0126	Z0132	yacC	hypothetical protein
G2583_0127	ECs0127	Z0133	cueO	Copper oxidase CueO
G2583_0128	ECs0128	Z0134	gcd	Quinoprotein glucose dehydrogenase
G2583_0129	ECs0129	Z0136	hpt	Hypoxanthine phosphoribosyltransferase
G2583_0130	ECs0130	Z0137	can	Carbonic anhydrase
G2583_0131	ECs0131	Z0138	yadG	ABC transporter, ATP-binding protein
G2583_0132	ECs0132	Z0139	yadH	hypothetical protein
G2583_0133	ECs0133	Z0140	yadI	PTS system IIA component domain protein
G2583_0134	ECs0134	Z0141	yadE	Polysaccharide deacetylase domain protein
G2583_0135	ECs0135	Z0142	panD	Aspartate 1-decarboxylase precursor
G2583_0136	ECs0136	Z0143	yadD	hypothetical protein
G2583_0137	ECs0137	Z0144	panC	Pantothenate synthetase
G2583_0138	ECs0138	Z0145	panB	3-methyl-2-oxobutanoate hydroxymethyltransferase
G2583_0139	ECs0139	Z0146	yadC	Putative fimbrial protein
G2583_0140	ECs0140	Z0147	yadK	Putative fimbrial protein
G2583_0141	ECs0141	Z0148	yadL	Putative fimbrial protein
G2583_0142	ECs0142	Z0149	yadM	Putative fimbrial protein
G2583_0143	ECs0143	Z0150	htrE	Probable outer membrane porin protein involved in fimbrial assembly
G2583_0144	ECs0144	Z0151	ecpD	Gram-negative pili assembly chaperone
G2583_0145	ECs0145	Z0152	yadN	Putative fimbrial protein
G2583_0146	ECs0146	Z0153	folK	2-amino-4-hydroxy-6-hydroxymethyldihydropteridine pyrophosphokinase
G2583_0147	ECs0147	Z0154	pcnB	Poly(A) polymerase
G2583_0148	ECs0148	Z0155	yadB	Glutamyl-Q tRNA(Asp) synthetase
G2583_0149	ECs0149	Z0156	dksA	RNA polymerase-binding protein DksA
G2583_0150	ECs0150	Z0157	sfsA	Sugar fermentation stimulation protein A
G2583_0151	ECs0151	Z0158	ligT	hypothetical protein
G2583_0152	ECs0152	Z0159	hrpB	ATP-dependent helicase HrpB
G2583_0153	ECs0153	Z0160	mrcB	Penicillin-binding protein 1B
G2583_0154	ECs0154	Z0161	fhuA	Ferrichrome-iron receptor
G2583_0155	ECs0155	Z0162	fhuC	Ferrichrome transport ATP-binding protein FhuC
G2583_0156	ECs0156	Z0163	fhuD	Ferrichrome-binding periplasmic protein FhuD
G2583_0157	ECs0157	Z0164	fhuB	Ferrichrome ABC transporter, permease protein FhuB

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CB9615	Sakai	EDL933		
G2583_0158	ECs0158	Z0165	hemL	Glutamate-1-semialdehyde 2,1-aminomutase
G2583_0159	ECs0159	Z0166	clcA	H(+)/Cl(-) exchange transporter clcA
G2583_0160	ECs0160	Z0167	yadR	Iron-sulfur cluster insertion protein erpA
G2583_0161	ECs0161	Z0168	yadS	UPF0126 inner membrane protein yadS
G2583_0162	ECs0162	Z0169	btuF	Vitamin B12-binding protein precursor
G2583_0163	ECs0163	Z0170	mtn	MTA/SAH nucleosidase
G2583_0164	ECs0164	Z0171	dgt	Deoxyguanosinetriphosphate triphosphohydrolase
G2583_0165	ECs0165	Z0173	degP	Protease do precursor
G2583_0166	ECs0166	Z0174	cdaR	hypothetical protein
G2583_0167	ECs0167	Z0175	yaeH	UPF0325 protein yaeH
G2583_0168	ECs0168	Z0176	dapD	2,3,4,5-tetrahydropyridine-2,6-dicarboxylate N-succinyltransferase
G2583_0169	ECs0169	Z0177	glnD	[Protein-P _{II}] uridylyltransferase
G2583_0170	ECs0170	Z0178	map	Methionine aminopeptidase
G2583_0171			-	ncRNA
G2583_0172	ECs0171	Z0180	rpsB	30S ribosomal protein S2
G2583_0173	ECs0172	Z0181	tsf	Elongation factor Ts
G2583_0174	ECs0173	Z0182	pyrH	UMP kinase
G2583_0175	ECs0174	Z0183	frr	Ribosome recycling factor
G2583_0176	ECs0175	Z0184	dxr	Putative ATP-binding component of a transport system
G2583_0177	ECs0176	Z0185	ispU	Undecaprenyl pyrophosphate synthetase
G2583_0178	ECs0177	Z0186	cdsA	Phosphatidate cytidylyltransferase
G2583_0179	ECs0178	Z0187	rseP	Regulator of sigma E protease
G2583_0180	ECs0179	Z0188	yaeT	Outer membrane protein assembly factor yaeT
G2583_0181	ECs0180	Z0190	skp	Chaperone protein skp precursor
G2583_0182	ECs0181	Z0191	lpxD	UDP-3-O-[3-hydroxymyristoyl] glucosamine N-acyltransferase
G2583_0183	ECs0182	Z0192	fabZ	(3R)-hydroxymyristoyl-(acyl carrier protein) dehydratase
G2583_0184	ECs0183	Z0193	lpxA	Acyl-[acyl-carrier-protein]-UDP-N-acetylglucosamine O-acyltransferase
G2583_0185	ECs0184	Z0194	lpxB	Lipid-A-disaccharide synthase
G2583_0186	ECs0185	Z0195	rnhB	Ribonuclease HIII
G2583_0187	ECs0186	Z0196	dnaE	DNA polymerase III subunit alpha
G2583_0188	ECs0187	Z0197	accA	Acetyl-coenzyme A carboxylase carboxyl transferase subunit alpha
G2583_0189	ECs0188	Z0198	ldcC	Lysine decarboxylase, constitutive
G2583_0190	ECs0189	Z0199	yaeR	Putative lactoylglutathione lyase
G2583_0191	ECs0190	Z0200	tilS	tRNA(Ile)-lysidine synthase
G2583_0192	ECs0191	Z0201	rof	Rof protein
G2583_0193			yaeP	hypothetical protein
G2583_0194	ECs0192	Z0202	yaeQ	hypothetical protein
G2583_0195	ECs0193	Z0203	yaeJ	hypothetical protein
G2583_0196	ECs0194	Z0204	nlpE	Copper homeostasis protein CutF
G2583_0197	ECs0195	Z0205	yaeF	hypothetical protein

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CB9615	Sakai	EDL933		
G2583_0198	ECs0196	Z0206	proS	Prolyl-tRNA synthetase
G2583_0199	ECs0197	Z0207	yaeB	hypothetical protein
G2583_0200	ECs0198	Z0208	rceF	Regulator in colanic acid synthesis
G2583_0201	ECs0199	Z0209	metQ	D-methionine-binding lipoprotein metQ precursor
G2583_0202	ECs0200	Z0210	metI	D-methionine transport system permease protein metI
G2583_0203	ECs0201	Z0211	metN	Methionine import ATP-binding protein metN
G2583_0204	ECs0202	Z0212	gmhB	D,D-heptose 1,7-bisphosphate phosphatase
G2583_0205	rrsH	RNA001	rrs	16S ribosomal RNA
G2583_0206	ileV	RNA002	ileV	Ile tRNA
G2583_0207	alaV	RNA003	alaV	Ala tRNA
G2583_0208	rrlH	RNA004	rrl	23S ribosomal RNA
G2583_0209	rrfH	RNA005	rrf	5S ribosomal RNA
G2583_0210	aspU	RNA006	aspU	Asp tRNA
G2583_0211	ECs0203	Z0229	dkgB	2,5-diketo-D-gluconic acid reductase B
G2583_0212	ECs0204	Z0230	yafC	putative transcriptional regulator LYSR-type
G2583_0213	ECs0205	Z0232	yafD	hypothetical protein
G2583_0214	ECs0206	Z0233	yafE	Methyltransferase, UbiE/COQ5 family
G2583_0215	ECs0207	Z0235	mltD	Membrane-bound lytic murein transglycosylase D precursor
G2583_0216	ECs0208	Z0236	gloB	Hydroxyacylglutathione hydrolase
G2583_0217	ECs0209	Z0237	yafS	hypothetical protein
G2583_0218	ECs0210	Z0239	rnhA	RNase HI
G2583_0219	ECs0211	Z0241	dnaQ	DNA polymerase III, epsilon subunit
G2583_0220	aspV	RNA007	aspV	Asp tRNA
G2583_0221		Z0243	yafT	hypothetical protein
G2583_0222	ECs0212	Z0244	-	hypothetical protein
G2583_0223	ECs0213	Z0245	-	hypothetical protein
G2583_0224	ECs0214	Z0246	-	hypothetical protein
G2583_0224	ECs0215	Z0247	-	hypothetical protein
G2583_0225	ECs0216	Z0248	yhhZ	hypothetical protein
G2583_0226	ECs0217	Z0249	ImpA	ImpA domain protein
G2583_0227	ECs0218	Z0250	-	putative macrophage toxin
	ECs0219		-	hypothetical protein
G2583_0228	ECs0220	Z0251	ImpA	ImpA domain protein
G2583_0228	ECs0221	Z0252	ImpA	ImpA domain protein
G2583_0229	ECs0222	Z0253	-	Type VI secretion-associated protein, VC_A0118 family
G2583_0230	ECs0223	Z0254	clpB	type VI secretion ATPase, ClpV1 family
G2583_0231	ECs0224	Z0255	-	hypothetical protein
G2583_0232	ECs0225	Z0256	-	Uncharacterized protein conserved in bacteria
G2583_0233	ECs0226	Z0257	-	Type VI secretion lipoprotein, VC_A0113 family
G2583_0234	ECs0227	Z0258	-	hypothetical protein
G2583_0235	ECs0228	Z0259	-	hypothetical protein
G2583_0236	ECs0229	Z0260	-	hypothetical protein
G2583_0237	ECs0230	Z0261	-	hypothetical protein

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CB9615	Sakai	EDL933		
G2583_0238	ECs0231	Z0262	-	hypothetical protein
G2583_0239	ECs0232	Z0263	-	hypothetical protein
G2583_0240	ECs0233	Z0264	-	hypothetical protein
G2583_0241		Z0265	-	hypothetical protein
G2583_0242	ECs0234	Z0266	-	Hcp
G2583_0243	ECs0235		-	hypothetical protein
G2583_0244	ECs0236	Z0267	VgrG	VgrG
G2583_0245	ECs0237	Z0268	rhsG1	rhsG-1
G2583_0246	Indel-2	Indel-2	-	Ankyrin repeat protein
G2583_0247	ECs0237	Z0268	rhsG2	RhsG-2
G2583_0248	ECs0238	Z0269	yibG	hypothetical protein
G2583_0249	ECs0239		-	hypothetical protein
G2583_0250	ECs0240		-	Hypothetical membrane protein
G2583_0251	ECs0241	Z0271	yhhI	ISEc3, transposase
G2583_0252	ECs0242	Z0272	-	unknown protein associated with Rhs element
G2583_0253	ECs0243		ydcD	hypothetical protein
		Z0273	-	hypothetical protein
G2583_0253	ECs0244	Z0274	ydcD	hypothetical protein
G2583_0254	ECs0245	Z0275	yncl	Putative transposase yncI
G2583_0255	ECs0246	Z0276	yafV	Hydrolase, carbon-nitrogen family
G2583_0256	ECs0247	Z0277	ivy	Inhibitor of vertebrate lysozyme precursor
G2583_0257	ECs0248	Z0278	fadE	Acyl-coenzyme A dehydrogenase
G2583_0258	ECs0249	Z0280	lpcA	Phosphoheptose isomerase
G2583_0259	ECs0250	Z0281	yafJ	Glutamine amidotransferase, class II
G2583_0260	ECs0251	Z0282	yafK	hypothetical protein
G2583_0261	ECs0252	Z0284	yafQ	Addiction module toxin, RelE/StbE family
G2583_0262	ECs0253	Z0285	dinJ	Addiction module antitoxin, RelB/DinJ family
G2583_0263	ECs0254	Z0287	yafL	NlpC/P60 family protein
G2583_0264	ECs0255	Z0288	yafM	Putative transposase
G2583_0265	ECs0257	Z0290	FhiA	Type III secretion protein, FHIPEP family
G2583_0266	ECs0256	Z0291	mbhA	Putative motility protein
G2583_0267	ECs0258	Z0292	dinB	DNA polymerase IV
G2583_0268	ECs0259	Z0293	yafN	Prevent-host-death family protein
G2583_0269	ECs0260	Z0294	yafO	putative toxin YafO
G2583_0270	ECs0261	Z0295	yafP	Acetyltransferase, GNAT family
G2583_0271	ECs0262	Z0296	ykfJ	hypothetical protein
G2583_0272	ECs0263	Z0297	prfH	Probable peptide chain release factor
G2583_0273	ECs0264	Z0298	pepD	Aminoacyl-histidine dipeptidase
G2583_0274	ECs0265	Z0299	gpt	Xanthine phosphoribosyltransferase
G2583_0275	ECs0266	Z0300	frsA	Esterase frsA
G2583_0276	ECs0267	Z0301	crl	Sigma factor-binding protein crl
G2583_0277	ECs0268	Z0302	phoE	Outer membrane protein (porin)
G2583_0278	ECs0269	Z0303	proB	Glutamate 5-kinase
G2583_0279	ECs0270	Z0304	proA	Gamma-glutamyl phosphate reductase

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CB9615	Sakai	EDL933		
G2583_0280	thrW	RNA008	thrW	Thr tRNA
Indel-5	ECs0271	Z0307	intH	putative integrase
Indel-5	ECs0272		-	putative transcription antitermination protein
Indel-5	ECs0273	Z0308	-	hypothetical protein
Indel-5	ECs0274	Z0309	-	repressor protein CI
Indel-5	ECs0275		-	Cro repressor
Indel-5	ECs0276	Z0310	-	regulatory protein cII
Indel-5	ECs0277	Z0311	-	replication protein
Indel-5	ECs0278	Z0312	-	replication protein
Indel-5	ECs0279	Z0313	-	replication protein
Indel-5	ECs0280	Z0314	-	putative tail fiber protein
Indel-6	ECs0281	Indel-6	-	hypothetical protein
Indel-6	ECs0282	Indel-6	-	hypothetical protein
Indel-6	ECs0283	Indel-6	-	putative tail fiber protein
Indel-7	Indel-7	Z0315	-	unknown protein from prophage CP-933H
Indel-7	Indel-7	Z0316	-	unknown protein from prophage CP-933H
Indel-7	Indel-7	Z0317	-	putative tail fiber protein from prophage CP-933H
Indel-8	ECs0284	Z0318	pinH	DNA-invertase
Indel-8	ECs0285	Z0319	-	hypothetical protein
Indel-8	ECs0286		-	hypothetical protein
Indel-8	ECs0287	Z0321	-	putative transcription regulator
Indel-8	ECs0288	Z0322	-	hypothetical protein
G2583_0281			-	Site-specific recombinase, phage integrase family
G2583_0282	Indel-9	Indel-9	-	hypothetical protein
G2583_0283	Indel-9	Indel-9	eaA	hypothetical protein
G2583_0284	Indel-9	Indel-9	-	ORF8
G2583_0285	Indel-9	Indel-9	-	hypothetical C4-type zinc finger protein TraR-family
G2583_0286	Indel-9	Indel-9	-	hypothetical protein
G2583_0287	Indel-9	Indel-9	-	unknown protein encoded by prophage CP-933K
G2583_0288	Indel-9	Indel-9	-	hypothetical protein
G2583_0289	Indel-9	Indel-9	-	Exonuclease
G2583_0290	Indel-9	Indel-9	bet	Bet protein
G2583_0291	Indel-9	Indel-9	gamW	Gam protein
G2583_0292	Indel-9	Indel-9	CIII	antitermination protein
G2583_0293	Indel-9	Indel-9	ral	Lambda ant-restriction protein
G2583_0294	Indel-9	Indel-9	-	Superinfection exclusion protein B
G2583_0295	Indel-9	Indel-9	-	Antitermination protein
G2583_0296	Indel-9	Indel-9	-	Gene 38 protein
G2583_0297	Indel-9	Indel-9	ymfK	SOS-response transcriptional repressors (RecA-mediated autopeptidases)
G2583_0298	Indel-9	Indel-9	cro	gene 40 protein
G2583_0299	Indel-9	Indel-9	-	Phage regulatory protein
G2583_0300	Indel-9	Indel-9	-	Putative replication protein O of bacteriophage
G2583_0301	Indel-9	Indel-9	-	putative replication protein P of bacteriophage BP-933W

Table S10. The orthologue table of the O55 and O157 strains Page 9

Locus_tag ^a			Gene	Product
CB9615	Sakai	EDL933		
G2583_0302	Indel-9	Indel-9	-	Ren protein
G2583_0303	Indel-9	Indel-9	ninB	Unknown protein encoded within prophage
G2583_0304	Indel-9	Indel-9	-	Putative DNA N-6-adenine-methyltransferase of bacteriophage
G2583_0305	Indel-9	Indel-9	ninE	NINE Protein
G2583_0306	Indel-9	Indel-9	NinG	hypothetical protein
G2583_0307	Indel-9	Indel-9	-	Serine/threonine-protein phosphatase 1
G2583_0308	Indel-9	Indel-9	-	putative antitermination protein
G2583_0309	Indel-9	Indel-9	-	conserved hypothetical protein
G2583_0310	Indel-9	Indel-9	YjhS	YjhS
G2583_0311	Indel-9	Indel-9	-	hypothetical protein
G2583_0312	Indel-9	Indel-9	-	Putative lysis protein S of prophage CP-933V
G2583_0313	Indel-9	Indel-9	ybcS	Phage-related lysozyme (muraminidase)
G2583_0314	Indel-9	Indel-9	-	Putative Rz endopeptidase from lambdoid prophage DLP12
G2583_0315	Indel-9	Indel-9	-	unknown protein encoded within prophage CP-933R
G2583_0316	Indel-9	Indel-9	-	Putative transcriptional regulator
G2583_0317	Indel-9	Indel-9	ynfO	unknown protein encoded within prophage CP-933R
G2583_0318	Indel-9	Indel-9	nohA	conserved hypothetical protein
G2583_0319	Indel-9	Indel-9	-	Prophage Qin DNA packaging protein NU1 homolog
G2583_0320	Indel-9	Indel-9	-	Putative terminase large subunit of prophage CP-933O
G2583_0321	Indel-9	Indel-9	-	Head-stabilizing protein
G2583_0322	Indel-9	Indel-9	-	Putative capsid protein of prophage
G2583_0323	Indel-9	Indel-9	-	Head-tail preconnector protein GP5
G2583_0324	Indel-9	Indel-9	-	Head decoration protein
G2583_0325	Indel-9	Indel-9	-	Major head protein
G2583_0326	Indel-9	Indel-9	-	Uncharacterized 13.5 kDa protein in GP7-GP8 intergenic region
G2583_0327	Indel-9	Indel-9	-	Putative head-tail joining protein of prophage
G2583_0328	Indel-9	Indel-9	-	Prophage minor tail protein Z
G2583_0329	Indel-9	Indel-9	-	Minor tail protein U
G2583_0330	Indel-9	Indel-9	-	Putative tail component of prophage CP-933X
G2583_0331	Indel-9	Indel-9	-	Putative tail component of prophage
G2583_0332	Indel-9	Indel-9	-	Minor tail protein T
G2583_0333	Indel-9	Indel-9	-	Phage-related minor tail protein
G2583_0334	Indel-9	Indel-9	-	minor tail protein
G2583_0335	Indel-9	Indel-9	-	Phage-related protein
G2583_0336	Indel-9	Indel-9	-	Tail assembly protein
G2583_0337	Indel-9	Indel-9	-	Tail assembly protein I
G2583_0338	Indel-9	Indel-9	-	Phage-related protein, tail component
G2583_0339	Indel-9	Indel-9	lomK	Enterobacterial Ail/Lom family protein
G2583_0340	Indel-9	Indel-9	-	Putative tail fiber protein
G2583_0341	Indel-9	Indel-9	nleG	hypothetical protein
G2583_0342	Indel-9	Indel-9	-	PotB, trcA, ORF2, ORF3, ORF4 genes,

Table S10. The orthologue table of the O55 and O157 strains Page 10

Locus_tag ^a			Gene	Product
CB9615	Sakai	EDL933		
G2583_0343	Indel-9	Indel-9	-	PotB, trcA, ORF2, ORF3, ORF4 genes,
G2583_0344	Indel-9	Indel-9	lpgB	Putative chaperone protein
G2583_0345	Indel-9	Indel-9	-	Tail fiber assembly protein
G2583_0346	Indel-9	Indel-9	intR	Putative integrase for prophage CP-933R
G2583_0347	Indel-9	Indel-9	-	NleB
G2583_0348	Indel-9	Indel-9	-	hypothetical protein
G2583_0349	Indel-9	Indel-9	gogB	conserved hypothetical protein
G2583_0350	Indel-9	Indel-9	-	conserved hypothetical protein
G2583_0351	ECs0289	Z0324	-	Integrase protein for prophage CP-933I
G2583_0352	ECs0290	Z0325	-	unknown protein encoded in prophage CP-933I
G2583_0353	ECs0291	Z0326	-	unknown protein encoded in prophage CP-933I
G2583_0354	ECs0292	Z0327	-	unknown protein encoded in prophage CP-933I
G2583_0355	ECs0293	Z0328	-	hypothetical protein
G2583_0356	ECs0294	Z0330	-	unknown protein encoded in prophage CP-933I
G2583_0357	ECs0295	Z0331	-	unknown protein encoded in prophage CP-933I
G2583_0358	ECs0296	Z0332	ogrK	Putative activator encoded in prophage CP-933I
G2583_0359	ECs0297	Z0333	psul	Putative polarity suppression protein encoded in CP-
G2583_0360	ECs0298	Z0334	sidI	Putative capsid morphogenesis protein encoded in CP-933I
G2583_0361		Z0335	-	unknown protein encoded in prophage CP-933I
G2583_0362	ECs0299	Z0336	alpA	Phage DNA binding protein
G2583_0363	ECs0300	Z0337	-	putative CI repressor
G2583_0364	ECs0301		-	hypothetical protein
G2583_0365	ECs0302	Z0338	-	unknown protein encoded in prophage CP-933I
G2583_0366	ECs0303	Z0339	-	Alpha replication protein of prophage CP-933I
G2583_0367	ECs0304	Z0340	-	unknown protein encoded in prophage CP-933I
		Z0341	-	unknown protein encoded in prophage CP-933I
G2583_0368	ECs0305	Z0342	yagP	putative LysR-like transcriptional regulator
G2583_0369	ECs0306	Z0343	-	Clavaldehyde dehydrogenase
G2583_0370	ECs0307	Z0344	-	hypothetical protein
	ECs0308		-	hypothetical protein
G2583_0371		Z0345	-	hypothetical protein
G2583_0372	ECs0309	Z0346	-	LysR substrate binding domain protein
G2583_0373	ECs0310	Z0347	-	Hydrolase of the alpha/beta superfamily
G2583_0374	ECs0311	Z0348	-	Purine ribonucleoside efflux pump NepI
	ECs0312		-	hypothetical protein
G2583_0375	ECs0313	Z0349	yagQ	Putative xanthine dehydrogenase accessory factor
G2583_0376	ECs0314	Z0350	yagR	Putative xanthine dehydrogenase yagR molybdenum-binding subunit
G2583_0377	ECs0315	Z0351	yagS	FAD binding domain in molybdopterin dehydrogenase
G2583_0378	ECs0316	Z0352	yagT	Putative xanthine dehydrogenase yagT iron-sulfur-binding subunit precursor
G2583_0379	ECs0317	Z0353	yagU	Inner membrane protein yagU
G2583_0380	ECs0318	Z0354	ykgJ	putative ferredoxin

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Locus_tag ^a			Gene	Product
CB9615	Sakai	EDL933		
G2583_0381	ECs0319	Z0356	yagV	hypothetical protein
G2583_0382	ECs0320	Z0357	yagW	putative receptor
G2583_0383	ECs0321	Z0358	yagX	putative enzyme
G2583_0384	ECs0322	Z0359	matC	hypothetical protein
G2583_0385	ECs0323	Z0360	matB	hypothetical protein
G2583_0386	ECs0324	Z0361	matA	MatA
G2583_0387		Z0362	-	hypothetical protein
	ECs0325		-	hypothetical protein
G2583_0388	ECs0326	Z0363	ykgL	hypothetical protein
G2583_0389			ykgO	50S ribosomal protein L36
G2583_0390	ECs0327	Z0364	ykgM	Ribosomal protein L31
Indel-10	ECs0328	Z0365	-	hypothetical protein
Indel-10	ECs0329	Z0366	-	hypothetical protein
Indel-10	ECs0330	Z0367	-	hypothetical protein
G2583_0391	ECs0331	Z0369	-	Oxidoreductase, FAD/FMN-binding
G2583_0392	ECs0332	Z0370	ycjY	hypothetical protein
G2583_0393	ECs0333	Z0371	ycaN	Putative LysR-like transcriptional regulator
G2583_0394	ECs0334	Z0372	-	hypothetical protein
G2583_0395		Z0373	-	hypothetical protein
G2583_0396	ECs0335	Z0374	-	2,5-diketo-D-gluconic acid reductase A
G2583_0397	ECs0336	Z0375	eaeH	Attaching and effacing protein homolog precursor
G2583_0398	ECs0337	Z0376	ykgA	Putative AraC-like transcriptional regulator
G2583_0399	ECs0338	Z0377	-	Putative dehydrogenase
G2583_0400	ECs0340	Z0378	ykgB	protein of unknown function DUF417
G2583_0401	ECs0339	Z0379	-	hypothetical protein
G2583_0402	ECs0341	Z0380	ykgI	hypothetical protein
G2583_0403	ECs0342	Z0381	ykgC	Pyridine nucleotide-disulphide oxidoreductase
G2583_0404	ECs0343	Z0382	ykgD	Hypothetical transcriptional regulator ykgD
G2583_0405	ECs0344	Z0384	ykgE	Cysteine-rich domain protein
G2583_0406	ECs0345	Z0385	ykgF	Iron-sulfur cluster binding protein
G2583_0407	ECs0346	Z0386	ykgG	hypothetical protein
G2583_0408	ECs0347	Z0387	-	hypothetical protein
G2583_0409	ECs0348	Z0388	ykgH	hypothetical protein
G2583_0410	ECs0349	Z0389	-	Putative autotransporter
G2583_0410	ECs0350	Z0390	-	Putative autotransporter
G2583_0411	ECs0351	Z0391	-	hypothetical protein
G2583_0412	ECs0352	Z0392	-	hypothetical protein
G2583_0412	ECs0353		-	hypothetical protein
		Z0393	-	hypothetical protein
G2583_0413	ECs0354	Z0394	fimX	Site-specific recombinase, phage integrase family
G2583_0413	ECs0355	Z0395	fimX	Site-specific recombinase, phage integrase family
	ECs0356		-	hypothetical protein
G2583_0414		Z0397	-	hypothetical protein
G2583_0415	ECs0357	Z0398	betA	Choline dehydrogenase

Table S10. The orthologue table of the O55 and O157 strains Page 12

Locus_tag ^a			Gene	Product
CB9615	Sakai	EDL933		
G2583_0416	ECs0358	Z0399	betB	Betaine aldehyde dehydrogenase
G2583_0417	ECs0359	Z0400	betI	Transcriptional regulator
G2583_0418	ECs0360	Z0401	betT	High-affinity choline transport protein
	ECs0361		-	hypothetical protein
G2583_0419	ECs0362	Z0402	AidA-I	AidA-I adhesin-like protein
G2583_0420	ECs0363	Z0403	yahA	LuxR-family transcriptional regulator/cyclic diguanylate phosphodiesterase (EAL) domain protein
G2583_0421	ECs0364	Z0404	yahB	Uncharacterized HTH-type transcriptional regulator
G2583_0421	ECs0365	Z0405	yahB	Uncharacterized HTH-type transcriptional regulator
G2583_0422	ECs0366	Z0406	yahC	Uncharacterized protein yahC
G2583_0423	ECs0367	Z0407	yahD	Ankyrin repeat protein
G2583_0424	ECs0368	Z0408	yahE	hypothetical protein
G2583_0425	ECs0369	Z0409	yahF	Bacterial FdrA protein
G2583_0426	ECs0370	Z0410	yahG	hypothetical protein
	ECs0371		-	hypothetical protein
G2583_0427			yahH	hypothetical protein
G2583_0428	ECs0372	Z0412	yahI	Carbamate kinase family protein
G2583_0429	ECs0373	Z0413	yahJ	Amidohydrolase family protein
G2583_0430		Z0414	-	hypothetical protein
G2583_0431	ECs0374	Z0415	-	Sugar ABC transporter, periplasmic sugar-binding
G2583_0432	ECs0375	Z0416	-	Sugar ABC transporter, ATP-binding protein
G2583_0432	ECs0376	Z0417	-	Sugar ABC transporter, ATP-binding protein
G2583_0433	ECs0377	Z0418	-	Putative permease component of transport system, probably ribose specific
G2583_0434	ECs0378	Z0419	-	Putative permease component of transport system
G2583_0435	ECs0379	Z0420	yahK	Oxidoreductase, zinc-binding dehydrogenase family
G2583_0436	ECs0380	Z0421	yahL	hypothetical protein
G2583_0437		RNA009	-	Xaa tRNA
G2583_0438	ECs0381	Z0423	yahM	hypothetical protein
G2583_0439	ECs0382	Z0424	yahN	Putative homoserine/threonine efflux protein
G2583_0440	ECs0383	Z0425	yahO	hypothetical protein
G2583_0441	ECs0384	Z0426	prpR	Propionate catabolism operon regulatory protein PrpR
G2583_0442	ECs0385	Z0427	prpB	Methylisocitrate lyase
G2583_0443	ECs0386	Z0428	prpC	2-methylcitrate synthase
G2583_0444	ECs0387	Z0429	prpD	2-methylcitrate dehydratase
G2583_0445	ECs0388	Z0430	prpE	Propionate--CoA ligase
G2583_0446			nrdB	mannitol-1-phosphate 5-dehydrogenase
		Z0431	-	hypothetical protein
G2583_0447	ECs0389	Z0432	codB	Cytosine permease
G2583_0448	ECs0390	Z0433	codA	Cytosine deaminase and related metal-dependent hydrolases
G2583_0449	ECs0391	Z0434	cynR	DNA-binding transcriptional regulator CynR
G2583_0450	ECs0392	Z0435	cynT	Carbonic anhydrase 1
G2583_0451	ECs0393	Z0436	cynS	Cyanate hydratase

Table S10. The orthologue table of the O55 and O157 strains Page 13

Locus_tag ^a			Gene	Product
CB9615	Sakai	EDL933		
G2583_0452	ECs0394	Z0437	cynX	Cyanate transport
G2583_0453	ECs0395	Z0438	lacA	Galactoside O-acetyltransferase LacA
G2583_0454	ECs0396	Z0439	lacY	Lactose permease
G2583_0455	ECs0397	Z0440	lacZ	Beta-D-galactosidase
G2583_0456	ECs0398	Z0441	lacI	lac repressor
G2583_0457	ECs0399	Z0442	-	putative AraC-like transcriptional regulator
G2583_0458	ECs0400	Z0443	-	Beta-lactamase fold protein
G2583_0459	ECs0401	Z0444	mhpR	DNA-binding transcriptional activator, 3HPP-binding
G2583_0460	ECs0402	Z0445	mhpA	3-(3-hydroxy-phenyl)propionate/3-hydroxycinnamic acid hydroxylase
G2583_0461	ECs0403	Z0446	mhpB	2,3-dihydroxyphenylpropionate/2,3-dihydroxycinnamic acid 1,2- dioxygenase
G2583_0462	ECs0404	Z0447	mhpC	2-hydroxy-6-oxononadienedioate/2-hydroxy-6-oxononatrienedioate hydrolase
G2583_0463	ECs0405	Z0448	mhpD	2-keto-4-pentenoate hydratase
G2583_0464	ECs0406	Z0450	mhpF	Acetaldehyde dehydrogenase
G2583_0465	ECs0407	Z0452	mhpE	4-hydroxy-2-oxovalerate aldolase
G2583_0466	ECs0408	Z0453	mhpT	Putative transport protein
G2583_0467	ECs0409	Z0454	yaiL	Nucleoprotein/polynucleotide-associated enzyme
G2583_0468	ECs0410	Z0455	frmB	putative esterase
G2583_0469	ECs0411	Z0456	frmA	S-(hydroxymethyl)glutathione dehydrogenase
G2583_0470	ECs0412	Z0457	frmR	regulator protein FrmR
G2583_0471	ECs0413	Z0458	afuC	Fe(3+) ions import ATP-binding protein fbpC
G2583_0472	ECs0414	Z0459	afuB	Binding-protein-dependent transport systems inner membrane component
G2583_0473	ECs0415	Z0460	afuA	Periplasmic ferric iron-binding protein
G2583_0474	ECs0416	Z0461	UhpC	putative permease; hexosephosphate transport
G2583_0475	ECs0417	Z0462	-	Integral membrane sensor signal transduction histidine kinase
G2583_0476	ECs0418	Z0463	-	Putative response regulator
G2583_0477	ECs0419	Z0464	tauA	Taurine transport system periplasmic protein
G2583_0478	ECs0420	Z0465	tauB	Taurine import ATP-binding protein tauB
G2583_0479	ECs0421	Z0466	tauC	ABC-type nitrate/sulfonate/bicarbonate transport system, permease component
G2583_0480	ECs0422	Z0467	tauD	Taurine dioxygenase
G2583_0481	ECs0423	Z0468	hemB	Delta-aminolevulinic acid dehydratase
G2583_0482	ECs0424	Z0469	yaiU	Putative flagellin structural protein
G2583_0483	ECs0425	Z0470	yaiV	putative DNA-binding transcriptional regulator
G2583_0484	ECs0426	Z0472	ampH	Penicillin-binding protein ampH
G2583_0485	ECs0427	Z0473	sbmA	Inner-membrane transport protein, Microcin 25
G2583_0486	ECs0428	Z0474	yaiW	hypothetical protein
G2583_0487	ECs0429	Z0475	yaiY	Inner membrane protein yaiY
G2583_0488	ECs0430	Z0476	yaiZ	hypothetical protein
G2583_0489	ECs0431	Z0477	ddlA	D-alanine--D-alanine ligase A

Table S10. The orthologue table of the O55 and O157 strains Page 14

Locus_tag ^a			Gene	Product
CB9615	Sakai	EDL933		
G2583_0490	ECs0432	Z0478	iraP	Anti-adaptor protein iraP
G2583_0491	ECs0433	Z0479	phoA	Alkaline phosphatase
G2583_0492	ECs0434	Z0480	psiF	Phosphate starvation-inducible protein
G2583_0493	ECs0435	Z0481	adrA	MASE2 domain/diguanylate cyclase
G2583_0494	ECs0437	Z0482	proC	Pyrroline-5-carboxylate reductase
G2583_0495	ECs0436	Z0483	yail	hypothetical protein
G2583_0496	ECs0438	Z0484	aroL	Shikimate kinase 2
G2583_0497	ECs0439	Z0485	yaiA	hypothetical protein
G2583_0498	ECs0440	Z0486	aroM	AroM protein
G2583_0499	ECs0441	Z0487	yaiE	UPF0345 protein yaiE
G2583_0500			ydbD	hypothetical protein
G2583_0500	ECs0442	Z0489	ydbD	hypothetical protein
G2583_0501	ECs0443	Z0491	-	hypothetical protein
G2583_0502	ECs0445	Z0492	rdgC	Recombination-associated protein rdgC
G2583_0503	ECs0444	Z0493	mak	Possible NAGC-like transcriptional regulator
G2583_0504	ECs0446	Z0494	araJ	protein AraJ
G2583_0505	ECs0447	Z0495	sbcC	Nuclease SbcCD, C subunit
G2583_0506	ECs0448	Z0496	sbcD	Nuclease sbcCD subunit D
G2583_0507	ECs0449	Z0497	phoB	Positive response regulator for pho regulon
G2583_0508	ECs0450	Z0498	phoR	Signal transduction histidine kinase
G2583_0509	ECs0451	Z0499	brnQ	Branched-chain amino acid transport system 2 carrier protein
G2583_0510	ECs0452	Z0500	proY	Proline-specific permease proY
G2583_0511	ECs0453	Z0501	malZ	Maltodextrin glucosidase
G2583_0512	ECs0454	Z0502	-	hypothetical protein
G2583_0513	ECs0455	Z0503	acpH	Acyl carrier protein phosphodiesterase
G2583_0514	ECs0456	Z0504	queA	S-adenosylmethionine:tRNA ribosyltransferase-
G2583_0515	ECs0457	Z0505	tgt	Queueine tRNA-ribosyltransferase
G2583_0516	ECs0458	Z0506	yajC	UPF0092 membrane protein yajC
G2583_0517	ECs0459	Z0507	secD	Protein-export membrane protein secD
G2583_0518	ECs0460	Z0508	secF	Protein-export membrane protein SecF
G2583_0519	ECs0461	Z0509	-	UPF0156 protein Z0509/ECs0461
G2583_0520	ECs0462	Z0510	-	Plasmid stabilization system protein, RelE/ParE family
G2583_0521	ECs0463	Z0511	yajD	hypothetical protein
G2583_0522	ECs0464	Z0512	tsx	Nucleoside-specific channel-forming protein, Tsx
G2583_0523	ECs0465	Z0513	yajI	hypothetical protein
G2583_0524	ECs0466	Z0514	nrdR	ATP-cone domain protein
G2583_0525	ECs0467	Z0515	ribD	Bifunctional deaminase-reductase, C-terminal:Riboflavin biosynthesis protein RibD
G2583_0526	ECs0468	Z0516	ribE	6,7-dimethyl-8-ribityllumazine synthase
G2583_0527	ECs0469	Z0518	nusB	N utilization substance protein B homolog
G2583_0528	ECs0470	Z0519	thiL	Thiamine-monophosphate kinase
G2583_0529	ECs0471	Z0520	pgpA	Phosphatidylglycerophosphatase A
G2583_0530	ECs0472	Z0521	-	hypothetical protein

Table S10. The orthologue table of the O55 and O157 strains Page 15

Locus_tag ^a			Gene	Product
CB9615	Sakai	EDL933		
G2583_0531	ECs0473	Z0522	yajO	Oxidoreductase, aldo/keto reductase family
G2583_0532	ECs0474	Z0523	dxs	1-deoxy-D-xylulose-5-phosphate synthase
G2583_0533	ECs0475	Z0524	ispA	Geranyltranstransferase
G2583_0534	ECs0476	Z0525	xseB	Exodeoxyribonuclease 7 small subunit
G2583_0535	ECs0477	Z0526	thil	Thiamine biosynthesis protein thil
G2583_0536	ECs0478	Z0527	yajL	4-methyl-5(Beta-hydroxyethyl)-thiazole monophosphate synthesis
G2583_0537	ECs0479	Z0528	panE	2-dehydropantoate 2-reductase
G2583_0538	ECs0480	Z0529	yajQ	UPF0234 protein yajQ
G2583_0539	ECs0481	Z0530	yajR	Hypothetical transport protein YajR
G2583_0540	ECs0482	Z0531	cyoE	Protoheme IX farnesyltransferase
G2583_0541	ECs0483	Z0532	cyoD	Cytochrome O ubiquinol oxidase protein CyoD
G2583_0542	ECs0484	Z0533	cyoC	Cytochrome o ubiquinol oxidase subunit 3
G2583_0543	ECs0485	Z0534	cyoB	Ubiquinol oxidase subunit 1
G2583_0544	ECs0486	Z0535	cyoA	Cytochrome o ubiquinol oxidase, subunit II
G2583_0545	ECs0487	Z0536	ampG	Regulates beta-lactamase synthesis
G2583_0546	ECs0488	Z0537	yajG	hypothetical protein
G2583_0547	ECs0489	Z0539	bolA	transcriptional regulator BolA
G2583_0548	ECs0490	Z0541	tig	Trigger factor
G2583_0549	ECs0491	Z0542	clpP	ATP-dependent Clp protease proteolytic subunit
G2583_0550	ECs0492	Z0543	clpX	ATP-dependent Clp protease ATP-binding subunit clpX
G2583_0551	ECs0493	Z0545	lon	DNA-binding ATP-dependent protease La
G2583_0552	ECs0494	Z0547	hupB	DNA-binding protein HU-beta
G2583_0553	ECs0495	Z0548	ppiD	Peptidylprolyl isomerase
G2583_0554	ECs0496	Z0549	ybaV	Competence protein ComEA
G2583_0555	ECs0497	Z0550	ybaW	Thioesterase family protein
G2583_0556	ECs0498	Z0551	queC	Queuosine biosynthesis protein queC
G2583_0557	ECs0499	Z0552	ybaE	Bacterial extracellular solute-binding protein, family 5
G2583_0558	ECs0500	Z0553	cof	Predicted hydrolases of the HAD superfamily
G2583_0559	ECs0501	Z0555	ybaO	Putative transcriptional regulator YbaO
G2583_0560	ECs0502	Z0557	mdlA	Multidrug resistance, ATP-binding protein mdlA
G2583_0561	ECs0503	Z0559	mdlB	Multidrug resistance-like ATP-binding protein mdlB
G2583_0562	ECs0504	Z0562	glnK	Glutamine synthetase regulation protein
G2583_0563	ECs0505	Z0563	amtB	Ammonia channel precursor
G2583_0564	ECs0506	Z0564	tesB	Acyl-CoA thioesterase II
G2583_0565	ECs0507	Z0565	ybaY	Glycoprotein/polysaccharide metabolism precursor
G2583_0566	ECs0508	Z0566	ybaZ	hypothetical protein
G2583_0567	ffs	RNA010	ffs	ncRNA
G2583_0568	ECs0509	Z0568	ybaA	hypothetical protein
G2583_0569	ECs0510	Z0569	ylaB	hypothetical protein
G2583_0570	ECs0511	Z0570	ylaC	hypothetical protein
G2583_0571	ECs0512	Z0571	maa	Maltose O-acetyltransferase
G2583_0572	ECs0513	Z0573	hha	Haemolysin expression modulating protein
G2583_0573	ECs0514	Z0574	ybaJ	hypothetical protein

Table S10. The orthologue table of the O55 and O157 strains Page 16

Locus_tag ^a			Gene	Product
CB9615	Sakai	EDL933		
G2583_0574	ECs0515	Z0576	acrB	Acriflavine resistance protein B
G2583_0575	ECs0516	Z0578	acrA	Acriflavine resistance protein A
G2583_0576	ECs0517	Z0579	acrR	DNA-binding transcriptional repressor
G2583_0577	ECs0518	Z0581	kefA	Potassium efflux system KefA
G2583_0578	ECs0519	Z0583	ybaM	hypothetical protein
G2583_0579	ECs0520	Z0584	priC	Primosomal replication protein N"
G2583_0580	ECs0521	Z0585	ybaN	Inner membrane protein ybaN
G2583_0581	ECs0522	Z0586	apt	Adenine phosphoribosyltransferase
G2583_0582	ECs0523	Z0587	dnaX	DNA polymerase III, tau subunit
G2583_0583	ECs0524	Z0588	ybaB	UPF0133 protein ybaB
G2583_0584	ECs0525	Z0589	recR	Recombination protein recR
G2583_0585	ECs0526	Z0590	htpG	Chaperone protein htpG
G2583_0586	ECs0527	Z0591	adk	Adenylate kinase
G2583_0587	ECs0528	Z0592	hemH	Ferrochelataase
G2583_0588	ECs0529	Z0593	aes	Acetyl esterase
G2583_0589	ECs0530	Z0596	gsk	Inosine-guanosine kinase
G2583_0590	ECs0531	Z0597	ybaL	Transporter, monovalent cation:proton antiporter-2
G2583_0591	ECs0532	Z0598	fsr	Fosmidomycin resistance protein
G2583_0592	ECs0533	Z0599	ushA	UDP-sugar hydrolase/5'-nucleotidase
G2583_0593	ECs0534	Z0600	ybaK	hypothetical protein
G2583_0594			sroB	ncRNA
G2583_0595	ECs0535	Z0601	ybaP	GumN family protein
G2583_0596	ECs0536	Z0602	ybaQ	Addiction module antidote protein, HigA family
G2583_0597	ECs0537	Z0604	copA	Copper-transporting P-type ATPase
G2583_0598	ECs0538	Z0606	ybaS	Glutaminase 1
G2583_0599	ECs0539	Z0607	ybaT	Amino acid permease family protein
G2583_0600	ECs0540	Z0608	-	Putative outer membrane export protein
G2583_0601	ECs0541	Z0609	-	hypothetical protein
G2583_0601	ECs0542	Z0615	-	hypothetical protein
G2583_0602	ECs0543	Z0634	-	Putative cytoplasmic membrane export protein
G2583_0603	ECs0544	Z0635	-	Membrane spanning export protein
G2583_0604	ECs0545	Z0636	cueR	DNA-binding transcriptional activator of copper-responsive regulon genes
G2583_0605	ECs0546	Z0638	-	hypothetical protein
	ECs0547		-	hypothetical protein
G2583_0606	ECs0548	Z0639	-	hypothetical protein
G2583_0607	ECs0549	Z0640	-	hypothetical protein
	ECs0550		-	hypothetical protein
G2583_0608	ECs0551	Z0641	ybbJ	Nodulation efficiency family protein
G2583_0609	ECs0552	Z0642	qmcA	putative protease
G2583_0610	ECs0553	Z0643	ybbL	ABC transporter, ATP-binding protein
G2583_0611	ECs0554	Z0644	ybbM	Putative metal resistance protein
G2583_0612	ECs0555	Z0645	ybbN	putative thioredoxin-like protein

Table S10. The orthologue table of the O55 and O157 strains Page 17

Locus_tag ^a			Gene	Product
CB9615	Sakai	EDL933		
G2583_0613	ECs0556	Z0646	ybbO	Oxidoreductase, short chain dehydrogenase/reductase family
G2583_0614	ECs0558	Z0647	tesA	Acyl-CoA thioesterase I
G2583_0615	ECs0557	Z0648	ybbA	Uncharacterized ABC transporter ATP-binding protein ybbA
G2583_0616	ECs0559	Z0649	ybbP	putative oxidoreductase
G2583_0617	ECs0560	Z0651	rhsD	RHS Repeat family protein
G2583_0618	ECs0561	Z0653	ybbD	hypothetical protein
G2583_0619			-	ncRNA
G2583_0620	ECs0562	Z0654	-	hypothetical protein
G2583_0621		Z0655	-	hypothetical protein
G2583_0622	ECs0563	Z0656	yIbG	hypothetical protein
G2583_0623	ECs0564	Z0657	ybbB	tRNA 2-selenouridine synthase
G2583_0624	ECs0565	Z0658	allS	DNA-binding transcriptional activator of the allD operon
G2583_0625	ECs0566	Z0659	allA	Ureidoglycolate hydrolase
G2583_0626	ECs0567	Z0660	allR	Putative regulator
G2583_0627	ECs0568	Z0661	gcl	Glyoxylate carboligase
G2583_0628	ECs0569	Z0662	hyi	Glyoxylate-induced protein
G2583_0629	ECs0570	Z0663	glxR	2-hydroxy-3-oxopropionate reductase
G2583_0630	ECs0571	Z0664	ybbV	hypothetical protein
G2583_0631	ECs0572	Z0665	ybbW	Cytosine/uracil/thiamine/allantoin permeases
G2583_0632	ECs0573	Z0666	allB	Dihydroorotase and related cyclic amidohydrolases
G2583_0632	ECs0574	Z0667	allB	Dihydroorotase and related cyclic amidohydrolases
G2583_0633	ECs0575	Z0668	ybbY	Putative purine permease ybbY
G2583_0634	ECs0576	Z0669	glxK	Glycerate kinase
G2583_0635	ECs0577	Z0670	yIbA	hypothetical protein
G2583_0636	ECs0578	Z0671	allC	Allantoate amidohydrolase
G2583_0637	ECs0579	Z0672	allD	Ureidoglycolate dehydrogenase
G2583_0638	ECs0580	Z0673	fdrA	Bacterial FdrA protein
G2583_0639	ECs0581	Z0674	yIbE	hypothetical protein
G2583_0640	ECs0582	Z0675	yIbF	putative carboxylase
G2583_0641	ECs0583	Z0676	ybcF	Carbamate kinase
G2583_0642	ECs0584	Z0677	purK	Phosphoribosylaminoimidazole carboxylase, ATPase subunit
G2583_0643	ECs0585	Z0678	purE	Phosphoribosylaminoimidazole carboxylase catalytic subunit
G2583_0644	ECs0586	Z0679	lpxH	UDP-2,3-diacetylglucosamine hydrolase
G2583_0645	ECs0587	Z0680	ppiB	Peptidyl-prolyl cis-trans isomerase
G2583_0646	ECs0588	Z0681	cysS	Cysteinyl-tRNA synthetase
G2583_0647	ECs0589	Z0682	ybcI	hypothetical protein
G2583_0648	ECs0590	Z0683	ybcJ	hypothetical protein
G2583_0649	ECs0591	Z0684	foID	Bifunctional protein foID [Includes: Methylenetetrahydrofolate dehydrogenase
G2583_0650	ECs0592	Z0686	sfmA	Putative fimbrial-like protein

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Locus_tag ^a			Gene	Product
CB9615	Sakai	EDL933		
G2583_0651	ECs0593	Z0688	sfmC	Chaperone protein FimC homolog
G2583_0652	ECs0594	Z0689	sfmD	Outer membrane usher protein SfmD
G2583_0653	ECs0595	Z0690	sfmH	Involved in fimbrial assembly precursor
G2583_0654	ECs0596	Z0691	sfmF	Putative fimbrial protein
G2583_0655	ECs0597	Z0693	fimZ	Fimbrial Z protein
G2583_0656	argU	RNA011	argU	Arg tRNA
G2583_0657	Indel-17	Indel-17	intD	Prophage DLP12 integrase
G2583_0658	Indel-17	Indel-17	-	Hypothetical phage protein
G2583_0659	Indel-17	Indel-17	-	Hypothetical phage protein
G2583_0660	Indel-17	Indel-17	-	Unknown protein encoded within prophage
G2583_0661	Indel-17	Indel-17	-	protein of unknown function DUF1382
G2583_0662	Indel-17	Indel-17	-	hypothetical protein
G2583_0663	Indel-17	Indel-17	ybcC	Putative exonuclease encoded by prophage CP-933K
G2583_0664	Indel-17	Indel-17	betW	Bet protein
G2583_0665	Indel-17	Indel-17	gam	Host-nuclease inhibitor protein gam
G2583_0666	Indel-17	Indel-17	kil	Prophage Kil protein
G2583_0667	Indel-17	Indel-17	-	Hypothetical phage associated protein
G2583_0668	Indel-17	Indel-17	-	hypothetical protein
G2583_0669	Indel-17	Indel-17	-	Putative repressor protein
G2583_0670	Indel-17	Indel-17	-	hypothetical protein
G2583_0671	Indel-17	Indel-17	cII	hypothetical protein
G2583_0672	Indel-17	Indel-17	-	Phage replication protein O
G2583_0673	Indel-17	Indel-17	-	replication protein P
G2583_0674	Indel-17	Indel-17	renD	Ren protein
G2583_0675	Indel-17	Indel-17	emrE	EmrE SMR transporter
G2583_0676	Indel-17	Indel-17	ybcK	DLP12 prophage; predicted recombinase
G2583_0677	Indel-17	Indel-17	ybcL	Putative phosphatidylethanolamine-binding protein
G2583_0678	Indel-17	Indel-17	ybcM	DLP12 prophage; predicted DNA-binding transcriptional regulator
G2583_0679	Indel-17	Indel-17	ylcH	hypothetical protein
G2583_0680	Indel-17	Indel-17	ybcN	hypothetical protein
G2583_0681	Indel-17	Indel-17	ninE	NinE
G2583_0682	Indel-17	Indel-17	ybcO	hypothetical protein
G2583_0683	Indel-17	Indel-17	rusA	Crossover junction endodeoxyribonuclease rusA
G2583_0684	Indel-17	Indel-17	ylcG	hypothetical protein
G2583_0685	Indel-17	Indel-17	ybcQ	Phage antitermination Q type 1 family
G2583_0686	Indel-17	Indel-17	nmpC	Outer membrane porin protein C
G2583_0687	Indel-17	Indel-17	essD	hypothetical protein
G2583_0688	Indel-17	Indel-17	ybcS	Lysozyme
G2583_0689	Indel-17	Indel-17	rzpD	Putative Rz endopeptidase from lambdoid prophage DLP12
G2583_0690	Indel-17	Indel-17	borD	Lambdoid prophage DLP12 Bor-like protein
G2583_0691	Indel-17	Indel-17	nohB	Bacteriophage DNA packaging protein
G2583_0692	Indel-17	Indel-17	-	Bacteriophage tail assembly protein

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Locus_tag ^a			Gene	Product
CB9615	Sakai	EDL933		
G2583_0693	Indel-17	Indel-17	-	Lambda prophage-derived head-to-tail joining protein W
G2583_0694	Indel-17	Indel-17	-	Putative capsid structural protein of prophage
G2583_0695	Indel-17	Indel-17	-	Minor capsid protein C
G2583_0696	Indel-17	Indel-17	-	Putative head-DNA stabilization protein of prophage
G2583_0697	Indel-17	Indel-17	-	phage major capsid protein E
G2583_0698	Indel-17	Indel-17	-	Putative DNA packaging protein of prophage
G2583_0699	Indel-17	Indel-17	-	Phage Head-Tail Attachment
G2583_0700	Indel-17	Indel-17	-	prophage minor tail protein Z
G2583_0701	Indel-17	Indel-17	-	Permeases of the major facilitator superfamily
G2583_0702	Indel-17	Indel-17	-	Putative tail component of prophage
G2583_0703	Indel-17	Indel-17	-	phage minor tail protein G
G2583_0704	Indel-17	Indel-17	-	Minor tail protein T
G2583_0705	Indel-17	Indel-17	-	Minor tail protein H
G2583_0706	Indel-17	Indel-17	-	Minor tail protein M
G2583_0707	Indel-17	Indel-17	-	Phage-related protein
G2583_0708	Indel-17	Indel-17	-	Putative tail fiber component K of prophage
G2583_0709	Indel-17	Indel-17	-	Putative tail component of prophage CP-933K
G2583_0710	Indel-17	Indel-17	-	Host specificity protein J
G2583_0711	Indel-17	Indel-17	-	hypothetical protein
G2583_0712	Indel-17	Indel-17	ydfN	PPE-repeat proteins
G2583_0713	Indel-17	Indel-17	ynaC	Tail fiber assembly protein
G2583_0714	Indel-17	Indel-17	ybcY	unknown protein encoded by prophage CP-933X
G2583_0715	Indel-17	Indel-17	ylcE	tail fiber assembly protein
G2583_0716	Indel-17	Indel-17	-	Putative protease encoded within prophage CP-933X
G2583_0717	Indel-17	Indel-17	ompT	Protease VII
G2583_0718	Indel-17	Indel-17	-	Helix-turn-helix domain protein
G2583_0719	Indel-17	Indel-17	yjaB	Hypothetical acetyltransferase YjaB
G2583_0720	ECs0598	Z0696	envY	envelope protein; thermoregulation of porin biosynthesis
G2583_0721	ECs0599	Z0697	ybcH	hypothetical protein
G2583_0722	ECs0600	Z0698	nfrA	Bacteriophage N4 adsorption protein A
G2583_0723	ECs0601	Z0699	nfrB	Bacteriophage N4 adsorption protein B
G2583_0724	ECs0602	Z0700	yhhI	ISEc4, transposase
G2583_0725		Z0701	-	hypothetical protein
G2583_0726	ECs0603	Z0702	-	YD repeat
G2583_0727	ECs0604		-	hypothetical protein
G2583_0728	ECs0605	Z0705	rhlI	Rhs core protein with extension
G2583_0729	ECs0606	Z0706	-	conserved hypothetical protein
G2583_0730	ECs0607	Z0707	-	Type VI secretion system Vgr family protein
G2583_0731	ECs0608	Z0708	cusS	Sensor kinase cusS
G2583_0732	ECs0609	Z0709	cusR	DNA-binding response regulator in two-component regulatory system with CusS
G2583_0733	ECs0610	Z0711	cusC	Cation efflux system protein cusC precursor
G2583_0734	ECs0611	Z0712	cusF	Cation efflux system protein cusF precursor
G2583_0735	ECs0612	Z0713	cusB	Cation efflux system protein CusB

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Locus_tag ^a			Gene	Product
CB9615	Sakai	EDL933		
G2583_0736	ECs0613	Z0714	cusA	Cation efflux system protein cusA
G2583_0737	ECs0614	Z0715	pheP	Phenylalanine-specific permease
G2583_0738	ECs0615	Z0716	ybdG	Transporter, small conductance mechanosensitive ion channel (MscS) family
G2583_0739	ECs0616	Z0717	nfsB	Oxygen-insensitive NAD(P)H nitroreductase
G2583_0740	ECs0617	Z0718	ybdF	hypothetical protein
G2583_0741	ECs0618	Z0719	ybdJ	putative membrane protein YbdJ
G2583_0742	ECs0619	Z0720	ybdK	Carboxylate-amine ligase ybdK
G2583_0743	ECs0620	Z0721	mokC2	Hok/Gef family protein
G2583_0744	ECs0621	Z0722	hokE	Hok/Gef family protein
G2583_0745	ECs0622	Z0723	entD	4'-phosphopantetheinyl transferase entD
G2583_0746	ECs0623	Z0724	fepA	Ferrienterobactin receptor
G2583_0747	ECs0624	Z0725	fes	Enterochelin esterase
G2583_0748		Z0726	ybdZ	MbtH-like protein
G2583_0749	ECs0625	Z0727	entF	Enterobactin synthetase component F
G2583_0750	ECs0626	Z0728	fepE	Ferric enterobactin transport protein fepE
G2583_0751	ECs0627	Z0729	fepC	Ferric enterobactin transport ATP-binding protein
G2583_0752	ECs0628	Z0731	fepG	Ferric enterobactin transport protein
G2583_0753	ECs0629	Z0732	fepD	ABC-type Fe ³⁺ -siderophore transport system, permease component
G2583_0754	ECs0630	Z0733	entS	Enterobactin exporter entS
G2583_0755	ECs0631	Z0734	fepB	Ferrienterobactin ABC transporter, ferrienterobactin-binding periplasmic protein FepB
G2583_0756	ECs0632	Z0735	entC	Isochorismate synthase entC
G2583_0757	ECs0633	Z0736	entE	Enterobactin synthetase component E (Enterochelin synthase E) [Includes: 2,3-dihydroxybenzoate-AMP
G2583_0758	ECs0634	Z0737	entB	Isochorismatase
G2583_0759	ECs0635	Z0738	entA	2,3-dihydroxybenzoate-2,3-dehydrogenase
G2583_0760	ECs0636	Z0739	ybdB	Esterase ybdB
G2583_0761	ECs0637	Z0740	cstA	Carbon starvation protein A
G2583_0762			ybdD	hypothetical protein
G2583_0763	ECs0638	Z0742	ybdH	Alcohol dehydrogenase, iron-containing
G2583_0764	ECs0639	Z0743	ybdL	Aminotransferase, classes I and II
G2583_0765	ECs0640	Z0744	ybdM	Immunoglobulin-binding regulator family protein
G2583_0766	ECs0641	Z0746	ybdN	Phosphoadenosine phosphosulfate reductase family protein
G2583_0767	ECs0642	Z0747	ybdO	putative transcriptional regulator LYSR-type
G2583_0768	ECs0643	Z0748	dsbG	Thiol:disulfide interchange protein DsbG
G2583_0769	ECs0644	Z0749	ahpC	Alkyl hydroperoxide reductase subunit C
G2583_0770	ECs0645	Z0750	ahpF	Alkyl hydroperoxide reductase subunit F
G2583_0771	ECs0646	Z0751	uspG	Universal stress protein UspG
G2583_0772	ECs0647	Z0752	ybdR	Oxidoreductase, zinc-binding dehydrogenase family
G2583_0773			-	hypothetical protein
	ECs0648	Z0753	-	hypothetical protein

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Locus_tag ^a			Gene	Product
CB9615	Sakai	EDL933		
G2583_0774	ECs0649	Z0754	rnk	Regulator of nucleoside diphosphate kinase
G2583_0775	ECs0650	Z0755	rna	Ribonuclease I
G2583_0776	ECs0651	Z0756	citT	Citrate carrier
G2583_0777	ECs0652	Z0757	citG	2-(5"-triphosphoribosyl)-3'-dephosphocoenzyme-A synthase
G2583_0778	ECs0653	Z0758	citX	Apo-citrate lyase phosphoribosyl-dephospho-CoA transferase
G2583_0779	ECs0654	Z0759	citF	Citrate lyase, alpha subunit
G2583_0780	ECs0655	Z0760	citE	Citrate lyase beta chain
G2583_0781	ECs0656	Z0761	citD	Citrate lyase acyl carrier protein
G2583_0782	ECs0657	Z0762	citC	Citrate lyase synthetase (Citrate (Pro-3S)-lyase ligase)
G2583_0783	ECs0658	Z0764	dpiB	Sensor histidine kinase DpiB
G2583_0784	ECs0659	Z0765	dpiA	transcriptional regulatory protein DpiA
G2583_0785	ECs0660	Z0766	dcuC	C4-dicarboxylate transporter
G2583_0786	ECs0661	Z0767	pagP	Antimicrobial peptide resistance and lipid A acylation protein PagP
G2583_0787	ECs0662	Z0769	cspE	hypothetical protein
G2583_0788	ECs0663	Z0770	crcB	camphor resistance protein CrcB
G2583_0789	ECs0664	Z0771	ybeM	UPF0012 hydrolase ybeM
G2583_0790	ECs0665	Z0772	tatE	Sec-independent protein translocase protein tatE
G2583_0791	ECs0666	Z0773	lipA	Lipoyl synthase
G2583_0792	ECs0667	Z0774	ybeF	putative DNA-binding transcriptional regulator
G2583_0793	ECs0668	Z0775	lipB	Octanoyltransferase
G2583_0794	ECs0669	Z0776	ybeD	Putative cytoplasmic protein
G2583_0795	ECs0670	Z0777	dacA	D-alanyl-D-alanine carboxypeptidase dacA precursor
G2583_0796	ECs0671	Z0778	rlpA	Rare lipoprotein A precursor
G2583_0797	ECs0672	Z0780	mrdB	rod shape-determining protein RodA
G2583_0798	ECs0673	Z0781	mrDA	Penicillin-binding protein 2
G2583_0799	ECs0674	Z0782	ybeA	UPF0247 protein ybeA
G2583_0800	ECs0675	Z0783	ybeB	hypothetical protein
G2583_0801	ECs0676	Z0785	cobC	Alpha-ribazole phosphatase
G2583_0802	ECs0677	Z0786	nadD	Nicotinate-nucleotide adenylyltransferase
G2583_0803	ECs0678	Z0787	holA	DNA polymerase III, delta subunit
G2583_0804	ECs0679	Z0788	rlpB	LPS-assembly lipoprotein rlpB precursor
G2583_0805	ECs0680	Z0789	leuS	Leucyl-tRNA synthetase
G2583_0806	ECs0681	Z0790	ybeL	hypothetical protein
G2583_0807	ECs0682	Z0791	ybeQ	FOG: TPR repeat, SEL1 subfamily
G2583_0807		Z0793	ybeQ	FOG: TPR repeat, SEL1 subfamily
G2583_0808	ECs0683	Z0794	ybeR	hypothetical protein
G2583_0809	ECs0684	Z0795	djlB	DnaJ domain protein
G2583_0810	ECs0685	Z0796	ybeT	Sel1 domain protein repeat-containing protein
G2583_0811	ECs0686	Z0797	ybeU	putative tRNA ligase
G2583_0812	ECs0687		ybeV	DnaJ domain protein
G2583_0812	ECs0688		ybeV	DnaJ domain protein

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Locus_tag ^a			Gene	Product
CB9615	Sakai	EDL933		
G2583_0813	ECs0689	Z0800	hscC	DnaK family protein HscC
G2583_0814	ECs0690	Z0801	rihA	Pyrimidine-specific ribonucleoside hydrolase rihA
G2583_0815	ECs0691	Z0802	gltL	Glutamate/aspartate transport ATP-binding protein gltL
G2583_0816	ECs0692	Z0803	gltK	Glutamate/aspartate transport system permease protein gltK
G2583_0817	ECs0693	Z0804	gltJ	Glutamate/aspartate ABC transporter, permease protein GltJ
G2583_0818			sroC	ncRNA
G2583_0819	ECs0694	Z0805	gltI	Glutamate/aspartate periplasmic binding protein
G2583_0820	ECs0695	Z0806	Int	Apolipoprotein N-acyltransferase
G2583_0821	ECs0696	Z0807	ybeX	Magnesium and cobalt efflux protein corC
G2583_0822	ECs0697	Z0808	ybeY	conserved hypothetical protein
G2583_0823	ECs0698	Z0809	ybeZ	PhoH family protein
G2583_0824	ECs0699	Z0810	miaB	UPF0004 protein yleA
G2583_0825	ECs0700	Z0811	ubiF	2-octaprenyl-3-methyl-6-methoxy-1,4-benzoquinol hydroxylase
G2583_0826	ECs0701		-	hypothetical protein
G2583_0827	glnX	RNA012	glnX	Gln tRNA
G2583_0828	glnV	RNA013	glnV	Gln tRNA
G2583_0829	metU	RNA014	metU	Met tRNA
G2583_0830	ECs0702		-	Putative RNA
G2583_0831	glnW	RNA015	glnW	Gln tRNA
	ECs0703		-	putative RNA
G2583_0832	glnU	RNA016	glnU	Gln tRNA
G2583_0833	leuW	RNA017	leuW	Leu tRNA
G2583_0834	metT	RNA018	metT	Met tRNA
G2583_0835	ECs0704	Z0821	asnB	Asparagine synthase
G2583_0836	ECs0705	Z0822	nagD	UMP phosphatase
G2583_0837	ECs0706	Z0823	nagC	N-acetylglucosamine repressor
G2583_0838	ECs0707	Z0824	nagA	N-acetylglucosamine-6-phosphate deacetylase
G2583_0839	ECs0708	Z0825	nagB	Glucosamine-6-phosphate deaminase
G2583_0840	ECs0709	Z0826	nagE	PTS system, N-acetylglucosamine-specific IICBA component
G2583_0841	ECs0710	Z0827	glnS	Glutaminyl-tRNA synthetase
G2583_0842	ECs0711	Z0828	ybfM	Outer membrane porin, OprD family
G2583_0842	ECs0712	Z0829	ybfM	Outer membrane porin, OprD family
G2583_0843	ECs0713	Z0830	ybfN	hypothetical protein
G2583_0844	ECs0714	Z0831	fur	Ferric uptake regulation protein
G2583_0845	ECs0715	Z0832	fldA	Flavodoxin
G2583_0846	ECs0716	Z0834	ybfE	CopG domain protein DNA-binding domain protein
G2583_0847	ECs0717	Z0835	ybfF	Esterase YbfF
G2583_0848	ECs0718	Z0836	seqA	Negative modulator of initiation of replication
G2583_0849	ECs0719	Z0837	pgm	Phosphoglucomutase
G2583_0850	ECs0720	Z0838	potE	Putrescine-ornithine antiporter

Table S10. The orthologue table of the O55 and O157 strains Page 23

Locus_tag ^a			Gene	Product
CB9615	Sakai	EDL933		
G2583_0851	ECs0721	Z0839	speF	Ornithine decarboxylase, inducible
		Z0840	-	hypothetical protein
G2583_0852	ECs0722	Z0841	kdpE	KDP operon transcriptional regulatory protein KdpE
G2583_0853	ECs0723	Z0842	kdpD	sensor protein KdpD
G2583_0854	ECs0724	Z0843	kdpC	Potassium-transporting ATPase C chain
G2583_0855	ECs0725	Z0844	kdpB	Potassium-transporting ATPase B chain
G2583_0856	ECs0726	Z0845	kdpA	Potassium-transporting ATPase A chain
G2583_0857	ECs0727		kdpF	K ⁺ -transporting ATPase, F subunit
G2583_0858	ECs0728	Z0846	ybfA	hypothetical protein
G2583_0859	ECs0729	Z0847	rhcC	RHS repeat protein
Indel-20	Indel-20	Z0848	-	rhcC protein in rhs element
Indel-20	Indel-20	Z0849	ybfB	orf, hypothetical protein
G2583_0859	ECs0729	Z0851	rhcC	RHS repeat protein
G2583_0860	ECs0730	Z0853	ybfC	hypothetical protein
		Z0855	-	hypothetical protein
G2583_0861		Z0856	yhhl	Transposase IS4 family protein
G2583_0861	ECs0731	Z0854	yhhl	Transposase IS4 family protein
G2583_0862	ECs0732	Z0858	ybgA	hypothetical protein
G2583_0863	ECs0733	Z0859	phr	Deoxyribodipyrimidine photolyase
G2583_0864	ECs0734	Z0860	ybgH	Amino acid/peptide transporter
G2583_0865	ECs0735	Z0861	ybgI	NIF3 family protein
G2583_0866	ECs0736	Z0862	ybgJ	putative carboxylase
G2583_0867	ECs0737	Z0863	ybgK	Putative carboxylase
G2583_0868	ECs0738	Z0864	ybgL	UPF0271 protein ybgL
G2583_0869	ECs0739	Z0865	nei	Endonuclease VIII (DNA glycosylase/AP lyase Nei)
G2583_0870	ECs0740	Z0867	abrB	Putative transport protein
G2583_0871	ECs0741	Z0868	ybgO	hypothetical protein
G2583_0872	ECs0742	Z0869	ybgP	Periplasmic pilus chaperone family protein
G2583_0873	ECsp001	Z0870	ybgQ	truncated outer membrane protein
G2583_0873	ECs0743	Z0871	ybgQ	truncated outer membrane protein
G2583_0874	ECs0744	Z0872	ybgD	Putative fimbrial-like protein
G2583_0875	ECs0745	Z0873	gltA	Citrate (Si)-synthase
G2583_0876	ECs0746	Z0875	sdhC	Succinate dehydrogenase cytochrome b-556 subunit
G2583_0877	ECs0747	Z0876	sdhD	Succinate dehydrogenase hydrophobic membrane anchor subunit
G2583_0878	ECs0748	Z0877	sdhA	Succinate dehydrogenase flavoprotein subunit
G2583_0879	ECs0749	Z0878	sdhB	Succinate dehydrogenase, iron-sulfur subunit
G2583_0880	ECs0750	Z0879	-	hypothetical protein
G2583_0881	ECs0751	Z0880	sucA	2-oxoglutarate dehydrogenase E1 component
G2583_0882	ECs0752	Z0881	sucB	Dihydrolipoyllysine-residue succinyltransferase, E2 component of oxoglutarate dehydrogenase (Succinyl-transferring) complex
G2583_0883	ECs0753	Z0882	sucC	Succinyl-CoA ligase [ADP-forming] subunit beta
G2583_0884	ECs0754	Z0883	sucD	Succinyl-CoA ligase [ADP-forming] subunit alpha

Table S10. The orthologue table of the O55 and O157 strains Page 24

Locus_tag ^a			Gene	Product
CB9615	Sakai	EDL933		
G2583_0885		Z0884	-	conserved domain protein
G2583_0886	ECs0755	Z0885	-	putative LysR-like transcriptional regulator
G2583_0887	ECs0756	Z0886	cobO	Cob(I)yrinic acid a,c-diamide adenosyltransferase
G2583_0888	ECs0757	Z0887	fumA	Hydro-lyase, Fe-S type, tartrate/fumarate family
G2583_0889	ECs0758	Z0888	-	Transporter, dicarboxylate/amino acid:cation family
G2583_0890	ECs0759	Z0890	-	hypothetical protein
G2583_0891	ECs0760	Z0891	-	hypothetical protein
G2583_0892	ECs0761	Z0892	-	Putative methylaspartate ammonia-lyase
G2583_0893	ECs0762	Z0893	mutE	Methylaspartate mutase, E subunit
G2583_0894	ECs0763	Z0894	-	Putative glutamate mutase mutL
G2583_0895	ECs0764	Z0895	mamA	Methylaspartate mutase S chain
G2583_0896	ECs0765	Z0896	-	hypothetical protein
G2583_0897	ECs0766	Z0897	-	hypothetical protein
G2583_0898	ECs0767	Z0898	-	hypothetical protein
		Z0899	-	hypothetical protein
G2583_0899	ECs0768	Z0900	cydA	Cytochrome d ubiquinol oxidase subunit 1
G2583_0900	ECs0769	Z0901	cydB	Cytochrome d ubiquinol oxidase subunit 2
G2583_0901			ybgT	hypothetical protein
G2583_0902	ECs0770	Z0903	ybgE	hypothetical protein
G2583_0903	ECs0771	Z0904	ybgC	Putative esterase YbgC
G2583_0904	ECs0772	Z0905	tolQ	Inner membrane protein
G2583_0905	ECs0773	Z0906	tolR	hypothetical protein
G2583_0906	ECs0774	Z0907	tolA	TolA colicin import membrane protein
G2583_0907	ECs0775	Z0908	tolB	Protein tolB precursor
G2583_0908	ECs0776	Z0909	pal	Peptidoglycan-associated lipoprotein precursor
G2583_0909	ECs0777	Z0910	ybgF	Tol-pal system protein YbgF
G2583_0910	lysT	RNA019	lysT	Lys tRNA
G2583_0911	valT	RNA020	valT	Val tRNA
G2583_0912	lysW	RNA021	lysW	Lys tRNA
G2583_0913	valZ	RNA022	valZ	Val tRNA
G2583_0914	lysY	RNA023	lysY	Lys tRNA
G2583_0915	lysZ	RNA024	lysZ	Lys tRNA
G2583_0916	ECs0778	Z0919	nadA	Quinolinate synthetase A
G2583_0917	ECs0779	Z0920	pnuC	Nicotinamide mononucleotide transporter PnuC
G2583_0918	ECs0780	Z0922	zitB	Zinc transporter zitB
G2583_0919	ECs0781	Z0923	ybgS	hypothetical protein
G2583_0920	ECs0782	Z0924	aroG	Phospho-2-dehydro-3-deoxyheptonate aldolase, Phe-sensitive
G2583_0921	ECs0783	Z0925	gpmA	2,3-bisphosphoglycerate-dependent phosphoglycerate mutase
G2583_0922	ECs0784	Z0926	galM	Galactose mutarotase
G2583_0923	ECs0785	Z0927	galK	Galactokinase
G2583_0924	ECs0786	Z0928	galT	Galactose-1-phosphate uridylyltransferase
G2583_0925	ECs0787	Z0929	galE	UDP-galactose-4-epimerase

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Locus_tag ^a			Gene	Product
CB9615	Sakai	EDL933		
G2583_0926	ECs0788	Z0930	modF	ABC transporter, ATP-binding protein
G2583_0927	ECs0789	Z0931	modE	transcriptional regulator ModE
G2583_0928	ECs0790	Z0932	ybhT	hypothetical protein
G2583_0929	ECs0791	Z0933	modA	Molybdate ABC transporter, periplasmic molybdate-binding protein
G2583_0930	ECs0792	Z0934	modB	ABC-type molybdate transport system, permease component
G2583_0931	ECs0793	Z0935	modC	Molybdenum import ATP-binding protein modC
G2583_0932	ECs0794	Z0936	ybhA	Phosphatase YbhA
G2583_0933	ECs0795	Z0938	pgl	6-phosphogluconolactonase
G2583_0934	ECs0796	Z0939	ybhD	putative transcriptional regulator LYSR-type
G2583_0935	ECs0797	Z0940	ybhH	hypothetical protein
G2583_0936	ECs0798	Z0941	ybhI	Anion transporter
G2583_0937	ECs0799	Z0942	ybhJ	aconitase family protein
G2583_0938	ECs0800	Z0943	ybhC	Pectinesterase
G2583_0939	ECsp002	Z0946	intE	Phage integrase family
G2583_0940	ECs0801		-	Excisionase
G2583_0941	ECs0802	Z0947	-	unknown protein encoded by prophage CP-933K
	ECs0803		-	hypothetical protein
G2583_0942	ECs0804	Z0948	-	unknown protein encoded by prophage CP-933K
G2583_0943	ECs0805		-	hypothetical C4-type zinc finger protein TraR-family
G2583_0944	ECs0806	Z0949	-	hypothetical protein
G2583_0945	ECs0807	Z0950	-	unknown protein encoded by prophage CP-933K
	ECs0808		-	hypothetical protein
G2583_0946	ECs0809	Z0951	-	Exonuclease
G2583_0947	ECsp003	Z0952	bet	Bacteriophage recombination protein
G2583_0948	Indel-24	Indel-24	gamW	Gam protein
G2583_0949	Indel-24	Indel-24	CIII	antitermination protein
G2583_0950	Indel-24	Indel-24	-	Lambda prophage-derived protein ea10
G2583_0951	Indel-24	Indel-24	-	Gene 34 protein
G2583_0952	Indel-24	Indel-24	-	N protein
G2583_0953	Indel-24	Indel-24	-	Hypothetical protein
G2583_0954	Indel-24	Indel-24	-	CI protein
G2583_0955	Indel-24	Indel-24	CRO	hypothetical protein
G2583_0956	Indel-24	Indel-24	-	regulatory protein CII
G2583_0957	Indel-24	Indel-24	-	hypothetical protein
G2583_0958	Indel-24	Indel-24	-	putative replication protein P of bacteriophage BP-933W
G2583_0959	Indel-24	Indel-24	-	Ren protein
G2583_0960	Indel-24	Indel-24	ninB	Unknown protein encoded within prophage
G2583_0961	ECs0810		ninE	NinE protein
G2583_0962	ECs0811		NinF	hypothetical protein
G2583_0963	ECs0812	Z0953	NinG	Bacteriophage Lambda NinG protein
G2583_0964	ECs0813	Z0954	-	Serine/threonine-protein phosphatase 1
G2583_0965	ECs0814	Z0955	-	Putative outer membrane protein

Table S10. The orthologue table of the O55 and O157 strains Page 26

Locus_tag ^a			Gene	Product
CB9615	Sakai	EDL933		
G2583_0966	ECs0815	Z0956	-	Putative antiterminator Q protein of prophage CP-933K
G2583_0967	ECs0816	Z0957	-	unknown protein encoded by prophage CP-933K
G2583_0968		Z0958	-	unknown protein encoded by prophage CP-933K
	ECs0817		-	hypothetical protein
		Z0959	-	unknown protein encoded by prophage CP-933K
G2583_0969	ECs0818		-	Putative holin protein
G2583_0970	ECs0819	Z0960	ybcS	putative lysozyme protein R of prophage CP-933K
G2583_0971	ECs0820	Z0961	-	Bacteriophage lysis protein
	ECs0821		-	putative lipoprotein Rz1 precursor
G2583_0972	ECs0822		-	hypothetical protein
G2583_0973	ECs0823		-	hypothetical protein
		Z0962	-	unknown protein encoded by prophage CP-933K
G2583_0974	ECs0824	Z0963	-	unknown protein encoded by prophage CP-933K
G2583_0975	ECs0825	Z0964	-	Phage terminase large subunit
G2583_0976	ECs0826		-	hypothetical protein
G2583_0977	ECs0827	Z0965	-	Putative capsid protein
G2583_0977	ECs0828	Z0966	-	Putative capsid protein
G2583_0978	ECs0829	Z0967	clpP	Clp protease domain protein
G2583_0979	ECs0830	Z0968	-	hypothetical protein
G2583_0980	ECs0831	Z0969	-	unknown protein encoded by prophage CP-933K
G2583_0981	ECs0832	Z0970	-	prophage minor tail protein Z
G2583_0982	ECs0833	Z0971	-	putative tail component of prophage CP-933K
G2583_0983	ECs0834	Z0972	-	Putative tail component of prophage CP-933K
G2583_0984	ECs0835	Z0973	-	ATPase components of ABC transporters with duplicated ATPase domains
G2583_0985	ECs0836	Z0974	-	Putative tail component of prophage
G2583_0986	ECs0837	Z0975	-	Putative tail component of prophage CP-933K
G2583_0987	ECs0838	Z0976	-	putative minor tail protein
G2583_0988	ECs0839	Z0977	-	putative minor tail protein
G2583_0989	ECs0840	Z0978	-	Putative tail fiber component K of prophage
G2583_0990	ECs0841	Z0979	-	Putative tail component of prophage CP-933K
G2583_0991	ECs0842	Z0980	-	Host specificity protein J
G2583_0992	ECs0843	Z0981	-	Enterobacterial Ail/Lom family protein
G2583_0993	ECs0844	Z0982	-	hypothetical protein
G2583_0994	ECs0845	Z0984	-	putative prophage tail fibre C-terminus family protein
G2583_0995	ECs0846	Z0985	nleB	NleB
G2583_0996	ECs0847	Z0986	nleC	Non-LEE encoded type III effector C
G2583_0997	ECsp004		-	tail fiber assembly proteins
G2583_0998	ECs0848	Z0989	nleH	non-LEE-encoded type III effector H
G2583_0999	ECs0849		-	hypothetical protein
G2583_1000	ECs0850	Z0990	nleD	hypothetical protein
G2583_1001	ECs0851	Z0992	ybhB	UPF0098 protein ybhB
G2583_1002	ECs0852	Z0993	bioA	Adenosylmethionine-8-amino-7-oxononanoate transaminase

Table S10. The orthologue table of the O55 and O157 strains Page 27

Locus_tag ^a			Gene	Product
CB9615	Sakai	EDL933		
G2583_1003	ECs0853	Z0994	bioB	Biotin synthase
G2583_1004	ECs0854	Z0995	bioF	8-amino-7-oxononanoate synthase
G2583_1005	ECs0855	Z0996	bioC	Biotin biosynthesis protein BioC
G2583_1006	ECs0856	Z0997	bioD	Dethiobiotin synthase
G2583_1007	ECs0857	Z0998	uvrB	UvrABC system protein B
G2583_1008	ECs0858	Z0999	ybhK	hypothetical protein
G2583_1009	ECs0859	Z1000	moaA	Molybdenum cofactor biosynthesis protein A
G2583_1010	ECs0860	Z1001	moaB	Molybdenum cofactor biosynthesis protein B
G2583_1011	ECs0861	Z1002	moaC	Molybdenum cofactor biosynthesis protein C
G2583_1012	ECs0862	Z1003	moaD	Molybdopterin biosynthesis
G2583_1013	ECs0863	Z1004	moaE	Molybdopterin converting factor, subunit 2
G2583_1014	ECs0864	Z1005	ybhL	hypothetical protein
G2583_1015	ECs0865	Z1006	ybhM	hypothetical protein
G2583_1016	ECs0866	Z1007	ybhN	hypothetical protein
G2583_1017	ECs0867	Z1008	ybhO	Putative cardiolipin synthetase ybhO
G2583_1018	ECs0868	Z1009	ybhP	hypothetical protein
G2583_1019	ECs0869	Z1010	ybhQ	Inner membrane protein ybhQ
G2583_1020	ECs0870	Z1012	ybhR	hypothetical protein
G2583_1021	ECs0871	Z1013	ybhS	ABC-2 type transporter, permease protein
G2583_1022	ECs0872	Z1014	ybhF	Putative ATP-binding component of a transport system
G2583_1023	ECs0873	Z1015	ybhG	UPF0194 membrane protein ybhG precursor
G2583_1024	ECs0874	Z1016	ybiH	Hypothetical transcriptional regulator ybiH
G2583_1025	ECs0875	Z1017	rhIE	ATP-dependent RNA helicase RhIE
		Z1018	-	hypothetical protein
G2583_1026	ECs0876	Z1019	sopA	hypothetical protein
G2583_1027	ECs0877	Z1020	dinG	ATP-dependent DNA helicase DinG
G2583_1028	ECs0878	Z1021	ybiB	Glycosyl transferase family protein
G2583_1029	ECs0879	Z1022	ybiC	Uncharacterized oxidoreductase ybiC
G2583_1030	ECs0880	Z1023	ybiJ	hypothetical protein
G2583_1031	ECs0881	Z1024	ybiI	C4-type zinc finger protein, DksA/TraR family
G2583_1032	ECs0882	Z1025	ybiX	Putative enzyme
G2583_1033	ECs0883	Z1026	fiu	Catecholate siderophore receptor fiu precursor
G2583_1034	ECs0884	Z1027	ybiM	hypothetical protein
G2583_1035	ECs0885	Z1028	ybiN	hypothetical protein
G2583_1036	ECs0886	Z1030	ybiO	Transporter, small conductance mechanosensitive ion channel (MscS) family
G2583_1037	ECs0887	Z1031	glnQ	Glutamine ABC transporter, ATP-binding protein
G2583_1038	ECs0888	Z1032	glnP	Glutamine transport system permease protein glnP
G2583_1039	ECs0889	Z1033	glnH	hypothetical protein
G2583_1040	ECs0890	Z1034	dps	Global regulator, starvation conditions
G2583_1041	ECs0891	Z1035	rhtA	Inner membrane transporter rhtA
G2583_1042	ECs0892	Z1036	ompX	Outer membrane protein X precursor
G2583_1043	ECs0893	Z1037	ybiP	Sulfatase family protein
G2583_1044		Z1038	yliL	hypothetical protein

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Locus_tag ^a			Gene	Product
CB9615	Sakai	EDL933		
G2583_1045	ECs0894	Z1039	mntR	manganese transport regulator MntR
G2583_1046	ECs0895	Z1040	ybiR	Citrate transporter family protein
G2583_1047	ECs0896	Z1041	ybiS	hypothetical protein
G2583_1048	ECs0897	Z1042	ybiT	Uncharacterized ABC transporter ATP-binding protein ybiT
G2583_1049	ECs0898	Z1043	ybiU	hypothetical protein
G2583_1050	ECs0899	Z1044	ybiV	Sugar phosphatase SupH
G2583_1051	ECs0900	Z1045	ybiW	Pyruvate-formate lyase
G2583_1051	ECs0901	Z1046	ybiW	Pyruvate-formate lyase
G2583_1052	ECs0902	Z1047	ybiY	Glycyl-radical enzyme activating protein family
G2583_1053	ECs0903	Z1048	fsaA	Fructose-6-phosphate aldolase 1
G2583_1054	ECs0904	Z1049	moeB	Molybdopterin biosynthesis
G2583_1055	ECs0905	Z1050	moeA	Molybdopterin biosynthesis protein MoeA
G2583_1056	ECs0906	Z1051	iaaA	Putative asparaginase
G2583_1056	ECs0907	Z1052	iaaA	Putative asparaginase
G2583_1057	ECs0908	Z1053	gsiA	Glutathione ABC transporter, ATP-binding protein GsiA
G2583_1058	ECs0909	Z1054	gsiB	Glutathione-binding protein gsiB precursor
G2583_1059	ECs0910	Z1055	gsiC	Glutathione transport system permease protein gsiC
G2583_1060	ECs0911	Z1056	gsiD	Glutathione transport system permease protein gsiD
G2583_1061	ECs0912	Z1057	yliE	cyclic diguanylate phosphodiesterase (EAL) domain protein
G2583_1062	ECs0913	Z1058	ylif	Uncharacterized membrane protein yliF
	ECs0914		-	hypothetical membrane protein
G2583_1063		Z1059	-	Helix-turn-helix DNA-binding domain protein
G2583_1064		Z1060	-	hypothetical protein
G2583_1065	ECs0915	Z1061	yliG	UPF0004 protein yliG
G2583_1066	ECs0916	Z1062	bssR	Biofilm regulator bssR
G2583_1067	ECs0917	Z1063	ylil	Glucose / sorbosone dehydrogenase protein
G2583_1068	ECs0918	Z1064	ylj	putative transferase
G2583_1069	ECs0919	Z1066	dacC	Penicillin-binding protein 6
G2583_1070	ECs0920	Z1067	deoR	Deoxyribose operon repressor
G2583_1071	ECs0921	Z1068	ybjG	Undecaprenyl-diphosphatase
G2583_1072	ECs0922	Z1069	cmr	Multidrug translocase MdfA
G2583_1073	ECs0923	Z1070	ybjH	hypothetical protein
G2583_1074	ECs0924	Z1071	ybjl	Cof-like hydrolase
G2583_1075	ECs0925	Z1072	ybjJ	putative DEOR-type transcriptional regulator
G2583_1076	ECs0926	Z1073	ybjK	putative DEOR-type transcriptional regulator
G2583_1077			rybB	ncRNA
G2583_1078	ECs0927	Z1074	ybjL	Putative transport protein ybjL
G2583_1079	ECs0928	Z1075	ybjM	Inner membrane protein ybjM
G2583_1080	ECs0929	Z1076	grxA	Glutaredoxin 1
G2583_1081	ECs0930	Z1077	ybjC	hypothetical protein
G2583_1082	ECs0931	Z1078	nfsA	Oxygen-insensitive NADPH nitroreductase
G2583_1083	ECs0932	Z1079	rimK	Ribosomal protein S6 modification protein

Table S10. The orthologue table of the O55 and O157 strains Page 29

Locus_tag ^a			Gene	Product
CB9615	Sakai	EDL933		
G2583_1084	ECs0933	Z1080	ybjN	Putative sensory transduction regulator
G2583_1085			potF	Putrescine ABC transporter, periplasmic putrescine-binding protein
G2583_1085	ECs0934	Z1081	potF	Putrescine ABC transporter, periplasmic putrescine-binding protein
G2583_1086	ECs0935	Z1082	potG	Putrescine transport ATP-binding protein PotG
G2583_1087	ECs0936	Z1083	potH	Putrescine transport protein
G2583_1088	ECs0937	Z1084	potI	Putrescine ABC transporter, permease protein PotI
G2583_1089	ECs0938	Z1085	ybjO	Inner membrane protein ybjO
G2583_1090	ECs0939	Z1086	rumB	23S rRNA (uracil-5-)-methyltransferase rumB
G2583_1091	ECs0940	Z1087	ulaA	Ascorbate-specific PTS system enzyme IIC
G2583_1092	ECs0941	Z1088	-	hypothetical protein
G2583_1093	ECs0942	Z1089	-	putative sulfatase
G2583_1094	ECs0943	Z1090	artJ	Arginine 3rd transport system periplasmic binding
G2583_1095	ECs0944	Z1091	artM	Arginine transport system permease protein artM
G2583_1096	ECs0945	Z1092	artQ	Arginine ABC transporter, permease protein ArtQ
G2583_1097	ECs0946	Z1093	artI	Arginine ABC transporter, periplasmic arginine-binding protein ArtI
G2583_1098	ECs0947	Z1094	artP	Arginine transport ATP-binding protein ArtP
G2583_1099	ECs0948	Z1095	ybjP	Putative lipoprotein YbjP
G2583_1100		Z1096	-	hypothetical protein
G2583_1101	ECs0949	Z1097	-	hypothetical protein
G2583_1101	ECs0950	Z1098	-	hypothetical protein
G2583_1102	ECs0951		-	hypothetical protein
G2583_1103	ECs0952	Z1099	ybjQ	UPF0145 protein ybjQ
G2583_1104	ECs0953	Z1100	ybjR	N-acetylmuramoyl-L-alanine amidase AmiD
G2583_1105	ECs0954	Z1102	ybjS	NAD dependent epimerase/dehydratase family
G2583_1106	ECs0955	Z1103	ybjT	NAD dependent epimerase/dehydratase family protein
G2583_1107	ECs0956	Z1104	ltaE	Low specificity L-threonine aldolase
G2583_1108	ECs0957	Z1105	poxB	Pyruvate dehydrogenase
G2583_1109	ECs0958	Z1106	hcr	NADH oxidoreductase hcr
G2583_1110	ECs0959	Z1107	hcp	Hydroxylamine reductase
G2583_1111	ECs0960	Z1108	ybjE	Putative surface protein
G2583_1112	ECs0961	Z1109	aqpZ	Aquaporin Z
G2583_1113	ECs0962	Z1110	ybjD	hypothetical protein
G2583_1114	ECs0963	Z1112	ybjX	putative enzyme
G2583_1115	ECs0964	Z1115	macA	macrolide transporter subunit MacA
G2583_1116	ECs0965	Z1116	macB	Macrolide-specific ABC-type efflux carrier protein MacB
G2583_1117	ECs0966	Z1117	cspD	Cold shock proteins
G2583_1118	ECs0967	Z1118	clpS	ATP-dependent Clp protease adapter protein clpS
G2583_1119	ECs0968	Z1119	clpA	ATP-dependent clp protease ATP-binding subunit clpA
Indel-27	Indel-27	Z1120	-	putative P4-family integrase
Indel-27	Indel-27	Z1121	-	hypothetical protein
Indel-27	Indel-27	Z1122	-	hypothetical protein

Table S10. The orthologue table of the O55 and O157 strains Page 30

Locus_tag ^a			Gene	Product
CB9615	Sakai	EDL933		
Indel-27	Indel-27	Z1123	-	unknown in IS1N
Indel-27	Indel-27	Z1124	-	putative prophage regulatory protein
Indel-27	Indel-27	Z1125	-	hypothetical protein
Indel-27	Indel-27	Z1126	-	unknown
Indel-27	Indel-27	Z1127	-	hypothetical protein
Indel-27	Indel-27	Z1128	-	hypothetical protein
Indel-27	Indel-27	Z1129	-	putative helicase
Indel-27	Indel-27	Z1130	-	hypothetical protein
Indel-27	Indel-27	Z1131	-	unknown protein encoded in ISEc8
Indel-27	Indel-27	Z1132	-	unknown protein encoded in ISEc8
Indel-27	Indel-27	Z1133	-	partial putative transposase
Indel-27	Indel-27	Z1134	-	unknown in IS600
Indel-27	Indel-27	Z1135	-	putative complement resistance protein
Indel-27	Indel-27	Z1136	-	hypothetical protein
Indel-27	Indel-27	Z1137	-	hypothetical protein
Indel-27	Indel-27	Z1138	-	hypothetical protein
Indel-27	Indel-27	Z1139	-	putative diacylglycerol kinase
Indel-27	Indel-27	Z1140	-	unknown
Indel-27	Indel-27	Z1141	-	hypothetical protein
Indel-27	Indel-27	Z1142	ureD	putative urease accessory protein D
Indel-27	Indel-27	Z1143	ureA	putative urease structural subunit A (gamma)
Indel-27	Indel-27	Z1144	ureB	putative urease structural subunit B (beta)
Indel-27	Indel-27	Z1145	ureC	putative urease structural subunit C (alpha)
Indel-27	Indel-27	Z1146	ureE	putative urease accessory protein E
Indel-27	Indel-27	Z1147	ureF	putative urease accessory protein F
Indel-27	Indel-27	Z1148	ureG	putative urease accessory protein G
Indel-27	Indel-27	Z1149	-	hypothetical protein
Indel-27	Indel-27	Z1150	-	unknown in IS
Indel-27	Indel-27	Z1151	-	hypothetical protein
Indel-27	Indel-27	Z1152	-	putative ribosomal protein
Indel-27	Indel-27	Z1153	-	hypothetical protein
Indel-27	Indel-27	Z1154	-	hypothetical protein
Indel-27	Indel-27	Z1155	-	hypothetical protein
Indel-27	Indel-27	Z1156	-	hypothetical protein
Indel-27	Indel-27	Z1157	-	hypothetical protein
Indel-27	Indel-27	Z1158	-	unknown in ISEc8
Indel-27	Indel-27	Z1159	-	unknown in ISEc8
Indel-27	Indel-27	Z1160	-	unknown in ISEc8
Indel-27	Indel-27	Z1161	-	unknown in ISEc8
Indel-27	Indel-27	Z1162	-	unknown in ISEc8
Indel-27	Indel-27	Z1163	-	unknown in ISEc8
Indel-27	Indel-27	Z1164	terW	unknown associated with putative tellurite resistance
Indel-27	Indel-27	Z1165	-	hypothetical protein
Indel-27	Indel-27	Z1166	-	hypothetical protein

Table S10. The orthologue table of the O55 and O157 strains Page 31

Locus_tag ^a			Gene	Product
CB9615	Sakai	EDL933		
Indel-27	Indel-27	Z1167	-	hypothetical protein
Indel-27	Indel-27	Z1168	-	hypothetical protein
Indel-27	Indel-27	Z1169	-	hypothetical protein
Indel-27	Indel-27	Z1170	-	hypothetical protein
Indel-27	Indel-27	Z1171	terZ	putative phage inhibition, colicin resistance and tellurite resistance protein
Indel-27	Indel-27	Z1172	terA	putative phage inhibition, colicin resistance and tellurite resistance protein
Indel-27	Indel-27	Z1173	terB	putative phage inhibition, colicin resistance and tellurite resistance protein
Indel-27	Indel-27	Z1174	terC	putative phage inhibition, colicin resistance and tellurite resistance protein
Indel-27	Indel-27	Z1175	terD	putative phage inhibition, colicin resistance and tellurite resistance protein
Indel-27	Indel-27	Z1176	terE	putative phage inhibition, colicin resistance and tellurite resistance protein
Indel-27	Indel-27	Z1177	terF	partial putative phage inhibition, colicin resistance and tellurite resistance protein
Indel-27	Indel-27	Z1178	-	putative receptor
Indel-27	Indel-27	Z1179	-	hypothetical protein
Indel-27	Indel-27	Z1180	-	hypothetical protein
Indel-27	Indel-27	Z1181	-	hypothetical protein
Indel-27	Indel-27	Z1182	-	hypothetical protein
Indel-27	Indel-27	Z1183	-	hypothetical protein
Indel-27	Indel-27	Z1184	-	hypothetical protein
Indel-27	Indel-27	Z1185	-	hypothetical protein
Indel-27	Indel-27	Z1186	-	hypothetical protein
Indel-27	Indel-27	Z1187	-	hypothetical protein
Indel-27	Indel-27	Z1188	-	unknown
Indel-27	Indel-27	Z1189	-	hypothetical protein
Indel-27	Indel-27	Z1190	-	putative glucosyltransferase
Indel-27	Indel-27	Z1191	-	hypothetical protein
Indel-27	Indel-27	Z1192	-	IS1 protein InsB
Indel-27	Indel-27	Z1193	-	hypothetical protein
Indel-27	Indel-27	Z1194	-	hypothetical protein
Indel-27	Indel-27	Z1195	-	hypothetical protein
Indel-27	Indel-27	Z1196	-	hypothetical protein
Indel-27	Indel-27	Z1197	-	hypothetical protein
Indel-27	Indel-27	Z1198	-	putative transposase
Indel-27	Indel-27	Z1199	-	unknown in IS
Indel-27	Indel-27	Z1200	-	hypothetical protein
Indel-27	Indel-27	Z1201	-	hypothetical protein
Indel-27	Indel-27	Z1202	-	hypothetical protein
Indel-27	Indel-27	Z1203	-	unknown

Table S10. The orthologue table of the O55 and O157 strains Page 32

Locus_tag ^a			Gene	Product
CB9615	Sakai	EDL933		
Indel-27	Indel-27	Z1204	-	unknown
Indel-27	Indel-27	Z1205	-	hypothetical protein
Indel-27	Indel-27	Z1206	-	hypothetical protein
Indel-27	Indel-27	Z1207	-	partial transposase
Indel-27	Indel-27	Z1208	-	unknown in putative ISEc8
Indel-27	Indel-27	Z1209	-	hypothetical protein
Indel-27	Indel-27	Z1210	-	putative histone
Indel-27	Indel-27	Z1211	-	putative adhesin
Indel-27	Indel-27	Z1212	-	unknown
Indel-27	Indel-27	Z1213	-	unknown
Indel-27	Indel-27	Z1214	-	hypothetical protein
Indel-27	Indel-27	Z1215	-	unknown
Indel-27	Indel-27	Z1216	-	unknown
Indel-27	Indel-27	Z1217	-	putative DNA repair protein, RADC family
Indel-27	Indel-27	Z1218	-	orf, hypothetical protein
Indel-27	Indel-27	Z1219	-	hypothetical protein
Indel-27	Indel-27	Z1220	-	putative structural protein
Indel-27	Indel-27	Z1221	-	putative transposase
Indel-27	Indel-27	Z1222	-	unknown in IS
Indel-27	Indel-27	Z1223	-	hypothetical protein
Indel-27	Indel-27	Z1225	-	hypothetical protein
Indel-27	Indel-27	Z1226	-	unknown
G2583_1120	serW	RNA025	serW	Ser tRNA
G2583_1121	ECs0969	Z1228	infA	hypothetical protein
G2583_1122	ECs0970	Z1229	aat	Leucyl/phenylalanyl-tRNA--protein transferase
G2583_1123	ECs0971	Z1230	cydC	ABC transporter, CydDC cysteine exporter (CydDC-E) family, permease/ATP-binding protein CydC
G2583_1124	ECs0972	Z1231	cydD	ABC transporter, CydDC cysteine exporter (CydDC-E) family, permease/ATP-binding protein CydD
G2583_1125	ECs0973	Z1232	trxB	Thioredoxin reductase
G2583_1126	ECs0974	Z1234	lrp	Leucine-responsive regulatory protein
G2583_1127	ECs0975	Z1235	ftsK	DNA translocase FtsK
G2583_1128	ECs0976	Z1237	lolA	Outer-membrane lipoprotein carrier protein precursor
G2583_1129	ECs0977	Z1238	rarA	Replication-associated recombination protein A
G2583_1130	ECs0978	Z1239	serS	Seryl-tRNA synthetase
G2583_1131	ECs0979	Z1240	dmsA	Anaerobic dimethyl sulfoxide reductase, A subunit
G2583_1132	ECs0980	Z1241	dmsB	Anaerobic dimethyl sulfoxide reductase chain B
G2583_1133	ECs0981	Z1242	dmsC	Anaerobic dimethyl sulfoxide reductase subunit C
G2583_1134	ECs0982	Z1243	ycaC	Protein ycaC
G2583_1135	ECs0983	Z1244	ycaD	putative MFS family transporter protein
G2583_1136	ECs0984	Z1245	ycaM	Amino acid permease family protein
G2583_1137	ECs0985	Z1246	pflA	Pyruvate formate lyase-activating enzyme 1
G2583_1138	ECs0986	Z1248	pflB	Formate acetyltransferase
G2583_1139	ECs0987	Z1250	focA	FocA formate FNT transporter

Table S10. The orthologue table of the O55 and O157 strains Page 33

Locus_tag ^a			Gene	Product
CB9615	Sakai	EDL933		
G2583_1140	ECs0988	Z1251	ycaO	hypothetical protein
G2583_1141	ECs0989	Z1252	ycaP	hypothetical protein
G2583_1142	ECs0990	Z1253	serC	Phosphoserine aminotransferase
G2583_1143	ECs0991	Z1254	aroA	3-phosphoshikimate 1-carboxyvinyltransferase
G2583_1144	ECs0992	Z1255	ycaL	Peptidase, M48B family
G2583_1145	ECs0993	Z1256	cmk	Cytidylate kinase
G2583_1146	ECs0994	Z1257	rpsA	30S ribosomal protein S1
G2583_1147	ECs0995	Z1258	ihfB	Integration host factor subunit beta
G2583_1148	ECs0996	Z1259	ycaI	DNA internalization-related competence protein ComEC/Rec2
G2583_1149	ECs0997	Z1260	msbA	Lipid A export ATP-binding/permease protein msbA
G2583_1150	ECs0998	Z1261	lpxK	Tetraacyldisaccharide 4'-kinase
G2583_1151	ECs0999	Z1262	ycaQ	hypothetical protein
G2583_1152	ECs1000	Z1263	ycaR	UPF0434 protein ycaR
G2583_1153	ECs1001	Z1264	kdsB	3-deoxy-manno-octulosonate cytidyltransferase
G2583_1154	ECs1002	Z1265	ycbJ	hypothetical protein
G2583_1155	ECs1003	Z1267	ycbC	hypothetical protein
G2583_1156	ECs1004	Z1268	smtA	SmtA protein
G2583_1157	ECs1005	Z1269	mukF	Chromosome partition protein mukF
G2583_1158	ECs1006	Z1270	mukE	MukE
G2583_1159	ECs1007	Z1271	mukB	Uncharacterized protein involved in chromosome partitioning
G2583_1160	ECs1008	Z1272	ycbB	Putative peptidoglycan binding domain
G2583_1161	ECs1009	Z1273	ycbK	hypothetical protein
G2583_1162	ECs1010	Z1274	ycbL	Metallo-beta-lactamase family protein
G2583_1163	ECs1011	Z1275	aspC	Aspartate transaminase
G2583_1164	ECs1012	Z1276	ompF	Outer membrane protein F
G2583_1165	ECs1013	Z1278	asnS	Asparaginylyl-tRNA synthetase
G2583_1166	ECs1014	Z1279	pncB	Nicotinate phosphoribosyltransferase
G2583_1167	ECs1015	Z1280	pepN	Aminopeptidase N
G2583_1168	ECs1016	Z1281	ssuB	ABC transporter, ATP-binding protein
G2583_1169	ECs1017	Z1282	ssuC	Putative sulfonate ABC transporter, permease protein
G2583_1170	ECs1018	Z1283	ssuD	Alkanesulfonate monooxygenase
G2583_1171	ECs1019	Z1284	ssuA	ABC transporter, periplasmic substrate-binding protein, aliphatic sulfonates family
G2583_1172	ECs1020	Z1285	ssuE	NAD(P)H-dependent FMN reductase
G2583_1173	ECs1021	Z1286	ycbQ	Putative fimbrial-like protein
G2583_1174	ECs1022	Z1287	ycbR	Putative chaperone
G2583_1175	ECs1023	Z1288	ycbS	PapC-like porin protein involved in fimbrial biogenesis
G2583_1175	ECs1024	Z1289	ycbS	PapC-like porin protein involved in fimbrial biogenesis
G2583_1176	ECs1025	Z1290	ycbT	Putative fimbrial protein
G2583_1177	ECs1026	Z1291	ycbU	Uncharacterized fimbrial-like protein ycbU precursor
G2583_1178	ECs1027	Z1292	ycbV	Putative fimbrial-like protein
G2583_1179	ECs1028	Z1293	ycbF	hypothetical protein

Table S10. The orthologue table of the O55 and O157 strains Page 34

Locus_tag ^a			Gene	Product
CB9615	Sakai	EDL933		
G2583_1179			ycbF	hypothetical protein
G2583_1180	ECs1029	Z1294	pyrD	Dihydroorotate dehydrogenase
G2583_1181	ECs1030	Z1295	ycbW	hypothetical protein
G2583_1182	ECs1031	Z1297	ycbX	MOSC domain protein
G2583_1183	ECs1032	Z1298	rlmL	Putative RNA methylase family UPF0020
G2583_1184	ECs1033	Z1299	uup	ABC transporter, ATP-binding protein
G2583_1185	ECs1034	Z1300	pqiA	Paraquat-inducible protein A
G2583_1186	ECs1035	Z1301	pqiB	Paraquat-inducible protein B
G2583_1187	ECs1036	Z1302	ymbA	putative lipoprotein
G2583_1188	ECs1037	Z1303	rmf	Ribosome modulation factor
G2583_1189	ECs1038	Z1304	fabA	3-hydroxydecanoyl-ACP dehydratase
G2583_1190	ECs1039	Z1305	ycbZ	Peptidase, S16 (Lon protease) family
G2583_1191	ECs1040	Z1306	ycbG	UPF0268 protein ycbG
G2583_1192	ECs1041	Z1307	ompA	OmpA domain protein transmembrane region-containing protein precursor
G2583_1193	ECs1042	Z1308	sulA	Suppressor of lon
G2583_1194	ECs1043	Z1309	sxy	conserved protein
G2583_1195	ECs1044	Z1311	yccS	hypothetical protein
G2583_1196	ECs1045	Z1312	yccF	hypothetical protein
G2583_1197	ECs1046	Z1313	helD	DNA helicase IV
G2583_1198	ECs1047	Z1314	mgsA	Methylglyoxal synthase
G2583_1199	ECs1048	Z1315	yccT	UPF0319 protein yccT precursor
G2583_1200	ECs1049	Z1317	yccU	hypothetical protein
G2583_1201	ECs1050	Z1318	hspQ	Heat shock protein hspQ
G2583_1202	ECs1051	Z1319	yccW	putative oxidoreductase
G2583_1203	ECs1052	Z1320	yccX	Acylphosphatase
G2583_1204	ECs1053	Z1321	yccK	Sulfurtransferase tusE
G2583_1205	ECs1054	Z1322	yccA	Inner membrane protein yccA
Indel-28	ECs1055	Z1323	-	putative integrase
Indel-28	ECs1056		-	hypothetical protein
Indel-28	ECs1057	Z1324	-	hypothetical protein
Indel-28	ECs1058	Z1325	-	hypothetical protein
Indel-28	ECs1059	Z1326	-	putative division inhibition protein
Indel-28	dicF1	RNA026	dicF1	DicF antisense RNA
Indel-28	ECs1060		-	hypothetical protein
Indel-28	ECs1061	Z1328	-	hypothetical protein
Indel-28	ECs1062		-	hypothetical protein
Indel-28	ECs1063	Z1329	-	hypothetical protein
Indel-28	ECs1064	Z1330	-	hypothetical protein
Indel-28	ECs1065	Z1331	-	hypothetical protein
Indel-28	ECs1066		-	hypothetical protein
Indel-28	ECs1067		-	hypothetical protein
Indel-28	ECs1068	Z1332	-	hypothetical protein
Indel-28	ECs1069	Z1333	-	putative regulatory protein

Table S10. The orthologue table of the O55 and O157 strains Page 35

Locus_tag ^a			Gene	Product
CB9615	Sakai	EDL933		
Indel-28	ECs1070	Z1334	-	hypothetical protein
Indel-28	ECs1071	Z1335	-	hypothetical protein
Indel-28		Z1336	-	unknown protein encoded by cryptic prophage CP-
Indel-28	ECs1072		-	hypothetical protein
Indel-28	ECs1073	Z1337	-	hypothetical protein
Indel-28	ECs1074	Z1338	-	putative DNA replication protein
Indel-28	ECs1075	Z1339	-	hypothetical protein
Indel-28	ECs1076	Z1340	-	hypothetical protein
Indel-28	ECs1077	Z1341	-	hypothetical protein
Indel-28	ECs1078		-	hypothetical protein
Indel-28	ECs1079		-	hypothetical protein
Indel-28	ECs1080	Z1342	-	prophage maintenance protein
Indel-28	ECs1081		-	hypothetical protein
Indel-28	ECs1082	Z1343	-	hypothetical protein
Indel-28	ECs1083	Z1344	-	putative crossover junction endodeoxyribonuclease
Indel-29	ECs1084	Indel-29	-	putative antitermination protein
Indel-29	ECs1085	Indel-29	-	hypothetical membrane protein
Indel-29	ECs1086	Indel-29	-	hypothetical protein
Indel-29	ECs1087	Indel-29	-	putative transcriptional regulator
Indel-29	ileZ1	Indel-29	ileZ1	Ile tRNA
Indel-29	argN1	Indel-29	argN1	Arg tRNA
Indel-29	argO1	Indel-29	argO1	Arg tRNA
Indel-29	ECs1088	Indel-29	-	hypothetical protein
Indel-29	ECs1089	Indel-29	-	putative transposase OrfA protein of insertion sequence IS629
Indel-29	ECs1090	Indel-29	-	putative transposase OrfB protein of insertion sequence IS629
Indel-29	ECs1091	Indel-29	-	putative transcriptional regulator
Indel-29	ECs1093	Indel-29	-	putative endopeptidase
Indel-29	ECs1092	Indel-29	-	putative lipoprotein Rz1 protein precursor
Indel-29	ECs1094	Indel-29	-	hypothetical protein
Indel-29	ECs1095	Indel-29	-	hypothetical protein
Indel-29	ECs1096	Indel-29	-	putative endolysin
Indel-29	ECs1098	Indel-29	-	hypothetical protein
Indel-29	ECs1097	Indel-29	-	hypothetical protein
Indel-29	ECs1099	Indel-29	-	hypothetical protein
Indel-29	ECs1100	Indel-29	-	putative holin protein
Indel-29	ECs1101	Indel-29	-	hypothetical protein
Indel-29	ECs1102	Indel-29	-	hypothetical protein
Indel-29	ECs1103	Indel-29	-	hypothetical protein
Indel-29	ECs1104	Indel-29	-	hypothetical protein
Indel-29	ECs1105	Indel-29	-	putative terminase small subunit
Indel-29	ECs1106	Indel-29	-	putative terminase large subunit
Indel-29	ECs1107	Indel-29	-	putative portal protein

Table S10. The orthologue table of the O55 and O157 strains Page 36

Locus_tag ^a			Gene	Product
CB9615	Sakai	EDL933		
Indel-29	ECs1108	Indel-29	-	putative head-tail preconnector protein
Indel-29	ECs1109	Indel-29	-	putative head decoration protein
Indel-29	ECs1110	Indel-29	-	putative major head protein
Indel-29	ECs1111	Indel-29	-	hypothetical protein
Indel-29	ECs1112	Indel-29	-	putative minor tail protein
Indel-29	ECs1113	Indel-29	-	putative minor tail protein
Indel-29	ECs1114	Indel-29	-	putative tail length tape measure protein
Indel-29	ECs1115	Indel-29	-	putative minor tail protein
Indel-29	ECs1116	Indel-29	-	putative minor tail protein
Indel-29	ECs1117	Indel-29	-	putative tail assembly protein
Indel-29	ECs1118	Indel-29	-	putative tail assembly protein
Indel-29	ECs1119	Indel-29	-	hypothetical protein
Indel-29	ECs1120	Indel-29	-	putative copper/zinc-superoxide dismutase
Indel-29	ECs1121	Indel-29	-	putative host specificity protein
Indel-29	ECs1122	Indel-29	-	putative outer membrane protein
Indel-29	ECs1123	Indel-29	-	putative tail fiber protein
Indel-29	ECs1124	Indel-29	-	hypothetical protein
Indel-31	ECs1125		-	hypothetical protein
Indel-29	ECs1126	Indel-29	-	EspF-like protein
Indel-30	Indel-30	Z1345	-	antitermination protein Q homolog of cryptic prophage CP-933M
Indel-30	Indel-30	Z1346	-	unknown protein encoded by cryptic prophage CP-
Indel-30	Indel-30	Z1347	-	unknown protein encoded by cryptic prophage CP-
Indel-30	Indel-30	Z1348	-	unknown protein encoded by cryptic prophage CP-
Indel-30	Indel-30	Z1349	-	conserved hypothetical protein similar to yjH for cryptic prophage CP-933M
Indel-30	Indel-30	Z1350	-	putative holin protein of cryptic prophage CP-933M
Indel-30	Indel-30	Z1351	-	unknown protein encoded by cryptic prophage CP-
Indel-30	Indel-30	Z1352	-	putative endolysin of cryptic prophage CP-933M
Indel-30	Indel-30	Z1353	-	putative antirepressor protein of cryptic prophage CP-933M
Indel-30	Indel-30	Z1354	-	putative endopeptidase of cryptic prophage CP-933M
Indel-30	Indel-30	Z1355	-	unknown protein encoded by cryptic prophage CP-
Indel-30	Indel-30	Z1356	-	unknown protein encoded by cryptic prophage CP-
Indel-30	Indel-30	Z1357	-	unknown protein encoded by cryptic prophage CP-
Indel-30	Indel-30	Z1358	-	unknown protein encoded by cryptic prophage CP-
Indel-30	Indel-30	Z1359	-	unknown protein encoded by cryptic prophage CP-
Indel-30	Indel-30	Z1360	-	unknown protein encoded by cryptic prophage CP-
Indel-30	Indel-30	Z1361	-	unknown protein encoded by cryptic prophage CP-
Indel-30	Indel-30	Z1362	-	unknown protein encoded by cryptic prophage CP-
Indel-30	Indel-30	Z1363	-	unknown protein encoded by cryptic prophage CP-
Indel-30	Indel-30	Z1364	-	unknown protein encoded by cryptic prophage CP-
Indel-30	Indel-30	Z1365	-	unknown protein encoded by cryptic prophage CP-
Indel-30	Indel-30	Z1366	-	unknown protein encoded by cryptic prophage CP-

Table S10. The orthologue table of the O55 and O157 strains Page 37

Locus_tag ^a			Gene	Product
CB9615	Sakai	EDL933		
Indel-30	Indel-30	Z1367	-	unknown protein encoded by cryptic prophage CP-
Indel-30	Indel-30	Z1368	-	unknown protein encoded by cryptic prophage CP-
Indel-30	Indel-30	Z1369	-	unknown protein encoded by cryptic prophage CP-
Indel-30	Indel-30	Z1370	-	putative tail component encoded by cryptic prophage CP-933M
Indel-30	Indel-30	Z1371	-	putative tail assembly chaperone encoded by cryptic prophage CP-933M
Indel-30	Indel-30	Z1372	-	unknown protein encoded by cryptic prophage CP-
Indel-30	Indel-30	Z1373	-	unknown protein encoded by cryptic prophage CP-
Indel-30	Indel-30	Z1374	-	unknown protein encoded by cryptic prophage CP-
Indel-30	Indel-30	Z1375	-	putative tail component encoded by cryptic prophage CP-933M; partial
Indel-30	Indel-30	Z1376	-	putative tail component encoded by cryptic prophage CP-933M; partial
Indel-30	Indel-30	Z1377	-	putative tail component encoded by cryptic prophage CP-933M
Indel-30	Indel-30	Z1378	-	putative tail component encoded by cryptic prophage CP-933M; partial
Indel-30	Indel-30	Z1379	-	putative tail component encoded by cryptic prophage CP-933M; partial
Indel-30	Indel-30	Z1380	-	putative tail component encoded by cryptic prophage CP-933M; partial
Indel-30	Indel-30	Z1381	-	putative outer membrane protein Lom precursor encoded by cryptic prophage CP-933M
Indel-30	Indel-30	Z1382	-	putative tail component encoded by cryptic prophage CP-933M; partial
Indel-30	Indel-30	Z1383	-	unknown protein encoded by cryptic prophage CP-
Indel-31	Indel-31	Z1386	-	unknown protein encoded by cryptic prophage CP-
Indel-31	ECs1127	Z1387	-	hypothetical protein
G2583_1206	serT	RNA027	serT	Ser tRNA
G2583_1207	ECs1128	Z1389	hyaA	Nickel-dependent hydrogenase 1, small subunit
G2583_1208	ECs1129	Z1390	hyaB	Hydrogenase-1 large subunit
G2583_1209	ECs1130	Z1391	hyaC	Probable Ni/Fe-hydrogenase 1 B-type cytochrome
G2583_1210	ECs1131	Z1392	hyaD	hydrogenase 1 maturation protease
G2583_1211	ECs1132	Z1393	hyaE	Hydrogenase-1 expression protein HyaE
G2583_1212	ECs1133	Z1394	hyaF	Hydrogenase-1 operon protein HyaF
G2583_1213	ECs1134	Z1395	appC	Cytochrome bd-II oxidase, subunit I
G2583_1214	ECs1135	Z1396	appB	Cytochrome bd-II oxidase, subunit II
G2583_1215	ECs1136	Z1397	appA	Phosphoanhydride phosphorylase
G2583_1216	ECs1137	Z1398	etk	Tyrosine-protein kinase etk
G2583_1217	ECs1138	Z1399	etp	Putative phosphatase
G2583_1218	ECs1139	Z1400	gfcE	Putative polysaccharide export protein gfcE precursor
G2583_1219	ECs1140	Z1401	gfcD	Group 4 capsule (G4C) polysaccharide, lipoprotein
G2583_1220	ECs1141	Z1402	gfcC	Group 4 capsule (G4C) polysaccharide, YmcB

Table S10. The orthologue table of the O55 and O157 strains Page 38

Locus_tag ^a			Gene	Product
CB9615	Sakai	EDL933		
G2583_1221	ECs1142	Z1403	gfcB	Group 4 capsule (G4C) polysaccharide, lipoprotein
G2583_1222	ECs1143	Z1404	ymcD	putative inner membrane protein
G2583_1223	ECs1144	Z1405	cspH	Cold shock-like protein cspH
G2583_1224	ECs1145	Z1406	cspG	Cold shock-like protein cspG
G2583_1225	ECs1146	Z1408	ymcE	cold shock gene
G2583_1226	ECs1147	Z1409	yccM	4Fe-4S binding domain protein
G2583_1227	ECs1148	Z1410	torS	hybrid sensory histidine kinase TorS
G2583_1228	ECs1149	Z1411	torT	Periplasmic protein torT precursor
G2583_1229	ECs1150	Z1412	torR	TorCAD operon transcriptional regulatory protein torR
G2583_1230	ECs1151	Z1414	torC	Cytochrome c-type protein TorC
G2583_1231	ECs1152	Z1415	torA	Trimethylamine-N-oxide reductase 1 precursor
G2583_1232	ECs1153	Z1416	torD	Chaperone protein torD
G2583_1233	ECs1154	Z1417	cbpM	Chaperone modulatory protein cbpM
G2583_1234	ECs1155	Z1418	cbpA	Curved DNA-binding protein
G2583_1235	ECs1156	Z1419	yccE	conserved hypothetical protein
G2583_1235	ECs1157	Z1420	yccE	conserved hypothetical protein
G2583_1236	ECs1158	Z1421	agp	Glucose-1-phosphatase
G2583_1237	ECs1159	Z1422	yccJ	hypothetical protein
G2583_1238	ECsp005	Z1423	wrbA	Flavoprotein wrbA
Indel-33	ECs1160	Z1424	intW	putative integrase
Indel-33	ECs1161	Z1425	xisW	putative excisionase
Indel-33	ECs1162	Z1426	-	hypothetical protein
Indel-33	ECs1163	Z1428	-	hypothetical protein
Indel-33	ECs1164	Z1429	-	hypothetical protein
Indel-33	ECs1165	Z1430	-	hypothetical protein
Indel-33	ECs1166		-	hypothetical protein
Indel-33		Z1431	-	unknown protein encoded by bacteriophage BP-933W
Indel-33	ECs1167		-	hypothetical protein
Indel-33	ECs1168		-	hypothetical protein
Indel-33	ECs1169	Z1432	-	hypothetical protein
Indel-33	ECs1170		-	C4-type zinc finger protein (TraR family)
Indel-33	ECs1171	Z1433	-	hypothetical protein
Indel-33	ECs1172	Z1434	-	hypothetical protein
Indel-33	ECs1173		-	hypothetical protein
Indel-33	ECs1174	Z1435	exoW	exonuclease
Indel-33	ECs1175	Z1437	betW	recombination protein Bet
Indel-33	ECs1176	Z1438	gamW	host-nuclease inhibitor protein Gam
Indel-33	ECs1177	Z1439	kilW	Kil protein
Indel-33	ECs1178		-	regulatory protein cIII
Indel-33	ECs1179	Z1440	ssbW	single strand binding protein Ea10
Indel-34	ECs1180	Indel-34	-	hypothetical protein
Indel-34	ECs1181	Indel-34	-	putative anti-termination protein N
Indel-34	ECs1182	Indel-34	-	hypothetical protein
Indel-34	ECs1183	Indel-34	-	hypothetical protein

Table S10. The orthologue table of the O55 and O157 strains Page 39

Locus_tag ^a			Gene	Product
CB9615	Sakai	EDL933		
Indel-34	ECs1184	Indel-34	-	hypothetical protein
Indel-34	ECs1185	Indel-34	-	putative cl repressor protein
Indel-34	ECs1186	Indel-34	-	putative regulatory protein
Indel-34	ECs1187	Indel-34	-	regulatory protein CII
Indel-34	ECs1188	Indel-34	-	hypothetical protein
Indel-34	ECs1189	Indel-34	-	replication protein O
Indel-34	ECs1190	Indel-34	-	replication protein P
Indel-34	ECs1191	Indel-34	-	hypothetical protein
Indel-34	ECs1192	Indel-34	-	hypothetical protein
Indel-34	ECs1193	Indel-34	-	hypothetical protein
Indel-34	ECs1194	Indel-34	-	hypothetical protein
Indel-34	ECs1195	Indel-34	-	hypothetical protein
Indel-34	ECs1196	Indel-34	-	putative DNA methylase
Indel-34	ECs1197	Indel-34	-	NinE protein
Indel-34	ECs1198	Indel-34	-	hypothetical protein
Indel-34	ECs1199	Indel-34	-	putative antirepressor protein
Indel-35	Indel-35	Z1441	-	unknown protein encoded by bacteriophage BP-933W
Indel-35	Indel-35	Z1442	-	putative antitermination protein N of bacteriophage BP-933W
Indel-35	Indel-35	Z1443	-	unknown protein encoded by bacteriophage BP-933W
Indel-35	Indel-35	Z1444	-	putative serine/threonine kinase encoded by bacteriophage BP-933W
Indel-35	Indel-35	Z1445	-	unknown protein encoded by bacteriophage BP-933W
Indel-35	Indel-35	Z1446	-	unknown protein encoded by bacteriophage BP-933W
Indel-35	Indel-35	Z1447	-	putative repressor protein CI of bacteriophage BP-933W
Indel-35	Indel-35	Z1448	-	regulatory protein Cro of bacteriophage BP-933W
Indel-35	Indel-35	Z1449	-	putative regulatory protein CII of bacteriophage BP-
Indel-35	Indel-35	Z1450	-	putative replication protein O of bacteriophage BP-
Indel-35	Indel-35	Z1451	-	putative replication protein P of bacteriophage BP-933W
Indel-35	Indel-35	Z1452	-	unknown protein encoded by bacteriophage BP-933W
Indel-35	Indel-35	Z1453	-	unknown protein encoded by bacteriophage BP-933W
Indel-35	Indel-35	Z1454	-	putative DNA N-6-adenine-methyltransferase of bacteriophage BP-933W
Indel-35	Indel-35	Z1456	-	unknown protein encoded by bacteriophage BP-933W
Indel-36	ECs1200	Z1457	-	DNA-binding protein
Indel-36	ECs1201	Z1458	-	hypothetical protein NinG
Indel-36	ECs1202		-	hypothetical protein
Indel-36	ECs1203	Z1459	-	antitermination protein Q
Indel-36	ECs1204	Z1460	-	hypothetical protein
Indel-36	ileZ2	RNA028	ileZ2	Ile tRNA
Indel-36	argN2	RNA029	argN2	Arg tRNA
Indel-36	argO2	RNA030	argO2	Arg tRNA
Indel-36	ECs1205	Z1464	stx2A	Shiga toxin 2 subunit A
Indel-36	ECs1206	Z1465	stx2B	Shiga toxin 2 subunit B

Table S10. The orthologue table of the O55 and O157 strains Page 40

Locus_tag ^a			Gene	Product
CB9615	Sakai	EDL933		
Indel-36	ECs1207	Z1466	-	hypothetical protein
Indel-37	ECs1208	Indel-37	-	putative transposase OrfB protein of insertion sequence IS629
Indel-37	ECs1209	Indel-37	-	putative transposase OrfA protein of insertion sequence IS629
Indel-38	ECsp006	Z1466	-	unknown protein encoded by bacteriophage BP-933W
Indel-38	ECs1210		-	hypothetical protein
Indel-38	ECs1211	Z1467	-	hypothetical protein
Indel-38	ECs1212	Z1468	-	putative holin protein
Indel-38	ECs1213	Z1469	-	putative endolysin
Indel-38	ECs1214	Z1471	-	putative antirepressor protein
Indel-38	ECs1215	Z1473	-	putative endopeptidase
Indel-38	ECs1216		-	putative lipoprotein Rz1 precursor
Indel-38	ECs1217	Z1474	borW	Bor protein precursor
Indel-38	ECs1218		-	hypothetical protein
Indel-38	ECs1219	Z1475	-	putative small subunit terminase
Indel-38	ECs1220	Z1476	-	putative terminase large subunit
Indel-38	ECs1221	Z1477	-	putative portal protein
Indel-38	ECs1222	Z1478	-	hypothetical protein
Indel-38	ECs1223	Z1479	-	hypothetical protein
Indel-38	ECs1224	Z1480	-	hypothetical protein
Indel-38	ECs1225	Z1481	-	hypothetical protein
Indel-38	ECs1226		-	hypothetical protein
Indel-38	ECs1227	Z1482	-	hypothetical protein
Indel-38	ECs1228	Z1483	-	putative tail fiber protein
Indel-38	ECs1229	Z1484	-	hypothetical protein
Indel-38	ECs1230	Z1485	-	hypothetical protein
Indel-38	ECs1231		-	putative outer membrane protein
Indel-38	ECs1232	Z1486	-	hypothetical protein
Indel-38	ECs1233	Z1487	-	putative tail tip fiber protein
Indel-38	ECs1234		-	putative outer membrane protein
Indel-38	ECs1235	Z1488	-	hypothetical protein
Indel-38	ECs1236	Z1489	lomW	putative outer membrane precursor
Indel-38	ECs1237	Z1490	-	hypothetical protein
Indel-38	ECs1238	Z1491	-	hypothetical protein
Indel-38	ECs1239	Z1492	-	hypothetical protein
Indel-38	ECs1240	Z1493	-	hypothetical protein
Indel-38	ECs1241	Z1494	-	hypothetical protein
Indel-38	ECs1242	Z1495	-	hypothetical protein
Indel-38	ECs1243		-	hypothetical protein
Indel-38	ECs1244	Z1498	-	hypothetical protein
Indel-38	ECs1245		-	MokW protein
Indel-38	ECs1246	Z1500	-	hypothetical protein
Indel-38	ECs1247	Z1501	-	hypothetical protein

Table S10. The orthologue table of the O55 and O157 strains Page 41

Locus_tag ^a			Gene	Product
CB9615	Sakai	EDL933		
Indel-38	ECs1248	Z1501	-	hypothetical protein
Indel-38	ECs1249		-	hypothetical protein
Indel-39	ECs1250	Indel-39	-	C4-type zinc finger protein (TraR family)
Indel-40	ECs1251	Z1503	-	putative anti-repressor protein
G2583_1238		Z1504	wrbA	Flavoprotein wrbA
G2583_1239	ECs1252	Z1505	rutG	Putative purine permease ycdG
G2583_1240	ECs1253	Z1506	rutF	Flavin reductase domain protein FMN-binding
G2583_1241	ECs1254	Z1507	rutE	Putative NADH dehydrogenase/NAD(P)H nitroreductase rutE
G2583_1242	ECs1255	Z1508	rutD	putative acetyltransferase
G2583_1243	ECs1256	Z1509	rutC	hypothetical protein
G2583_1244	ECs1257	Z1510	rutB	Putative synthetase
G2583_1245	ECs1258	Z1511	rutA	Putative monooxygenase rutA
G2583_1246	ECs1259	Z1512	rutR	putative tet operon regulator
G2583_1247	ECs1260	Z1513	putA	Bifunctional protein PutA
G2583_1248	ECs1261	Z1515	putP	Sodium/proline symporter
G2583_1249	ECs1262	Z1516	-	hypothetical protein
G2583_1250		Z1517	-	hypothetical protein
G2583_1251		Z1518	-	hypothetical protein
G2583_1252	ECs1263	Z1519	ycdN	Ferrous iron permease efeU
G2583_1253	ECs1264	Z1520	ycdO	UPF0409 protein ycdO precursor
G2583_1254	ECs1265	Z1521	ycdB	Tat-translocated enzyme
G2583_1255	ECs1266	Z1522	phoH	hypothetical protein
G2583_1256	ECs1267	Z1523	pgaD	Biofilm PGA synthesis protein pgaD
G2583_1257	ECs1268	Z1524	pgaC	Biofilm PGA synthesis N-glycosyltransferase pgaC
G2583_1258	ECs1269	Z1525	pgaB	Biofilm PGA synthesis lipoprotein pgaB
G2583_1259	ECs1270	Z1526	pgaA	Biofilm PGA synthesis protein pgaA precursor
G2583_1260	ECs1271	Z1527	ycdT	diguanylate cyclase (GGDEF) domain protein
G2583_1261	ECs1272	Z1528	rtn	Rtn-like protein
G2583_1262	ECs1273	Z1530	fidL	hypothetical protein
G2583_1263	ECs1274	Z1531	marT	hypothetical protein
		Z1532	-	hypothetical protein
G2583_1264	ECs1275	Z1533	ygcW	2-deoxy-D-gluconate 3-dehydrogenase
G2583_1265	ECs1276	Z1534	-	Putative chaperone protein
G2583_1266	ECs1277	Z1535	mrkD	hypothetical protein
G2583_1267	ECs1278	Z1536	mrkC	Putative outer membrane usher protein
G2583_1268	ECs1279	Z1537	-	Gram-negative pili assembly chaperone
G2583_1269	ECs1280	Z1538	mrkA	Fimbrial protein
G2583_1270	ECs1281	Z1539	-	hypothetical protein
G2583_1271		Z1540	-	hypothetical protein
G2583_1272		Z1541	-	hypothetical protein
G2583_1273	ECs1282	Z1542	-	Hemagglutinin/hemolysin-related protein
G2583_1274	ECs1283	Z1543	-	Putative outer membrane transporter of ShIA/HecA/FhaA exoprotein family

Table S10. The orthologue table of the O55 and O157 strains Page 42

Locus_tag ^a			Gene	Product
CB9615	Sakai	EDL933		
G2583_1275	ECs1284	Z1544	-	Probable holo-[acyl-carrier-protein] synthase 2
G2583_1276	ECs1285	Z1545	fabG	NAD dependent epimerase/dehydratase family
G2583_1277	ECs1286	Z1546	cylZ	Putative fatty acyl chain dehydrase
G2583_1278	ECs1287	Z1547	-	Putative acyl-carrier protein
G2583_1279	ECs1288	Z1548	gcvT	Putative aminomethyltransferase
G2583_1280	ECs1289	Z1549	fabF	Putative beta-ketoacyl-[acyl carrier protein] synthase
G2583_1281	ECs1290	Z1550	olmA	Beta-ketoacyl synthase, C-domain protein
G2583_1282	ECs1291	Z1551	-	hypothetical protein
G2583_1283	ECs1292	Z1552	-	Lipoprotein-releasing system ATP-binding protein LpID
G2583_1284	ECs1293	Z1553	-	hypothetical protein
G2583_1285	ECs1294	Z1554	-	hypothetical protein
G2583_1286	ECs1295	Z1555	-	hypothetical protein
G2583_1287	ECs1296	Z1556	-	hypothetical protein
G2583_1288	ECs1297	Z1557	-	Malonyl CoA-acyl carrier protein transacylase
G2583_1289	ECs1298	Z1558	ycdU	hypothetical protein
Indel-45	ECs1299	Z1559	-	putative integrase
Indel-45	ECs1300	Z1560	-	putative membrane protein
Indel-45	ECsp007	Z1561	-	hypothetical protein
Indel-45	ECs1301	Z1562	-	transposase
Indel-45	ECs1302	Z1563	-	putative regulatory protein
Indel-45		Z1564	-	hypothetical protein
Indel-45	ECs1303	Z1565	-	hypothetical protein
Indel-45		Z1566	-	hypothetical protein
Indel-45	ECs1304	Z1567	-	hypothetical protein
Indel-45	ECs1305	Z1568	-	hypothetical protein
Indel-45		Z1569	-	hypothetical protein
Indel-45	ECs1306		-	hypothetical protein
Indel-45	ECsp008		-	IS30 transposase
Indel-45	ECs1307	Z1570	-	hypothetical protein
Indel-45	ECs1308	Z1571	-	hypothetical protein
Indel-45	ECs1309		-	hypothetical protein
Indel-45	ECs1310	Z1572	-	IS30 transposase
Indel-45	ECs1311	Z1573	-	putative transposase
Indel-45	ECs1312	Z1574	-	putative complement resistance protein precursor
Indel-45	ECs1313	Z1575	-	hypothetical protein
Indel-45	ECs1314	Z1576	-	hypothetical protein
Indel-45	ECs1315		-	hypothetical protein
Indel-45		Z1577	-	hypothetical protein
Indel-45	ECs1316	Z1578	-	putative diacylglycerol kinase
Indel-45	ECs1317	Z1579	-	putative outer membrane protein
Indel-45	ECs1318		-	hypothetical protein
Indel-45	ECs1319	Z1580	-	hypothetical protein
Indel-45	ECs1320		-	hypothetical protein
Indel-45	ECs1321	Z1581	ureD_2	urease-associated protein UreD

Table S10. The orthologue table of the O55 and O157 strains Page 43

Locus_tag ^a			Gene	Product
CB9615	Sakai	EDL933		
Indel-45	ECs1322	Z1582	ureA_2	urease gamma subunit
Indel-45	ECs1323	Z1583	ureB_2	urease beta subunit
Indel-45	ECs1324	Z1584	ureC_2	urease alpha subunit
Indel-45	ECs1325	Z1585	ureE_2	urease accessory protein UreE
Indel-45	ECs1326	Z1586	ureF_2	urease accessory protein UreF
Indel-45	ECs1327	Z1587	ureG_2	urease accessory protein UreG
Indel-45	ECsp009		-	autosecreted serine protease
Indel-45		Z1588	-	hypothetical protein
Indel-45	ECs1328	Z1589	-	hypothetical protein
Indel-45	ECs1329		-	hypothetical protein
Indel-45		Z1590	-	hypothetical protein
Indel-45	ECs1330	Z1591	-	ribosomal protein L31-like protein
Indel-45		Z1592	-	hypothetical protein
Indel-45	ECs1331		-	hypothetical protein
Indel-45		Z1593	-	hypothetical protein
Indel-45	ECs1332		-	putative colicin immunity protein
Indel-45	ECs1333	Z1594	-	putative membrane protein
Indel-45	ECs1334		-	hypothetical protein
Indel-45		Z1595	-	hypothetical protein
Indel-45		Z1596	-	hypothetical protein
Indel-45	ECs1335		-	hypothetical protein
Indel-45	ECs1336	Z1597	-	hypothetical protein
Indel-45	ECs1337	Z1598	-	hypothetical protein
Indel-45	ECs1338	Z1599	-	hypothetical protein
Indel-45	ECs1339	Z1600	-	hypothetical protein
Indel-45	ECs1340	Z1601	-	hypothetical protein
Indel-45	ECs1341	Z1602	-	hypothetical protein
Indel-45	ECs1342		-	hypothetical protein
Indel-45	ECs1343	Z1603	terW_2	TerW protein
Indel-45	ECs1344	Z1604	-	hypothetical protein
Indel-45	ECs1345	Z1605	-	hypothetical protein
Indel-45	ECs1346	Z1606	-	hypothetical protein
Indel-45	ECs1347	Z1606	-	hypothetical protein
Indel-45	ECs1348	Z1607	-	hypothetical protein
Indel-45	ECs1349	Z1608	-	hypothetical protein
Indel-45	ECs1350	Z1609	-	hypothetical protein
Indel-45	ECs1351	Z1610	terZ_2	putative tellurium resistance protein TerZ
Indel-45	ECs1352	Z1611	terA_2	putative tellurium resistance protein TerA
Indel-45	ECs1353	Z1612	terB_2	putative tellurium resistance protein TerB
Indel-45	ECs1354	Z1613	terC_2	putative tellurium resistance protein TerC
Indel-45	ECs1355	Z1614	terD_2	putative tellurium resistance protein TerD
Indel-45	ECs1356	Z1615	terE_2	putative tellurium resistance TerE
Indel-45	ECs1357		-	hypothetical protein
Indel-45	ECs1358	Z1616	terF_2	putative tellurium resistance protein TerF

Table S10. The orthologue table of the O55 and O157 strains Page 44

Locus_tag ^a			Gene	Product
CB9615	Sakai	EDL933		
Indel-45	ECs1359		-	hypothetical protein
Indel-45	ECs1360	Z1617	-	lha adhesin
Indel-45		Z1618	-	hypothetical protein
Indel-45		Z1619	-	hypothetical protein
Indel-45	ECs1361		-	hypothetical protein
Indel-45	ECsp010		-	ShiA
Indel-45	ECs1362	Z1620	-	hypothetical protein
Indel-45		Z1621	-	hypothetical protein
Indel-45	ECsp011	Z1622	-	hypothetical protein
Indel-45	ECsp012	Z1622	-	hypothetical protein
Indel-45	ECs1363		-	hypothetical protein
Indel-45	ECsp013		-	transposase OrfB
Indel-45		Z1623	-	hypothetical protein
Indel-45	ECs1364	Z1624	-	hypothetical protein
Indel-45	ECs1365		-	hypothetical protein
Indel-45	ECs1366	Z1625	-	hypothetical protein
Indel-45	ECs1367	Z1626	-	hypothetical protein
Indel-45	ECs1368		-	hypothetical protein
Indel-45		Z1627	-	hypothetical protein
Indel-45	ECs1369		-	hypothetical protein
Indel-45		Z1628	-	hypothetical protein
Indel-45	ECs1370	Z1629	-	putative glucosyl-transferase
Indel-45	ECs1370	Z1630	-	putative glucosyl-transferase
Indel-45	ECs1371	Z1631	-	ferric enterochelin esterase
Indel-45	ECs1372	Z1632	-	transposase
Indel-45	ECs1373		-	InsA protein of insertion sequence IS1
Indel-45	ECs1374	Z1633	-	putative membrane protein
Indel-45	ECs1375		-	hypothetical protein
Indel-45	ECs1376	Z1634	-	hypothetical protein
Indel-45	ECs1377	Z1635	-	hypothetical protein
Indel-45	ECs1378	Z1636	-	hypothetical protein
Indel-45	ECs1379		-	hypothetical protein
Indel-45		Z1637	-	hypothetical protein
Indel-45	ECs1380	Z1638	-	putative transposase OrfB protein of insertion sequence IS629
Indel-45	ECs1381	Z1639	-	putative transposase OrfA protein of insertion sequence IS629
Indel-45	ECs1382	Z1640	-	HecB-like protein
Indel-45	ECs1383	Z1641	-	hypothetical protein
Indel-45	ECs1384	Z1642	-	hypothetical protein
Indel-45	ECs1385		-	hypothetical protein
Indel-45	ECs1386	Z1643	-	hypothetical protein
Indel-45	ECs1387	Z1644	-	hypothetical protein
Indel-45	ECs1388		-	putative transcriptional regulator

Table S10. The orthologue table of the O55 and O157 strains Page 45

Locus_tag ^a			Gene	Product
CB9615	Sakai	EDL933		
Indel-45	ECs1389	Z1645	-	hypothetical protein
Indel-45	ECs1390	Z1646	-	hypothetical protein
Indel-45	ECs1391		-	BfpM-like protein
Indel-45		Z1647	-	partial transposase
Indel-45	ECs1392		-	hypothetical protein
Indel-45	ECs1393	Z1648	-	hypothetical protein
Indel-45	ECs1394	Z1649	-	hypothetical protein
Indel-45	ECs1395	Z1650	-	hypothetical protein
Indel-45	ECs1396	Z1651	-	AidA-I adhesin-like protein
Indel-45	ECs1397	Z1652	-	hypothetical protein
Indel-45	ECs1398	Z1653	-	hypothetical protein
Indel-45	ECs1399	Z1654	-	hypothetical protein
Indel-45	ECs1400		-	hypothetical protein
Indel-45	ECs1401	Z1655	-	hypothetical protein
Indel-45	ECs1402	Z1656	-	hypothetical protein
Indel-45	ECs1403	Z1657	-	putative DNA repair protein
Indel-45	ECs1404		-	hypothetical protein
Indel-45	ECs1405	Z1658	-	hypothetical protein
Indel-47	ECs1406		-	hypothetical protein
Indel-46	Indel-46	Z1660	-	transposase for IS629
Indel-46	Indel-46	Z1661	-	unknown protein encoded by IS629
Indel-47	ECs1407	Z1662	-	hypothetical protein
Indel-47	ECs1408	Z1663	-	hypothetical protein
Indel-47	ECs1409	Z1664	-	hypothetical protein
G2583_1290	serX	RNA031	serX	Ser tRNA
G2583_1291	ECs1410	Z1666	ghrA	Putative dehydrogenase
G2583_1292	ECs1411	Z1667	ycdX	Putative hydrolase ycdX
G2583_1293	ECs1412	Z1668	ycdY	Chaperone, TorD family
G2583_1294	ECs1413	Z1669	ycdZ	hypothetical protein
G2583_1295	ECs1414	Z1670	csgG	Curli production assembly/transport component csgG precursor
G2583_1296	ECs1415	Z1671	csgF	Curli production assembly/transport component csgF precursor
G2583_1297	ECs1416	Z1672	csgE	Curli production assembly/transport component csgE precursor
G2583_1298	ECs1417	Z1673	csgD	CsgD
G2583_1299	ECs1418		-	hypothetical protein
G2583_1300	ECs1419	Z1675	csgB	Minor curlin subunit
G2583_1301	ECs1420	Z1676	csgA	Major curlin subunit precursor
G2583_1302	ECs1421	Z1677	csgC	CsgC
G2583_1303	ECs1422	Z1678	ymdA	hypothetical protein
G2583_1304	ECs1423	Z1679	ymdB	UPF0189 protein ymdB
G2583_1305	ECs1424	Z1680	ymdC	Putative synthase
G2583_1306	ECs1425	Z1681	mdoC	Glucans biosynthesis protein C

Table S10. The orthologue table of the O55 and O157 strains Page 46

Locus_tag ^a			Gene	Product
CB9615	Sakai	EDL933		
G2583_1307	ECs1426	Z1683	mdoG	Glucans biosynthesis protein G precursor
G2583_1308	ECs1427	Z1684	mdoH	Periplasmic glucans biosynthesis protein MdoH
G2583_1309	ECs1428	Z1685	yceK	hypothetical protein
G2583_1310	ECs1429	Z1686	msyB	Acidic protein MsyB
G2583_1311	ECs1430	Z1687	-	hypothetical protein
G2583_1312	ECs1431	Z1688	mdtG	Multidrug resistance protein mdtG
G2583_1313	ECs1432	Z1690	lpxL	Heat shock protein
G2583_1314	ECs1433	Z1691	yceA	UPF0176 protein yceA
G2583_1315	ECs1434	Z1692	yceI	hypothetical protein
G2583_1316	ECs1435	Z1693	yceJ	Nickel-dependent hydrogenase b-type cytochrome
G2583_1317	ECs1436	Z1695	yceO	hypothetical protein
G2583_1318	ECs1437	Z1696	solA	N-methyl-L-tryptophan oxidase
G2583_1319	ECs1438	Z1697	bssS	hypothetical protein
G2583_1320	ECs1439	Z1698	dinI	DinI
G2583_1321	ECs1440	Z1699	pyrC	Dihydroorotase
G2583_1322	ECs1441	Z1700	yceB	Putative lipoprotein yceB
G2583_1323	ECs1442	Z1701	grxB	Glutaredoxin-2
G2583_1324	ECs1443	Z1702	mdtH	Multidrug resistance protein mdtH
G2583_1325	ECs1444	Z1703	rimJ	Ribosomal-protein-alanine acetyltransferase
G2583_1326	ECs1445	Z1704	yceH	UPF0502 protein yceH
G2583_1327	ECs1446	Z1705	yceM	Oxidoreductase family, NAD-binding
G2583_1328	ECs1447	Z1707	yceN	Virulence factor mviN homolog
G2583_1329	ECs1448	Z1708	flgN	Flagellar biosynthesis/type III secretory path way chaperone
G2583_1330	ECs1449	Z1709	flgM	Negative regulator of flagellin synthesis
G2583_1331	ECs1450	Z1710	flgA	Flagellar biosynthesis
G2583_1332	ECs1451	Z1711	flgB	Flagellar basal-body rod protein FlgB
G2583_1333	ECs1452	Z1712	flgC	Cell-proximal portion of basal-body rod
G2583_1334	ECs1453	Z1713	flgD	Flagellar hook protein FlgE
G2583_1335	ECs1454	Z1714	flgE	Flagellar hook protein FlgE
G2583_1336	ECs1455	Z1715	flgF	Flagellar basal-body rod protein FlgF
G2583_1337	ECs1456	Z1716	flgG	Flagellar basal-body rod protein flgG
G2583_1338	ECs1457	Z1717	flgH	Flagellar L-ring protein precursor
G2583_1339	ECs1458	Z1718	flgI	flagellar basal body P-ring protein
G2583_1340	ECs1459	Z1719	flgJ	Peptidoglycan hydrolase flgJ
G2583_1341	ECs1460	Z1720	flgK	Flagellar hook-associated protein FlgK
G2583_1342	ECs1461	Z1721	flgL	Flagellar hook-associated protein 3
G2583_1343	ECs1462	Z1722	rne	Ribonuclease, Rne/Rng family
G2583_1344	ECs1463	Z1724	yceQ	hypothetical protein
G2583_1345	ECs1464	Z1725	rluC	Ribosomal large subunit pseudouridine synthase C
G2583_1346	ECs1465	Z1726	yceF	Septum formation protein Maf
G2583_1347			sraB	ncRNA
G2583_1348	ECs1466	Z1727	yceD	hypothetical protein
G2583_1349	ECs1467	Z1728	rpmF	50S ribosomal protein L32

Table S10. The orthologue table of the O55 and O157 strains Page 47

Locus_tag ^a			Gene	Product
CB9615	Sakai	EDL933		
G2583_1350	ECs1468	Z1729	plsX	fatty acid/phospholipid synthesis protein
G2583_1351	ECs1469	Z1730	fabH	3-oxoacyl-[acyl-carrier-protein] synthase 3
G2583_1352	ECs1470	Z1731	fabD	Malonyl CoA-acyl carrier protein transacylase
G2583_1353	ECs1471	Z1732	fabG	3-oxoacyl-[acyl-carrier-protein] reductase
G2583_1354	ECs1472	Z1733	acpP	Acyl carrier protein
G2583_1355	ECs1473	Z1734	fabF	3-oxoacyl-[acyl-carrier-protein] synthase 2
G2583_1356	ECs1474	Z1735	pabC	Aminodeoxychorismate lyase
G2583_1357	ECs1475	Z1736	yceG	Putative thymidylate kinase
G2583_1358	ECs1476	Z1737	tmk	Thymidylate kinase
G2583_1359	ECs1477	Z1738	holB	DNA polymerase III, delta' subunit
G2583_1360	ECs1478	Z1739	ycfH	Hydrolase, TatD family
G2583_1361	ECs1479	Z1740	ptsG	hypothetical protein
G2583_1362	ECs1480	Z1741	fhuE	Outer membrane receptor for ferric iron uptake
G2583_1363	ECs1481	Z1742	hinT	hypothetical protein
G2583_1364	ECs1482	Z1743	ycfL	Putative outer membrane lipoprotein YcfL
G2583_1365	ECs1483	Z1744	ycfM	hypothetical protein
G2583_1366	ECs1484	Z1745	thiK	Thiamine kinase
G2583_1367	ECs1485	Z1746	nagZ	Beta-hexosaminidase
G2583_1368	ECs1486	Z1747	ycfP	hypothetical protein
G2583_1369	ECs1487	Z1748	ndh	NADH dehydrogenase
G2583_1370	ECs1488	Z1749	ycfJ	Surface antigen domain protein
G2583_1371	ECs1489	Z1750	ycfQ	hypothetical protein
G2583_1372	ECs1490	Z1751	bhsA	Putative outer membrane protein
G2583_1373	ECs1491	Z1752	ycfS	hypothetical protein
G2583_1374	ECs1492	Z1754	mfd	transcription-repair coupling factor
G2583_1375	ECs1493	Z1756	ycfT	hypothetical protein
G2583_1376	ECs1494	Z1757	lolC	outer membrane-specific lipoprotein transporter subunit LoIC
G2583_1377	ECs1495	Z1758	lolD	ABC transporter, ATP-binding protein
G2583_1378	ECs1496	Z1759	lolE	Lipoprotein releasing system, transmembrane protein
G2583_1379	ECs1497	Z1760	nagK	N-acetyl-D-glucosamine kinase
G2583_1380	ECs1498	Z1761	cobB	NAD-dependent deacetylase
G2583_1381	ECs1499	Z1762	potD	Spermidine/putrescine-binding periplasmic protein precursor
G2583_1382	ECs1500	Z1763	potC	Spermidine/putrescine transport system permease
Indel-48	ECs1501	Z1764	intN	putative integrase
Indel-48	ECs1502	Z1765	xisN	putative excisionase
Indel-48	ECs1503	Z1766	-	hypothetical protein
Indel-48	ECs1504	Z1768	-	hypothetical protein
Indel-48	ECs1505	Z1769	-	hypothetical protein
Indel-48	ECs1506	Z1770	-	putative phage repressor
Indel-48	ECs1507	Z1771	-	hypothetical protein
Indel-48	ECs1508	Z1772	-	hypothetical protein
Indel-48	ECs1509	Z1773	-	hypothetical protein

Table S10. The orthologue table of the O55 and O157 strains Page 48

Locus_tag ^a			Gene	Product
CB9615	Sakai	EDL933		
Indel-48	ECs1510	Z1774	-	putative replication protein
Indel-48	ECs1511	Z1775	-	hypothetical protein
Indel-48	ECs1512	Z1776	-	hypothetical protein
Indel-48	ECs1513	Z1777	-	hypothetical protein
Indel-48	ECs1514	Z1778	-	hypothetical protein
Indel-48	ECs1515	Z1779	-	hypothetical protein
Indel-48	ECs1516	Z1780	-	hypothetical protein
Indel-48	ECs1517		-	hypothetical protein
Indel-48	ECs1518	Z1781	-	hypothetical protein
Indel-48		Z1782	-	unknown protein encoded by prophage CP-933N
Indel-48	ECs1519		-	hypothetical protein
Indel-48	ECs1520	Z1783	-	prophage maintenance protein
Indel-48	ECs1521		-	hypothetical protein
Indel-48	ECs1522	Z1784	-	hypothetical protein
Indel-48	ECs1523	Z1785	-	putative crossover junction endodeoxyribonuclease
Indel-49	ECs1524	Indel-49	-	putative antitermination protein
Indel-49	ECs1526	Indel-49	-	hypothetical protein
Indel-49	ECs1525	Indel-49	-	hypothetical protein
Indel-49	ECs1527	Indel-49	-	hypothetical protein
Indel-49	ECs1528	Indel-49	-	hypothetical protein
Indel-49	ECs1529	Indel-49	-	hypothetical protein
Indel-49	ECs1530	Indel-49	-	putative holin
Indel-49	ECs1531	Indel-49	-	hypothetical protein
Indel-49	ECs1532	Indel-49	-	putative endolysin
Indel-49	ECs1533	Indel-49	-	antirepressor protein
Indel-49	ECs1534	Indel-49	-	putative endopeptidase
Indel-49	ECs1535	Indel-49	-	putative lipoprotein Rz1 precursor
Indel-49	ECs1536	Indel-49	-	hypothetical protein
Indel-49	ECs1537	Indel-49	-	hypothetical protein
Indel-49	ECs1538	Indel-49	-	hypothetical protein
Indel-49	ECs1539	Indel-49	-	hypothetical protein
Indel-49	ECs1540	Indel-49	-	putative Dnase
Indel-49	ECs1541	Indel-49	-	putative terminase small subunit
Indel-49	ECs1542	Indel-49	-	putative large terminase subunit
Indel-49	ECs1543	Indel-49	-	putative major head protein/prohead proteinase
Indel-49	ECs1544	Indel-49	-	putative portal protein
Indel-49	ECs1545	Indel-49	-	hypothetical protein
Indel-49	ECs1546	Indel-49	-	putative head-tail adaptor
Indel-49	ECs1547	Indel-49	-	hypothetical protein
Indel-49	ECs1548	Indel-49	-	hypothetical protein
Indel-49	ECs1549	Indel-49	-	putative major tail subunit
Indel-51	ECs1550		-	putative tail assembly chaperone
Indel-50	Indel-50	Z1786	-	putative Q antiterminator of prophage CP-933N
Indel-50	Indel-50	Z1787	-	unknown protein encoded by prophage CP-933N

Table S10. The orthologue table of the O55 and O157 strains Page 49

Locus_tag ^a			Gene	Product
CB9615	Sakai	EDL933		
Indel-50	Indel-50	Z1788	-	unknown protein encoded by prophage CP-933N
Indel-50	Indel-50	Z1789	-	putative envelope protein encoded within prophage CP-933N
Indel-50	Indel-50	Z1793	-	unknown protein encoded by prophage CP-933N
Indel-50	Indel-50	Z1794	-	putative holin protein
Indel-50	Indel-50	Z1795	-	unknown protein encoded by prophage CP-933N
Indel-50	Indel-50	Z1796	-	putative endolysin of prophage CP-933N
Indel-50	Indel-50	Z1797	-	putative antirepressor of prophage CP-933N
Indel-50	Indel-50	Z1798	-	putative endopeptidase of prophage CP-933N
Indel-50	Indel-50	Z1799	-	partial tonB-like membrane protein encoded within prophage CP-933N
Indel-50	Indel-50	Z1800	-	unknown protein encoded by prophage CP-933N
Indel-50	Indel-50	Z1802	-	unknown protein encoded by prophage CP-933N
Indel-50	Indel-50	Z1803	-	putative terminase encoded by prophage CP-933N
Indel-50	Indel-50	Z1804	-	unknown protein encoded by prophage CP-933N
Indel-50	Indel-50	Z1805	-	unknown protein encoded by prophage CP-933N
Indel-50	Indel-50	Z1806	-	unknown protein encoded by prophage CP-933N
Indel-50	Indel-50	Z1807	-	unknown protein encoded by prophage CP-933N
Indel-50	Indel-50	Z1808	-	unknown protein encoded by prophage CP-933N
Indel-50	Indel-50	Z1809	-	unknown protein encoded by prophage CP-933N
Indel-50	Indel-50	Z1810	-	unknown protein encoded by prophage CP-933N
Indel-50	Indel-50	Z1811	-	putative tail component encoded by prophage CP-933N
Indel-51	ECs1551	Z1813	-	putative phage tail protein
Indel-51	ECs1552	Z1814	-	putative tail length tape measure protein
Indel-51	ECs1553	Z1814	-	putative tail length tape measure protein
Indel-52	ECs1554	Indel-52	-	putative minor tail protein
Indel-54	ECs1555		-	putative minor tail protein
Indel-54	ECs1556		-	putative regulatory protein
Indel-54		Z1816	-	unknown protein encoded by prophage CP-933N
Indel-54		Z1817	-	unknown protein encoded by prophage CP-933N
Indel-54	ECs1557	Z1818	-	putative antirepressor protein
Indel-54	ECs1558	Z1819	-	putative tail assembly protein
Indel-54	ECs1559	Z1820	-	putative tail assembly protein
Indel-54		Z1821	-	unknown protein encoded by prophage CP-933N
Indel-54	ECs1560	Z1822	-	putative secreted effector protein
Indel-54	ECs1561	Z1823	-	hypothetical protein
Indel-54	ECs1561	Z1824	-	hypothetical protein
Indel-54	ECs1562		-	hypothetical protein
Indel-54	ECs1563		-	hypothetical membrane protein
Indel-54	ECs1564	Z1825	-	putative transposase OrfB protein of insertion sequence IS2
Indel-54	ECs1565	Z1826	-	putative transposase OrfA protein of insertion sequence IS2
Indel-54		Z1827	-	putative IS encoded protein

Table S10. The orthologue table of the O55 and O157 strains Page 50

Locus_tag ^a			Gene	Product
CB9615	Sakai	EDL933		
Indel-54	ECs1566		-	hypothetical protein
Indel-54	ECs1567		-	hypothetical protein
Indel-54	ECs1568	Z1829	-	hypothetical protein
Indel-54	ECs1569		-	hypothetical protein
G2583_1383	ECs1570	Z1830	potB	Spermidine/putrescine ABC transporter, permease protein PotB
G2583_1384	ECs1571	Z1831	potA	Spermidine/putrescine import ATP-binding protein potA
G2583_1385	ECs1572	Z1832	pepT	Peptidase T
G2583_1386	ECs1573	Z1833	ycfD	YcfD protein
G2583_1387	ECs1574	Z1835	-	Site-specific recombinase, phage integrase family
		Z1836	-	unknown protein encoded by prophage CP-933C
G2583_1388	ECs1575		-	putative DNA binding protein
G2583_1389		Z1838	-	unknown protein encoded by prophage CP-933C
Indel-55		Z1839	-	unknown protein encoded by prophage CP-933C
Indel-55	ECs1577		-	lcd-like protein
Indel-55	ECs1578	Z1840	-	hypothetical protein
Indel-55	ECs1579		-	hypothetical protein
Indel-55	ECs1580	Z1841	-	hypothetical protein
Indel-55	ECs1581		-	hypothetical protein
Indel-55	ECs1582	Z1842	-	hypothetical protein
Indel-55	ECs1583	Z1843	-	hypothetical protein
Indel-55	ECs1584	Z1843	-	hypothetical protein
Indel-55	ECs1585		-	hypothetical protein
Indel-55	ECs1586	Z1844	-	hypothetical protein
Indel-55	ECs1587	Z1845	-	putative single stranded DNA-binding protein
Indel-55	ECs1588		-	putative transcriptional activator
Indel-55	ECs1589	Z1846	-	hypothetical protein
Indel-55	ECs1590	Z1847	-	putative major head protein
Indel-55	ECs1591	Z1848	-	putative prohead protease
Indel-55	ECs1592	Z1849	-	putative head portal protein
Indel-55	ECs1593		-	putative head-tail adaptor
Indel-55		Z1850	-	unknown protein encoded by prophage CP-933C
Indel-55	ECs1594	Z1851	-	hypothetical protein
Indel-55	ECs1595	Z1852	-	hypothetical protein
Indel-55	ECs1596		-	hypothetical protein
Indel-55	ECs1597	Z1853	-	putative terminase small subunit
Indel-55	ECs1598	Z1854	-	putative terminase large subunit
Indel-55	ECs1599	Z1855	-	hypothetical protein
Indel-55		Z1856	-	unknown protein encoded by prophage CP-933C
Indel-55	ECs1600	Z1857	-	hypothetical protein
G2583_1390	Indel-56	Indel-56	-	conserved hypothetical protein
G2583_1391	Indel-56	Indel-56	-	hypothetical protein
G2583_1392	Indel-56	Indel-56	-	hypothetical protein
G2583_1393	Indel-56	Indel-56	-	hypothetical protein

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Locus_tag ^a			Gene	Product
CB9615	Sakai	EDL933		
G2583_1394	Indel-56	Indel-56	-	hypothetical protein
G2583_1395	Indel-56	Indel-56	-	hypothetical protein
G2583_1396	Indel-56	Indel-56	YabA	Bacteriophage P4 DNA primase
G2583_1397	Indel-56	Indel-56	-	hypothetical bacteriophage protein
G2583_1398	Indel-56	Indel-56	-	Single-stranded DNA-binding protein
G2583_1399	Indel-56	Indel-56	-	hypothetical protein
G2583_1400	Indel-56	Indel-56	-	Major capsid protein
G2583_1401	Indel-56	Indel-56	-	Capsid protein small subunit
G2583_1402	Indel-56	Indel-56	-	hypothetical protein
G2583_1403	Indel-56	Indel-56	-	Phage DNA packaging protein NU1-like protein
G2583_1404	Indel-56	Indel-56	-	Hypothetical bacteriophage protein
G2583_1405	ECs1601	Z1858	phoQ	sensor protein PhoQ
G2583_1406	ECs1602	Z1859	phoP	DNA-binding response regulator in two-component regulatory system with PhoQ
G2583_1407	ECs1603	Z1860	purB	Adenylosuccinate lyase
G2583_1408	ECs1604	Z1861	hflD	hypothetical protein
G2583_1409	ECs1605	Z1862	mnmA	Predicted tRNA(5-methylaminomethyl-2-thiouridylate) methyltransferase, contains the PP-loop ATPase
G2583_1410	ECs1606	Z1863	nudJ	Phosphatase nudJ
G2583_1411	ECs1607	Z1864	rluE	Ribosomal large subunit pseudouridine synthase E
G2583_1412	ECs1608	Z1865	icd	Isocitrate dehydrogenase [NADP]
Indel-57	ECs1609	Z1866	-	integrase
Indel-57	ECs1610	Z1867	-	excisionase
Indel-57	ECs1611	Z1868	-	putative replication protein
Indel-57	ECs1612	Z1869	-	replication protein P
Indel-57	ECs1613		-	Ren protein
Indel-57	ECs1614	Z1870	-	integral membrane drug resistance protein EmrE
Indel-57	ECs1615	Z1871	-	hypothetical protein
Indel-57	ECs1616	Z1872	ybcN	hypothetical protein
Indel-57	ECs1617		-	NinE protein
Indel-57	ECs1618		-	hypothetical protein
Indel-57	ECs1619	Z1873	rus	putative crossover junction endodeoxyribonuclease
Indel-57	ECs1620	Z1874	-	antitermination protein
Indel-57	ECs1621	Z1875	-	putative holin protein
Indel-57	ECs1622	Z1876	-	putative endolysin
Indel-57	ECs1623	Z1877	-	putative endopeptidase
Indel-57	ECs1624		-	lipoprotein Rz1 precursor
Indel-57	ECs1625	Z1878	-	Bor protein precursor
Indel-57	ECs1626	Z1879	-	hypothetical protein
Indel-57	ECs1627	Z1880	-	hypothetical protein
Indel-57	ECs1628	Z1881	-	hypothetical protein
Indel-57	ECs1629	Z1882	-	terminase small subunit
Indel-57	ECs1630	Z1883	-	terminase large subunit
Indel-57	ECs1631	Z1884	-	head-to-tail joining protein

Table S10. The orthologue table of the O55 and O157 strains Page 52

Locus_tag ^a			Gene	Product
CB9615	Sakai	EDL933		
Indel-57	ECs1632	Z1885	-	portal protein
Indel-57	ECs1633	Z1886	-	minor capsid protein
Indel-57	ECs1634	Z1887	-	major capsid protein
Indel-57	ECs1635	Z1888	-	major capsid protein
Indel-57	ECs1636	Z1889	-	DNA packaging protein
Indel-57	ECs1637	Z1890	-	minor capsid protein
Indel-57	ECs1638	Z1891	-	minor tail protein
Indel-57	ECs1639	Z1893	-	minor tail protein
Indel-57	ECs1640	Z1894	-	major tail protein
Indel-57	ECs1641	Z1895	-	minor tail protein
Indel-57	ECs1642	Z1896	-	minor tail protein
Indel-57	ECs1643	Z1898	-	tail length tape measure protein precursor
Indel-58	ECs1644	Indel-58	-	minor tail protein
Indel-58	ECs1645	Indel-58	-	minor tail protein
Indel-58	ECs1646	Indel-58	-	tail assembly protein
Indel-58	ECs1647	Indel-58	-	tail assembly protein
Indel-58	ECs1648	Indel-58	-	host specificity protein
Indel-60	ECs1649		-	putative membrane protein precursor
Indel-59	Indel-59	Z1901	-	unknown protein encoded by prophage CP-933X
Indel-59	Indel-59	Z1902	-	putative head-tail adaptor of prophage CP-933X
Indel-59	Indel-59	Z1903	-	unknown protein encoded by prophage CP-933X
Indel-59	Indel-59	Z1905	-	unknown protein encoded by prophage CP-933X
Indel-59	Indel-59	Z1906	-	unknown protein encoded by prophage CP-933X
Indel-59	Indel-59	Z1908	-	putative tail component of prophage CP-933X
Indel-59	Indel-59	Z1910	-	unknown protein encoded by prophage CP-933X
Indel-59	Indel-59	Z1912	-	unknown protein encoded by prophage CP-933X
Indel-59	Indel-59	Z1913	-	putative tail component of prophage CP-933X
Indel-59	Indel-59	Z1914	-	putative minor tail fiber protein of prophage CP-933X
Indel-59	Indel-59	Z1915	-	putative tail protein (partial) of prophage CP-933X
Indel-59	Indel-59	Z1916	-	putative tail protein (partial) of prophage CP-933X
Indel-60		Z1919	-	unknown protein encoded by prophage CP-933X
Indel-60	ECs1650	Z1918	-	putative tail fiber protein
Indel-60	ECs1651	Z1920	-	tail fiber assembly protein
Indel-60	ECs1652	Z1921	-	putative catalase
Indel-60	ECs1653	Z1922	-	hypothetical protein
Indel-60	ECs1654	Z1923	-	hypothetical protein
Indel-60	ECs1655	Z1924	-	hypothetical protein
Indel-60	ECs1656	Z1925	-	hypothetical protein
Indel-60	ECs1657	Z1926	-	hypothetical protein
Indel-60	ECs1658	Z1927	-	hypothetical protein
Indel-60	ECs1659	Z1928	-	hypothetical protein
Indel-60	ECs1660	Z1929	-	hypothetical protein
Indel-60	ECs1661		-	BfpA-like protein
Indel-60	ECs1662	Z1930	-	hypothetical protein

Table S10. The orthologue table of the O55 and O157 strains Page 53

Locus_tag ^a			Gene	Product
CB9615	Sakai	EDL933		
Indel-60	ECs1663	Z1931	-	outer membrane protease precursor
Indel-60	ECs1664	Z1932	-	hypothetical protein
Indel-62	ECs1665	Z1933	-	putative transposase OrfA protein of insertion sequence IS629
Indel-62	ECs1666	Z1934	-	putative transposase OrfB protein of insertion sequence IS629
G2583_1413	Indel-63	Indel-63	elbA	Anti-adapter protein iraM
G2583_1414	Indel-63	Indel-63	ycgX	hypothetical protein
G2583_1415	Indel-63	Indel-63	ycgE	transcriptional regulator mlrA
G2583_1416	Indel-63	Indel-63	ycgF	BLUF domain/cyclic diguanylate phosphodiesterase (EAL) domain protein
G2583_1417	Indel-63	Indel-63	ycgF	BLUF domain/cyclic diguanylate phosphodiesterase (EAL) domain protein
G2583_1418	Indel-63	Indel-63	ycgZ	hypothetical protein
G2583_1419	Indel-63	Indel-63	-	hypothetical protein
G2583_1420	Indel-63	Indel-63	ymgA	hypothetical protein
G2583_1421	Indel-63	Indel-63	ymgB	hypothetical protein
G2583_1422	Indel-63	Indel-63	ymgC	hypothetical protein
G2583_1423	Indel-63	Indel-63	ycgG	Cyclic diguanylate phosphodiesterase (EAL) domain protein
G2583_1424	Indel-63	Indel-63	ymgF	hypothetical protein
G2583_1425	Indel-63	Indel-63	-	hypothetical protein
G2583_1426	Indel-63	Indel-63	-	Porin, autotransporter (AT) family
G2583_1427	Indel-63	Indel-63	-	Porin, autotransporter (AT) family
G2583_1428	Indel-63	Indel-63	ymgD	hypothetical protein
G2583_1429	Indel-63	Indel-63	-	hypothetical protein
G2583_1430	Indel-63	Indel-63	ymgI	hypothetical protein
G2583_1431	Indel-63	Indel-63	ymgJ	hypothetical protein
G2583_1432	Indel-63	Indel-63	ypjA	Putative ATP-binding component of a transport system
	ECs1667	Z1935	-	hypothetical protein
G2583_1433	ECs1668	Z1936	minE	Cell division topological specificity factor
G2583_1434	ECs1669	Z1937	minD	Septum site-determining protein minD
G2583_1435	ECs1670	Z1938	minC	Septum site-determining protein minC
G2583_1436	ECs1671	Z1939	ycgJ	Putative fels-1 Prophage Protein
G2583_1437	ECs1672	Z1940	ycgK	Bacterial pre-peptidase C-terminal domain protein
G2583_1438	ECs1673		-	hypothetical protein
G2583_1439	ECs1674	Z1941	ycgL	hypothetical protein
G2583_1440	ECs1675	Z1942	ycgM	Fumarylacetoacetate hydrolase family protein
G2583_1441	ECs1676	Z1943	ycgN	conserved hypothetical protein
G2583_1442	ECs1677	Z1944	hlyE	Hemolysin E
G2583_1443			-	ncRNA
G2583_1444	ECs1678	Z1946	umuD	DNA polymerase V subunit UmuD
G2583_1445	ECs1679	Z1947	umuC	DNA polymerase V subunit UmuC
G2583_1446	ECs1680	Z1948	dsbB	Disulfide bond formation protein B

Table S10. The orthologue table of the O55 and O157 strains Page 54

Locus_tag ^a			Gene	Product
CB9615	Sakai	EDL933		
G2583_1447	ECs1681	Z1949	nhaB	Na(+)/H(+) antiporter nhaB
G2583_1448	ECs1682	Z1950	fadR	Fatty acid metabolism regulator protein
G2583_1449	ECs1683	Z1951	ycgB	SpoVR family protein
G2583_1450	ECs1684	Z1952	dadA	D-amino acid dehydrogenase small subunit
G2583_1451	ECs1685	Z1953	dadX	Alanine racemase, catabolic
G2583_1452	Indel-65	Indel-65	ipaH	hypothetical protein
G2583_1453	Indel-65	Indel-65	-	hypothetical protein
G2583_1454	ECs1686	Z1954	cvrA	potassium/proton antiporter
G2583_1455	ECs1688	Z1955	ldcA	Muramoyltetrapeptide carboxypeptidase
G2583_1456	ECs1687	Z1956	emtA	Membrane-bound lytic murein transglycosylase E
Indel-66	ECs1689	Z1957	-	putative transposase OrfB protein of insertion sequence IS629
Indel-66	ECs1690	Z1958	-	putative transposase OrfA protein of insertion sequence IS629
G2583_1457	ECs1691	Z1959	ycgR	hypothetical protein
G2583_1458	ECs1692	Z1960	yngE	hypothetical protein
G2583_1459	ECs1693	Z1961	prpA	Putative TonB dependent outer membrane receptor
G2583_1460	ECs1694	Z1962	modD	Putative pyrophosphorylase modD
	ECs1695		-	hypothetical protein
G2583_1461	ECs1696	Z1963	-	Putative methyltransferase
G2583_1462	ECs1697	Z1964	-	Putative iron compound ABC transporter, ATP-binding protein
G2583_1463	ECs1698	Z1965	-	Putative iron compound ABC transporter, permease protein
G2583_1464	ECs1699	Z1966	-	Putative iron compound ABC transporter, periplasmic-binding protein
G2583_1465	ECs1700	Z1967	-	hypothetical protein
G2583_1466	ECs1701	Z1968	treA	putative trehalase
G2583_1467	ECs1702		treA	trehalase
G2583_1468	ECs1703	Z1969	dhaM	Putative PTS system enzyme I
G2583_1469	ECs1704	Z1970	dhaL	Putative dihydroxyacetone kinase
G2583_1470	ECs1705	Z1971	dhaK	Dihydroxyacetone kinase, N-terminal domain
	ECs1706		-	hypothetical protein
G2583_1471	Indel-67	Indel-67	dhaR	PTS-dependent dihydroxyacetone kinase operon regulatory protein
G2583_1472	ECs1707	Z1972	ycgV	putative outer membrane autotransporter
G2583_1473			-	hypothetical protein
G2583_1474	ECs1708	Z1974	ychF	GTP-dependent nucleic acid-binding protein engD
G2583_1475	ECs1709	Z1975	pth	Peptidyl-tRNA hydrolase
G2583_1476	ECs1710	Z1976	ychH	predicted inner membrane protein
G2583_1477	ECs1711	Z1977	ychM	Putative sulfate transporter ychM
G2583_1478	ECs1712	Z1978	prs	Ribose-phosphate pyrophosphokinase
G2583_1479	ECs1713	Z1979	ispE	4-diphosphocytidyl-2-C-methyl-D-erythritol kinase
G2583_1480	ECs1714	Z1980	lolB	Outer membrane lipoprotein LolB

Table S10. The orthologue table of the O55 and O157 strains Page 55

Locus_tag ^a			Gene	Product
CB9615	Sakai	EDL933		
G2583_1481	ECs1715	Z1981	hemA	Glutamyl-tRNA reductase
G2583_1482	ECs1716	Z1982	prfA	Peptide chain release factor 1
G2583_1483	ECs1717	Z1983	prmC	Protein-(Glutamine-N5) methyltransferase, release factor-specific
G2583_1484	ECs1718	Z1984	ychQ	Putative Invasion gene expression up-regulator SirB
G2583_1485	ECs1719	Z1985	ychA	putative transcriptional regulator
G2583_1486	ECs1720	Z1986	kdsA	2-dehydro-3-deoxyphosphooctonate aldolase
G2583_1487		Z1987	ldrB	hypothetical protein
Indel-68	Indel-68	Z1989	-	hypothetical protein
G2583_1488	ECs1721	Z1991	chaA	Calcium/proton antiporter
G2583_1489	ECs1722	Z1992	chaB	Cation transport regulator chaB
G2583_1490	ECs1723	Z1993	chaC	Cation transport regulator
G2583_1491	ECs1724	Z1994	ychN	hypothetical protein
G2583_1492	ECs1725	Z1995	ychO	Putative invasin
G2583_1493	ECs1726	Z1996	narL	Nitrate/nitrite response regulator protein narL
G2583_1494	ECs1727	Z1998	narX	Nitrate/nitrite sensor protein NarX
G2583_1495			-	hypothetical protein
G2583_1496	ECs1728	Z2000	narK	Nitrite extrusion protein 1
G2583_1497	ECs1729	Z2001	narG	Nitrate reductase, alpha subunit
G2583_1498	ECs1730	Z2002	narH	Nitrate reductase, beta subunit
G2583_1499	ECs1731	Z2003	narJ	Respiratory nitrate reductase 1 delta chain
G2583_1500	ECs1732	Z2004	narI	Respiratory nitrate reductase, gamma subunit
G2583_1501	ECs1733	Z2005	ychS	hypothetical protein
G2583_1502			-	ncRNA
G2583_1503	tyrV	RNA034	tyrV	Tyr tRNA
G2583_1504			-	ncRNA
G2583_1505	tyrT	RNA035	tyrT	Tyr tRNA
G2583_1506	ECs1734	Z2008	purU	Formyltetrahydrofolate deformylase
G2583_1507	ECs1735	Z2009	ychJ	SEC-C motif domain protein
G2583_1508	ECs1736	Z2010	rssA	Phospholipase, patatin family
G2583_1509	ECs1737	Z2011	rssB	response regulator of RpoS
G2583_1510	ECs1738	Z2012	galU	UTP--glucose-1-phosphate uridylyltransferase
G2583_1511	ECs1739	Z2013	hns	DNA-binding protein H-NS
G2583_1512	ECs1740	Z2015	tdk	Thymidine kinase
G2583_1513	ECs1741	Z2016	adhE	Aldehyde-alcohol dehydrogenase
G2583_1514	ECs1742	Z2017	ychE	Integral membrane protein, MarC family
G2583_1515	ECs1743	Z2019	oppA	Periplasmic oligopeptide-binding protein
G2583_1516	ECs1744	Z2020	oppB	Oligopeptide transport system permease protein oppB
G2583_1517	ECs1745	Z2021	oppC	Oligopeptide transport system permease protein oppC
G2583_1518	ECs1746	Z2022	oppD	Oligopeptide ABC transporter, ATP-binding protein
G2583_1519	ECs1747	Z2023	oppF	Oligopeptide ABC transporter, ATP-binding protein
G2583_1520	ECs1748	Z2024	yciU	hypothetical protein
G2583_1521	ECs1749	Z2026	cls	Cardiolipin synthetase
G2583_1522			yciY	hypothetical protein

Table S10. The orthologue table of the O55 and O157 strains Page 56

Locus_tag ^a			Gene	Product
CB9615	Sakai	EDL933		
G2583_1523	ECs1750	Z2028	kch	Potassium channel protein kch
G2583_1524	ECs1751	Z2029	ycil	Uncharacterized protein conserved in bacteria
G2583_1525	ECs1752	Z2030	tonB	outer membrane receptor-mediated transport energizer protein TonB
G2583_1526	ECs1753	Z2031	yciA	Acyl-CoA thioester hydrolase yciA
G2583_1527	ECs1754	Z2032	yciB	Probable intracellular septation protein
G2583_1528	ECs1755	Z2033	yciC	UPF0259 membrane protein yciC
G2583_1529	ECs1756	Z2034	ompW	Outer membrane protein W
G2583_1530	ECs1757	Z2036	intE	Putative integrase for prophage CP-933O
G2583_1531	ECs1758		xisE	Excisionase
G2583_1532	ECs1759	Z2037	exoO	putative exonuclease
G2583_1533	ECs1760	Z2038	ydfD	unknown protein encoded by prophage CP-933O
G2583_1534	ECs1761	Z2039	dicB	Putative regulator of cell division encoded by prophage CP-933O
G2583_1535	dicF4		dicF4	ncRNA
G2583_1536	ECs1762	Z2040	-	unknown protein encoded by prophage CP-933O
G2583_1537	ECs1763	Z2041	-	unknown protein encoded by prophage CP-933O
G2583_1538	ECs1764	Z2042	ydfC	unknown protein encoded by prophage CP-933O
G2583_1539		Z2043	-	hypothetical protein
G2583_1540	ECs1765	Z2045	dicA	Similar to DicA, regulator of DicB encoded by prophage CP-933O
G2583_1541	ECs1766	Z2046	dicC	DNA-binding transcriptional regulator DicC
G2583_1542	ECs1767	Z2047	-	unknown protein encoded by prophage CP-933O
G2583_1543	ECs1768	Z2048	-	unknown protein encoded by prophage CP-933O
G2583_1544	ECs1769	Z2049	-	unknown protein encoded by prophage CP-933O
G2583_1545	ECsp014	Z2051	-	hypothetical protein EcolO15_16731
G2583_1546	ECs1770		papH	putative fimbrial minor pilin protein precursor
	ECs1771		-	fimbrial minor pilin protein precursor
		Z2052	-	unknown protein encoded by prophage CP-933O
G2583_1547	ECs1772	Z2053	acfC	Porcine attaching-effacing associated protein
G2583_1548	ECs1773	Z2054	gef	Putative killer protein encoded by prophage CP-933O
G2583_1549	ECs1774	Z2055	rem	hypothetical protein
G2583_1550	ECs1775		-	hypothetical protein
G2583_1551	ECs1776	Z2056	-	hypothetical protein
Indel-72	ECs1777	Z2057	-	endonuclease
Indel-72	ECs1778	Z2058	-	hypothetical protein
Indel-72	ECs1779	Z2059	-	hypothetical lipoprotein
Indel-72	ECs1780	Z2060	-	putative DNA methylase
Indel-72	ileZ3	RNA036	ileZ3	Ile tRNA
Indel-72	argO3	RNA037	argO3	Arg tRNA
Indel-72		Z2063	-	unknown protein encoded by prophage CP-933O
Indel-73	ECs1781	Indel-73	-	hypothetical protein
Indel-73	ECs1782	Indel-73	-	putative holin protein
Indel-73	ECs1783	Indel-73	-	hypothetical protein

Table S10. The orthologue table of the O55 and O157 strains Page 57

Locus_tag ^a			Gene	Product
CB9615	Sakai	EDL933		
Indel-73	ECs1784	Indel-73	-	putative endolysin
Indel-73	ECs1785	Indel-73	-	antirepressor protein
Indel-73	ECs1786	Indel-73	-	endopeptidase
Indel-73	ECs1787	Indel-73	-	lipoprotein Rz1 precursor
Indel-73	ECs1788	Indel-73	-	hypothetical protein
Indel-73	ECs1789	Indel-73	-	putative Dnase
Indel-73	ECs1790	Indel-73	-	hypothetical protein
Indel-73	ECs1791	Indel-73	-	putative terminase small subunit
Indel-73	ECs1792	Indel-73	-	putative terminase large subunit
Indel-73	ECs1793	Indel-73	-	major head protein/prohead protease
Indel-73	ECs1794	Indel-73	-	hypothetical protein
Indel-73	ECs1795	Indel-73	-	putative portal protein
Indel-73	ECs1796	Indel-73	-	hypothetical protein
Indel-73	ECs1797	Indel-73	-	putative head-tail adaptor
Indel-73	ECs1798	Indel-73	-	hypothetical protein
Indel-73	ECs1799	Indel-73	-	hypothetical protein
Indel-73	ECs1800	Indel-73	-	putative major tail subunit
Indel-73	ECs1801	Indel-73	-	putative tail assembly chaperone
Indel-73	ECs1802	Indel-73	-	putative tail assembly chaperone
Indel-73	ECs1803	Indel-73	-	putative tail length tape measure protein
Indel-73	ECs1804	Indel-73	-	minor tail protein
Indel-73	ECs1805	Indel-73	-	minor tail protein
Indel-74	Indel-74	Z2065	-	similar to conserved hypothetical phage protein YjhS encoded within prophage CP-933O
Indel-74	Indel-74	Z2066	-	unknown protein encoded by prophage CP-933O
Indel-74	Indel-74	Z2068	-	unknown protein encoded by prophage CP-933O
Indel-74	Indel-74	Z2069	-	putative holin protein of prophage CP-933O
Indel-74	Indel-74	Z2070	-	unknown protein encoded by prophage CP-933O
Indel-74	Indel-74	Z2071	-	putative endolysin of prophage CP933-O; partial
Indel-74	Indel-74	Z2072	-	putative IS encoded protein encoded by prophage CP-933O
Indel-74	Indel-74	Z2073	-	putative transposase within CP-933O
Indel-74	Indel-74	Z2074	-	putative IS encoded protein within CP-933O
G2583_1552	Indel-75	Indel-75	-	Holliday junction resolvase
G2583_1553	Indel-75	Indel-75	-	Antitermination protein Q
G2583_5267	Indel-75	Indel-75	-	Met tRNA
G2583_5268	Indel-75	Indel-75	-	Arg tRNA
G2583_1554	Indel-75	Indel-75	-	hypothetical protein
G2583_1555	Indel-75	Indel-75	-	hypothetical protein
G2583_1556	Indel-75	Indel-75	-	hypothetical protein
G2583_1557	Indel-75	Indel-75	-	hypothetical protein
G2583_1558	Indel-75	Indel-75	-	Putative lysis protein S of prophage CP-933V
G2583_1559	Indel-75	Indel-75	ybcS	lysozyme-like protein
G2583_1560	Indel-75	Indel-75	ybcT	Bacteriophage lysis protein

Table S10. The orthologue table of the O55 and O157 strains Page 58

Locus_tag ^a			Gene	Product
CB9615	Sakai	EDL933		
G2583_1561	Indel-75	Indel-75	-	hypothetical protein
G2583_1562	Indel-75	Indel-75	-	Putative transcriptional regulator
G2583_1563	Indel-75	Indel-75	ynfO	unknown protein encoded within prophage CP-933R
G2583_1564	Indel-75	Indel-75	-	unknown protein encoded by prophage CP-933N
G2583_1565	Indel-75	Indel-75	-	Phage terminase, small subunit
G2583_1566	Indel-75	Indel-75	-	Phage terminase-like protein, large subunit
G2583_1567	Indel-75	Indel-75	-	Phage head maturation protease
G2583_1568	Indel-75	Indel-75	insN	unknown protein encoded by IS911 within prophage CP-933L
G2583_1569	Indel-75	Indel-75	-	putative transposase
G2583_1570	Indel-75	Indel-75	-	Phage head maturation protease
G2583_1571	Indel-75	Indel-75	-	conserved hypothetical protein
G2583_1572	Indel-75	Indel-75	-	conserved hypothetical protein
G2583_1573	Indel-75	Indel-75	-	Bacteriophage head-tail adaptor
G2583_1574	Indel-75	Indel-75	-	Phage protein, HK97 gp10 family
G2583_1575	Indel-75	Indel-75	-	unknown protein encoded by prophage CP-933N
G2583_1576	Indel-75	Indel-75	-	Putative major tail subunit
G2583_1577	Indel-75	Indel-75	-	Phage tail assembly chaperone
G2583_1578	Indel-75	Indel-75	-	putative tail protein
G2583_1579	Indel-75	Indel-75	-	putative tail length tape measure protein
G2583_1580	Indel-75	Indel-75	-	minor tail protein
G2583_1581	Indel-75	Indel-75	-	Phage-related protein
G2583_1582	Indel-75	Indel-75	-	Putative tail fiber component
G2583_1583	Indel-75	Indel-75	-	putative tail assembly protein
G2583_1584	Indel-75	Indel-75	-	putative host specificity protein
G2583_1585	Indel-75	Indel-75	insF	IS911 transposase orfB
G2583_1586	Indel-75	Indel-75	insN	unknown protein encoded by IS911 within prophage CP-933L
G2583_1587	Indel-75	Indel-75	-	Opacity protein and related surface antigens
G2583_1588	Indel-75	Indel-75	-	hypothetical protein
G2583_1589	Indel-75	Indel-75	-	conserved hypothetical protein
G2583_1590	Indel-75	Indel-75	-	NleA8-2 protein
G2583_1591	Indel-75	Indel-75	-	putative integrase fragment
G2583_1592	Indel-75	Indel-75	nleH	Non-LEE-encoded type III effector H
G2583_1593	Indel-75	Indel-75	nleF	hypothetical protein
G2583_1594	Indel-75	Indel-75	-	Putative transposase within CP-933O; partial
Indel-76	ECs1806	Z6029	-	putative host specificity protein
Indel-76	ECs1807	Z6028	lomP	putative outer membrane protein precursor
Indel-76	ECs1808	Z6027	-	putative tail fiber protein
Indel-76	ECs1809	Z6026	-	hypothetical protein
Indel-76	ECs1810		-	hypothetical protein
Indel-76	ECs1811	Z6025	-	hypothetical protein
Indel-76	ECs1812	Z6024	-	hypothetical protein
Indel-76		Z6023	-	unknown protein encoded by cryptic prophage CP-933P

Table S10. The orthologue table of the O55 and O157 strains Page 59

Locus_tag ^a			Gene	Product
CB9615	Sakai	EDL933		
Indel-76	ECs1813	Z6022	-	integrase
Indel-76	ECs1814	Z6021	-	hypothetical protein
Indel-76	ECs1815	Z6020	-	hypothetical protein
Indel-76	ECs1816	Z6019	-	hypothetical protein
Indel-76	ECs1817	Z6017	-	hypothetical protein
Indel-76	ECs1818	Z6016	-	hypothetical protein
Indel-76	ECs1819	Z6015	-	hypothetical protein
Indel-76	ECs1820	Z6014	-	hypothetical protein
Indel-76		Z6012	-	hypothetical protein
Indel-76	ECs1821		-	hypothetical protein
Indel-76	ECs1822		-	hypothetical protein
Indel-76	ECs1823	Z6011	-	hypothetical protein
Indel-76	ECs1824	Z6010	-	hypothetical protein
Indel-76	ECs1825	Z2565	-	bfpT-regulated chaperone-like protein
Indel-76	ECs1826	Z2563	-	hypothetical protein
Indel-76	ECsp015	Z2562	-	putative transposase (partial)
Indel-76	ECs1827	Z2561	-	IS630 hypothetical protein
Indel-76	ECs1828	Z2560	-	hypothetical protein
Indel-76	ECsp016		-	insertion sequence IS3
Indel-76		Z2558	-	hypothetical protein
G2583_1595		Z2557	yciD	Putative outer membrane protein
G2583_1596	ECs1829	Z2555	yciE	YciE protein
G2583_1597	ECs1830	Z2554	yciF	YciF protein
G2583_1598	ECs1831	Z2553	yciG	hypothetical protein
G2583_1599	ECs1832	Z2551	trpA	Tryptophan synthase alpha chain
G2583_1600	ECs1833	Z2550	trpB	Tryptophan synthase beta chain
G2583_1601	ECs1834	Z2549	trpC	bifunctional indole-3-glycerol phosphate synthase/phosphoribosylanthranilate isomerase
G2583_1602	ECs1835	Z2548	trpD	Anthranilate synthase, component II
G2583_1603	ECs1836	Z2547	trpE	anthranilate synthase component I
G2583_1603	ECs1836	Z2546	trpE	anthranilate synthase component I
G2583_1604	ECs1837	Z2545	trpL	trp operon leader peptide
G2583_1605	ECs1838	Z2544	trpH	Putative phosphoesterase
G2583_1606	ECs1839	Z2543	yciO	hypothetical protein
G2583_1607	ECs1840	Z2542	-	conserved hypothetical protein
G2583_1608	ECs1841	Z2541	rIuB	Ribosomal large subunit pseudouridine synthase B
G2583_1609	ECs1842	Z2540	btuR	Cob(I)yrinic acid a,c-diamide adenosyltransferase
G2583_1610	ECs1843	Z2539	yciK	Oxidoreductase, short chain dehydrogenase/reductase family
G2583_1611	ECs1844	Z2538	sohB	Peptidase, S49 (Protease IV) family
G2583_1612	ECs1845	Z2537	yciN	hypothetical protein
G2583_1613	ECs1846	Z2536	topA	DNA topoisomerase I
G2583_1614	ECs1847	Z2535	cysB	transcriptional regulator CysB
G2583_1615		Z2534	ymiA	hypothetical protein

Table S10. The orthologue table of the O55 and O157 strains Page 60

Locus_tag ^a			Gene	Product
CB9615	Sakai	EDL933		
G2583_1616	ECs1848	Z2533	yciX	hypothetical protein
G2583_1617	ECs1849	Z2532	acnA	Aconitate hydratase 1
G2583_1618	ECs1850	Z2531	ribA	GTP cyclohydrolase-2
G2583_1619	ECs1851	Z2529	pgpB	Phosphatidylglycerophosphatase B
G2583_1620	ECs1852	Z2528	yciS	hypothetical protein
G2583_1621	ECs1853	Z2526	yciM	hypothetical protein
G2583_1622	ECs1854	Z2525	pyrF	Orotidine 5'-phosphate decarboxylase
G2583_1623	ECs1855	Z2524	yciH	Putative translation initiation factor SUI1
G2583_1624	ECs1856	Z2523	osmB	hypothetical protein
G2583_1625	ECs1857	Z2521	yciT	putative DEOR-type transcriptional regulator
G2583_1626		Z2519	yciZ	UPF0509 protein yciZ
G2583_1627	ECs1858	Z2516	gmr	sensory box-containing diguanylate cyclase/cyclic diguanylate phosphodiesterase
G2583_1628	ECs1859	Z2514	rnb	Exoribonuclease 2
G2583_1629	ECs1860	Z2513	yciW	Putative oxidoreductase
G2583_1630	ECs1861	Z2512	fabI	Enoyl-[acyl-carrier-protein] reductase [NADH]
G2583_1631		Z2511	-	hypothetical protein
G2583_1632	ECs1862	Z2510	eefR	Putative transcriptional repressor
G2583_1633	ECs1863	Z2509	eefA	Acriflavine resistance protein A
G2583_1634	ECs1864	Z2508	acrB	putative multidrug-efflux transport protein
		Z2507	-	hypothetical protein
G2583_1635	ECs1865	Z2506	eefC	Multidrug efflux outer membrane protein EefC
G2583_1635	ECs1865	Z2504	eefC	Multidrug efflux outer membrane protein EefC
G2583_1636	ECs1866	Z2503	eefD	Multidrug efflux transport protein EefD
G2583_1636	ECs1866	Z2501	eefD	Multidrug efflux transport protein EefD
G2583_1637	ECs1867	Z2500	sapF	Peptide transport system, ATP-binding protein SapF
G2583_1638	ECs1868	Z2499	sapD	Peptide transport system ATP-binding protein sapD
G2583_1639	ECs1869	Z2498	sapC	Peptide ABC transporter, permease protein SapC
G2583_1640	ECs1870	Z2496	sapB	Peptide transport system permease protein sapB
G2583_1641	ECs1871	Z2494	sapA	Homolog of Salmonella peptide transport periplasmic protein
G2583_1642	ECs1872	Z2493	ymjA	hypothetical protein
G2583_1643	ECs1873	Z2492	puuP	Putative amino acid/amine transport protein
G2583_1644	ECs1874	Z2491	puuA	Putative glutamine synthetase
G2583_1645	ECs1875	Z2490	puuD	Gamma-glutamyl-gamma-aminobutyrate hydrolase
G2583_1646	ECs1876	Z2489	puuR	DNA-binding transcriptional repressor
G2583_1647	ECs1877	Z2488	puuC	Gamma-glutamyl-gamma-aminobutyraldehyde dehydrogenase
G2583_1648	ECs1878	Z2487	puuB	Gamma-glutamylputrescine oxidoreductase
G2583_1649	ECs1879	Z2486	puuE	4-aminobutyrate transaminase
G2583_1650	ECs1880	Z2484	pspF	Psp operon transcriptional activator
G2583_1651	ECs1881	Z2482	pspA	Phage shock protein
G2583_1652	ECs1882	Z2480	pspB	Phage shock protein B
G2583_1653	ECs1883	Z2479	pspC	Phage shock protein C

Table S10. The orthologue table of the O55 and O157 strains Page 61

Locus_tag ^a			Gene	Product
CB9615	Sakai	EDL933		
G2583_1654	ECs1884	Z2478	pspD	Phage shock protein
G2583_1655	ECs1885	Z2477	pspE	Phage shock protein E
G2583_1656	ECs1886	Z2476	ycjM	Alpha amylase family protein
G2583_1656	ECs1887	Z2475	ycjM	Alpha amylase family protein
G2583_1657	ECs1888	Z2474	ycjN	Sugar-binding periplasmic protein
G2583_1657	ECs1889	Z2473	ycjN	Sugar-binding periplasmic protein
G2583_1658	ECs1890	Z2472	ycjO	Putative sugar ABC transporter, permease protein
G2583_1659	ECs1891	Z2471	ycjP	Binding-protein-dependent transport system inner membrane component
G2583_1660	ECs1892	Z2470	ycjQ	Oxidoreductase, zinc-binding dehydrogenase family
G2583_1661	ECs1893	Z2469	ycjR	AP endonuclease, family 2
G2583_1662	ECs1894	Z2468	ycjS	Gfo/idh/mocA family
G2583_1663	ECs1895	Z2467	ycjT	glycosyl hydrolase, family 65
G2583_1664	ECs1896	Z2465	ycjU	Beta-phosphoglucomutase
G2583_1665	ECs1897	Z2463	ycjV	Uncharacterized ABC transporter ATP-binding protein ycjV
G2583_1666	ECs1898	Z2462	ompG	Outer membrane protein G
G2583_1667	ECs1899	Z2461	ycjW	putative LACI-type transcriptional regulator
G2583_1668	ECs1900	Z2458	ycjX	putative EC 2.1 enzyme
G2583_1669	ECs1901	Z2456	ycjF	UPF0283 membrane protein ycjF
G2583_1670	ECs1902	Z2454	tyrR	DNA-binding transcriptional dual regulator, tyrosine-binding
G2583_1671	ECs1903	Z2452	tpx	Thiol peroxidase
G2583_1672	ECs1904	Z2450	ycjG	Mandelate racemase/muconate lactonizing enzyme family protein
G2583_1673	ECs1905	Z2448	mpaA	murein peptide amidase A
G2583_1674	ECs1906	Z2446	ymjC	NmrA family protein
G2583_1675	ECs1907	Z2445	-	hypothetical protein
G2583_1675	ECs1908	Z2444	-	hypothetical protein
G2583_1676	ECs1909	Z2442	ycjY	hypothetical protein
G2583_1677	ECs1910	Z2439	ycjZ	putative transcriptional regulator LYSR-type
G2583_1678	ECs1911	Z2438	mppA	Putative transport periplasmic protein
G2583_1679	ECs1912	Z2437	ynaI	MscS family inner membrane protein ynaI
G2583_1680	ECs1913	Z2436	ynaJ	hypothetical protein
G2583_1681	ECs1914	Z2435	uspE	Universal stress protein E
G2583_1682	ECs1915	Z2433	fnr	Fumarate and nitrate reduction regulatory protein
G2583_1683	ECs1916	Z2432	ogt	Methylated-DNA-[protein]-cysteine S-methyltransferase
G2583_1684	ECs1917	Z2431	abgT	Aminobenzoyl-glutamate transport protein
Indel-78	ECs1918	Z2430	-	putative transposase OrfB protein of insertion sequence IS629
Indel-78	ECs1919	Z2429	-	putative transposase OrfA protein of insertion sequence IS629
G2583_1684	ECs1920	Z2428	abgT	Aminobenzoyl-glutamate transport protein
G2583_1685	ECs1921	Z2427	abgB	Aminobenzoyl-glutamate utilization protein B

Table S10. The orthologue table of the O55 and O157 strains Page 62

Locus_tag ^a			Gene	Product
CB9615	Sakai	EDL933		
G2583_1686	ECs1922	Z2425	abgA	Aminobenzoyl-glutamate utilization protein A
G2583_1687	ECs1923	Z2423	abgR	putative DNA-binding transcriptional regulator
G2583_1688			-	ncRNA
G2583_1689	ECs1924	Z2422	ydaL	Smr domain protein
G2583_1690	ECs1925	Z2421	ydaM	hypothetical protein
G2583_1691	ECs1926	Z2419	ydaN	Zinc transport protein zntB
G2583_1692			-	ncRNA
G2583_1693	ECs1927	Z2417	dbpA	ATP-independent RNA helicase DbpA
G2583_1694	ECs1928	Z2416	ttcA	C32 tRNA thiolase
G2583_1695	ECs1929	Z2415	intR	Putative integrase for prophage CP-933R
G2583_1696	ECs1930	Z2414	ydaQ	hypothetical protein
G2583_1697	ECs1931	Z2413	ydaC	hypothetical protein
G2583_1698	ECs1932	Z2412	lar	Restriction alleviation and modification enhancement protein
G2583_1699	ECs1933	Z2410	recT	Recombinase, DNA renaturation protein encoded by prophage CP-933R
G2583_1700	ECs1934	Z2409	recE	Putative exodeoxyribonuclease VIII of prophage CP-
Indel-79	ECs1935	Z2408	racC	racC protein
Indel-79	ECs1936	Z2406	ydaD	hypothetical protein
Indel-79	ECs1937	Z2404	sieB	phage superinfection exclusion protein
Indel-79	ECs1939		-	hypothetical protein
Indel-79	ECs1938	Z2403	-	hypothetical protein
Indel-79	ECs1940	Z2402	-	hypothetical protein
Indel-79	ECs1941	Z2400	-	putative transcriptional regulator
Indel-79	ECs1942	Z2399	-	regulatory protein
Indel-79	ECs1943	Z2398	-	hypothetical protein
Indel-79	ECs1944	Z2397	-	hypothetical protein
Indel-79	ECs1945	Z2396	-	putative DNA replication factor
Indel-79	ECs1946	Z2395	-	hypothetical protein
Indel-79	ECs1947		-	hypothetical protein
Indel-79	ECs1948	Z2394	-	hypothetical protein
Indel-79	ECs1949	Z2393	-	hypothetical protein
Indel-79	ECs1950	Z2392	-	hypothetical protein
Indel-79	ECs1951	Z2391	-	hypothetical protein
Indel-79	ECs1952	Z2390	-	hypothetical protein
Indel-79	ECs1953	Z2389	-	putative methyltransferase
Indel-79	ECs1954	Z2387	-	hypothetical protein
Indel-79	ECs1955	Z2386	-	hypothetical protein
Indel-79	ECs1956	Z2385	-	hypothetical protein
Indel-79	ECs1957		-	hypothetical protein
Indel-79	ECs1958	Z2384	-	putative antitermination protein
Indel-79	ECs1958	Z2382	-	putative antitermination protein
Indel-79	ileZ4	RNA039	ileZ4	Ile tRNA
Indel-79	tRNA25		tRNA25	-

Table S10. The orthologue table of the O55 and O157 strains Page 63

Locus_tag ^a			Gene	Product
CB9615	Sakai	EDL933		
Indel-79	argO4	RNA038	argO4	Arg tRNA
Indel-79	ECs1959	Z2379	-	hypothetical protein
Indel-79	ECs1960	Z2378	-	hypothetical protein
Indel-79	ECs1961	Z2377	-	hypothetical protein
Indel-80	ECs1962	Indel-80	-	putative holin protein
Indel-80	ECs1963	Indel-80	-	hypothetical protein
Indel-80	ECs1964	Indel-80	-	putative endolysin
Indel-80	ECs1965	Indel-80	-	putative antirepressor protein
Indel-80	ECs1966	Indel-80	-	putative endopeptidase
Indel-80	ECs1967	Indel-80	-	hypothetical protein
Indel-80	ECs1968	Indel-80	-	putative DNase
Indel-80	ECs1969	Indel-80	-	hypothetical protein
Indel-80	ECs1970	Indel-80	-	putative terminase small subunit
Indel-80	ECs1971	Indel-80	-	putative terminase large subunit
Indel-80	ECs1972	Indel-80	-	putative phage major head protein/prohead protease
Indel-80	ECs1973	Indel-80	-	hypothetical protein
Indel-80	ECs1974	Indel-80	-	putative portal protein
Indel-80	ECs1975	Indel-80	-	hypothetical protein
Indel-80	ECs1976	Indel-80	-	hypothetical protein
Indel-80	ECs1977	Indel-80	-	putative head-tail adaptor
Indel-80	ECs1978	Indel-80	-	hypothetical protein
Indel-80	ECs1979	Indel-80	-	hypothetical protein
Indel-80	ECs1980	Indel-80	-	major tail protein
Indel-80	ECs1981	Indel-80	-	putative tail assembly chaperon
Indel-80	ECs1982	Indel-80	-	hypothetical protein
Indel-80	ECs1983	Indel-80	-	putative tail length tape measure protein
Indel-80	ECs1984	Indel-80	-	putative minor tail protein
Indel-80	ECs1985	Indel-80	-	putative minor tail protein
Indel-80	ECs1986	Indel-80	-	putative tail assembly protein
Indel-80	ECs1987	Indel-80	-	putative tail assembly protein
Indel-80	ECs1988	Indel-80	-	hypothetical protein
Indel-80	ECs1989	Indel-80	-	putative copper/zinc-superoxide dismutase
Indel-80	ECs1990	Indel-80	-	putative host specificity protein
Indel-81	Indel-81	Z2343	-	partial putative outer membrane protein Lom precursor encoded by prophage CP-933R
Indel-81	Indel-81	Z2344	-	putative tail fiber protein encoded by prophage CP-
Indel-81	Indel-81	Z2346	-	partial putative phage tail protein encoded by prophage CP-933R
Indel-81	Indel-81	Z2347	-	putative copper-zinc superoxide dismutase encoded within prophage CP-933R
Indel-81	Indel-81	Z2348	-	partial putative phage tail protein encoded by prophage CP-933R
Indel-81	Indel-81	Z2350	-	partial putative phage tail protein encoded by prophage CP-933R

Table S10. The orthologue table of the O55 and O157 strains Page 64

Locus_tag ^a			Gene	Product
CB9615	Sakai	EDL933		
Indel-81	Indel-81	Z2351	-	putative tail component of prophage CP-933R
Indel-81	Indel-81	Z2352	-	putative tail component of prophage CP-933R
Indel-81	Indel-81	Z2353	-	putative tail component of prophage CP-933R
Indel-81	Indel-81	Z2354	-	partial putative tail component of prophage CP-933R
Indel-81	Indel-81	Z2355	-	partial putative tail component of prophage CP-933R
Indel-81	Indel-81	Z2356	-	putative tail component of prophage CP-933R
Indel-81	Indel-81	Z2357	-	putative tail component of prophage CP-933R
Indel-81	Indel-81	Z2358	-	putative tail component of prophage CP-933R
Indel-81	Indel-81	Z2359	-	partial putative capsid structural protein of prophage CP-933R
Indel-81	Indel-81	Z2360	-	putative capsid protein of prophage CP-933R
Indel-81	Indel-81	Z2361	-	putative capsid assembly protein of prophage CP-933R
Indel-81	Indel-81	Z2362	-	putative capsid protein of prophage CP-933R
Indel-81	Indel-81	Z2363	-	putative DNA packaging protein of prophage CP-933R
Indel-81	Indel-81	Z2364	-	putative DNA packaging protein of prophage CP-933R; terminase large subunit
Indel-81	Indel-81	Z2365	-	putative DNA packaging protein of prophage CP-933R; terminase small subunit
Indel-81	Indel-81	Z2366	-	unknown protein encoded within prophage CP-933R
Indel-81	Indel-81	Z2367	-	unknown protein encoded within prophage CP-933R
Indel-81	Indel-81	Z2368	-	unknown protein encoded within prophage CP-933R
Indel-81	Indel-81	Z2369	-	putative endopeptidase Rz of prophage CP-933R
Indel-81	Indel-81	Z2370	-	unknown protein encoded within prophage CP-933R
Indel-81	Indel-81	Z2371	-	putative lysozyme R of prophage CP-933R
Indel-81	Indel-81	Z2372	-	unknown protein encoded within prophage CP-933R
Indel-81	Indel-81	Z2374	-	putative holin protein of prophage CP-933R
Indel-81	Indel-81	Z2375	-	orf; hypothetical protein in IS629 within prophage CP-
Indel-81	Indel-81	Z2376	-	putative IS629 transposase within prophage CP-933R
Indel-82	ECs1991	Z2342	-	putative outer membrane protein
	ECs1992	Z2340	-	putative tail fiber protein
G2583_1701	Indel-83	Indel-83	racC	Putative bacteriophage protein
G2583_1702	Indel-83	Indel-83	ydaE	Putative bacteriophage protein
G2583_1703	Indel-83	Indel-83	kilR	Putative cell division inhibitor protein
G2583_1704	Indel-83	Indel-83	-	conserved hypothetical protein
G2583_1705	Indel-83	Indel-83	racR	Rac prophage repressor
G2583_1706	Indel-83	Indel-83	ydaS	putative tail fiber protein
G2583_1707	Indel-83	Indel-83	ydaT	conserved hypothetical protein
G2583_1708	Indel-83	Indel-83	ydaU	hypothetical protein
G2583_1709	Indel-83	Indel-83	ydaV	Putative DNA replication factor encoded by prophage CP-933R
G2583_1710	Indel-83	Indel-83	ydaW	conserved hypothetical protein
G2583_1711	Indel-83	Indel-83	renP	hypothetical protein
G2583_1712	Indel-83	Indel-83	-	unknown protein encoded by cryptic prophage CP-933P
G2583_1713	Indel-83	Indel-83	-	conserved hypothetical protein

Table S10. The orthologue table of the O55 and O157 strains Page 65

Locus_tag ^a			Gene	Product
CB9615	Sakai	EDL933		
G2583_1714	Indel-83	Indel-83	-	hypothetical protein
G2583_1715	Indel-83	Indel-83	mokP	Putative cell killing protein encoded within cryptic prophage CP-933P
G2583_1716	Indel-83	Indel-83	-	Putative bacteriophage cohesive ends
G2583_1717	Indel-83	Indel-83	-	hypothetical protein
G2583_1718	Indel-83	Indel-83	-	Putative antitermination protein
G2583_1719	Indel-83	Indel-83	-	unknown protein encoded by prophage CP-933O
G2583_1720	Indel-83	Indel-83	-	YjhS
G2583_1721	Indel-83	Indel-83	-	hypothetical protein
G2583_1722	Indel-83	Indel-83	-	Putative lysis protein S of prophage CP-933V
G2583_1723	Indel-83	Indel-83	-	putative endolysin
G2583_1724	Indel-83	Indel-83	-	putative endolysin
G2583_1725	Indel-83	Indel-83	-	Anti-repressor protein Ant
G2583_1726	Indel-83	Indel-83	-	Endopeptidase
G2583_1727	Indel-83	Indel-83	-	hypothetical protein
G2583_1728	Indel-83	Indel-83	-	hypothetical protein
G2583_1729	Indel-83	Indel-83	-	conserved hypothetical protein
G2583_1730	Indel-83	Indel-83	-	Phage terminase large subunit
G2583_1731	Indel-83	Indel-83	-	hypothetical protein
G2583_1732	Indel-83	Indel-83	-	Peptidase S14, ClpP
G2583_1733	Indel-83	Indel-83	-	unknown protein encoded within prophage CP-933U
G2583_1734	Indel-83	Indel-83	-	hypothetical protein
G2583_1735	Indel-83	Indel-83	-	Putative tail fiber component Z
G2583_1736	Indel-83	Indel-83	-	putative tail fiber component U of prophage CP-933U
G2583_1737	Indel-83	Indel-83	-	hypothetical protein
G2583_1738	Indel-83	Indel-83	-	Minor tail protein G
G2583_1739	Indel-83	Indel-83	-	Minor tail protein T
G2583_1740	Indel-83	Indel-83	-	Minor tail protein H
G2583_1741	Indel-83	Indel-83	-	putative tail component of prophage CP-933O
G2583_1742	Indel-83	Indel-83	-	Phage-related protein
G2583_1743	Indel-83	Indel-83	-	Putative tail fiber component
G2583_1744	Indel-83	Indel-83	-	putative tail assembly protein
G2583_1745	Indel-83	Indel-83	-	Phage-related protein, tail component
G2583_1746	Indel-83	Indel-83	-	Putative outer membrane protein Lom of prophage CP-933O
G2583_1747	Indel-83	Indel-83	-	putative tail fiber protein
	ECs1993		-	hypothetical protein
G2583_1748	ECs1994	Z2339	-	unknown protein encoded by prophage CP-933R
G2583_1749	ECs1995	Z2338	-	unknown protein encoded by prophage CP-933R
G2583_1750	ECs1996	Z2337	-	unknown protein encoded by prophage CP-933R
G2583_1751	ECs1997	Z2335	uspF	Universal stress protein F
G2583_1752	ECs1998	Z2334	ompN	Outer membrane protein N
G2583_1752	ECs1999	Z2333	ompN	Outer membrane protein N
G2583_1753			-	ncRNA

Table S10. The orthologue table of the O55 and O157 strains Page 66

Locus_tag ^a			Gene	Product
CB9615	Sakai	EDL933		
G2583_1754	ECs2000	Z2332	ydbK	Pyruvate-flavodoxin oxidoreductase
G2583_1755			ydbJ	hypothetical protein
G2583_1756	ECs2001	Z2330	hslJ	Heat shock protein HslJ
G2583_1757	ECs2002	Z2329	ldhA	D-lactate dehydrogenase
G2583_1758	ECs2003	Z2328	ydbH	hypothetical protein
G2583_1759	ECs2004	Z2327	ynbE	hypothetical protein
G2583_1760	ECs2005	Z2326	ydbL	hypothetical protein
G2583_1761		Z2325	entS	hypothetical protein
G2583_1762	ECs2006	Z2323	-	putative BigA-like protein
G2583_1763	ECs2007	Z2322	entS	putative outer membrane protein
G2583_1764	ECs2008	Z2321	ydbC	Oxidoreductase, aldo/keto reductase family
G2583_1765	ECs2009	Z2320	ydbD	hypothetical protein
G2583_1766	ECs2010	Z2319	ynbA	Phosphatidylglycerophosphate synthase
G2583_1767	ECs2011	Z2318	ynbB	Phosphatidate cytidyltransferase
G2583_1768	ECs2012	Z2317	ynbC	hypothetical protein
G2583_1769	ECs2013	Z2316	ynbD	hypothetical protein
G2583_1770	ECs2014	Z2315	azoR	FMN-dependent NADH-azoreductase
G2583_1771	ECs2015	Z2313	hrpA	HrpA-like helicases
G2583_1772	ECs2016	Z2312	-	hypothetical protein
G2583_1773	ECs2017	Z2311	-	hypothetical protein
G2583_1774	ECs2018	Z2310	-	hypothetical protein
G2583_1775	ECs2019	Z2309	-	hypothetical protein
G2583_1776	ECs2020	Z2308	ydcF	hypothetical protein
G2583_1777	ECs2021	Z2306	aldA	Aldehyde dehydrogenase A
G2583_1778	ECs2022	Z2304	gapC	Glyceraldehyde-3-phosphate dehydrogenase C
G2583_1779	ECs2023	Z2303	cybB	Nickel-dependent hydrogenase, b-type cytochrome subunit
G2583_1780			-	ncRNA
G2583_1781	ECs2024	Z2302	ydcA	hypothetical protein
G2583_1782	ECs2025	Z2301	mokB	hypothetical protein
G2583_1783	ECs2026	Z2300	trg	Methyl-accepting chemotaxis protein III, ribose sensor receptor
G2583_1784	ECs2027	Z2299	ydcI	putative transcriptional regulator LYSR-type
G2583_1785	ECs2028	Z2298	ydcJ	hypothetical protein
G2583_1785	ECs2028	Z2297	ydcJ	hypothetical protein
G2583_1785	ECs2028	Z2296	ydcJ	hypothetical protein
G2583_1786	ECs2029	Z2294	mdoD	Glucans biosynthesis protein D precursor
G2583_1787	ECs2030	Z2293	-	hypothetical protein
G2583_1788	ECs2031	Z2292	ydcH	hypothetical protein
G2583_1789	ECs2032	Z2291	rimL	Ribosomal-protein-serine acetyltransferase
G2583_1790	ECs2033	Z2290	ydcK	hypothetical protein
G2583_1791	ECs2034	Z2289	tehA	Tellurite resistance protein tehA
G2583_1792	ECs2035	Z2288	tehB	Tellurite resistance protein TehB
G2583_1793	ECs2036	Z2287	ydcL	Uncharacterized lipoprotein ydcL precursor

Table S10. The orthologue table of the O55 and O157 strains Page 67

Locus_tag ^a			Gene	Product
CB9615	Sakai	EDL933		
G2583_1794	ECs2038	Z2286	ydcO	hypothetical protein
G2583_1795	ECs2037	Z2285	ydcN	DNA-binding protein
G2583_1796	ECs2039	Z2284	ydcP	Peptidase, U32 family
G2583_1797	ECs2040	Z2283	yncJ	hypothetical protein
G2583_1798	ECs2041	Z2282	-	hypothetical protein
G2583_1799	ECs2042	Z2281	ydcQ	Predicted DNA-binding transcriptional regulator
G2583_1800	ECs2043	Z2280	ydcR	multi modular; putative transcriptional regulator; also putative ATP-binding component of a transport system
G2583_1801	ECs2044	Z2279	ydcS	ABC transporter, periplasmic substrate-binding protein
G2583_1802	ECs2045	Z2278	ydcT	ABC transporter, ATP-binding protein
G2583_1803	ECs2046	Z2277	ydcU	ABC transporter, permease protein
G2583_1804	ECs2047	Z2276	ydcV	Putative transport system permease protein
G2583_1805	ECs2048	Z2275	ydcW	Gamma-aminobutyraldehyde dehydrogenase
G2583_1806	ECs2049	Z2274	ydcX	hypothetical protein
G2583_1807	ECs2050	Z2273	ydcY	hypothetical protein
G2583_1808	ECs2051	Z2272	ydcZ	hypothetical protein
G2583_1809	ECs2052	Z2271	yncA	Acetyltransferase, GNAT family
G2583_1810	ECs2053	Z2270	yncB	Putative NADP-dependent oxidoreductase yncB
G2583_1811	ECs2054	Z2269	yncC	putative DNA-binding transcriptional regulator
G2583_1812	ECs2055	Z2268	yncD	TonB-dependent receptor
G2583_1813	ECs2056	Z2267	yncE	Uncharacterized conserved protein
G2583_1814	ECs2057	Z2266	ansP	L-asparagine permease
G2583_1815	ECs2058	Z2265	yncG	putative transferase
G2583_1816	ECs2059	Z2264	yncH	conserved hypothetical protein
G2583_1817		Z2263	-	hypothetical protein
G2583_1818	ECs2060	Z2262	vgrE	unknown protein associated with Rhs element
G2583_1819	ECs2061	Z2261	rhsE	protein rhsE
G2583_1819	ECs2061	Z2259	rhsE	protein rhsE
G2583_1819	ECs2061	Z2257	rhsE	protein rhsE
G2583_1820		Z2256	-	DsORF-e4
G2583_1821		Z2255	-	unknown protein associated with Rhs element
G2583_1822		Z2254	ydcC	H repeat-associated protein
G2583_1822	ECs2062	Z2253	ydcC	H repeat-associated protein
G2583_1822	ECs2063		ydcC	H repeat-associated protein
G2583_1823	ECs2064	Z2252	pptA	Probable tautomerase ydcE
G2583_1824	ECs2065	Z2251	yddH	hypothetical protein
G2583_1825	ECs2066	Z2250	nhoA	Putative N-hydroxyarylamine O-acetyltransferase
G2583_1825		Z2249	nhoA	Putative N-hydroxyarylamine O-acetyltransferase
G2583_1826	ECs2067	Z2248	yddE	Uncharacterized isomerase yddE
G2583_1827	ECs2068	Z2247	narV	Nitrate reductase 2, gamma subunit
G2583_1828	ECs2069	Z2246	narW	Nitrate reductase molybdenum cofactor assembly chaperone 2
G2583_1829	ECs2070	Z2245	narY	Nitrate reductase 2, beta subunit
G2583_1830	ECs2071	Z2244	narZ	Nitrate reductase 2, alpha subunit

Table S10. The orthologue table of the O55 and O157 strains Page 68

Locus_tag ^a			Gene	Product
CB9615	Sakai	EDL933		
G2583_1831	ECs2072	Z2243	narU	Nitrite extrusion protein 2
G2583_1832	ECs2073	Z2242	yddJ	Leucine-rich repeat protein
G2583_1833	ECs2074	Z2241	-	hypothetical protein
G2583_1834	ECs2075	Z2240	-	hypothetical protein
G2583_1835	ECs2076	Z2239	-	Gram-negative porin family
G2583_1836	ECs2077	Z2238	yddG	hypothetical protein
G2583_1837	ECs2078	Z2236	fdnG	nitrate-inducible formate dehydrogenase-N alpha
G2583_1838	ECs2079	Z2235	fdnH	Formate dehydrogenase, nitrate-inducible, iron-sulfur subunit
G2583_1839	ECs2080	Z2234	fdnI	Formate dehydrogenase-N gamma subunit
G2583_1840	ECs2081	Z2233	yddM	hypothetical protein
G2583_1841	ECs2082	Z2232	adhP	Zn-dependent alcohol dehydrogenases
G2583_1842	ECs2083	Z2231	maeA	NAD-dependent malic enzyme
G2583_1843	ECs2084	Z2230	sra	Stationary-phase-induced ribosome-associated protein
G2583_1844	ECs2085	Z2229	bdm	biofilm-dependent modulation protein
G2583_1845	ECs2086	Z2228	osmC	Peroxiredoxin OsmC
G2583_1846	ECs2087	Z2227	ddpF	Putative ABC transport system ATP-binding protein
G2583_1847	ECs2088	Z2226	ddpD	ABC transporter, ATP-binding protein
G2583_1848	ECs2089	Z2225	ddpC	Inner membrane ABC transporter permease protein
G2583_1849	ECs2090	Z2224	ddpB	Binding-protein-dependent transport systems inner membrane component
G2583_1850	ECs2091	Z2223	ddpA	Putative ABC transporter periplasmic-binding protein
G2583_1851	ECs2092	Z2222	ddpX	D-alanyl-D-alanine dipeptidase
G2583_1852	ECs2093	Z2221	dos	FOG: PAS/PAC domain
G2583_1852	ECs2094	Z2220	dos	FOG: PAS/PAC domain
G2583_1853	ECs2095	Z2219	yddV	Diguanylate cyclase yddV
G2583_1854	ECs2096	Z2217	yddW	Uncharacterized lipoprotein yddW precursor
G2583_1855	ECs2097	Z2216	gadC	Probable glutamate/gamma-aminobutyrate antiporter
G2583_1856	ECs2098	Z2215	gadB	Glutamate decarboxylase beta
G2583_1857	ECs2099	Z2214	pqqL	Putative peptidase
G2583_1858	ECs2100	Z2213	yddB	TonB-dependent receptor
G2583_1859	ECs2101	Z2212	yddA	Inner membrane ABC transporter ATP-binding protein
G2583_1860	ECs2102	Z2211	ydeM	Putative enzyme
G2583_1861	ECs2103	Z2210	ydeN	Putative sulfatase
G2583_1862	ECs2104	Z2209	ydeO	transcriptional regulator YdeO
G2583_1863	ECs2105	Z2208	-	Two-component-system connector protein yneN
G2583_1864	ECs2106	Z2207	ydeP	putative oxidoreductase major subunit
G2583_1865	ECs2107	Z2206	ydeQ	transcriptional regulator BoIA
G2583_1866	ECs2108	Z2205	ydeR	Uncharacterized fimbrial-like protein ydeR precursor
G2583_1867	ECs2109	Z2204	ydeS	biofilm-dependent modulation protein
G2583_1868	ECs2110	Z2202	fimD	Fimbrial usher family protein
	ECs2111		-	hypothetical protein
G2583_1868		Z2203	fimD	Fimbrial usher family protein
G2583_1869	ECs2112	Z2201	FimC	P pilus assembly protein, chaperone PapD

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Locus_tag ^a			Gene	Product
CB9615	Sakai	EDL933		
G2583_1870	ECs2113	Z2200	fmlA	Putative Fml fimbriae subunit
G2583_1871	ECs2114	Z2199	yneL	Putative ARAC-type regulatory protein
G2583_1872	ECs2115	Z2197	hipA	regulator with hipB
G2583_1873	Indel-91	Indel-91	hipB	transcriptional regulator HipB
G2583_1874	ECs2116	Z2196	ydeU	Outer membrane autotransporter barrel domain protein precursor
G2583_1875	ECs2117	Z2195	ydeK	hypothetical protein
G2583_1876	ECs2118	Z2194	lsrK	Carbohydrate kinase FGGY
G2583_1877	ECs2119	Z2193	lsrR	putative transcriptional regulator, sorC family
G2583_1878	ECs2120	Z2192	lsrA	Autoinducer-2 ABC transporter, ATP-binding protein
G2583_1879	ECs2121	Z2191	lsrC	Autoinducer-2 ABC transporter, permease protein LsrC
G2583_1880	ECs2122	Z2190	lsrD	Autoinducer-2 ABC transporter, permease protein LsrD
G2583_1881	ECs2123	Z2189	lsrB	Autoinducer-2 ABC transporter, periplasmic autoinducer-2-binding protein LsrB
G2583_1882	ECs2124	Z2188	lsrF	Uncharacterized aldolase yneB
G2583_1883	ECs2125	Z2187	lsrG	autoinducer-2 (AI-2) modifying protein LsrG
G2583_1884	ECs2126	Z2186	tam	Trans-aconitate 2-methyltransferase
G2583_1885	ECs2127	Z2185	yneE	hypothetical protein
G2583_1886	ECs2128	Z2184	uxaB	Altronate oxidoreductase
G2583_1887	ECs2129	Z2182	yneF	Diguanylate cyclase (GGDEF) domain protein
G2583_1887		Z2181	yneF	Diguanylate cyclase (GGDEF) domain protein
G2583_1888	ECs2130	Z2180	yneG	hypothetical protein
G2583_1889	ECs2131	Z2179	yneH	Glutaminase 2
G2583_1890	ECs2132	Z2178	yneI	NAD-dependent aldehyde dehydrogenases
G2583_1891	ECs2133	Z2177	yneJ	putative transcriptional regulator LYSR-type
G2583_1892	ECs2134	Z2176	yneK	hypothetical protein
G2583_1892		Z2175	yneK	hypothetical protein
G2583_1893	ECs2135	Z2173	ydeA	Probable sugar efflux transporter
G2583_1894	ECs2136	Z2172	marC	MarC
G2583_1895	ECs2137	Z2171	marR	MarR
G2583_1896	ECs2138	Z2170	marA	Multiple antibiotic resistance protein marA
G2583_1897	ECs2139	Z2169	marB	Multiple antibiotic resistance protein MarB
G2583_1898	ECs2140	Z2168	eamA	Transporter, 10 TMS drug/metabolite exporter (DME) family
G2583_1899	ECs2141	Z2166	ydeE	Transporter, major facilitator family
G2583_1900		Z2165	-	Rhodanese domain protein
	ECs2142		-	hypothetical protein
G2583_1901	ECs2143	Z2164	ftrA	Transcriptional activator FtrA
G2583_1902	ECs2144	Z2163	ydeH	Diguanylate cyclase
G2583_1903	ECs2145	Z2162	ydeI	hypothetical protein
G2583_1904	ECs2146	Z2161	ydeJ	Competence/damage-inducible protein CinA C-terminal domain protein
G2583_1905	ECs2147	Z2160	dcp	Peptidyl-dipeptidase Dcp
G2583_1906	ECs2148	Z2158	ydfG	L-allo-threonine dehydrogenase, NAD(P)-binding

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Locus_tag ^a			Gene	Product
CB9615	Sakai	EDL933		
G2583_1907	ECs2149	Z2157	ydfH	Hypothetical transcriptional regulator ydfH
G2583_1908	ECs2150	Z2156	ydfZ	Putative selenoprotein ydfZ
G2583_1909	ECs2151	Z2155	ydfI	Mannitol dehydrogenase family protein
G2583_1910	ECs2152	Z2153	ydfJ	Inner membrane metabolite transport protein ydfJ
G2583_1911	ECs2153	Z2152	-	unknown protein encoded within CP-933O
Indel-92	ECs2154	Z2151	-	hypothetical protein
Indel-92	ECs2155	Z2150	-	hypothetical protein
Indel-92	ECs2156	Z2149	-	hypothetical protein
Indel-92	ECs2157	Z2148	-	hypothetical protein
Indel-92	ECs2158		-	putative tail fiber protein
Indel-93	ECs2159	Indel-93	-	putative tail fiber protein
Indel-93	ECs2160	Indel-93	-	putative outer host membrane protein precursor
Indel-93	ECs2161	Indel-93	-	putative host specificity protein
Indel-93	ECs2162	Indel-93	-	putative tail assembly protein
Indel-93	ECs2163	Indel-93	-	putative tail assembly protein
Indel-93	ECs2164	Indel-93	-	putative minor tail protein
Indel-93	ECs2165	Indel-93	-	putative minor tail protein
Indel-93	ECs2166	Indel-93	-	putative tail length tape measure protein precursor
Indel-93	ECs2167	Indel-93	-	putative minor tail protein
Indel-93	ECs2168	Indel-93	-	minor tail protein
Indel-93	ECs2169	Indel-93	-	hypothetical protein
Indel-93	ECs2170	Indel-93	-	putative minor tail protein
Indel-93	ECs2171	Indel-93	-	putative minor tail protein
Indel-93	ECs2172	Indel-93	-	putative tail attachment protein
Indel-93	ECs2173	Indel-93	-	putative DNA-packaging protein
Indel-93	ECs2174	Indel-93	-	putative major capsid protein
Indel-93	ECs2175	Indel-93	-	putative head decoration protein
Indel-93	ECs2176	Indel-93	-	putative minor capsid protein precursor
Indel-93	ECs2177	Indel-93	-	putative portal protein
Indel-93	ECs2178	Indel-93	-	putative head-to-tail joining protein
Indel-93	ECs2179	Indel-93	-	putative terminase large subunit
Indel-93	ECs2180	Indel-93	-	putative terminase small subunit
Indel-93	ECs2181	Indel-93	-	hypothetical protein
Indel-93	ECs2182	Indel-93	-	putative transcriptional regulator
Indel-93	ECs2184	Indel-93	-	putative endopeptidase
Indel-93	ECs2183	Indel-93	-	putative lipoprotein Rz1 precursor
Indel-93	ECs2185	Indel-93	-	putative antirepressor protein
Indel-93	ECs2186	Indel-93	-	putative endolysin
Indel-93	ECs2187	Indel-93	-	hypothetical protein
Indel-93	ECs2188	Indel-93	-	putative holin protein
Indel-93	ECs2189	Indel-93	-	hypothetical protein
Indel-94	Indel-94	Z2108	-	hypothetical phage protein similar to YjhS encoded within prophage CP-933O

Table S10. The orthologue table of the O55 and O157 strains Page 71

Locus_tag ^a			Gene	Product
CB9615	Sakai	EDL933		
Indel-94	Indel-94	Z2109	-	hypothetical phage protein similar to YjhS encoded within prophage CP-933O
Indel-94	Indel-94	Z2110	-	putative transposase encoded within prophage CP-
Indel-94	Indel-94	Z2111	-	putative transposase encoded within prophage CP-
Indel-94	Indel-94	Z2112	-	putative ClpP-like protease encoded within prophage CP-933O
Indel-94	Indel-94	Z2113	-	unknown protein encoded within prophage CP-933O
Indel-94	Indel-94	Z2114	-	unknown protein encoded within prophage CP-933O
Indel-94	Indel-94	Z2115	-	unknown protein encoded within prophage CP-933O
Indel-94	Indel-94	Z2116	-	unknown protein encoded within prophage CP-933O similar to terminase large subunit of phage lambda
Indel-94	Indel-94	Z2117	-	unknown protein encoded within prophage CP-933O
Indel-94	Indel-94	Z2118	-	putative endopeptidase Rz of prophage CP-933O
Indel-94	Indel-94	Z2119	-	unknown protein encoded within prophage CP-933O
Indel-94	Indel-94	Z2120	-	putative endolysin of prophage CP-933O
Indel-94	Indel-94	Z2121	-	unknown protein encoded within prophage CP-933O
Indel-94	Indel-94	Z2122	-	putative holin protein of prophage CP-933O
Indel-94	Indel-94	Z2123	-	unknown protein encoded within prophage CP-933O
Indel-94	Indel-94	Z2124	-	unknown protein encoded within prophage CP-933O
Indel-94	Indel-94	Z2127	-	putative IS encoded protein encoded within prophage CP-933O
Indel-94	Indel-94	Z2130	-	putative IS encoded protein encoded within prophage CP-933O
Indel-94	Indel-94	Z2131	-	putative terminase large subunit of prophage CP-933O
Indel-94	Indel-94	Z2132	-	putative head completion protein of prophage CP-933O
Indel-94	Indel-94	Z2133	-	putative capsid assembly protein of prophage CP-933O
Indel-94	Indel-94	Z2134	-	putative head-tail preconnector protein of prophage CP-933O
Indel-94	Indel-94	Z2135	-	putative capsid protein small subunit of prophage CP-933O
Indel-94	Indel-94	Z2136	-	partial putative major capsid protein of prophage CP-
Indel-94	Indel-94	Z2137	-	putative tail component of prophage CP-933O
Indel-94	Indel-94	Z2138	-	putative tail component of prophage CP-933O
Indel-94	Indel-94	Z2139	-	putative tail component of prophage CP-933O
Indel-94	Indel-94	Z2140	-	putative tail component of prophage CP-933O
Indel-94	Indel-94	Z2141	-	putative tail component of prophage CP-933O
Indel-94	Indel-94	Z2142	-	putative tail component of prophage CP-933O
Indel-94	Indel-94	Z2143	-	putative tail component of prophage CP-933O
Indel-94	Indel-94	Z2144	-	putative tail component of prophage CP-933O
Indel-94	Indel-94	Z2145	-	putative tail component of prophage CP-933O
Indel-94	Indel-94	Z2146	-	putative outer membrane protein Lom precursor of prophage CP-933O
Indel-92	Indel-92	Z2147	-	putative tail fiber protein of prophage CP-933O
Indel-95		Z2107	-	unknown protein encoded within prophage CP-933O

Table S10. The orthologue table of the O55 and O157 strains Page 72

Locus_tag ^a			Gene	Product
CB9615	Sakai	EDL933		
Indel-95	ECs2190	Z2106	-	hypothetical protein
Indel-95	ECs2190	Z2105	-	hypothetical protein
Indel-95	argO5		argO5	Arg tRNA
Indel-95	tRNA99		tRNA99	-
Indel-95	ileZ5		ileZ5	Ile tRNA
Indel-95	ECs2191	Z2104	-	putative transcriptional regulator
Indel-95	ECs2192	Z2103	-	hypothetical protein
Indel-95	ECs2193	Z2102	-	putative ante-terminator protein
Indel-95	ECs2194	Z2101	-	putative crossover junction endodeoxyribonuclease
Indel-95	ECs2195	Z2100	-	hypothetical protein
Indel-95	ECs2196		-	hypothetical protein
Indel-95	ECs2197	Z2099	-	hypothetical protein
Indel-95	ECs2198		-	MokW
Indel-95	ECs2199	Z2098	-	hypothetical protein
Indel-95	ECs2200		-	hypothetical protein
Indel-95	ECs2201	Z2097	-	hypothetical protein
Indel-95	ECs2202		-	hypothetical protein
Indel-95	ECs2203		-	hypothetical protein
Indel-95	ECs2204	Z2096	-	hypothetical protein
Indel-95	ECs2204	Z2095	-	hypothetical protein
Indel-95	ECs2205	Z2094	-	putative replication protein
Indel-95	ECs2206	Z2093	-	hypothetical protein
Indel-95	ECs2207	Z2092	-	hypothetical protein
Indel-95	ECs2208	Z2091	-	putative regulatory protein
Indel-95	ECs2209	Z2090	-	putative repressor protein
Indel-95	ECs2210	Z2089	-	hypothetical protein
Indel-95	ECs2211	Z2088	-	hypothetical protein
Indel-95	ECs2212		-	hypothetical protein
Indel-95	ECs2213		-	hypothetical protein
Indel-95		Z2087	-	unknown protein encoded by prophage CP-9330
Indel-95	dicF2		dicF2	DicF antisense RNA
Indel-95	ECs2214	Z2086	-	putative cell division inhibitor
Indel-95	ECs2215		-	hypothetical protein
Indel-95	ECs2216	Z2085	-	putative exonuclease
Indel-95	ECs2217	Z2084	-	putative integrase
Indel-95	ECs2218	Z2083	-	hypothetical protein
Indel-96	ECs2219	Indel-96	-	putative transposase OrfB protein of insertion sequence IS629
Indel-96	ECs2220	Indel-96	-	putative transposase OrfA protein of insertion sequence IS629
G2583_1912	ECs2221	Z2082	tnpA	Transposase and inactivated derivatives
Indel-98	ECs2222		-	hypothetical protein
Indel-98	ECs2223	Z2081	-	hypothetical protein
Indel-98	ECs2224	Z2080	-	hypothetical protein

Table S10. The orthologue table of the O55 and O157 strains Page 73

Locus_tag ^a			Gene	Product
CB9615	Sakai	EDL933		
Indel-98	ECs2224	Z2079	-	hypothetical protein
G2583_1912	ECs2225	Z2078	tnpA	Transposase and inactivated derivatives
G2583_1913	ECs2226	Z2077	-	unknown protein encoded by prophage CP-933O
G2583_1914	ECs2227		-	hypothetical protein
G2583_1915	ECs2228	Z2076	-	conserved hypothetical protein
G2583_1916	ECs2229	Z2075	-	hypothetical protein
	ECs2230		-	hypothetical protein
Indel-99	ECs2231	Indel-99	-	putative tail fiber protein
Indel-99	ECs2232	Indel-99	-	putative outer membrane protein
Indel-99	ECs2233	Indel-99	-	putative host specificity protein
Indel-99	ECs2234	Indel-99	-	putative host specificity protein
Indel-99	ECs2235	Indel-99	-	putative host specificity protein
Indel-99	ECs2236	Indel-99	-	putative tail assembly protein
Indel-99	ECs2237	Indel-99	-	putative tail assembly protein
Indel-100	Indel-100	Z6030	-	putative tail component of cryptic prophage CP-933P
Indel-100	Indel-100	Z6031	-	putative tail assembly protein of cryptic prophage CP-933P
Indel-100	Indel-100	Z6032	-	putative tail assembly protein of cryptic prophage CP-933P
G2583_1917	Indel-101	Indel-101	-	putative tail fiber protein encoded by prophage CP-
G2583_1918	Indel-101	Indel-101	-	Enterobacterial Ail/Lom family protein
G2583_1919	Indel-101	Indel-101	-	Host specificity protein J
G2583_1920	Indel-101	Indel-101	-	Host specificity protein
G2583_1921	Indel-101	Indel-101	-	Putative tail fiber component K of prophage
G2583_1922	Indel-101	Indel-101	-	minor tail protein
G2583_1923	Indel-101	Indel-101	-	Minor tail family protein
G2583_1924	Indel-101	Indel-101	-	putative tail component of prophage CP-933O
G2583_1925	Indel-101	Indel-101	-	hypothetical protein
G2583_1926	Indel-101	Indel-101	-	phage minor tail protein G
G2583_1927	Indel-101	Indel-101	-	COG5492: Bacterial surface proteins containing Ig-like domains
G2583_1928	Indel-101	Indel-101	-	hypothetical protein
G2583_1929	Indel-101	Indel-101	-	hypothetical protein
G2583_1930	Indel-101	Indel-101	-	hypothetical protein
G2583_1931	Indel-101	Indel-101	-	conserved hypothetical protein
G2583_1932	Indel-101	Indel-101	-	phage major capsid protein E
G2583_1933	Indel-101	Indel-101	-	Bacteriophage lambda head decoration protein D
G2583_1934	Indel-101	Indel-101	-	COG0616: Periplasmic serine proteases (ClpP class)
G2583_1935	Indel-101	Indel-101	-	COG5511: Bacteriophage capsid protein
G2583_1936	Indel-101	Indel-101	-	putative head completion protein
G2583_1937	Indel-101	Indel-101	-	Putative terminase large subunit of prophage CP-933O
G2583_1938	Indel-101	Indel-101	-	Prophage Qin DNA packaging protein NU1 homolog
G2583_1939	Indel-101	Indel-101	nohA	conserved hypothetical protein
Indel-102	ECs2238	Z6033	-	minor tail protein

Table S10. The orthologue table of the O55 and O157 strains Page 74

Locus_tag ^a			Gene	Product
CB9615	Sakai	EDL933		
Indel-102	ECs2239		-	putative minor tail protein
Indel-102	ECs2240	Z6034	-	putative tail length tape measure protein
Indel-102	ECs2241	Z6035	-	putative tail protein
Indel-102	ECs2242	Z6036	-	putative tail assembly chaperone
Indel-102	ECs2243	Z6037	-	putative major tail subunit
Indel-102	ECs2244	Z6038	-	hypothetical protein
Indel-102	ECs2245	Z6039	-	hypothetical protein
Indel-102	ECs2246	Z6040	-	putative head-tail adaptor
Indel-102	ECs2247	Z6041	-	hypothetical protein
Indel-102	ECs2248	Z6042	-	putative portal protein
Indel-102		Z6043	-	unknown protein encoded by cryptic prophage CP-933P
Indel-102	ECs2249		-	hypothetical protein
Indel-102	ECs2250	Z6044	-	putative major head protein/prohead protease
Indel-102	ECs2251	Z6045	-	putative terminase large subunit
Indel-102	ECs2252	Z6046	-	putative terminase small subunit
Indel-102	ECs2253		-	hypothetical protein
Indel-102	ECs2254	Z6047	-	putative Dnase
Indel-102	ECs2255	Z6048	-	hypothetical protein
G2583_1940			-	conserved hypothetical protein
G2583_1941	ECs2257	Z6049	-	Putative endopeptidase Rz
	ECs2256		-	lipoprotein Rz1 precursor
G2583_1942	ECs2258	Z6050	antU	Antirepressor protein
G2583_1943	ECs2259	Z6051	-	putative endolysin
G2583_1944	ECs2260	Z6052	-	unknown protein encoded by cryptic prophage CP-933P
G2583_1945	ECs2261	Z6053	-	Putative lysis protein S of prophage CP-933V
Indel-103	ECs2262	Z6054	-	hypothetical protein
Indel-103	ECs2263		-	hypothetical protein
Indel-103		Z6055	-	unknown protein encoded by cryptic prophage CP-933P
Indel-103	ECs2264		-	hypothetical protein
Indel-103	ECs2265	Z6056	-	hypothetical protein
Indel-103	ECs2266		-	hypothetical protein
Indel-103	argO6	RNA040	argO6	Arg tRNA
Indel-103	argN4	RNA041	argN4	Arg tRNA
Indel-103	ileZ6	RNA042	ileZ6	Ile tRNA
Indel-103	ECs2267	Z6060	-	putative antitermination protein
Indel-103	ECs2268	Z6061	-	putative crossover junction endodeoxyribonuclease
Indel-103	ECs2269	Z6062	-	hypothetical protein
Indel-103		Z6063	mokP	putative cell killing protein encoded within cryptic prophage CP-933P
Indel-103	ECs2270		-	hypothetical protein
Indel-103	ECs2271	Z6064	-	hypothetical protein
Indel-103	ECs2272	Z6065	-	hypothetical protein
Indel-103	ECs2273	Z6066	renP	hypothetical protein
Indel-103	ECs2274	Z6067	-	hypothetical protein

Table S10. The orthologue table of the O55 and O157 strains Page 75

Locus_tag ^a			Gene	Product
CB9615	Sakai	EDL933		
Indel-103		Z6068	-	unknown protein encoded by cryptic prophage CP-933P
Indel-103	ECs2275	Z6069	-	putative DNA replication protein
Indel-103	ECs2276	Z6070	-	putative replication protein
Indel-103	ECs2277	Z6071	-	hypothetical protein
Indel-103	ECs2278	Z6072	-	hypothetical protein
Indel-103	ECs2279	Z6073	-	hypothetical protein
Indel-103	ECs2280	Z6074	-	hypothetical protein
Indel-103	ECs2281		-	hypothetical protein
Indel-103	ECs2282		-	hypothetical protein
Indel-103	ECs2283	Z6075	-	hypothetical protein
Indel-103		Z6076	-	unknown protein encoded by cryptic prophage CP-933P
Indel-103	dicF3	RNA043	dicF3	DicF antisense RNA
Indel-103	ECs2284	Z6078	-	inhibitor of cell division
Indel-103	ECs2285	Z6079	-	hypothetical protein
Indel-103	ECs2286	Z6080	exoP	hypothetical protein
Indel-103	ECs2287	Z6081	xisP	excisionase
Indel-103		Z2566	intP_1	integrase fragment, cryptic prophage CP-933P
		Z2568	intP_2	integrase fragment, cryptic prophage CP-933P
G2583_1946	Indel-104	Indel-104	-	hypothetical protein
G2583_1947	Indel-104	Indel-104	-	hypothetical protein
G2583_1948	Indel-104	Indel-104	-	hypothetical protein
G2583_1949	Indel-104	Indel-104	-	hypothetical protein
G2583_1950	Indel-104	Indel-104	-	hypothetical protein
G2583_1951	Indel-104	Indel-104	-	DnaJ-class molecular chaperone with C-terminal Zn finger domain
G2583_1952	Indel-104	Indel-104	rusA	Putative endonuclease of cryptic prophage CP-933M
G2583_1953	Indel-104	Indel-104	ydfU	conserved hypothetical protein
G2583_1954	Indel-104	Indel-104	-	hypothetical protein
G2583_1955	Indel-104	Indel-104	hokD	Putative cell killing protein encoded within cryptic prophage CP-933M
G2583_1956	Indel-104	Indel-104	-	Eaa protein
G2583_1957	Indel-104	Indel-104	-	unknown protein encoded within prophage CP-933R
G2583_1958	Indel-104	Indel-104	-	hypothetical protein
G2583_1959	Indel-104	Indel-104	-	unknown protein encoded within prophage CP-933R
G2583_1960	Indel-104	Indel-104	-	Putative bacteriophage protein
G2583_1961	Indel-104	Indel-104	-	Unknown protein encoded within prophage
G2583_1962	Indel-104	Indel-104	-	conserved hypothetical protein
G2583_1963	Indel-104	Indel-104	-	hypothetical protein
G2583_1964	Indel-104	Indel-104	cro	hypothetical protein
G2583_1965	Indel-104	Indel-104	cII	SOS-response transcriptional repressors (RecA-mediated autopeptidases)
G2583_1966	Indel-104	Indel-104	ydaF	unknown protein encoded by prophage CP-933N
G2583_1967	Indel-104	Indel-104	-	unknown protein encoded by prophage CP-933N

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Locus_tag ^a			Gene	Product
CB9615	Sakai	EDL933		
G2583_1968	Indel-104	Indel-104	dicB	Putative regulator of cell division encoded by prophage CP-9330
G2583_1969	Indel-104	Indel-104	-	conserved hypothetical protein
G2583_1970	Indel-104	Indel-104	ydfE	Exonuclease family protein
G2583_1971	Indel-104	Indel-104	xisP	Putative phage excisionase protein
G2583_1972	Indel-104	Indel-104	intQ	Integrase family protein
G2583_1973	Indel-104	Indel-104	YdfJ	Inner membrane metabolite transport protein ydfJ
G2583_1974	Indel-104	Indel-104	rspB	Starvation sensing protein RspB
G2583_1975	Indel-104	Indel-104	rspA	Starvation-sensing protein rspA
G2583_1976	ECs2288	Z2569	ynfA	UPF0060 membrane protein ynfA
G2583_1977	ECs2289	Z2570	ynfB	UPF0482 protein ynfB precursor
G2583_1978	ECs2290	Z2571	speG	Spermidine N(1)-acetyltransferase
G2583_1979	ECs2291	Z2572	ynfC	hypothetical protein
G2583_1980	ECs2292	Z2573	ynfD	hypothetical protein
G2583_1981	ECs2293	Z2575	ynfE	Anaerobic dimethyl sulfoxide reductase, A subunit YnfE
G2583_1982	ECs2294	Z2576	ynfF	Anaerobic dimethyl sulfoxide reductase, A subunit, DmsA/YnfE family
G2583_1983	ECs2295	Z2577	ynfG	Probable anaerobic dimethyl sulfoxide reductase chain ynfG
G2583_1984	ECs2296	Z2579	ynfH	Oxidoreductase, membrane subunit
G2583_1985	ECs2297	Z2581	dmsD	Twin-arginine leader-binding protein dmsD
G2583_1986	ECs2298	Z2583	clcB	Putative chloride channel
G2583_1987	ECs2299	Z2585	ynfK	Putative dethiobiotin synthetase
G2583_1988	ECs2300	Z2587	dgsA	putative NAGC-like transcriptional regulator
G2583_1989	ECs2301	Z2589	ynfL	putative transcriptional regulator LYSR-type
G2583_1990	ECs2302	Z2590	ynfM	Major facilitator family transporter
G2583_1991	ECs2303	Z2591	asr	acid shock protein precursor
G2583_1992	ECs2304	Z2592	ydgD	V8-like Glu-specific endopeptidase
G2583_1993	ECs2305	Z2593	mdtI	multidrug resistance protein MdtI
G2583_1994	ECs2306	Z2594	mdtJ	Spermidine export protein mdtJ
G2583_1995	ECs2307	Z2595	tqsA	Putative permease, PerM family
G2583_1996	ECs2308	Z2597	pntB	NAD(P) transhydrogenase subunit beta
G2583_1997	ECs2309	Z2600	pntA	NAD(P) transhydrogenase, alpha subunit
G2583_1998	ECs2310	Z2603	ydgH	predicted protein
G2583_1999	ECs2311	Z2605	ydgI	Arginine/ornithine antiporter
G2583_2000	ECs2312	Z2606	folM	Dihydrofolate reductase folM
G2583_2001	ECs2313	Z2608	ydgC	Inner membrane protein ydgC
G2583_2002	ECs2314	Z2609	rstA	DNA-binding response regulator in two-component regulatory system with RstB
G2583_2003	ECs2315	Z2610	rstB	Sensor histidine kinase RstB
G2583_2004	ECs2316	Z2611	tus	DNA replication terminus site-binding protein
G2583_2005	ECs2317	Z2614	fumC	Fumarate hydratase class II
G2583_2006	ECs2318	Z2615	fumA	Fumarate hydratase class I, aerobic
G2583_2007	ECs2319	Z2616	manA	Mannose-6-phosphate isomerase, class I

Table S10. The orthologue table of the O55 and O157 strains Page 77

Locus_tag ^a			Gene	Product
CB9615	Sakai	EDL933		
G2583_2008	ECs2320	Z2617	ydgA	hypothetical protein
G2583_2009	ECs2321	Z2618	uidC	membrane-associated protein
G2583_2009	ECs2322	Z2619	uidC	membrane-associated protein
G2583_2010	ECs2323	Z2620	uidB	Glucuronide permease uidB
G2583_2011	ECs2324	Z2621	uidA	Beta-glucuronidase
G2583_2011	ECs2325	Z2622	uidA	Beta-glucuronidase
G2583_2012	ECs2326	Z2623	uidR	repressor for uid operon
G2583_2013	ECs2327	Z2624	hdhA	7-alpha-hydroxysteroid dehydrogenase
G2583_2014	ECs2328	Z2625	mall	Maltose regulon regulatory protein Mall
G2583_2015	ECs2329	Z2626	malX	PTS system, maltose and glucose-specific IIBC component
G2583_2016	ECs2330	Z2627	malY	Maltose regulon modulator MalY
G2583_2017	ECs2331	Z2628	add	Adenosine deaminase
G2583_2018	ECs2332	Z2629	ydgJ	Oxidoreductase, NAD-binding
G2583_2019	ECs2333		blr	Beta-lactam resistance protein
G2583_2020	ECs2334	Z2631	cnu	OriC-binding nucleoid-associated protein
G2583_2021	ECs2335	Z2632	ydgK	hypothetical protein
G2583_2022	ECs2336	Z2633	rsxA	Electron transport complex protein rnfA
G2583_2023	ECs2337	Z2634	rsxB	Electron transport complex protein rnfB
G2583_2024	ECs2338	Z2636	rsxC	Electron transport complex protein RnfC
G2583_2025	ECs2339	Z2639	rsxD	Electron transport complex protein rnfD
G2583_2026	ECs2340	Z2640	rsxG	Electron transport complex protein rnfG
G2583_2027	ECs2341	Z2642	rsxE	Predicted NADH:ubiquinone oxidoreductase, subu nit RnfE
G2583_2028	ECs2342	Z2644	nth	Endonuclease III
G2583_2029	ECs2343	Z2646	tppB	Tripeptide permease tppB
G2583_2030	ECs2344	Z2647	gst	Glutathione S-transferase
G2583_2031	ECs2345	Z2648	pdxY	Pyridoxamine kinase
G2583_2032	ECs2346	Z2650	tyrS	Tyrosyl-tRNA synthetase
G2583_2033	ECs2347	Z2652	pdxH	Pyridoxine/pyridoxamine 5'-phosphate oxidase
G2583_2034	ECs2348	Z2653	ydhA	predicted lipoprotein
G2583_2035	ECs2349	Z2654	anmK	Anhydro-N-acetylmuramic acid kinase
G2583_2036	ECs2350	Z2655	slyB	Outer membrane lipoprotein slyB precursor
G2583_2037	ECs2351	Z2657	slyA	Transcriptional regulators
G2583_2038	ECs2352	Z2658	ydhI	hypothetical protein
G2583_2039	ECs2353	Z2659	ydhJ	hypothetical protein
G2583_2040	ECs2354	Z2660	ydhK	Uncharacterized transporter ydhK
G2583_2041	ECs2355	Z2661	sodC	Superoxide dismutase [Cu-Zn]
G2583_2042	ECs2356	Z2664	ydhF	Oxidoreductase ydhF
G2583_2043	ECs2358	Z2665	ydhL	hypothetical protein
G2583_2044	ECs2357	Z2666	ydhM	hypothetical protein
G2583_2045	ECs2359	Z2668	nemA	N-ethylmaleimide reductase
G2583_2046	ECs2360	Z2669	gloA	Lactoylglutathione lyase
G2583_2047	ECs2361	Z2671	rnt	Ribonuclease T

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Locus_tag ^a			Gene	Product
CB9615	Sakai	EDL933		
G2583_2048	ECs2362	Z2673	lhr	DEAD/DEAH box helicase family protein Lhr
G2583_2049	ECs2363	Z2676	grxD	Glutaredoxin-4
G2583_2050	ECs2364	Z2677	ydhO	NlpC/P60 family protein
G2583_2051	ECs2365	Z2678	sodB	Superoxide dismutase [Fe]
G2583_2052	ECs2366	Z2679	ydhP	predicted transporter
G2583_2053	ECs2367	Z2681	purR	DNA-binding transcriptional repressor PurR
G2583_2054	ECs2368	Z2682	ydhB	putative DNA-binding transcriptional regulator
G2583_2055	ECs2369	Z2685	ydhC	Drug resistance transporter, Bcr/CflA subfamily
G2583_2056	ECs2370	Z2686	cfa	Cyclopropane-fatty-acyl-phospholipid synthase
G2583_2057	ECs2371	Z2688	ribC	Riboflavin synthase alpha chain
G2583_2058	ECs2372	Z2690	mdtK	Multidrug resistance protein mdtK
G2583_2059	ECs2373	Z2691	ydhQ	hypothetical protein
G2583_2060	valV	RNA044	valV	Val tRNA
G2583_2061	valW	RNA045	valW	Val tRNA
G2583_2062	ECs2374	Z2694	ydhR	Protein ydhR
G2583_2063	ECs2375	Z2695	ydhS	hypothetical protein
G2583_2064	ECs2376	Z2696	ydhT	hypothetical protein
G2583_2065	ECs2377	Z2697	ydhU	Nickel-dependent hydrogenase, b-type cytochrome subunit
G2583_2066	ECs2378	Z2698	ydhX	Uncharacterized ferredoxin-like protein ydhX
G2583_2067	ECs2379	Z2700	ydhW	hypothetical protein
G2583_2068	ECs2380	Z2701	ydhV	hypothetical protein
G2583_2069	ECs2381	Z2702	ydhY	Uncharacterized ferredoxin-like protein ydhY
G2583_2070	ECs2382	Z2703	ydhZ	hypothetical protein
G2583_2071	ECs2383	Z2704	pykF	Pyruvate kinase I
G2583_2072	ECs2384	Z2705	lpp	Major outer membrane lipoprotein precursor
G2583_2073	ECs2385	Z2706	ynhG	LysM domain/ErkK/YbiS/YcfS/YnhG family protein
G2583_2074	ECs2386	Z2707	sufE	Cysteine desulfuration protein sufE
G2583_2075	ECs2387	Z2708	sufS	Cysteine desulfurase
G2583_2076	ECs2388	Z2709	sufD	FeS assembly protein SufD
G2583_2077	ECs2389	Z2710	sufC	FeS assembly ATPase SufC
G2583_2078	ECs2390	Z2711	sufB	cysteine desulfurase activator complex subunit SufB
G2583_2079	ECs2391	Z2712	sufA	FeS assembly scaffold SufA
G2583_2080			-	ncRNA
G2583_2081	ECs2392	Z2713	ydiH	hypothetical protein
G2583_2082	ECs2393	Z2714	ydiI	Esterase YdiI
G2583_2083	ECs2394	Z2715	ydiJ	Oxidoreductase, FAD-binding
G2583_2084	ECs2395	Z2716	ydiK	Inner membrane protein YdiK
G2583_2085			rprA	ncRNA
G2583_2086	ECs2396	Z2717	ydiL	hypothetical protein
G2583_2087	ECs2397	Z2718	ydiM	Major facilitator family transporter
G2583_2088	ECs2398	Z2719	ydiN	Transporter, major facilitator family
G2583_2089	ECs2399	Z2720	ydiB	Quinate/shikimate dehydrogenase
G2583_2090	ECs2400	Z2721	aroD	3-dehydroquinate dehydratase

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Locus_tag ^a			Gene	Product
CB9615	Sakai	EDL933		
G2583_2091	ECs2401	Z2722	ydiF	Propionate CoA-transferase
G2583_2092	ECs2402	Z2723	ydiO	Acyl-coA dehydrogenase
G2583_2093	ECs2403	Z2724	ydiP	putative ARAC-type regulatory protein
G2583_2094	ECs2404	Z2726	ydiQ	camphor resistance protein CrcB
G2583_2095	ECs2405	Z2727	ydiR	iron donor protein CyaY
G2583_2096	ECs2406	Z2728	ydiS	putative sulfate transport protein CysZ
G2583_2097	ECs2407	Z2729	ydiT	Iron-sulfur cluster-binding protein
G2583_2098	ECs2408	Z2730	fadK	Putative ligase/synthetase
G2583_2099	ECs2409	Z2731	pps	Phosphoenolpyruvate synthase
G2583_2100	ECs2410	Z2732	ydiA	Putative phosphotransferase ydiA
G2583_2101	ECs2411	Z2733	aroH	Phospho-2-dehydro-3-deoxyheptonate aldolase, Trp-sensitive
G2583_2102	ECs2412	Z2734	ydiE	hypothetical protein
G2583_2103	ECs2413	Z2735	ydiU	UPF0061 protein ydiU
G2583_2104	ECs2414	Z2736	ydiV	hypothetical protein
G2583_2105	ECs2415	Z2737	nlpC	Lipoprotein, NlpC/P60 family
G2583_2106	ECs2416	Z2738	btuD	Vitamin B12 import ATP-binding protein btuD
G2583_2107	ECs2417	Z2739	btuE	Vitamin B12 transport periplasmic protein btuE
G2583_2108	ECs2418	Z2740	btuC	Vitamin B12 import system permease protein btuC
G2583_2109	Indel-106	Indel-106	-	hypothetical protein
G2583_2110	Indel-106	Indel-106	intT	integrase
G2583_2111	Indel-106	Indel-106	cl	gpC
G2583_2112	Indel-106	Indel-106	-	hypothetical phage DNA-binding protein
G2583_2113	Indel-106	Indel-106	-	unknown protein encoded by prophage CP-933T
G2583_2114	Indel-106	Indel-106	-	hypothetical protein
G2583_2115	Indel-106	Indel-106	-	hypothetical protein
G2583_2116	Indel-106	Indel-106	-	hypothetical protein
G2583_2117	Indel-106	Indel-106	-	hypothetical protein
G2583_2118	Indel-106	Indel-106	-	hypothetical protein
G2583_2119	Indel-106	Indel-106	-	conserved hypothetical protein
G2583_2120	Indel-106	Indel-106	-	hypothetical protein
G2583_2121	Indel-106	Indel-106	-	hypothetical protein
G2583_2122	Indel-106	Indel-106	-	putative phage replication protein
G2583_2123	Indel-106	Indel-106	-	Molecular chaperone
G2583_2124	Indel-106	Indel-106	-	hypothetical protein
G2583_2125	Indel-106	Indel-106	clpX	ATP-dependent protease Clp, ATPase subunit
G2583_2126	Indel-106	Indel-106	-	hypothetical protein
G2583_2127	Indel-106	Indel-106	gpq	Putative phage protein
G2583_2128	Indel-106	Indel-106	gpP	Putative phage protein gpP
G2583_2129	Indel-106	Indel-106	-	putative capsid scaffolding protein
G2583_2130	Indel-106	Indel-106	gpn	Predicted major capsid protein
G2583_2131	Indel-106	Indel-106	gpm	Putative phage terminase
G2583_2132	Indel-106	Indel-106	gpl	phage head completion protein
G2583_2133	Indel-106	Indel-106	-	Probable phage tail protein

Table S10. The orthologue table of the O55 and O157 strains Page 80

Locus_tag ^a			Gene	Product
CB9615	Sakai	EDL933		
G2583_2134	Indel-106	Indel-106	-	Phosphotransferase system IIC components, glucose/maltose/N-acetylglucosamine-specific
G2583_2135	Indel-106	Indel-106	-	Phage capsid scaffolding protein
G2583_2136	Indel-106	Indel-106	-	hypothetical protein
G2583_2137	Indel-106	Indel-106	-	Predicted tail completion phage protein
G2583_2138	Indel-106	Indel-106	gps	Predicted tail completion phage protein
G2583_2139	Indel-106	Indel-106	-	Phage P2 baseplate assembly protein gpV
G2583_2140	Indel-106	Indel-106	-	Phage baseplate assembly protein
G2583_2141	Indel-106	Indel-106	-	probable phage baseplate assembly protein
G2583_2142	Indel-106	Indel-106	gpl	phage tail protein I
G2583_2143	Indel-106	Indel-106	-	DNA inversion product
G2583_2144	Indel-106	Indel-106	-	Alternative bacteriophage tail fiber C-terminus
G2583_2145	Indel-106	Indel-106	tfaE	Tail fiber assembly protein homolog
G2583_2146	Indel-106	Indel-106	-	Sc/SvM1 protein
G2583_2147	Indel-106	Indel-106	ycfK	putative tail fiber protein
G2583_2148	Indel-106	Indel-106	pin	DNA-invertase
G2583_2149	Indel-106	Indel-106	-	Phage protein U
G2583_2150	Indel-106	Indel-106	-	Phage-related tail protein
G2583_2151	Indel-106	Indel-106	-	Putative phage tail protein
G2583_2152	Indel-106	Indel-106	-	ABC-type antimicrobial peptide transport system, ATPase component
G2583_2153	Indel-106	Indel-106	-	Putative tail fiber component of prophage CP-933T
G2583_2154	Indel-106	Indel-106	-	Phage tail sheath protein FI
G2583_2155	Indel-106	Indel-106	gpd	Phage protein D
G2583_2156	Indel-106	Indel-106	-	hypothetical protein
G2583_2157	Indel-106	Indel-106	-	putative phage transcriptional activator, Ogr/Delta
G2583_2158	Indel-106	Indel-106	-	conserved hypothetical protein
G2583_2159	ECs2419	Z2741	ihfA	Integration host factor subunit alpha
G2583_2160	ECs2420	Z2742	pheT	Phenylalanyl-tRNA synthetase beta chain
G2583_2161	ECs2421	Z2743	pheS	Phenylalanyl-tRNA synthetase alpha chain
G2583_2162	ECs2422	Z2744	pheM	phenylalanyl-tRNA synthetase (pheST) operon leader peptide
G2583_2163	ECs2423	Z2745	rpIT	50S ribosomal protein L20
G2583_2164	ECs2424	Z2746	rpml	50S ribosomal protein L35
G2583_2165	ECs2425	Z2747	infC	Translation initiation factor IF-3
G2583_2166	ECs2426	Z2748	thrS	Threonyl-tRNA synthetase
G2583_2167	ECs2427	Z2749	arpA	Ankyrin repeat protein B
G2583_2168	ECs2428	Z2751	ydiY	hypothetical protein
G2583_2169	ECs2429	Z2752	pfkB	6-phosphofructokinase II
G2583_2170	ECs2430	Z2753	ydiZ	hypothetical protein
G2583_2171	ECs2431	Z2754	yniA	hypothetical protein
G2583_2172	ECs2432	Z2755	yniB	hypothetical protein
G2583_2173	ECs2433	Z2756	yniC	Phosphatase yniC
G2583_2174	ECs2434	Z2757	ydjM	Inner membrane protein ydjM precursor

Table S10. The orthologue table of the O55 and O157 strains Page 81

Locus_tag ^a			Gene	Product
CB9615	Sakai	EDL933		
G2583_2175	ECs2435	Z2758	ydjN	Sodium:dicarboxylate symporter precursor
G2583_2176	ECs2436	Z2759	ydjO	hypothetical protein
G2583_2177	ECs2437	Z2760	cedA	Cell division activator cedA
G2583_2178	ECs2438	Z2761	katE	Catalase HP11
G2583_2179	ECs2439	Z2763	chbG	UPF0249 protein chbG
G2583_2180	ECs2440	Z2764	chbF	Phospho-beta-glucosidase
G2583_2181	ECs2441	Z2765	chbR	ChbR
G2583_2182	ECs2442	Z2766	chbA	N,N'-diacetylchitobiose-specific phosphotransferase enzyme IIA component
G2583_2183	ECs2443	Z2767	chbC	N,N'-diacetylchitobiose permease IIC component
G2583_2184	ECs2444	Z2768	chbB	PTS system, lactose/cellobiose family IIB subunit precursor
G2583_2185	ECs2445	Z2769	osmE	Osmotically-inducible lipoprotein E precursor
G2583_2186	ECs2446	Z2770	nadE	NAD synthase
G2583_2187	ECs2447	Z2771	cho	Excinuclease cho
G2583_2188	ECs2448	Z2774	ves	Uncharacterized protein conserved in bacteria
G2583_2189	ECs2449	Z2775	spy	Spy
G2583_2190	ECs2450	Z2776	astE	Succinylglutamate desuccinylase
G2583_2191	ECs2451	Z2777	astB	N-succinylarginine dihydrolase
G2583_2192	ECs2452	Z2778	astD	N-succinylglutamate 5-semialdehyde dehydrogenase
G2583_2193	ECs2453	Z2779	astA	Arginine N-succinyltransferase
G2583_2194	ECs2454	Z2780	astC	Succinylornithine transaminase
G2583_2195	ECs2455	Z2781	xthA	Exodeoxyribonuclease III
G2583_2196	ECs2456	Z2782	ydjX	hypothetical protein
G2583_2197	ECs2457	Z2783	ydjY	hypothetical protein
G2583_2198	ECs2458	Z2784	ydjZ	hypothetical protein
G2583_2199	ECs2459	Z2785	ynjA	Carboxymuconolactone decarboxylase family protein
G2583_2200	ECs2460	Z2786	ynjB	hypothetical protein
G2583_2201	ECs2461	Z2787	ynjC	ABC transporter, permease protein
G2583_2202	ECs2462	Z2788	ynjD	Putative ATP-binding component of a transport system
G2583_2203	ECs2463	Z2789	ynjE	Putative thiosulfate sulfurtransferase YnjE
G2583_2204	ECs2464	Z2790	ynjF	Putative cytochrome oxidase
G2583_2205	ECs2465	Z2791	nudG	CTP pyrophosphohydrolase
G2583_2206	ECs2466	Z2792	ynjH	hypothetical protein
G2583_2207	ECs2467	Z2793	gdhA	NADP-specific glutamate dehydrogenase
G2583_2208	ECs2468	Z2795	ynjI	hypothetical protein
G2583_2209	ECs2469	Z2796	topB	DNA topoisomerase III
G2583_2210	ECs2470	Z2797	selD	Selenide, water dikinase
G2583_2211	ECs2471	Z2798	ydjA	Protein ydjA
G2583_2212	ECs2472	Z2799	sppA	Protease 4
G2583_2213	ECs2473	Z2800	-	hypothetical protein
G2583_2214	ECs2474	Z2801	ansA	L-asparaginase 1
G2583_2215	ECs2475	Z2802	pncA	hypothetical protein
G2583_2216	ECs2476	Z2803	ydjE	Inner membrane metabolite transport protein ydjE

Table S10. The orthologue table of the O55 and O157 strains Page 82

Locus_tag ^a			Gene	Product
CB9615	Sakai	EDL933		
Indel-107	ECs2477	Z2804	-	putative transposase OrfA protein of insertion sequence IS629
Indel-107	ECs2478	Z2806	-	putative transposase OrfB protein of insertion sequence IS629
G2583_2217	ECs2479	Z2808	ydjF	transcriptional regulator, DeoR family
G2583_2218	ECs2480	Z2809	ydjG	Oxidoreductase, aldo/keto reductase family
G2583_2219	ECs2481	Z2810	ydjH	Kinase, pfkB family
G2583_2220	ECs2482	Z2811	ydjI	Fructose-bisphosphate aldolase, class II family
G2583_2221	ECs2483	Z2812	ydjJ	Sorbitol dehydrogenase
G2583_2222	ECs2484	Z2813	ydjK	major facilitator family transporter
G2583_2223	ECs2485	Z2815	ydjL	Oxidoreductase, zinc-binding dehydrogenase family
G2583_2224	ECs2486	Z2816	yeaC	hypothetical protein
G2583_2225	ECs2487	Z2817	msrB	Methionine sulfoxide reductase B
G2583_2226	ECs2488	Z2818	gapA	Glyceraldehyde-3-phosphate dehydrogenase A
G2583_2227	ECs2489	Z2820	yeaD	Aldose 1-epimerase family protein
G2583_2228	ECs2490	Z2821	yeaE	Oxidoreductase, aldo/keto reductase family
G2583_2229	ECs2491	Z2822	mipA	MltA-interacting protein precursor
G2583_2230	ECs2492	Z2823	yeaG	hypothetical protein
G2583_2231	ECs2493	Z2824	yeaH	UPF0229 protein yeaH
G2583_2232	ECs2494	Z2825	yeaI	Diguanylate cyclase (GGDEF) domain protein
G2583_2233	ECs2495	Z2826	yeaJ	hypothetical protein
G2583_2234	ECs2496	Z2827	yeaK	hypothetical protein
G2583_2235	ECs2497	Z2828	-	hypothetical protein
G2583_2236	ECs2498	Z2829	yeaL	Predicted membrane protein
G2583_2237	ECs2499	Z2831	yeaM	Putative AraC-type regulatory protein
G2583_2238	ECs2500	Z2833	yeaN	inner membrane transport protein yeaN
G2583_2239	ECs2501	Z2834	yeaO	hypothetical protein
G2583_2240	ECs2502	Z2835	yoaF	hypothetical protein
G2583_2241	ECs2503	Z2836	yeaP	GAF domain/diguanylate cyclase (GGDEF) domain protein
G2583_2242	ECs2504	Z2837	yeaQ	hypothetical protein
G2583_2243	ECs2505	Z2838	yoaG	Protein yoaG
G2583_2244	ECs2506	Z2839	yeaR	hypothetical protein
G2583_2245	ECs2507	Z2841	leuE	Leucine efflux protein
G2583_2246	ECs2508	Z2842	yeaT	putative transcriptional regulator LYSR-type
G2583_2247	ECs2509	Z2843	yeaU	Tartrate dehydrogenase/decarboxylase
G2583_2248	ECs2510	Z2844	yeaV	Transporter, betaine/carnitine/choline transporter (BCCT) family
G2583_2249	ECs2511	Z2845	yeaW	Putative dioxygenase subunit alpha yeaW
G2583_2250	ECs2512	Z2846	yeaX	Putative diogenase beta subunit
G2583_2251	ECs2513	Z2847	rnd	Ribonuclease D
G2583_2252			-	ncRNA
G2583_2253	ECs2514	Z2848	fadD	Long-chain-fatty-acid--CoA ligase
G2583_2254	ECs2515	Z2849	yeaY	Outer membrane protein Slp

Table S10. The orthologue table of the O55 and O157 strains Page 83

Locus_tag ^a			Gene	Product
CB9615	Sakai	EDL933		
G2583_2255	ECs2516	Z2850	yeaZ	Glycoprotease family protein
G2583_2256	ECs2517	Z2851	yoaA	Helicase c2
G2583_2257	ECs2518	Z2852	yoaB	hypothetical protein
G2583_2258	ECs2519	Z2853	yoaC	hypothetical protein
G2583_2259	ECs2520	Z2854	yoaH	UPF0181 protein yoaH
G2583_2260	ECs2521	Z2855	pabB	p-aminobenzoate synthetase, component I
G2583_2261	ECs2522	Z2856	nudL	Uncharacterized Nudix hydrolase nudL
G2583_2262	ECs2523	Z2857	sdaA	L-serine ammonia-lyase 1
G2583_2263	ECs2524	Z2858	yoaD	hypothetical protein
G2583_2264	ECs2525	Z2859	yoaE	UPF0053 inner membrane protein yoaE
G2583_2265	ECs2526		-	putative cytoplasmic protein
G2583_2266	ECs2527	Z2860	manX	Putative PTS system, mannose-specific component
G2583_2267	ECs2528	Z2861	manY	PTS enzyme IIC, mannose-specific
G2583_2268	ECs2529	Z2862	manZ	Mannose permease IID component
G2583_2269	ECs2530	Z2863	yobD	UPF0266 membrane protein yobD
G2583_2270	ECs2531	Z2864	yebN	hypothetical protein
G2583_2271	ECs2532	Z2866	rrmA	23S rRNA methyltransferase A
G2583_2272	ECs2533	Z2868	cspC	hypothetical protein
G2583_2273	ECs2534	Z2869	yobF	hypothetical protein
G2583_2274	ECs2535	Z2871	yebO	hypothetical protein
G2583_2275	ECs2536	Z2872	mgrB	hypothetical protein
G2583_2276		Z2873	yobH	hypothetical protein
G2583_2277	ECs2537	Z2874	kdgR	putative regulator
G2583_2278	ECs2538	Z2875	yebQ	Putative transport protein
G2583_2279	ECs2539	Z2876	htpX	Probable protease htpX
G2583_2280	ECs2540	Z2877	prc	C-terminal processing peptidase
G2583_2281	ECs2541	Z2878	proQ	ProP effector
G2583_2282	ECs2542	Z2879	yebR	GAF domain protein
G2583_2283	ECs2543	Z2880	yebS	hypothetical protein
G2583_2284	ECs2544	Z2881	yebT	Mce-related protein
G2583_2285	ECs2545	Z2882	rsmF	Ribosomal RNA small subunit methyltransferase F
G2583_2286	ECs2546	Z2883	yebV	hypothetical protein
G2583_2287	ECs2547	Z2884	yebW	hypothetical protein
G2583_2288	ECs2548	Z2885	pphA	Protein phosphatase 1 modulates phosphoproteins, signals protein misfolding
G2583_2289			-	ncRNA
G2583_2290			-	ncRNA
G2583_2291	ECs2549	Z2887	yebY	hypothetical protein
G2583_2292	ECs2550	Z2888	yebZ	Copper resistance protein D
G2583_2293	ECs2551	Z2889	yobA	Copper resistance protein CopC
G2583_2294	ECs2552	Z2891	holE	DNA polymerase III subunit theta
G2583_2295	ECs2553	Z2893	yobB	Hydrolase, carbon-nitrogen family
G2583_2296	ECs2554	Z2894	exoX	Exodeoxyribonuclease 10
G2583_2297	ECs2555	Z2896	ptrB	Oligopeptidase B

Table S10. The orthologue table of the O55 and O157 strains Page 84

Locus_tag ^a			Gene	Product
CB9615	Sakai	EDL933		
G2583_2298	ECs2556	Z2897	yebE	hypothetical protein
G2583_2299	ECs2557	Z2899	yebF	hypothetical protein
G2583_2300	ECs2558	Z2900	yebG	hypothetical protein
G2583_2301	ECs2559	Z2901	purT	Phosphoribosylglycinamide formyltransferase 2
G2583_2302	ECs2560	Z2902	eda	KDPG and KHG aldolase
G2583_2303	ECs2561	Z2903	edd	Phosphogluconate dehydratase
G2583_2304	ECs2562	Z2904	zwf	Glucose-6-phosphate 1-dehydrogenase
G2583_2305	ECs2563	Z2905	yebK	DNA-binding transcriptional regulator HexR
G2583_2306	ECs2564	Z2906	pykA	Pyruvate kinase II
G2583_2307	ECs2565	Z2907	lpxM	Lipid A biosynthesis (KDO)2-(Lauroyl)-lipid IVA acyltransferase
G2583_2308	ECs2566	Z2908	yebA	Uncharacterized metalloprotease yebA
G2583_2309	ECs2567	Z2909	znuA	Putative adhesin
G2583_2310	ECs2568	Z2910	znuC	Zinc import ATP-binding protein znuC
G2583_2311	ECs2569	Z2911	znuB	Zinc uptake ABC transporter, permease protein ZnuB
G2583_2312	ECs2570	Z2912	ruvB	Holliday junction ATP-dependent DNA helicase ruvB
G2583_2313	ECs2571	Z2913	ruvA	Holliday junction ATP-dependent DNA helicase ruvA
G2583_2314	ECs2572	Z2914	yebB	hypothetical protein
G2583_2315	ECs2573	Z2915	ruvC	Crossover junction endodeoxyribonuclease ruvC
G2583_2316	ECs2574	Z2916	yebC	UPF0082 protein yebC
G2583_2317	ECs2575	Z2917	nudB	dATP pyrophosphohydrolase
G2583_2318	ECs2576	Z2919	aspS	Aspartyl-tRNA synthetase
G2583_2319	ECs2577	Z2920	yecD	hypothetical protein
G2583_2320	ECs2578	Z2921	yecE	hypothetical protein
G2583_2321	ECs2579	Z2922	yecN	hypothetical protein
G2583_2322	ECs2580	Z2923	cmoA	tRNA (cmo5U34)-methyltransferase
G2583_2323	ECs2581	Z2924	cmoB	tRNA (mo5U34)-methyltransferase
G2583_2324	ECs2582	Z2925	torZ	Trimethylamine N-oxide reductase III, subunit TorZ
G2583_2325	ECs2583	Z2926	torY	Cytochrome c-type protein torY
G2583_2326	ECs2584	Z2927	cutC	Copper homeostasis protein cutC
G2583_2327	ECs2585	Z2928	yecM	hypothetical protein
G2583_2328	ECs2586	Z2929	argS	Arginyl-tRNA synthetase
G2583_2329	ECs2587	Z2930	yecT	hypothetical protein
G2583_2330	ECs2588	Z2931	flhE	hypothetical protein
G2583_2331	ECs2589	Z2932	flhA	Flagellar biosynthesis protein flhA
G2583_2332	ECs2590	Z2934	flhB	Flagellar biosynthetic protein FlhB
G2583_2333	ECs2591	Z2935	cheZ	Chemotaxis phosphatase CheZ
G2583_2334	ECs2592	Z2936	cheY	Chemotaxis protein cheY
G2583_2335	ECs2593	Z2937	cheB	Chemotaxis response regulator protein-glutamate methylesterase
G2583_2336	ECs2594	Z2938	cheR	Chemotaxis protein methyltransferase CheR
G2583_2337	ECs2595	Z2939	tap	Methyl-accepting chemotaxis protein IV
G2583_2338	ECs2596	Z2940	tar	Methyl-accepting chemotaxis protein II
G2583_2339			-	ncRNA

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Locus_tag ^a			Gene	Product
CB9615	Sakai	EDL933		
G2583_2340	ECs2597	Z2941	cheW	Chemotaxis protein cheW
G2583_2341	ECs2598	Z2942	cheA	Sensory transducer kinase between chemo-signal receptors and CheB and CheY
G2583_2342	ECs2599	Z2943	motB	Chemotaxis protein motB
G2583_2343	ECs2600	Z2944	motA	Chemotaxis protein MotA
G2583_2344	ECs2601	Z2945	flhC	Flagellar transcriptional activator flhC
G2583_2345	ECs2602	Z2946	flhD	Transcriptional activator
		Z2947	-	hypothetical protein
G2583_2346	ECs2603	Z2948	uspC	Universal stress protein C
G2583_2347	ECs2604	Z2949	otsA	Alpha,alpha-trehalose-phosphate synthase [UDP-
G2583_2348	ECs2605	Z2950	otsB	Trehalose-phosphatase
G2583_2349	ECs2606	Z2951	araH	ABC-type arabinose transport system, permease component
G2583_2349	ECs2607	Z2952	araH	ABC-type arabinose transport system, permease component
G2583_2350	ECs2608	Z2953	araG	Arabinose import ATP-binding protein araG
G2583_2351	ECs2609	Z2954	araF	L-arabinose-binding periplasmic protein
G2583_2352	ECs2610	Z2956	ftnB	Ferritin-like protein 2
G2583_2353			yecJ	hypothetical protein
G2583_2354	ECs2611	Z2958	-	hypothetical protein
G2583_2355	ECs2612	Z2959	yecR	hypothetical protein
G2583_2356	ECs2613	Z2960	ftnA	Ferritin-1
G2583_2357	ECs2614	Z2962	yecH	hypothetical protein
G2583_2358	ECs2615	Z2963	tyrP	Tyrosine-specific transport protein
G2583_2359	ECs2616	Z2964	yecA	SEC-C domain protein
Indel-109	ECs2617	Z2966	intT	putative integrase
Indel-109	ECs2618	Z2967	-	hypothetical protein
Indel-109	ECs2619	Z2968	-	putative membrane protein
Indel-109	ECs2620	Z2969	-	putative transcriptional regulator
Indel-109	ECs2621		-	hypothetical protein
Indel-109	ECs2622	Z2970	coxT	putative DNA-binding protein
Indel-109	ECs2623	Z2971	-	hypothetical protein
Indel-109	ECs2624	Z2972	-	hypothetical protein
Indel-109	ECs2625	Z2973	-	hypothetical protein
Indel-109	ECs2626	Z2974	-	hypothetical protein
Indel-109	ECs2627		-	hypothetical protein
Indel-109	ECs2628		-	hypothetical protein
Indel-109	ECs2629	Z2975	-	hypothetical protein
Indel-109	ECs2630		-	hypothetical protein
Indel-109	ECs2631	Z2976	-	putative derepression protein
Indel-109	ECs2632	Z2977	-	hypothetical protein
Indel-109	ECs2633	Z2978	-	putative phage replication protein
Indel-109	ECs2634	Z2979	-	putative plasmid partition protein
Indel-109	ECs2635	Z2980	-	putative plasmid partition protein

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Locus_tag ^a			Gene	Product
CB9615	Sakai	EDL933		
Indel-109	ECs2636	Z2981	-	putative transposase OrfB protein of insertion sequence IS629
Indel-109	ECs2637	Z2982	-	putative transposase OrfA protein of insertion sequence IS629
Indel-109	ECsp017	Z2983	-	putative tail fiber assembly protein of prophage CP-
Indel-109	ECs2638	Z2984	-	hypothetical protein
Indel-109	ECs2639	Z2985	-	putative tail protein
Indel-109	ECs2640	Z2986	-	phage tail protein
Indel-109	ECs2641	Z2987	-	putative tail protein
Indel-109	ECs2642	Z2988	-	putative phage tail protein
Indel-109	ECs2643	Z2989	-	putative tail protein
Indel-109	ECs2644	Z2990	-	putative tail tube protein
Indel-109	ECs2645	Z2991	-	putative tail sheath protein
Indel-109	ECs2646	Z2992	-	putative tail protein
Indel-109	ECs2647	Z2993	tra8_2	transposase of insertion sequence IS30
Indel-109	ECs2648		-	hypothetical protein
Indel-109	ECs2649	Z2994	-	hypothetical protein
G2583_2360	leuZ	RNA046	leuZ	Leu tRNA
G2583_2361	cysT	RNA047	-	Cys tRNA
G2583_2362	glyW	RNA048	glyW	Gly tRNA
G2583_2363	ECs2650	Z3000	pgsA	CDP-diacylglycerol--glycerol-3-phosphate 3-phosphatidyltransferase
G2583_2364	ECs2651	Z3001	uvrC	UvrABC system protein C
G2583_2365	ECs2652	Z3002	uvrY	Response regulator uvrY
G2583_2366	ECs2653	Z3003	yecF	hypothetical protein
G2583_2367	ECs2654	Z3004	sdiA	DNA-binding transcriptional activator
G2583_2368	ECs2655	Z3005	yecC	Amino acid ABC transporter, ATP-binding protein
G2583_2369	ECs2656	Z3006	yecS	putative transport system permease protein
G2583_2370	ECs2657	Z3008	dcyD	Putative 1-aminocyclopropane-1-carboxylate
G2583_2370	ECs2658	Z3008	dcyD	Putative 1-aminocyclopropane-1-carboxylate
G2583_2371	ECs2659	Z3010	fliY	Cystine-binding periplasmic protein
G2583_2372	ECs2660	Z3011	fliZ	protein FliZ
G2583_2373	ECs2661	Z3012	fliA	RNA polymerase sigma factor for flagellar operon
G2583_2374	ECs2662	Z3013	fliC	Flagellin
G2583_2375	ECs2663	Z3014	fliD	Flagellar capping protein
G2583_2376	ECs2664	Z3015	fliS	Flagellar protein FliS
G2583_2377	ECs2665	Z3016	fliT	Flagellar protein fliT
G2583_2378	ECs2666	Z3017	amyA	Alpha-amylase, cytoplasmic
G2583_2379	ECs2667	Z3018	yedD	hypothetical protein
G2583_2380	ECs2668	Z3019	yedE	predicted inner membrane protein
G2583_2381	ECs2669	Z3020	yedF	UPF0033 protein yedF
G2583_2382	ECs2670	Z3021	yedK	hypothetical protein
G2583_2383	ECs2671	Z3022	yedL	Acetyltransferase, GNAT family
G2583_2384	ECs2672	Z3023	yedM	putative secreted protein

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Locus_tag ^a			Gene	Product
CB9615	Sakai	EDL933		
G2583_2385	ECs2673	Z3025	yedL	acetyltransferase, gnat family
G2583_2386	ECs2674	Z3026	yedM	putative secreted protein
G2583_2387	ECs2675	Z3024	int	Putative lambdoid prophage defective integrase
G2583_2388	ECs2676	Z3027	fliE	Flagellar hook-basal body complex protein fliE
G2583_2389	ECs2677	Z3028	fliF	Flagellar M-ring protein FliF precursor
G2583_2390	ECs2678	Z3029	fliG	Flagellar motor switch protein fliG
G2583_2391	ECs2679	Z3030	fliH	Flagellar biosynthesis
G2583_2392	ECs2680	Z3031	fliI	Flagellum-specific ATP synthase
G2583_2393	ECs2681	Z3032	fliJ	Flagellar fliJ protein
G2583_2394	ECs2682	Z3033	fliK	Flagellar hook-length control protein FliK
G2583_2395	ECs2683	Z3034	fliL	Flagellar fliL protein
G2583_2396	ECs2684	Z3035	fliM	Flagellar motor switch protein FliM
G2583_2397	ECs2685	Z3036	fliN	Flagellar motor switch protein FliN
G2583_2398	ECs2686	Z3037	fliO	Flagellar biogenesis protein
G2583_2399	ECs2687	Z3038	fliP	Flagellar biosynthetic protein fliP precursor
G2583_2400	ECs2688	Z3039	fliQ	hypothetical protein
G2583_2401	ECs2689	Z3040	fliR	Flagellar biosynthetic protein FliR
G2583_2402	ECs2690	Z3041	rcsA	Colanic acid capsular biosynthesis activation protein A
G2583_2403	ECs2691	Z3042	dsrB	putative oxidoreductase Fe-S binding subunit
G2583_2404	ECs2692	Z3043	yodD	hypothetical protein
G2583_2405	dsrA	RNA049	dsrA	ncRNA
G2583_2406	ECs2693	Z3045	yedP	Putative mannosyl-3-phosphoglycerate phosphatase
G2583_2407	ECs2694	Z3047	yedQ	Cellulose synthesis regulatory protein
G2583_2408	ECs2695	Z3048	yodC	hypothetical protein
G2583_2409	ECs2696	Z3049	yedI	putative membrane protein
G2583_2410	ECs2697	Z3050	yedA	Uncharacterized inner membrane transporter yedA
G2583_2411	ECs2698	Z3053	vsr	Very short patch repair protein
G2583_2412	ECs2699	Z3054	dcm	DNA-cytosine methyltransferase
G2583_2413	ECs2700	Z3055	yedJ	Putative metal-dependent phosphohydrolase
G2583_2414	ECs2701	Z3056	yedR	hypothetical protein
G2583_2415	ECs2702	Z3057	ompS	Outer membrane protein
G2583_2415	ECs2703	Z3058	ompS	Outer membrane protein
G2583_2416	ECs2704		-	hypothetical protein
G2583_2417	ECs2705	Z3059	hchA	Chaperone protein hchA
G2583_2418	ECs2706	Z3060	yedV	Heavy metal sensor histidine kinase
G2583_2419	ECs2707	Z3061	yedW	Heavy metal response regulator
G2583_2420	ECs2708	Z3062	yedX	Transthyretin-like protein precursor
G2583_2421	ECs2709	Z3063	yedY	UPF0190 protein yedY precursor
G2583_2422	ECs2710	Z3064	yedZ	UPF0191 membrane protein yedZ
G2583_2423	ECs2711	Z3065	yodA	Ribulose-phosphate 3-epimerase precursor
G2583_2424		Z3066	-	hypothetical protein
G2583_2425	ECs2712	Z3067	yodB	putative cytochrome
G2583_2426	ECs2713		-	hypothetical protein
G2583_2427		Z3069	-	unknown protein encoded within prophage CP-933U

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Locus_tag ^a			Gene	Product
CB9615	Sakai	EDL933		
G2583_2428	ECs2714	Z3071	-	unknown protein encoded within prophage CP-933U
G2583_2429	ECs2715	Z3072	-	Tir-cytoskeleton coupling protein
Indel-111	ECs2716	Indel-111	-	hypothetical protein
Indel-111	ECs2717	Indel-111	-	putative tail fiber protein
Indel-111	ECs2718	Indel-111	-	putative outer membrane protein precursor
Indel-111	ECs2719	Indel-111	-	host specificity protein
Indel-111	ECs2720	Indel-111	-	putative host specificity protein
Indel-111	ECs2721	Indel-111	-	putative tail assembly protein
Indel-111	ECs2722	Indel-111	-	putative tail assembly protein
Indel-111	ECs2723	Indel-111	-	putative minor tail protein
Indel-111	ECs2724	Indel-111	-	putative minor tail protein
Indel-111	ECs2725	Indel-111	-	putative tail length tape measure protein precursor
Indel-111	ECs2726	Indel-111	-	putative tail length tape measure protein precursor
Indel-111	ECs2727	Indel-111	-	putative minor tail protein
Indel-111	ECs2728	Indel-111	-	putative minor tail protein
Indel-111	ECs2729	Indel-111	-	hypothetical protein
Indel-111	ECs2730	Indel-111	-	putative major head protein
Indel-111	ECs2731	Indel-111	-	putative head decoration protein
Indel-111	ECs2732	Indel-111	-	putative head-tail preconnector protein
Indel-111	ECs2733	Indel-111	-	putative portal protein
Indel-111	ECs2734	Indel-111	-	putative head completion protein
Indel-111	ECs2735	Indel-111	-	putative terminase large subunit
Indel-111	ECs2736	Indel-111	-	putative terminase small subunit
Indel-111	ECs2737	Indel-111	-	putative transcriptional regulator
Indel-111	ECs2739	Indel-111	-	putative endopeptidase
Indel-111	ECs2738	Indel-111	-	putative lipoprotein precursor
Indel-111	ECs2740	Indel-111	-	hypothetical protein
Indel-111	ECs2741	Indel-111	-	putative endolysin
Indel-111	ECs2742	Indel-111	-	hypothetical protein
Indel-111	ECs2743	Indel-111	-	putative holin protein
Indel-111	ECs2744	Indel-111	-	putative transposase OrfA protein of insertion sequence IS629
Indel-111	ECs2745	Indel-111	-	putative transposase OrfB protein of insertion sequence IS629
Indel-112	Indel-112	Z3073	-	unknown protein encoded within prophage CP-933U
Indel-112	Indel-112	Z3074	-	putative tail fiber protein of prophage CP-933U
Indel-112	Indel-112	Z3075	lomU	putative outer membrane protein of prophage CP-933U
Indel-112	Indel-112	Z3077	-	putative tail fiber component J of prophage CP-933U
Indel-112	Indel-112	Z3079	-	putative tail fiber component I of prophage CP-933U
Indel-112	Indel-112	Z3081	-	putative tail fiber component K of prophage CP-933U
Indel-112	Indel-112	Z3082	-	putative tail fiber component L of prophage CP-933U
Indel-112	Indel-112	Z3083	-	putative tail fiber component M of prophage CP-933U
Indel-112	Indel-112	Z3084	-	putative tail fiber component H of prophage CP-933U
Indel-112	Indel-112	Z3085	-	putative tail fiber component T of prophage CP-933U

Table S10. The orthologue table of the O55 and O157 strains Page 89

Locus_tag ^a			Gene	Product
CB9615	Sakai	EDL933		
Indel-112	Indel-112	Z3086	-	putative tail fiber component G of prophage CP-933U
Indel-112	Indel-112	Z3087	-	putative tail fiber component V of prophage CP-933U
Indel-112	Indel-112	Z3088	-	putative tail fiber component U of prophage CP-933U
Indel-112	Indel-112	Z3089	-	putative tail fiber component Z of prophage CP-933U
Indel-112	Indel-112	Z3090	-	unknown protein encoded within prophage CP-933U
Indel-112	Indel-112	Z3091	-	unknown protein encoded within prophage CP-933U
Indel-112	Indel-112	Z3092	-	unknown protein encoded within prophage CP-933U
Indel-112	Indel-112	Z3093	-	unknown in IS629 encoded within prophage CP-933U
Indel-112	Indel-112	Z3095	-	putative transposase encoded within prophage CP-
Indel-112	Indel-112	Z3097	-	putative peptidase encoded within prophage CP-933U
Indel-112	Indel-112	Z3098	-	putative head-tail preconnector protein of prophage CP-933U
Indel-112	Indel-112	Z3099	-	putative DNA packaging protein of prophage CP-933U
Indel-112	Indel-112	Z3100	-	unknown protein encoded within prophage CP-933U
Indel-112	Indel-112	Z3101	-	putative endopeptidase of prophage CP-933U
Indel-112	Indel-112	Z3103	antU	putative antirepressor protein of prophage CP-933U
Indel-112	Indel-112	Z3104	-	putative endolysin of prophage CP-933U
Indel-112	Indel-112	Z3105	-	unknown protein encoded within prophage CP-933U
Indel-112	Indel-112	Z3106	-	putative holin protein of prophage CP-933U
Indel-113	ECs2746	Z3107	-	hypothetical protein
Indel-113	ECs2747		-	hypothetical protein
Indel-113	ECs2748	Z3108	-	hypothetical protein
Indel-113	ECs2749	Z3109	-	hypothetical protein
Indel-113	argO7	RNA050	argO7	Arg tRNA
Indel-113	argN5	RNA051	argN5	Arg tRNA
Indel-113	ileZ7	RNA052	ileZ7	Ile tRNA
Indel-113	ECs2750	Z3114	-	antiterminator
Indel-113	ECs2751	Z3115	-	putative crossover junction endodeoxyribonuclease
Indel-113	ECs2752	Z3116	-	hypothetical protein
Indel-113	ECs2753		-	hypothetical protein
Indel-113		Z3117	-	unknown protein encoded within prophage CP-933U
Indel-113	ECs2754		-	prophage maintenance protein
Indel-113	ECs2755	Z3118	-	hypothetical protein
Indel-113	ECs2756	Z3119	-	hypothetical protein
Indel-113	ECs2757	Z3120	-	hypothetical protein
Indel-113	ECs2758		-	hypothetical protein
Indel-113	ECs2759	Z3121	-	hypothetical protein
Indel-113	ECs2760		-	hypothetical protein
Indel-113	ECs2761	Z3122	-	hypothetical protein
Indel-113	ECs2762	Z3123	-	putative phage replication protein
Indel-113	ECs2763	Z3124	-	hypothetical protein
Indel-113	ECs2764	Z3125	-	hypothetical protein
Indel-113	ECs2765		-	putative cell division control protein
Indel-113	ECs2766	Z3126	-	putative repressor protein

Table S10. The orthologue table of the O55 and O157 strains Page 90

Locus_tag ^a			Gene	Product
CB9615	Sakai	EDL933		
Indel-113	ECs2767	Z3127	-	hypothetical protein
Indel-113	ECs2768	Z3128	-	putative cell division inhibition protein
Indel-113	ECs2769		-	hypothetical protein
Indel-113	ECs2770	Z3129	exoU	hypothetical protein
Indel-113	ECs2771	Z3129	exoU	hypothetical protein
Indel-113	ECs2772		-	hypothetical protein
	ECs2773	Z3130	intU	putative integrase
G2583_2430	Indel-114	Indel-114	-	Tail fiber protein
G2583_2431	Indel-114	Indel-114	-	Enterobacterial Ail/Lom family protein
G2583_2432	Indel-114	Indel-114	-	Putative host specificity protein
G2583_2433	Indel-114	Indel-114	-	Superoxide dismutase [Cu-Zn]
G2583_2434	Indel-114	Indel-114	-	hypothetical protein
G2583_2435	Indel-114	Indel-114	-	Cell wall-associated hydrolases (invasion-associated proteins)
G2583_2436	Indel-114	Indel-114	-	Phage-related protein
G2583_2437	Indel-114	Indel-114	-	Putative tail component of prophage CP-933R
G2583_2438	Indel-114	Indel-114	-	putative tail component of prophage CP-933O
G2583_2439	Indel-114	Indel-114	-	Phage tail assembly protein T
G2583_2440	Indel-114	Indel-114	-	hypothetical protein
G2583_2441	Indel-114	Indel-114	-	hypothetical protein
G2583_2442	Indel-114	Indel-114	-	Putative tail component of prophage
G2583_2443	Indel-114	Indel-114	-	prophage minor tail protein Z
G2583_2444	Indel-114	Indel-114	-	Phage Head-Tail Attachment
G2583_2445	Indel-114	Indel-114	-	conserved hypothetical protein
G2583_2446	Indel-114	Indel-114	-	phage major capsid protein E
G2583_2447	Indel-114	Indel-114	-	Bacteriophage lambda head decoration protein D
G2583_2448	Indel-114	Indel-114	-	Periplasmic serine proteases (ClpP class)
G2583_2449	Indel-114	Indel-114	-	Bacteriophage capsid protein
G2583_2450	Indel-114	Indel-114	-	putative head completion protein
G2583_2451	Indel-114	Indel-114	-	Putative terminase large subunit of prophage CP-933O
G2583_2452	Indel-114	Indel-114	-	Prophage Qin DNA packaging protein NU1 homolog
G2583_2453	Indel-114	Indel-114	-	hypothetical protein
G2583_2454	Indel-114	Indel-114	-	hypothetical protein
G2583_2455	Indel-114	Indel-114	-	putative endopeptidase
G2583_2456	Indel-114	Indel-114	-	conserved hypothetical protein
G2583_2457	Indel-114	Indel-114	-	Phage-related lysozyme (muraminidase)
G2583_2458	Indel-114	Indel-114	-	hypothetical protein
G2583_2459	Indel-114	Indel-114	-	Putative holin protein
G2583_2460	Indel-114	Indel-114	-	YjhS
G2583_2461	Indel-114	Indel-114	-	Putative envelope protein encoded within prophage CP-933N
G2583_2462	Indel-114	Indel-114	-	CAAX amino terminal protease family
G2583_2463	Indel-114	Indel-114	ybcQ	Phage antitermination Q type 1 family
G2583_2464	Indel-114	Indel-114	rusA	Crossover junction endodeoxyribonuclease RusA

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Locus_tag ^a			Gene	Product
CB9615	Sakai	EDL933		
G2583_2465	Indel-114	Indel-114	ydfU	hypothetical protein
G2583_2466	Indel-114	Indel-114	-	hypothetical protein
G2583_2467	Indel-114	Indel-114	rem	hypothetical protein
G2583_2468	Indel-114	Indel-114	-	Helix-turn-helix domain protein
G2583_2469	Indel-114	Indel-114	-	hypothetical protein
G2583_2470	Indel-114	Indel-114	-	Putative cell killing protein encoded within cryptic prophage CP-933M
G2583_2471	Indel-114	Indel-114	-	conserved hypothetical protein
G2583_2472	Indel-114	Indel-114	-	LygF
G2583_2473	Indel-114	Indel-114	-	Phage O protein family
G2583_2474	Indel-114	Indel-114	ydfX	hypothetical protein
G2583_2475	Indel-114	Indel-114	-	hypothetical protein
G2583_2476	Indel-114	Indel-114	dicA	Similar to DicA, regulator of DicB encoded by prophage
G2583_2477	Indel-114	Indel-114	ydfA	hypothetical protein
G2583_2478	Indel-114	Indel-114	-	unknown protein encoded by prophage CP-933N
G2583_2479	Indel-114	Indel-114	DicB	Putative regulator of cell division encoded by prophage CP-933O
G2583_2480	Indel-114	Indel-114	-	hypothetical protein
G2583_2481	Indel-114	Indel-114	recE	Exodeoxyribonuclease VIII
G2583_2482	Indel-114	Indel-114	-	hypothetical protein
G2583_2483	Indel-114	Indel-114	intU	Site-specific recombinase, phage integrase family
G2583_2484	serU	RNA053	serU	Ser tRNA
G2583_2485	ECs2774	Z3132	mtfA	hypothetical protein
G2583_2486	asnT	RNA054	asnT	Asn tRNA
G2583_2487	ECs2775	Z3135	yeeJ	Putative invasin
		Z3136	-	hypothetical protein
G2583_2488	ECs2775	Z3135	-	putative factor
G2583_2488	ECs2776	Z3135	-	putative factor
G2583_2489	ECs2777	Z3137	-	hypothetical protein
G2583_2490	ECs2778	Z3138	shiA	Shikimate transporter
G2583_2491	ECs2779	Z3139	amn	AMP nucleosidase
G2583_2492	ECs2780	Z3140	yeeN	UPF0082 protein yeeN
G2583_2493	asnW	RNA055	asnW	Asn tRNA
G2583_2494	ECs2781	Z3143	yeeO	MATE efflux family protein
G2583_2495	ECs2781	Z3143	yeeO	MATE efflux family protein
G2583_2495	ECs2782	Z3144	yeeO	MATE efflux family protein
G2583_2496	asnU	RNA056	asnU	Asn tRNA
G2583_2497	ECs2783	Z3146	cbl	transcriptional regulator Cbl
G2583_2498	ECs2784	Z3147	nac	Nitrogen assimilation regulatory protein Nac
G2583_2499	asnV	RNA057	asnV	Asn tRNA
G2583_2500	ECs2785	Z3150	erfK	Conserved protein with NAD(P)-binding Rossmann-fold domain
G2583_2501	ECs2786	Z3151	cobT	Nicotinate-nucleotide--dimethylbenzimidazole phosphoribosyltransferase

Table S10. The orthologue table of the O55 and O157 strains Page 92

Locus_tag ^a			Gene	Product
CB9615	Sakai	EDL933		
G2583_2502	ECs2787	Z3152	cobS	cobalamin synthase
G2583_2503	ECs2788	Z3153	cobU	cobalamin synthase
Indel-115	ECs2789	Z3154	-	hypothetical protein
Indel-115	ECs2790	Z3155	-	hypothetical protein
Indel-115	ECs2791	Z3156	-	hypothetical protein
G2583_2504	ECs2792	Z3159	yoeE	Putative outer membrane receptor for iron compound or colicin
	ECs2793		-	hypothetical protein
Indel-116	ECs2794	Z3161	-	putative transposase OrfA protein of insertion sequence IS629
Indel-116	ECs2795	Z3162	-	putative transposase OrfB protein of insertion sequence IS629
G2583_2505	Indel-118	Indel-118	ibrB	putative ParB-like nuclease
G2583_2506	Indel-118	Indel-118	ibrA	Immunoglobulin-binding regulator A homolog
G2583_2507	Indel-118	Indel-118	insN	unknown protein encoded by IS911 within prophage CP-933L
G2583_2508	Indel-118	Indel-118	-	putative transposase
G2583_2509	Indel-118	Indel-118	-	Putative transposase subunit
G2583_2510	Indel-118	Indel-118	-	hypothetical protein
G2583_2511	Indel-118	Indel-118	-	hypothetical protein
G2583_2512	Indel-118	Indel-118	-	hypothetical protein
G2583_2513	Indel-118	Indel-118	yfjP	hypothetical protein
G2583_2514	ECs2796	Indel-119	-	hypothetical protein
G2583_2515	ECs2797	Indel-119	-	hypothetical protein
G2583_2516	ECs2798	Indel-119	-	putative esterase
G2583_2517	ECs2799	Indel-119	-	hypothetical protein
G2583_2518	ECs2800	Indel-119	-	hypothetical protein
G2583_2519	ECs2801	Indel-119	yafZ	conserved hypothetical protein
G2583_2520	ECs2802	Indel-119	yafX	Antirestriction protein
G2583_2521	ECs2803	Indel-119	yeeS	DNA repair protein, RadC family
G2583_2522	ECs2804	Z3163	yeeT	hypothetical protein
G2583_2523	ECs2805	Z3164	yeeU	Putative structural protein
G2583_2524	ECs2806	Z3165	yeeV1	hypothetical protein
G2583_2525	ECs2807	Z3166	yeeW	hypothetical protein
G2583_2526	ECs2808	Z3167	yoeF	hypothetical protein
G2583_2527	ECs2809	Z3168	yeeX	hypothetical protein
G2583_2528	ECs2810	Z3169	yeeA	hypothetical protein
G2583_2529	ECs2811	Z3170	sbmC	DNA gyrase inhibitory protein
G2583_2530	ECs2812	Z3171	dacD	Serine-type D-Ala-D-Ala carboxypeptidase
G2583_2531	ECs2813	Z3173	sbcB	Exonuclease I
G2583_2532	ECs2814	Z3174	yeeD	hypothetical protein
G2583_2533	ECs2815	Z3175	yeeE	Membrane protein, YeeE/YedE family
G2583_2534	ECs2816	Z3176	yeeF	Hypothetical transport protein YeeF
G2583_2535	ECs2817	Z3177	yeeY	Predicted DNA-binding transcriptional regulator

Table S10. The orthologue table of the O55 and O157 strains Page 93

Locus_tag ^a			Gene	Product
CB9615	Sakai	EDL933		
G2583_2536	ECs2818	Z3178	yeeZ	NAD dependent epimerase/dehydratase family protein
		Z3179	-	orf; hypothetical protein
G2583_2537	Indel-121	Indel-121	yoeB	Toxin yoeB
G2583_2538	Indel-121	Indel-121	yefM	Antitoxin yefM
G2583_2539	ECs2819	Z3180	hisL	his operon leader peptide
G2583_2540	ECs2820	Z3181	hisG	ATP phosphoribosyltransferase
G2583_2541	ECs2821	Z3182	hisD	Bifunctional histidinal dehydrogenase and histidinol dehydrogenase
G2583_2542	ECs2822	Z3183	hisC	Histidinol-phosphate aminotransferase
G2583_2543	ECs2823	Z3184	hisB	Fused histidinol-phosphatase/imidazoleglycerol-phosphate dehydratase
G2583_2544	ECs2824	Z3185	hisH	Imidazole glycerol phosphate synthase
G2583_2545	ECs2825	Z3186	hisA	1-(5-phosphoribosyl)-5-[(5-phosphoribosylamino)methylideneamino] imidazole-4-carboxamide isomerase
G2583_2546	ECs2826	Z3187	hisF	Imidazole glycerol phosphate synthase subunit hisF
G2583_2547	ECs2827	Z3188	hisI	Fused phosphoribosyl-AMP cyclohydrolase/phosphoribosyl-ATP pyrophosphatase
G2583_2548	ECs2828	Z3189	cld	O-antigen chain length determinant Wzz
G2583_2549	ECs2829	Z3190	ugd	UDP-glucose-6-dehydrogenase
G2583_2550	Indel-123	Indel-123	ydcC	Transposase IS4 family protein
G2583_2551	Indel-123	Indel-123	WbdK	Putative pyridoxamine 5-phosphate-dependent
G2583_2552	Indel-123	Indel-123	wbcJ	WbdJ
G2583_2553	ECs2830	Z3191	gnd	6-phosphogluconate dehydrogenase, decarboxylating
Indel-124	ECs2831	Z3192	wbdR	acetyltransferase
Indel-124	ECs2832		-	H repeat-associated protein
Indel-124	ECs2833		-	H repeat-associated protein
Indel-124	ECs2834		-	H repeat-associated protein
G2583_2554	Indel-125	Indel-125	rfpA	Putative glycosyltransferase WbgP
G2583_2555	Indel-125	Indel-125	wblT	Putative glycosyltransferase WbgO
G2583_2556	Indel-125	Indel-125	wzx	O-antigen flippase Wzx
G2583_2557	Indel-125	Indel-125	-	O-antigen polymerase Wzy
G2583_2558	Indel-125	Indel-125	fucT	Putative fucosyltransferase WbgN
G2583_2559	ECs2835	Z3194	cpsG	Phosphomannomutase ManB
G2583_2560	ECs2836	Z3195	manC	Mannose-1-P guanosyltransferase ManC
G2583_2561	ECs2837	Z3196	wcaH	GDP-mannose mannosyl hydrolase
G2583_2562	ECs2839	Z3198	gmd	GDP-mannose dehydratase Gmd
Indel-128	ECs2838	Z3197	fcl	fucose synthetase
Indel-130	ECs2840	Z3199	wbdP	putative glycosyl transferase
Indel-130	ECs2841	Z3200	per	perosamine synthetase
Indel-130	ECs2842	Z3201	wzx	O antigen flippase
Indel-130	ECs2843	Z3202	wbdO	putative glycosyl transferase
Indel-130	ECs2844	Z3203	wzy	O antigen polymerase
Indel-130	ECs2845	Z3204	wbdN	putative glycosyl transferase

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Locus_tag ^a			Gene	Product
CB9615	Sakai	EDL933		
G2583_2563	Indel-131	Indel-131	wbgM	Putative galactosyltransferase WbgM
G2583_2564	ECs2846	Z3205	galF	UDP-glucose pyrophosphorylase GalF
G2583_2565	ECs2847	Z3206	gne	UDP-N-acetylglucosamine 4-epimerase
G2583_2566	ECs2848	Z3207	wcaM	Predicted colanic acid biosynthesis protein WcaM
G2583_2567	ECs2849	Z3208	wcaL	Predicted glycosyl transferase WcaL
G2583_2568	ECs2850	Z3209	wcaK	Predicted pyruvyl transferase WcaK
G2583_2569	ECs2851	Z3210	wzxC	Colanic acid exporter WzxC
G2583_2570	ECs2852	Z3211	wcaJ	Predicted UDP-glucose lipid carrier transferase WcaJ
G2583_2571	ECs2853	Z3212	cpsG	Phosphomannomutase CpsG
G2583_2572	ECs2854	Z3213	cpsB	Mannose-1-phosphate guanyltransferase CpsB
G2583_2573	ECs2855	Z3214	wcaI	Predicted glycosyl transferase WcaI
G2583_2574	ECs2856	Z3215	gmm	GDP-mannose mannosyl hydrolase
G2583_2575	ECs2857	Z3216	fcl	Bifunctional GDP-fucose synthetase
G2583_2576	ECs2858	Z3217	gmd	GDP-mannose 4,6-dehydratase
G2583_2577	ECs2859	Z3218	wcaF	Predicted acyl transferase WcaF
G2583_2578	ECs2860	Z3219	wcaE	Predicted glycosyl transferase WcaE
G2583_2579	ECs2861	Z3220	wcaD	Putative colanic acid polymerase
G2583_2580	ECs2862	Z3221	wcaC	Predicted glycosyl transferase WcaC
G2583_2581	ECs2863	Z3222	wcaB	Predicted acyl transferase WcaB
G2583_2582	ECs2864	Z3223	wcaA	Predicted glycosyl transferase WcaA
G2583_2583	ECs2865	Z3224	wzc	Protein-tyrosine kinase Wzc
G2583_2584	ECs2866	Z3226	wzb	Low molecular weight protein-tyrosine-phosphatase wzb
G2583_2585	ECs2867	Z3227	wza	Putative polysaccharide export protein wza precursor
G2583_2586	ECs2868	Z3229	yegH	Putative transport protein
G2583_2587	ECs2869	Z3230	-	hypothetical protein
G2583_2588	ECs2870	Z3231	-	Putative DNA-binding protein
G2583_2589	ECs2871	Z3232	asmA	Predicted assembly protein AsmA
G2583_2590	ECs2872	Z3233	dcd	Deoxycytidine triphosphate deaminase
G2583_2591	ECs2873	Z3234	udk	Uridine/cytidine kinase
G2583_2592	ECs2874	Z3235	yegE	Predicted diguanylate cyclase
G2583_2592	ECs2875	Z3236	yegE	Predicted diguanylate cyclase
G2583_2592	ECs2876	Z3236	yegE	Predicted diguanylate cyclase
G2583_2593	ECs2877	Z3237	alkA	3-methyl-adenine DNA glycosylase II
G2583_2594	ECs2878	Z3238	yegD	Predicted chaperone
G2583_2595	ECs2879	Z3239	yegI	conserved predicted protein
G2583_2596	ECs2880	Z3240	yegK	conserved predicted protein
G2583_2597	ECs2881	Z3241	yegL	Uncharacterized protein encoded in toxicity protection region of plasmid R478, contains von Willebrand factor (vWF) domain
G2583_2598			-	ncRNA
G2583_2599			-	ncRNA
		Z3242	-	hypothetical protein
G2583_2600	ECs2882	Z3243	mdtA	hypothetical protein
G2583_2601	ECs2883	Z3244	mdtB	Multidrug resistance protein mdtB

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Locus_tag ^a			Gene	Product
CB9615	Sakai	EDL933		
G2583_2602	ECs2884	Z3245	mdtC	Multidrug resistance protein mdtC
G2583_2603	ECs2885	Z3246	mdtD	Multidrug resistance protein mdtD
G2583_2604	ECs2886	Z3247	baeS	Sensor histidine kinase BaeS
G2583_2605	ECs2887	Z3248	baeR	DNA-binding response regulator in two-component regulatory system with BaeS
G2583_2606	ECs2888	Z3249	yegP	hypothetical protein
G2583_2607	Indel-138	Indel-138	-	Putative addiction module antidote protein, CC2985
G2583_2608	Indel-138	Indel-138	-	Plasmid stabilization system protein, RelE/ParE family
G2583_2609	ECs2889	Z3250	yegQ	hypothetical protein
G2583_2610			-	ncRNA
G2583_2611	ECs2890		-	hypothetical protein
G2583_2612	ECs2891	Z3251	yegR	hypothetical protein
G2583_2613	ECs2892	Z3252	yegS	Lipid kinase yegS
G2583_2614	Indel-140	Indel-140	-	hypothetical protein
G2583_2615	Indel-140	Indel-140	rbtT	D-arabitol membrane transporter
G2583_2616	Indel-140	Indel-140	-	hypothetical protein
G2583_2617	Indel-140	Indel-140	-	Arabitol dehydrogenase
G2583_2618	Indel-140	Indel-140	-	D-arabitol repressor
G2583_2619	Indel-140	Indel-140	-	hypothetical protein
G2583_2620	Indel-140	Indel-140	-	Ribitol dehydrogenase
G2583_2621	Indel-140	Indel-140	rIk	Ribitol kinase
G2583_2622	ECs2893	Z3253	gatR	Galactitol utilization operon repressor
G2583_2623	ECs2894	Z3254	gatD	Galactitol-1-phosphate 5-dehydrogenase
G2583_2624	ECs2895	Z3255	gatC	PTS system, galactitol-specific IIC component
G2583_2625	ECs2896	Z3256	gatB	Galactitol-specific phosphotransferase enzyme IIB component
G2583_2626	ECs2897	Z3257	gatA	Galactitol-specific phosphotransferase enzyme IIA component
G2583_2627	ECs2898	Z3258	gatZ	Tagatose 6-phosphate kinase
G2583_2628	ECs2899	Z3259	gatY	Class II aldolase, tagatose bisphosphate family
G2583_2629	ECs2900	Z3260	fbaB	Fructose-bisphosphate aldolase class 1
G2583_2630	ECs2901	Z3261	yegT	Nucleoside transporter
G2583_2631	ECs2902	Z3262	yegU	ADP-ribosylglycohydrolase family protein
G2583_2632	ECs2903	Z3263	yegV	Kinase, PfkB family
G2583_2633	ECs2904	Z3264	yegW	transcriptional regulator, GntR family
G2583_2634	ECs2905	Z3266	yegX	hypothetical protein
G2583_2635	ECs2906	Z3267	thiD	Hydroxymethylpyrimidine/phosphomethylpyrimidin e kinase
G2583_2636	ECs2907	Z3268	thiM	Hydroxyethylthiazole kinase
G2583_2637	ECs2908	Z3269	-	hypothetical protein
G2583_2638		Z3270	-	hypothetical protein
G2583_2639	ECs2909	Z3271	-	hypothetical protein
G2583_2640	ECs2910	Z3272	-	hypothetical protein
G2583_2641	ECs2911	Z3273	rcnR	hypothetical protein

Table S10. The orthologue table of the O55 and O157 strains Page 96

Locus_tag ^a			Gene	Product
CB9615	Sakai	EDL933		
G2583_2642	ECs2912	Z3274	rcnA	Nickel/cobalt efflux system rcnA
G2583_2643	ECs2913	Z3275	yohN	hypothetical protein
Indel-141	ECs2914	Z3276	-	putative type-1 fimbrial protein
G2583_2644			yehA	predicted fimbrial-like adhesin protein
G2583_2645	ECs2915	Z3277	yehB	fimbrial usher protein
G2583_2646	ECs2916	Z3278	yehC	gram-negative pilus assembly chaperone
G2583_2647	ECs2917	Z3279	yehD	Fimbrial protein
G2583_2648	ECs2918	Z3280	yehE	hypothetical protein
G2583_2649	ECs2919	Z3281	mrp	Putative ATPase
G2583_2650	ECs2920	Z3282	metG	Methionyl-tRNA synthetase
G2583_2651	ECs2921	Z3283	molR_A	putative molybdate metabolism regulator
G2583_2651	ECs2922	Z3284	molR_A	putative molybdate metabolism regulator
G2583_2652	ECs2922	Z3284	molR_B	putative molybdate metabolism regulator
G2583_2653	ECs2923	Z3285	molR_C	interrupted molybdate metabolism regulator
G2583_2653	ECs2924	Z3286	molR_C	interrupted molybdate metabolism regulator
G2583_2654	ECs2925	Z3287	yehI	Molybdate metabolism regulator MolR homolog
G2583_2655	ECs2926	Z3288	yehK	hypothetical protein
Indel-144		Z3289	-	hypothetical protein
		Z3290	-	hypothetical protein
G2583_2656	ECs2927	Z3291	yehL	hypothetical protein
G2583_2657	ECs2928	Z3292	yehM	hypothetical protein
G2583_2657	ECs2929	Z3293	yehM	hypothetical protein
G2583_2658	ECs2930	Z3294	yehP	hypothetical protein
G2583_2659	ECs2931	Z3295	yehQ	hypothetical protein
Indel-145	ECs2932	Z3297	-	putative transposase OrfB protein of insertion sequence IS629
Indel-145	ECs2933	Z3299	-	putative transposase OrfA protein of insertion sequence IS629
G2583_2660	ECs2934	Z3300	yehR	Hypothetical lipoprotein YehR
G2583_2661	ECs2935	Z3301	yehS	hypothetical protein
G2583_2662	ECs2936	Z3302	yehT	putative two-component response-regulatory protein
G2583_2663	ECs2937	Z3303	yehU	Sensor histidine kinase
G2583_2664	ECs2938		mlrA	DNA-binding transcriptional regulator
Indel-146	ECs2939	Z3305	-	hypothetical protein
Indel-146	ECs2940	Z3306	-	hypothetical protein
Indel-146	ECs2941	Z3307	-	putative tail fiber protein
Indel-146	ECs2941	Z3309	-	putative tail fiber protein
Indel-146	ECs2942	Z3310	-	putative outer membrane protein Lom precursor
Indel-147	ECs2943	Indel-147	-	putative host specificity protein
Indel-147	ECs2944	Indel-147	-	putative host specificity protein
Indel-147	ECs2945	Indel-147	-	putative tail assembly protein
Indel-147	ECs2946	Indel-147	-	putative tail assembly protein
Indel-147	ECs2947	Indel-147	-	putative minor tail protein
Indel-147	ECs2948	Indel-147	-	putative minor tail protein

Table S10. The orthologue table of the O55 and O157 strains Page 97

Locus_tag ^a			Gene	Product
CB9615	Sakai	EDL933		
Indel-147	ECs2949	Indel-147	-	putative tail length tape measure protein precursor
Indel-147	ECs2950	Indel-147	-	putative minor tail protein
Indel-147	ECs2951	Indel-147	-	putative minor tail protein
Indel-147	ECs2952	Indel-147	-	hypothetical protein
Indel-147	ECs2953	Indel-147	-	putative minor tail protein
Indel-147	ECs2954	Indel-147	-	putative minor tail protein
Indel-147	ECs2955	Indel-147	-	hypothetical protein
Indel-147	ECs2956	Indel-147	-	hypothetical membrane protein
Indel-147	ECs2957	Indel-147	-	hypothetical protein
Indel-147	ECs2958	Indel-147	-	putative transposase OrfA protein of insertion sequence IS629
Indel-147	ECs2959	Indel-147	-	putative transposase OrfB protein of insertion sequence IS629
Indel-147	ECs2960	Indel-147	-	putative protease/scaffold protein
Indel-147	ECs2961	Indel-147	-	putative portal protein
Indel-147	ECs2962	Indel-147	-	hypothetical protein
Indel-147	ECs2963	Indel-147	-	putative terminase large subunit
Indel-147	ECs2964	Indel-147	-	hypothetical protein
Indel-148	Indel-148	Z3311	-	putative tail fiber protein of prophage CP-933V
Indel-148	Indel-148	Z3312	-	putative superoxide dismutase
Indel-148	Indel-148	Z3313	-	putative tail component of prophage CP-933V
Indel-148	Indel-148	Z3314	-	putative tail component of prophage CP-933V
Indel-148	Indel-148	Z3315	-	putative tail component of prophage CP-933V
Indel-148	Indel-148	Z3316	-	unknown protein encoded within prophage CP-933V
Indel-148	Indel-148	Z3318	-	putative tail component of prophage CP-933V
Indel-148	Indel-148	Z3319	-	unknown protein encoded within prophage CP-933V
Indel-148	Indel-148	Z3320	-	unknown protein encoded within prophage CP-933V
Indel-148	Indel-148	Z3322	-	putative major tail subunit encoded within prophage CP-933V
Indel-148	Indel-148	Z3323	-	unknown protein encoded within prophage CP-933V
Indel-148	Indel-148	Z3325	-	unknown protein encoded within prophage CP-933V
Indel-148	Indel-148	Z3326	-	unknown protein encoded within prophage CP-933V
Indel-148	Indel-148	Z3327	-	unknown protein encoded within prophage CP-933V
Indel-148	Indel-148	Z3328	-	putative portal protein for prophage CP-933V
Indel-148	Indel-148	Z3329	-	unknown protein encoded within prophage CP-933V
Indel-148	Indel-148	Z3331	-	unknown protein encoded within prophage CP-933V
Indel-148	Indel-148	Z3332	-	unknown protein encoded within prophage CP-933V
Indel-148	Indel-148	Z3333	-	unknown protein encoded within prophage CP-933V
Indel-148	Indel-148	Z3334	-	unknown protein encoded within prophage CP-933V
Indel-148	Indel-148	Z3335	-	unknown protein encoded within prophage CP-933V
Indel-149	ECs2966	Z3336	-	putative endopeptidase
Indel-149	ECs2965		-	lipoprotein Rz1 precursor
Indel-149	ECs2967	Z3337	antV	putative antirepressor protein
Indel-149	ECs2968	Z3339	-	putative endolysin

Table S10. The orthologue table of the O55 and O157 strains Page 98

Locus_tag ^a			Gene	Product
CB9615	Sakai	EDL933		
Indel-149	ECs2969	Z3340	-	putative holin protein
Indel-149	ECs2970	Z3341	-	hypothetical protein
Indel-149	ECs2971		-	hypothetical protein
Indel-149	ECs2972	Z3342	-	hypothetical protein
Indel-149	ECs2973	Z3343	stx1B	Shiga toxin I subunit B precursor
Indel-149	ECs2974	Z3344	stx1A	Shiga toxin I subunit A precursor
Indel-149	ECs2975	Z3345	-	antitermination protein
Indel-149	ECs2976		-	hypothetical protein
Indel-149	ECs2977	Z3346	-	hypothetical protein
Indel-149	ECs2978	Z3347	-	hypothetical protein
Indel-149	ECs2979	Z3348	-	hypothetical protein
Indel-149	ECs2980		-	hypothetical protein NinE
Indel-149	ECs2981	Z3349	-	putative DNA methylase
Indel-149	ECs2982	Z3351	-	hypothetical protein
Indel-149	ECs2983	Z3352	-	hypothetical protein
Indel-149	ECs2984	Z3353	-	hypothetical protein
Indel-149	ECs2985	Z3354	-	Ren protein
Indel-149	ECs2986	Z3355	-	phage replication protein P
Indel-149	ECs2987	Z3356	-	phage replication protein O
Indel-149	ECs2988	Z3357	-	regulatory protein CII
Indel-149	ECs2989		-	putative regulatory protein
Indel-149	ECs2990	Z3358	-	putative prophage repressor CI
Indel-149	ECs2991	Z3359	-	hypothetical protein
Indel-149	ECs2992	Z3360	-	putative membrane protein
Indel-149	ECs2994		-	hypothetical protein
Indel-149	ECs2993	Z3361	-	putative regulatory protein
Indel-149	ECs2995	Z3362	-	putative superinfection exclusion protein
Indel-149	ECs2996	Z3363	-	putative single-stranded DNA binding protein
Indel-149	ECs2997		-	regulatory protein cIII
Indel-149	ECs2998	Z3364	-	Kil protein
Indel-149	ECs2999		-	host-nuclease inhibitor protein gam
Indel-149	ECs3000	Z3365	-	putative host-nuclease inhibitor protein Gam
Indel-149	ECs3001	Z3366	-	recombination protein Bet
Indel-149	ECs3002	Z3367	-	exonuclease
Indel-149	ECs3003		-	hypothetical protein
Indel-149	ECs3004	Z3368	-	hypothetical protein
Indel-149	ECs3005	Z3369	-	hypothetical protein
Indel-149	ECs3006		-	putative C4-type zinc finger protein
Indel-149	ECs3007	Z3370	-	hypothetical protein
Indel-149	ECs3008		-	hypothetical protein
Indel-149	ECs3009	Z3371	-	hypothetical protein
Indel-149	ECs3010	Z3372	-	hypothetical protein
Indel-149	ECs3011	Z3373	-	hypothetical protein
Indel-149		Z3374	-	unknown protein encoded within prophage CP-933V

Table S10. The orthologue table of the O55 and O157 strains Page 99

Locus_tag ^a			Gene	Product
CB9615	Sakai	EDL933		
Indel-149	ECs3012		-	putative excisionase
Indel-149	ECs3013	Z3375	intV	putative integrase
G2583_2664	ECs3014	Z3376	mlrA	DNA-binding transcriptional regulator
G2583_2665	ECs3015	Z3377	yehW	ABC transporter, quaternary amine uptake (QAT) family, permease protein
G2583_2666	ECs3016	Z3378	yehX	ABC transporter, quaternary amine uptake (QAT) family, ATP-binding protein
G2583_2667	ECs3017	Z3379	yehY	ABC transporter, quaternary amine uptake (QAT) family, permease protein
G2583_2668	ECs3018	Z3380	osmF	Substrate-binding region of ABC-type glycine betaine transport system precursor
G2583_2669	ECs3019	Z3381	bglX	Periplasmic beta-glucosidase
G2583_2670	ECs3020	Z3382	dld	D-lactate dehydrogenase
G2583_2671	ECs3021	Z3383	pbpG	Penicillin-binding protein 7
G2583_2672	ECs3022	Z3384	yohC	hypothetical protein
G2583_2673	ECs3023	Z3385	yohD	hypothetical protein
G2583_2674	ECs3024	Z3386	yohF	Putative 3-oxoacyl-[acyl-carrier-protein] reductase
G2583_2675	ECs3025	Z3387	yohG	Multidrug resistance outer membrane protein mdtQ precursor
G2583_2676		Z3388	-	hypothetical protein
G2583_2677	ECs3026	Z3389	dusC	tRNA-dihydrouridine synthase C
G2583_2678	ECs3027	Z3390	-	FAD dependent oxidoreductase
G2583_2679	ECs3028	Z3391	maiA	Putative glutathione-S-transferase
G2583_2680	ECs3029	Z3392	-	Fumarylacetoacetate hydrolase family protein
G2583_2681	ECs3030	Z3393	gtdA	Gentisate 1,2-dioxygenase
G2583_2682	ECs3031	Z3394	-	Putative transporter
G2583_2683	ECs3032	Z3395	-	putative regulator
G2583_2684	ECs3033	Z3396	yohJ	UPF0299 membrane protein yohJ
G2583_2685	ECs3034	Z3397	yohK	Putative serotonin transporter
G2583_2686	ECs3035	Z3398	cdd	Cytidine deaminase
G2583_2687	ECs3036	Z3399	sanA	hypothetical protein
G2583_2688	ECs3037	Z3400	yeiS	hypothetical protein
G2583_2689	ECs3038	Z3401	yeiT	Uncharacterized oxidoreductase yeiT
G2583_2690	ECs3039	Z3402	yeiA	putative oxidoreductase
G2583_2691	ECs3040	Z3403	mgIC	Galactose ABC transporter, permease protein
G2583_2692	ECs3041	Z3404	mgIA	Galactose/methyl galactoside import ATP-binding protein mgIA
G2583_2693	ECs3042	Z3405	mgIB	Galactose ABC transporter, periplasmic galactose-binding protein
G2583_2694	ECs3043	Z3407	galS	DNA-binding transcriptional repressor
G2583_2695	ECs3044	Z3408	yeiB	hypothetical protein
G2583_2696	ECs3045	Z3409	foIE	GTP cyclohydrolase 1
G2583_2697	ECs3046	Z3410	yeiG	S-formylglutathione hydrolase yeiG
G2583_2698	ECs3047	Z3411	cirA	Colicin I receptor

Table S10. The orthologue table of the O55 and O157 strains Page 100

Locus_tag ^a			Gene	Product
CB9615	Sakai	EDL933		
G2583_2699	ECs3048	Z3413	lysP	Lysine-specific permease
G2583_2700	ECs3049	Z3414	yeiE	putative DNA-binding transcriptional regulator
G2583_2701	ECs3050	Z3415	yeiH	UPF0324 inner membrane protein yeiH
G2583_2702	ECs3051	Z3416	nfo	Endonuclease 4
G2583_2703	ECs3052	Z3417	yeiI	Kinase, pfkB family
G2583_2704	ECs3053	Z3418	nupX	Nucleoside permease
G2583_2705	ECs3054	Z3419	rihB	Pyrimidine-specific ribonucleoside hydrolase rihB
G2583_2706	ECs3055	Z3420	yeiL	DNA-binding transcriptional activator of stationary phase nitrogen survival
G2583_2707	ECs3056	Z3421	yeiM	Nucleoside transporter, NupC family
G2583_2708	ECs3057	Z3422	yeiN	Indigoidine synthase A like protein
G2583_2709	ECs3058	Z3423	yeiC	Kinase, pfkB family protein
G2583_2710	ECs3059	Z3425	fruA	fructose-specific PTS system IIBC component
G2583_2711	ECs3060	Z3426	fruK	1-phosphofructokinase
G2583_2712	ECs3061	Z3427	fruB	Pts system mannitol-specific eicba component
G2583_2713	ECs3062	Z3428	setB	Sugar efflux transporter B
G2583_2714	ECs3063	Z3430	yeiP	Elongation factor P family protein
G2583_2715	ECs3064	Z3431	yeiQ	Mannitol dehydrogenase family protein
G2583_2716	ECs3065	Z3432	yeiR	CobW/P47K family protein
G2583_2717	ECs3066	Z3433	yeiU	hypothetical protein
G2583_2718	ECs3067	Z3434	spr	Lipoprotein spr precursor
G2583_2719	ECs3068	Z3435	rtn	Putative cyclic diguanylate phosphodiesterase
G2583_2720	ECs3069	Z3436	yejA	ABC transporter, periplasmic solute-binding protein
G2583_2721	ECs3070	Z3437	yejB	Inner membrane ABC transporter permease protein
G2583_2722	ECs3071	Z3438	yejE	ABC transporter, permease protein
G2583_2723	ECs3072	Z3439	yejF	ABC transporter, ATP-binding protein
G2583_2724	ECs3073	Z3440	yejG	hypothetical protein
G2583_2725	ECs3074	Z3441	bcr	Bicyclomycin resistance protein
G2583_2726	ECs3075	Z3442	rsuA	Pseudouridine synthase
G2583_2727	ECs3076	Z3443	yejH	Putative helicase
G2583_2728	ECs3077	Z3444	rpLY	50S ribosomal protein L25
G2583_2729	ECs3078	Z3445	yejK	Nucleoid-associated protein ndpA
G2583_2730	ECs3079	Z3446	yejL	UPF0352 protein yejL
G2583_2731	ECs3080	Z3447	yejM	Inner membrane protein yejM
G2583_2732	proL	RNA058	proL	Pro tRNA
G2583_2733	ECs3081	Z3449	yejO	Putative autotransporter, IS5K-containing
G2583_2734	ECs3082	Z3450	narP	Nitrate/nitrite response regulator NarP
G2583_2735	ECs3083	Z3451	ccmH	Cytochrome c-type biogenesis family protein
G2583_2736	ECs3084	Z3452	ccmG	Thiol:disulfide interchange protein dsbE
G2583_2737	ECs3085	Z3453	ccmF	Cytochrome c-type biogenesis protein CcmF
G2583_2738	ECs3086	Z3454	ccmE	Cytochrome c-type biogenesis protein ccmE
G2583_2739	ECs3087	Z3455	ccmD	heme exporter protein D
G2583_2740	ECs3088	Z3456	ccmC	Heme exporter protein C
G2583_2741	ECs3089	Z3457	ccmB	Heme exporter protein B

Table S10. The orthologue table of the O55 and O157 strains Page 101

Locus_tag ^a			Gene	Product
CB9615	Sakai	EDL933		
G2583_2742	ECs3090	Z3458	ccmA	Cytochrome c biogenesis ATP-binding export protein ccmA
G2583_2743	ECs3091	Z3459	napC	Cytochrome c-type protein napC
G2583_2744	ECs3092	Z3460	napB	Cytochrome c-type protein
G2583_2745	ECs3093	Z3461	napH	Polyferredoxin
G2583_2746	ECs3094	Z3462	napG	Ferredoxin-type protein napG precursor
G2583_2747	ECs3095	Z3463	napA	Periplasmic nitrate reductase precursor
G2583_2748	ECs3096	Z3464	napD	Periplasmic nitrate reductase
G2583_2749	ECs3097	Z3465	napF	Ferredoxin-type protein napF
G2583_2750	ECs3098	Z3467	eco	Ecotin precursor
G2583_2751	ECs3099	Z3468	mgo	Malate:quinone oxidoreductase
G2583_2752	ECs3100	Z3469	yojI	ABC transporter ATP-binding protein
G2583_2753	ECs3101	Z3470	alkB	alkylated DNA repair protein
G2583_2754	ECs3102	Z3471	ada	O6-methylguanine-DNA methyltransferase; transcription activator/repressor
G2583_2755	ECs3103	Z3472	apbE	Thiamine biosynthesis lipoprotein apbE precursor
G2583_2756	ECs3104	Z3473	ompC	Outer membrane protein C precursor
G2583_2757	micF		micF	ncRNA
G2583_2758	ECs3105	Z3475	rcsD	Sensor histidine kinase YojN
G2583_2759	ECs3106	Z3476	rcsB	Capsular synthesis regulator component B
G2583_2760	ECs3107	Z3477	rcsC	Sensor histidine kinase/response regulator RcsC
G2583_2761	ECs3108	Z3478	yfaP	hypothetical protein
G2583_2762	ECs3109	Z3479	yfaQ	hypothetical protein
G2583_2762	ECs3110	Z3480	yfaQ	hypothetical protein
G2583_2763	ECs3111	Z3481	yfaSR	alpha-2-macroglobulin family protein
G2583_2764	Indel-150	Indel-150	-	hypothetical protein
G2583_2765	Indel-150	Indel-150	ISSf12	ISSf12 ORF
G2583_2766	ECs3111	Z3481	yfaS	alpha-2-macroglobulin family protein
G2583_2767	ECs3112	Z3482	yfaT	hypothetical protein
G2583_2768	ECs3113	Z3483	yfaA	hypothetical protein
G2583_2769	ECs3114	Z3484	gyrA	DNA gyrase, A subunit
G2583_2770	ECs3115	Z3486	ubiG	3-demethylubiquinone-9 3-methyltransferase
G2583_2771	ECs3116	Z3487	yfaL	Putative ATP-binding component of a transport system
G2583_2772	ECs3117	Z3489	nrdA	Ribonucleoside-diphosphate reductase, alpha subunit
G2583_2773	ECs3118	Z3491	nrdB	Ribonucleoside-diphosphate reductase 1, beta subunit,
G2583_2774	ECs3119	Z3492	yfaE	Ferredoxin
G2583_2775	ECs3120	Z3493	inaA	pH-inducible protein involved in stress response
G2583_2776	ECs3121	Z3494	-	transporter, major facilitator family
G2583_2777	ECs3122	Z3495	yfaH	putative regulator
G2583_2778	ECs3123	Z3496	-	hypothetical protein
G2583_2779	ECs3124	Z3497	glpQ	Glycerophosphoryl diester phosphodiesterase
G2583_2780	ECs3125	Z3498	glpT	Glycerol-3-phosphate transporter
G2583_2781	ECs3126	Z3499	glpA	Anaerobic glycerol-3-phosphate dehydrogenase subunit
G2583_2782	ECs3127	Z3500	glpB	Anaerobic glycerol-3-phosphate dehydrogenase subunit

Table S10. The orthologue table of the O55 and O157 strains Page 102

Locus_tag ^a			Gene	Product
CB9615	Sakai	EDL933		
G2583_2783	ECs3128	Z3501	glpC	Anaerobic glycerol-3-phosphate dehydrogenase subunit
G2583_2784	ECs3129	Z3502	yfaD	hypothetical protein
G2583_2785	ECs3130	Z3503	yfaU	putative aldolase
G2583_2786	ECs3131	Z3504	yfaV	Putative transport protein
Indel-151	ECs3132	Indel-151	-	putative transposase OrfA protein of insertion sequence IS629
Indel-151	ECs3133	Indel-151	-	putative transposase OrfB protein of insertion sequence IS629
G2583_2786	ECs3134	Z3504	yfaV	Putative transport protein
G2583_2787	ECs3135	Z3505	yfaW	Putative racemase
G2583_2788	ECs3136	Z3506	yfaX	putative regulator
G2583_2789	ECs3137	Z3507	yfaY	CinA family protein
G2583_2790	ECs3138	Z3508	yfaZ	hypothetical protein
G2583_2791	ECs3139	Z3509	nudI	Nucleoside triphosphatase nudI
G2583_2792	ECs3140	Z3510	ais	protein induced by aluminum
G2583_2793	ECs3141	Z3511	arnB	UDP-4-amino-4-deoxy-L-arabinose--oxoglutarate aminotransferase
G2583_2794	ECs3142	Z3512	arnC	Undecaprenyl-phosphate 4-deoxy-4-formamido-L-arabinose transferase
G2583_2795	ECs3143	Z3513	arnA	Bifunctional polymyxin resistance protein arnA [Includes: UDP-4-amino- 4-deoxy-L-arabinose
G2583_2796	ECs3144	Z3514	yfbH	hypothetical protein
G2583_2797	ECs3145	Z3515	arnT	Undecaprenyl phosphate-alpha-4-amino-4-deoxy-L-arabinose arabinosyl transferase
G2583_2798		Z3516	yfbW	Sucrose-6 phosphate hydrolase
G2583_2799	ECs3146	Z3517	yfbJ	putative transport/receptor protein
G2583_2800	ECs3147	Z3518	pmrD	Polymyxin resistance protein B
G2583_2801	ECs3148	Z3520	menE	O-succinylbenzoate-CoA ligase
G2583_2802	ECs3149	Z3521	menC	o-succinylbenzoate synthase
G2583_2803	ECs3150	Z3522	menB	Naphthoate synthase
G2583_2804	ECs3151	Z3523	yfbB	2-succinyl-6-hydroxy-2,4-cyclohexadiene-1-carboxylate synthase
G2583_2805	ECs3152	Z3524	menD	2-succinyl-5-enolpyruvyl-6-hydroxy-3-cyclohexene-1-carboxylate synthase
G2583_2806	ECs3153	Z3525	menF	Isochorismate synthase, menaquinone-specific
G2583_2807	ECs3154	Z3526	elaB	regulatory protein AmpE
G2583_2808	ECs3155	Z3527	elaA	Acetyltransferase, GNAT family
G2583_2809	ECs3156	Z3528	rbn	ribonuclease Z
G2583_2810	ECs3157	Z3529	elaD	putative sulfatase / phosphatase
G2583_2811	ECs3158	Z3531	yfbL	Peptidase, M28 family
G2583_2812	ECs3159	Z3533	yfbM	hypothetical protein
G2583_2813	ECs3160	Z3534	nuoN	NADH-quinone oxidoreductase subunit N
G2583_2814	ECs3161	Z3536	nuoM	NADH-quinone oxidoreductase subunit M
G2583_2815	ECs3162	Z3537	nuoL	NADH-quinone oxidoreductase, L subunit

Table S10. The orthologue table of the O55 and O157 strains Page 103

Locus_tag ^a			Gene	Product
CB9615	Sakai	EDL933		
G2583_2816	ECs3163	Z3538	nuoK	NADH-quinone oxidoreductase subunit K
G2583_2817	ECs3164	Z3539	nuoJ	NADH-quinone oxidoreductase subunit J
G2583_2818	ECs3165	Z3540	nuoI	NADH-quinone oxidoreductase subunit I
G2583_2819	ECs3166	Z3541	nuoH	NADH-quinone oxidoreductase subunit H
G2583_2820	ECs3167	Z3542	nuoG	NADH-quinone oxidoreductase
G2583_2821	ECs3168	Z3543	nuoF	NADH-quinone oxidoreductase, F subunit
G2583_2822	ECs3169	Z3544	nuoE	NADH-quinone oxidoreductase, E subunit
G2583_2823	ECs3170	Z3545	nuoC	NADH-quinone oxidoreductase, C/D subunit
G2583_2824	ECs3171	Z3546	nuoB	NADH-quinone oxidoreductase subunit B
G2583_2825	ECs3172	Z3547	nuoA	NADH-quinone oxidoreductase subunit A
G2583_2826	ECs3173	Z3549	IrhA	Probable HTH-type transcriptional regulator IrhA
G2583_2827	ECs3174	Z3551	yfbQ	Uncharacterized aminotransferase yfbQ
G2583_2828	ECs3175	Z3552	yfbR	5'-nucleotidase yfbR
G2583_2829	ECs3176	Z3553	yfbS	Putative transport protein
G2583_2830	ECs3177	Z3554	yfbT	Sugar-phosphatase, YfbT
G2583_2831	ECs3178	Z3555	yfbU	UPF0304 protein yfbU
G2583_2832	ECs3179	Z3556	yfbV	UPF0208 membrane protein yfbV
G2583_2833	ECs3180	Z3558	ackA	Acetate kinase
G2583_2834	ECs3181	Z3559	pta	Phosphate acetyltransferase
G2583_2835	ECs3182	Z3560	yfcC	C4-dicarboxylate anaerobic carrier protein
G2583_2836	ECs3183	Z3561	yfcD	Uncharacterized Nudix hydrolase yfcD
G2583_2837	ECs3184	Z3562	yfcE	Phosphodiesterase yfcE
G2583_2838	ECs3185	Z3563	yfcF	Glutathione S-transferase domain protein
G2583_2839	ECs3186	Z3564	yfcG	Glutathione S-transferase
G2583_2840	ECs3187	Z3565	folX	D-erythro-7,8-dihydroneopterin triphosphate epimerase
G2583_2841	ECs3188	Z3566	yfcH	NAD-binding domain 4 protein
G2583_2842	ECs3189	Z3567	yfcI	hypothetical protein
G2583_2843	ECs3190	Z3568	hisP	ATP-binding component of histidine transport
G2583_2844	ECs3191	Z3569	hisM	Histidine transport system permease protein hisM
G2583_2845	ECs3192	Z3570	hisQ	ABC-type arginine transport system, permease component
G2583_2846	ECs3193	Z3571	hisJ	Histidine-binding periplasmic protein precursor
G2583_2847	ECs3194	Z3572	argT	Lysine-arginine-ornithine-binding periplasmic protein precursor
G2583_2848	ECs3195	Z3573	ubiX	3-octaprenyl-4-hydroxybenzoate carboxy-lyase
G2583_2849	ECs3196	Z3574	purF	Amidophosphoribosyltransferase
G2583_2850	ECs3197	Z3575	cvpA	CvpA protein
G2583_2851	ECs3198	Z3576	dedD	Sporulation and cell division repeat protein
G2583_2852	ECs3199	Z3577	folC	Tetrahydrofolate synthase/dihydrofolate synthase
G2583_2853	ECs3200	Z3578	accD	Acetyl-coenzyme A carboxylase carboxyl transferase subunit beta
G2583_2854	ECs3201	Z3579	dedA	hypothetical protein
G2583_2855	ECs3202	Z3580	truA	tRNA pseudouridine synthase A
G2583_2856	ECs3203	Z3581	usg	USG-1 protein

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Locus_tag ^a			Gene	Product
CB9615	Sakai	EDL933		
G2583_2857	ECs3204	Z3582	pdxB	Erythronate-4-phosphate dehydrogenase
G2583_2858	ECs3205	Z3583	flk	Cell division protein
G2583_2859	ECs3206	Z3585	yfcJ	Permeases of the major facilitator superfamily
G2583_2860	ECs3207	Z3586	fabB	3-oxoacyl-[acyl-carrier-protein] synthase 1
G2583_2861	ECs3208	Z3587	mnmC	UPF0209 protein yfcK
G2583_2862	ECs3209	Z3588	yfcL	hypothetical protein
G2583_2863	ECs3210	Z3589	yfcM	putative transporting ATPase
G2583_2864	ECs3211	Z3590	yfcA	Inner membrane protein yfcA
G2583_2865	ECs3212	Z3591	mepA	Penicillin-insensitive murein endopeptidase precursor
G2583_2866	ECs3213	Z3592	aroC	Chorismate synthase
G2583_2867	ECs3215	Z3593	prmB	Putative adenine-specific methylase
G2583_2868	ECs3214	Z3594	yfcN	UPF0115 protein yfcN
G2583_2869	ECs3216	Z3595	yfcO	hypothetical protein
G2583_2870	ECs3217	Z3596	yfcP	Fimbrial protein
G2583_2871	ECs3218	Z3597	yfcQ	Fimbrial subunit
G2583_2872	ECs3219	Z3598	yfcR	Putative minor fimbrial subunit
G2583_2873	ECs3220	Z3599	yfcS	Chaperone protein PapD
G2583_2874	ECs3221	Z3600	yfcU	Fimbrial usher family protein
G2583_2875	ECs3222	Z3601	yfcV	Fimbrial protein
G2583_2876	ECs3223	Z3603	sixA	Phosphohistidine phosphatase SixA
G2583_2877	ECs3224	Z3604	fadJ	Fatty oxidation complex, alpha subunit FadJ
G2583_2878	ECs3225	Z3605	fadI	3-ketoacyl-CoA thiolase
G2583_2879	ECs3226	Z3606	yfcZ	hypothetical protein
G2583_2880	ECs3227	Z3608	fadL	Transport of long-chain fatty acids
G2583_2881	ECs3228	Z3609	yfdF	hypothetical protein
G2583_2882	ECs3229	Z3610	vacJ	Lipoprotein, VacJ family
G2583_2883	ECs3230	Z3611	yfdC	putative transport
G2583_2884	argW	RNA059	argW	Arg tRNA
G2583_2885	ECs3231	Z3613	intS	putative prophage integrase
G2583_2886	ECs3232	Z3614	-	Putative prophage DNA injection protein
G2583_2887	ECs3233	Z3615	-	Phage DNA transfer protein
G2583_2888	ECs3234	Z3616	-	hypothetical protein
G2583_2889	ECs3235	Z3617	-	Gene 9 protein
G2583_2890	ECs3236	Z3618	-	hypothetical protein
	ECs3237		-	hypothetical protein
		Z3619	-	hypothetical protein
G2583_2891	ECs3238	Z3620	-	hypothetical protein
G2583_2892	ECs3239	Z3621	-	hypothetical protein
G2583_2893	ECs3240	Z3622	-	Resolvase domain protein
G2583_2894	ECs3241	Z3623	lacY	Oligosaccharide:H ⁺ symporter
G2583_2895	ECs3242	Z3624	cscK	Fructokinase
G2583_2896	ECs3243	Z3625	-	Sucrose-6-phosphate hydrolase
G2583_2897	ECs3244	Z3626	-	Sugar binding transcriptional regulator, LacI family
G2583_2898		Z3627	dsdX	Putative uncharacterized dsdX-like protein

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Locus_tag ^a			Gene	Product
CB9615	Sakai	EDL933		
G2583_2899	ECs3245	Z3628	dsdA	D-serine ammonia-lyase
G2583_2900	ECs3246	Z3629	emrY	Multidrug resistance protein Y
G2583_2901	ECs3247	Z3630	emrK	Drug resistance MFS transporter, membrane fusion protein (MFP) subunit EmrK
G2583_2902	ECs3248	Z3631	evgA	Positive transcription regulator evgA
G2583_2903	ECs3249	Z3632	evgS	hybrid sensory histidine kinase in two-component regulatory system with EvgA
G2583_2904	ECs3250	Z3633	yfdE	hypothetical protein
G2583_2904	ECs3251	Z3634	yfdE	hypothetical protein
G2583_2905	ECs3252	Z3635	yfdV	Uncharacterized transporter yfdV
G2583_2906	ECs3253	Z3637	oxc	Thiamine pyrophosphate-dependent enzyme
G2583_2907	ECs3254	Z3639	frc	Formyl-coenzyme A transferase
G2583_2908	ECs3255	Z3640	yfdX	Protein yfdX precursor
G2583_2909	ECs3256	Z3641	ypdI	hypothetical protein
G2583_2910	ECs3257	Z3642	yfdY	hypothetical protein
G2583_2911	ECs3258	Z3643	lpxP	hypothetical protein
G2583_2912	ECs3259	Z3644	yfdZ	Aminotransferase, classes I and II
G2583_2913	ECs3260	Z3645	ypdA	Inner membrane protein ypdA
G2583_2914	ECs3261	Z3646	ypdB	Uncharacterized response regulatory protein ypdB
G2583_2915	ECs3262	Z3647	ypdC	helix-turn-helix- domain containing protein AraC type
G2583_2916	ECs3263	Z3648	fryA	Putative phosphoenolpyruvate-protein
G2583_2917	ECs3264	Z3649	ypdE	Aminopeptidase
G2583_2918	ECs3265	Z3651	ypdF	Aminopeptidase YpdF
G2583_2919	ECs3266	Z3652	fryC	Fructose-like permease IIC component
G2583_2920	ECs3267	Z3653	fryB	Fructose-like phosphotransferase enzyme IIB component 1
G2583_2921	ECs3268	Z3654	glk	Glucokinase
G2583_2922	ECs3269	Z3655	yfeO	Putative ion-transport protein yfeO
G2583_2923	ECs3270	Z3656	ypeC	conserved hypothetical protein
G2583_2924		Z3657	-	hypothetical protein
G2583_2925	ECs3271	Z3658	mntH	Manganese transport protein mntH
G2583_2926	ECs3272	Z3659	nupC	Nucleoside transporter NupC
G2583_2927	ECs3273	Z3660	yfeA	hypothetical protein
G2583_2928	alaX	RNA060	alaX	Ala tRNA
G2583_2929	alaW	Indel-153	alaW	Ala tRNA
G2583_2930	ECs3274	Z3662	yfeC	hypothetical protein
G2583_2931	ECs3275	Z3663	yfeD	hypothetical protein
G2583_2932	ECs3276	Z3664	ydcM	IS605 family transposase orfB
G2583_2933	ECs3277		-	Putative transposase TnA
G2583_2934	ECs3278	Z3665	gltX	Glutamyl-tRNA synthetase
G2583_2935	valU	RNA061	valU	Val tRNA
G2583_2936	valX	RNA062	valX	Val tRNA
G2583_2937	valY	RNA063	valY	Val tRNA
G2583_2938	lysV	RNA064	lysV	Lys tRNA

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Locus_tag ^a			Gene	Product
CB9615	Sakai	EDL933		
G2583_2939	ECs3279	Z3672	flxA	hypothetical protein
G2583_2940	ECs3280	Z3673	yfeR	transcriptional regulator, LysR family protein
G2583_2940	ECs3281	Z3674	yfeR	transcriptional regulator, LysR family protein
G2583_2941	ECs3282	Z3675	yfeH	putative cytochrome oxidase
G2583_2942		Z3676	ypeB	hypothetical protein
G2583_2943	ECs3283	Z3677	ligA	DNA ligase
G2583_2944	ECs3284	Z3678	zipA	Cell division protein ZipA
G2583_2945	ECs3285	Z3679	cysZ	putative sulfate transport protein CysZ
G2583_2946	ECs3286	Z3680	cysK	Cysteine synthase A
G2583_2947	ECs3287	Z3681	ptsH	PTS system, phosphocarrier protein
G2583_2948	ECs3288	Z3682	ptsI	Phosphoenolpyruvate-protein phosphotransferase
G2583_2949	ECs3289	Z3683	crr	Glucose-specific phosphotransferase enzyme IIA component
G2583_2950	ECs3290	Z3684	pdxK	pyridoxal kinase
G2583_2951	ECs3291	Z3685	yfeK	hypothetical protein
G2583_2952	ECs3292	Z3686	cysM	Cysteine synthase
G2583_2953	ECs3293	Z3687	cysA	Sulfate/thiosulfate import ATP-binding protein cysA
G2583_2954	ECs3294	Z3688	cysW	Sulfate ABC transporter, permease protein CysW
G2583_2955	ECs3295	Z3689	cysU	Sulfate ABC transporter, permease protein CysT
G2583_2956	ECs3296	Z3690	cysP	Sulfate/thiosulfate ABC transporter, periplasmic sulfate/thiosulfate- binding protein
G2583_2957	ECs3297	Z3691	ucpA	Oxidoreductase ucpA
G2583_2958	ECs3298	Z3692	yfeT	hypothetical protein
G2583_2959	ECs3299	Z3693	murQ	Predicted sugar phosphate isomerase
G2583_2960	ECs3300	Z3694	murP	Phosphoenolpyruvate-dependent sugar phosphotransferase system EIIABC, probable beta-glucoside-specific
G2583_2961	ECs3301	Z3695	yfeW	Putative hydrolase/beta lactamase fusion protein
G2583_2962	ECs3302	Z3696	yfeX	hypothetical protein
G2583_2963	ECs3303	Z3697	yfeY	hypothetical protein
G2583_2964	ECs3304	Z3698	yfeZ	hypothetical protein
G2583_2965	ECs3305	Z3699	ypeA	Acetyltransferase ypeA
G2583_2966	ECs3306	Z3700	amiA	N-acetylmuramoyl-L-alanine amidase
G2583_2967	ECs3307	Z3701	hemF	Coproporphyrinogen III oxidase, aerobic
G2583_2968	ECs3308	Z3702	eutR	AraC-type DNA-binding domain-containing proteins
G2583_2969	ECs3309	Z3703	eutK	Ethanolamine utilization protein EutK
G2583_2970	ECs3310	Z3704	eutL	Putative ethanolamine utilization protein EutL
G2583_2971	ECs3311	Z3705	eutC	Ethanolamine ammonia-lyase light chain
G2583_2972	ECs3312	Z3706	eutB	Ethanolamine ammonia-lyase heavy chain
G2583_2973	ECs3313	Z3707	eutA	Ethanolamine utilization protein EutA
G2583_2974	ECs3314	Z3708	eutH	EutH
G2583_2975	ECs3315	Z3709	eutG	EutG
G2583_2976	ECs3316	Z3710	eutJ	Ethanolamine utilization protein EutJ
G2583_2977	ECs3317	Z3711	eutE	Ethanolamine utilization

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Locus_tag ^a			Gene	Product
CB9615	Sakai	EDL933		
G2583_2978	ECs3318	Z3712	eutN	Ethanolamine utilization protein
G2583_2979	ECs3319	Z3713	eutM	Detox protein
G2583_2980	ECs3320	Z3714	eutD	Ethanolamine utilization protein EutD
G2583_2981	ECs3321	Z3715	eutT	Ethanolamine utilization cobalamin adenosyltransferase
G2583_2982	ECs3322	Z3716	eutQ	Ethanolamine utilization protein EutQ
G2583_2983	ECs3323	Z3717	eutP	hypothetical protein
G2583_2984	ECs3324	Z3718	eutS	hypothetical protein
G2583_2985	ECs3325	Z3719	maeB	Malate dehydrogenase (Oxaloacetate-decarboxylating) (NADP(+))
G2583_2986	ECs3326	Z3720	talA	Transaldolase A
G2583_2987	ECs3327	Z3721	tktB	Transketolase 2
G2583_2988	ECs3328	Z3722	ypfG	hypothetical protein
G2583_2989	ECs3329	Z3723	nudK	GDP-mannose pyrophosphatase nudK
G2583_2990	ECs3330	Z3724	aegA	putative oxidoreductase Fe-S binding subunit
G2583_2991	ECs3331	Z3726	narQ	Nitrate/nitrite sensor histidine kinase NarQ
G2583_2992	ECs3332	Z3727	acrD	Probable aminoglycoside efflux pump
G2583_2993	ECs3333	Z3729	yffB	ArsC family protein
G2583_2994	ECs3334	Z3730	dapE	Succinyl-diaminopimelate desuccinylase
G2583_2995		Z3731	ypfN	UPF0370 protein ypfN
G2583_2996	ECs3335	Z3732	ypfH	Esterase, AB hydrolase 2 family
G2583_2997	ECs3336	Z3733	ypfI	hypothetical protein
G2583_2998	ECs3337	Z3734	ypfJ	hypothetical protein
G2583_2999	ECs3338	Z3735	purC	Phosphoribosylaminoimidazole-succinocarboxamide synthase
G2583_3000	ECs3339	Z3736	nlpB	Lipoprotein-34
G2583_3001	ECs3340	Z3737	dapA	Dihydrodipicolinate synthase
G2583_3002	ECs3341	Z3738	gcvR	Glycine cleavage system transcriptional repressor
G2583_3003	ECs3342	Z3739	bcp	Putative peroxiredoxin bcp
G2583_3004	ECs3343	Z3741	hyfA	Hydrogenase 4 Fe-S subunit
G2583_3005	ECs3344	Z3742	hyfB	Hydrogenase 4 membrane subunit
G2583_3006	ECs3345	Z3743	hyfC	Hydrogenase 4 membrane subunit
G2583_3007	ECs3346	Z3744	hyfD	Hydrogenase-4 component D
G2583_3008	ECs3347	Z3745	hyfE	Hydrogenase-4 component E
G2583_3009	ECs3348	Z3746	hyfF	Hydrogenase 4 membrane subunit
G2583_3010	ECs3349	Z3747	hyfG	Hydrogenase-4, G subunit
G2583_3011	ECs3350	Z3748	hyfH	Iron-sulfur cluster-binding protein
G2583_3012	ECs3351	Z3749	hyfI	Hydrogenase-4, I subunit
G2583_3013	ECs3352	Z3750	hyfJ	putative protein processing element
G2583_3014	ECs3353	Z3751	hyfR	Hydrogenase-4 transcriptional regulator
G2583_3015	ECs3354	Z3753	focB	Formate/nitrite transporter
G2583_3016	ECs3355	Z3755	yfgO	Putative permease perM
G2583_3017	ECs3356	Z3757	yfgC	Peptidase, M48 family
G2583_3018	ECs3357	Z3758	yfgD	Arsenate reductase
G2583_3019	ECs3358	Z3759	hda	DnaA-homolog protein hda

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Locus_tag ^a			Gene	Product
CB9615	Sakai	EDL933		
G2583_3020	ECs3359	Z3760	uraA	Uracil permease
G2583_3021	ECs3360	Z3761	upp	Uracil phosphoribosyltransferase
G2583_3022	ECs3361	Z3762	purM	Phosphoribosylformylglycinamide cyclo-ligase
G2583_3023	ECs3362	Z3763	purN	Phosphoribosylglycinamide formyltransferase 1
G2583_3024	ECs3363	Z3764	ppk	Polyphosphate kinase
G2583_3025	ECs3364	Z3765	ppx	exopolyphosphatase
G2583_3026	ECs3365	Z3766	yfgF	Putative cytochrome C-type biogenesis protein
G2583_3027		Z3767	-	hypothetical protein
G2583_3028	ECs3366	Z3768	yfgG	hypothetical protein
G2583_3029	ECs3367	Z3769	yfgH	Uncharacterized lipoprotein yfgH precursor
G2583_3030	ECs3368	Z3770	yfgI	hypothetical protein
G2583_3031	ECs3369	Z3771	guaA	GMP synthase [glutamine-hydrolyzing]
G2583_3032	ECs3370	Z3772	guaB	Inosine-5'-monophosphate dehydrogenase
G2583_3033	ECs3371	Z3773	xseA	Exodeoxyribonuclease 7 large subunit
G2583_3034	ECs3372		yfgJ	hypothetical protein
G2583_3035	ECs3373	Z3774	der	GTP-binding protein engA
G2583_3036	ECs3374	Z3775	yfgL	Outer membrane assembly lipoprotein YfgL
G2583_3037	ECs3375	Z3776	yfgM	UPF0070 protein yfgM
G2583_3038	ECs3376	Z3777	hisS	Histidyl-tRNA synthetase
G2583_3039			-	ncRNA
G2583_3040	ECs3377	Z3778	ispG	4-hydroxy-3-methylbut-2-en-1-yl diphosphate synthase
G2583_3041	ECs3378	Z3779	yfgA	Helix-turn-helix DNA-binding domain protein
G2583_3042	ECs3379	Z3780	yfgB	Radical SAM enzyme, Cfr family
G2583_3043	ECs3380	Z3781	ndk	Nucleoside diphosphate kinase
G2583_3044	ECs3381	Z3782	-	Putative polyferredoxin
G2583_3045	ECs3382	Z3783	ynfH	Putative dimethyl sulfoxide reductase subunit C
G2583_3046	ECs3383	Z3784	-	Dimethylsulfoxide reductase, chain B
G2583_3047	ECs3384	Z3785	dmsA	putative anaerobic dimethyl sulfoxide reductase chain A precursor
G2583_3048	ECs3385	Z3786	pbpC	Penicillin-binding protein 1C
G2583_3049	ECs3386	Z3787	yfhM	Alpha-2-macroglobulin domain protein
G2583_3050	ECs3387	Z3788	sseA	Putative thiosulfate sulfurtransferase
G2583_3051			-	ncRNA
G2583_3052	ECs3388	Z3789	sseB	Enhanced serine sensitivity
G2583_3053	ECs3389	Z3790	pepB	Peptidase B
G2583_3054	ECs3390	Z3791	iscX	hypothetical protein
G2583_3055	ECs3391	Z3792	fdx	2Fe-2S ferredoxin
G2583_3056	ECs3392	Z3793	hscA	Chaperone protein hscA
G2583_3057	ECs3393	Z3794	hscB	Fe-S protein assembly co-chaperone HscB
G2583_3058	ECs3394	Z3795	iscA	Iron-binding protein iscA
G2583_3059	ECs3395	Z3796	iscU	NifU-like protein
G2583_3060	ECs3396	Z3797	iscS	Cysteine desulfurase
G2583_3061	ECs3397	Z3798	iscR	DNA-binding transcriptional repressor
G2583_3062	ECs3398	Z3799	trmJ	tRNA (cytidine/uridine-2'-O-)-methyltransferase trmJ

Table S10. The orthologue table of the O55 and O157 strains Page 109

Locus_tag ^a			Gene	Product
CB9615	Sakai	EDL933		
G2583_3063	ECs3399		suhB	Inositol-1-monophosphatase
G2583_3064	ECs3400	Z3802	yfhR	putative enzyme (3.4.-)
G2583_3065	ECs3401	Z3804	csiE	Transcriptional antiterminator
G2583_3066	ECs3402	Z3807	hcaT	3-phenylpropionic acid transporter
G2583_3067	ECs3403	Z3808	hcaR	Hca operon transcriptional activator
G2583_3068	ECs3404	Z3809	hcaE	3-phenylpropionate/cinnamic acid dioxygenase subunit alpha
G2583_3069	ECs3405	Z3810	hcaF	3-phenylpropionate/cinnamic acid dioxygenase subunit beta
G2583_3070	ECs3406	Z3811	hcaC	3-phenylpropionate/cinnamic acid dioxygenase ferredoxin subunit
G2583_3071	ECs3407	Z3813	hcaB	3-phenylpropionate-dihydrodiol/cinnamic acid-dihydrodiol dehydrogenase
G2583_3072	ECs3408	Z3814	hcaD	3-phenylpropionate/cinnamic acid dioxygenase ferredoxin--NAD(+) reductase component
G2583_3073	ECs3409	Z3815	yphA	Predicted inner membrane protein
G2583_3074	ECs3410	Z3816	yphB	Aldose 1-epimerase family protein
G2583_3075	ECs3411	Z3817	yphC	Hypothetical zinc-type alcohol dehydrogenase-like protein yphC
G2583_3075		Z3818	yphC	Hypothetical zinc-type alcohol dehydrogenase-like protein yphC
G2583_3076	ECs3412	Z3819	yphD	Putative transport system permease protein
G2583_3077	ECs3413	Z3821	yphE	Putative sugar ABC transporter, ATP-binding protein
G2583_3078	ECs3414	Z3823	yphF	Periplasmic binding protein/LacI transcriptional regulator precursor
G2583_3079	ECs3415	Z3825	yphG	hypothetical protein
G2583_3080	ECs3416	Z3826	yphH	ROK family protein
G2583_3081	ECs3417	Z3827	glyA	Serine hydroxymethyltransferase
G2583_3082	ECs3418	Z3828	hmp	Flavoheмоprotein
G2583_3083	ECs3419	Z3829	glnB	Nitrogen regulatory protein P-II 1
G2583_3084	ECs3420	Z3830	yfhA	putative 2-component transcriptional regulator
G2583_3085	ECs3421	Z3831	yfhG	hypothetical protein
G2583_3086	ECs3422	Z3833	yfhK	putative 2-component sensor protein
G2583_3087			-	ncRNA
G2583_3088	ECs3423	Z3835	purL	Phosphoribosylformylglycinamide synthase
G2583_3089	ECs3424	Z3838	yfhD	Predicted soluble lytic transglycosylase fused to an ABC-type amino acid-binding protein
G2583_3090	ECs3425	Z3839	tadA	tRNA-specific adenosine deaminase
G2583_3091	ECs3426	Z3840	yfhB	HAD hydrolase YhfB
G2583_3092	ECs3427	Z3841	yfhH	hypothetical protein
G2583_3093	Indel-154	Indel-154	-	hypothetical protein
G2583_3094	Indel-154	Indel-154	pinE	DNA invertase from prophage CP-933H
G2583_3095	Indel-154	Indel-154	yfdL	putative tail fiber protein
G2583_3096	Indel-154	Indel-154	yfdK	tail fiber assembly protein

Table S10. The orthologue table of the O55 and O157 strains Page 110

Locus_tag ^a			Gene	Product
CB9615	Sakai	EDL933		
G2583_3097	Indel-154	Indel-154	tfaE	hypothetical protein
G2583_3098	Indel-154	Indel-154	-	Phage-related tail fibre protein
G2583_3099	Indel-154	Indel-154	-	putative bacteriophage protein
G2583_3100	Indel-154	Indel-154	-	Uncharacterized homolog of phage Mu protein gp 47
G2583_3101	Indel-154	Indel-154	-	putative bacteriophage protein
G2583_3102	Indel-154	Indel-154	-	Phage P2 baseplate assembly protein gpV
G2583_3103	Indel-154	Indel-154	-	Putative secreted protein precursor
G2583_3104	Indel-154	Indel-154	-	hypothetical protein
G2583_3105	Indel-154	Indel-154	-	Putative bacteriophage protein
G2583_3106	Indel-154	Indel-154	-	putative bacteriophage protein
G2583_3107	Indel-154	Indel-154	-	Putative bacteriophage protein
G2583_3108	Indel-154	Indel-154	-	Putative bacteriophage protein
G2583_3109	Indel-154	Indel-154	-	Putative bacteriophage protein
G2583_3110	Indel-154	Indel-154	-	Hypothetical prophage protein
G2583_3111	Indel-154	Indel-154	-	Putative bacteriophage protein
G2583_3112	Indel-154	Indel-154	-	Putative bacteriophage protein
G2583_3113	Indel-154	Indel-154	-	Putative bacteriophage protein
G2583_3114	Indel-154	Indel-154	-	hypothetical protein
G2583_3115	Indel-154	Indel-154	-	Putative bacteriophage protein
G2583_3116	Indel-154	Indel-154	-	Putative bacteriophage protein
G2583_3117	Indel-154	Indel-154	-	Putative bacteriophage protein
G2583_3118	Indel-154	Indel-154	-	Uncharacterized protein conserved in bacteria
G2583_3119	Indel-154	Indel-154	-	Uncharacterized protein, homolog of phage Mu protein gp30
G2583_3120	Indel-154	Indel-154	-	Uncharacterized protein conserved in bacteria
G2583_3121	Indel-154	Indel-154	-	hypothetical protein
G2583_3122	Indel-154	Indel-154	-	Phage terminase, small subunit
G2583_3123	Indel-154	Indel-154	-	conserved hypothetical protein
G2583_3124	Indel-154	Indel-154	-	Lysozyme
G2583_3125	Indel-154	Indel-154	-	phage holin, lambda family
G2583_3126	Indel-154	Indel-154	-	hypothetical protein
G2583_3127	Indel-154	Indel-154	-	Transcriptional regulator
G2583_3128	Indel-154	Indel-154	-	Predicted P-loop ATPase and inactivated derivatives
G2583_3129	Indel-154	Indel-154	-	hypothetical protein
G2583_3130	Indel-154	Indel-154	-	hypothetical protein
G2583_3131	Indel-154	Indel-154	-	hypothetical protein
G2583_3132	Indel-154	Indel-154	-	Bbp38
G2583_3133	Indel-154	Indel-154	-	hypothetical protein
G2583_3134	Indel-154	Indel-154	-	hypothetical protein
G2583_3135	Indel-154	Indel-154	dpoL	DNA polymerase I - 3'→5' exonuclease and polymerase domains
G2583_3136	Indel-154	Indel-154	-	hypothetical protein
G2583_3137	Indel-154	Indel-154	-	Phage associated protein
G2583_3138	Indel-154	Indel-154	-	hypothetical protein

Table S10. The orthologue table of the O55 and O157 strains Page 111

Locus_tag ^a			Gene	Product
CB9615	Sakai	EDL933		
G2583_3139	Indel-154	Indel-154	-	Superfamily II DNA/RNA helicases, SNF2 family
G2583_3140	Indel-154	Indel-154	-	hypothetical protein
G2583_3141	Indel-154	Indel-154	-	Integrase
G2583_3142	ECs3428	Z3842	yfhL	hypothetical protein
G2583_3143		Z3843	-	hypothetical protein
G2583_3144	ECs3429	Z3844	acpS	Holo-[acyl-carrier-protein] synthase
G2583_3145	ECs3430	Z3845	pdxJ	Pyridoxine 5'-phosphate synthase
G2583_3146	ECs3431	Z3846	recO	DNA repair protein recO
G2583_3147	ECs3432	Z3847	era	GTP-binding protein era
G2583_3148	ECs3433	Z3848	rnc	Ribonuclease 3
G2583_3149		Z3849	-	hypothetical protein
G2583_3150	ECs3434	Z3850	lepB	Signal peptidase I
G2583_3151	ECs3435	Z3851	lepA	GTP-binding protein lepA
G2583_3152	ECs3436	Z3852	rseC	Sigma-E factor regulatory protein RseC
G2583_3153	ECs3437	Z3853	rseB	Sigma-E factor regulatory protein rseB precursor
G2583_3154	ECs3438	Z3854	rseA	Sigma-E factor negative regulatory protein
G2583_3155	ECs3439	Z3855	rpoE	DNA-directed RNA polymerase specialized sigma subunit, sigma24 homolog
G2583_3156	ECs3440	Z3856	nadB	L-aspartate oxidase
G2583_3157	ECs3441	Z3857	yfiC	Putative enzyme
G2583_3158	ECs3442	Z3859	srmB	ATP-dependent RNA helicase SrmB
G2583_3159	ECs3443	Z3860	yfiE	putative transcriptional regulator LYSR-type
G2583_3160	ECs3444	Z3861	eamB	Cysteine/O-acetylserine efflux protein
G2583_3161	ECs3445	Z3862	yfiD	Autonomous glycyl radical cofactor
G2583_3162	ECs3446	Z3864	ung	Uracil-DNA glycosylase
G2583_3163	ECs3447	Z3865	yfiF	rRNA methylases
G2583_3164		Z3866	-	hypothetical protein
G2583_3165	ECs3448	Z3867	trxC	Thioredoxin-2
G2583_3166	ECs3449	Z3868	yfiP	DTW domain protein
G2583_3167	ECs3450	Z3869	yfiQ	CoA binding domain/acetyltransferase domain protein
G2583_3167	ECs3451	Z3869	yfiQ	CoA binding domain/acetyltransferase domain protein
G2583_3168	ECs3452	Z3870	pssA	CDP-diacylglycerol--serine O-phosphatidyltransferase
G2583_3169	ECs3453	Z3871	yfiM	hypothetical protein
G2583_3170	ECs3454	Z3872	kgtP	Alpha-ketoglutarate permease
G2583_3171	rrfG	RNA065	rrf	5S ribosomal RNA
G2583_3172	rrlG	RNA066	rrl	23S ribosomal RNA
G2583_3173	gltW	RNA067	gltW	Glu tRNA
G2583_3174	rrsG	RNA068	rrs	16S ribosomal RNA
G2583_3175	ECs3455	Z3886	clpB	Heat shock protein
G2583_3176	ECs3456	Z3887	yfiH	hypothetical protein
G2583_3177	ECs3457	Z3888	rluD	Ribosomal large subunit pseudouridine synthase D
G2583_3178	ECs3458	Z3889	yfiO	predicted lipoprotein
G2583_3179	ECs3459		-	hypothetical protein
G2583_3180	ECs3460	Z3890	raiA	Ribosome-associated inhibitor A

Table S10. The orthologue table of the O55 and O157 strains Page 112

Locus_tag ^a			Gene	Product
CB9615	Sakai	EDL933		
	ECs3461		-	leader peptide of chorismate mutase-P-prephenate dehydratase
G2583_3181	ECs3462	Z3891	pheA	P-protein [Includes: Chorismate mutase
G2583_3182	ECs3463	Z3892	tyrA	Chorismate mutase/prephenate dehydrogenase
G2583_3183	ECs3464	Z3893	aroF	Phospho-2-dehydro-3-deoxyheptonate aldolase, Tyr-sensitive
G2583_3184	ECs3465	Z3895	yfiL	hypothetical protein
G2583_3185	ECs3466	Z3897	yfiR	hypothetical protein
G2583_3186	ECs3467	Z3898	yfiN	GGDEF domain protein
G2583_3187	ECs3468	Z3899	yfiB	OmpA family protein
G2583_3188	ECs3469	Z3900	rplS	50S ribosomal protein L19
G2583_3189	ECs3470	Z3901	trmD	tRNA (guanine-N(1)-)-methyltransferase
G2583_3190	ECs3471	Z3902	rimM	16S rRNA-processing protein rimM
G2583_3191	ECs3472	Z3903	rpsP	30S ribosomal subunit protein S16
G2583_3192	ECs3473	Z3904	ffh	Signal recognition particle protein
G2583_3193	ECs3474	Z3905	ypjD	hypothetical protein
G2583_3194	ECs3475	Z3906	yfjD	CBS/transporter associated domain protein
G2583_3195	ECs3476	Z3907	grpE	heat shock protein GrpE
G2583_3196	ECs3477	Z3908	nadK	Probable inorganic polyphosphate/ATP-NAD kinase
G2583_3197	ECs3478	Z3909	recN	recombination and repair protein
G2583_3198	ECs3479	Z3910	smpA	Lipoprotein, SmpA/OmlA family
G2583_3199	ECs3480	Z3911	yfjF	hypothetical protein
G2583_3200	ECs3481	Z3912	yfjG	Polyketide cyclase/dehydrase family protein
G2583_3201	ECs3482	Z3913	smpB	SsrA-binding protein
G2583_3202	ssrA	RNA069	ssrA	tmRNA
G2583_3203	ECs3483	Z3916	-	DinI-like protein Z3916/ECs3483
	ECs3484		-	hypothetical protein
		Z3917	-	orf, hypothetical protein
G2583_3204	ECs3485	Z3918	lpgB	Putative chaperone protein
G2583_3205	ECs3486	Z3919	-	PotB, trcA, ORF2, ORF3, ORF4 genes,
Indel-155	ECs3487	Z3920	-	hypothetical protein
Indel-155	ECs3488	Z3921	-	hypothetical protein
Indel-156	ECs3489	Indel-156	-	hypothetical protein
Indel-156	ECs3490	Indel-156	-	putative transposase OrfA protein of insertion sequence IS629
Indel-156	ECs3491	Indel-156	-	putative transposase OrfB protein of insertion sequence IS629
Indel-156	ECs3492	Indel-156	-	hypothetical protein
Indel-156	ECs3493	Indel-156	-	hypothetical protein
Indel-156	ECs3494	Indel-156	-	hypothetical protein
Indel-156	ECs3495	Indel-156	-	putative endolysin
Indel-156	ECs3496	Indel-156	-	hypothetical protein
Indel-156	ECs3497	Indel-156	-	holin protein
G2583_3206	Indel-157	Indel-157	-	conserved hypothetical protein

Table S10. The orthologue table of the O55 and O157 strains Page 113

Locus_tag ^a			Gene	Product
CB9615	Sakai	EDL933		
G2583_3207	Indel-157	Indel-157	-	hypothetical protein
G2583_3208	Indel-157	Indel-157	-	putative tail fiber protein encoded by prophage CP-
G2583_3209	Indel-157	Indel-157	-	Opacity protein and related surface antigens
G2583_3210	Indel-157	Indel-157	-	Phage-related protein, tail component
G2583_3211	Indel-157	Indel-157	-	putative tail assembly protein
G2583_3212	Indel-157	Indel-157	-	Cell wall-associated hydrolases (invasion-associated proteins)
G2583_3213	Indel-157	Indel-157	ant	Antirepressor protein
G2583_3214	Indel-157	Indel-157	-	hypothetical protein
G2583_3215	Indel-157	Indel-157	-	putative tail fiber component L of prophage CP-933U
G2583_3216	Indel-157	Indel-157	-	Putative minor tail protein
G2583_3217	Indel-157	Indel-157	-	Phage-related minor tail protein
G2583_3218	Indel-157	Indel-157	-	Gp14
G2583_3219	Indel-157	Indel-157	-	Putative tail assembly chaperone encoded by prophage CP-933N
G2583_3220	Indel-157	Indel-157	-	Putative tail component of cryptic prophage CP-933P
G2583_3221	Indel-157	Indel-157	-	Gp11
G2583_3222	Indel-157	Indel-157	-	Phage protein, HK97 gp10 family
G2583_3223	Indel-157	Indel-157	-	Bacteriophage head-tail adaptor
G2583_3224	Indel-157	Indel-157	-	unknown protein encoded by cryptic prophage CP-
G2583_3225	Indel-157	Indel-157	-	Portal protein (GP3)
G2583_3226	Indel-157	Indel-157	-	Portal protein (GP3)
G2583_3227	Indel-157	Indel-157	-	hypothetical protein
G2583_3228	Indel-157	Indel-157	-	Phage head maturation protease
G2583_3229	Indel-157	Indel-157	-	Phage terminase-like protein, large subunit
G2583_3230	Indel-157	Indel-157	-	unknown protein encoded by prophage CP-933N
G2583_3231	Indel-157	Indel-157	-	unknown protein encoded by prophage CP-933N
G2583_3232	Indel-157	Indel-157	ynfO	conserved hypothetical protein
G2583_3233	Indel-157	Indel-157	tonB	Partial tonB-like membrane protein encoded within prophage CP-933N
G2583_3234	Indel-157	Indel-157	-	conserved hypothetical protein
G2583_3235	Indel-157	Indel-157	-	Putative endopeptidase Rz
G2583_3236	Indel-157	Indel-157	antU	Antirepressor protein
G2583_3237	Indel-157	Indel-157	-	putative endolysin
G2583_3238	Indel-157	Indel-157	-	hypothetical protein
G2583_3239	Indel-157	Indel-157	-	putative holin protein of prophage CP-933U
G2583_3240	Indel-157	Indel-157	insN	unknown protein encoded by IS911 within prophage CP-933L
G2583_3241	Indel-157	Indel-157	-	putative transposase
Indel-158	Indel-158	Z3922	-	putative transposase
Indel-158	Indel-158	Z3923	-	hypothetical protein
Indel-158	Indel-158	Z3924	-	partial putative transposase
Indel-158	Indel-158	Z3925	-	partial putative transposase
G2583_3242	ECs3498	Z3926	-	YjhS

Table S10. The orthologue table of the O55 and O157 strains Page 114

Locus_tag ^a			Gene	Product
CB9615	Sakai	EDL933		
G2583_3242	ECs3498	Z3927	-	YjhS
Indel-159	ECs3499		-	hypothetical protein
Indel-159		Z3929	-	unknown protein encoded by prophage CP-933Y
Indel-159	ECs3500	Z3931	-	hypothetical membrane protein
Indel-159	ECs3501	Z3932	-	putative antitermination protein
Indel-159	ECs3502	Z3933	-	putative serine/threonine protein phosphatase
Indel-159	ECs3503	Z3934	-	hypothetical protein
Indel-159	ECs3504	Z3935	-	hypothetical protein
	ECs3505	Z3936	tra8_3	transposase of insertion sequence IS30
G2583_3243	Indel-160	Indel-160	-	hypothetical protein
G2583_3244	Indel-160	Indel-160	-	unknown protein encoded within prophage CP-933R
G2583_3245	Indel-160	Indel-160	-	DNA modification methylase
G2583_3246	Indel-160	Indel-160	ybcQ	Antitermination protein Q
G2583_3247	Indel-160	Indel-160	ninH	hypothetical protein
G2583_3248	Indel-160	Indel-160	NinG	protein ninG
G2583_3249	Indel-160	Indel-160	roi	hypothetical protein
G2583_3250	Indel-160	Indel-160	ant	Putative antirepressor
G2583_3251	Indel-160	Indel-160	ninE	hypothetical protein
G2583_3252	Indel-160	Indel-160	-	Putative DNA N-6-adenine-methyltransferase of bacteriophage
G2583_3253	Indel-160	Indel-160	ninB	hypothetical protein
G2583_3254	Indel-160	Indel-160	-	Ren protein
G2583_3255	Indel-160	Indel-160	-	P protein
G2583_3256	Indel-160	Indel-160	-	phage replication protein O
G2583_3257	Indel-160	Indel-160	-	CII protein
G2583_3258	Indel-160	Indel-160	cro	Cro
G2583_3259	Indel-160	Indel-160	ymfK	P22 repressor protein c2
G2583_3260	Indel-160	Indel-160	-	hypothetical lipoprotein
G2583_3261	Indel-160	Indel-160	-	hypothetical protein
G2583_3262	Indel-160	Indel-160	-	Gp45
G2583_3263	Indel-160	Indel-160	-	Lambda prophage-derived protein ea10
G2583_3264	Indel-160	Indel-160	CIII	Lambda phage regulatory protein CIII
G2583_3265	Indel-160	Indel-160	kilW	putative Kil protein of bacteriophage BP-933W
G2583_3266	Indel-160	Indel-160	bet	Recombination protein Bet
G2583_3267	Indel-160	Indel-160	-	Putative exonuclease encoded by prophage CP-933K
G2583_3268	Indel-160	Indel-160	-	hypothetical protein
G2583_3269	Indel-160	Indel-160	-	hypothetical protein
G2583_3270	Indel-160	Indel-160	-	hypothetical protein
G2583_3271	Indel-160	Indel-160	-	C4-type zinc finger protein
G2583_3272	Indel-160	Indel-160	-	Enterohemolysin 2
G2583_3273	Indel-160	Indel-160	-	Valyl-tRNA synthetase
G2583_3274	Indel-160	Indel-160	-	hypothetical protein
G2583_3275	Indel-160	Indel-160	-	Putative bacteriophage protein
G2583_3276	Indel-160	Indel-160	-	hypothetical protein

Table S10. The orthologue table of the O55 and O157 strains Page 115

Locus_tag ^a			Gene	Product
CB9615	Sakai	EDL933		
G2583_3277	Indel-160	Indel-160	-	hypothetical protein
G2583_3278	Indel-160	Indel-160	intA	phage integrase family protein
G2583_3279	Indel-160	Indel-160	-	hypothetical protein
G2583_3280	Indel-160	Indel-160	-	hypothetical protein
G2583_3281	Indel-160	Indel-160	-	hypothetical protein
G2583_3282	Indel-160	Indel-160	-	hypothetical protein
G2583_3283	Indel-160	Indel-160	-	hypothetical protein
G2583_3284	Indel-160	Indel-160	intA	Prophage integrase
G2583_3285	Indel-160	Indel-160	-	conserved hypothetical protein
G2583_3286	Indel-160	Indel-160	-	Hypothetical purine NTPase
G2583_3287	Indel-160	Indel-160	-	hypothetical protein
G2583_3288	Indel-160	Indel-160	-	hypothetical protein
G2583_3289	Indel-160	Indel-160	-	hypothetical protein
G2583_3290	ECs3506	Z3937	-	hypothetical protein
		Z3938	-	hypothetical protein
G2583_3291	ECs3507	Z3939	-	hypothetical protein
G2583_3292	ECs3508	Z3940	-	hypothetical protein
G2583_3293	ECs3509	Z3941	-	hypothetical protein
G2583_3294	ECs3510	Z3942	-	Conserved DNA-binding protein
G2583_3295	ECs3511	Z3943	-	Site-specific recombinase, phage integrase family
G2583_3296	ECs3512	Z3945	-	Putative site specific recombinase
G2583_3297	ECs3513	Z3946	alpA	Putative DNA binding protein
G2583_3298	ECs3514	Z3947	-	hypothetical protein
G2583_3299	ECs3515	Z3948	ypjA	putative ATP-binding component of a transport system
G2583_3300	ECs3516	Z3949	-	Putative DNA-invertase from prophage CP4-44
G2583_3301	ECs3517	Z3950	ypjB	hypothetical protein
G2583_3302		Z3951	-	hypothetical protein
G2583_3303	ileY	RNA070	ileY	Met tRNA
G2583_3304	ECs3518	Z3954	ygaR	hypothetical protein
G2583_3304	ECs3519	Z3955	ygaR	hypothetical protein
G2583_3305	ECs3520	Z3956	csiD	alpha amylase family protein
G2583_3306	ECs3521	Z3958	ygaF	hypothetical protein
G2583_3307	ECs3522	Z3959	gabD	Succinate-semialdehyde dehydrogenase (NAD(P)(+))
G2583_3308	ECs3523	Z3960	gabT	4-aminobutyrate transaminase
G2583_3309	ECs3524	Z3961	gabP	GABA permease
		Z3962	-	hypothetical protein
G2583_3310	ECs3525	Z3963	csiR	DNA-binding transcriptional regulator CsiR
G2583_3311	ECs3526	Z3964	ygaU	Phospholipid-binding protein
G2583_3312	ECs3527	Z3965	yqaE	UPF0057 membrane protein yqaE
G2583_3313	ECs3528	Z3966	ygaV	hypothetical protein
G2583_3314	ECs3529	Z3967	ygaP	hypothetical protein
G2583_3315	ECs3530	Z3968	stpA	DNA-binding protein H-NS
G2583_3316	ECs3531	Z3970	ygaW	hypothetical protein
G2583_3317	ECs3532	Z3971	ygaC	hypothetical protein

Table S10. The orthologue table of the O55 and O157 strains Page 116

Locus_tag ^a			Gene	Product
CB9615	Sakai	EDL933		
G2583_3318	ECs3533	Z3972	ygaM	hypothetical protein
G2583_3319	ECs3534	Z3973	-	transcriptional regulator, GntR family
G2583_3320	ECs3535	Z3974	-	Carboxymuconolactone decarboxylase family protein
G2583_3321	ECs3536	Z3975	nrdH	Glutaredoxin-like protein nrdH
G2583_3322	ECs3537	Z3976	nrdI	ribonucleotide reductase stimulatory protein
G2583_3323	ECs3538	Z3977	nrdE	Ribonucleoside-diphosphate reductase, alpha subunit
G2583_3324	ECs3539	Z3978	nrdF	Ribonucleoside-diphosphate reductase 2 subunit beta
G2583_3325	ECs3540	Z3979	proV	ATP-binding component of transport system
G2583_3326	ECs3541	Z3980	proW	Glycine betaine/L-proline ABC transporter, permease protein
G2583_3327	ECs3542	Z3981	proX	Glycine betaine-binding periplasmic protein precursor
G2583_3328	ECs3543	Z3982	ygaX	Putative transport protein
G2583_3329	ECs3544	Z3983	ygaZ	Transporter, branched chain amino acid exporter (LIV-E) family
G2583_3330	ECs3545	Z3984	ygaH	predicted inner membrane protein
G2583_3331	ECs3546	Z3985	mprA	transcriptional repressor MprA
G2583_3332	ECs3547	Z3986	emrA	Multidrug resistance protein A
G2583_3333	ECs3548	Z3987	emrB	Probably membrane translocase
G2583_3334	ECs3549	Z3988	luxS	S-ribosylhomocysteine lyase
G2583_3335			sraD	ncRNA
G2583_3336	ECs3550	Z3989	gshA	Glutamate--cysteine ligase
G2583_3337	ECs3551	Z3990	yqaA	hypothetical protein
G2583_3338	ECs3552	Z3991	yqaB	HAD-superfamily hydrolase, subfamily IA
G2583_3339	argQ	RNA071	argQ	Arg tRNA
G2583_3340	argZ	RNA072	argZ	Arg tRNA
G2583_3341	argY	RNA073	argY	Arg tRNA
G2583_3342	argV	RNA074	argV	Arg tRNA
G2583_3343	serV	RNA075	serV	Ser tRNA
G2583_3344	ECs3553	Z3998	csrA	Carbon storage regulator homolog
G2583_3345	ECs3554	Z3999	alaS	Alanyl-tRNA synthetase
		Z4000	-	hypothetical protein
G2583_3346	ECs3555	Z4001	recX	regulatory protein RecX
G2583_3347	ECs3556	Z4002	recA	RecA/GFP fusion protein
G2583_3348	ECs3557	Z4003	ygaD	Competence/damage-inducible protein CinA domain protein
G2583_3349	ECs3558	Z4004	mltB	Membrane-bound lytic murein transglycosylase B
G2583_3350	ECs3559	Z4005	srIA	Glucitol/sorbitol permease IIC component
G2583_3350	ECsp018	Z4006	srIA	Glucitol/sorbitol permease IIC component
G2583_3351		Z4007	srIE	Phosphotransferase system sorbitol-specific component IIBC
G2583_3351	ECsp019	Z4009	srIE	Phosphotransferase system sorbitol-specific component IIBC
G2583_3352	ECs3560	Z4011	srIB	sorbitol-6-phosphate dehydrogenase
G2583_3353	ECs3561	Z4012	srID	Sorbitol-6-phosphate 2-dehydrogenase

Table S10. The orthologue table of the O55 and O157 strains Page 117

Locus_tag ^a			Gene	Product
CB9615	Sakai	EDL933		
G2583_3354	ECs3562	Z4013	gutM	Glucitol operon activator protein
G2583_3355	ECs3563	Z4014	srIR	Glucitol operon repressor
G2583_3356	ECs3564	Z4015	gutQ	D-arabinose 5-phosphate isomerase
G2583_3357	ECs3565	Z4017	norR	Anaerobic nitric oxide reductase transcription regulator norR
G2583_3358	ECs3566	Z4018	norV	Uncharacterized flavoproteins
G2583_3359	ECs3567	Z4019	norW	Nitric oxide reductase FIRd-NAD(+) reductase
G2583_3360	ECs3568	Z4020	hypF	Carbamoyltransferase HypF
G2583_3361	ECs3569	Z4021	hydN	Electron transport protein hydN
G2583_3362	ECs3570	Z4022	ascG	transcriptional regulator AscG
G2583_3363	ECs3571	Z4023	ascF	PTS system enzyme II ABC (Asc), cryptic, transports specific beta- glucosides
G2583_3364	ECs3572	Z4024	ascB	6-phospho-beta-glucosidase
G2583_3365	ECs3573	Z4025	hycl	Hydrogenase 3 maturation protease
G2583_3366	ECs3574	Z4026	hycH	Formate hydrogenlyase maturation protein hycH
G2583_3367	ECs3575	Z4027	hycG	Formate hydrogenlyase, subunit G
G2583_3368	ECs3576	Z4028	hycF	Formate hydrogenlyase, subunit F
G2583_3369	ECs3577	Z4029	hycE	Formate hydrogenlyase, subunit E
G2583_3370	ECs3578	Z4030	hycD	Membrane-spanning protein of hydrogenase 3
G2583_3371	ECs3579	Z4031	hycC	Formate hydrogenlyase, subunit C
G2583_3372	ECs3580	Z4032	hycB	Formate hydrogenlyase, subunit B
G2583_3373	ECs3581	Z4033	hycA	Formate hydrogenlyase regulatory protein hycA
G2583_3374		Z4034	-	hypothetical protein
G2583_3375	ECs3582	Z4035	hypA	Hydrogenase nickel insertion protein HypA
G2583_3376	ECs3583	Z4036	hypB	Hydrogenase isoenzymes nickel incorporation protein hypB
G2583_3377	ECs3584	Z4037	hypC	Hydrogenase isoenzymes formation protein hypC
G2583_3378	ECs3585	Z4038	hypD	Hydrogenase expression/formation protein HypD
G2583_3379	ECs3586	Z4039	hypE	Hydrogenase maturation factor
G2583_3380	ECs3587	Z4040	fhlA	Formate hydrogenlyase transcriptional activator
G2583_3381	ECs3588	Z4041	ygbA	hypothetical protein
G2583_3382		Z4042	-	hypothetical protein
G2583_3383	ECs3589	Z4043	mutS	DNA mismatch repair protein mutS
G2583_3384	ECs3590	Z4044	pphB	O218 protein
G2583_3385	ECs3591	Z4045	kpdD	4-hydroxybenzoate decarboxylase, subunit D
G2583_3386	ECs3592	Z4046	kpdC	YclC protein
G2583_3387	ECs3593	Z4047	padI	Probable aromatic acid decarboxylase
G2583_3388	ECs3594	Z4048	-	putative regulator
G2583_3389	ECs3595	Z4049	rpoS	RNA polymerase sigma factor
G2583_3390	ECs3596	Z4050	nlpD	Lipoprotein
G2583_3391	ECs3597	Z4051	pcm	Protein-L-isoaspartate O-methyltransferase
G2583_3392	ECs3598	Z4052	surE	Multifunctional protein surE [Includes: 5'/3'-nucleotidase
G2583_3393	ECs3599	Z4053	truD	tRNA pseudouridine synthase D
G2583_3394	ECs3600	Z4054	ispF	2-C-methyl-D-erythritol 2,4-cyclodiphosphate synthase

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Locus_tag ^a			Gene	Product
CB9615	Sakai	EDL933		
G2583_3395	ECs3601	Z4055	ispD	2-C-methyl-D-erythritol 4-phosphate cytidyltransferase
G2583_3396	ECs3602	Z4056	ftsB	Cell division protein ftsB homolog
G2583_3397	ECs3603	Z4057	ygbE	hypothetical protein
G2583_3398	ECs3604	Z4058	cysC	Adenylyl-sulfate kinase
G2583_3399	ECs3605	Z4059	cysN	Sulfate adenylyltransferase subunit 1
G2583_3400	ECs3606	Z4060	cysD	Sulfate adenylyltransferase subunit 2
G2583_3401	ECs3607	Z4061	iap	Alkaline phosphatase isozyme conversion peptidase
G2583_3402	ECs3608	Z4062	ygbF	CRISPR-associated protein Cas2
G2583_3403	ECs3609	Z4064	ygbT	CRISPR-associated protein Cas1
G2583_3404	ECs3610	Z4065	cse	CRISPR-associated protein, Cse3 family
G2583_3405	ECs3611	Z4066	ygcl	CRISPR-associated protein Cas5
G2583_3406	ECs3612	Z4067	ycgJ	CRISPR-associated protein, Cse4 family
G2583_3407	ECs3613	Z4068	cse	CRISPR-associated protein, Cse2 family
G2583_3408	ECs3614	Z4069	ygcl	CRISPR-associated protein, Cse1 family
G2583_3409	ECs3615	Z4070	ycgB	CRISPR-associated helicase Cas3
G2583_3410	ECs3616	Z4071	small	Small toxic membrane polypeptide
G2583_3411			-	ncRNA
G2583_3412	ECs3617	Z4072	cysH	Phosphoadenosine phosphosulfate reductase
G2583_3413	ECs3618	Z4073	cysI	Sulfite reductase [NADPH] hemoprotein beta-
G2583_3414	ECs3619	Z4074	cysJ	Sulfite reductase [NADPH] flavoprotein alpha-
G2583_3415	ECs3620	Z4075	sscR	Putative 6-pyruvoyl tetrahydrobiopterin synthase
G2583_3416	ECs3621	Z4076	ycgN	hypothetical protein
G2583_3417	ECs3622	Z4077	ycgO	hypothetical protein
G2583_3418	ECs3623	Z4078	ycgP	Glycerol-3-phosphate responsive antiterminator
G2583_3419	ECs3624	Z4079	ycgQ	Electron transfer flavoprotein
G2583_3419	ECs3625	Z4080	ycgQ	Electron transfer flavoprotein
G2583_3420	ECs3626	Z4081	ycgR	Electron transfer flavoprotein
G2583_3421	ECs3627	Z4082	ycgS	Permease (major facilitator superfamily)
G2583_3421	ECs3628	Z4083	ycgS	Permease (major facilitator superfamily)
G2583_3422	ECs3629	Z4084	ycgU	Uncharacterized flavoprotein ycgU
G2583_3423	ECs3630	Z4085	ycgW	Hypothetical oxidoreductase ycgW
G2583_3424	ECs3631	Z4086	yqcE	putative transport protein
G2583_3425	ECs3632	Z4087	ycgE	Carbohydrate kinase, FGGY family protein
		Z4088	-	hypothetical protein
G2583_3426	ECs3633	Z4089	ycgF	hypothetical protein
G2583_3427	ECs3634	Z4090	LemA	LemA family protein
G2583_3428	ECs3635	Z4091	-	hypothetical protein
	ECs3636		-	hypothetical protein
G2583_3429	ECs3637	Z4092	-	hypothetical protein
G2583_3430	ECs3638	Z4093	ycgG	hypothetical protein
G2583_3431	ECs3639	Z4094	eno	Enolase
G2583_3432	ECs3640	Z4095	pyrG	CTP synthase
G2583_3433	ECs3641	Z4096	mazG	Nucleoside triphosphate pyrophosphohydrolase
G2583_3434	ECs3642	Z4097	chpA	PemK-like protein 1

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Locus_tag ^a			Gene	Product
CB9615	Sakai	EDL933		
G2583_3435	ECs3643	Z4098	chpR	PemI-like protein 1
G2583_3436	ECs3644	Z4099	relA	GTP diphosphokinase
G2583_3437	ECs3645	Z4100	rumA	23S rRNA (uracil-5-)-methyltransferase rumA
G2583_3438	ECs3646	Z4101	barA	Signal transduction histidine-protein kinase barA
G2583_3439	ECs3647	Z4102	gudD	Glucarate dehydratase
G2583_3440	ECs3648	Z4103	gudX	Glucarate dehydratase
G2583_3440		Z4104	gudX	Glucarate dehydratase
G2583_3441	ECs3649	Z4105	gudP	Glucarate permease
G2583_3442	ECs3650	Z4106	yqcA	flavodoxin
G2583_3443	ECs3651	Z4107	truC	tRNA pseudouridine synthase C
G2583_3444	ECs3652	Z4108	yqcC	hypothetical protein
G2583_3445	csrB		csrB	ncRNA
G2583_3446	ECs3653	Z4110	syd	SecY interacting protein Syd
G2583_3447	ECs3654	Z4111	queF	NADPH-dependent 7-cyano-7-deazaguanine reductase
G2583_3448	ECs3655	Z4112	ygdH	hypothetical protein
G2583_3449	ECs3656	Z4113	sdaC	Serine transporter family protein
G2583_3450	ECs3657	Z4114	sdaB	L-serine ammonia-lyase 2
G2583_3451	ECs3658	Z4115	xni	Uncharacterized exonuclease xni
G2583_3452	ECs3659	Z4116	fucO	Lactaldehyde reductase
G2583_3453	ECs3660	Z4117	fucA	L-fuculose phosphate aldolase
G2583_3454	ECs3661	Z4118	fucP	L-fucose:H ⁺ symporter permease
G2583_3455	ECs3662	Z4119	fucl	L-fucose isomerase
G2583_3456	ECs3663	Z4120	fucK	L-fuculokinase
G2583_3457	ECs3664	Z4121	fucU	Fucose operon fucU protein
G2583_3458	ECs3665	Z4122	fucR	L-fucose operon activator
G2583_3459	ECs3666	Z4123	ygdE	Putative RNA 2'-O-ribose methyltransferase ygdE
G2583_3460	ECs3667	Z4124	ygdD	UPF0382 inner membrane protein ygdD
G2583_3461	ECs3668	Z4125	gcvA	Glycine cleavage system transcriptional activator
G2583_3462	gcvB		gcvB	ncRNA
G2583_3463	ECs3669	Z4126	ygdI	hypothetical protein
G2583_3464	ECs3670	Z4127	csdA	Cysteine desulfurase, catalytic subunit CsdA
G2583_3465	ECs3671	Z4128	csdE	Uncharacterized sufE-like protein ygdK
G2583_3466	ECs3672	Z4129	ygdL	Putative enzyme
G2583_3467	ECs3673	Z4130	mltA	Membrane-bound lytic murein transglycosylase A
G2583_3468	metZ	RNA076	metZ	Met tRNA
G2583_3469	metW	RNA077	metW	Met tRNA
G2583_3470	metV	RNA078	metV	Met tRNA
G2583_3471	ECs3674	Z4134	amiC	Putative amidase
G2583_3472	ECs3675	Z4135	argA	Amino-acid acetyltransferase
G2583_3473	ECs3676	Z4136	recD	Exodeoxyribonuclease V, alpha subunit
G2583_3474	ECs3677	Z4137	recB	Exodeoxyribonuclease V, beta subunit
G2583_3475	ECs3678	Z4138	ptrA	Protease III
G2583_3476	ECs3679	Z4139	recC	Exodeoxyribonuclease V, gamma subunit
G2583_3477	ECs3680	Z4140	ppdC	Prepilin peptidase-dependent protein C

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Locus_tag ^a			Gene	Product
CB9615	Sakai	EDL933		
G2583_3478	ECs3681	Z4141	ygdB	hypothetical protein
G2583_3479	ECs3682	Z4142	ppdB	Prepilin peptidase dependent protein B
G2583_3480	ECs3683	Z4143	ppdA	Prepilin peptidase-dependent protein A
G2583_3481	ECs3684	Z4144	thyA	Thymidylate synthase
G2583_3482	ECs3685	Z4145	lgt	Prolipoprotein diacylglyceryl transferase
G2583_3483	ECs3686	Z4146	ptsP	Phosphoenolpyruvate-protein phosphotransferase
G2583_3484	ECs3687	Z4147	nudH	RNA pyrophosphohydrolase
G2583_3485		Z4148	ygdT	hypothetical protein
G2583_3486	ECs3688	Z4149	mutH	DNA mismatch repair protein mutH
G2583_3487	ECs3689	Z4150	ygdQ	UPF0053 inner membrane protein ygdQ
G2583_3488	ECs3690	Z4151	ygdR	Uncharacterized lipoprotein ygdR precursor
G2583_3489	ECs3691	Z4152	tas	predicted oxidoreductase, NADP(H)-dependent aldo-keto reductase
G2583_3490	ECs3692	Z4153	lpIT	hypothetical protein
G2583_3491	ECs3693	Z4154	aas	2-acyl-glycerophospho-ethanolamine acyltransferase
G2583_3492			-	ncRNA
G2583_3493			-	ncRNA
G2583_3494	ECs3694	Z4155	galR	DNA-binding transcriptional repressor
G2583_3495	ECs3695	Z4156	lysA	Diaminopimelate decarboxylase
G2583_3496	ECs3696	Z4157	lysR	DNA-binding transcriptional regulator LysR
G2583_3497	ECs3697	Z4160	ygeA	Putative resistance proteins
G2583_3498	ECs3698	Z4161	araE	Arabinose-proton symporter
G2583_3499	ECs3699	Z4162	kduD	2-deoxy-D-gluconate 3-dehydrogenase
G2583_3500	ECs3700	Z4163	kduI	4-deoxy-L-threo-5-hexosulose-uronate ketol-isomerase
G2583_3501	ECs3701	Z4164	yqeF	Acetyl-CoA acetyltransferase
G2583_3502	ECs3702	Z4165	yqeG	putative transporter protein
G2583_3503	ECs3703	Z4166	yqeH	hypothetical protein
G2583_3504	ECs3704	Z4167	yqeI	putative sensory transducer
G2583_3505	ECs3705	Z4168	yqeJ	hypothetical protein
G2583_3506	ECs3706	Z4169	yqeK	hypothetical protein
G2583_3507		Z4170	-	hypothetical protein
G2583_3508	ECs3707	Z4171	ygeF	hypothetical protein
G2583_3509	ECs3708	Z4172	ygeG	Tetratricopeptide repeat protein
G2583_3510			ygeH	transcriptional regulatory protein
Indel-167	ECs3709	Z4173	ygeH	putative invasion protein
Indel-167	ECs3710	Z4174	-	hypothetical protein
Indel-167	ECs3711	Z4175	-	hypothetical protein
Indel-167	ECs3712	Z4176	-	hypothetical protein
Indel-167		Z4177	-	hypothetical protein
Indel-167	ECs3713	Z4178	-	hypothetical protein
Indel-167	ECs3714	Z4179	-	hypothetical protein
Indel-167	ECs3715		-	hypothetical protein
Indel-167	ECs3716	Z4180	-	type III secretion system lipoprotein precursor EprK
Indel-167	ECs3717	Z4181	-	type III secretion protein EprJ

Table S10. The orthologue table of the O55 and O157 strains Page 121

Locus_tag ^a			Gene	Product
CB9615	Sakai	EDL933		
Indel-167	ECs3718		-	type III secretion protein EprI
Indel-167	ECs3719	Z4182	-	type III secretion protein EprH
Indel-167		Z4183	-	hypothetical protein
Indel-167	ECs3720	Z4184	-	putative transcriptional regulator
Indel-167	ECs3721	Z4185	-	type III secretion protein EprS
Indel-167	ECs3722	Z4186	-	type III secretion protein EpaR2
Indel-167	ECs3723	Z4187	-	type III secretion protein EpaR1
Indel-167	ECs3724	Z4188	-	type III secretion protein EpaQ
Indel-167	ECs3725	Z4189	-	type III secretion protein EpaP
Indel-167	ECs3726	Z4190	-	type III secretion protein EpaO
Indel-167	ECs3727	Z4191	-	type III secretion protein EivJ
Indel-167	ECs3728	Z4192	-	hypothetical protein
Indel-167	ECs3729	Z4193	-	type III secretion protein EivI
Indel-167	ECs3730	Z4194	-	type III secretion protein ATP synthetase EivC
G2583_3511	ECs3730	Z4194	-	flagellum-specific ATP synthase
G2583_3512	ECs3731	Z4195	EivA	Type III secretion apparatus protein
G2583_3513	ECs3732	Z4196	EivE	Putative secreted protein
G2583_3514	ECs3733	Z4197	EivG	Putative type III secretion apparatus protein
G2583_3515	ECs3734	Z4198	invF	Putative type III secretion apparatus regulatory protein
G2583_3516	ECs3735	Z4199	-	hypothetical protein
G2583_3517	ECs3736	Z4200	-	hypothetical protein
G2583_3517	ECs3737	Z4201	-	hypothetical protein
G2583_3518	glyU	RNA079	glyU	Gly tRNA
G2583_3519	ECs3738	Z4203	ygeR	Hypothetical lipoprotein YgeR
G2583_3520	ECs3739	Z4205	xdhA	Xanthine dehydrogenase
G2583_3521	ECs3740	Z4206	xdhB	Xanthine dehydrogenase FAD-binding subunit
G2583_3522	ECs3741	Z4207	xdhC	Xanthine dehydrogenase iron-sulfur-binding subunit
G2583_3523	ECs3742	Z4208	ygeV	Putative transcriptional regulator
G2583_3524	ECs3743	Z4209	ygeW	hypothetical protein
G2583_3525	ECs3744	Z4210	ygeX	Putative diaminopropionate ammonia-lyase
G2583_3526	ECs3745	Z4211	ygeY	peptidase
G2583_3527	ECs3746	Z4212	hyuA	D-phenylhydantoinase
G2583_3528	ECs3747	Z4213	yqeA	Carbamate kinase arcC homolog
G2583_3529	ECs3748	Z4214	yqeB	Putative xanthine dehydrogenase accessory factor
G2583_3530	ECs3749	Z4215	yqeC	Probable selenium-dependent hydroxylase accessory protein YqeC
G2583_3531	ECs3750	Z4216	ygfJ	Molybdenum hydroxylase accessory protein, YgfJ family
G2583_3532	ECs3751	Z4217	ygfK	putative oxidoreductase, Fe-S subunit
G2583_3533	ECs3752	Z4218	ssnA	Cytosine deaminase and related metal-dependent hydrolases
G2583_3534	ECs3753	Z4219	ygfM	hypothetical protein
G2583_3535	ECs3754	Z4220	xdhD	Probable hypoxanthine oxidase xdhD
G2583_3536	ECs3755	Z4221	ygfO	Putative purine permease ygfO
G2583_3537	ECs3756	Z4222	guaD	guanine deaminase

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Locus_tag ^a			Gene	Product
CB9615	Sakai	EDL933		
G2583_3538	ECs3757	Z4223	ygfQ	hypothetical protein
G2583_3539	ECs3758	Z4224	ygfS	Putative electron transport protein ygfS
G2583_3540	ECs3759	Z4225	ygfT	putative oxidoreductase Fe-S binding subunit
G2583_3541	ECs3760	Z4226	ygfU	Putative xanthine permease
G2583_3542	ECs3761	Z4227	idi	Isopentenyl-diphosphate Delta-isomerase
G2583_3543	ECs3762	Z4228	lysS	Lysyl-tRNA synthetase
G2583_3544	ECs3763	Z4229	prfB	Peptide chain release factor 2
G2583_3545	ECs3764	Z4230	recJ	Single-stranded-DNA-specific exonuclease RecJ
G2583_3546	ECs3765	Z4231	dsbC	Thiol:disulfide interchange protein dsbC precursor
G2583_3547	ECs3766	Z4232	xerD	Tyrosine recombinase xerD
G2583_3548	ECs3767	Z4233	fldB	Flavodoxin-2
G2583_3549	ECs3768	Z4234	ygfX	hypothetical protein
G2583_3550	ECs3769	Z4235	ygfY	UPF0350 protein ygfY
G2583_3551	ECs3770	Z4236	ygfZ	tRNA-modifying protein ygfZ
G2583_3552	ECs3771	Z4237	yqfA	UPF0073 inner membrane protein yqfA
G2583_3553	ECs3772	Z4238	yqfB	Uncharacterized protein conserved in bacteria
G2583_3554	ECs3773	Z4239	bgIA	6-phospho-beta-glucosidase BglA
G2583_3555	ECs3774	Z4240	gcvP	Glycine dehydrogenase [decarboxylating]
G2583_3556	ECs3775	Z4241	gcvH	Glycine cleavage system H protein
G2583_3557	ECs3776	Z4242	gcvT	Glycine cleavage complex protein T, aminomethyltransferase, tetrahydrofolate-dependent
G2583_3558	ECs3777	Z4243	visC	Ubiquinone biosynthesis hydroxylase, UbiH/UbiF/VisC/COQ6 family
G2583_3559	ECs3778	Z4244	ubiH	2-octaprenyl-6-methoxyphenol 4-monoxygenase
G2583_3560	ECs3779	Z4245	pepP	Xaa-Pro aminopeptidase
G2583_3561	ECs3780	Z4246	ygfB	UPF0149 protein ygfB
G2583_3562	ECs3781	Z4247	zapA	Z-ring-associated protein
G2583_3563	ssrS	RNA080	ssrS	ncRNA
G2583_3564	ECs3782	Z4249	ygfA	Putative ligase
G2583_3565			-	ncRNA
G2583_3566	ECs3783		-	hypothetical protein
		Z4250	-	hypothetical protein
G2583_3567			-	ncRNA
G2583_3568	ECs3784	Z4251	serA	D-3-phosphoglycerate dehydrogenase
G2583_3569	ECs3785	Z4252	rpiA	Ribose 5-phosphate isomerase
G2583_3570	ECs3786	Z4253	argP	Chromosome initiation inhibitor
G2583_3571	ECs3787	Z4254	scpA	Methylmalonyl-CoA mutase
G2583_3572	ECs3788	Z4255	argK	LAO/AO transport system kinase
G2583_3573	ECs3789	Z4256	scpB	Methylmalonyl-CoA decarboxylase
G2583_3574	ECs3790	Z4257	scpC	Succinate CoA transferase
G2583_3575	ECs3791		ygfI	Uncharacterized HTH-type transcriptional regulator ygfI
G2583_3575	ECs3792	Z4258	ygfI	Uncharacterized HTH-type transcriptional regulator ygfI
G2583_3576	ECs3793	Z4259	yggE	hypothetical protein
G2583_3577	ECs3794	Z4260	argO	arginine exporter protein

Table S10. The orthologue table of the O55 and O157 strains Page 123

Locus_tag ^a			Gene	Product
CB9615	Sakai	EDL933		
G2583_3578	ECs3795	Z4261	mscS	Small-conductance mechanosensitive channel
G2583_3579	ECs3796	Z4263	fbaA	Fructose-bisphosphate aldolase
G2583_3580	ECs3797	Z4265	pgk	Phosphoglycerate kinase
G2583_3581	ECs3798	Z4266	epd	D-erythrose-4-phosphate dehydrogenase
G2583_3582	ECs3799	Z4267	-	hypothetical protein
G2583_3583	ECs3800	Z4268	-	hypothetical protein
G2583_3584	ECs3801	Z4269	-	hypothetical protein
G2583_3585	ECs3802	Z4270	-	ABC transporter, ATP-binding protein
G2583_3586	ECs3803	Z4271	-	putative ATP-binding protein of ABC transport system
G2583_3587	ECs3804	Z4273	yggC	putative fructose transport system kinase
G2583_3588	ECs3805	Z4274	yggD	Mannitol operon repressor
G2583_3589	ECs3806	Z4275	yggF	Fructose-1,6-bisphosphatase, class II
G2583_3590	ECs3807	Z4276	yggP	L-sorbose 1-phosphate reductase
G2583_3591	ECs3808	Z4277	cmtA	PTS system mannitol-specific EIICB component (EIICB-Mtl) (EII-Mtl) [Includes: Mannitol permease IIC component (PTS system mannitol-specific EIIC
G2583_3592	ECs3809	Z4278	cmtB	hypothetical protein
G2583_3593	ECs3810	Z4279	tktA	transketolase
G2583_3594	ECs3811	Z4280	yggG	hypothetical protein
G2583_3595	ECs3812	Z4281	speB	agmatinase
G2583_3596	ECs3813	Z4282	-	hypothetical protein
G2583_3597	ECs3814	Z4283	speA	Biosynthetic arginine decarboxylase
G2583_3598	ECs3815	Z4284	yqgB	hypothetical protein
G2583_3599	ECs3816	Z4285	yqgC	hypothetical protein
G2583_3600	ECs3817	Z4286	yqgD	hypothetical protein
G2583_3601	ECs3818	Z4287	metK	S-adenosylmethionine synthetase
G2583_3602	ECs3819	Z4288	galP	Galactose-proton symporter
G2583_3603	ECs3820	Z4289	yggI	hypothetical protein
G2583_3604	ECs3821	Z4290	endA	Endonuclease I
G2583_3605	ECs3822	Z4291	rsmE	hypothetical protein
G2583_3606	ECs3823	Z4292	gshB	Glutathione synthetase
G2583_3607	ECs3824	Z4293	yqgE	UPF0301 protein yqgE
G2583_3608	ECs3825	Z4294	yqgF	Putative Holliday junction resolvase
G2583_3609	ECs3827	Z4295	yggR	Twitching motility family protein
G2583_3610	ECs3826	Z4296	yggS	UPF0001 protein yggS
G2583_3611	ECs3828	Z4297	yggT	putative resistance protein
G2583_3612	ECs3829	Z4298	yggU	conserved hypothetical protein
G2583_3613	ECs3830	Z4299	rdgB	Nucleoside-triphosphatase rdgB
G2583_3614	ECs3831	Z4300	yggW	Putative oxygen-independent coproporphyrinogen III oxidase
G2583_3615	ECs3832	Z4301	yggM	putative alpha helix chain
G2583_3616	ECs3833	Z4302	ansB	L-asparaginase 2
G2583_3617	ECs3834	Z4303	yggN	hypothetical protein
G2583_3618	ECs3835	Z4304	yggL	hypothetical protein

Table S10. The orthologue table of the O55 and O157 strains Page 124

Locus_tag ^a			Gene	Product
CB9615	Sakai	EDL933		
G2583_3619	ECs3836	Z4305	trmI	tRNA (Guanine-N(7)-)-methyltransferase
G2583_3620	ECs3837	Z4306	mutY	A/G-specific adenine glycosylase
G2583_3621	ECs3838	Z4307	yggX	Probable Fe(2+)-trafficking protein
G2583_3622	ECs3839	Z4308	mltC	Membrane-bound lytic murein transglycosylase C precursor
G2583_3623	ECs3840	Z4309	nupG	Transport of nucleosides, permease protein
G2583_3624	ECs3841	Z4310	speC	Ornithine decarboxylase isozyme
G2583_3625	ECs3842	Z4311	yqgA	putative transport protein
G2583_3626	pheV	RNA081	pheV	Phe tRNA
G2583_3627	ECs3843	Z4313	intB	Site-specific recombinase, phage integrase family
G2583_3628	ECs3844	Z4314	-	unknown protein encoded by ISEc8
	ECs3845		-	hypothetical protein
G2583_3629	ECs3846	Z4315	ISSfI4	ISSfI3 OrfA
G2583_3630	ECs3847	Z4316	ISSfI4	ISSfI4 ORF2
G2583_3631	ECs3848	Z4317	ISSfI4	Transposase and inactivated derivatives
G2583_3632	ECs3849	Z4318	-	DNA helicase II
		Z4320	-	hypothetical protein
G2583_3633	ECs3850	Z4321	PagC	PagC-like membrane protein
	ECs3851		-	hypothetical protein
G2583_3634	ECs3852	Z4322	-	hypothetical protein
G2583_3635			-	ISEc13 transposase
		Z4323	-	hypothetical protein
G2583_3635	ECs3853	Z4324	-	ISEc13 transposase
G2583_3636	ECs3854		-	ST51 protein
		Z4325	-	hypothetical protein
G2583_3637	ECs3855	Z4326	ospD	Ent protein
	ECs3856		-	hypothetical protein
		Z4327	-	hypothetical protein
G2583_3638	ECs3857	Z4328	-	NleB
G2583_3639	ECs3858	Z4329	NleE	ST47 protein
G2583_3640	ECs3859	Z4330	-	Putative transposase
		Z4331	-	hypothetical protein
G2583_3641	ECs3860	Z4332	lifA	EHEC factor for adherence
G2583_3641	ECs3861	Z4333	lifA	EHEC factor for adherence
Indel-169	ECs3862	Z4334	-	putative transposase OrfB protein of insertion sequence IS629
Indel-169	ECs3863	Z4335	-	putative transposase OrfA protein of insertion sequence IS629
Indel-169	ECs3864		-	hypothetical protein
Indel-169	ECs3865	Z4336	-	hypothetical protein
Indel-169	ECs3866	Z4337	-	hypothetical protein
G2583_3642	Indel-170	Indel-170	-	Transposase and inactivated derivatives
G2583_3643	Indel-170	Indel-170	-	Transposase and inactivated derivatives
	ECs3867		-	hypothetical protein

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Locus_tag ^a			Gene	Product
CB9615	Sakai	EDL933		
G2583_3644	ECs3868	Z4338	-	IS66 family transposase orfB
G2583_3645	ECs3869	Z4340	-	Transposase and inactivated derivatives
G2583_3646	ECs3870		-	IS3
Indel-171	ECs3871		-	hypothetical protein
G2583_3647	Indel-172	Indel-172	yagK	hypothetical protein
G2583_3648	Indel-172	Indel-172	-	hypothetical protein
G2583_3649	Indel-172	Indel-172	-	DNA-directed RNA polymerase, beta subunit/140 kD subunit
G2583_3650	Indel-172	Indel-172	-	hypothetical protein
G2583_3651	Indel-172	Indel-172	yagK	hypothetical protein
G2583_3652	Indel-172	Indel-172	-	hypothetical protein
G2583_3653	Indel-172	Indel-172	-	hypothetical protein
G2583_3654	Indel-172	Indel-172	-	Predicted transcriptional regulator
G2583_3655	Indel-172	Indel-172	-	hypothetical protein
G2583_3656	Indel-172	Indel-172	-	ORFa1203
G2583_3657	Indel-172	Indel-172	-	IS629 transposase orfB
G2583_3658	Indel-172	Indel-172	-	hypothetical protein
G2583_3659	Indel-172	Indel-172	-	hypothetical protein
G2583_3660	Indel-172	Indel-172	yfjP	hypothetical protein
G2583_3661	Indel-172	Indel-172	flu	Type V secretory pathway, adhesin AidA
G2583_3662	Indel-172	Indel-172	insN	unknown protein encoded by IS911 within prophage CP-933L
G2583_3663	Indel-172	Indel-172	-	putative transposase
G2583_3664	Indel-172	Indel-172	ykfF	hypothetical protein
G2583_3665	Indel-172	Indel-172	yafZ	hypothetical protein
G2583_3666	Indel-172	Indel-172	yfjX	hypothetical protein
G2583_3667	Indel-172	Indel-172	yeeS	DNA repair protein, RadC family
G2583_3668	Indel-172	Indel-172	yeeT	hypothetical protein
G2583_3669	Indel-172	Indel-172	yeeU	Putative structural protein
G2583_3670	Indel-172	Indel-172	yeeV	hypothetical protein
G2583_3671	Indel-172	Indel-172	yeeW	hypothetical protein
G2583_3672	Indel-172	Indel-172	tnpA	Transposase for ISEc12
G2583_3673	Indel-172	Indel-172	tnpA	TnpA
G2583_3674	Indel-172	Indel-172	-	hypothetical protein
G2583_3675	Indel-172	Indel-172	-	hypothetical protein
G2583_3676	Indel-172	Indel-172	-	hypothetical protein
G2583_3677	Indel-172	Indel-172	yghD	Putative general secretion pathway protein M-type yghD
G2583_3678	Indel-172	Indel-172	gspL	Type II secretory pathway, component Pull
G2583_3679	Indel-172	Indel-172	gspK	General secretion pathway protein K
G2583_3680	Indel-172	Indel-172	gspJ	General secretion pathway protein GspJ
G2583_3681	Indel-172	Indel-172	gspI	General secretion pathway protein GspI
G2583_3682	Indel-172	Indel-172	gspH	General secretion pathway protein H
G2583_3683	Indel-172	Indel-172	gspG	General secretion pathway protein G
G2583_3684	Indel-172	Indel-172	gspF	Hypothetical type II secretion protein

Table S10. The orthologue table of the O55 and O157 strains Page 126

Locus_tag ^a			Gene	Product
CB9615	Sakai	EDL933		
G2583_3685	Indel-172	Indel-172	gspE	Type II secretory pathway, ATPase PulE/Tfp pil us assembly pathway, ATPase PilB
G2583_3686	Indel-172	Indel-172	gspD	General secretion pathway protein D
G2583_3687	Indel-172	Indel-172	gspC	General secretion pathway protein C
G2583_3688	Indel-172	Indel-172	yghG	Hypothetical lipoprotein
G2583_3689	Indel-172	Indel-172	pppA	Putative prepilin peptidase A
G2583_3690	Indel-172	Indel-172	yghJ	Putative lipoprotein acfD homolog precursor
G2583_3691	Indel-172	Indel-172	-	hypothetical protein
G2583_3692	Indel-172	Indel-172	-	hypothetical protein
G2583_3693	Indel-172	Indel-172	glcA	Glycolate permease glcA
G2583_3694	Indel-172	Indel-172	glcB	Malate synthase G
G2583_3695	Indel-172	Indel-172	glcG	hypothetical protein
G2583_3696	Indel-172	Indel-172	glcF	Glycolate oxidase iron-sulfur subunit
G2583_3697	Indel-172	Indel-172	glcE	Glycolate oxidase, subunit GlcE
G2583_3698	Indel-172	Indel-172	glcD	Glycolate oxidase subunit glcD
G2583_3699	Indel-172	Indel-172	glcC	Glc operon transcriptional activator
G2583_3700	Indel-172	Indel-172	yghO	hypothetical protein
G2583_3701	Indel-172	Indel-172	-	AMP-binding enzyme
G2583_3702	Indel-172	Indel-172	-	hypothetical protein
G2583_3703	Indel-172	Indel-172	-	Phosphopantetheine-binding
G2583_3704	Indel-172	Indel-172	-	7-keto-8-aminopelargonate synthetase and related enzymes
G2583_3705	Indel-172	Indel-172	-	Permease YjgP/YjgQ family protein precursor
G2583_3706	Indel-172	Indel-172	-	Permease YjgP/YjgQ family protein precursor
G2583_3707	Indel-172	Indel-172	ytfJ	Protein ytfJ
G2583_3708	Indel-172	Indel-172	-	hypothetical protein
G2583_3709	Indel-172	Indel-172	yghQ	Putative polysaccharide biosynthesis protein
G2583_3710	Indel-172	Indel-172	yghR	Thymidylate kinase
G2583_3711	Indel-172	Indel-172	yghS	Uncharacterized ATP-binding protein yghS
G2583_3712	Indel-172	Indel-172	yghT	Uncharacterized ATP-binding protein yghT
G2583_3713	ECs3872	Z4341	pitB	Probable low-affinity inorganic phosphate transporter 2
G2583_3714	ECs3873	Z4342	gsp	Glutathionylspermidine amidase/glutathionylspermidine synthase
G2583_3715	ECs3874	Z4343	yghU	putative glutathione S-transferase YghU
G2583_3716	ECs3875	Z4344	hybG	Hydrogenase-2 operon protein hybG
G2583_3717	ECs3876	Z4345	hybF	Probable hydrogenase nickel incorporation protein hybF
G2583_3718	ECs3877	Z4346	hybE	Hydrogenase-2 operon protein hybE
G2583_3719	ECs3878	Z4347	hybD	predicted maturation element for hydrogenase 2
G2583_3720	ECs3879	Z4348	hybC	Hydrogenase-2 large chain precursor
G2583_3721	ECs3880	Z4349	hybB	Probable Ni/Fe-hydrogenase 2 b-type cytochrome
G2583_3722	ECs3881	Z4350	hybA	Hydrogenase-2 operon protein hybA precursor
G2583_3723	ECs3882	Z4351	hybO	Hydrogenase-2 small chain precursor
G2583_3724	ECs3883	Z4352	yghW	hypothetical protein
G2583_3725	ECs3884	Z4353	yghYX	Putative enzyme

Table S10. The orthologue table of the O55 and O157 strains Page 127

Locus_tag ^a			Gene	Product
CB9615	Sakai	EDL933		
G2583_3726	ECs3885	Z4354	yghZ	aldo-keto reductase
G2583_3727	ECs3886	Z4355	yqhA	UPF0114 protein yqhA
G2583_3728	ECs3887	Z4356	yghA	Uncharacterized oxidoreductase yghA
	ECs3888	Z4357	-	hypothetical protein
G2583_3729	ECs3889	Z4358	exbD	Biopolymer transport protein exbD
G2583_3730	ECs3890	Z4359	exbB	Biopolymer transport protein exbB
G2583_3731	ECs3891	Z4360	-	hypothetical protein
G2583_3732	ECs3892	Z4361	metC	Cystathionine beta-lyase
G2583_3733	ECs3893	Z4362	yghB	Inner membrane protein yghB
G2583_3734	ECs3895	Z4363	yqhC	Putative ARAC-type regulatory protein
G2583_3735	ECs3894	Z4364	yqhD	Alcohol dehydrogenase yqhD
G2583_3736	ECs3896	Z4365	dkgA	2,5-diketo-D-gluconic acid reductase A
G2583_3737	ECs3897	Z4367	yqhG	hypothetical protein
G2583_3737	ECs3898	Z4368	yqhG	hypothetical protein
G2583_3738	ECs3899	Z4369	yqhH	predicted outer membrane lipoprotein
G2583_3739	ECs3900	Z4370	ygiQ	UPF0313 protein ygiQ
G2583_3740	ECs3901	Z4371	sufl	repressor protein for FtsI
G2583_3741	ECs3902	Z4372	plsC	1-acyl-sn-glycerol-3-phosphate acyltransferase
G2583_3742	ECs3903	Z4373	parC	DNA topoisomerase 4 subunit A
G2583_3743	ECs3904	Z4374	ygiS	Bacterial extracellular solute-binding protein, family 5
G2583_3744	ECs3905	Z4375	ygiV	hypothetical protein
G2583_3745	ECs3906	Z4376	ygiW	Protein ygiW
G2583_3746	ECs3907	Z4377	qseB	DNA-binding response regulator in two-component regulatory system with QseC
G2583_3747	ECs3908	Z4378	qseC	sensor protein QseC
G2583_3747	ECs3909	Z4378	qseC	sensor protein QseC
G2583_3748	ECs3910	Z4379	mdaB	Modulator of drug activity B
G2583_3749	ECs3911	Z4380	ygiN	Protein ygiN
G2583_3750	ECs3912	Z4381	-	Iron transport system regulatory protein FitR
G2583_3751	ECs3913	Z4382	-	Putative iron compound-binding protein of ABC transporter family
G2583_3752	ECs3914	Z4383	-	Putative iron compound permease protein of ABC transporter family
G2583_3753	ECs3915	Z4384	-	Iron ABC transporter, permease protein FitC
G2583_3754	ECs3916	Z4385	FepC	Iron ABC transporter, ATP binding protein FitB
G2583_3755	ECs3917	Z4386	-	TonB-dependent outer membrane ferric coprogen receptor FitA
G2583_3756	ECs3918	Z4387	parE	DNA topoisomerase IV, B subunit
G2583_3757	ECs3919	Z4388	yqiA	Esterase yqiA
G2583_3758	ECs3920	Z4389	cpdA	cyclic 3',5'-adenosine monophosphate
G2583_3759	ECs3921	Z4390	yqiB	hypothetical protein
G2583_3760	ECs3922	Z4391	nudF	ADP-ribose pyrophosphatase
G2583_3761	ECs3923	Z4392	tolC	Outer membrane protein TolC
G2583_3762	ECs3924	Z4393	ygiA	hypothetical protein

Table S10. The orthologue table of the O55 and O157 strains Page 128

Locus_tag ^a			Gene	Product
CB9615	Sakai	EDL933		
G2583_3763	ECs3925	Z4394	ygiB	UPF0441 protein ygiB
G2583_3764	ECs3926	Z4395	ygiC	putative synthetase/amidase
G2583_3765	ECs3927	Z4396	ygiD	Aromatic ring-opening dioxygenase
G2583_3766	ECs3928	Z4397	zupT	Zinc transporter zupT
G2583_3767		Z4398	-	hypothetical protein
G2583_3768	ECs3929	Z4399	ribB	3,4-dihydroxy-2-butanone 4-phosphate synthase
G2583_3769	ECs3930	Z4400	yqiC	hypothetical protein
G2583_3770	ECs3931	Z4401	glgS	Glycogen synthesis protein glgS
G2583_3771	ECs3932	Z4402	yqiJ	Putative oxidoreductase
G2583_3772	ECs3933	Z4403	yqiK	SPFH/band 7 domain protein
G2583_3773			-	ncRNA
G2583_3774	ECs3934		-	hypothetical protein
G2583_3775			-	ncRNA
G2583_3776	ECs3935	Z4405	rfaE	Bifunctional protein hldE [Includes: D-beta-D-heptose 7-phosphate kinase
G2583_3777	ECs3936	Z4406	glnE	bifunctional glutamine-synthetase adenyltransferase/deadenyltransferase
G2583_3778	ECs3937	Z4407	ygiF	Adenylate cyclase
G2583_3779	ECs3938	Z4408	htrG	putative signal transduction protein
G2583_3780	ECs3939	Z4409	cca	TRNA nucleotidyltransferase
G2583_3781	ECs3940	Z4410	bacA	Putative undecaprenol kinase
G2583_3782	ECs3941	Z4411	folB	Dihydroneopterin aldolase
G2583_3783	ECs3942	Z4412	ygiH	UPF0078 membrane protein ygiH
G2583_3784	ECs3943	Z4413	ttdR	transcriptional activator TtdR
G2583_3785	ECs3944	Z4414	ttdA	L(+)-tartrate dehydratase subunit alpha
G2583_3786	ECs3945	Z4415	ttdB	L(+)-tartrate dehydratase subunit beta
G2583_3787	ECs3946	Z4416	ttdT	L-tartrate/succinate antiporter
G2583_3788	ECs3947	Z4417	ygiD	Probable O-sialoglycoprotein endopeptidase
G2583_3789	ECs3948	Z4418	rpsU	Ribosomal protein S21
G2583_3790	ECs3949	Z4419	dnaG	DNA primase
G2583_3791	ECs3950	Z4420	rpoD	RNA polymerase sigma factor RpoD
G2583_3792	ECs3951	Z4421	mug	G/U mismatch-specific DNA glycosylase
G2583_3793	ileX	RNA082	ileX	Met tRNA
G2583_3794	ECs3952	Z4423	yqiH	Siderophore-interacting protein
G2583_3795	ECs3953	Z4424	yqiI	transcriptional regulator, PadR family
G2583_3796	ECs3954	Z4425	aer	Aerotaxis receptor
G2583_3797	ECs3955	Z4426	ygiG	Ornithine/acetylornithine aminotransferase
G2583_3798	ECs3956	Z4427	ygiH	T-RNA-binding domain protein
G2583_3799	ECs3957	Z4428	ebgR	DNA-binding transcriptional repressor
G2583_3800	ECs3958	Z4429	ebgA	Evolved beta-D-galactosidase, alpha subunit
G2583_3801	ECs3959	Z4430	ebgC	Evolved beta-galactosidase subunit beta
G2583_3802	ECs3960	Z4431	ygiI	Amino acid permease family protein
G2583_3803	ECs3961	Z4432	ygiJ	hypothetical protein
G2583_3804	ECs3962	Z4433	ygiK	predicted glycosyl hydrolase

Table S10. The orthologue table of the O55 and O157 strains Page 129

Locus_tag ^a			Gene	Product
CB9615	Sakai	EDL933		
G2583_3805	ECs3963	Z4434	fadH	2,4-dienoyl-CoA reductase
G2583_3806	ECs3964	Z4435	ygjM	Helix-turn-helix DNA-binding domain protein
G2583_3807	ECs3965	Z4436	ygjN	hypothetical protein
G2583_3808	ECs3966	Z4437	rlmG	Putative enzyme
G2583_3809	ECs3967	Z4438	ygjP	hypothetical protein
G2583_3810	ECs3968	Z4439	ygjQ	Putative SanA protein
G2583_3811	ECs3969	Z4440	ygjR	Oxidoreductase, NAD binding
G2583_3812	ECs3970	Z4441	alx	Inner membrane protein alx
G2583_3813	ECs3971	Z4442	sstT	Sodium:serine/threonine symporter
G2583_3814	ECs3972	Z4443	ygjV	Putative inner membrane protein
G2583_3815	ECs3973	Z4444	uxaA	Altronate dehydratase
G2583_3816	ECs3974	Z4445	uxaC	Uronate isomerase
G2583_3817	ECs3975	Z4446	exuT	Hexuronate transporter
G2583_3818	ECs3976	Z4448	exuR	Exu regulon transcriptional regulator
G2583_3819	ECs3977	Z4449	ygjA	hypothetical protein
G2583_3820	ECs3978	Z4450	ygjB	hypothetical protein
G2583_3821	ECs3979	Z4451	ygjC	hypothetical protein
G2583_3822	ECs3980	Z4452	ygjD	hypothetical protein
G2583_3823	ECs3981	Z4453	ygjE	ORF_o157; overlaps o101 by 64 bases, no frameshift found, other starts possible
G2583_3824	ECs3982	Z4454	ygjK	hypothetical protein
G2583_3825	ECs3983	Z4455	ygjF	Putative inner membrane protein YqjF
G2583_3826	ECs3984	Z4456	ygjG	putative transferase
G2583_3827	ECs3985	Z4457	yhaH	putative inner membrane protein YhaH
G2583_3828	ECs3986	Z4458	yhaI	Inner membrane protein yhaI
G2583_3829	ECs3987	Z4459	yhaJ	putative transcriptional regulator LYSR-type
G2583_3830	ECs3988	Z4460	yhaK	Pirin-like protein yhaK
G2583_3831	ECs3989	Z4461	yhaL	hypothetical protein
G2583_3832	ECs3990	Z4462	yhaM	UPF0597 protein yhaM
G2583_3833	ECs3991	Z4463	yhaO	putative transport system permease protein
G2583_3834	ECs3992	Z4464	tdcG	L-serine ammonia-lyase TdcG
G2583_3835	ECs3993	Z4465	tdcF	TdcF protein
G2583_3836	ECs3994	Z4466	tdcE	Keto-acid formate acetyltransferase
G2583_3837	ECs3995	Z4467	tdcD	Putative kinase
G2583_3838	ECs3996	Z4468	tdcC	Threonine/serine transporter tdcC (H(+)/threonine-serine symporter)
G2583_3839	ECs3997	Z4469	tdcB	Threonine dehydratase catabolic
G2583_3840	ECs3998	Z4470	tdcA	DNA-binding transcriptional activator
G2583_3841	ECs3999	Z4471	tdcR	Threonine dehydratase operon activator protein
G2583_3842	ECs4000	Z4472	yhaB	hypothetical protein
G2583_3843	ECs4001	Z4473	yhaC	hypothetical protein
G2583_3844			-	hypothetical protein
		Z4474	-	hypothetical protein
G2583_3845	rnpB	RNA083	rnpB	ncRNA

Table S10. The orthologue table of the O55 and O157 strains Page 130

Locus_tag ^a			Gene	Product
CB9615	Sakai	EDL933		
G2583_3846	ECs4002	Z4476	garK	hypothetical protein
G2583_3847	ECs4003	Z4477	garR	2-hydroxy-3-oxopropionate reductase
G2583_3848	ECs4004	Z4478	garL	2-dehydro-3-deoxyglucarate aldolase
G2583_3849	ECs4005	Z4479	garP	Probable galactarate transporter
G2583_3850	ECs4006	Z4480	garD	Galactarate dehydratase
G2583_3851	ECs4007	Z4481	sohA	HtrA suppressor protein
G2583_3852	ECs4008	Z4482	yhaV	hypothetical protein
G2583_3853	ECs4009	Z4483	agaR	Putative aga operon transcriptional repressor
G2583_3854	ECs4010	Z4484	kbaZ	D-tagatose-bisphosphate aldolase, class II, non-catalytic subunit
G2583_3855	ECs4011	Z4485	agaV	N-acetylgalactosamine-specific PTS system enzyme IIB component
G2583_3856	ECs4012	Z4486	agaW	Putative phosphotransferase system enzyme subunit
G2583_3857	ECs4013	Z4487	agaE	PTS system N-acetylgalactosamine-specific, IID component
G2583_3858	ECs4014	Z4488	agaF	PTS system, mannose/sorbose-specific, IIA component
G2583_3859	ECs4015	Z4489	agaA	N-acetylgalactosamine-6-phosphate deacetylase
G2583_3860	ECs4016	Z4490	agaS	Putative sugar isomerase, AgaS family
G2583_3861	ECs4017	Z4491	kbaY	Tagatose-1,6-bisphosphate aldolase kbaY
G2583_3862	ECs4018	Z4492	agaB	PTS system, D galactosamine-specific, IIB component
G2583_3863	ECsp020	Z4493	agaC	N-acetylgalactosamine permease IIC component 1
G2583_3864	ECs4019	Z4494	agaD	N-acetylglucosamine transport enzyme IID component 1
G2583_3865		Z4495	agal	putative galactosamine-6-phosphate isomerase
G2583_3865	ECsp021	Z4497	agal	putative galactosamine-6-phosphate isomerase
G2583_3866	ECs4020	Z4498	yraH	Putative type 1 fimbrial protein
G2583_3867	ECs4021	Z4499	yraI	Gram-negative pili assembly chaperone protein
G2583_3868	ECs4022	Z4500	yraJ	Fimbrial usher family protein
G2583_3869	ECs4023	Z4501	yraK	Putative fimbrial protein
Indel-175	ECs4024	Z4502	-	putative transposase OrfA protein of insertion sequence IS629
Indel-175	ECs4025	Z4503	-	putative transposase OrfB protein of insertion sequence IS629
G2583_3869	ECs4026	Z4504	yraK	Putative fimbrial protein
G2583_3870	ECs4027	Z4505	yraL	UPF0011 protein yraL
G2583_3871	ECs4028	Z4506	yraM	hypothetical protein
G2583_3872	ECs4029	Z4507	yraN	UPF0102 protein yraN
G2583_3873	ECs4030	Z4508	diaA	DnaA initiator-associating protein diaA
G2583_3874	ECs4031	Z4509	yraP	hypothetical protein
G2583_3875	ECs4032	Z4510	yraQ	Putative permease
G2583_3876	ECs4033	Z4511	yraR	hypothetical protein
G2583_3877	ECs4034	Z4512	yhbO	hypothetical protein
G2583_3878	ECs4035	Z4514	yhbP	UPF0306 protein yhbP
G2583_3879	ECs4036	Z4516	yhbQ	UPF0213 protein yhbQ
G2583_3880	ECs4037	Z4517	yhbS	Uncharacterized acetyltransferase yhbS

Table S10. The orthologue table of the O55 and O157 strains Page 131

Locus_tag ^a			Gene	Product
CB9615	Sakai	EDL933		
G2583_3881	ECs4038	Z4518	yhbT	hypothetical protein
G2583_3882	ECs4039	Z4519	yhbU	Peptidase, U32 family
G2583_3883	ECs4040	Z4520	yhbV	hypothetical protein
G2583_3884	ECs4041	Z4521	yhbW	Monoxygenase, luciferase family
G2583_3885	ECs4042	Z4522	mtr	Tryptophan-specific transport protein
G2583_3886	ECs4043	Z4523	deaD	Cold-shock DEAD-box protein A
G2583_3887	ECs4044	Z4524	nlpl	Lipoprotein nlpl precursor
G2583_3888	ECs4045	Z4525	pnp	Polynucleotide phosphorylase/polyadenylase
G2583_3889			-	ncRNA
G2583_3890	ECs4046	Z4526	rpsO	30S ribosomal protein S15
G2583_3891	ECs4047	Z4527	truB	tRNA pseudouridine synthase B
G2583_3892	ECs4048	Z4528	rbfA	Ribosome-binding factor A
G2583_3893	ECs4049	Z4529	infB	Translation initiation factor IF-2
G2583_3894	ECs4050	Z4530	nusA	Transcription elongation protein nusA
G2583_3895	ECs4051	Z4531	yhbC	hypothetical protein
G2583_3896	metY	RNA084	metY	Met tRNA
G2583_3897	ECs4052	Z4534	argG	Argininosuccinate synthase
G2583_3898	ECs4053	Z4535	yhbX	Outer-membrane protein yhbX
G2583_3899	leuU	RNA085	leuU	Leu tRNA
G2583_3900	ECs4054	Z4537	secG	Preprotein translocase IISP family, auxillary membrane component
G2583_3901	ECs4055	Z4538	glmM	Phosphoglucosamine mutase
G2583_3902	ECs4056	Z4539	folP	7,8-dihydropteroate synthase
G2583_3903	ECs4057	Z4540	hflB	Cell division protease ftsH
G2583_3904	ECs4058	Z4541	rrmJ	Ribosomal RNA large subunit methyltransferase J
G2583_3905	ECs4059	Z4542	yhbY	hypothetical protein
G2583_3906	ECs4060	Z4543	greA	Transcription elongation factor greA
G2583_3907	ECs4061	Z4544	dacB	D-alanyl-D-alanine carboxypeptidase/D-alanyl-D-alanine-endopeptidase
G2583_3908	ECs4062	Z4545	obgE	GTP-binding protein Obg/CgtA
G2583_3909	ECs4063	Z4546	yhbE	Uncharacterized inner membrane transporter yhbE
G2583_3910	ECs4064	Z4547	rpmA	50S ribosomal protein L27
G2583_3911	ECs4065	Z4549	rplU	50S ribosomal protein L21
G2583_3912	ECs4066	Z4550	ispB	hypothetical protein
G2583_3913	ECs4067	Z4551	sfsB	Sugar fermentation stimulation protein B
G2583_3914	ECs4068	Z4552	murA	UDP-N-acetylglucosamine 1-carboxyvinyltransferase
G2583_3915	ECs4069	Z4553	yrbA	Predicted transcriptional regulator, BolA superfamily
G2583_3916	ECs4070	Z4554	yrbB	hypothetical protein
G2583_3917	ECs4071	Z4555	yrbC	Toluene tolerance protein Ttg2D
G2583_3918	ECs4072	Z4556	yrbD	hypothetical protein
G2583_3919	ECs4073	Z4557	yrbE	UPF0393 inner membrane protein yrbE
G2583_3920	ECs4074	Z4558	yrbF	Uncharacterized ABC transporter ATP-binding protein yrbF
G2583_3921	ECs4075	Z4559	yrbG	Sodium/calcium exchanger protein

Table S10. The orthologue table of the O55 and O157 strains Page 132

Locus_tag ^a			Gene	Product
CB9615	Sakai	EDL933		
G2583_3922	ECs4076	Z4560	kdsD	Arabinose 5-phosphate isomerase
G2583_3923	ECs4077	Z4561	kdsC	3-deoxy-D-manno-octulosonate 8-phosphate
G2583_3924	ECs4078	Z4562	yrbK	hypothetical protein
G2583_3925	ECs4079	Z4563	lptA	Protein yhbN precursor
G2583_3926	ECs4080	Z4564	lptB	Uncharacterized ABC transporter ATP-binding protein yhbG
G2583_3927	ECs4081	Z4565	rpoN	RNA polymerase sigma-54 factor
G2583_3928	ECs4082	Z4566	hpf	Probable sigma(54) modulation protein
G2583_3929	ECs4083	Z4567	ptsN	PTS IIA-like nitrogen-regulatory protein PtsN
G2583_3930	ECs4084	Z4568	yhbJ	UPF0042 protein yhbJ
G2583_3931	ECs4085	Z4569	npr	Phosphocarrier protein NPr
G2583_3932	ECs4086	Z4570	yrbL	hypothetical protein
G2583_3933	ECs4087	Z4571	mtgA	Monofunctional biosynthetic peptidoglycan transglycosylase
G2583_3934	ECs4088	Z4573	elbB	Sigma cross-reacting protein 27A
G2583_3935			-	ncRNA
G2583_3936	ECs4089	Z4574	arcB	Aerobic respiration control sensor protein arcB
G2583_3937	ECs4090	Z4575	yhcC	hypothetical protein
G2583_3938	ECs4091	Z4576	gltB	Glutamate synthase (NADPH), large subunit
G2583_3939	ECs4092	Z4577	gltD	Glutamate synthase (NADPH), small subunit
G2583_3940	ECs4093	Z4578	yhcG	conserved hypothetical protein
G2583_3941	ECs4094	Z4579	yhcH	hypothetical protein
G2583_3942	ECs4095	Z4580	nanK	N-acetylmannosamine kinase
G2583_3943	ECs4096	Z4581	nanE	Putative N-acetylmannosamine-6-phosphate 2-
G2583_3944	ECs4097	Z4582	nanT	Sialic acid transporter
G2583_3945	ECs4098	Z4583	nanA	N-acetylneuraminase lyase
G2583_3946	ECs4099	Z4584	nanR	Transcriptional regulators
G2583_3947	ECs4100	Z4585	dcuD	Putative C4-dicarboxylate carrier protein
G2583_3948	ECs4101	Z4586	sspB	Stringent starvation protein B
G2583_3949	ECs4102	Z4587	sspA	Stringent starvation protein A
G2583_3950	ECs4103	Z4588	rpsI	30S ribosomal protein S9
G2583_3951	ECs4104	Z4589	rplM	50S ribosomal protein L13
G2583_3952	ECs4105	Z4591	yhcM	hypothetical protein
G2583_3953	ECs4106	Z4592	yhcB	hypothetical protein
G2583_3954	ECs4107	Z4593	degQ	Serine peptidase DegQ
G2583_3955	ECs4108	Z4594	degS	Protease degS precursor
G2583_3956	ECs4109	Z4595	mdh	Malate dehydrogenase
G2583_3957	ECs4110	Z4596	argR	Arginine repressor
G2583_3958	ECs4111	Z4597	yhcN	hypothetical protein
G2583_3959	ECs4112	Z4598	yhcO	hypothetical protein
G2583_3960	ECs4113	Z4599	aaeB	p-hydroxybenzoic acid efflux pump subunit aaeB
G2583_3961	ECs4114	Z4600	aaeA	p-hydroxybenzoic acid efflux pump subunit aaeA
G2583_3962	ECs4115	Z4601	aaeX	hypothetical protein
G2583_3963	ECs4116	Z4602	aaeR	putative DNA-binding transcriptional regulator

Table S10. The orthologue table of the O55 and O157 strains Page 133

Locus_tag ^a			Gene	Product
CB9615	Sakai	EDL933		
G2583_3964	ECs4117	Z4603	tldD	suppresses inhibitory activity of CsrA
G2583_3965	ECs4118	Z4604	yhdP	hypothetical protein
G2583_3966	ECs4119	Z4605	rng	Ribonuclease G
G2583_3967	ECs4120	Z4606	yhdE	Maf-like protein yhdE
G2583_3968	ECs4121	Z4607	mreD	Rod shape-determining protein
G2583_3969	ECs4122	Z4609	mreC	Rod shape-determining protein MreC
G2583_3970	ECs4123	Z4610	mreB	Rod shape-determining protein mreB
G2583_3971	ECs4124	Z4611	csrD	Cyclic diguanylate phosphodiesterase (EAL) domain
G2583_3972	ECs4125	Z4612	yhdH	Quinone oxidoreductase, YhdH family
G2583_3973	ECs4126	Z4613	-	hypothetical protein
		Z4614	-	hypothetical protein
G2583_3974	ECs4127	Z4615	accB	acetyl-CoA carboxylase, biotin carboxyl carrier protein
G2583_3975	ECs4128	Z4616	accC	Acetyl CoA carboxylase, biotin carboxylase subunit
G2583_3976	ECs4129	Z4617	yhdT	hypothetical protein
G2583_3977	ECs4130	Z4618	panF	Sodium/pantothenate symporter
G2583_3978	ECs4131	Z4619	prmA	Ribosomal protein L11 methyltransferase
G2583_3979	ECs4132	Z4620	dusB	tRNA-dihydrouridine synthase B
G2583_3980	ECs4133	Z4621	fis	DNA-binding protein fis
G2583_3981	ECs4134	Z4622	yhdJ	DNA methylase, N4/N6-methyltransferase family
G2583_3982	ECs4135	Z4623	yhdU	hypothetical protein
G2583_3983	ECs4136	Z4624	envR	Probable acrEF/envCD operon repressor
G2583_3984	ECs4137	Z4625	acrE	Acriflavine resistance protein E
G2583_3985	ECs4138	Z4626	acrF	Transporter, hydrophobe/amphiphile efflux-1 (HAE1) family precursor
G2583_3985	ECs4139	Z4627	acrF	Transporter, hydrophobe/amphiphile efflux-1 (HAE1) family precursor
G2583_3986	ECs4140	Z4628	yhdV	hypothetical protein
G2583_3987	ECs4141	Z4629	yhdW	Putative amino-acid ABC transporter-binding protein yhdW precursor
G2583_3988	ECs4142	Z4630	yhdX	Amino acid ABC transporter, permease protein, His/Glu/Gln/Arg/opine family
G2583_3989	ECs4143	Z4631	yhdY	general L-amino acid transport system permease protein AapM
G2583_3990	ECs4144	Z4632	yhdZ	Amino acid ABC transporter, ATP-binding protein
G2583_3991	rrfF	RNA086	rrf	5S ribosomal RNA
G2583_3992	thrV	RNA087	thrV	Thr tRNA
G2583_3993	rrfD	RNA088	rrf	5S ribosomal RNA
G2583_3994	rrlD	RNA089	rrl	23S ribosomal RNA
G2583_3995	alaU	RNA090	alaU	Ala tRNA
G2583_3996	ileU	RNA091	ileU	Ile tRNA
G2583_3997	rrsD	RNA092	rrs	16S ribosomal RNA
G2583_3998	ECs4145	Z4650	yrdA	hypothetical protein
G2583_3999	ECs4146	Z4651	yrdB	hypothetical protein
G2583_4000	ECs4147	Z4652	aroE	Shikimate dehydrogenase

Table S10. The orthologue table of the O55 and O157 strains Page 134

Locus_tag ^a			Gene	Product
CB9615	Sakai	EDL933		
G2583_4001	ECs4148	Z4653	rimN	Sua5/YciO/YrdC/YwC family protein
G2583_4002	ECs4149	Z4654	yrdD	predicted DNA topoisomerase
G2583_4003	ECs4150	Z4655	smg	hypothetical protein
G2583_4004	ECs4151	Z4656	smf	hypothetical protein
G2583_4005	ECs4152	Z4657	def	Peptide deformylase
G2583_4006	ECs4153	Z4658	fmt	Methionyl-tRNA formyltransferase
G2583_4007	ECs4154	Z4659	rsmB	Ribosomal RNA small subunit methyltransferase B
G2583_4008	ECs4155	Z4660	trkA	Trk system potassium uptake protein trkA (K(+)-uptake protein trkA)
G2583_4009	ECs4156	Z4661	mscL	Large-conductance mechanosensitive channel
G2583_4010	ECs4157	Z4662	zntR	zinc-responsive transcriptional regulator
G2583_4011	ECs4158	Z4663	yhdN	hypothetical protein
G2583_4012	ECs4159	Z4664	rplQ	50S ribosomal protein L17
G2583_4013	ECs4160	Z4665	rpoA	DNA-directed RNA polymerase subunit alpha
G2583_4014	ECs4161	Z4666	rpsD	30S ribosomal protein S4
G2583_4015	ECs4162	Z4667	rpsK	30S ribosomal protein S11
G2583_4016	ECs4163	Z4668	rpsM	30S ribosomal protein S13
G2583_4017	ECs4164	Z4669	rpmJ	ribosomal protein L36
G2583_4018	ECs4165	Z4670	secY	Preprotein translocase subunit secY
G2583_4019	ECs4166	Z4671	rplO	50S ribosomal protein L15
G2583_4020	ECs4167	Z4672	rpmD	50S ribosomal protein L30
G2583_4021	ECs4168	Z4673	rpsE	30S ribosomal protein S5
G2583_4022	ECs4169	Z4674	rplR	50S ribosomal protein L18
G2583_4023	ECs4170	Z4675	rplF	50S ribosomal protein L6
G2583_4024	ECs4171	Z4676	rpsH	30S ribosomal protein S8
G2583_4025	ECs4172	Z4677	rpsN	30S ribosomal protein S14
G2583_4026	ECs4173	Z4678	rplE	50S ribosomal protein L5
G2583_4027	ECs4174	Z4679	rplX	50S ribosomal protein L24
G2583_4028	ECs4175	Z4680	rplN	50S ribosomal protein L14
G2583_4029	ECs4176	Z4681	rpsQ	30S ribosomal protein S17
G2583_4030	ECs4177	Z4683	rpmC	50S ribosomal protein L29
G2583_4031	ECs4178	Z4684	rplP	50S ribosomal protein L16
G2583_4032	ECs4179	Z4685	rpsC	30S ribosomal protein S3
G2583_4033	ECs4180	Z4686	rplV	50S ribosomal protein L22
G2583_4034	ECs4181	Z4687	rpsS	30S ribosomal protein S19
G2583_4035	ECs4182	Z4688	rplB	50S ribosomal protein L2
G2583_4036	ECs4183	Z4689	rplW	50S ribosomal protein L23
G2583_4037	ECs4184	Z4690	rplD	50S ribosomal protein L4
G2583_4038	ECs4185	Z4691	rplC	50S ribosomal protein L3
G2583_4039	ECs4186	Z4692	rpsJ	Ribosomal protein S10
G2583_4040	ECs4187		-	hypothetical protein
G2583_4041	ECs4188	Z4693	gspO	Peptidase, A24 (Type IV prepilin peptidase) family
G2583_4042	ECs4189	Z4695	bfr	Bacterioferritin
G2583_4043		Z4696	bfd	Bacterioferritin-associated ferredoxin

Table S10. The orthologue table of the O55 and O157 strains Page 135

Locus_tag ^a			Gene	Product
CB9615	Sakai	EDL933		
G2583_4044	ECs4190	Z4697	tufA	Elongation factor Tu 1
G2583_4045	ECs4191	Z4698	fusA	Elongation factor G
G2583_4046	ECs4192	Z4699	rpsG	30S ribosomal protein S7
G2583_4047	ECs4193	Z4700	rpsL	Ribosomal protein S12
G2583_4048	ECs4194	Z4701	yheL	sulfur relay protein TusD/DsrH
G2583_4049	ECs4195	Z4702	yheM	hypothetical protein
G2583_4050	ECs4196	Z4703	yheN	Sulfurtransferase tusD
G2583_4051	ECs4197	Z4704	yheO	hypothetical protein
G2583_4052	ECs4198	Z4705	fkpA	FKBP-type peptidyl-prolyl cis-trans isomerase fkpA precursor
G2583_4053	ECs4199	Z4706	slyX	slyX protein
G2583_4054	ECs4200	Z4707	slyD	FKBP-type peptidyl-prolyl cis-trans isomerase SlyD
G2583_4055		Z4708	yheV	hypothetical protein
G2583_4056	ECs4201	Z4710	kefB	Glutathione-regulated potassium-efflux system protein kefB (K+)/H(+) antiporter) (NEM-activatable K+)/H(+) antiporter)
G2583_4057	ECs4202	Z4712	kefG	Glutathione-regulated potassium-efflux system ancillary protein kefG
G2583_4058	ECs4203	Z4713	yheS	Uncharacterized ABC transporter ATP-binding protein yheS
G2583_4059	ECs4204	Z4714	yheT	Hydrolase, alpha/beta fold family
G2583_4060	ECs4205	Z4715	yheU	UPF0270 protein yheU
G2583_4061	ECs4206	Z4716	prkB	Phosphoribulokinase/uridine kinase family protein
G2583_4062	ECs4207	Z4717	yhfA	Protein yhfA
G2583_4063	ECs4208	Z4718	crp	Catabolite gene activator
G2583_4064	ECs4209	Z4719	yhfK	integral membrane protein, YccS/YhfK family
G2583_4065	ECs4210	Z4720	argD	Acetylornithine/succinyldiaminopimelate
G2583_4066	ECs4211	Z4721	pabA	Aminodeoxychorismate synthase, component II
G2583_4067	ECs4212	Z4722	fic	Cell filamentation protein Fic
G2583_4068	ECs4213	Z4723	yhfG	hypothetical protein
G2583_4069	ECs4214	Z4724	ppiA	Peptidyl-prolyl cis-trans isomerase
G2583_4070	ECs4215	Z4725	tsgA	hypothetical protein
G2583_4071	ECs4216	Z4726	nirB	Nitrite reductase [NAD(P)H], large subunit
G2583_4072	ECs4217	Z4727	nirD	Nitrite reductase [NAD(P)H] large subunit
G2583_4073	ECs4218	Z4728	nirC	Response regulator receiver protein
G2583_4074	ECs4219	Z4729	cysG	Siroheme synthase [Includes: Uroporphyrinogen-III C-methyltransferase
G2583_4075	ECs4220	Z4730	yhfL	putative lipoprotein
G2583_4076	ECs4221	Z4731	frlA	Amino acid transporters
G2583_4077	ECs4222	Z4732	frlB	SIS family protein
G2583_4078	ECs4223	Z4733	frlC	predicted isomerase
G2583_4079	ECs4224	Z4734	-	hypothetical protein
G2583_4079		Z4735	-	hypothetical protein
G2583_4080	ECs4225	Z4736	frlR	GntR-family transcriptional regulator FrIR

Table S10. The orthologue table of the O55 and O157 strains Page 136

Locus_tag ^a			Gene	Product
CB9615	Sakai	EDL933		
G2583_4081	ECs4226	Z4737	trpS	Tryptophanyl-tRNA synthetase
G2583_4082	ECs4227	Z4738	gph	Phosphoglycolate phosphatase
G2583_4083	ECs4228	Z4739	rpe	Ribulose-phosphate 3-epimerase
G2583_4084	ECs4229	Z4740	dam	DNA adenine methylase
G2583_4085	ECs4230	Z4741	damX	Uncharacterized protein conserved in bacteria
G2583_4086	ECs4231	Z4742	aroB	3-dehydroquinate synthase
G2583_4087	ECs4232	Z4743	aroK	Shikimate kinase
G2583_4088	ECs4233	Z4744	hofQ	predicted fimbrial transporter
G2583_4089	ECs4234	Z4746	hofP	hypothetical protein
G2583_4089	ECs4235	Z4747	hofP	hypothetical protein
G2583_4090	ECs4236	Z4748	hofN	PilN family protein
G2583_4091	ECs4237	Z4749	hofM	hypothetical protein
G2583_4092	ECs4238	Z4750	mrcA	Penicillin-binding protein 1A
G2583_4093	ECs4239	Z4751	nudE	ADP compounds hydrolase NudE
G2583_4094	ECs4240	Z4752	yrfF	hypothetical protein
G2583_4095	ECs4241	Z4753	yrfG	Putative phosphatase
G2583_4096	ECs4242	Z4754	hsIR	Heat shock protein 15
G2583_4097	ECs4243	Z4755	hsIO	Disulfide bond chaperones of the HSP33 family
G2583_4098	ECs4244	Z4756	yhgE	putative transport
G2583_4099		Z4757	-	hypothetical protein
G2583_4100	ECs4245	Z4758	pck	Phosphoenolpyruvate carboxykinase [ATP]
G2583_4101	ECs4246	Z4759	envZ	Osmolarity sensor protein envZ
G2583_4102	ECs4247	Z4760	ompR	hypothetical protein
G2583_4103	ECs4248	Z4761	greB	Transcription elongation factor greB
G2583_4104	ECs4249	Z4762	yhgF	protein yhgF
G2583_4105	ECs4250	Z4763	feoA	Ferrous iron transport protein A
G2583_4106	ECs4251	Z4764	feoB	Ferrous iron transport protein B
G2583_4107	ECs4252	Z4765	feoC	conserved hypothetical protein
G2583_4108	ECs4253	Z4766	yhgA	hypothetical protein
G2583_4109	ECs4255	Z4767	bioH	Carboxylesterase bioH
G2583_4110	ECs4254	Z4768	gntX	gluconate periplasmic binding protein
G2583_4111	ECs4256	Z4769	gntY	Fe/S biogenesis protein nfuA
G2583_4112	ECs4257	Z4770	gntT	High-affinity gluconate transporter
G2583_4113	ECs4258	Z4771	malQ	4-alpha-gluconotransferase
G2583_4114	ECs4259	Z4772	malP	Maltodextrin phosphorylase
		Z4773	-	hypothetical protein
G2583_4115	ECs4260	Z4774	malT	transcriptional regulator MalT
G2583_4116		Z4775	-	hypothetical protein
G2583_4117	ECs4261	Z4776	-	hypothetical protein
G2583_4118	ECs4262	Z4777	-	Acetyltransferase, gnat family
G2583_4119	ECs4263	Z4778	rtcA	RNA 3'-terminal phosphate cyclase
G2583_4120	ECs4264	Z4779	rtcB	RtcB protein
G2583_4121	ECs4265	Z4780	rtcR	Sigma-54 dependent transcriptional regulator RtcR
G2583_4122	ECs4266	Z4781	glpR	Glycerol-3-phosphate regulon repressor

Table S10. The orthologue table of the O55 and O157 strains Page 137

Locus_tag ^a			Gene	Product
CB9615	Sakai	EDL933		
G2583_4123	ECs4267	Z4784	glpG	Rhomboid protease glpG
G2583_4124	ECs4268	Z4785	glpE	Thiosulfate sulfurtransferase glpE
G2583_4125	ECs4269	Z4786	glpD	Glycerol-3-phosphate dehydrogenase
G2583_4126	ECs4270	Z4787	-	hypothetical protein
G2583_4127	ECs4271	Z4788	-	hypothetical protein
G2583_4128	ECs4272	Z4789	yzgL	Hypothetical membrane protein
G2583_4129	ECs4273	Z4790	glgP	Glycogen phosphorylase
G2583_4130	ECs4274	Z4791	glgA	Glycogen synthase
G2583_4131	ECs4275	Z4792	glgC	Glucose-1-phosphate adenylyltransferase
G2583_4132	ECs4276	Z4794	glgX	Glycogen debranching enzyme
G2583_4133	ECs4277	Z4796	glgB	1,4-alpha-glucan-branching enzyme
G2583_4134	ECs4278	Z4797	asd	Aspartate-semialdehyde dehydrogenase
G2583_4135	ECs4279	Z4798	yhgN	UPF0056 inner membrane protein yhgN
G2583_4136	ECs4280	Z4799	-	Putative DNA processing protein
G2583_4137	ECs4281		-	putative ATP-dependent DNA helicase
G2583_4137	ECs4282	Z4801	-	putative ATP-dependent DNA helicase
G2583_4137	ECs4283	Z4802	-	putative ATP-dependent DNA helicase
G2583_4137	ECs4284	Z4803	-	putative ATP-dependent DNA helicase
G2583_4137	ECs4283		-	putative ATP-dependent DNA helicase
G2583_4138	ECs4285	Z4804	gntU	H ⁺ /gluconate symporter and related permeases
G2583_4139	ECs4286	Z4805	gntK	Thermoresistant gluconokinase
G2583_4140	ECs4287	Z4806	gntR	regulator of gluconate operon
G2583_4141	ECs4288	Z4807	yhhW	hypothetical protein
G2583_4142	ECs4289	Z4808	yhhX	Oxidoreductase, NAD-binding
G2583_4143			-	ncRNA
G2583_4144	ECs4290	Z4809	yhhY	Acetyltransferase, GNAT family
G2583_4145	ECs4291	Z4810	-	hypothetical protein
G2583_4146	ECs4292	Z4811	-	hypothetical protein
G2583_4147	ECs4293	Z4813	ggt	Gamma-glutamyltranspeptidase
G2583_4148	ECs4294	Z4815	yhhA	hypothetical protein
G2583_4149	ECs4295	Z4817	ugpQ	Glycerophosphodiester phosphodiesterase, cytosolic
G2583_4150	ECs4296	Z4818	ugpC	sn-glycerol-3-phosphate import ATP-binding protein
G2583_4151	ECs4297	Z4819	ugpE	sn-glycerol-3-phosphate transport system permease protein ugpe
G2583_4152	ECs4298	Z4820	ugpA	sn-glycerol-3-phosphate transport system permease protein ugpa
G2583_4153	ECs4299	Z4822	ugpB	sn-glycerol-3-phosphate-binding periplasmic protein ugpb precursor
G2583_4154	ECs4300	Z4823	-	hypothetical protein
G2583_4155	ECs4301	Z4824	livF	ATP-binding component of leucine transport
G2583_4156	ECs4302	Z4825	livG	High-affinity branched-chain amino acid transport ATP-binding protein livG
G2583_4157	ECs4303	Z4826	livM	High-affinity branched-chain amino acid ABC transporter, permease protein LivM

Table S10. The orthologue table of the O55 and O157 strains Page 138

Locus_tag ^a			Gene	Product
CB9615	Sakai	EDL933		
G2583_4158	ECs4304	Z4827	livH	High-affinity branched-chain amino acid transport system permease protein livH
G2583_4159	ECs4305	Z4829	livK	High-affinity branched-chain amino acid ABC transporter, periplasmic leucine-specific-binding protein
G2583_4160	ECs4306	Z4831	yhhK	Acetyltransferase, GNAT family
G2583_4161	ECs4307	Z4832	-	hypothetical protein
G2583_4162	ECs4308	Z4833	-	hypothetical protein
G2583_4163	ECs4309	Z4834	livJ	High-affinity amino acid transport protein, periplasmic binding protein
G2583_4164	ECs4310	Z4835	rpoH	RNA polymerase sigma factor
G2583_4165	ECs4311	Z4836	ftsX	Cell division protein ftsX
G2583_4166	ECs4312	Z4837	ftsE	Cell division ATP-binding protein ftsE
G2583_4167	ECs4313	Z4838	ftsY	Cell division protein FtsY
G2583_4168	ECs4314	Z4839	rsmD	16S rRNA methyltransferase RsmD
G2583_4169	ECs4315	Z4840	yhhL	hypothetical protein
G2583_4170	ECs4316	Z4841	yhhM	putative receptor
G2583_4171	ECs4317	Z4842	yhhN	Uncharacterized membrane protein yhhN
G2583_4172	ECs4318	Z4843	zntA	Cadmium-translocating P-type ATPase
G2583_4173	ECs4319	Z4844	sirA	Sulfurtransferase tusA
G2583_4174	ECs4320	Z4845	yhhQ	hypothetical protein
G2583_4175	ECs4321	Z4846	dcrB	hypothetical protein
G2583_4176	ECs4322	Z4847	yhhS	Transporter, major facilitator family
G2583_4177	ECs4323	Z4848	yhhT	hypothetical protein
G2583_4178	ECs4324	Z4849	-	hypothetical protein
G2583_4179	ECs4325	Z4850	-	O-methyltransferase, family 2
G2583_4180	ECs4326	Z4851	-	Beta-ketoacyl synthase domain protein
G2583_4181	ECs4327	Z4852	-	Putative phospholipid biosynthesis acyltransferase
G2583_4182	ECs4328	Z4853	-	Acyl carrier protein
G2583_4183	ECs4329	Z4854	acyl	acyl carrier protein
G2583_4184	ECs4330	Z4855	-	DNA gyrase subunit B
G2583_4185	ECs4331	Z4856	-	Putative surfactin synthetase
G2583_4186	ECs4332	Z4857	-	hypothetical protein
G2583_4187	ECs4333	Z4858	-	Glycosyl transferase, family 2
G2583_4188	ECs4334	Z4859	-	Thioesterase superfamily protein
G2583_4189	ECs4335	Z4860	-	Outer membrane lipoprotein carrier protein LolA
G2583_4190	ECs4336	Z4861	-	hypothetical protein
G2583_4191	ECs4337	Z4862	-	hypothetical protein
G2583_4192	ECs4338	Z4863	-	3-oxoacyl-(acyl carrier protein) synthase I
G2583_4193	ECs4339	Z4864	-	FabA-like domain protein
G2583_4194	ECs4340	Z4865	fabG	Putative 3-oxoacyl-(Acyl-carrier-protein) reductase
G2583_4195	ECs4341	Z4866	-	Beta-ketoacyl synthase
G2583_4196	ECs4342	Z4867	acpT	4'-phosphopantetheinyl transferase acpT
G2583_4197	ECs4343	Z4868	nikA	Nickel ABC transporter, periplasmic nickel-binding protein NikA

Table S10. The orthologue table of the O55 and O157 strains Page 139

Locus_tag ^a			Gene	Product
CB9615	Sakai	EDL933		
G2583_4198	ECs4344	Z4869	nikB	Nickel transport system permease protein nikB
G2583_4199	ECs4345	Z4870	nikC	Nickel transport system permease protein nikC
G2583_4200	ECs4346	Z4871	nikD	Nickel import ATP-binding protein nikD
G2583_4201	ECs4347	Z4872	nikE	Nickel import ATP-binding protein nikE
G2583_4202	ECs4348	Z4873	nikR	Nickel-responsive regulator
G2583_4203	ECs4349	Z4874	-	putative regulator
G2583_4204	ECs4350	Z4875	-	PEP-dependent sugar transporting PTS family, IIA component
G2583_4205	ECs4351	Z4876	-	PEP-dependent sugar transporting PTS family, IIB component
G2583_4206	ECs4352	Z4877	-	PEP-dependent sugar transporting PTS family, IIC component
G2583_4207	ECs4353	Z4878	-	Carbohydrate kinase, FGGY family
G2583_4208	ECs4354	Z4879	-	Phosphocarrier, HPr family
G2583_4209	ECs4355	Z4881	gatY	Fructose-bisphosphate aldolase, class II
G2583_4210	ECs4356	Z4882	hicB	HicB family protein
G2583_4211	ECs4357	Z4883	HicA	HicA-like protein
G2583_4212	ECs4358	Z4884	yhhJ	hypothetical protein
G2583_4213	ECs4359	Z4885	rbbA	ABC transporter, ATP binding protein
G2583_4214	ECs4360	Z4886	yhiI	Auxiliary transport protein, membrane fusion protein (MFP) family
G2583_4215	ECs4361	Z4887	yhiJ	hypothetical protein
G2583_4216	ECs4362	Z4888	yhiL	hypothetical protein
G2583_4217	ECs4363	Z4890	yhiM	Inner membrane protein yhiM
G2583_4218	ECs4364	Z4891	yhiN	Pyridine nucleotide-disulfide oxidoreductase family
G2583_4219	ECs4365	Z4893	pitA	Low-affinity inorganic phosphate transporter 1
G2583_4220	ECs4366	Z4894	uspB	Universal stress protein B
G2583_4221	ECs4367	Z4895	uspA	Universal stress protein A
G2583_4222	ECs4368	Z4896	yhiP	Hypothetical transporter YhiP
G2583_4223	ECs4369	Z4897	yhiQ	UPF0341 protein yhiQ
G2583_4224	ECs4370	Z4898	prlC	Oligopeptidase A
G2583_4225	ECs4371	Z4899	yhiR	DNA utilization protein YhiR
G2583_4226	ECs4372	Z4900	gor	Glutathione-disulfide reductase
G2583_4227	ECs4373	Z4903	arsR	Arsenical resistance operon repressor
G2583_4228	ECs4374	Z4904	arsB	Arsenical pump membrane protein
G2583_4229	ECs4375	Z4905	arsC	Arsenate reductase
G2583_4230		Z4906	-	hypothetical protein
G2583_4231	ECs4376	Z4907	yhiS	hypothetical protein
G2583_4232	ECs4377	Z4908	slp	Outer membrane lipoprotein, Slp family
G2583_4233	ECs4378	Z4909	dctR	hypothetical protein
G2583_4234	ECs4379	Z4910	chuS	Hemin transport protein HmuS
G2583_4235	ECs4380	Z4911	chuA	Outer membrane heme/hemoglobin receptor ChuA
G2583_4236	ECs4381	Z4912	-	hypothetical protein
G2583_4237	ECs4382	Z4913	chuT	Putative periplasmic binding protein

Table S10. The orthologue table of the O55 and O157 strains Page 140

Locus_tag ^a			Gene	Product
CB9615	Sakai	EDL933		
G2583_4238	ECs4383	Z4914	chuW	Putative coproporphyrinogen III oxidase
G2583_4239	ECs4384	Z4915	chuX	hypothetical protein
G2583_4240	ECs4385	Z4917	chuY	hypothetical protein
G2583_4241	ECs4386	Z4918	chuU	Putative permease of iron compound ABC transport system
G2583_4242	ECs4387	Z4919	shuV	Hemin import ATP-binding protein hmuV
G2583_4243	ECs4388	Z4920	yhiD	putative Mg ²⁺ transporter-C (MgtC) family protein
G2583_4244	ECs4389	Z4921	hdeB	acid-resistance protein
G2583_4245	ECs4390	Z4922	hdeA	Chaperone-like protein hdeA precursor
G2583_4246	ECs4391	Z4923	hdeD	acid-resistance membrane protein
G2583_4247	ECs4392	Z4925	gadE	hypothetical protein
G2583_4248	ECs4393	Z4926	mdtE	Multidrug resistance protein mdtE precursor
G2583_4249	ECs4394	Z4927	mdtF	Multidrug resistance protein mdtF
G2583_4250	ECs4395	Z4928	gadW	putative ARAC-type regulatory protein
G2583_4251			-	ncRNA
G2583_4252	ECs4396	Z4929	gadX	DNA-binding transcriptional dual regulator
G2583_4253	ECs4397	Z4930	gadA	Glutamate decarboxylase alpha
G2583_4254	ECs4398	Z4931	yhjA	Di-haem cytochrome c peroxidase family protein
G2583_4255	ECs4399	Z4932	treF	Cytoplasmic trehalase
G2583_4256	ECs4400	Z4933	yhjB	Putative HTH-type transcriptional regulator yhjB
G2583_4257	ECs4401	Z4934	yhjC	putative transcriptional regulator LYSR-type
G2583_4258	ECs4402	Z4935	yhjD	Putative ribonuclease
G2583_4259	ECs4403	Z4936	yhjE	Inner membrane metabolite transport protein yhjE
G2583_4260	ECs4404	Z4937	yhjG	hypothetical protein
G2583_4261	ECs4405	Z4939	yhjH	Cyclic diguanylate phosphodiesterase
G2583_4262	ECs4406	Z4940	kdgK	Ketodeoxygluconokinase
G2583_4263	ECs4407	Z4941	yhjJ	Predicted Zn-dependent peptidases
G2583_4264	ECs4408	Z4942	dctA	C4-dicarboxylate transport protein
G2583_4265	ECs4409	Z4943	yhjK	Putative diguanylate cyclase
G2583_4266	ECs4410	Z4944	bcsC	Cellulose synthase operon protein C
G2583_4266		Z4945	bcsC	Cellulose synthase operon protein C
G2583_4267	ECs4411	Z4946	bcsZ	Endoglucanase precursor
G2583_4268	ECs4412	Z4947	bcsB	Cyclic di-GMP binding protein
G2583_4269	ECs4413	Z4948	bcsA	Cellulose synthase catalytic subunit [UDP-forming]
G2583_4270	ECs4414	Z4949	yhjQ	ATPases involved in chromosome partitioning
G2583_4270		Z4950	yhjQ	ATPases involved in chromosome partitioning
G2583_4271	ECs4415	Z4951	yhjR	hypothetical protein
G2583_4272	ECs4416	Z4952	bcsE	Putative protease
G2583_4273	ECs4417	Z4953	bcsF	hypothetical protein
G2583_4274	ECs4418	Z4954	bcsG	hypothetical protein
G2583_4275		Z4955	ldrD	hypothetical protein
G2583_4276	ECs4419	Z4956	yhjV	Serine transporter family protein
G2583_4277	ECs4420	Z4957	dppF	ABC-type oligopeptide transport system, ATPase component

Table S10. The orthologue table of the O55 and O157 strains Page 141

Locus_tag ^a			Gene	Product
CB9615	Sakai	EDL933		
G2583_4278	ECs4421	Z4958	dppD	Dipeptide transport ATP-binding protein dppD
G2583_4279	ECs4422	Z4959	dppC	Dipeptide transport system permease protein dppC
G2583_4280	ECs4423	Z4960	dppB	Dipeptide transport system permease protein dppB
G2583_4281	ECs4424	Z4961	dppA	Dipeptide ABC transporter, periplasmic dipeptide-binding protein
G2583_4282	proK	RNA093	proK	Pro tRNA
G2583_4283	ECs4425	Z4964	eptB	hypothetical protein
G2583_4284	ECs4426	Z4965	lpfE	putative fimbrial subunit
G2583_4285	ECs4427	Z4966	lpfD	putative fimbrial protein
G2583_4286	ECs4428	Z4967	fimD	PapC-like porin protein involved in fimbrial biogenesis
G2583_4286	ECs4429	Z4968	fimD	PapC-like porin protein involved in fimbrial biogenesis
G2583_4287	ECs4430	Z4969	lpfB	Putative fimbrial chaperone
G2583_4288	ECs4431	Z4971	lpfA	Putative major fimbrial subunit
G2583_4289	ECs4432	Z4972	yhjX	Inner membrane protein YhjX
G2583_4290	ECs4433	Z4973	yhjY	Putative lipase
G2583_4291	ECs4434	Z4974	tag	3-methyladenine DNA glycosylase I
G2583_4292	ECs4435	Z4975	yaC	Acetyltransferase, GNAT family
G2583_4293	ECs4436	Z4976	bisC	Biotin sulfoxide reductase
G2583_4294	ECs4437	Z4977	yaD	Inner membrane lipoprotein yaD precursor
G2583_4295	ECs4438	Z4978	ghrB	2-ketogluconate reductase
G2583_4296	ECs4439	Z4979	yaF	hypothetical protein
G2583_4297	ECs4440	Z4980	yaG	putative transcriptional regulator
G2583_4298	ECs4441	Z4981	cspA	Cold shock protein cspA
G2583_4299		Z4982	hokA	small toxic polypeptide
G2583_4300	ECs4442	Z4983	glyS	Glycyl-tRNA synthetase beta subunit
G2583_4301	ECs4443	Z4984	glyQ	Glycyl-tRNA synthetase alpha subunit
G2583_4302		Z4985	ysaB	Uncharacterized lipoprotein ysaB precursor
G2583_4303	ECs4444	Z4986	wechH	Acyltransferase family protein
G2583_4304	ECs4445	Z4987	yaA	Inner membrane protein yaA
G2583_4305	ECs4446	Z4988	yaB	hypothetical protein
G2583_4306	ECs4447	Z4989	xylB	Xylulokinase
G2583_4307	ECs4448	Z4990	xylA	Xylose isomerase
G2583_4308	ECs4449	Z4991	xylF	Xylose binding protein transport system
G2583_4309	ECs4450	Z4992	xylG	Xylose import ATP-binding protein xylG
G2583_4310	ECs4451	Z4993	xylH	Xylose transport system permease protein xylH
G2583_4311	ECs4452	Z4994	xylR	Xylose operon regulatory protein
G2583_4312	ECs4453	Z4995	bax	hypothetical protein
G2583_4313	ECs4454	Z4996	malS	Alpha-amylase, periplasmic
G2583_4314	ECs4455	Z4997	avtA	Alanine-alpha-ketoisovalerate (Or valine-pyruvate) transaminase, transaminase C
G2583_4315	ECs4456	Z4998	ysaA	4Fe-4S binding domain protein
		Z4999	-	hypothetical protein
G2583_4316	ECs4457	Z5000	-	AraC-type DNA-binding domain-containing protein
G2583_4317	ECs4458	Z5001	-	Sugar transporter, glycoside-pentoside-hexuronide

Table S10. The orthologue table of the O55 and O157 strains Page 142

Locus_tag ^a			Gene	Product
CB9615	Sakai	EDL933		
G2583_4318	ECs4459	Z5002	-	hypothetical protein
G2583_4319	ECs4460	Z5003	yiaT	Putative outer membrane protein yiaT precursor
G2583_4320	ECs4461	Z5004	yiaU	Transcriptional regulator
G2583_4321	ECs4462	Z5006	yiaV	Auxiliary transport protein, membrane fusion protein family
G2583_4322	ECs4463	Z5007	yiaW	Inner membrane protein yiaW
G2583_4323	ECs4464	Z5008	aldB	Aldehyde dehydrogenase B
G2583_4324	ECs4465	Z5009	-	Fic family protein
G2583_4325	ECs4466	Z5010	yiaY	Alcohol dehydrogenase II
G2583_4326	ECs4467	Z5011	selB	Selenocysteine-specific translation elongation factor
G2583_4327	ECs4468	Z5012	selA	L-seryl-tRNA(Sec) selenium transferase
G2583_4328	ECs4469	Z5013	yibF	Glutathione S-transferase
G2583_4329	ECs4470	Z5014	rhsA	Rhs family protein
Indel-182	Indel-182	Z5015	yibA	hypothetical protein
G2583_4330	ECs4470	Z5017	yibJ	Rhs family protein
G2583_4331	ECs4471	Z5018	yibG	hypothetical protein
G2583_4332	ECs4472		yibV	hypothetical protein
G2583_4333	ECs4473	Z5021	yibH	Inner membrane protein yibH
G2583_4334	ECs4474	Z5022	yibI	hypothetical protein
G2583_4335	ECs4475	Z5023	mtIA	PTS system, mannitol-specific IIABC component
G2583_4336	ECs4476	Z5024	mtID	Mannitol-1-phosphate dehydrogenase
G2583_4337	ECs4477	Z5025	mtIR	Mannitol operon repressor
G2583_4338	ECs4478	Z5026	yibL	conserved hypothetical protein
G2583_4339		Z5027	-	hypothetical protein
G2583_4340	ECs4479	Z5028	-	putative lipoprotein
G2583_4341	ECs4480	Z5029	-	Putative adhesin
G2583_4342	ECs4481	Z5030	lldP	L-lactate permease
G2583_4343	ECs4482	Z5031	lldR	Putative L-lactate dehydrogenase operon regulatory protein
G2583_4344	ECs4483	Z5032	lldD	L-lactate dehydrogenase [cytochrome]
G2583_4345	ECs4484	Z5033	yibK	RNA methyltransferase, TrmH family, group 2
G2583_4346	ECs4485	Z5034	cysE	Serine acetyltransferase
G2583_4347	ECs4486	Z5035	gpsA	Glycerol-3-phosphate dehydrogenase [NAD(P)+]
G2583_4348	ECs4487	Z5036	secB	Protein-export protein secB
G2583_4349	ECs4488	Z5037	grxC	Glutaredoxin-3
G2583_4350	ECs4489	Z5038	yibN	hypothetical protein
G2583_4351	ECs4490	Z5039	gpmM	Putative 2,3-bisphosphoglycerate-independent phosphoglycerate mutase
G2583_4352	ECs4491	Z5040	envC	hypothetical protein
G2583_4353	ECs4492	Z5041	yibQ	Uncharacterized protein conserved in bacteria
G2583_4354	ECs4493	Z5042	yibD	Putative regulator
G2583_4355	ECs4494	Z5043	tdh	L-threonine 3-dehydrogenase
G2583_4356	ECs4495	Z5044	kbl	2-amino-3-ketobutyrate CoA ligase
G2583_4357	ECs4496	Z5045	htrL	Involved in lipopolysaccharide biosynthesis

Table S10. The orthologue table of the O55 and O157 strains Page 143

Locus_tag ^a			Gene	Product
CB9615	Sakai	EDL933		
G2583_4358	ECs4497	Z5046	rfaD	ADP-L-glycero-D-manno-heptose-6-epimerase
G2583_4359	ECs4498	Z5047	rfaF	Lipopolysaccharide heptosyltransferase II
G2583_4360	ECs4499	Z5048	rfaC	Lipopolysaccharide heptosyltransferase I
G2583_4361	ECs4500	Z5049	waaL	Lipid A-core:surface polymer ligase WaaL
G2583_4362	ECs4501	Z5050	waaD	Lipopolysaccharide 1,2-N-acetylglucosaminetransferase
G2583_4363	ECs4502	Z5051	rfaJ	Lipopolysaccharide 1,2-glucosyltransferase
G2583_4364	ECs4503	Z5052	rfaY	lipopolysaccharide core biosynthesis protein
G2583_4365	ECs4504	Z5053	rfaI	Lipopolysaccharide 1,3-galactosyltransferase
G2583_4366	ECs4505	Z5054	rfaP	Lipopolysaccharide core biosynthesis protein RfaP
G2583_4367	ECs4506	Z5055	rfaG	Lipopolysaccharide core biosynthesis protein RfaG
G2583_4368	ECs4507	Z5056	rfaQ	Lipopolysaccharide core biosynthesis protein
G2583_4369	ECs4508	Z5057	waaA	Kdo transferase WaaA
G2583_4370	ECs4509	Z5058	coaD	Phosphopantetheine adenylyltransferase
G2583_4371	ECs4510	Z5059	mutM	Formamidopyrimidine-DNA glycosylase
G2583_4372	ECs4511	Z5060	rpmG	50S ribosomal protein L33
G2583_4373	ECs4512	Z5061	rpmB	50S ribosomal protein L28
G2583_4374	ECs4513	Z5062	yicR	DNA repair proteins
G2583_4375	ECs4514	Z5063	dfp	Dfp
G2583_4376	ECs4515	Z5064	dut	Deoxyuridine 5'-triphosphate nucleotidohydrolase
G2583_4377	ECs4516	Z5065	slmA	HTH-type protein slmA
G2583_4378	ECs4517	Z5066	pyrE	Orotate phosphoribosyltransferase
G2583_4379	ECs4518	Z5068	rph	Ribonuclease PH
G2583_4380	ECs4519	Z5069	yicC	Uncharacterized stress-induced protein
G2583_4381	ECs4520	Z5070	dinD	Pyridoxine biosynthesis enzyme
G2583_4382	ECs4521	Z5071	yicG	hypothetical protein
G2583_4383	ECs4522	Z5073	ligB	DNA ligase B
G2583_4384	ECs4523	Z5074	gmk	Guanylate kinase
G2583_4385	ECs4524	Z5075	rpoZ	DNA-directed RNA polymerase, subunit K/omega
G2583_4386	ECs4525	Z5076	spoT	Guanosine-3',5'-bis(diphosphate) 3'-
G2583_4387	ECs4526	Z5077	trmH	tRNA guanosine-2'-O-methyltransferase
G2583_4388	ECs4527	Z5078	recG	ATP-dependent DNA helicase recG
G2583_4389	ECs4528	Z5079	-	hypothetical protein
G2583_4390	ECs4529	Z5081	gltS	Glutamate transport protein
G2583_4391	ECs4530	Z5082	yicE	Putative purine permease yicE
G2583_4392	ECs4531	Z5083	yicH	hypothetical protein
G2583_4393	ECs4532	Z5084	yicI	Alpha-xylosidase
G2583_4394	ECs4533	Z5085	yicJ	Sugar transporter, glycoside-pentoside-hexuronide (GPH):cation symporter family
G2583_4395	selC	RNA094	selC	Sec tRNA
G2583_4396	ECs4534	Z5087	intL	CP4-like integrase
G2583_4397	ECs4535	Z5088	insN	unknown protein encoded by IS911 within prophage CP-933L
	ECs4536		-	hypothetical protein
G2583_4398	ECs4537	Z5089	-	putative transposase

Table S10. The orthologue table of the O55 and O157 strains Page 144

Locus_tag ^a			Gene	Product
CB9615	Sakai	EDL933		
G2583_4399	ECs4538		YeeU	hypothetical protein
G2583_4400	ECs4539	Z5091	yeeV	unknown protein encoded within prophage CP-933L
G2583_4401	ECs4540	Z5092	-	unknown protein encoded within prophage CP-933L
G2583_4402	ECs4541	Z5093	-	hypothetical protein
G2583_4403	ECs4542	Z5094	-	hypothetical protein
G2583_4403	ECs4543		-	hypothetical protein
G2583_4403	ECs4544	Z5095	-	hypothetical protein
Indel-184	ECs4545	Z5096	-	hypothetical protein
Indel-184	ECs4546	Z5097	-	hypothetical protein
Indel-184	ECs4547	Z5098	-	hypothetical protein
G2583_4404	ECs4548		-	hypothetical protein
	ECs4549		-	hypothetical protein
G2583_4405	ECs4550	Z5100	espF	espF
G2583_4406	ECs4551	Z5102	-	hypothetical protein
G2583_4407	ECs4552	Z5103	EscF	Type III secretion apparatus needle protein
G2583_4408	ECs4553	Z5104	-	hypothetical protein
G2583_4409	ECs4554	Z5105	espB	Secreted protein EspB
G2583_4410	ECs4555	Z5106	espD	secreted protein EspD
G2583_4411	ECs4556	Z5107	espA	espA
G2583_4412	ECs4557	Z5108	sepL	SepL
G2583_4413	ECs4558	Z5109	EscD	Pas
G2583_4414	ECs4559	Z5110	eae	Gamma intimin
G2583_4415	ECs4560	Z5111	CesT	Tir chaperone
G2583_4416	ECs4561	Z5112	tir	Translocated intimin receptor Tir
G2583_4417	ECs4562	Z5113	ipgB	hypothetical protein
G2583_4418	ECs4563	Z5114	-	hypothetical protein
G2583_4419	ECs4564	Z5115	-	hypothetical protein
G2583_4420	ECs4565	Z5116	SepQ	sepQ
G2583_4421	ECs4566	Z5117	-	hypothetical protein
G2583_4422	ECs4567	Z5118	-	hypothetical protein
G2583_4423	ECs4568	Z5119	escN	escN
G2583_4424	ECs4569	Z5120	escV	escV
G2583_4425	ECs4570	Z5121	-	hypothetical protein
G2583_4426	ECs4571	Z5122	sepZ	SepZ
G2583_4427	ECs4572	Z5123	-	hypothetical protein
G2583_4428	ECs4573	Z5124	EscJ	EscJ
G2583_4429	ECs4574	Z5125	SepD	hypothetical protein
G2583_4430	ECs4575	Z5126	EscC	escC
G2583_4431	ECs4576	Z5127	cesD	Type III secretion low calcium response chaperone LcrH/SycD
G2583_4432	ECs4577	Z5128	-	hypothetical protein
G2583_4433	ECs4578	Z5129	-	hypothetical protein
G2583_4434	ECs4579	Z5131	-	transglycosylase SLT domain
G2583_4435	ECs4580	Z5132	escU	secretion system apparatus protein SsaU

Table S10. The orthologue table of the O55 and O157 strains Page 145

Locus_tag ^a			Gene	Product
CB9615	Sakai	EDL933		
G2583_4436	ECs4581	Z5133	EscT	escT
G2583_4437	ECs4582	Z5134	EscS	EscS
G2583_4438	ECs4583	Z5135	escR	Type III secretion system EscR protein
G2583_4439	ECs4584	Z5136	-	hypothetical protein
G2583_4440	ECs4585	Z5137	-	hypothetical protein
G2583_4441	ECs4586	Z5138	-	hypothetical protein
G2583_4442	ECs4587	Z5139	-	type III secretion system protein, YseE family
G2583_4443	ECs4588	Z5140	-	hypothetical protein
	ECs4589		-	hypothetical protein
G2583_4444	ECs4590	Z5142	EspG	hypothetical protein
G2583_4445	ECs4591	Z5143	-	hypothetical protein
G2583_4446	ECs4592		-	conserved hypothetical protein
G2583_4447	ECs4593		-	hypothetical protein
G2583_4448	ECs4594	Z5146	yicL	YicL
G2583_4449	ECs4595	Z5147	nlpA	Lipoprotein 28 precursor
G2583_4450		Z5148	yicS	hypothetical protein
G2583_4451	ECs4596	Z5149	nepl	Major facilitator family transporter
G2583_4452	ECs4597	Z5150	-	hypothetical protein
G2583_4453	ECs4598	Z5151	-	Putative DNA-binding protein
G2583_4454	ECs4599	Z5152	yicN	hypothetical protein
G2583_4455	ECs4600	Z5153	yicO	Inorganic anion transporter, sulfate permease (SulP) family
G2583_4455	ECs4601	Z5154	yicO	Inorganic anion transporter, sulfate permease (SulP) family
G2583_4456	ECs4602	Z5155	ade	Adenine deaminase
G2583_4457	ECs4603	Z5156	uhpT	Hexose phosphate transport protein
G2583_4458	ECs4604	Z5157	uhpC	Regulator of uhpT
G2583_4459	ECs4605	Z5158	uhpB	sensory histidine kinase UhpB
G2583_4460	ECs4606	Z5159	uhpA	transcriptional regulatory protein UhpA
G2583_4461	ECs4607	Z5160	-	hypothetical protein
G2583_4461	ECs4608	Z5161	-	hypothetical protein
G2583_4462	ECs4609	Z5162	-	hypothetical protein
G2583_4463	ECs4610	Z5163	-	hypothetical protein
G2583_4464	ECs4611	Z5164	ilvN	Acetolactate synthase isozyme 1 small subunit
G2583_4465	ECs4612	Z5165	ilvB	Acetolactate synthase, large subunit, isozyme I
G2583_4466			-	hypothetical protein
G2583_4467	ECs4613	Z5166	ivbL	ilvBN operon leader peptide
G2583_4468	ECs4614	Z5168	emrD	Multidrug resistance protein D
G2583_4469	ECs4615	Z5169	yidF	putative transcriptional regulator
G2583_4470	ECs4616	Z5170	yidG	Inner membrane protein yidG
G2583_4471	ECs4617	Z5171	yidH	Inner membrane protein yidH
G2583_4472	ECs4618	Z5172	yidI	hypothetical protein
G2583_4473	ECs4619	Z5173	yidJ	Sulfatase
G2583_4474	ECs4620	Z5174	yidK	Transporter, solute:sodium symporter (SSS) family

Table S10. The orthologue table of the O55 and O157 strains Page 146

Locus_tag ^a			Gene	Product
CB9615	Sakai	EDL933		
G2583_4475	ECs4621	Z5175	yidL	putative ARAC-type regulatory protein
G2583_4476	ECs4622	Z5177	glvA	Maltose-6'-phosphate glucosidase
G2583_4477	ECs4623	Z5178	glvC	PTS system arbutin-like IIC component
G2583_4478	ECs4624	Z5179	yidP	transcriptional regulator, GntR family
G2583_4479	ECs4625	Z5181	yidE	Putative transport protein yidE
G2583_4480	ECs4626	Z5182	ibpB	Small heat shock protein ibpB
G2583_4481	ECs4627	Z5183	ibpA	Small heat shock protein ibpA
G2583_4482	ECs4628	Z5184	yidQ	hypothetical protein
G2583_4483	ECs4629	Z5185	yidR	hypothetical protein
G2583_4484	ECs4630	Z5186	cbrA	conserved hypothetical protein
G2583_4485	ECs4631	Z5187	yidX	Putative replicase
G2583_4486	ECs4632	Z5188	yidA	Phosphatase yidA
G2583_4487	ECs4633	Z5189	yidB	hypothetical protein
G2583_4488	ECs4634	Z5190	gyrB	DNA gyrase subunit B
G2583_4489	ECs4635	Z5191	recF	DNA replication and repair protein recF
G2583_4490	ECs4636	Z5192	dnaN	DNA polymerase III subunit beta
G2583_4491	ECs4637	Z5193	dnaA	Chromosomal replication initiator protein dnaA
G2583_4492	ECs4638	Z5194	rpmH	hypothetical protein
G2583_4493	ECs4639	Z5195	rnpA	Ribonuclease P protein component
G2583_4494	ECs4640	Z5197	yidC	Preprotein translocase subunit YidC
G2583_4495	ECs4641	Z5198	mnmE	tRNA modification GTPase trmE
G2583_4496	ECs4642	Z5199	-	ShET2 enterotoxin, N-region family
G2583_4496	ECs4643	Z5200	-	ShET2 enterotoxin, N-region family
G2583_4497		Z5201	-	hypothetical protein
G2583_4498	ECs4644	Z5202	tnaL	tryptophanase leader peptide
G2583_4499	ECs4645	Z5203	tnaA	Tryptophanase
G2583_4500	ECs4646	Z5204	tnaB	Low affinity tryptophan permease
G2583_4501	ECs4647	Z5205	mdtL	Multidrug resistance protein mdtL
G2583_4502	ECs4648	Z5206	yidZ	DNA-binding transcriptional regulator YidZ
G2583_4503	ECs4649	Z5207	yieE	hypothetical protein
G2583_4504	ECs4650	Z5208	yieF	hypothetical protein
G2583_4505	ECs4651	Z5209	yieG	Putative membrane transport protein
G2583_4506	ECs4652	Z5210	yieH	HAD hydrolase, IA family
G2583_4507	ECs4653	Z5211	-	hypothetical protein
G2583_4508	ECs4654	Z5212	-	hypothetical protein
G2583_4509	ECs4655	Z5213	-	hypothetical protein
G2583_4510	ECs4656		-	hypothetical protein
G2583_4511	ECs4657	Z5214	-	hypothetical protein
G2583_4511	ECs4658		-	hypothetical protein
G2583_4512			-	hypothetical protein
G2583_4513	ECs4659		-	hypothetical protein
G2583_4514	ECs4660	Z5215	phoU	Phosphate transport system regulatory protein PhoU
G2583_4515	ECs4661	Z5216	pstB	Phosphate import ATP-binding protein pstB
G2583_4516	ECs4662	Z5217	pstA	Phosphate ABC transporter, permease protein PstA

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Locus_tag ^a			Gene	Product
CB9615	Sakai	EDL933		
G2583_4517	ECs4663	Z5218	pstC	Phosphate transport system permease protein pstC
G2583_4518	ECs4664	Z5219	pstS	Phosphate ABC transporter, periplasmic phosphate-binding protein PstS
G2583_4519	ECs4665	Z5220	lpfD	Fimbrial family protein
G2583_4520	ECs4666	Z5221	lpfD	Putative fimbrial protein
G2583_4521	ECs4667	Z5222	lpfC	fimbrial usher protein
G2583_4522	ECs4668	Z5223	stgB	Putative fimbrial chaperone
G2583_4523	ECs4669	Z5224	stgB	Putative fimbrial chaperone
G2583_4524	ECs4670	Z5225	lpfA	Fimbrial protein
		Z5226	-	hypothetical protein
G2583_4525	ECs4671	Z5227	glmS	Glucosamine--fructose-6-phosphate aminotransferase [isomerizing]
G2583_4526	ECs4672	Z5228	glmU	Bifunctional protein glmU [Includes: UDP-N-acetylglucosamine pyrophosphorylase
G2583_4527	ECs4673	Z5229	atpC	ATP synthase epsilon chain
G2583_4528	ECs4674	Z5230	atpD	ATP synthase subunit beta
G2583_4529	ECs4675	Z5231	atpG	ATP synthase gamma chain
G2583_4530	ECs4676	Z5232	atpA	ATP synthase subunit alpha
G2583_4531	ECs4677	Z5233	atpH	ATP synthase delta chain
G2583_4532	ECs4678	Z5234	atpF	ATP synthase B chain
G2583_4533	ECs4679	Z5235	atpE	ATP synthase C chain
G2583_4534	ECs4680	Z5236	atpB	ATP synthase A chain
G2583_4535	ECs4681	Z5238	atpI	Membrane-bound ATP synthase
G2583_4536	ECs4682	Z5240	gidB	Ribosomal RNA small subunit methyltransferase G
G2583_4537	ECs4683	Z5241	mnmG	tRNA uridine 5-carboxymethylaminomethyl modification enzyme gidA
G2583_4538	ECs4684	Z5243	miuC	flavodoxin
G2583_4539	ECs4685	Z5244	asnC	DNA-binding transcriptional regulator AsnC
G2583_4540	ECs4686	Z5245	asnA	Aspartate--ammonia ligase
G2583_4541	ECs4687	Z5246	viaA	hypothetical protein
G2583_4542	ECs4688	Z5247	ravA	ATPase ravA
G2583_4543	ECs4689	Z5248	kup	Low affinity potassium transport system protein kup
G2583_4544	ECs4690	Z5249	rbsD	D-ribose high-affinity transport system
G2583_4545	ECs4691	Z5250	rbsA	Ribose import ATP-binding protein rbsA
G2583_4546	ECs4692	Z5251	rbsC	Ribose transport system permease protein rbsC
G2583_4547	ECs4693	Z5252	rbsB	D-ribose-binding periplasmic protein
G2583_4548	ECs4694	Z5253	rbsK	Ribokinase
G2583_4549	ECs4695	Z5254	rbsR	Regulator for rbs operon
G2583_4550	ECs4696	Z5255	hsrA	Drug resistance MFS transporter, drug:H ⁺ antiporter-1 (DHA2) family
G2583_4551	ECs4697	Z5258	yieP	hypothetical protein
G2583_4552	rrsC	RNA095	rrs	16S ribosomal RNA
G2583_4553	gltU	RNA096	gltU	Glu tRNA
G2583_4554	rrlC	RNA097	rrl	23S ribosomal RNA

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Locus_tag ^a			Gene	Product
CB9615	Sakai	EDL933		
G2583_4555	rrfC	RNA098	rrf	5S ribosomal RNA
G2583_4556	aspT	RNA099	aspT	Asp tRNA
G2583_4557	trpT	RNA100	trpT	Trp tRNA
G2583_4558	ECs4698	Z5275	hdfR	transcriptional regulator HdfR
G2583_4559	ECs4699	Z5276	yifE	UPF0438 protein yifE
G2583_4560	ECs4700	Z5277	yifB	Putative 2-component regulator
G2583_4561	ECs4701	Z5278	ilvL	ilvGMEDA operon leader peptide
G2583_4562	ECs4702	Z5279	ilvG	Acetolactate synthase, large subunit, isozyme II
G2583_4563	ECs4703	Z5280	ilvM	Acetolactate synthase isozyme 2 small subunit
G2583_4564	ECs4704	Z5281	ilvE	Branched-chain-amino-acid aminotransferase
G2583_4565	ECs4705	Z5282	ilvD	Dihydroxy-acid dehydratase
G2583_4566	ECs4706	Z5283	ilvA	Threonine dehydratase biosynthetic
G2583_4567	ECs4707	Z5284	ilvY	DNA-binding transcriptional regulator IlvY
G2583_4568	ECs4708	Z5285	ilvC	Ketol-acid reductoisomerase
G2583_4569	ECs4709	Z5286	ppiC	Peptidyl-prolyl cis-trans isomerase C
G2583_4570	ECs4710	Z5287	yifO	hypothetical protein
G2583_4571	ECs4711	Z5288	rep	ATP-dependent DNA helicase Rep
G2583_4572	ECs4712	Z5289	gpp	Guanosine-5'-triphosphate,3'-diphosphate pyrophosphatase
G2583_4573	ECs4713	Z5290	rhIB	ATP-dependent RNA helicase RhIB
G2583_4574	ECs4714	Z5291	trxA	thioredoxin TrxA
G2583_4575	ECs4715	Z5292	rhoL	rho operon leader peptide
G2583_4576	ECs4716	Z5293	rho	Transcription termination factor rho
G2583_4577		Z5294	-	hypothetical protein
G2583_4578	ECs4717	Z5295	rfe	Undecaprenyl-phosphate alpha-N-acetylglucosaminyl 1-phosphate transferase
G2583_4579	ECs4718	Z5296	wzzE	Lipopolysaccharide biosynthesis protein
G2583_4580	ECs4719	Z5297	rffE	UDP-N-acetylglucosamine 2-epimerase
G2583_4581	ECs4720	Z5298	rffD	UDP-N-acetyl-D-mannosamine dehydrogenase
G2583_4582	ECs4721	Z5299	rffG	dTDP-glucose 4,6-dehydratase
G2583_4583	ECs4722	Z5300	rffH	Glucose-1-phosphate thymidyltransferase
G2583_4584	ECs4723	Z5301	rffC	TDP-D-fucosamine acetyltransferase
G2583_4585	ECs4724	Z5302	rffA	TDP-4-oxo-6-deoxy-D-glucose transaminase
G2583_4586	ECs4725	Z5303	wzxE	Polysaccharide biosynthesis protein
G2583_4587	ECs4726	Z5304	rffT	TDP-Fuc4NAc:lipid II Fuc4Nac transferase
G2583_4588	ECs4727	Z5305	wzyE	Putative ECA polymerase
G2583_4589	ECs4728	Z5306	rffM	Probable UDP-N-acetyl-D-mannosaminuronic acid transferase
G2583_4590	ECs4729	Z5307	yifK	Probable transport protein yifK
G2583_4591	argX	RNA101	argX	Arg tRNA
G2583_4592	hisR	RNA102	hisR	His tRNA
G2583_4593	leuT1	RNA103	leuT1	Leu tRNA
G2583_4594	tRNA51	RNA104	-	Pro tRNA
Indel-189	leuT2	Indel-189	leuT2	Leu tRNA

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Locus_tag ^a			Gene	Product
CB9615	Sakai	EDL933		
Indel-189	proM2	Indel-189	proM2	Pro tRNA
G2583_4595	ECs4730	Z5313	aslB	Arylsulfatase-activating protein AslB
G2583_4596	ECs4731	Z5314	aslA	Arylsulfatase precursor
G2583_4597			-	ncRNA
G2583_4598	ECs4732	Z5316	hemY	putative protoheme IX biogenesis protein
G2583_4599	ECs4733	Z5317	hemX	Uroporphyrinogen III methylase
G2583_4600	ECs4734	Z5318	hemD	Uroporphyrinogen-III synthase
G2583_4601	ECs4735	Z5319	hemC	Porphobilinogen deaminase
G2583_4602	ECs4736	Z5322	cyaA	Adenylate cyclase
G2583_4603	ECs4738	Z5323	cyaY	iron donor protein CyaY
G2583_4604	ECs4737	Z5324	yzcX	hypothetical protein
G2583_4605		Z5325	yifL	Uncharacterized lipoprotein yifL precursor
G2583_4606	ECs4739	Z5326	dapF	Diaminopimelate epimerase
G2583_4607	ECs4740	Z5327	yigA	hypothetical protein
G2583_4608	ECs4741	Z5328	xerC	Tyrosine recombinase xerC
G2583_4609	ECs4742	Z5329	yigB	HAD-superfamily hydrolase
G2583_4610	ECs4743	Z5330	uvrD	DNA helicase II
G2583_4611	ECs4744	Z5331	orf	hypothetical protein
G2583_4612	ECs4745	Z5332	yigE	hypothetical protein
G2583_4613	ECs4746	Z5333	corA	Magnesium transport protein corA
G2583_4614		Z5334	-	putative membrane protein
G2583_4615	ECs4747	Z5335	-	hypothetical protein
G2583_4616		Z5336	corA	hypothetical protein
G2583_4617		Z5337	-	hypothetical protein
G2583_4618	ECs4748	Z5339	-	Hypothetical membrane protein
G2583_4619	ECs4749	Z5340	rarD	hypothetical protein
G2583_4620	ECs4750	Z5341	yigI	Thioesterase family protein
G2583_4621	ECs4751	Z5342	pldA	Phospholipase A1 precursor
G2583_4622	ECs4752	Z5343	recQ	ATP-dependent DNA helicase RecQ
G2583_4623	ECs4753	Z5344	rhtC	Threonine efflux protein
G2583_4624	ECs4754	Z5345	rhtB	Homoserine/homoserine lactone efflux protein
G2583_4625	ECs4755	Z5346	pldB	Lysophospholipase L2
G2583_4626	ECs4756	Z5347	yigL	Putative hydrolase
G2583_4627	ECs4757	Z5348	yigM	Uncharacterized membrane protein yigM
G2583_4628	ECs4758	Z5349	metR	regulator for metE and metH
G2583_4629	ECs4759	Z5351	metE	5-methyltetrahydropteroyltriglutamate-homocysteine S-methyltransferase
G2583_4630	ECs4760	Z5352	ysgA	Putative enzyme
G2583_4631	ECs4761	Z5353	udp	Uridine phosphorylase
G2583_4632	ECs4762	Z5354	rmuC	DNA recombination protein rmuC
G2583_4633	ECs4763	Z5355	ubiE	Ubiquinone/menaquinone biosynthesis methyltransferase ubiE
G2583_4634	ECs4764	Z5356	yigP	hypothetical protein
G2583_4635	ECs4765	Z5357	ubiB	Probable ubiquinone biosynthesis protein ubiB

Table S10. The orthologue table of the O55 and O157 strains Page 150

Locus_tag ^a			Gene	Product
CB9615	Sakai	EDL933		
G2583_4636	ECs4766	Z5358	tatA	Sec-independent twin-arginine translocase subunit TatA
G2583_4637	ECs4767	Z5359	tatB	sec-independent translocase
G2583_4638	ECs4768	Z5360	tatC	TatABCE protein translocation system subunit
G2583_4639	ECs4769	Z5361	tatD	MttC
G2583_4640	ECs4770	Z5362	rfaH	transcriptional activator RfaH
G2583_4641	ECs4771	Z5364	ubiD	3-octaprenyl-4-hydroxybenzoate carboxy-lyase
G2583_4642	ECs4772	Z5365	fre	Oxidoreductase
G2583_4643	ECs4773	Z5366	fadA	Beta-ketoadipyl CoA thiolase
G2583_4644	ECs4774	Z5367	fadB	Fused 3-hydroxybutyryl-CoA epimerase/delta(3)-cis-delta(2)-trans- enoyl-CoA isomerase/enoyl-CoA hydratase/3-hydroxyacyl-CoA dehydrogenase
G2583_4645	ECs4775	Z5369	pepQ	Xaa-Pro dipeptidase
G2583_4646	ECs4776	Z5370	yigZ	hypothetical protein
G2583_4647	ECs4777	Z5371	trkH	Trk system potassium uptake protein trkH
G2583_4648	ECs4778	Z5372	hemG	Protoporphyrinogen oxidase
G2583_4649	rrsA	RNA105	rrs	16S ribosomal RNA
G2583_4650	ileT	RNA106	ileT	Ile tRNA
G2583_4651	alaT	RNA107	alaT	Ala tRNA
G2583_4652	rrlA	RNA108	rrl	23S ribosomal RNA
G2583_4653	rrfA	RNA109	rrf	5S ribosomal RNA
G2583_4654	ECs4779	Z5388	mobB	Molybdopterin-guanine dinucleotide biosynthesis protein
G2583_4655	ECs4780	Z5389	mobA	Molybdopterin-guanine dinucleotide biosynthesis protein
G2583_4656	ECs4781	Z5390	yihD	hypothetical protein
G2583_4657	ECs4782	Z5391	rdoA	predicted kinase
G2583_4658	ECs4783	Z5392	dsbA	Thiol:disulfide interchange protein dsbA precursor
G2583_4659	ECs4784	Z5393	yihF	Putative GTP-binding protein
G2583_4660	ECs4785	Z5394	yihG	Acyltransferase domain protein
G2583_4661			-	hypothetical protein
G2583_4662	ECs4786	Z5398	polA	DNA polymerase I
G2583_4663	spf	RNA110	spf	ncRNA
G2583_4664	ECs4787	Z5400	yihA	Probable GTP-binding protein engB
G2583_4665		Z5401	-	ncRNA
G2583_4666	ECs4788	Z5402	yihI	UPF0241 protein yihI
G2583_4667	ECs4789	Z5403	hemN	Oxygen-independent coproporphyrinogen III oxidase
G2583_4668	ECs4790	Z5404	glnG	Nitrogen regulation protein NR
G2583_4669	ECs4791	Z5405	glnL	Signal transduction histidine kinase, nitrogen specific
G2583_4670	ECs4792	Z5406	glnA	Glutamine synthetase
G2583_4671	ECs4793	Z5407	typA	GTP-binding protein typA/bipA
G2583_4672	ECs4794	Z5408	yihL	putative transcriptional regulator
G2583_4673	ECs4795	Z5409	yihM	AP endonuclease, family 2
G2583_4674	ECs4796	Z5410	yihN	Transporter, major facilitator family
G2583_4675	ECs4797	Z5411	ompL	hypothetical protein
G2583_4676	ECs4798	Z5412	yihO	Sugar (Glycoside-Pentoside-Hexuronide) transporter family protein

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Locus_tag ^a			Gene	Product
CB9615	Sakai	EDL933		
G2583_4677	ECs4799	Z5413	yihP	Sugar transporter family protein
G2583_4678	ECs4800	Z5414	yihQ	Glycosyl hydrolase, family 31
G2583_4679	ECs4801	Z5415	-	hypothetical protein
G2583_4680	ECs4802	Z5416	yihR	Aldose-1-epimerase family protein
G2583_4681	ECs4803	Z5417	yihS	N-acylglucosamine 2-epimerase
G2583_4682	ECs4804	Z5418	yihT	Uncharacterized aldolase yihT
G2583_4683	ECs4805	Z5420	yihU	3-hydroxyisobutyrate dehydrogenase family
G2583_4684	ECs4806	Z5421	yihV	Kinase, PfkB family
G2583_4685	ECs4807	Z5422	yihW	Putative DEOR-type transcriptional activator
G2583_4686	ECs4808	Z5424	yihX	Phosphatase YihX
G2583_4687	ECs4809	Z5425	yihY	tRNA-processing ribonuclease BN
G2583_4688	ECs4810	Z5426	dtd	D-tyrosyl-tRNA(Tyr) deacylase
G2583_4689	ECs4811	Z5427	yiiD	putative acetyltransferase
G2583_4690	ECs4812	Z5428	-	hypothetical protein
G2583_4690	ECs4813	Z5429	-	hypothetical protein
G2583_4691	ECs4814		-	hypothetical protein
G2583_4692		Z5430	-	hypothetical protein
G2583_4693	ECs4815	Z5431	yiiE	Ribbon-helix-helix protein, copG family
G2583_4694	ECs4816	Z5432	yiiF	hypothetical protein
G2583_4695	ECs4817	Z5433	fdhE	protein AraJ
G2583_4696	ECs4818	Z5434	fdol	Formate dehydrogenase, cytochrome b556(fdo) subunit
G2583_4697	ECs4819	Z5435	fdoH	Formate dehydrogenase-O, iron-sulfur subunit
G2583_4698	ECs4820	Z5436	fdoG	formate dehydrogenase-O major subunit
G2583_4699	ECs4821	Z5438	fdhD	ApaG
G2583_4700	ECs4822	Z5439	yiiG	hypothetical protein
G2583_4701	ECs4823	Z5440	frvR	Putative PTS system, IIA component
G2583_4702	ECs4824	Z5441	frvX	Aminopeptidase
G2583_4703	ECs4825	Z5442	frvB	Phosphotransferase system, fructose-specific I IC component
G2583_4704	ECs4826	Z5443	frvA	PTS system, fructose family, IIA component
G2583_4705	ECs4827	Z5444	rafY	Glycoporin RafY
G2583_4706	ECs4828	Z5445	rhaM	L-rhamnose 1-epimerase
G2583_4707	ECs4829	Z5446	rhaD	Rhamnulose-1-phosphate aldolase
G2583_4708	ECs4830	Z5447	rhaA	L-rhamnose isomerase
G2583_4709	ECs4831	Z5448	rhaB	Rhamnulokinase
G2583_4710	ECs4832	Z5449	rhaS	positive regulator for rhaBAD operon
G2583_4711	ECs4833	Z5450	rhaR	positive regulator for rhaRS operon
G2583_4712	ECsp022	Z5452	rhaT	rhamnose transport
G2583_4712			rhaT	rhamnose transport
G2583_4713	ECs4834	Z5453	sodA	Superoxide dismutase
G2583_4714	ECs4835	Z5454	kdgT	2-keto-3-deoxygluconate permease
G2583_4715	ECs4836	Z5455	yiiM	MOSC domain protein
G2583_4716	ECs4837	Z5456	cpxA	two-component sensor protein

Table S10. The orthologue table of the O55 and O157 strains Page 152

Locus_tag ^a			Gene	Product
CB9615	Sakai	EDL933		
G2583_4717	ECs4838	Z5457	cpxR	DNA-binding response regulator in two-component regulatory system with CpxA
G2583_4718	ECs4839	Z5458	cpxP	P pilus assembly/Cpx signaling pathway, periplasmic inhibitor/zinc-resistance associated protein
G2583_4719	ECs4840	Z5459	fieF	Ferrous-iron efflux pump fieF
G2583_4720	ECs4841	Z5460	pfkA	6-phosphofructokinase isozyme 1
G2583_4721			-	hypothetical protein
G2583_4722	ECs4842	Z5462	sbp	Sulfate-binding protein
G2583_4723	ECs4843	Z5463	cdh	CDP-diacylglycerol pyrophosphatase
G2583_4724	ECs4844	Z5464	tpiA	Triosephosphate isomerase
G2583_4725	ECs4845	Z5465	yiiQ	hypothetical protein
G2583_4726	ECs4846	Z5466	yiiR	hypothetical protein
G2583_4727	ECs4847	Z5467	yiiS	hypothetical protein
G2583_4728	ECs4848	Z5468	uspD	Universal stress protein D
G2583_4729	ECs4849	Z5469	fpr	Ferredoxin--NADP(+) reductase
G2583_4730	ECs4850	Z5470	glpX	Fructose-1,6-bisphosphatase, class II
G2583_4731	ECs4851	Z5471	glpK	Glycerol kinase
G2583_4732	ECs4852	Z5472	glpF	glycerol uptake facilitator protein
G2583_4733	ECs4853	Z5473	yiiU	Cell division protein zapB
G2583_4734	ECs4854	Z5474	-	hypothetical protein
G2583_4735	ECs4855	Z5475	-	hypothetical protein
G2583_4736	ECs4856	Z5476	rraA	Regulator of ribonuclease activity A
G2583_4737	ECs4857	Z5477	menA	1,4-dihydroxy-2-naphthoate octaprenyltransferase
G2583_4738	ECs4858	Z5478	hslU	ATP-dependent hsl protease ATP-binding subunit hslU
G2583_4739	ECs4859	Z5479	hslV	ATP-dependent protease hslV
G2583_4740	ECs4860	Z5480	ftsN	Cell division protein FtsN
G2583_4741	ECs4861	Z5481	cytR	Transcriptional regulators
G2583_4742	ECs4862	Z5482	priA	Primosomal protein N'
G2583_4743	ECs4863	Z5484	rpmE	50S ribosomal protein L31
G2583_4744	ECs4864	Z5485	rhsF	RhsH core protein with extension
G2583_4744	ECs4864	Z5487	rhsF	RhsH core protein with extension
G2583_4744	ECs4864	Z5488	rhsF	RhsH core protein with extension
G2583_4745		Z5489	-	hypothetical protein
G2583_4746		Z5490	insB	hypothetical protein
G2583_4747		Z5491	-	IS1N transposase
G2583_4748	ECs4865		-	hypothetical protein
G2583_4749	ECs4866	Z5492	yiiX	hypothetical protein
G2583_4750	ECs4867	Z5493	metJ	MetJ
G2583_4751	ECs4868	Z5494	metB	O-succinylhomoserine (Thiol)-lyase
G2583_4752	ECs4869	Z5495	metL	Aspartokinase/homoserine dehydrogenase II
G2583_4753	ECs4870	Z5496	metF	5,10-methylenetetrahydrofolate reductase
G2583_4754	ECs4871	Z5497	katG	Peroxidase/catalase HPI
G2583_4755	ECs4872	Z5498	yijE	Hypothetical transport protein yijE
G2583_4756	ECs4873	Z5499	yijF	hypothetical protein

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Locus_tag ^a			Gene	Product
CB9615	Sakai	EDL933		
G2583_4757	ECs4874	Z5500	gldA	Glycerol dehydrogenase,
G2583_4758	ECs4875	Z5501	fsaB	Fructose-6-phosphate aldolase 2
G2583_4759	ECs4877	Z5502	ptsA	PEP-protein phosphotransferase system enzyme I
G2583_4760	ECs4876	Z5503	yijI	hypothetical protein
G2583_4761	ECs4878	Z5504	frwC	PTS system, fructose-like-2 IIC component
G2583_4761	ECsp023	Z5505	frwC	PTS system, fructose-like-2 IIC component
G2583_4762	ECs4879	Z5506	frwB	PTS system fructose-like IIB component 1
G2583_4763	ECs4880	Z5507	pfID	Formate C-acetyltransferase 2
G2583_4764	ECs4881	Z5508	pfIC	Glycyl-radical enzyme activating protein family
G2583_4765	ECs4882	Z5509	frwD	Predicted enzyme IIB component of PTS
G2583_4766	ECs4883	Z5512	yijO	putative ARAC-type regulatory protein
G2583_4767	ECs4884	Z5513	yijP	Membrane protein
G2583_4768	ECs4885	Z5514	ppc	Phosphoenolpyruvate carboxylase
G2583_4769	ECs4886	Z5515	argE	Acetylornithine deacetylase
G2583_4770	ECs4887	Z5516	argC	N-acetyl-gamma-glutamyl-phosphate reductase
G2583_4771	ECs4888	Z5517	argB	Acetylglutamate kinase
G2583_4772	ECs4889	Z5518	argH	Argininosuccinate lyase
G2583_4773	oxyS		oxyS	ncRNA
G2583_4774	ECs4890	Z5519	oxyR	Transcriptional regulator
G2583_4775	ECs4891	Z5521	sthA	Soluble pyridine nucleotide transhydrogenase
G2583_4776	ECs4892	Z5522	-	Hippuricase
G2583_4777	ECs4893	Z5523	-	Major facilitator superfamily
G2583_4778	ECs4894	Z5524	fabR	Transcriptional regulator
G2583_4779	ECs4895	Z5525	yijD	Inner membrane protein yijD
G2583_4780	ECs4896	Z5526	trmA	tRNA (uracil-5-)-methyltransferase
G2583_4781	ECs4897	Z5527	btuB	Vitamin B12 transporter btuB precursor
G2583_4782	ECs4898	Z5528	murl	Glutamate racemase
G2583_4783	rrsB	RNA111	rrs	16S ribosomal RNA
G2583_4784	gltT	RNA112	gltT	Glu tRNA
G2583_4785	rrlB	RNA113	rrl	23S ribosomal RNA
G2583_4786	rrfB	RNA114	rrf	5S ribosomal RNA
G2583_4787	ECs4899	Z5543	murB	UDP-N-acetylenolpyruvoylglucosamine reductase
G2583_4788	ECs4900	Z5544	birA	Bifunctional protein BirA
G2583_4789	ECs4901	Z5545	coaA	Pantothenate kinase
G2583_4790	ECs4902	Z5547	-	hypothetical protein
G2583_4791	thrU	RNA115	thrU	Thr tRNA
G2583_4792	tyrU	RNA116	tyrU	Tyr tRNA
G2583_4793	glyT	RNA117	glyT	Gly tRNA
G2583_4794	thrT	RNA118	thrT	Thr tRNA
G2583_4795	ECs4903	Z5553	tufB	Elongation factor Tu 2
G2583_4796	ECs4904	Z5554	secE	Preprotein translocase
G2583_4797	ECs4905	Z5555	nusG	Transcription antitermination protein nusG
G2583_4798	ECs4906	Z5556	rplK	50S ribosomal protein L11
G2583_4799	ECs4907	Z5557	rplA	50S ribosomal protein L1

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Locus_tag ^a			Gene	Product
CB9615	Sakai	EDL933		
G2583_4800	ECs4908	Z5558	rplJ	50S ribosomal protein L10
G2583_4801	ECs4909	Z5559	rplL	50S ribosomal protein L7/L12
G2583_4802			-	ncRNA
G2583_4803	ECs4910	Z5560	rpoB	DNA-directed RNA polymerase subunit beta
G2583_4804	ECs4911	Z5561	rpoC	DNA-directed RNA polymerase subunit beta'
G2583_4805	ECs4912	Z5563	yjaZ	Heat shock protein C
G2583_4806			-	ncRNA
G2583_4807	ECs4913	Z5564	thiH	Thiazole biosynthesis protein ThiH
G2583_4808	ECs4914	Z5565	thiG	Thiamin biosynthesis, thiazole moiety
G2583_4809		Z5566	thiS	Thiamine biosynthesis protein ThiS
G2583_4810	ECs4915	Z5567	thiF	Thiazole biosynthesis adenylyltransferase ThiF
G2583_4811	ECs4916	Z5568	thiE	Thiamine-phosphate pyrophosphorylase
G2583_4812	ECs4917	Z5569	thiC	Thiamine biosynthesis protein thiC
G2583_4813	ECs4918	Z5570	rsd	Regulator of sigma D
G2583_4814	ECs4919	Z5571	nudC	NADH pyrophosphatase
G2583_4815	ECs4920	Z5572	hemE	Uroporphyrinogen decarboxylase
G2583_4816	ECs4921	Z5574	nfi	Endonuclease V
G2583_4817	ECs4922	Z5575	yjaG	hypothetical protein
G2583_4818	ECs4923	Z5576	hupA	DNA-binding protein HU-alpha
G2583_4819	ECs4924	Z5577	yjaH	hypothetical protein
G2583_4820	ECs4925	Z5578	zraP	Zinc resistance-associated protein
G2583_4821	ECs4926	Z5579	zraS	sensor protein ZraS
G2583_4822	ECs4927	Z5580	zraR	transcriptional regulatory protein ZraR
G2583_4823	ECs4928	Z5582	purD	Phosphoribosylamine--glycine ligase
G2583_4824	ECs4929	Z5583	purH	IMP cyclohydrolase / phosphoribosylaminoimidazolecarboxamide formyltransferase
G2583_4825	rrsE	RNA119	rrs	16S ribosomal RNA
G2583_4826	gltV	RNA120	gltV	Glu tRNA
G2583_4827	rrlE	RNA121	rrl	23S ribosomal RNA
G2583_4828	rrfE	RNA122	rrf	5S ribosomal RNA
G2583_4829	ECs4930	Z5598	yjaB	hypothetical protein
G2583_4830	ECs4931	Z5599	metA	Homoserine O-succinyltransferase
G2583_4831	ECs4932	Z5600	aceB	Malate synthase A
G2583_4832	ECs4933	Z5601	aceA	Isocitrate lyase
G2583_4833	ECs4934	Z5602	aceK	Isocitrate dehydrogenase kinase/phosphatase
G2583_4834	ECs4935	Z5608	arp	ShET2 enterotoxin, N- region family
G2583_4835	ECs4936	Z5609	iclR	Repressor of aceBA operon
G2583_4836	ECs4937	Z5610	metH	Methionine synthase
G2583_4837	ECs4938	Z5611	yjbB	hypothetical protein
G2583_4838	ECs4939	Z5612	pepE	Peptidase E
G2583_4839	ECs4940		-	hypothetical protein
G2583_4840	ECs4941	Z5613	sorE	Putative L-sorbose-1-P-reductase

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Locus_tag ^a			Gene	Product
CB9615	Sakai	EDL933		
G2583_4841	ECs4942	Z5614	sorM	PTS system, mannose/fructose/sorbose family, IID component
Indel-193	ECs4943	Indel-193	-	putative regulatory protein
Indel-193	ECs4944	Indel-193	-	putative DNA-binding protein
Indel-193	ECs4945	Indel-193	-	phage transposase
Indel-193	ECs4946	Indel-193	-	putative DNA transposition protein
Indel-193	ECs4947	Indel-193	-	hypothetical protein
Indel-193	ECs4948	Indel-193	-	hypothetical protein
Indel-193	ECs4949	Indel-193	-	hypothetical protein
Indel-193	ECs4950	Indel-193	-	hypothetical protein
Indel-193	ECs4951	Indel-193	-	hypothetical protein
Indel-193	ECs4952	Indel-193	-	putative host-nuclease inhibitor protein
Indel-193	ECs4953	Indel-193	-	hypothetical protein
Indel-193	ECs4954	Indel-193	-	hypothetical protein
Indel-193	ECs4955	Indel-193	-	hypothetical protein
Indel-193	ECs4956	Indel-193	-	hypothetical protein
Indel-193	ECs4957	Indel-193	-	hypothetical protein
Indel-193	ECs4958	Indel-193	-	hypothetical protein
Indel-193	ECs4959	Indel-193	-	hypothetical protein
Indel-193	ECs4960	Indel-193	-	hypothetical protein
Indel-193	ECs4961	Indel-193	-	putative transcription regulator
Indel-193	ECs4962	Indel-193	-	putative endolysin
Indel-193	ECs4963	Indel-193	-	hypothetical protein
Indel-193	ECs4964	Indel-193	-	hypothetical protein
Indel-193	ECs4965	Indel-193	-	C4-type zinc finger protein (TraR family)
Indel-193	ECs4966	Indel-193	-	hypothetical protein
Indel-193	ECs4967	Indel-193	-	hypothetical protein
Indel-193	ECs4968	Indel-193	-	hypothetical protein
Indel-193	ECs4969	Indel-193	-	putative portal protein
Indel-193	ECs4970	Indel-193	-	hypothetical protein
Indel-193	ECs4971	Indel-193	-	hypothetical protein
Indel-193	ECs4972	Indel-193	-	putative virion morphogenesis protein
Indel-193	ECs4973	Indel-193	-	putative protease protein
Indel-193	ECs4974	Indel-193	-	putative major head subunit
Indel-193	ECs4975	Indel-193	-	hypothetical protein
Indel-193	ECs4976	Indel-193	-	hypothetical protein
Indel-193	ECs4977	Indel-193	-	hypothetical protein
Indel-193	ECs4978	Indel-193	-	hypothetical protein
Indel-193	ECs4979	Indel-193	-	putative tail sheath protein
Indel-193	ECs4980	Indel-193	-	hypothetical protein
Indel-193	ECs4981	Indel-193	-	hypothetical protein
Indel-193	ECs4982	Indel-193	-	putative tape measure protein
Indel-193	ECs4983	Indel-193	-	putative DNA circulation protein
Indel-193	ECs4984	Indel-193	-	putative tail protein

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Locus_tag ^a			Gene	Product
CB9615	Sakai	EDL933		
Indel-193	ECs4985	Indel-193	-	hypothetical protein
Indel-193	ECs4986	Indel-193	-	hypothetical protein
Indel-193	ECs4987	Indel-193	-	hypothetical protein
Indel-193	ECs4988	Indel-193	-	hypothetical protein
Indel-193	ECs4989	Indel-193	-	tail fiber
Indel-193	ECs4990	Indel-193	-	putative tail fiber assembly protein
Indel-193	ECs4991	Indel-193	-	putative tail fiber protein
Indel-193	ECs4992	Indel-193	-	putative DNA-invertase
Indel-193	ECs4993	Indel-193	-	hypothetical protein
Indel-193	ECs4994	Indel-193	-	hypothetical protein
Indel-193	ECs4995	Indel-193	-	hypothetical protein
Indel-193	ECs4996	Indel-193	-	hypothetical protein
Indel-193	ECs4997	Indel-193	-	translational regulator
Indel-193	ECs4998	Indel-193	-	putative DNA modification protein
G2583_4841	ECs4999	Z5614	sorM	PTS system, mannose/fructose/sorbose family, IID component
G2583_4842	ECs5000	Z5615	sorA	PTS system, mannose/fructose/sorbose family, IIC component
G2583_4843	ECs5001	Z5616	sorB	Putative sorbose PTS component
G2583_4844	ECs5002	Z5617	sorF	PTS system, mannose/fructose/sorbose family, IIA component
G2583_4845	ECs5003	Z5618	sorD	Sorbitol-6-phosphate 2-dehydrogenase
G2583_4846	ECs5004	Z5619	-	Putative transcriptional regulator of sorbose uptake and utilization genes
G2583_4847	ECs5005	Z5620	rluF	Ribosomal large subunit pseudouridine synthase F
G2583_4848	ECs5006	Z5621	pagB	hypothetical protein
G2583_4849	ECs5007	Z5622	lysC	Lysine-sensitive aspartokinase 3
G2583_4850	ECs5008	Z5623	pgi	Glucose-6-phosphate isomerase
G2583_4851	ECs5009	Z5624	yjbE	hypothetical protein
G2583_4852	ECs5010	Z5625	yjbF	hypothetical protein
G2583_4853	ECs5011	Z5626	yjbG	hypothetical protein
G2583_4854	ECs5012	Z5627	yjbH	hypothetical protein
G2583_4855	ECs5013	Z5628	psiE	phosphate-starvation-inducible protein PsiE
G2583_4856	ECs5014	Z5629	xylE	D-xylose-proton symporter
G2583_4857	ECs5015	Z5630	malG	Part of maltose permease, inner membrane
G2583_4858	ECs5016	Z5631	malF	Maltose transport system permease protein malF
G2583_4859	ECs5017	Z5632	malE	Maltose-binding periplasmic protein precursor
G2583_4860	ECs5018	Z5633	malK	Maltose/maltodextrin import ATP-binding protein malK
G2583_4861	ECs5019	Z5634	lamB	Maltoporin precursor
G2583_4862	ECs5020	Z5635	malM	Maltose operon periplasmic protein precursor
G2583_4863	ECs5021	Z5636	yjbl	hypothetical protein
G2583_4864	ECs5022	Z5638	ubiC	Chorismate--pyruvate lyase
G2583_4865	ECs5023	Z5639	ubiA	4-hydroxybenzoate octaprenyltransferase
G2583_4866	ECs5024	Z5640	plsB	Glycerol-3-phosphate acyltransferase

Table S10. The orthologue table of the O55 and O157 strains Page 157

Locus_tag ^a			Gene	Product
CB9615	Sakai	EDL933		
G2583_4867	ECs5025	Z5641	dgkA	Diacylglycerol kinase
G2583_4868	ECs5026	Z5642	lexA	LexA repressor
G2583_4869	ECs5027	Z5643	dinF	MATE efflux family protein
G2583_4870	ECs5028	Z5644	yjbJ	UPF0337 protein yjbJ
G2583_4871	ECs5029	Z5645	zur	Putative zinc uptake regulation protein
G2583_4872	ECs5030	Z5646	yjbM	hypothetical protein
G2583_4873	ECs5031	Z5647	dusA	tRNA-dihydrouridine synthase A
G2583_4874	ECs5032	Z5648	pspG	hypothetical protein
G2583_4875	ECs5033	Z5649	qor	Quinone oxidoreductase
G2583_4876	ECs5034	Z5650	dnaB	Replicative DNA helicase
G2583_4877	ECs5035	Z5651	alr	Alanine racemase, biosynthetic
G2583_4878	ECs5036	Z5652	tyrB	Aromatic-amino-acid transaminase
G2583_4879			-	hypothetical protein
G2583_4880	ECs5037	Z5654	aphA	Diadenosine tetraphosphatase
G2583_4881	ECs5038	Z5655	yjbQ	UPF0047 protein yjbQ
G2583_4882	ECs5039	Z5656	yjbR	hypothetical protein
G2583_4883	ECs5040	Z5657	uvrA	UvrABC system protein A
G2583_4884	ECs5041	Z5658	ssb	Single-stranded DNA-binding protein
G2583_4885	ECs5042	Z5659	yjCB	hypothetical protein
G2583_4886	ECs5043	Z5660	yjCC	Cyclic diguanylate phosphodiesterase (EAL) domain protein
G2583_4887	ECs5044	Z5661	soxS	DNA-binding transcriptional dual regulator
G2583_4888	ECs5045	Z5662	soxR	Redox-sensitive transcriptional activator soxR
G2583_4889	ECs5046	Z5663	yjCD	Inorganic anion transporter, sulfate permease (SulP) family
G2583_4890	ECs5047	Z5664	yjCE	Na ⁺ /H ⁺ antiporter
G2583_4891	ECs5048	Z5665	yjCF	hypothetical protein
G2583_4892	ECs5049	Z5666	actP	Cation/acetate symporter actP
G2583_4893	ECs5050	Z5667	yjCH	hypothetical protein
G2583_4894	ECs5051	Z5668	acs	Acetyl-coenzyme A synthetase
G2583_4895	ECs5052	Z5669	nrfA	Cytochrome c-552 precursor
G2583_4896	ECs5053	Z5670	nrfB	NrfB, formate-dependent nitrite reductase
G2583_4897	ECs5054	Z5671	nrfC	formate-dependent nitrite reductase; Fe-S centers
G2583_4898	ECs5055	Z5672	nrfD	NrfD protein
G2583_4899	ECs5056	Z5673	nrfE	Cytochrome c-type biogenesis protein NrfE
G2583_4900	ECs5057	Z5674	nrfF	Formate-dependent nitrite reductase complex subunit nrfF precursor
G2583_4901	ECs5058	Z5675	nrfG	Formate-dependent nitrite reductase complex NrfG subunit
G2583_4902	ECs5059	Z5676	gltP	Sodium:dicarboxylate symporter
G2583_4903	ECs5060	Z5677	yjCO	hypothetical protein
G2583_4904	ECs5061	Z5678	fdhF	selenopolypeptide subunit of formate dehydrogenase H
G2583_4905	ECs5062	Z5680	mdtP	Multidrug resistance outer membrane protein mdtP precursor

Table S10. The orthologue table of the O55 and O157 strains Page 158

Locus_tag ^a			Gene	Product
CB9615	Sakai	EDL933		
G2583_4906	ECs5063	Z5681	mdtO	Multidrug resistance protein mdtO
G2583_4907	ECs5064	Z5682	mdtN	multidrug resistance protein MdtN
G2583_4908	ECs5065		yticA	hypothetical protein
G2583_4909	ECs5066	Z5683	yjcS	hypothetical protein
G2583_4910	ECs5067	Z5684	-	Putative transcriptional regulator
G2583_4911	ECs5068	Z5686	PfkB	PfkB domain protein
G2583_4912	ECs5069	Z5687	-	Fructose-bisphosphate aldolase
G2583_4913	ECs5070	Z5688	-	hypothetical protein
G2583_4914	ECs5071	Z5689	-	Putative periplasmic ribose-binding protein of ABC transport system
G2583_4915	ECs5072	Z5690	-	Putative permease of ribose ABC transport system
G2583_4916	ECs5073	Z5691	-	Ribose import ATP-binding protein rbsA 2
G2583_4917	ECs5074	Z5692	-	Integral membrane sensor hybrid histidine kinase
G2583_4917	ECs5074	Z5693	-	Integral membrane sensor hybrid histidine kinase
G2583_4918		Z5694	yjdP	hypothetical protein
G2583_4919	ECs5075	Z5695	phnP	Phosphonate utilization protein
G2583_4920	ECs5076	Z5696	phnO	predicted acyltransferase with acyl-CoA N-acyltransferase domain
G2583_4921	ECs5077	Z5697	phnN	Phosphonate metabolism protein/1,5-bisphosphokinase (PRPP-forming) PhnN
G2583_4922	ECs5078	Z5698	phnM	Phosphonate metabolism protein PhnM
G2583_4923	ECs5079	Z5699	phnL	Phosphonate C-P lyase system protein PhnL
G2583_4924	ECs5080	Z5700	phnK	Phosphonate C-P lyase system protein PhnK
G2583_4925	ECs5081	Z5701	phnJ	PhnJ protein
G2583_4926	ECs5082	Z5702	phnI	Phosphonate metabolism protein PhnI
G2583_4927	ECs5083	Z5703	phnH	Bacterial phosphonate metabolism protein PhnH
G2583_4928	ECs5084	Z5704	phnG	Phosphonate C-P lyase system protein PhnG
G2583_4929	ECs5085	Z5705	phnF	Phosphonates metabolism transcriptional regulator
G2583_4930	ECs5086	Z5706	phnE	Phosphonate ABC transporter, permease protein
G2583_4931	ECs5087	Z5707	phnD	Phosphonate ABC transporter, periplasmic phosphonate-binding protein
G2583_4932	ECs5088	Z5708	phnC	Phosphonates import ATP-binding protein phnC
G2583_4933	ECs5089	Z5709	yjdN	Putative phnB protein
G2583_4934	ECs5090	Z5710	yjdM	Alkylphosphonate utilization operon protein PhnA
G2583_4935	ECs5091	Z5711	yjdA	hypothetical protein
G2583_4936	ECs5092	Z5712	yjcZ	hypothetical protein
G2583_4937	ECs5093	Z5713	proP	Proline/betaine transporter
G2583_4938	ECs5094	Z5714	basS	Sensor histidine kinase BasS
G2583_4939	ECs5095	Z5715	basR	DNA-binding response regulator BasR
G2583_4940	ECs5096	Z5716	eptA	Putative sulfatase
G2583_4941	ECs5097	Z5717	adiC	Putative amino acid permease
G2583_4942	ECs5098	Z5718	adiY	putative ARAC-type regulatory protein
G2583_4943	ECs5099	Z5719	adiA	Biodegradative arginine decarboxylase
G2583_4944	ECs5100	Z5720	melR	Melibiose operon regulatory protein

Table S10. The orthologue table of the O55 and O157 strains Page 159

Locus_tag ^a			Gene	Product
CB9615	Sakai	EDL933		
G2583_4945	ECs5101	Z5721	melA	Alpha-galactosidase
G2583_4946	ECs5102	Z5722	melB	Melibiose carrier protein
G2583_4947	ECs5103	Z5723	yjdF	hypothetical protein
G2583_4948	ECs5104	Z5724	fumB	Fumarase B
G2583_4949	ECs5105	Z5725	dcuB	Anaerobic C4-dicarboxylate transporter DcuB
G2583_4950	ECs5106	Z5726	dcuR	DNA-binding response regulator in two-component regulatory system with DcuS
G2583_4951	ECs5107	Z5727	dcuS	sensory histidine kinase DcuS
G2583_4952	ECs5108	Z5728	yjdI	hypothetical protein
G2583_4953	ECs5109	Z5729	yjdJ	hypothetical protein
G2583_4954	ECs5110	Z5730	yjdK	hypothetical protein
G2583_4955		Z5731	yjdO	hypothetical protein
G2583_4956	ECs5111	Z5732	lysU	Lysyl-tRNA synthetase, heat inducible
G2583_4957	ECs5112	Z5733	yjdL	Amino acid/peptide transporter
G2583_4958	ECs5113	Z5734	cadA	Lysine decarboxylase, inducible
G2583_4959	ECs5114	Z5735	cadB	Probable cadaverine/lysine antiporter
G2583_4960	ECs5115	Z5736	cadC	Transcriptional activator cadC
G2583_4961	pheU	RNA123	pheU	Phe tRNA
G2583_4962	ECs5116	Z5740	yjdC	YjdC
G2583_4963	ECs5117	Z5741	dipZ	Thiol:disulfide interchange protein DsbD
G2583_4964	ECs5118	Z5742	cutA	Divalent-cation tolerance protein cutA
G2583_4965	ECs5119	Z5743	dcuA	Anaerobic C4-dicarboxylate transporter dcuA
G2583_4966	ECs5120	Z5744	aspA	aspartate ammonia-lyase
G2583_4967	ECs5121	Z5745	fxsA	FxsA
G2583_4968	ECs5122	Z5746	yjeH	Amino acid-polyamine-organocation (APC) permease family protein
G2583_4969	ECs5123	Z5747	groS	hypothetical protein
G2583_4970	ECs5124	Z5748	groL	60 kDa chaperonin 1
G2583_4971	ECs5125	Z5749	yjeI	hypothetical protein
G2583_4972	ECs5126	Z5750	yjeJ	conserved hypothetical protein
G2583_4973	ECs5127	Z5751	yjeK	KamA family protein
G2583_4974	ECs5128	Z5752	efp	Elongation factor P
G2583_4975		Z5753	ecnA	Predicted small secreted protein
G2583_4976		Z5754	ecnB	Entericidin B
G2583_4977	ECs5129	Z5755	sugE	SugE
G2583_4978	ECs5130	Z5756	blc	Outer membrane lipoprotein blc precursor
G2583_4979	ECs5131	Z5757	ampC	Beta-lactamase
G2583_4980	ECs5132	Z5758	frdD	Fumarate reductase subunit D
G2583_4981	ECs5133	Z5759	frdC	Fumarate reductase subunit C
G2583_4982	ECs5134	Z5760	frdB	Fumarate reductase iron-sulfur subunit
G2583_4983	ECs5135	Z5762	frdA	Fumarate reductase, anaerobic, flavoprotein subunit
G2583_4984	ECs5136	Z5763	poxA	Putative lysyl-tRNA synthetase
G2583_4985	ECs5137	Z5764	yjeM	Hypothetical transporter YjeM
G2583_4986	ECs5138	Z5765	yjeP	Mechanosensitive ion channel family protein

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Locus_tag ^a			Gene	Product
CB9615	Sakai	EDL933		
G2583_4987	ECs5139	Z5766	psd	Phosphatidylserine decarboxylase proenzyme
G2583_4988	ECs5140	Z5767	rsgA	Probable GTPase engC precursor
G2583_4989	ECs5141	Z5768	orn	Oligoribonuclease
G2583_4990	glyV	RNA124	glyV	Gly tRNA
G2583_4991	glyX	RNA125	glyX	Gly tRNA
G2583_4992	glyY	RNA126	glyY	Gly tRNA
G2583_4993	ECs5143	Z5773	yjeS	hypothetical protein
G2583_4994	ECs5142	Z5774	yjeF	hypothetical protein
G2583_4995	ECs5144	Z5775	yjeE	UPF0079 ATP-binding protein yjeE
G2583_4996	ECs5145	Z5776	amiB	N-acetylmuramoyl-L-alanine amidase AmiB
G2583_4997	ECs5146	Z5777	mutL	DNA mismatch repair protein MutL
G2583_4998	ECs5147	Z5778	miaA	tRNA delta(2)-isopentenylpyrophosphate transferase
G2583_4999	ECs5148	Z5779	hfq	RNA-binding protein Hfq
G2583_5000	ECs5149	Z5780	hflX	GTP-binding protein HflX
G2583_5001	ECs5150	Z5781	hflK	FtsH protease regulator HflK
G2583_5002	ECs5151	Z5782	hflC	FtsH protease regulator HflC
G2583_5003	ECs5152	Z5783	yjeT	hypothetical protein
G2583_5004	ECs5153	Z5784	purA	Adenylosuccinate synthetase
G2583_5005	ECs5154	Z5785	nsrR	transcriptional repressor NsrR
G2583_5006	ECs5155	Z5786	rnr	Putative enzyme
G2583_5007	ECs5156	Z5787	rlmB	23S rRNA (guanosine-2'-O-)-methyltransferase rlmB
G2583_5008	ECs5157	Z5788	yjfl	hypothetical protein
G2583_5009	ECs5158	Z5789	yjfJ	PspA/IM30 family protein
G2583_5010	ECs5159	Z5790	yjfK	hypothetical protein
G2583_5011	ECs5160	Z5791	yjfL	hypothetical protein
G2583_5012	ECs5161	Z5792	yjfM	hypothetical protein
G2583_5013	ECs5162	Z5793	yjfC	Glutathionylspermidine synthase domain protein
G2583_5014	ECs5163	Z5794	aidB	Putative acyl coenzyme A dehydrogenase
G2583_5015	ECs5164	Z5795	yjfN	hypothetical protein
G2583_5016	ECs5165	Z5796	yjfO	hypothetical protein
G2583_5017	ECs5166	Z5799	yjfP	Esterase yjfP
G2583_5018	ECs5167	Z5800	ulaR	putative DEOR-type transcriptional regulator
G2583_5019	ECs5168	Z5801	ulaG	Predicted Zn-dependent hydrolases of the beta-lactamase fold
G2583_5020	ECs5169	Z5802	ulaA	ascorbate-specific PTS system enzyme IIC
G2583_5021	ECs5170	Z5803	ulaB	Ascorbate-specific phosphotransferase enzyme IIB component
G2583_5022	ECs5171	Z5804	ulaC	Ascorbate-specific phosphotransferase enzyme IIA component
G2583_5023	ECs5172	Z5805	ulaD	Putative hexulose-6-phosphate synthase
G2583_5024	ECs5173	Z5806	ulaE	L-ribulose-5-phosphate 3-epimerase ulaE
G2583_5025	ECs5174	Z5807	ulaF	L-ribulose-5-phosphate 4-epimerase ulaF
G2583_5026	ECs5175	Z5808	yjfY	UPF0379 protein yjfY precursor
G2583_5027	ECs5176	Z5809	rpsF	Ribosomal protein S6

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Locus_tag ^a			Gene	Product
CB9615	Sakai	EDL933		
G2583_5028	ECs5177	Z5810	priB	Primosomal replication protein n
G2583_5029	ECs5178	Z5811	rpsR	30S ribosomal protein S18
G2583_5030	ECs5179	Z5812	rpII	50S ribosomal protein L9
G2583_5031	ECs5180	Z5813	yjZ	hypothetical protein
G2583_5033		Z5814	-	hypothetical protein
G2583_5032	ECs5181		-	conserved hypothetical protein
G2583_5034	ECs5182	Z5815	-	Transposase, family
G2583_5035	ECs5183	Z5816	ydcM	IS605 family transposase orfB
G2583_5036	ECs5184	Z5817	ytfB	hypothetical protein
G2583_5037	ECs5185	Z5818	fkIB	Peptidyl-prolyl cis-trans isomerase
G2583_5038	ECs5186	Z5819	cycA	D-serine/D-alanine/glycine transporter
G2583_5039	ECs5187	Z5820	ytfE	Regulator of cell morphogenesis and NO signaling
G2583_5040	ECs5188	Z5821	ytfF	Putative transmembrane subunit
G2583_5041	ECs5190	Z5822	ytfG	NmrA family protein
G2583_5042	ECs5189	Z5823	ytfH	hypothetical protein
G2583_5043	ECs5191	Z5824	cpdB	2',3'-cyclic-nucleotide 2'-phosphodiesterase
G2583_5044	ECs5192	Z5825	cysQ	PAPS (adenosine 3'-phosphate 5'-phosphosulfate) 3'(2'),5'-bisphosphate nucleotidase
G2583_5045	ECs5193	Z5826	ytfI	hypothetical protein
G2583_5046	ECs5194	Z5827	ytfJ	hypothetical protein
G2583_5047	ECs5195	Z5828	ytfK	hypothetical protein
G2583_5048	ECs5196	Z5829	ytfL	UPF0053 inner membrane protein ytfL
G2583_5049	ECs5197	Z5830	msrA	Peptide methionine sulfoxide reductase msrA
G2583_5050	ECs5198	Z5831	ytfM	hypothetical protein
G2583_5051	ECs5199	Z5832	ytfN	hypothetical protein
G2583_5052	ECs5200	Z5833	ytfP	UPF0131 protein ytfP
G2583_5053	ECs5201	Z5834	yzfA	Ile repressor (ileR)
G2583_5054	ECs5202	Z5835	chpS	PemI protein 2
G2583_5055	ECs5203	Z5836	chpB	PemK protein 2
G2583_5056	ECs5204	Z5837	ppa	Inorganic pyrophosphatase
G2583_5057	ECs5205	Z5838	ytfQ	Putative sugar ABC transporter, periplasmic sugar-binding protein
G2583_5058	ECs5206	Z5839	ytfR	Uncharacterized ABC transporter ATP-binding protein
G2583_5059	ECs5207	Z5840	ytfT	Putative transport system permease protein
G2583_5060	ECs5208	Z5841	yjfF	Putative sugar ABC transporter, permease protein
G2583_5061	ECs5209	Z5842	fbp	Fructose-1,6-bisphosphatase
G2583_5062	ECs5210	Z5843	mpl	UDP-N-acetylmuramate:L-alanyl-gamma-D-glutamyl-meso-diaminopimelate ligase
G2583_5063	ECs5211	Z5844	yjgA	UPF0307 protein yjgA
G2583_5064	ECs5212	Z5845	pmbA	Putative peptide maturation protein
G2583_5065	ECs5213	Z5846	cybC	Soluble cytochrome b562 precursor
G2583_5066	ECs5214	Z5847	nrdG	Anaerobic ribonucleoside-triphosphate reductase-activating protein
G2583_5067	ECs5215	Z5848	nrdD	Anaerobic ribonucleoside-triphosphate reductase

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Locus_tag ^a			Gene	Product
CB9615	Sakai	EDL933		
G2583_5068	ECs5216	Z5849	treC	Trehalase 6-P hydrolase
G2583_5069	ECs5217	Z5850	treB	PTS system, trehalose-specific IIBC component
G2583_5070	ECs5218	Z5851	treR	Trehalose operon repressor
G2583_5071		Z5852	-	hypothetical protein
G2583_5072	ECs5219	Z5853	mgtA	Magnesium-transporting ATPase, P-type 1
G2583_5073	ECs5220	Z5854	yjgF	hypothetical protein
G2583_5074	ECs5221	Z5855	pyrI	Aspartate carbamoyltransferase regulatory chain
G2583_5075	ECs5222	Z5856	pyrB	Aspartate carbamoyltransferase
G2583_5076	ECs5224	Z5857	pyrL	PyrBI operon leader peptide
G2583_5077	ECs5223	Z5858	yjgG	hypothetical protein
G2583_5078		Z5859	yjgG	ORF_o110
G2583_5079	ECs5225	Z5860	yjgH	Endoribonuclease L-PSP family protein
G2583_5080	ECs5226	Z5861	yjgI	Oxidoreductase, short chain dehydrogenase/reductase family
G2583_5081	ECs5228	Z5862	yjgJ	hypothetical protein
G2583_5082	ECs5229	Z5864	yjgK	hypothetical protein
G2583_5083	ECs5230	Z5865	yjgL	hypothetical protein
G2583_5084	ECs5231	Z5866	argI	Ornithine carbamoyltransferase
G2583_5085	ECs5232	Z5867	rraB	hypothetical protein
G2583_5086	ECs5233	Z5868	yjgM	Acetyltransferase, GNAT family
G2583_5087	ECs5234	Z5869	yjgN	hypothetical protein
G2583_5088	ECs5235	Z5870	valS	Valyl-tRNA synthetase
G2583_5089	ECs5236	Z5871	holC	DNA polymerase III, chi subunit
G2583_5090	ECs5237	Z5872	pepA	Cytosol aminopeptidase
G2583_5091	ECs5238	Z5873	yjgP	Inner membrane protein yjgP
G2583_5092	ECs5239	Z5874	yjgQ	Inner membrane protein yjgQ
G2583_5093	ECs5240	Z5875	yjgR	hypothetical protein
G2583_5094	ECs5241	Z5876	yjgB	Alcohol dehydrogenase
G2583_5095	leuX	RNA127	leuX	Leu tRNA
Indel-197	ECs5242	Z5878	-	putative integrase
Indel-197	ECs5243	Z5879	-	putative transposase OrfA protein of insertion sequence IS629
Indel-197	ECs5244	Z5880	-	putative transposase OrfB protein of insertion sequence IS629
Indel-197	ECs5245	Z5881	-	hypothetical protein
Indel-197	ECs5246	Z5882	-	hypothetical protein
Indel-197		Z5883	-	hypothetical protein
Indel-197	ECs5247		-	hypothetical protein
Indel-197	ECs5248	Z5884	-	hypothetical protein
Indel-197	ECs5249	Z5885	-	putative resolvase
Indel-197	ECs5250	Z5886	-	hypothetical protein
Indel-197	ECs5251	Z5887	-	hypothetical protein
Indel-197	ECs5252	Z5888	-	putative transcription regulator
Indel-197		Z5889	-	hypothetical protein

Table S10. The orthologue table of the O55 and O157 strains Page 163

Locus_tag ^a			Gene	Product
CB9615	Sakai	EDL933		
G2583_5096	ECs5253	Z5890	-	Prophage P4 integrase
G2583_5097		Z5891	-	hypothetical protein
G2583_5098	ECs5254	Z5892	-	hypothetical protein
G2583_5099	ECs5255	Z5893	yjhT	N-acetylneuraminate epimerase 2
G2583_5100	ECs5256	Z5894	-	hypothetical protein
G2583_5101	ECs5257	Z5895	-	hypothetical protein
G2583_5102	ECs5258	Z5896	-	hypothetical protein
G2583_5103	ECs5259	Z5897	-	hypothetical protein
G2583_5104	ECs5260	Z5898	-	hypothetical protein
G2583_5105	ECs5261	Z5899	-	Helicase family protein
G2583_5106	ECs5262	Z5900	-	hypothetical protein
G2583_5107	ECs5263	Z5901	-	DEAD/DEAH box helicase domain protein
G2583_5108	ECs5264	Z5902	-	ATP-dependent DNA helicase, UvrD/REP family
		Z5903	-	hypothetical protein
	ECs5265		-	hypothetical protein
G2583_5109	ECs5266	Z5904	-	hypothetical protein
G2583_5109	ECs5267		-	hypothetical protein
G2583_5110	ECs5268	Z5905	yjhS	hypothetical protein
G2583_5111	ECs5269	Z5906	yjhT	N-acetylneuraminate-epimerase precursor
G2583_5112	ECs5270	Z5907	nanC	hypothetical protein
G2583_5113	ECs5271	Z5910	fimB	Type 1 fimbriae regulatory protein fimB
G2583_5114	ECs5272	Z5911	fimE	Type 1 fimbriae regulatory protein FimE
G2583_5115	ECs5273	Z5912	fimA	Major type 1 subunit fimbrin
G2583_5116	ECs5274	Z5913	fimI	FimI fimbrial protein
G2583_5117	ECs5275	Z5914	fimC	Chaperone protein FimC
G2583_5118	ECs5276	Z5915	fimD	Export and assembly outer membrane protein of type 1 fimbriae
G2583_5119	ECs5277	Z5916	fimF	Fimbrial protein FimF
G2583_5120	ECs5278	Z5917	fimG	FimG
G2583_5121	ECs5279	Z5918	fimH	Adhesin
G2583_5122	ECs5280	Z5919	gntP	High-affinity gluconate transporter
G2583_5123	ECs5281	Z5920	uxuA	D-mannonate dehydratase
G2583_5124	ECs5282	Z5921	uxuB	Fructuronate reductase
G2583_5125	ECs5283	Z5922	uxuR	DNA-binding transcriptional repressor
G2583_5126	ECs5284	Z5923	yjiC	hypothetical protein
G2583_5127		Z5924	-	hypothetical protein
G2583_5128	ECs5285	Z5925	yjiD	Anti-adaptor protein iraD
G2583_5129	ECsp024	Z5926	yjiE	transcriptional regulator, LysR family
G2583_5130	ECs5286	Z5927	iadA	Beta-aspartyl peptidase
G2583_5131	ECs5287	Z5928	yjiG	putative membrane protein
G2583_5132	ECs5288	Z5929	yjiH	hypothetical protein
G2583_5133	ECs5289	Z5930	yjiI	Putative uncharacterized protein yjiI
G2583_5133			yjiI	Putative uncharacterized protein yjiI
G2583_5134	ECs5290	Z5932	yeeJ	Putative invasin

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Locus_tag ^a			Gene	Product
CB9615	Sakai	EDL933		
	ECs5291		-	hypothetical protein
G2583_5134	ECs5292		yeeJ	Putative invasin
G2583_5135	ECs5293	Z5933	yjiJ	Transporter, major facilitator family
G2583_5136	ECs5294	Z5934	yjiK	SdiA-regulated protein
G2583_5137	ECs5295	Z5935	-	hypothetical protein
G2583_5138	ECs5296		-	hypothetical protein
G2583_5139	ECs5297	Z5936	yjiL	(R)-2-hydroxyglutaryl-CoA dehydratase activator
G2583_5140	ECs5298	Z5937	yjiM	hypothetical protein
G2583_5141	ECs5299	Z5938	yjiN	conserved hypothetical protein
G2583_5142	ECs5300	Z5939	mdtM	Multidrug resistance protein mdtM
G2583_5143	ECs5301	Z5940	yjiP	hypothetical protein
G2583_5144	ECs5302	Z5941	yjiR	transcriptional regulator, GntR family/aminotransferase, classes I and II
G2583_5145	ECs5303	Z5942	yjiS	YjiS
G2583_5146	ECs5304	Z5943	-	hypothetical protein
G2583_5146	ECs5305	Z5944	-	hypothetical protein
G2583_5147		Z5945	yjiW	HSP20-like domain protein
G2583_5148	ECs5306	Z5946	hsdS	type I restriction-modification system, S subunit
G2583_5149	ECs5307	Z5947	hsdM	Type I restriction-modification system, M subunit
G2583_5150	ECs5308	Z5948	hsdR	Type I restriction-modification system, R subunit
G2583_5151	ECs5309	Z5949	-	protein of unknown function DUF262
G2583_5152	ECs5310	Z5950	orf	protein of unknown function DUF262
G2583_5153	ECs5311	Z5951	yjiA	Putative GTPase
G2583_5154	ECs5312	Z5952	yjiX	hypothetical protein
G2583_5155	ECs5313	Z5953	yjiY	Carbon starvation family protein
G2583_5156	ECs5314	Z5954	-	hypothetical protein
G2583_5157	ECs5315	Z5955	tsr	Methyl-accepting chemotaxis protein I
G2583_5158	ECs5316	Z5956	yjiL	Transporter, major facilitator family
G2583_5159	ECs5317	Z5957	yjiM	transcriptional regulator, GntR family
G2583_5160	ECs5318	Z5958	yjiN	Putative oxidoreductase
G2583_5161	ECs5319	Z5959	mdoB	Phosphoglycerol transferase I
G2583_5162	ECs5320	Z5960	yjiA	hypothetical protein
G2583_5163	ECs5321	Z5961	dnaC	DNA replication protein DnaC
G2583_5164	ECs5322	Z5962	dnaT	Primosomal protein 1
G2583_5165	ECs5323	Z5963	yjiB	Uncharacterized conserved protein
G2583_5166	ECs5324	Z5964	yjiP	putative structural protein
G2583_5167	ECs5325	Z5966	yjiQ	hypothetical protein
G2583_5168	ECs5326	Z5967	bglJ	transcriptional regulator, LuxR family
G2583_5169	ECs5327	Z5968	fhuF	Ferric iron reductase protein FhuF
G2583_5170	ECs5328		yjiZ	hypothetical protein
G2583_5171	leuQ	RNA128	leuQ	Leu tRNA
G2583_5172	ECs5329	Z5972	rsmC	16S RNA G1207 methylase RsmC
G2583_5173	ECs5330	Z5973	holD	DNA polymerase III, psi subunit
G2583_5174	ECs5331	Z5974	rimI	Ribosomal-protein-alanine acetyltransferase

Table S10. The orthologue table of the O55 and O157 strains Page 165

Locus_tag ^a			Gene	Product
CB9615	Sakai	EDL933		
G2583_5175	ECs5332	Z5975	yjjG	5'-nucleotidase yjjG
G2583_5176	Indel-202	Indel-202	-	Phage integrase
G2583_5177	Indel-202	Indel-202	-	hypothetical protein
G2583_5178	Indel-202	Indel-202	yfdT	hypothetical protein
G2583_5179	Indel-202	Indel-202	yfdS	hypothetical protein
G2583_5180	Indel-202	Indel-202	yfdR	hypothetical protein
G2583_5181	Indel-202	Indel-202	yfdQ	hypothetical protein
G2583_5182	Indel-202	Indel-202	yfdP	hypothetical protein
G2583_5183	Indel-202	Indel-202	-	hypothetical protein
G2583_5184	Indel-202	Indel-202	rpc	Putative regulatory protein
G2583_5185	Indel-202	Indel-202	-	hypothetical protein
G2583_5186	Indel-202	Indel-202	ymfL	hypothetical protein
G2583_5187	Indel-202	Indel-202	ymfM	e14 prophage; predicted protein
G2583_5188	Indel-202	Indel-202	yfdO	Unknown protein encoded by cryptic prophage
G2583_5189	Indel-202	Indel-202	yfdN	hypothetical protein
G2583_5190	Indel-202	Indel-202	yfdM	putative DNA adenine methylase
G2583_5191	Indel-202	Indel-202	-	hypothetical protein
G2583_5192	Indel-202	Indel-202	rusA	Holliday junction resolvase
G2583_5193	Indel-202	Indel-202	KilA-N	KilA-N domain family
G2583_5194	Indel-202	Indel-202	ydfU	hypothetical protein
G2583_5195	Indel-202	Indel-202	ydfT	Antitermination protein Q
G2583_5196	Indel-202	Indel-202	cspF	Cold shock-like protein cspF
G2583_5197	Indel-202	Indel-202	cspB	Cold shock-like protein cspB
G2583_5198	Indel-202	Indel-202	essQ	Lysis protein S-like from lambdoid prophage Qin
G2583_5199	Indel-202	Indel-202	ydfR	hypothetical protein
G2583_5200	Indel-202	Indel-202	-	hypothetical protein
G2583_5201	Indel-202	Indel-202	ydfQ	phage lysozyme
G2583_5202	Indel-202	Indel-202	ydfP	hypothetical protein
G2583_5203	Indel-202	Indel-202	cspI	Cold shock-like protein cspI
G2583_5204	Indel-202	Indel-202	ynfN	hypothetical protein
G2583_5205	Indel-202	Indel-202	gnsB	GnsB protein
G2583_5206	Indel-202	Indel-202	ybcW	conserved hypothetical protein
G2583_5207	Indel-202	Indel-202	ylcI	hypothetical protein
G2583_5208	Indel-202	Indel-202	nohA	Prophage Qin DNA packaging protein NU1-like protein
G2583_5209	Indel-202	Indel-202	-	Putative DNA packaging protein of prophage
G2583_5210	Indel-202	Indel-202	-	Head-stabilizing protein
G2583_5211	Indel-202	Indel-202	-	Putative capsid protein of prophage
G2583_5212	Indel-202	Indel-202	-	Head-tail preconnector protein GP5
G2583_5213	Indel-202	Indel-202	-	Head decoration protein
G2583_5214	Indel-202	Indel-202	-	Major head protein
G2583_5215	Indel-202	Indel-202	-	Uncharacterized 13.5 kDa protein in GP7-GP8 intergenic region
G2583_5216	Indel-202	Indel-202	-	Putative head-tail joining protein of prophage
G2583_5217	Indel-202	Indel-202	-	Prophage minor tail protein Z

Table S10. The orthologue table of the O55 and O157 strains Page 166

Locus_tag ^a			Gene	Product
CB9615	Sakai	EDL933		
G2583_5218	Indel-202	Indel-202	-	Permeases of the major facilitator superfamily
G2583_5219	Indel-202	Indel-202	-	Putative tail component of prophage
G2583_5220	Indel-202	Indel-202	-	Putative tail component of prophage
G2583_5221	Indel-202	Indel-202	-	Minor tail protein T
G2583_5222	Indel-202	Indel-202	-	Putative tail length tape measure protein
G2583_5223	Indel-202	Indel-202	-	Minor tail protein
G2583_5224	Indel-202	Indel-202	-	Phage-related protein
G2583_5225	Indel-202	Indel-202	-	Putative tail fiber component K of prophage
G2583_5226	Indel-202	Indel-202	-	Putative tail component of prophage CP-933K
G2583_5227	Indel-202	Indel-202	-	hypothetical protein
G2583_5228	Indel-202	Indel-202	-	Phage-related protein, tail component
G2583_5229	Indel-202	Indel-202	-	putative membrane protein precursor
G2583_5230	Indel-202	Indel-202	-	PPE-repeat proteins
G2583_5231	Indel-202	Indel-202	tfaQ	Tail fiber assembly protein homolog from lambdoid prophage Qin
G2583_5232	Indel-202	Indel-202	pinR	Putative DNA-invertase from lambdoid prophage
G2583_5233	Indel-202	Indel-202	ydfK	hypothetical protein
G2583_5234	Indel-202	Indel-202	-	hypothetical protein
G2583_5235	ECs5333	Z5976	prfC	Peptide chain release factor RF-3
G2583_5236	ECs5334	Z5977	osmY	Osmotically inducible protein Y
		Z5978	-	hypothetical protein
G2583_5237	ECs5335	Z5979	yjjU	hypothetical protein
G2583_5238	ECs5336	Z5980	yjjV	Hydrolase, TatD family
G2583_5239	ECs5337	Z5981	yjjW	Putative activating enzyme
G2583_5240	ECs5338	Z5982	yjjI	hypothetical protein
G2583_5240	ECs5339	Z5982	yjjI	hypothetical protein
G2583_5241	ECs5340	Z5983	deoC	Deoxyribose-phosphate aldolase
G2583_5242	ECs5341	Z5984	deoA	Thymidine phosphorylase
G2583_5243	ECs5342	Z5985	deoB	Phosphopentomutase
G2583_5244	ECs5343	Z5986	deoD	Purine nucleoside phosphorylase
G2583_5245	ECs5344	Z5987	-	Helix-turn-helix domain protein
G2583_5246	ECs5345	Z5988	lplA	protein smp precursor
G2583_5247	ECs5346	Z5989	serB	Phosphoserine phosphatase
G2583_5248	ECs5347	Z5990	radA	Predicted ATP-dependent serine protease
G2583_5249	ECs5348	Z5991	nadR	bifunctional DNA-binding transcriptional repressor and NMN adenylyltransferase
G2583_5250	ECs5349	Z5993	yjjK	Uncharacterized ABC transporter ATP-binding protein
G2583_5251	ECs5350	Z5994	slt	Soluble lytic murein transglycosylase
G2583_5252	ECs5351	Z5995	trpR	Trp operon repressor
G2583_5253	ECs5352	Z5996	yjjX	conserved hypothetical protein
G2583_5254	ECs5353	Z5997	ytjC	Probable phosphoglycerate mutase gpmB
G2583_5255	ECs5354	Z5999	rob	Right origin-binding protein
G2583_5256	ECs5355	Z6000	creA	hypothetical protein
G2583_5257	ECs5356	Z6001	creB	DNA-binding response regulator CreB

Table S10. The orthologue table of the O55 and O157 strains Page 167

Locus_tag ^a			Gene	Product
CB9615	Sakai	EDL933		
G2583_5258	ECs5357	Z6002	creC	sensory histidine kinase CreC
G2583_5259	ECs5358	Z6003	creD	Inner membrane protein CreD
G2583_5260	ECs5359	Z6004	arcA	Aerobic respiration control protein arcA
G2583_5261	ECs5360	Z6005	yjyY	hypothetical protein
G2583_5262	ECs5361	Z6006	yjtD	RNA methyltransferase, TrmH family, group 1

^a rRNA and tRNA genes in Sakai and EDL933 lack locus_tags, gene name is given as a substitute.

Some genes were not predicted in one or two of the genomes and left as a blank cell. All insertion or deletion of genes are described in the number of the indels.

In some cases a gene in one genome was annotated as 2 or more genes in other genomes, and the same gene name appears 2 or more times for a genome. This may be due to mutation to stop codon, frameshift mutation or sequencing errors.