

Common Name	Entrez ID	Gene Name	Prediction	Sorted Category	
yjeK	948662	Uncharacterized kamA family protein yjeK	['metabolic process']	Down Regulated	
dxr	945019	1-deoxy-D-xylulose 5-phosphate reductoisomerase		Temporarily Down Regulated	
groL	948665	60 kDa chaperonin		Down Regulated	
ribF	949129	Riboflavin biosynthesis protein ribF		Down Regulated	
kch	945841	Putative potassium channel protein		Down Regulated	
ydhB	945208	Uncharacterized HTH-type transcriptional regulator ydhB	['Transcription', 'RNA related', 'Type of regulation', 'transcription', 'regulation of transcription DNA dependent']	Up Regulated	
fepG	945209	Ferric enterobactin transport system permease protein fepG		Ambiguous/Unsorted	
ybaA	948863	Uncharacterized protein ybaA	[]	Up Regulated	
ydcl	948865	Uncharacterized HTH-type transcriptional regulator ydcl	['Transcription', 'RNA related', 'Type of regulation', 'Genetic unit regulated', 'transcription', 'regulation of transcription DNA dependent']	Up Regulated	
btuR	945839	Cob(I)yrinic acid a,c-diamide adenosyltransferase		Down Regulated	
hsdS	948867	Type-1 restriction enzyme EcoKI specificity protein		Temporarily Down Regulated	
yciK	945838	Uncharacterized oxidoreductase yciK	['DNA repair', 'response to DNA damage stimulus']	Ambiguous/Unsorted	
creD	948868	Inner membrane protein creD		Ambiguous/Unsorted	
cstA	945213	Carbon starvation protein A		Ambiguous/Unsorted	
rbsK	948260	Ribokinase		Down Regulated	
yhcE	945836	UPF0056 membrane protein yhcE		Temporarily Down Regulated	
yjiN	948860	Uncharacterized protein yjiN	['response to antibiotic']	Up Regulated	
sugE	948671	Quaternary ammonium compound-resistance protein sugE		Down Regulated	
tauD	945021	Alpha-ketoglutarate-dependent taurine dioxygenase		Down Regulated	
dinI	945022	DNA-damage-inducible protein I		Temporarily Up Regulated	
rcsF	949113	Protein rcsF		Down Regulated	
yaeB	949112	UPF0066 protein yaeB		Ambiguous/Unsorted	
psd	948673	Phosphatidylserine decarboxylase proenzyme		Ambiguous/Unsorted	
poxA	948672	Putative lysyl-tRNA synthetase		Up Regulated	
abgR	945831	HTH-type transcriptional regulator abgR		Ambiguous/Unsorted	
yqeG	945028	Inner membrane transport protein yqeG		Ambiguous/Unsorted	
yhbV	949117	Uncharacterized protein yhbV	['Coenzyme transport and metabolism', 'Energy metabolism carbon', 'Building block biosynthesis', 'ion transport', 'iron ion transport']	Up Regulated	
yjeM	948679	Inner membrane transporter yjeM		Up Regulated	
yleL	948272	Uncharacterized protein yleL	['Carbohydrate transport and metabolism']	Up Regulated	
yjeP	948676	Uncharacterized mscS family protein yjeP	['purine nucleotide biosynthetic process', 'biosynthetic process']	Down Regulated	
ilvE	948278	Branched-chain-amino-acid aminotransferase		Down Regulated	
ilvM	948279	Acetolactate synthase isozyme 2 small subunit		Down Regulated	
tauC	945026	Taurine transport system permease protein tauC		Down Regulated	
tauB	945027	Taurine import ATP-binding protein tauB		Down Regulated	
ilvD	948277	Dihydroxy-acid dehydratase		Down Regulated	
oppA	945830	Periplasmic oligopeptide-binding protein		Down Regulated	
thrB	947498	Homoserine kinase		Down Regulated	
ylaC	948876	Inner membrane protein ylaC		Up Regulated	
ampD	948877	1,6-anhydro-N-acetylmuramyl-L-alanine amidase ampD		Ambiguous/Unsorted	
leuS	947497	Leucyl-tRNA synthetase		Temporarily Down Regulated	
dkgA	947495	2,5-diketo-D-gluconic acid reductase A		Temporarily Up Regulated	
tatE	945228	Sec-independent protein translocase protein tatE		Down Regulated	
marR	945825	Multiple antibiotic resistance protein marR		Up Regulated	
ybgI	945824	UPF0135 protein ybgI		Ambiguous/Unsorted	
dacA	945222	D-alanyl-D-alanine carboxypeptidase dacA		Down Regulated	
ahpC	945225	Alkyl hydroperoxide reductase subunit C		Temporarily Up Regulated	
yqhC	947491	Uncharacterized HTH-type transcriptional regulator yqhC	['RNA related', 'Type of regulation', 'Genetic unit regulated', 'Protection', 'regulation of transcription DNA dependent']	Up Regulated	
dsbG	945224	Thiol:disulfide interchange protein dsbG		Down Regulated	
yjiL	948879	Inner membrane transport protein yjiL		Up Regulated	
ybeD	945220	UPF0250 protein ybeD		Ambiguous/Unsorted	
hsdM	948872	Type I restriction enzyme EcoKI M protein		Down Regulated	
fecR	949104	Protein fecR		Ambiguous/Unsorted	
tauA	945030	Taurine-binding periplasmic protein		Down Regulated	
dsdX	949103	DsdX permease		Up Regulated	
fumB	948642	Fumarate hydratase class I, anaerobic		Up Regulated	
yail	945033	UPF0178 protein yail		Down Regulated	
atpF	948247	ATP synthase subunit b; ATP synthase B chain		Down Regulated	
mmnG	948248	tRNA uridine 5-carboxymethylaminomethyl modification enzyme mmnG		Ambiguous/Unsorted	
atpG	948243	ATP synthase gamma chain		Down Regulated	
atpD	948244	ATP synthase subunit beta		Down Regulated	
ptrA	947284	Protease 3		Temporarily Down Regulated	
atpC	948245	ATP synthase epsilon chain		Down Regulated	
glmU	948246	Bifunctional protein glmU		Down Regulated	
recB	947286	Exodeoxyribonuclease V beta chain		Down Regulated	
ynfH	945822	Anaerobic dimethyl sulfoxide reductase chain ynfH		Down Regulated	
RecD	947287	Exodeoxyribonuclease V alpha chain		Down Regulated	
oppB	945823	Oligopeptide transport system permease protein oppB		Down Regulated	
fimA	948838	Type-1 fimbrial protein, A chain		Up Regulated	
nanM	949106	N-acetylneuraminate epimerase		Up Regulated	
glmS	948241	Glucosamine-fructose-6-phosphate aminotransferase [isomerizing]		Down Regulated	
argA	947289	Amino-acid acetyltransferase		Down Regulated	
atpA	948242	ATP synthase subunit alpha		Down Regulated	
Dos	945815	Heme-regulated cyclic di-GMP, cyclic AMP phosphodiesterase,		Temporarily Up Regulated	

dosP	945815	Heme-regulated cyclic di-GMP, cyclic AMP phosphodiesterase,		Temporarily Up Regulated	
gpr	947480	Uncharacterized protein yghZ		Temporarily Up Regulated	
yghZ	947480	Uncharacterized protein yghZ		Temporarily Up Regulated	
fimH	948847	Protein fimH		Temporarily Down Regulated	
ygiT	945814	Uncharacterized HTH-type transcriptional regulator ygiT	[' Carbon compound utilization', 'metabolic process']	Up Regulated	
mqsA	945814	Uncharacterized HTH-type transcriptional regulator ygiT		Up Regulated	
gntP	948848	High-affinity gluconate transporter		Up Regulated	
flgD	945813	Basal-body rod modification protein flgD		Down Regulated	
rfbC	947482	dTDP-4-dehydroorhamnose 3,5-epimerase		Down Regulated	
yfdY	948842	Uncharacterized protein yfdY	[]	Up Regulated	
uidB	947484	ECIAI39_1442; EchS_A1691; APECO1_699; b1616; ECDH10B_1749; c2008; UTI89_C1804; EcSMS35_1583; EcE24377A_1824; Z2620; ECS88_1662; ECED1_1815; ECUMN_1905; ECH		Up Regulated	
yciU	945819	UPF0263 protein yciU		Down Regulated	
rimH	945239	Ribosomal RNA large subunit methyltransferase H		Temporarily Down Regulated	
mrdB	945238	Rod shape-determining protein rodA		Down Regulated	
flhC	947280	Flagellar transcriptional activator flhC		Temporarily Up Regulated	
ybeB	945237	Uncharacterized protein ybeB	[]	Down Regulated	
sgcX	948840	Putative sgc region protein sgcX		Up Regulated	
fadR	948652	Fatty acid metabolism regulator protein		Down Regulated	
psiF	945040	Phosphate starvation-inducible protein psiF		Up Regulated	
ygdD	947279	UPF0382 inner membrane protein ygdD		Temporarily Up Regulated	
yjdC	948650	HTH-type transcriptional regulator yjdC		Temporarily Up Regulated	
phoR	945044	Sensor protein; Phosphate regulon sensor protein phoR		Temporarily Down Regulated	
aroM	945045	Protein aroM		Temporarily Down Regulated	
asnC	948259	Asparaginyl-tRNA synthetase; Regulatory protein asnC		Down Regulated	
fucO	947273	Lactaldehyde reductase		Temporarily Up Regulated	
csdE	947274	Uncharacterized sufE-like protein ygdK		Ambiguous/Unsorted	
yaiE	945048	UPF0345 protein yaiE		Down Regulated	
atpH	948254	ATP synthase subunit delta		Down Regulated	
aspA	948658	Aspartate ammonia-lyase		Temporarily Up Regulated	
atpB	948252	ATP synthase subunit a		Down Regulated	
fxsA	948657	UPF0716 protein fxsA		Temporarily Up Regulated	
yjeH	948656	Inner membrane protein yjeH		Down Regulated	
atpE	948253	ATP synthase subunit c		Down Regulated	
oppC	945810	Oligopeptide transport system permease protein oppC		Down Regulated	
rsmG	948250	Ribosomal RNA small subunit methyltransferase G		Down Regulated	
groS	948655	10 kDa chaperonin		Down Regulated	
uxuR	948849	Uxu operon transcriptional regulator		Ambiguous/Unsorted	
thrA	945803	Bifunctional aspartokinase/homoserine dehydrogenase 1		Temporarily Up Regulated	
oppD	945802	Oligopeptide transport ATP-binding protein oppD		Down Regulated	
holE	947471	DNA polymerase III subunit theta		Temporarily Down Regulated	
nadD	945248	Nicotinate-nucleotide adenyllyltransferase; Probable nicotinate-nucleotide adenyllyltransferase		Down Regulated	
gss	947474	Bifunctional glutathionylspermidine synthetase/amidase		Temporarily Down Regulated	
gsp	947474	Bifunctional glutathionylspermidine synthetase/amidase		Temporarily Down Regulated	
yjiE	948852	Uncharacterized HTH-type transcriptional regulator yjiE	['Transcription', ' RNA related', ' Type of regulation', 'transcription', 'regulation of transcription DNA dependent']	Ambiguous/Unsorted	
glcG	947473	Protein glcG		Temporarily Up Regulated	
yqhA	947479	UPF0114 protein yqhA		Down Regulated	
rlpA	945241	Rare lipoprotein A		Down Regulated	
mrdA	945240	Penicillin-binding protein 2		Down Regulated	
ygdH	947266	UPF0717 protein ygdH		Down Regulated	
gudX	947261	Glucarate dehydratase-related protein		Up Regulated	
rumB	947260	23S rRNA (uracil-5-)-methyltransferase rumB		Temporarily Down Regulated	
wrbA	947263	Flavoprotein wrbA; Putative flavoprotein wrbA		Temporarily Up Regulated	
yieE	948226	Uncharacterized protein yieE	['Amino acid transport and metabolism']	Temporarily Down Regulated	
yieF	948225	Uncharacterized protein yieF		Temporarily Down Regulated	
ygbE	947268	Inner membrane protein ygbE		Down Regulated	
gadA	948027	Glutamate decarboxylase alpha		Up Regulated	
djlC	945253	Uncharacterized J domain-containing protein djlC		Up Regulated	
thuC	945250	Iron(3+)-hydroxamate import ATP-binding protein thuC		Temporarily Up Regulated	
serA	945258	D-3-phosphoglycerate dehydrogenase		Down Regulated	
adiA	948638	Biodegradative arginine decarboxylase		Up Regulated	
dcuS	948639	Sensor protein dcuS		Temporarily Down Regulated	
phoU	948233	Phosphate transport system protein phoU		Down Regulated	
melR	948637	Melibiose operon regulatory protein		Up Regulated	
glcA	947259	Glycolate permease glcA		Temporarily Up Regulated	
yhjA	948038	Probable cytochrome c peroxidase		Up Regulated	
miaB	945260	(Dimethylallyl)adenosine tRNA methylthiotransferase miaB		Down Regulated	
ubif	945261	[2-octaprenyl-3-methyl-6-methoxy-1,4-benzoquinol hydroxylase		Up Regulated	
yhjE	948032	Inner membrane metabolite transport protein yhjE		Temporarily Up Regulated	
yhjD	948033	Inner membrane protein yhjD		Temporarily Up Regulated	
eptA	948629	ECIAI1_4344; E2348C_4442; ECUMN_4646; ECS88_4616; b4114; ECED1_4848; ECIAI39_4538; EC55989_4605; ECDH10B_4306		Ambiguous/Unsorted	
yhjC	948035	Uncharacterized HTH-type transcriptional regulator yhjC	['Transcription', ' RNA related', ' Type of regulation', 'transcription', 'regulation of transcription DNA dependent']	Up Regulated	
lbpA	948200	Small heat shock protein lbpA		Up Regulated	
yecJ	946388	Uncharacterized protein yecJ	[]	Down Regulated	
yidX	948202	Uncharacterized protein yidX	[' Type of regulation', 'proteolysis', 'signal transduction']	Up Regulated	

CYBB	947241	Cytochrome b561		Down Regulated	
torZ	946389	Trimethylamine-N-oxide reductase 2		Ambiguous/Unsorted	
rumA	947243	23S rRNA (uracil-5-)-methyltransferase rumA		Temporarily Down Regulated	
nudB	946383	Dihydroneopterin triphosphate pyrophosphatase		Down Regulated	
recF	948209	DNA replication and repair protein recF		Temporarily Down Regulated	
yecR	946386	Uncharacterized protein yecR	['Inorganic ion transport and metabolism', 'Adaptation to stress', 'iron ion transport']	Down Regulated	
cmoB	946387	tRNA (mo5U34)-methyltransferase		Down Regulated	
pgm	945271	Phosphoglucomutase		Ambiguous/Unsorted	
pitA	948009	Low-affinity inorganic phosphate transporter 1		Down Regulated	
seqA	945272	Protein seqA		Temporarily Down Regulated	
tsr	948884	Methyl-accepting chemotaxis protein I		Up Regulated	
yhiQ	948005	UPF0341 protein yhiQ		Temporarily Up Regulated	
rfbB	945276	dTDP-glucose 4,6-dehydratase		Down Regulated	
erfK	945273	Protein erfK/srK		Temporarily Up Regulated	
uspA	948007	Universal stress protein A		Up Regulated	
yhil	948003	Uncharacterized protein yhil	['Protection']	Up Regulated	
yahB	945278	Uncharacterized HTH-type transcriptional regulator yahB	['Transcription', 'RNA related', 'Type of regulation', 'transcription', 'regulation of transcription DNA dependent']	Temporarily Down Regulated	
cusR	945003	Transcriptional regulatory protein cusR		Down Regulated	
yael	945002	Phosphodiesterase yael		Down Regulated	
opgG	945005	Glucans biosynthesis protein G		Down Regulated	
gyrB	948211	DNA gyrase subunit B		Down Regulated	
pal	945004	Peptidoglycan-associated lipoprotein		Down Regulated	
lacI	945007	Lactose operon repressor		Up Regulated	
trmJ	948610	tRNA (cytidine/uridine-2'-O-)-methyltransferase trmJ		Temporarily Down Regulated	
cysI	947231	Sulfite reductase [NADPH] hemoprotein beta-component		Down Regulated	
hisQ	947235	Histidine transport system permease protein hisQ		Down Regulated	
dnaN	948218	DNA polymerase III subunit beta		Down Regulated	
dnaA	948217	Chromosomal replication initiator protein dnaA		Down Regulated	
rpmH	948216	50S ribosomal protein L34		Down Regulated	
yidC	948214	Inner membrane protein oxaA		Down Regulated	
osmY	948895	Osmotically-inducible protein Y		Temporarily Up Regulated	
asnB	945281	Asparagine synthetase B [glutamine-hydrolyzing]		Down Regulated	
thuD	948891	Ferric iron reductase protein thuF		Temporarily Up Regulated	
flhA	946390	Flagellar biosynthesis protein flhA		Down Regulated	
ybfF	945288	Esterase ybfF		Ambiguous/Unsorted	
nagA	945289	N-acetylglucosamine-6-phosphate deacetylase		Ambiguous/Unsorted	
yjiG	948899	5'-nucleotidase yjiG		Temporarily Down Regulated	
mrr	948898	Mrr restriction system protein		Temporarily Up Regulated	
prfC	948897	Peptide chain release factor 3		Down Regulated	
yhjX	948066	Inner membrane protein yhjX		Up Regulated	
dppC	948064	Dipeptide transport system permease protein dppC		Down Regulated	
valV	946170	c5541; Z2692; UT189_C1856; ECDH10B_1799; b1665; E2348C_tRNA31; ECs5461		Temporarily Down Regulated	
eptB	948068	b3546; ECS88_3965; ECIA139_4054; EC55989_3997; E2348C_3793; ECED1_4224; ECUMN_4058; ECDH10B_3725; ECIA11_3705		Temporarily Down Regulated	
yfeA	946864	Uncharacterized protein yfeA	['Signal transduction mechanisms', 'Type of regulation', 'two component signal transduction system phosphorelay', 'regulation of']	Temporarily Down Regulated	
pykF	946179	Pyruvate kinase I; Pyruvate kinase		Temporarily Up Regulated	
glk	946858	Glucokinase		Up Regulated	
lpp	946175	Major outer membrane lipoprotein		Down Regulated	
ydhR	946177	Putative monooxygenase ydhR		Down Regulated	
ydgA	946172	Protein ydgA		Temporarily Up Regulated	
ynhG	946174	Uncharacterized protein ynhG	[]	Temporarily Up Regulated	
sufE	946173	Cysteine desulfuration protein sufE		Temporarily Up Regulated	
gabD	948060	Succinate-semialdehyde dehydrogenase [NADP+]		Temporarily Up Regulated	
yiaD	948075	Inner membrane lipoprotein yiaD		Temporarily Up Regulated	
glyQ	948079	Glycyl-tRNA synthetase alpha subunit		Down Regulated	
yiaA	948078	Inner membrane protein yiaA		Up Regulated	
ptsI	946879	Phosphoenolpyruvate-protein phosphotransferase		Down Regulated	
yfeK	946876	Uncharacterized protein yfeK	['Defense mechanisms', 'Primary Active Transporters', 'Protection']	Up Regulated	
cysK	946877	Cysteine synthase A; Cysteine synthase		Down Regulated	
ydhL	946168	Uncharacterized protein ydhL	['Metabolism of other compounds', 'purine nucleotide biosynthetic process']	Up Regulated	
plsX	946165	Fatty acid/phospholipid synthesis protein plsX		Down Regulated	
nemA	946164	N-ethylmaleimide reductase		Ambiguous/Unsorted	
pdxY	946162	Pyridoxamine kinase		Down Regulated	
yiaG	948071	Uncharacterized HTH-type transcriptional regulator yiaG	['RNA related', 'Type of regulation', 'Adaptation to stress', 'transcription', 'regulation of transcription DNA dependent', 'response to']	Temporarily Up Regulated	
yiaF	948072	Uncharacterized protein yiaF	['Carbohydrate transport and metabolism', 'Carbon compound utilization', 'phosphoenolpyruvate dependent sugar phosphotransferase']	Down Regulated	
yhjK	948048	c4341; EC55989_3976; ECDH10B_3706; APECO1_2919; ECIA1_3680; b3529; ECIA139_4032; ECED1_4207; ECS88_3943; ECUMN_4036; UT189_C4061; Z4943; E2348C_3771		Ambiguous/Unsorted	
bcsZ	948046	Endoglucanase		Down Regulated	
bcsB	948045	Cyclic di-GMP-binding protein		Down Regulated	
ybeZ	948044	PhoH-like protein		Temporarily Up Regulated	
pdxK	946881	Pyridoxine kinase		Up Regulated	
kdgK	948041	2-dehydro-3-deoxygluconokinase		Temporarily Up Regulated	
cysU	946882	Sulfate transport system permease protein cysT		Down Regulated	
cysP	946883	Thiosulfate-binding protein		Down Regulated	
ptsH	946886	Phosphocarrier protein HPr		Down Regulated	
yfeS	946887	Uncharacterized protein yfeS	[]	Down Regulated	

cysM	946888	Cysteine synthase B; Cysteine synthase		Down Regulated	
rsxG	946158	Electron transport complex protein rnfG		Down Regulated	
leuE	946157	Leucine efflux protein		Down Regulated	
yhjJ	948040	Protein yhjJ		Down Regulated	
hdhA	946151	7-alpha-hydroxysteroid dehydrogenase		Temporarily Up Regulated	
murC	946153	UDP-N-acetylmuramate--L-alanine ligase		Down Regulated	
yhjV	948057	Inner membrane transport protein yhjV		Temporarily Down Regulated	
csiR	948055	Uncharacterized HTH-type transcriptional regulator ygaE		Ambiguous/Unsorted	
prpE	946891	Propionate--CoA ligase		Up Regulated	
cyoC	946897	Cytochrome o ubiquinol oxidase subunit 3		Down Regulated	
mntH	946899	Manganese transport protein mntH		Up Regulated	
uidA	946149	Beta-glucuronidase		Up Regulated	
rsxB	946146	Electron transport complex protein rnfB		Temporarily Down Regulated	
topB	946141	DNA topoisomerase 3		Down Regulated	
pntB	946144	NAD(P) transhydrogenase subunit beta		Down Regulated	
tqsA	946142	AI-2 transport protein tqsA		Temporarily Down Regulated	
fadL	946820	Long-chain fatty acid transport protein		Temporarily Up Regulated	
fecE	948819	Fe(3+) dicitrate transport ATP-binding protein fecE		Down Regulated	
dnaJ	944753	Chaperone protein dnaJ		Down Regulated	
dnaK	944750	Chaperone protein dnaK		Temporarily Up Regulated	
aroC	946814	Chorismate synthase		Down Regulated	
sixA	946815	Phosphohistidine phosphatase sixA		Up Regulated	
fecD	946816	Fe(3+) dicitrate transport system permease protein fecD		Down Regulated	
insB	944743	Insertion element IS1 2/3 protein insB; Insertion element IS1 2/3/4 protein insA; Insertion element IS1 protein insA; Insertion element IS1 4 protein insB; Insertion element IS1 1/5/6 protein ins		Ambiguous/Unsorted	
sspA	944744	Stringent starvation protein A		Down Regulated	
nfrA	944741	Bacteriophage N4 adsorption protein A		Ambiguous/Unsorted	
efeO	945603	UPF0409 protein ycdO		Temporarily Up Regulated	
putP	945602	Sodium/proline symporter		Down Regulated	
yceA	945601	UPF0176 protein yceA		Down Regulated	
ypfG	946828	Uncharacterized protein ypfG	['Transcription', ' RNA related', ' Type of regulation', 'transcription', 'regulation of transcription DNA dependent']	Temporarily Down Regulated	
evgS	946844	Sensor protein evgS; Sensor protein		Temporarily Down Regulated	
BAX	948089	Protein bax		Temporarily Down Regulated	
ydil	946190	Esterase ydil		Down Regulated	
malS	948088	Alpha-amylase		Down Regulated	
sapB	946191	Peptide transport system permease protein sapB		Temporarily Up Regulated	
xyiR	948086	Xylose operon regulatory protein		Up Regulated	
ygcE	946193	Uncharacterized sugar kinase ygcE	[' Central intermediary metabolism', 'carbohydrate metabolic process']	Temporarily Up Regulated	
yiaJ	948084	HTH-type transcriptional regulator yiaJ		Ambiguous/Unsorted	
ydiH	946194	Uncharacterized protein ydiH	['proteolysis']	Temporarily Down Regulated	
trxA	948289	Thioredoxin-1		Temporarily Down Regulated	
yafE	946197	Uncharacterized protein yafE	['Amino acid transport and metabolism', ' Building block biosynthesis', 'amino acid biosynthetic process']	Ambiguous/Unsorted	
glyS	948080	Glycyl-tRNA synthetase beta subunit		Down Regulated	
ilvY	948284	HTH-type transcriptional regulator ilvY		Temporarily Down Regulated	
rstA	946199	Transcriptional regulatory protein rstA		Down Regulated	
ilvL	948283	ilvGMEDA operon leader peptide		Temporarily Up Regulated	
dsdA	946837	D-serine dehydratase; D-serine dehydratase 1		Ambiguous/Unsorted	
fecB	946838	Fe(3+) dicitrate-binding periplasmic protein		Temporarily Up Regulated	
fecI	946839	Probable RNA polymerase sigma factor fecI; RNA polymerase sigma factor		Up Regulated	
yjhP	946851	Uncharacterized protein yjhP	['Replication recombination and repair']	Up Regulated	
yfeC	946857	Uncharacterized protein yfeC	[]	Up Regulated	
ypeC	946855	Uncharacterized protein ypeC	['Energy production and conversion']	Temporarily Up Regulated	
rhlB	948290	ATP-dependent RNA helicase rhlB		Down Regulated	
gpp	948291	Guanosine-5'-triphosphate,3'-diphosphate pyrophosphatase		Down Regulated	
yjiP	948812	Inner membrane protein yjiP		Ambiguous/Unsorted	
rep	948292	ATP-dependent DNA helicase rep		Down Regulated	
wzyE	948293	Putative ECA polymerase		Down Regulated	
ydhZ	946180	Uncharacterized protein ydhZ	[]	Temporarily Up Regulated	
rffH	948299	Glucose-1-phosphate thymidyltransferase; Glucose-1-phosphate thymidyltransferase 2		Down Regulated	
sufS	946185	Cysteine desulfurase		Temporarily Up Regulated	
ydiK	946183	UPF0118 inner membrane protein ydiK		Ambiguous/Unsorted	
insG	948805	Transposase insG for insertion sequence element IS4		Up Regulated	
yneE	946188	UPF0187 protein yneE		Down Regulated	
wzxE	948294	Protein wzxE		Down Regulated	
hyi	946186	Hydroxypyruvate isomerase		Ambiguous/Unsorted	
yjhB	948807	Putative metabolite transport protein yjhB		Up Regulated	
rffA	948296	Lipopolysaccharide biosynthesis protein rffA		Down Regulated	
lpcA	949134	Phosphoheptose isomerase		Ambiguous/Unsorted	
acpH	949132	Acyl carrier protein phosphodiesterase		Up Regulated	
secD	949133	Protein-export membrane protein secD		Down Regulated	
tgt	949130	Queuine tRNA-ribosyltransferase		Down Regulated	
malZ	949131	Maltodextrin glucosidase		Down Regulated	
puuA	946202	Gamma-glutamylputrescine synthetase		Down Regulated	
trpA	946204	Tryptophan synthase alpha chain		Down Regulated	
leuD	945642	3-isopropylmalate dehydratase small subunit		Down Regulated	

yadD	944781	Uncharacterized protein yadD	['Replication recombination and repair', 'DNA recombination']	Temporarily Up Regulated	
ydjM	945644	Inner membrane protein ydjM		Up Regulated	
araC	944780	Arabinose operon regulatory protein		Up Regulated	
ydiE	946205	Uncharacterized protein ydiE	['Amino acid transport and metabolism', 'Building block biosynthesis', 'metabolic process', 'biosynthetic process', 'aromatic amino acid biosynthesis']	Up Regulated	
flgL	945646	Flagellar hook-associated protein 3		Down Regulated	
ydiA	946207	Uncharacterized protein yuaU; Putative phosphotransferase	[]	Ambiguous/Unsorted	
ppsR	946207	Uncharacterized protein yuaU; Putative phosphotransferase ydiA		Ambiguous/Unsorted	
flgG	945647	Flagellar basal-body rod protein flgG		Down Regulated	
baeR	946605	Transcriptional regulatory protein baeR		Up Regulated	
ubiG	946607	3-demethylubiquinone-9 3-methyltransferase		Down Regulated	
rffE	944789	UDP-N-acetylglucosamine 2-epimerase		Temporarily Down Regulated	
ydiB	946200	Quinate/shikimate dehydrogenase		Temporarily Down Regulated	
nrdA	946612	Ribonucleoside-diphosphate reductase; Ribonucleoside-diphosphate reductase 1 subunit alpha		Down Regulated	
ybiS	945441	Uncharacterized protein ybiS	['phosphoenolpyruvate dependent sugar phosphotransferase system']	Ambiguous/Unsorted	
gyrA	946614	DNA gyrase subunit A		Down Regulated	
hicB	946001	Uncharacterized HTH-type transcriptional regulator ydcQ		Up Regulated	
ydcQ	946001	Uncharacterized HTH-type transcriptional regulator ydcQ	['Coenzyme transport and metabolism']	Up Regulated	
fabH	946003	3-oxoacyl-[acyl-carrier-protein] synthase 3		Down Regulated	
gluJ	945443	Glutamate/aspartate transport system permease protein gluJ		Down Regulated	
ydcR	946004	Uncharacterized HTH-type transcriptional regulator ydcR	[]	Up Regulated	
flgF	945639	Flagellar basal-body rod protein flgF		Down Regulated	
yceF	945631	Maf-like protein yceF 1; Maf-like protein yceF		Up Regulated	
yniC	945632	Phosphatase yniC		Temporarily Down Regulated	
tolB	945429	Protein tolB		Down Regulated	
ydiU	946219	UPF0061 protein ydiU		Down Regulated	
pspD	945635	Phage shock protein D		Up Regulated	
folA	944790	Dihydrofolate reductase; Dihydrofolate reductase type 1		Temporarily Up Regulated	
flgE	945636	Flagellar hook protein flgE		Down Regulated	
yaaH	944792	Inner membrane protein yaaH		Ambiguous/Unsorted	
flgN	945634	Flagella synthesis protein flgN		Down Regulated	
murE	944791	UDP-N-acetylmuramoyl-L-alanyl-D-glutamate--2,6-diaminopimelate ligase		Down Regulated	
aceF	944794	Dihydrodipicolylsine-residue acetyltransferase component of pyruvate dehydrogenase complex		Down Regulated	
setA	944793	Sugar efflux transporter A		Temporarily Down Regulated	
leuB	944798	3-isopropylmalate dehydrogenase		Down Regulated	
otsB	946406	Trehalose-phosphate phosphatase		Up Regulated	
ftsI	944799	Peptidoglycan synthetase ftsI		Down Regulated	
yncB	946012	Putative NADP-dependent oxidoreductase yncB		Ambiguous/Unsorted	
yqjG	946013	Z2450; ECUMN_1620; ECED1_1533; ECDH10B_1444; b1325; UTI89_C1596; E2348C_1518; ECIAI1_1350; c1797; APECO1_478; ECS88_1467; ECIAI39_1677; EC55989_1489		Temporarily Down Regulated	
yccA	946016	Inner membrane protein yccA		Down Regulated	
ybiJ	945433	Uncharacterized protein ybiJ	[]	Up Regulated	
araB	946017	Ribulokinase		Up Regulated	
glnQ	945435	Glutamine transport ATP-binding protein glnQ		Down Regulated	
yfcA	946808	UPF0721 transmembrane protein yfcA		Down Regulated	
csgC	945623	Putative curli production protein csgC		Down Regulated	
yfcL	946804	Uncharacterized protein yfcL	['Cell wall membrane envelope biogenesis', 'amino acid biosynthetic process', 'aromatic amino acid family biosynthetic process']	Down Regulated	
yibG	946803	b0502; ECDH10B_0458		Down Regulated	
ribD	945620	Riboflavin biosynthesis protein ribD		Down Regulated	
glnP	945621	Glutamine transport system permease protein glnP		Temporarily Down Regulated	
dapB	944762	Dihydrodipicolinate reductase		Down Regulated	
ileS	944761	Isoleucyl-tRNA synthetase		Down Regulated	
hcaD	945427	3-phenylpropionate/cinnamic acid dioxygenase ferredoxin--NAD(+) reductase component		Temporarily Up Regulated	
mepA	946812	Penicillin-insensitive murein endopeptidase		Down Regulated	
ybiH	945421	Uncharacterized HTH-type transcriptional regulator ybiH	['Defense mechanisms', 'Primary Active Transporters']	Ambiguous/Unsorted	
exbB	945420	Biopolymer transport protein exbB		Down Regulated	
cyoB	945615	Ubiquinol oxidase subunit 1		Down Regulated	
ndk	945611	Nucleoside diphosphate kinase		Temporarily Down Regulated	
msyB	945612	Acidic protein msyB		Temporarily Up Regulated	
rbbA	947998	Uncharacterized ABC transporter ATP-binding protein yhiH		Temporarily Up Regulated	
carB	944775	Carbamoyl-phosphate synthase large chain		Down Regulated	
ftsA	944778	Cell division protein ftsA		Down Regulated	
nikR	947995	Nickel-responsive regulator		Temporarily Up Regulated	
sspB	944774	Stringent starvation protein B		Down Regulated	
kefC	944773	Glutathione-regulated potassium-efflux system protein kefC		Ambiguous/Unsorted	
rpmD	947797	50S ribosomal protein L30		Down Regulated	
secY	947799	Preprotein translocase subunit secY; Preprotein translocase secY subunit		Down Regulated	
rplO	947798	50S ribosomal protein L15		Down Regulated	
rpsD	947793	30S ribosomal protein S4		Down Regulated	
rpsK	947792	30S ribosomal protein S11		Down Regulated	
rpsE	947795	30S ribosomal protein S5		Down Regulated	
rpoA	947794	DNA-directed RNA polymerase subunit alpha		Down Regulated	
rpsM	947791	30S ribosomal protein S13; 30S ribosomal protein		Down Regulated	
metC	946240	Cystathionine beta-lyase metC		Down Regulated	
ybdG	946243	Uncharacterized protein ybdG	[]	Down Regulated	
pspF	945683	Psp operon transcriptional activator		Down Regulated	

potD	945682	Spermidine/putrescine-binding periplasmic protein		Down Regulated	
fiu	946246	Catechololate siderophore receptor fiu		Temporarily Up Regulated	
cobB	945687	NAD-dependent deacetylase		Up Regulated	
panD	945686	Aspartate 1-decarboxylase		Down Regulated	
nudJ	945689	Phosphatase nudJ		Down Regulated	
ybhL	945401	Inner membrane protein ybhL		Temporarily Up Regulated	
rplQ	947784	50S ribosomal protein L17		Down Regulated	
trkA	947788	Trk system potassium uptake protein trkA		Up Regulated	
yhdN	947785	Uncharacterized protein yhdN	[]	Ambiguous/Unsorted	
yehQ	946654	ECIAI39_0891; E2348C_2268; APECO1_4427; c2652; ECS88_2265; b2122; Z3295; ECED1_2478; ECUMN_2456; UTI89_C2394; ECDH10B_2277; ECIAI1_2198		Up Regulated	
spy	946253	Spheroplast protein Y		Up Regulated	
ycfP	945676	UPF0227 protein ycfP		Temporarily Up Regulated	
astB	946259	N-succinylarginine dihydrolase		Ambiguous/Unsorted	
lptE	946257	LPS-assembly lipoprotein lptE		Down Regulated	
lolC	945673	Lipoprotein-releasing system transmembrane protein lolC		Down Regulated	
flgB	945678	Flagellar basal-body rod protein flgB		Down Regulated	
parE	947501	DNA topoisomerase 4 subunit B		Down Regulated	
ybiX	947502	PKHD-type hydroxylase ybiX		Ambiguous/Unsorted	
yrdB	947774	Uncharacterized protein yrdB	[' Building block biosynthesis', 'purine nucleotide biosynthetic process', 'aromatic amino acid family biosynthetic process']	Temporarily Down Regulated	
yrdA	947775	Protein yrdA		Down Regulated	
fnt	947779	Methionyl-tRNA formyltransferase		Ambiguous/Unsorted	
nlpC	946220	Probable lipoprotein nlpC		Up Regulated	
holB	945661	DNA polymerase III subunit delta'		Down Regulated	
thrS	946222	Threonyl-tRNA synthetase		Down Regulated	
mrp	946627	Protein mrp		Ambiguous/Unsorted	
pntA	946628	NAD(P) transhydrogenase subunit alpha		Down Regulated	
ycfS	945666	Uncharacterized protein ycfS	[]	Down Regulated	
aroH	946229	Phospho-2-dehydro-3-deoxyheptonate aldolase, Trp-sensitive		Down Regulated	
infC	946225	Translation initiation factor IF-3		Down Regulated	
accC	947761	Biotin carboxylase		Down Regulated	
aaeR	947760	HTH-type transcriptional activator aaeR		Up Regulated	
yhdV	947767	Uncharacterized protein yhdV	[' Electrochemical potential driven transporters', ' Protection', 'cell cycle', 'cell division']	Up Regulated	
acrF	947768	Acriflavine resistance protein F		Up Regulated	
yagV	946631	Uncharacterized protein yagV	[]	Up Regulated	
yegU	946630	Uncharacterized protein yegU	[]	Down Regulated	
yhdY	947764	Inner membrane amino-acid ABC transporter permease protein yhdY		Down Regulated	
yceD	945650	Uncharacterized protein yceD	[]	Down Regulated	
ydiZ	946232	Uncharacterized protein ydiZ	[' Carbon compound utilization', ' Energy metabolism carbon', 'translation']	Temporarily Up Regulated	
yfaA	946618	Uncharacterized protein yfaA	['Replication recombination and repair', ' RNA related', ' Type of regulation']	Ambiguous/Unsorted	
rpmF	945657	50S ribosomal protein L32		Down Regulated	
ycfH	945656	Uncharacterized deoxyribonuclease ycfH	[]	Temporarily Up Regulated	
ydjN	946238	Uncharacterized symporter ydjN	[]	Down Regulated	
yhcH	947750	Uncharacterized protein yhcH	['Carbohydrate transport and metabolism', 'carbohydrate metabolic process']	Up Regulated	
flgK	945648	Flagellar hook-associated protein 1		Down Regulated	
fhuE	945649	FhuE receptor		Ambiguous/Unsorted	
yegS	946626	Probable lipid kinase yegS; Lipid kinase yegS		Up Regulated	
mreD	947756	Rod shape-determining protein mreD		Temporarily Down Regulated	
nanK	947757	N-acetylmannosamine kinase		Temporarily Up Regulated	
tolA	946625	Protein tolA		Down Regulated	
accB	947758	Biotin carboxyl carrier protein of acetyl-CoA carboxylase		Down Regulated	
hpt	946624	Hypoxanthine phosphoribosyltransferase		Down Regulated	
ccmH	946623	Cytochrome c-type biogenesis protein ccmH		Down Regulated	
cyaA	947755	Adenylate cyclase		Temporarily Down Regulated	
nanE	947745	Putative N-acetylmannosamine-6-phosphate 2-epimerase		Up Regulated	
aaeA	947748	p-hydroxybenzoic acid efflux pump subunit aaeA		Up Regulated	
aaeB	947747	p-hydroxybenzoic acid efflux pump subunit aaeB		Up Regulated	
glgS	947533	Glycogen synthesis protein glgS		Up Regulated	
hybC	945182	Hydrogenase-2 large chain		Up Regulated	
flgI	947534	Flagellar P-ring protein		Down Regulated	
yejL	946694	UPF0352 protein yejL		Ambiguous/Unsorted	
yqiK	947537	Inner membrane protein yqiK		Up Regulated	
rtn	946695	Protein rtn		Temporarily Down Regulated	
nanT	947740	Putative sialic acid transporter; Putative sialic acid transporter 1		Up Regulated	
lpxT	946693	Inner membrane protein yeiU		Down Regulated	
fepB	947538	Ferrienterobactin-binding periplasmic protein		Ambiguous/Unsorted	
yeeN	946493	UPF0082 protein yeeN		Temporarily Down Regulated	
guaA	947334	GMP synthase [glutamine-hydrolyzing]		Down Regulated	
rhtC	948317	Threonine efflux protein		Down Regulated	
sulA	947335	Cell division inhibitor sulA		Up Regulated	
tatB	948319	Sec-independent protein translocase protein tatB homolog; Sec-independent protein translocase protein tatB		Down Regulated	
dapE	948313	Succinyl-diaminopimelate desuccinylase		Ambiguous/Unsorted	
pldB	948314	Lysophospholipase L2		Temporarily Down Regulated	
shiA	946495	Shikimate transporter		Down Regulated	
RhtB	948316	Homoserine/homoserine lactone efflux protein		Down Regulated	

yhcG	947739	Uncharacterized protein yhcG	[' Macromolecule degradation']	Down Regulated	
glgB	947940	1,4-alpha-glucan-branching enzyme		Down Regulated	
metR	948310	HTH-type transcriptional regulator metR		Up Regulated	
hemY	948311	Protein hemY		Down Regulated	
glgX	947941	Glycogen debranching enzyme		Up Regulated	
yeeJ	946498	Uncharacterized protein yeeJ		Up Regulated	
ushA	947331	Protein ushA		Down Regulated	
yejM	946685	Inner membrane protein yejM		Down Regulated	
aroB	947927	3-dehydroquinate synthase		Down Regulated	
flgC	946687	Flagellar basal-body rod protein flgC		Down Regulated	
nuoM	947731	NADH-quinone oxidoreductase subunit M		Down Regulated	
yrbG	947730	Inner membrane protein yrbG		Ambiguous/Unsorted	
yejF	946689	Uncharacterized ABC transporter ATP-binding protein yejF		Down Regulated	
pgpA	947542	Phosphatidylglycerophosphatase A		Up Regulated	
ahpF	947540	Alkyl hydroperoxide reductase subunit F		Down Regulated	
kdsD	947734	Arabinose 5-phosphate isomerase		Down Regulated	
rtcB	947929	Protein rtcB		Temporarily Up Regulated	
yggG	945173	Uncharacterized metalloprotease yggG	[]	Up Regulated	
osmF	946681	Putative osmoprotectant uptake system substrate-binding protein osmF		Temporarily Up Regulated	
bglX	946682	Periplasmic beta-glucosidase		Temporarily Down Regulated	
rfaE	947548	Bifunctional protein hldE		Down Regulated	
flgM	946684	Negative regulator of flagellin synthesis		Down Regulated	
yodA	946480	Metal-binding protein yodA		Up Regulated	
zinT	946480	Metal-binding protein yodA		Up Regulated	
ygeA	947348	Uncharacterized protein ygeA	[]	Up Regulated	
hchA	946481	Chaperone protein hchA		Ambiguous/Unsorted	
pldA	948307	Phospholipase A1		Down Regulated	
yedW	946486	Probable transcriptional regulatory protein yedW		Temporarily Down Regulated	
damX	947930	Protein damX		Down Regulated	
rffG	948300	dTDP-glucose 4,6-dehydratase		Down Regulated	
glgP	947931	Phosphorylase; Glycogen phosphorylase		Down Regulated	
rffM	948301	Probable UDP-N-acetyl-D-mannosaminuronic acid transferase		Down Regulated	
yhbJ	947727	UPF0042 protein yhbJ		Down Regulated	
glpE	947935	Thiosulfate sulfurtransferase glpE		Temporarily Down Regulated	
glgA	947932	Glycogen synthase		Temporarily Up Regulated	
gltB	947724	Glutamate synthase [NADPH] large chain		Down Regulated	
gltD	947723	Glutamate synthase [NADPH] small chain		Down Regulated	
speE	947726	Spermidine synthase		Down Regulated	
ampE	946678	Protein ampE		Ambiguous/Unsorted	
lptB	947725	Lipopolysaccharide export system ATP-binding protein lptB		Down Regulated	
fruK	946676	1-phosphofructokinase		Temporarily Up Regulated	
secG	947720	Protein-export membrane protein secG		Down Regulated	
npr	947914	Phosphocarrier protein NPr		Ambiguous/Unsorted	
yeiP	946674	Elongation factor P-like protein		Down Regulated	
lptC	947722	Lipopolysaccharide export system protein lptC		Down Regulated	
bioH	947916	Carboxylesterase bioH		Down Regulated	
fruA	946672	PTS system fructose-specific EIIBC component		Temporarily Up Regulated	
aes	947514	Acetyl esterase		Up Regulated	
araA	947511	L-arabinose isomerase		Up Regulated	
lplT	947317	Lysophospholipid transporter lplT		Temporarily Up Regulated	
kdul	947319	4-deoxy-L-threo-5-hexosulose-uronate ketol-isomerase		Down Regulated	
yafC	947507	Uncharacterized HTH-type transcriptional regulator yafC	['Transcription', ' RNA related', ' Type of regulation', 'transcription', 'regulation of transcription DNA dependent']	Up Regulated	
rsxE	947509	Electron transport complex protein rnfE		Down Regulated	
galR	947314	HTH-type transcriptional regulator galR		Temporarily Down Regulated	
malP	947922	Phosphorylase; Maltodextrin phosphorylase		Down Regulated	
malQ	947923	4-alpha-glucanotransferase		Down Regulated	
gntT	947924	High-affinity gluconate transporter		Down Regulated	
kdsC	947717	3-deoxy-D-manno-octulosonate 8-phosphate phosphatase		Ambiguous/Unsorted	
hpf	947718	Probable sigma(54) modulation protein		Down Regulated	
pspB	945893	Phage shock protein B		Up Regulated	
speD	947719	S-adenosylmethionine decarboxylase proenzyme		Down Regulated	
lptA	947920	Lipopolysaccharide export system protein lptA		Down Regulated	
speB	947715	Agmatinase		Down Regulated	
yeiH	946668	UPF0324 inner membrane protein yeiH; Probable endonuclease 4		Up Regulated	
ybjQ	945493	UPF0145 protein ybjQ		Up Regulated	
rpoN	947714	RNA polymerase sigma-54 factor		Down Regulated	
nfo	946669	Endonuclease 4; Probable endonuclease 4		Down Regulated	
yrbD	947712	Uncharacterized protein yrbD	['Amino acid transport and metabolism']	Down Regulated	
miaD	947712	Uncharacterized protein yrbD		Down Regulated	
ybjS	945495	Uncharacterized protein ybjS	[]	Ambiguous/Unsorted	
aat	945490	Leucyl/phenylalanyl-tRNA--protein transferase		Down Regulated	
nudE	947906	ADP compounds hydrolase nudE		Down Regulated	
miaC	947710	Protein yrbC		Down Regulated	
yrbC	947710	Protein yrbC		Down Regulated	

yohD	946661	Inner membrane protein yohD		Ambiguous/Unsorted	
thrC	945198	Threonine synthase		Down Regulated	
pbpG	946662	D-alanyl-D-alanine endopeptidase		Ambiguous/Unsorted	
ybjD	945498	Uncharacterized protein ybjD	['SOS response']	Temporarily Up Regulated	
entD	945194	4'-phosphopantetheinyl transferase entD		Temporarily Up Regulated	
rpmA	945190	50S ribosomal protein L27		Down Regulated	
cusA	945191	Cation efflux system protein cusA		Down Regulated	
phoP	945697	Transcriptional regulatory protein phoP		Ambiguous/Unsorted	
yiaC	946460	Uncharacterized N-acetyltransferase yiaC	['amino acid biosynthetic process']	Temporarily Down Regulated	
nudF	947519	ADP-ribose pyrophosphatase		Down Regulated	
hslR	947912	Heat shock protein 15		Ambiguous/Unsorted	
potC	945691	Spermidine/putrescine transport system permease protein potC		Down Regulated	
ymdC	947321	Uncharacterized protein ymdC	[]	Down Regulated	
ompR	947913	Transcriptional regulatory protein ompR		Temporarily Up Regulated	
hflD	945693	ECIAI1_1170; ECS88_1147; ECDH10B_1204; b1132; ECIAI39_2005; ECED1_1276; E2348C_1273; ECUMN_1376; EC55989_1245		Temporarily Down Regulated	
dusB	947707	tRNA-dihydrouridine synthase B		Down Regulated	
prmA	947708	Ribosomal protein L11 methyltransferase		Down Regulated	
artP	945489	Arginine transport ATP-binding protein artP		Ambiguous/Unsorted	
ygiD	947578	Probable O-sialoglycoprotein endopeptidase		Ambiguous/Unsorted	
murJ	945487	Virulence factor mviN homolog		Down Regulated	
potF	945480	Putrescine-binding periplasmic protein		Temporarily Up Regulated	
ybjC	945481	Uncharacterized protein ybjC	['Energy production and conversion', 'Translation ribosomal structure and biogenesis', 'Energy metabolism carbon ', 'Building block biosynthesis']	Ambiguous/Unsorted	
dnaG	947570	DNA primase		Up Regulated	
gmr	945868	Protein gmr		Down Regulated	
rimK	945484	Ribosomal protein S6 modification protein		Down Regulated	
hoIA	947573	DNA polymerase III subunit delta		Down Regulated	
potI	945485	Putrescine transport system permease protein potI		Temporarily Up Regulated	
csrD	947702	Uncharacterized protein yhdA		Temporarily Down Regulated	
murA	947703	UDP-N-acetylglucosamine 1-carboxyvinyltransferase		Down Regulated	
btuF	947574	Vitamin B12-binding protein		Down Regulated	
srlA	947575	Glucitol/sorbitol permease IIC component		Temporarily Up Regulated	
yhhQ	947984	Inner membrane protein yhhQ		Ambiguous/Unsorted	
ymjA	945874	Uncharacterized protein ymjA	['Amino acid transport and metabolism', 'Electrochemical potential driven transporters']	Ambiguous/Unsorted	
ribE	946453	6,7-dimethyl-8-ribityllumazine synthase		Down Regulated	
yhhS	947982	UPF0226 protein yhhS		Temporarily Down Regulated	
potG	945476	Putrescine transport ATP-binding protein potG		Temporarily Up Regulated	
tyrR	945879	Transcriptional regulatory protein tyrR		Up Regulated	
ftsX	947969	Cell division protein ftsX		Down Regulated	
ybjI	945470	Phosphatase ybjI		Up Regulated	
ybjJ	945471	Inner membrane protein ybjJ		Temporarily Down Regulated	
ihfA	945472	Integration host factor subunit alpha		Down Regulated	
ybjK	945473	Uncharacterized HTH-type transcriptional regulator ybjK	['translation', 'ion transport']	Up Regulated	
puuD	945882	Gamma-glutamyl-gamma-aminobutyrate hydrolase		Down Regulated	
yhhN	947973	Uncharacterized membrane protein yhhN	['Energy metabolism carbon ']	Ambiguous/Unsorted	
ybaV	945884	Uncharacterized protein ybaV	[]	Up Regulated	
pspA	945887	Phage shock protein A		Up Regulated	
puuR	945886	HTH-type transcriptional regulator puuR		Ambiguous/Unsorted	
ygdR	947304	Uncharacterized lipoprotein ygdR	['Amino acid transport and metabolism', 'Building block biosynthesis', 'amino acid metabolic process']	Temporarily Up Regulated	
hemD	945887	Uroporphyrinogen-III synthase		Down Regulated	
livJ	947971	Leu/Ile/Val-binding protein		Down Regulated	
rpoH	947970	RNA polymerase sigma-32 factor; RNA polymerase sigma factor		Up Regulated	
ascG	947305	HTH-type transcriptional regulator ascG		Temporarily Down Regulated	
ygiF	947554	Uncharacterized protein ygiF	['Amino acid transport and metabolism']	Temporarily Down Regulated	
yliI	945467	Soluble aldose sugar dehydrogenase yliI		Up Regulated	
ygiM	947555	Uncharacterized protein ygiM		Down Regulated	
rimO	945465	Ribosomal protein S12 methylthiotransferase rimO		Down Regulated	
yliF	945463	Uncharacterized membrane protein yliF	['Signal transduction mechanisms', 'Type of regulation', 'two component signal transduction system phosphorelay ', 'transcription']	Up Regulated	
bacA	947551	Undecaprenyl-diphosphatase		Down Regulated	
gsiC	945460	Glutathione transport system permease protein gsiC		Ambiguous/Unsorted	
gsiD	945461	Glutathione transport system permease protein gsiD		Down Regulated	
ribC	945848	Riboflavin synthase alpha chain		Ambiguous/Unsorted	
yrbA	947958	Uncharacterized protein yrbA	['Amino acid transport and metabolism', 'Building block biosynthesis', 'amino acid biosynthetic process']	Down Regulated	
trpE	945846	Anthranyl synthase component 1		Down Regulated	
livM	947966	High-affinity branched-chain amino acid transport system permease protein livM		Temporarily Up Regulated	
ampG	946438	Protein ampG		Down Regulated	
yjcE	948577	Uncharacterized Na(+)/H(+) exchanger yjcE	['rRNA processing']	Down Regulated	
livH	947965	High-affinity branched-chain amino acid transport system permease protein livH		Temporarily Up Regulated	
ydgD	946436	Uncharacterized serine protease ydgD	['response to stress']	Up Regulated	
livG	947967	High-affinity branched-chain amino acid transport ATP-binding protein livG		Temporarily Up Regulated	
livF	947961	High-affinity branched-chain amino acid transport ATP-binding protein livF		Down Regulated	
yhhK	947963	Uncharacterized protein yhhK	['Carbon compound utilization', 'Metabolism of other compounds']	Down Regulated	
ybeY	946430	Putative metalloprotease ybeY		Temporarily Up Regulated	
ghrA	946431	Glyoxylate/hydroxypyruvate reductase A		Down Regulated	
yjcH	948574	Inner membrane protein yjcH		Ambiguous/Unsorted	

gsiA	945457	Glutathione import ATP-binding protein gsiA		Down Regulated	
gsiB	945459	Glutathione-binding protein gsiB		Down Regulated	
rpoD	947567	RNA polymerase sigma factor rpoD; RNA polymerase sigma factor		Temporarily Down Regulated	
moeA	945454	Molybdopterin biosynthesis protein moeA		Down Regulated	
dacC	945455	D-alanyl-D-alanine carboxypeptidase dacC		Temporarily Up Regulated	
iaaA	945456	Isoaspartyl peptidase		Down Regulated	
folC	945451	Bifunctional protein folC		Down Regulated	
moeB	945452	Molybdopterin biosynthesis protein moeB		Ambiguous/Unsorted	
mug	947560	G/U mismatch-specific DNA glycosylase		Ambiguous/Unsorted	
ggT	947947	Gamma-glutamyltranspeptidase		Up Regulated	
yciW	945859	Uncharacterized protein yciW	['Lipid transport and metabolism']	Down Regulated	
proB	946425	Glutamate 5-kinase		Ambiguous/Unsorted	
yjcB	948569	Uncharacterized protein yjcB	[]	Down Regulated	
rmb	945864	Exoribonuclease 2		Down Regulated	
soxR	948566	Redox-sensitive transcriptional activator soxR		Up Regulated	
fecA	946427	Fe(3+) dicitrate transport protein fecA		Down Regulated	
soxS	948567	Regulatory protein soxS		Temporarily Up Regulated	
yrbB	947954	Uncharacterized protein yrbB	['Cell wall membrane envelope biogenesis', 'Macromolecules cellular constituent biosynthesis', 'cell cycle', 'cell division']	Down Regulated	
miaB	947954	Uncharacterized protein yrbB		Down Regulated	
ugpC	947953	sn-glycerol-3-phosphate import ATP-binding protein ugpC		Temporarily Up Regulated	
ydfI	945861	Uncharacterized oxidoreductase ydfI	['Carbon compound utilization']	Temporarily Down Regulated	
yciN	945860	Protein yciN		Temporarily Up Regulated	
pgpB	945863	Phosphatidylglycerophosphatase B		Down Regulated	
topA	945862	DNA topoisomerase 1		Down Regulated	
uvrY	946424	Response regulator uvrY		Ambiguous/Unsorted	
yjbR	948560	Uncharacterized protein yjbR	['Amino acid transport and metabolism', 'Central intermediary metabolism', 'amino acid biosynthetic process', 'biosynthetic process']	Temporarily Down Regulated	
alr	948564	Alanine racemase, biosynthetic; Alanine racemase		Down Regulated	
yjcD	948565	Putative permease yjcD		Temporarily Up Regulated	
dapF	948364	Diaminopimelate epimerase		Down Regulated	
ydgC	945156	Inner membrane protein ydgC		Temporarily Down Regulated	
ydgJ	947164	Uncharacterized oxidoreductase ydgJ	[]	Temporarily Down Regulated	
glnL	948360	Nitrogen regulation protein NR(II); Sensor protein		Down Regulated	
glnG	948361	Nitrogen regulation protein NR(I)		Down Regulated	
hemN	948362	Oxygen-independent coproporphyrinogen-III oxidase		Down Regulated	
feaR	945941	Transcriptional activator feaR		Ambiguous/Unsorted	
emrB	947167	Multidrug resistance protein B		Ambiguous/Unsorted	
yihI	948363	UPF0241 protein yihI		Up Regulated	
luxS	947168	S-ribosylhomocysteine lyase		Down Regulated	
iclR	948524	Acetate operon repressor		Down Regulated	
yihL	948368	Uncharacterized HTH-type transcriptional regulator yihL	['Amino acid transport and metabolism', 'Carbon compound utilization', 'Central intermediary metabolism', 'Primary Active Transport']	Down Regulated	
rfbA	945154	Glucose-1-phosphate thymidyltransferase; Glucose-1-phosphate thymidyltransferase 1		Down Regulated	
ubiE	948926	Ubiquinone/menaquinone biosynthesis methyltransferase ubiE		Down Regulated	
typA	948369	GTP-binding protein typA/BipA; GTP-binding protein typA/bipA		Down Regulated	
prfB	947369	Peptide chain release factor 2		Down Regulated	
yccJ	948930	Uncharacterized protein yccJ	['Macromolecules cellular constituent biosynthesis']	Temporarily Up Regulated	
malY	945937	Protein malY		Temporarily Up Regulated	
ybgS	945356	Uncharacterized protein ybgS	['Inorganic ion transport and metabolism', 'Electrochemical potential driven transporters', 'ion transport']	Temporarily Up Regulated	
Cyca	948725	D-serine/D-alanine/glycine transporter		Down Regulated	
fkIB	948726	FKBP-type 22 kDa peptidyl-prolyl cis-trans isomerase		Down Regulated	
ybiO	945935	Uncharacterized mscS family protein ybiO	[]	Temporarily Up Regulated	
ytfB	948727	Uncharacterized protein ytfB	['Replication recombination and repair', 'DNA recombination', 'DNA integration']	Ambiguous/Unsorted	
galE	945354	UDP-glucose 4-epimerase		Ambiguous/Unsorted	
rpsR	948721	30S ribosomal protein S18		Down Regulated	
priB	948722	Primosomal replication protein n		Down Regulated	
fdx	947160	2Fe-2S ferredoxin		Temporarily Down Regulated	
mngB	945359	Alpha-mannosidase mngB		Up Regulated	
rpsF	948723	30S ribosomal protein S6		Down Regulated	
ygfA	945167	Uncharacterized protein ygfA	['cell cycle', 'cell division']	Up Regulated	
dtb	948378	D-tyrosyl-tRNA(Tyr) deacylase		Down Regulated	
dbpA	947153	ATP-independent RNA helicase dbpA		Down Regulated	
ycfL	948539	Uncharacterized protein ycfL	['Nucleotide transport and metabolism', 'Cell wall membrane envelope biogenesis', 'Building block biosynthesis']	Down Regulated	
yfgI	945168	Uncharacterized protein yfgI	['Lipid transport and metabolism', 'Building block biosynthesis']	Temporarily Up Regulated	
malE	948538	Maltose-binding periplasmic protein		Temporarily Up Regulated	
malK	948537	Maltose/maltodextrin import ATP-binding protein malK		Down Regulated	
ygaC	947156	Uncharacterized protein ygaC	[]	Up Regulated	
cpdB	948729	ECs5191; ECP_4467; ECSE_4519; EcSMS35_4692; ECUMN_4750; Z5824; EcoC_3793; ECS88_4807; E2348C_4544; EC55989_4773; ECDH10B_4408; ECED1_5072; ECH74115_5730		Temporarily Down Regulated	
trkG	945932	Trk system potassium uptake protein trkG		Up Regulated	
ascF	947154	PTS system arbutin-, cellobiose-, and salicin-specific EIIBC component		Up Regulated	
feaB	945933	Phenylacetaldehyde dehydrogenase		Up Regulated	
malF	948532	Maltose transport system permease protein malF		Down Regulated	
lysC	948531	Aspartokinase; Lysine-sensitive aspartokinase 3		Down Regulated	
pqiA	944999	Paraquat-inducible protein A		Ambiguous/Unsorted	
malG	948530	Maltose transport system permease protein malG		Temporarily Up Regulated	
yjC	948918	Probable phosphoglycerate mutase gpmB		Temporarily Down Regulated	

macB	945164	Macrolide export ATP-binding/permease protein macB		Temporarily Down Regulated
ybcL	945165	UPF0098 protein ybcL		Up Regulated
yigP	948915	Uncharacterized protein yigP	[protein secretion]	Down Regulated
yjID	948924	Uncharacterized tRNA/rRNA methyltransferase lasT		Ambiguous/Unsorted
ytfH	948730	Uncharacterized HTH-type transcriptional regulator ytfH	[]	Up Regulated
yqeA	947358	Carbamate kinase-like protein yqeA		Temporarily Up Regulated
mocA	947356	Uncharacterized protein ygfJ		Temporarily Up Regulated
ygfJ	947356	Uncharacterized protein ygfJ	[electron transport]	Temporarily Up Regulated
glnA	948370	Glutamine synthetase		Down Regulated
ytfJ	948737	Uncharacterized protein ytfJ	[Energy production and conversion', 'Secondary metabolites biosynthesis transport and catabolism]	Up Regulated
ytfL	948735	UPF0053 inner membrane protein ytfL		Temporarily Down Regulated
modF	945368	Putative molybdenum transport ATP-binding protein modF		Down Regulated
yaiZ	947355	Uncharacterized protein yaiZ	[]	Ambiguous/Unsorted
gltK	947354	Glutamate/aspartate transport system permease protein gltK		Down Regulated
qorB	948731	Uncharacterized oxidoreductase ytfG		Up Regulated
ygeR	947352	Uncharacterized lipoprotein ygeR		Ambiguous/Unsorted
ygbA	947187	Uncharacterized protein ygbA	[Energy production and conversion', 'Primary Active Transporters]	Up Regulated
msrB	947188	Peptide methionine sulfoxide reductase msrB		Ambiguous/Unsorted
fdol	948383	Formate dehydrogenase, cytochrome b556(fdol) subunit		Down Regulated
malM	948547	Maltose operon periplasmic protein		Temporarily Up Regulated
allS	945139	HTH-type transcriptional activator allS		Up Regulated
ydjA	945964	Putative NAD(P)H nitroreductase ydjA		Down Regulated
yddB	945961	Uncharacterized protein yddB	[Cell wall membrane envelope biogenesis', 'translation', 'ion transport']	Temporarily Up Regulated
hinT	948549	HIT-like protein hinT		Down Regulated
ybdJ	947183	Uncharacterized protein ybdJ	[Protection', 'ion transport', 'iron ion transport']	Up Regulated
nuoN	945136	NADH-quinone oxidoreductase subunit N		Down Regulated
MltB	947184	Membrane-bound lytic murein transglycosylase B		Temporarily Down Regulated
lamB	948548	Maltoporin		Down Regulated
frvX	948388	Putative frv operon protein frvX		Ambiguous/Unsorted
yfiL	947106	Uncharacterized protein yfiL	[Replication recombination and repair', 'DNA recombination]	Temporarily Up Regulated
norR	947186	Anaerobic nitric oxide reductase transcription regulator norR		Up Regulated
tus	945135	DNA replication terminus site-binding protein		Up Regulated
recN	947105	DNA repair protein recN		Ambiguous/Unsorted
pmrD	945130	Signal transduction protein pmrD		Ambiguous/Unsorted
ffh	947102	Signal recognition particle protein		Temporarily Down Regulated
rimM	947101	Ribosome maturation factor rimM		Down Regulated
dgkA	948543	Diacylglycerol kinase		Ambiguous/Unsorted
mtn	948542	5'-methylthioadenosine/S-adenosylhomocysteine nucleosidase		Down Regulated
ylaB	948951	Uncharacterized protein ylaB	[Signal transduction mechanisms', 'Type of regulation', 'two component signal transduction system phosphorelay', 'transcription]	Up Regulated
yibA	948108	Protein yibA		Up Regulated
visC	947389	Protein visC		Down Regulated
efeU	948956	ECUMN_1201; ECIAI39_2139; ECS88_1033; ECDH10B_1089; EC55989_1127; b4490; ECED1_1172; ECIAI1_1062; E2348C_1067		Up Regulated
hypE	947182	Hydrogenase isoenzymes formation protein hypE		Temporarily Up Regulated
ubiH	947388	2-octaprenyl-6-methoxyphenol hydroxylase		Down Regulated
ybbO	945337	Uncharacterized oxidoreductase ybbO	[]	Down Regulated
fhlA	947181	Formate hydrogenlyase transcriptional activator		Up Regulated
thiL	947387	Thiamine-monophosphate kinase		Down Regulated
lyxK	948101	L-xylulose/3-keto-L-gulonate kinase		Ambiguous/Unsorted
sapF	945335	Peptide transport system ATP-binding protein sapF		Down Regulated
ppa	948748	Inorganic pyrophosphatase		Down Regulated
allR	945333	HTH-type transcriptional repressor allR		Up Regulated
ygfZ	947384	tRNA-modifying protein ygfZ		Temporarily Down Regulated
selB	948103	Selenocysteine-specific elongation factor		Down Regulated
yihW	948381	Uncharacterized HTH-type transcriptional regulator yihW	[Transcription', 'RNA related', 'Type of regulation', 'Genetic unit regulated', 'transcription', 'regulation of transcription DNA dependent transcription']	Temporarily Up Regulated
ydeN	945957	Uncharacterized sulfatase ydeN	[Signal transduction mechanisms', 'Metabolism of other compounds']	Temporarily Up Regulated
cueR	945332	HTH-type transcriptional regulator cueR		Up Regulated
aegA	947383	Protein aegA		Temporarily Up Regulated
fdoH	948395	Formate dehydrogenase-O iron-sulfur subunit		Down Regulated
dusA	948558	tRNA-dihydrouridine synthase A		Down Regulated
csrA	947176	Carbon storage regulator		Up Regulated
qorA	948556	Quinone oxidoreductase		Temporarily Up Regulated
dnaB	948555	Replicative DNA helicase		Down Regulated
rhaT	948398	L-rhamnose-proton symporter		Up Regulated
mppA	945951	Periplasmic murein peptide-binding protein		Up Regulated
allA	945141	Ureidoglycolate hydrolase		Up Regulated
ThiM	945142	Hydroxyethylthiazole kinase		Temporarily Down Regulated
dinF	948554	DNA-damage-inducible protein F		Ambiguous/Unsorted
yjbJ	948553	UPF0337 protein yjbJ		Temporarily Up Regulated
mtiA	948118	PTS system mannitol-specific EIICBA component		Temporarily Up Regulated
mtiR	948116	Mannitol operon repressor		Ambiguous/Unsorted
cydA	945341	Cytochrome d ubiquinol oxidase subunit 1		Up Regulated
mpl	948752	UDP-N-acetylmuramate:L-alanyl-gamma-D-glutamyl-meso-diaminopimelate ligase		Down Regulated
yibK	948119	Uncharacterized tRNA/rRNA methyltransferase yibK		Temporarily Down Regulated
yibH	948110	Inner membrane protein yibH		Up Regulated

zitB	945348	Zinc transporter zitB		Ambiguous/Unsorted	
yceB	947377	Uncharacterized lipoprotein yceB	[electron transport]	Down Regulated	
betB	947376	Betaine aldehyde dehydrogenase		Down Regulated	
ydhV	948756	Uncharacterized protein ydhV	[Central intermediary metabolism]	Up Regulated	
cydB	945347	Cytochrome d ubiquinol oxidase subunit 2		Ambiguous/Unsorted	
fbp	948753	Fructose-1,6-bisphosphatase class 1		Ambiguous/Unsorted	
ygjF	947373	Uncharacterized oxidoreductase ygjF	[tricarboxylic acid cycle]	Ambiguous/Unsorted	
lysS	947372	Lysyl-tRNA synthetase; Lysyl-tRNA synthetase, heat inducible		Down Regulated	
yibF	948113	Uncharacterized GST-like protein yibF	[]	Temporarily Down Regulated	
yddA	945945	Inner membrane ABC transporter ATP-binding protein yddA		Up Regulated	
yibJ	948112	b3595; ECDH10B_3776; Z5017		Up Regulated	
alkA	947371	DNA-3-methyladenine glycosylase 2		Temporarily Down Regulated	
yobB	948329	Uncharacterized protein yobB	[Replication recombination and repair]	Up Regulated	
rluA	946262	Ribosomal large subunit pseudouridine synthase A; Pseudouridine synthase		Ambiguous/Unsorted	
ygaH	945111	Uncharacterized protein ygaH	[Transcription', 'RNA related', 'Type of regulation', 'Protection', 'transcription', 'regulation of transcription DNA dependent']	Down Regulated	
fre	948325	NAD(P)H-flavin reductase		Down Regulated	
fadA	948324	3-ketoacyl-CoA thiolase		Up Regulated	
ubiD	948326	3-octaprenyl-4-hydroxybenzoate carboxy-lyase		Ambiguous/Unsorted	
tatA	948321	Sec-independent protein translocase protein tatA		Down Regulated	
ysgA	948320	Putative carboxymethylenebutenolidase		Down Regulated	
patA	947120	Putrescine aminotransferase		Up Regulated	
torA	946267	Trimethylamine-N-oxide reductase 1		Up Regulated	
apt	945113	Adenine phosphoribosyltransferase		Down Regulated	
metE	948323	5-methyltetrahydropteroyltrimethylglutamate--homocysteine methyltransferase		Ambiguous/Unsorted	
acrA	945112	Acriflavine resistance protein A		Down Regulated	
ybbP	945118	Uncharacterized ABC transporter permease ybbP		Temporarily Down Regulated	
pyrF	947121	Orotidine 5'-phosphate decarboxylase		Down Regulated	
rhsD	945116	Protein rhsD		Up Regulated	
yjgH	948769	UPF0076 protein yjgH		Up Regulated	
secB	948123	Protein-export protein secB		Down Regulated	
trpD	945109	Anthranylate synthase component II		Down Regulated	
gpsA	948125	Glycerol-3-phosphate dehydrogenase [NAD(P)+]		Down Regulated	
moaE	945399	Molybdopterin-converting factor subunit 2		Temporarily Up Regulated	
pyrB	948767	Aspartate carbamoyltransferase catalytic chain; Aspartate carbamoyltransferase		Down Regulated	
rhsA	948120	Protein rhsA		Up Regulated	
pepB	948766	Peptidase B		Down Regulated	
treR	948760	HTH-type transcriptional regulator treR		Ambiguous/Unsorted	
ybhK	945390	UPF0052 protein ybhK		Temporarily Down Regulated	
ycfD	945391	Uncharacterized protein ycfD	[]	Up Regulated	
cysE	948126	Serine acetyltransferase		Down Regulated	
yibQ	948128	Uncharacterized protein yibQ	[proteolysis]	Temporarily Down Regulated	
ybbN	947119	Uncharacterized protein ybbN	[Nucleotide transport and metabolism]	Down Regulated	
pepQ	948335	Xaa-Pro dipeptidase		Down Regulated	
ynjH	946279	Uncharacterized protein ynjH	[Amino acid transport and metabolism]	Up Regulated	
ybbJ	945126	Inner membrane protein ybbJ		Temporarily Up Regulated	
ompW	945128	Outer membrane protein W		Temporarily Up Regulated	
gcvT	947390	Aminomethyltransferase		Down Regulated	
rfaF	948135	ADP-heptose--LPS heptosyltransferase 2		Down Regulated	
gcvP	947394	Glycine dehydrogenase [decarboxylating]		Down Regulated	
rfaC	948136	Lipopolysaccharide heptosyltransferase 1		Down Regulated	
ypdB	947395	Uncharacterized response regulatory protein ypdB	[]	Temporarily Up Regulated	
rfaD	948134	ADP-L-glycero-D-manno-heptose-6-epimerase		Down Regulated	
gcvH	947393	Glycine cleavage system H protein		Down Regulated	
yibN	948131	Uncharacterized protein yibN	[]	Down Regulated	
grxC	948132	Glutaredoxin-3		Down Regulated	
argI	948774	Ornithine carbamoyltransferase chain I; Ornithine carbamoyltransferase		Temporarily Down Regulated	
rraB	948773	Uncharacterized protein yjgD		Up Regulated	
yjgM	948772	Uncharacterized N-acetyltransferase yjgM	[]	Temporarily Up Regulated	
tdh	948139	L-threonine 3-dehydrogenase		Ambiguous/Unsorted	
kbl	948138	2-amino-3-ketobutyrate coenzyme A ligase		Temporarily Up Regulated	
uvrD	948347	DNA helicase II		Down Regulated	
rdoA	948346	Protein rdoA		Down Regulated	
mobA	948349	Molybdopterin-guanine dinucleotide biosynthesis protein A		Temporarily Up Regulated	
ybgC	948907	Acyl-CoA thioester hydrolase ybgC		Temporarily Down Regulated	
yihD	948348	Protein yihD		Down Regulated	
yafD	946286	UPF0294 protein yafD		Up Regulated	
ygaW	947147	Uncharacterized protein ygaW	[]	Down Regulated	
sppA	946281	Protease 4		Down Regulated	
nupG	946282	Nucleoside permease nupG		Down Regulated	
ygaU	947144	Uncharacterized protein ygaU	[]	Ambiguous/Unsorted	
trmA	947143	tRNA (uracil-5-)-methyltransferase		Temporarily Down Regulated	
yjaG	948501	Uncharacterized protein yjaG	[]	Down Regulated	
nfi	948502	Endonuclease V		Down Regulated	
proW	947145	Glycine betaine/L-proline transport system permease protein proW		Ambiguous/Unsorted	

purH	948503	Bifunctional purine biosynthesis protein purH		Down Regulated	
ygiS	947140	Putative binding protein ygiS		Temporarily Down Regulated	
purD	948504	Phosphoribosylamine-glycine ligase		Down Regulated	
zraS	948506	Sensor protein; Sensor protein zraS		Ambiguous/Unsorted	
ybjE	947142	Uncharacterized protein ybjE	[' Building block biosynthesis', 'metabolic process']	Temporarily Down Regulated	
zraP	948507	Zinc resistance-associated protein		Temporarily Up Regulated	
holC	948787	DNA polymerase III subunit chi		Down Regulated	
yfcD	946783	Uncharacterized Nudix hydrolase yfcD	['tricarboxylic acid cycle', 'response to antibiotic']	Down Regulated	
yqhG	945919	Uncharacterized protein yqhG	['Replication recombination and repair', ' Carbon compound utilization', 'DNA recombination']	Up Regulated	
yccU	949008	Uncharacterized protein yccU	[]	Temporarily Up Regulated	
folX	946781	D-erythro-7,8-dihydroneopterin triphosphate epimerase		Ambiguous/Unsorted	
rfe	948789	Undecaprenyl-phosphate alpha-N-acetylglucosaminyl 1-phosphate transferase		Temporarily Down Regulated	
rfaY	948145	Lipopolysaccharide core biosynthesis protein rfaY		Down Regulated	
yajC	945374	UPF0092 membrane protein yajC		Down Regulated	
rfaL	948148	O-antigen ligase		Down Regulated	
rpsI	949000	30S ribosomal protein S9		Down Regulated	
DeoB	948910	Phosphopentomutase		Temporarily Up Regulated	
ybhA	945372	Phosphatase ybhA		Down Regulated	
yfcl	946787	Uncharacterized protein yfcl	['Amino acid transport and metabolism', ' Building block biosynthesis', 'amino acid metabolic process', 'aromatic amino acid family']	Up Regulated	
radA	948912	DNA repair protein radA		Temporarily Up Regulated	
mngR	945371	Mannosyl-D-glycerate transport/metabolism system repressor mngR		Ambiguous/Unsorted	
intB	948782	ECDH10B_4464; ECIAI39_4743; UTI89_C4878; b4271; ECED1_5125; EC55989_4829; ECUMN_4803		Temporarily Up Regulated	
nadR	948911	Transcriptional regulator nadR		Down Regulated	
valS	948785	Valyl-tRNA synthetase		Down Regulated	
serB	948913	Phosphoserine phosphatase		Temporarily Down Regulated	
yfcH	946784	Epimerase family protein yfcH		Up Regulated	
yeaG	946297	Uncharacterized protein yeaG	[]	Up Regulated	
YigA	948359	Uncharacterized protein yigA		Down Regulated	
recR	945100	Recombination protein recR		Down Regulated	
yihA	948358	Probable GTP-binding protein engB		Down Regulated	
yigB	948357	Uncharacterized protein yigB	[]	Down Regulated	
ygaV	947136	Probable HTH-type transcriptional regulator ygaV		Up Regulated	
tomB	945106	Uncharacterized protein ybaJ		Up Regulated	
metA	948513	Homoserine O-succinyltransferase		Temporarily Up Regulated	
yjaB	948514	Uncharacterized N-acetyltransferase yjaB	[]	Up Regulated	
dnaX	945105	DNA polymerase III subunit tau		Down Regulated	
polA	948356	DNA polymerase I		Down Regulated	
ftsK	945102	DNA translocase ftsK		Temporarily Down Regulated	
aceA	948517	Isocitrate lyase		Temporarily Up Regulated	
pagB	948518	Uncharacterized protein yjbD		Ambiguous/Unsorted	
yjbD	948518	Uncharacterized protein yjbD		Ambiguous/Unsorted	
xerC	948355	Tyrosine recombinase xerC		Down Regulated	
ybaB	945104	UPF0133 protein ybaB		Down Regulated	
asr	945103	Acid shock protein		Temporarily Up Regulated	
dsbA	948353	Thiol:disulfide interchange protein dsbA		Down Regulated	
yicC	948154	UPF0701 protein yicC		Down Regulated	
idnT	948798	Gnt-II system L-idonate transporter		Ambiguous/Unsorted	
purF	946794	Amidophosphoribosyltransferase		Down Regulated	
truA	946793	tRNA pseudouridine synthase A		Down Regulated	
yjaH	948508	Uncharacterized protein yjaH	['Cell wall membrane envelope biogenesis', 'lipopolysaccharide biosynthetic process']	Down Regulated	
pyrE	948157	Orotate phosphoribosyltransferase		Down Regulated	
ynaJ	945901	Uncharacterized protein ynaJ	['Replication recombination and repair', 'DNA recombination']	Temporarily Down Regulated	
bioC	945388	Biotin synthesis protein bioC		Down Regulated	
slmA	948158	HTH-type protein slmA		Temporarily Down Regulated	
uspE	945904	Universal stress protein E		Temporarily Up Regulated	
rph	948156	Ribonuclease PH		Temporarily Down Regulated	
folK	948792	2-amino-4-hydroxy-6-hydroxymethyldihydropteridine pyrophosphokinase		Down Regulated	
accD	946796	Acetyl-coenzyme A carboxylase carboxyl transferase subunit beta		Down Regulated	
ydaM	945909	Uncharacterized protein ydaM		Up Regulated	
uxuB	946795	D-mannonate oxidoreductase		Up Regulated	
ybhJ	945380	Uncharacterized protein ybhJ	['Energy production and conversion', ' Energy metabolism carbon ', 'glycolysis', 'tricarboxylic acid cycle']	Up Regulated	
deoC	948902	Deoxyribose-phosphate aldolase		Down Regulated	
dedA	946798	Protein dedA		Down Regulated	
deoA	948901	Thymidine phosphorylase		Down Regulated	
tolQ	948900	Protein tolQ		Down Regulated	
pheT	945382	Phenylalanyl-tRNA synthetase beta chain		Down Regulated	
nuoG	946762	NADH-quinone oxidoreductase; NADH-quinone oxidoreductase subunit G		Down Regulated	
ydcD	946958	Uncharacterized protein ydcD	['Cell wall membrane envelope biogenesis']	Up Regulated	
CARA	949025	Carbamoyl-phosphate synthase small chain		Temporarily Up Regulated	
yacL	944809	UPF0231 protein yacL		Temporarily Up Regulated	
nuoA	946764	NADH-quinone oxidoreductase subunit; NADH-quinone oxidoreductase subunit A		Down Regulated	
yehU	949027	Inner membrane protein yehU		Ambiguous/Unsorted	
mutM	946765	Formamidopyrimidine-DNA glycosylase		Temporarily Up Regulated	
idi	949020	Isopentenyl-diphosphate Delta-isomerase		Up Regulated	

yfbS	946766	Uncharacterized transporter yfbS	[]	Temporarily Down Regulated
yfbU	946767	UPF0304 protein yfbU		Down Regulated
selD	946768	Selenide, water dikinase		Down Regulated
lrhA	946769	Probable HTH-type transcriptional regulator lrhA		Up Regulated
ftsL	944803	Cell division protein ftsL		Ambiguous/Unsorted
yicI	948169	Alpha-xylosidase		Temporarily Up Regulated
fruR	944804	Fructose repressor		Ambiguous/Unsorted
yfdC	944801	Inner membrane protein yfdC		Up Regulated
gltS	948166	Sodium/glutamate symport carrier protein		Ambiguous/Unsorted
ydfJ	944802	b4600; c1969; EcHS_A1633; Z2153; E2348C_1663; ECED1_1671; ECDH10B_1674; ECH74115_2159; EC55989_1684; ECS88_1623; EcE24377A_1752; EcSMS35_1621; ECED1_1674; E		Up Regulated
fkpB	944807	FKBP-type 16 kDa peptidyl-prolyl cis-trans isomerase		Down Regulated
nuoH	946761	NADH-quinone oxidoreductase subunit H		Down Regulated
recG	948162	ATP-dependent DNA helicase recG		Down Regulated
rpoZ	948160	DNA-directed RNA polymerase subunit omega		Temporarily Down Regulated
trmH	948161	tRNA guanosine-2'-O-methyltransferase		Temporarily Down Regulated
maeA	946031	NAD-dependent malic enzyme		Down Regulated
ydhF	946960	Oxidoreductase ydhF		Up Regulated
adhP	946036	Alcohol dehydrogenase, propanol-preferring		Temporarily Up Regulated
nuoC	946759	NADH-quinone oxidoreductase subunit C/D		Down Regulated
ackA	946775	Acetate kinase		Down Regulated
yfbV	946774	UPF0208 membrane protein yfbV		Up Regulated
ymdA	949012	Uncharacterized protein ymdA	[]	Down Regulated
yfbT	946777	Phosphatase yfbT		Down Regulated
pta	946778	Phosphate acetyltransferase		Down Regulated
yicN	948173	Uncharacterized protein yicN	['Carbon compound utilization', 'regulation of transcription']	Temporarily Down Regulated
yicL	948176	Uncharacterized inner membrane transporter yicL	['regulation of cell shape']	Ambiguous/Unsorted
nlpA	948175	Lipoprotein 28		Down Regulated
ygfT	949018	Uncharacterized protein ygfT	['electron transport']	Temporarily Up Regulated
yicH	948171	Uncharacterized protein yicH	['Energy production and conversion']	Up Regulated
lspA	944800	Lipoprotein signal peptidase		Down Regulated
yfgD	946974	Uncharacterized protein yfgD	[]	Temporarily Down Regulated
rhsE	946026	ECDH10B_1586; EC55989_0238; b1456		Ambiguous/Unsorted
ymbA	946972	Uncharacterized lipoprotein ymbA	['Amino acid transport and metabolism']	Temporarily Up Regulated
uraA	946978	Uracil permease		Down Regulated
galS	949043	HTH-type transcriptional regulator galS		Temporarily Up Regulated
nuoE	946746	NADH-quinone oxidoreductase subunit E		Down Regulated
yeiB	949044	Uncharacterized protein yeiB	['two component signal transduction system phosphorelay']	Down Regulated
yeiG	949045	S-formylglutathione hydrolase yeiG		Down Regulated
artQ	949046	Arginine transport system permease protein artQ		Down Regulated
dfp	949047	Coenzyme A biosynthesis bifunctional protein coaBC		Down Regulated
menE	946741	2-succinylbenzoate--CoA ligase		Temporarily Up Regulated
gltI	946938	Glutamate/aspartate periplasmic-binding protein		Temporarily Up Regulated
ftsQ	944823	Cell division protein ftsQ		Down Regulated
yadG	944833	Uncharacterized ABC transporter ATP-binding protein yadG		Down Regulated
can	944832	Carbonic anhydrase 2		Down Regulated
gnsB	946054	Protein gnsB		Down Regulated
secM	944831	Secretion monitor		Down Regulated
gcd	944830	Quinoprotein glucose dehydrogenase		Down Regulated
tmcA	946053	Uncharacterized protein ypfI		Ambiguous/Unsorted
ivbL	948181	IlvBN operon leader peptide		Temporarily Up Regulated
nuoB	946738	NADH-quinone oxidoreductase subunit B		Down Regulated
rpmB	946941	50S ribosomal protein L28		Down Regulated
yfaZ	946739	Uncharacterized protein yfaZ	[]	Temporarily Up Regulated
nuoI	946757	NADH-quinone oxidoreductase subunit I		Down Regulated
ubiX	949033	3-octaprenyl-4-hydroxybenzoate carboxy-lyase		Down Regulated
purE	949031	Phosphoribosylaminoimidazole carboxylase catalytic subunit		Down Regulated
yfcE	946755	Phosphodiesterase yfcE		Down Regulated
nuoJ	946756	NADH-quinone oxidoreductase subunit J		Down Regulated
nuoF	946753	NADH-quinone oxidoreductase subunit F		Down Regulated
yeiA	949037	Uncharacterized protein yeiA	['Nucleotide transport and metabolism']	Up Regulated
ppiB	949038	Peptidyl-prolyl cis-trans isomerase B; Peptidyl-prolyl cis-trans isomerase		Down Regulated
nadE	946946	NH(3)-dependent NAD(+) synthetase		Down Regulated
thyA	949035	Thymidylate synthase		Down Regulated
murD	944818	UDP-N-acetylmuramoylalanine--D-glutamate ligase		Down Regulated
surA	944812	Chaperone surA		Down Regulated
murF	944813	UDP-N-acetylmuramoyl-tripeptide--D-alanyl-D-alanine ligase		Down Regulated
mraY	944814	Phospho-N-acetylmuramoyl-pentapeptide-transferase		Down Regulated
wzzE	944815	Lipopolysaccharide biosynthesis protein wzzE		Down Regulated
uidC	944820	Membrane-associated protein uidC		Up Regulated
ddpB	946044	Probable D,D-dipeptide transport system permease protein ddpB		Down Regulated
secA	944821	Protein translocase subunit secA		Down Regulated
ibpB	948192	Small heat shock protein ibpB		Up Regulated
yidE	948193	Putative transport protein yidE		Up Regulated
ypfJ	946956	Uncharacterized protein ypfJ	[]	Temporarily Up Regulated

bamC	946954	Lipoprotein 34		Down Regulated	
gcvR	946950	Glycine cleavage system transcriptional repressor		Temporarily Up Regulated	
yebQ	946048	Uncharacterized transporter yebQ	[]	Temporarily Down Regulated	
yfcN	944847	UPF0115 protein yfcN		Temporarily Down Regulated	
ybgJ	945311	Uncharacterized protein ybgJ	[]	Down Regulated	
sucC	945312	Succinyl-CoA ligase [ADP-forming] subunit beta		Down Regulated	
yadB	944846	Glutamyl-Q tRNA(Asp) synthetase; Insertion element IS150	uncharacterized 14 kDa protein	Ambiguous/Unsorted	
hrpB	944845	ATP-dependent RNA helicase hrpB		Temporarily Down Regulated	
ybgK	945317	Uncharacterized protein ybgK	[]	Down Regulated	
lpxA	944849	Acyl-[acyl-carrier-protein]-UDP-N-acetylglucosamine O-acyltransferase		Down Regulated	
yjgR	948978	Uncharacterized protein yjgR	[]	Temporarily Up Regulated	
rffD	948977	UDP-N-acetyl-D-mannosamine dehydrogenase		Down Regulated	
glpQ	946725	Glycerophosphoryl diester phosphodiesterase		Temporarily Up Regulated	
pinR	948973	Putative DNA-invertase from lambdoid prophage Rac		Up Regulated	
coaE	949060	Dephospho-CoA kinase		Up Regulated	
clcA	946715	H(+)/Cl(-) exchange transporter clcA		Down Regulated	
dksA	944850	DnaK suppressor protein		Temporarily Up Regulated	
sucB	945307	Dihydrolipoyllysine-residue succinyltransferase component of 2-oxoglutarate dehydrogenase complex		Down Regulated	
hisJ	945309	Histidine-binding periplasmic protein		Temporarily Down Regulated	
lpd	944854	Dihydrolipoyl dehydrogenase		Down Regulated	
HtpX	946076	Probable protease htpX		Ambiguous/Unsorted	
ydhC	946077	Inner membrane transport protein ydhC		Down Regulated	
rmhB	944852	Ribonuclease HII		Down Regulated	
aceE	944834	Pyruvate dehydrogenase E1 component		Down Regulated	
lptG	945324	Lipopolysaccharide export system permease protein lptG		Ambiguous/Unsorted	
sdhD	945322	Succinate dehydrogenase hydrophobic membrane anchor subunit		Down Regulated	
panB	944839	3-methyl-2-oxobutanoate hydroxymethyltransferase		Down Regulated	
tolR	945328	Protein tolR		Down Regulated	
yjhQ	949059	Uncharacterized N-acetyltransferase yjhQ	['Translation ribosomal structure and biogenesis', 'translation']	Up Regulated	
csgA	949055	Major curlin subunit		Up Regulated	
glpC	946735	Anaerobic glycerol-3-phosphate dehydrogenase subunit C		Up Regulated	
trxB	949054	Thioredoxin reductase		Down Regulated	
menC	946734	o-succinylbenzoate synthase		Down Regulated	
lpxH	949053	UDP-2,3-diacetylglucosamine hydrolase		Down Regulated	
lrp	949051	Leucine-responsive regulatory protein		Down Regulated	
cydD	949052	ATP-binding/permease protein cydD		Down Regulated	
rluE	945701	Pseudouridine synthase; Ribosomal large subunit pseudouridine synthase E		Down Regulated	
hipA	946064	Protein hipA		Temporarily Up Regulated	
ygbL	947197	Putative aldolase class 2 protein ygbL		Temporarily Up Regulated	
manA	944840	Mannose-6-phosphate isomerase		Temporarily Down Regulated	
ybgL	945318	UPF0271 protein ybgL		Down Regulated	
pphB	947196	Serine/threonine-protein phosphatase 2		Temporarily Up Regulated	
ygbK	947199	Uncharacterized protein ygbK	['Carbohydrate transport and metabolism']	Up Regulated	
ydeJ	946067	Protein ydeJ		Up Regulated	
yacH	944868	Uncharacterized protein yacH	['Signal transduction mechanisms', 'Type of regulation', 'signal transduction']	Up Regulated	
argP	944867	Chromosome initiation inhibitor		Ambiguous/Unsorted	
caiB	948997	Crtonobetainyl-CoA:carnitine CoA-transferase		Up Regulated	
eco	946700	Ecotin		Down Regulated	
symE	949088	Endoribonuclease symE		Up Regulated	
ymdB	946987	UPF0189 protein ymdB		Ambiguous/Unsorted	
bamB	946982	Lipoprotein yfgL		Down Regulated	
der	946983	GTP-binding protein engA		Down Regulated	
yfgJ	946984	Uncharacterized protein yfgJ	['Type of regulation']	Ambiguous/Unsorted	
cdsA	944876	Phosphatidate cytidyltransferase		Temporarily Down Regulated	
dnaE	944877	DNA polymerase III subunit alpha		Down Regulated	
yfgG	946980	Uncharacterized protein yfgG	['Nucleotide transport and metabolism']	Up Regulated	
yfgM	946981	UPF0070 protein yfgM		Down Regulated	
yaeR	944875	Uncharacterized protein yaeR	[]	Ambiguous/Unsorted	
glnH	944872	Glutamine-binding periplasmic protein		Down Regulated	
flhE	946094	Flagellar protein flhE		Down Regulated	
prc	946096	Tail-specific protease		Down Regulated	
bamA	944870	Outer membrane protein assembly factor yaeT		Down Regulated	
rseP	944871	Regulator of sigma E protease		Down Regulated	
ynfN	946097	Uncharacterized protein ynfN	[]	Up Regulated	
osmE	945305	Osmotically-inducible lipoprotein E		Temporarily Up Regulated	
sucA	945303	2-oxoglutarate dehydrogenase E1 component		Down Regulated	
ulaF	948711	L-ribulose-5-phosphate 4-epimerase ulaF		Up Regulated	
aer	945301	Aerotaxis receptor		Up Regulated	
erpA	944857	Iron-sulfur cluster insertion protein erpA		Up Regulated	
yjFY	948713	Uncharacterized protein yjFY	[]	Temporarily Up Regulated	
kdpE	945302	KDP operon transcriptional regulatory protein kdpE		Temporarily Up Regulated	
yciM	944858	Uncharacterized protein yciM	[]	Ambiguous/Unsorted	
glpA	946713	Anaerobic glycerol-3-phosphate dehydrogenase subunit A		Up Regulated	
menF	946712	Menaquione-specific isochorismate synthase		Ambiguous/Unsorted	

sbcC	949076	Nuclease sbcCD subunit C		Down Regulated	
apbE	946711	Thiamine biosynthesis lipoprotein apbE		Temporarily Down Regulated	
lolA	948989	Outer-membrane lipoprotein carrier protein		Down Regulated	
betA	945716	Choline dehydrogenase		Down Regulated	
xdhD	949079	Probable hypoxanthine oxidase xdhD		Up Regulated	
flgH	946996	Flagellar L-ring protein		Down Regulated	
sseA	946993	3-mercaptopyruvate sulfurtransferase		Temporarily Up Regulated	
glpT	946704	Glycerol-3-phosphate transporter		Up Regulated	
sseB	946994	Protein sseB		Down Regulated	
ulaR	948706	HTH-type transcriptional regulator ulaR		Up Regulated	
rodZ	946992	Cytoskeleton protein rodZ		Temporarily Down Regulated	
acnB	944864	Aconitate hydratase 2		Down Regulated	
yjfP	948707	Esterase yjfP		Ambiguous/Unsorted	
yjfN	948709	Uncharacterized protein yjfN	[' Building block biosynthesis', 'ion transport']	Up Regulated	
tsf	944866	Elongation factor Ts		Down Regulated	
pinQ	946088	Putative DNA-invertase from lambdoid prophage Qin		Up Regulated	
yebR	946086	UPF0067 protein yebR		Down Regulated	
skp	944861	Chaperone protein skp		Down Regulated	
dcp	946084	Peptidyl-dipeptidase dcp		Ambiguous/Unsorted	
fabZ	944888	(3R)-hydroxymyristoyl-[acyl-carrier-protein] dehydratase		Down Regulated	
yhfY	947888	Uncharacterized protein yhfY	['Replication recombination and repair', ' Carbon compound utilization']	Temporarily Up Regulated	
yhfX	947889	Uncharacterized protein yhfX	['Replication recombination and repair', ' Carbon compound utilization']	Up Regulated	
lpxD	944882	UDP-3-O-[3-hydroxymyristoyl] glucosamine N-acyltransferase		Down Regulated	
map	947882	Methionine aminopeptidase		Ambiguous/Unsorted	
DHAR	945743	PTS-dependent dihydroxyacetone kinase operon regulatory protein		Up Regulated	
yjiX	949090	Uncharacterized protein yjiX	['Signal transduction mechanisms', ' Adaptation to stress', 'response to stress']	Down Regulated	
cysG	947880	Siroheme synthase		Down Regulated	
umuD	945746	Protein umuD		Up Regulated	
minE	945740	Cell division topological specificity factor		Down Regulated	
kdsB	945539	3-deoxy-manno-octulosonate cytidyltransferase		Down Regulated	
folM	949096	Dihydrofolate reductase folM		Temporarily Up Regulated	
hupB	949095	DNA-binding protein HU-beta		Ambiguous/Unsorted	
rbfA	947685	Ribosome-binding factor A		Down Regulated	
ycbC	945546	Uncharacterized protein ycbC	['regulation of cell shape', 'peptidoglycan biosynthetic process']	Ambiguous/Unsorted	
infB	947684	Translation initiation factor IF-2		Down Regulated	
arnA	947683	Bifunctional polymyxin resistance protein arnA		Up Regulated	
mukF	945548	Chromosome partition protein mukF		Down Regulated	
nusA	947682	Transcription elongation protein nusA		Down Regulated	
smtA	945547	Protein smtA		Down Regulated	
uxaB	945542	Altronate oxidoreductase		Up Regulated	
ycbB	945541	Uncharacterized protein ycbB	['DNA replication']	Temporarily Up Regulated	
rimP	947680	b3170		Down Regulated	
yegX	945543	Uncharacterized protein yegX	['translation']	Up Regulated	
nuoL	945540	NADH-quinone oxidoreductase subunit L		Down Regulated	
rlmE	947689	b3179		Down Regulated	
yhbY	947688	RNA-binding protein yhbY		Down Regulated	
truB	947687	tRNA pseudouridine synthase B		Down Regulated	
sufD	944878	Protein sufD		Up Regulated	
rpsO	947686	30S ribosomal protein S15		Down Regulated	
PabA	947873	Para-aminobenzoate synthase glutamine amidotransferase component II		Ambiguous/Unsorted	
metQ	944893	D-methionine-binding lipoprotein metQ		Down Regulated	
rpsB	947874	30S ribosomal protein S2		Down Regulated	
accA	944895	Acetyl-coenzyme A carboxylase carboxyl transferase subunit alpha		Down Regulated	
yejH	945529	Uncharacterized protein yejH	[' Building block biosynthesis', 'amino acid biosynthetic process']	Temporarily Down Regulated	
serC	945527	Phosphoserine aminotransferase		Down Regulated	
pnp	947672	Polyribonucleotide nucleotidyltransferase		Down Regulated	
yhbQ	947671	UPF0213 protein yhbQ		Up Regulated	
deaD	947674	Cold-shock DEAD box protein A		Down Regulated	
cmk	945535	Cytidylate kinase		Temporarily Down Regulated	
nlpI	947673	Lipoprotein nlpI		Temporarily Down Regulated	
ihfB	945533	Integration host factor subunit beta		Down Regulated	
ycal	945531	Uncharacterized protein ycal	[]	Up Regulated	
rssA	945725	NTE family protein rssA		Temporarily Down Regulated	
mtr	947675	Tryptophan-specific transport protein		Temporarily Up Regulated	
yhbW	947677	Uncharacterized protein yhbW	[]	Down Regulated	
ymgE	945760	UPF0410 protein ymgE		Up Regulated	
clpA	945764	ATP-dependent Clp protease ATP-binding subunit clpA		Temporarily Up Regulated	
pth	945765	Peptidyl-tRNA hydrolase		Ambiguous/Unsorted	
fabD	945766	Malonyl CoA-acyl carrier protein transacylase		Down Regulated	
ycgV	945767	Uncharacterized protein ycgV	['Amino acid transport and metabolism', ' Building block biosynthesis']	Up Regulated	
trpB	945768	Tryptophan synthase beta chain		Down Regulated	
rlmL	945564	Ribosomal RNA large subunit methyltransferase L		Down Regulated	
gst	945758	Glutathione S-transferase		Up Regulated	
ycbX	945563	Uncharacterized protein ycbX	[]	Temporarily Down Regulated	

rmf	945567	Ribosome modulation factor		Temporarily Up Regulated
gph	947895	Phosphoglycolate phosphatase		Down Regulated
rpe	947896	Ribulose-phosphate 3-epimerase		Down Regulated
yhfZ	947897	Uncharacterized protein yhfZ	['Replication recombination and repair', 'Carbon compound utilization', 'DNA replication']	Up Regulated
dadA	945752	D-amino acid dehydrogenase small subunit		Temporarily Down Regulated
sufB	945753	Protein sufB		Temporarily Up Regulated
mukB	945549	Chromosome partition protein mukB		Down Regulated
ldcA	945756	Muramoyltetrapeptide carboxypeptidase		Temporarily Down Regulated
treA	945757	Periplasmic trehalase; Putative periplasmic trehalase		Up Regulated
dam	947893	DNA adenine methylase		Down Regulated
trpS	947894	Tryptophanyl-tRNA synthetase		Down Regulated
ompF	945554	Outer membrane protein F		Down Regulated
dhaM	945749	PTS-dependent dihydroxyacetone kinase, phosphotransferase subunit dhaM		Down Regulated
dhaL	945748	PTS-dependent dihydroxyacetone kinase, ADP-binding subunit dhaL		Down Regulated
glmM	947692	Phosphoglucosamine mutase		Down Regulated
aspC	945553	Aspartate aminotransferase		Down Regulated
folP	947691	Dihydropteroate synthase		Down Regulated
ycbW	945552	Uncharacterized protein ycbW	['Nucleotide transport and metabolism', 'Building block biosynthesis']	Ambiguous/Unsorted
dhaK	945747	PTS-dependent dihydroxyacetone kinase, dihydroxyacetone-binding subunit dhaK		Down Regulated
dacB	947693	D-alanyl-D-alanine carboxypeptidase dacB		Down Regulated
ybaN	945558	Inner membrane protein ybaN		Down Regulated
greA	947696	Transcription elongation factor; Transcription elongation factor greA		Down Regulated
yhdJ	947695	Uncharacterized adenine-specific methylase yhdJ		Up Regulated
yhbE	947699	Uncharacterized inner membrane transporter yhbE	['Type of regulation']	Down Regulated
ycbL	945551	Uncharacterized protein ycbL	[]	Temporarily Down Regulated
mukE	945550	Chromosome partition protein mukE		Down Regulated
pyrC	945787	Dihydroorotase		Down Regulated
yjiM	945789	Uncharacterized protein yjiM	[]	Up Regulated
ychA	945784	Protein sirB1		Down Regulated
yeeO	946506	Uncharacterized transporter yeeO	[]	Temporarily Up Regulated
hisF	946516	Imidazole glycerol phosphate synthase subunit hisF		Down Regulated
agaA	947646	ECED1_3799; EC55989_3555; E2348C_3421; ECUMN_3619; ECIA1_3285; ECDH10B_3308; ECIAI39_3636; b3135; ECS88_3523		Ambiguous/Unsorted
garP	947642	Probable galactarate transporter		Temporarily Up Regulated
yeeR	946512	Inner membrane protein yeeR		Down Regulated
dmsC	945502	Anaerobic dimethyl sulfoxide reductase chain C		Up Regulated
rihA	945503	Pyrimidine-specific ribonucleoside hydrolase rihA		Down Regulated
cydC	945504	ATP-binding/permease protein cydC		Temporarily Up Regulated
grxB	946926	Glutaredoxin-2		Temporarily Up Regulated
yfiH	947089	UPF0124 protein yfiH		Down Regulated
hemA	945777	Glutamyl-tRNA reductase		Temporarily Down Regulated
ycgM	946115	Uncharacterized protein ycgM	[]	Ambiguous/Unsorted
aroF	947084	Phospho-2-dehydro-3-deoxyheptonate aldolase, Tyr-sensitive		Down Regulated
lolB	945775	Outer-membrane lipoprotein lolB		Down Regulated
ispE	945774	4-diphosphocytidyl-2-C-methyl-D-erythritol kinase		Down Regulated
bamD	947086	UPF0169 lipoprotein yfiO		Down Regulated
agp	945773	Glucose-1-phosphatase		Up Regulated
prs	945772	Ribose-phosphate pyrophosphokinase		Down Regulated
rluD	947087	Pseudouridine synthase; Ribosomal large subunit pseudouridine synthase D		Ambiguous/Unsorted
cysB	945771	HTH-type transcriptional regulator cysB		Ambiguous/Unsorted
ychM	945770	Putative sulfate transporter ychM		Ambiguous/Unsorted
agaR	947636	Putative aga operon transcriptional repressor		Up Regulated
yhaV	947638	Uncharacterized protein yhaV		Up Regulated
cbl	946502	HTH-type transcriptional regulator cbl		Down Regulated
nac	946501	Nitrogen assimilation regulatory protein nac		Down Regulated
efeB	946500	Peroxidase ycdB		Down Regulated
pheA	947081	P-protein		Down Regulated
pheL	947080	Phe operon leader peptide		Up Regulated
yfeZ	946918	Inner membrane protein yfeZ		Down Regulated
uxuA	947082	Mannonate dehydratase		Temporarily Up Regulated
ypeA	946917	Acetyltransferase ypeA		Down Regulated
bisC	946915	Biotin sulfoxide reductase		Down Regulated
yfeX	946913	Uncharacterized protein yfeX	['Building block biosynthesis']	Temporarily Down Regulated
pflA	945517	Pyruvate formate-lyase 1-activating enzyme		Temporarily Up Regulated
ypjD	947098	Inner membrane protein ypjD		Down Regulated
trpC	945519	Tryptophan biosynthesis protein trpCF		Down Regulated
rspB	946127	Starvation-sensing protein rspB		Up Regulated
rplS	947096	50S ribosomal protein L19		Down Regulated
sufC	946128	Probable ATP-dependent transporter sufC		Temporarily Up Regulated
trmD	947099	tRNA (guanine-N(1)-)-methyltransferase		Down Regulated
ydhK	946528	Uncharacterized transporter ydhK	['Type of regulation']	Temporarily Down Regulated
sbcB	946529	Exodeoxyribonuclease I		Temporarily Down Regulated
hisD	946531	Histidinol dehydrogenase		Temporarily Up Regulated
yraL	947664	UPF0011 protein yraL		Ambiguous/Unsorted
rsmI	947664	UPF0011 protein yraL		Ambiguous/Unsorted

yadE	946536	Uncharacterized protein yadE	['Cell wall membrane envelope biogenesis', 'lipopolysaccharide biosynthetic process']	Up Regulated	
yraQ	947668	UPF0718 protein yraQ		Up Regulated	
yajO	946903	Uncharacterized oxidoreductase yajO	[]	Temporarily Up Regulated	
ycaK	945520	Uncharacterized NAD(P)H oxidoreductase ycaK	['amino acid transport']	Up Regulated	
yajG	945521	Uncharacterized lipoprotein yajG	['Posttranslational modification protein turnover chaperones', 'Electrochemical potential driven transporters']	Down Regulated	
yraN	947662	UPF0102 protein yraN		Down Regulated	
yraM	947663	Uncharacterized protein yraM	['DNA replication']	Down Regulated	
ivy	946530	Inhibitor of vertebrate lysozyme		Temporarily Up Regulated	
ycaP	945525	UPF0702 transmembrane protein ycaP		Ambiguous/Unsorted	
hcr	947660	NADH oxidoreductase hcr		Up Regulated	
diaA	947661	DnaA initiator-associating protein diaA		Down Regulated	
rsxC	946137	Electron transport complex protein rnfC		Down Regulated	
rhmT	945796	Inner membrane transport protein yfaV		Ambiguous/Unsorted	
yfaV	945796	Inner membrane transport protein yfaV		Ambiguous/Unsorted	
yafS	944903	Uncharacterized protein yafS	['DNA replication']	Down Regulated	
serS	945506	Seryl-tRNA synthetase		Temporarily Down Regulated	
rarA	945505	Replication-associated recombination protein A		Down Regulated	
ychN	945794	Protein ychN		Temporarily Up Regulated	
dkgB	944901	2,5-diketo-D-gluconic acid reductase B		Up Regulated	
yafJ	944906	Putative glutamine amidotransferase yafJ		Ambiguous/Unsorted	
queA	944905	S-adenosylmethionine:tRNA ribosyltransferase-isomerase		Down Regulated	
cobU	946519	Bifunctional adenosylcobalamin biosynthesis protein cobU		Up Regulated	
ynfD	946133	Uncharacterized protein ynfD	['Energy production and conversion', 'Electrochemical potential driven transporters', 'response to stress']	Up Regulated	
rsxD	946134	Electron transport complex protein rnfD		Down Regulated	
chaB	945792	Cation transport regulator chaB		Temporarily Up Regulated	
chaA	945790	Calcium/proton antiporter		Down Regulated	
poxB	946132	Pyruvate dehydrogenase [cytochrome]		Up Regulated	
mreC	947655	Rod shape-determining protein mreC		Down Regulated	
hisA	946521	1-(5-phosphoribosyl)-5-[(5-phosphoribosylamino)methylideneamino] imidazole-4-carboxamide isomerase		Down Regulated	
cobS	946520	Cobalamin synthase		Temporarily Up Regulated	
yraJ	947656	Uncharacterized outer membrane usher protein yraJ	['Amino acid transport and metabolism', 'Coenzyme transport and metabolism', 'Central intermediary metabolism', 'translation']	Up Regulated	
yeeE	946526	UPF0394 inner membrane protein yeeE		Down Regulated	
yraH	947658	Uncharacterized fimbrial-like protein yraH	[]	Up Regulated	
hslJ	946525	Heat shock protein hslJ		Temporarily Up Regulated	
yafK	944910	Uncharacterized protein yafK	[]	Temporarily Down Regulated	
ycaD	945515	Uncharacterized MFS-type transporter ycaD	['translation']	Temporarily Up Regulated	
yhgE	947651	Uncharacterized protein yhgE	[]	Temporarily Up Regulated	
focA	945513	Type-1 fimbrial protein, C chain; Probable formate transporter 1		Temporarily Down Regulated	
hisC	946551	Histidinol-phosphate aminotransferase		Down Regulated	
hisB	946552	Histidine biosynthesis bifunctional protein hisB		Down Regulated	
mutL	948691	DNA mismatch repair protein mutL		Temporarily Down Regulated	
yjeT	948696	Uncharacterized protein yjeT	['Posttranslational modification protein turnover chaperones', 'purine nucleotide biosynthetic process']	Temporarily Down Regulated	
rplJ	948490	50S ribosomal protein L10		Down Regulated	
hflK	948698	Protein hflK		Down Regulated	
yjfC	948699	Uncharacterized protein yjfC	['electron transport', 'metabolic process']	Up Regulated	
exuT	947601	Hexuronate transporter		Up Regulated	
rplE	947800	50S ribosomal protein L5		Down Regulated	
rpsN	947801	30S ribosomal protein S14		Down Regulated	
rpsH	947802	30S ribosomal protein S8		Down Regulated	
umuC	946359	Protein umuC		Up Regulated	
rplF	947803	50S ribosomal protein L6		Down Regulated	
ptrB	946358	Protease 2		Ambiguous/Unsorted	
yoaB	946357	UPF0076 protein yoaB		Down Regulated	
pphA	946356	Serine/threonine-protein phosphatase 1		Up Regulated	
cdh	948410	CDP-diacylglycerol pyrophosphatase		Temporarily Down Regulated	
pdxJ	947039	Pyridoxine 5'-phosphate synthase		Temporarily Down Regulated	
pdxA	944919	4-hydroxythreonine-4-phosphate dehydrogenase		Down Regulated	
cyoD	944918	Cytochrome o ubiquinol oxidase protein cyoD		Down Regulated	
yebW	946354	Uncharacterized protein yebW	[]	Up Regulated	
queC	947034	Queuosine biosynthesis protein queC		Up Regulated	
pfkA	948412	6-phosphofructokinase; 6-phosphofructokinase isozyme 1		Down Regulated	
fieF	948413	Ferrous-iron efflux pump fieF		Temporarily Down Regulated	
fpr	948414	Ferredoxin--NADP reductase		Temporarily Down Regulated	
uspD	948415	Universal stress protein D		Temporarily Up Regulated	
yjiS	948416	UPF0381 protein yjiS		Temporarily Up Regulated	
hemE	948497	Uroporphyrinogen decarboxylase		Down Regulated	
yebO	946350	Uncharacterized protein yebO	[]	Down Regulated	
yjiR	948417	Uncharacterized protein yjiR	['Amino acid transport and metabolism', 'Building block biosynthesis']	Up Regulated	
hupA	948499	DNA-binding protein HU-alpha		Down Regulated	
menA	948418	1,4-dihydroxy-2-naphthoate octaprenyltransferase		Down Regulated	
nudC	948498	NADH pyrophosphatase		Ambiguous/Unsorted	
yafQ	944911	Uncharacterized protein yafQ		Up Regulated	
flu	946540	Antigen 43		Down Regulated	
frdC	948680	Fumarate reductase subunit C		Temporarily Up Regulated	

zapA	947404	Cell division protein zapA		Temporarily Up Regulated
yeeX	946541	UPF0265 protein yeeX		Ambiguous/Unsorted
hfq	948689	Protein hfq		Down Regulated
sbmC	946546	DNA gyrase inhibitory protein		Temporarily Up Regulated
hisL	946547	His operon leader peptide		Ambiguous/Unsorted
hflX	948688	GTP-binding protein hflX		Down Regulated
hisG	946549	ATP phosphoribosyltransferase		Down Regulated
hisH	946544	Imidazole glycerol phosphate synthase subunit hisH		Down Regulated
yeeA	946545	Inner membrane protein yeeA		Up Regulated
ygbJ	947200	Uncharacterized oxidoreductase ygbJ	[]	Up Regulated
rpmI	946349	50S ribosomal protein L35		Down Regulated
rsmF	946348	Ribosomal RNA small subunit methyltransferase F		Temporarily Down Regulated
rpIL	948489	50S ribosomal protein L7/L12		Down Regulated
yeeD	946539	UPF0033 protein yeeD		Temporarily Up Regulated
dsbB	946344	Disulfide bond formation protein B		Down Regulated
yebV	946347	Uncharacterized protein yebV	['Replication recombination and repair']	Up Regulated
yoaH	946346	UPF0181 protein yoaH		Down Regulated
yfiC	947047	ECED1_3006; c3099; E2348C_2852; ECIA1_2689; APECO1_3956; ECS88_2749; ECDH10B_2743; ECUMN_2898; ECIAI39_2780; UTI89_C2897; EC55989_2864; pC15-1a_066; Z3857; b1		Ambiguous/Unsorted
rplK	948484	50S ribosomal protein L11		Down Regulated
rplA	948483	50S ribosomal protein L1		Down Regulated
rlmA	946340	b1822		Ambiguous/Unsorted
cpxR	948404	Transcriptional regulatory protein cpxR		Down Regulated
yobD	946343	UPF0266 membrane protein yobD		Down Regulated
rhtA	947045	Inner membrane transporter rhtA		Temporarily Up Regulated
ygbM	947207	Protein ygbM		Temporarily Up Regulated
manZ	946342	Mannose permease IID component		Temporarily Up Regulated
rpoB	948488	DNA-directed RNA polymerase subunit beta		Down Regulated
bolA	947043	Protein bolA		Temporarily Up Regulated
dinB	944922	DNA polymerase IV		Ambiguous/Unsorted
nusG	948485	Transcription antitermination protein nusG		Temporarily Down Regulated
yiiM	948406	Protein yiiM		Down Regulated
lepB	947040	Signal peptidase I		Down Regulated
pgk	947414	Phosphoglycerate kinase		Down Regulated
mscS	947416	Small-conductance mechanosensitive channel		Down Regulated
cpsG	946574	Phosphomannomutase		Temporarily Down Regulated
fbaA	947415	Fructose-bisphosphate aldolase class 2		Down Regulated
ugd	946571	UDP-glucose 6-dehydrogenase		Temporarily Up Regulated
argO	947418	Arginine exporter protein argO		Up Regulated
rpoE	947050	RNA polymerase sigma factor; RNA polymerase sigma-E factor		Up Regulated
rplD	947818	50S ribosomal protein L4		Down Regulated
rplC	947817	50S ribosomal protein L3		Down Regulated
yggF	947410	Uncharacterized protein yggF	['Replication recombination and repair', 'Central intermediary metabolism', 'DNA recombination']	Temporarily Down Regulated
yhaH	947617	Inner membrane protein yhaH		Temporarily Up Regulated
hslU	948430	ATP-dependent hsl protease ATP-binding subunit hslU		Down Regulated
yebC	946379	UPF0082 protein yebC		Down Regulated
ruvC	946378	Crossover junction endodeoxyribonuclease ruvC		Down Regulated
rplB	947820	50S ribosomal protein L2		Down Regulated
metF	948432	Methylenetetrahydrofolate reductase; 5,10-methylenetetrahydrofolate reductase		Temporarily Up Regulated
surE	947211	Multifunctional protein surE		Down Regulated
yciS	944936	Inner membrane protein yciS		Down Regulated
ruvB	946371	Holliday junction ATP-dependent DNA helicase ruvB		Temporarily Down Regulated
truD	947214	tRNA pseudouridine synthase D		Down Regulated
rseB	947054	Sigma-E factor regulatory protein rseB		Temporarily Down Regulated
rseA	947053	Sigma-E factor negative regulatory protein		Ambiguous/Unsorted
metB	948434	Cystathionine gamma-synthase		Down Regulated
znuA	946375	High-affinity zinc uptake system protein znuA		Ambiguous/Unsorted
ydeA	947218	UPF0401 protein yubL; Probable sugar efflux transporter; Sugar efflux transporter		Up Regulated
metJ	948435	Met repressor		Temporarily Up Regulated
srnB	947055	ATP-dependent RNA helicase srnB		Down Regulated
rsmA	944939	b0051		Down Regulated
cysN	947219	Sulfate adenylyltransferase subunit 1		Down Regulated
yciH	947058	Uncharacterized protein yciH	['Translation ribosomal structure and biogenesis', 'translation']	Down Regulated
nagE	945292	PTS system N-acetylglucosamine-specific EIICBA component		Up Regulated
ycfQ	947425	Uncharacterized HTH-type transcriptional regulator ycfQ	[]	Up Regulated
FidA	945293	Flavodoxin-1		Down Regulated
rdgB	947429	Nucleoside-triphosphatase; Nucleoside-triphosphatase rdgB		Down Regulated
insE	944952	Transposase insE for insertion sequence IS3A/B/C/D/E/A/IB; Transposase insE for insertion sequence IS3		Up Regulated
fur	945295	Ferric uptake regulation protein		Ambiguous/Unsorted
entE	947426	Enterobactin synthetase component E		Temporarily Up Regulated
ybaO	945091	Uncharacterized HTH-type transcriptional regulator ybaO	['Metabolism of other compounds']	Up Regulated
rpmC	947807	50S ribosomal protein L29		Down Regulated
rplP	947806	50S ribosomal protein L16		Down Regulated
rpmJ	947805	50S ribosomal protein L36 2; 50S ribosomal protein L36; 50S ribosomal protein L36 1		Down Regulated
yegH	946566	UPF0053 protein yegH		Ambiguous/Unsorted

rplR	947804	50S ribosomal protein L18		Down Regulated	
murR	946568	b2427		Down Regulated	
tktA	947420	Transketolase 1		Down Regulated	
rplN	947809	50S ribosomal protein L14		Down Regulated	
rpsQ	947808	30S ribosomal protein S17		Down Regulated	
marA	947613	Multiple antibiotic resistance protein marA		Up Regulated	
yqjF	947608	Inner membrane protein yqjF		Up Regulated	
eda	946367	KHG/KDPG aldolase		Down Regulated	
glpF	948422	Glycerol uptake facilitator protein		Up Regulated	
zapB	948420	Cell division protein zapB		Up Regulated	
purT	946368	Phosphoribosylglycinamide formyltransferase 2		Down Regulated	
rplV	947813	50S ribosomal protein L22		Down Regulated	
rpsC	947814	30S ribosomal protein S3		Down Regulated	
rpsS	947811	30S ribosomal protein S19		Down Regulated	
cysC	947221	Adenylyl-sulfate kinase		Down Regulated	
hslV	948429	ATP-dependent protease hslV		Down Regulated	
eamB	947065	Cysteine/O-acetylserine efflux protein		Temporarily Up Regulated	
ybgF	947227	Uncharacterized protein ybgF		Down Regulated	
cytR	948427	HTH-type transcriptional repressor cytR		Down Regulated	
exoX	946361	Exodeoxyribonuclease 10		Down Regulated	
selU	947063	tRNA 2-selenouridine synthase		Up Regulated	
maa	945096	Maltose O-acetyltransferase		Up Regulated	
pagP	946360	Protein crcA		Up Regulated	
kgpP	947069	Alpha-ketoglutarate permease		Temporarily Up Regulated	
yebF	946363	Protein yebF		Up Regulated	
adk	945097	Adenylate kinase		Down Regulated	
edd	946362	Phosphogluconate dehydratase		Temporarily Down Regulated	
hha	945098	Hemolysin expression-modulating protein		Up Regulated	
yfiD	947068	Autonomous glycol radical cofactor		Temporarily Down Regulated	
insF	944948	Transposase insF for insertion sequence IS3A/B/C/D/E/fA		Up Regulated	
ung	947067	Uracil-DNA glycosylase		Down Regulated	
htpG	945099	Chaperone protein htpG		Down Regulated	
glpK	948423	Glycerol kinase		Up Regulated	
yebG	946364	Uncharacterized protein yebG	['Translation ribosomal structure and biogenesis', 'Replication recombination and repair']	Up Regulated	
glpX	948424	Fructose-1,6-bisphosphatase class 2		Temporarily Up Regulated	
yfiF	947066	Uncharacterized tRNA/rRNA methyltransferase yfiF	[]	Down Regulated	
speA	947432	Biosynthetic arginine decarboxylase; Arginine decarboxylase		Down Regulated	
vacJ	945582	Lipoprotein vacJ		Down Regulated	
miaA	945582	Lipoprotein vacJ		Down Regulated	
CHIA	947837	Probable bifunctional chitinase/lysozyme		Up Regulated	
mpaA	945969	Protein mpaA		Up Regulated	
tufA	947838	Elongation factor Tu 2; Elongation factor Tu; Elongation factor Tu 1		Down Regulated	
bfr	947839	Bacterioferritin		Up Regulated	
cyoA	945080	Ubiquinol oxidase subunit 2		Down Regulated	
yfaL	946595	Uncharacterized protein yfaL		Up Regulated	
dtpA	947436	Tripeptide permease tppB		Ambiguous/Unsorted	
tppB	947436	Tripeptide permease tppB		Ambiguous/Unsorted	
cof	945089	HMP-PP phosphatase		Ambiguous/Unsorted	
mdlB	945088	Multidrug resistance-like ATP-binding protein mdlB		Temporarily Down Regulated	
glnK	945087	Nitrogen regulatory protein P-II 2		Down Regulated	
yijO	948451	Uncharacterized HTH-type transcriptional regulator yijO	[' RNA related', ' Type of regulation', ' Genetic unit regulated', 'regulation of transcription DNA dependent']	Down Regulated	
lon	945085	ATP-dependent protease La		Ambiguous/Unsorted	
clpX	945083	ATP-dependent Clp protease ATP-binding subunit clpX		Ambiguous/Unsorted	
argC	948455	N-acetyl-gamma-glutamyl-phosphate reductase		Temporarily Down Regulated	
ykgA	944956	UT189_C0322; ECS88_0301; APECO1_1693; E2348C_0262; c0416; ECIAI39_0385; ECIAI1_0298; ECUMN_0338; b0300; EC55989_0303; Z0376; ECDH10B_0289		Ambiguous/Unsorted	
ycfJ	945977	Uncharacterized protein ycfJ	[]	Temporarily Up Regulated	
argE	948456	Acetylornithine deacetylase		Down Regulated	
ycdU	945976	Inner membrane ABC transporter permease protein ycdU		Temporarily Up Regulated	
rpmG	946318	50S ribosomal protein L33		Down Regulated	
ppc	948457	Phosphoenolpyruvate carboxylase		Down Regulated	
fusA	947847	Elongation factor G		Down Regulated	
yijP	948458	E2348C_4267; ECUMN_4486; ECED1_4660; b3955; ECDH10B_4143; ECIAI1_4163; EC55989_4437; Z5513; ECS88_4410; UT189_C4546; c4914; ECIAI39_3034		Down Regulated	
rpsG	947846	30S ribosomal protein S7		Down Regulated	
yeaQ	946311	UPF0410 protein yeaQ		Temporarily Up Regulated	
yeaY	946312	Uncharacterized lipoprotein yeaY	['Cell wall membrane envelope biogenesis', 'metabolic process']	Up Regulated	
yqgE	947442	UPF0301 protein yqgE		Down Regulated	
ompA	945571	Outer membrane protein A		Temporarily Up Regulated	
cusS	945978	Sensor kinase cusS; Sensor protein		Down Regulated	
rplM	947828	50S ribosomal protein L13		Down Regulated	
ydbK	946587	Probable pyruvate-flavodoxin oxidoreductase		Up Regulated	
tehB	945979	Tellurite resistance protein tehB		Temporarily Down Regulated	
gspB	947826	Protein pioO		Ambiguous/Unsorted	
hspQ	945578	Heat shock protein hspQ		Temporarily Up Regulated	
asmA	946582	Protein asmA		Down Regulated	

lrml	947448	tRNA (guanine-N(7)-)-methyltransferase		Up Regulated	
mgsA	945574	Methylglyoxal synthase		Ambiguous/Unsorted	
yggW	947446	Oxygen-independent coproporphyrinogen-III oxidase-like protein yggW		Down Regulated	
mutY	947447	A/G-specific adenine glycosylase		Down Regulated	
scpA	945576	Protein sbm		Up Regulated	
gshB	947445	Glutathione synthetase		Temporarily Down Regulated	
iscU	947002	NifU-like protein		Temporarily Up Regulated	
LeuC	945076	3-isopropylmalate dehydratase large subunit		Down Regulated	
glcA	948440	Glycerol dehydrogenase		Ambiguous/Unsorted	
puuC	947003	Gamma-glutamyl-gamma-aminobutyraldehyde dehydrogenase		Down Regulated	
ydbC	945980	Putative oxidoreductase ydbC		Ambiguous/Unsorted	
hcaR	947000	Hca operon transcriptional activator		Down Regulated	
yccS	947001	Inner membrane protein yccS		Down Regulated	
puuB	945072	Gamma-glutamylputrescine oxidoreductase		Down Regulated	
clpS	948443	ATP-dependent Clp protease adapter protein clpS		Up Regulated	
ompX	944967	Outer membrane protein X		Up Regulated	
yahN	944968	Uncharacterized membrane protein yahN		Up Regulated	
tesB	945074	Acyl-CoA thioesterase 2		Temporarily Up Regulated	
yahM	944969	Uncharacterized protein yahM	[]	Temporarily Up Regulated	
emrE	948442	Multidrug transporter emrE		Up Regulated	
cyoE	945073	Protoheme IX farnesyltransferase		Down Regulated	
ydcA	945986	Uncharacterized protein ydcA	['Energy production and conversion', 'Energy production transport', 'Macromolecules cellular constituent biosynthesis', 'electron transport chain']	Up Regulated	
yoaA	946305	Probable ATP-dependent helicase yoaA		Down Regulated	
yhcN	947835	Uncharacterized protein yhcN	['Transcription', 'Building block biosynthesis', 'RNA related', 'Type of regulation', 'DNA recombination', 'transcription', 'regulation of transcription']	Up Regulated	
thiB	946306	Thiamine-binding periplasmic protein		Temporarily Up Regulated	
hemX	948446	Putative uroporphyrinogen-III C-methyltransferase		Down Regulated	
yeaL	946307	Uncharacterized protein yeaL	[]	Temporarily Down Regulated	
flgA	946300	Flagella basal body P-ring formation protein flgA		Down Regulated	
mipA	946301	MitA-interacting protein		Down Regulated	
ydeM	945981	Anaerobic sulfatase-maturing enzyme homolog ydeM		Up Regulated	
iscS	947004	Cysteine desulfurase		Ambiguous/Unsorted	
yeaE	946302	Uncharacterized protein yeaE		Temporarily Down Regulated	
ydfK	947451	Uncharacterized protein ydfK	[]	Up Regulated	
yggN	947453	Uncharacterized protein yggN	['Central intermediary metabolism']	Ambiguous/Unsorted	
solA	944983	N-methyl-L-tryptophan oxidase		Down Regulated	
flgJ	947456	Peptidoglycan hydrolase flgJ		Down Regulated	
betI	944981	HTH-type transcriptional regulator betI		Up Regulated	
prpR	944987	Propionate catabolism operon regulatory protein		Up Regulated	
frmR	944986	Transcriptional repressor frmR		Down Regulated	
ycdX	948477	Putative hydrolase ycdX		Down Regulated	
sdaA	946331	L-serine dehydratase 1		Up Regulated	
murB	948470	UDP-N-acetylenolpyruvoylglucosamine reductase		Down Regulated	
manY	946332	Mannose permease IIC component		Temporarily Down Regulated	
yncJ	945990	Uncharacterized protein yncJ	[]	Ambiguous/Unsorted	
qseE	947013	Putative sensor-like histidine kinase yfhK; Sensor protein		Down Regulated	
glrK	947013	Putative sensor-like histidine kinase yfhK; Sensor protein		Down Regulated	
panE	945065	2-dehydropantoate 2-reductase		Up Regulated	
yebY	947014	Uncharacterized protein yebY	['translation']	Down Regulated	
nudL	946330	Uncharacterized Nudix hydrolase nudL		Up Regulated	
yoaE	946335	UPF0053 inner membrane protein yoaE		Temporarily Down Regulated	
yheU	947863	UPF0270 protein yheU		Temporarily Down Regulated	
trg	945995	Methyl-accepting chemotaxis protein III		Up Regulated	
glnB	947016	Nitrogen regulatory protein P-II 1		Ambiguous/Unsorted	
xseB	945069	Exodeoxyribonuclease 7 small subunit		Ambiguous/Unsorted	
degS	947865	Protease degS		Down Regulated	
pepT	946333	Peptidase T		Ambiguous/Unsorted	
argD	947864	Succinylornithine transaminase; Acetylornithine/succinyldiaminopimelate aminotransferase		Ambiguous/Unsorted	
manX	946334	PTS system mannose-specific EIIB component		Ambiguous/Unsorted	
cspC	946339	Cold shock-like protein cspC		Down Regulated	
crp	947867	Catabolite gene activator		Temporarily Down Regulated	
rimL	945998	Ribosomal-protein-serine acetyltransferase		Up Regulated	
coaA	948479	Pantothenate kinase		Temporarily Down Regulated	
ydcH	945997	Uncharacterized protein ydcH	['Channel type Transporters']	Temporarily Up Regulated	
tsgA	947869	Protein tsgA		Ambiguous/Unsorted	
yobF	946338	Uncharacterized protein yobF	['RNA related', 'Type of regulation', 'Adaptation to stress', 'transcription', 'regulation of transcription DNA dependent']	Down Regulated	
yhdH	947848	Putative quinone oxidoreductase yhdH		Temporarily Up Regulated	
slyX	947849	Protein slyX		Temporarily Up Regulated	
yqgA	947462	Uncharacterized protein yqgA	[]	Up Regulated	
prpB	944990	Methylisocitrate lyase		Up Regulated	
torS	945595	Sensor protein torS; Sensor protein		Temporarily Down Regulated	
frmB	944991	S-formylglutathione hydrolase frmB		Temporarily Down Regulated	
cbpM	945597	Chaperone modulatory protein cbpM		Up Regulated	
codB	944994	Cytosine permease		Down Regulated	
glcC	947466	Glc operon transcriptional activator		Temporarily Up Regulated	

proY	945050	Proline-specific permease proY		Temporarily Down Regulated	
frmA	944988	S-(hydroxymethyl)glutathione dehydrogenase		Down Regulated	
argH	948463	Argininosuccinate lyase		Ambiguous/Unsorted	
sthA	948461	Soluble pyridine nucleotide transhydrogenase		Down Regulated	
nusB	945054	N utilization substance protein B homolog; N utilization substance protein B		Down Regulated	
oxyR	948462	Hydrogen peroxide-inducible genes activator		Temporarily Down Regulated	
glyA	947022	Serine hydroxymethyltransferase		Down Regulated	
yphH	947023	Uncharacterized protein yphH	['Carbohydrate transport and metabolism', 'Transcription', 'carbohydrate metabolic process']	Ambiguous/Unsorted	
murG	946321	UDP-N-acetylglucosamine--N-acetylmuramyl-(pentapeptide)	pyrophosphoryl-undecaprenol N-acetylglucosamine transferase	Down Regulated	
mdh	947854	Malate dehydrogenase		Ambiguous/Unsorted	
ftsW	946322	Cell division protein ftsW		Temporarily Down Regulated	
yajR	945058	Inner membrane transport protein yajR		Up Regulated	
ddlB	946324	D-alanine--D-alanine ligase B		Down Regulated	
yheO	947851	Uncharacterized protein yheO	['protein folding']	Down Regulated	
yfhR	945059	Uncharacterized protein yfhR	[]	Ambiguous/Unsorted	
kefG	947857	Glutathione-regulated potassium-efflux system ancillary protein kefG		Up Regulated	
yheS	947856	Uncharacterized ABC transporter ATP-binding protein yheS	[]	Temporarily Down Regulated	
rnd	946328	Ribonuclease D		Ambiguous/Unsorted	