Supplementary Table 5: Comparison of previously known transcription start sites (TSSs) to TSSs obtained from this study.
Abbreviations: D, detected; ND, not detected.

bnum	Promoter	Direction	TSS Position	Detection	Reads	Translation Start	5' UTR
b0001	thrL	+	148	D	3522	190	42
b0008	talB	+	8191	D	3136	8238	47
b0012	htgA	+	10643	ND		10830	187
b0012	htgA	+	10644	ND		10830	186
b0014	dnaK	+	12048	D	2226	12163	115
b0014	dnaK	+	12123	D	743	12163	40
b0014	dnaK	+	12144	D	2857	12163	19
b0019	nhaA	+	17317	D	2	17489	172
b0019	nhaA	+	17458	D	25	17489	31
b0025	ribF	+	21383	D	16	21407	24
b0026	ileS	+	21833	D	5	22391	558
b0026	ileS	+	22034	D	295	22391	357
b0026	ileS	+	22229	D	299	22391	162
b0027	lspA	+	25014	D	26	25207	193
b0031	dapB	+	28288	D	61	28374	86
b0031	dapB	+	28343	D	49	28374	31
b0032	carA	+	29551	D	27	29651	100
b0032	carA	+	29619	D	412	29651	32
b0034	caiF	+	34218	D	65	34300	82
b0041	fixA	+	42325	D	1	42403	78
b0065	yabI	+	71271	D	17	71351	80
b4577	sgrS	+	77367	D	13	77367	0
b0076	leuO	+	84188	ND		84368	180
b0077	ilvIH	+	85394	ND		85630	236
b0077	ilvIH	+	85420	ND		85630	210
b0077	ilvIH	+	85534	ND		85630	96
b0077	ilvIH	+	85597	D	13	85630	33
b0081	mraZ	+	89596	D	820	89634	38
b0082	mraW	+	90010	D	11	90094	84
b0083	ftsL	+	90688	D	92	91032	344
b0083	ftsL	+	91012	D	1	91032	20
b0093	ftsQ	+	102742	D	19	103155	413
b0093	ftsQ	+	102867	D	8	103155	288
b0094	ftsA	+	103561	D	2	103982	421
b0095	ftsZ	+	104636	D	9	105305	669
b0095	ftsZ	+	104693	D	6	105305	612
b0095	ftsZ	+	105045	ND		105305	260
b0096	lpxC	+	106508	D	210	106557	49
b0096	lpxC	+	106530	D	54	106557	27
b0113	pdhR	+	122034	D	162	122092	58
b0114	aceE	+	122970	D	2905	123017	47
b0116	lpd	+	127717	D	658	127912	195
b0118	acnB	+	131519	D	34	131615	96
b0118	acnB	+	131564	D	1	131615	51
b0119	yacL	+	134339	D	216	134388	49
b0125	hpt	+	141360	D	72	141431	71
b0149	mrcB	+	164721	D	4	164730	9
b0156	erpA	+	176561	D	1843	176610	49
b0160	dgt	+	179196	ND		179237	41
b0160	dgt	+	179214	D	1	179237	23
b0161	degP	+	180845	D	78	180884	39
b0162	cdaR	+	182447	ND		182463	16
b0169	rpsB	+	189711	D	108	189874	163
b0171	pyrH	+	191812	D	218	191855	43
b0174	ispU	+	194784	D	2	194903	119
b0174	ispU	+	194901	D	2	194903	2
b0176	rseP	+	196470	D	15	196546	76
b0177	bamA	+	197026	D	11	197928	902
b0177	bamA	+	197821	D	75	197928	107

b0179	lpxD	+	200455	D	1	200971	516
b0179	lpxD	+	200960	D	56	200971	11
b0185	accA	+	208411	D	221	208621	210
b0200	gmhB	+	222806	D	36	222833	27
b0209	yafD	+	231064	D	54	231122	58
b0240	crl	+	257810	D	456	257829	19
b0314	betT	+	328645	D	57	328687	42
b0315	yahA	+	331097	D	6	331595	498
b0315	yahA	+	331263	D	8	331595	332
b0329	yahO	+	345656	D	654	345708	52
b0336	codB	+	354108	D	472	354146	38
b0339	cynT	+	357997	D	1	358023	26
b0347	mhpA	+	367743	D	6	367835	92
b0365	tauA	+	384429	D	5	384456	27
b0377	sbmA	+	395777	D	3	395863	86
b0382	iraP	+	400543	D	148	400610	67
b0382	iraP	+	400587	D	73	400610	23
b0385	adrA	+	402911	D	5	402927	16
b0388	aroL	+	405504	D	26	405629	125
b0391	yaiE	+	407372	D	62	407401	29
b0401	brnQ	+	418712	D	3	418815	103
b0403	malZ	+	421719	D	21	421739	20
b0406	tgt	+	425279	D	205	425361	82
b0407	yajC	+	426429	D	533	426511	82
b0415	ribE	+	433728	D	1005	433871	143
b0426	yajQ	+	443882	D	622	443907	25
b0435	bolA	+	453573	D	9	453696	123
b0435	bolA	+	453658	D	1006	453696	38
b0436	tig	+	454217	D	504	454357	140
b0436	tig	+	454346	D	12	454357	11
b0437	clpP	+	455801	D	184	455901	100
b0437	clpP	+	455829	D	117	455901	72
b0437	clpP	+	455870	D	218	455901	31
b0438	clpX	+	456426	D	26	456650	224
b0439	lon	+	458039	D	3018	458112	73
b0440	hupB	+	460529	D	7	460675	146
b0440	hupB	+	460556	D	554	460675	119
b0440	hupB	+	460619	D	1568	460675	56
b0440	hupB	+	460666	D	41	460675	9
b0441	ppiD	+	461043	D	1	461139	96
b0441	ppiD	+	461062	ND		461139	77
b0465	kefA	+	485716	D	30	485760	44
b0469	apt	+	490534	D	109	490636	102
b0470	dnaX	+	491280	D	13	491316	36
b0471	ybaB	+	492933	ND		493300	367
b0473	htpG	+	494299	D	455	494344	45
b0473	htpG	+	494308	D	2752	494344	36
b0475	hemH	+	497255	D	90	497279	24
b4585	sroB	+	506428	D	376	506428	0
b0485	ybaS	+	510797	D	4	510865	68
b0505	allA	+	531614	D	3	531675	61
b0513	ybbY	+	539583	ND		539789	206
b0526	cysS	+	553800	D	54	553834	34
b0554	essD	+	576096	D	1	576621	525
b0572	cusC	+	594796	D	1	594823	27
b0576	pheP	+	601152	D	27	601182	30
b0591	entS	+	621476	ND		621523	47
b0591	entS	+	621481	D	37	621523	42
b0593	entC	+	624054	D	20	624108	54
b0597	ybdB	+	628515	ND		628523	8
b0598	cstA	+	629087	D	287	629117	30
b0598	cstA	+	629096	D	69	629117	21
b0605	ahpC	+	638144	D	9461	638168	24

b0606	ahpF	+	638225	D	59	638976	751
b0622	pagP	+	655749	D	2	655780	31
b0623	cspE	+	656473	D	741	656515	42
b0643	ybeL	+	674216	D	430	674241	25
b0679	nagE	+	703063	D	80	703167	104
b0680	glnS	+	705222	D	8	705316	94
b0680	glnS	+	705283	D	1366	705316	33
b0707	ybgA	+	738143	ND		738224	81
b0707	ybgA	+	738203	D	9	738224	21
b0708	phr	+	738644	ND		738730	86
b0710	ybgI	+	741842	D	18	742050	208
b0710	ybgI	+	742021	D	105	742050	29
b0721	sdhC	+	754181	D	64	754400	219
b0726	sucA	+	757809	D	4032	757929	120
b0733	cydA	+	770393	D	3	770681	288
b0733	cydA	+	770425	D	1	770681	256
b0733	cydA	+	770436	D	7	770681	245
b0733	cydA	+	770507	D	27	770681	174
b0733	cydA	+	770591	D	3	770681	90
b0750	nadA	+	781284	D	19	781308	24
b0754	aroG	+	784814	D	3697	784856	42
b0763	modA	+	794285	D	21	794312	27
b0781	moaA	+	816050	D	3	816267	217
b0781	moaA	+	816137	D	125	816267	130
b0782	moaB	+	817200	D	601	817278	78
b0791	ybhQ	+	823824	D	32	823853	29
b0814	ompX	+	849432	D	618	849673	241
b0814	ompX	+	849642	D	1175	849673	31
b0828	iaaA	+	865760	D	121	865791	31
b0842	cmr	+	882872	D	1	882896	24
b0850	ybjC	+	890115	D	6	890136	21
b0852	rimK	+	891099	D	1	891190	91
b0854	potF	+	892857	D	13	893007	150
b0866	ybjQ	+	903740	D	288	903816	76
b0882	clpA	+	922303	D	20	922487	184
b0882	clpA	+	922315	D	502	922487	172
b0882	clpA	+	922433	D	1831	922487	54
b0889	lrp	+	931551	D	30	931818	267
b0890	ftsK	+	932152	D	1	932447	295
b0890	ftsK	+	932361	D	18	932447	86
b0893	serS	+	938588	D	13	938651	63
b0894	dmsA	+	940046	D	4	940182	136
b0907	serC	+	956818	D	235	956876	58
b0910	cmk	+	960388	D	10	960424	36
b0911	rpsA	+	960940	D	126	961218	278
b0911	rpsA	+	961082	D	11	961218	136
b0912	ihfB	+	962972	D	8	963051	79
b0917	ycaR	+	969865	D	476	969896	31
b0919	ycbJ	+	970895	D	1	970975	80
b0925	ycbB	+	980154	D	4	980270	116
b0926	ycbK	+	982246	ND		982298	52
b0932	pepN	+	989814	D	125	989845	31
b0948	rlmL	+	1006895	D	52	1007067	172
b0950	pqiA	+	1010882	D	14	1011224	342
b0950	pqiA	+	1010889	D	2	1011224	335
b0956	ycbG	+	1017682	D	160	1017708	26
b0972	hyaA	+	1031207	D	6	1031362	155
b0980	appA	+	1039822	D	1	1039840	18
b1002	agp	+	1064782	D	99	1064808	26
b1013	rutR	+	1073336	D	2	1073465	129
b1013	rutR	+	1073357	ND		1073465	108
b1015	putP	+	1078391	D	16	1078528	137
b1015	putP	+	1078402	D	1	1078528	126

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b1015	putP	+	1078408	D	4	1078528	120
b1015	putP	+	1078433	ND		1078528	95
b1015	putP	+	1078514	D	12	1078528	14
b4490	efeU	+	1080530	D	54	1080579	49
b1020	phoH	+	1084088	D	6	1084215	127
b1020	phoH	+	1084161	D	54	1084215	54
b1041	csgB	+	1103082	ND		1103174	92
b1046	ymdC	+	1105515	D	2	1105578	63
b1048	mdoG	+	1108480	D	47	1108558	78
b1048	mdoG	+	1108501	D	144	1108558	57
b1055	yceA	+	1115995	D	681	1116030	35
b1055	yceA	+	1116150	D	2	1116030	-120
b4418	psrD	+	1145812	D	48	1145812	0
b1088	yceD	+	1145872	D	249	1146017	145
b1088	yceD	+	1146014	D	474	1146017	3
b1089	rpmF	+	1146561	D	2	1146590	29
b1094	acpP	+	1150797	D	5111	1150838	41
b1101	ptsG	+	1156849	D	19	1157092	243
b1101	ptsG	+	1156989	D	2183	1157092	103
b1109	ndh	+	1165215	ND		1165308	93
b1127	pepT	+	1185046	D	5	1185067	21
b1136	icd	+	1194184	D	218	1194346	162
b1136	icd	+	1194231	D	109	1194346	115
b1179	ycgL	+	1226832	D	1	1226904	72
b1187	fadR	+	1234139	D	38	1234161	22
b1189	dadA	+	1236732	D	4	1236794	62
b1189	dadA	+	1236748	D	76	1236794	46
b1189	dadA	+	1236761	D	11	1236794	33
b1205	ychH	+	1257961	D	777	1258014	53
b1210	hemA	+	1262806	D	1	1262937	131
b1210	hemA	+	1262899	D	64	1262937	38
b1213	ychQ	+	1266122	ND		1266147	25
b1215	kdsA	+	1267077	D	8	1267388	311
b1218	chaC	+	1271645	D	150	1271730	85
b1220	ychO	+	1273171	ND		1273007	-164
b1223	narK	+	1277044	ND		1277180	136
b1223	narK	+	1277155	ND		1277180	25
b1235	rssB	+	1289443	D	5	1289465	22
b1252	tonB	+	1309078	D	155	1309113	35
b1256	ompW	+	1312015	D	35	1312044	29
b1266	trpH	+	1321212	D	25	1321244	32
b1274	topA	+	1328813	D	16	1329072	259
b1274	topA	+	1328849	D	17	1329072	223
b1274	topA	+	1328872	D	2	1329072	200
b1274	topA	+	1328907	D	4	1329072	165
b1274	topA	+	1329004	D	3	1329072	68
b1276	acnA	+	1333448	D	38	1333855	407
b1276	acnA	+	1333805	D	120	1333855	50
b1276	acnA	+	1333851	D	3	1333855	4
b1279	yciS	+	1338159	D	26	1338267	108
b1298	puuD	+	1359075	D	428	1359144	69
b1304	pspA	+	1366062	D	737	1366103	41
b1321	ycjX	+	1382093	D	94	1382141	48
b1323	tyrR	+	1384716	D	94	1384744	28
b1325	ycjG	+	1386898	D	20	1386954	56
b1342	ydaN	+	1406048	D	37	1406074	26
b4427	micC	+	1435145	ND		1435145	0
b1385	feaB	+	1445521	D	3	1445543	22
b1388	paaA	+	1451889	ND		1451951	62
b1399	paaX	+	1461533	D	21	1461563	30
b1415	aldA	+	1486214	D	163	1486256	42
b1421	trg	+	1490463	D	18	1490494	31
b1429	tehA	+	1498560	D	9	1498597	37

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b1439	ydcR	+	1508002	D	23	1508027	25
b1452	yncE	+	1521251	D	1200	1521331	80
b1454	yncG	+	1524252	D	30	1524271	19
b1474	fdnG	+	1545396	ND		1545425	29
b1482	osmC	+	1554620	D	648	1554649	29
b1482	osmC	+	1554630	D	623	1554649	19
b1539	ydfG	+	1625515	D	293	1625541	26
b1540	ydfH	+	1626350	D	48	1626376	26
b1575	dicB	+	1647621	ND		1647633	12
b1583	ynfB	+	1653733	D	5	1653832	99
b1597	asr	+	1669351	D	15	1669400	49
b1601	tqsA	+	1671914	D	6	1671937	23
b1608	rstA	+	1680162	D	97	1680183	21
b1613	manA	+	1686575	D	64	1686600	25
b1614	ydgA	+	1687818	D	142	1687876	58
b1626	ydgK	+	1703231	D	54	1703274	43
b1627	rsxA	+	1703779	D	5	1703791	12
b1634	tppB	+	1710695	D	2	1710793	98
b1635	gst	+	1712351	D	6	1712401	50
b1641	slyB	+	1717772	D	420	1717900	128
b1641	slyB	+	1717801	D	3932	1717900	99
b1643	ydhI	+	1719022	D	7	1719049	27
b1649	ydhM	+	1724045	D	24	1724047	2
b1653	lhr	+	1726377	ND		1727111	734
b1656	sodB	+	1733347	D	2242	1733402	55
b1661	cfa	+	1739225	D	131	1739437	212
b1661	cfa	+	1739403	D	41	1739437	34
b1665	valV	+	1744439	D	1	1744459	20
b1676	pykF	+	1753624	D	91	1753722	98
b1676	pykF	+	1753687	D	638	1753722	35
b1677	lpp	+	1755320	ND		1755445	125
b1677	lpp	+	1755407	D	12457	1755445	38
b4431	rprA	+	1768396	D	472	1768396	0
b1704	aroH	+	1786342	D	128	1786459	117
b1704	aroH	+	1786408	D	63	1786459	51
b1723	pfkB	+	1804347	D	3	1804394	47
b1723	pfkB	+	1804375	D	114	1804394	19
b1727	yniC	+	1807350	D	138	1807404	54
b1732	katE	+	1811838	D	46	1811891	53
b1740	nadE	+	1820326	ND		1820482	156
b1757	ynjE	+	1837464	D	3	1837491	27
b1761	gdhA	+	1840332	D	604	1840395	63
b1779	gapA	+	1860550	D	96	1860795	245
b1779	gapA	+	1860621	D	18	1860795	174
b1779	gapA	+	1860642	D	407	1860795	153
b1779	gapA	+	1860759	D	3020	1860795	36
b1783	yeaG	+	1864789	D	2	1864932	143
b1789	yeaL	+	1872347	ND		1872376	29
b1814	sdaA	+	1894833	D	106	1894956	123
b1817	manX	+	1899957	D	126	1900072	115
b4432	ryeA	+	1921090	D	52	1921090	0
b1854	pykA	+	1935518	D	41	1935673	155
b1854	pykA	+	1935571	D	411	1935673	102
b1858	znuC	+	1940658	D	16	1940686	28
b1902	ftnB	+	1984799	ND		1984949	150
b1902	ftnB	+	1984823	D	7	1984949	126
b1907	tyrP	+	1987526	ND		1987705	179
b1907	tyrP	+	1987669	D	52	1987705	36
b1944	fliL	+	2017608	D	23	2017642	34
b1944	fliL	+	2017619	D	1	2017642	23
b1951	rcsA	+	2021860	D	1	2021992	132
b1967	hchA	+	2033654	D	61	2033859	205
b1967	hchA	+	2033804	D	117	2033859	55

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b1973	yodA	+	2039370	D	2452	2039399	29
b1982	amn	+	2053055	D	29	2053085	30
b2000	flu	+	2069341	D	21	2069563	222
b2000	flu	+	2069498	D	202	2069563	65
b2000	flu	+	2069527	D	13	2069563	36
b2011	sbcB	+	2080752	D	144	2080780	28
b2018	hisL	+	2087988	D	682	2088020	32
b2022	hisB	+	2091384	D	18	2091492	108
b2063	yegH	+	2135887	D	4	2135926	39
b4438	ryeE	+	2165138	D	1515	2165136	-2
b2098	yegT	+	2176803	ND		2176843	40
b2114	metG	+	2192291	D	32	2192322	31
b2143	cdd	+	2229841	D	13	2229866	25
b2146	yeiT	+	2232011	D	21	2232055	44
b2159	nfo	+	2248828	D	88	2248862	34
b2163	yeiL	+	2253312	ND		2253377	65
b2175	spr	+	2267942	D	114	2268001	59
b2193	narP	+	2288444	D	8	2288522	78
b4439	micF	+	2311106	D	124	2311106	0
b2221	atoD	+	2321434	ND		2321469	35
b2234	nrdA	+	2342777	D	175	2342887	110
b2321	flK	+	2435934	ND		2435972	38
b2344	fadL	+	2459227	D	33	2459328	101
b2369	evgA	+	2481653	D	346	2481777	124
b2369	evgA	+	2481663	D	130	2481777	114
b2378	lpxP	+	2493600	ND		2493667	67
b2393	nupC	+	2511031	D	131	2511064	33
b2414	cysK	+	2530366	D	6	2530431	65
b2415	ptsH	+	2531520	D	3	2531786	266
b2415	ptsH	+	2531523	D	888	2531786	263
b2415	ptsH	+	2531529	D	182	2531786	257
b2415	ptsH	+	2531623	D	211	2531786	163
b2415	ptsH	+	2531630	D	8	2531786	156
b2417	crr	+	2533502	D	22	2533856	354
b2417	crr	+	2533632	D	49	2533856	224
b2419	yfeK	+	2535337	D	68	2535364	27
b2435	amiA	+	2550263	D	81	2550374	111
b2436	hemF	+	2551227	D	3	2551247	20
b2464	talA	+	2576592	ND		2576688	96
b2464	talA	+	2576610	D	3	2576688	78
b2464	talA	+	2576630	D	183	2576688	58
b2472	dapE	+	2589582	D	47	2589629	47
b2479	gcvR	+	2597901	D	116	2597928	27
b2480	bcp	+	2598459	D	115	2598500	41
b2481	hyfA	+	2599193	D	1	2599223	30
b2494	yfgC	+	2614048	D	1	2614116	68
b2494	yfgC	+	2614090	D	3	2614116	26
b2521	sseA	+	2650413	D	10	2650516	103
b2535	csiE	+	2663423	D	10	2663457	34
b2538	hcaE	+	2667004	D	1	2667054	50
b2552	hmp	+	2683819	D	195	2683857	38
b4608	ryfC	+	2698540	D	4	2698542	2
b2582	trxC	+	2716697	D	143	2716757	60
b2595	bamD	+	2733983	D	24	2734168	185
b2595	bamD	+	2734028	D	8	2734168	140
b2617	smpA	+	2751508	D	12	2751627	119
b2630	rnlA	+	2763928	D	187	2763940	12
b2631	yfjO	+	2764729	D	3	2765006	277
b2659	csiD	+	2786949	D	31	2787007	58
b2661	gabD	+	2788934	D	3	2789295	361
b2661	gabD	+	2789194	D	1	2789295	101
b2672	ygaM	+	2798143	D	233	2798156	13
b2673	nrdH	+	2798678	D	45	2798745	67

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b2677	proV	+	2802585	D	5	2802837	252
b2677	proV	+	2802621	ND		2802837	216
b2677	proV	+	2802777	D	21	2802837	60
b2682	ygaZ	+	2807710	D	15	2807639	-71
b2684	mprA	+	2808769	D	21	2808792	23
b4442	micA	+	2812824	D	429	2812824	0
b2707	srlR	+	2826882	D	1	2827069	187
b2710	norV	+	2830461	D	3	2830498	37
b2726	hypA	+	2848649	ND		2848669	20
b2727	hypB	+	2848861	D	26	2849023	162
b2733	mutS	+	2855041	D	156	2855115	74
b2794	queF	+	2923343	D	30	2923370	27
b4443	gcvB	+	2940718	D	208	2940718	0
b2837	galR	+	2974591	D	61	2974621	30
b2866	xdhA	+	2998279	ND		2998367	88
b2895	fldB	+	3037844	D	99	3037877	33
b2898	ygfZ	+	3039304	D	419	3039335	31
b2911	ssrS	+	3053781	D	79	3054005	224
b2911	ssrS	+	3053996	D	11741	3054005	9
b2916	argP	+	3057752	D	9	3057775	23
b2936	yggG	+	3079914	D	3	3079935	21
b2942	metK	+	3084599	D	328	3084728	129
b2943	galP	+	3086277	D	149	3086306	29
b2954	rdgB	+	3094642	D	40	3094703	61
b2961	mutY	+	3100933	ND		3101035	102
b2961	mutY	+	3101010	D	8	3101035	25
b2962	yggX	+	3102015	D	103	3102115	100
b2964	nupG	+	3103673	D	38	3103736	63
b2980	glcC	+	3126228	D	28	3126294	66
b2989	yghU	+	3136722	D	74	3136749	27
b3009	yghB	+	3151551	D	41	3151585	34
b3012	dkgA	+	3154593	D	171	3154645	52
b3025	qseB	+	3167773	ND		3167850	77
b3025	qseB	+	3167823	D	5	3167850	27
b3055	htrG	+	3199064	D	21	3199229	165
b3055	htrG	+	3199126	ND		3199229	103
b3065	rpsU	+	3208668	D	821	3208803	135
b3065	rpsU	+	3208734	D	3784	3208803	69
b3067	rpoD	+	3210495	D	12	3211069	574
b3067	rpoD	+	3210659	D	1	3211069	410
b3067	rpoD	+	3210710	D	227	3211069	359
b3067	rpoD	+	3210715	D	2	3211069	354
b3071	yqjI	+	3214775	D	172	3214801	26
b3073	ygjG	+	3217480	D	14	3217516	36
b3075	ebgR	+	3219459	ND		3219488	29
b3087	ygjR	+	3235304	D	129	3235333	29
b3089	sstT	+	3237885	D	133	3237966	81
b3095	yqjA	+	3245570	D	20	3245795	225
b3095	yqjA	+	3245665	D	26	3245795	130
b3132	kbaZ	+	3276888	D	3	3276936	48
b3136	agaS	+	3279911	D	3	3279998	87
b3150	yraP	+	3294094	D	1	3294431	337
b3150	yraP	+	3294371	D	9	3294431	60
b3180	yhbY	+	3325781	D	69	3325812	31
b3196	yrbG	+	3338233	D	5	3338297	64
b3200	lptA	+	3341348	D	13	3341402	54
b3201	lptB	+	3341418	D	9	3341966	548
b3207	yrbL	+	3346443	D	41	3346474	31
b3233	yhcB	+	3378204	D	16	3378213	9
b3234	degQ	+	3378676	D	16	3378765	89
b3237	argR	+	3382624	D	19	3382725	101
b3237	argR	+	3382699	D	46	3382725	26
b3255	accB	+	3403162	D	1	3403458	296

b3257	yhdT	+	3405373	D	3	3405397	24
b3260	dusB	+	3408268	D	26	3408302	34
b3287	def	+	3431672	D	72	3431712	40
b3291	mscL	+	3436023	D	40	3436046	23
b3324	gspC	+	3453504	ND		3453600	96
b3324	gspC	+	3453549	D	2	3453600	51
b3324	gspC	+	3453553	D	3	3453600	47
b3355	prkB	+	3482333	ND		3482512	179
b3357	crp	+	3483975	D	123	3484142	167
b3357	crp	+	3484047	D	9	3484142	95
b3357	crp	+	3484053	D	2	3484142	89
b3364	tsgA	+	3490541	D	17	3490590	49
b3368	cysG	+	3495776	D	74	3495850	74
b3368	cysG	+	3495815	D	1	3495850	35
b3396	mrcA	+	3520848	D	19	3520893	45
b3400	hslR	+	3527132	D	73	3527370	238
b3403	pck	+	3530701	D	20	3530840	139
b3414	gntY	+	3543480	D	36	3543646	166
b3414	gntY	+	3543618	D	481	3543646	28
b3415	gntT	+	3544427	D	2	3544581	154
b3415	gntT	+	3544468	D	1	3544581	113
b3415	gntT	+	3544471	ND		3544581	110
b3418	malT	+	3551046	D	511	3551107	61
b3426	glpD	+	3559994	D	10	3560036	42
b3469	zntA	+	3604445	D	34	3604474	29
b3481	nikR	+	3616560	D	57	3616611	51
b3493	pitA	+	3635635	D	30	3635665	30
b3495	uspA	+	3638006	D	326	3638134	128
b3495	uspA	+	3638021	D	232	3638134	113
b3495	uspA	+	3638023	D	29	3638134	111
b3499	yhiR	+	3643373	D	3	3643408	35
b3501	arsR	+	3646535	D	2	3646551	16
b3511	hdeD	+	3654983	D	545	3655018	35
b3511	hdeD	+	3655034	D	20	3655018	-16
b3512	gadE	+	3656264	D	37	3656389	125
b3512	gadE	+	3656297	D	19	3656389	92
b3512	gadE	+	3656368	D	6	3656389	21
b4452	gadY	+	3662887	D	34	3662887	0
b4454	rdlD	+	3698159	D	12	3698159	0
b3555	yiaG	+	3717454	D	198	3717501	47
b3556	cspA	+	3717912	D	91	3718072	160
b3556	cspA	+	3717963	D	3	3718072	109
b3566	xylF	+	3729092	D	1	3729154	62
b3569	xylR	+	3732929	D	12	3733002	73
b3571	malS	+	3735493	D	3	3735520	27
b3572	avtA	+	3737697	D	57	3737728	31
b3575	yiaK	+	3740697	D	1	3740756	59
b3575	yiaK	+	3740743	ND		3740756	13
b3603	lldP	+	3775312	D	19	3775422	110
b3612	gpmM	+	3783258	D	806	3783283	25
b3619	rfaD	+	3791888	ND		3792010	122
b3619	rfaD	+	3791919	D	5	3792010	91
b3619	rfaD	+	3791962	D	2311	3792010	48
b3619	rfaD	+	3791993	D	27	3792010	17
b3633	waaA	+	3806539	D	38	3806563	24
b3639	dfp	+	3810726	D	9	3810754	28
b3655	yicH	+	3828454	D	43	3828480	26
b3680	yidL	+	3858276	D	1	3858276	0
b3688	yidQ	+	3865567	ND		3865751	184
b3703	rpmH	+	3882088	D	6	3882359	271
b3703	rpmH	+	3882134	D	22	3882359	225
b3703	rpmH	+	3882260	D	1227	3882359	99
b3707	tnaC	+	3886434	D	5	3886458	24

b3712	yieE	+	3891852	D	28	3891892	40
b3744	asnA	+	3925152	D	221	3925178	26
b3747	kup	+	3929126	ND		3929339	213
b3747	kup	+	3929204	D	2	3929339	135
b3747	kup	+	3929288	D	5	3929339	51
b3748	rbsD	+	3931345	D	223	3931374	29
b3766	ilvL	+	3948241	D	5	3948345	104
b3766	ilvL	+	3948313	D	1007	3948345	32
b3770	ilvE	+	3950411	D	329	3950507	96
b3774	ilvC	+	3955935	D	7252	3955993	58
b3782	rhoL	+	3964185	D	102	3964254	69
b4456	glmZ	+	3984455	D	795	3984455	0
b3806	cyaA	+	3988797	D	5	3989176	379
b3806	cyaA	+	3988813	D	2	3989176	363
b3806	cyaA	+	3989022	D	88	3989176	154
b3809	dapF	+	3992901	ND		3992785	-116
b3829	metE	+	4010907	D	4103	4011076	169
b3831	udp	+	4014414	D	261	4014454	40
b3844	fre	+	4024466	D	43	4024550	84
b3844	fre	+	4024508	D	2	4024550	42
b3847	pepQ	+	4029170	D	43	4029184	14
b3858	yihD	+	4040072	D	143	4040092	20
b3859	rdoA	+	4040414	D	107	4040438	24
b3860	dsbA	+	4041400	D	201	4041441	41
b3863	polA	+	4044963	D	786	4044989	26
b4457	csrC	+	4049059	D	4204	4049059	0
b3867	hemN	+	4049966	D	4	4050068	102
b3885	yihX	+	4073571	D	6	4073576	5
b3905	rhaS	+	4095734	ND		4095759	25
b4484	cpxP	+	4103808	D	74	4103843	35
b3916	pfkA	+	4105497	D	75	4105575	78
b3922	yiiS	+	4110892	D	2	4110990	98
b3936	rpmE	+	4124931	D	224	4125036	105
b3963	fabR	+	4159103	D	59	4159147	44
b3966	btuB	+	4161422	D	1	4161662	240
b3968	rrsB	+	4164390	ND		4164682	292
b3968	rrsB	+	4164507	ND		4164682	175
b3981	secE	+	4175200	D	2	4175381	181
b3983	rplK	+	4176377	D	2625	4176470	93
b3985	rplJ	+	4177646	D	38	4178019	373
b3987	rpoB	+	4179086	D	159	4179268	182
b3989	yjaZ	+	4187776	ND		4187809	33
b4000	hupA	+	4198199	D	376	4198304	105
b4013	metA	+	4212182	ND		4212303	121
b4013	metA	+	4212256	D	455	4212303	47
b4014	aceB	+	4213425	D	47	4213501	76
b4020	yjbB	+	4225625	D	110	4225754	129
b4025	pgi	+	4231745	D	655	4231781	36
b4030	psiE	+	4238323	D	1	4238348	25
b4042	dgkA	+	4254631	D	9	4254660	29
b4050	pspG	+	4260839	D	4	4260863	24
b4052	dnaB	+	4262306	D	137	4262337	31
b4053	alr	+	4263612	D	25	4263805	193
b4053	alr	+	4263675	ND		4263805	130
b4054	tyrB	+	4265105	D	26	4265137	32
b4056	yjbQ	+	4268237	D	145	4268261	24
b4063	soxR	+	4275470	D	8	4275492	22
b4090	rpiB	+	4311280	D	5	4311373	93
b4111	proP	+	4328343	D	13	4328525	182
b4111	proP	+	4328430	D	7	4328525	95
b4119	melA	+	4339910	D	5	4339934	24
b4140	fxsA	+	4366626	D	2	4366687	61
b4142	groS	+	4368639	D	1411	4368711	72

b4143	groL	+	4368806	ND		4369048	242
b4143	groL	+	4368896	D	6	4369048	152
b4143	groL	+	4368999	D	82	4369048	49
b4144	yjeI	+	4370784	D	652	4370832	48
b4411	ecnB	+	4374532	D	506	4374576	44
b4148	sugE	+	4374817	D	27	4374898	81
b4155	poxA	+	4380641	D	1	4380666	25
b4167	yjeF	+	4391700	D	16	4392089	389
b4167	yjeF	+	4391960	D	93	4392089	129
b4167	yjeF	+	4392058	D	54	4392089	31
b4170	mutL	+	4395069	D	4	4395435	366
b4170	mutL	+	4395123	ND		4395435	312
b4171	miaA	+	4397005	ND		4397275	270
b4171	miaA	+	4397075	D	20	4397275	200
b4172	hfq	+	4397824	D	1	4398311	487
b4172	hfq	+	4398243	D	54	4398311	68
b4177	purA	+	4402687	D	349	4402710	23
b4178	nsrR	+	4404067	D	5	4404213	146
b4187	aidB	+	4412270	D	21	4412298	28
b4193	ulaA	+	4417950	ND		4418003	53
b4200	rpsF	+	4423048	D	140	4423141	93
b4208	cycA	+	4427803	D	8	4427887	84
b4217	ytfK	+	4437534	D	40	4437610	76
b4235	pmbA	+	4455968	D	50	4455982	14
b4242	mgtA	+	4465303	D	1	4465648	345
b4242	mgtA	+	4465386	D	121	4465648	262
b4255	rraB	+	4476468	D	121	4476496	28
b4268	idnk	+	4492620	D	2	4492646	26
b4624	ryjB	+	4526000	D	84	4526000	0
b4312	fimB	+	4538690	D	3	4538980	290
b4312	fimB	+	4538832	D	11	4538980	148
b4313	fimE	+	4539894	D	2	4540060	166
b4314	fimA	+	4540717	ND		4541138	421
b4322	uxuA	+	4549541	D	26	4549659	118
b4625	symR	+	4577858	D	126	4577858	0
b4355	tsr	+	4589656	D	559	4589680	24
b4365	yjjQ	+	4601342	ND		4601500	158
b4372	holD	+	4605804	D	19	4605826	22
b4376	osmY	+	4609176	D	215	4609419	243
b4381	deoC	+	4614702	ND		4615346	644
b4381	deoC	+	4615301	D	51	4615346	45
b4383	deoB	+	4617590	D	32	4617626	36
b4388	serB	+	4622879	D	66	4622918	39
b4393	trpR	+	4630727	D	39	4630783	56
b4397	creA	+	4633266	D	1	4633544	278
b4400	creD	+	4636183	ND		4636201	18
b0023	rpsT	-	21120	D	5635	21078	42
b0023	rpsT	-	21210	D	7211	21078	132
b0050	apaG	-	52034	D	303	51606	428
b0051	ksgA	-	52588	D	132	52430	158
b0054	imp	-	57156	D	22	57109	47
b0054	imp	-	57241	D	528	57109	132
b0054	imp	-	57336	D	2	57109	227
b0059	hepA	-	63358	D	123	63264	94
b0059	hepA	-	63588	D	7	63264	324
b0063	araB	-	70075	D	2	70048	27
G0-9381	sroA	-	75608	D	12	75608	0
b0075	leuL	-	83735	D	712	83708	27
b0112	aroP	-	121650	D	179	121551	99
b0112	aroP	-	121671	D	37	121551	120
b0122	yacC	-	136940	D	19	136917	23
b0124	gcd	-	141263	D	10	141225	38
b0124	gcd	-	141279	ND		141225	54

b0126	can	-	142703	D	970	142670	33
b0140	ecpD	-	156214	D	1	156201	13
b0140	ecpD	-	156224	ND		156201	23
b0140	ecpD	-	156235	ND		156201	34
b0143	pcnB	-	159151	D	32	159126	25
b0143	pcnB	-	159171	D	134	159126	45
b0143	pcnB	-	159195	D	11	159126	69
b0145	dksA	-	160658	D	257	160604	54
b0145	dksA	-	160722	ND		160604	118
b0154	hemL	-	174921	D	6	174882	39
b0159	mtn	-	179183	D	180	179153	30
b0166	dapD	-	185977	D	612	185947	30
b0194	proS	-	218837	D	2568	218775	62
b0219	yafV	-	240216	D	4	240189	27
b0237	pepD	-	255737	D	1	255716	21
b0237	pepD	-	255776	D	1108	255716	60
b0237	pepD	-	255809	D	407	255716	93
b0252	yafZ	-	267250	ND		267229	21
b0292	matC	-	309300	ND		309250	50
b0292	matC	-	309343	ND		309250	93
b0313	betI	-	328585	D	7	328558	27
b0338	cynR	-	357933	D	8	357914	19
b0344	lacZ	-	365567	D	10	365529	38
b0344	lacZ	-	365582	ND		365529	53
b0344	lacZ	-	365589	ND		365529	60
b0344	lacZ	-	365601	D	2	365529	72
b0346	mhpR	-	367752	D	26	367644	108
b0376	ampH	-	395543	D	88	395511	32
b0376	ampH	-	395587	D	46	395511	76
b0386	proC	-	404910	D	275	404868	42
b0396	araJ	-	411753	D	6	411705	48
b0411	tsx	-	431315	D	104	431237	78
b0411	tsx	-	431469	D	1	431237	232
b0427	yajR	-	445911	D	8	445890	21
b0432	cyoA	-	450877	D	2993	450834	43
b0452	tesB	-	474425	D	20	474385	40
b0458	ylaC	-	478512	D	50	478475	37
b0461	ybaJ	-	480018	D	75	479932	86
b0462	acrB	-	483909	ND		483627	282
b0476	aeS	-	499275	ND		499197	78
b0478	ybaL	-	502519	D	10	502462	57
b0484	copA	-	510635	D	2761	510603	32
b0492	ybbN	-	517714	ND		517503	211
b0504	allS	-	531524	ND		531445	79
b0529	folD	-	557004	D	73	556964	40
b0553	nmpC	-	576093	D	84	573809	2284
b0557	borD	-	578144	D	1355	578116	28
b0565	ompT	-	584888	D	116732	584856	32
b0571	cusR	-	594685	D	2	594666	19
b0590	fepD	-	621415	D	3	621412	3
b0592	fepB	-	623950	D	80	623733	217
b0607	uspG	-	641126	D	131	641090	36
b0611	rna	-	644257	D	124	644226	31
b0621	dcuC	-	655306	ND		655191	115
b0628	lipA	-	659524	D	13	659439	85
b0631	ybeD	-	661929	D	316	661865	64
b0637	ybeB	-	668295	D	54	668259	36
G0-9383	sroC	-	686066	D	291	686066	0
b0660	ybeZ	-	692692	D	354	692601	91
b0675	nagD	-	699575	D	41	699549	26
b0676	nagC	-	701088	D	42	700817	271
b0676	nagC	-	701231	D	1	700817	414
b0677	nagA	-	702398	D	7	701974	424

b0678	nagB	-	702931	D	119	702834	97
b0683	fur	-	709939	D	1628	709869	70
b0683	fur	-	709946	D	190	709869	77
b0683	fur	-	710052	D	320	709869	183
b0684	fldA	-	710744	D	479	710688	56
b0691	ybfH	-	715864	D	1	715820	44
b0720	gltA	-	753893	D	2233	753691	202
b0720	gltA	-	753990	D	404	753691	299
b0759	galE	-	791304	D	93	791278	26
b0759	galE	-	791400	ND		791278	122
b0772	ybhC	-	806544	D	602	806504	40
b0811	glnH	-	847270	D	15	847227	43
b0811	glnH	-	847421	D	7	847227	194
b0812	dps	-	848173	D	13391	848134	39
b0827	moeA	-	865617	D	51	865587	30
b0835	yliG	-	877293	D	105	877258	35
b0838	yliJ	-	879742	D	307	879703	39
b0841	ybjG	-	882731	D	4	882611	120
b4417	rybB	-	887280	D	638	887277	3
b0849	grxA	-	889999	D	68	889976	23
b0860	artJ	-	899849	D	619	899798	51
b0864	artP	-	902992	D	150	902957	35
b0864	artP	-	903038	D	1	902957	81
b0864	artP	-	903059	D	1	902957	102
b0864	artP	-	903066	D	61	902957	109
b0865	ybjP	-	903746	D	100	903690	56
b0870	ltaE	-	908543	D	169	908517	26
b0871	poxB	-	910299	D	69	910272	27
b0873	hcp	-	913068	ND		913037	31
b0873	hcp	-	913352	ND		913037	315
b0877	ybjX	-	918326	D	396	918343	-17
b0880	cspD	-	921899	D	498	921813	86
b0884	infA	-	925702	D	2026	925666	36
b0884	infA	-	925908	D	9	925666	242
b0887	cydD	-	930254	ND		930185	69
b0888	trxB	-	931301	D	415	931273	28
b0903	pflB	-	952802	D	294	952777	25
b0903	pflB	-	952864	D	352	952777	87
b0903	pflB	-	952964	D	861	952777	187
b0903	pflB	-	953074	ND		952777	297
b0903	pflB	-	953148	D	54	952777	371
b0904	focA	-	953716	D	20	953689	27
b0904	focA	-	953726	D	12	953689	37
b0904	focA	-	954037	ND		953689	348
b0905	ycaO	-	954095	ND		955855	-1760
b0928	aspC	-	984966	D	427	984932	34
b0930	asnS	-	988267	D	102	988208	59
b0931	pncB	-	989637	D	32	989579	58
b0937	ssuE	-	996786	D	8	996735	51
b0957	ompA	-	1019410	D	40	1019276	134
b0957	ompA	-	1019414	D	34	1019276	138
b0958	sulA	-	1020170	D	46	1020142	28
b0963	mgsA	-	1026264	D	181	1026238	26
b0970	yccA	-	1030666	D	3107	1030641	25
b0995	torR	-	1057207	D	120	1057177	30
b1000	cbpA	-	1063056	D	282	1062998	58
b1004	wrbA	-	1066981	D	2025	1066931	50
b1014	putA	-	1078148	D	15	1078105	43
b1024	pgaA	-	1091746	D	2	1091512	234
b1040	csgD	-	1102558	D	5	1102419	139
b1040	csgD	-	1102567	D	64	1102419	148
b1051	msyB	-	1113436	D	771	1113404	32
b1054	lpxL	-	1115932	D	9	1115805	127

b1057	yceJ	-	1118294	D	1	1118269	25
b1059	solA	-	1119832	D	93	1119809	23
b1060	bssS	-	1120243	D	10	1120178	65
b1060	bssS	-	1120255	D	111	1120178	77
b1060	bssS	-	1120281	ND		1120178	103
b1062	pyrC	-	1121866	D	67	1121830	36
b1084	rne	-	1143547	D	1	1143590	-43
b1084	rne	-	1143644	D	2	1143590	54
b1084	rne	-	1143951	D	1	1143590	361
b1084	rne	-	1143985	ND		1143590	395
b1084	rne	-	1144096	D	21	1143590	506
b1113	ycfS	-	1169640	D	43	1169597	43
b1114	mfd	-	1173215	D	71	1173187	28
b1114	mfd	-	1173251	D	279	1173187	64
b1130	phoP	-	1189706	D	48	1189670	36
b1130	phoP	-	1189714	D	31	1189670	44
b1130	phoP	-	1189731	D	2	1189670	61
b1160	elbA	-	1211313	ND		1211226	87
b1162	ycgE	-	1213336	D	73	1213282	54
b1182	hlyE	-	1229689	D	2	1229617	72
b1188	ycgB	-	1236508	D	2	1236464	44
b1197	treA	-	1246648	D	34	1246599	49
b1203	ychF	-	1257105	D	570	1257035	70
b1204	pth	-	1257765	D	141	1257736	29
b1231	tyrT	-	1286888	D	9	1286845	43
b1233	ychJ	-	1288400	D	109	1288355	45
b1237	hns	-	1292181	D	1704	1292145	36
b1241	adhE	-	1297532	D	4	1297344	188
b1241	adhE	-	1297636	D	5	1297344	292
b1249	cls	-	1306691	D	50	1306669	22
b1251	yciI	-	1308916	D	1048	1308889	27
b1262	trpC	-	1317968	ND		1317809	159
b1277	ribA	-	1337214	D	117	1337184	30
b1277	ribA	-	1337258	D	1	1337184	74
b1283	osmB	-	1341393	D	122	1341352	41
b1283	osmB	-	1341500	D	31	1341352	148
b4596	yciZ	-	1342662	D	32	1342633	29
b1285	gmr	-	1344867	D	32	1344766	101
b1286	rnb	-	1346968	D	117	1346936	32
b1286	rnb	-	1347153	D	23	1346936	217
b1288	fabI	-	1348903	D	4	1349063	-160
b1288	fabI	-	1349142	D	94	1349063	79
b1303	pspF	-	1365953	D	2	1365936	17
b1303	pspF	-	1365969	D	16	1365936	33
b1303	pspF	-	1366064	ND		1365936	128
b1324	tpx	-	1386868	D	2078	1386835	33
b1330	ynaI	-	1393997	ND		1393946	51
b1333	uspE	-	1396683	D	668	1396646	37
b1376	uspF	-	1433665	D	143	1433643	22
b1379	hslJ	-	1439804	D	55	1439767	37
b1380	ldhA	-	1440939	D	122	1440867	72
b1387	maoC	-	1451694	ND		1451666	28
b4597	rydC	-	1489530	D	42	1489530	0
b1453	ansP	-	1524035	D	6	1524004	31
b1453	ansP	-	1524044	ND		1524004	40
b1466	narW	-	1536711	ND		1535333	1378
b1480	sra	-	1554070	D	60	1553987	83
b1481	bdm	-	1554364	D	1	1554304	60
b1493	gadB	-	1570096	D	331	1570069	27
b1508	hipB	-	1590506	D	16	1590466	40
b1529	marC	-	1616965	D	8	1616932	33
b1535	ydeH	-	1621901	D	10	1621874	27
b1535	ydeH	-	1621903	ND		1621874	29

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b1550	gnsB	-	1635870	D	344	1635806	64
b1552	cspI	-	1636836	D	1	1636691	145
b1564	relB	-	1643927	D	556	1643896	31
b1594	dgsA	-	1666615	D	5	1666588	27
b1594	dgsA	-	1666627	D	49	1666588	39
b1611	fumC	-	1684733	ND		1684612	121
b1612	fumA	-	1686464	D	2507	1686401	63
b1617	uidA	-	1694176	ND		1694095	81
b1619	hdhA	-	1696146	D	48	1696064	82
b1637	tyrS	-	1715293	ND		1715246	47
b1637	tyrS	-	1715307	D	93	1715246	61
b1638	pdxH	-	1716058	D	36	1716031	27
b1646	sodC	-	1722703	D	48	1722679	24
b1664	ydhQ	-	1744226	D	9	1744151	75
b1674	ydhY	-	1752666	D	1	1752501	165
b1684	sufA	-	1762442	D	208	1762410	32
b1696	ydiP	-	1777352	D	5	1777325	27
b1702	pps	-	1785185	D	81	1785136	49
b1706	ydiU	-	1789278	D	313	1789268	10
b1712	ihfA	-	1793745	D	100	1793576	169
b1715	pheM	-	1797325	D	41	1797294	31
b1716	rplT	-	1797787	D	21	1797773	14
b1717	rpmI	-	1798451	D	111	1798023	428
b1718	infC	-	1798842	D	38	1798662	180
b1718	infC	-	1799370	D	49	1798662	708
b1719	thrS	-	1800757	D	268	1800594	163
b1726	yniB	-	1807287	D	26	1807257	30
b1738	chbB	-	1819750	D	11	1819643	107
b1739	osmE	-	1820307	D	2301	1820280	27
b1742	ves	-	1823008	D	21	1822961	47
b1743	spy	-	1823712	D	21	1823649	63
b1748	astC	-	1830063	D	12	1830006	57
b1748	astC	-	1830068	ND		1830006	62
b1782	mipA	-	1864530	D	182	1864496	34
b1797	yeaR	-	1878018	ND		1877972	46
G0-9384	sroD	-	1886126	D	13	1886126	0
b1805	fadD	-	1887831	D	102	1887770	61
b1806	yeaY	-	1888585	D	10	1888556	29
b1816	yoaE	-	1899796	D	22	1899609	187
b1824	yobF	-	1905641	D	1590	1905615	26
b1826	mgrB	-	1906816	D	65	1906790	26
b1829	htpX	-	1910642	D	1010	1910600	42
b1838	pphA	-	1921409	D	1	1920993	416
b1845	ptrB	-	1926889	D	24	1926863	26
b1846	yebE	-	1927756	D	26	1927731	25
b1850	eda	-	1930808	D	55	1930780	28
b1850	eda	-	1930823	D	51	1930780	43
b1850	eda	-	1931133	D	3	1930780	353
b1851	edd	-	1932737	D	14	1932628	109
b1852	zwf	-	1934400	D	677	1934338	62
b1861	ruvA	-	1944040	D	62	1944000	40
b1861	ruvA	-	1944048	D	2	1944000	48
b1866	aspS	-	1948641	D	1047	1948546	95
b1866	aspS	-	1948725	ND		1948546	179
b1874	cutC	-	1957010	ND		1957290	-280
b1886	tar	-	1970740	D	171	1970715	25
b1892	flhD	-	1976419	D	7	1976221	198
b1894	insA-5	-	1977250	ND		1977239	11
b1896	otsA	-	1979675	D	125	1979636	39
b1897	otsB	-	1980489	ND		1980411	78
b1901	araF	-	1984262	ND		1984152	110
b1919	dcyD	-	1997532	D	181	1997504	28
b1922	fliA	-	1999832	D	21	1999813	19

b1922	fliA	-	1999843	D	126	1999813	30
b1923	fliC	-	2001700	D	951	2001630	70
b1987	cbl	-	2058965	D	48	2058938	27
b1988	nac	-	2060002	D	3	2059957	45
b1993	cobU	-	2063898	ND		2063788	110
b1993	cobU	-	2063996	ND		2063788	208
b1997	insC-3	-	2068232	ND		2068249	-17
b2009	sbmC	-	2079327	D	8	2079286	41
b2009	sbmC	-	2079349	D	16	2079286	63
b2013	yeeE	-	2083576	D	24	2083549	27
b2029	gnd	-	2099348	D	462	2099292	56
b2042	galF	-	2112375	D	109	2112351	24
b2062	wza	-	2135217	ND		2135267	-50
b2062	wza	-	2135607	ND		2135267	340
b2068	alkA	-	2145583	D	11	2145564	19
b2095	gatZ	-	2174454	D	827	2174343	111
b2096	gatY	-	2175256	D	3817	2175226	30
b2097	fbaB	-	2176689	ND		2176586	103
b2104	thiM	-	2183473	D	29	2183323	150
b2131	osmF	-	2217545	D	109	2217503	42
b2150	mglB	-	2238588	D	3	2238370	218
b2151	galS	-	2239732	D	7	2239690	42
b2155	cirA	-	2244951	D	16	2244791	160
b2155	cirA	-	2244964	ND		2244791	173
b2156	lysP	-	2246582	D	95	2246554	28
b2162	rihB	-	2253274	ND		2253208	66
b2208	napF	-	2301596	D	1	2301519	77
b2208	napF	-	2301599	ND		2301519	80
b2208	napF	-	2301717	ND		2301519	198
b2213	ada	-	2308449	D	1	2308427	22
b2215	ompC	-	2310850	D	16	2310771	79
b2215	ompC	-	2310852	D	36	2310771	81
b2215	ompC	-	2310886	D	16	2310771	115
b2215	ompC	-	2310909	D	9	2310771	138
b2237	inaA	-	2347521	D	28	2347494	27
b2249	yfaY	-	2361677	D	12	2361655	22
b2288	nuoA	-	2403184	D	113	2403094	90
b2288	nuoA	-	2403357	ND		2403094	263
b2309	hisJ	-	2424859	D	628	2424810	49
b2313	cvpA	-	2428792	D	5	2428785	7
b2313	cvpA	-	2428822	D	14	2428785	37
b2316	accD	-	2432037	D	544	2431948	89
b2319	usg	-	2434912	D	2	2434671	241
b2320	pdxB	-	2435906	D	69	2435873	33
b2340	sixA	-	2455021	D	7	2454834	187
b2343	yfcZ	-	2459001	D	487	2458956	45
b2346	vacJ	-	2463157	D	128	2463029	128
b2368	emrK	-	2481470	D	1	2481361	109
b2388	glk	-	2507469	D	20	2507448	21
b2388	glk	-	2507484	D	36	2507448	36
b2400	gltX	-	2518752	D	186	2518694	58
b2400	gltX	-	2518798	D	66	2518694	104
b2400	gltX	-	2518806	D	15	2518694	112
b2405	xapR	-	2520527	D	4	2520499	28
b2405	xapR	-	2520585	ND		2520499	86
b2407	xapA	-	2522932	D	4	2522900	32
b2411	ligA	-	2528223	ND		2528198	25
b2418	pdxK	-	2535341	D	1	2535259	82
b2426	ucpA	-	2542686	D	157	2542645	41
b2426	ucpA	-	2542693	D	25	2542645	48
b2432	yfeY	-	2549265	D	16	2549238	27
b2477	bamC	-	2597036	D	5	2596887	149
b2478	dapA	-	2597806	D	354	2597782	24

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b2498	upp	-	2618931	D	1771	2618894	37
b2508	guaB	-	2632129	D	8663	2632092	37
b2512	bamB	-	2636997	D	14	2636674	323
b2513	yfgM	-	2637392	D	63	2637305	87
b2513	yfgM	-	2637424	D	1	2637305	119
b2513	yfgM	-	2637455	D	5	2637305	150
b2514	hisS	-	2638664	D	4	2638597	67
b2520	yfhM	-	2650346	D	4	2650309	37
b2526	hscA	-	2657014	D	196	2656957	57
b2531	iscR	-	2660220	D	76	2660153	67
b2532	trmJ	-	2661292	ND		2661345	-53
b2537	hcaR	-	2666986	ND		2666918	68
b2551	glyA	-	2683596	D	1335	2683529	67
b2553	glnB	-	2685463	D	303	2685430	33
b2553	glnB	-	2685548	D	162	2685430	118
b4441	glmY	-	2689362	D	300	2689362	0
b2564	pdxJ	-	2699835	D	61	2699751	84
b2567	rnc	-	2702245	D	50	2702085	160
b2569	lepA	-	2705218	D	27	2705146	72
b2572	rseA	-	2707654	D	82	2707426	228
b2573	rpoE	-	2708109	D	24	2708034	75
b2573	rpoE	-	2708208	D	2	2708034	174
b2579	yfiD	-	2714545	D	2461	2714471	74
b2592	clpB	-	2732227	D	3582	2732195	32
b4609	ryfD	-	2732317	D	1038	2732317	0
b2601	aroF	-	2739223	D	30	2739172	51
b2609	rpsP	-	2744276	D	3465	2744207	69
b2610	ffh	-	2745875	D	394	2745817	58
b2614	grpE	-	2748769	D	3716	2748730	39
b2669	stpA	-	2796558	D	315	2796517	41
b2669	stpA	-	2796578	D	37	2796517	61
b2669	stpA	-	2796600	D	6	2796517	83
b2696	csrA	-	2817295	D	447	2817168	127
b2697	alaS	-	2820112	D	3061	2820033	79
b2700	ygaD	-	2822416	D	1	2822368	48
b2709	norR	-	2830329	D	31	2830311	18
b2713	hydN	-	2836154	D	1	2836127	27
b2725	hycA	-	2848483	D	1	2848457	26
b2732	ygbA	-	2854850	ND		2854828	22
b2735	ygbI	-	2859278	D	311	2859286	-8
b2741	rpoS	-	2865589	D	37	2865573	16
b2741	rpoS	-	2865629	D	4	2865573	56
b2741	rpoS	-	2865676	D	49	2865573	103
b2741	rpoS	-	2865746	D	11	2865573	173
b2741	rpoS	-	2866140	D	223	2865573	567
b2742	nlpD	-	2866804	D	17	2866775	29
b2742	nlpD	-	2866851	D	11	2866775	76
b2744	surE	-	2868708	D	2	2868296	412
b2752	cysD	-	2874390	D	683	2874351	39
b2754	ygbF	-	2876937	D	3	2876875	62
b2779	eno	-	2906039	D	6972	2905963	76
b2779	eno	-	2906696	D	1	2905963	733
b2779	eno	-	2906724	D	1	2905963	761
b2779	eno	-	2906868	D	1	2905963	905
b2780	pyrG	-	2907735	D	105	2907688	47
b2783	chpR	-	2909377	D	20	2909361	16
b2783	chpR	-	2909390	D	56	2909361	29
b2784	relA	-	2911851	D	15	2911673	178
b2784	relA	-	2912299	D	1	2911673	626
b2785	rumA	-	2913065	ND		2913022	43
b4408	csrB	-	2922546	D	382	2922537	9
b2808	gcvA	-	2940661	D	95	2940589	72
b2821	ptrA	-	2957033	D	11	2956906	127

b2822	recC	-	2960529	D	2	2960450	79
b4444	omrA	-	2974211	D	14	2974211	0
b4445	omrB	-	2974407	D	9	2974407	0
b2841	araE	-	2980230	D	14	2980204	26
b2869	ygeV	-	3003869	D	3	3003808	61
b2893	dsbC	-	3036856	D	36	3036844	12
b2893	dsbC	-	3037655	ND		3036844	811
b2894	xerD	-	3037873	D	5	3037765	108
b2897	ygfY	-	3039121	D	73	3039092	29
b2905	gcvT	-	3048794	D	283	3048689	105
b2913	serA	-	3056478	D	57	3056432	46
b2913	serA	-	3056571	ND		3056432	139
b2914	rpiA	-	3057375	D	317	3057347	28
b2922	yggE	-	3066148	D	680	3066102	46
b2922	yggE	-	3066207	ND		3066102	105
b2923	argO	-	3066858	D	7	3066830	28
b2924	mscS	-	3067893	D	670	3067829	64
b2926	pgk	-	3070879	D	168	3070644	235
b2927	epd	-	3071845	D	200	3071713	132
b2935	tktA	-	3079729	D	788	3079657	72
b2958	yggN	-	3099662	D	1	3099645	17
b2958	yggN	-	3099766	D	7	3099645	121
b2958	yggN	-	3099820	D	50	3099645	175
b2970	yghF	-	3110921	D	2	3110942	-21
b2979	glcD	-	3126098	D	4	3126043	55
b2988	gsp	-	3136632	D	3	3136544	88
b2997	hybO	-	3144385	D	13	3144283	102
b3041	ribB	-	3182740	D	9	3182488	252
b3049	glgS	-	3190024	D	343	3189961	63
b3049	glgS	-	3190034	D	1	3189961	73
b3057	bacA	-	3202197	D	34	3202153	44
b3118	tdcA	-	3265115	ND		3265087	28
b3123	rnpB	-	3268614	D	47	3268614	0
b3131	agaR	-	3276725	D	65	3276687	38
b3157	yhbT	-	3299323	D	153	3299298	25
b3157	yhbT	-	3299390	D	1	3299298	92
b3161	mtr	-	3303882	D	17	3303839	43
b3161	mtr	-	3303954	D	3	3303839	115
b3164	pnp	-	3309348	ND		3309190	158
b3165	rpsO	-	3309808	D	294	3309706	102
b3170	yhbC	-	3316197	D	16	3316034	163
b3171	metY	-	3316319	D	1143	3316311	8
b3171	metY	-	3316397	D	155	3316311	86
b3175	secG	-	3320609	D	40	3320527	82
b3175	secG	-	3320612	D	70	3320527	85
b3179	rrmJ	-	3325753	D	147	3325686	67
b3179	rrmJ	-	3325782	ND		3325686	96
b3181	greA	-	3326874	D	78	3326737	137
b3210	arcB	-	3351071	D	13	3351047	24
b3225	nanA	-	3371642	D	28	3371598	44
b3251	mreB	-	3399151	D	132	3399109	42
b3251	mreB	-	3399215	D	816	3399109	106
b3251	mreB	-	3399378	ND		3399109	269
b3278	rrsD	-	3426962	D	3	3426784	178
b3278	rrsD	-	3427069	D	23	3426784	285
b4473	smf	-	3431708	ND		3431582	126
b3293	yhdN	-	3437568	D	8	3437531	37
b3298	rpsM	-	3440517	D	175	3440493	24
b3298	rpsM	-	3440587	D	3034	3440493	94
b3310	rplN	-	3446244	D	282	3446171	73
b3321	rpsJ	-	3451464	D	131	3451292	172
b3323	gspA	-	3453517	ND		3453420	97
b3323	gspA	-	3453532	ND		3453420	112

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b3323	gspA	-	3453541	ND		3453420	121
b3323	gspA	-	3453656	ND		3453420	236
b3338	chiA	-	3467918	ND		3467875	43
b3340	fusA	-	3471707	D	6	3471536	171
b3342	rpsL	-	3472643	D	1027	3472574	69
b3346	yheO	-	3474528	D	12	3474462	66
b3346	yheO	-	3474563	D	14	3474462	101
b3347	fkpA	-	3475521	D	4	3475441	80
b3347	fkpA	-	3475547	D	65	3475441	106
b3356	yhfA	-	3483973	D	6	3483840	133
b3362	yhfG	-	3489669	D	136	3489642	27
b3363	ppiA	-	3490357	D	60	3490319	38
b3384	trpS	-	3511719	D	420	3511660	59
b3386	rpe	-	3513175	D	25	3513081	94
b3387	dam	-	3514004	ND		3513935	69
b3387	dam	-	3514274	D	15	3513935	339
b3388	damX	-	3515622	D	1	3515328	294
b3390	aroK	-	3517189	D	50	3517086	103
b3390	aroK	-	3517402	D	69	3517086	316
b3405	ompR	-	3534661	D	3	3534606	55
b3405	ompR	-	3534707	D	80	3534606	101
b3405	ompR	-	3534729	D	17	3534606	123
b3405	ompR	-	3534777	D	31	3534606	171
b3416	malQ	-	3548421	ND		3548092	329
b3417	malP	-	3550532	D	197	3550495	37
b3421	rtcB	-	3556129	D	3	3556101	28
b3423	glpR	-	3558779	D	3	3558628	151
b3423	glpR	-	3558914	D	2	3558628	286
b3424	glpG	-	3559503	D	11	3559475	28
b3425	glpE	-	3559872	D	34	3559846	26
b3430	glgC	-	3567412	D	71	3567351	61
b3430	glgC	-	3567478	D	151	3567351	127
b3430	glgC	-	3567594	D	68	3567351	243
b3437	gntK	-	3575668	D	12	3575615	53
b3438	gntR	-	3576841	D	1	3576749	92
b3438	gntR	-	3576885	ND		3576749	136
b3438	gntR	-	3576903	ND		3576749	154
b4451	ryhB	-	3579039	D	49	3579039	0
b3458	livK	-	3595753	D	1230	3595583	170
b3458	livK	-	3595778	D	214	3595583	195
b3460	livJ	-	3597785	D	724	3597681	104
b3461	rpoH	-	3598836	D	47	3598806	30
b3461	rpoH	-	3598872	D	49	3598806	66
b3461	rpoH	-	3598886	D	279	3598806	80
b3461	rpoH	-	3598893	D	135	3598806	87
b3461	rpoH	-	3599026	D	16	3598806	220
b3494	uspB	-	3637871	D	55	3637743	128
b3498	prlC	-	3643261	D	896	3643205	56
b3510	hdeA	-	3654814	D	542	3654763	51
b3516	gadX	-	3663862	D	88	3663833	29
b3517	gadA	-	3665630	D	34	3665603	27
b3518	yhjA	-	3667284	D	1	3667211	73
b3527	yhjJ	-	3680039	D	5	3679963	76
b3528	dctA	-	3681521	D	12	3681470	51
b4453	ldrD	-	3698295	D	4	3698110	185
b3544	dppA	-	3705893	D	18	3705728	165
b3554	yiaF	-	3717120	D	2	3717067	53
b3565	xylA	-	3728830	D	9	3728788	42
b3574	yiaJ	-	3740641	ND		3740555	86
b3588	aldB	-	3754558	D	22	3754534	24
b3592	yibF	-	3759998	D	34	3759978	20
b3632	rfaQ	-	3806203	D	9	3806121	82
b3632	rfaQ	-	3806261	D	21	3806121	140

b3635	mutM	-	3809198	D	33	3809175	23
b3637	rpmB	-	3810018	D	9	3809697	321
b3638	yicR	-	3810600	ND		3810582	18
b3657	yicJ	-	3834687	ND		3833952	735
b3661	nlpA	-	3838040	D	1442	3838016	24
b3662	nepI	-	3839794	D	6	3839762	32
b3666	uhpT	-	3845221	ND		3845190	31
b3672	ivbL	-	3851046	D	87	3851011	35
b4616	istR	-	3851215	D	2	3851280	-65
b4616	istR	-	3851280	D	1	3851280	0
b3686	ibpB	-	3865004	D	740	3864920	84
b3687	ibpA	-	3865541	D	242	3865445	96
b3699	gyrB	-	3878173	D	186	3878142	31
b3700	recF	-	3879864	D	6	3879244	620
b3700	recF	-	3879884	D	23	3879244	640
b3701	dnaN	-	3880371	D	143	3880344	27
b3701	dnaN	-	3880585	D	79	3880344	241
b3701	dnaN	-	3880613	D	1	3880344	269
b3701	dnaN	-	3880756	D	11	3880344	412
b3723	bglG	-	3904720	D	3	3904590	130
b3728	pstS	-	3909591	D	5	3909548	43
b3730	glmU	-	3913246	D	2432	3913223	23
b3730	glmU	-	3913349	D	133	3913223	126
b3742	mioC	-	3924498	D	50	3924478	20
b3743	asnC	-	3925054	D	8	3925026	28
b3746	ravA	-	3929151	D	45	3929116	35
b3773	ilvY	-	3955890	D	11	3955843	47
b3775	ppiC	-	3957864	D	21	3957836	28
b3820	yigI	-	4002747	D	32	4002720	27
b3828	metR	-	4010860	D	24	4010839	21
b3828	metR	-	4010878	D	58	4010839	39
b3857	mobA	-	4040053	D	1	4040022	31
b3857	mobA	-	4040144	ND		4040022	122
b3862	yihG	-	4044675	D	4	4044625	50
b3869	glnL	-	4054394	D	2	4054362	32
b3870	glnA	-	4056130	D	59	4056057	73
b3870	glnA	-	4056245	D	6	4056057	188
b3904	rhaB	-	4095495	ND		4095471	24
b3919	tpiA	-	4109592	D	2263	4109530	62
b3927	glpF	-	4116184	ND		4116113	71
b3929	rraA	-	4117378	D	367	4117353	25
b3929	rraA	-	4117381	D	77	4117353	28
b3930	menA	-	4118421	D	159	4118372	49
b3930	menA	-	4118429	D	187	4118372	57
b3932	hslV	-	4120377	D	825	4120310	67
b3938	metJ	-	4126489	D	129	4126418	71
b3938	metJ	-	4126552	D	407	4126418	134
b3938	metJ	-	4126581	D	17	4126418	163
b3956	ppc	-	4151213	D	1147	4151121	92
b3957	argE	-	4152920	D	1004	4152870	50
b3957	argE	-	4153101	D	13	4152870	231
b3965	trmA	-	4161318	D	7	4161293	25
b3974	coaA	-	4173130	D	54	4173049	81
b3995	rsd	-	4194882	D	18	4194831	51
b3995	rsd	-	4194977	D	1	4194831	146
b4018	iclR	-	4221675	D	23	4221651	24
b4024	lysC	-	4231562	D	126	4231256	306
b4024	lysC	-	4231639	ND		4231256	383
b4034	malE	-	4244487	D	29	4244442	45
b4041	plsB	-	4254621	D	11	4254489	132
b4051	qor	-	4262327	D	174	4262254	73
b4058	uvrA	-	4271956	D	1	4271894	62
b4062	soxS	-	4275446	D	49	4275406	40

b4079	fdhF	-	4297430	D	3	4297389	41
b4089	rpiR	-	4311155	ND		4311014	141
b4089	rpiR	-	4311160	ND		4311014	146
b4106	phnC	-	4323229	ND		4323188	41
b4116	adiY	-	4336065	ND		4335952	113
b4117	adiA	-	4338579	D	5	4338547	32
b4118	melR	-	4339673	D	9	4339651	22
b4123	dcuB	-	4346787	D	1	4346767	20
b4123	dcuB	-	4347114	D	12	4346767	347
b4124	dcuR	-	4348588	ND		4348057	531
b4125	dcuS	-	4349708	D	17	4349685	23
b4129	lysU	-	4352820	D	160	4352740	80
b4129	lysU	-	4352828	ND		4352740	88
b4132	cadB	-	4358129	ND		4358054	75
b4133	cadC	-	4359986	D	15	4359957	29
b4135	yjdC	-	4361353	D	44	4361331	22
b4137	cutA	-	4363415	D	4	4363379	36
b4138	dcuA	-	4364866	D	6	4364796	70
b4149	blc	-	4375768	D	28	4375745	23
b4150	ampC	-	4377026	D	79	4376967	59
b4160	psd	-	4388661	D	40	4388383	278
b4189	yjfO	-	4414787	D	35	4414793	-6
b4192	ulaG	-	4417698	D	21	4417648	50
b4206	ytfB	-	4426842	D	40	4426740	102
b4209	ytfE	-	4430032	D	2	4430006	26
b4213	cpdB	-	4434652	D	31	4434588	64
b4216	ytfJ	-	4437309	D	1	4437285	24
b4219	msrA	-	4440284	D	146	4440199	85
b4223	yjfA	-	4446317	ND		4446268	49
b4226	ppa	-	4447709	D	7880	4447675	34
b4238	nrdD	-	4460861	D	10	4460683	178
b4240	treB	-	4464233	D	22	4464203	30
b4241	treR	-	4465294	D	8	4465269	25
b4241	treR	-	4465298	D	5	4465269	29
b4241	treR	-	4465314	ND		4465269	45
b4241	treR	-	4465370	D	3	4465269	101
b4243	yjgF	-	4468969	D	273	4468936	33
b4246	pyrL	-	4470576	D	140	4470556	20
b4246	pyrL	-	4470769	D	1	4470556	213
b4258	valS	-	4481942	D	871	4481860	82
b4258	valS	-	4481950	D	106	4481860	90
b4259	holC	-	4482296	D	4	4482303	-7
b4267	idnD	-	4492458	D	2	4492429	29
b4291	fecA	-	4514750	D	9	4514700	50
b4293	fecI	-	4516305	D	3	4516258	47
b4311	nanC	-	4537951	ND		4537524	427
b4321	gntP	-	4549357	D	1	4549319	38
b4362	dnaT	-	4599638	D	3	4599540	98
b4363	yjjB	-	4600200	ND		4600120	80
b4364	yjjP	-	4601057	D	1	4600881	176
b4387	ytjB	-	4622822	D	1	4622812	10
b4396	rob	-	4633376	D	157	4633333	43
b4401	arcA	-	4638531	D	20	4638329	202
b4401	arcA	-	4638535	D	31	4638329	206
b4401	arcA	-	4638558	D	9	4638329	229
b4401	arcA	-	4638622	D	128	4638329	293
b4401	arcA	-	4638704	D	75	4638329	375
b4401	arcA	-	4638711	D	5	4638329	382
b4401	arcA	-	4638824	D	2	4638329	495