

Table S1. Pseudogenes within the ~3 Mb common backbone sequence in *Shigella* genomes and the counterparts in MG1655. (* pseudogenes)

MG1655	Sd197	Sf301	Sb227	Ss046	Gene	Product
b0007	SDY0007	SF0007*	SBO0008*	SSO0008*	yaaJ	inner membrane transport protein
b0045	SDY0067	SF0042	SBO0034	SSO0053*	yaaU	putative transport protein
b0060	SDY0087*	SF0055	SBO0047	SSO0066	polB	DNA polymerase II
b0062	SDY0089	SF0057*	SBO0049	SSO0068	araA	L-arabinose isomerase
b0064	SDY0091*	SF0059	SBO0051	SSO0070	araC	transcriptional regulator for ara operon
b0106	SDY0136*	SF0103	SBO0094	SSO0114	hofC	putative integral membrane protein involved in biogenesis of fimbriae, protein transport, DNA uptake
b0108	SDY0138	SF0105	SBO0097*	SSO0116	ppdD	prelipin peptidase dependent protein
b0124	SDY0033*	SF0121	SBO0113	SSO0132	gcd	glucose dehydrogenase
b0130	SDY0040	SF0127	SBO0119*	SSO0138	yadE	orf, hypothetical protein
b0148	SDY0164*	SF0140	SBO0137	SSO0160	hrpB	helicase, ATP-dependent
b0160	SDY0176*	SF0152	SBO0149	SSO0172*	dgt	deoxyguanosine triphosphate triphosphohydrolase
b0162	SDY0179	SF0154*	SBO0151	SSO0175	yaeG	orf, hypothetical protein
b0186	SDY0204*	SF0176	SBO0174*	SSO0199	ldcC	lysine decarboxylase 2, constitutive
b0191	SDY0210	SF0182	SBO0180	SSO0205*	yaeJ	orf, hypothetical protein
b0221	SDY0247*	SF0271	SBO0212*	SSO0263	yafH	putative acyl-CoA dehydrogenase (EC 1.3.99.-)
b0383	SDY0361*	SF0230	SBO0278	SSO0358	phoA	alkaline phosphatase
b0394	SDY0345	SF0330	SBO0288*	SSO0371	yajF	possible NAGC-like transcriptional regulator
b0396	SDY0342*	SF0333	SBO0290	SSO0373	araJ	involved in either transport or processing of arabinose polymers
b0398	SDY0339*	SF0335	SBO0292	SSO0375	sbcD	ATP-dependent dsDNA exonuclease
b0400	SDY0337*	SF0337	SBO0294	SSO0377	phoR	positive and negative sensor protein for pho regulon
b0403	SDY0334*	SF0340	SBO0297*	SSO0380	malZ	maltodextrin glucosidase
b0453	SDY0390*	SF0398	SBO0348	SSO0441	ybaY	glycoprotein/polysaccharide metabolism
b0458	SDY0461	SF0403	SBO0358*	SSO0445	ylaC	orf, hypothetical protein
b0459	SDY0460	SF0404*	SBO0359	SSO0446	ylaD	putative transferase
b0476	SDY0443*	SF0421	SBO0376	SSO0463	ybaC	putative lipase (EC 3.1.1.-)
b0479	SDY0439*	SF0424	SBO0381*	SSO0468	fsr	fosmidomycin resistance protein
b0485	SDY0433*	SF0430	SBO0387	SSO0474	ybaS	putative glutaminase
b0492	SDY0407	SF0437	SBO0394*	SSO0481	ybbN	putative thioredoxin-like protein

MG1655	Sd197	Sf301	Sb227	Ss046	Gene	Product
b0494	SDY0404	SF0440*	SBO0397	SSO0484	tesA	acyl-CoA thioesterase I; also functions as protease I
b0496	SDY0403*	SF0441	SBO0398*	SSO0485	ybbP	putative oxidoreductase
b0504	SDY0398	SF0443	SBO0408*	SSO0487*	ybbS	putative transcriptional regulator LYSR-type
b0521	SDY0271*	SF0452	SBO0422*	SSO0497	arcC	putative carbamate kinase (EC 2.7.2.2)
b0578	SDY0491	SF0485*	SBO0439	SSO0529	nfnB	oxygen-insensitive NAD(P)H nitroreductase
b0580	SDY0493	SF0487	SBO0441	SSO0531*	ybdJ	orf, hypothetical protein
b0587	SDY0518	SF0501*	SBO0448	SSO0538	fepE	ferric enterobactin (enterochelin) transport
b0593	SDY0524	SF0507*	SBO0454	SSO0544	entC	isochorismate hydroxymutase 2, enterochelin biosynthesis
b0598	SDY0529*	SF0512	SBO0459	SSO0549	cstA	carbon starvation protein
b0600	SDY0532	SF0515	SBO0462*	SSO0552	ybdL	putative aminotransferase
b0602	SDY0537	SF0521*	SBO0463	SSO0554*	ybdN	orf, hypothetical protein
b0604	SDY0539*	SF0523	SBO0469*	SSO0556	dsbG	thiol:disulfide interchange protein
b0638	SDY0560*	SF0643	SBO0502*	SSO0592	phpB	homolog of Salmonella cobC, a phosphohistidine protein
b0654	SDY0589*	SF0627	SBO0517	SSO0608	gltJ	glutamate/aspartate transport system permease
b0675	SDY0609	SF0618*	SBO0537	SSO0629	nagD	N-acetylglucosamine metabolism
b0694	SDY0629	SF0601*	SBO0556	SSO0645	kdpE	regulator of kdp operon (transcriptional effector)
b0695	SDY0630*	SF0600*	SBO0557	SSO0646	kdpD	sensor for high-affinity potassium transport system
b0696	SDY0631	SF0602	SBO0558*	SSO0647	kdpC	high-affinity potassium transport system
b0697	SDY0632*	SF0599*	SBO0559	SSO0648	kdpB	ATPase of high-affinity potassium transport system, B chain
b0698	SDY0633*	SF0598	SBO0560	SSO0649	kdpA	ATPase of high-affinity potassium transport system, A chain
b0709	SDY0644*	SF0588	SBO0568	SSO0660	ybgH	putative transport protein
b0712	SDY0647	SF0585*	SBO0571	SSO0663	ybgK	putative carboxylase
b0750	SDY0694	SF0554	SBO0605	SSO0700*	nadA	quinolinate synthetase, A protein
b0788	SDY0815	SF0738	SBO0676	SSO0767*	ybhN	orf, hypothetical protein
b0789	SDY0814	SF0739	SBO0677*	SSO0768	ybhO	putative synthetase
b0790	SDY0813	SF0740	SBO0678*	SSO0769	ybhP	orf, hypothetical protein
b0806	SDY0791	SF0757	SBO0696*	SSO0786	ybiM	orf, hypothetical protein
b0813	SDY0782*	SF0764	SBO0704	SSO0793	ybiF	putative transmembrane subunit
b0839	SDY0841	SF0789	SBO0735*	SSO0822*	dacC	D-alanyl-D-alanine carboxypeptidase; penicillin-binding protein 6
b0842	SDY0844*	SF0795	SBO0738	SSO0827*	cmr	proton motive force efflux pump

MG1655	Sd197	SF301	Sb227	Ss046	Gene	Product
b0860	SDY2408*	SF0814	SBO0794	SSO0845	artJ	arginine 3rd transport system periplasmic binding protein
b0895	SDY2366*	SF0854	SBO0828*	SSO0896	dmsB	anaerobic dimethyl sulfoxide reductase subunit B
b0909	SDY2349	SF0905	SBO2197*	SSO0911	ycaL	putative heat shock protein
b0913	SDY2345	SF0909*	SBO2201	SSO0915	ycaI	orf, hypothetical protein
b0933	SDY2324	SF0930	SBO2224*	SSO0936	ycbE	putative ATP-binding component of a transport system
b0934	SDY2323	SF0931	SBO2225*	SSO0937	ycbM	putative transport system permease protein
b0958	SDY0933*	SF0958	SBO2273	SSO0962	sulA	suppressor of lon; inhibits cell division and ftsZ ring formation
b0974	SDY0949	SF0975	SBO2257	SSO0980*	hyaC	probable Ni/Fe-hydrogenase 1 b-type cytochrome subunit
b0977	SDY0952*	SF0978	SBO2254	SSO0983	hyaF	nickel incorporation into hydrogenase-1 proteins
b0992	SDY0966	SF0994	SBO2239	SSO1000*	yccM	orf, hypothetical protein
b0993	SDY0967*	SF0995	SBO2238	SSO1001	torS	sensor protein torS (regulator TorR)
b0996	SDY0970*	SF0997	SBO2235	SSO1004	torC	trimethylamine N-oxide reductase, cytochrome c-type subunit
b0997	SDY0971*	SF0999*	SBO2234*	SSO1005*	torA	trimethylamine N-oxide reductase subunit
b0998	SDY0972	SF1000*	SBO2233	SSO1006*	torD	part of trimethylamine-N-oxide oxidoreductase
b1033	SDY1004	SF1027*	SBO2035	SSO1042	ycdW	putative dehydrogenase
b1037	SDY0999	SF1031*	SBO2031*	SSO1046	csgG	curli production assembly/transport component, 2nd curli operon
b1040	SDY0996*	SF1034	SBO2028	SSO1050*	csgD	putative 2-component transcriptional regulator for 2nd curli operon
b1049	SDY2301	SF1045	SBO2017*	SSO1062	mdoH	membrane glycosyltransferase; synthesis of membrane-derived oligosaccharide (MDO)
b1070	SDY2082*	SF1076	SBO1994	SSO1090	flgN	protein of flagellar biosynthesis
b1077	SDY2074*	SF1081*	SBO1987	SSO1097	flgF	flagellar biosynthesis, cell-proximal portion of basal-body rod
b1078	SDY2073*	SF1082	SBO1986	SSO1098*	flgG	flagellar biosynthesis, cell-distal portion of basal-body rod
b1081	SDY2070	SF1085	SBO1983*	SSO1101	flgJ	flagellar biosynthesis
b1082	SDY2069*	SF1086*	SBO1982	SSO1102	flgK	flagellar biosynthesis, hook-filament junction protein 1
b1083	SDY2068	SF1087*	SBO1981	SSO1103	flgL	flagellar biosynthesis; hook-filament junction protein
b1102	SDY2048	SF1106*	SBO1961	SSO1122	fhuE	outer membrane receptor for ferric iron uptake
b1184	SDY1221	SF1173	SBO1888*	SSO1175*	umuC	SOS mutagenesis and repair
b1190	SDY1227*	SF1179	SBO1882*	SSO1182	dadX	alanine racemase 2, catabolic
b1214	SDY1263	SF1217	SBO1853	SSO1964*	ycaA	orf, hypothetical protein
b1220	SDY1274*	SF1223	SBO1846	SSO1957	ycaP	putative factor
b1269	SDY1339	SF1271*	SBO1797	SSO1874	ycaL	orf, hypothetical protein

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b1276	SDY1350*	SF1280	SBO1788*	SSO1864	acnA	aconitate hydratase 1
b1285	SDY1363*	SF1290*	SBO1779	SSO1855*	yciR	orf, hypothetical protein
b1287	SDY1367	SF1292	SBO1775	SSO1853*	yciW	putative oxidoreductase
b1328	SDY1408	SF1842*	SBO1734	SSO1805	ycjZ	putative transcriptional regulator LYSR-type
b1340	SDY1419	SF1829*	SBO1721	SSO1791	ydaL	orf, hypothetical protein
b1343	SDY1425*	SF1826	SBO1718	SSO1788	dbpA	ATP-dependent RNA helicase
b1379	SDY1463*	SF1820*	SBO1687	SSO1745	hslJ	heat shock protein hslJ
b1416.m	SDY1765*	SF1796	SBO1671	SSO1725	gapC	Glyceraldehyde-3-phosphate dehydrogenase
b1474	SDY1604*	SF1751	SBO1583	SSO1650	fdnG	formate dehydrogenase-N, nitrate-inducible, alpha subunit
b1478	SDY1608	SF1747	SBO1579*	SSO1646*	adhP	alcohol dehydrogenase
b1479	SDY1609*	SF1746	SBO1578	SSO1645	sfcA	NAD-linked malate dehydrogenase (malic enzyme)
b1524	SDY1631	SF1569	SBO1642*	SSO1604	yneH	putative glutaminase
b1532	SDY1595*	SF1562	SBO1650	SSO1596	marB	multiple antibiotic resistance protein
b1542	SDY1583*	SF1553	SBO1616	SSO1586	ydfI	putative oxidoreductase
b1596	SDY1559	SF1617*	SBO1540*	SSO1568	ynfM	putative transport protein
b1615	SDY1831*	SF1638	SBO1521	SSO1545	uidC	membrane-associated protein
b1616	SDY1835	SF1639*	SBO1520	SSO1544	uidB	glucuronide permease
b1635	SDY1858	SF1660	SBO1499	SSO1523*	gst	glutathionine S-transferase
b1650	SDY1876	SF1677	SBO1485*	SSO1506	nemA	N-ethylmaleimide reductase
b1692	SDY1475	SF1722	SBO1439*	SSO1462	ydiB	putative oxidoreductase
b1748	SDY1528*	SF1478*	SBO1342	SSO1409	cstC	acetylornithine delta-aminotransferase
b1790	SDY1688	SF1434*	SBO1303	SSO1371	yeaM	putative ARAC-type regulatory protein
b1818	SDY1964*	SF1410	SBO1230	SSO1342	manY	PTS enzyme IIC, mannose-specific
b1838	SDY1989*	SF1386*	SBO1253	SSO1321*	pphA	protein phosphatase 1 modulates phosphoproteins, signals protein misfolding
b1845	SDY1131	SF1856	SBO1153*	SSO1303	ptrB	protease II
b1852	SDY1138	SF1862*	SBO1160	SSO1296	zwf	glucose-6-phosphate dehydrogenase
b1864	SDY1151	SF1874*	SBO1187	SSO1277	yebC	orf, hypothetical protein
b1872	SDY1171	SF1913	SBO1130*	SSO1248	bisZ	biotin sulfoxide reductase 2
b1873	SDY1175*	SF1914	SBO1127*	SSO1245	yecK	putative cytochrome C-type protein
b1897	SDY1194*	SF1944	SBO1108*	SSO1220	otsB	trehalose-6-phosphate phosphatase, biosynthetic

MG1655	Sd197	SF301	Sb227	Ss046	Gene	Product
b1901	SDY1120	SF1947*	SBO1105*	SSO1217	araF	L-arabinose-binding periplasmic protein
b1916	SDY1101*	SF1959	SBO1090	SSO1202	sdiA	transcriptional regulator of ftsQAZ gene cluster
b1921	SDY1096	SF1964	SBO1085	SSO1195*	fliZ	orf, hypothetical protein
b1922	SDY1095	SF1965*	SBO1084	SSO1194	fliA	flagellar biosynthesis; alternative sigma factor 28; regulation of flagellar operons
b1926	SDY1089*	SF1969	SBO1080*	SSO1982	fliT	flagellar biosynthesis; repressor of class 3a and 3b operons (RflA activity)
b1931	SDY1084	SF1974*	SBO1075	SSO1987	yedK	orf, hypothetical protein
b1959	SDY1047	SF2003	SBO1049	SSO2016*	yedA	putative transmembrane subunit
b1990	SDY2243	SF2058	SBO1213	SSO2051*	erfK	orf, hypothetical protein
b1993	SDY2240	SF2061	SBO1210*	SSO2054	cobU	cobinamide kinase/cobinamide phosphate guanylyltransferase
b2067	SDY2195*	SF2131*	SBO0894*	SSO2120	yegE	putative sensor-type protein
b2069	SDY2193	SF2134*	SBO0896	SSO2122	yegD	putative heat shock protein
b2092	SDY2264*	SF2154	SBO0913	SSO2139	gatC	PTS system galactitol-specific enzyme IIC
b2094	SDY2266*	SF2156	SBO0915	SSO2142*	gatA	galactitol-specific enzyme IIA of phosphotransferase system
b2095	SDY2268*	SF2157	SBO0916*	SSO2143*	gatZ	putative tagatose 6-phosphate kinase 1
b2101	SDY2274	SF2163*	SBO0922	SSO2149	yegW	putative transcriptional regulator
b2127	SDY2162	SF2210*	SBO1017	SSO2183	yehV	putative transcriptional regulator
b2129	SDY2159*	SF2214	SBO1015	SSO2186	yehX	putative ATP-binding component of a transport system
b2130	SDY2158*	SF2215	SBO1014	SSO2187	yehY	putative transport system permease protein
b2137	SDY2151	SF2222*	SBO1007	SSO2194	yohF	putative oxidoreductase
b2138	SDY2150	SF2223	SBO1002*	SSO2195	yohG	putative channel/filament proteins
b2140	SDY2147	SF2225	SBO1001*	SSO2196	yohI	putative regulator protein
b2147	SDY2139*	SF2232*	SBO2180*	SSO2203	yeiA	putative oxidoreductase
b2149	SDY2133*	SF2234	SBO2178	SSO2205	mgIA	ATP-binding component of methyl-galactoside transport and galactose taxis
b2154	SDY2112	SF2239*	SBO2173	SSO2210	yeiG	putative esterase (EC 3.1.1.-).
b2182	SDY0897	SF2269	SBO2142*	SSO2238*	bcr	bicyclomycin resistance protein; transmembrane protein
b2209	SDY0869*	SF2293	SBO2098	SSO2267	eco	ecotin, a serine protease inhibitor
b2210	SDY0866	SF2294*	SBO2097	SSO2268	yojH	orf, hypothetical protein
b2237	SDY2431	SF2319	SBO2057*	SSO2296	inaA	pH-inducible protein involved in stress response
b2293	SDY2489	SF2369	SBO2328	SSO2350*	yfbT	putative phosphatase
b2327	SDY2526*	SF2403	SBO2364	SSO2385	yfcA	putative structural protein

MG1655	Sd197	SF301	Sb227	Ss046	Gene	Product
b2336	SDY2535	SF2412*	SBO2375	SSO2393	yfcS	putative chaperone
b2409	SDY2605*	SF2464	SBO2432	SSO2497	yfeR	putative transcriptional regulator LYSR-type
b2418	SDY2615	SF2473	SBO2444*	SSO2508	pdxK	pyridoxal/pyridoxine/pyridoxamine kinase
b2423m	SDY2619	SF2477*	SBO2448	SSO2512	cysW	ABC-type sulfate transport system, permease component
b2437	SDY2635	SF2490*	SBO2462	SSO2526	yfeG	putative ARAC-type regulatory protein
b2464	SDY2646*	SF2506	SBO2479*	SSO2544	talA	transaldolase A
b2465	SDY2647*	SF2507	SBO2480*	SSO2545	tktB	transketolase 2 isozyme
b2469	SDY2653	SF2511*	SBO2485	SSO2549	narQ	sensor for nitrate reductase system, protein histidine kinase (acts on NarP and narL)
b2470	SDY2654	SF2512	SBO2486*	SSO2550	acrD	sensitivity to acriflavine, integral membrane protein, possible efflux pump
b2519	SDY2715*	SF2565	SBO2543	SSO2601	pbpC	putative peptidoglycan enzyme
b2549	SDY2738	SF2596	SBO2577	SSO2632*	yphG	orf, hypothetical protein
b2550	SDY2740	SF2597	SBO2578	SSO2633*	yphH	putative NAGC-like transcriptional regulator
b2574	SDY2815	SF2636*	SBO2602*	SSO2698*	nadB	quinolinate synthetase, B protein
b2604	SDY2778	SF2664*	SBO2740	SSO2761	yfiN	orf, hypothetical protein
b2662	SDY2852*	SF2689	SBO2857*	SSO2806	gabT	4-aminobutyrate aminotransferase activity
b2674	SDY2867	SF2702	SBO2843	SSO2819*	nrdI	orf, hypothetical protein
b2679	SDY2875*	SF2707	SBO2837	SSO2824	proX	high-affinity transport system for glycine betaine and proline
b2685	SDY2880	SF2712*	SBO2832	SSO2829	emrA	multidrug resistance secretion protein
b2686	SDY2881*	SF2713	SBO2831	SSO2830	emrB	multidrug resistance; probably membrane translocase
b2702	SDY2898	SF2725*	SBO2816	SSO2846	srlA	PTS system, glucitol/sorbitol-specific IIC component, one of two
b2703	SDY2899*	SF2726	SBO2815	SSO2847	srlE	PTS system, glucitol/sorbitol-specific IIB component and second of two IIC components
b2705	SDY2902	SF2728	SBO2813	SSO2849*	srlD	glucitol (sorbitol)-6-phosphate dehydrogenase
b2706	SDY2903	SF2729	SBO2812*	SSO2850	gutM	glucitol operon activator
b2713	SDY2910*	SF2736	SBO2805	SSO2857	hydN	involved in electron transport from formate to hydrogen, Fe-S centers
b2723	SDY2920*	SF2740	SBO2795	SSO2870	hycC	membrane-spanning protein of hydrogenase 3 (part of FHL complex)
b2731	SDY2928*	SF2748	SBO2789	SSO2878*	fh1A	formate hydrogen-lyase transcriptional activator for fdhF, hyc and hyp operons
b2768	SDY2970	SF2784*	SBO2652	SSO2921	ygcP	putative anti-terminator regulatory protein
b2769	SDY2971*	SF2785	SBO2653	SSO2922	ygcQ	putative flavoprotein
b2770	SDY2972*	SF2786	SBO2654	SSO2923	ygcR	putative transport protein

MG1655	Sd197	SF301	Sb227	Ss046	Gene	Product
b2787	SDY3004*	SF2800	SBO2668	SSO2944	ygcX	putative glucarate dehydratase
b2788	SDY3005*	SF2801	SBO2669	SSO2945	ygcY	putative glucarate dehydratase
b2799	SDY3016	SF2813	SBO2680*	SSO2956	fucO	L-1,2-propanediol oxidoreductase
b2801	SDY3018*	SF2815	SBO2684*	SSO2958	fucP	fucose permease
b2802	SDY3020	SF2816	SBO2685	SSO2959*	fucI	L-fucose isomerase
b2803	SDY3021	SF2817*	SBO2686*	SSO2960	fucK	L-fuculokinase
b2825	SDY3042	SF2835	SBO2717*	SSO2982	ppdB	prepilin peptidase dependent protein B
b2826	SDY3043	SF2836*	SBO2718	SSO2983	ppdA	prepilin peptidase dependent protein A
b2841	SDY3058	SF2851	SBO2733*	SSO3001	araE	low-affinity L-arabinose transport system proton symport protein
b2891	SDY3191	SF2877*	SBO3101	SSO3044*	prfB	peptide chain release factor RF-2
b2900	SDY3181	SF2886*	SBO3092	SSO3053	yqfB	orf, hypothetical protein
b2901	SDY3180*	SF2887	SBO3091	SSO3054	bgIA	6-phospho-beta-glucosidase A; cryptic
b2956	SDY3116	SF2953	SBO3034	SSO3240*	yggM	putative alpha helix chain
b2965	SDY3107	SF2962	SBO3024*	SSO3230	speC	ornithine decarboxylase isozyme
b2966	SDY3106*	SF2963	SBO3023	SSO3229	yqgA	putative transport protein
b2999m	SDY3074*	SF3045	SBO2994*	SSO3144	yghYX	Predicted hydrolase
b3015m	SDY3221*	SF3060	SBO2878	SSO3158	ygiRQ	Fe-S oxidoreductase
b3039	SDY3201*	SF3079	SBO2897	SSO3176	ygiD	orf, hypothetical protein
b3057	SDY3240*	SF3098	SBO2913	SSO3194	bacA	bacitracin resistance; possibly phosphorylates undecaprenol
b3060	SDY3243*	SF3101	SBO2916*	SSO3197*	ygiP	putative transcriptional regulator LYSR-type
b3061	SDY3245*	SF3102	SBO2919	SSO3198	ttdA	L-tartrate dehydratase, subunit A
b3062	SDY3246*	SF3103	SBO2920	SSO3199	ttdB	L-tartrate dehydratase, subunit B
b3068	SDY3252	SF3110*	SBO2927	SSO3206	ygjF	orf, hypothetical protein
b3070	SDY3254	SF3111*	SBO2929	SSO3208	yqjH	orf, hypothetical protein
b3072	SDY3256	SF3113*	SBO2931	SSO3210	aer	aerotaxis sensor receptor, flavoprotein
b3073	SDY3257*	SF3114	SBO2932	SSO3211	ygjG	probable ornithine aminotransferase
b3076	SDY3260*	SF3116	SBO2935	SSO3215	ebgA	evolved beta-D-galactosidase, alpha subunit; cryptic gene
b3079	SDY3262*	SF3119*	SBO2940	SSO3126	ygjJ	orf, hypothetical protein
b3080	SDY3263	SF3120	SBO2941*	SSO3125	ygjK	putative isomerase
b3086	SDY3271*	SF3126	SBO2947	SSO3119	ygjQ	orf, hypothetical protein

MG1655	Sd197	SF301	Sb227	Ss046	Gene	Product
b3091	SDY3276	SF3131	SBO2952*	SSO3244	uxaA	altronate hydrolase
b3092	SDY3277*	SF3132	SBO2953	SSO3245	uxaC	uronate isomerase
b3093	SDY3278	SF3133	SBO2954	SSO3246*	exuT	transport of hexuronates
b3097	SDY3284	SF3140*	SBO2964	SSO3256	yqjC	orf, hypothetical protein
b3105	SDY3297	SF3147	SBO2972	SSO3264*	yhaJ	putative transcriptional regulator LYSR-type
b3110	SDY3301	SF3151	SBO2976*	SSO3268	yhaO	putative transport system permease protein
b3113	SDY3305*	SF3153	SBO2978	SSO3270	yhaR	orf, hypothetical protein
b3126	SDY3320	SF3163*	SBO2991	SSO3281	yhaF	orf, hypothetical protein
b3127	SDY3321*	SF3164	SBO2992*	SSO3282	yhaU	putative transport protein
b3151	SDY3330*	SF3192	SBO3231	SSO3297	yraQ	orf, hypothetical protein
b3173	SDY3352	SF3214*	SBO3209	SSO3321	yhbX	putative alkaline phosphatase I
b3203	SDY3384	SF3243	SBO3179*	SSO3351	yhbH	probable sigma-54 modulation protein
b3208	SDY3389	SF3248*	SBO3174	SSO3356	mtgA	putative peptidoglycan enzyme
b3241	SDY3417	SF3281	SBO3148*	SSO3383	yhcQ	putative membrane protein
b3243	SDY3419	SF3282	SBO3144	SSO3385*	qseA	quorum sensing Escherichia coli regulator A
b3262	SDY3439*	SF3300	SBO3256	SSO3403	yhdJ	putative methyltransferase
b3271	SDY3448*	SF3310	SBO3265	SSO3412	yhdZ	putative ATP-binding component of a transport system
b3283	SDY3460	SF3315	SBO3277	SSO3424*	yrdD	putative DNA topoisomerase
b3355	SDY3517*	SF3374	SBO3335	SSO3486	prkB	probable phosphoribulokinase
b3391	SDY3688*	SF3409	SBO3378	SSO3522	hofQ	putative transport portein
b3392	SDY3687	SF3410*	SBO3379	SSO3523	yrfA	orf, hypothetical protein
b3394	SDY3685	SF3412	SBO3381	SSO3525*	yrfC	orf, hypothetical protein
b3402	SDY3674	SF3420	SBO3389	SSO3533*	yhgE	putative transport
b3411	SDY3665	SF3430	SBO3400	SSO3542*	yhgA	orf, hypothetical protein
b3413	SDY3664*	SF3436	SBO3401	SSO3544	yhgH	orf, hypothetical protein
b3418	SDY3658	SF3441*	SBO3407	SSO3550	malT	positive regulator of mal regulon
b3441	SDY3592*	SF3463	SBO3438	SSO3683	yhhY	orf, hypothetical protein
b3449	SDY3597*	SF3466	SBO3445	SSO3687	ugpQ	glycerophosphodiester phosphodiesterase, cytosolic
b3450	SDY3598*	SF3468*	SBO3446	SSO3688	ugpC	ATP-binding component of sn-glycerol 3-phosphate transport system
b3451	SDY3599	SF3469	SBO3447*	SSO3689	ugpE	sn-glycerol 3-phosphate transport system, integral membrane protein

MG1655	Sd197	SF301	Sb227	Ss046	Gene	Product
b3468	SDY3619*	SF3486	SBO3465	SSO3706	yhhN	putative enzyme
b3474	SDY3625*	SF3492	SBO3471	SSO3712	yhhT	orf, hypothetical protein
b3496	SDY3566	SF3527*	SBO3494	SSO3731	yhiP	putative transport protein
b3508	SDY3545*	SF3542*	SBO3507*	SSO3578	yhiD	putative transport ATPase
b3513	SDY3538	SF3599*	SBO3512	SSO3573	yhiU	putative membrane protein
b3515	SDY3534*	SF3596	SBO3514	SSO3571	yhiW	putative ARAC-type regulatory protein
b3526	SDY4546*	SF3557	SBO3525	SSO3865	kdgK	ketodeoxygluconokinase
b3530	SDY4550*	SF3562*	SBO3529	SSO3861*	yhjL	putative oxidoreductase subunit
b3533	SDY4553	SF3564*	SBO3532	SSO3858*	yhjO	putative cellulose synthase
b3534	SDY4554*	SF3565	SBO3533	SSO3857	yhjQ	orf, hypothetical protein
b3538	SDY4561*	SF3570	SBO3537	SSO3852	yhjU	orf, hypothetical protein
b3544	SDY4567	SF3579	SBO3543*	SSO3846	dppA	dipeptide transport protein
b3548	SDY4354*	SF3583	SBO3550	SSO3842	yhjY	putative lipase
b3552	SDY4351*	SF3586	SBO3554	SSO3836	viaD	putative outer membrane protein
b3638	SDY4068	SF3677	SBO3640	SSO3768*	radC	DNA repair protein
b3647	SDY4078*	SF3686	SBO3730*	SSO3759	yicF	putative enzyme
b3656	SDY4088*	SF3696	SBO3721	SSO3748*	yicI	orf, hypothetical protein
b3657	SDY4578*	SF3697*	SBO3720	SSO3746	yicJ	putative permease
b3711	SDY4202	SF3751*	SBO3664	SSO3555	yidZ	putative transcriptional regulator LYSR-type
b3713	SDY4200*	SF3747	SBO3662	SSO3557*	yieF	orf, hypothetical protein
b3738	SDY4010	SF3818	SBO3749*	SSO3881	atpB	membrane-bound ATP synthase, F0 sector, subunit a
b3748	SDY4000*	SF3829	SBO3762	SSO3918	rbsD	D-ribose high-affinity transport system; membrane-associated protein
b3749	SDY3999*	SF3830*	SBO3763*	SSO3919	rbsA	ATP-binding component of D-ribose high-affinity transport system
b3751	SDY3996*	SF3834*	SBO3765*	SSO3921*	rbsB	D-ribose periplasmic binding protein
b3765	SDY3982*	SF3841*	SBO3777	SSO3937*	yifB	putative 2-component regulator
b3788	SDY3960*	SF3862	SBO3799	SSO3960	rffG	dTDP-glucose 4,6-dehydratase
b3800	SDY3947*	SF3871	SBO3812	SSO3973	aslB	putative arylsulfatase regulator
b3815m	SDY3930	SF3893*	SBO3828*	SSO3990*	yigE	Predicted periplasmic protein
b3840m	SDY3904*	SF3917	SBO3853	SSO4014	tatD	Mg-dependent DNase

MG1655	Sd197	SF301	Sb227	Ss046	Gene	Product
b3846	SDY3899	SF3922	SBO3858*	SSO4019	fadB	4-enzyme protein: 3-hydroxyacyl-CoA dehydrogenase; 3-hydroxybutyryl-CoA epimerase; delta(3)-cis-delta(2)-trans-enoyl-CoA isomerase; enoyl-CoA hydratase
b3861	SDY3882*	SF3932	SBO3873*	SSO4034*	yihF	putative GTP-binding protein
b3903	SDY3843*	SF3980	SBO3921	SSO4073	rhaA	L-rhamnose isomerase
b3906	SDY3840	SF3983	SBO3924	SSO4076*	rhaR	positive regulator for rhaRS operon
b3918	SDY3829*	SF3996	SBO3935	SSO4087	cdh	CDP-diacylglycerol phosphotidylhydrolase
b3921	SDY3824	SF3999*	SBO3938	SSO4090	yiiR	orf, hypothetical protein
b3942	SDY3777*	SF4020	SBO3962	SSO4116	katG	catalase; hydroperoxidase HPI(I)
b3944	SDY3779	SF4022*	SBO3964	SSO4118	yijF	orf, hypothetical protein
b3945	SDY3780	SF4023*	SBO3965	SSO4119	gldA	glycerol dehydrogenase, (NAD)
b3947	SDY3782	SF4025*	SBO3967	SSO4121	ptsA	PEP-protein phosphotransferase system enzyme I
b3950	SDY3785	SF4027	SBO3969	SSO4123*	frwB	PTS system fructose-like IIB component 1
b3951	SDY3786	SF4028	SBO3970	SSO4124*	pflD	formate acetyltransferase 2
b3966	SDY3762	SF4048	SBO3985*	SSO4139	btuB	outer membrane receptor for transport of vitamin B12, E colicins, and bacteriophage BF23
b3992	SDY3734	SF4064	SBO4013*	SSO4165	thiF	thiamin biosynthesis, thiazole moiety
b4013	SDY4330	SF4079*	SBO4033	SSO4185	metA	homoserine transsuccinylase
b4014	SDY4329*	SF4080*	SBO4034	SSO4186	aceB	malate synthase A
b4015	SDY4328	SF4081	SBO4035*	SSO4187	aceA	isocitrate lyase
b4021	SDY4318*	SF4087	SBO4042	SSO4192	pepE	peptidase E, a dipeptidase where amino-terminal residue is aspartate
b4029	SDY4219*	SF4176	SBO4057	SSO4207	yjbH	orf, hypothetical protein
b4055	SDY4514*	SF4149	SBO4084	SSO4235	aphA	diadenosine tetraphosphatase
b4107	SDY4110*	SF4116	SBO4132	SSO4282*	phnB	orf, hypothetical protein
b4109	SDY4106*	SF4114	SBO4136*	SSO4284	yjdB	putative vimentin
b4110	SDY4103	SF4113	SBO4137*	SSO4285	yjcz	orf, hypothetical protein
b4113	SDY4100*	SF4110	SBO4140	SSO4288	basR	transcriptional regulatory protein, member of 2-component regulatory system,
b4118	SDY4093*	SF4105	SBO4145	SSO4293	melR	regulator of melibiose operon
b4121	SDY4230*	SF4102	SBO4325	SSO4298	yjdB	orf, hypothetical protein
b4148	SDY4392	SF4306	SBO4308	SSO4334*	sugE	suppresses groEL, may be chaperone
b4167	SDY4426*	SF4321	SBO4290	SSO4351	yjeF	orf, hypothetical protein

MG1655	Sd197	SF301	Sb227	Ss046	Gene	Product
b4185	SDY4402	SF4338	SBO4270	SSO4367*	yjfM	orf, hypothetical protein
b4193	SDY4362	SF4348	SBO4262	SSO4375*	sgaT	orf, hypothetical protein
b4197	SDY4366*	SF4352	SBO4258	SSO4379	sgaU	putative hexulose-6-phosphate isomerase
b4198	SDY4367	SF4353	SBO4257*	SSO4380	sgaE	putative epimerase/aldolase
b4207	SDY4377	SF4279	SBO4238*	SSO4392*	fkfB	FKBP-type 22KD peptidyl-prolyl cis-trans isomerase (rotamase)
b4227	SDY4463*	SF4263	SBO4218	SSO4409	ytfQ	putative LACI-type transcriptional regulator
b4228	SDY4247	SF4262	SBO4217*	SSO4410	ytfR	putative ATP-binding component of a transport system
b4252	SDY4270	SF4239	SBO4195	SSO4432*	yjgK	orf, hypothetical protein
b4355	SDY4608*	SF4386	SBO4414	SSO4501*	tsr	methyl-accepting chemotaxis protein I, serine sensor receptor
b4364	SDY4620*	SF4395	SBO4424	SSO4510	yjjP	putative structural protein
b4366	SDY4624*	SF4399	SBO4426*	SSO4513	bglJ	2-component transcriptional regulator
b4376	SDY4636	SF4407	SBO4437*	SSO4526	osmY	hyperosmotically inducible periplasmic protein
b4386	SDY4647	SF4418*	SBO4449	SSO4536	lplA	lipoate-protein ligase A
b4394	SDY4655	SF4426*	SBO4457	SSO4544	yjjX	orf, hypothetical protein
b4399	SDY4660*	SF4431	SBO4462	SSO4549	creC	catabolite repression sensor kinase for PhoB; alternative sensor for pho regulon
b4400	SDY4661*	SF4432	SBO4463	SSO4550	creD	tolerance to colicin E2