

**Supplementary Table 2: Iterative analysis of expression profiles.** "Total probes" indicates total number of probes within ORF region. "Expressed probes" was determined by transcriptiondetector algorithm. "Probe density (%)" shows the ratio between the expressed probe and total probes within ORF region. Abbreviations: R1, log phase; R2, log phase+heat-shocked condition; R3, log phase+heat-shocked condition+stationary phase; R4, log phase+heat-shocked condition+stationary phase+glutamine growth condition; P, presence; A, absence; U, uncharacterized gene.

bnum	Gene	start	end	direction	size	total probes	Expressed probes				Probe density (%)				presence/absence call				Note
							R1	R2	R3	R4	R1	R2	R3	R4	R1	R2	R3	R4	
b0001	thrL	190	255	+	65	3	3	3	3	3	100%	100%	100%	100%	P	P	P	P	
b0002	thrA	337	2799	+	2462	98	98	98	98	98	100%	100%	100%	100%	P	P	P	P	
b0003	thrB	2801	3733	+	932	37	37	37	37	37	100%	100%	100%	100%	P	P	P	P	
b0004	thrC	3734	5020	+	1286	51	51	51	51	51	100%	100%	100%	100%	P	P	P	P	
b0005	yaaX	5234	5530	+	296	12	12	12	12	12	100%	100%	100%	100%	P	P	P	P	U
b0008	talB	8238	9191	+	953	38	38	38	38	38	100%	100%	100%	100%	P	P	P	P	
b0009	mog	9306	9893	+	587	23	23	23	23	23	100%	100%	100%	100%	P	P	P	P	U
b0014	dnaK	12163	14079	+	1916	77	77	77	77	77	100%	100%	100%	100%	P	P	P	P	
G0-8893	tpke11	14080	14168	+	88	3	3	3	3	3	100%	100%	100%	100%	P	P	P	P	
b0015	dnaJ	14168	15298	+	1130	45	45	45	45	45	100%	100%	100%	100%	P	P	P	P	
b0016	insL	15445	16557	+	1112	45	45	45	45	45	100%	100%	100%	100%	P	P	P	P	
b4413	sokC	16952	17006	+	54	2	0	0	0	2	0%	0%	0%	100%	A	A	A	P	
b0019	nhaA	17489	18655	+	1166	47	44	44	45	45	94%	94%	96%	96%	P	P	P	P	
b0020	nhaR	18715	19620	+	905	36	28	29	29	30	78%	81%	81%	83%	P	P	P	P	
b0024	yaaY	21181	21399	+	218	8	0	3	8	8	0%	38%	100%	100%	A	P	P	P	U
b0025	ribF	21407	22348	+	941	37	37	37	37	37	100%	100%	100%	100%	P	P	P	P	
b0026	ileS	22391	25207	+	2816	113	113	113	113	113	100%	100%	100%	100%	P	P	P	P	
b0027	lspA	25207	25701	+	494	20	20	20	20	20	100%	100%	100%	100%	P	P	P	P	
b0028	fkpB	25826	26275	+	449	18	18	18	18	18	100%	100%	100%	100%	P	P	P	P	
b0029	ispH	26277	27227	+	950	38	38	38	38	38	100%	100%	100%	100%	P	P	P	P	
b0030	rihC	27293	28207	+	914	37	13	13	14	14	35%	35%	38%	38%	P	P	P	P	
b0031	dapB	28374	29195	+	821	33	33	33	33	33	100%	100%	100%	100%	P	P	P	P	
b0032	carA	29651	30799	+	1148	46	46	46	46	46	100%	100%	100%	100%	P	P	P	P	
b0033	carB	30817	34038	+	3221	129	129	129	129	129	100%	100%	100%	100%	P	P	P	P	
b0034	caiF	34300	34695	+	395	16	14	14	14	14	88%	88%	88%	88%	P	P	P	P	
b0041	fixA	42403	43173	+	770	31	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b0042	fixB	43188	44129	+	941	37	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b0043	fixC	44180	45466	+	1286	52	0	1	1	1	0%	2%	2%	2%	A	P	P	P	U
b0044	fixX	45463	45750	+	287	11	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b0045	yaaU	45807	47138	+	1331	54	0	0	7	7	0%	0%	13%	13%	A	A	P	P	U
b0046	kefF	47246	47776	+	530	21	16	16	16	16	76%	76%	76%	76%	P	P	P	P	
b0047	kefC	47769	49631	+	1862	74	50	50	50	50	68%	68%	68%	68%	P	P	P	P	
b0048	folA	49823	50302	+	479	19	18	18	19	19	95%	95%	100%	100%	P	P	P	P	
b0055	djIA	57364	58179	+	815	32	32	32	32	32	100%	100%	100%	100%	P	P	P	P	
b4659	yabP	58474	59269	+	795	32	29	29	30	30	91%	91%	94%	94%	P	P	P	P	U
b0064	araC	70387	71265	+	878	35	33	34	34	34	94%	97%	97%	97%	P	P	P	P	
b0065	yabI	71351	72115	+	764	31	21	23	24	25	68%	74%	77%	81%	P	P	P	P	U
b4577	sgrS	77367	77593	+	226	9	6	6	6	6	67%	67%	67%	67%	P	P	P	P	
b0070	setA	77621	78799	+	1178	47	27	28	29	29	57%	60%	62%	62%	P	P	P	P	

b0076	leuO	84368	85312	+	944	38	0	0	0	4	0%	0%	0%	11%	A	A	A	P
b0077	ilvI	85630	87354	+	1724	69	69	69	69	69	100%	100%	100%	100%	P	P	P	P
b0078	ilvH	87357	87848	+	491	20	20	20	20	20	100%	100%	100%	100%	P	P	P	P
b0080	fruR	88028	89032	+	1004	40	38	38	38	38	95%	95%	95%	95%	P	P	P	P
b0081	mraZ	89634	90092	+	458	19	19	19	19	19	100%	100%	100%	100%	P	P	P	P
b0082	mraW	90094	91035	+	941	38	38	38	38	38	100%	100%	100%	100%	P	P	P	P
b0083	ftsL	91032	91397	+	365	15	15	15	15	15	100%	100%	100%	100%	P	P	P	P
b0084	ftsI	91413	93179	+	1766	70	69	69	69	69	99%	99%	99%	99%	P	P	P	P
b0085	murE	93166	94653	+	1487	59	59	59	59	59	100%	100%	100%	100%	P	P	P	P
b0086	murF	94650	96008	+	1358	54	54	54	54	54	100%	100%	100%	100%	P	P	P	P
b0087	mraY	96002	97084	+	1082	44	44	44	44	44	100%	100%	100%	100%	P	P	P	P
b0088	murD	97087	98403	+	1316	52	51	51	51	51	98%	98%	98%	98%	P	P	P	P
b0089	ftsW	98403	99647	+	1244	50	50	50	50	50	100%	100%	100%	100%	P	P	P	P
b0090	murG	99644	100711	+	1067	43	43	43	43	43	100%	100%	100%	100%	P	P	P	P
b0091	murC	100765	102240	+	1475	59	58	58	58	58	98%	98%	98%	98%	P	P	P	P
b0092	ddlB	102233	103153	+	920	37	37	37	37	37	100%	100%	100%	100%	P	P	P	P
b0093	ftsQ	103155	103985	+	830	34	34	34	34	34	100%	100%	100%	100%	P	P	P	P
b0094	ftsA	103982	105244	+	1262	51	51	51	51	51	100%	100%	100%	100%	P	P	P	P
b0095	ftsZ	105305	106456	+	1151	46	46	46	46	46	100%	100%	100%	100%	P	P	P	P
b0096	lpxC	106557	107474	+	917	37	37	37	37	37	100%	100%	100%	100%	P	P	P	P
b0097	secM	107705	108217	+	512	21	21	21	21	21	100%	100%	100%	100%	P	P	P	P
b0098	secA	108279	110984	+	2705	109	109	109	109	109	100%	100%	100%	100%	P	P	P	P
b0099	mutT	111044	111433	+	389	15	9	9	10	10	60%	60%	67%	67%	P	P	P	P
b0104	guaC	113444	114487	+	1043	42	42	42	42	42	100%	100%	100%	100%	P	P	P	P
b0110	ampD	118733	119284	+	551	23	21	21	21	21	91%	91%	91%	91%	P	P	P	P
b0111	ampE	119281	120135	+	854	35	25	25	25	26	71%	71%	71%	74%	P	P	P	P
b0113	pdhR	122092	122856	+	764	30	27	27	27	27	90%	90%	90%	90%	P	P	P	P
b0114	aceE	123017	125680	+	2663	106	106	106	106	106	100%	100%	100%	100%	P	P	P	P
b0115	aceF	125695	127587	+	1892	75	75	75	75	75	100%	100%	100%	100%	P	P	P	P
b0116	lpd	127912	129336	+	1424	57	57	57	57	57	100%	100%	100%	100%	P	P	P	P
b0118	acnB	131615	134212	+	2597	104	104	104	104	104	100%	100%	100%	100%	P	P	P	P
b0119	yacL	134388	134750	+	362	15	13	13	15	15	87%	87%	100%	100%	P	P	P	P
b0123	cueO	137083	138633	+	1550	62	61	61	61	61	98%	98%	98%	98%	P	P	P	P
b0125	hpt	141431	141967	+	536	21	21	21	21	21	100%	100%	100%	100%	P	P	P	P
b0127	yadG	142779	143705	+	926	37	36	36	36	36	97%	97%	97%	97%	P	P	P	P
b0128	yadH	143702	144472	+	770	31	26	26	26	26	84%	84%	84%	84%	P	P	P	P
	yadI	144577	145017	+	440	17	3	3	7	7	18%	18%	41%	41%	P	P	P	P
b0130	yadE	145081	146310	+	1229	49	14	16	16	19	29%	33%	33%	39%	P	P	P	P
b0132	yadD	146968	147870	+	902	36	9	9	9	9	25%	25%	25%	25%	P	P	P	P
b0148	hrpB	162105	164534	+	2429	97	78	79	79	79	80%	81%	81%	81%	P	P	P	P
b0149	mrcB	164730	167264	+	2534	101	94	94	94	94	93%	93%	93%	93%	P	P	P	P
b0150	fhuA	167484	169727	+	2243	90	86	86	86	88	96%	96%	96%	98%	P	P	P	P
b0151	fhuC	169778	170575	+	797	31	22	22	22	26	71%	71%	71%	84%	P	P	P	P
b0152	fhuD	170575	171465	+	890	36	16	16	16	22	44%	44%	44%	61%	P	P	P	P
b0153	fhuB	171462	173444	+	1982	79	20	20	21	29	25%	25%	27%	37%	P	P	P	P
b0155	clcA	175107	176528	+	1421	57	45	48	50	55	79%	84%	88%	96%	P	P	P	P

U

U

U

U

U

U

U

U

U

b0156	erpA	176610	176954	+	344	14	14	14	14	14	100%	100%	100%	100%	P	P	P	P	U
b0160	dgt	179237	180754	+	1517	60	51	51	51	51	85%	85%	85%	85%	P	P	P	P	
b0161	degP	180884	182308	+	1424	57	57	57	57	57	100%	100%	100%	100%	P	P	P	P	
b0162	cdaR	182463	183620	+	1157	46	13	14	16	16	28%	30%	35%	35%	P	P	P	P	U
b4414	tff	189712	189847	+	135	5	5	5	5	5	100%	100%	100%	100%	P	P	P	P	U
b0169	rpsB	189874	190599	+	725	29	29	29	29	29	100%	100%	100%	100%	P	P	P	P	
b0170	tsf	190857	191708	+	851	35	35	35	35	35	100%	100%	100%	100%	P	P	P	P	
b0171	pyrH	191855	192580	+	725	29	29	29	29	29	100%	100%	100%	100%	P	P	P	P	
b0172	frr	192872	193429	+	557	22	22	22	22	22	100%	100%	100%	100%	P	P	P	P	
b0173	dxr	193521	194717	+	1196	48	45	45	45	45	94%	94%	94%	94%	P	P	P	P	
b0174	ispU	194903	195664	+	761	31	31	31	31	31	100%	100%	100%	100%	P	P	P	P	
b0175	cdsA	195677	196534	+	857	35	35	35	35	35	100%	100%	100%	100%	P	P	P	P	
b0176	rseP	196546	197898	+	1352	54	54	54	54	54	100%	100%	100%	100%	P	P	P	P	
b0177	bamA	197928	200360	+	2432	98	98	98	98	98	100%	100%	100%	100%	P	P	P	P	U
b0178	skp	200482	200967	+	485	20	20	20	20	20	100%	100%	100%	100%	P	P	P	P	
b0179	lpxD	200971	201996	+	1025	41	41	41	41	41	100%	100%	100%	100%	P	P	P	P	
b0180	fabZ	202101	202556	+	455	18	18	18	18	18	100%	100%	100%	100%	P	P	P	P	
b0181	lpxA	202560	203348	+	788	31	31	31	31	31	100%	100%	100%	100%	P	P	P	P	
b0182	lpxB	203348	204496	+	1148	46	46	46	46	46	100%	100%	100%	100%	P	P	P	P	
b0183	rnhB	204493	205089	+	596	24	24	24	24	24	100%	100%	100%	100%	P	P	P	P	
b0184	dnaE	205126	208608	+	3482	140	139	139	139	139	99%	99%	99%	99%	P	P	P	P	
b0185	accA	208621	209580	+	959	38	36	36	36	36	95%	95%	95%	95%	P	P	P	P	
b0186	ldcC	209679	211820	+	2141	86	77	77	77	85	90%	90%	90%	99%	P	P	P	P	
b0187	yaeR	211877	212266	+	389	16	16	16	16	16	100%	100%	100%	100%	P	P	P	P	U
b0188	tilS	212331	213629	+	1298	52	49	49	49	49	94%	94%	94%	94%	P	P	P	P	
b0190	yaeQ	214291	214836	+	545	22	22	22	22	22	100%	100%	100%	100%	P	P	P	P	U
b0191	yaeJ	214833	215255	+	422	16	16	16	16	16	100%	100%	100%	100%	P	P	P	P	U
b0192	nlpE	215269	215979	+	710	28	27	27	27	27	96%	96%	96%	96%	P	P	P	P	
b0200	gmhB	222833	223408	+	575	23	23	23	23	23	100%	100%	100%	100%	P	P	P	P	
b0201	rrsH	223771	225312	+	1541	62	62	62	62	62	100%	100%	100%	100%	P	P	P	P	
b0202	ileV	225381	225457	+	76	4	4	4	4	4	100%	100%	100%	100%	P	P	P	P	
b0203	alaV	225500	225575	+	75	3	3	3	3	3	100%	100%	100%	100%	P	P	P	P	
b0204	rrlH	225759	228662	+	2903	116	116	116	116	116	100%	100%	100%	100%	P	P	P	P	
b0205	rrfH	228756	228875	+	119	5	5	5	5	5	100%	100%	100%	100%	P	P	P	P	
b0206	aspU	228928	229004	+	76	3	3	3	3	3	100%	100%	100%	100%	P	P	P	P	
b0207	dkgB	229167	229970	+	803	32	22	22	22	22	69%	69%	69%	69%	P	P	P	P	
b0209	yafD	231122	231922	+	800	32	32	32	32	32	100%	100%	100%	100%	P	P	P	P	U
b0210	yafE	231926	232549	+	623	25	13	24	24	24	52%	96%	96%	96%	P	P	P	P	U
b0213	yafS	234816	235538	+	722	29	22	22	22	22	76%	76%	76%	76%	P	P	P	P	U
b0215	dnaQ	236067	236798	+	731	29	29	29	29	29	100%	100%	100%	100%	P	P	P	P	
b0216	aspV	236931	237007	+	76	3	3	3	3	3	100%	100%	100%	100%	P	P	P	P	
b0217	yafT	237335	238120	+	785	32	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
GO-8896	C0067	238462	238586	+	124	5	0	0	0	0	0%	0%	0%	0%	A	A	A	A	
b4503	yafF	239106	239378	+	272	11	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b0220	ivy	240343	240816	+	473	19	19	19	19	19	100%	100%	100%	100%	P	P	P	P	
b0222	lpcA	243543	244121	+	578	23	23	23	23	23	100%	100%	100%	100%	P	P	P	P	

b0223	yafJ	244327	245094	+	767	31	29	29	29	29	94%	94%	94%	94%	P	P	P	P	U
b0227	yafL	246712	247461	+	749	30	0	4	9	9	0%	13%	30%	30%	A	P	P	P	U
b0228	yafM	247637	248134	+	497	20	8	10	10	10	40%	50%	50%	50%	P	P	P	P	U
b0230	lafU	250072	250827	+	755	30	0	0	8	8	0%	0%	27%	27%	A	A	P	P	U
b0231	dinB	250898	251953	+	1055	42	27	27	31	32	64%	64%	74%	76%	P	P	P	P	
b0232	yafN	252005	252298	+	293	12	10	11	11	11	83%	92%	92%	92%	P	P	P	P	U
b0233	yafO	252301	252699	+	398	16	5	5	5	5	31%	31%	31%	31%	P	P	P	P	U
b0234	yafP	252709	253161	+	452	18	2	2	2	2	11%	11%	11%	11%	P	P	P	P	U
b0235	ykfJ	253479	253685	+	206	8	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b0236	prfH	253702	254202	+	500	20	0	2	2	2	0%	10%	10%	10%	A	P	P	P	U
b0238	gpt	255977	256435	+	458	18	18	18	18	18	100%	100%	100%	100%	P	P	P	P	
b0239	frsA	256527	257771	+	1244	50	50	50	50	50	100%	100%	100%	100%	P	P	P	P	
b0240	crl	257829	258230	+	401	16	16	16	16	16	100%	100%	100%	100%	P	P	P	P	
b0242	proB	259612	260715	+	1103	45	45	45	45	45	100%	100%	100%	100%	P	P	P	P	
b0243	proA	260727	261980	+	1253	50	48	48	48	48	96%	96%	96%	96%	P	P	P	P	
b0244	thrW	262095	262170	+	75	3	3	3	3	3	100%	100%	100%	100%	P	P	P	P	
b4587	insN	269502	269759	+	257	10	7	7	10	10	70%	70%	100%	100%	P	P	P	P	U
b0256	insI	269827	270978	+	1151	46	45	45	45	45	98%	98%	98%	98%	P	P	P	P	
b4587	insN	270988	271413	+	425	17	15	15	15	15	88%	88%	88%	88%	P	P	P	P	U
b0258	ykfC	272071	273178	+	1107	44	10	10	10	10	23%	23%	23%	23%	P	P	P	P	U
b0260	mmuP	274549	275952	+	1403	56	53	56	56	56	95%	100%	100%	100%	P	P	P	P	U
b0261	mmuM	275939	276871	+	932	38	36	37	37	37	95%	97%	97%	97%	P	P	P	P	
b0268	yagE	281481	282410	+	929	37	0	0	6	6	0%	0%	16%	16%	A	A	P	P	U
b0269	yagF	282425	284392	+	1967	79	0	0	4	4	0%	0%	5%	5%	A	A	P	P	U
b0270	yagG	284619	286001	+	1382	55	0	0	2	2	0%	0%	4%	4%	A	A	P	P	U
b0271	yagH	286013	287623	+	1610	65	0	0	2	2	0%	0%	3%	3%	A	A	P	P	U
b0276	yagJ	290724	291455	+	731	29	4	4	8	8	14%	14%	28%	28%	P	P	P	P	U
b4629	ptwF	296430	296478	+	48	2	2	2	2	2	100%	100%	100%	100%	P	P	P	P	
b0287	yagU	302215	302829	+	614	25	25	25	25	25	100%	100%	100%	100%	P	P	P	P	U
b0295	ykgL	311336	311563	+	227	9	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b0297	eaeH	313581	314452	+	871	35	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b0298	insE	314506	314814	+	308	12	12	12	12	12	100%	100%	100%	100%	P	P	P	P	
b0299	insF	314811	315677	+	866	35	33	33	33	33	94%	94%	94%	94%	P	P	P	P	
b4631	ykgQ	316663	316791	+	128	5	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b0305	ykgD	319451	320305	+	854	34	0	3	3	3	0%	9%	9%	9%	A	P	P	P	U
b0306	ykgE	320832	321551	+	719	29	1	10	10	10	3%	34%	34%	34%	P	P	P	P	U
b0307	ykgF	321562	322989	+	1427	57	8	27	27	27	14%	47%	47%	47%	P	P	P	P	U
b0308	ykgG	322982	323677	+	695	28	4	19	20	20	14%	68%	71%	71%	P	P	P	P	U
b0314	betT	328687	330720	+	2033	82	77	77	80	80	94%	94%	98%	98%	P	P	P	P	
b0315	yahA	331595	332683	+	1088	43	18	18	18	34	42%	42%	42%	79%	P	P	P	P	U
b0318	yahD	334504	335109	+	605	24	0	0	1	1	0%	0%	4%	4%	A	A	P	P	U
b0319	yahE	335149	336012	+	863	34	0	0	2	2	0%	0%	6%	6%	A	A	P	P	U
b0320	yahF	336002	337549	+	1547	62	0	0	6	6	0%	0%	10%	10%	A	A	P	P	U
b0321	yahG	337549	338967	+	1418	56	0	1	6	6	0%	2%	11%	11%	A	P	P	P	U
b0323	yahI	339389	340339	+	950	38	0	0	3	3	0%	0%	8%	8%	A	A	P	P	U
b0324	yahJ	340349	341731	+	1382	55	41	42	42	42	75%	76%	76%	76%	P	P	P	P	U

b0325	yahK	342108	343157	+	1049	42	41	41	41	42	98%	98%	98%	100%	P	P	P	P	U
b0326	yahL	343400	344215	+	815	32	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b0327	yahM	344628	344873	+	245	10	1	1	1	1	10%	10%	10%	10%	P	P	P	P	U
b0329	yahO	345708	345983	+	275	11	10	11	11	11	91%	100%	100%	100%	P	P	P	P	U
b0331	prpB	347906	348796	+	890	36	0	0	34	34	0%	0%	94%	94%	A	A	P	P	
b0333	prpC	349236	350405	+	1169	47	0	0	11	11	0%	0%	23%	23%	A	A	P	P	
b0334	prpD	350439	351890	+	1451	58	0	0	1	1	0%	0%	2%	2%	A	A	P	P	
b0335	prpE	351930	353816	+	1886	75	0	0	7	7	0%	0%	9%	9%	A	A	P	P	U
b0336	codB	354146	355405	+	1259	50	50	50	50	50	100%	100%	100%	100%	P	P	P	P	
b0337	codA	355395	356678	+	1283	51	51	51	51	51	100%	100%	100%	100%	P	P	P	P	
b0339	cynT	358023	358682	+	659	26	0	0	0	0	0%	0%	0%	0%	A	A	A	A	
b0340	cynS	358713	359183	+	470	19	0	0	0	0	0%	0%	0%	0%	A	A	A	A	
b0341	cynX	359216	360370	+	1154	47	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b0347	mhpA	367835	369499	+	1664	66	0	0	2	2	0%	0%	3%	3%	A	A	P	P	
b0348	mhpB	369501	370445	+	944	38	0	0	1	1	0%	0%	3%	3%	A	A	P	P	
b0349	mhpC	370448	371329	+	881	36	0	0	1	1	0%	0%	3%	3%	A	A	P	P	
b0350	mhpD	371339	372148	+	809	32	0	0	1	1	0%	0%	3%	3%	A	A	P	P	
b0351	mhpF	372145	373095	+	950	38	0	5	5	5	0%	13%	13%	13%	A	P	P	P	
b0352	mhpE	373092	374105	+	1013	41	0	6	10	10	0%	15%	24%	24%	A	P	P	P	
b0353	mhpT	374683	375894	+	1211	48	0	1	6	6	0%	2%	13%	13%	A	P	P	P	U
b0354	yaiL	375996	376535	+	539	22	22	22	22	22	100%	100%	100%	100%	P	P	P	P	
b0360	insC	380575	380940	+	365	15	15	15	15	15	100%	100%	100%	100%	P	P	P	P	
b0361	insD	380898	381803	+	905	36	36	36	36	36	100%	100%	100%	100%	P	P	P	P	
b0365	tauA	384456	385418	+	962	39	0	0	0	0	0%	0%	0%	0%	A	A	A	A	
b0366	tauB	385431	386198	+	767	31	2	7	7	7	6%	23%	23%	23%	P	P	P	P	
b0367	tauC	386195	387022	+	827	33	3	3	5	5	9%	9%	15%	15%	P	P	P	P	
b0368	tauD	387019	387870	+	851	34	0	8	10	10	0%	24%	29%	29%	A	P	P	P	
b4580	yaiT	389475	390932	+	1457	58	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b4580	yaiT	392191	393642	+	1451	58	0	4	14	14	0%	7%	24%	24%	A	P	P	P	U
b0375	yaiV	393685	394353	+	668	27	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b0377	sbmA	395863	397083	+	1220	48	21	26	30	33	44%	54%	63%	69%	P	P	P	P	U
b0378	yaiW	397096	398190	+	1094	44	41	41	41	41	93%	93%	93%	93%	P	P	P	P	U
b0380	yaiZ	398817	399029	+	212	9	8	8	8	8	89%	89%	89%	89%	P	P	P	P	U
b0382	iraP	400610	400870	+	260	10	10	10	10	10	100%	100%	100%	100%	P	P	P	P	U
b0383	phoA	400971	402386	+	1415	57	33	33	33	33	58%	58%	58%	58%	P	P	P	P	
b0384	psiF	402505	402825	+	320	12	12	12	12	12	100%	100%	100%	100%	P	P	P	P	U
b0385	adrA	402927	404042	+	1115	45	0	0	6	6	0%	0%	13%	13%	A	A	P	P	U
b0387	yaiI	404988	405446	+	458	18	18	18	18	18	100%	100%	100%	100%	P	P	P	P	U
b0388	aroL	405629	406153	+	524	21	21	21	21	21	100%	100%	100%	100%	P	P	P	P	
b0389	yaiA	406203	406394	+	191	8	8	8	8	8	100%	100%	100%	100%	P	P	P	P	U
b0390	aroM	406652	407329	+	677	27	24	24	24	24	89%	89%	89%	89%	P	P	P	P	U
b0391	yaiE	407401	407685	+	284	12	11	12	12	12	92%	100%	100%	100%	P	P	P	P	U
b0392	ykiA	407893	408174	+	281	11	3	7	10	10	27%	64%	91%	91%	P	P	P	P	U
b0394	mak	409368	410276	+	908	36	33	33	33	35	92%	92%	92%	97%	P	P	P	P	
b0399	phoB	416366	417055	+	689	27	21	27	27	27	78%	100%	100%	100%	P	P	P	P	
b0400	phoR	417113	418408	+	1295	52	14	45	45	45	27%	87%	87%	87%	P	P	P	P	

b0401	brnQ	418815	420134	+	1319	53	49	49	49	49	92%	92%	92%	92%	P	P	P	P	U
b0402	proY	420210	421583	+	1373	55	35	35	35	35	64%	64%	64%	64%	P	P	P	P	U
b0403	malZ	421739	423556	+	1817	73	41	41	41	41	56%	56%	56%	56%	P	P	P	P	
b0405	queA	424235	425305	+	1070	42	41	41	41	41	98%	98%	98%	98%	P	P	P	P	
b0406	tgt	425361	426488	+	1127	45	45	45	45	45	100%	100%	100%	100%	P	P	P	P	
b0407	yajC	426511	426843	+	332	13	13	13	13	13	100%	100%	100%	100%	P	P	P	P	
b0408	secD	426871	428718	+	1847	74	74	74	74	74	100%	100%	100%	100%	P	P	P	P	
b0409	secF	428729	429700	+	971	39	39	39	39	39	100%	100%	100%	100%	P	P	P	P	
b0410	yajD	429829	430176	+	347	14	14	14	14	14	100%	100%	100%	100%	P	P	P	P	U
b0413	nrdR	432226	432675	+	449	18	18	18	18	18	100%	100%	100%	100%	P	P	P	P	U
b0414	ribD	432679	433782	+	1103	44	44	44	44	44	100%	100%	100%	100%	P	P	P	P	
b0415	ribE	433871	434341	+	470	19	19	19	19	19	100%	100%	100%	100%	P	P	P	P	
b0416	nusB	434361	434780	+	419	17	17	17	17	17	100%	100%	100%	100%	P	P	P	P	
b0417	thiL	434858	435835	+	977	39	39	39	39	39	100%	100%	100%	100%	P	P	P	P	
b0418	pgpA	435813	436331	+	518	20	18	18	18	18	90%	90%	90%	90%	P	P	P	P	
b0423	thiI	440773	442221	+	1448	58	58	58	58	58	100%	100%	100%	100%	P	P	P	P	
b0426	yajQ	443907	444398	+	491	20	20	20	20	20	100%	100%	100%	100%	P	P	P	P	U
b0435	bolA	453696	454013	+	317	13	13	13	13	13	100%	100%	100%	100%	P	P	P	P	
b0436	tig	454357	455655	+	1298	52	52	52	52	52	100%	100%	100%	100%	P	P	P	P	
b0437	clpP	455901	456524	+	623	25	25	25	25	25	100%	100%	100%	100%	P	P	P	P	
b0438	clpX	456650	457924	+	1274	51	51	51	51	51	100%	100%	100%	100%	P	P	P	P	
b0439	lon	458112	460466	+	2354	94	94	94	94	94	100%	100%	100%	100%	P	P	P	P	
b0440	hupB	460675	460947	+	272	11	11	11	11	11	100%	100%	100%	100%	P	P	P	P	
b0441	ppiD	461139	463010	+	1871	75	75	75	75	75	100%	100%	100%	100%	P	P	P	P	
b0442	ybaV	463161	463532	+	371	15	2	4	4	4	13%	27%	27%	27%	P	P	P	P	U
b0443	ybaW	463626	464024	+	398	16	5	9	11	14	31%	56%	69%	88%	P	P	P	P	U
b0446	cof	466636	467454	+	818	32	13	21	21	21	41%	66%	66%	66%	P	P	P	P	
b0447	ybaO	467607	468065	+	458	18	13	13	16	16	72%	72%	89%	89%	P	P	P	P	U
b0448	mdIA	468095	469867	+	1772	71	11	11	11	16	15%	15%	15%	23%	P	P	P	P	U
b0449	mdIB	469860	471641	+	1781	71	11	11	11	13	15%	15%	15%	18%	P	P	P	P	U
b0450	glnK	471822	472160	+	338	14	0	0	0	14	0%	0%	0%	100%	A	A	A	P	
b0451	amtB	472190	473476	+	1286	51	26	26	26	51	51%	51%	51%	100%	P	P	P	P	
b0453	ybaY	474603	475175	+	572	23	23	23	23	23	100%	100%	100%	100%	P	P	P	P	U
b0455	ffs	475672	475785	+	113	5	5	5	5	5	100%	100%	100%	100%	P	P	P	P	
b0456	ybaA	475896	476249	+	353	14	2	5	9	9	14%	36%	64%	64%	P	P	P	P	U
b0464	acrR	484985	485632	+	647	25	15	15	15	15	60%	60%	60%	60%	P	P	P	P	
b0465	kefA	485760	489122	+	3362	134	125	125	125	125	93%	93%	93%	93%	P	P	P	P	U
b0468	ybaN	490106	490483	+	377	16	15	15	15	15	94%	94%	94%	94%	P	P	P	P	U
b0469	apt	490636	491187	+	551	22	22	22	22	22	100%	100%	100%	100%	P	P	P	P	
b0470	dnaX	491316	493247	+	1931	77	76	76	76	76	99%	99%	99%	99%	P	P	P	P	
b0471	ybaB	493300	493629	+	329	13	13	13	13	13	100%	100%	100%	100%	P	P	P	P	U
b0472	recR	493629	494234	+	605	25	25	25	25	25	100%	100%	100%	100%	P	P	P	P	
b0473	htpG	494344	496218	+	1874	75	72	74	74	74	96%	99%	99%	99%	P	P	P	P	
b0474	adk	496399	497043	+	644	26	26	26	26	26	100%	100%	100%	100%	P	P	P	P	
b0475	hemH	497279	498241	+	962	39	31	31	31	31	79%	79%	79%	79%	P	P	P	P	
b0477	gsk	499349	500653	+	1304	52	52	52	52	52	100%	100%	100%	100%	P	P	P	P	

b0480	ushA	504138	505790	+	1652	66	66	66	66	66	100%	100%	100%	100%	P	P	P	P	
b4585	sroB	506428	506509	+	81	3	2	2	3	3	67%	67%	100%	100%	P	P	P	P	U
b0483	ybaQ	507442	507783	+	341	13	12	13	13	13	92%	100%	100%	100%	P	P	P	P	U
b0485	ybaS	510865	511797	+	932	37	37	37	37	37	100%	100%	100%	100%	P	P	P	P	U
b0486	ybaT	511800	513092	+	1292	52	49	49	51	51	94%	94%	98%	98%	P	P	P	P	U
b0487	cueR	513217	513624	+	407	16	16	16	16	16	100%	100%	100%	100%	P	P	P	P	
b0490	ybbL	515143	515820	+	677	27	25	25	25	26	93%	93%	93%	96%	P	P	P	P	U
b0491	ybbM	515807	516586	+	779	31	18	18	18	18	58%	58%	58%	58%	P	P	P	P	U
b0495	ybbA	518957	519643	+	686	28	26	26	26	26	93%	93%	93%	93%	P	P	P	P	U
b0496	ybbP	519640	522054	+	2414	96	32	36	37	41	33%	38%	39%	43%	P	P	P	P	U
b0497	rhsD	522485	526765	+	4280	172	30	32	41	43	17%	19%	24%	25%	P	P	P	P	U
b0498	ybbC	526805	527173	+	368	15	3	6	6	9	20%	40%	40%	60%	P	P	P	P	U
b0499	ylbH	527176	527883	+	707	28	4	5	6	6	14%	18%	21%	21%	P	P	P	P	U
b0500	ybbD	527864	528354	+	490	20	1	1	1	1	5%	5%	5%	5%	P	P	P	P	U
b4632	ylbI	528724	528816	+	92	4	1	1	1	1	25%	25%	25%	25%	P	P	P	P	U
b0505	allA	531675	532157	+	482	19	4	4	4	4	21%	21%	21%	21%	P	P	P	P	
b0506	allR	532235	533050	+	815	33	33	33	33	33	100%	100%	100%	100%	P	P	P	P	
b0507	gcl	533140	534921	+	1781	71	0	2	17	17	0%	3%	24%	24%	A	P	P	P	
b0508	hyi	534934	535710	+	776	31	0	0	2	2	0%	0%	6%	6%	A	A	P	P	
b0509	glxR	535810	536688	+	878	35	0	0	1	1	0%	0%	3%	3%	A	A	P	P	
b0511	ybbW	536857	538311	+	1454	58	0	0	5	5	0%	0%	9%	9%	A	A	P	P	U
b0512	allB	538371	539732	+	1361	54	0	0	11	11	0%	0%	20%	20%	A	A	P	P	
b0513	ybbY	539789	541090	+	1301	53	0	0	2	2	0%	0%	4%	4%	A	A	P	P	U
b0514	glxK	541112	542257	+	1145	46	13	13	18	19	28%	28%	39%	41%	P	P	P	P	
b0518	fdrA	545904	547571	+	1667	67	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b4572	ylbE	547581	548839	+	1258	51	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b0520	ylbF	548850	549665	+	815	33	0	0	2	2	0%	0%	6%	6%	A	A	P	P	U
b0521	ybcF	549662	550555	+	893	36	0	0	7	7	0%	0%	19%	19%	A	A	P	P	U
b0526	cysS	553834	555219	+	1385	56	56	56	56	56	100%	100%	100%	100%	P	P	P	P	
b0530	sfmA	557435	557977	+	542	22	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b0531	sfmC	558197	558889	+	692	28	0	0	0	0	0%	0%	0%	0%	A	A	A	A	
b0532	sfmD	558920	561523	+	2603	104	0	2	7	7	0%	2%	7%	7%	A	P	P	P	U
b0533	sfmH	561559	562542	+	983	40	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b0534	sfmF	562553	563068	+	515	21	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b0536	argU	563946	564022	+	76	3	3	3	3	3	100%	100%	100%	100%	P	P	P	P	
b4508	peaD	565599	565910	+	311	12	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b0542	renD	565907	565999	+	92	4	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b0540	insE	566056	566364	+	308	13	12	12	12	12	92%	92%	92%	92%	P	P	P	P	
b0541	insF	566361	567227	+	866	35	31	31	31	31	89%	89%	89%	89%	P	P	P	P	
b0542	renD	567258	567470	+	212	9	7	7	7	7	78%	78%	78%	78%	P	P	P	P	U
b0543	emrE	567538	567870	+	332	14	12	12	12	12	86%	86%	86%	86%	P	P	P	P	
b0544	ybcK	568125	569651	+	1526	61	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b0545	ybcL	570116	570667	+	551	23	1	1	13	14	4%	4%	57%	61%	P	P	P	P	U
b0546	ybcM	570677	571474	+	797	32	8	15	19	26	25%	47%	59%	81%	P	P	P	P	U
b4588	ylcH	571591	571692	+	101	5	0	1	1	1	0%	20%	20%	20%	A	P	P	P	U
b0547	ybcN	571689	572144	+	455	19	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U

b0548	ninE	572144	572314	+	170	6	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b0549	ybcO	572307	572597	+	290	12	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b0550	rusA	572594	572956	+	362	14	0	0	2	2	0%	0%	14%	14%	A	A	P	P	
b4509	ylcG	572953	573093	+	140	6	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b0551	quuD	573179	573562	+	383	15	0	0	1	1	0%	0%	7%	7%	A	A	P	P	U
b0554	essD	576621	576836	+	215	9	0	0	2	2	0%	0%	22%	22%	A	A	P	P	U
b0555	arrD	576836	577333	+	497	20	0	0	2	2	0%	0%	10%	10%	A	A	P	P	U
b0556	rzpD	577330	577791	+	461	18	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b4510	rzoD	577550	577732	+	182	7	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b0559	ybcW	579103	579309	+	206	9	0	3	3	3	0%	33%	33%	33%	A	P	P	P	U
b0560	nohB	580057	580602	+	545	22	0	0	0	0	0%	0%	0%	0%	A	A	A	A	
b4634	aaaD	580577	580885	+	308	12	0	0	2	2	0%	0%	17%	17%	A	A	P	P	U
b0561	tfaD	580883	581320	+	437	18	0	0	1	1	0%	0%	6%	6%	A	A	P	P	U
b0563	tfaX	582176	582358	+	182	7	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b0564	appY	582904	583653	+	749	30	14	14	15	17	47%	47%	50%	57%	P	P	P	P	
b4635	pauD	585280	585324	+	44	2	2	2	2	2	100%	100%	100%	100%	P	P	P	P	
b0572	cusC	594823	596196	+	1373	55	0	0	0	0	0%	0%	0%	0%	A	A	A	A	
b0573	cusF	596354	596686	+	332	13	0	4	4	4	0%	31%	31%	31%	A	P	P	P	
b0574	cusB	596702	597925	+	1223	49	0	0	1	1	0%	0%	2%	2%	A	A	P	P	
b0575	cusA	597937	601080	+	3143	126	0	0	10	11	0%	0%	8%	9%	A	A	P	P	
b0576	pheP	601182	602558	+	1376	55	39	39	39	39	71%	71%	71%	71%	P	P	P	P	
b4415	hokE	607059	607211	+	152	6	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b0582	insL	607288	608400	+	1112	45	45	45	45	45	100%	100%	100%	100%	P	P	P	P	
b0585	fes	612038	613162	+	1124	45	2	2	17	45	4%	4%	38%	100%	P	P	P	P	
b4511	ybdZ	613165	613383	+	218	9	1	1	1	9	11%	11%	11%	100%	P	P	P	P	U
b0586	entF	613380	617261	+	3881	155	18	34	41	151	12%	22%	26%	97%	P	P	P	P	
b0587	fepE	617477	618610	+	1133	45	0	0	0	0	0%	0%	0%	0%	A	A	A	A	
b0591	entS	621523	622773	+	1250	50	5	5	5	31	10%	10%	10%	62%	P	P	P	P	U
b0593	entC	624108	625283	+	1175	47	14	14	28	47	30%	30%	60%	100%	P	P	P	P	
b0594	entE	625293	626903	+	1610	65	19	19	34	65	29%	29%	52%	100%	P	P	P	P	
b0595	entB	626917	627774	+	857	35	14	14	22	35	40%	40%	63%	100%	P	P	P	P	
b0596	entA	627774	628520	+	746	29	11	11	12	29	38%	38%	41%	100%	P	P	P	P	
b0597	ybdB	628523	628936	+	413	16	6	6	8	16	38%	38%	50%	100%	P	P	P	P	U
b0598	cstA	629117	631222	+	2105	85	85	85	85	85	100%	100%	100%	100%	P	P	P	P	
b4512	ybdD	631405	631602	+	197	8	7	7	8	8	88%	88%	100%	100%	P	P	P	P	U
b0600	ybdL	632809	633969	+	1160	46	41	44	44	44	89%	96%	96%	96%	P	P	P	P	
b0605	ahpC	638168	638731	+	563	23	23	23	23	23	100%	100%	100%	100%	P	P	P	P	
b0606	ahpF	638976	640541	+	1565	62	62	62	62	62	100%	100%	100%	100%	P	P	P	P	
b0608	ybdR	641311	642549	+	1238	49	17	18	19	38	35%	37%	39%	78%	P	P	P	P	U
b0619	dpiB	651458	653116	+	1658	66	24	25	25	25	36%	38%	38%	38%	P	P	P	P	
b0620	dpiA	653085	653765	+	680	27	15	18	18	18	56%	67%	67%	67%	P	P	P	P	
b0622	pagP	655780	656340	+	560	22	0	3	3	5	0%	14%	14%	23%	A	P	P	P	
b0623	cspE	656515	656724	+	209	9	9	9	9	9	100%	100%	100%	100%	P	P	P	P	
b4581	ybeM	657254	658041	+	787	31	21	21	30	30	68%	68%	97%	97%	P	P	P	P	U
b0627	tatE	658170	658373	+	203	8	8	8	8	8	100%	100%	100%	100%	P	P	P	P	
b0643	ybeL	674241	674723	+	482	19	19	19	19	19	100%	100%	100%	100%	P	P	P	P	U



b0645	ybeR	675934	676641	+	707	28	0	0	1	1	0%	0%	4%	4%	A	A	P	P	U
b0646	djIB	676638	678065	+	1427	57	0	0	4	4	0%	0%	7%	7%	A	A	P	P	U
b0648	ybeU	678731	679438	+	707	28	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b0649	djIC	679435	680886	+	1451	58	0	0	0	0	0%	0%	0%	0%	A	A	A	A	
b0662	ubiF	694324	695499	+	1175	47	47	47	47	47	100%	100%	100%	100%	P	P	P	P	
b0679	nagE	703167	705113	+	1946	78	73	73	76	76	94%	94%	97%	97%	P	P	P	P	
b0680	glnS	705316	706980	+	1664	67	67	67	67	67	100%	100%	100%	100%	P	P	P	P	
b0681	ybfM	707557	708963	+	1406	56	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b0682	ybfN	709013	709339	+	326	13	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b0687	seqA	712210	712755	+	545	22	22	22	22	22	100%	100%	100%	100%	P	P	P	P	
b0688	pgm	712781	714421	+	1640	65	65	65	65	65	100%	100%	100%	100%	P	P	P	P	
b0689	ybfP	714635	715129	+	494	19	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b4590	ybfK	719806	720063	+	257	10	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b0699	ybfA	728357	728563	+	206	8	8	8	8	8	100%	100%	100%	100%	P	P	P	P	U
b0700	rhcC	728806	732999	+	4193	167	42	46	55	57	25%	28%	33%	34%	P	P	P	P	
b0702	ybfB	732999	733325	+	326	13	0	0	1	1	0%	0%	8%	8%	A	A	P	P	U
b0703	ybfO	733356	734876	+	1520	60	16	17	23	23	27%	28%	38%	38%	P	P	P	P	U
b0704	ybfC	734873	735442	+	569	23	0	0	1	2	0%	0%	4%	9%	A	A	P	P	U
b4514	ybfQ	735668	735922	+	254	10	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b0705	ybfL	736048	737184	+	1136	46	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b0706	ybfD	737315	738076	+	761	30	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b0707	ybgA	738224	738733	+	509	21	18	18	18	20	86%	86%	86%	95%	P	P	P	P	U
b0708	phr	738730	740148	+	1418	57	35	35	36	38	61%	61%	63%	67%	P	P	P	P	
b0710	ybgI	742050	742793	+	743	30	30	30	30	30	100%	100%	100%	100%	P	P	P	P	U
b0711	ybgJ	742816	743472	+	656	26	26	26	26	26	100%	100%	100%	100%	P	P	P	P	U
b0712	ybgK	743466	744398	+	932	37	37	37	37	37	100%	100%	100%	100%	P	P	P	P	U
b0713	ybgL	744388	745122	+	734	29	28	28	28	28	97%	97%	97%	97%	P	P	P	P	U
b0714	nei	745158	745949	+	791	32	29	29	29	29	91%	91%	91%	91%	P	P	P	P	
b0721	sdhC	754400	754789	+	389	16	16	16	16	16	100%	100%	100%	100%	P	P	P	P	
b0722	sdhD	754783	755130	+	347	14	14	14	14	14	100%	100%	100%	100%	P	P	P	P	
b0723	sdhA	755130	756896	+	1766	71	71	71	71	71	100%	100%	100%	100%	P	P	P	P	
b0724	sdhB	756912	757628	+	716	28	28	28	28	28	100%	100%	100%	100%	P	P	P	P	
b0726	sucA	757929	760730	+	2801	112	112	112	112	112	100%	100%	100%	100%	P	P	P	P	
b0727	sucB	760745	761962	+	1217	49	49	49	49	49	100%	100%	100%	100%	P	P	P	P	
b0728	sucC	762237	763403	+	1166	46	46	46	46	46	100%	100%	100%	100%	P	P	P	P	
b0729	sucD	763403	764272	+	869	35	35	35	35	35	100%	100%	100%	100%	P	P	P	P	
b0731	mngA	765207	767183	+	1976	80	0	3	9	10	0%	4%	11%	13%	A	P	P	P	
b0732	mngB	767201	769834	+	2633	106	17	21	23	23	16%	20%	22%	22%	P	P	P	P	
b0733	cydA	770681	772249	+	1568	63	63	63	63	63	100%	100%	100%	100%	P	P	P	P	
b0734	cydB	772265	773404	+	1139	45	45	45	45	45	100%	100%	100%	100%	P	P	P	P	
b4515	ybgT	773419	773532	+	113	4	4	4	4	4	100%	100%	100%	100%	P	P	P	P	U
b0735	ybgE	773532	773825	+	293	12	10	11	11	11	83%	92%	92%	92%	P	P	P	P	U
b0736	ybgC	773975	774379	+	404	16	16	16	16	16	100%	100%	100%	100%	P	P	P	P	U
b0737	tolQ	774376	775068	+	692	28	28	28	28	28	100%	100%	100%	100%	P	P	P	P	
b0738	tolR	775072	775500	+	428	17	17	17	17	17	100%	100%	100%	100%	P	P	P	P	
b0739	tolA	775565	776830	+	1265	50	49	49	49	49	98%	98%	98%	98%	P	P	P	P	

b0740	tolB	776963	778255	+	1292	51	51	51	51	51	100%	100%	100%	100%	P	P	P	P	
b0741	pal	778290	778811	+	521	21	21	21	21	21	100%	100%	100%	100%	P	P	P	P	
b0742	ybgF	778821	779612	+	791	32	32	32	32	32	100%	100%	100%	100%	P	P	P	P	U
b0743	lysT	779777	779852	+	75	3	3	3	3	3	100%	100%	100%	100%	P	P	P	P	
b0744	valT	779988	780063	+	75	3	3	3	3	3	100%	100%	100%	100%	P	P	P	P	
b0745	lysW	780066	780141	+	75	3	3	3	3	3	100%	100%	100%	100%	P	P	P	P	
b0746	valZ	780291	780366	+	75	3	3	3	3	3	100%	100%	100%	100%	P	P	P	P	
b0747	lysY	780370	780445	+	75	3	3	3	3	3	100%	100%	100%	100%	P	P	P	P	
b0748	lysZ	780592	780667	+	75	3	3	3	3	3	100%	100%	100%	100%	P	P	P	P	
b0749	lysQ	780800	780875	+	75	3	3	3	3	3	100%	100%	100%	100%	P	P	P	P	
b0750	nadA	781308	782351	+	1043	42	42	42	42	42	100%	100%	100%	100%	P	P	P	P	
b0751	pnuC	782389	783108	+	719	29	29	29	29	29	100%	100%	100%	100%	P	P	P	P	U
b0754	aroG	784856	785908	+	1052	43	43	43	43	43	100%	100%	100%	100%	P	P	P	P	
b0762	ybhT	793996	794145	+	149	6	6	6	6	6	100%	100%	100%	100%	P	P	P	P	U
b0763	modA	794312	795085	+	773	31	30	30	30	31	97%	97%	97%	100%	P	P	P	P	
b0764	modB	795085	795774	+	689	27	21	21	21	26	78%	78%	78%	96%	P	P	P	P	
b0765	modC	795777	796835	+	1058	43	28	28	28	34	65%	65%	65%	79%	P	P	P	P	
b0767	pgl	797809	798804	+	995	39	39	39	39	39	100%	100%	100%	100%	P	P	P	P	
b0769	ybhH	799982	801034	+	1052	43	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b0770	ybhI	801110	802543	+	1433	57	0	1	5	5	0%	2%	9%	9%	A	P	P	P	U
b0771	ybhJ	802726	804987	+	2261	91	0	3	4	4	0%	3%	4%	4%	A	P	P	P	U
b0775	bioB	808567	809607	+	1040	42	42	42	42	42	100%	100%	100%	100%	P	P	P	P	
b0776	bioF	809604	810758	+	1154	47	47	47	47	47	100%	100%	100%	100%	P	P	P	P	
b0777	bioC	810745	811500	+	755	30	30	30	30	30	100%	100%	100%	100%	P	P	P	P	U
b0778	bioD	811493	812170	+	677	27	27	27	27	27	100%	100%	100%	100%	P	P	P	P	
b0779	uvrB	812749	814770	+	2021	81	80	80	80	80	99%	99%	99%	99%	P	P	P	P	
b0781	moaA	816267	817256	+	989	39	39	39	39	39	100%	100%	100%	100%	P	P	P	P	
b0782	moaB	817278	817790	+	512	21	21	21	21	21	100%	100%	100%	100%	P	P	P	P	
b0783	moaC	817793	818278	+	485	19	19	19	19	19	100%	100%	100%	100%	P	P	P	P	
b0784	moaD	818271	818516	+	245	10	10	10	10	10	100%	100%	100%	100%	P	P	P	P	
b0785	moaE	818518	818970	+	452	18	17	17	17	17	94%	94%	94%	94%	P	P	P	P	
b0786	ybhL	819107	819811	+	704	28	28	28	28	28	100%	100%	100%	100%	P	P	P	P	U
b0787	ybhM	820016	820729	+	713	28	0	1	1	2	0%	4%	4%	7%	A	P	P	P	U
b0791	ybhQ	823853	824263	+	410	16	12	12	15	15	75%	75%	94%	94%	P	P	P	P	U
b0797	rhIE	830095	831459	+	1364	54	42	42	42	42	78%	78%	78%	78%	P	P	P	P	
b0799	dinG	832293	834443	+	2150	85	28	28	31	33	33%	33%	36%	39%	P	P	P	P	
b0800	ybiB	834471	835433	+	962	39	38	38	38	39	97%	97%	97%	100%	P	P	P	P	U
b0801	ybiC	835574	836659	+	1085	43	43	43	43	43	100%	100%	100%	100%	P	P	P	P	U
b0807	rlmF	841555	842481	+	926	37	33	33	33	33	89%	89%	89%	89%	P	P	P	P	U
b0814	ompX	849673	850188	+	515	20	20	20	20	20	100%	100%	100%	100%	P	P	P	P	
b0816	yliL	851894	852163	+	269	11	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b0817	mntR	852406	852873	+	467	19	19	19	19	19	100%	100%	100%	100%	P	P	P	P	
b0818	ybiR	852870	853988	+	1118	45	37	37	37	37	82%	82%	82%	82%	P	P	P	P	U
b0820	ybiT	855186	856778	+	1592	64	62	62	62	62	97%	97%	97%	97%	P	P	P	P	U
b0825	fsaA	862865	863527	+	662	27	9	11	12	16	33%	41%	44%	59%	P	P	P	P	
b0828	iaaA	865791	866756	+	965	39	39	39	39	39	100%	100%	100%	100%	P	P	P	P	

b0829	gsiA	866743	868614	+	1871	75	75	75	75	75	100%	100%	100%	100%	P	P	P	P	U
b0830	gsiB	868634	870172	+	1538	61	60	60	60	61	98%	98%	98%	100%	P	P	P	P	U
b0831	gsiC	870190	871110	+	920	37	35	35	35	36	95%	95%	95%	97%	P	P	P	P	U
b0832	gsiD	871113	872024	+	911	36	32	32	32	33	89%	89%	89%	92%	P	P	P	P	U
b0833	yliE	872202	874550	+	2348	94	84	84	84	84	89%	89%	89%	89%	P	P	P	P	U
b0834	yliF	874558	875886	+	1328	53	47	47	47	47	89%	89%	89%	89%	P	P	P	P	U
b0836	bssR	877471	877854	+	383	16	7	16	16	16	44%	100%	100%	100%	P	P	P	P	U
b0837	yliI	877965	879080	+	1115	45	14	14	24	34	31%	31%	53%	76%	P	P	P	P	U
b0839	dacC	879950	881152	+	1202	48	47	48	48	48	98%	100%	100%	100%	P	P	P	P	
b0842	cmr	882896	884128	+	1232	49	41	41	49	49	84%	84%	100%	100%	P	P	P	P	
b0846	ybjK	886646	887182	+	536	21	3	3	9	9	14%	14%	43%	43%	P	P	P	P	U
b0848	ybjM	889312	889689	+	377	15	3	9	9	9	20%	60%	60%	60%	P	P	P	P	U
b0850	ybjC	890136	890423	+	287	11	11	11	11	11	100%	100%	100%	100%	P	P	P	P	U
b0851	nfsA	890407	891129	+	722	29	29	29	29	29	100%	100%	100%	100%	P	P	P	P	
b0852	rimK	891190	892092	+	902	36	32	32	32	32	89%	89%	89%	89%	P	P	P	P	
b0853	ybjN	892180	892656	+	476	19	18	18	18	18	95%	95%	95%	95%	P	P	P	P	U
b0854	potF	893007	894119	+	1112	44	44	44	44	44	100%	100%	100%	100%	P	P	P	P	
b0855	potG	894214	895347	+	1133	45	45	45	45	45	100%	100%	100%	100%	P	P	P	P	
b0856	potH	895357	896310	+	953	39	29	29	29	37	74%	74%	74%	95%	P	P	P	P	
b0857	potI	896307	897152	+	845	34	26	27	28	31	76%	79%	82%	91%	P	P	P	P	
b0858	ybjO	897212	897700	+	488	19	16	16	16	16	84%	84%	84%	84%	P	P	P	P	U
b0859	rumB	897741	898868	+	1127	45	27	27	27	27	60%	60%	60%	60%	P	P	P	P	
b0866	ybjQ	903816	904139	+	323	13	13	13	13	13	100%	100%	100%	100%	P	P	P	P	U
b0867	amiD	904136	904966	+	830	33	32	32	33	33	97%	97%	100%	100%	P	P	P	P	U
b0876	ybjD	915696	917354	+	1658	66	43	43	53	53	65%	65%	80%	80%	P	P	P	P	U
b0878	macA	918458	919573	+	1115	45	45	45	45	45	100%	100%	100%	100%	P	P	P	P	
b0879	macB	919570	921516	+	1946	78	68	70	70	70	87%	90%	90%	90%	P	P	P	P	
b0881	clpS	922136	922456	+	320	12	12	12	12	12	100%	100%	100%	100%	P	P	P	P	
b0882	clpA	922487	924763	+	2276	90	90	90	90	90	100%	100%	100%	100%	P	P	P	P	
b0889	lrp	931818	932312	+	494	20	20	20	20	20	100%	100%	100%	100%	P	P	P	P	
b0890	ftsK	932447	936436	+	3989	160	159	159	159	159	99%	99%	99%	99%	P	P	P	P	
b0891	lolA	936595	937206	+	611	24	24	24	24	24	100%	100%	100%	100%	P	P	P	P	
b0892	rarA	937217	938560	+	1343	54	51	51	51	52	94%	94%	94%	96%	P	P	P	P	
b0893	serS	938651	939943	+	1292	52	49	49	49	52	94%	94%	94%	100%	P	P	P	P	
b0894	dmsA	940182	942626	+	2444	98	6	66	66	66	6%	67%	67%	67%	P	P	P	P	
b0895	dmsB	942637	943254	+	617	24	1	13	13	13	4%	54%	54%	54%	P	P	P	P	
b0896	dmsC	943256	944119	+	863	35	0	15	15	15	0%	43%	43%	43%	A	P	P	P	
b0898	ycaD	945094	946242	+	1148	46	42	42	42	42	91%	91%	91%	91%	P	P	P	P	U
b0899	ycaM	946452	947882	+	1430	57	0	0	5	5	0%	0%	9%	9%	A	A	P	P	U
b0901	ycaK	948891	949481	+	590	23	8	8	8	10	35%	35%	35%	43%	P	P	P	P	U
b0906	ycaP	955985	956677	+	692	28	20	22	28	28	71%	79%	100%	100%	P	P	P	P	U
b0907	serC	956876	957964	+	1088	44	44	44	44	44	100%	100%	100%	100%	P	P	P	P	
b0908	aroA	958035	959318	+	1283	52	52	52	52	52	100%	100%	100%	100%	P	P	P	P	
b0909	ycaL	959487	960251	+	764	30	0	0	11	11	0%	0%	37%	37%	A	A	P	P	U
b0910	cmk	960424	961107	+	683	27	27	27	27	27	100%	100%	100%	100%	P	P	P	P	
b0911	rpsA	961218	962891	+	1673	67	67	67	67	67	100%	100%	100%	100%	P	P	P	P	

b0912	ihfB	963051	963335	+	284	11	11	11	11	11	100%	100%	100%	100%	P	P	P	P	
b0913	ycaI	963543	965807	+	2264	90	0	0	11	11	0%	0%	12%	12%	A	A	P	P	U
b0914	msbA	965844	967592	+	1748	70	69	69	69	69	99%	99%	99%	99%	P	P	P	P	
b0915	lpxK	967589	968575	+	986	39	33	33	33	33	85%	85%	85%	85%	P	P	P	P	
b0916	ycaQ	968612	969844	+	1232	50	13	13	14	14	26%	26%	28%	28%	P	P	P	P	U
b0917	ycaR	969896	970078	+	182	7	7	7	7	7	100%	100%	100%	100%	P	P	P	P	U
b0918	kdsB	970075	970821	+	746	30	27	27	27	27	90%	90%	90%	90%	P	P	P	P	
b0919	ycbJ	970975	971868	+	893	36	11	30	30	34	31%	83%	83%	94%	P	P	P	P	U
b0921	smtA	972760	973545	+	785	32	32	32	32	32	100%	100%	100%	100%	P	P	P	P	U
b0922	mukF	973542	974864	+	1322	53	52	52	52	52	98%	98%	98%	98%	P	P	P	P	
b0923	mukE	974872	975549	+	677	27	27	27	27	27	100%	100%	100%	100%	P	P	P	P	
b0924	mukB	975549	980009	+	4460	178	176	176	176	176	99%	99%	99%	99%	P	P	P	P	U
b0925	ycbB	980270	982117	+	1847	74	68	68	74	74	92%	92%	100%	100%	P	P	P	P	U
b0926	ycbK	982298	982846	+	548	22	22	22	22	22	100%	100%	100%	100%	P	P	P	P	U
b0927	ycbL	982873	983520	+	647	26	26	26	26	26	100%	100%	100%	100%	P	P	P	P	U
b0932	pepN	989845	992457	+	2612	104	103	103	103	103	99%	99%	99%	99%	P	P	P	P	
b0938	ycbQ	997091	997630	+	539	22	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b0939	ycbR	997713	998414	+	701	28	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b0940	ycbS	998439	1001039	+	2600	104	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b0941	ycbT	1001030	1002100	+	1070	43	0	0	5	5	0%	0%	12%	12%	A	A	P	P	U
b0942	ycbU	1002112	1002654	+	542	22	0	0	2	2	0%	0%	9%	9%	A	A	P	P	U
b0943	ycbV	1002662	1003177	+	515	21	0	5	5	5	0%	24%	24%	24%	A	P	P	P	U
b0944	ycbF	1003170	1003880	+	710	28	0	5	5	5	0%	18%	18%	18%	A	P	P	P	U
b0945	pyrD	1003991	1005001	+	1010	41	41	41	41	41	100%	100%	100%	100%	P	P	P	P	
b0946	ycbW	1005175	1005717	+	542	21	21	21	21	21	100%	100%	100%	100%	P	P	P	P	U
b0948	rlmL	1007067	1009175	+	2108	85	85	85	85	85	100%	100%	100%	100%	P	P	P	P	U
b0949	uup	1009187	1011094	+	1907	77	77	77	77	77	100%	100%	100%	100%	P	P	P	P	U
b0950	pqiA	1011224	1012477	+	1253	50	27	27	41	41	54%	54%	82%	82%	P	P	P	P	
b0951	pqiB	1012482	1014122	+	1640	66	63	63	63	63	95%	95%	95%	95%	P	P	P	P	
b0952	ymbA	1014119	1014682	+	563	22	17	17	17	17	77%	77%	77%	77%	P	P	P	P	U
b0953	rnf	1014938	1015105	+	167	7	7	7	7	7	100%	100%	100%	100%	P	P	P	P	
b0956	ycbG	1017708	1018160	+	452	18	16	18	18	18	89%	100%	100%	100%	P	P	P	P	U
b0959	sxy	1020361	1020990	+	629	25	15	17	18	21	60%	68%	72%	84%	P	P	P	P	U
b0962	helD	1023694	1025748	+	2054	82	78	78	78	79	95%	95%	95%	96%	P	P	P	P	
b0965	yccU	1027169	1027582	+	413	16	16	16	16	16	100%	100%	100%	100%	P	P	P	P	U
b0968	yccX	1029287	1029565	+	278	11	8	10	10	10	73%	91%	91%	91%	P	P	P	P	U
b0972	hyaA	1031362	1032480	+	1118	45	0	2	31	31	0%	4%	69%	69%	A	P	P	P	
b0973	hyaB	1032477	1034270	+	1793	72	0	0	19	19	0%	0%	26%	26%	A	A	P	P	
b0974	hyaC	1034289	1034996	+	707	28	0	0	10	10	0%	0%	36%	36%	A	A	P	P	
b0975	hyaD	1034993	1035580	+	587	23	0	0	12	12	0%	0%	52%	52%	A	A	P	P	
b0976	hyaE	1035577	1035975	+	398	16	0	0	3	4	0%	0%	19%	25%	A	A	P	P	
b0977	hyaF	1035972	1036829	+	857	34	0	0	2	2	0%	0%	6%	6%	A	A	P	P	
b0978	appC	1036963	1038507	+	1544	61	38	38	38	50	62%	62%	62%	82%	P	P	P	P	
b0979	appB	1038519	1039655	+	1136	45	15	15	15	22	33%	33%	33%	49%	P	P	P	P	
b4592	yccB	1039668	1039760	+	92	3	3	3	3	3	100%	100%	100%	100%	P	P	P	P	U
b0980	appA	1039840	1041138	+	1298	52	27	28	28	34	52%	54%	54%	65%	P	P	P	P	

b4516	insA	1049056	1049331	+	275	11	11	11	11	11	100%	100%	100%	100%	P	P	P	P	
b0988	insB	1049250	1049753	+	503	20	11	14	14	14	55%	70%	70%	70%	P	P	P	P	
b0990	cspG	1050684	1050896	+	212	9	0	0	0	0	0%	0%	0%	0%	A	A	A	A	
b0991	ymcE	1051070	1051300	+	230	9	3	3	3	3	33%	33%	33%	33%	P	P	P	P	U
b4517	gnsA	1051290	1051463	+	173	7	6	6	6	6	86%	86%	86%	86%	P	P	P	P	U
b0994	torT	1055484	1056512	+	1028	42	0	2	14	14	0%	5%	33%	33%	A	P	P	P	
b0996	torC	1057307	1058479	+	1172	47	0	0	4	4	0%	0%	9%	9%	A	A	P	P	
b0997	torA	1058479	1061025	+	2546	102	0	1	8	8	0%	1%	8%	8%	A	P	P	P	
b0998	torD	1061022	1061621	+	599	24	0	0	1	1	0%	0%	4%	4%	A	A	P	P	
b1001	yccE	1063259	1064515	+	1256	51	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b1002	agp	1064808	1066049	+	1241	50	39	39	50	50	78%	78%	100%	100%	P	P	P	P	
b4518	ymdF	1067304	1067477	+	173	7	7	7	7	7	100%	100%	100%	100%	P	P	P	P	U
b1013	rutR	1073465	1074103	+	638	25	23	23	23	23	92%	92%	92%	92%	P	P	P	P	U
b1015	putP	1078528	1080036	+	1508	60	60	60	60	60	100%	100%	100%	100%	P	P	P	P	
b4490	efeU	1080579	1081408	+	829	33	32	32	32	32	97%	97%	97%	97%	P	P	P	P	U
b1018	efeO	1081466	1082593	+	1127	45	45	45	45	45	100%	100%	100%	100%	P	P	P	P	U
b1019	efeB	1082599	1083870	+	1271	51	48	48	48	49	94%	94%	94%	96%	P	P	P	P	U
b1020	phoH	1084215	1085279	+	1064	42	37	37	38	38	88%	88%	90%	90%	P	P	P	P	U
b1025	ycdT	1092099	1093457	+	1358	54	4	5	6	11	7%	9%	11%	20%	P	P	P	P	U
b1028	ymdE	1094728	1095069	+	341	14	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b1029	ycdU	1095066	1096052	+	986	39	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b1033	ghrA	1097109	1098047	+	938	38	38	38	38	38	100%	100%	100%	100%	P	P	P	P	
b1034	ycdX	1098102	1098839	+	737	30	30	30	30	30	100%	100%	100%	100%	P	P	P	P	U
b1035	ycdY	1098863	1099417	+	554	22	22	22	22	22	100%	100%	100%	100%	P	P	P	P	U
b1036	ycdZ	1099519	1100010	+	491	19	18	19	19	19	95%	100%	100%	100%	P	P	P	P	U
b1041	csgB	1103174	1103629	+	455	18	0	1	1	2	0%	6%	6%	11%	A	P	P	P	
b1042	csgA	1103670	1104125	+	455	18	7	13	13	13	39%	72%	72%	72%	P	P	P	P	
b1043	csgC	1104184	1104516	+	332	14	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b1044	ymdA	1104637	1104948	+	311	13	0	0	1	1	0%	0%	8%	8%	A	A	P	P	U
b1045	ymdB	1105043	1105576	+	533	21	19	19	21	21	90%	90%	100%	100%	P	P	P	P	U
b1046	ymdC	1105578	1106999	+	1421	57	27	27	31	33	47%	47%	54%	58%	P	P	P	P	U
b1048	mdoG	1108558	1110093	+	1535	62	62	62	62	62	100%	100%	100%	100%	P	P	P	P	
b1049	mdoH	1110086	1112629	+	2543	102	102	102	102	102	100%	100%	100%	100%	P	P	P	P	
b1050	yceK	1112802	1113029	+	227	9	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b1055	yceA	1116030	1117082	+	1052	42	42	42	42	42	100%	100%	100%	100%	P	P	P	P	U
b1066	rimJ	1124785	1125369	+	584	23	23	23	23	23	100%	100%	100%	100%	P	P	P	P	
b1067	yceH	1125380	1126027	+	647	26	26	26	26	26	100%	100%	100%	100%	P	P	P	P	U
b1068	yceM	1126029	1126952	+	923	37	37	37	37	37	100%	100%	100%	100%	P	P	P	P	U
b1069	yceN	1127062	1128597	+	1535	61	48	48	48	48	79%	79%	79%	79%	P	P	P	P	U
b1073	flgB	1130241	1130657	+	416	17	0	0	0	0	0%	0%	0%	0%	A	A	A	A	
b1074	flgC	1130661	1131065	+	404	16	0	0	0	0	0%	0%	0%	0%	A	A	A	A	
b1075	flgD	1131077	1131772	+	695	27	0	0	0	0	0%	0%	0%	0%	A	A	A	A	
b1076	flgE	1131797	1133005	+	1208	49	0	0	0	0	0%	0%	0%	0%	A	A	A	A	
b1077	flgF	1133025	1133780	+	755	30	0	0	0	0	0%	0%	0%	0%	A	A	A	A	
b1078	flgG	1133952	1134734	+	782	31	0	0	0	0	0%	0%	0%	0%	A	A	A	A	
b1079	flgH	1134787	1135485	+	698	28	0	0	0	0	0%	0%	0%	0%	A	A	A	A	

b1080	flgI	1135497	1136594	+	1097	44	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b1081	flgJ	1136594	1137535	+	941	38	0	0	0	0	0%	0%	0%	0%	A	A	A	A	
b1082	flgK	1137601	1139244	+	1643	66	4	19	23	23	6%	29%	35%	35%	P	P	P	P	
b1083	flgL	1139256	1140209	+	953	38	6	17	22	22	16%	45%	58%	58%	P	P	P	P	
b1085	yceQ	1143725	1144045	+	320	13	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b1086	rluC	1144163	1145122	+	959	38	37	37	37	37	97%	97%	97%	97%	P	P	P	P	
b4418	psrD	1145812	1145980	+	168	7	5	6	7	7	71%	86%	100%	100%	P	P	P	P	U
b1088	yceD	1146017	1146538	+	521	21	21	21	21	21	100%	100%	100%	100%	P	P	P	P	U
b1089	rpmF	1146590	1146763	+	173	7	7	7	7	7	100%	100%	100%	100%	P	P	P	P	
b1090	plsX	1146844	1147914	+	1070	43	43	43	43	43	100%	100%	100%	100%	P	P	P	P	
b1091	fabH	1147982	1148935	+	953	38	38	38	38	38	100%	100%	100%	100%	P	P	P	P	
b1092	fabD	1148951	1149880	+	929	38	38	38	38	38	100%	100%	100%	100%	P	P	P	P	
b1093	fabG	1149893	1150627	+	734	29	29	29	29	29	100%	100%	100%	100%	P	P	P	P	
b1094	acpP	1150838	1151074	+	236	9	9	9	9	9	100%	100%	100%	100%	P	P	P	P	
b1095	fabF	1151162	1152403	+	1241	49	48	48	48	48	98%	98%	98%	98%	P	P	P	P	
b1096	pabC	1152523	1153332	+	809	33	26	29	29	30	79%	88%	88%	91%	P	P	P	P	
b1097	yceG	1153335	1154357	+	1022	41	36	36	36	36	88%	88%	88%	88%	P	P	P	P	U
b1098	tmk	1154347	1154988	+	641	26	25	25	25	25	96%	96%	96%	96%	P	P	P	P	
b1099	holB	1154985	1155989	+	1004	40	39	39	39	39	98%	98%	98%	98%	P	P	P	P	
b1100	ycfH	1156000	1156797	+	797	32	31	31	32	32	97%	97%	100%	100%	P	P	P	P	U
b1101	ptsG	1157092	1158525	+	1433	57	57	57	57	57	100%	100%	100%	100%	P	P	P	P	
b1103	hinT	1161108	1161467	+	359	14	14	14	14	14	100%	100%	100%	100%	P	P	P	P	
b1104	ycfL	1161470	1161847	+	377	15	15	15	15	15	100%	100%	100%	100%	P	P	P	P	U
b1105	ycfM	1161861	1162502	+	641	25	25	25	25	25	100%	100%	100%	100%	P	P	P	P	U
b1106	thiK	1162483	1163307	+	824	33	32	32	32	32	97%	97%	97%	97%	P	P	P	P	
b1107	nagZ	1163318	1164343	+	1025	41	41	41	41	41	100%	100%	100%	100%	P	P	P	P	
b1108	ycfP	1164366	1164908	+	542	22	22	22	22	22	100%	100%	100%	100%	P	P	P	P	U
b1109	ndh	1165308	1166612	+	1304	52	52	52	52	52	100%	100%	100%	100%	P	P	P	P	
b1110	ycfJ	1166822	1167361	+	539	22	3	19	19	19	14%	86%	86%	86%	P	P	P	P	U
b1112	bhsA	1168296	1168553	+	257	10	9	9	10	10	90%	90%	100%	100%	P	P	P	P	U
b1116	lolC	1174650	1175849	+	1199	48	47	47	47	47	98%	98%	98%	98%	P	P	P	P	
b1117	lolD	1175842	1176543	+	701	28	28	28	28	28	100%	100%	100%	100%	P	P	P	P	
b1118	lolE	1176543	1177787	+	1244	50	49	49	49	49	98%	98%	98%	98%	P	P	P	P	
b1119	nagK	1177816	1178727	+	911	36	36	36	36	36	100%	100%	100%	100%	P	P	P	P	
b1120	cobB	1178743	1179582	+	839	34	33	33	33	33	97%	97%	97%	97%	P	P	P	P	
b1127	pepT	1185067	1186293	+	1226	49	46	47	47	48	94%	96%	96%	98%	P	P	P	P	
b1136	icd	1194346	1195596	+	1250	50	50	50	50	50	100%	100%	100%	100%	P	P	P	P	
GO-8897	C0293	1195937	1196009	+	72	3	0	0	0	0	0%	0%	0%	0%	A	A	A	A	
b1139	lit	1197918	1198811	+	893	36	10	10	10	13	28%	28%	28%	36%	P	P	P	P	
b1143	ymfI	1200720	1201061	+	341	14	13	13	13	13	93%	93%	93%	93%	P	P	P	P	U
b1146	ymfT	1202247	1202447	+	200	8	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b1147	ymfL	1202491	1203048	+	557	22	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b1148	ymfM	1203045	1203383	+	338	14	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b1149	ymfN	1203393	1204760	+	1367	55	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b1150	ymfR	1204772	1204954	+	182	8	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b1151	ymfO	1204954	1205365	+	411	16	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U

b1152	ymfP	1205366	1206145	+	779	31	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b1153	ymfQ	1206136	1206720	+	584	23	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b1154	ycfK	1206724	1207353	+	629	25	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b1155	ymfS	1207355	1207768	+	413	17	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b1158	pinE	1208908	1209462	+	554	22	0	0	0	0	0%	0%	0%	0%	A	A	A	A	
b1159	mcrA	1209569	1210402	+	833	33	0	0	0	0	0%	0%	0%	0%	A	A	A	A	
b4519	icdC	1210636	1210800	+	164	7	5	5	5	5	71%	71%	71%	71%	P	P	P	P	U
b1164	ycgZ	1215012	1215248	+	236	10	10	10	10	10	100%	100%	100%	100%	P	P	P	P	U
b1165	ymgA	1215291	1215563	+	272	11	7	7	11	11	64%	64%	100%	100%	P	P	P	P	U
b1166	ariR	1215592	1215858	+	266	11	6	6	9	9	55%	55%	82%	82%	P	P	P	P	U
b1167	ymgC	1215971	1216219	+	248	10	0	1	6	6	0%	10%	60%	60%	A	P	P	P	U
b1168	ycgG	1216551	1218074	+	1523	61	0	0	8	8	0%	0%	13%	13%	A	A	P	P	U
b4520	ymgF	1218206	1218424	+	218	9	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b4491	ycgH	1218824	1221471	+	2647	106	26	30	36	38	25%	28%	34%	36%	P	P	P	P	U
b4594	ymgJ	1222487	1222672	+	185	8	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b4521	ycgI	1222787	1223130	+	343	14	0	5	10	10	0%	36%	71%	71%	A	P	P	P	U
b1177	ycgJ	1225823	1226191	+	368	14	13	13	13	13	93%	93%	93%	93%	P	P	P	P	U
b1179	ycgL	1226904	1227230	+	326	13	12	12	12	13	92%	92%	92%	100%	P	P	P	P	U
b1180	ycgM	1227302	1227961	+	659	26	26	26	26	26	100%	100%	100%	100%	P	P	P	P	U
b1181	ycgN	1228038	1228499	+	461	19	17	17	19	19	89%	89%	100%	100%	P	P	P	P	U
G0-8898	C0299	1229852	1229930	+	78	3	0	0	1	1	0%	0%	33%	33%	A	A	P	P	
b1183	umuD	1229990	1230409	+	419	17	1	1	5	5	6%	6%	29%	29%	P	P	P	P	
b1184	umuC	1230409	1231677	+	1268	51	4	4	7	8	8%	8%	14%	16%	P	P	P	P	
b1187	fadR	1234161	1234880	+	719	29	29	29	29	29	100%	100%	100%	100%	P	P	P	P	
b1189	dadA	1236794	1238092	+	1298	52	51	51	51	51	98%	98%	98%	98%	P	P	P	P	
b1190	dadX	1238102	1239172	+	1070	43	32	32	34	34	74%	74%	79%	79%	P	P	P	P	
b1193	emtA	1242403	1243014	+	611	24	24	24	24	24	100%	100%	100%	100%	P	P	P	P	
b1195	ymgE	1243951	1244205	+	254	10	6	9	10	10	60%	90%	100%	100%	P	P	P	P	U
b1196	ycgY	1244383	1244823	+	440	17	0	2	7	7	0%	12%	41%	41%	A	P	P	P	U
b1201	dhaR	1250289	1252208	+	1919	77	25	39	39	39	32%	51%	51%	51%	P	P	P	P	U
b1205	ychH	1258014	1258292	+	278	11	11	11	11	11	100%	100%	100%	100%	P	P	P	P	U
b1210	hemA	1262937	1264193	+	1256	50	50	50	50	50	100%	100%	100%	100%	P	P	P	P	
b1211	prfA	1264235	1265317	+	1082	43	42	42	42	42	98%	98%	98%	98%	P	P	P	P	
b1212	prmC	1265317	1266150	+	833	34	23	23	23	23	68%	68%	68%	68%	P	P	P	P	
b1213	ychQ	1266147	1266539	+	392	16	8	8	8	8	50%	50%	50%	50%	P	P	P	P	U
b1214	ychA	1266543	1267352	+	809	33	33	33	33	33	100%	100%	100%	100%	P	P	P	P	U
b1215	kdsA	1267388	1268242	+	854	34	34	34	34	34	100%	100%	100%	100%	P	P	P	P	
b4420	rdlA	1268546	1268612	+	66	3	2	2	2	2	67%	67%	67%	67%	P	P	P	P	
b4422	rdlB	1269081	1269146	+	65	2	0	0	1	1	0%	0%	50%	50%	A	A	P	P	
b4424	rdlC	1269616	1269683	+	67	3	2	2	2	2	67%	67%	67%	67%	P	P	P	P	
b1217	chaB	1271342	1271572	+	230	9	8	9	9	9	89%	100%	100%	100%	P	P	P	P	U
b1218	chaC	1271730	1272425	+	695	28	28	28	28	28	100%	100%	100%	100%	P	P	P	P	
b1220	ychO	1273007	1274401	+	1394	56	31	31	31	36	55%	55%	55%	64%	P	P	P	P	U
b1223	narK	1277180	1278571	+	1391	55	0	0	18	18	0%	0%	33%	33%	A	A	P	P	
b1224	narG	1279087	1282830	+	3743	150	0	0	0	50	0%	0%	0%	33%	A	A	A	P	
b1225	narH	1282827	1284365	+	1538	61	0	0	5	5	0%	0%	8%	8%	A	A	P	P	

b1226	narJ	1284362	1285072	+	710	28	0	0	1	1	0%	0%	4%	4%	A	A	P	P	
b1227	narI	1285072	1285749	+	677	27	0	0	0	0	0%	0%	0%	0%	A	A	A	A	
b1228	ychS	1285932	1286207	+	275	11	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b1234	rssA	1288429	1289373	+	944	37	37	37	37	37	100%	100%	100%	100%	P	P	P	P	U
b1235	rssB	1289465	1290478	+	1013	41	41	41	41	41	100%	100%	100%	100%	P	P	P	P	
b1236	galU	1290680	1291588	+	908	36	36	36	36	36	100%	100%	100%	100%	P	P	P	P	
b1238	tdk	1292750	1293367	+	617	25	23	23	23	23	92%	92%	92%	92%	P	P	P	P	
b1242	ychE	1297821	1298468	+	647	26	0	4	4	4	0%	15%	15%	15%	A	P	P	P	U
b1243	oppA	1299206	1300837	+	1631	65	65	65	65	65	100%	100%	100%	100%	P	P	P	P	
b1244	oppB	1300923	1301843	+	920	37	37	37	37	37	100%	100%	100%	100%	P	P	P	P	
b1245	oppC	1301858	1302766	+	908	36	36	36	36	36	100%	100%	100%	100%	P	P	P	P	
b1246	oppD	1302778	1303791	+	1013	40	40	40	40	40	100%	100%	100%	100%	P	P	P	P	
b1247	oppF	1303788	1304792	+	1004	40	38	38	38	38	95%	95%	95%	95%	P	P	P	P	
b4595	yciY	1306812	1306985	+	173	7	6	6	6	6	86%	86%	86%	86%	P	P	P	P	U
b1252	tonB	1309113	1309832	+	719	29	29	29	29	29	100%	100%	100%	100%	P	P	P	P	
b1256	ompW	1312044	1312682	+	638	26	23	26	26	26	88%	100%	100%	100%	P	P	P	P	
b1266	trpH	1321244	1322125	+	881	35	33	33	33	33	94%	94%	94%	94%	P	P	P	P	U
b1267	yciO	1322122	1322742	+	620	25	25	25	25	25	100%	100%	100%	100%	P	P	P	P	U
b1268	yciQ	1322770	1324665	+	1895	76	14	15	16	20	18%	20%	21%	26%	P	P	P	P	U
b1269	rluB	1324876	1325751	+	875	35	35	35	35	35	100%	100%	100%	100%	P	P	P	P	
b1272	sohB	1327356	1328405	+	1049	42	41	41	41	41	98%	98%	98%	98%	P	P	P	P	U
b1274	topA	1329072	1331669	+	2597	104	102	102	102	103	98%	98%	98%	99%	P	P	P	P	
b1275	cysB	1331879	1332853	+	974	39	35	35	35	37	90%	90%	90%	95%	P	P	P	P	
b4522	ymiA	1333184	1333312	+	128	5	5	5	5	5	100%	100%	100%	100%	P	P	P	P	U
b4523	yciX	1333315	1333482	+	167	6	6	6	6	6	100%	100%	100%	100%	P	P	P	P	U
b1276	acnA	1333855	1336530	+	2675	107	107	107	107	107	100%	100%	100%	100%	P	P	P	P	
b1278	pgpB	1337354	1338118	+	764	31	27	27	27	27	87%	87%	87%	87%	P	P	P	P	
b1279	yciS	1338267	1338575	+	308	12	12	12	12	12	100%	100%	100%	100%	P	P	P	P	U
b1280	yciM	1338582	1339751	+	1169	47	44	46	46	46	94%	98%	98%	98%	P	P	P	P	U
b1281	pyrF	1339945	1340682	+	737	29	29	29	29	29	100%	100%	100%	100%	P	P	P	P	
b1282	yciH	1340682	1341008	+	326	13	12	12	12	12	92%	92%	92%	92%	P	P	P	P	U
b1298	puuD	1359144	1359908	+	764	30	30	30	30	30	100%	100%	100%	100%	P	P	P	P	
b1299	puuR	1359935	1360492	+	557	23	22	22	22	22	96%	96%	96%	96%	P	P	P	P	
b1300	puuC	1360767	1362254	+	1487	59	54	54	54	54	92%	92%	92%	92%	P	P	P	P	
b1301	puuB	1362256	1363536	+	1280	51	39	39	39	39	76%	76%	76%	76%	P	P	P	P	
b1302	puuE	1363574	1364839	+	1265	50	23	23	23	23	46%	46%	46%	46%	P	P	P	P	
b1304	pspA	1366103	1366771	+	668	27	27	27	27	27	100%	100%	100%	100%	P	P	P	P	
b1305	pspB	1366825	1367049	+	224	9	9	9	9	9	100%	100%	100%	100%	P	P	P	P	
b1306	pspC	1367049	1367408	+	359	14	11	14	14	14	79%	100%	100%	100%	P	P	P	P	
b1307	pspD	1367417	1367638	+	221	8	7	8	8	8	88%	100%	100%	100%	P	P	P	P	
b1308	pspE	1367713	1368027	+	314	13	11	11	11	11	85%	85%	85%	85%	P	P	P	P	
b1309	ycjM	1368240	1369919	+	1679	68	0	0	4	4	0%	0%	6%	6%	A	A	P	P	U
b1310	ycjN	1369933	1371225	+	1292	52	0	0	1	1	0%	0%	2%	2%	A	A	P	P	U
b1311	ycjO	1371246	1372127	+	881	35	0	0	1	1	0%	0%	3%	3%	A	A	P	P	U
b1312	ycjP	1372114	1372956	+	842	34	0	0	1	1	0%	0%	3%	3%	A	A	P	P	U
b1313	ycjQ	1372987	1374039	+	1052	42	0	0	3	4	0%	0%	7%	10%	A	A	P	P	U



b1314	ycjR	1374058	1374846	+	788	32	0	0	1	1	0%	0%	3%	3%	A	A	P	P	U
b1315	ycjS	1374856	1375911	+	1055	42	0	0	1	3	0%	0%	2%	7%	A	A	P	P	U
b1316	ycjT	1375908	1378175	+	2267	91	0	0	5	5	0%	0%	5%	5%	A	A	P	P	U
b1317	ycjU	1378172	1378831	+	659	26	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b4524	ycjV	1378845	1379926	+	1081	43	0	0	0	1	0%	0%	0%	2%	A	A	A	P	U
b1319	ompG	1379971	1380876	+	905	36	0	0	0	0	0%	0%	0%	0%	A	A	A	A	
b1321	ycjX	1382141	1383538	+	1397	56	54	56	56	56	96%	100%	100%	100%	P	P	P	P	U
b1322	ycjF	1383535	1384596	+	1061	43	30	43	43	43	70%	100%	100%	100%	P	P	P	P	U
b1323	tyrR	1384744	1386285	+	1541	61	60	60	60	60	98%	98%	98%	98%	P	P	P	P	
b1325	ycjG	1386954	1387919	+	965	39	28	29	33	33	72%	74%	85%	85%	P	P	P	P	
b1328	ycjZ	1390015	1390914	+	899	36	24	24	24	24	67%	67%	67%	67%	P	P	P	P	U
b1329	mppA	1391251	1392864	+	1613	64	56	56	56	56	88%	88%	88%	88%	P	P	P	P	
b1331	insH	1394100	1395116	+	1016	41	41	41	41	41	100%	100%	100%	100%	P	P	P	P	
b1332	ynaJ	1395389	1395646	+	257	11	11	11	11	11	100%	100%	100%	100%	P	P	P	P	U
b1339	abgR	1402765	1403673	+	908	37	2	2	3	33	5%	5%	8%	89%	P	P	P	P	U
b1340	ydaL	1404003	1404566	+	563	22	21	22	22	22	95%	100%	100%	100%	P	P	P	P	U
b1342	ydaN	1406074	1407057	+	983	39	35	36	37	37	90%	92%	95%	95%	P	P	P	P	U
GO-8900	C0343	1407387	1407461	+	74	3	3	3	3	3	100%	100%	100%	100%	P	P	P	P	
b1343	dbpA	1407535	1408908	+	1373	55	38	38	38	38	69%	69%	69%	69%	P	P	P	P	
b1353	sieB	1416695	1417183	+	488	19	0	0	0	0	0%	0%	0%	0%	A	A	A	A	
b1357	ydaS	1418389	1418685	+	296	12	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b1358	ydaT	1418708	1419130	+	422	17	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b1359	ydaU	1419143	1420000	+	857	34	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b1360	ydaV	1420007	1420753	+	746	30	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b1361	ydaW	1420725	1421224	+	499	20	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b1362	rzpR	1421225	1421668	+	443	18	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b4528	rzoR	1421424	1421609	+	185	7	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b1363	trkG	1421806	1423263	+	1457	59	10	10	11	14	17%	17%	19%	24%	P	P	P	P	
b1365	ynaK	1423401	1423664	+	263	11	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b1366	ydaY	1423654	1424106	+	452	18	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b1368	ynaA	1424478	1425410	+	932	37	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b4570	lomR	1425413	1425622	+	209	8	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b4570	lomR	1426819	1427008	+	189	7	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b1372	stfR	1427073	1430435	+	3362	134	0	0	17	17	0%	0%	13%	13%	A	A	P	P	U
b1373	tfaR	1430435	1431010	+	575	23	0	0	2	4	0%	0%	9%	17%	A	A	P	P	U
b4427	micC	1435145	1435253	+	108	4	0	0	0	1	0%	0%	0%	25%	A	A	A	P	
b4529	ydbJ	1439082	1439348	+	266	11	11	11	11	11	100%	100%	100%	100%	P	P	P	P	U
b1381	ydbH	1441075	1443714	+	2639	106	54	54	57	57	51%	51%	54%	54%	P	P	P	P	U
b1382	ynbE	1443711	1443896	+	185	8	8	8	8	8	100%	100%	100%	100%	P	P	P	P	U
b1383	ydbL	1443904	1444230	+	326	13	13	13	13	13	100%	100%	100%	100%	P	P	P	P	U
b1385	feaB	1445543	1447042	+	1499	60	13	13	32	32	22%	22%	53%	53%	P	P	P	P	
b1388	paaA	1451951	1452880	+	929	37	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b1389	paaB	1452892	1453179	+	287	11	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b1390	paaC	1453188	1453934	+	746	30	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b1391	paaD	1453943	1454446	+	503	20	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b1392	paaE	1454454	1455524	+	1070	43	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U

b1393	paaF	1455521	1456288	+	767	31	0	0	0	0	0%	0%	0%	0%	A	A	A	A	
b1394	paaG	1456288	1457076	+	788	32	0	0	0	0	0%	0%	0%	0%	A	A	A	A	
b1395	paaH	1457078	1458505	+	1427	57	0	0	0	0	0%	0%	0%	0%	A	A	A	A	
b1396	paaI	1458495	1458917	+	422	17	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b1397	paaJ	1458917	1460122	+	1205	48	7	7	13	13	15%	15%	27%	27%	P	P	P	P	U
b1398	paaK	1460149	1461462	+	1313	52	4	4	5	5	8%	8%	10%	10%	P	P	P	P	
b1399	paaX	1461563	1462513	+	950	39	37	37	37	38	95%	95%	95%	97%	P	P	P	P	
b1400	paaY	1462495	1463085	+	590	23	20	20	23	23	87%	87%	100%	100%	P	P	P	P	U
b4492	ydbA	1463416	1465928	+	2512	100	12	15	27	28	12%	15%	27%	28%	P	P	P	P	U
b4492	ydbA	1467265	1467317	+	52	2	0	0	2	2	0%	0%	100%	100%	A	A	P	P	U
b1404	insI	1467382	1468533	+	1151	46	44	44	44	44	96%	96%	96%	96%	P	P	P	P	
b4492	ydbA	1468541	1472037	+	3496	139	128	131	131	131	92%	94%	94%	94%	P	P	P	P	U
b1406	ydbC	1472245	1473105	+	860	34	17	17	17	21	50%	50%	50%	62%	P	P	P	P	U
b1407	ydbD	1473168	1475474	+	2306	92	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b1408	ynbA	1475645	1476250	+	605	25	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b1409	ynbB	1476250	1477146	+	896	35	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b1410	ynbC	1477162	1478919	+	1757	70	0	0	4	4	0%	0%	6%	6%	A	A	P	P	U
b1411	ynbD	1478933	1480225	+	1292	52	4	7	9	9	8%	13%	17%	17%	P	P	P	P	U
b1413	hrpA	1481085	1484987	+	3902	156	148	148	149	149	95%	95%	96%	96%	P	P	P	P	
b1414	ydcF	1485259	1486059	+	800	32	30	30	30	30	94%	94%	94%	94%	P	P	P	P	U
b1415	aldA	1486256	1487695	+	1439	58	58	58	58	58	100%	100%	100%	100%	P	P	P	P	
b1418	cybB	1488926	1489456	+	530	21	21	21	21	21	100%	100%	100%	100%	P	P	P	P	
b1419	ydcA	1489701	1489874	+	173	7	6	6	6	6	86%	86%	86%	86%	P	P	P	P	U
b4429	sokB	1490143	1490198	+	55	2	0	0	0	0	0%	0%	0%	0%	A	A	A	A	
b1421	trg	1490494	1492134	+	1640	65	5	5	10	10	8%	8%	15%	15%	P	P	P	P	
b1423	ydcJ	1493312	1494655	+	1343	54	8	8	35	35	15%	15%	65%	65%	P	P	P	P	U
b1424	mdoD	1494880	1496535	+	1655	66	58	58	58	59	88%	88%	88%	89%	P	P	P	P	
b1426	ydcH	1496675	1496899	+	224	9	2	4	9	9	22%	44%	100%	100%	P	P	P	P	U
b1427	rimL	1496962	1497501	+	539	21	15	15	15	18	71%	71%	71%	86%	P	P	P	P	
b1429	tehA	1498597	1499589	+	992	40	25	25	26	30	63%	63%	65%	75%	P	P	P	P	
b1430	tehB	1499586	1500179	+	593	24	24	24	24	24	100%	100%	100%	100%	P	P	P	P	U
b1431	ydcL	1500481	1501149	+	668	26	24	24	26	26	92%	92%	100%	100%	P	P	P	P	U
b1432	ydcM	1501681	1502889	+	1208	48	33	33	33	33	69%	69%	69%	69%	P	P	P	P	U
b1434	ydcN	1504196	1504732	+	536	22	13	13	14	14	59%	59%	64%	64%	P	P	P	P	U
b1435	ydcP	1504805	1506766	+	1961	79	73	73	74	74	92%	92%	94%	94%	P	P	P	P	U
b4532	yncN	1507310	1507486	+	176	7	7	7	7	7	100%	100%	100%	100%	P	P	P	P	U
b1438	ydcQ	1507532	1507948	+	416	17	15	15	17	17	88%	88%	100%	100%	P	P	P	P	U
b1439	ydcR	1508027	1509433	+	1406	56	34	34	34	35	61%	61%	61%	63%	P	P	P	P	U
b1440	ydcS	1509678	1510823	+	1145	45	10	12	45	45	22%	27%	100%	100%	P	P	P	P	U
b1441	ydcT	1510841	1511854	+	1013	41	3	4	38	41	7%	10%	93%	100%	P	P	P	P	U
b1442	ydcU	1511855	1512796	+	941	37	1	1	19	35	3%	3%	51%	95%	P	P	P	P	U
b1443	ydcV	1512786	1513580	+	794	32	5	5	7	31	16%	16%	22%	97%	P	P	P	P	U
b1444	ydcW	1513602	1515026	+	1424	57	31	31	31	57	54%	54%	54%	100%	P	P	P	P	
b1445	ydcX	1515413	1515586	+	173	7	6	6	6	6	86%	86%	86%	86%	P	P	P	P	U
b1446	ydcY	1515672	1515905	+	233	10	10	10	10	10	100%	100%	100%	100%	P	P	P	P	U
b1449	yncB	1517027	1518088	+	1061	42	42	42	42	42	100%	100%	100%	100%	P	P	P	P	U

b1450	yncC	1518286	1518951	+	665	27	11	13	13	16	41%	48%	48%	59%	P	P	P	P	U
b1452	yncE	1521331	1522392	+	1061	42	42	42	42	42	100%	100%	100%	100%	P	P	P	P	U
b1454	yncG	1524271	1524888	+	617	25	0	1	1	13	0%	4%	4%	52%	A	P	P	P	U
b1455	yncH	1524964	1525176	+	212	9	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b1456	rhsE	1525926	1527962	+	2036	81	9	9	12	12	11%	11%	15%	15%	P	P	P	P	U
b1457	ydcD	1527946	1528428	+	482	19	1	2	2	2	5%	11%	11%	11%	P	P	P	P	U
b1459	yncI	1528610	1529663	+	1053	42	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b1460	ydcC	1529840	1530976	+	1136	45	0	1	1	1	0%	2%	2%	2%	A	P	P	P	U
b1461	pptA	1531076	1531309	+	233	10	10	10	10	10	100%	100%	100%	100%	P	P	P	P	
b1463	nhoA	1532048	1532893	+	845	34	15	15	18	29	44%	44%	53%	85%	P	P	P	P	
b1474	fdnG	1545425	1548472	+	3047	122	0	9	16	18	0%	7%	13%	15%	A	P	P	P	
b1475	fdnH	1548485	1549369	+	884	36	0	0	0	0	0%	0%	0%	0%	A	A	A	A	
b1476	fdnI	1549362	1550015	+	653	26	0	0	0	0	0%	0%	0%	0%	A	A	A	A	
G0-8902	C0362	1550025	1550410	+	385	15	0	0	0	0	0%	0%	0%	0%	A	A	A	A	
b1482	osmC	1554649	1555080	+	431	17	17	17	17	17	100%	100%	100%	100%	P	P	P	P	
b1513	lsrA	1599514	1601049	+	1535	61	0	0	0	0	0%	0%	0%	0%	A	A	A	A	
b1514	lsrC	1601043	1602071	+	1028	41	0	0	2	2	0%	0%	5%	5%	A	A	P	P	
b1515	lsrD	1602071	1603063	+	992	40	0	0	4	5	0%	0%	10%	13%	A	A	P	P	
b1516	lsrB	1603075	1604097	+	1022	41	2	2	5	6	5%	5%	12%	15%	P	P	P	P	
b1517	lsrF	1604124	1604999	+	875	35	6	8	8	12	17%	23%	23%	34%	P	P	P	P	
b1518	lsrG	1605023	1605313	+	290	12	1	2	2	2	8%	17%	17%	17%	P	P	P	P	
b1519	tam	1605370	1606128	+	758	30	24	25	26	29	80%	83%	87%	97%	P	P	P	P	
b1526	yneJ	1612828	1613709	+	881	35	14	14	16	16	40%	40%	46%	46%	P	P	P	P	U
b1527	yneK	1613787	1614902	+	1115	45	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b1528	ydeA	1615052	1616242	+	1190	48	42	42	42	44	88%	88%	88%	92%	P	P	P	P	U
b1530	marR	1617144	1617578	+	434	17	13	13	13	13	76%	76%	76%	76%	P	P	P	P	
b1531	marA	1617598	1617981	+	383	15	15	15	15	15	100%	100%	100%	100%	P	P	P	P	
b1532	marB	1618013	1618231	+	218	8	0	2	2	2	0%	25%	25%	25%	A	P	P	P	U
b1534	ydeE	1619356	1620543	+	1187	48	0	0	4	6	0%	0%	8%	13%	A	A	P	P	U
b4599	yneM	1620670	1620765	+	95	4	4	4	4	4	100%	100%	100%	100%	P	P	P	P	U
b1537	ydeJ	1622797	1623315	+	518	21	0	3	6	6	0%	14%	29%	29%	A	P	P	P	U
b1539	ydfG	1625541	1626287	+	746	30	30	30	30	30	100%	100%	100%	100%	P	P	P	P	
b1540	ydfH	1626376	1627062	+	686	28	26	26	26	26	93%	93%	93%	93%	P	P	P	P	U
b1541	ydfZ	1627239	1627442	+	203	8	7	8	8	8	88%	100%	100%	100%	P	P	P	P	U
b1544	ydfK	1631063	1631329	+	266	10	0	2	2	2	0%	20%	20%	20%	A	P	P	P	U
b1545	pinQ	1631646	1632236	+	590	23	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b4533	ynfO	1634780	1635013	+	233	9	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b1549	ydfO	1635071	1635481	+	410	17	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b1558	cspF	1639879	1640091	+	212	9	0	0	0	0	0%	0%	0%	0%	A	A	A	A	
b1565	ydfV	1643921	1644226	+	305	12	0	5	5	5	0%	42%	42%	42%	A	P	P	P	U
b1566	flxA	1644429	1644761	+	332	13	0	11	11	11	0%	85%	85%	85%	A	P	P	P	U
b1570	dicA	1645958	1646365	+	407	17	13	13	13	13	76%	76%	76%	76%	P	P	P	P	U
b1571	ydfA	1646532	1646687	+	155	6	0	2	3	3	0%	33%	50%	50%	A	P	P	P	U
b1572	ydfB	1646689	1646817	+	128	6	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b1573	rzpQ	1646910	1647005	+	95	4	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b1574	dicF	1647406	1647458	+	52	2	0	0	1	1	0%	0%	50%	50%	A	A	P	P	

b1575	dicB	1647633	1647821	+	188	8	0	0	0	0	0%	0%	0%	0%	A	A	A	A	
b1576	ydfD	1647818	1648009	+	191	7	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b1577	ydfE	1648102	1648866	+	764	31	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b1578	insD	1648869	1649561	+	692	27	27	27	27	27	100%	100%	100%	100%	P	P	P	P	U
b1579	intQ	1649575	1650732	+	1157	46	0	3	3	3	0%	7%	7%	7%	A	P	P	P	U
b1583	ynfB	1653832	1654173	+	341	14	14	14	14	14	100%	100%	100%	100%	P	P	P	P	U
b1584	speG	1654208	1654768	+	560	22	22	22	22	22	100%	100%	100%	100%	P	P	P	P	
b1586	ynfD	1655589	1655894	+	305	12	10	10	11	11	83%	83%	92%	92%	P	P	P	P	U
b1587	ynfE	1656093	1658519	+	2426	97	5	29	41	50	5%	30%	42%	52%	P	P	P	P	
b1588	ynfF	1658580	1661003	+	2423	97	27	27	28	30	28%	28%	29%	31%	P	P	P	P	
b1589	ynfG	1661014	1661631	+	617	25	8	8	9	9	32%	32%	36%	36%	P	P	P	P	
b1590	ynfH	1661633	1662487	+	854	34	13	14	16	17	38%	41%	47%	50%	P	P	P	P	
b1591	dmsD	1662530	1663144	+	614	24	21	21	21	22	88%	88%	88%	92%	P	P	P	P	
b1592	clcB	1663339	1664595	+	1256	51	2	2	3	3	4%	4%	6%	6%	P	P	P	P	U
b1596	ynfM	1667723	1668976	+	1253	50	11	11	11	47	22%	22%	22%	94%	P	P	P	P	U
b1597	asr	1669400	1669708	+	308	12	6	6	7	11	50%	50%	58%	92%	P	P	P	P	
b4601	ydgU	1669801	1669884	+	83	3	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b1598	ydgD	1669984	1670805	+	821	33	27	27	33	33	82%	82%	100%	100%	P	P	P	P	U
b1601	tqsA	1671937	1672971	+	1034	42	3	27	27	27	7%	64%	64%	64%	P	P	P	P	U
b1604	ydgH	1676451	1677395	+	944	38	36	36	36	36	95%	95%	95%	95%	P	P	P	P	U
b1605	ydgI	1677581	1678963	+	1382	55	4	7	8	10	7%	13%	15%	18%	P	P	P	P	U
b1606	folM	1679000	1679722	+	722	29	20	20	20	24	69%	69%	69%	83%	P	P	P	P	
b1608	rstA	1680183	1680902	+	719	29	29	29	29	29	100%	100%	100%	100%	P	P	P	P	
b1609	rstB	1680906	1682207	+	1301	52	44	44	44	51	85%	85%	85%	98%	P	P	P	P	
b1610	tus	1682283	1683212	+	929	37	33	33	37	37	89%	89%	100%	100%	P	P	P	P	
b1613	manA	1686600	1687775	+	1175	47	45	45	45	45	96%	96%	96%	96%	P	P	P	P	
b1614	ydgA	1687876	1689384	+	1508	60	60	60	60	60	100%	100%	100%	100%	P	P	P	P	U
b1621	malX	1697379	1698971	+	1592	64	3	38	38	38	5%	59%	59%	59%	P	P	P	P	
b1622	malY	1698981	1700153	+	1172	47	35	35	35	35	74%	74%	74%	74%	P	P	P	P	
b1623	add	1700257	1701258	+	1001	40	30	30	30	30	75%	75%	75%	75%	P	P	P	P	
b4409	blr	1702575	1702700	+	125	5	5	5	5	5	100%	100%	100%	100%	P	P	P	P	
b1625	cnu	1702973	1703188	+	215	8	7	7	7	7	88%	88%	88%	88%	P	P	P	P	U
b1626	ydgK	1703274	1703714	+	440	17	15	15	15	15	88%	88%	88%	88%	P	P	P	P	U
b1627	rsxA	1703791	1704372	+	581	24	22	22	22	22	92%	92%	92%	92%	P	P	P	P	U
b1628	rsxB	1704372	1704950	+	578	23	23	23	23	23	100%	100%	100%	100%	P	P	P	P	U
b1629	rsxC	1704943	1707165	+	2222	89	88	88	88	88	99%	99%	99%	99%	P	P	P	P	U
b1630	rsxD	1707166	1708224	+	1058	43	42	42	42	42	98%	98%	98%	98%	P	P	P	P	U
b1631	rsxG	1708228	1708848	+	620	25	24	24	24	24	96%	96%	96%	96%	P	P	P	P	U
b1632	rsxE	1708852	1709547	+	695	28	25	25	25	25	89%	89%	89%	89%	P	P	P	P	U
b1633	nth	1709547	1710182	+	635	25	22	22	22	22	88%	88%	88%	88%	P	P	P	P	
b1634	tppB	1710793	1712295	+	1502	60	8	16	16	16	13%	27%	27%	27%	P	P	P	P	U
b1635	gst	1712401	1713006	+	605	24	24	24	24	24	100%	100%	100%	100%	P	P	P	P	
b1641	slyB	1717900	1718367	+	467	18	18	18	18	18	100%	100%	100%	100%	P	P	P	P	
b1643	ydhI	1719049	1719285	+	236	9	2	4	4	4	22%	44%	44%	44%	P	P	P	P	U
b1644	ydhJ	1719288	1720145	+	857	34	3	3	3	3	9%	9%	9%	9%	P	P	P	P	
b1645	ydhK	1720145	1722157	+	2012	81	3	3	7	7	4%	4%	9%	9%	P	P	P	P	U

b1649	ydhM	1724047	1724646	+	599	24	9	9	9	10	38%	38%	38%	42%	P	P	P	P	U
b1650	nemA	1724683	1725780	+	1097	44	35	35	35	35	80%	80%	80%	80%	P	P	P	P	
b1651	gloA	1725861	1726268	+	407	16	16	16	16	16	100%	100%	100%	100%	P	P	P	P	
b1652	rnt	1726371	1727018	+	647	26	24	24	24	25	92%	92%	92%	96%	P	P	P	P	
b1653	lhr	1727111	1731727	+	4616	185	48	48	50	62	26%	26%	27%	34%	P	P	P	P	U
b1655	ydhO	1732459	1733274	+	815	33	31	31	31	31	94%	94%	94%	94%	P	P	P	P	U
b1656	sodB	1733402	1733983	+	581	23	23	23	23	23	100%	100%	100%	100%	P	P	P	P	
b1658	purR	1735868	1736893	+	1025	41	41	41	41	41	100%	100%	100%	100%	P	P	P	P	
b1660	ydhC	1737935	1739146	+	1211	49	16	16	16	17	33%	33%	33%	35%	P	P	P	P	U
b1661	cfa	1739437	1740585	+	1148	46	45	45	45	46	98%	98%	98%	100%	P	P	P	P	
b1663	mdtK	1741481	1742854	+	1373	55	51	52	52	52	93%	95%	95%	95%	P	P	P	P	
b1665	valV	1744459	1744535	+	76	3	3	3	3	3	100%	100%	100%	100%	P	P	P	P	
b1666	valW	1744540	1744616	+	76	4	3	3	3	3	75%	75%	75%	75%	P	P	P	P	
b1667	ydhR	1744724	1745029	+	305	12	11	11	11	11	92%	92%	92%	92%	P	P	P	P	U
b1668	ydhS	1745155	1746759	+	1604	64	47	47	52	55	73%	73%	81%	86%	P	P	P	P	U
b1676	pykF	1753722	1755134	+	1412	56	56	56	56	56	100%	100%	100%	100%	P	P	P	P	
b1677	lpp	1755445	1755681	+	236	9	9	9	9	9	100%	100%	100%	100%	P	P	P	P	
b1688	ydiK	1767098	1768210	+	1112	44	38	38	40	40	86%	86%	91%	91%	P	P	P	P	U
b4431	rprA	1768396	1768501	+	105	4	0	0	0	0	0%	0%	0%	0%	A	A	A	A	
b1689	ydiL	1768639	1768995	+	356	15	0	0	3	3	0%	0%	20%	20%	A	A	P	P	U
b1690	ydiM	1769095	1770309	+	1214	49	0	0	1	1	0%	0%	2%	2%	A	A	P	P	U
b1691	ydiN	1770530	1771801	+	1271	51	0	0	2	2	0%	0%	4%	4%	A	A	P	P	U
b1692	ydiB	1771813	1772679	+	866	35	3	3	4	4	9%	9%	11%	11%	P	P	P	P	
b1693	aroD	1772710	1773468	+	758	30	29	29	29	29	97%	97%	97%	97%	P	P	P	P	
b1694	ydiF	1773611	1775206	+	1595	64	0	0	5	5	0%	0%	8%	8%	A	A	P	P	U
b1695	ydiO	1775220	1776371	+	1151	47	0	0	1	1	0%	0%	2%	2%	A	A	P	P	U
b1697	ydiQ	1777641	1778405	+	764	31	0	0	3	3	0%	0%	10%	10%	A	A	P	P	U
b1698	ydiR	1778425	1779363	+	938	37	0	0	7	7	0%	0%	19%	19%	A	A	P	P	U
b1699	ydiS	1779419	1780708	+	1289	52	0	0	2	2	0%	0%	4%	4%	A	A	P	P	U
b1700	ydiT	1780705	1780998	+	293	12	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b1701	fadK	1781055	1782701	+	1646	66	0	0	3	3	0%	0%	5%	5%	A	A	P	P	
b1703	ydiA	1785469	1786302	+	833	34	34	34	34	34	100%	100%	100%	100%	P	P	P	P	U
b1704	aroH	1786459	1787505	+	1046	42	41	41	41	41	98%	98%	98%	98%	P	P	P	P	
b1705	ydiE	1787637	1787828	+	191	8	1	1	1	4	13%	13%	13%	50%	P	P	P	P	U
b4494	arpB	1801118	1803017	+	1899	76	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b4535	yniD	1803189	1803296	+	107	4	3	3	3	3	75%	75%	75%	75%	P	P	P	P	U
b1723	pfkB	1804394	1805323	+	929	38	38	38	38	38	100%	100%	100%	100%	P	P	P	P	
b1724	ydiZ	1805424	1805714	+	290	11	10	10	10	11	91%	91%	91%	100%	P	P	P	P	U
b1725	yniA	1805820	1806680	+	860	35	34	34	35	35	97%	97%	100%	100%	P	P	P	P	U
b1727	yniC	1807404	1808072	+	668	27	26	26	26	26	96%	96%	96%	96%	P	P	P	P	U
b1728	ydjM	1808223	1808825	+	602	24	0	1	9	10	0%	4%	38%	42%	A	P	P	P	U
b1729	ydjN	1808958	1810349	+	1391	56	56	56	56	56	100%	100%	100%	100%	P	P	P	P	U
b1732	katE	1811891	1814152	+	2261	90	89	89	89	90	99%	99%	99%	100%	P	P	P	P	
b1740	nadE	1820482	1821309	+	827	33	33	33	33	33	100%	100%	100%	100%	P	P	P	P	
b1741	cho	1821539	1822426	+	887	35	24	24	24	24	69%	69%	69%	69%	P	P	P	P	
b1749	xthA	1830452	1831258	+	806	32	31	31	31	31	97%	97%	97%	97%	P	P	P	P	

b1750	ydjX	1831425	1832135	+	710	29	0	0	0	26	0%	0%	0%	90%	A	A	A	P	U
b1751	ydjY	1832140	1832817	+	677	27	1	12	12	20	4%	44%	44%	74%	P	P	P	P	U
b1752	ydjZ	1832832	1833539	+	707	29	2	7	9	12	7%	24%	31%	41%	P	P	P	P	U
b1753	ynjA	1833539	1834087	+	548	22	13	13	13	16	59%	59%	59%	73%	P	P	P	P	U
b1754	ynjB	1834097	1835263	+	1166	47	20	20	20	23	43%	43%	43%	49%	P	P	P	P	U
b1755	ynjC	1835236	1836771	+	1535	61	4	4	10	10	7%	7%	16%	16%	P	P	P	P	
b1756	ynjD	1836771	1837424	+	653	26	4	4	4	5	15%	15%	15%	19%	P	P	P	P	U
b1757	ynjE	1837491	1838798	+	1307	52	27	27	28	43	52%	52%	54%	83%	P	P	P	P	U
b1759	nudG	1839514	1839921	+	407	16	9	9	9	9	56%	56%	56%	56%	P	P	P	P	
b1761	gdhA	1840395	1841738	+	1343	54	54	54	54	54	100%	100%	100%	100%	P	P	P	P	
b1766	sppA	1846861	1848717	+	1856	74	71	71	71	71	96%	96%	96%	96%	P	P	P	P	
b1767	ansA	1848884	1849900	+	1016	41	41	41	41	41	100%	100%	100%	100%	P	P	P	P	
b1768	pncA	1849911	1850552	+	641	25	25	25	25	25	100%	100%	100%	100%	P	P	P	P	
b1779	gapA	1860795	1861790	+	995	40	40	40	40	40	100%	100%	100%	100%	P	P	P	P	
b1780	yeaD	1861874	1862758	+	884	35	34	34	34	34	97%	97%	97%	97%	P	P	P	P	U
b1783	yeaG	1864932	1866866	+	1934	77	77	77	77	77	100%	100%	100%	100%	P	P	P	P	U
b1784	yeaH	1866979	1868262	+	1283	51	35	35	51	51	69%	69%	100%	100%	P	P	P	P	U
b1785	yeaI	1868409	1869884	+	1475	59	0	0	15	15	0%	0%	25%	25%	A	A	P	P	U
b1786	yeaJ	1870065	1871555	+	1490	60	9	21	21	21	15%	35%	35%	35%	P	P	P	P	U
b1787	yeaK	1871598	1872101	+	503	20	20	20	20	20	100%	100%	100%	100%	P	P	P	P	U
b1789	yeaL	1872376	1872822	+	446	18	6	6	6	6	33%	33%	33%	33%	P	P	P	P	U
b1791	yeaN	1873697	1874878	+	1181	47	0	1	1	1	0%	2%	2%	2%	A	P	P	P	U
b1792	yeaO	1874933	1875280	+	347	14	12	12	13	13	86%	86%	93%	93%	P	P	P	P	U
b1794	yeaP	1875739	1876764	+	1025	41	40	40	40	40	98%	98%	98%	98%	P	P	P	P	U
b1800	yeaU	1879936	1881021	+	1085	44	7	7	7	7	16%	16%	16%	16%	P	P	P	P	U
b1801	yeaV	1881212	1882657	+	1445	58	2	2	2	2	3%	3%	3%	3%	P	P	P	P	U
b1802	yeaW	1882689	1883813	+	1124	45	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b1803	yeaX	1883869	1884834	+	965	38	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b1809	yoaB	1891391	1891735	+	344	14	14	14	14	14	100%	100%	100%	100%	P	P	P	P	U
b1810	yoaC	1892097	1892456	+	359	14	12	12	14	14	86%	86%	100%	100%	P	P	P	P	U
b1812	pabB	1892829	1894190	+	1361	54	52	52	52	52	96%	96%	96%	96%	P	P	P	P	
b1813	nudL	1894194	1894772	+	578	24	21	21	21	21	88%	88%	88%	88%	P	P	P	P	U
b1814	sdaA	1894956	1896320	+	1364	55	33	55	55	55	60%	100%	100%	100%	P	P	P	P	
b1815	yoaD	1896451	1898049	+	1598	64	0	0	6	15	0%	0%	9%	23%	A	A	P	P	U
b1817	manX	1900072	1901043	+	971	38	38	38	38	38	100%	100%	100%	100%	P	P	P	P	
b1818	manY	1901106	1901906	+	800	32	32	32	32	32	100%	100%	100%	100%	P	P	P	P	
b1819	manZ	1901910	1902770	+	860	35	35	35	35	35	100%	100%	100%	100%	P	P	P	P	
b1820	yobD	1902825	1903283	+	458	18	6	6	6	6	33%	33%	33%	33%	P	P	P	P	U
b1821	yebN	1903712	1904278	+	566	23	0	5	5	5	0%	22%	22%	22%	A	P	P	P	U
b4536	yobH	1906949	1907188	+	239	9	5	5	5	5	56%	56%	56%	56%	P	P	P	P	U
b1828	yebQ	1908300	1909673	+	1373	55	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b1833	yebS	1914282	1915565	+	1283	51	19	21	21	26	37%	41%	41%	51%	P	P	P	P	U
b1834	yebT	1915534	1918167	+	2633	105	83	83	83	87	79%	79%	79%	83%	P	P	P	P	U
b1835	rsmF	1918247	1919686	+	1439	57	45	45	45	45	79%	79%	79%	79%	P	P	P	P	U
b1836	yebV	1919804	1920040	+	236	9	8	8	9	9	89%	89%	100%	100%	P	P	P	P	U
b1837	yebW	1920145	1920336	+	191	8	7	7	8	8	88%	88%	100%	100%	P	P	P	P	U

b4432	ryeA	1921090	1921338	+	248	10	9	9	9	9	90%	90%	90%	90%	P	P	P	P	U
b1842	holE	1923132	1923362	+	230	9	9	9	9	9	100%	100%	100%	100%	P	P	P	P	
b1843	yobB	1923464	1924120	+	656	26	20	20	20	20	77%	77%	77%	77%	P	P	P	P	U
b1844	exoX	1924144	1924806	+	662	27	22	22	22	23	81%	81%	81%	85%	P	P	P	P	
b1849	purT	1928905	1930083	+	1178	47	47	47	47	47	100%	100%	100%	100%	P	P	P	P	
b1853	yebK	1934676	1935545	+	869	34	34	34	34	34	100%	100%	100%	100%	P	P	P	P	U
b1854	pykA	1935673	1937115	+	1442	58	58	58	58	58	100%	100%	100%	100%	P	P	P	P	
b1858	znuC	1940686	1941441	+	755	30	30	30	30	30	100%	100%	100%	100%	P	P	P	P	
b1859	znuB	1941438	1942223	+	785	31	31	31	31	31	100%	100%	100%	100%	P	P	P	P	
b1862	yebB	1944275	1944877	+	602	24	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b1867	yecD	1948856	1949422	+	566	22	21	21	21	22	95%	95%	95%	100%	P	P	P	P	U
b1868	yecE	1949419	1950237	+	818	33	23	23	23	23	70%	70%	70%	70%	P	P	P	P	U
b1869	yecN	1950290	1950685	+	395	16	16	16	16	16	100%	100%	100%	100%	P	P	P	P	U
b1870	cmoA	1950726	1951469	+	743	29	29	29	29	29	100%	100%	100%	100%	P	P	P	P	U
b1871	cmoB	1951466	1952437	+	971	39	37	37	37	37	95%	95%	95%	95%	P	P	P	P	U
b1876	argS	1958086	1959819	+	1733	69	69	69	69	69	100%	100%	100%	100%	P	P	P	P	
b1877	yecT	1959996	1960484	+	488	20	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
GO-8903	C0465	1970763	1970840	+	77	3	0	0	0	0	0%	0%	0%	0%	A	A	A	A	
b1895	uspC	1977777	1978205	+	428	17	7	12	12	12	41%	71%	71%	71%	P	P	P	P	
b1902	ftnB	1984949	1985452	+	503	21	18	19	19	19	86%	90%	90%	90%	P	P	P	P	U
b1904	yecR	1986246	1986569	+	323	13	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b1905	ftnA	1986740	1987237	+	497	20	20	20	20	20	100%	100%	100%	100%	P	P	P	P	
b1907	tyrP	1987705	1988916	+	1211	48	36	36	41	41	75%	75%	85%	85%	P	P	P	P	
b1915	yecF	1993842	1994066	+	224	9	7	7	7	7	78%	78%	78%	78%	P	P	P	P	U
b1924	fliD	2001896	2003302	+	1406	57	2	2	2	2	4%	4%	4%	4%	P	P	P	P	
b1925	fliS	2003327	2003737	+	410	16	0	0	0	0	0%	0%	0%	0%	A	A	A	A	
b1926	fliT	2003737	2004102	+	365	15	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b1927	amyA	2004180	2005667	+	1487	59	59	59	59	59	100%	100%	100%	100%	P	P	P	P	
b1929	yedE	2006301	2007506	+	1205	48	48	48	48	48	100%	100%	100%	100%	P	P	P	P	U
b1930	yedF	2007503	2007736	+	233	9	9	9	9	9	100%	100%	100%	100%	P	P	P	P	U
b1931	yedK	2007845	2008513	+	668	27	4	6	24	24	15%	22%	89%	89%	P	P	P	P	U
b1932	yedL	2008624	2009103	+	479	19	5	5	7	19	26%	26%	37%	100%	P	P	P	P	U
b1936	intG	2010526	2010687	+	161	6	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b1938	fliF	2011253	2012911	+	1658	66	0	0	3	3	0%	0%	5%	5%	A	A	P	P	
b1939	fliG	2012904	2013899	+	995	40	0	0	2	2	0%	0%	5%	5%	A	A	P	P	
b1940	fliH	2013892	2014578	+	686	28	0	0	0	0	0%	0%	0%	0%	A	A	A	A	
b1941	fliI	2014578	2015951	+	1373	55	0	0	1	1	0%	0%	2%	2%	A	A	P	P	
b1942	fliJ	2015970	2016413	+	443	18	0	0	0	0	0%	0%	0%	0%	A	A	A	A	
b1943	fliK	2016410	2017537	+	1127	45	0	5	6	6	0%	11%	13%	13%	A	P	P	P	
b1944	fliL	2017642	2018106	+	464	19	0	0	1	1	0%	0%	5%	5%	A	A	P	P	
b1945	fliM	2018111	2019115	+	1004	40	0	0	4	4	0%	0%	10%	10%	A	A	P	P	
b1946	fliN	2019112	2019525	+	413	17	0	0	0	0	0%	0%	0%	0%	A	A	A	A	
b1947	fliO	2019528	2019893	+	365	14	0	0	0	0	0%	0%	0%	0%	A	A	A	A	
b1948	fliP	2019893	2020630	+	737	30	0	0	0	0	0%	0%	0%	0%	A	A	A	A	
b1949	fliQ	2020640	2020909	+	269	11	0	0	0	0	0%	0%	0%	0%	A	A	A	A	
b1950	fliR	2020917	2021702	+	785	32	0	0	0	0	0%	0%	0%	0%	A	A	A	A	

b1951	rcsA	2021992	2022615	+	623	25	0	0	0	0	0%	0%	0%	0%	A	A	A	A	
b1953	yodD	2023010	2023237	+	227	9	8	9	9	9	89%	100%	100%	100%	P	P	P	P	U
b1955	yedP	2023535	2024350	+	815	32	25	27	32	32	78%	84%	100%	100%	P	P	P	P	U
b1959	yedA	2027563	2028483	+	920	37	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b4603	rseX	2031673	2031763	+	90	4	0	0	0	0	0%	0%	0%	0%	A	A	A	A	
b4496	yedS	2032075	2033267	+	1192	48	0	2	41	42	0%	4%	85%	88%	A	P	P	P	U
b1967	hchA	2033859	2034710	+	851	34	33	34	34	34	97%	100%	100%	100%	P	P	P	P	
b1970	yedX	2036980	2037393	+	413	16	9	9	9	10	56%	56%	56%	63%	P	P	P	P	U
b1971	yedY	2037502	2038506	+	1004	41	28	29	38	38	68%	71%	93%	93%	P	P	P	P	U
b1972	yedZ	2038507	2039142	+	635	25	10	10	18	18	40%	40%	72%	72%	P	P	P	P	U
b1973	yodA	2039399	2040049	+	650	26	26	26	26	26	100%	100%	100%	100%	P	P	P	P	U
b1974	yodB	2040392	2040922	+	530	21	0	0	3	18	0%	0%	14%	86%	A	A	P	P	U
b1976	mtfA	2041675	2042472	+	797	32	32	32	32	32	100%	100%	100%	100%	P	P	P	P	U
b1977	asnT	2042573	2042648	+	75	3	3	3	3	3	100%	100%	100%	100%	P	P	P	P	
b1978	yeeJ	2042962	2050038	+	7076	283	30	46	55	56	11%	16%	19%	20%	P	P	P	P	
b1981	shiA	2051667	2052983	+	1316	52	51	51	51	51	98%	98%	98%	98%	P	P	P	P	
b1982	amn	2053085	2054539	+	1454	59	58	58	58	58	98%	98%	98%	98%	P	P	P	P	
b1983	yeeN	2054882	2055598	+	716	29	24	24	24	24	83%	83%	83%	83%	P	P	P	P	U
b1986	asnU	2057875	2057950	+	75	3	3	3	3	3	100%	100%	100%	100%	P	P	P	P	
b1989	asnV	2060284	2060359	+	75	4	4	4	4	4	100%	100%	100%	100%	P	P	P	P	
b4582	yoeA	2066659	2066962	+	303	13	2	2	2	13	15%	15%	15%	100%	P	P	P	P	U
b4582	yoeA	2068294	2068498	+	204	8	3	3	8	8	38%	38%	100%	100%	P	P	P	P	U
b1999	yeeP	2068684	2069235	+	551	23	3	3	6	6	13%	13%	26%	26%	P	P	P	P	U
b4435	isrC	2069339	2069542	+	203	8	2	2	3	3	25%	25%	38%	38%	P	P	P	P	U
b2000	flu	2069563	2072682	+	3119	124	118	118	118	118	95%	95%	95%	95%	P	P	P	P	
b2001	yeeR	2072803	2074335	+	1532	61	3	3	3	3	5%	5%	5%	5%	P	P	P	P	U
b2002	yeeS	2074332	2074778	+	446	18	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b2003	yeeT	2074841	2075062	+	221	9	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b2004	yeeU	2075136	2075504	+	368	15	0	0	0	0	0%	0%	0%	0%	A	A	A	A	
b2005	yeeV	2075593	2075967	+	374	15	0	0	0	0	0%	0%	0%	0%	A	A	A	A	
b2006	yeeW	2075964	2076131	+	167	6	2	2	2	2	33%	33%	33%	33%	P	P	P	P	U
b4538	yoeF	2076770	2076955	+	185	7	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b2011	sbcB	2080780	2082207	+	1427	57	56	56	56	56	98%	98%	98%	98%	P	P	P	P	
b2018	hisL	2088020	2088070	+	50	2	2	2	2	2	100%	100%	100%	100%	P	P	P	P	
b2019	hisG	2088216	2089115	+	899	36	36	36	36	36	100%	100%	100%	100%	P	P	P	P	
b2020	hisD	2089121	2090425	+	1304	52	52	52	52	52	100%	100%	100%	100%	P	P	P	P	
b2021	hisC	2090422	2091492	+	1070	43	43	43	43	43	100%	100%	100%	100%	P	P	P	P	
b2022	hisB	2091492	2092559	+	1067	42	42	42	42	42	100%	100%	100%	100%	P	P	P	P	
b2023	hisH	2092559	2093149	+	590	24	24	24	24	24	100%	100%	100%	100%	P	P	P	P	
b2024	hisA	2093149	2093886	+	737	30	30	30	30	30	100%	100%	100%	100%	P	P	P	P	
b2025	hisF	2093868	2094644	+	776	31	31	31	31	31	100%	100%	100%	100%	P	P	P	P	
b2026	hisI	2094638	2095249	+	611	24	24	24	24	24	100%	100%	100%	100%	P	P	P	P	
b2063	yegH	2135926	2137509	+	1583	63	57	57	60	60	90%	90%	95%	95%	P	P	P	P	U
b2067	yegE	2141290	2144607	+	3317	133	62	62	66	84	47%	47%	50%	63%	P	P	P	P	U
b2069	yegD	2145698	2147050	+	1352	54	23	23	25	25	43%	43%	46%	46%	P	P	P	P	U
b2071	yegJ	2149209	2149670	+	461	19	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U



b4436	ryeC	2151333	2151475	+	142	6	1	1	2	2	17%	17%	33%	33%	P	P	P	P	U
b4437	ryeD	2151668	2151803	+	135	5	4	4	4	4	80%	80%	80%	80%	P	P	P	P	U
b2074	mdtA	2152040	2153287	+	1247	50	33	33	33	34	66%	66%	66%	68%	P	P	P	P	
b2075	mdtB	2153287	2156409	+	3122	125	9	9	10	13	7%	7%	8%	10%	P	P	P	P	
b2076	mdtC	2156410	2159487	+	3077	123	8	8	9	10	7%	7%	7%	8%	P	P	P	P	
b2077	mdtD	2159488	2160903	+	1415	57	3	4	10	11	5%	7%	18%	19%	P	P	P	P	
b2078	baeS	2160900	2162303	+	1403	56	4	4	4	5	7%	7%	7%	9%	P	P	P	P	
b2079	baeR	2162300	2163022	+	722	29	28	28	28	28	97%	97%	97%	97%	P	P	P	P	
b2080	yegP	2163213	2163545	+	332	14	14	14	14	14	100%	100%	100%	100%	P	P	P	P	U
b2081	yegQ	2163692	2165053	+	1361	54	53	53	53	53	98%	98%	98%	98%	P	P	P	P	U
b4438	ryeE	2165136	2165221	+	85	4	2	2	2	2	50%	50%	50%	50%	P	P	P	P	U
b2086	yegS	2166736	2167635	+	899	36	31	31	33	34	86%	86%	92%	94%	P	P	P	P	
b2088	insE	2168251	2168559	+	308	12	12	12	12	12	100%	100%	100%	100%	P	P	P	P	
b2089	insF	2168556	2169422	+	866	35	32	32	32	32	91%	91%	91%	91%	P	P	P	P	
b2098	yegT	2176843	2178120	+	1277	51	3	3	3	3	6%	6%	6%	6%	P	P	P	P	U
b2099	yegU	2178117	2179121	+	1004	40	7	7	7	7	18%	18%	18%	18%	P	P	P	P	U
b2100	yegV	2179118	2180083	+	965	38	2	2	2	2	5%	5%	5%	5%	P	P	P	P	U
b2106	rcnA	2183939	2184763	+	824	33	7	7	7	9	21%	21%	21%	27%	P	P	P	P	
b2107	yohN	2184982	2185320	+	338	14	12	12	12	12	86%	86%	86%	86%	P	P	P	P	U
b2114	metG	2192322	2194355	+	2033	81	81	81	81	81	100%	100%	100%	100%	P	P	P	P	
b4499	yehH	2194496	2198291	+	3795	152	0	1	1	1	0%	1%	1%	1%	A	P	P	P	U
b2118	yehI	2198301	2201933	+	3632	145	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b4541	yehK	2201994	2202311	+	317	12	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b2119	yehL	2202618	2203706	+	1088	43	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b2120	yehM	2203717	2205996	+	2279	91	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b2121	yehP	2205989	2207125	+	1136	46	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b2122	yehQ	2207122	2209122	+	2000	80	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b2123	yehR	2209247	2209708	+	461	18	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b2127	mlrA	2212888	2213619	+	731	30	23	23	24	26	77%	77%	80%	87%	P	P	P	P	
b4542	yohO	2213679	2213786	+	107	4	4	4	4	4	100%	100%	100%	100%	P	P	P	P	U
b2133	dld	2220207	2221922	+	1715	69	69	69	69	69	100%	100%	100%	100%	P	P	P	P	
b2136	yohD	2223823	2224401	+	578	23	23	23	23	23	100%	100%	100%	100%	P	P	P	P	U
b2141	yohJ	2228646	2229044	+	398	16	5	11	12	12	31%	69%	75%	75%	P	P	P	P	U
b2142	yohK	2229041	2229736	+	695	28	7	15	24	24	25%	54%	86%	86%	P	P	P	P	U
b2143	cdd	2229866	2230750	+	884	36	25	28	30	31	69%	78%	83%	86%	P	P	P	P	
b2144	sanA	2230900	2231619	+	719	29	21	22	22	22	72%	76%	76%	76%	P	P	P	P	U
b2145	yeiS	2231622	2231861	+	239	9	6	6	6	6	67%	67%	67%	67%	P	P	P	P	U
b2146	yeiT	2232055	2233293	+	1238	50	2	19	19	19	4%	38%	38%	38%	P	P	P	P	U
b2147	yeiA	2233287	2234522	+	1235	50	7	21	21	21	14%	42%	42%	42%	P	P	P	P	U
b2154	yeiG	2241932	2242768	+	836	33	30	30	30	30	91%	91%	91%	91%	P	P	P	P	U
b2158	yeiH	2247739	2248788	+	1049	42	15	15	15	15	36%	36%	36%	36%	P	P	P	P	U
b2159	nfo	2248862	2249719	+	857	34	33	33	33	33	97%	97%	97%	97%	P	P	P	P	
b2160	yeiI	2249722	2250810	+	1088	43	31	31	31	31	72%	72%	72%	72%	P	P	P	P	U
b2163	yeiL	2253377	2254036	+	659	26	0	0	0	0	0%	0%	0%	0%	A	A	A	A	
b2170	setB	2261885	2263066	+	1181	47	4	4	4	4	9%	9%	9%	9%	P	P	P	P	
b2171	yeiP	2263472	2264044	+	572	22	22	22	22	22	100%	100%	100%	100%	P	P	P	P	U

b2172	yeiQ	2264267	2265733	+	1466	59	18	18	30	30	31%	31%	51%	51%	P	P	P	P	U
b2173	yeiR	2265851	2266837	+	986	39	34	34	34	34	87%	87%	87%	87%	P	P	P	P	U
b2174	lpxT	2266876	2267589	+	713	28	22	22	22	22	79%	79%	79%	79%	P	P	P	P	U
b2175	spr	2268001	2268567	+	566	22	22	22	22	22	100%	100%	100%	100%	P	P	P	P	U
b2176	rtn	2268748	2270304	+	1556	62	33	33	33	33	53%	53%	53%	53%	P	P	P	P	U
b2177	yejA	2270386	2272200	+	1814	73	45	45	46	50	62%	62%	63%	68%	P	P	P	P	U
b2178	yejB	2272201	2273295	+	1094	43	4	4	4	6	9%	9%	9%	14%	P	P	P	P	U
b2179	yejE	2273295	2274320	+	1025	41	9	9	9	12	22%	22%	22%	29%	P	P	P	P	U
b2180	yejF	2274322	2275911	+	1589	63	41	41	41	42	65%	65%	65%	67%	P	P	P	P	U
b2184	yejH	2278654	2280414	+	1760	70	41	41	41	41	59%	59%	59%	59%	P	P	P	P	U
b2185	rply	2280539	2280823	+	284	12	12	12	12	12	100%	100%	100%	100%	P	P	P	P	U
b2187	yejL	2282151	2282378	+	227	9	9	9	9	9	100%	100%	100%	100%	P	P	P	P	U
b2188	yejM	2282398	2284158	+	1760	70	64	64	64	64	91%	91%	91%	91%	P	P	P	P	U
b2189	proL	2284233	2284309	+	76	3	3	3	3	3	100%	100%	100%	100%	P	P	P	P	U
b2193	narP	2288522	2289169	+	647	26	25	26	26	26	96%	100%	100%	100%	P	P	P	P	U
b4604	yojO	2301628	2301792	+	164	7	0	0	2	2	0%	0%	29%	29%	A	A	P	P	U
b2209	eco	2301927	2302415	+	488	20	15	17	18	18	75%	85%	90%	90%	P	P	P	P	U
b4439	micF	2311106	2311198	+	92	3	2	2	3	3	67%	67%	100%	100%	P	P	P	P	U
b2216	rdsD	2311510	2314182	+	2672	107	106	106	106	106	99%	99%	99%	99%	P	P	P	P	U
b2217	rdsB	2314199	2314849	+	650	26	26	26	26	26	100%	100%	100%	100%	P	P	P	P	U
b2219	atoS	2318065	2319891	+	1826	73	0	0	29	29	0%	0%	40%	40%	A	A	P	P	U
b2220	atoC	2319888	2321273	+	1385	55	0	0	2	2	0%	0%	4%	4%	A	A	P	P	U
b2221	atoD	2321469	2322131	+	662	27	0	0	1	1	0%	0%	4%	4%	A	A	P	P	U
b2222	atoA	2322131	2322781	+	650	26	0	0	3	3	0%	0%	12%	12%	A	A	P	P	U
b2223	atoE	2322778	2324100	+	1322	53	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b2224	atoB	2324131	2325315	+	1184	47	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b2232	ubiG	2337589	2338311	+	722	29	29	29	29	29	100%	100%	100%	100%	P	P	P	P	U
b2234	nrdA	2342887	2345172	+	2285	91	91	91	91	91	100%	100%	100%	100%	P	P	P	P	U
b2235	nrdB	2345406	2346536	+	1130	45	45	45	45	45	100%	100%	100%	100%	P	P	P	P	U
b2236	yfaE	2346536	2346790	+	254	10	7	7	7	7	70%	70%	70%	70%	P	P	P	P	U
b2238	yfaH	2347673	2347915	+	242	10	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b2241	glpA	2350669	2352297	+	1628	65	0	0	6	6	0%	0%	9%	9%	A	A	P	P	U
b2242	glpB	2352287	2353546	+	1259	50	0	0	4	4	0%	0%	8%	8%	A	A	P	P	U
b2243	glpC	2353543	2354733	+	1190	48	0	0	1	1	0%	0%	2%	2%	A	A	P	P	U
b2244	yfaD	2354926	2355825	+	899	36	9	9	9	9	25%	25%	25%	25%	P	P	P	P	U
b4543	ypaA	2355838	2356023	+	185	7	7	7	7	7	100%	100%	100%	100%	P	P	P	P	U
b2251	nudI	2362576	2363001	+	425	17	5	5	5	7	29%	29%	29%	41%	P	P	P	P	U
b2253	arnB	2363950	2365089	+	1139	46	24	24	24	39	52%	52%	52%	85%	P	P	P	P	U
b2254	arnC	2365093	2366061	+	968	39	7	7	7	34	18%	18%	18%	87%	P	P	P	P	U
b2255	arnA	2366061	2368043	+	1982	79	14	14	14	30	18%	18%	18%	38%	P	P	P	P	U
b2256	arnD	2368040	2368930	+	890	36	1	1	1	2	3%	3%	3%	6%	P	P	P	P	U
b2257	arnT	2368930	2370582	+	1652	66	5	6	16	17	8%	9%	24%	26%	P	P	P	P	U
b4544	arnE	2370579	2370914	+	335	14	1	1	13	13	7%	7%	93%	93%	P	P	P	P	U
b2258	arnF	2370914	2371300	+	386	15	1	1	6	6	7%	7%	40%	40%	P	P	P	P	U
b2268	rbn	2379630	2380547	+	917	36	24	24	24	25	67%	67%	67%	69%	P	P	P	P	U
b2269	elaD	2380735	2381946	+	1211	48	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U

b2271	yfbL	2383882	2384853	+	971	38	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b2272	yfbM	2384956	2385459	+	503	20	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b2274	yfbO	2386603	2387079	+	476	19	0	1	3	3	0%	5%	16%	16%	A	P	P	P	U
b2275	yfbP	2387135	2387986	+	851	34	0	5	7	7	0%	15%	21%	21%	A	P	P	P	U
b2290	yfbQ	2405583	2406800	+	1217	49	42	42	42	42	86%	86%	86%	86%	P	P	P	P	U
b2291	yfbR	2406884	2407483	+	599	24	16	16	16	17	67%	67%	67%	71%	P	P	P	P	U
b2296	ackA	2411492	2412694	+	1202	48	48	48	48	48	100%	100%	100%	100%	P	P	P	P	U
b2297	pta	2412769	2414913	+	2144	86	85	85	85	85	99%	99%	99%	99%	P	P	P	P	U
b2298	yfcC	2415103	2416623	+	1520	61	0	10	10	11	0%	16%	16%	18%	A	P	P	P	U
b2302	yfcG	2418643	2419290	+	647	26	17	20	25	25	65%	77%	96%	96%	P	P	P	P	U
b2303	folX	2419347	2419709	+	362	15	15	15	15	15	100%	100%	100%	100%	P	P	P	P	U
b2304	yfcH	2419730	2420623	+	893	36	36	36	36	36	100%	100%	100%	100%	P	P	P	P	U
b2321	flk	2435972	2436967	+	995	40	35	35	35	35	88%	88%	88%	88%	P	P	P	P	U
b2324	mnmC	2439786	2441792	+	2006	80	56	56	57	57	70%	70%	71%	71%	P	P	P	P	U
b2331	yfcN	2446628	2447179	+	551	22	22	22	22	22	100%	100%	100%	100%	P	P	P	P	U
b2344	fadL	2459328	2460668	+	1340	53	47	47	49	49	89%	89%	92%	92%	P	P	P	P	U
b2345	yfdF	2461034	2462092	+	1058	42	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b2347	yfdC	2463323	2464255	+	932	38	15	17	28	36	39%	45%	74%	95%	P	P	P	P	U
b2348	argW	2464331	2464405	+	74	3	3	3	3	3	100%	100%	100%	100%	P	P	P	P	U
b2349	intS	2464567	2465724	+	1157	46	37	37	37	37	80%	80%	80%	80%	P	P	P	P	U
b2350	yfdG	2465877	2466239	+	362	15	15	15	15	15	100%	100%	100%	100%	P	P	P	P	U
b2351	yfdH	2466236	2467156	+	920	37	37	37	37	37	100%	100%	100%	100%	P	P	P	P	U
b2352	yfdI	2467153	2468484	+	1331	54	39	39	39	40	72%	72%	72%	74%	P	P	P	P	U
b2353	tfaS	2468837	2469127	+	290	11	4	5	11	11	36%	45%	100%	100%	P	P	P	P	U
b2359	yfdP	2471626	2471988	+	362	15	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b2360	yfdQ	2472054	2472878	+	824	33	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b2361	yfdR	2473006	2473542	+	536	21	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b2362	yfdS	2473533	2473895	+	362	14	0	2	2	2	0%	14%	14%	14%	A	P	P	P	U
b2363	yfdT	2473895	2474200	+	305	12	0	5	5	5	0%	42%	42%	42%	A	P	P	P	U
b4545	ypdJ	2474203	2474253	+	50	3	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b4501	torI	2474332	2474532	+	200	8	5	7	7	7	63%	88%	88%	88%	P	P	P	P	U
b4643	pawZ	2474606	2474620	+	14	0	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b2365	dsdX	2475869	2477206	+	1337	54	2	3	5	5	4%	6%	9%	9%	P	P	P	P	U
b2366	dsdA	2477224	2478552	+	1328	53	20	21	21	24	38%	40%	40%	45%	P	P	P	P	U
b2369	evgA	2481777	2482391	+	614	25	24	24	25	25	96%	96%	100%	100%	P	P	P	P	U
b2370	evgS	2482396	2485989	+	3593	144	54	54	54	56	38%	38%	38%	39%	P	P	P	P	U
b2376	ypdI	2492720	2492995	+	275	11	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b2378	lpxP	2493667	2494587	+	920	37	1	4	4	5	3%	11%	11%	14%	P	P	P	P	U
b2380	ypdA	2496693	2498390	+	1697	68	19	20	21	21	28%	29%	31%	31%	P	P	P	P	U
b2381	ypdB	2498405	2499139	+	734	29	27	27	29	29	93%	93%	100%	100%	P	P	P	P	U
b2382	ypdC	2499152	2500009	+	857	35	5	6	9	10	14%	17%	26%	29%	P	P	P	P	U
b2389	yfeO	2507652	2508908	+	1256	51	2	2	5	9	4%	4%	10%	18%	P	P	P	P	U
b2390	ypeC	2509023	2509349	+	326	13	5	7	7	9	38%	54%	54%	69%	P	P	P	P	U
b2393	nupC	2511064	2512266	+	1202	48	47	47	47	47	98%	98%	98%	98%	P	P	P	P	U
b2394	insL	2512353	2513465	+	1112	45	45	45	45	45	100%	100%	100%	100%	P	P	P	P	U
b2398	yfeC	2516489	2516833	+	344	14	14	14	14	14	100%	100%	100%	100%	P	P	P	P	U

b2399	yfeD	2516856	2517227	+	371	14	12	13	14	14	86%	93%	100%	100%	P	P	P	P	U
b2401	valU	2518953	2519028	+	75	3	3	3	3	3	100%	100%	100%	100%	P	P	P	P	
b2402	valX	2519073	2519148	+	75	3	3	3	3	3	100%	100%	100%	100%	P	P	P	P	
b2403	valY	2519195	2519270	+	75	3	3	3	3	3	100%	100%	100%	100%	P	P	P	P	
b2404	lysV	2519275	2519350	+	75	3	3	3	3	3	100%	100%	100%	100%	P	P	P	P	
b2408	yfeN	2523149	2523913	+	764	31	5	7	13	14	16%	23%	42%	45%	P	P	P	P	U
b2410	yfeH	2524968	2525966	+	998	40	35	35	36	36	88%	88%	90%	90%	P	P	P	P	U
b2413	cysZ	2529485	2530246	+	761	30	26	26	26	26	87%	87%	87%	87%	P	P	P	P	U
b2414	cysK	2530431	2531402	+	971	39	39	39	39	39	100%	100%	100%	100%	P	P	P	P	
b2415	ptsH	2531786	2532043	+	257	10	10	10	10	10	100%	100%	100%	100%	P	P	P	P	
b2416	ptsI	2532088	2533815	+	1727	69	69	69	69	69	100%	100%	100%	100%	P	P	P	P	
b2417	crr	2533856	2534365	+	509	21	21	21	21	21	100%	100%	100%	100%	P	P	P	P	
b2419	yfeK	2535364	2535738	+	374	15	9	9	9	13	60%	60%	60%	87%	P	P	P	P	U
b2420	yfeS	2535771	2536505	+	734	29	5	5	6	14	17%	17%	21%	48%	P	P	P	P	U
b2428	murQ	2543795	2544691	+	896	36	16	16	16	17	44%	44%	44%	47%	P	P	P	P	U
b2429	murP	2544695	2546119	+	1424	57	4	4	4	4	7%	7%	7%	7%	P	P	P	P	U
b2430	yfeW	2546124	2547428	+	1304	52	3	7	7	7	6%	13%	13%	13%	P	P	P	P	U
b2435	amiA	2550374	2551243	+	869	35	35	35	35	35	100%	100%	100%	100%	P	P	P	P	
b2436	hemF	2551247	2552146	+	899	36	32	32	32	32	89%	89%	89%	89%	P	P	P	P	
b2442	intZ	2556880	2558088	+	1208	49	43	43	43	43	88%	88%	88%	88%	P	P	P	P	U
b2443	yffL	2558279	2558920	+	641	26	15	16	17	17	58%	62%	65%	65%	P	P	P	P	U
b2444	yffM	2559390	2559635	+	245	9	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b2445	yffN	2559647	2560015	+	368	15	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b2446	yffO	2560133	2560549	+	416	17	3	13	13	13	18%	76%	76%	76%	P	P	P	P	U
b2447	yffP	2560546	2561139	+	593	24	0	7	7	7	0%	29%	29%	29%	A	P	P	P	U
b2448	yffQ	2561614	2561991	+	377	15	2	5	5	5	13%	33%	33%	33%	P	P	P	P	U
b2449	yffR	2562002	2562394	+	392	16	15	15	15	16	94%	94%	94%	100%	P	P	P	P	U
b2450	yffS	2562545	2563354	+	809	32	29	30	30	30	91%	94%	94%	94%	P	P	P	P	U
b2464	talA	2576688	2577638	+	950	38	38	38	38	38	100%	100%	100%	100%	P	P	P	P	
b2465	tkkB	2577658	2579661	+	2003	80	80	80	80	80	100%	100%	100%	100%	P	P	P	P	
b2469	narQ	2583753	2585453	+	1700	68	15	30	30	31	22%	44%	44%	46%	P	P	P	P	
b2470	acrD	2585617	2588730	+	3113	124	4	14	14	15	3%	11%	11%	12%	P	P	P	P	
b2471	yffB	2589269	2589625	+	356	14	14	14	14	14	100%	100%	100%	100%	P	P	P	P	U
b2472	dapE	2589629	2590756	+	1127	45	44	44	45	45	98%	98%	100%	100%	P	P	P	P	
b4547	ypfN	2590784	2590984	+	200	8	8	8	8	8	100%	100%	100%	100%	P	P	P	P	U
b2479	gcvR	2597928	2598500	+	572	23	23	23	23	23	100%	100%	100%	100%	P	P	P	P	
b2480	bcp	2598500	2598970	+	470	19	19	19	19	19	100%	100%	100%	100%	P	P	P	P	
b2481	hyfA	2599223	2599840	+	617	25	0	0	3	3	0%	0%	12%	12%	A	A	P	P	
b2482	hyfB	2599840	2601858	+	2018	80	0	0	0	0	0%	0%	0%	0%	A	A	A	A	
b2483	hyfC	2601869	2602816	+	947	38	0	0	0	0	0%	0%	0%	0%	A	A	A	A	
b2484	hyfD	2602833	2604272	+	1439	58	0	0	0	0	0%	0%	0%	0%	A	A	A	A	
b2485	hyfE	2604284	2604934	+	650	26	0	0	0	0	0%	0%	0%	0%	A	A	A	A	
b2486	hyfF	2604939	2606519	+	1580	64	0	1	5	5	0%	2%	8%	8%	A	P	P	P	
b2487	hyfG	2606509	2608176	+	1667	67	0	0	5	5	0%	0%	7%	7%	A	A	P	P	
b2488	hyfH	2608186	2608731	+	545	22	0	0	0	0	0%	0%	0%	0%	A	A	A	A	
b2489	hyfI	2608728	2609486	+	758	30	0	0	2	2	0%	0%	7%	7%	A	A	P	P	

b2490	hyfJ	2609479	2609892	+	413	17	0	1	2	2	0%	6%	12%	12%	A	P	P	P	U
b2491	hyfR	2609922	2611934	+	2012	80	0	0	2	2	0%	0%	3%	3%	A	A	P	P	
b2492	focB	2611956	2612804	+	848	34	0	5	5	5	0%	15%	15%	15%	A	P	P	P	U
b2494	yfgC	2614116	2615579	+	1463	58	57	57	57	57	98%	98%	98%	98%	P	P	P	P	U
b2495	yfgD	2615600	2615959	+	359	14	14	14	14	14	100%	100%	100%	100%	P	P	P	P	U
b2499	purM	2619219	2620256	+	1037	41	41	41	41	41	100%	100%	100%	100%	P	P	P	P	
b2500	purN	2620256	2620894	+	638	26	26	26	26	26	100%	100%	100%	100%	P	P	P	P	
b2501	ppk	2621066	2623132	+	2066	83	83	83	83	83	100%	100%	100%	100%	P	P	P	P	
b2502	ppx	2623137	2624678	+	1541	62	61	61	61	61	98%	98%	98%	98%	P	P	P	P	
b2504	yfgG	2627312	2627503	+	191	8	8	8	8	8	100%	100%	100%	100%	P	P	P	P	U
b2505	yfgH	2627814	2628332	+	518	21	0	0	2	2	0%	0%	10%	10%	A	A	P	P	U
b2506	yfgI	2628348	2628887	+	539	22	0	5	19	19	0%	23%	86%	86%	A	P	P	P	U
b2509	xseA	2632254	2633624	+	1370	54	52	52	52	52	96%	96%	96%	96%	P	P	P	P	
b2521	sseA	2650516	2651361	+	845	34	33	33	33	34	97%	97%	97%	100%	P	P	P	P	
G0-8908	IS128	2651537	2651745	+	208	7	0	0	0	0	0%	0%	0%	0%	A	A	A	A	
b4440	ryfA	2651877	2652180	+	303	12	11	11	11	11	92%	92%	92%	92%	P	P	P	P	U
b2533	suhB	2661464	2662267	+	803	32	28	28	28	28	88%	88%	88%	88%	P	P	P	P	
b2534	yfhR	2662385	2663266	+	881	35	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b2535	csiE	2663457	2664737	+	1280	51	15	15	51	51	29%	29%	100%	100%	P	P	P	P	U
b2538	hcaE	2667054	2668415	+	1361	54	24	24	24	24	44%	44%	44%	44%	P	P	P	P	
b2539	hcaF	2668412	2668930	+	518	21	0	0	0	0	0%	0%	0%	0%	A	A	A	A	
b2540	hcaC	2668930	2669250	+	320	12	2	3	3	3	17%	25%	25%	25%	P	P	P	P	U
b2541	hcaB	2669247	2670059	+	812	33	1	2	2	2	3%	6%	6%	6%	P	P	P	P	
b2542	hcaD	2670069	2671271	+	1202	48	3	3	6	6	6%	6%	13%	13%	P	P	P	P	
b2543	yphA	2671368	2671790	+	422	17	17	17	17	17	100%	100%	100%	100%	P	P	P	P	U
b2550	yphH	2680885	2682078	+	1193	48	11	31	31	32	23%	65%	65%	67%	P	P	P	P	U
b2552	hmp	2683857	2685047	+	1190	47	33	33	44	44	70%	70%	94%	94%	P	P	P	P	
b2558	yfhD	2693823	2695379	+	1556	63	18	18	20	20	29%	29%	32%	32%	P	P	P	P	U
b2561	yfhH	2696781	2697629	+	848	34	20	27	27	27	59%	79%	79%	79%	P	P	P	P	U
b2562	yfhL	2697685	2697945	+	260	10	10	10	10	10	100%	100%	100%	100%	P	P	P	P	U
b4608	ryfC	2698542	2698618	+	76	1	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b2574	nadB	2708442	2710064	+	1622	65	64	64	64	65	98%	98%	98%	100%	P	P	P	P	
b2576	srmB	2710918	2712252	+	1334	53	53	53	53	53	100%	100%	100%	100%	P	P	P	P	
b2578	eamB	2713445	2714032	+	587	23	1	2	2	2	4%	9%	9%	9%	P	P	P	P	
b2580	ung	2714776	2715465	+	689	28	28	28	28	28	100%	100%	100%	100%	P	P	P	P	
b2582	trxC	2716757	2717176	+	419	17	17	17	17	17	100%	100%	100%	100%	P	P	P	P	
b2583	yfiP	2717245	2717943	+	698	28	12	12	12	12	43%	43%	43%	43%	P	P	P	P	U
b2584	yfiQ	2717975	2720635	+	2660	106	69	69	94	94	65%	65%	89%	89%	P	P	P	P	U
b2585	pssA	2720749	2722104	+	1355	54	54	54	54	54	100%	100%	100%	100%	P	P	P	P	
b2586	yfiM	2722150	2722473	+	323	13	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b2595	bamD	2734168	2734905	+	737	30	30	30	30	30	100%	100%	100%	100%	P	P	P	P	U
b2597	raiA	2735176	2735517	+	341	13	13	13	13	13	100%	100%	100%	100%	P	P	P	P	
b2598	pheL	2735621	2735668	+	47	1	1	1	1	1	100%	100%	100%	100%	P	P	P	P	
b2599	pheA	2735767	2736927	+	1160	47	43	43	43	43	91%	91%	91%	91%	P	P	P	P	
b2602	yfiL	2739382	2739747	+	365	15	0	10	15	15	0%	67%	100%	100%	A	P	P	P	U
b2603	yfiR	2739897	2740415	+	518	20	11	11	14	15	55%	55%	70%	75%	P	P	P	P	U

b2604	yfiN	2740405	2741631	+	1226	49	13	13	13	13	27%	27%	27%	27%	P	P	P	P	U
b2605	yfiB	2741647	2742129	+	482	19	18	18	18	18	95%	95%	95%	95%	P	P	P	P	U
b2611	ypjD	2745984	2746775	+	791	32	32	32	32	32	100%	100%	100%	100%	P	P	P	P	U
b4461	yfjD	2746796	2748082	+	1286	51	43	43	43	44	84%	84%	84%	86%	P	P	P	P	U
b2615	nadK	2748853	2749731	+	878	35	32	32	32	32	91%	91%	91%	91%	P	P	P	P	
b2616	recN	2749817	2751478	+	1661	67	58	58	58	59	87%	87%	87%	88%	P	P	P	P	
b2617	smpA	2751627	2751968	+	341	13	13	13	13	13	100%	100%	100%	100%	P	P	P	P	
b2620	smpB	2752918	2753400	+	482	20	20	20	20	20	100%	100%	100%	100%	P	P	P	P	
b2621	ssrA	2753615	2753977	+	362	15	15	15	15	15	100%	100%	100%	100%	P	P	P	P	
b2622	intA	2754181	2755422	+	1241	50	48	48	48	48	96%	96%	96%	96%	P	P	P	P	
b2624	alpA	2756666	2756878	+	212	9	0	0	0	0	0%	0%	0%	0%	A	A	A	A	
b2625	yfjI	2757007	2758416	+	1409	56	5	5	7	8	9%	9%	13%	14%	P	P	P	P	U
b2626	yfjJ	2758569	2759195	+	626	25	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b2630	rnlA	2763940	2765013	+	1073	43	43	43	43	43	100%	100%	100%	100%	P	P	P	P	
b2631	yfjO	2765006	2765377	+	371	15	12	13	13	13	80%	87%	87%	87%	P	P	P	P	U
b2632	yfjP	2765732	2766595	+	863	35	0	3	7	7	0%	9%	20%	20%	A	P	P	P	U
b2633	yfjQ	2766687	2767508	+	821	33	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b2634	yfjR	2767725	2768426	+	701	28	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b2635	ypjK	2768467	2768703	+	236	10	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b2636	yfjS	2768703	2769146	+	443	18	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b2637	yfjT	2769170	2769637	+	467	18	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b2642	yfjW	2771340	2773043	+	1703	69	11	11	11	12	16%	16%	16%	17%	P	P	P	P	U
b4644	ypjI	2773567	2773838	+	271	11	0	0	2	3	0%	0%	18%	27%	A	A	P	P	U
b2643	yfjX	2773941	2774399	+	458	19	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b2644	yfjY	2774408	2774890	+	482	19	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b4548	ypjJ	2774899	2775099	+	200	8	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b2645	yfjZ	2775137	2775454	+	317	13	0	0	0	0	0%	0%	0%	0%	A	A	A	A	
b2646	ypjF	2775475	2775804	+	329	13	0	1	1	1	0%	8%	8%	8%	A	P	P	P	
b4645	psaA	2775994	2776007	+	13	0	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b4462	ygaQ	2784419	2786671	+	2252	90	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b2659	csiD	2787007	2787984	+	977	39	25	25	38	38	64%	64%	97%	97%	P	P	P	P	U
b2660	ygaF	2788004	2789272	+	1268	50	25	25	41	42	50%	50%	82%	84%	P	P	P	P	U
b2661	gabD	2789295	2790743	+	1448	58	48	48	51	58	83%	83%	88%	100%	P	P	P	P	
b2662	gabT	2790757	2792037	+	1280	51	46	46	46	51	90%	90%	90%	100%	P	P	P	P	
b2663	gabP	2792275	2793675	+	1400	56	3	3	3	55	5%	5%	5%	98%	P	P	P	P	
b2664	csiR	2793696	2794358	+	662	27	23	25	25	26	85%	93%	93%	96%	P	P	P	P	
b2667	ygaV	2795233	2795532	+	299	12	1	6	6	6	8%	50%	50%	50%	P	P	P	P	U
b2668	ygaP	2795542	2796066	+	524	21	3	7	7	8	14%	33%	33%	38%	P	P	P	P	U
b2670	ygaW	2797186	2797635	+	449	18	0	16	16	16	0%	89%	89%	89%	A	P	P	P	U
b2672	ygaM	2798156	2798497	+	341	13	13	13	13	13	100%	100%	100%	100%	P	P	P	P	U
b2673	nrdH	2798745	2798990	+	245	10	10	10	10	10	100%	100%	100%	100%	P	P	P	P	
b2674	nrdI	2798987	2799397	+	410	16	15	15	16	16	94%	94%	100%	100%	P	P	P	P	
b2675	nrdE	2799370	2801514	+	2144	86	47	47	60	86	55%	55%	70%	100%	P	P	P	P	
b2676	nrdF	2801524	2802483	+	959	39	9	9	10	34	23%	23%	26%	87%	P	P	P	P	
b2677	proV	2802837	2804039	+	1202	48	44	44	44	44	92%	92%	92%	92%	P	P	P	P	
b2678	proW	2804032	2805096	+	1064	42	39	39	39	39	93%	93%	93%	93%	P	P	P	P	

b2679	proX	2805154	2806146	+	992	39	34	34	34	34	87%	87%	87%	87%	P	P	P	P	
b2681	ygaY	2806338	2807515	+	1177	47	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b2682	ygaZ	2807639	2808376	+	737	29	29	29	29	29	100%	100%	100%	100%	P	P	P	P	U
b2683	ygaH	2808366	2808701	+	335	13	13	13	13	13	100%	100%	100%	100%	P	P	P	P	U
b2684	mprA	2808792	2809322	+	530	21	21	21	21	21	100%	100%	100%	100%	P	P	P	P	
b2685	emrA	2809449	2810621	+	1172	47	47	47	47	47	100%	100%	100%	100%	P	P	P	P	
b2686	emrB	2810638	2812176	+	1538	61	51	52	55	55	84%	85%	90%	90%	P	P	P	P	
b4442	micA	2812824	2812901	+	77	3	0	0	2	2	0%	0%	67%	67%	A	A	P	P	
b2702	srlA	2823854	2824417	+	563	23	0	1	1	1	0%	4%	4%	4%	A	P	P	P	
b2703	srlE	2824414	2825373	+	959	38	0	1	2	2	0%	3%	5%	5%	A	P	P	P	
b2704	srlB	2825384	2825755	+	371	14	0	0	0	0	0%	0%	0%	0%	A	A	A	A	
b2705	srlD	2825759	2826538	+	779	31	5	5	6	6	16%	16%	19%	19%	P	P	P	P	
b2706	gutM	2826643	2827002	+	359	14	0	0	1	1	0%	0%	7%	7%	A	A	P	P	
b2707	srlR	2827069	2827842	+	773	31	30	30	30	30	97%	97%	97%	97%	P	P	P	P	
b2708	gutQ	2827835	2828800	+	965	38	33	33	33	33	87%	87%	87%	87%	P	P	P	P	U
b2710	norV	2830498	2831937	+	1439	58	0	5	5	5	0%	9%	9%	9%	A	P	P	P	
b2711	norW	2831934	2833067	+	1133	45	0	0	0	0	0%	0%	0%	0%	A	A	A	A	
GO-8911	C0664	2833077	2833189	+	112	5	0	0	0	0	0%	0%	0%	0%	A	A	A	A	
b2715	ascF	2837546	2839003	+	1457	58	6	6	12	12	10%	10%	21%	21%	P	P	P	P	
b2716	ascB	2839012	2840436	+	1424	57	11	17	27	27	19%	30%	47%	47%	P	P	P	P	
b2726	hypA	2848669	2849019	+	350	14	4	5	5	10	29%	36%	36%	71%	P	P	P	P	
b2727	hypB	2849023	2849895	+	872	35	19	20	20	26	54%	57%	57%	74%	P	P	P	P	
b2728	hypC	2849886	2850158	+	272	11	5	5	5	8	45%	45%	45%	73%	P	P	P	P	
b2729	hypD	2850158	2851279	+	1121	44	25	25	26	32	57%	57%	59%	73%	P	P	P	P	
b2730	hypE	2851318	2852286	+	968	39	23	28	33	34	59%	72%	85%	87%	P	P	P	P	
b2731	fhIA	2852360	2854438	+	2078	83	24	25	27	37	29%	30%	33%	45%	P	P	P	P	
b2733	mutS	2855115	2857676	+	2561	102	90	90	90	90	88%	88%	88%	88%	P	P	P	P	
b2734	pphB	2857782	2858438	+	656	27	0	0	0	0	0%	0%	0%	0%	A	A	A	A	
b2736	ygbJ	2859452	2860360	+	908	37	1	2	37	37	3%	5%	100%	100%	P	P	P	P	U
b2737	ygbK	2860357	2861523	+	1166	47	1	1	46	46	2%	2%	98%	98%	P	P	P	P	U
b2738	ygbL	2861615	2862253	+	638	25	1	1	15	15	4%	4%	60%	60%	P	P	P	P	U
b2739	ygbM	2862258	2863034	+	776	31	1	1	18	18	3%	3%	58%	58%	P	P	P	P	U
b2740	ygbN	2863123	2864487	+	1364	55	1	1	4	4	2%	2%	7%	7%	P	P	P	P	U
b2753	iap	2874603	2875640	+	1037	42	33	33	33	34	79%	79%	79%	81%	P	P	P	P	
b2765	sscR	2890236	2890601	+	365	14	13	13	13	13	93%	93%	93%	93%	P	P	P	P	
b2766	ygcN	2890679	2891950	+	1271	50	3	4	4	4	6%	8%	8%	8%	P	P	P	P	U
b2767	ygcO	2891941	2892201	+	260	10	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b2768	ygcP	2892218	2892793	+	575	23	0	1	1	1	0%	4%	4%	4%	A	P	P	P	U
b2775	yqcE	2898614	2899891	+	1277	51	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b2776	ygcE	2899918	2901396	+	1478	59	0	3	5	5	0%	5%	8%	8%	A	P	P	P	U
b2778	ygcG	2903733	2904605	+	872	35	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b2786	barA	2913079	2915835	+	2756	110	82	82	82	83	75%	75%	75%	75%	P	P	P	P	
b2794	queF	2923370	2924218	+	848	34	33	33	33	33	97%	97%	97%	97%	P	P	P	P	
b2795	ygdH	2924330	2925694	+	1364	55	54	54	55	55	98%	98%	100%	100%	P	P	P	P	U
b2796	sdaC	2926251	2927540	+	1289	52	50	51	51	51	96%	98%	98%	98%	P	P	P	P	U
b2797	sdaB	2927598	2928965	+	1367	55	26	26	26	26	47%	47%	47%	47%	P	P	P	P	

b2798	ygdG	2928987	2929832	+	845	34	18	18	18	18	53%	53%	53%	53%	P	P	P	P	
b2801	fucP	2932257	2933573	+	1316	53	0	1	3	3	0%	2%	6%	6%	A	P	P	P	
b2802	fucI	2933606	2935381	+	1775	71	0	1	4	4	0%	1%	6%	6%	A	P	P	P	
b2803	fucK	2935460	2936908	+	1448	58	13	13	15	16	22%	22%	26%	28%	P	P	P	P	
b2804	fucU	2936910	2937332	+	422	17	16	16	16	16	94%	94%	94%	94%	P	P	P	P	
b2805	fucR	2937390	2938121	+	731	29	26	26	26	26	90%	90%	90%	90%	P	P	P	P	
b4443	gcvB	2940718	2940923	+	205	9	3	5	5	5	33%	56%	56%	56%	P	P	P	P	
b2810	csdA	2941359	2942564	+	1205	48	48	48	48	48	100%	100%	100%	100%	P	P	P	P	
b2811	csdE	2942564	2943007	+	443	18	17	17	18	18	94%	94%	100%	100%	P	P	P	P	U
b2814	metZ	2945409	2945485	+	76	3	3	3	3	3	100%	100%	100%	100%	P	P	P	P	
b2815	metW	2945519	2945595	+	76	3	3	3	3	3	100%	100%	100%	100%	P	P	P	P	
b2816	metV	2945629	2945705	+	76	3	3	3	3	3	100%	100%	100%	100%	P	P	P	P	
b2818	argA	2947264	2948595	+	1331	53	53	53	53	53	100%	100%	100%	100%	P	P	P	P	
b2831	mutH	2967684	2968373	+	689	27	10	11	12	12	37%	41%	44%	44%	P	P	P	P	
b2832	ygdQ	2968442	2969155	+	713	29	14	14	14	14	48%	48%	48%	48%	P	P	P	P	U
b2833	ygdR	2969293	2969511	+	218	9	7	9	9	9	78%	100%	100%	100%	P	P	P	P	U
b2834	tas	2969619	2970659	+	1040	42	42	42	42	42	100%	100%	100%	100%	P	P	P	P	U
b2837	galR	2974621	2975652	+	1031	41	33	34	34	36	80%	83%	83%	88%	P	P	P	P	
b2839	lysR	2977043	2977978	+	935	38	12	12	12	12	32%	32%	32%	32%	P	P	P	P	
b2845	yqeG	2983869	2985098	+	1229	49	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b2846	yqeH	2985558	2986190	+	632	25	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b2847	yqeI	2986524	2987333	+	809	33	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b2848	yqeJ	2987326	2987808	+	482	20	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b2850	ygeF	2988576	2989065	+	489	19	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b2851	ygeG	2989290	2989781	+	491	20	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b2852	ygeH	2990116	2991492	+	1376	55	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b2853	ygeI	2991660	2991878	+	218	9	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b2854	pbl	2991961	2992463	+	502	20	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b2866	xdhA	2998367	3000625	+	2258	91	3	3	17	24	3%	3%	19%	26%	P	P	P	P	
b2867	xdhB	3000636	3001514	+	878	35	2	2	3	3	6%	6%	9%	9%	P	P	P	P	
b2868	xdhC	3001511	3001990	+	479	19	1	1	3	4	5%	5%	16%	21%	P	P	P	P	
b2870	ygeW	3004284	3005474	+	1190	47	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b2871	ygeX	3005532	3006728	+	1196	47	0	0	3	3	0%	0%	6%	6%	A	A	P	P	
b2872	ygeY	3006786	3007997	+	1211	48	0	0	1	1	0%	0%	2%	2%	A	A	P	P	U
b2873	hyuA	3008050	3009435	+	1385	56	0	0	3	3	0%	0%	5%	5%	A	A	P	P	
b2874	yqeA	3009483	3010415	+	932	37	0	0	2	2	0%	0%	5%	5%	A	A	P	P	U
b2877	ygfJ	3013182	3013760	+	578	23	0	7	18	18	0%	30%	78%	78%	A	P	P	P	U
b2878	ygfK	3014082	3017180	+	3098	124	0	0	4	4	0%	0%	3%	3%	A	A	P	P	U
b2879	ssnA	3017183	3018511	+	1328	53	0	0	2	2	0%	0%	4%	4%	A	A	P	P	U
b2880	ygfM	3018562	3019341	+	779	31	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b2881	xdhD	3019338	3022208	+	2870	115	0	0	14	14	0%	0%	12%	12%	A	A	P	P	U
b2882	ygfO	3022373	3023773	+	1400	56	0	0	1	3	0%	0%	2%	5%	A	A	P	P	U
b2883	guaD	3023788	3025107	+	1319	53	16	16	16	52	30%	30%	30%	98%	P	P	P	P	
b4464	ygfQ	3025143	3026510	+	1367	54	3	3	7	47	6%	6%	13%	87%	P	P	P	P	U
b2888	ygfU	3029389	3030837	+	1448	58	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b2889	idi	3031087	3031635	+	548	22	7	14	19	19	32%	64%	86%	86%	P	P	P	P	



b2895	fldB	3037877	3038398	+	521	21	21	21	21	21	100%	100%	100%	100%	P	P	P	P	
b2898	ygfZ	3039335	3040315	+	980	39	39	39	39	39	100%	100%	100%	100%	P	P	P	P	U
b2901	bglA	3041684	3043123	+	1439	57	57	57	57	57	100%	100%	100%	100%	P	P	P	P	
b2910	zapA	3053634	3053963	+	329	13	13	13	13	13	100%	100%	100%	100%	P	P	P	P	
b2911	ssrS	3054005	3054187	+	182	7	7	7	7	7	100%	100%	100%	100%	P	P	P	P	
b2912	ygfA	3054263	3054811	+	548	22	11	11	11	11	50%	50%	50%	50%	P	P	P	P	U
b4446	rygC	3054871	3055010	+	139	6	4	4	4	4	67%	67%	67%	67%	P	P	P	P	U
b2916	argP	3057775	3058668	+	893	36	29	29	29	30	81%	81%	81%	83%	P	P	P	P	
b2917	scpA	3058872	3061016	+	2144	86	0	0	0	0	0%	0%	0%	0%	A	A	A	A	
b2918	argK	3061009	3062004	+	995	39	0	0	0	0	0%	0%	0%	0%	A	A	A	A	
b2919	scpB	3062015	3062800	+	785	31	0	0	0	0	0%	0%	0%	0%	A	A	A	A	
b2920	scpC	3062824	3064302	+	1478	59	0	0	0	0	0%	0%	0%	0%	A	A	A	A	
b2936	yggG	3079935	3080693	+	758	30	29	29	29	29	97%	97%	97%	97%	P	P	P	P	U
b2940	yqgC	3084209	3084424	+	215	9	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b2942	metK	3084728	3085882	+	1154	46	46	46	46	46	100%	100%	100%	100%	P	P	P	P	
b2943	galP	3086306	3087700	+	1394	56	50	50	50	50	89%	89%	89%	89%	P	P	P	P	
b2944	yggI	3087777	3088274	+	497	20	10	10	11	11	50%	50%	55%	55%	P	P	P	P	U
b2945	endA	3088369	3089076	+	707	29	0	0	14	14	0%	0%	48%	48%	A	A	P	P	
b2946	rsmE	3089156	3089887	+	731	29	29	29	29	29	100%	100%	100%	100%	P	P	P	P	U
b2947	gshB	3089900	3090850	+	950	38	38	38	38	38	100%	100%	100%	100%	P	P	P	P	
b2948	yqgE	3090959	3091522	+	563	22	22	22	22	22	100%	100%	100%	100%	P	P	P	P	U
b2949	yqgF	3091522	3091938	+	416	17	16	16	16	16	94%	94%	94%	94%	P	P	P	P	U
b2951	yggS	3093120	3093824	+	704	29	29	29	29	29	100%	100%	100%	100%	P	P	P	P	U
b2952	yggT	3093842	3094408	+	566	23	23	23	23	23	100%	100%	100%	100%	P	P	P	P	U
b2953	yggU	3094405	3094695	+	290	11	11	11	11	11	100%	100%	100%	100%	P	P	P	P	U
b2954	rdgB	3094703	3095296	+	593	23	23	23	23	23	100%	100%	100%	100%	P	P	P	P	
b2955	yggW	3095289	3096425	+	1136	46	45	46	46	46	98%	100%	100%	100%	P	P	P	P	U
b2961	mutY	3101035	3102087	+	1052	42	42	42	42	42	100%	100%	100%	100%	P	P	P	P	
b2962	yggX	3102115	3102390	+	275	11	11	11	11	11	100%	100%	100%	100%	P	P	P	P	
b2963	mltC	3102455	3103534	+	1079	43	41	41	41	41	95%	95%	95%	95%	P	P	P	P	
b2964	nupG	3103736	3104992	+	1256	50	12	13	13	13	24%	26%	26%	26%	P	P	P	P	
b2966	yqgA	3107575	3108282	+	707	28	0	2	8	8	0%	7%	29%	29%	A	P	P	P	U
b2967	pheV	3108388	3108463	+	75	4	3	3	3	3	75%	75%	75%	75%	P	P	P	P	
G0-8912	C0719	3119380	3119601	+	221	9	3	8	8	8	33%	89%	89%	89%	P	P	P	P	
b2980	glcC	3126294	3127058	+	764	30	28	28	28	28	93%	93%	93%	93%	P	P	P	P	
b2982	insH	3128200	3129216	+	1016	41	41	41	41	41	100%	100%	100%	100%	P	P	P	P	
b2986	yghT	3132153	3132845	+	692	28	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b2989	yghU	3136749	3137615	+	866	35	35	35	35	35	100%	100%	100%	100%	P	P	P	P	U
b3001	yghZ	3145919	3146959	+	1040	41	23	23	38	38	56%	56%	93%	93%	P	P	P	P	
b3003	yghA	3147684	3148568	+	884	36	32	32	32	35	89%	89%	89%	97%	P	P	P	P	U
b3008	metC	3150258	3151445	+	1187	48	48	48	48	48	100%	100%	100%	100%	P	P	P	P	
b3009	yghB	3151585	3152244	+	659	27	25	25	26	26	93%	93%	96%	96%	P	P	P	P	U
b3011	yqhD	3153377	3154540	+	1163	46	46	46	46	46	100%	100%	100%	100%	P	P	P	P	
b3012	dkgA	3154645	3155472	+	827	34	33	33	33	34	97%	97%	97%	100%	P	P	P	P	
b3013	yqhG	3155672	3156598	+	926	38	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b3014	yqhH	3156649	3156906	+	257	10	0	1	1	1	0%	10%	10%	10%	A	P	P	P	U

b3025	qseB	3167850	3168509	+	659	26	11	11	12	16	42%	42%	46%	62%	P	P	P	P	
b3026	qseC	3168506	3169855	+	1349	54	9	9	14	15	17%	17%	26%	28%	P	P	P	P	
b3028	mdaB	3170552	3171133	+	581	24	24	24	24	24	100%	100%	100%	100%	P	P	P	P	
b3029	ygiN	3171164	3171478	+	314	13	12	12	13	13	92%	92%	100%	100%	P	P	P	P	
b3035	tolC	3176137	3177618	+	1481	59	59	59	59	59	100%	100%	100%	100%	P	P	P	P	
b3037	ygiB	3177766	3178437	+	671	27	27	27	27	27	100%	100%	100%	100%	P	P	P	P	U
b3038	ygiC	3178443	3179603	+	1160	47	45	45	45	45	96%	96%	96%	96%	P	P	P	P	U
b3040	zupT	3180572	3181345	+	773	31	31	31	31	31	100%	100%	100%	100%	P	P	P	P	
b3042	yqiC	3182862	3183152	+	290	12	11	11	11	11	92%	92%	92%	92%	P	P	P	P	U
b3043	ygiL	3183436	3183987	+	551	22	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b3046	yqiG	3184083	3184111	+	28	1	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b3044	insC	3184209	3184574	+	365	14	14	14	14	14	100%	100%	100%	100%	P	P	P	P	
b3045	insD	3184532	3185437	+	905	36	36	36	36	36	100%	100%	100%	100%	P	P	P	P	
b3046	yqiG	3185443	3187887	+	2444	98	0	1	1	1	0%	1%	1%	1%	A	P	P	P	U
b3047	yqiH	3187903	3188652	+	749	30	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b3048	yqiI	3188654	3189718	+	1064	42	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b3050	yqiJ	3190230	3190859	+	629	25	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b3051	yqiK	3190886	3192547	+	1661	66	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b3055	htrG	3199229	3199849	+	620	24	24	24	24	24	100%	100%	100%	100%	P	P	P	P	U
b3056	cca	3199913	3201151	+	1238	49	48	48	48	48	98%	98%	98%	98%	P	P	P	P	
b3059	ygiH	3202716	3203333	+	617	25	24	24	24	24	96%	96%	96%	96%	P	P	P	P	U
b3061	ttdA	3204485	3205396	+	911	36	0	0	0	0	0%	0%	0%	0%	A	A	A	A	
b3062	ttdB	3205393	3205998	+	605	24	0	0	0	0	0%	0%	0%	0%	A	A	A	A	
b3063	ttdT	3206046	3207509	+	1463	59	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b3065	rpsU	3208803	3209018	+	215	8	8	8	8	8	100%	100%	100%	100%	P	P	P	P	
b3066	dnaG	3209129	3210874	+	1745	69	69	69	69	69	100%	100%	100%	100%	P	P	P	P	
b3067	rpoD	3211069	3212910	+	1841	74	74	74	74	74	100%	100%	100%	100%	P	P	P	P	
b3069	ileX	3213620	3213695	+	75	3	2	2	2	2	67%	67%	67%	67%	P	P	P	P	
b3071	yqjI	3214801	3215424	+	623	25	24	25	25	25	96%	100%	100%	100%	P	P	P	P	U
b3073	ygjG	3217516	3218895	+	1379	55	55	55	55	55	100%	100%	100%	100%	P	P	P	P	
b3075	ebgR	3219488	3220471	+	983	39	25	25	25	25	64%	64%	64%	64%	P	P	P	P	
b3076	ebgA	3220655	3223747	+	3092	123	0	0	0	0	0%	0%	0%	0%	A	A	A	A	
b3077	ebgC	3223744	3224193	+	449	18	0	0	0	0	0%	0%	0%	0%	A	A	A	A	
b3078	ygjI	3224256	3225689	+	1433	57	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b3079	ygjJ	3225823	3226893	+	1070	43	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b3080	ygjK	3226910	3229261	+	2351	94	0	0	6	6	0%	0%	6%	6%	A	A	P	P	U
b3081	fadH	3229687	3231705	+	2018	81	5	5	37	37	6%	6%	46%	46%	P	P	P	P	
b3085	ygjP	3233982	3234485	+	503	20	11	11	11	12	55%	55%	55%	60%	P	P	P	P	U
b3086	ygjQ	3234562	3235254	+	692	28	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b3087	ygjR	3235333	3236319	+	986	39	32	32	38	38	82%	82%	97%	97%	P	P	P	P	U
b4448	psrN	3236396	3236583	+	187	8	6	6	7	7	75%	75%	88%	88%	P	P	P	P	U
b3088	alx	3236602	3237567	+	965	39	0	1	1	1	0%	3%	3%	3%	A	P	P	P	U
b3089	sstT	3237966	3239210	+	1244	50	46	46	46	46	92%	92%	92%	92%	P	P	P	P	
b3093	exuT	3243126	3244544	+	1418	56	0	14	34	34	0%	25%	61%	61%	A	P	P	P	
b3094	exuR	3244674	3245450	+	776	31	30	30	30	30	97%	97%	97%	97%	P	P	P	P	
b3095	yqjA	3245795	3246457	+	662	27	26	27	27	27	96%	100%	100%	100%	P	P	P	P	U

b3096	yqjB	3246461	3246844	+	383	15	13	13	13	13	87%	87%	87%	87%	P	P	P	P	U
b3097	yqjC	3246991	3247359	+	368	15	15	15	15	15	100%	100%	100%	100%	P	P	P	P	U
b3098	yqjD	3247397	3247702	+	305	13	13	13	13	13	100%	100%	100%	100%	P	P	P	P	U
b3099	yqjE	3247705	3248109	+	404	16	16	16	16	16	100%	100%	100%	100%	P	P	P	P	U
b3100	yqjK	3248099	3248398	+	299	12	11	12	12	12	92%	100%	100%	100%	P	P	P	P	U
b3101	yqjF	3248584	3248976	+	392	16	0	5	6	6	0%	31%	38%	38%	A	P	P	P	U
b3102	yqjG	3249046	3250032	+	986	40	26	26	26	32	65%	65%	65%	80%	P	P	P	P	U
b3103	yhaH	3250326	3250691	+	365	14	13	13	13	13	93%	93%	93%	93%	P	P	P	P	U
b3104	yhaI	3250933	3251289	+	356	14	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b3106	yhaK	3252341	3253042	+	701	28	0	0	0	2	0%	0%	0%	7%	A	A	A	P	U
b3107	yhaL	3253065	3253229	+	164	7	7	7	7	7	100%	100%	100%	100%	P	P	P	P	U
b3119	tdcR	3265402	3265620	+	218	8	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b3120	yhaB	3265876	3266415	+	539	22	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b3121	yhaC	3266437	3267624	+	1187	47	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b3128	garD	3273304	3274875	+	1571	63	6	35	43	43	10%	56%	68%	68%	P	P	P	P	U
b3129	sohA	3275024	3275359	+	335	13	13	13	13	13	100%	100%	100%	100%	P	P	P	P	U
b3130	yhaV	3275359	3275823	+	464	19	17	17	19	19	89%	89%	100%	100%	P	P	P	P	U
b3132	kbaZ	3276936	3278216	+	1280	51	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b3133	agaV	3278239	3278712	+	473	19	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b3134	agaW	3278723	3279097	+	374	15	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b3135	agaA	3279093	3279647	+	554	23	0	0	2	2	0%	0%	9%	9%	A	A	P	P	U
b3136	agaS	3279998	3281152	+	1154	46	0	0	2	2	0%	0%	4%	4%	A	A	P	P	U
b3137	kbaY	3281165	3282025	+	860	35	0	0	2	2	0%	0%	6%	6%	A	A	P	P	U
b3138	agaB	3282192	3282668	+	476	19	0	0	1	1	0%	0%	5%	5%	A	A	P	P	U
b3139	agaC	3282707	3283510	+	803	32	0	0	1	1	0%	0%	3%	3%	A	A	P	P	U
b3140	agaD	3283500	3284291	+	791	31	0	0	2	2	0%	0%	6%	6%	A	A	P	P	U
b3141	agaI	3284292	3285047	+	755	31	0	0	1	1	0%	0%	3%	3%	A	A	P	P	U
b3142	yraH	3285448	3286032	+	584	23	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b3143	yraI	3286112	3286807	+	695	28	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b3144	yraJ	3286836	3289352	+	2516	101	0	1	6	6	0%	1%	6%	6%	A	P	P	P	U
b3145	yraK	3289363	3290454	+	1091	44	0	0	3	3	0%	0%	7%	7%	A	A	P	P	U
b3147	yraM	3291422	3293458	+	2036	81	81	81	81	81	100%	100%	100%	100%	P	P	P	P	U
b3148	yraN	3293416	3293811	+	395	16	16	16	16	16	100%	100%	100%	100%	P	P	P	P	U
b3149	diaA	3293831	3294421	+	590	24	24	24	24	24	100%	100%	100%	100%	P	P	P	P	U
b3150	yraP	3294431	3295006	+	575	23	23	23	23	23	100%	100%	100%	100%	P	P	P	P	U
b3153	yhbO	3296996	3297514	+	518	21	13	13	14	17	62%	62%	67%	81%	P	P	P	P	U
b3155	yhbQ	3297988	3298290	+	302	12	7	7	7	7	58%	58%	58%	58%	P	P	P	P	U
b3158	yhbU	3299507	3300502	+	995	40	0	18	18	30	0%	45%	45%	75%	A	P	P	P	U
b3159	yhbV	3300511	3301389	+	878	35	0	12	12	12	0%	34%	34%	34%	A	P	P	P	U
b3160	yhbW	3301470	3302477	+	1007	41	38	38	38	38	93%	93%	93%	93%	P	P	P	P	U
b4449	psrO	3309247	3309420	+	173	6	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b3172	argG	3316659	3318002	+	1343	54	52	52	52	52	96%	96%	96%	96%	P	P	P	P	U
b3180	yhbY	3325812	3326105	+	293	12	12	12	12	12	100%	100%	100%	100%	P	P	P	P	U
b3182	dacB	3326985	3328418	+	1433	57	51	51	51	51	89%	89%	89%	89%	P	P	P	P	U
b3187	ispB	3331732	3332703	+	971	39	39	39	39	39	100%	100%	100%	100%	P	P	P	P	U
b3188	sfsB	3332931	3333209	+	278	11	0	2	2	2	0%	18%	18%	18%	A	P	P	P	U

b3196	yrbG	3338297	3339274	+	977	40	31	32	32	32	78%	80%	80%	80%	P	P	P	P	U
b3197	kdsD	3339288	3340274	+	986	40	40	40	40	40	100%	100%	100%	100%	P	P	P	P	
b3198	kdsC	3340295	3340861	+	566	23	23	23	23	23	100%	100%	100%	100%	P	P	P	P	
b3199	yrbK	3340858	3341433	+	575	23	23	23	23	23	100%	100%	100%	100%	P	P	P	P	U
b3200	lptA	3341402	3341959	+	557	22	22	22	22	22	100%	100%	100%	100%	P	P	P	P	U
b3201	lptB	3341966	3342691	+	725	29	29	29	29	29	100%	100%	100%	100%	P	P	P	P	U
b3202	rpoN	3342739	3344172	+	1433	58	58	58	58	58	100%	100%	100%	100%	P	P	P	P	
b3203	hpf	3344195	3344482	+	287	12	12	12	12	12	100%	100%	100%	100%	P	P	P	P	U
b3204	ptsN	3344600	3345091	+	491	19	19	19	19	19	100%	100%	100%	100%	P	P	P	P	
b3205	yhbJ	3345137	3345991	+	854	34	34	34	34	34	100%	100%	100%	100%	P	P	P	P	U
b3206	npr	3345988	3346260	+	272	11	9	9	9	9	82%	82%	82%	82%	P	P	P	P	
b3207	yrbL	3346474	3347106	+	632	25	25	25	25	25	100%	100%	100%	100%	P	P	P	P	U
b4450	ryhA	3348599	3348706	+	107	5	4	4	5	5	80%	80%	100%	100%	P	P	P	P	U
b3212	gltB	3352654	3357207	+	4553	183	183	183	183	183	100%	100%	100%	100%	P	P	P	P	
b3213	gltD	3357220	3358638	+	1418	57	57	57	57	57	100%	100%	100%	100%	P	P	P	P	
b3214	gltF	3359198	3359962	+	764	31	23	23	23	23	74%	74%	74%	74%	P	P	P	P	
b3215	yhcA	3360134	3360808	+	674	27	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b3216	yhcD	3360829	3363210	+	2381	96	0	0	8	13	0%	0%	8%	14%	A	A	P	P	U
b4569	yhcE	3363207	3363573	+	366	14	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b4569	yhcE	3364773	3364951	+	178	7	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b3219	yhcF	3364948	3365664	+	716	29	11	12	17	21	38%	41%	59%	72%	P	P	P	P	U
b3220	yhcG	3365849	3366976	+	1127	45	1	1	1	1	2%	2%	2%	2%	P	P	P	P	U
b3227	dcuD	3372891	3374258	+	1367	54	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b3233	yhcB	3378213	3378611	+	398	16	15	15	15	15	94%	94%	94%	94%	P	P	P	P	U
b3234	degQ	3378765	3380132	+	1367	54	53	53	53	53	98%	98%	98%	98%	P	P	P	P	
b3235	degS	3380222	3381289	+	1067	43	42	42	42	42	98%	98%	98%	98%	P	P	P	P	
b3237	argR	3382725	3383195	+	470	19	18	18	18	18	95%	95%	95%	95%	P	P	P	P	
b3238	yhcN	3383560	3383823	+	263	10	2	9	9	9	20%	90%	90%	90%	P	P	P	P	U
b3243	aaeR	3387542	3388471	+	929	37	35	35	35	35	95%	95%	95%	95%	P	P	P	P	U
b3253	yhdH	3401506	3402480	+	974	39	39	39	39	39	100%	100%	100%	100%	P	P	P	P	U
b4646	yrdE	3402666	3403053	+	387	16	0	3	3	3	0%	19%	19%	19%	A	P	P	P	U
b3255	accB	3403458	3403928	+	470	19	19	19	19	19	100%	100%	100%	100%	P	P	P	P	
b3256	accC	3403939	3405288	+	1349	54	54	54	54	54	100%	100%	100%	100%	P	P	P	P	
b3257	yhdT	3405397	3405639	+	242	10	7	7	8	8	70%	70%	80%	80%	P	P	P	P	U
b3258	panF	3405629	3407080	+	1451	58	35	37	39	39	60%	64%	67%	67%	P	P	P	P	
b3259	prmA	3407092	3407973	+	881	35	34	34	34	34	97%	97%	97%	97%	P	P	P	P	
b3260	dusB	3408302	3409267	+	965	39	39	39	39	39	100%	100%	100%	100%	P	P	P	P	
b3261	fis	3409293	3409589	+	296	12	12	12	12	12	100%	100%	100%	100%	P	P	P	P	
b3262	yhdJ	3409675	3410559	+	884	36	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b3263	yhdU	3410643	3410822	+	179	7	4	4	4	4	57%	57%	57%	57%	P	P	P	P	U
b3265	acrE	3411886	3413043	+	1157	46	0	0	0	0	0%	0%	0%	0%	A	A	A	A	
b3266	acrF	3413055	3416159	+	3104	125	0	0	5	5	0%	0%	4%	4%	A	A	P	P	
b3267	yhdV	3416412	3416633	+	221	9	0	0	0	5	0%	0%	0%	56%	A	A	A	P	U
b3268	yhdW	3417064	3418088	+	1024	41	6	6	12	40	15%	15%	29%	98%	P	P	P	P	U
b3269	yhdX	3418156	3419337	+	1181	48	0	0	0	8	0%	0%	0%	17%	A	A	A	P	U
b3270	yhdY	3419347	3420450	+	1103	44	0	0	0	17	0%	0%	0%	39%	A	A	A	P	U

b3271	yhdZ	3420458	3421216	+	758	30	2	8	8	27	7%	27%	27%	90%	P	P	P	P	U
b3279	yrdA	3427258	3427812	+	554	22	22	22	22	22	100%	100%	100%	100%	P	P	P	P	U
b3287	def	3431712	3432221	+	509	20	20	20	20	20	100%	100%	100%	100%	P	P	P	P	
b3288	fmt	3432236	3433183	+	947	38	38	38	38	38	100%	100%	100%	100%	P	P	P	P	
b3289	rsmB	3433229	3434518	+	1289	52	51	51	51	52	98%	98%	98%	100%	P	P	P	P	
b3290	trkA	3434540	3435916	+	1376	55	53	53	54	54	96%	96%	98%	98%	P	P	P	P	
b3291	mscL	3436046	3436456	+	410	16	16	16	16	16	100%	100%	100%	100%	P	P	P	P	
b3324	gspC	3453600	3454415	+	815	32	0	0	0	13	0%	0%	0%	41%	A	A	A	P	
b3325	gspD	3454399	3456351	+	1952	78	0	0	2	24	0%	0%	3%	31%	A	A	P	P	
b3326	gspE	3456361	3457842	+	1481	59	0	0	3	10	0%	0%	5%	17%	A	A	P	P	
b3327	gspF	3457839	3459035	+	1196	48	0	0	0	0	0%	0%	0%	0%	A	A	A	A	
b3328	gspG	3459045	3459482	+	437	18	0	0	2	2	0%	0%	11%	11%	A	A	P	P	
b3329	gspH	3459490	3459999	+	509	21	0	0	2	2	0%	0%	10%	10%	A	A	P	P	U
b3330	gspI	3459996	3460373	+	377	16	0	0	1	1	0%	0%	6%	6%	A	A	P	P	
b3331	gspJ	3460366	3460953	+	587	24	0	0	1	3	0%	0%	4%	13%	A	A	P	P	U
b3332	gspK	3460946	3461929	+	983	40	0	0	3	3	0%	0%	8%	8%	A	A	P	P	
b3333	gspL	3461944	3463107	+	1163	47	0	0	2	2	0%	0%	4%	4%	A	A	P	P	
b3334	gspM	3463104	3463565	+	461	18	0	0	0	0	0%	0%	0%	0%	A	A	A	A	
b3335	gspO	3463565	3464242	+	677	27	0	0	2	2	0%	0%	7%	7%	A	A	P	P	
b3348	slyX	3475662	3475880	+	218	9	9	9	9	9	100%	100%	100%	100%	P	P	P	P	U
b3352	yheS	3479311	3481224	+	1913	77	77	77	77	77	100%	100%	100%	100%	P	P	P	P	U
b3353	yheT	3481224	3482246	+	1022	41	40	40	40	40	98%	98%	98%	98%	P	P	P	P	U
b3354	yheU	3482240	3482458	+	218	9	9	9	9	9	100%	100%	100%	100%	P	P	P	P	U
b3355	prkB	3482512	3483381	+	869	35	33	33	33	33	94%	94%	94%	94%	P	P	P	P	U
b3357	crp	3484142	3484774	+	632	26	26	26	26	26	100%	100%	100%	100%	P	P	P	P	
b3358	yhfK	3484813	3486915	+	2102	84	61	61	61	61	73%	73%	73%	73%	P	P	P	P	U
b3364	tsgA	3490590	3491771	+	1181	47	33	33	33	33	70%	70%	70%	70%	P	P	P	P	U
b3365	nirB	3492033	3494576	+	2543	102	0	94	94	100	0%	92%	92%	98%	A	P	P	P	
b3366	nirD	3494573	3494899	+	326	14	0	12	12	12	0%	86%	86%	86%	A	P	P	P	
b3367	nirC	3495025	3495831	+	806	32	1	14	15	15	3%	44%	47%	47%	P	P	P	P	
b3368	cysG	3495850	3497223	+	1373	55	46	46	46	47	84%	84%	84%	85%	P	P	P	P	
b3369	yhfL	3497470	3497637	+	167	7	0	0	2	2	0%	0%	29%	29%	A	A	P	P	U
b3370	frlA	3497932	3499269	+	1337	54	0	0	2	2	0%	0%	4%	4%	A	A	P	P	U
b3371	frlB	3499290	3500312	+	1022	41	0	0	2	2	0%	0%	5%	5%	A	A	P	P	
b4474	frlC	3500362	3501192	+	830	33	0	1	2	2	0%	3%	6%	6%	A	P	P	P	U
b3374	frlD	3501189	3501974	+	785	31	0	1	2	2	0%	3%	6%	6%	A	P	P	P	
b3375	frlR	3502074	3502805	+	731	29	27	27	27	28	93%	93%	93%	97%	P	P	P	P	U
b3396	mrcA	3520893	3523445	+	2552	102	101	101	101	101	99%	99%	99%	99%	P	P	P	P	
b3398	yrff	3524491	3526626	+	2135	85	71	71	71	71	84%	84%	84%	84%	P	P	P	P	U
b3399	yrfG	3526691	3527359	+	668	26	26	26	26	26	100%	100%	100%	100%	P	P	P	P	U
b3400	hslR	3527370	3527771	+	401	16	16	16	16	16	100%	100%	100%	100%	P	P	P	P	
b3401	hslO	3527796	3528674	+	878	35	34	35	35	35	97%	100%	100%	100%	P	P	P	P	
b3403	pck	3530840	3532462	+	1622	64	60	60	61	61	94%	94%	95%	95%	P	P	P	P	
b3406	greB	3534834	3535310	+	476	19	18	19	19	19	95%	100%	100%	100%	P	P	P	P	
b3407	yhgF	3535407	3537728	+	2321	93	93	93	93	93	100%	100%	100%	100%	P	P	P	P	U
b3408	feoA	3538185	3538412	+	227	9	9	9	9	9	100%	100%	100%	100%	P	P	P	P	

b3409	feoB	3538429	3540750	+	2321	93	88	88	88	92	95%	95%	95%	99%	P	P	P	P	
b3410	feoC	3540750	3540986	+	236	9	5	5	5	7	56%	56%	56%	78%	P	P	P	P	U
b3411	yhgA	3541189	3542067	+	878	35	7	8	8	8	20%	23%	23%	23%	P	P	P	P	U
b3413	gntX	3542904	3543587	+	683	27	15	15	15	15	56%	56%	56%	56%	P	P	P	P	
b3414	gntY	3543646	3544221	+	575	23	23	23	23	23	100%	100%	100%	100%	P	P	P	P	U
b3415	gntT	3544581	3545897	+	1316	53	6	37	37	37	11%	70%	70%	70%	P	P	P	P	
b3418	malT	3551107	3553812	+	2705	108	108	108	108	108	100%	100%	100%	100%	P	P	P	P	U
b3422	rtcR	3556290	3557888	+	1598	63	0	1	10	10	0%	2%	16%	16%	A	P	P	P	
b3426	glpD	3560036	3561541	+	1505	61	11	20	60	60	18%	33%	98%	98%	P	P	P	P	
b3434	yhgN	3573094	3573687	+	593	24	6	12	12	12	25%	50%	50%	50%	P	P	P	P	U
b3441	yhhY	3579161	3579649	+	488	20	11	11	11	12	55%	55%	55%	60%	P	P	P	P	U
b3442	yhhZ	3579886	3581064	+	1178	46	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b3443	yrhA	3581061	3581441	+	380	15	0	0	1	1	0%	0%	7%	7%	A	A	P	P	U
b3444	insA	3581506	3581781	+	275	11	10	10	10	10	91%	91%	91%	91%	P	P	P	P	
b3445	insB	3581700	3582203	+	503	20	11	14	14	14	55%	70%	70%	70%	P	P	P	P	
b3443	yrhA	3582219	3582332	+	113	5	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b4612	yrhD	3582427	3582582	+	155	6	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b3446	yrhB	3582782	3583066	+	284	11	0	0	0	10	0%	0%	0%	91%	A	A	A	P	U
b3448	yhhA	3584966	3585406	+	440	18	15	16	18	18	83%	89%	100%	100%	P	P	P	P	U
b3459	yhhK	3596007	3596390	+	383	15	10	10	10	10	67%	67%	67%	67%	P	P	P	P	U
b3465	rsmD	3602416	3603012	+	596	24	24	24	24	24	100%	100%	100%	100%	P	P	P	P	U
b3466	yhhL	3603002	3603271	+	269	10	6	6	6	7	60%	60%	60%	70%	P	P	P	P	U
b3468	yhhN	3603774	3604400	+	626	26	24	24	24	24	92%	92%	92%	92%	P	P	P	P	U
b3469	zntA	3604474	3606672	+	2198	88	11	18	23	23	13%	20%	26%	26%	P	P	P	P	
b3471	yhhQ	3607240	3607905	+	665	27	19	19	19	19	70%	70%	70%	70%	P	P	P	P	U
b3472	dcrB	3607978	3608535	+	557	22	21	21	21	21	95%	95%	95%	95%	P	P	P	P	
b3474	yhhT	3609888	3610937	+	1049	42	15	15	29	31	36%	36%	69%	74%	P	P	P	P	U
b3475	acpT	3610992	3611579	+	587	24	23	23	23	23	96%	96%	96%	96%	P	P	P	P	
b3476	nikA	3611690	3613264	+	1574	63	0	4	6	6	0%	6%	10%	10%	A	P	P	P	
b3477	nikB	3613264	3614208	+	944	38	0	0	1	1	0%	0%	3%	3%	A	A	P	P	
b3478	nikC	3614205	3615038	+	833	33	0	0	1	1	0%	0%	3%	3%	A	A	P	P	
b3479	nikD	3615038	3615802	+	764	31	0	1	1	1	0%	3%	3%	3%	A	P	P	P	
b3480	nikE	3615799	3616605	+	806	33	2	3	3	3	6%	9%	9%	9%	P	P	P	P	
b3481	nikR	3616611	3617012	+	401	16	8	8	8	8	50%	50%	50%	50%	P	P	P	P	
b3482	rhsB	3617215	3621450	+	4235	170	50	54	69	69	29%	32%	41%	41%	P	P	P	P	
b3483	yhhH	3621422	3621805	+	383	16	0	1	1	1	0%	6%	6%	6%	A	P	P	P	U
b4552	yrhC	3621910	3622260	+	350	14	0	7	7	7	0%	50%	50%	50%	A	P	P	P	U
b3484	yhhI	3622401	3623537	+	1136	45	0	0	4	4	0%	0%	9%	9%	A	A	P	P	U
b3491	yhiM	3632822	3633916	+	1094	44	0	0	0	11	0%	0%	0%	25%	A	A	A	P	U
b3493	pitA	3635665	3637164	+	1499	60	60	60	60	60	100%	100%	100%	100%	P	P	P	P	
b3495	uspA	3638134	3638568	+	434	17	17	17	17	17	100%	100%	100%	100%	P	P	P	P	
b3496	yhiP	3638885	3640354	+	1469	59	10	11	48	49	17%	19%	81%	83%	P	P	P	P	U
b3499	yhiR	3643408	3644250	+	842	34	34	34	34	34	100%	100%	100%	100%	P	P	P	P	U
b3500	gor	3644322	3645674	+	1352	55	55	55	55	55	100%	100%	100%	100%	P	P	P	P	
b3501	arsR	3646551	3646904	+	353	14	0	11	11	11	0%	79%	79%	79%	A	P	P	P	
b3502	arsB	3646958	3648247	+	1289	52	1	10	13	13	2%	19%	25%	25%	P	P	P	P	

b3503	arsC	3648260	3648685	+	425	18	10	11	11	11	56%	61%	61%	61%	P	P	P	P	
b3504	yhiS	3649314	3650054	+	740	29	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b3504	yhiS	3651254	3651736	+	482	20	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b3506	slp	3651984	3652550	+	566	23	23	23	23	23	100%	100%	100%	100%	P	P	P	P	
b3507	dctR	3652706	3653236	+	530	22	1	1	1	2	5%	5%	5%	9%	P	P	P	P	U
b3511	hdeD	3655018	3655590	+	572	23	23	23	23	23	100%	100%	100%	100%	P	P	P	P	
b3512	gadE	3656389	3656916	+	527	21	20	20	20	21	95%	95%	95%	100%	P	P	P	P	
b3513	mdtE	3657255	3658412	+	1157	47	41	41	41	43	87%	87%	87%	91%	P	P	P	P	
b3514	mdtF	3658437	3661550	+	3113	124	65	65	66	79	52%	52%	53%	64%	P	P	P	P	
b4452	gadY	3662887	3662991	+	104	4	2	2	2	2	50%	50%	50%	50%	P	P	P	P	
b3519	treF	3667615	3669264	+	1649	66	49	49	64	64	74%	74%	97%	97%	P	P	P	P	
b3521	yhjC	3670437	3671336	+	899	36	22	25	25	25	61%	69%	69%	69%	P	P	P	P	U
b3522	yhjD	3671385	3672398	+	1013	41	38	38	40	40	93%	93%	98%	98%	P	P	P	P	U
b3523	yhjE	3672809	3674131	+	1322	53	53	53	53	53	100%	100%	100%	100%	P	P	P	P	U
b3526	kdgK	3677442	3678371	+	929	37	35	35	35	35	95%	95%	95%	95%	P	P	P	P	
b3536	bcsE	3694481	3696052	+	1571	63	62	62	62	63	98%	98%	98%	100%	P	P	P	P	U
b3537	bcsF	3696049	3696240	+	191	7	7	7	7	7	100%	100%	100%	100%	P	P	P	P	U
b3538	bcsG	3696237	3697916	+	1679	68	64	64	64	65	94%	94%	94%	96%	P	P	P	P	U
b4454	rdlD	3698159	3698222	+	63	3	0	0	0	0	0%	0%	0%	0%	A	A	A	A	
b3539	yhjV	3698586	3699857	+	1271	51	9	9	9	9	18%	18%	18%	18%	P	P	P	P	U
b3549	tag	3711115	3711678	+	563	23	23	23	23	23	100%	100%	100%	100%	P	P	P	P	
b3550	yiaC	3711675	3712115	+	440	17	15	15	16	16	88%	88%	94%	94%	P	P	P	P	U
b3552	yiaD	3714570	3715229	+	659	26	23	23	23	23	88%	88%	88%	88%	P	P	P	P	U
b3553	ghrB	3715333	3716307	+	974	39	38	38	38	38	97%	97%	97%	97%	P	P	P	P	
b3555	yiaG	3717501	3717791	+	290	11	10	11	11	11	91%	100%	100%	100%	P	P	P	P	U
b3556	cspA	3718072	3718284	+	212	8	7	7	7	7	88%	88%	88%	88%	P	P	P	P	
b3557	insJ	3718703	3719224	+	521	21	0	0	0	0	0%	0%	0%	0%	A	A	A	A	
b3558	insK	3719221	3720072	+	851	34	0	3	3	3	0%	9%	9%	9%	A	P	P	P	U
b4614	sokA	3720099	3720128	+	29	1	0	0	0	0	0%	0%	0%	0%	A	A	A	A	
b3561	wecH	3723910	3724905	+	995	40	0	0	10	10	0%	0%	25%	25%	A	A	P	P	U
b3566	xylF	3729154	3730146	+	992	40	0	0	0	0	0%	0%	0%	0%	A	A	A	A	
b3567	xylG	3730224	3731765	+	1541	61	0	0	0	0	0%	0%	0%	0%	A	A	A	A	
b3568	xylH	3731743	3732924	+	1181	48	2	11	13	13	4%	23%	27%	27%	P	P	P	P	
b3569	xylR	3733002	3734180	+	1178	47	21	21	21	21	45%	45%	45%	45%	P	P	P	P	
b3571	malS	3735520	3737550	+	2030	81	6	7	14	14	7%	9%	17%	17%	P	P	P	P	
b3572	avtA	3737728	3738981	+	1253	50	50	50	50	50	100%	100%	100%	100%	P	P	P	P	
b3575	yiaK	3740756	3741754	+	998	40	0	0	4	4	0%	0%	10%	10%	A	A	P	P	
b3576	yiaL	3741766	3742233	+	467	19	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b3577	yiaM	3742351	3742824	+	473	19	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b3578	yiaN	3742827	3744104	+	1277	51	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b3579	yiaO	3744117	3745103	+	986	40	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b3580	lyx	3745107	3746603	+	1496	60	0	0	0	0	0%	0%	0%	0%	A	A	A	A	
b3581	sgbH	3746600	3747262	+	662	27	0	0	0	0	0%	0%	0%	0%	A	A	A	A	
b3582	sgbU	3747255	3748115	+	860	34	0	2	2	2	0%	6%	6%	6%	A	P	P	P	U
b3583	sgbE	3748109	3748804	+	695	28	0	2	2	2	0%	7%	7%	7%	A	P	P	P	
b4649	ysaD	3748941	3749132	+	191	8	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U

b3585	yiaU	3750015	3750989	+	974	39	0	3	9	10	0%	8%	23%	26%	A	P	P	P	U
b3593	rhsA	3760206	3764339	+	4133	165	47	59	74	75	28%	36%	45%	45%	P	P	P	P	U
b3594	yibA	3764360	3765202	+	842	34	6	28	28	28	18%	82%	82%	82%	P	P	P	P	U
b3595	yibJ	3765244	3766188	+	944	38	8	21	21	21	21%	55%	55%	55%	P	P	P	P	U
b3596	yibG	3766200	3766661	+	461	19	0	9	9	9	0%	47%	47%	47%	A	P	P	P	U
b4650	yibS	3766662	3766913	+	251	10	0	3	3	3	0%	30%	30%	30%	A	P	P	P	U
b4651	yibW	3766915	3767279	+	364	15	0	5	5	6	0%	33%	33%	40%	A	P	P	P	U
b4615	yibV	3767368	3767703	+	335	14	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b4652	yibU	3767971	3768169	+	198	8	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b3599	mtlA	3770304	3772217	+	1913	76	73	73	73	73	96%	96%	96%	96%	P	P	P	P	
b3600	mtlD	3772447	3773595	+	1148	46	46	46	46	46	100%	100%	100%	100%	P	P	P	P	
b3601	mtlR	3773595	3774182	+	587	24	16	16	16	16	67%	67%	67%	67%	P	P	P	P	
b3602	yibL	3774688	3775050	+	362	14	14	14	14	14	100%	100%	100%	100%	P	P	P	P	U
b3603	lldP	3775422	3777077	+	1655	67	44	44	45	45	66%	66%	67%	67%	P	P	P	P	
b3604	lldR	3777077	3777853	+	776	32	27	27	27	27	84%	84%	84%	84%	P	P	P	P	
b3605	lldD	3777850	3779040	+	1190	48	48	48	48	48	100%	100%	100%	100%	P	P	P	P	
b3606	yibK	3779238	3779711	+	473	19	15	15	17	17	79%	79%	89%	89%	P	P	P	P	U
b3612	gpmM	3783283	3784827	+	1544	62	62	62	62	62	100%	100%	100%	100%	P	P	P	P	
b3613	envC	3784861	3786120	+	1259	50	49	49	49	49	98%	98%	98%	98%	P	P	P	P	
b3614	yibQ	3786124	3787083	+	959	39	34	34	34	34	87%	87%	87%	87%	P	P	P	P	U
b3619	rfaD	3792010	3792942	+	932	37	37	37	37	37	100%	100%	100%	100%	P	P	P	P	
b3620	rfaF	3792952	3793998	+	1046	42	42	42	42	42	100%	100%	100%	100%	P	P	P	P	
b3621	rfaC	3794002	3794961	+	959	39	39	39	39	39	100%	100%	100%	100%	P	P	P	P	
b3622	rfaL	3794971	3796230	+	1259	51	41	41	41	41	80%	80%	80%	80%	P	P	P	P	
b3633	waaA	3806563	3807840	+	1277	51	50	50	50	50	98%	98%	98%	98%	P	P	P	P	
b3634	coaD	3807848	3808327	+	479	19	17	17	17	17	89%	89%	89%	89%	P	P	P	P	
b3639	dfp	3810754	3811974	+	1220	49	49	49	49	49	100%	100%	100%	100%	P	P	P	P	
b3640	dut	3811955	3812410	+	455	19	19	19	19	19	100%	100%	100%	100%	P	P	P	P	
b3641	slmA	3812517	3813113	+	596	24	23	23	23	23	96%	96%	96%	96%	P	P	P	P	
b3644	yicC	3814699	3815562	+	863	35	35	35	35	35	100%	100%	100%	100%	P	P	P	P	U
b3645	dinD	3815783	3816607	+	824	33	0	0	0	0	0%	0%	0%	0%	A	A	A	A	
b3646	yicG	3816897	3817514	+	617	25	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b3648	gmk	3819451	3820074	+	623	25	25	25	25	25	100%	100%	100%	100%	P	P	P	P	
b3649	rpoZ	3820129	3820404	+	275	11	11	11	11	11	100%	100%	100%	100%	P	P	P	P	
b3650	spoT	3820423	3822531	+	2108	85	85	85	85	85	100%	100%	100%	100%	P	P	P	P	
b3651	trmH	3822538	3823227	+	689	27	27	27	27	27	100%	100%	100%	100%	P	P	P	P	
b3652	recG	3823233	3825314	+	2081	83	75	75	75	75	90%	90%	90%	90%	P	P	P	P	
b3654	yicE	3826968	3828359	+	1391	56	55	55	55	55	98%	98%	98%	98%	P	P	P	P	U
b3655	yicH	3828480	3830189	+	1709	69	66	66	66	66	96%	96%	96%	96%	P	P	P	P	U
b3658	selC	3834245	3834339	+	94	4	4	4	4	4	100%	100%	100%	100%	P	P	P	P	
b4653	yicT	3834448	3834579	+	131	5	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b3659	setC	3834976	3836160	+	1184	48	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b3660	yicL	3836271	3837194	+	923	37	27	27	27	29	73%	73%	73%	78%	P	P	P	P	U
b4555	yicS	3838238	3838531	+	293	12	0	5	5	5	0%	42%	42%	42%	A	P	P	P	U
b3665	ade	3841987	3843753	+	1766	70	16	16	25	25	23%	23%	36%	36%	P	P	P	P	
b4617	tisA	3851466	3851579	+	113	4	4	4	4	4	100%	100%	100%	100%	P	P	P	P	U



b4618	tisB	3851576	3851665	+	89	4	4	4	4	4	100%	100%	100%	100%	P	P	P	P	
b3673	emrD	3851945	3853129	+	1184	47	0	3	5	5	0%	6%	11%	11%	A	P	P	P	
b3677	yidI	3854438	3854887	+	449	18	6	6	6	6	33%	33%	33%	33%	P	P	P	P	U
b3680	yidL	3858276	3859199	+	923	37	0	1	1	1	0%	3%	3%	3%	A	P	P	P	U
b3684	yidP	3861922	3862638	+	716	29	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b3688	yidQ	3865751	3866083	+	332	14	14	14	14	14	100%	100%	100%	100%	P	P	P	P	U
b3690	cbrA	3867400	3868464	+	1064	43	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b3696	yidX	3873461	3874117	+	656	26	6	6	17	17	23%	23%	65%	65%	P	P	P	P	U
b3703	rpmH	3882359	3882499	+	140	6	6	6	6	6	100%	100%	100%	100%	P	P	P	P	
b3704	rnpA	3882516	3882875	+	359	15	15	15	15	15	100%	100%	100%	100%	P	P	P	P	
b4557	yidD	3882839	3883096	+	257	11	11	11	11	11	100%	100%	100%	100%	P	P	P	P	U
b3705	yidC	3883099	3884745	+	1646	65	63	63	63	63	97%	97%	97%	97%	P	P	P	P	
b3706	mnmE	3884851	3886215	+	1364	54	53	53	53	53	98%	98%	98%	98%	P	P	P	P	
b3707	tnaC	3886458	3886532	+	74	3	2	2	2	2	67%	67%	67%	67%	P	P	P	P	
b3708	tnaA	3886753	3888168	+	1415	56	0	2	5	5	0%	4%	9%	9%	A	P	P	P	
b3709	tnaB	3888259	3889506	+	1247	50	0	0	0	0	0%	0%	0%	0%	A	A	A	A	
b3710	mdtL	3889638	3890813	+	1175	47	3	3	3	3	6%	6%	6%	6%	P	P	P	P	
b3711	yidZ	3890788	3891747	+	959	39	21	21	21	21	54%	54%	54%	54%	P	P	P	P	U
b3712	yieE	3891892	3892653	+	761	31	24	24	24	29	77%	77%	77%	94%	P	P	P	P	U
b3713	yieF	3892675	3893241	+	566	22	21	21	21	22	95%	95%	95%	100%	P	P	P	P	
b3715	yieH	3894797	3895462	+	665	27	25	25	25	25	93%	93%	93%	93%	P	P	P	P	U
b3716	cbrB	3895529	3895996	+	467	18	1	2	3	3	6%	11%	17%	17%	P	P	P	P	U
b3717	cbrC	3896045	3896632	+	587	24	7	12	13	14	29%	50%	54%	58%	P	P	P	P	U
b3744	asnA	3925178	3926170	+	992	40	35	35	35	35	88%	88%	88%	88%	P	P	P	P	
b3747	kup	3929339	3931207	+	1868	75	61	61	61	61	81%	81%	81%	81%	P	P	P	P	
b3748	rbsD	3931374	3931793	+	419	17	16	16	16	16	94%	94%	94%	94%	P	P	P	P	U
b3749	rbsA	3931801	3933306	+	1505	60	54	54	54	54	90%	90%	90%	90%	P	P	P	P	
b3750	rbsC	3933311	3934276	+	965	38	31	31	31	31	82%	82%	82%	82%	P	P	P	P	
b3751	rbsB	3934301	3935191	+	890	36	36	36	36	36	100%	100%	100%	100%	P	P	P	P	
b3752	rbsK	3935317	3936246	+	929	37	37	37	37	37	100%	100%	100%	100%	P	P	P	P	
b3753	rbsR	3936250	3937242	+	992	40	13	13	14	14	33%	33%	35%	35%	P	P	P	P	
b3756	rrsC	3939831	3941372	+	1541	62	62	62	62	62	100%	100%	100%	100%	P	P	P	P	
b3757	gltU	3941458	3941533	+	75	3	3	3	3	3	100%	100%	100%	100%	P	P	P	P	
b3758	rrlC	3941727	3944630	+	2903	116	116	116	116	116	100%	100%	100%	100%	P	P	P	P	
b3759	rrfC	3944723	3944842	+	119	5	5	5	5	5	100%	100%	100%	100%	P	P	P	P	
b3760	aspT	3944895	3944971	+	76	3	3	3	3	3	100%	100%	100%	100%	P	P	P	P	
b3761	trpT	3944980	3945055	+	75	3	3	3	3	3	100%	100%	100%	100%	P	P	P	P	
b3764	yifE	3946109	3946447	+	338	14	14	14	14	14	100%	100%	100%	100%	P	P	P	P	U
b3766	ilvL	3948345	3948443	+	98	4	4	4	4	4	100%	100%	100%	100%	P	P	P	P	
b4488	ilvG	3948583	3950227	+	1644	65	65	65	65	65	100%	100%	100%	100%	P	P	P	P	U
b3769	ilvM	3950224	3950487	+	263	11	11	11	11	11	100%	100%	100%	100%	P	P	P	P	
b3770	ilvE	3950507	3951436	+	929	38	38	38	38	38	100%	100%	100%	100%	P	P	P	P	
b3771	ilvD	3951501	3953351	+	1850	74	74	74	74	74	100%	100%	100%	100%	P	P	P	P	
b3772	ilvA	3953354	3954898	+	1544	62	61	61	61	61	98%	98%	98%	98%	P	P	P	P	
b3774	ilvC	3955993	3957468	+	1475	59	59	59	59	59	100%	100%	100%	100%	P	P	P	P	
b3778	rep	3958700	3960721	+	2021	81	78	78	78	78	96%	96%	96%	96%	P	P	P	P	

b3781	trxA	3963784	3964113	+	329	14	14	14	14	14	100%	100%	100%	100%	P	P	P	P
b3783	rho	3964440	3965699	+	1259	50	48	48	48	48	96%	96%	96%	96%	P	P	P	P
b3784	rfe	3965939	3967042	+	1103	44	44	44	44	44	100%	100%	100%	100%	P	P	P	P
b3785	wzzE	3967054	3968100	+	1046	42	42	42	42	42	100%	100%	100%	100%	P	P	P	P
b3786	rffE	3968156	3969286	+	1130	45	44	44	44	44	98%	98%	98%	98%	P	P	P	P
b3787	rffD	3969283	3970545	+	1262	51	51	51	51	51	100%	100%	100%	100%	P	P	P	P
b3788	rffG	3970545	3971612	+	1067	43	43	43	43	43	100%	100%	100%	100%	P	P	P	P
b3789	rffH	3971631	3972512	+	881	36	36	36	36	36	100%	100%	100%	100%	P	P	P	P
b3790	rffC	3972490	3973164	+	674	27	27	27	27	27	100%	100%	100%	100%	P	P	P	P
b3791	rffA	3973169	3974299	+	1130	45	43	43	43	43	96%	96%	96%	96%	P	P	P	P
b3792	wzzE	3974301	3975551	+	1250	50	44	44	44	44	88%	88%	88%	88%	P	P	P	P
b4481	rffT	3975548	3976627	+	1079	43	33	33	33	34	77%	77%	77%	79%	P	P	P	P
b3793	wzyE	3976624	3977976	+	1352	54	29	29	29	29	54%	54%	54%	54%	P	P	P	P
b3794	rffM	3977979	3978719	+	740	30	23	23	23	23	77%	77%	77%	77%	P	P	P	P
b3795	yifK	3978910	3980295	+	1385	56	56	56	56	56	100%	100%	100%	100%	P	P	P	P
b3796	argX	3980398	3980474	+	76	3	3	3	3	3	100%	100%	100%	100%	P	P	P	P
b3797	hisR	3980532	3980608	+	76	3	3	3	3	3	100%	100%	100%	100%	P	P	P	P
b3798	leuT	3980629	3980715	+	86	4	4	4	4	4	100%	100%	100%	100%	P	P	P	P
b3799	proM	3980758	3980834	+	76	3	3	3	3	3	100%	100%	100%	100%	P	P	P	P
b3800	aslB	3980981	3982216	+	1235	50	0	0	2	2	0%	0%	4%	4%	A	A	P	P
b4456	glmZ	3984455	3984626	+	171	7	7	7	7	7	100%	100%	100%	100%	P	P	P	P
b3806	cyaA	3989176	3991722	+	2546	102	102	102	102	102	100%	100%	100%	100%	P	P	P	P
b4558	yifL	3992545	3992748	+	203	8	8	8	8	8	100%	100%	100%	100%	P	P	P	P
b3809	dapF	3992785	3993609	+	824	33	33	33	33	33	100%	100%	100%	100%	P	P	P	P
b3810	yigA	3993606	3994313	+	707	28	28	28	28	28	100%	100%	100%	100%	P	P	P	P
b3811	xerC	3994310	3995206	+	896	36	35	35	35	35	97%	97%	97%	97%	P	P	P	P
b3812	yigB	3995206	3995922	+	716	29	28	28	28	28	97%	97%	97%	97%	P	P	P	P
b3813	uvrD	3996006	3998168	+	2162	87	82	82	82	82	94%	94%	94%	94%	P	P	P	P
b3816	corA	3999449	4000399	+	950	38	37	37	37	37	97%	97%	97%	97%	P	P	P	P
b3821	pldA	4002885	4003754	+	869	35	33	33	33	33	94%	94%	94%	94%	P	P	P	P
b3822	recQ	4003887	4005716	+	1829	74	69	69	69	69	93%	93%	93%	93%	P	P	P	P
b3823	rhtC	4005780	4006400	+	620	25	22	22	22	23	88%	88%	88%	92%	P	P	P	P
b3825	pldB	4007193	4008215	+	1022	41	40	40	40	40	98%	98%	98%	98%	P	P	P	P
b3826	yigL	4008223	4009023	+	800	32	28	28	28	28	88%	88%	88%	88%	P	P	P	P
b3827	yigM	4009099	4009998	+	899	36	13	13	13	13	36%	36%	36%	36%	P	P	P	P
b3829	metE	4011076	4013337	+	2261	90	90	90	90	90	100%	100%	100%	100%	P	P	P	P
b3831	udp	4014454	4015215	+	761	31	30	31	31	31	97%	100%	100%	100%	P	P	P	P
b3832	rmuC	4015356	4016783	+	1427	57	27	29	29	29	47%	51%	51%	51%	P	P	P	P
b3833	ubiE	4016878	4017633	+	755	30	30	30	30	30	100%	100%	100%	100%	P	P	P	P
b3834	yigP	4017647	4018252	+	605	24	24	24	24	24	100%	100%	100%	100%	P	P	P	P
b3835	ubiB	4018249	4019889	+	1640	65	62	62	62	62	95%	95%	95%	95%	P	P	P	P
b3836	tatA	4019968	4020237	+	269	10	10	10	10	10	100%	100%	100%	100%	P	P	P	P
b3838	tatB	4020241	4020756	+	515	20	20	20	20	20	100%	100%	100%	100%	P	P	P	P
b3839	tatC	4020759	4021535	+	776	31	31	31	31	31	100%	100%	100%	100%	P	P	P	P
b4483	tatD	4021577	4022359	+	782	31	27	27	27	27	87%	87%	87%	87%	P	P	P	P
b3843	ubiD	4023011	4024504	+	1493	60	60	60	60	60	100%	100%	100%	100%	P	P	P	P

b3844	fre	4024550	4025251	+	701	28	28	28	28	28	100%	100%	100%	100%	P	P	P	P	
b3847	pepQ	4029184	4030515	+	1331	53	53	53	53	53	100%	100%	100%	100%	P	P	P	P	
b3848	yigZ	4030515	4031129	+	614	25	25	25	25	25	100%	100%	100%	100%	P	P	P	P	U
b3849	trkH	4031168	4032619	+	1451	58	54	54	55	55	93%	93%	95%	95%	P	P	P	P	
b3850	hemG	4032631	4033176	+	545	22	22	22	22	22	100%	100%	100%	100%	P	P	P	P	
b3851	rrsA	4033554	4035095	+	1541	62	62	62	62	62	100%	100%	100%	100%	P	P	P	P	
b3852	ileT	4035164	4035240	+	76	3	3	3	3	3	100%	100%	100%	100%	P	P	P	P	
b3853	alaT	4035283	4035358	+	75	3	3	3	3	3	100%	100%	100%	100%	P	P	P	P	
b3854	rrlA	4035542	4038446	+	2904	117	117	117	117	117	100%	100%	100%	100%	P	P	P	P	
b3855	rrfA	4038540	4038659	+	119	5	5	5	5	5	100%	100%	100%	100%	P	P	P	P	
b3858	yihD	4040092	4040361	+	269	11	11	11	11	11	100%	100%	100%	100%	P	P	P	P	U
b3859	rdoA	4040438	4041424	+	986	39	39	39	39	39	100%	100%	100%	100%	P	P	P	P	
b3860	dsbA	4041441	4042067	+	626	25	25	25	25	25	100%	100%	100%	100%	P	P	P	P	
b3861	yihF	4042222	4043652	+	1430	57	0	0	1	1	0%	0%	2%	2%	A	A	P	P	U
b3863	polA	4044989	4047775	+	2786	111	111	111	111	111	100%	100%	100%	100%	P	P	P	P	
b3864	spf	4047922	4048030	+	108	4	4	4	4	4	100%	100%	100%	100%	P	P	P	P	
b4457	csrC	4049059	4049303	+	244	9	8	8	8	8	89%	89%	89%	89%	P	P	P	P	
b3866	yihI	4049370	4049879	+	509	20	20	20	20	20	100%	100%	100%	100%	P	P	P	P	U
b3867	hemN	4050068	4051441	+	1373	55	52	52	52	52	95%	95%	95%	95%	P	P	P	P	
b3871	typA	4056430	4058253	+	1823	73	73	73	73	73	100%	100%	100%	100%	P	P	P	P	
b3872	yihL	4058470	4059180	+	710	28	0	0	0	1	0%	0%	0%	4%	A	A	A	P	U
b3873	yihM	4059188	4060168	+	980	39	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b3874	yihN	4060270	4061535	+	1265	51	0	0	4	4	0%	0%	8%	8%	A	A	P	P	U
b3883	yihV	4071762	4072658	+	896	36	0	14	24	24	0%	39%	67%	67%	A	P	P	P	U
b3884	yihW	4072692	4073477	+	785	31	31	31	31	31	100%	100%	100%	100%	P	P	P	P	U
b3885	yihX	4073576	4074175	+	599	24	24	24	24	24	100%	100%	100%	100%	P	P	P	P	U
b3886	yihY	4074169	4075041	+	872	35	31	31	32	32	89%	89%	91%	91%	P	P	P	P	U
b3887	dtd	4075038	4075475	+	437	17	17	17	17	17	100%	100%	100%	100%	P	P	P	P	
b3888	yiiD	4075472	4076461	+	989	40	40	40	40	40	100%	100%	100%	100%	P	P	P	P	U
b3889	yiiE	4077320	4077532	+	212	8	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b3890	yiiF	4077774	4077992	+	218	9	0	1	1	1	0%	11%	11%	11%	A	P	P	P	U
b3895	fdhD	4084039	4084872	+	833	33	26	26	27	27	79%	79%	82%	82%	P	P	P	P	
b3896	yiiG	4085025	4086080	+	1055	42	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b3905	rhaS	4095759	4096595	+	836	34	0	0	4	4	0%	0%	12%	12%	A	A	P	P	
b3906	rhaR	4096669	4097517	+	848	34	0	0	0	0	0%	0%	0%	0%	A	A	A	A	
b3908	sodA	4098833	4099453	+	620	25	25	25	25	25	100%	100%	100%	100%	P	P	P	P	
b3909	kdgT	4099713	4100696	+	983	40	3	13	14	14	8%	33%	35%	35%	P	P	P	P	
b3910	yiiM	4100845	4101519	+	674	27	26	26	27	27	96%	96%	100%	100%	P	P	P	P	U
b4484	cpxP	4103843	4104343	+	500	20	20	20	20	20	100%	100%	100%	100%	P	P	P	P	
b3915	fieF	4104492	4105394	+	902	36	36	36	36	36	100%	100%	100%	100%	P	P	P	P	
b3916	pfkA	4105575	4106537	+	962	38	38	38	38	38	100%	100%	100%	100%	P	P	P	P	
b3917	sbp	4106857	4107846	+	989	40	38	38	38	38	95%	95%	95%	95%	P	P	P	P	
b3918	cdh	4107953	4108708	+	755	30	24	24	24	24	80%	80%	80%	80%	P	P	P	P	
b3921	yiiR	4110338	4110778	+	440	18	13	13	16	17	72%	72%	89%	94%	P	P	P	P	U
b3922	yiiS	4110990	4111289	+	299	12	12	12	12	12	100%	100%	100%	100%	P	P	P	P	U
b3923	uspD	4111316	4111744	+	428	17	17	17	17	17	100%	100%	100%	100%	P	P	P	P	

b3928	yiiU	4116538	4116783	+	245	10	10	10	10	10	100%	100%	100%	100%	P	P	P	P	U
b3936	rpmE	4125036	4125248	+	212	9	9	9	9	9	100%	100%	100%	100%	P	P	P	P	
b3939	metB	4126695	4127855	+	1160	47	47	47	47	47	100%	100%	100%	100%	P	P	P	P	
b3940	metL	4127858	4130290	+	2432	97	93	94	94	94	96%	97%	97%	97%	P	P	P	P	
b3941	metF	4130639	4131529	+	890	36	36	36	36	36	100%	100%	100%	100%	P	P	P	P	
b3942	katG	4131858	4134038	+	2180	87	87	87	87	87	100%	100%	100%	100%	P	P	P	P	
b3943	yijE	4134131	4135036	+	905	36	4	5	5	5	11%	14%	14%	14%	P	P	P	P	U
b3949	frwC	4140553	4141632	+	1079	43	0	0	1	1	0%	0%	2%	2%	A	A	P	P	U
b3950	frwB	4141647	4141967	+	320	13	0	3	3	3	0%	23%	23%	23%	A	P	P	P	U
b3951	pflD	4142018	4144315	+	2297	92	0	0	6	6	0%	0%	7%	7%	A	A	P	P	U
b3952	pflC	4144281	4145159	+	878	35	0	0	2	2	0%	0%	6%	6%	A	A	P	P	
b3953	frwD	4145161	4145502	+	341	14	0	0	2	2	0%	0%	14%	14%	A	A	P	P	U
b3958	argC	4153024	4154028	+	1004	40	40	40	40	40	100%	100%	100%	100%	P	P	P	P	
b3959	argB	4154036	4154812	+	776	31	31	31	31	31	100%	100%	100%	100%	P	P	P	P	
b3960	argH	4154873	4156246	+	1373	55	55	55	55	55	100%	100%	100%	100%	P	P	P	P	
b3961	oxyR	4156513	4157430	+	917	36	33	33	33	33	92%	92%	92%	92%	P	P	P	P	
b3963	fabR	4159147	4159794	+	647	26	26	26	26	26	100%	100%	100%	100%	P	P	P	P	
b3964	yijD	4159794	4160153	+	359	14	14	14	14	14	100%	100%	100%	100%	P	P	P	P	U
b3966	btuB	4161662	4163506	+	1844	73	71	71	71	71	97%	97%	97%	97%	P	P	P	P	
b3967	murI	4163451	4164308	+	857	34	33	33	33	33	97%	97%	97%	97%	P	P	P	P	
b3968	rrsB	4164682	4166223	+	1541	62	62	62	62	62	100%	100%	100%	100%	P	P	P	P	
b3969	gltT	4166395	4166470	+	75	3	3	3	3	3	100%	100%	100%	100%	P	P	P	P	
b3970	rrlB	4166664	4169567	+	2903	116	116	116	116	116	100%	100%	100%	100%	P	P	P	P	
b3971	rrfB	4169660	4169779	+	119	5	5	5	5	5	100%	100%	100%	100%	P	P	P	P	
b3972	murB	4170080	4171108	+	1028	41	41	41	41	41	100%	100%	100%	100%	P	P	P	P	
b3973	birA	4171105	4172070	+	965	39	31	31	32	32	79%	79%	82%	82%	P	P	P	P	
b3976	thrU	4173411	4173486	+	75	3	3	3	3	3	100%	100%	100%	100%	P	P	P	P	
b3977	tyrU	4173495	4173579	+	84	3	3	3	3	3	100%	100%	100%	100%	P	P	P	P	
b3978	glyT	4173696	4173770	+	74	3	3	3	3	3	100%	100%	100%	100%	P	P	P	P	
b3979	thrT	4173777	4173852	+	75	3	3	3	3	3	100%	100%	100%	100%	P	P	P	P	
b3980	tufB	4173967	4175151	+	1184	47	47	47	47	47	100%	100%	100%	100%	P	P	P	P	
b3981	secE	4175381	4175764	+	383	16	16	16	16	16	100%	100%	100%	100%	P	P	P	P	
b3982	nusG	4175766	4176311	+	545	22	22	22	22	22	100%	100%	100%	100%	P	P	P	P	
b3983	rplK	4176470	4176898	+	428	17	17	17	17	17	100%	100%	100%	100%	P	P	P	P	
b3984	rplA	4176902	4177606	+	704	28	28	28	28	28	100%	100%	100%	100%	P	P	P	P	
b3985	rplJ	4178019	4178516	+	497	20	20	20	20	20	100%	100%	100%	100%	P	P	P	P	
b3986	rplL	4178583	4178948	+	365	15	15	15	15	15	100%	100%	100%	100%	P	P	P	P	
b3987	rpoB	4179268	4183296	+	4028	161	161	161	161	161	100%	100%	100%	100%	P	P	P	P	
b3988	rpoC	4183373	4187596	+	4223	169	168	168	168	168	99%	99%	99%	99%	P	P	P	P	
b3989	yjaZ	4187809	4188348	+	539	21	0	0	0	0	0%	0%	0%	0%	A	A	A	A	
b3996	nudC	4194926	4195699	+	773	31	31	31	31	31	100%	100%	100%	100%	P	P	P	P	
b3997	hemE	4195739	4196803	+	1064	43	43	43	43	43	100%	100%	100%	100%	P	P	P	P	
b3998	nfi	4196813	4197484	+	671	27	26	26	26	26	96%	96%	96%	96%	P	P	P	P	
b3999	yjaG	4197527	4198117	+	590	23	23	23	23	23	100%	100%	100%	100%	P	P	P	P	U
b4000	hupA	4198304	4198576	+	272	11	11	11	11	11	100%	100%	100%	100%	P	P	P	P	
b4001	yjaH	4198589	4199284	+	695	28	18	18	18	18	64%	64%	64%	64%	P	P	P	P	U

b4003	zraS	4199949	4201346	+	1397	56	7	13	13	13	13%	23%	23%	23%	P	P	P	P	
b4004	zraR	4201343	4202668	+	1325	53	33	33	33	33	62%	62%	62%	62%	P	P	P	P	
b4007	rrsE	4206170	4207711	+	1541	62	62	62	62	62	100%	100%	100%	100%	P	P	P	P	
b4008	gltV	4207797	4207872	+	75	3	3	3	3	3	100%	100%	100%	100%	P	P	P	P	
b4009	rrlE	4208066	4210969	+	2903	116	116	116	116	116	100%	100%	100%	100%	P	P	P	P	
b4010	rrfE	4211063	4211182	+	119	5	5	5	5	5	100%	100%	100%	100%	P	P	P	P	
b4011	yjaA	4211257	4211640	+	383	15	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b4013	metA	4212303	4213232	+	929	37	37	37	37	37	100%	100%	100%	100%	P	P	P	P	
b4014	aceB	4213501	4215102	+	1601	65	65	65	65	65	100%	100%	100%	100%	P	P	P	P	
b4015	aceA	4215132	4216436	+	1304	52	52	52	52	52	100%	100%	100%	100%	P	P	P	P	
b4016	aceK	4216619	4218355	+	1736	70	68	68	68	68	97%	97%	97%	97%	P	P	P	P	
b4019	metH	4221851	4225534	+	3683	148	147	147	147	147	99%	99%	99%	99%	P	P	P	P	
b4020	yjbB	4225754	4227385	+	1631	66	42	42	43	43	64%	64%	65%	65%	P	P	P	P	U
b4022	rluF	4228377	4229249	+	872	35	32	32	32	32	91%	91%	91%	91%	P	P	P	P	
b4025	pgi	4231781	4233430	+	1649	66	66	66	66	66	100%	100%	100%	100%	P	P	P	P	
b4026	yjbE	4233929	4234171	+	242	10	3	3	3	3	30%	30%	30%	30%	P	P	P	P	U
b4027	yjbF	4234285	4234923	+	638	25	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b4028	yjbG	4234920	4235657	+	737	29	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b4029	yjbH	4235657	4237753	+	2096	84	10	11	13	13	12%	13%	15%	15%	P	P	P	P	U
b4030	psiE	4238348	4238758	+	410	17	7	11	11	17	41%	65%	65%	100%	P	P	P	P	U
b4035	malK	4244807	4245922	+	1115	45	20	20	20	20	44%	44%	44%	44%	P	P	P	P	
b4036	lamB	4245994	4247334	+	1340	54	45	45	45	45	83%	83%	83%	83%	P	P	P	P	
b4037	malM	4247577	4248497	+	920	37	21	25	30	30	57%	68%	81%	81%	P	P	P	P	
b4038	yjbI	4248726	4250306	+	1580	63	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b4039	ubiC	4250529	4251026	+	497	20	20	20	20	20	100%	100%	100%	100%	P	P	P	P	
b4040	ubiA	4251039	4251911	+	872	35	33	33	33	33	94%	94%	94%	94%	P	P	P	P	
b4042	dgkA	4254660	4255028	+	368	15	15	15	15	15	100%	100%	100%	100%	P	P	P	P	
b4043	lexA	4255138	4255746	+	608	25	22	22	22	22	88%	88%	88%	88%	P	P	P	P	
b4044	dinF	4255765	4257144	+	1379	56	14	15	16	16	25%	27%	29%	29%	P	P	P	P	
b4045	yjbJ	4257260	4257469	+	209	9	5	8	8	8	56%	89%	89%	89%	P	P	P	P	U
b4047	yjbL	4258344	4258598	+	254	10	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b4048	yjbM	4258622	4259329	+	707	28	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b4049	dusA	4259737	4260729	+	992	40	39	39	39	39	98%	98%	98%	98%	P	P	P	P	
b4050	pspG	4260863	4261105	+	242	10	0	4	5	5	0%	40%	50%	50%	A	P	P	P	
b4052	dnaB	4262337	4263752	+	1415	57	57	57	57	57	100%	100%	100%	100%	P	P	P	P	
b4053	alr	4263805	4264884	+	1079	43	36	36	36	36	84%	84%	84%	84%	P	P	P	P	
b4054	tyrB	4265137	4266330	+	1193	48	48	48	48	48	100%	100%	100%	100%	P	P	P	P	
b4055	aphA	4267437	4268150	+	713	29	5	5	7	7	17%	17%	24%	24%	P	P	P	P	
b4056	yjbQ	4268261	4268677	+	416	17	17	17	17	17	100%	100%	100%	100%	P	P	P	P	U
b4057	yjbR	4268681	4269037	+	356	14	12	12	12	12	86%	86%	86%	86%	P	P	P	P	U
b4059	ssb	4272148	4272684	+	536	21	19	19	19	19	90%	90%	90%	90%	P	P	P	P	
b4061	yjcC	4273494	4275080	+	1586	63	0	0	53	53	0%	0%	84%	84%	A	A	P	P	U
b4063	soxR	4275492	4275956	+	464	19	0	17	17	17	0%	89%	89%	89%	A	P	P	P	
b4064	yjcD	4276502	4277851	+	1349	54	53	53	53	53	98%	98%	98%	98%	P	P	P	P	U
b4065	yjcE	4278003	4279652	+	1649	66	57	57	57	57	86%	86%	86%	86%	P	P	P	P	U
b4070	nrfA	4285787	4287223	+	1436	58	0	0	3	7	0%	0%	5%	12%	A	A	P	P	

b4071	nrfB	4287268	4287834	+	566	23	0	0	0	0	0%	0%	0%	0%	A	A	A	A	
b4072	nrfC	4287831	4288502	+	671	27	0	0	0	0	0%	0%	0%	0%	A	A	A	A	
b4073	nrfD	4288499	4289455	+	956	38	0	0	0	0	0%	0%	0%	0%	A	A	A	A	
b4074	nrfE	4289535	4291193	+	1658	67	0	0	0	0	0%	0%	0%	0%	A	A	A	A	
b4075	nrfF	4291186	4291569	+	383	16	0	0	0	0	0%	0%	0%	0%	A	A	A	A	
b4076	nrfG	4291566	4292162	+	596	24	0	0	0	0	0%	0%	0%	0%	A	A	A	A	
b4077	gltP	4292504	4293817	+	1313	52	52	52	52	52	100%	100%	100%	100%	P	P	P	P	
b4090	rpiB	4311373	4311822	+	449	18	12	14	14	15	67%	78%	78%	83%	P	P	P	P	
b4487	yjdP	4311891	4312220	+	329	14	12	13	13	13	86%	93%	93%	93%	P	P	P	P	U
b4109	yjdA	4325158	4327386	+	2228	89	15	20	20	20	17%	22%	22%	22%	P	P	P	P	U
b4110	yjcZ	4327383	4328261	+	878	35	0	2	2	2	0%	6%	6%	6%	A	P	P	P	U
b4111	proP	4328525	4330027	+	1502	60	60	60	60	60	100%	100%	100%	100%	P	P	P	P	
b4119	melA	4339934	4341289	+	1355	54	0	9	38	38	0%	17%	70%	70%	A	P	P	P	
b4120	melB	4341404	4342813	+	1409	56	0	4	20	20	0%	7%	36%	36%	A	P	P	P	
b4126	yjdI	4349866	4350096	+	230	9	9	9	9	9	100%	100%	100%	100%	P	P	P	P	U
b4127	yjdJ	4350108	4350380	+	272	11	11	11	11	11	100%	100%	100%	100%	P	P	P	P	U
b4128	yjdK	4350607	4350903	+	296	12	0	2	2	2	0%	17%	17%	17%	A	P	P	P	U
b4559	yjdO	4350931	4351104	+	173	7	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b4140	fxsA	4366687	4367163	+	476	19	18	19	19	19	95%	100%	100%	100%	P	P	P	P	
b4142	groS	4368711	4369004	+	293	12	12	12	12	12	100%	100%	100%	100%	P	P	P	P	
b4143	groL	4369048	4370694	+	1646	66	66	66	66	66	100%	100%	100%	100%	P	P	P	P	
b4144	yjeI	4370832	4371185	+	353	14	14	14	14	14	100%	100%	100%	100%	P	P	P	P	U
b4147	efp	4373722	4374288	+	566	23	23	23	23	23	100%	100%	100%	100%	P	P	P	P	
b4410	ecnA	4374340	4374465	+	125	5	5	5	5	5	100%	100%	100%	100%	P	P	P	P	
b4411	ecnB	4374576	4374722	+	146	5	5	5	5	5	100%	100%	100%	100%	P	P	P	P	
b4148	sugE	4374898	4375215	+	317	13	11	12	12	12	85%	92%	92%	92%	P	P	P	P	
b4155	poxA	4380666	4381643	+	977	39	28	30	33	33	72%	77%	85%	85%	P	P	P	P	U
b4156	yjeM	4381862	4383364	+	1502	60	3	5	5	5	5%	8%	8%	8%	P	P	P	P	U
b4157	yjeN	4383416	4383730	+	314	13	0	1	2	2	0%	8%	15%	15%	A	P	P	P	U
b4158	yjeO	4383727	4384041	+	314	12	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b4162	orn	4389627	4390172	+	545	21	21	21	21	21	100%	100%	100%	100%	P	P	P	P	
b4163	glyV	4390383	4390458	+	75	3	3	3	3	3	100%	100%	100%	100%	P	P	P	P	
b4164	glyX	4390495	4390570	+	75	3	3	3	3	3	100%	100%	100%	100%	P	P	P	P	
b4165	glyY	4390606	4390681	+	75	3	3	3	3	3	100%	100%	100%	100%	P	P	P	P	
b4167	yjeF	4392089	4393636	+	1547	62	62	62	62	62	100%	100%	100%	100%	P	P	P	P	U
b4168	yjeE	4393608	4394069	+	461	18	18	18	18	18	100%	100%	100%	100%	P	P	P	P	
b4169	amiB	4394088	4395425	+	1337	53	53	53	53	53	100%	100%	100%	100%	P	P	P	P	
b4170	mutL	4395435	4397282	+	1847	74	70	70	70	71	95%	95%	95%	96%	P	P	P	P	
b4171	miaA	4397275	4398225	+	950	38	38	38	38	38	100%	100%	100%	100%	P	P	P	P	
b4172	hfq	4398311	4398619	+	308	12	12	12	12	12	100%	100%	100%	100%	P	P	P	P	
b4173	hflX	4398695	4399975	+	1280	51	51	51	51	51	100%	100%	100%	100%	P	P	P	P	U
b4174	hflK	4400061	4401320	+	1259	50	50	50	50	50	100%	100%	100%	100%	P	P	P	P	
b4175	hflC	4401323	4402327	+	1004	40	40	40	40	40	100%	100%	100%	100%	P	P	P	P	
b4176	yjeT	4402409	4402606	+	197	7	3	3	3	3	43%	43%	43%	43%	P	P	P	P	U
b4177	purA	4402710	4404008	+	1298	52	52	52	52	52	100%	100%	100%	100%	P	P	P	P	
b4178	nsrR	4404213	4404638	+	425	17	17	17	17	17	100%	100%	100%	100%	P	P	P	P	U

b4179	rnr	4404677	4407118	+	2441	98	98	98	98	98	100%	100%	100%	100%	P	P	P	P	
b4180	rlmB	4407298	4408029	+	731	29	24	24	24	24	83%	83%	83%	83%	P	P	P	P	
b4181	yjfI	4408156	4408557	+	401	16	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b4182	yjfJ	4408576	4409274	+	698	28	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b4183	yjfK	4409325	4409984	+	659	26	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b4184	yjfL	4410002	4410400	+	398	16	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b4185	yjfM	4410410	4411048	+	638	26	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b4186	yjfC	4411051	4412214	+	1163	46	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b4187	aidB	4412298	4413923	+	1625	65	57	57	63	65	88%	88%	97%	100%	P	P	P	P	
b4190	yjfP	4414975	4415724	+	749	30	18	20	20	22	60%	67%	67%	73%	P	P	P	P	U
b4193	ulaA	4418003	4419400	+	1397	56	0	0	0	0	0%	0%	0%	0%	A	A	A	A	
b4194	ulaB	4419416	4419721	+	305	13	0	3	3	3	0%	23%	23%	23%	A	P	P	P	
b4195	ulaC	4419731	4420195	+	464	19	1	1	2	2	5%	5%	11%	11%	P	P	P	P	
b4196	ulaD	4420209	4420859	+	650	26	3	3	5	5	12%	12%	19%	19%	P	P	P	P	
b4197	ulaE	4420869	4421723	+	854	35	4	5	6	6	11%	14%	17%	17%	P	P	P	P	
b4198	ulaF	4421723	4422409	+	686	27	1	1	1	1	4%	4%	4%	4%	P	P	P	P	
b4200	rpsF	4423141	4423536	+	395	16	16	16	16	16	100%	100%	100%	100%	P	P	P	P	
b4201	priB	4423543	4423857	+	314	13	13	13	13	13	100%	100%	100%	100%	P	P	P	P	
b4202	rpsR	4423862	4424089	+	227	9	9	9	9	9	100%	100%	100%	100%	P	P	P	P	
b4203	rplI	4424131	4424580	+	449	18	18	18	18	18	100%	100%	100%	100%	P	P	P	P	
b4205	ytfA	4425717	4426118	+	401	16	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b4207	fkIB	4426958	4427578	+	620	25	25	25	25	25	100%	100%	100%	100%	P	P	P	P	
b4208	cycA	4427887	4429299	+	1412	57	57	57	57	57	100%	100%	100%	100%	P	P	P	P	
b4212	ytfH	4432136	4432516	+	380	15	4	12	15	15	27%	80%	100%	100%	P	P	P	P	U
b4214	cysQ	4434778	4435518	+	740	29	26	28	29	29	90%	97%	100%	100%	P	P	P	P	
b4215	ytfI	4435730	4436668	+	938	37	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b4217	ytfK	4437610	4437816	+	206	8	6	6	7	7	75%	75%	88%	88%	P	P	P	P	U
b4220	ytfM	4440405	4442138	+	1733	69	66	66	66	66	96%	96%	96%	96%	P	P	P	P	U
b4221	ytfN	4442135	4445914	+	3779	151	147	147	147	147	97%	97%	97%	97%	P	P	P	P	U
b4222	ytfP	4445917	4446258	+	341	14	14	14	14	14	100%	100%	100%	100%	P	P	P	P	U
b4224	chpS	4446470	4446721	+	251	10	10	10	10	10	100%	100%	100%	100%	P	P	P	P	
b4225	chpB	4446715	4447065	+	350	14	14	14	14	14	100%	100%	100%	100%	P	P	P	P	
b4227	ytfQ	4447985	4448941	+	956	38	15	16	38	38	39%	42%	100%	100%	P	P	P	P	U
b4485	ytfR	4449081	4450583	+	1502	60	1	1	57	57	2%	2%	95%	95%	P	P	P	P	U
b4230	ytfT	4450594	4451619	+	1025	41	0	0	37	37	0%	0%	90%	90%	A	A	P	P	U
b4231	yjfF	4451606	4452601	+	995	40	0	0	30	30	0%	0%	75%	75%	A	A	P	P	U
b4233	mpl	4453808	4455181	+	1373	55	55	55	55	55	100%	100%	100%	100%	P	P	P	P	
b4235	pmbA	4455982	4457334	+	1352	54	54	54	54	54	100%	100%	100%	100%	P	P	P	P	U
b4236	cybC	4457513	4457878	+	365	15	12	12	14	14	80%	80%	93%	93%	P	P	P	P	U
b4242	mgtA	4465648	4468344	+	2696	108	100	103	103	105	93%	95%	95%	97%	P	P	P	P	
b4251	yjgJ	4472147	4472740	+	593	24	19	22	22	22	79%	92%	92%	92%	P	P	P	P	U
b4252	yjgK	4472885	4473337	+	452	19	16	17	17	17	84%	89%	89%	89%	P	P	P	P	U
b4253	yjgL	4473460	4475274	+	1814	73	0	1	3	3	0%	1%	4%	4%	A	P	P	P	U
b4255	rraB	4476496	4476912	+	416	17	17	17	17	17	100%	100%	100%	100%	P	P	P	P	U
b4257	yjgN	4477753	4478949	+	1196	48	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b4261	yjgP	4484241	4485341	+	1100	44	44	44	44	44	100%	100%	100%	100%	P	P	P	P	U

b4262	yjqQ	4485341	4486423	+	1082	43	40	40	40	40	93%	93%	93%	93%	P	P	P	P	U
b4268	idnK	4492646	4493209	+	563	22	0	4	4	4	0%	18%	18%	18%	A	P	P	P	
b4270	leuX	4494428	4494512	+	84	3	3	3	3	3	100%	100%	100%	100%	P	P	P	P	
b4271	intB	4494698	4495963	+	1265	51	30	31	31	36	59%	61%	61%	71%	P	P	P	P	U
b4272	insC	4496295	4496660	+	365	14	14	14	14	14	100%	100%	100%	100%	P	P	P	P	
b4273	insD	4496618	4497523	+	905	36	36	36	36	36	100%	100%	100%	100%	P	P	P	P	
b4277	yjgZ	4499283	4499612	+	329	13	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b4279	yjhB	4502081	4503298	+	1217	49	0	0	0	3	0%	0%	0%	6%	A	A	A	P	U
b4280	yjhC	4503310	4504428	+	1118	45	0	0	0	19	0%	0%	0%	42%	A	A	A	P	U
b4655	ythA	4504471	4504596	+	125	5	0	0	0	0	0%	0%	0%	0%	A	A	A	A	
b4282	yjhE	4504884	4505132	+	248	10	2	2	3	3	20%	20%	30%	30%	P	P	P	P	U
b4623	insO	4505220	4505474	+	254	10	4	6	6	6	40%	60%	60%	60%	P	P	P	P	U
b4623	insO	4507032	4507816	+	784	32	0	0	3	4	0%	0%	9%	13%	A	A	P	P	U
b4286	yjhV	4507827	4508156	+	329	13	0	0	1	1	0%	0%	8%	8%	A	A	P	P	U
b4294	insA	4516550	4516825	+	275	11	9	9	9	9	82%	82%	82%	82%	P	P	P	P	
b4576	insB	4516744	4517247	+	503	21	5	5	6	7	24%	24%	29%	33%	P	P	P	P	U
b4624	ryjB	4526000	4526089	+	89	3	2	2	2	2	67%	67%	67%	67%	P	P	P	P	U
b4308	yjhR	4532814	4534054	+	1240	50	0	3	3	3	0%	6%	6%	6%	A	P	P	P	U
b4312	fimB	4538980	4539582	+	602	24	22	22	22	22	92%	92%	92%	92%	P	P	P	P	
b4313	fimE	4540060	4540656	+	596	24	5	10	10	10	21%	42%	42%	42%	P	P	P	P	
b4314	fimA	4541138	4541686	+	548	22	22	22	22	22	100%	100%	100%	100%	P	P	P	P	
b4315	fimI	4541751	4542290	+	539	21	21	21	21	21	100%	100%	100%	100%	P	P	P	P	
b4316	fimC	4542327	4543052	+	725	29	27	27	27	27	93%	93%	93%	93%	P	P	P	P	
b4317	fimD	4543119	4545755	+	2636	106	34	35	36	36	32%	33%	34%	34%	P	P	P	P	
b4318	fimF	4545765	4546295	+	530	21	12	12	12	12	57%	57%	57%	57%	P	P	P	P	
b4319	fimG	4546308	4546811	+	503	20	7	7	7	7	35%	35%	35%	35%	P	P	P	P	
b4320	fimH	4546831	4547733	+	902	36	20	20	22	22	56%	56%	61%	61%	P	P	P	P	
b4322	uxuA	4549659	4550843	+	1184	47	25	45	45	45	53%	96%	96%	96%	P	P	P	P	
b4323	uxuB	4550924	4552384	+	1460	58	12	51	51	51	21%	88%	88%	88%	P	P	P	P	
b4324	uxuR	4552599	4553372	+	773	31	25	26	26	26	81%	84%	84%	84%	P	P	P	P	
b4326	yjiD	4555016	4555408	+	392	16	6	6	6	11	38%	38%	38%	69%	P	P	P	P	
b4331	kptA	4558953	4559507	+	554	22	5	5	5	6	23%	23%	23%	27%	P	P	P	P	
b4339	yjiP	4567021	4567941	+	920	37	11	14	14	14	30%	38%	38%	38%	P	P	P	P	U
b4341	yjiS	4569774	4569938	+	164	7	0	0	1	1	0%	0%	14%	14%	A	A	P	P	U
b4342	yjiT	4570437	4571939	+	1502	60	54	54	54	54	90%	90%	90%	90%	P	P	P	P	U
b4486	yjiV	4571942	4574878	+	2936	118	44	60	61	62	37%	51%	52%	53%	P	P	P	P	U
b4625	symR	4577858	4577934	+	76	3	2	2	2	2	67%	67%	67%	67%	P	P	P	P	
b4351	mrr	4584972	4585886	+	914	37	36	36	36	36	97%	97%	97%	97%	P	P	P	P	
b4355	tsr	4589680	4591335	+	1655	66	6	20	27	27	9%	30%	41%	41%	P	P	P	P	
b4358	yjjN	4594022	4595035	+	1013	41	0	4	7	7	0%	10%	17%	17%	A	P	P	P	U
b4365	yjjQ	4601500	4602225	+	725	29	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b4366	bglJ	4602333	4602860	+	527	21	0	0	0	0	0%	0%	0%	0%	A	A	A	A	
b4567	yjjZ	4603827	4604063	+	236	9	0	0	9	9	0%	0%	100%	100%	A	A	P	P	U
b4372	holD	4605826	4606239	+	413	16	16	16	16	16	100%	100%	100%	100%	P	P	P	P	
b4373	rimI	4606208	4606654	+	446	18	18	18	18	18	100%	100%	100%	100%	P	P	P	P	
b4374	yjjG	4606669	4607346	+	677	27	26	26	26	26	96%	96%	96%	96%	P	P	P	P	



b4375	prfC	4607437	4609026	+	1589	64	63	63	63	63	98%	98%	98%	98%	P	P	P	P	
b4376	osmY	4609419	4610024	+	605	25	25	25	25	25	100%	100%	100%	100%	P	P	P	P	
b4568	ytjA	4610151	4610312	+	161	6	6	6	6	6	100%	100%	100%	100%	P	P	P	P	U
b4377	yjjU	4610434	4611507	+	1073	43	43	43	43	43	100%	100%	100%	100%	P	P	P	P	U
b4378	yjjV	4611504	4612283	+	779	31	23	23	23	23	74%	74%	74%	74%	P	P	P	P	U
b4381	deoC	4615346	4616125	+	779	32	31	31	32	32	97%	97%	100%	100%	P	P	P	P	
b4382	deoA	4616252	4617574	+	1322	53	50	50	50	51	94%	94%	94%	96%	P	P	P	P	
b4383	deoB	4617626	4618849	+	1223	49	49	49	49	49	100%	100%	100%	100%	P	P	P	P	
b4384	deoD	4618906	4619625	+	719	29	27	27	27	28	93%	93%	93%	97%	P	P	P	P	
b4385	yjjJ	4619792	4621123	+	1331	53	38	42	42	42	72%	79%	79%	79%	P	P	P	P	U
b4388	serB	4622918	4623886	+	968	39	39	39	39	39	100%	100%	100%	100%	P	P	P	P	
b4389	radA	4623935	4625317	+	1382	55	55	55	55	55	100%	100%	100%	100%	P	P	P	P	U
b4390	nadR	4625338	4626570	+	1232	49	48	48	49	49	98%	98%	100%	100%	P	P	P	P	
b4392	slt	4628756	4630693	+	1937	77	76	76	76	77	99%	99%	99%	100%	P	P	P	P	
b4393	trpR	4630783	4631109	+	326	13	13	13	13	13	100%	100%	100%	100%	P	P	P	P	
b4395	ytjC	4631820	4632467	+	647	26	26	26	26	26	100%	100%	100%	100%	P	P	P	P	
b4397	creA	4633544	4634017	+	473	19	19	19	19	19	100%	100%	100%	100%	P	P	P	P	U
b4398	creB	4634030	4634719	+	689	27	26	26	26	26	96%	96%	96%	96%	P	P	P	P	
b4399	creC	4634719	4636143	+	1424	57	29	30	30	30	51%	53%	53%	53%	P	P	P	P	
b4400	creD	4636201	4637553	+	1352	54	5	8	8	8	9%	15%	15%	15%	P	P	P	P	
b4402	yjjY	4638425	4638565	+	140	5	0	1	1	2	0%	20%	20%	40%	A	P	P	P	U
b4403	yjtD	4638965	4639651	+	686	28	25	25	25	25	89%	89%	89%	89%	P	P	P	P	U
b0006	yaaA	5683	6459	-	776	31	28	28	28	28	90%	90%	90%	90%	P	P	P	P	U
b0007	yaaJ	6529	7959	-	1430	57	0	7	9	22	0%	12%	16%	39%	A	P	P	P	U
b0010	yaaH	9928	10494	-	566	22	7	10	10	10	32%	45%	45%	45%	P	P	P	P	U
b0011	yaaW	10643	11356	-	713	29	0	0	12	12	0%	0%	41%	41%	A	A	P	P	U
b0013	yaaI	11382	11786	-	404	16	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b0018	mokC	16751	16960	-	209	9	1	1	7	7	11%	11%	78%	78%	P	P	P	P	
b4412	hokC	16751	16903	-	152	7	1	1	6	6	14%	14%	86%	86%	P	P	P	P	
b0021	insB	19811	20314	-	503	20	15	16	16	16	75%	80%	80%	80%	P	P	P	P	
b0022	insA	20233	20508	-	275	11	11	11	11	11	100%	100%	100%	100%	P	P	P	P	
b0023	rpsT	20815	21078	-	263	11	11	11	11	11	100%	100%	100%	100%	P	P	P	P	
b0035	caiE	34781	35371	-	590	24	1	4	4	4	4%	17%	17%	17%	P	P	P	P	U
b0036	caiD	35377	36270	-	893	36	1	1	3	3	3%	3%	8%	8%	P	P	P	P	
b0037	caiC	36271	37839	-	1568	63	4	4	5	5	6%	6%	8%	8%	P	P	P	P	U
b0038	caiB	37898	39115	-	1217	49	0	0	12	12	0%	0%	24%	24%	A	A	P	P	
b0039	caiA	39244	40386	-	1142	46	12	12	18	18	26%	26%	39%	39%	P	P	P	P	
b0040	caiT	40417	41931	-	1514	60	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b0049	apaH	50380	51222	-	842	34	34	34	34	34	100%	100%	100%	100%	P	P	P	P	
b0050	apaG	51229	51606	-	377	15	15	15	15	15	100%	100%	100%	100%	P	P	P	P	
b0051	ksgA	51609	52430	-	821	33	33	33	33	33	100%	100%	100%	100%	P	P	P	P	
b0052	pdxA	52427	53416	-	989	40	40	40	40	40	100%	100%	100%	100%	P	P	P	P	
b0053	surA	53416	54702	-	1286	51	51	51	51	51	100%	100%	100%	100%	P	P	P	P	
b0054	imp	54755	57109	-	2354	95	95	95	95	95	100%	100%	100%	100%	P	P	P	P	
b0058	rluA	59687	60346	-	659	26	23	23	25	25	88%	88%	96%	96%	P	P	P	P	
b0059	hepA	60358	63264	-	2906	117	115	117	117	117	98%	100%	100%	100%	P	P	P	P	

b0060	polB	63429	65780	-	2351	94	46	50	51	54	49%	53%	54%	57%	P	P	P	P	
b0061	araD	65855	66550	-	695	28	0	0	1	1	0%	0%	4%	4%	A	A	P	P	
b0062	araA	66835	68337	-	1502	60	0	0	27	27	0%	0%	45%	45%	A	A	P	P	
b0063	araB	68348	70048	-	1700	68	0	0	33	33	0%	0%	49%	49%	A	A	P	P	
b0066	thiQ	72229	72927	-	698	28	25	25	25	25	89%	89%	89%	89%	P	P	P	P	
b0067	thiP	72911	74521	-	1610	64	61	61	61	61	95%	95%	95%	95%	P	P	P	P	
b0068	tbpA	74497	75480	-	983	39	38	38	38	38	97%	97%	97%	97%	P	P	P	P	
GO-9381	sroA	75516	75608	-	92	3	3	3	3	3	100%	100%	100%	100%	P	P	P	P	
b0069	sgrR	75644	77299	-	1655	66	48	48	48	48	73%	73%	73%	73%	P	P	P	P	
b0071	leuD	78848	79453	-	605	24	24	24	24	24	100%	100%	100%	100%	P	P	P	P	
b0072	leuC	79464	80864	-	1400	56	56	56	56	56	100%	100%	100%	100%	P	P	P	P	
b0073	leuB	80867	81958	-	1091	43	43	43	43	43	100%	100%	100%	100%	P	P	P	P	
b0074	leuA	81958	83529	-	1571	63	63	63	63	63	100%	100%	100%	100%	P	P	P	P	
b0075	leuL	83622	83708	-	86	3	3	3	3	3	100%	100%	100%	100%	P	P	P	P	
b0101	yacG	111649	111846	-	197	8	8	8	8	8	100%	100%	100%	100%	P	P	P	P	U
b0102	yacF	111856	112599	-	743	30	30	30	30	30	100%	100%	100%	100%	P	P	P	P	U
b0103	coaE	112599	113219	-	620	25	24	24	24	24	96%	96%	96%	96%	P	P	P	P	
b0106	hofC	114522	115724	-	1202	48	0	0	4	4	0%	0%	8%	8%	A	A	P	P	
b0107	hofB	115714	117099	-	1385	55	4	5	5	5	7%	9%	9%	9%	P	P	P	P	U
b0108	ppdD	117109	117549	-	440	18	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b0109	nadC	117752	118645	-	893	36	34	34	34	34	94%	94%	94%	94%	P	P	P	P	
b0112	aroP	120178	121551	-	1373	55	55	55	55	55	100%	100%	100%	100%	P	P	P	P	
GO-8894	tp2	122697	122857	-	160	6	0	0	0	0	0%	0%	0%	0%	A	A	A	A	
b0117	yacH	129407	131260	-	1853	74	0	0	5	5	0%	0%	7%	7%	A	A	P	P	U
b0120	speD	134788	135582	-	794	32	32	32	32	32	100%	100%	100%	100%	P	P	P	P	
b0121	speE	135598	136464	-	866	34	34	34	34	34	100%	100%	100%	100%	P	P	P	P	
b0122	yacC	136570	136917	-	347	14	13	13	13	13	93%	93%	93%	93%	P	P	P	P	U
b0124	gcd	138835	141225	-	2390	96	94	94	95	95	98%	98%	99%	99%	P	P	P	P	
b0126	can	142008	142670	-	662	26	26	26	26	26	100%	100%	100%	100%	P	P	P	P	
b0131	panD	146314	146694	-	380	15	15	15	15	15	100%	100%	100%	100%	P	P	P	P	
b0133	panC	147944	148795	-	851	34	33	33	33	33	97%	97%	97%	97%	P	P	P	P	
b0134	panB	148807	149601	-	794	32	32	32	32	32	100%	100%	100%	100%	P	P	P	P	
b0135	yadC	149715	150953	-	1238	50	0	1	2	2	0%	2%	4%	4%	A	P	P	P	U
b0136	yadK	151003	151599	-	596	23	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b0137	yadL	151626	152231	-	605	25	0	4	4	4	0%	16%	16%	16%	A	P	P	P	U
b0138	yadM	152243	152812	-	569	23	0	1	1	1	0%	4%	4%	4%	A	P	P	P	U
b0139	htrE	152829	155426	-	2597	104	0	1	1	1	0%	1%	1%	1%	A	P	P	P	U
b0140	ecpD	155461	156201	-	740	30	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b0141	yadN	156299	156883	-	584	24	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b0142	folK	157253	157732	-	479	19	16	16	16	16	84%	84%	84%	84%	P	P	P	P	
b0143	pcnB	157729	159126	-	1397	56	56	56	56	56	100%	100%	100%	100%	P	P	P	P	
b0144	yadB	159186	160082	-	896	36	24	24	24	24	67%	67%	67%	67%	P	P	P	P	
b0145	dksA	160149	160604	-	455	19	19	19	19	19	100%	100%	100%	100%	P	P	P	P	
b0146	sfsA	160782	161486	-	704	28	26	27	27	27	93%	96%	96%	96%	P	P	P	P	U
b0147	ligT	161501	162031	-	530	22	19	19	19	19	86%	86%	86%	86%	P	P	P	P	
b0154	hemL	173602	174882	-	1280	51	51	51	51	51	100%	100%	100%	100%	P	P	P	P	

b0157	yadS	177001	177624	-	623	25	17	17	17	17	68%	68%	68%	68%	P	P	P	P	U
b0158	btuF	177662	178462	-	800	32	25	25	25	25	78%	78%	78%	78%	P	P	P	P	
b0159	mtn	178455	179153	-	698	28	28	28	28	28	100%	100%	100%	100%	P	P	P	P	
b0163	yaeH	183709	184095	-	386	15	15	15	15	15	100%	100%	100%	100%	P	P	P	P	U
b0164	yaeI	184257	185069	-	812	33	5	5	5	5	15%	15%	15%	15%	P	P	P	P	U
b0166	dapD	185123	185947	-	824	33	33	33	33	33	100%	100%	100%	100%	P	P	P	P	
b0167	glnD	185978	188650	-	2672	107	105	105	105	106	98%	98%	98%	99%	P	P	P	P	
b0168	map	188712	189506	-	794	31	31	31	31	31	100%	100%	100%	100%	P	P	P	P	
b0189	rof	213678	213932	-	254	11	11	11	11	11	100%	100%	100%	100%	P	P	P	P	
b4406	yaeP	213925	214125	-	200	8	8	8	8	8	100%	100%	100%	100%	P	P	P	P	U
b0193	yaeF	216179	217003	-	824	33	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b0194	proS	217057	218775	-	1718	69	65	65	65	65	94%	94%	94%	94%	P	P	P	P	
b0195	yaeB	218887	219594	-	707	28	24	24	24	24	86%	86%	86%	86%	P	P	P	P	U
b0196	rscF	219591	219995	-	404	16	16	16	16	16	100%	100%	100%	100%	P	P	P	P	U
b0197	metQ	220113	220928	-	815	32	32	32	32	32	100%	100%	100%	100%	P	P	P	P	
b0198	metI	220968	221621	-	653	26	26	26	26	26	100%	100%	100%	100%	P	P	P	P	
b0199	metN	221614	222645	-	1031	41	41	41	41	41	100%	100%	100%	100%	P	P	P	P	
b0208	yafC	229967	230881	-	914	36	29	30	30	30	81%	83%	83%	83%	P	P	P	P	U
b0211	mltD	232597	233955	-	1358	54	54	54	54	54	100%	100%	100%	100%	P	P	P	P	U
b0212	gloB	234027	234782	-	755	30	24	26	26	27	80%	87%	87%	90%	P	P	P	P	U
b0214	rnhA	235535	236002	-	467	19	17	17	17	17	89%	89%	89%	89%	P	P	P	P	
b4586	ykfM	238257	238736	-	479	19	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b0218	yafU	238746	239102	-	356	14	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b0219	yafV	239419	240189	-	770	31	20	23	23	26	65%	74%	74%	84%	P	P	P	P	U
b0221	fadE	240859	243303	-	2444	98	68	68	98	98	69%	69%	100%	100%	P	P	P	P	
b0224	yafK	245065	245805	-	740	29	29	29	29	29	100%	100%	100%	100%	P	P	P	P	U
b0225	yafQ	245961	246239	-	278	12	11	11	12	12	92%	92%	100%	100%	P	P	P	P	U
b0226	dinJ	246242	246502	-	260	10	10	10	10	10	100%	100%	100%	100%	P	P	P	P	U
b0229	lfhA	248358	250070	-	1712	69	0	3	18	18	0%	4%	26%	26%	A	P	P	P	U
b0237	pepD	254259	255716	-	1457	59	59	59	59	59	100%	100%	100%	100%	P	P	P	P	
b0241	phoE	258269	259324	-	1055	42	0	1	1	1	0%	2%	2%	2%	A	P	P	P	
b4626	ykfN	262374	262436	-	62	2	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b0245	ykfI	262552	262893	-	341	14	0	0	0	0	0%	0%	0%	0%	A	A	A	A	
b0246	yafW	262914	263231	-	317	13	0	0	1	1	0%	0%	8%	8%	A	A	P	P	
b4504	ykfH	263250	263471	-	221	9	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b0247	ykfG	263480	263956	-	476	19	0	0	1	1	0%	0%	5%	5%	A	A	P	P	U
b0248	yafX	263972	264430	-	458	18	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b0249	ykfF	264528	264767	-	239	10	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b0250	ykfB	264844	265311	-	467	18	11	12	17	17	61%	67%	94%	94%	P	P	P	P	U
b0251	yafY	265334	265777	-	443	18	3	3	3	3	17%	17%	17%	17%	P	P	P	P	U
b4627	ykfL	265777	265998	-	221	9	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b4628	ykfK	266000	266191	-	191	8	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b0252	yafZ	266408	267229	-	821	33	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b0253	ykfA	267321	268184	-	863	34	6	9	9	10	18%	26%	26%	29%	P	P	P	P	U
b0254	perR	268513	269406	-	893	36	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b0259	insH	273325	274341	-	1016	41	41	41	41	41	100%	100%	100%	100%	P	P	P	P	

b0262	afuC	276980	278026	-	1046	42	0	4	4	4	0%	10%	10%	10%	A	P	P	P	U
b0263	afuB	278038	278385	-	347	14	0	2	2	2	0%	14%	14%	14%	A	P	P	P	U
b0264	insB	278402	278905	-	503	20	11	16	16	16	55%	80%	80%	80%	P	P	P	P	
b0265	insA	278824	279099	-	275	11	10	10	10	10	91%	91%	91%	91%	P	P	P	P	
b4505	insX	279338	279586	-	248	10	10	10	10	10	100%	100%	100%	100%	P	P	P	P	U
b0266	yagB	279651	279959	-	308	12	11	11	11	11	92%	92%	92%	92%	P	P	P	P	U
b0267	yagA	280053	281207	-	1154	46	0	0	6	6	0%	0%	13%	13%	A	A	P	P	U
b0272	yagI	287628	288386	-	758	30	23	23	23	23	77%	77%	77%	77%	P	P	P	P	U
b0273	argF	288525	289529	-	1004	40	40	40	40	40	100%	100%	100%	100%	P	P	P	P	
b0274	insB	289873	290376	-	503	20	12	14	14	15	60%	70%	70%	75%	P	P	P	P	
b0275	insA	290295	290570	-	275	11	11	11	11	11	100%	100%	100%	100%	P	P	P	P	
b0277	yagK	291546	292172	-	626	25	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b0278	yagL	292444	293142	-	698	28	0	0	0	0	0%	0%	0%	0%	A	A	A	A	
b0279	yagM	293169	294023	-	854	34	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b0280	yagN	294363	294803	-	440	18	15	15	15	15	83%	83%	83%	83%	P	P	P	P	U
b0281	intF	294920	296320	-	1400	56	53	55	55	55	95%	98%	98%	98%	P	P	P	P	U
b0282	yagP	296605	297015	-	410	17	0	1	1	1	0%	6%	6%	6%	A	P	P	P	U
b0283	yagQ	296994	297950	-	956	38	0	2	5	5	0%	5%	13%	13%	A	P	P	P	U
b0284	yagR	297960	300158	-	2198	88	0	2	7	8	0%	2%	8%	9%	A	P	P	P	U
b0285	yagS	300155	301111	-	956	38	0	2	2	4	0%	5%	5%	11%	A	P	P	P	U
b0286	yagT	301108	301797	-	689	28	0	1	2	8	0%	4%	7%	29%	A	P	P	P	U
b0288	ykgJ	303077	303406	-	329	13	9	10	10	10	69%	77%	77%	77%	P	P	P	P	U
b0289	yagV	303719	304429	-	710	28	2	2	4	4	7%	7%	14%	14%	P	P	P	P	U
b0290	yagW	304398	306041	-	1643	66	10	10	10	10	15%	15%	15%	15%	P	P	P	P	U
b0291	yagX	306031	308556	-	2525	101	0	0	5	5	0%	0%	5%	5%	A	A	P	P	U
b0292	matC	308582	309250	-	668	27	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b0293	matB	309308	309895	-	587	24	6	6	6	14	25%	25%	25%	58%	P	P	P	P	U
b0294	matA	309970	310560	-	590	23	0	1	1	1	0%	4%	4%	4%	A	P	P	P	U
b4506	ykgO	311598	311738	-	140	5	3	3	4	5	60%	60%	80%	100%	P	P	P	P	
b0296	ykgM	311738	312001	-	263	11	11	11	11	11	100%	100%	100%	100%	P	P	P	P	
b4630	ykgP	312940	313029	-	89	4	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b0300	ykgA	315710	316393	-	683	28	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b0301	ykgB	316950	317543	-	593	24	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b0303	ykgI	317555	317791	-	236	9	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b0304	ykgC	317900	319225	-	1325	53	9	9	16	19	17%	17%	30%	36%	P	P	P	P	U
b0310	ykgH	323920	324588	-	668	26	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b0311	betA	324801	326471	-	1670	67	57	57	57	57	85%	85%	85%	85%	P	P	P	P	
b0312	betB	326485	327957	-	1472	59	57	57	57	57	97%	97%	97%	97%	P	P	P	P	
b0313	betI	327971	328558	-	587	23	23	23	23	23	100%	100%	100%	100%	P	P	P	P	
b0316	yahB	332725	333657	-	932	37	15	17	19	19	41%	46%	51%	51%	P	P	P	P	U
b0317	yahC	333749	334246	-	497	20	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b0328	yahN	344890	345561	-	671	27	0	2	18	18	0%	7%	67%	67%	A	P	P	P	
b0330	prpR	346081	347667	-	1586	63	0	0	3	3	0%	0%	5%	5%	A	A	P	P	
b0338	cynR	357015	357914	-	899	36	23	23	23	23	64%	64%	64%	64%	P	P	P	P	
b0342	lacA	360473	361084	-	611	24	0	0	0	0	0%	0%	0%	0%	A	A	A	A	
b0343	lacY	361150	362403	-	1253	50	0	1	4	4	0%	2%	8%	8%	A	P	P	P	

b0344	lacZ	362455	365529	-	3074	123	0	0	5	5	0%	0%	4%	4%	A	A	P	P	
b0345	lacI	365652	366734	-	1082	44	40	40	40	40	91%	91%	91%	91%	P	P	P	P	
b0346	mhpR	366811	367644	-	833	33	33	33	33	33	100%	100%	100%	100%	P	P	P	P	
b0355	frmB	376759	377592	-	833	33	13	20	21	21	39%	61%	64%	64%	P	P	P	P	U
b0356	frmA	377686	378795	-	1109	44	44	44	44	44	100%	100%	100%	100%	P	P	P	P	
b0357	frmR	378830	379105	-	275	11	11	11	11	11	100%	100%	100%	100%	P	P	P	P	
b0358	yaiO	379293	380066	-	773	31	0	1	14	14	0%	3%	45%	45%	A	P	P	P	U
b4579	yaiX	380068	380483	-	415	17	0	1	1	1	0%	6%	6%	6%	A	P	P	P	U
b4579	yaiX	381815	382096	-	281	11	0	1	1	1	0%	9%	9%	9%	A	P	P	P	U
b0363	yaiP	381963	383159	-	1196	48	0	2	2	2	0%	4%	4%	4%	A	P	P	P	U
b0364	yaiS	383283	383840	-	557	22	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b0369	hemB	387977	388951	-	974	39	37	37	37	37	95%	95%	95%	95%	P	P	P	P	
b0372	insF	390963	391829	-	866	34	33	33	33	33	97%	97%	97%	97%	P	P	P	P	
b0373	insE	391826	392134	-	308	12	12	12	12	12	100%	100%	100%	100%	P	P	P	P	
b0376	ampH	394354	395511	-	1157	47	42	42	42	42	89%	89%	89%	89%	P	P	P	P	
b0379	yaiY	398249	398557	-	308	13	0	10	11	11	0%	77%	85%	85%	A	P	P	P	U
b0381	ddlA	399053	400147	-	1094	44	41	42	44	44	93%	95%	100%	100%	P	P	P	P	
b0386	proC	404059	404868	-	809	32	32	32	32	32	100%	100%	100%	100%	P	P	P	P	
b0393	rdgC	408332	409243	-	911	36	34	34	34	34	94%	94%	94%	94%	P	P	P	P	
b0396	araJ	410521	411705	-	1184	47	12	12	18	19	26%	26%	38%	40%	P	P	P	P	U
b0397	sbcC	411831	414977	-	3146	126	105	105	105	105	83%	83%	83%	83%	P	P	P	P	
b0398	sbcD	414974	416176	-	1202	48	44	44	44	44	92%	92%	92%	92%	P	P	P	P	
b0404	acpH	423561	424142	-	581	23	16	16	16	16	70%	70%	70%	70%	P	P	P	P	U
b0411	tsx	430353	431237	-	884	36	36	36	36	36	100%	100%	100%	100%	P	P	P	P	
b0412	yajI	431536	432075	-	539	22	7	8	9	9	32%	36%	41%	41%	P	P	P	P	U
b0419	yajO	436385	437359	-	974	39	38	38	39	39	97%	97%	100%	100%	P	P	P	P	U
b0420	dxs	437539	439401	-	1862	74	74	74	74	74	100%	100%	100%	100%	P	P	P	P	
b0421	ispA	439426	440325	-	899	36	36	36	36	36	100%	100%	100%	100%	P	P	P	P	
b0422	xseB	440325	440567	-	242	10	10	10	10	10	100%	100%	100%	100%	P	P	P	P	
b0424	yajL	442275	442865	-	590	24	23	23	23	23	96%	96%	96%	96%	P	P	P	P	U
b0425	panE	442828	443739	-	911	37	37	37	37	37	100%	100%	100%	100%	P	P	P	P	
b0427	yajR	444526	445890	-	1364	55	22	23	23	23	40%	42%	42%	42%	P	P	P	P	U
b0428	cyoE	446039	446929	-	890	35	35	35	35	35	100%	100%	100%	100%	P	P	P	P	
b0429	cyoD	446941	447270	-	329	13	13	13	13	13	100%	100%	100%	100%	P	P	P	P	
b0430	cyoC	447270	447884	-	614	24	24	24	24	24	100%	100%	100%	100%	P	P	P	P	
b0431	cyoB	447874	449865	-	1991	80	80	80	80	80	100%	100%	100%	100%	P	P	P	P	
b0432	cyoA	449887	450834	-	947	38	38	38	38	38	100%	100%	100%	100%	P	P	P	P	
b0433	ampG	451294	452769	-	1475	59	51	51	51	51	86%	86%	86%	86%	P	P	P	P	
b0434	yajG	452813	453391	-	578	23	23	23	23	23	100%	100%	100%	100%	P	P	P	P	U
G0-8861	sraA	457952	458008	-	56	2	0	0	0	0	0%	0%	0%	0%	A	A	A	A	
b0444	queC	464076	464771	-	695	28	26	26	26	26	93%	93%	93%	93%	P	P	P	P	U
b0445	ybaE	464836	466536	-	1700	68	0	0	52	52	0%	0%	76%	76%	A	A	P	P	U
b0452	tesB	473525	474385	-	860	35	30	30	30	30	86%	86%	86%	86%	P	P	P	P	
b0454	ybaZ	475206	475595	-	389	15	11	11	11	11	73%	73%	73%	73%	P	P	P	P	U
b0457	ylaB	476291	477841	-	1550	62	14	14	17	21	23%	23%	27%	34%	P	P	P	P	U
b0458	ylaC	478005	478475	-	470	19	19	19	19	19	100%	100%	100%	100%	P	P	P	P	U

b0459	maa	478591	479142	-	551	22	21	21	21	21	95%	95%	95%	95%	P	P	P	P	
b0460	hha	479314	479532	-	218	8	8	8	8	8	100%	100%	100%	100%	P	P	P	P	
b0461	ybaJ	479558	479932	-	374	15	14	14	14	14	93%	93%	93%	93%	P	P	P	P	U
b0462	acrB	480478	483627	-	3149	126	124	124	124	124	98%	98%	98%	98%	P	P	P	P	
b0463	acrA	483650	484843	-	1193	48	48	48	48	48	100%	100%	100%	100%	P	P	P	P	
b0466	ybaM	489334	489495	-	161	6	6	6	6	6	100%	100%	100%	100%	P	P	P	P	U
b0467	priC	489509	490036	-	527	21	20	20	20	20	95%	95%	95%	95%	P	P	P	P	
b0476	aes	498238	499197	-	959	38	0	4	6	6	0%	11%	16%	16%	A	P	P	P	
b0478	ybaL	500786	502462	-	1676	68	67	67	67	67	99%	99%	99%	99%	P	P	P	P	U
b0479	fsr	502700	503920	-	1220	49	8	8	9	9	16%	16%	18%	18%	P	P	P	P	U
b0481	ybaK	505827	506306	-	479	19	18	18	18	18	95%	95%	95%	95%	P	P	P	P	U
b0482	ybaP	506510	507304	-	794	32	29	29	29	29	91%	91%	91%	91%	P	P	P	P	U
b0484	copA	508099	510603	-	2504	100	99	99	99	99	99%	99%	99%	99%	P	P	P	P	
b0488	ybbJ	513625	514083	-	458	18	15	15	18	18	83%	83%	100%	100%	P	P	P	P	U
b0489	qmcA	514080	514997	-	917	37	36	36	37	37	97%	97%	100%	100%	P	P	P	P	U
b0492	ybbN	516649	517503	-	854	34	34	34	34	34	100%	100%	100%	100%	P	P	P	P	U
b0493	ybbO	517564	518373	-	809	33	33	33	33	33	100%	100%	100%	100%	P	P	P	P	U
b0494	tesA	518363	518989	-	626	26	26	26	26	26	100%	100%	100%	100%	P	P	P	P	
b0502	ylbG	528819	529240	-	421	17	8	8	8	10	47%	47%	47%	59%	P	P	P	P	U
b0503	ybbB	529356	530450	-	1094	44	32	32	32	32	73%	73%	73%	73%	P	P	P	P	
b0504	allS	530519	531445	-	926	37	0	1	1	1	0%	3%	3%	3%	A	P	P	P	
b0515	ylbA	542485	543270	-	785	32	23	25	26	29	72%	78%	81%	91%	P	P	P	P	U
b0516	allC	543281	544516	-	1235	50	13	16	20	21	26%	32%	40%	42%	P	P	P	P	
b0517	allD	544538	545587	-	1049	42	0	0	2	2	0%	0%	5%	5%	A	A	P	P	
b0522	purK	550750	551817	-	1067	43	43	43	43	43	100%	100%	100%	100%	P	P	P	P	
b0523	purE	551814	552323	-	509	21	21	21	21	21	100%	100%	100%	100%	P	P	P	P	
b0524	lpxH	552441	553163	-	722	28	27	27	27	27	96%	96%	96%	96%	P	P	P	P	
b0525	ppiB	553166	553660	-	494	19	19	19	19	19	100%	100%	100%	100%	P	P	P	P	
b0527	ybcI	555255	555776	-	521	21	0	1	2	3	0%	5%	10%	14%	A	P	P	P	U
b0528	ybcJ	555884	556096	-	212	9	6	6	6	6	67%	67%	67%	67%	P	P	P	P	U
b0529	fold	556098	556964	-	866	35	35	35	35	35	100%	100%	100%	100%	P	P	P	P	
b0535	fimZ	563071	563703	-	632	25	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b0537	intD	564038	565201	-	1163	47	40	41	41	42	85%	87%	87%	89%	P	P	P	P	U
b4633	xisD	565081	565302	-	221	9	6	6	6	6	67%	67%	67%	67%	P	P	P	P	U
b0539	exoD	565321	565599	-	278	11	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b0553	nmpC	573752	573809	-	57	2	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b0552	insH	573960	574976	-	1016	41	41	41	41	41	100%	100%	100%	100%	P	P	P	P	
b0553	nmpC	575009	576048	-	1039	42	42	42	42	42	100%	100%	100%	100%	P	P	P	P	U
b0557	borD	577823	578116	-	293	12	12	12	12	12	100%	100%	100%	100%	P	P	P	P	U
b0558	ybcV	578407	578817	-	410	16	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b4589	ylcI	579474	579668	-	194	8	0	1	1	4	0%	13%	13%	50%	A	P	P	P	U
b0562	ybcY	581375	582029	-	654	26	0	1	3	3	0%	4%	12%	12%	A	P	P	P	U
b0565	ompT	583903	584856	-	953	38	38	38	38	38	100%	100%	100%	100%	P	P	P	P	
b0566	envY	585370	586131	-	761	30	0	2	2	2	0%	7%	7%	7%	A	P	P	P	
b0567	ybcH	586314	587204	-	890	36	6	9	9	9	17%	25%	25%	25%	P	P	P	P	U
b0568	nfrA	587205	590177	-	2972	119	49	50	51	51	41%	42%	43%	43%	P	P	P	P	

b0569	nfrB	590164	592401	-	2237	90	4	11	20	20	4%	12%	22%	22%	P	P	P	P	
b0570	cusS	592551	593993	-	1442	58	37	37	37	37	64%	64%	64%	64%	P	P	P	P	
b0571	cusR	593983	594666	-	683	27	26	26	26	26	96%	96%	96%	96%	P	P	P	P	
b0577	ybdG	602639	603886	-	1247	50	38	38	38	38	76%	76%	76%	76%	P	P	P	P	U
b0578	nfsB	603994	604647	-	653	27	26	26	26	26	96%	96%	96%	96%	P	P	P	P	
b0579	ybdF	604741	605109	-	368	15	14	14	14	14	93%	93%	93%	93%	P	P	P	P	U
b0580	ybdJ	605174	605422	-	248	10	6	6	6	6	60%	60%	60%	60%	P	P	P	P	U
b0581	ybdK	605488	606606	-	1118	45	28	29	39	39	62%	64%	87%	87%	P	P	P	P	U
b0583	entD	608682	609311	-	629	25	0	0	0	16	0%	0%	0%	64%	A	A	A	P	
b0584	fepA	609477	611717	-	2240	89	18	18	36	88	20%	20%	40%	99%	P	P	P	P	
b0588	fepC	618607	619422	-	815	33	7	7	7	28	21%	21%	21%	85%	P	P	P	P	
b0589	fepG	619419	620411	-	992	40	5	5	5	28	13%	13%	13%	70%	P	P	P	P	
b0590	fepD	620408	621412	-	1004	40	6	6	11	22	15%	15%	28%	55%	P	P	P	P	
b0592	fepB	622777	623733	-	956	38	15	15	15	34	39%	39%	39%	89%	P	P	P	P	
b0599	ybdH	631612	632700	-	1088	44	43	44	44	44	98%	100%	100%	100%	P	P	P	P	U
b0601	ybdM	633970	634599	-	629	26	7	7	7	7	27%	27%	27%	27%	P	P	P	P	U
b0602	ybdN	634572	635792	-	1220	48	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b0603	ybdO	635939	636841	-	902	36	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b0604	dsbG	637050	637796	-	746	30	27	27	27	28	90%	90%	90%	93%	P	P	P	P	
b0607	uspG	640662	641090	-	428	17	16	17	17	17	94%	100%	100%	100%	P	P	P	P	
b0610	rnk	642780	643190	-	410	17	14	14	14	14	82%	82%	82%	82%	P	P	P	P	
b0611	rna	643420	644226	-	806	32	32	32	32	32	100%	100%	100%	100%	P	P	P	P	
b0612	citT	644340	645803	-	1463	58	0	0	2	2	0%	0%	3%	3%	A	A	P	P	
b0613	citG	645854	646732	-	878	35	0	0	0	0	0%	0%	0%	0%	A	A	A	A	
b0614	citX	646707	647258	-	551	22	0	0	0	0	0%	0%	0%	0%	A	A	A	A	
b0615	citF	647262	648794	-	1532	62	0	0	0	0	0%	0%	0%	0%	A	A	A	A	
b0616	citE	648805	649713	-	908	36	0	0	0	0	0%	0%	0%	0%	A	A	A	A	
b0617	citD	649710	650006	-	296	12	0	0	0	0	0%	0%	0%	0%	A	A	A	A	
b0618	citC	650021	651079	-	1058	42	0	0	0	0	0%	0%	0%	0%	A	A	A	A	
b0621	dcuC	653806	655191	-	1385	55	0	2	6	10	0%	4%	11%	18%	A	P	P	P	
b0624	crcB	656778	657161	-	383	15	15	15	15	15	100%	100%	100%	100%	P	P	P	P	U
b0628	lipA	658474	659439	-	965	39	37	38	38	38	95%	97%	97%	97%	P	P	P	P	
b0629	ybeF	659648	660601	-	953	39	0	0	1	1	0%	0%	3%	3%	A	A	P	P	U
b0630	lipB	660860	661501	-	641	26	24	24	24	24	92%	92%	92%	92%	P	P	P	P	
b0631	ybeD	661602	661865	-	263	10	10	10	10	10	100%	100%	100%	100%	P	P	P	P	U
b0632	dacA	661975	663186	-	1211	48	48	48	48	48	100%	100%	100%	100%	P	P	P	P	
b0633	rlpA	663325	664413	-	1088	44	43	43	43	43	98%	98%	98%	98%	P	P	P	P	
b0634	mrdb	664424	665536	-	1112	45	45	45	45	45	100%	100%	100%	100%	P	P	P	P	
b0635	mrda	665539	667440	-	1901	76	74	74	74	74	97%	97%	97%	97%	P	P	P	P	
b0636	ybeA	667471	667938	-	467	19	19	19	19	19	100%	100%	100%	100%	P	P	P	P	U
b0637	ybeB	667942	668259	-	317	13	13	13	13	13	100%	100%	100%	100%	P	P	P	P	U
b0638	cobC	668519	669130	-	611	25	18	18	18	18	72%	72%	72%	72%	P	P	P	P	U
b0639	nadD	669154	669795	-	641	26	26	26	26	26	100%	100%	100%	100%	P	P	P	P	
b0640	holA	669797	670828	-	1031	41	40	40	40	40	98%	98%	98%	98%	P	P	P	P	
b0641	rlpB	670828	671409	-	581	24	24	24	24	24	100%	100%	100%	100%	P	P	P	P	
b0642	leuS	671424	674006	-	2582	104	103	103	103	103	99%	99%	99%	99%	P	P	P	P	

b0644	ybeQ	674793	675770	-	977	39	0	3	5	21	0%	8%	13%	54%	A	P	P	P	U
b0647	ybeT	678075	678629	-	554	22	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b0650	hscC	680946	682616	-	1670	67	0	3	6	6	0%	4%	9%	9%	A	P	P	P	
b0651	rihA	682700	683635	-	935	38	36	36	36	36	95%	95%	95%	95%	P	P	P	P	
b0652	gltL	683753	684478	-	725	29	28	28	28	28	97%	97%	97%	97%	P	P	P	P	
b0653	gltK	684478	685152	-	674	27	25	25	25	26	93%	93%	93%	96%	P	P	P	P	
b0654	gltJ	685152	685892	-	740	30	26	26	26	26	87%	87%	87%	87%	P	P	P	P	
GO-9383	sroC	685904	686066	-	162	7	6	6	6	6	86%	86%	86%	86%	P	P	P	P	
b0655	gltI	686062	686970	-	908	36	36	36	36	36	100%	100%	100%	100%	P	P	P	P	
b0656	insH	687220	688236	-	1016	41	41	41	41	41	100%	100%	100%	100%	P	P	P	P	
b0657	Int	688566	690104	-	1538	61	56	56	56	56	92%	92%	92%	92%	P	P	P	P	
b0658	ybeX	690129	691007	-	878	36	36	36	36	36	100%	100%	100%	100%	P	P	P	P	
b0659	ybeY	691097	691564	-	467	19	19	19	19	19	100%	100%	100%	100%	P	P	P	P	U
b0660	ybeZ	691561	692601	-	1040	41	41	41	41	41	100%	100%	100%	100%	P	P	P	P	U
b0661	miaB	692754	694178	-	1424	57	56	56	56	56	98%	98%	98%	98%	P	P	P	P	
b0664	glnX	695653	695727	-	74	3	3	3	3	3	100%	100%	100%	100%	P	P	P	P	
b0665	glnV	695765	695839	-	74	3	3	3	3	3	100%	100%	100%	100%	P	P	P	P	
b0666	metU	695887	695963	-	76	3	3	3	3	3	100%	100%	100%	100%	P	P	P	P	
b0668	glnW	695979	696053	-	74	3	3	3	3	3	100%	100%	100%	100%	P	P	P	P	
b0670	glnU	696088	696162	-	74	3	3	3	3	3	100%	100%	100%	100%	P	P	P	P	
b0672	leuW	696186	696270	-	84	3	3	3	3	3	100%	100%	100%	100%	P	P	P	P	
b0673	metT	696280	696356	-	76	4	4	4	4	4	100%	100%	100%	100%	P	P	P	P	
b0674	asnB	696736	698400	-	1664	66	65	65	65	66	98%	98%	98%	100%	P	P	P	P	
b0675	nagD	698797	699549	-	752	30	30	30	30	30	100%	100%	100%	100%	P	P	P	P	
b0676	nagC	699597	700817	-	1220	49	48	48	48	48	98%	98%	98%	98%	P	P	P	P	
b0677	nagA	700826	701974	-	1148	46	44	45	45	46	96%	98%	98%	100%	P	P	P	P	
b0678	nagB	702034	702834	-	800	32	30	30	31	31	94%	94%	97%	97%	P	P	P	P	
b0683	fur	709423	709869	-	446	18	18	18	18	18	100%	100%	100%	100%	P	P	P	P	
b4637	uof	709862	709948	-	86	3	3	3	3	3	100%	100%	100%	100%	P	P	P	P	
b0684	fldA	710158	710688	-	530	21	21	21	21	21	100%	100%	100%	100%	P	P	P	P	
b0685	ybfE	710828	711121	-	293	12	12	12	12	12	100%	100%	100%	100%	P	P	P	P	U
b0686	ybfF	711261	712025	-	764	30	29	29	29	29	97%	97%	97%	97%	P	P	P	P	U
b0691	ybfG	715170	715820	-	650	26	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b4636	ybfI	715944	716093	-	149	6	0	0	1	1	0%	0%	17%	17%	A	A	P	P	U
b0692	potE	716169	717488	-	1319	53	0	8	22	22	0%	15%	42%	42%	A	P	P	P	
b0693	speF	717485	719683	-	2198	88	0	1	3	3	0%	1%	3%	3%	A	P	P	P	
b0694	kdpE	720279	720956	-	677	28	21	22	27	27	75%	79%	96%	96%	P	P	P	P	
b0695	kdpD	720953	723637	-	2684	108	78	78	79	79	72%	72%	73%	73%	P	P	P	P	
b0696	kdpC	723630	724202	-	572	23	14	14	14	14	61%	61%	61%	61%	P	P	P	P	
b0697	kdpB	724211	726259	-	2048	82	0	0	1	1	0%	0%	1%	1%	A	A	P	P	
b0698	kdpA	726282	727955	-	1673	67	0	0	1	1	0%	0%	1%	1%	A	A	P	P	
b4513	kdpF	727955	728044	-	89	4	0	0	1	1	0%	0%	25%	25%	A	A	P	P	
b0709	ybgH	740298	741779	-	1481	59	43	47	47	47	73%	80%	80%	80%	P	P	P	P	U
b0715	abrB	745946	746992	-	1046	42	0	3	5	8	0%	7%	12%	19%	A	P	P	P	U
b0716	ybgO	747144	748205	-	1061	42	0	0	2	2	0%	0%	5%	5%	A	A	P	P	U
b0717	ybgP	748202	748930	-	728	29	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U



b0718	ybgQ	748945	751392	-	2447	98	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b0719	ybgD	751452	752018	-	566	23	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b0720	gltA	752408	753691	-	1283	52	52	52	52	52	100%	100%	100%	100%	P	P	P	P	
b0730	mngR	764376	765098	-	722	29	18	29	29	29	62%	100%	100%	100%	P	P	P	P	
b0752	zitB	783105	784046	-	941	38	26	26	29	30	68%	68%	76%	79%	P	P	P	P	
b0753	ybgS	784160	784540	-	380	15	13	13	13	14	87%	87%	87%	93%	P	P	P	P	U
b0755	gpmA	786066	786818	-	752	30	30	30	30	30	100%	100%	100%	100%	P	P	P	P	
b0756	galM	787020	788060	-	1040	42	41	41	41	41	98%	98%	98%	98%	P	P	P	P	
b0757	galK	788054	789202	-	1148	46	46	46	46	46	100%	100%	100%	100%	P	P	P	P	
b0758	galT	789206	790252	-	1046	42	41	41	41	41	98%	98%	98%	98%	P	P	P	P	
b0759	galE	790262	791278	-	1016	40	40	40	40	40	100%	100%	100%	100%	P	P	P	P	
b0760	modF	791539	793011	-	1472	59	57	57	57	57	97%	97%	97%	97%	P	P	P	P	
b0761	modE	793079	793867	-	788	32	29	29	29	29	91%	91%	91%	91%	P	P	P	P	
b0766	ybhA	796836	797654	-	818	32	32	32	32	32	100%	100%	100%	100%	P	P	P	P	U
b0768	ybhD	798845	799798	-	953	38	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b0772	ybhC	805221	806504	-	1283	51	51	51	51	51	100%	100%	100%	100%	P	P	P	P	U
b0773	ybhB	806656	807132	-	476	19	18	18	18	18	95%	95%	95%	95%	P	P	P	P	U
b0774	bioA	807191	808480	-	1289	52	49	49	49	49	94%	94%	94%	94%	P	P	P	P	
b4591	ybhU	812337	812474	-	137	5	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b0780	ybhK	814962	815870	-	908	37	34	34	34	34	92%	92%	92%	92%	P	P	P	P	U
b0788	ybhN	820765	821721	-	956	39	0	0	2	11	0%	0%	5%	28%	A	A	P	P	U
b0789	ybhO	821721	822962	-	1241	49	35	36	37	43	71%	73%	76%	88%	P	P	P	P	
b0790	ybhP	822959	823720	-	761	31	25	25	25	28	81%	81%	81%	90%	P	P	P	P	U
b0792	ybhR	824225	825331	-	1106	44	16	16	16	23	36%	36%	36%	52%	P	P	P	P	U
b0793	ybhS	825342	826475	-	1133	45	21	21	22	25	47%	47%	49%	56%	P	P	P	P	U
b0794	ybhF	826468	828204	-	1736	69	58	58	58	58	84%	84%	84%	84%	P	P	P	P	U
b0795	ybhG	828197	829195	-	998	40	40	40	40	40	100%	100%	100%	100%	P	P	P	P	U
b0796	ybiH	829195	829866	-	671	27	18	18	18	19	67%	67%	67%	70%	P	P	P	P	U
b0798	ybiA	831691	832173	-	482	19	4	5	5	5	21%	26%	26%	26%	P	P	P	P	U
b0802	ybiJ	836888	837148	-	260	11	10	10	11	11	91%	91%	100%	100%	P	P	P	P	U
b0803	ybiI	837413	837679	-	266	11	4	6	11	11	36%	55%	100%	100%	P	P	P	P	U
b0804	ybiX	837753	838430	-	677	27	3	3	3	12	11%	11%	11%	44%	P	P	P	P	U
b0805	fiu	838472	840754	-	2282	91	22	22	27	68	24%	24%	30%	75%	P	P	P	P	U
b0806	ybiM	841019	841279	-	260	11	5	6	11	11	45%	55%	100%	100%	P	P	P	P	U
b0808	ybiO	842478	844703	-	2225	89	12	13	14	25	13%	15%	16%	28%	P	P	P	P	U
b0809	glnQ	844964	845686	-	722	29	29	29	29	29	100%	100%	100%	100%	P	P	P	P	
b0810	glnP	845683	846342	-	659	26	26	26	26	26	100%	100%	100%	100%	P	P	P	P	
b0811	glnH	846481	847227	-	746	30	30	30	30	30	100%	100%	100%	100%	P	P	P	P	
b0812	dps	847631	848134	-	503	20	20	20	20	20	100%	100%	100%	100%	P	P	P	P	
b0813	rhtA	848433	849320	-	887	35	2	2	4	4	6%	6%	11%	11%	P	P	P	P	
b0815	ybiP	850237	851820	-	1583	63	10	10	10	10	16%	16%	16%	16%	P	P	P	P	U
b4416	rybA	852175	852263	-	88	3	3	3	3	3	100%	100%	100%	100%	P	P	P	P	U
b0819	ybiS	854047	854967	-	920	37	35	35	35	35	95%	95%	95%	95%	P	P	P	P	U
b0821	ybiU	857019	858284	-	1265	51	36	36	37	37	71%	71%	73%	73%	P	P	P	P	U
b0822	ybiV	858436	859251	-	815	33	31	31	31	32	94%	94%	94%	97%	P	P	P	P	U
b0823	ybiW	859397	861829	-	2432	98	0	2	4	4	0%	2%	4%	4%	A	P	P	P	U

b0824	ybiY	861835	862761	-	926	37	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b0826	moeB	863603	864352	-	749	30	22	22	23	23	73%	73%	77%	77%	P	P	P	P	
b0827	moeA	864352	865587	-	1235	49	49	49	49	49	100%	100%	100%	100%	P	P	P	P	
b0835	yliG	875933	877258	-	1325	53	52	52	52	52	98%	98%	98%	98%	P	P	P	P	U
b0838	yliJ	879077	879703	-	626	25	23	23	24	24	92%	92%	96%	96%	P	P	P	P	U
b0840	deoR	881199	881957	-	758	30	29	29	29	29	97%	97%	97%	97%	P	P	P	P	
b0841	ybjG	882015	882611	-	596	24	24	24	24	24	100%	100%	100%	100%	P	P	P	P	
b0843	ybjH	884169	884453	-	284	11	4	4	4	4	36%	36%	36%	36%	P	P	P	P	U
b0844	ybjI	884539	885354	-	815	32	31	31	31	31	97%	97%	97%	97%	P	P	P	P	U
b0845	ybjJ	885354	886562	-	1208	49	37	39	39	39	76%	80%	80%	80%	P	P	P	P	U
b4417	rybB	887199	887277	-	78	3	1	2	2	2	33%	67%	67%	67%	P	P	P	P	
b0847	ybjL	887357	889042	-	1685	67	61	61	61	61	91%	91%	91%	91%	P	P	P	P	U
b0849	grxA	889719	889976	-	257	10	8	9	9	9	80%	90%	90%	90%	P	P	P	P	
b0860	artJ	899067	899798	-	731	29	29	29	29	29	100%	100%	100%	100%	P	P	P	P	
b0861	artM	900089	900757	-	668	27	27	27	27	27	100%	100%	100%	100%	P	P	P	P	
b0862	artQ	900757	901473	-	716	29	28	28	28	28	97%	97%	97%	97%	P	P	P	P	
b0863	artI	901480	902211	-	731	30	30	30	30	30	100%	100%	100%	100%	P	P	P	P	
b0864	artP	902229	902957	-	728	30	30	30	30	30	100%	100%	100%	100%	P	P	P	P	
b0865	ybjP	903175	903690	-	515	21	21	21	21	21	100%	100%	100%	100%	P	P	P	P	U
b0868	ybjS	904963	905976	-	1013	40	36	36	36	36	90%	90%	90%	90%	P	P	P	P	U
b0869	ybjT	906075	907505	-	1430	57	56	56	56	56	98%	98%	98%	98%	P	P	P	P	U
b0870	ltaE	907516	908517	-	1001	40	40	40	40	40	100%	100%	100%	100%	P	P	P	P	
b0871	poxB	908554	910272	-	1718	69	69	69	69	69	100%	100%	100%	100%	P	P	P	P	
b0872	hcr	910405	911373	-	968	39	0	22	22	22	0%	56%	56%	56%	A	P	P	P	
b0873	hcp	911385	913037	-	1652	66	0	9	12	12	0%	14%	18%	18%	A	P	P	P	
b0874	ybjE	913181	914080	-	899	36	34	34	34	34	94%	94%	94%	94%	P	P	P	P	U
b0875	aqpZ	914575	915270	-	695	28	6	6	18	18	21%	21%	64%	64%	P	P	P	P	
b0877	ybjX	917351	918343	-	992	40	39	39	39	39	98%	98%	98%	98%	P	P	P	P	U
b0880	cspD	921589	921813	-	224	9	9	9	9	9	100%	100%	100%	100%	P	P	P	P	
b0883	serW	925107	925194	-	87	3	3	3	3	3	100%	100%	100%	100%	P	P	P	P	
b0884	infA	925448	925666	-	218	9	9	9	9	9	100%	100%	100%	100%	P	P	P	P	
b0885	aat	925951	926655	-	704	28	28	28	28	28	100%	100%	100%	100%	P	P	P	P	
b0886	cydC	926697	928418	-	1721	69	69	69	69	69	100%	100%	100%	100%	P	P	P	P	
b0887	cydD	928419	930185	-	1766	71	69	69	69	69	97%	97%	97%	97%	P	P	P	P	
b0888	trxB	930308	931273	-	965	39	39	39	39	39	100%	100%	100%	100%	P	P	P	P	
b0897	ycaC	944154	944780	-	626	25	24	24	24	25	96%	96%	96%	100%	P	P	P	P	U
b0900	ycaN	947883	948791	-	908	37	6	6	8	12	16%	16%	22%	32%	P	P	P	P	U
b0902	pflA	949563	950303	-	740	29	29	29	29	29	100%	100%	100%	100%	P	P	P	P	
b0903	pflB	950495	952777	-	2282	91	90	90	91	91	99%	99%	100%	100%	P	P	P	P	
b0904	focA	952832	953689	-	857	35	35	35	35	35	100%	100%	100%	100%	P	P	P	P	
b0905	ycaO	954095	955855	-	1760	70	66	66	66	66	94%	94%	94%	94%	P	P	P	P	U
b0920	ycbC	971845	972624	-	779	31	15	15	16	16	48%	48%	52%	52%	P	P	P	P	U
b0928	aspC	983742	984932	-	1190	47	47	47	47	47	100%	100%	100%	100%	P	P	P	P	
b0929	ompF	985117	986205	-	1088	43	43	43	43	43	100%	100%	100%	100%	P	P	P	P	
b0930	asnS	986808	988208	-	1400	56	56	56	56	56	100%	100%	100%	100%	P	P	P	P	
b0931	pncB	988377	989579	-	1202	48	48	48	48	48	100%	100%	100%	100%	P	P	P	P	

b0933	ssuB	992500	993267	-	767	31	0	2	10	10	0%	6%	32%	32%	A	P	P	P	
b0934	ssuC	993264	994055	-	791	32	0	1	3	3	0%	3%	9%	9%	A	P	P	P	
b0935	ssuD	994066	995211	-	1145	46	0	0	3	3	0%	0%	7%	7%	A	A	P	P	
b0936	ssuA	995208	996167	-	959	39	0	0	1	1	0%	0%	3%	3%	A	A	P	P	
b0937	ssuE	996160	996735	-	575	23	0	0	0	0	0%	0%	0%	0%	A	A	A	A	
b0947	ycbX	1005714	1006823	-	1109	45	35	35	36	36	78%	78%	80%	80%	P	P	P	P	U
b0954	fabA	1015175	1015693	-	518	21	21	21	21	21	100%	100%	100%	100%	P	P	P	P	
b0955	ycbZ	1015762	1017522	-	1760	71	69	69	69	69	97%	97%	97%	97%	P	P	P	P	U
b0957	ompA	1018236	1019276	-	1040	42	42	42	42	42	100%	100%	100%	100%	P	P	P	P	
b0958	sulA	1019633	1020142	-	509	20	20	20	20	20	100%	100%	100%	100%	P	P	P	P	
b0960	yccS	1020953	1023106	-	2153	86	76	76	76	76	88%	88%	88%	88%	P	P	P	P	U
b0961	yccF	1023125	1023571	-	446	18	18	18	18	18	100%	100%	100%	100%	P	P	P	P	U
b0963	mgsA	1025780	1026238	-	458	18	18	18	18	18	100%	100%	100%	100%	P	P	P	P	
b0964	yccT	1026334	1026996	-	662	27	4	14	19	19	15%	52%	70%	70%	P	P	P	P	U
b0966	hspQ	1027627	1027944	-	317	13	13	13	13	13	100%	100%	100%	100%	P	P	P	P	
b0967	yccW	1028002	1029192	-	1190	48	48	48	48	48	100%	100%	100%	100%	P	P	P	P	U
b0969	yccK	1029562	1029891	-	329	14	13	13	13	13	93%	93%	93%	93%	P	P	P	P	U
b0970	yccA	1029982	1030641	-	659	27	27	27	27	27	100%	100%	100%	100%	P	P	P	P	
b0971	serT	1030848	1030935	-	87	3	3	3	3	3	100%	100%	100%	100%	P	P	P	P	
b0981	etk	1041253	1043433	-	2180	87	23	24	29	29	26%	28%	33%	33%	P	P	P	P	
b0982	etp	1043453	1043899	-	446	18	3	7	7	7	17%	39%	39%	39%	P	P	P	P	
b0983	gfcE	1043887	1045026	-	1139	46	5	10	10	11	11%	22%	22%	24%	P	P	P	P	U
b0984	gfcD	1045072	1047168	-	2096	84	0	0	2	2	0%	0%	2%	2%	A	A	P	P	U
b0985	gfcC	1047168	1047914	-	746	30	0	0	1	1	0%	0%	3%	3%	A	A	P	P	U
b0986	gfcB	1047911	1048555	-	644	26	0	4	5	5	0%	15%	19%	19%	A	P	P	P	U
b0987	gfcA	1048662	1048967	-	305	13	3	9	9	9	23%	69%	69%	69%	P	P	P	P	U
b0989	cspH	1050186	1050398	-	212	9	0	0	1	1	0%	0%	11%	11%	A	A	P	P	U
b0992	yccM	1051512	1052585	-	1073	43	0	0	2	2	0%	0%	5%	5%	A	A	P	P	U
b0993	torS	1052657	1055401	-	2744	110	0	0	3	3	0%	0%	3%	3%	A	A	P	P	
b0995	torR	1056485	1057177	-	692	28	18	25	25	25	64%	89%	89%	89%	P	P	P	P	
b0999	cbpM	1061773	1062078	-	305	12	10	10	10	10	83%	83%	83%	83%	P	P	P	P	
b1000	cbpA	1062078	1062998	-	920	37	37	37	37	37	100%	100%	100%	100%	P	P	P	P	
b1003	yccJ	1066087	1066314	-	227	10	10	10	10	10	100%	100%	100%	100%	P	P	P	P	U
b1004	wrbA	1066335	1066931	-	596	24	24	24	24	24	100%	100%	100%	100%	P	P	P	P	
b1006	rutG	1067734	1069062	-	1328	54	0	3	17	54	0%	6%	31%	100%	A	P	P	P	U
b1007	rutF	1069083	1069577	-	494	20	0	0	1	20	0%	0%	5%	100%	A	A	P	P	U
b1008	rutE	1069588	1070178	-	590	23	0	0	0	23	0%	0%	0%	100%	A	A	A	P	U
b1009	rutD	1070188	1070988	-	800	32	0	0	1	32	0%	0%	3%	100%	A	A	P	P	U
b1010	rutC	1070996	1071382	-	386	15	0	0	0	15	0%	0%	0%	100%	A	A	A	P	U
b1011	rutB	1071394	1072086	-	692	27	0	0	3	27	0%	0%	11%	100%	A	A	P	P	U
b1012	rutA	1072086	1073234	-	1148	46	0	0	3	46	0%	0%	7%	100%	A	A	P	P	U
b1014	putA	1074143	1078105	-	3962	158	94	94	96	99	59%	59%	61%	63%	P	P	P	P	
b1021	pgaD	1085329	1085742	-	413	17	0	15	15	15	0%	88%	88%	88%	A	P	P	P	U
b1022	pgaC	1085744	1087069	-	1325	53	0	15	15	16	0%	28%	28%	30%	A	P	P	P	U
b1023	pgaB	1087062	1089080	-	2018	81	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b1024	pgaA	1089089	1091512	-	2423	97	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U

b1026	insF	1093498	1094364	-	866	35	32	32	32	32	91%	91%	91%	91%	P	P	P	P	
b1027	insE	1094361	1094669	-	308	13	13	13	13	13	100%	100%	100%	100%	P	P	P	P	
b1032	serX	1096788	1096875	-	87	3	3	3	3	3	100%	100%	100%	100%	P	P	P	P	
b1037	csgG	1100074	1100907	-	833	33	22	22	22	22	67%	67%	67%	67%	P	P	P	P	
b1038	csgF	1100934	1101350	-	416	17	9	9	9	9	53%	53%	53%	53%	P	P	P	P	U
b1039	csgE	1101375	1101764	-	389	16	3	4	4	4	19%	25%	25%	25%	P	P	P	P	U
b1040	csgD	1101769	1102419	-	650	26	19	22	22	22	73%	85%	85%	85%	P	P	P	P	
b1047	mdoC	1107007	1108164	-	1157	46	16	16	18	18	35%	35%	39%	39%	P	P	P	P	
b1051	msyB	1113030	1113404	-	374	15	15	15	15	15	100%	100%	100%	100%	P	P	P	P	U
b1053	mdtG	1113487	1114713	-	1226	49	0	5	5	5	0%	10%	10%	10%	A	P	P	P	U
b1054	lpxL	1114885	1115805	-	920	37	37	37	37	37	100%	100%	100%	100%	P	P	P	P	
b1056	yceI	1117124	1117699	-	575	23	21	21	21	23	91%	91%	91%	100%	P	P	P	P	U
b1057	yceJ	1117703	1118269	-	566	23	8	8	8	8	35%	35%	35%	35%	P	P	P	P	U
b1058	yceO	1118530	1118670	-	140	6	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b1059	solA	1118691	1119809	-	1118	44	42	42	42	42	95%	95%	95%	95%	P	P	P	P	
b1060	bssS	1119924	1120178	-	254	10	10	10	10	10	100%	100%	100%	100%	P	P	P	P	U
b1061	dinI	1120465	1120710	-	245	10	10	10	10	10	100%	100%	100%	100%	P	P	P	P	
b1062	pyrC	1120784	1121830	-	1046	42	42	42	42	42	100%	100%	100%	100%	P	P	P	P	
b1063	yceB	1121936	1122496	-	560	22	17	17	17	17	77%	77%	77%	77%	P	P	P	P	U
b1064	grxB	1122630	1123277	-	647	26	26	26	26	26	100%	100%	100%	100%	P	P	P	P	
b1065	mdtH	1123341	1124549	-	1208	49	0	2	2	2	0%	4%	4%	4%	A	P	P	P	U
b1070	flgN	1128637	1129053	-	416	17	2	3	3	3	12%	18%	18%	18%	P	P	P	P	
b1071	flgM	1129058	1129351	-	293	12	9	9	9	9	75%	75%	75%	75%	P	P	P	P	
b1072	flgA	1129427	1130086	-	659	26	0	1	1	1	0%	4%	4%	4%	A	P	P	P	
b1084	rne	1140405	1143590	-	3185	127	127	127	127	127	100%	100%	100%	100%	P	P	P	P	
b1087	yceF	1145234	1145818	-	584	23	23	23	23	23	100%	100%	100%	100%	P	P	P	P	U
b1102	fhuE	1158585	1160774	-	2189	87	0	1	1	74	0%	1%	1%	85%	A	P	P	P	
b1111	ycfQ	1167423	1168055	-	632	26	21	23	23	23	81%	88%	88%	88%	P	P	P	P	U
b1113	ycfS	1168635	1169597	-	962	38	27	34	34	34	71%	89%	89%	89%	P	P	P	P	U
b1114	mfd	1169741	1173187	-	3446	138	137	137	137	137	99%	99%	99%	99%	P	P	P	P	
b1115	ycfT	1173315	1174388	-	1073	43	0	0	4	4	0%	0%	9%	9%	A	A	P	P	U
b1121	ycfZ	1179702	1180490	-	788	32	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b1122	ymfA	1180487	1180948	-	461	18	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b1123	potD	1181006	1182052	-	1046	42	42	42	42	42	100%	100%	100%	100%	P	P	P	P	
b1124	potC	1182049	1182843	-	794	32	31	31	31	31	97%	97%	97%	97%	P	P	P	P	
b1125	potB	1182840	1183667	-	827	33	33	33	33	33	100%	100%	100%	100%	P	P	P	P	
b1126	potA	1183681	1184817	-	1136	46	46	46	46	46	100%	100%	100%	100%	P	P	P	P	
b1128	ycfD	1186342	1187463	-	1121	45	45	45	45	45	100%	100%	100%	100%	P	P	P	P	U
b1129	phoQ	1187539	1188999	-	1460	58	58	58	58	58	100%	100%	100%	100%	P	P	P	P	
b1130	phoP	1188999	1189670	-	671	27	27	27	27	27	100%	100%	100%	100%	P	P	P	P	
b1131	purB	1189839	1191209	-	1370	55	55	55	55	55	100%	100%	100%	100%	P	P	P	P	
b1132	hflD	1191213	1191854	-	641	26	26	26	26	26	100%	100%	100%	100%	P	P	P	P	U
b1133	mnmA	1191890	1192996	-	1106	45	45	45	45	45	100%	100%	100%	100%	P	P	P	P	
b1134	nudJ	1193050	1193511	-	461	18	15	15	15	15	83%	83%	83%	83%	P	P	P	P	
b1135	rluE	1193521	1194174	-	653	26	24	24	24	24	92%	92%	92%	92%	P	P	P	P	
b1137	ymfD	1196090	1196755	-	665	27	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U

b1138	ymfE	1196756	1197460	-	704	28	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b1140	intE	1198902	1200029	-	1127	45	0	4	6	7	0%	9%	13%	16%	A	P	P	P	U
b1141	xisE	1200010	1200255	-	245	10	0	2	2	2	0%	20%	20%	20%	A	P	P	P	U
b1144	ymfJ	1200999	1201307	-	308	13	0	3	3	3	0%	23%	23%	23%	A	P	P	P	U
b1145	ymfK	1201482	1202156	-	674	27	22	22	22	22	81%	81%	81%	81%	P	P	P	P	
b1156	tfaE	1207740	1208342	-	602	24	0	0	8	8	0%	0%	33%	33%	A	A	P	P	U
b1157	stfE	1208342	1208842	-	500	20	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b1160	elbA	1210903	1211226	-	323	13	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b1161	ycgX	1211926	1212330	-	404	16	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b1162	ycgE	1212551	1213282	-	731	29	28	28	28	28	97%	97%	97%	97%	P	P	P	P	U
b1163	ycgF	1213487	1214698	-	1211	49	9	16	17	20	18%	33%	35%	41%	P	P	P	P	U
b1171	ymgD	1221528	1221857	-	329	13	13	13	13	13	100%	100%	100%	100%	P	P	P	P	U
b1172	ymgG	1221867	1222151	-	284	12	12	12	12	12	100%	100%	100%	100%	P	P	P	P	U
b4593	ymgI	1222213	1222386	-	173	7	4	4	4	4	57%	57%	57%	57%	P	P	P	P	U
b1174	minE	1223502	1223768	-	266	10	10	10	10	10	100%	100%	100%	100%	P	P	P	P	
b1175	minD	1223772	1224584	-	812	32	32	32	32	32	100%	100%	100%	100%	P	P	P	P	
b1176	minC	1224608	1225303	-	695	28	28	28	28	28	100%	100%	100%	100%	P	P	P	P	
b1178	ycgK	1226294	1226695	-	401	17	16	16	16	17	94%	94%	94%	100%	P	P	P	P	U
b1182	hlyE	1228706	1229617	-	911	36	0	1	1	8	0%	3%	3%	22%	A	P	P	P	
b1185	dsbB	1231723	1232253	-	530	21	18	18	18	18	86%	86%	86%	86%	P	P	P	P	
b1186	nhaB	1232399	1233940	-	1541	61	59	59	59	59	97%	97%	97%	97%	P	P	P	P	
b1188	ycgB	1234932	1236464	-	1532	61	55	55	61	61	90%	90%	100%	100%	P	P	P	P	U
b1191	cvrA	1239558	1241294	-	1736	69	56	56	56	56	81%	81%	81%	81%	P	P	P	P	U
b1192	ldcA	1241389	1242303	-	914	37	36	36	36	36	97%	97%	97%	97%	P	P	P	P	
b1194	ycgR	1243016	1243750	-	734	30	0	8	8	8	0%	27%	27%	27%	A	P	P	P	
b1197	treA	1244902	1246599	-	1697	68	64	64	65	66	94%	94%	96%	97%	P	P	P	P	
b1198	dhaM	1246919	1248340	-	1421	57	54	54	54	54	95%	95%	95%	95%	P	P	P	P	U
b1199	dhaL	1248348	1248980	-	632	26	24	24	24	24	92%	92%	92%	92%	P	P	P	P	
b1200	dhaK	1248991	1250061	-	1070	43	43	43	43	43	100%	100%	100%	100%	P	P	P	P	
b1202	ycgV	1252308	1255175	-	2867	115	11	15	18	18	10%	13%	16%	16%	P	P	P	P	U
b1203	ychF	1255944	1257035	-	1091	44	44	44	44	44	100%	100%	100%	100%	P	P	P	P	U
b1204	pth	1257152	1257736	-	584	23	23	23	23	23	100%	100%	100%	100%	P	P	P	P	
b1206	ychM	1258347	1260026	-	1679	68	10	10	10	11	15%	15%	15%	16%	P	P	P	P	U
b1207	prs	1260151	1261098	-	947	37	37	37	37	37	100%	100%	100%	100%	P	P	P	P	
b1208	ispE	1261249	1262100	-	851	35	35	35	35	35	100%	100%	100%	100%	P	P	P	P	
b1209	lolB	1262100	1262723	-	623	24	24	24	24	24	100%	100%	100%	100%	P	P	P	P	
b4419	ldrA	1268391	1268498	-	107	4	3	4	4	4	75%	100%	100%	100%	P	P	P	P	
b4421	ldrB	1268926	1269033	-	107	4	4	4	4	4	100%	100%	100%	100%	P	P	P	P	
b4423	ldrC	1269461	1269568	-	107	4	3	4	4	4	75%	100%	100%	100%	P	P	P	P	
b1216	chaA	1269972	1271072	-	1100	44	43	44	44	44	98%	100%	100%	100%	P	P	P	P	
b1219	ychN	1272469	1272822	-	353	14	13	13	13	13	93%	93%	93%	93%	P	P	P	P	U
b1221	narL	1274402	1275052	-	650	26	26	26	26	26	100%	100%	100%	100%	P	P	P	P	
b1222	narX	1275045	1276841	-	1796	72	37	50	51	51	51%	69%	71%	71%	P	P	P	P	
b4425	rttR	1286289	1286459	-	170	7	3	4	4	4	43%	57%	57%	57%	P	P	P	P	
b1229	tpr	1286310	1286399	-	89	3	1	1	1	1	33%	33%	33%	33%	P	P	P	P	U
b1230	tyrV	1286467	1286551	-	84	4	4	4	4	4	100%	100%	100%	100%	P	P	P	P	

b1231	tyrT	1286761	1286845	-	84	3	3	3	3	3	100%	100%	100%	100%	P	P	P	P	
b1232	purU	1287005	1287847	-	842	33	33	33	33	33	100%	100%	100%	100%	P	P	P	P	
b1233	ychJ	1287897	1288355	-	458	19	19	19	19	19	100%	100%	100%	100%	P	P	P	P	U
b1237	hns	1291732	1292145	-	413	16	16	16	16	16	100%	100%	100%	100%	P	P	P	P	
b4573	insZ	1293649	1294545	-	896	36	3	3	3	3	8%	8%	8%	8%	P	P	P	P	U
b1241	adhE	1294669	1297344	-	2675	107	107	107	107	107	100%	100%	100%	100%	P	P	P	P	
b1248	yciU	1304845	1305174	-	329	13	13	13	13	13	100%	100%	100%	100%	P	P	P	P	U
b1249	cls	1305209	1306669	-	1460	58	58	58	58	58	100%	100%	100%	100%	P	P	P	P	
b1250	kch	1307040	1308293	-	1253	50	37	37	37	44	74%	74%	74%	88%	P	P	P	P	
b1251	yciI	1308593	1308889	-	296	12	11	11	11	11	92%	92%	92%	92%	P	P	P	P	U
b1253	yciA	1309872	1310270	-	398	16	16	16	16	16	100%	100%	100%	100%	P	P	P	P	U
b1254	yciB	1310375	1310914	-	539	22	21	21	22	22	95%	95%	100%	100%	P	P	P	P	U
b1255	yciC	1310944	1311687	-	743	30	29	29	29	29	97%	97%	97%	97%	P	P	P	P	U
b1257	yciE	1312742	1313248	-	506	20	7	7	7	18	35%	35%	35%	90%	P	P	P	P	U
b1258	yciF	1313294	1313794	-	500	20	17	17	17	20	85%	85%	85%	100%	P	P	P	P	U
b1259	yciG	1313880	1314059	-	179	7	7	7	7	7	100%	100%	100%	100%	P	P	P	P	U
b1260	trpA	1314440	1315246	-	806	32	32	32	32	32	100%	100%	100%	100%	P	P	P	P	
b1261	trpB	1315246	1316439	-	1193	48	48	48	48	48	100%	100%	100%	100%	P	P	P	P	
b1262	trpC	1316451	1317809	-	1358	55	55	55	55	55	100%	100%	100%	100%	P	P	P	P	
b1263	trpD	1317813	1319408	-	1595	64	64	64	64	64	100%	100%	100%	100%	P	P	P	P	
b1264	trpE	1319408	1320970	-	1562	62	62	62	62	62	100%	100%	100%	100%	P	P	P	P	
b1265	trpL	1321062	1321106	-	44	2	2	2	2	2	100%	100%	100%	100%	P	P	P	P	
b1270	btuR	1325791	1326381	-	590	24	24	24	24	24	100%	100%	100%	100%	P	P	P	P	
b1271	yciK	1326378	1327136	-	758	30	30	30	30	30	100%	100%	100%	100%	P	P	P	P	U
b1273	yciN	1328441	1328692	-	251	10	8	8	8	8	80%	80%	80%	80%	P	P	P	P	U
b1277	ribA	1336594	1337184	-	590	23	23	23	23	23	100%	100%	100%	100%	P	P	P	P	
b1283	osmB	1341134	1341352	-	218	9	9	9	9	9	100%	100%	100%	100%	P	P	P	P	
b1284	yciT	1341621	1342370	-	749	30	23	23	23	23	77%	77%	77%	77%	P	P	P	P	U
b4596	yciZ	1342460	1342633	-	173	7	7	7	7	7	100%	100%	100%	100%	P	P	P	P	U
b1285	gmr	1342781	1344766	-	1985	80	51	51	77	77	64%	64%	96%	96%	P	P	P	P	
b1286	rnb	1345002	1346936	-	1934	77	77	77	77	77	100%	100%	100%	100%	P	P	P	P	
b1287	yciW	1347004	1348131	-	1127	45	45	45	45	45	100%	100%	100%	100%	P	P	P	P	U
b1288	fabI	1348275	1349063	-	788	32	31	31	31	31	97%	97%	97%	97%	P	P	P	P	
b1289	ycjD	1349431	1349784	-	353	14	1	1	7	7	7%	7%	50%	50%	P	P	P	P	U
b1290	sapF	1349852	1350658	-	806	32	27	27	29	29	84%	84%	91%	91%	P	P	P	P	U
b1291	sapD	1350660	1351652	-	992	40	39	39	40	40	98%	98%	100%	100%	P	P	P	P	U
b1292	sapC	1351652	1352542	-	890	36	13	13	33	33	36%	36%	92%	92%	P	P	P	P	U
b1293	sapB	1352529	1353494	-	965	39	26	26	38	38	67%	67%	97%	97%	P	P	P	P	U
b1294	sapA	1353491	1355134	-	1643	65	59	59	61	61	91%	91%	94%	94%	P	P	P	P	U
b1295	ymjA	1355447	1355692	-	245	10	10	10	10	10	100%	100%	100%	100%	P	P	P	P	U
b1296	puuP	1355826	1357211	-	1385	55	12	12	12	13	22%	22%	22%	24%	P	P	P	P	
b1297	puuA	1357514	1358932	-	1418	57	56	56	56	56	98%	98%	98%	98%	P	P	P	P	
b1303	pspF	1364959	1365936	-	977	39	12	12	12	12	31%	31%	31%	31%	P	P	P	P	
b1320	ycjW	1380987	1381985	-	998	40	20	20	20	20	50%	50%	50%	50%	P	P	P	P	U
b1324	tpx	1386329	1386835	-	506	20	20	20	20	20	100%	100%	100%	100%	P	P	P	P	
b1326	mpaA	1387894	1388682	-	788	31	28	28	28	28	90%	90%	90%	90%	P	P	P	P	

b4525	ymjC	1388749	1388886	-	137	5	1	1	1	1	20%	20%	20%	20%	P	P	P	P	U
b1327	ycjY	1388957	1389889	-	932	37	0	2	2	3	0%	5%	5%	8%	A	P	P	P	U
b1330	ynaI	1392915	1393946	-	1031	42	34	34	34	34	81%	81%	81%	81%	P	P	P	P	U
b1333	uspE	1395696	1396646	-	950	38	38	38	38	38	100%	100%	100%	100%	P	P	P	P	
b1334	fnr	1396798	1397550	-	752	30	30	30	30	30	100%	100%	100%	100%	P	P	P	P	
b1335	ogt	1397745	1398260	-	515	20	13	13	13	16	65%	65%	65%	80%	P	P	P	P	
b1336	abgT	1398271	1399797	-	1526	61	0	1	1	1	0%	2%	2%	2%	A	P	P	P	U
b1337	abgB	1399834	1401279	-	1445	58	0	2	5	5	0%	3%	9%	9%	A	P	P	P	U
b1338	abgA	1401279	1402589	-	1310	52	0	0	5	6	0%	0%	10%	12%	A	A	P	P	U
b4426	isrA	1403676	1403833	-	157	6	3	3	4	4	50%	50%	67%	67%	P	P	P	P	U
b1341	ydaM	1404587	1405819	-	1232	50	44	46	46	46	88%	92%	92%	92%	P	P	P	P	U
b1344	ttcA	1409037	1409972	-	935	38	38	38	38	38	100%	100%	100%	100%	P	P	P	P	U
b1345	intR	1410024	1411259	-	1235	49	6	12	17	17	12%	24%	35%	35%	P	P	P	P	
b1346	ydaQ	1411261	1411476	-	215	9	0	0	1	1	0%	0%	11%	11%	A	A	P	P	U
b1347	ydaC	1411555	1411764	-	209	8	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b1348	lar	1411757	1411951	-	194	8	0	1	2	2	0%	13%	25%	25%	A	P	P	P	
b1349	recT	1412008	1412817	-	809	32	0	3	3	5	0%	9%	9%	16%	A	P	P	P	
b1350	recE	1412810	1415410	-	2600	104	0	1	6	6	0%	1%	6%	6%	A	P	P	P	
b1351	racC	1415512	1415787	-	275	11	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b4526	ydaE	1415862	1416032	-	170	7	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b1352	kilR	1416032	1416253	-	221	9	0	0	0	0	0%	0%	0%	0%	A	A	A	A	
b4527	ydaF	1417180	1417335	-	155	6	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b1355	ydaG	1417346	1417480	-	134	5	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b1356	racR	1417789	1418265	-	476	19	18	18	18	18	95%	95%	95%	95%	P	P	P	P	U
b1370	insH	1425770	1426750	-	980	39	37	37	37	37	95%	95%	95%	95%	P	P	P	P	
b1374	pinR	1431108	1431698	-	590	24	0	1	1	1	0%	4%	4%	4%	A	P	P	P	U
b1375	ynaE	1432015	1432281	-	266	10	0	2	2	2	0%	20%	20%	20%	A	P	P	P	U
b4638	ttcC	1432982	1433032	-	50	2	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b1376	uspF	1433209	1433643	-	434	18	17	17	18	18	94%	94%	100%	100%	P	P	P	P	
b1377	ompN	1433784	1434917	-	1133	46	0	1	1	1	0%	2%	2%	2%	A	P	P	P	
b1378	ydbK	1435284	1438808	-	3524	141	135	135	140	140	96%	96%	99%	99%	P	P	P	P	U
b1379	hslJ	1439345	1439767	-	422	17	14	15	17	17	82%	88%	100%	100%	P	P	P	P	
b1380	ldhA	1439878	1440867	-	989	40	39	40	40	40	98%	100%	100%	100%	P	P	P	P	
b1384	feaR	1444402	1445307	-	905	36	5	5	6	9	14%	14%	17%	25%	P	P	P	P	
b1386	tynA	1447100	1449373	-	2273	91	0	1	4	4	0%	1%	4%	4%	A	P	P	P	
b1387	maoC	1449621	1451666	-	2045	82	0	0	6	6	0%	0%	7%	7%	A	A	P	P	
b1402	insD	1465945	1466850	-	905	36	36	36	36	36	100%	100%	100%	100%	P	P	P	P	
b1403	insC	1466808	1467173	-	365	15	15	15	15	15	100%	100%	100%	100%	P	P	P	P	
b1412	azoR	1480279	1480884	-	605	24	22	22	22	22	92%	92%	92%	92%	P	P	P	P	
b4493	gapC	1487737	1488737	-	1000	40	40	40	40	40	100%	100%	100%	100%	P	P	P	P	U
b4597	rydC	1489467	1489530	-	63	3	0	0	0	0	0%	0%	0%	0%	A	A	A	A	
b4428	hokB	1489946	1490095	-	149	6	6	6	6	6	100%	100%	100%	100%	P	P	P	P	
b1420	mokB	1489986	1490153	-	167	7	7	7	7	7	100%	100%	100%	100%	P	P	P	P	
b1422	ydcI	1492172	1493095	-	923	37	37	37	37	37	100%	100%	100%	100%	P	P	P	P	U
b1428	ydcK	1497493	1498473	-	980	39	20	20	36	36	51%	51%	92%	92%	P	P	P	P	U
b4578	yncK	1501167	1501658	-	491	20	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U

b1433	ydcO	1502929	1504104	-	1175	47	0	1	3	3	0%	2%	6%	6%	A	P	P	P	U
b1436	yncJ	1506858	1507088	-	230	9	0	8	8	8	0%	89%	89%	89%	A	P	P	P	U
b4598	yncL	1515123	1515218	-	95	4	4	4	4	4	100%	100%	100%	100%	P	P	P	P	U
b1447	ydcZ	1515906	1516355	-	449	18	9	9	9	10	50%	50%	50%	56%	P	P	P	P	U
b1448	yncA	1516352	1516870	-	518	20	20	20	20	20	100%	100%	100%	100%	P	P	P	P	U
b1451	yncD	1518987	1521089	-	2102	84	56	57	57	57	67%	68%	68%	68%	P	P	P	P	U
b1453	ansP	1522505	1524004	-	1499	60	9	9	11	11	15%	15%	18%	18%	P	P	P	P	
b1462	yddH	1531306	1531875	-	569	23	4	4	7	14	17%	17%	30%	61%	P	P	P	P	U
b1464	yddE	1532989	1533882	-	893	36	32	32	32	32	89%	89%	89%	89%	P	P	P	P	U
b1465	narV	1533961	1534641	-	680	27	0	0	2	2	0%	0%	7%	7%	A	A	P	P	
b1466	narW	1534638	1535333	-	695	28	0	2	2	2	0%	7%	7%	7%	A	P	P	P	
b1467	narY	1535333	1536877	-	1544	61	0	0	3	3	0%	0%	5%	5%	A	A	P	P	
b1468	narZ	1536874	1540614	-	3740	150	0	0	9	13	0%	0%	6%	9%	A	A	P	P	
b1469	narU	1540696	1542084	-	1388	56	0	0	2	7	0%	0%	4%	13%	A	A	P	P	
b1470	yddJ	1542408	1542743	-	335	13	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b1471	yddK	1542782	1543771	-	989	39	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b1472	yddL	1543774	1544052	-	278	11	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b1473	yddG	1544312	1545193	-	881	36	24	24	24	24	67%	67%	67%	67%	P	P	P	P	U
b1477	yddM	1550422	1550706	-	284	11	9	11	11	11	82%	100%	100%	100%	P	P	P	P	U
b1478	adhP	1550852	1551862	-	1010	40	38	38	39	39	95%	95%	98%	98%	P	P	P	P	
b1479	maeA	1551996	1553693	-	1697	68	68	68	68	68	100%	100%	100%	100%	P	P	P	P	
b1480	sra	1553850	1553987	-	137	5	5	5	5	5	100%	100%	100%	100%	P	P	P	P	
b1481	bdm	1554089	1554304	-	215	9	5	5	5	6	56%	56%	56%	67%	P	P	P	P	
b1483	ddpF	1555136	1556062	-	926	37	0	0	1	35	0%	0%	3%	95%	A	A	P	P	
b1484	ddpD	1556055	1557041	-	986	39	0	0	1	39	0%	0%	3%	100%	A	A	P	P	
b1485	ddpC	1557038	1557934	-	896	36	0	0	1	36	0%	0%	3%	100%	A	A	P	P	
b1486	ddpB	1557931	1558953	-	1022	41	0	0	2	41	0%	0%	5%	100%	A	A	P	P	
b1487	ddpA	1558955	1560505	-	1550	62	0	0	0	62	0%	0%	0%	100%	A	A	A	P	
b1488	ddpX	1560519	1561100	-	581	23	0	0	0	23	0%	0%	0%	100%	A	A	A	P	
b1489	dos	1561358	1563757	-	2399	96	14	14	25	45	15%	15%	26%	47%	P	P	P	P	
b1490	yddV	1563782	1565164	-	1382	55	41	41	54	54	75%	75%	98%	98%	P	P	P	P	U
b1491	yddW	1565528	1566847	-	1319	53	49	49	49	49	92%	92%	92%	92%	P	P	P	P	U
b1492	gadC	1566978	1568513	-	1535	61	59	59	61	61	97%	97%	100%	100%	P	P	P	P	U
b1493	gadB	1568669	1570069	-	1400	56	56	56	56	56	100%	100%	100%	100%	P	P	P	P	
b1494	pqqL	1570431	1573226	-	2795	112	0	6	7	10	0%	5%	6%	9%	A	P	P	P	U
b1495	yddB	1573271	1575643	-	2372	95	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b1496	yddA	1575681	1577366	-	1685	68	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b1497	ydeM	1577657	1578814	-	1157	47	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b1498	ydeN	1578866	1580548	-	1682	67	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b1499	ydeO	1580950	1581711	-	761	30	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b1500	yneN	1581786	1581983	-	197	8	0	0	0	0	0%	0%	0%	0%	A	A	A	A	
b1501	ydeP	1582231	1584510	-	2279	91	0	54	54	54	0%	59%	59%	59%	A	P	P	P	U
b1502	ydeQ	1584844	1585758	-	914	36	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b1503	ydeR	1585817	1586320	-	503	20	0	3	3	3	0%	15%	15%	15%	A	P	P	P	U
b1504	ydeS	1586333	1586863	-	530	22	0	8	8	8	0%	36%	36%	36%	A	P	P	P	U
b1505	ydeT	1586877	1588103	-	1226	49	0	10	10	11	0%	20%	20%	22%	A	P	P	P	U



b1506	yneL	1588358	1588560	-	202	8	0	2	2	2	0%	25%	25%	25%	A	P	P	P	U
b1507	hipA	1588878	1590200	-	1322	53	36	42	42	42	68%	79%	79%	79%	P	P	P	P	
b1508	hipB	1590200	1590466	-	266	11	11	11	11	11	100%	100%	100%	100%	P	P	P	P	
b1509	ydeU	1590689	1592089	-	1400	56	23	29	30	31	41%	52%	54%	55%	P	P	P	P	U
b1510	ydeK	1592133	1596110	-	3977	159	41	69	74	75	26%	43%	47%	47%	P	P	P	P	U
b1511	lsrK	1596641	1598233	-	1592	63	5	5	19	19	8%	8%	30%	30%	P	P	P	P	
b1512	lsrR	1598312	1599265	-	953	39	16	17	21	23	41%	44%	54%	59%	P	P	P	P	
b1520	yneE	1606132	1607046	-	914	37	26	26	26	26	70%	70%	70%	70%	P	P	P	P	U
b1521	uxaB	1607253	1608704	-	1451	58	0	2	13	13	0%	3%	22%	22%	A	P	P	P	
b1522	yneF	1608931	1609878	-	947	38	5	9	10	10	13%	24%	26%	26%	P	P	P	P	U
b1523	yneG	1609990	1610349	-	359	14	13	13	13	13	93%	93%	93%	93%	P	P	P	P	U
b1524	yneH	1610349	1611275	-	926	37	37	37	37	37	100%	100%	100%	100%	P	P	P	P	U
b1525	sad	1611339	1612727	-	1388	55	49	49	49	50	89%	89%	89%	91%	P	P	P	P	U
b1529	marC	1616267	1616932	-	665	26	20	21	21	22	77%	81%	81%	85%	P	P	P	P	U
b1533	eamA	1618262	1619161	-	899	36	36	36	36	36	100%	100%	100%	100%	P	P	P	P	
b1535	ydeH	1620984	1621874	-	890	36	0	33	33	33	0%	92%	92%	92%	A	P	P	P	U
b1536	ydeI	1622129	1622521	-	392	16	5	14	15	16	31%	88%	94%	100%	P	P	P	P	U
b1538	dcp	1623359	1625404	-	2045	82	82	82	82	82	100%	100%	100%	100%	P	P	P	P	
b1542	ydfI	1627477	1628937	-	1460	59	0	2	3	3	0%	3%	5%	5%	A	P	P	P	U
b4600	ydfJ	1629026	1630309	-	1283	51	0	0	3	3	0%	0%	6%	6%	A	A	P	P	U
b1546	tfaQ	1632334	1632909	-	575	23	0	1	3	4	0%	4%	13%	17%	A	P	P	P	U
b1547	ydfN	1632909	1633871	-	962	39	0	1	3	3	0%	3%	8%	8%	A	P	P	P	U
b1548	nohA	1633864	1634391	-	527	21	0	0	2	2	0%	0%	10%	10%	A	A	P	P	U
b1550	gnsB	1635633	1635806	-	173	6	5	5	5	5	83%	83%	83%	83%	P	P	P	P	U
b1551	ynfN	1635978	1636133	-	155	6	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b1552	cspI	1636479	1636691	-	212	9	0	0	0	0	0%	0%	0%	0%	A	A	A	A	
b1553	ydfP	1637054	1637551	-	497	20	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b1554	arrQ	1637548	1638081	-	533	21	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b1555	ydfR	1638078	1638389	-	311	13	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b1556	essQ	1638394	1638609	-	215	8	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b1557	cspB	1639363	1639578	-	215	8	0	0	0	1	0%	0%	0%	13%	A	A	A	P	
b1559	quuQ	1640513	1641265	-	752	30	6	7	11	12	20%	23%	37%	40%	P	P	P	P	U
b1560	ydfU	1641279	1642226	-	947	38	0	0	2	2	0%	0%	5%	5%	A	A	P	P	U
b1561	rem	1642675	1642926	-	251	10	1	2	7	7	10%	20%	70%	70%	P	P	P	P	U
b1562	hokD	1643143	1643298	-	155	6	6	6	6	6	100%	100%	100%	100%	P	P	P	P	
b1563	relE	1643370	1643657	-	287	11	10	11	11	11	91%	100%	100%	100%	P	P	P	P	
b1564	relB	1643657	1643896	-	239	10	9	10	10	10	90%	100%	100%	100%	P	P	P	P	
b1567	ydfW	1645146	1645373	-	227	9	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b1568	ydfX	1645370	1645660	-	290	11	0	0	2	2	0%	0%	18%	18%	A	A	P	P	U
b1569	dicC	1645644	1645874	-	230	9	0	0	0	0	0%	0%	0%	0%	A	A	A	A	
b4600	ydfJ	1650779	1650862	-	83	3	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b1580	rspB	1650920	1651939	-	1019	40	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b1581	rspA	1651951	1653165	-	1214	48	0	0	4	4	0%	0%	8%	8%	A	A	P	P	U
b1582	ynfA	1653371	1653697	-	326	13	8	8	8	9	62%	62%	62%	69%	P	P	P	P	U
b1585	ynfC	1654771	1655481	-	710	28	20	20	20	22	71%	71%	71%	79%	P	P	P	P	U
b1593	ynfK	1664548	1665243	-	695	27	22	27	27	27	81%	100%	100%	100%	P	P	P	P	U

b1594	dgsA	1665368	1666588	-	1220	49	43	44	44	44	88%	90%	90%	90%	P	P	P	P	
b1595	ynfL	1666723	1667616	-	893	35	4	4	8	8	11%	11%	23%	23%	P	P	P	P	U
b1599	mdtI	1670844	1671173	-	329	14	1	1	1	1	7%	7%	7%	7%	P	P	P	P	
b1600	mdtJ	1671160	1671525	-	365	15	4	4	4	4	27%	27%	27%	27%	P	P	P	P	
b1602	pntB	1672996	1674384	-	1388	55	55	55	55	55	100%	100%	100%	100%	P	P	P	P	
b1603	pntA	1674395	1675927	-	1532	62	62	62	62	62	100%	100%	100%	100%	P	P	P	P	
b1607	ydgC	1679719	1680054	-	335	14	13	13	13	13	93%	93%	93%	93%	P	P	P	P	U
b1611	fumC	1683209	1684612	-	1403	56	51	51	51	51	91%	91%	91%	91%	P	P	P	P	
b1612	fumA	1684755	1686401	-	1646	66	66	66	66	66	100%	100%	100%	100%	P	P	P	P	
b1615	uidC	1689610	1690875	-	1265	51	0	1	5	5	0%	2%	10%	10%	A	P	P	P	U
b1616	uidB	1690914	1692287	-	1373	55	0	0	3	3	0%	0%	5%	5%	A	A	P	P	U
b1617	uidA	1692284	1694095	-	1811	73	0	0	8	8	0%	0%	11%	11%	A	A	P	P	
b1618	uidR	1694486	1695076	-	590	24	16	16	17	17	67%	67%	71%	71%	P	P	P	P	
b1619	hdhA	1695297	1696064	-	767	30	30	30	30	30	100%	100%	100%	100%	P	P	P	P	
b1620	malI	1696176	1697204	-	1028	41	4	29	29	29	10%	71%	71%	71%	P	P	P	P	
b1624	ydgJ	1701292	1702332	-	1040	42	42	42	42	42	100%	100%	100%	100%	P	P	P	P	U
b1636	pdxY	1713050	1713913	-	863	34	31	31	31	31	91%	91%	91%	91%	P	P	P	P	
b1637	tyrS	1713972	1715246	-	1274	51	50	50	50	50	98%	98%	98%	98%	P	P	P	P	
b1638	pdxH	1715375	1716031	-	656	26	26	26	26	26	100%	100%	100%	100%	P	P	P	P	
b1639	ydhA	1716090	1716419	-	329	13	8	9	9	10	62%	69%	69%	77%	P	P	P	P	U
b1640	anmK	1716517	1717626	-	1109	45	33	33	33	33	73%	73%	73%	73%	P	P	P	P	U
b1642	slyA	1718414	1718848	-	434	18	18	18	18	18	100%	100%	100%	100%	P	P	P	P	
b1646	sodC	1722158	1722679	-	521	21	20	20	20	20	95%	95%	95%	95%	P	P	P	P	
b1647	ydhF	1722760	1723656	-	896	36	36	36	36	36	100%	100%	100%	100%	P	P	P	P	U
b1648	ydhL	1723705	1723944	-	239	9	6	6	7	7	67%	67%	78%	78%	P	P	P	P	U
b1654	grxD	1731778	1732125	-	347	14	14	14	14	14	100%	100%	100%	100%	P	P	P	P	U
b1657	ydhP	1734145	1735314	-	1169	46	21	21	22	22	46%	46%	48%	48%	P	P	P	P	U
b4602	ynhF	1735480	1735569	-	89	4	4	4	4	4	100%	100%	100%	100%	P	P	P	P	U
b1659	ydhB	1736890	1737822	-	932	38	18	21	21	21	47%	55%	55%	55%	P	P	P	P	U
b1662	ribC	1740625	1741266	-	641	26	26	26	26	26	100%	100%	100%	100%	P	P	P	P	
b1664	ydhQ	1742895	1744151	-	1256	50	49	50	50	50	98%	100%	100%	100%	P	P	P	P	U
b1669	ydhT	1746771	1747583	-	812	32	0	1	1	1	0%	3%	3%	3%	A	P	P	P	U
b1670	ydhU	1747587	1748372	-	785	32	0	4	9	10	0%	13%	28%	31%	A	P	P	P	U
b1671	ydhX	1748369	1749088	-	719	28	0	2	2	3	0%	7%	7%	11%	A	P	P	P	U
b1672	ydhW	1749101	1749748	-	647	26	0	4	5	5	0%	15%	19%	19%	A	P	P	P	U
b1673	ydhV	1749752	1751854	-	2102	84	0	12	13	13	0%	14%	15%	15%	A	P	P	P	U
b1674	ydhY	1751875	1752501	-	626	25	0	5	5	5	0%	20%	20%	20%	A	P	P	P	U
b1675	ydhZ	1752956	1753165	-	209	9	7	7	7	7	78%	78%	78%	78%	P	P	P	P	U
b1678	ynhG	1755745	1756749	-	1004	40	38	38	40	40	95%	95%	100%	100%	P	P	P	P	U
b1679	sufE	1756898	1757314	-	416	16	12	12	13	13	75%	75%	81%	81%	P	P	P	P	
b1680	sufS	1757327	1758547	-	1220	49	47	47	49	49	96%	96%	100%	100%	P	P	P	P	
b1681	sufD	1758544	1759815	-	1271	51	51	51	51	51	100%	100%	100%	100%	P	P	P	P	
b1682	sufC	1759790	1760536	-	746	30	28	28	30	30	93%	93%	100%	100%	P	P	P	P	
b1683	sufB	1760546	1762033	-	1487	59	57	57	59	59	97%	97%	100%	100%	P	P	P	P	
b1684	sufA	1762042	1762410	-	368	15	15	15	15	15	100%	100%	100%	100%	P	P	P	P	
b4430	rydB	1762737	1762804	-	67	3	3	3	3	3	100%	100%	100%	100%	P	P	P	P	U

b1685	ydiH	1762958	1763227	-	269	11	9	9	9	9	82%	82%	82%	82%	P	P	P	P	U
b1686	ydiI	1763246	1763656	-	410	16	16	16	16	16	100%	100%	100%	100%	P	P	P	P	U
b1687	ydiJ	1763653	1766709	-	3056	122	122	122	122	122	100%	100%	100%	100%	P	P	P	P	U
b1696	ydiP	1776414	1777325	-	911	37	0	2	2	9	0%	5%	5%	24%	A	P	P	P	U
b1702	pps	1782758	1785136	-	2378	95	95	95	95	95	100%	100%	100%	100%	P	P	P	P	
b1706	ydiU	1787832	1789268	-	1436	57	54	54	54	54	95%	95%	95%	95%	P	P	P	P	U
b1707	ydiV	1789331	1790044	-	713	28	16	16	17	18	57%	57%	61%	64%	P	P	P	P	U
b1708	nlpC	1790291	1790755	-	464	19	19	19	19	19	100%	100%	100%	100%	P	P	P	P	U
b1709	btuD	1790833	1791582	-	749	30	30	30	30	30	100%	100%	100%	100%	P	P	P	P	
b1710	btuE	1791582	1792133	-	551	22	22	22	22	22	100%	100%	100%	100%	P	P	P	P	U
b1711	btuC	1792196	1793176	-	980	40	34	34	35	35	85%	85%	88%	88%	P	P	P	P	
b1712	ihfA	1793277	1793576	-	299	12	12	12	12	12	100%	100%	100%	100%	P	P	P	P	
b1713	pheT	1793581	1795968	-	2387	95	94	94	94	94	99%	99%	99%	99%	P	P	P	P	
b1714	pheS	1795983	1796966	-	983	39	39	39	39	39	100%	100%	100%	100%	P	P	P	P	
b1715	pheM	1797250	1797294	-	44	1	1	1	1	1	100%	100%	100%	100%	P	P	P	P	
b1716	rplT	1797417	1797773	-	356	15	15	15	15	15	100%	100%	100%	100%	P	P	P	P	
b1717	rpmI	1797826	1798023	-	197	8	8	8	8	8	100%	100%	100%	100%	P	P	P	P	
b1718	infC	1798120	1798662	-	542	22	22	22	22	22	100%	100%	100%	100%	P	P	P	P	
b1719	thrS	1798666	1800594	-	1928	77	77	77	77	77	100%	100%	100%	100%	P	P	P	P	
b1722	ydiY	1803349	1804107	-	758	30	28	28	28	28	93%	93%	93%	93%	P	P	P	P	U
b1726	yniB	1806721	1807257	-	536	22	21	21	21	22	95%	95%	95%	100%	P	P	P	P	U
b1730	ydjO	1810353	1811168	-	815	32	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b1731	cedA	1811445	1811687	-	242	10	6	6	6	6	60%	60%	60%	60%	P	P	P	P	
b1733	chbG	1814410	1815159	-	749	30	11	11	11	12	37%	37%	37%	40%	P	P	P	P	U
b1734	chbF	1815172	1816524	-	1352	54	9	10	12	14	17%	19%	22%	26%	P	P	P	P	
b1735	chbR	1816629	1817471	-	842	34	5	5	7	11	15%	15%	21%	32%	P	P	P	P	
b1736	chbA	1817479	1817829	-	350	14	6	7	7	8	43%	50%	50%	57%	P	P	P	P	
b1737	chbC	1817880	1819238	-	1358	55	3	4	5	5	5%	7%	9%	9%	P	P	P	P	
b1738	chbB	1819323	1819643	-	320	13	10	12	12	12	77%	92%	92%	92%	P	P	P	P	
b1739	osmE	1819942	1820280	-	338	13	13	13	13	13	100%	100%	100%	100%	P	P	P	P	
b1742	ves	1822386	1822961	-	575	23	0	4	4	5	0%	17%	17%	22%	A	P	P	P	U
b1743	spy	1823164	1823649	-	485	19	12	18	19	19	63%	95%	100%	100%	P	P	P	P	
b1744	astE	1823979	1824947	-	968	39	1	1	32	32	3%	3%	82%	82%	P	P	P	P	
b1745	astB	1824940	1826283	-	1343	53	1	1	51	52	2%	2%	96%	98%	P	P	P	P	
b1746	astD	1826280	1827758	-	1478	59	2	2	57	58	3%	3%	97%	98%	P	P	P	P	
b1747	astA	1827755	1828789	-	1034	42	7	7	42	42	17%	17%	100%	100%	P	P	P	P	
b1748	astC	1828786	1830006	-	1220	48	16	16	48	48	33%	33%	100%	100%	P	P	P	P	
b1758	ynjF	1838807	1839427	-	620	25	13	13	13	14	52%	52%	52%	56%	P	P	P	P	U
b1760	ynjH	1839887	1840159	-	272	10	0	1	3	3	0%	10%	30%	30%	A	P	P	P	U
b1762	ynjI	1841855	1842895	-	1040	42	0	3	3	3	0%	7%	7%	7%	A	P	P	P	U
b1763	topB	1843023	1844984	-	1961	78	77	77	77	77	99%	99%	99%	99%	P	P	P	P	
b1764	selD	1844989	1846032	-	1043	41	41	41	41	41	100%	100%	100%	100%	P	P	P	P	
b1765	ydjA	1846149	1846700	-	551	22	22	22	22	22	100%	100%	100%	100%	P	P	P	P	U
b1769	ydjE	1850645	1852003	-	1358	54	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b1770	ydjF	1852120	1852878	-	758	30	15	15	15	15	50%	50%	50%	50%	P	P	P	P	U
b1771	ydjG	1853015	1853995	-	980	39	0	1	1	1	0%	3%	3%	3%	A	P	P	P	U

b1772	ydjH	1854005	1854952	-	947	38	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b1773	ydjI	1854957	1855793	-	836	34	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b1774	ydjJ	1855814	1856857	-	1043	41	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b1775	ydjK	1856874	1858253	-	1379	55	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b1776	ydjL	1858280	1859356	-	1076	43	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b1777	yeaC	1859726	1859998	-	272	11	11	11	11	11	100%	100%	100%	100%	P	P	P	P	U
b1778	msrB	1860040	1860453	-	413	16	16	16	16	16	100%	100%	100%	100%	P	P	P	P	
b1781	yeaE	1862806	1863660	-	854	35	18	18	19	19	51%	51%	54%	54%	P	P	P	P	U
b1782	mipA	1863750	1864496	-	746	30	30	30	30	30	100%	100%	100%	100%	P	P	P	P	
b1788	yoaI	1872102	1872206	-	104	4	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b1790	yeaM	1872779	1873600	-	821	33	23	23	23	23	70%	70%	70%	70%	P	P	P	P	U
b1793	yoaF	1875302	1875556	-	254	10	10	10	10	10	100%	100%	100%	100%	P	P	P	P	U
b1795	yeaQ	1877031	1877279	-	248	10	10	10	10	10	100%	100%	100%	100%	P	P	P	P	U
b1796	yoaG	1877427	1877609	-	182	7	0	4	4	4	0%	57%	57%	57%	A	P	P	P	U
b1797	yeaR	1877613	1877972	-	359	15	0	2	2	2	0%	13%	13%	13%	A	P	P	P	U
b1798	leuE	1878145	1878783	-	638	25	1	8	8	8	4%	32%	32%	32%	P	P	P	P	
b1799	yeaT	1878910	1879833	-	923	37	28	28	28	32	76%	76%	76%	86%	P	P	P	P	U
b1804	rnd	1884888	1886015	-	1127	45	35	35	35	35	78%	78%	78%	78%	P	P	P	P	
G0-9384	sroD	1886041	1886126	-	85	4	2	2	3	3	50%	50%	75%	75%	P	P	P	P	
b1805	fadD	1886085	1887770	-	1685	68	51	51	68	68	75%	75%	100%	100%	P	P	P	P	
b1806	yeaY	1887975	1888556	-	581	23	20	20	20	20	87%	87%	87%	87%	P	P	P	P	U
b1807	yeaZ	1888596	1889291	-	695	27	26	26	26	26	96%	96%	96%	96%	P	P	P	P	U
b1808	yoaA	1889349	1891259	-	1910	76	60	60	60	60	79%	79%	79%	79%	P	P	P	P	U
b1811	yoaH	1892576	1892755	-	179	7	7	7	7	7	100%	100%	100%	100%	P	P	P	P	U
b1816	yoaE	1898053	1899609	-	1556	62	58	58	58	58	94%	94%	94%	94%	P	P	P	P	U
b1822	rrmA	1904275	1905084	-	809	32	29	29	29	29	91%	91%	91%	91%	P	P	P	P	
b1823	cspC	1905250	1905459	-	209	8	8	8	8	8	100%	100%	100%	100%	P	P	P	P	
b1824	yobF	1905472	1905615	-	143	5	5	5	5	5	100%	100%	100%	100%	P	P	P	P	U
b1825	yebO	1906285	1906572	-	287	12	9	10	10	10	75%	83%	83%	83%	P	P	P	P	U
b1826	mgrB	1906647	1906790	-	143	5	5	5	5	5	100%	100%	100%	100%	P	P	P	P	U
b1827	kdgR	1907332	1908123	-	791	32	32	32	32	32	100%	100%	100%	100%	P	P	P	P	U
b1829	htpX	1909719	1910600	-	881	36	35	36	36	36	97%	100%	100%	100%	P	P	P	P	U
b1830	prc	1910792	1912840	-	2048	82	82	82	82	82	100%	100%	100%	100%	P	P	P	P	
b1831	proQ	1912860	1913558	-	698	28	28	28	28	28	100%	100%	100%	100%	P	P	P	P	U
b1832	yebR	1913655	1914152	-	497	20	20	20	20	20	100%	100%	100%	100%	P	P	P	P	
b1838	pphA	1920337	1920993	-	656	26	0	15	15	15	0%	58%	58%	58%	A	P	P	P	
b4433	ryeB	1921188	1921308	-	120	5	2	2	3	3	40%	40%	60%	60%	P	P	P	P	U
b1839	yebY	1921389	1921730	-	341	14	13	13	13	13	93%	93%	93%	93%	P	P	P	P	U
b1840	yebZ	1921743	1922615	-	872	35	35	35	35	35	100%	100%	100%	100%	P	P	P	P	U
b1841	yobA	1922619	1922993	-	374	15	15	15	15	15	100%	100%	100%	100%	P	P	P	P	U
b1845	ptrB	1924803	1926863	-	2060	82	52	52	52	59	63%	63%	63%	72%	P	P	P	P	
b1846	yebE	1927072	1927731	-	659	26	22	26	26	26	85%	100%	100%	100%	P	P	P	P	U
b1847	yebF	1928058	1928414	-	356	14	14	14	14	14	100%	100%	100%	100%	P	P	P	P	U
b1848	yebG	1928481	1928771	-	290	12	12	12	12	12	100%	100%	100%	100%	P	P	P	P	U
b1850	eda	1930139	1930780	-	641	26	26	26	26	26	100%	100%	100%	100%	P	P	P	P	
b1851	edd	1930817	1932628	-	1811	73	72	72	72	72	99%	99%	99%	99%	P	P	P	P	

b1852	zwf	1932863	1934338	-	1475	59	58	58	58	58	98%	98%	98%	98%	P	P	P	P	
b1855	lpxM	1937246	1938217	-	971	39	38	38	38	38	97%	97%	97%	97%	P	P	P	P	
b1856	yebA	1938337	1939659	-	1322	53	53	53	53	53	100%	100%	100%	100%	P	P	P	P	U
b1857	znuA	1939675	1940607	-	932	37	37	37	37	37	100%	100%	100%	100%	P	P	P	P	
b1860	ruvB	1942370	1943380	-	1010	41	41	41	41	41	100%	100%	100%	100%	P	P	P	P	
b1861	ruvA	1943389	1944000	-	611	25	25	25	25	25	100%	100%	100%	100%	P	P	P	P	
b1863	ruvC	1944879	1945400	-	521	21	20	20	20	20	95%	95%	95%	95%	P	P	P	P	
b1864	yebC	1945435	1946175	-	740	30	30	30	30	30	100%	100%	100%	100%	P	P	P	P	U
b1865	nudB	1946204	1946656	-	452	18	18	18	18	18	100%	100%	100%	100%	P	P	P	P	
b1866	aspS	1946774	1948546	-	1772	71	71	71	71	71	100%	100%	100%	100%	P	P	P	P	
b1872	torZ	1952602	1955031	-	2429	97	4	13	18	18	4%	13%	19%	19%	P	P	P	P	
b1873	torY	1955056	1956156	-	1100	44	0	1	1	2	0%	2%	2%	5%	A	P	P	P	
b1874	cutC	1956544	1957290	-	746	30	30	30	30	30	100%	100%	100%	100%	P	P	P	P	
b1875	yecM	1957304	1957870	-	566	22	22	22	22	22	100%	100%	100%	100%	P	P	P	P	U
b1878	flhE	1960604	1960996	-	392	15	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b1879	flhA	1960996	1963074	-	2078	84	8	9	10	10	10%	11%	12%	12%	P	P	P	P	U
b1880	flhB	1963067	1964215	-	1148	46	0	0	2	2	0%	0%	4%	4%	A	A	P	P	U
b1881	cheZ	1964417	1965061	-	644	26	4	7	7	7	15%	27%	27%	27%	P	P	P	P	
b1882	cheY	1965072	1965461	-	389	16	3	7	7	7	19%	44%	44%	44%	P	P	P	P	
b1883	cheB	1965476	1966525	-	1049	42	2	4	5	6	5%	10%	12%	14%	P	P	P	P	
b1884	cheR	1966528	1967388	-	860	34	0	0	0	0	0%	0%	0%	0%	A	A	A	A	
b1885	tap	1967407	1969008	-	1601	64	0	1	1	1	0%	2%	2%	2%	A	P	P	P	
b1886	tar	1969054	1970715	-	1661	66	0	10	10	10	0%	15%	15%	15%	A	P	P	P	
b1887	cheW	1970860	1971363	-	503	20	0	0	0	0	0%	0%	0%	0%	A	A	A	A	
b1888	cheA	1971384	1973348	-	1964	78	0	10	10	10	0%	13%	13%	13%	A	P	P	P	
b1889	motB	1973353	1974279	-	926	37	0	5	5	6	0%	14%	14%	16%	A	P	P	P	
b1890	motA	1974276	1975163	-	887	35	0	14	14	14	0%	40%	40%	40%	A	P	P	P	
b1891	flhC	1975290	1975868	-	578	23	21	22	22	22	91%	96%	96%	96%	P	P	P	P	
b1892	flhD	1975871	1976221	-	350	14	13	13	13	13	93%	93%	93%	93%	P	P	P	P	
b1893	insB	1976542	1977045	-	503	20	10	14	15	15	50%	70%	75%	75%	P	P	P	P	
b1894	insA	1976964	1977239	-	275	11	10	10	10	10	91%	91%	91%	91%	P	P	P	P	
b1896	otsA	1978212	1979636	-	1424	57	56	56	57	57	98%	98%	100%	100%	P	P	P	P	
b1897	otsB	1979611	1980411	-	800	32	32	32	32	32	100%	100%	100%	100%	P	P	P	P	
b4460	araH	1980578	1981564	-	986	39	0	9	36	36	0%	23%	92%	92%	A	P	P	P	
b1900	araG	1981579	1983093	-	1514	60	0	9	56	56	0%	15%	93%	93%	A	P	P	P	
b1901	araF	1983163	1984152	-	989	40	0	8	39	39	0%	20%	98%	98%	A	P	P	P	
b4537	yecJ	1985531	1985782	-	251	10	10	10	10	10	100%	100%	100%	100%	P	P	P	P	U
b4434	isrB	1985863	1986022	-	159	6	5	5	5	5	83%	83%	83%	83%	P	P	P	P	U
b1906	yecH	1987275	1987514	-	239	10	0	7	10	10	0%	70%	100%	100%	A	P	P	P	U
b1908	yecA	1988978	1989643	-	665	26	26	26	26	26	100%	100%	100%	100%	P	P	P	P	U
b1909	leuZ	1989839	1989925	-	86	3	3	3	3	3	100%	100%	100%	100%	P	P	P	P	
b1910	cysT	1989938	1990011	-	73	3	3	3	3	3	100%	100%	100%	100%	P	P	P	P	
b1911	glyW	1990066	1990141	-	75	3	3	3	3	3	100%	100%	100%	100%	P	P	P	P	
b1912	pgsA	1990293	1990841	-	548	22	22	22	22	22	100%	100%	100%	100%	P	P	P	P	
b1913	uvrC	1990898	1992730	-	1832	74	70	70	70	71	95%	95%	95%	96%	P	P	P	P	
b1914	uvrY	1992727	1993383	-	656	27	27	27	27	27	100%	100%	100%	100%	P	P	P	P	

b1916	sdiA	1994134	1994856	-	722	29	14	17	22	22	48%	59%	76%	76%	P	P	P	P	
b1917	yecC	1995086	1995838	-	752	30	26	26	28	28	87%	87%	93%	93%	P	P	P	P	U
b1918	yecS	1995835	1996503	-	668	26	26	26	26	26	100%	100%	100%	100%	P	P	P	P	U
b1919	dcyD	1996518	1997504	-	986	39	39	39	39	39	100%	100%	100%	100%	P	P	P	P	
b1920	fliY	1997609	1998409	-	800	32	32	32	32	32	100%	100%	100%	100%	P	P	P	P	
b1921	fliZ	1998497	1999048	-	551	22	1	1	2	4	5%	5%	9%	18%	P	P	P	P	U
b1922	fliA	1999094	1999813	-	719	29	0	6	6	6	0%	21%	21%	21%	A	P	P	P	
b1923	fliC	2000134	2001630	-	1496	60	26	57	60	60	43%	95%	100%	100%	P	P	P	P	
b1928	yedD	2005701	2006114	-	413	16	16	16	16	16	100%	100%	100%	100%	P	P	P	P	U
b4495	yedN	2009247	2010375	-	1128	46	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b1937	fliE	2010724	2011038	-	314	12	0	0	0	0	0%	0%	0%	0%	A	A	A	A	
b1952	dsrB	2022659	2022847	-	188	7	6	6	6	7	86%	86%	86%	100%	P	P	P	P	U
b1954	dsrA	2023251	2023337	-	86	4	2	2	2	2	50%	50%	50%	50%	P	P	P	P	
b1956	yedQ	2024347	2026041	-	1694	68	41	41	50	52	60%	60%	74%	76%	P	P	P	P	U
b1957	yodC	2026212	2026394	-	182	7	7	7	7	7	100%	100%	100%	100%	P	P	P	P	U
b1958	yedI	2026473	2027390	-	917	37	37	37	37	37	100%	100%	100%	100%	P	P	P	P	U
b1960	vsr	2028472	2028942	-	470	19	11	11	11	11	58%	58%	58%	58%	P	P	P	P	
b1961	dcm	2028923	2030341	-	1418	57	54	54	54	54	95%	95%	95%	95%	P	P	P	P	
b1962	yedJ	2030408	2031103	-	695	28	28	28	28	28	100%	100%	100%	100%	P	P	P	P	U
b1963	yedR	2031143	2031508	-	365	15	13	13	13	13	87%	87%	87%	87%	P	P	P	P	U
b1968	yedV	2034818	2036176	-	1358	54	18	18	18	18	33%	33%	33%	33%	P	P	P	P	U
b1969	yedW	2036176	2036847	-	671	27	21	21	21	21	78%	78%	78%	78%	P	P	P	P	U
b1975	serU	2041492	2041581	-	89	3	3	3	3	3	100%	100%	100%	100%	P	P	P	P	
b4497	yeeL	2050300	2051352	-	1052	42	0	0	4	4	0%	0%	10%	10%	A	A	P	P	U
b1984	asnW	2056051	2056126	-	75	3	3	3	3	3	100%	100%	100%	100%	P	P	P	P	
b1985	yeeO	2056227	2057870	-	1643	66	11	27	38	41	17%	41%	58%	62%	P	P	P	P	U
b1987	cbl	2057988	2058938	-	950	38	36	36	36	38	95%	95%	95%	100%	P	P	P	P	
b1988	nac	2059040	2059957	-	917	36	0	0	1	36	0%	0%	3%	100%	A	A	P	P	
b1990	erfK	2060415	2061347	-	932	37	25	29	30	35	68%	78%	81%	95%	P	P	P	P	U
b1991	cobT	2061412	2062491	-	1079	43	41	42	42	43	95%	98%	98%	100%	P	P	P	P	
b1992	cobS	2062503	2063246	-	743	30	30	30	30	30	100%	100%	100%	100%	P	P	P	P	
b1993	cobU	2063243	2063788	-	545	22	21	21	21	21	95%	95%	95%	95%	P	P	P	P	
b4639	yeeH	2064092	2064178	-	86	3	0	1	1	1	0%	33%	33%	33%	A	P	P	P	U
b1994	insH	2064329	2065345	-	1016	41	41	41	41	41	100%	100%	100%	100%	P	P	P	P	
b4640	yoeG	2065384	2065916	-	532	22	17	20	20	20	77%	91%	91%	91%	P	P	P	P	U
b4641	yoeH	2066285	2066443	-	158	6	5	5	5	5	83%	83%	83%	83%	P	P	P	P	U
b1996	insD	2066976	2067881	-	905	36	36	36	36	36	100%	100%	100%	100%	P	P	P	P	
b1997	insC	2067839	2068204	-	365	14	14	14	14	14	100%	100%	100%	100%	P	P	P	P	
b4642	yoeD	2076573	2076701	-	128	5	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b2007	yeeX	2077056	2077385	-	329	13	13	13	13	13	100%	100%	100%	100%	P	P	P	P	U
b2008	yeeA	2077557	2078615	-	1058	43	27	27	29	31	63%	63%	67%	72%	P	P	P	P	U
b2009	sbmC	2078813	2079286	-	473	19	19	19	19	19	100%	100%	100%	100%	P	P	P	P	
b2010	dacD	2079405	2080571	-	1166	47	13	14	18	19	28%	30%	38%	40%	P	P	P	P	
b2012	yeeD	2082250	2082477	-	227	9	9	9	9	9	100%	100%	100%	100%	P	P	P	P	U
b2013	yeeE	2082491	2083549	-	1058	42	41	41	41	41	98%	98%	98%	98%	P	P	P	P	U
b2014	yeeF	2083728	2085086	-	1358	55	55	55	55	55	100%	100%	100%	100%	P	P	P	P	U

b2015	yeeY	2085353	2086282	-	929	37	9	21	37	37	24%	57%	100%	100%	P	P	P	P	U
b2016	yeeZ	2086328	2087152	-	824	33	32	32	33	33	97%	97%	100%	100%	P	P	P	P	U
b4539	yoeB	2087235	2087489	-	254	11	11	11	11	11	100%	100%	100%	100%	P	P	P	P	
b2017	yefM	2087486	2087737	-	251	11	11	11	11	11	100%	100%	100%	100%	P	P	P	P	
b2027	cld	2095345	2096325	-	980	40	39	39	39	39	98%	98%	98%	98%	P	P	P	P	
b2028	ugd	2096471	2097637	-	1166	47	20	20	20	20	43%	43%	43%	43%	P	P	P	P	
b2029	gnd	2097886	2099292	-	1406	56	56	56	56	56	100%	100%	100%	100%	P	P	P	P	
b4571	wbbL	2099420	2099768	-	348	14	13	13	13	13	93%	93%	93%	93%	P	P	P	P	U
b2030	insH	2099919	2100935	-	1016	41	41	41	41	41	100%	100%	100%	100%	P	P	P	P	
b4571	wbbL	2100968	2101413	-	445	18	16	16	16	16	89%	89%	89%	89%	P	P	P	P	U
b2032	wbbK	2101415	2102533	-	1118	45	44	44	44	44	98%	98%	98%	98%	P	P	P	P	
b2033	wbbJ	2102518	2103108	-	590	24	24	24	24	24	100%	100%	100%	100%	P	P	P	P	U
b2034	wbbI	2103089	2104081	-	992	40	40	40	40	40	100%	100%	100%	100%	P	P	P	P	U
b2035	rfc	2104084	2105250	-	1166	46	42	42	42	43	91%	91%	91%	93%	P	P	P	P	
b2036	glf	2105250	2106353	-	1103	44	43	43	43	43	98%	98%	98%	98%	P	P	P	P	
b2037	rfbX	2106361	2107608	-	1247	50	48	48	48	49	96%	96%	96%	98%	P	P	P	P	U
b2038	rfbC	2107605	2108162	-	557	23	23	23	23	23	100%	100%	100%	100%	P	P	P	P	
b2039	rfbA	2108162	2109043	-	881	35	35	35	35	35	100%	100%	100%	100%	P	P	P	P	
b2040	rfbD	2109101	2110000	-	899	36	36	36	36	36	100%	100%	100%	100%	P	P	P	P	
b2041	rfbB	2110000	2111085	-	1085	44	44	44	44	44	100%	100%	100%	100%	P	P	P	P	
b2042	galF	2111458	2112351	-	893	36	36	36	36	36	100%	100%	100%	100%	P	P	P	P	U
b2043	wcaM	2112526	2113920	-	1394	56	7	9	10	14	13%	16%	18%	25%	P	P	P	P	U
b2044	wcaL	2113931	2115151	-	1220	49	0	0	2	2	0%	0%	4%	4%	A	A	P	P	U
b2045	wcaK	2115148	2116428	-	1280	51	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b2046	wzxC	2116704	2118182	-	1478	59	0	0	3	3	0%	0%	5%	5%	A	A	P	P	
b2047	wcaJ	2118184	2119578	-	1394	56	0	0	5	5	0%	0%	9%	9%	A	A	P	P	U
b2048	cpsG	2119633	2121003	-	1370	55	0	0	3	3	0%	0%	5%	5%	A	A	P	P	
b2049	cpsB	2121108	2122544	-	1436	58	0	0	2	2	0%	0%	3%	3%	A	A	P	P	
b2050	wcaI	2122547	2123770	-	1223	49	0	0	2	2	0%	0%	4%	4%	A	A	P	P	U
b2051	gmm	2123767	2124246	-	479	19	0	0	1	1	0%	0%	5%	5%	A	A	P	P	
b2052	fcl	2124249	2125214	-	965	39	0	0	2	2	0%	0%	5%	5%	A	A	P	P	
b2053	gmd	2125217	2126338	-	1121	45	0	0	2	2	0%	0%	4%	4%	A	A	P	P	
b2054	wcaF	2126364	2126912	-	548	21	0	0	1	1	0%	0%	5%	5%	A	A	P	P	U
b2055	wcaE	2126928	2127674	-	746	30	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b2056	wcaD	2127685	2128902	-	1217	49	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b2057	wcaC	2128877	2130094	-	1217	49	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b2058	wcaB	2130091	2130579	-	488	20	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b2059	wcaA	2130582	2131421	-	839	34	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b2060	wzc	2131514	2133676	-	2162	87	0	0	0	0	0%	0%	0%	0%	A	A	A	A	
b2061	wzb	2133679	2134122	-	443	18	0	0	0	0	0%	0%	0%	0%	A	A	A	A	
b2062	wza	2134128	2135267	-	1139	46	0	0	0	0	0%	0%	0%	0%	A	A	A	A	
b2064	asmA	2137783	2139636	-	1853	74	71	71	71	71	96%	96%	96%	96%	P	P	P	P	U
b2065	dcd	2139658	2140239	-	581	23	23	23	23	23	100%	100%	100%	100%	P	P	P	P	
b2066	udk	2140331	2140972	-	641	26	26	26	26	26	100%	100%	100%	100%	P	P	P	P	
b2068	alkA	2144716	2145564	-	848	34	13	15	22	22	38%	44%	65%	65%	P	P	P	P	
b2070	yegI	2147063	2149009	-	1946	78	0	1	5	6	0%	1%	6%	8%	A	P	P	P	U

b2072	yegK	2149735	2150496	-	761	31	0	0	4	4	0%	0%	13%	13%	A	A	P	P	U
b2073	yegL	2150493	2151152	-	659	26	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b2082	ogrK	2165326	2165544	-	218	9	8	9	9	9	89%	100%	100%	100%	P	P	P	P	
b2083	yegZ	2165626	2165838	-	212	8	0	1	1	1	0%	13%	13%	13%	A	P	P	P	U
b2085	yegR	2166013	2166330	-	317	13	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b4498	gatR	2167717	2168191	-	474	19	0	2	2	2	0%	11%	11%	11%	A	P	P	P	U
b4498	gatR	2169453	2169751	-	298	12	12	12	12	12	100%	100%	100%	100%	P	P	P	P	U
b2091	gatD	2169857	2170897	-	1040	42	42	42	42	42	100%	100%	100%	100%	P	P	P	P	
b2092	gatC	2170945	2172300	-	1355	54	54	54	54	54	100%	100%	100%	100%	P	P	P	P	
b2093	gatB	2172304	2172588	-	284	11	11	11	11	11	100%	100%	100%	100%	P	P	P	P	
b2094	gatA	2172619	2173071	-	452	18	18	18	18	18	100%	100%	100%	100%	P	P	P	P	
b2095	gatZ	2173081	2174343	-	1262	51	51	51	51	51	100%	100%	100%	100%	P	P	P	P	
b2096	gatY	2174372	2175226	-	854	34	34	34	34	34	100%	100%	100%	100%	P	P	P	P	
b2097	fbaB	2175534	2176586	-	1052	42	42	42	42	42	100%	100%	100%	100%	P	P	P	P	
b2101	yegW	2180057	2180803	-	746	30	25	25	25	25	83%	83%	83%	83%	P	P	P	P	U
b2102	yegX	2180855	2181673	-	818	33	14	15	15	16	42%	45%	45%	48%	P	P	P	P	U
b2103	thiD	2181738	2182538	-	800	32	32	32	32	32	100%	100%	100%	100%	P	P	P	P	
b2104	thiM	2182535	2183323	-	788	32	32	32	32	32	100%	100%	100%	100%	P	P	P	P	
b2105	rcnR	2183546	2183818	-	272	11	9	9	9	9	82%	82%	82%	82%	P	P	P	P	U
b2108	yehA	2185402	2186436	-	1034	41	0	0	1	1	0%	0%	2%	2%	A	A	P	P	U
b2109	yehB	2186452	2188932	-	2480	99	0	3	3	3	0%	3%	3%	3%	A	P	P	P	U
b2110	yehC	2188948	2189667	-	719	29	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b2111	yehD	2189702	2190244	-	542	22	0	6	6	6	0%	27%	27%	27%	A	P	P	P	U
b2112	yehE	2190537	2190818	-	281	12	9	9	10	12	75%	75%	83%	100%	P	P	P	P	U
b2113	mrp	2191081	2192190	-	1109	44	44	44	44	44	100%	100%	100%	100%	P	P	P	P	
b2124	yehS	2209748	2210218	-	470	19	14	14	14	14	74%	74%	74%	74%	P	P	P	P	U
b2125	yehT	2210265	2210984	-	719	29	25	25	25	25	86%	86%	86%	86%	P	P	P	P	U
b2126	yehU	2210981	2212666	-	1685	67	31	31	31	35	46%	46%	46%	52%	P	P	P	P	U
b2128	yehW	2213767	2214498	-	731	30	12	12	12	15	40%	40%	40%	50%	P	P	P	P	U
b2129	yehX	2214503	2215429	-	926	37	27	27	27	29	73%	73%	73%	78%	P	P	P	P	U
b2130	yehY	2215422	2216579	-	1157	46	16	16	16	19	35%	35%	35%	41%	P	P	P	P	U
b2131	osmF	2216586	2217503	-	917	37	35	35	35	37	95%	95%	95%	100%	P	P	P	P	U
b2132	bglX	2217714	2220011	-	2297	92	92	92	92	92	100%	100%	100%	100%	P	P	P	P	
b2134	pbpG	2221960	2222892	-	932	37	35	36	36	36	95%	97%	97%	97%	P	P	P	P	
b2135	yohC	2223066	2223653	-	587	24	8	12	24	24	33%	50%	100%	100%	P	P	P	P	U
b2137	yohF	2224531	2225292	-	761	30	17	21	22	27	57%	70%	73%	90%	P	P	P	P	U
b2139	mdtQ	2225345	2226780	-	1435	57	0	1	1	1	0%	2%	2%	2%	A	P	P	P	U
b2140	dusC	2227460	2228407	-	947	38	25	25	25	25	66%	66%	66%	66%	P	P	P	P	
b2148	mgIC	2234765	2235775	-	1010	41	28	28	28	28	68%	68%	68%	68%	P	P	P	P	
b2149	mgIA	2235791	2237311	-	1520	61	45	45	45	45	74%	74%	74%	74%	P	P	P	P	
b2150	mgIB	2237372	2238370	-	998	39	39	39	39	39	100%	100%	100%	100%	P	P	P	P	
b2151	galS	2238650	2239690	-	1040	41	0	0	3	3	0%	0%	7%	7%	A	A	P	P	
b2152	yeiB	2239832	2240989	-	1157	46	36	36	36	36	78%	78%	78%	78%	P	P	P	P	U
b2153	folE	2241006	2241674	-	668	27	27	27	27	27	100%	100%	100%	100%	P	P	P	P	
b2155	cirA	2242800	2244791	-	1991	79	55	55	55	76	70%	70%	70%	96%	P	P	P	P	
b2156	lysP	2245085	2246554	-	1469	59	59	59	59	59	100%	100%	100%	100%	P	P	P	P	



b2157	yeiE	2246759	2247640	-	881	35	26	26	26	26	74%	74%	74%	74%	P	P	P	P	U
b2161	nupX	2250917	2252167	-	1250	50	0	0	5	5	0%	0%	10%	10%	A	A	P	P	U
b2162	rihB	2252267	2253208	-	941	38	0	0	1	1	0%	0%	3%	3%	A	A	P	P	
b2164	yeiM	2254107	2255357	-	1250	50	0	2	5	5	0%	4%	10%	10%	A	P	P	P	U
b2165	yeiN	2255451	2256389	-	938	37	0	0	1	1	0%	0%	3%	3%	A	A	P	P	U
b2166	yeiC	2256377	2257318	-	941	37	0	2	2	2	0%	5%	5%	5%	A	P	P	P	U
b2167	fruA	2257741	2259432	-	1691	68	65	68	68	68	96%	100%	100%	100%	P	P	P	P	
b2168	fruK	2259449	2260387	-	938	37	37	37	37	37	100%	100%	100%	100%	P	P	P	P	
b2169	fruB	2260387	2261517	-	1130	45	38	45	45	45	84%	100%	100%	100%	P	P	P	P	
b4502	yeiW	2263063	2263317	-	254	10	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b2181	yejG	2275915	2276259	-	344	14	14	14	14	14	100%	100%	100%	100%	P	P	P	P	U
b2182	bcr	2276592	2277782	-	1190	48	41	41	41	41	85%	85%	85%	85%	P	P	P	P	
b2183	rsuA	2277810	2278505	-	695	28	28	28	28	28	100%	100%	100%	100%	P	P	P	P	
b2186	yejK	2280962	2281969	-	1007	40	40	40	40	40	100%	100%	100%	100%	P	P	P	P	
b2190	yejO	2284412	2286936	-	2524	101	66	68	71	77	65%	67%	70%	76%	P	P	P	P	U
b2192	insH	2287087	2288103	-	1016	41	41	41	41	41	100%	100%	100%	100%	P	P	P	P	
b2190	yejO	2288136	2288202	-	66	3	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b2194	ccmH	2289380	2290432	-	1052	42	10	10	10	10	24%	24%	24%	24%	P	P	P	P	
b2195	ccmG	2290429	2290986	-	557	22	5	5	5	5	23%	23%	23%	23%	P	P	P	P	
b2196	ccmF	2290983	2292926	-	1943	78	21	21	21	21	27%	27%	27%	27%	P	P	P	P	
b2197	ccmE	2292923	2293402	-	479	19	16	16	16	16	84%	84%	84%	84%	P	P	P	P	
b2198	ccmD	2293399	2293608	-	209	8	4	4	4	4	50%	50%	50%	50%	P	P	P	P	
b2199	ccmC	2293605	2294342	-	737	30	15	15	15	15	50%	50%	50%	50%	P	P	P	P	
b2200	ccmB	2294384	2295046	-	662	27	5	5	5	5	19%	19%	19%	19%	P	P	P	P	
b2201	ccmA	2295043	2295666	-	623	25	9	10	11	11	36%	40%	44%	44%	P	P	P	P	
b2202	napC	2295679	2296281	-	602	24	9	11	12	12	38%	46%	50%	50%	P	P	P	P	
b2203	napB	2296291	2296740	-	449	18	1	2	2	2	6%	11%	11%	11%	P	P	P	P	
b2204	napH	2296737	2297600	-	863	35	1	1	2	2	3%	3%	6%	6%	P	P	P	P	
b2205	napG	2297587	2298282	-	695	28	1	1	2	2	4%	4%	7%	7%	P	P	P	P	
b2206	napA	2298289	2300775	-	2486	99	6	8	8	8	6%	8%	8%	8%	P	P	P	P	
b2207	napD	2300772	2301035	-	263	10	1	1	1	2	10%	10%	10%	20%	P	P	P	P	
b2208	napF	2301025	2301519	-	494	20	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b2210	mgo	2303130	2304776	-	1646	66	65	65	65	65	98%	98%	98%	98%	P	P	P	P	
b2211	yojI	2304994	2306637	-	1643	66	62	62	62	62	94%	94%	94%	94%	P	P	P	P	U
b2212	alkB	2306713	2307363	-	650	26	4	4	13	13	15%	15%	50%	50%	P	P	P	P	
b2213	ada	2307363	2308427	-	1064	43	17	17	41	41	40%	40%	95%	95%	P	P	P	P	
b2214	apbE	2308501	2309556	-	1055	42	10	10	10	10	24%	24%	24%	24%	P	P	P	P	U
b2215	ompC	2309668	2310771	-	1103	44	44	44	44	44	100%	100%	100%	100%	P	P	P	P	
b2218	rscC	2315049	2317898	-	2849	114	102	102	102	102	89%	89%	89%	89%	P	P	P	P	
b2225	yfaP	2325389	2326165	-	776	31	0	0	10	10	0%	0%	32%	32%	A	A	P	P	U
b2226	yfaQ	2326170	2327819	-	1649	66	0	0	1	1	0%	0%	2%	2%	A	A	P	P	U
b4500	yfaS	2327820	2332424	-	4604	184	0	0	1	1	0%	0%	1%	1%	A	A	P	P	U
b2229	yfaT	2332358	2332981	-	623	25	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b2230	yfaA	2332978	2334666	-	1688	67	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b2231	gyrA	2334815	2337442	-	2627	105	105	105	105	105	100%	100%	100%	100%	P	P	P	P	
b2233	yfaL	2338439	2342191	-	3752	150	50	52	54	55	33%	35%	36%	37%	P	P	P	P	

b4605	ypaB	2342616	2342759	-	143	6	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b2237	inaA	2346844	2347494	-	650	26	20	20	21	22	77%	77%	81%	85%	P	P	P	P	U
b2239	glpQ	2347957	2349033	-	1076	43	25	28	29	31	58%	65%	67%	72%	P	P	P	P	
b2240	glpT	2349038	2350396	-	1358	54	11	12	13	15	20%	22%	24%	28%	P	P	P	P	
b2245	yfaU	2356064	2356867	-	803	32	0	7	8	8	0%	22%	25%	25%	A	P	P	P	U
b2246	yfaV	2356885	2358174	-	1289	51	0	3	4	4	0%	6%	8%	8%	A	P	P	P	U
b2247	yfaW	2358231	2359448	-	1217	48	0	0	9	10	0%	0%	19%	21%	A	A	P	P	U
b2248	yfaX	2359451	2360233	-	782	32	0	0	3	4	0%	0%	9%	13%	A	A	P	P	U
b2249	yfaY	2360453	2361655	-	1202	49	36	36	36	37	73%	73%	73%	76%	P	P	P	P	U
b2250	yfaZ	2361755	2362297	-	542	21	13	13	14	14	62%	62%	67%	67%	P	P	P	P	U
b2252	ais	2363040	2363642	-	602	24	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b2259	pmrD	2371294	2371560	-	266	11	10	11	11	11	91%	100%	100%	100%	P	P	P	P	
b2260	menE	2371670	2373025	-	1355	54	33	33	33	34	61%	61%	61%	63%	P	P	P	P	
b2261	menC	2373022	2373984	-	962	39	39	39	39	39	100%	100%	100%	100%	P	P	P	P	
b2262	menB	2373984	2374841	-	857	34	34	34	34	34	100%	100%	100%	100%	P	P	P	P	
b2263	yfbB	2374856	2375614	-	758	30	19	19	19	19	63%	63%	63%	63%	P	P	P	P	U
b2264	menD	2375611	2377281	-	1670	67	57	57	57	57	85%	85%	85%	85%	P	P	P	P	
b2265	menF	2377370	2378665	-	1295	52	49	49	49	49	94%	94%	94%	94%	P	P	P	P	
b2266	elaB	2378744	2379049	-	305	12	12	12	12	12	100%	100%	100%	100%	P	P	P	P	U
b2267	elaA	2379104	2379565	-	461	19	18	18	18	19	95%	95%	95%	100%	P	P	P	P	U
b2270	yfbK	2382017	2383744	-	1727	69	0	0	0	9	0%	0%	0%	13%	A	A	A	P	U
b2273	yfbN	2385732	2386448	-	716	28	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b2276	nuoN	2388070	2389527	-	1457	58	58	58	58	58	100%	100%	100%	100%	P	P	P	P	
b2277	nuoM	2389534	2391063	-	1529	61	61	61	61	61	100%	100%	100%	100%	P	P	P	P	
b2278	nuoL	2391227	2393068	-	1841	74	74	74	74	74	100%	100%	100%	100%	P	P	P	P	
b2279	nuoK	2393065	2393367	-	302	12	12	12	12	12	100%	100%	100%	100%	P	P	P	P	
b2280	nuoJ	2393364	2393918	-	554	22	22	22	22	22	100%	100%	100%	100%	P	P	P	P	
b2281	nuoI	2393930	2394472	-	542	22	22	22	22	22	100%	100%	100%	100%	P	P	P	P	
b2282	nuoH	2394487	2395464	-	977	39	39	39	39	39	100%	100%	100%	100%	P	P	P	P	
b2283	nuoG	2395461	2398187	-	2726	109	109	109	109	109	100%	100%	100%	100%	P	P	P	P	
b2284	nuoF	2398240	2399577	-	1337	53	53	53	53	53	100%	100%	100%	100%	P	P	P	P	
b2285	nuoE	2399574	2400074	-	500	20	20	20	20	20	100%	100%	100%	100%	P	P	P	P	
b2286	nuoC	2400077	2401867	-	1790	72	72	72	72	72	100%	100%	100%	100%	P	P	P	P	
b2287	nuoB	2401973	2402635	-	662	27	27	27	27	27	100%	100%	100%	100%	P	P	P	P	
b2288	nuoA	2402651	2403094	-	443	18	18	18	18	18	100%	100%	100%	100%	P	P	P	P	
b2289	lrhA	2403725	2404663	-	938	37	36	36	36	36	97%	97%	97%	97%	P	P	P	P	
b2292	yfbS	2407542	2409374	-	1832	74	12	14	16	37	16%	19%	22%	50%	P	P	P	P	U
b2293	yfbT	2409461	2410111	-	650	26	26	26	26	26	100%	100%	100%	100%	P	P	P	P	U
b2294	yfbU	2410122	2410616	-	494	20	20	20	20	20	100%	100%	100%	100%	P	P	P	P	U
b2295	yfbV	2410699	2411154	-	455	18	18	18	18	18	100%	100%	100%	100%	P	P	P	P	U
b2299	yfcD	2416656	2417198	-	542	22	22	22	22	22	100%	100%	100%	100%	P	P	P	P	U
b2300	yfcE	2417256	2417810	-	554	22	22	22	22	22	100%	100%	100%	100%	P	P	P	P	U
b2301	yfcF	2417863	2418507	-	644	26	21	21	21	21	81%	81%	81%	81%	P	P	P	P	U
b2305	yfcI	2420671	2421561	-	890	36	8	15	18	21	22%	42%	50%	58%	P	P	P	P	U
b2306	hisP	2421758	2422531	-	773	31	29	29	29	30	94%	94%	94%	97%	P	P	P	P	
b2307	hisM	2422539	2423255	-	716	29	29	29	29	29	100%	100%	100%	100%	P	P	P	P	

b2308	hisQ	2423252	2423938	-	686	27	27	27	27	27	100%	100%	100%	100%	P	P	P	P	
b2309	hisJ	2424028	2424810	-	782	31	31	31	31	31	100%	100%	100%	100%	P	P	P	P	
b2310	argT	2425031	2425813	-	782	31	31	31	31	31	100%	100%	100%	100%	P	P	P	P	
b2311	ubiX	2426079	2426648	-	569	23	19	19	19	19	83%	83%	83%	83%	P	P	P	P	
b2312	purF	2426743	2428260	-	1517	61	61	61	61	61	100%	100%	100%	100%	P	P	P	P	
b2313	cvpA	2428297	2428785	-	488	20	20	20	20	20	100%	100%	100%	100%	P	P	P	P	
b2314	dedD	2429044	2429706	-	662	27	27	27	27	27	100%	100%	100%	100%	P	P	P	P	U
b2315	folC	2429696	2430964	-	1268	51	51	51	51	51	100%	100%	100%	100%	P	P	P	P	
b2316	accD	2431034	2431948	-	914	37	37	37	37	37	100%	100%	100%	100%	P	P	P	P	
b2317	dedA	2432104	2432763	-	659	26	26	26	26	26	100%	100%	100%	100%	P	P	P	P	U
b2318	truA	2432846	2433658	-	812	33	33	33	33	33	100%	100%	100%	100%	P	P	P	P	
b2319	usg	2433658	2434671	-	1013	40	40	40	40	40	100%	100%	100%	100%	P	P	P	P	U
b2320	pdxB	2434737	2435873	-	1136	46	46	46	46	46	100%	100%	100%	100%	P	P	P	P	
b2322	yfcJ	2436964	2438142	-	1178	47	0	1	1	1	0%	2%	2%	2%	A	P	P	P	U
b2323	fabB	2438407	2439627	-	1220	49	49	49	49	49	100%	100%	100%	100%	P	P	P	P	
b2325	yfcL	2441913	2442191	-	278	11	11	11	11	11	100%	100%	100%	100%	P	P	P	P	U
b2326	yfcM	2442225	2442773	-	548	22	22	22	22	22	100%	100%	100%	100%	P	P	P	P	U
b2327	yfcA	2442773	2443582	-	809	32	32	32	32	32	100%	100%	100%	100%	P	P	P	P	U
b2328	mepA	2443582	2444406	-	824	33	33	33	33	33	100%	100%	100%	100%	P	P	P	P	
b2329	aroC	2444410	2445495	-	1085	43	43	43	43	43	100%	100%	100%	100%	P	P	P	P	
b2330	prmB	2445530	2446462	-	932	37	37	37	37	37	100%	100%	100%	100%	P	P	P	P	
b2332	yfcO	2447250	2448071	-	821	32	15	20	30	30	47%	63%	94%	94%	P	P	P	P	U
b2333	yfcP	2448073	2448612	-	539	22	0	2	2	2	0%	9%	9%	9%	A	P	P	P	U
b2334	yfcQ	2448609	2449097	-	488	19	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b2335	yfcR	2449094	2449606	-	512	21	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b2336	yfcS	2449606	2450358	-	752	30	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b4661	yfcU	2450378	2453023	-	2645	106	8	13	14	14	8%	12%	13%	13%	P	P	P	P	U
b2339	yfcV	2453105	2453668	-	563	22	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b2340	sixA	2454349	2454834	-	485	19	19	19	19	19	100%	100%	100%	100%	P	P	P	P	
b2341	fadJ	2455037	2457181	-	2144	86	67	67	81	81	78%	78%	94%	94%	P	P	P	P	
b2342	fadI	2457181	2458491	-	1310	52	20	20	49	49	38%	38%	94%	94%	P	P	P	P	
b2343	yfcZ	2458672	2458956	-	284	12	11	12	12	12	92%	100%	100%	100%	P	P	P	P	U
b2346	vacJ	2462274	2463029	-	755	31	29	29	29	29	94%	94%	94%	94%	P	P	P	P	U
b2354	yfdK	2469099	2469539	-	440	18	0	3	3	3	0%	17%	17%	17%	A	P	P	P	U
b2355	yfdL	2469566	2470144	-	578	23	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b2356	yfdM	2470140	2470409	-	269	11	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b2357	yfdN	2470409	2470903	-	494	20	0	1	1	1	0%	5%	5%	5%	A	P	P	P	U
b2358	yfdO	2470900	2471346	-	446	18	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b2364	dsdC	2474716	2475651	-	935	37	12	12	14	14	32%	32%	38%	38%	P	P	P	P	
b2367	emrY	2478660	2480198	-	1538	61	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b2368	emrK	2480198	2481361	-	1163	47	0	0	10	10	0%	0%	21%	21%	A	A	P	P	
b2371	yfdE	2486045	2487190	-	1145	46	0	1	9	9	0%	2%	20%	20%	A	P	P	P	U
b2372	yfdV	2487264	2488208	-	944	38	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b2373	oxc	2488278	2489972	-	1694	68	0	10	10	10	0%	15%	15%	15%	A	P	P	P	U
b2374	frc	2490026	2491276	-	1250	50	0	3	3	3	0%	6%	6%	6%	A	P	P	P	
b2375	yfdX	2491789	2492424	-	635	25	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U

b2377	yfdY	2493072	2493314	-	242	10	10	10	10	10	100%	100%	100%	100%	P	P	P	P	U
G0-8906	tpke70	2494216	2494651	-	435	17	0	0	0	0	0%	0%	0%	0%	A	A	A	A	
b2379	yfdZ	2495079	2496317	-	1238	50	48	48	48	48	96%	96%	96%	96%	P	P	P	P	
b2383	fryA	2500012	2502507	-	2495	100	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b2384	ypdE	2502532	2503569	-	1037	41	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b2385	ypdF	2503569	2504654	-	1085	44	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b2386	fryC	2504669	2505916	-	1247	50	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b2387	fryB	2505938	2506264	-	326	13	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b2388	glk	2506483	2507448	-	965	38	34	34	34	34	89%	89%	89%	89%	P	P	P	P	
b2392	mntH	2509490	2510728	-	1238	49	47	47	49	49	96%	96%	100%	100%	P	P	P	P	
b2395	yfeA	2513665	2515854	-	2189	88	68	68	69	69	77%	77%	78%	78%	P	P	P	P	U
b2396	alaX	2516063	2516138	-	75	3	3	3	3	3	100%	100%	100%	100%	P	P	P	P	
b2397	alaW	2516178	2516253	-	75	3	3	3	3	3	100%	100%	100%	100%	P	P	P	P	
b2400	gltX	2517279	2518694	-	1415	57	55	55	55	55	96%	96%	96%	96%	P	P	P	P	
b2405	xapR	2519615	2520499	-	884	35	12	15	15	17	34%	43%	43%	49%	P	P	P	P	
b2406	xapB	2520751	2522007	-	1256	51	0	0	5	6	0%	0%	10%	12%	A	A	P	P	
b2407	xapA	2522067	2522900	-	833	33	0	0	1	1	0%	0%	3%	3%	A	A	P	P	
b2409	yfeR	2523952	2524878	-	926	37	8	9	9	9	22%	24%	24%	24%	P	P	P	P	U
b4546	ypeB	2525963	2526181	-	218	9	2	2	2	2	22%	22%	22%	22%	P	P	P	P	U
b2411	ligA	2526183	2528198	-	2015	80	79	79	79	79	99%	99%	99%	99%	P	P	P	P	
b2412	zipA	2528269	2529255	-	986	39	39	39	39	39	100%	100%	100%	100%	P	P	P	P	
b2418	pdxK	2534408	2535259	-	851	34	32	32	32	33	94%	94%	94%	97%	P	P	P	P	
b2421	cysM	2536694	2537605	-	911	36	36	36	36	36	100%	100%	100%	100%	P	P	P	P	
b2422	cysA	2537739	2538836	-	1097	44	44	44	44	44	100%	100%	100%	100%	P	P	P	P	
b2423	cysW	2538826	2539701	-	875	35	35	35	35	35	100%	100%	100%	100%	P	P	P	P	
b2424	cysU	2539701	2540534	-	833	34	34	34	34	34	100%	100%	100%	100%	P	P	P	P	
b2425	cysP	2540534	2541550	-	1016	40	40	40	40	40	100%	100%	100%	100%	P	P	P	P	
b2426	ucpA	2541854	2542645	-	791	32	28	28	31	31	88%	88%	97%	97%	P	P	P	P	U
b2427	yfeT	2542774	2543631	-	857	34	0	1	1	2	0%	3%	3%	6%	A	P	P	P	U
b2431	yfeX	2547668	2548567	-	899	36	36	36	36	36	100%	100%	100%	100%	P	P	P	P	U
b2432	yfeY	2548663	2549238	-	575	23	23	23	23	23	100%	100%	100%	100%	P	P	P	P	U
b2433	yfeZ	2549299	2549748	-	449	18	18	18	18	18	100%	100%	100%	100%	P	P	P	P	U
b2434	ypeA	2549735	2550160	-	425	18	18	18	18	18	100%	100%	100%	100%	P	P	P	P	U
b2437	eutR	2552152	2553204	-	1052	42	7	8	9	9	17%	19%	21%	21%	P	P	P	P	U
b2438	eutK	2553250	2553750	-	500	20	9	9	9	9	45%	45%	45%	45%	P	P	P	P	U
b2439	eutL	2553763	2554422	-	659	26	24	24	24	24	92%	92%	92%	92%	P	P	P	P	U
b2440	eutC	2554432	2555319	-	887	36	31	31	31	31	86%	86%	86%	86%	P	P	P	P	
b2441	eutB	2555340	2556701	-	1361	54	48	48	48	48	89%	89%	89%	89%	P	P	P	P	
b2451	eutA	2563503	2564906	-	1403	56	0	0	1	1	0%	0%	2%	2%	A	A	P	P	
b2452	eutH	2564903	2566129	-	1226	49	0	0	6	6	0%	0%	12%	12%	A	A	P	P	U
b2453	eutG	2566346	2567533	-	1187	47	0	0	3	3	0%	0%	6%	6%	A	A	P	P	U
b2454	eutJ	2567523	2568359	-	836	33	0	0	1	2	0%	0%	3%	6%	A	A	P	P	U
b2455	eutE	2568370	2569773	-	1403	56	0	0	2	3	0%	0%	4%	5%	A	A	P	P	U
b2456	eutN	2569785	2570072	-	287	12	0	0	2	2	0%	0%	17%	17%	A	A	P	P	U
b2457	eutM	2570179	2570472	-	293	12	0	0	0	1	0%	0%	0%	8%	A	A	A	P	U
b2458	eutD	2570511	2571527	-	1016	41	0	0	5	6	0%	0%	12%	15%	A	A	P	P	U

b2459	eutT	2571524	2572327	-	803	32	0	0	1	1	0%	0%	3%	3%	A	A	P	P	U
b2460	eutQ	2572324	2573025	-	701	28	0	0	1	1	0%	0%	4%	4%	A	A	P	P	U
b2461	eutP	2573000	2573479	-	479	19	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b2462	eutS	2573492	2573827	-	335	13	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b2463	maeB	2574120	2576399	-	2279	91	91	91	91	91	100%	100%	100%	100%	P	P	P	P	U
b2466	ypfG	2579756	2580799	-	1043	42	1	13	13	13	2%	31%	31%	31%	P	P	P	P	U
b2467	nudK	2580925	2581500	-	575	23	17	17	17	17	74%	74%	74%	74%	P	P	P	P	U
b2468	aegA	2581568	2583547	-	1979	79	0	4	6	6	0%	5%	8%	8%	A	P	P	P	U
b4606	ypfM	2588829	2588888	-	59	3	2	2	3	3	67%	67%	100%	100%	P	P	P	P	U
b2473	ypfH	2591094	2591792	-	698	28	21	21	22	23	75%	75%	79%	82%	P	P	P	P	U
b2474	ypfI	2591866	2593881	-	2015	80	73	73	73	73	91%	91%	91%	91%	P	P	P	P	U
b2475	ypfJ	2593896	2594759	-	863	34	34	34	34	34	100%	100%	100%	100%	P	P	P	P	U
b2476	purC	2594927	2595640	-	713	29	29	29	29	29	100%	100%	100%	100%	P	P	P	P	U
b2477	bamC	2595853	2596887	-	1034	41	41	41	41	41	100%	100%	100%	100%	P	P	P	P	U
b2478	dapA	2596904	2597782	-	878	35	35	35	35	35	100%	100%	100%	100%	P	P	P	P	U
b2493	yfgO	2612842	2613903	-	1061	42	41	41	41	41	98%	98%	98%	98%	P	P	P	P	U
b2496	hda	2616097	2616843	-	746	30	30	30	30	30	100%	100%	100%	100%	P	P	P	P	U
b2497	uraA	2616893	2618182	-	1289	51	51	51	51	51	100%	100%	100%	100%	P	P	P	P	U
b2498	upp	2618268	2618894	-	626	25	25	25	25	25	100%	100%	100%	100%	P	P	P	P	U
b2503	yfgF	2624717	2626960	-	2243	90	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b2507	guaA	2628980	2630557	-	1577	63	63	63	63	63	100%	100%	100%	100%	P	P	P	P	U
b2508	guaB	2630626	2632092	-	1466	59	59	59	59	59	100%	100%	100%	100%	P	P	P	P	U
b2510	yfgJ	2633621	2633836	-	215	9	5	5	5	5	56%	56%	56%	56%	P	P	P	P	U
b2511	der	2633906	2635378	-	1472	59	59	59	59	59	100%	100%	100%	100%	P	P	P	P	U
b2512	bamB	2635496	2636674	-	1178	47	47	47	47	47	100%	100%	100%	100%	P	P	P	P	U
b2513	yfgM	2636685	2637305	-	620	25	25	25	25	25	100%	100%	100%	100%	P	P	P	P	U
b2514	hisS	2637323	2638597	-	1274	51	51	51	51	51	100%	100%	100%	100%	P	P	P	P	U
G0-9385	sroE	2638617	2638708	-	91	4	4	4	4	4	100%	100%	100%	100%	P	P	P	P	U
b2515	ispG	2638708	2639826	-	1118	44	44	44	44	44	100%	100%	100%	100%	P	P	P	P	U
b2516	yfgA	2639853	2640866	-	1013	41	41	41	41	41	100%	100%	100%	100%	P	P	P	P	U
b2517	rlmN	2641151	2642305	-	1154	47	45	45	45	45	96%	96%	96%	96%	P	P	P	P	U
b2518	ndk	2642455	2642886	-	431	17	17	17	17	17	100%	100%	100%	100%	P	P	P	P	U
b2519	pbpC	2643035	2645347	-	2312	92	17	17	19	19	18%	18%	21%	21%	P	P	P	P	U
b2520	yfhM	2645348	2650309	-	4961	199	186	186	189	190	93%	93%	95%	95%	P	P	P	P	U
G0-8907	C0614	2651474	2651560	-	86	4	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b2522	sseB	2652179	2652955	-	776	31	31	31	31	31	100%	100%	100%	100%	P	P	P	P	U
b2523	pepB	2653097	2654380	-	1283	52	52	52	52	52	100%	100%	100%	100%	P	P	P	P	U
b2524	iscX	2654558	2654758	-	200	8	8	8	8	8	100%	100%	100%	100%	P	P	P	P	U
b2525	fdx	2654770	2655105	-	335	14	14	14	14	14	100%	100%	100%	100%	P	P	P	P	U
b2526	hscA	2655107	2656957	-	1850	74	73	73	73	73	99%	99%	99%	99%	P	P	P	P	U
b2527	hscB	2656974	2657489	-	515	21	21	21	21	21	100%	100%	100%	100%	P	P	P	P	U
b2528	iscA	2657585	2657908	-	323	13	13	13	13	13	100%	100%	100%	100%	P	P	P	P	U
b2529	iscU	2657925	2658311	-	386	16	16	16	16	16	100%	100%	100%	100%	P	P	P	P	U
b2530	iscS	2658339	2659553	-	1214	49	49	49	49	49	100%	100%	100%	100%	P	P	P	P	U
b2531	iscR	2659665	2660153	-	488	20	20	20	20	20	100%	100%	100%	100%	P	P	P	P	U
b2532	trmJ	2660605	2661345	-	740	29	29	29	29	29	100%	100%	100%	100%	P	P	P	P	U

b2536	hcaT	2664729	2665868	-	1139	45	16	16	16	16	36%	36%	36%	36%	P	P	P	P	U
b2537	hcaR	2666028	2666918	-	890	35	29	29	29	29	83%	83%	83%	83%	P	P	P	P	
b2544	yphB	2671838	2672710	-	872	35	4	6	6	6	11%	17%	17%	17%	P	P	P	P	U
b2545	yphC	2672722	2673783	-	1061	43	6	15	17	17	14%	35%	40%	40%	P	P	P	P	U
b2546	yphD	2673849	2674847	-	998	40	2	10	10	10	5%	25%	25%	25%	P	P	P	P	U
b2547	yphE	2674872	2676383	-	1511	61	0	9	9	9	0%	15%	15%	15%	A	P	P	P	U
b2548	yphF	2676406	2677389	-	983	39	0	5	6	6	0%	13%	15%	15%	A	P	P	P	U
b2549	yphG	2677486	2680767	-	3281	131	0	2	8	9	0%	2%	6%	7%	A	P	P	P	U
b2551	glyA	2682276	2683529	-	1253	51	51	51	51	51	100%	100%	100%	100%	P	P	P	P	
b2553	glnB	2685092	2685430	-	338	14	14	14	14	14	100%	100%	100%	100%	P	P	P	P	
b2554	yfhA	2685491	2686825	-	1334	53	49	49	49	49	92%	92%	92%	92%	P	P	P	P	U
b2555	yfhG	2686815	2687528	-	713	29	28	28	28	28	97%	97%	97%	97%	P	P	P	P	U
b2556	yfhK	2687693	2689120	-	1427	57	29	30	31	31	51%	53%	54%	54%	P	P	P	P	U
b4441	glmY	2689179	2689362	-	183	7	6	6	6	6	86%	86%	86%	86%	P	P	P	P	
b2557	purL	2689678	2693565	-	3887	155	155	155	155	155	100%	100%	100%	100%	P	P	P	P	
b2559	tadA	2695376	2695879	-	503	21	20	20	20	20	95%	95%	95%	95%	P	P	P	P	
b2560	yfhB	2695937	2696572	-	635	25	24	24	24	25	96%	96%	96%	100%	P	P	P	P	U
b4607	ryfB	2698081	2698399	-	318	12	7	7	7	7	58%	58%	58%	58%	P	P	P	P	U
b2563	acpS	2698640	2699020	-	380	15	13	13	13	13	87%	87%	87%	87%	P	P	P	P	
b2564	pdxJ	2699020	2699751	-	731	29	29	29	29	29	100%	100%	100%	100%	P	P	P	P	
b2565	recO	2699763	2700491	-	728	30	29	29	29	29	97%	97%	97%	97%	P	P	P	P	
b2566	era	2700503	2701408	-	905	36	36	36	36	36	100%	100%	100%	100%	P	P	P	P	
b2567	rnc	2701405	2702085	-	680	27	27	27	27	27	100%	100%	100%	100%	P	P	P	P	
b2568	lepB	2702357	2703331	-	974	39	39	39	39	39	100%	100%	100%	100%	P	P	P	P	
b2569	lepA	2703347	2705146	-	1799	72	72	72	72	72	100%	100%	100%	100%	P	P	P	P	
b2570	rseC	2705344	2705823	-	479	19	18	18	18	18	95%	95%	95%	95%	P	P	P	P	
b2571	rseB	2705820	2706776	-	956	38	38	38	38	38	100%	100%	100%	100%	P	P	P	P	
b2572	rseA	2706776	2707426	-	650	26	26	26	26	26	100%	100%	100%	100%	P	P	P	P	
b2573	rpoE	2707459	2708034	-	575	23	23	23	23	23	100%	100%	100%	100%	P	P	P	P	
b2575	yfiC	2710049	2710786	-	737	29	23	23	23	23	79%	79%	79%	79%	P	P	P	P	U
b2577	yfiE	2712461	2713342	-	881	36	9	24	24	24	25%	67%	67%	67%	P	P	P	P	U
b2579	yfiD	2714088	2714471	-	383	16	16	16	16	16	100%	100%	100%	100%	P	P	P	P	
b2581	yfiF	2715513	2716550	-	1037	42	39	39	39	39	93%	93%	93%	93%	P	P	P	P	U
b2587	kgtP	2722470	2723768	-	1298	52	52	52	52	52	100%	100%	100%	100%	P	P	P	P	
b2588	rrfG	2724091	2724210	-	119	4	4	4	4	4	100%	100%	100%	100%	P	P	P	P	
b2589	rrlG	2724303	2727206	-	2903	116	116	116	116	116	100%	100%	100%	100%	P	P	P	P	
b2590	gltW	2727391	2727466	-	75	3	3	3	3	3	100%	100%	100%	100%	P	P	P	P	
b2591	rrsG	2727638	2729179	-	1541	62	62	62	62	62	100%	100%	100%	100%	P	P	P	P	
b2592	clpB	2729622	2732195	-	2573	103	103	103	103	103	100%	100%	100%	100%	P	P	P	P	
b4609	ryfD	2732175	2732317	-	142	5	5	5	5	5	100%	100%	100%	100%	P	P	P	P	U
b2593	yfiH	2732325	2733056	-	731	29	29	29	29	29	100%	100%	100%	100%	P	P	P	P	U
b2594	rluD	2733053	2734033	-	980	39	39	39	39	39	100%	100%	100%	100%	P	P	P	P	
b2600	tyrA	2736970	2738091	-	1121	44	44	44	44	44	100%	100%	100%	100%	P	P	P	P	
b2601	aroF	2738102	2739172	-	1070	43	43	43	43	43	100%	100%	100%	100%	P	P	P	P	
b2606	rplS	2742205	2742552	-	347	14	14	14	14	14	100%	100%	100%	100%	P	P	P	P	
b2607	trmD	2742594	2743361	-	767	31	31	31	31	31	100%	100%	100%	100%	P	P	P	P	

b2608	rimM	2743392	2743940	-	548	22	22	22	22	22	100%	100%	100%	100%	P	P	P	P	
b2609	rpsP	2743959	2744207	-	248	10	10	10	10	10	100%	100%	100%	100%	P	P	P	P	
b2610	ffh	2744456	2745817	-	1361	54	54	54	54	54	100%	100%	100%	100%	P	P	P	P	
b2614	grpE	2748137	2748730	-	593	24	23	24	24	24	96%	100%	100%	100%	P	P	P	P	
b2618	yfjF	2752030	2752320	-	290	12	12	12	12	12	100%	100%	100%	100%	P	P	P	P	U
b2619	yfjG	2752310	2752786	-	476	19	18	18	18	18	95%	95%	95%	95%	P	P	P	P	U
b2623	yfjH	2755666	2756622	-	956	38	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b2627	yfjK	2759373	2761562	-	2189	88	66	66	67	70	75%	75%	76%	80%	P	P	P	P	U
b2628	yfjL	2761559	2763175	-	1616	65	62	62	62	64	95%	95%	95%	98%	P	P	P	P	U
b2629	yfjM	2763535	2763798	-	263	11	0	1	1	1	0%	9%	9%	9%	A	P	P	P	U
b2638	yfjU	2770024	2770176	-	152	6	1	1	1	1	17%	17%	17%	17%	P	P	P	P	U
b2641	yfjV	2770189	2771204	-	1015	41	14	15	15	16	34%	37%	37%	39%	P	P	P	P	U
b2647	ypjA	2776168	2780748	-	4580	184	54	82	95	95	29%	45%	52%	52%	P	P	P	P	
b2648	pinH	2781087	2781326	-	239	10	0	1	1	1	0%	10%	10%	10%	A	P	P	P	U
b2650	ypjC	2781660	2783033	-	1373	55	2	2	2	2	4%	4%	4%	4%	P	P	P	P	U
b2652	ileY	2783784	2783859	-	75	3	2	2	2	2	67%	67%	67%	67%	P	P	P	P	
b2665	ygaU	2794359	2794808	-	449	18	18	18	18	18	100%	100%	100%	100%	P	P	P	P	U
b2666	yqaE	2794892	2795050	-	158	6	6	6	6	6	100%	100%	100%	100%	P	P	P	P	U
b2669	stpA	2796113	2796517	-	404	16	16	16	16	16	100%	100%	100%	100%	P	P	P	P	
b2671	ygaC	2797672	2798016	-	344	14	6	13	14	14	43%	93%	100%	100%	P	P	P	P	U
b2687	luxS	2812240	2812755	-	515	21	21	21	21	21	100%	100%	100%	100%	P	P	P	P	
b2688	gshA	2812905	2814461	-	1556	63	63	63	63	63	100%	100%	100%	100%	P	P	P	P	
b2689	yqaA	2814534	2814962	-	428	17	16	16	16	17	94%	94%	94%	100%	P	P	P	P	U
b2690	yqaB	2814959	2815525	-	566	22	22	22	22	22	100%	100%	100%	100%	P	P	P	P	U
b2691	argQ	2815806	2815882	-	76	4	4	4	4	4	100%	100%	100%	100%	P	P	P	P	
b2692	argZ	2816081	2816157	-	76	4	4	4	4	4	100%	100%	100%	100%	P	P	P	P	
b2693	argY	2816220	2816296	-	76	3	3	3	3	3	100%	100%	100%	100%	P	P	P	P	
b2694	argV	2816495	2816571	-	76	3	3	3	3	3	100%	100%	100%	100%	P	P	P	P	
b2695	serV	2816575	2816667	-	92	4	4	4	4	4	100%	100%	100%	100%	P	P	P	P	
b2696	csrA	2816983	2817168	-	185	7	7	7	7	7	100%	100%	100%	100%	P	P	P	P	
b2697	alaS	2817403	2820033	-	2630	106	106	106	106	106	100%	100%	100%	100%	P	P	P	P	
b2698	recX	2820161	2820661	-	500	20	0	0	0	0	0%	0%	0%	0%	A	A	A	A	
b2699	recA	2820730	2821791	-	1061	43	41	41	41	41	95%	95%	95%	95%	P	P	P	P	
b2700	ygaD	2821871	2822368	-	497	20	20	20	20	20	100%	100%	100%	100%	P	P	P	P	U
b2701	mltB	2822513	2823598	-	1085	43	43	43	43	43	100%	100%	100%	100%	P	P	P	P	
b2709	norR	2828797	2830311	-	1514	61	32	52	52	52	52%	85%	85%	85%	P	P	P	P	
b2712	hypF	2833195	2835447	-	2252	90	11	13	14	16	12%	14%	16%	18%	P	P	P	P	
b2713	hydN	2835600	2836127	-	527	21	0	0	1	1	0%	0%	5%	5%	A	A	P	P	
b2714	ascG	2836276	2837289	-	1013	41	39	39	39	39	95%	95%	95%	95%	P	P	P	P	
b2717	hycI	2840595	2841065	-	470	19	12	13	17	18	63%	68%	89%	95%	P	P	P	P	
b2718	hycH	2841058	2841468	-	410	16	4	4	6	6	25%	25%	38%	38%	P	P	P	P	
b2719	hycG	2841465	2842232	-	767	31	5	6	6	6	16%	19%	19%	19%	P	P	P	P	
b2720	hycF	2842232	2842774	-	542	21	0	0	0	0	0%	0%	0%	0%	A	A	A	A	
b2721	hycE	2842784	2844493	-	1709	68	0	0	5	5	0%	0%	7%	7%	A	A	P	P	
b2722	hycD	2844511	2845434	-	923	37	0	0	0	0	0%	0%	0%	0%	A	A	A	A	
b2723	hycC	2845437	2847263	-	1826	73	0	0	3	3	0%	0%	4%	4%	A	A	P	P	

b2724	hycB	2847260	2847871	-	611	24	0	0	3	3	0%	0%	13%	13%	A	A	P	P	
b2725	hycA	2847996	2848457	-	461	19	0	0	1	1	0%	0%	5%	5%	A	A	P	P	
b2732	ygbA	2854475	2854828	-	353	14	0	0	12	12	0%	0%	86%	86%	A	A	P	P	U
b2735	ygbI	2858489	2859286	-	797	32	25	25	25	25	78%	78%	78%	78%	P	P	P	P	U
b2741	rpoS	2864581	2865573	-	992	40	40	40	40	40	100%	100%	100%	100%	P	P	P	P	
b2742	nlpD	2865636	2866775	-	1139	45	45	45	45	45	100%	100%	100%	100%	P	P	P	P	U
b2743	pcm	2866915	2867541	-	626	25	25	25	25	25	100%	100%	100%	100%	P	P	P	P	
b2744	surE	2867535	2868296	-	761	30	30	30	30	30	100%	100%	100%	100%	P	P	P	P	
b2745	truD	2868277	2869326	-	1049	42	42	42	42	42	100%	100%	100%	100%	P	P	P	P	
b2746	ispF	2869323	2869802	-	479	19	19	19	19	19	100%	100%	100%	100%	P	P	P	P	
b2747	ispD	2869802	2870512	-	710	29	29	29	29	29	100%	100%	100%	100%	P	P	P	P	
b2748	ftsB	2870531	2870842	-	311	13	13	13	13	13	100%	100%	100%	100%	P	P	P	P	
b2749	ygbE	2871036	2871359	-	323	13	13	13	13	13	100%	100%	100%	100%	P	P	P	P	U
b2750	cysC	2871409	2872014	-	605	24	24	24	24	24	100%	100%	100%	100%	P	P	P	P	
b2751	cysN	2872014	2873441	-	1427	57	57	57	57	57	100%	100%	100%	100%	P	P	P	P	
b2752	cysD	2873443	2874351	-	908	36	36	36	36	36	100%	100%	100%	100%	P	P	P	P	
b2754	ygbF	2876591	2876875	-	284	11	6	8	8	8	55%	73%	73%	73%	P	P	P	P	U
b2755	ygbT	2876877	2877794	-	917	37	14	20	20	22	38%	54%	54%	59%	P	P	P	P	U
b2756	ygcH	2877810	2878409	-	599	24	9	14	14	16	38%	58%	58%	67%	P	P	P	P	U
b2757	ygcI	2878396	2879070	-	674	27	9	14	14	16	33%	52%	52%	59%	P	P	P	P	U
b2758	ygcJ	2879073	2880164	-	1091	44	0	0	0	1	0%	0%	0%	2%	A	A	A	P	U
b2759	ygcK	2880177	2880659	-	482	20	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b2760	ygcL	2880652	2882160	-	1508	60	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b2761	ygcB	2882575	2885241	-	2666	107	0	1	29	31	0%	1%	27%	29%	A	P	P	P	U
b2762	cysH	2885600	2886334	-	734	30	30	30	30	30	100%	100%	100%	100%	P	P	P	P	
b2763	cysI	2886409	2888121	-	1712	68	68	68	68	68	100%	100%	100%	100%	P	P	P	P	
b2764	cysJ	2888121	2889920	-	1799	72	72	72	72	72	100%	100%	100%	100%	P	P	P	P	
b2769	ygcQ	2892941	2893801	-	860	34	0	2	3	3	0%	6%	9%	9%	A	P	P	P	U
b2770	ygcR	2893798	2894577	-	779	31	0	1	1	1	0%	3%	3%	3%	A	P	P	P	U
b2771	ygcS	2894555	2895892	-	1337	53	0	0	4	4	0%	0%	8%	8%	A	A	P	P	U
b4463	ygcU	2895986	2897440	-	1454	58	0	0	2	2	0%	0%	3%	3%	A	A	P	P	U
b2774	ygcW	2897510	2898295	-	785	31	0	0	1	1	0%	0%	3%	3%	A	A	P	P	U
b2777	ygcF	2902769	2903440	-	671	27	24	25	26	26	89%	93%	96%	96%	P	P	P	P	U
b2779	eno	2904665	2905963	-	1298	52	52	52	52	52	100%	100%	100%	100%	P	P	P	P	
b2780	pyrG	2906051	2907688	-	1637	66	66	66	66	66	100%	100%	100%	100%	P	P	P	P	
b2781	mazG	2907916	2908707	-	791	31	29	29	29	29	94%	94%	94%	94%	P	P	P	P	
b2782	chpA	2908778	2909113	-	335	14	13	13	13	13	93%	93%	93%	93%	P	P	P	P	
b2783	chpR	2909113	2909361	-	248	10	10	10	10	10	100%	100%	100%	100%	P	P	P	P	
b2784	relA	2909439	2911673	-	2234	89	89	89	89	89	100%	100%	100%	100%	P	P	P	P	
b2785	rumA	2911721	2913022	-	1301	52	50	50	50	50	96%	96%	96%	96%	P	P	P	P	
b2787	gudD	2916067	2917407	-	1340	53	0	10	18	21	0%	19%	34%	40%	A	P	P	P	
b2788	gudX	2917428	2918768	-	1340	54	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b2789	gudP	2918770	2920122	-	1352	54	0	3	5	5	0%	6%	9%	9%	A	P	P	P	U
b2790	yqcA	2920557	2921006	-	449	18	16	16	16	16	89%	89%	89%	89%	P	P	P	P	U
b2791	truC	2921024	2921806	-	782	31	29	29	29	29	94%	94%	94%	94%	P	P	P	P	
b2792	yqcC	2921806	2922135	-	329	13	13	13	13	13	100%	100%	100%	100%	P	P	P	P	U



b4408	csrB	2922178	2922537	-	359	14	13	13	13	13	93%	93%	93%	93%	P	P	P	P	
b2793	syd	2922757	2923302	-	545	22	20	20	20	20	91%	91%	91%	91%	P	P	P	P	U
b2799	fucO	2929887	2931038	-	1151	46	11	25	25	25	24%	54%	54%	54%	P	P	P	P	
b2800	fucA	2931063	2931710	-	647	26	2	6	7	7	8%	23%	27%	27%	P	P	P	P	
b2806	ygdE	2938165	2939265	-	1100	44	39	39	40	40	89%	89%	91%	91%	P	P	P	P	U
b2807	ygdD	2939258	2939653	-	395	16	16	16	16	16	100%	100%	100%	100%	P	P	P	P	U
b2808	gcvA	2939672	2940589	-	917	37	34	34	34	34	92%	92%	92%	92%	P	P	P	P	
b2809	ygdI	2940940	2941167	-	227	9	6	9	9	9	67%	100%	100%	100%	P	P	P	P	U
b2812	ygdL	2943058	2943864	-	806	32	31	31	32	32	97%	97%	100%	100%	P	P	P	P	U
b2813	mltA	2944103	2945200	-	1097	44	44	44	44	44	100%	100%	100%	100%	P	P	P	P	
b2817	amiC	2945779	2947032	-	1253	50	50	50	50	50	100%	100%	100%	100%	P	P	P	P	
b2819	recD	2948657	2950483	-	1826	73	58	58	58	59	79%	79%	79%	81%	P	P	P	P	
b2820	recB	2950483	2954025	-	3542	142	138	138	138	138	97%	97%	97%	97%	P	P	P	P	
b2821	ptrA	2954018	2956906	-	2888	116	106	106	106	107	91%	91%	91%	92%	P	P	P	P	
b2822	recC	2957082	2960450	-	3368	135	115	115	115	115	85%	85%	85%	85%	P	P	P	P	
b2823	ppdC	2960463	2960786	-	323	13	2	4	4	4	15%	31%	31%	31%	P	P	P	P	U
b2824	ygdB	2960771	2961178	-	407	17	0	1	1	1	0%	6%	6%	6%	A	P	P	P	U
b2825	ppdB	2961175	2961738	-	563	23	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b2826	ppdA	2961729	2962199	-	470	18	0	1	2	2	0%	6%	11%	11%	A	P	P	P	U
b2827	thyA	2962383	2963177	-	794	32	32	32	32	32	100%	100%	100%	100%	P	P	P	P	
b2828	lgt	2963184	2964059	-	875	35	35	35	35	35	100%	100%	100%	100%	P	P	P	P	
b2829	ptsP	2964210	2966456	-	2246	90	88	88	88	88	98%	98%	98%	98%	P	P	P	P	
b2830	rppH	2966469	2966999	-	530	21	21	21	21	21	100%	100%	100%	100%	P	P	P	P	
b4610	ygdT	2967352	2967498	-	146	5	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b2835	lplT	2970691	2971884	-	1193	48	36	36	39	39	75%	75%	81%	81%	P	P	P	P	U
b2836	aas	2971877	2974036	-	2159	87	76	76	76	77	87%	87%	87%	89%	P	P	P	P	
b4444	omrA	2974124	2974211	-	87	4	1	1	2	2	25%	25%	50%	50%	P	P	P	P	
b4445	omrB	2974332	2974407	-	75	3	1	1	1	2	33%	33%	33%	67%	P	P	P	P	
b2838	lysA	2975659	2976921	-	1262	50	50	50	50	50	100%	100%	100%	100%	P	P	P	P	
b2840	ygeA	2977965	2978657	-	692	28	27	27	27	27	96%	96%	96%	96%	P	P	P	P	U
b2841	araE	2978786	2980204	-	1418	57	9	9	17	18	16%	16%	30%	32%	P	P	P	P	
b2842	kduD	2980519	2981280	-	761	31	14	16	17	18	45%	52%	55%	58%	P	P	P	P	
b2843	kduI	2981310	2982146	-	836	33	1	1	3	4	3%	3%	9%	12%	P	P	P	P	U
b2844	yqeF	2982433	2983614	-	1181	47	40	40	40	40	85%	85%	85%	85%	P	P	P	P	U
b2849	yqeK	2987957	2988382	-	425	16	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b2856	ygeK	2992482	2993114	-	632	25	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b2858	ygeN	2993336	2994042	-	706	28	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b2859	ygeO	2993984	2994382	-	398	16	0	1	1	1	0%	6%	6%	6%	A	P	P	P	U
b2860	insD	2994394	2995299	-	905	36	36	36	36	36	100%	100%	100%	100%	P	P	P	P	
b2861	insC	2995257	2995622	-	365	14	14	14	14	14	100%	100%	100%	100%	P	P	P	P	
b2863	ygeQ	2995714	2996850	-	1136	46	0	12	14	14	0%	26%	30%	30%	A	P	P	P	U
b2864	glyU	2997006	2997079	-	73	3	3	3	3	3	100%	100%	100%	100%	P	P	P	P	
b2865	ygeR	2997158	2997913	-	755	30	25	25	25	25	83%	83%	83%	83%	P	P	P	P	
b2869	ygeV	3002030	3003808	-	1778	71	0	2	61	61	0%	3%	86%	86%	A	P	P	P	U
b2875	yqeB	3010636	3012261	-	1625	65	2	3	12	63	3%	5%	18%	97%	P	P	P	P	U
b2876	yqeC	3012309	3013079	-	770	31	0	1	1	12	0%	3%	3%	39%	A	P	P	P	U

b2886	ygfS	3026546	3027034	-	488	20	0	2	4	4	0%	10%	20%	20%	A	P	P	P	U
b2887	ygfT	3027034	3028953	-	1919	77	0	2	5	5	0%	3%	6%	6%	A	P	P	P	U
b2890	lysS	3031679	3033196	-	1517	60	56	56	56	56	93%	93%	93%	93%	P	P	P	P	
b2891	prfB	3033206	3034304	-	1098	44	44	44	44	44	100%	100%	100%	100%	P	P	P	P	
b2892	recJ	3034395	3036128	-	1733	70	69	69	69	69	99%	99%	99%	99%	P	P	P	P	
b2893	dsbC	3036134	3036844	-	710	28	28	28	28	28	100%	100%	100%	100%	P	P	P	P	
b2894	xerD	3036869	3037765	-	896	36	36	36	36	36	100%	100%	100%	100%	P	P	P	P	
b2896	ygfX	3038438	3038845	-	407	16	16	16	16	16	100%	100%	100%	100%	P	P	P	P	U
b2897	ygfY	3038826	3039092	-	266	11	11	11	11	11	100%	100%	100%	100%	P	P	P	P	U
b2899	yqfA	3040511	3041170	-	659	26	21	25	25	25	81%	96%	96%	96%	P	P	P	P	U
b2900	yqfB	3041334	3041645	-	311	12	12	12	12	12	100%	100%	100%	100%	P	P	P	P	U
b2902	ygfF	3043180	3043923	-	743	29	19	19	19	19	66%	66%	66%	66%	P	P	P	P	U
b2903	gcvP	3044190	3047063	-	2873	115	114	114	114	114	99%	99%	99%	99%	P	P	P	P	
b2904	gcvH	3047182	3047571	-	389	15	15	15	15	15	100%	100%	100%	100%	P	P	P	P	
b2905	gcvT	3047595	3048689	-	1094	44	44	44	44	44	100%	100%	100%	100%	P	P	P	P	
b2906	visC	3049137	3050339	-	1202	48	46	46	46	46	96%	96%	96%	96%	P	P	P	P	U
b2907	ubiH	3050362	3051540	-	1178	47	47	47	47	47	100%	100%	100%	100%	P	P	P	P	
b2908	pepP	3051537	3052862	-	1325	53	53	53	53	53	100%	100%	100%	100%	P	P	P	P	
b2909	ygfB	3052888	3053466	-	578	23	23	23	23	23	100%	100%	100%	100%	P	P	P	P	U
b2913	serA	3055200	3056432	-	1232	50	50	50	50	50	100%	100%	100%	100%	P	P	P	P	
b2914	rpiA	3056688	3057347	-	659	26	25	25	25	25	96%	96%	96%	96%	P	P	P	P	
b2915	yqfE	3057403	3057723	-	320	12	2	2	2	2	17%	17%	17%	17%	P	P	P	P	U
b2921	ygfI	3064299	3065195	-	896	36	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b2922	yggE	3065362	3066102	-	740	29	29	29	29	29	100%	100%	100%	100%	P	P	P	P	U
b2923	argO	3066195	3066830	-	635	25	20	20	21	22	80%	80%	84%	88%	P	P	P	P	
b2924	mscS	3066969	3067829	-	860	34	34	34	34	34	100%	100%	100%	100%	P	P	P	P	
b2925	fbaA	3068187	3069266	-	1079	43	42	42	42	42	98%	98%	98%	98%	P	P	P	P	
b2926	pgk	3069481	3070644	-	1163	47	47	47	47	47	100%	100%	100%	100%	P	P	P	P	
b2927	epd	3070694	3071713	-	1019	41	40	40	40	40	98%	98%	98%	98%	P	P	P	P	
b2928	yggC	3071998	3072711	-	713	29	28	28	28	28	97%	97%	97%	97%	P	P	P	P	U
b2929	yggD	3072708	3073217	-	509	21	21	21	21	21	100%	100%	100%	100%	P	P	P	P	U
b2930	yggF	3073239	3074204	-	965	38	0	7	12	12	0%	18%	32%	32%	A	P	P	P	U
b4465	yggP	3074201	3075478	-	1277	51	0	5	6	6	0%	10%	12%	12%	A	P	P	P	U
b2933	cmtA	3075493	3076881	-	1388	55	0	1	4	4	0%	2%	7%	7%	A	P	P	P	U
b2934	cmtB	3076909	3077352	-	443	17	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b2935	tktA	3077666	3079657	-	1991	80	79	79	79	79	99%	99%	99%	99%	P	P	P	P	
b2937	speB	3080899	3081819	-	920	36	36	36	36	36	100%	100%	100%	100%	P	P	P	P	
b2938	speA	3081957	3083933	-	1976	79	79	79	79	79	100%	100%	100%	100%	P	P	P	P	
b2939	yqgB	3083942	3084073	-	131	5	5	5	5	5	100%	100%	100%	100%	P	P	P	P	U
b2941	yqgD	3084421	3084672	-	251	10	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b2950	yggR	3092122	3093102	-	980	40	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b2956	yggM	3096580	3097587	-	1007	40	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b2957	ansB	3097704	3098750	-	1046	42	0	14	14	14	0%	33%	33%	33%	A	P	P	P	
b2958	yggN	3098926	3099645	-	719	28	26	26	26	27	93%	93%	93%	96%	P	P	P	P	U
b2959	yggL	3099829	3100155	-	326	13	13	13	13	13	100%	100%	100%	100%	P	P	P	P	U
b2960	trmI	3100155	3100874	-	719	29	29	29	29	29	100%	100%	100%	100%	P	P	P	P	

b2965	speC	3105042	3107177	-	2135	85	80	80	80	82	94%	94%	94%	96%	P	P	P	P	
b2968	yghD	3108612	3109148	-	536	22	0	2	2	2	0%	9%	9%	9%	A	P	P	P	U
b2969	yghE	3109150	3110112	-	962	38	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b2970	yghF	3110115	3110942	-	827	33	10	10	10	10	30%	30%	30%	30%	P	P	P	P	U
b2971	yghG	3111089	3111499	-	410	16	14	14	14	14	88%	88%	88%	88%	P	P	P	P	U
b2972	pppA	3111565	3112374	-	809	32	17	17	17	17	53%	53%	53%	53%	P	P	P	P	
b4466	yghJ	3112572	3117134	-	4562	182	160	160	162	162	88%	88%	89%	89%	P	P	P	P	U
b2975	glcA	3117619	3119301	-	1682	67	0	3	7	10	0%	4%	10%	15%	A	P	P	P	
b2976	glcB	3119656	3121827	-	2171	87	81	81	82	82	93%	93%	94%	94%	P	P	P	P	
b2977	glcG	3121849	3122253	-	404	16	15	15	15	15	94%	94%	94%	94%	P	P	P	P	U
b4467	glcF	3122258	3123481	-	1223	49	20	20	22	22	41%	41%	45%	45%	P	P	P	P	
b4468	glcE	3123492	3124544	-	1052	42	0	0	0	0	0%	0%	0%	0%	A	A	A	A	
b2979	glcD	3124544	3126043	-	1499	60	0	0	5	5	0%	0%	8%	8%	A	A	P	P	
b2981	yghO	3127065	3128165	-	1100	44	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b2983	yghQ	3129363	3130430	-	1067	43	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b2984	yghR	3130476	3131234	-	758	30	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b2985	yghS	3131266	3131979	-	713	28	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b2987	pitB	3132894	3134393	-	1499	60	0	0	0	0	0%	0%	0%	0%	A	A	A	A	
b2988	gsp	3134685	3136544	-	1859	75	69	69	69	73	92%	92%	92%	97%	P	P	P	P	
b2990	hybG	3137738	3137986	-	248	10	4	4	4	4	40%	40%	40%	40%	P	P	P	P	
b2991	hybF	3137999	3138340	-	341	14	3	3	3	3	21%	21%	21%	21%	P	P	P	P	
b2992	hybE	3138333	3138821	-	488	20	12	12	12	12	60%	60%	60%	60%	P	P	P	P	
b2993	hybD	3138814	3139308	-	494	19	17	17	17	17	89%	89%	89%	89%	P	P	P	P	U
b2994	hybC	3139308	3141011	-	1703	68	59	59	59	61	87%	87%	87%	90%	P	P	P	P	
b2995	hybB	3141008	3142186	-	1178	47	2	2	2	4	4%	4%	4%	9%	P	P	P	P	U
b2996	hybA	3142176	3143162	-	986	39	5	7	7	10	13%	18%	18%	26%	P	P	P	P	
b2997	hybO	3143165	3144283	-	1118	44	4	20	20	33	9%	45%	45%	75%	P	P	P	P	
b2998	yghW	3144472	3144759	-	287	11	0	0	0	11	0%	0%	0%	100%	A	A	A	P	U
b4658	yghX	3144878	3145713	-	835	34	15	19	29	29	44%	56%	85%	85%	P	P	P	P	U
b3002	yqhA	3146999	3147493	-	494	20	20	20	20	20	100%	100%	100%	100%	P	P	P	P	U
b3005	exbD	3148840	3149265	-	425	17	15	15	15	17	88%	88%	88%	100%	P	P	P	P	
b3006	exbB	3149272	3150006	-	734	29	29	29	29	29	100%	100%	100%	100%	P	P	P	P	
b3010	yqhC	3152284	3153240	-	956	38	31	32	35	35	82%	84%	92%	92%	P	P	P	P	U
b4469	ygiQ	3156949	3159168	-	2219	88	82	82	83	83	93%	93%	94%	94%	P	P	P	P	U
b3017	ftsP	3159279	3160691	-	1412	56	56	56	56	56	100%	100%	100%	100%	P	P	P	P	
b3018	plsC	3160766	3161503	-	737	30	30	30	30	30	100%	100%	100%	100%	P	P	P	P	
b3019	parC	3161737	3163995	-	2258	90	90	90	90	90	100%	100%	100%	100%	P	P	P	P	
b3020	ygiS	3164133	3165740	-	1607	64	22	23	24	24	34%	36%	38%	38%	P	P	P	P	U
b3021	ygiT	3165873	3166268	-	395	16	8	14	15	15	50%	88%	94%	94%	P	P	P	P	U
b3022	mqsR	3166270	3166566	-	296	12	11	12	12	12	92%	100%	100%	100%	P	P	P	P	U
b3023	ygiV	3166771	3167253	-	482	20	11	13	13	16	55%	65%	65%	80%	P	P	P	P	U
b3024	ygiW	3167306	3167698	-	392	15	15	15	15	15	100%	100%	100%	100%	P	P	P	P	U
b3027	ygiZ	3169901	3170233	-	332	13	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b3030	parE	3171526	3173418	-	1892	76	76	76	76	76	100%	100%	100%	100%	P	P	P	P	
b3031	yqiA	3173447	3174028	-	581	24	24	24	24	24	100%	100%	100%	100%	P	P	P	P	U
b3032	cpdA	3174028	3174855	-	827	33	33	33	33	33	100%	100%	100%	100%	P	P	P	P	

b3033	yqiB	3174880	3175302	-	422	17	17	17	17	17	100%	100%	100%	100%	P	P	P	P	U
b3034	nudF	3175303	3175932	-	629	25	25	25	25	25	100%	100%	100%	100%	P	P	P	P	
b3039	ygiD	3179641	3180456	-	815	33	0	1	2	7	0%	3%	6%	21%	A	P	P	P	U
b3041	ribB	3181835	3182488	-	653	26	26	26	26	26	100%	100%	100%	100%	P	P	P	P	
G0-9387	sroG	3182592	3182740	-	148	6	6	6	6	6	100%	100%	100%	100%	P	P	P	P	
b3049	glgS	3189761	3189961	-	200	8	8	8	8	8	100%	100%	100%	100%	P	P	P	P	U
b4447	rygD	3192745	3192887	-	142	6	5	5	5	5	83%	83%	83%	83%	P	P	P	P	U
b4611	rygE	3193121	3193262	-	141	6	5	5	5	5	83%	83%	83%	83%	P	P	P	P	U
b3052	rfaE	3193342	3194775	-	1433	57	56	56	56	56	98%	98%	98%	98%	P	P	P	P	
b3053	glnE	3194823	3197663	-	2840	114	113	113	113	113	99%	99%	99%	99%	P	P	P	P	
b3054	ygiF	3197686	3198987	-	1301	52	52	52	52	52	100%	100%	100%	100%	P	P	P	P	U
b3057	bacA	3201332	3202153	-	821	33	26	26	26	26	79%	79%	79%	79%	P	P	P	P	
b3058	folB	3202243	3202611	-	368	15	15	15	15	15	100%	100%	100%	100%	P	P	P	P	
b3060	ttdR	3203346	3204278	-	932	38	0	1	1	16	0%	3%	3%	42%	A	P	P	P	U
b3064	ygjD	3207552	3208565	-	1013	41	41	41	41	41	100%	100%	100%	100%	P	P	P	P	U
b3068	mug	3212989	3213495	-	506	20	20	20	20	20	100%	100%	100%	100%	P	P	P	P	
b3070	yqjH	3213749	3214513	-	764	31	29	29	29	29	94%	94%	94%	94%	P	P	P	P	U
b3072	aer	3215578	3217098	-	1520	60	26	26	26	26	43%	43%	43%	43%	P	P	P	P	
b3074	ygjH	3218937	3219269	-	332	13	0	2	2	2	0%	15%	15%	15%	A	P	P	P	U
b3082	ygjM	3231750	3232166	-	416	17	9	14	14	14	53%	82%	82%	82%	P	P	P	P	U
b3083	ygjN	3232163	3232477	-	314	12	4	6	6	6	33%	50%	50%	50%	P	P	P	P	U
b3084	rlmG	3232761	3233897	-	1136	45	28	28	29	29	62%	62%	64%	64%	P	P	P	P	U
b3090	ygjV	3239215	3239766	-	551	21	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b3091	uxaA	3239849	3241336	-	1487	59	9	18	18	18	15%	31%	31%	31%	P	P	P	P	
b3092	uxaC	3241351	3242763	-	1412	56	18	46	46	46	32%	82%	82%	82%	P	P	P	P	
b3105	yhaJ	3251340	3252236	-	896	36	34	34	34	34	94%	94%	94%	94%	P	P	P	P	U
b4470	yhaM	3253363	3254673	-	1310	52	0	11	11	11	0%	21%	21%	21%	A	P	P	P	U
b3110	yhaO	3254701	3256032	-	1331	53	0	3	6	6	0%	6%	11%	11%	A	P	P	P	U
b4471	tdcG	3256307	3257671	-	1364	54	0	3	5	6	0%	6%	9%	11%	A	P	P	P	
b3113	tdcF	3257743	3258132	-	389	16	0	1	1	2	0%	6%	6%	13%	A	P	P	P	U
b3114	tdcE	3258146	3260440	-	2294	92	0	1	4	8	0%	1%	4%	9%	A	P	P	P	
b3115	tdcD	3260474	3261682	-	1208	49	0	0	0	0	0%	0%	0%	0%	A	A	A	A	
b3116	tdcC	3261708	3263039	-	1331	53	0	0	0	0	0%	0%	0%	0%	A	A	A	A	
b3117	tdcB	3263061	3264050	-	989	39	0	0	0	0	0%	0%	0%	0%	A	A	A	A	
b3118	tdcA	3264149	3265087	-	938	38	0	0	0	0	0%	0%	0%	0%	A	A	A	A	
b3123	rnpB	3268238	3268614	-	376	15	15	15	15	15	100%	100%	100%	100%	P	P	P	P	
b3124	garK	3268647	3269792	-	1145	45	21	23	30	30	47%	51%	67%	67%	P	P	P	P	
b3125	garR	3269889	3270773	-	884	36	21	23	23	24	58%	64%	64%	67%	P	P	P	P	
b3126	garL	3270809	3271579	-	770	31	0	3	4	5	0%	10%	13%	16%	A	P	P	P	
b3127	garP	3271595	3272929	-	1334	54	0	2	2	2	0%	4%	4%	4%	A	P	P	P	U
b3131	agaR	3275878	3276687	-	809	32	31	31	31	31	97%	97%	97%	97%	P	P	P	P	
b3146	yraL	3290497	3291357	-	860	34	30	30	30	30	88%	88%	88%	88%	P	P	P	P	U
b3151	yraQ	3295120	3296160	-	1040	42	37	37	38	38	88%	88%	90%	90%	P	P	P	P	U
b3152	yraR	3296233	3296868	-	635	25	12	14	24	24	48%	56%	96%	96%	P	P	P	P	U
b3154	yhbP	3297494	3297937	-	443	18	10	10	10	10	56%	56%	56%	56%	P	P	P	P	U
b3156	yhbS	3298277	3298780	-	503	20	20	20	20	20	100%	100%	100%	100%	P	P	P	P	U

b3157	yhbT	3298774	3299298	-	524	21	21	21	21	21	100%	100%	100%	100%	P	P	P	P	U
b3161	mtr	3302595	3303839	-	1244	50	23	23	23	24	46%	46%	46%	48%	P	P	P	P	
b3162	deaD	3303993	3305882	-	1889	76	76	76	76	76	100%	100%	100%	100%	P	P	P	P	
b3163	nlpI	3306062	3306946	-	884	36	36	36	36	36	100%	100%	100%	100%	P	P	P	P	U
b3164	pnp	3307055	3309190	-	2135	85	85	85	85	85	100%	100%	100%	100%	P	P	P	P	
b3165	rpsO	3309437	3309706	-	269	11	11	11	11	11	100%	100%	100%	100%	P	P	P	P	
b3166	truB	3309855	3310799	-	944	38	38	38	38	38	100%	100%	100%	100%	P	P	P	P	
b3167	rbfA	3310799	3311200	-	401	16	16	16	16	16	100%	100%	100%	100%	P	P	P	P	
b3168	infB	3311364	3314036	-	2672	107	107	107	107	107	100%	100%	100%	100%	P	P	P	P	U
b3169	nusA	3314061	3315548	-	1487	60	60	60	60	60	100%	100%	100%	100%	P	P	P	P	
b3170	yhbC	3315576	3316034	-	458	18	18	18	18	18	100%	100%	100%	100%	P	P	P	P	U
b3171	metY	3316235	3316311	-	76	3	3	3	3	3	100%	100%	100%	100%	P	P	P	P	
b3173	yhbX	3318010	3319635	-	1625	65	0	0	4	5	0%	0%	6%	8%	A	A	P	P	U
b3174	leuU	3320094	3320180	-	86	4	4	4	4	4	100%	100%	100%	100%	P	P	P	P	
b3175	secG	3320195	3320527	-	332	14	14	14	14	14	100%	100%	100%	100%	P	P	P	P	
b3176	glmM	3320755	3322092	-	1337	53	53	53	53	53	100%	100%	100%	100%	P	P	P	P	
b3177	folP	3322085	3322933	-	848	34	31	31	31	31	91%	91%	91%	91%	P	P	P	P	
b3178	hflB	3323023	3324957	-	1934	77	77	77	77	77	100%	100%	100%	100%	P	P	P	P	
b3179	rrmJ	3325057	3325686	-	629	25	25	25	25	25	100%	100%	100%	100%	P	P	P	P	
b3181	greA	3326261	3326737	-	476	19	19	19	19	19	100%	100%	100%	100%	P	P	P	P	
b3183	obgE	3328604	3329776	-	1172	47	47	47	47	47	100%	100%	100%	100%	P	P	P	P	
b3184	yhbE	3329792	3330757	-	965	39	37	37	37	37	95%	95%	95%	95%	P	P	P	P	U
b3185	rpmA	3330884	3331141	-	257	10	10	10	10	10	100%	100%	100%	100%	P	P	P	P	
b3186	rplU	3331162	3331473	-	311	13	13	13	13	13	100%	100%	100%	100%	P	P	P	P	
b3189	murA	3333257	3334516	-	1259	50	50	50	50	50	100%	100%	100%	100%	P	P	P	P	
b3190	yrbA	3334571	3334825	-	254	11	11	11	11	11	100%	100%	100%	100%	P	P	P	P	U
b3191	yrbB	3334985	3335278	-	293	12	12	12	12	12	100%	100%	100%	100%	P	P	P	P	U
b3192	yrbC	3335278	3335913	-	635	25	25	25	25	25	100%	100%	100%	100%	P	P	P	P	U
b3193	yrbD	3335932	3336483	-	551	22	22	22	22	22	100%	100%	100%	100%	P	P	P	P	U
b3194	yrbE	3336488	3337270	-	782	31	31	31	31	31	100%	100%	100%	100%	P	P	P	P	U
b3195	yrbF	3337278	3338087	-	809	32	32	32	32	32	100%	100%	100%	100%	P	P	P	P	U
b3208	mtgA	3347103	3347831	-	728	29	20	20	20	20	69%	69%	69%	69%	P	P	P	P	
b3209	elbB	3347828	3348481	-	653	27	26	26	26	26	96%	96%	96%	96%	P	P	P	P	
b3210	arcB	3348711	3351047	-	2336	93	86	86	86	88	92%	92%	92%	95%	P	P	P	P	
b3211	yhcC	3351143	3352072	-	929	37	0	17	17	17	0%	46%	46%	46%	A	P	P	P	U
b3218	insH	3363724	3364740	-	1016	41	41	41	41	41	100%	100%	100%	100%	P	P	P	P	
b3221	yhcH	3367036	3367500	-	464	18	9	12	12	14	50%	67%	67%	78%	P	P	P	P	U
b3222	nanK	3367497	3368372	-	875	35	20	21	27	27	57%	60%	77%	77%	P	P	P	P	U
b3223	nanE	3368369	3369058	-	689	27	2	3	14	14	7%	11%	52%	52%	P	P	P	P	U
b3224	nanT	3369106	3370596	-	1490	60	3	4	53	53	5%	7%	88%	88%	P	P	P	P	
b3225	nanA	3370705	3371598	-	893	36	3	9	36	36	8%	25%	100%	100%	P	P	P	P	
b3226	nanR	3371720	3372511	-	791	32	29	29	29	29	91%	91%	91%	91%	P	P	P	P	
b3228	sspB	3374301	3374798	-	497	20	20	20	20	20	100%	100%	100%	100%	P	P	P	P	
b3229	sspA	3374804	3375442	-	638	26	26	26	26	26	100%	100%	100%	100%	P	P	P	P	
b3230	rpsI	3375837	3376229	-	392	15	15	15	15	15	100%	100%	100%	100%	P	P	P	P	
b3231	rplM	3376245	3376673	-	428	17	17	17	17	17	100%	100%	100%	100%	P	P	P	P	

b3232	yhcM	3376892	3378019	-	1127	45	45	45	45	45	100%	100%	100%	100%	P	P	P	P	U
b3236	mdh	3381352	3382290	-	938	38	38	38	38	38	100%	100%	100%	100%	P	P	P	P	
b3239	yhcO	3383879	3384151	-	272	10	7	8	9	10	70%	80%	90%	100%	P	P	P	P	U
b3240	aaeB	3384243	3386210	-	1967	79	0	1	3	3	0%	1%	4%	4%	A	P	P	P	
b3241	aaeA	3386216	3387148	-	932	37	0	6	7	7	0%	16%	19%	19%	A	P	P	P	
b3242	aaeX	3387156	3387359	-	203	8	0	3	3	3	0%	38%	38%	38%	A	P	P	P	
b3244	tldD	3388605	3390050	-	1445	57	57	57	57	57	100%	100%	100%	100%	P	P	P	P	U
b4472	yhdP	3390480	3394280	-	3800	152	124	124	129	131	82%	82%	85%	86%	P	P	P	P	U
b3247	rng	3394348	3395817	-	1469	59	59	59	59	59	100%	100%	100%	100%	P	P	P	P	
b3248	yhdE	3395807	3396400	-	593	23	23	23	23	23	100%	100%	100%	100%	P	P	P	P	U
b3249	mreD	3396409	3396897	-	488	19	19	19	19	19	100%	100%	100%	100%	P	P	P	P	
b3250	mreC	3396897	3398000	-	1103	44	44	44	44	44	100%	100%	100%	100%	P	P	P	P	
b3251	mreB	3398066	3399109	-	1043	42	42	42	42	42	100%	100%	100%	100%	P	P	P	P	
b3252	csrD	3399414	3401354	-	1940	78	50	52	52	52	64%	67%	67%	67%	P	P	P	P	U
b3264	envR	3410825	3411487	-	662	27	0	0	0	0	0%	0%	0%	0%	A	A	A	A	
b3272	rrfF	3421445	3421564	-	119	5	5	5	5	5	100%	100%	100%	100%	P	P	P	P	
b3273	thrV	3421602	3421677	-	75	3	3	3	3	3	100%	100%	100%	100%	P	P	P	P	
b3274	rrfD	3421690	3421809	-	119	5	5	5	5	5	100%	100%	100%	100%	P	P	P	P	
b3275	rrlD	3421902	3424805	-	2903	116	116	116	116	116	100%	100%	100%	100%	P	P	P	P	
b3276	alaU	3424980	3425055	-	75	3	3	3	3	3	100%	100%	100%	100%	P	P	P	P	
b3277	ileU	3425098	3425174	-	76	3	3	3	3	3	100%	100%	100%	100%	P	P	P	P	
b3278	rrsD	3425243	3426784	-	1541	62	62	62	62	62	100%	100%	100%	100%	P	P	P	P	
b3280	yrdB	3427788	3428045	-	257	10	8	8	9	9	80%	80%	90%	90%	P	P	P	P	U
b3281	aroE	3428042	3428860	-	818	33	32	32	32	32	97%	97%	97%	97%	P	P	P	P	
b3282	rimN	3428865	3429437	-	572	23	23	23	23	23	100%	100%	100%	100%	P	P	P	P	U
b3283	yrdD	3429442	3429984	-	542	22	22	22	22	22	100%	100%	100%	100%	P	P	P	P	U
b3284	smg	3430013	3430486	-	473	19	19	19	19	19	100%	100%	100%	100%	P	P	P	P	U
b4473	smf	3430458	3431582	-	1124	45	26	30	35	35	58%	67%	78%	78%	P	P	P	P	U
b4550	yhdL	3436453	3436671	-	218	9	6	7	8	8	67%	78%	89%	89%	P	P	P	P	U
b3292	zntR	3436727	3437152	-	425	17	13	17	17	17	76%	100%	100%	100%	P	P	P	P	
b3293	yhdN	3437163	3437531	-	368	14	14	14	14	14	100%	100%	100%	100%	P	P	P	P	U
b3294	rplQ	3437638	3438021	-	383	15	15	15	15	15	100%	100%	100%	100%	P	P	P	P	
b3295	rpoA	3438062	3439051	-	989	40	40	40	40	40	100%	100%	100%	100%	P	P	P	P	
b3296	rpsD	3439077	3439697	-	620	25	25	25	25	25	100%	100%	100%	100%	P	P	P	P	
b3297	rpsK	3439731	3440120	-	389	15	15	15	15	15	100%	100%	100%	100%	P	P	P	P	
b3298	rpsM	3440137	3440493	-	356	14	14	14	14	14	100%	100%	100%	100%	P	P	P	P	
b3299	rpmJ	3440640	3440756	-	116	5	5	5	5	5	100%	100%	100%	100%	P	P	P	P	
b3300	secY	3440788	3442119	-	1331	53	53	53	53	53	100%	100%	100%	100%	P	P	P	P	
b3301	rplO	3442127	3442561	-	434	17	17	17	17	17	100%	100%	100%	100%	P	P	P	P	
b3302	rpmD	3442565	3442744	-	179	7	7	7	7	7	100%	100%	100%	100%	P	P	P	P	
b3303	rpsE	3442748	3443251	-	503	20	20	20	20	20	100%	100%	100%	100%	P	P	P	P	
b3304	rplR	3443266	3443619	-	353	14	14	14	14	14	100%	100%	100%	100%	P	P	P	P	
b3305	rplF	3443629	3444162	-	533	21	21	21	21	21	100%	100%	100%	100%	P	P	P	P	
b3306	rpsH	3444175	3444567	-	392	15	15	15	15	15	100%	100%	100%	100%	P	P	P	P	
b3307	rpsN	3444601	3444906	-	305	12	12	12	12	12	100%	100%	100%	100%	P	P	P	P	
b3308	rplE	3444921	3445460	-	539	22	22	22	22	22	100%	100%	100%	100%	P	P	P	P	

b3309	rplX	3445475	3445789	-	314	12	12	12	12	12	100%	100%	100%	100%	P	P	P	P
b3310	rplN	3445800	3446171	-	371	14	14	14	14	14	100%	100%	100%	100%	P	P	P	P
b3311	rpsQ	3446336	3446590	-	254	10	10	10	10	10	100%	100%	100%	100%	P	P	P	P
b3312	rpmC	3446590	3446781	-	191	8	8	8	8	8	100%	100%	100%	100%	P	P	P	P
b3313	rplP	3446781	3447191	-	410	16	16	16	16	16	100%	100%	100%	100%	P	P	P	P
b3314	rpsC	3447204	3447905	-	701	28	28	28	28	28	100%	100%	100%	100%	P	P	P	P
b3315	rplV	3447923	3448255	-	332	13	13	13	13	13	100%	100%	100%	100%	P	P	P	P
b3316	rpsS	3448270	3448548	-	278	12	12	12	12	12	100%	100%	100%	100%	P	P	P	P
b3317	rplB	3448565	3449386	-	821	33	33	33	33	33	100%	100%	100%	100%	P	P	P	P
b3318	rplW	3449404	3449706	-	302	12	12	12	12	12	100%	100%	100%	100%	P	P	P	P
b3319	rplD	3449703	3450308	-	605	24	24	24	24	24	100%	100%	100%	100%	P	P	P	P
b3320	rplC	3450319	3450948	-	629	26	26	26	26	26	100%	100%	100%	100%	P	P	P	P
b3321	rpsJ	3450981	3451292	-	311	12	12	12	12	12	100%	100%	100%	100%	P	P	P	P
b3322	gspB	3451530	3451949	-	419	17	9	13	13	13	53%	76%	76%	76%	P	P	P	P
b3323	gspA	3451951	3453420	-	1469	58	0	5	5	5	0%	9%	9%	9%	A	P	P	P
b3336	bfr	3464271	3464747	-	476	20	20	20	20	20	100%	100%	100%	100%	P	P	P	P
b3337	bfd	3464819	3465013	-	194	8	8	8	8	8	100%	100%	100%	100%	P	P	P	P
b3338	chiA	3465182	3467875	-	2693	108	20	20	28	28	19%	19%	26%	26%	P	P	P	P
b3339	tufA	3468167	3469351	-	1184	48	48	48	48	48	100%	100%	100%	100%	P	P	P	P
b3340	fusA	3469422	3471536	-	2114	85	85	85	85	85	100%	100%	100%	100%	P	P	P	P
b3341	rpsG	3471564	3472103	-	539	22	22	22	22	22	100%	100%	100%	100%	P	P	P	P
b3342	rpsL	3472200	3472574	-	374	15	15	15	15	15	100%	100%	100%	100%	P	P	P	P
b3343	yheL	3472700	3472987	-	287	11	11	11	11	11	100%	100%	100%	100%	P	P	P	P
b3344	yheM	3472995	3473354	-	359	15	15	15	15	15	100%	100%	100%	100%	P	P	P	P
b3345	yheN	3473354	3473740	-	386	15	15	15	15	15	100%	100%	100%	100%	P	P	P	P
b3346	yheO	3473740	3474462	-	722	29	29	29	29	29	100%	100%	100%	100%	P	P	P	P
b3347	fkpA	3474629	3475441	-	812	32	31	31	31	31	97%	97%	97%	97%	P	P	P	P
b3349	slyD	3475929	3476519	-	590	23	23	23	23	23	100%	100%	100%	100%	P	P	P	P
b4551	yheV	3476614	3476814	-	200	8	8	8	8	8	100%	100%	100%	100%	P	P	P	P
b3350	kefB	3476824	3478629	-	1805	73	45	45	48	51	62%	62%	66%	70%	P	P	P	P
b3351	kefG	3478629	3479183	-	554	22	20	20	20	20	91%	91%	91%	91%	P	P	P	P
b3356	yhfA	3483436	3483840	-	404	16	16	16	16	16	100%	100%	100%	100%	P	P	P	P
b3359	argD	3486982	3488202	-	1220	49	49	49	49	49	100%	100%	100%	100%	P	P	P	P
b3360	pabA	3488288	3488851	-	563	23	23	23	23	23	100%	100%	100%	100%	P	P	P	P
b3361	fic	3488883	3489485	-	602	24	23	23	24	24	96%	96%	100%	100%	P	P	P	P
b3362	yhfG	3489475	3489642	-	167	6	6	6	6	6	100%	100%	100%	100%	P	P	P	P
b3363	ppiA	3489747	3490319	-	572	23	22	22	22	22	96%	96%	96%	96%	P	P	P	P
b3376	yhfS	3502957	3504042	-	1085	44	0	1	5	5	0%	2%	11%	11%	A	P	P	P
b3377	yhfT	3504054	3505358	-	1304	52	0	1	1	1	0%	2%	2%	2%	A	P	P	P
b3378	yhfU	3505370	3505723	-	353	14	0	0	0	0	0%	0%	0%	0%	A	A	A	A
b3379	php	3505734	3506612	-	878	36	0	4	4	4	0%	11%	11%	11%	A	P	P	P
b3380	yhfW	3506609	3507835	-	1226	49	0	7	7	7	0%	14%	14%	14%	A	P	P	P
b3381	yhfX	3507835	3508998	-	1163	47	0	10	10	10	0%	21%	21%	21%	A	P	P	P
b3382	yhfY	3509082	3509444	-	362	15	1	15	15	15	7%	100%	100%	100%	P	P	P	P
b3383	yhfZ	3509461	3510366	-	905	37	13	31	31	32	35%	84%	84%	86%	P	P	P	P
b3384	trpS	3510656	3511660	-	1004	40	40	40	40	40	100%	100%	100%	100%	P	P	P	P

b3385	gph	3511653	3512411	-	758	30	30	30	30	30	100%	100%	100%	100%	P	P	P	P	
b3386	rpe	3512404	3513081	-	677	27	27	27	27	27	100%	100%	100%	100%	P	P	P	P	
b3387	dam	3513099	3513935	-	836	33	33	33	33	33	100%	100%	100%	100%	P	P	P	P	
b3388	damX	3514042	3515328	-	1286	51	51	51	51	51	100%	100%	100%	100%	P	P	P	P	U
b3389	aroB	3515420	3516508	-	1088	43	43	43	43	43	100%	100%	100%	100%	P	P	P	P	
b3390	aroK	3516565	3517086	-	521	20	20	20	20	20	100%	100%	100%	100%	P	P	P	P	
b3391	hofQ	3517487	3518725	-	1238	50	0	2	3	5	0%	4%	6%	10%	A	P	P	P	U
b3392	hofP	3518637	3519041	-	404	17	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b3393	hofO	3519031	3519471	-	440	18	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b3394	hofN	3519455	3519994	-	539	22	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b3395	hofM	3519994	3520773	-	779	31	0	0	3	3	0%	0%	10%	10%	A	A	P	P	U
b3397	nudE	3523611	3524171	-	560	23	22	22	22	22	96%	96%	96%	96%	P	P	P	P	
b3402	yhgE	3528737	3530461	-	1724	69	16	16	16	16	23%	23%	23%	23%	P	P	P	P	U
b3404	envZ	3532538	3533890	-	1352	55	50	50	50	50	91%	91%	91%	91%	P	P	P	P	
b3405	ompR	3533887	3534606	-	719	29	29	29	29	29	100%	100%	100%	100%	P	P	P	P	
b3412	bioH	3542096	3542866	-	770	31	24	24	24	24	77%	77%	77%	77%	P	P	P	P	
b3416	malQ	3546008	3548092	-	2084	84	82	82	82	82	98%	98%	98%	98%	P	P	P	P	
b3417	malP	3548102	3550495	-	2393	96	95	95	95	96	99%	99%	99%	100%	P	P	P	P	
b4475	rtcA	3553855	3554871	-	1016	41	6	9	26	26	15%	22%	63%	63%	P	P	P	P	
b3421	rtcB	3554875	3556101	-	1226	49	12	25	46	46	24%	51%	94%	94%	P	P	P	P	U
b3423	glpR	3557870	3558628	-	758	30	30	30	30	30	100%	100%	100%	100%	P	P	P	P	
b3424	glpG	3558645	3559475	-	830	33	33	33	33	33	100%	100%	100%	100%	P	P	P	P	U
b3425	glpE	3559520	3559846	-	326	13	13	13	13	13	100%	100%	100%	100%	P	P	P	P	
b3427	yzgL	3561747	3562028	-	281	11	5	5	5	6	45%	45%	45%	55%	P	P	P	P	U
b3428	glgP	3562157	3564604	-	2447	98	95	95	95	96	97%	97%	97%	98%	P	P	P	P	
b3429	glgA	3564623	3566056	-	1433	57	57	57	57	57	100%	100%	100%	100%	P	P	P	P	
b3430	glgC	3566056	3567351	-	1295	52	52	52	52	52	100%	100%	100%	100%	P	P	P	P	
b3431	glgX	3567369	3569342	-	1973	79	78	78	78	78	99%	99%	99%	99%	P	P	P	P	
b3432	glgB	3569339	3571525	-	2186	88	88	88	88	88	100%	100%	100%	100%	P	P	P	P	
b3433	asd	3571798	3572901	-	1103	44	44	44	44	44	100%	100%	100%	100%	P	P	P	P	
b4476	gntU	3573744	3575084	-	1340	54	0	8	8	8	0%	15%	15%	15%	A	P	P	P	
b3437	gntK	3575088	3575615	-	527	21	2	19	19	19	10%	90%	90%	90%	P	P	P	P	
b3438	gntR	3575754	3576749	-	995	40	40	40	40	40	100%	100%	100%	100%	P	P	P	P	
b3439	yhhW	3576973	3577668	-	695	27	18	18	18	20	67%	67%	67%	74%	P	P	P	P	U
b3440	yhhX	3577791	3578828	-	1037	42	40	40	40	42	95%	95%	95%	100%	P	P	P	P	U
b4451	ryhB	3578950	3579039	-	89	3	2	2	2	3	67%	67%	67%	100%	P	P	P	P	
b3447	ggt	3583104	3584846	-	1742	70	58	58	58	59	83%	83%	83%	84%	P	P	P	P	
b3449	ugpQ	3585393	3586136	-	743	30	25	25	25	25	83%	83%	83%	83%	P	P	P	P	
b3450	ugpC	3586133	3587203	-	1070	43	40	40	40	40	93%	93%	93%	93%	P	P	P	P	
b3451	ugpE	3587205	3588050	-	845	34	12	12	12	12	35%	35%	35%	35%	P	P	P	P	
b3452	ugpA	3588047	3588934	-	887	35	8	8	8	8	23%	23%	23%	23%	P	P	P	P	
b3453	ugpB	3589032	3590348	-	1316	53	47	47	52	52	89%	89%	98%	98%	P	P	P	P	
b3454	livF	3590747	3591460	-	713	28	28	28	28	28	100%	100%	100%	100%	P	P	P	P	
b3455	livG	3591462	3592229	-	767	31	31	31	31	31	100%	100%	100%	100%	P	P	P	P	
b3456	livM	3592226	3593503	-	1277	51	51	51	51	51	100%	100%	100%	100%	P	P	P	P	
b3457	livH	3593500	3594426	-	926	37	37	37	37	37	100%	100%	100%	100%	P	P	P	P	



b3458	livK	3594474	3595583	-	1109	44	44	44	44	44	100%	100%	100%	100%	P	P	P	P	
b3460	livJ	3596578	3597681	-	1103	44	44	44	44	44	100%	100%	100%	100%	P	P	P	P	
b3461	rpoH	3597952	3598806	-	854	34	33	34	34	34	97%	100%	100%	100%	P	P	P	P	
b3462	ftsX	3599051	3600109	-	1058	42	40	40	40	40	95%	95%	95%	95%	P	P	P	P	U
b3463	ftsE	3600102	3600770	-	668	26	26	26	26	26	100%	100%	100%	100%	P	P	P	P	U
b3464	ftsY	3600773	3602266	-	1493	60	60	60	60	60	100%	100%	100%	100%	P	P	P	P	U
b3467	yhhM	3603274	3603633	-	359	15	15	15	15	15	100%	100%	100%	100%	P	P	P	P	U
b3470	sirA	3606774	3607019	-	245	10	9	10	10	10	90%	100%	100%	100%	P	P	P	P	U
b3473	yhhS	3608539	3609756	-	1217	49	31	31	31	33	63%	63%	63%	67%	P	P	P	P	U
b3485	yhhJ	3623702	3624829	-	1127	45	44	44	44	44	98%	98%	98%	98%	P	P	P	P	U
b3486	rbbA	3624826	3627561	-	2735	109	108	108	108	108	99%	99%	99%	99%	P	P	P	P	U
b3487	yhiI	3627558	3628625	-	1067	43	43	43	43	43	100%	100%	100%	100%	P	P	P	P	U
b3488	yhiJ	3628991	3630613	-	1622	65	0	0	2	2	0%	0%	3%	3%	A	A	P	P	U
b4660	yhiL	3630875	3632481	-	1606	64	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b3492	yhiN	3634231	3635433	-	1202	48	47	47	47	47	98%	98%	98%	98%	P	P	P	P	U
b3494	uspB	3637408	3637743	-	335	13	13	13	13	13	100%	100%	100%	100%	P	P	P	P	U
b3497	yhiQ	3640403	3641155	-	752	30	25	26	26	26	83%	87%	87%	87%	P	P	P	P	U
b3498	prlC	3641163	3643205	-	2042	82	82	82	82	82	100%	100%	100%	100%	P	P	P	P	
b4613	dinQ	3645728	3645856	-	128	5	5	5	5	5	100%	100%	100%	100%	P	P	P	P	U
b3505	insH	3650205	3651221	-	1016	41	41	41	41	41	100%	100%	100%	100%	P	P	P	P	
b3508	yhiD	3653278	3653925	-	647	26	14	14	15	25	54%	54%	58%	96%	P	P	P	P	U
b3509	hdeB	3653989	3654315	-	326	13	13	13	13	13	100%	100%	100%	100%	P	P	P	P	
b3510	hdeA	3654431	3654763	-	332	14	14	14	14	14	100%	100%	100%	100%	P	P	P	P	
b3515	gadW	3661913	3662641	-	728	29	26	26	26	27	90%	90%	90%	93%	P	P	P	P	
b3516	gadX	3663009	3663833	-	824	33	33	33	33	33	100%	100%	100%	100%	P	P	P	P	
b3517	gadA	3664203	3665603	-	1400	56	56	56	56	56	100%	100%	100%	100%	P	P	P	P	
b3518	yhjA	3665814	3667211	-	1397	56	6	20	21	21	11%	36%	38%	38%	P	P	P	P	U
b3520	yhjB	3669315	3669917	-	602	24	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b3524	yhjG	3674313	3676388	-	2075	83	44	55	75	78	53%	66%	90%	94%	P	P	P	P	U
b3525	yhjH	3676443	3677210	-	767	30	0	4	4	4	0%	13%	13%	13%	A	P	P	P	
b3527	yhjJ	3678467	3679963	-	1496	59	57	57	57	57	97%	97%	97%	97%	P	P	P	P	U
b3528	dctA	3680184	3681470	-	1286	52	52	52	52	52	100%	100%	100%	100%	P	P	P	P	
b3529	yhjK	3681653	3683608	-	1955	78	56	56	56	56	72%	72%	72%	72%	P	P	P	P	U
b3530	bcsC	3683723	3687145	-	3422	137	60	60	63	63	44%	44%	46%	46%	P	P	P	P	
b3531	bcsZ	3687178	3688284	-	1106	44	0	0	3	3	0%	0%	7%	7%	A	A	P	P	
b3532	bcsB	3688291	3690630	-	2339	93	0	2	9	10	0%	2%	10%	11%	A	P	P	P	
b3533	bcsA	3690641	3693259	-	2618	104	0	0	2	2	0%	0%	2%	2%	A	A	P	P	
b3534	yhjQ	3693256	3694008	-	752	30	16	16	16	16	53%	53%	53%	53%	P	P	P	P	U
b3535	yhjR	3694020	3694208	-	188	7	7	7	7	7	100%	100%	100%	100%	P	P	P	P	U
b4453	ldrD	3698003	3698110	-	107	4	4	4	4	4	100%	100%	100%	100%	P	P	P	P	
b3540	dppF	3699887	3700891	-	1004	41	39	39	39	40	95%	95%	95%	98%	P	P	P	P	
b3541	dppD	3700888	3701871	-	983	40	40	40	40	40	100%	100%	100%	100%	P	P	P	P	
b3542	dppC	3701882	3702784	-	902	36	36	36	36	36	100%	100%	100%	100%	P	P	P	P	
b3543	dppB	3702794	3703813	-	1019	40	40	40	40	40	100%	100%	100%	100%	P	P	P	P	
b3544	dppA	3704121	3705728	-	1607	64	64	64	64	64	100%	100%	100%	100%	P	P	P	P	
b3545	proK	3706639	3706715	-	76	3	3	3	3	3	100%	100%	100%	100%	P	P	P	P	

b3546	eptB	3706807	3708498	-	1691	68	16	16	16	17	24%	24%	24%	25%	P	P	P	P	U
b3547	yhjX	3708822	3710030	-	1208	48	0	0	1	1	0%	0%	2%	2%	A	A	P	P	U
b3548	yhjY	3710259	3710957	-	698	28	26	26	27	27	93%	93%	96%	96%	P	P	P	P	U
b3551	bisC	3712084	3714417	-	2333	93	88	88	88	88	95%	95%	95%	95%	P	P	P	P	
b3554	yiaF	3716357	3717067	-	710	28	28	28	28	28	100%	100%	100%	100%	P	P	P	P	U
b4455	hokA	3718471	3718623	-	152	6	0	0	0	0	0%	0%	0%	0%	A	A	A	A	
b4647	mokA	3718471	3718655	-	184	7	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b3559	glyS	3720351	3722420	-	2069	83	83	83	83	83	100%	100%	100%	100%	P	P	P	P	
b3560	glyQ	3722430	3723341	-	911	36	36	36	36	36	100%	100%	100%	100%	P	P	P	P	
b4553	ysaB	3723436	3723735	-	299	12	2	6	6	7	17%	50%	50%	58%	P	P	P	P	U
b3562	yiaA	3724947	3725384	-	437	17	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b3563	yiaB	3725430	3725771	-	341	14	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b3564	xylB	3725940	3727394	-	1454	59	34	41	55	55	58%	69%	93%	93%	P	P	P	P	
b3565	xylA	3727466	3728788	-	1322	53	16	24	29	29	30%	45%	55%	55%	P	P	P	P	
b3570	bax	3734376	3735200	-	824	32	32	32	32	32	100%	100%	100%	100%	P	P	P	P	U
b3573	ysaA	3739132	3739605	-	473	19	0	6	6	6	0%	32%	32%	32%	A	P	P	P	U
b3574	yiaJ	3739707	3740555	-	848	34	31	31	31	31	91%	91%	91%	91%	P	P	P	P	U
b4648	ysaC	3748836	3748937	-	101	4	0	0	3	3	0%	0%	75%	75%	A	A	P	P	U
b3584	yiaT	3749151	3749891	-	740	30	0	1	18	18	0%	3%	60%	60%	A	P	P	P	U
b3586	yiaV	3750986	3752122	-	1136	45	0	0	4	4	0%	0%	9%	9%	A	A	P	P	
b3587	yiaW	3752128	3752451	-	323	13	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b3588	aldB	3752996	3754534	-	1538	62	13	17	60	60	21%	27%	97%	97%	P	P	P	P	
b3589	yiaY	3754699	3755850	-	1151	46	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b3590	selB	3756040	3757884	-	1844	74	67	67	67	67	91%	91%	91%	91%	P	P	P	P	
b3591	selA	3757881	3759272	-	1391	55	55	55	55	55	100%	100%	100%	100%	P	P	P	P	
b3592	yibF	3759370	3759978	-	608	25	25	25	25	25	100%	100%	100%	100%	P	P	P	P	U
b3597	yibH	3768266	3769402	-	1136	46	5	8	25	26	11%	17%	54%	57%	P	P	P	P	U
b3598	yibI	3769405	3769767	-	362	14	3	4	11	11	21%	29%	79%	79%	P	P	P	P	U
b4554	yibT	3774194	3774403	-	209	9	9	9	9	9	100%	100%	100%	100%	P	P	P	P	U
b3607	cysE	3779764	3780585	-	821	33	32	32	32	32	97%	97%	97%	97%	P	P	P	P	
b3608	gpsA	3780665	3781684	-	1019	41	41	41	41	41	100%	100%	100%	100%	P	P	P	P	
b3609	secB	3781684	3782151	-	467	18	18	18	18	18	100%	100%	100%	100%	P	P	P	P	
b3610	grxC	3782214	3782465	-	251	10	10	10	10	10	100%	100%	100%	100%	P	P	P	P	
b3611	yibN	3782607	3783038	-	431	17	17	17	17	17	100%	100%	100%	100%	P	P	P	P	U
b3615	yibD	3787070	3788104	-	1034	42	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b3616	tdh	3788343	3789368	-	1025	41	35	35	39	39	85%	85%	95%	95%	P	P	P	P	
b3617	kbl	3789378	3790574	-	1196	47	41	44	45	45	87%	94%	96%	96%	P	P	P	P	
b3618	htrL	3790849	3791706	-	857	35	27	27	28	28	77%	77%	80%	80%	P	P	P	P	U
b3623	waaU	3796262	3797335	-	1073	43	22	22	22	23	51%	51%	51%	53%	P	P	P	P	
b3624	rfaZ	3797368	3798219	-	851	34	15	15	15	17	44%	44%	44%	50%	P	P	P	P	
b3625	rfaY	3798290	3798988	-	698	28	22	22	22	24	79%	79%	79%	86%	P	P	P	P	
b3626	rfaJ	3799006	3800022	-	1016	40	27	27	27	32	68%	68%	68%	80%	P	P	P	P	
b3627	rfaI	3800062	3801081	-	1019	41	30	30	30	34	73%	73%	73%	83%	P	P	P	P	
b3628	rfaB	3801081	3802190	-	1109	44	35	35	35	37	80%	80%	80%	84%	P	P	P	P	
b3629	rfaS	3802204	3803139	-	935	38	17	17	17	19	45%	45%	45%	50%	P	P	P	P	
b3630	rfaP	3803176	3803973	-	797	32	30	30	30	30	94%	94%	94%	94%	P	P	P	P	

b3631	rfaG	3803966	3805090	-	1124	45	44	44	44	44	98%	98%	98%	98%	P	P	P	P	
b3632	rfaQ	3805087	3806121	-	1034	41	39	39	39	39	95%	95%	95%	95%	P	P	P	P	
b3635	mutM	3808366	3809175	-	809	32	21	32	32	32	66%	100%	100%	100%	P	P	P	P	
b3636	rpmG	3809273	3809440	-	167	7	7	7	7	7	100%	100%	100%	100%	P	P	P	P	
b3637	rpmB	3809461	3809697	-	236	9	9	9	9	9	100%	100%	100%	100%	P	P	P	P	
b3638	yicR	3809914	3810582	-	668	27	4	4	4	4	15%	15%	15%	15%	P	P	P	P	
b3642	pyrE	3813150	3813791	-	641	26	9	9	9	9	35%	35%	35%	35%	P	P	P	P	
b3643	rph	3813886	3814572	-	686	27	27	27	27	27	100%	100%	100%	100%	P	P	P	P	
b3647	ligB	3817511	3819193	-	1682	67	0	0	0	0	0%	0%	0%	0%	A	A	A	A	
b3653	gltS	3825483	3826688	-	1205	48	38	45	45	45	79%	94%	94%	94%	P	P	P	P	
b3656	yicI	3830242	3832560	-	2318	93	0	3	5	5	0%	3%	5%	5%	A	P	P	P	U
b3657	yicJ	3832570	3833952	-	1382	55	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b3661	nlpA	3837198	3838016	-	818	33	33	33	33	33	100%	100%	100%	100%	P	P	P	P	
b3662	nepI	3838572	3839762	-	1190	48	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b3663	yicN	3839973	3840425	-	452	18	0	1	2	2	0%	6%	11%	11%	A	P	P	P	U
b3664	yicO	3840478	3841812	-	1334	54	0	0	5	5	0%	0%	9%	9%	A	A	P	P	U
b3666	uhpT	3843799	3845190	-	1391	56	0	7	7	7	0%	13%	13%	13%	A	P	P	P	
b3667	uhpC	3845328	3846647	-	1319	53	18	26	26	26	34%	49%	49%	49%	P	P	P	P	
b3668	uhpB	3846657	3848159	-	1502	60	29	29	29	29	48%	48%	48%	48%	P	P	P	P	
b3669	uhpA	3848159	3848749	-	590	23	22	22	22	22	96%	96%	96%	96%	P	P	P	P	
b3670	ilvN	3848825	3849115	-	290	12	12	12	12	12	100%	100%	100%	100%	P	P	P	P	
b3671	ilvB	3849119	3850807	-	1688	68	68	68	68	68	100%	100%	100%	100%	P	P	P	P	
b3672	ivbL	3850913	3851011	-	98	4	4	4	4	4	100%	100%	100%	100%	P	P	P	P	
b4616	istR	3851141	3851280	-	139	5	0	0	0	0	0%	0%	0%	0%	A	A	A	A	
b3674	yidF	3853137	3853634	-	497	20	1	1	2	2	5%	5%	10%	10%	P	P	P	P	U
b3675	yidG	3853631	3853993	-	362	15	5	5	6	8	33%	33%	40%	53%	P	P	P	P	U
b3676	yidH	3853983	3854330	-	347	14	12	13	13	13	86%	93%	93%	93%	P	P	P	P	U
b3678	yidJ	3854934	3856427	-	1493	59	0	2	6	6	0%	3%	10%	10%	A	P	P	P	U
b3679	yidK	3856424	3858139	-	1715	69	0	1	1	1	0%	1%	1%	1%	A	P	P	P	U
b4556	glvG	3859196	3860010	-	814	33	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b3683	glvC	3860010	3861626	-	1616	64	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b3685	yidE	3862635	3864296	-	1661	66	50	51	51	51	76%	77%	77%	77%	P	P	P	P	U
b3686	ibpB	3864492	3864920	-	428	17	11	17	17	17	65%	100%	100%	100%	P	P	P	P	
b3687	ibpA	3865032	3865445	-	413	17	17	17	17	17	100%	100%	100%	100%	P	P	P	P	
b3689	yidR	3866085	3867299	-	1214	48	29	29	29	29	60%	60%	60%	60%	P	P	P	P	U
b3691	dgoT	3868461	3869753	-	1292	51	0	0	0	0	0%	0%	0%	0%	A	A	A	A	
b4478	dgoD	3869873	3871021	-	1148	46	0	4	6	6	0%	9%	13%	13%	A	P	P	P	
b4477	dgoA	3871018	3871635	-	617	25	0	1	2	2	0%	4%	8%	8%	A	P	P	P	
b3693	dgoK	3871619	3872497	-	878	35	0	2	8	8	0%	6%	23%	23%	A	P	P	P	
b4479	dgoR	3872494	3873183	-	689	27	24	24	25	25	89%	89%	93%	93%	P	P	P	P	U
b3697	yidA	3874163	3874975	-	812	33	32	32	32	32	97%	97%	97%	97%	P	P	P	P	U
b3698	yidB	3875090	3875488	-	398	16	14	14	14	15	88%	88%	88%	94%	P	P	P	P	U
b3699	gyrB	3875728	3878142	-	2414	96	96	96	96	96	100%	100%	100%	100%	P	P	P	P	
b3700	recF	3878171	3879244	-	1073	42	39	42	42	42	93%	100%	100%	100%	P	P	P	P	
b3701	dnaN	3879244	3880344	-	1100	44	44	44	44	44	100%	100%	100%	100%	P	P	P	P	
b3702	dnaA	3880349	3881752	-	1403	56	56	56	56	56	100%	100%	100%	100%	P	P	P	P	

b3714	yieG	3893295	3894632	-	1337	54	54	54	54	54	100%	100%	100%	100%	P	P	P	P	U
b3718	yieK	3896694	3897416	-	722	29	0	5	8	8	0%	17%	28%	28%	A	P	P	P	U
b3719	yieL	3897431	3898600	-	1169	47	0	1	1	1	0%	2%	2%	2%	A	P	P	P	U
b3720	bglH	3898627	3900243	-	1616	64	0	0	0	0	0%	0%	0%	0%	A	A	A	A	
b3721	bglB	3900312	3901724	-	1412	57	0	0	0	0	0%	0%	0%	0%	A	A	A	A	
b3722	bglF	3901743	3903620	-	1877	75	0	0	0	0	0%	0%	0%	0%	A	A	A	A	
b3723	bglG	3903754	3904590	-	836	33	0	0	0	0	0%	0%	0%	0%	A	A	A	A	
b3724	phoU	3904876	3905601	-	725	29	29	29	29	29	100%	100%	100%	100%	P	P	P	P	
b3725	pstB	3905616	3906389	-	773	31	31	31	31	31	100%	100%	100%	100%	P	P	P	P	
b3726	pstA	3906572	3907462	-	890	36	35	35	35	35	97%	97%	97%	97%	P	P	P	P	
b3727	pstC	3907462	3908421	-	959	38	38	38	38	38	100%	100%	100%	100%	P	P	P	P	
b3728	pstS	3908508	3909548	-	1040	41	41	41	41	41	100%	100%	100%	100%	P	P	P	P	
b3729	glmS	3909862	3911691	-	1829	73	73	73	73	73	100%	100%	100%	100%	P	P	P	P	
b3730	glmU	3911853	3913223	-	1370	55	55	55	55	55	100%	100%	100%	100%	P	P	P	P	
b3731	atpC	3913576	3913995	-	419	17	17	17	17	17	100%	100%	100%	100%	P	P	P	P	
b3732	atpD	3914016	3915398	-	1382	55	55	55	55	55	100%	100%	100%	100%	P	P	P	P	
b3733	atpG	3915425	3916288	-	863	35	35	35	35	35	100%	100%	100%	100%	P	P	P	P	
b3734	atpA	3916339	3917880	-	1541	61	61	61	61	61	100%	100%	100%	100%	P	P	P	P	
b3735	atpH	3917893	3918426	-	533	21	21	21	21	21	100%	100%	100%	100%	P	P	P	P	
b3736	atpF	3918441	3918911	-	470	19	19	19	19	19	100%	100%	100%	100%	P	P	P	P	
b3737	atpE	3918973	3919212	-	239	10	10	10	10	10	100%	100%	100%	100%	P	P	P	P	
b3738	atpB	3919259	3920074	-	815	32	32	32	32	32	100%	100%	100%	100%	P	P	P	P	
b3739	atpI	3920083	3920463	-	380	15	15	15	15	15	100%	100%	100%	100%	P	P	P	P	
b3740	gidB	3921080	3921703	-	623	25	20	20	20	20	80%	80%	80%	80%	P	P	P	P	
b3741	mnmG	3921767	3923656	-	1889	75	74	74	74	74	99%	99%	99%	99%	P	P	P	P	
b3742	mioC	3924035	3924478	-	443	17	17	17	17	17	100%	100%	100%	100%	P	P	P	P	
b3743	asnC	3924568	3925026	-	458	18	11	11	11	11	61%	61%	61%	61%	P	P	P	P	
b3745	viaA	3926175	3927626	-	1451	58	44	44	44	47	76%	76%	76%	81%	P	P	P	P	U
b3746	ravA	3927620	3929116	-	1496	60	57	57	57	59	95%	95%	95%	98%	P	P	P	P	U
b3754	hsrA	3937208	3938635	-	1427	57	4	5	8	8	7%	9%	14%	14%	P	P	P	P	U
b3755	yieP	3938658	3939350	-	692	27	27	27	27	27	100%	100%	100%	100%	P	P	P	P	U
b4480	hdfR	3945151	3945990	-	839	34	23	30	30	30	68%	88%	88%	88%	P	P	P	P	
b3765	yifB	3946472	3947992	-	1520	61	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b3773	ilvY	3954950	3955843	-	893	36	29	32	32	32	81%	89%	89%	89%	P	P	P	P	
b3775	ppiC	3957555	3957836	-	281	12	11	11	11	11	92%	92%	92%	92%	P	P	P	P	
b3777	yifN	3958035	3958483	-	448	18	9	11	15	16	50%	61%	83%	89%	P	P	P	P	U
b3779	gpp	3960768	3962252	-	1484	59	53	53	53	53	90%	90%	90%	90%	P	P	P	P	
b3780	rhlB	3962388	3963653	-	1265	50	50	50	50	50	100%	100%	100%	100%	P	P	P	P	
b3801	aslA	3982375	3984030	-	1655	66	0	5	7	7	0%	8%	11%	11%	A	P	P	P	
b3802	hemY	3984709	3985905	-	1196	48	46	46	46	46	96%	96%	96%	96%	P	P	P	P	U
b3803	hemX	3985908	3987089	-	1181	48	48	48	48	48	100%	100%	100%	100%	P	P	P	P	U
b3804	hemD	3987111	3987851	-	740	30	30	30	30	30	100%	100%	100%	100%	P	P	P	P	
b3805	hemC	3987848	3988789	-	941	38	38	38	38	38	100%	100%	100%	100%	P	P	P	P	
b3807	cyaY	3991762	3992082	-	320	13	13	13	13	13	100%	100%	100%	100%	P	P	P	P	
b4482	yigE	3998315	3999079	-	764	31	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b3817	yigF	4000442	4000822	-	380	15	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U

b3818	yigG	4000836	4001216	-	380	16	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b3819	rarD	4001311	4002201	-	890	36	17	17	18	18	47%	47%	50%	50%	P	P	P	P	U
b3820	yigI	4002253	4002720	-	467	19	19	19	19	19	100%	100%	100%	100%	P	P	P	P	U
b3824	rhtB	4006462	4007082	-	620	25	24	24	24	25	96%	96%	96%	100%	P	P	P	P	
b3828	metR	4009886	4010839	-	953	38	37	38	38	38	97%	100%	100%	100%	P	P	P	P	
b3830	ysgA	4013377	4014192	-	815	33	33	33	33	33	100%	100%	100%	100%	P	P	P	P	U
b3842	rfaH	4022356	4022844	-	488	20	15	15	15	15	75%	75%	75%	75%	P	P	P	P	
b3845	fadA	4025632	4026795	-	1163	47	15	15	28	28	32%	32%	60%	60%	P	P	P	P	
b3846	fadB	4026805	4028994	-	2189	88	75	75	87	87	85%	85%	99%	99%	P	P	P	P	
b3856	mobB	4038929	4039456	-	527	21	17	17	17	17	81%	81%	81%	81%	P	P	P	P	
b3857	mobA	4039438	4040022	-	584	24	24	24	24	24	100%	100%	100%	100%	P	P	P	P	
b3862	yihG	4043693	4044625	-	932	37	15	15	15	16	41%	41%	41%	43%	P	P	P	P	U
b3865	yihA	4048156	4048788	-	632	26	25	25	25	25	96%	96%	96%	96%	P	P	P	P	
b3868	glnG	4051892	4053301	-	1409	56	54	54	54	56	96%	96%	96%	100%	P	P	P	P	
b3869	glnL	4053313	4054362	-	1049	42	42	42	42	42	100%	100%	100%	100%	P	P	P	P	
b3870	glnA	4054648	4056057	-	1409	57	57	57	57	57	100%	100%	100%	100%	P	P	P	P	
b3875	ompL	4061626	4062318	-	692	28	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b3876	yihO	4062386	4063789	-	1403	56	0	2	4	4	0%	4%	7%	7%	A	P	P	P	U
b3877	yihP	4063832	4065217	-	1385	55	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b3878	yihQ	4065263	4067299	-	2036	81	0	0	0	0	0%	0%	0%	0%	A	A	A	A	
b3879	yihR	4067498	4068424	-	926	37	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b3880	yihS	4068538	4069779	-	1241	49	0	5	7	7	0%	10%	14%	14%	A	P	P	P	U
b3881	yihT	4069796	4070674	-	878	35	0	1	4	4	0%	3%	11%	11%	A	P	P	P	U
b3882	yihU	4070698	4071594	-	896	36	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b3891	fdhE	4078322	4079251	-	929	37	31	31	31	31	84%	84%	84%	84%	P	P	P	P	
b3892	fdoI	4079248	4079883	-	635	26	18	18	18	18	69%	69%	69%	69%	P	P	P	P	
b3893	fdoH	4079880	4080782	-	902	36	28	28	28	28	78%	78%	78%	78%	P	P	P	P	
b3894	fdoG	4080795	4083845	-	3050	122	117	117	117	117	96%	96%	96%	96%	P	P	P	P	
b3897	frvR	4086130	4087878	-	1748	70	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b3898	frvX	4087878	4088948	-	1070	43	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b3899	frvB	4088938	4090389	-	1451	58	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b3900	frvA	4090400	4090846	-	446	18	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b3901	rhaM	4091147	4091461	-	314	13	0	0	0	0	0%	0%	0%	0%	A	A	A	A	
b3902	rhaD	4091471	4092295	-	824	33	0	0	0	0	0%	0%	0%	0%	A	A	A	A	
b3903	rhaA	4092746	4094005	-	1259	50	0	0	0	0	0%	0%	0%	0%	A	A	A	A	
b3904	rhaB	4094002	4095471	-	1469	59	0	0	0	0	0%	0%	0%	0%	A	A	A	A	
b3907	rhaT	4097514	4098548	-	1034	42	0	0	26	26	0%	0%	62%	62%	A	A	P	P	
b3911	cpxA	4101625	4102998	-	1373	55	55	55	55	55	100%	100%	100%	100%	P	P	P	P	
b3912	cpxR	4102995	4103693	-	698	28	28	28	28	28	100%	100%	100%	100%	P	P	P	P	
b3919	tpiA	4108763	4109530	-	767	31	29	29	29	30	94%	94%	94%	97%	P	P	P	P	
b3920	yiiQ	4109638	4110237	-	599	24	23	23	23	23	96%	96%	96%	96%	P	P	P	P	U
b3924	fpr	4111749	4112495	-	746	29	29	29	29	29	100%	100%	100%	100%	P	P	P	P	
b3925	glpX	4112592	4113602	-	1010	41	39	39	39	39	95%	95%	95%	95%	P	P	P	P	
b3926	glpK	4113737	4115245	-	1508	60	28	30	30	30	47%	50%	50%	50%	P	P	P	P	
b3927	glpF	4115268	4116113	-	845	34	1	6	8	10	3%	18%	24%	29%	P	P	P	P	
b3929	rraA	4116868	4117353	-	485	20	18	19	19	19	90%	95%	95%	95%	P	P	P	P	

b3930	menA	4117446	4118372	-	926	37	37	37	37	37	100%	100%	100%	100%	P	P	P	P	
b3931	hslU	4118439	4119770	-	1331	53	52	53	53	53	98%	100%	100%	100%	P	P	P	P	
b3932	hslV	4119780	4120310	-	530	21	21	21	21	21	100%	100%	100%	100%	P	P	P	P	
b3933	ftsN	4120403	4121362	-	959	38	35	35	35	35	92%	92%	92%	92%	P	P	P	P	
b3934	cytR	4121454	4122479	-	1025	41	41	41	41	41	100%	100%	100%	100%	P	P	P	P	
b3935	priA	4122635	4124833	-	2198	88	66	66	66	66	75%	75%	75%	75%	P	P	P	P	
b3937	yiiX	4125309	4125917	-	608	24	9	24	24	24	38%	100%	100%	100%	P	P	P	P	U
b3938	metJ	4126101	4126418	-	317	12	12	12	12	12	100%	100%	100%	100%	P	P	P	P	
b3944	yijF	4135063	4135680	-	617	25	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b3945	gldA	4135955	4137058	-	1103	44	3	20	20	28	7%	45%	45%	64%	P	P	P	P	
b3946	fsaB	4137069	4137731	-	662	27	2	3	4	5	7%	11%	15%	19%	P	P	P	P	
b3947	ptsA	4137743	4140244	-	2501	100	0	0	4	4	0%	0%	4%	4%	A	A	P	P	U
b3954	yijO	4145489	4146340	-	851	34	16	16	16	16	47%	47%	47%	47%	P	P	P	P	U
b3955	yijP	4146555	4148288	-	1733	69	69	69	69	69	100%	100%	100%	100%	P	P	P	P	U
b3956	ppc	4148470	4151121	-	2651	106	106	106	106	106	100%	100%	100%	100%	P	P	P	P	
b3957	argE	4151719	4152870	-	1151	46	46	46	46	46	100%	100%	100%	100%	P	P	P	P	
b4458	oxyS	4156308	4156417	-	109	4	3	3	3	3	75%	75%	75%	75%	P	P	P	P	
b3962	sthA	4157413	4158813	-	1400	56	56	56	56	56	100%	100%	100%	100%	P	P	P	P	
b3965	trmA	4160193	4161293	-	1100	44	43	43	43	43	98%	98%	98%	98%	P	P	P	P	
b3974	coaA	4172099	4173049	-	950	38	37	37	37	37	97%	97%	97%	97%	P	P	P	P	
G0-9388	sroH	4188350	4188510	-	160	6	4	4	4	4	67%	67%	67%	67%	P	P	P	P	
b3990	thiH	4188758	4189891	-	1133	45	45	45	45	45	100%	100%	100%	100%	P	P	P	P	
b3991	thiG	4189888	4190658	-	770	31	31	31	31	31	100%	100%	100%	100%	P	P	P	P	
b4407	thiS	4190660	4190860	-	200	8	8	8	8	8	100%	100%	100%	100%	P	P	P	P	
b3992	thiF	4190844	4191599	-	755	31	31	31	31	31	100%	100%	100%	100%	P	P	P	P	
b3993	thiE	4191592	4192227	-	635	26	26	26	26	26	100%	100%	100%	100%	P	P	P	P	
b3994	thiC	4192227	4194122	-	1895	75	75	75	75	75	100%	100%	100%	100%	P	P	P	P	
b3995	rsd	4194355	4194831	-	476	19	19	19	19	19	100%	100%	100%	100%	P	P	P	P	
b4002	zraP	4199286	4199711	-	425	17	0	0	0	16	0%	0%	0%	94%	A	A	A	P	
b4005	purD	4202665	4203954	-	1289	52	51	51	51	51	98%	98%	98%	98%	P	P	P	P	
b4006	purH	4203966	4205555	-	1589	64	64	64	64	64	100%	100%	100%	100%	P	P	P	P	
b4012	yjaB	4211703	4212146	-	443	17	12	14	15	15	71%	82%	88%	88%	P	P	P	P	U
b4017	arpA	4218324	4220510	-	2186	88	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b4018	iclR	4220827	4221651	-	824	33	31	31	31	31	94%	94%	94%	94%	P	P	P	P	
b4021	pepE	4227476	4228165	-	689	28	7	9	9	14	25%	32%	32%	50%	P	P	P	P	
b4023	pagB	4229382	4229654	-	272	11	11	11	11	11	100%	100%	100%	100%	P	P	P	P	U
b4024	lysC	4229907	4231256	-	1349	54	54	54	54	54	100%	100%	100%	100%	P	P	P	P	
b4620	yjbT	4237800	4238078	-	278	11	0	1	2	2	0%	9%	18%	18%	A	P	P	P	U
b4031	xylE	4238802	4240277	-	1475	59	0	1	2	2	0%	2%	3%	3%	A	P	P	P	
b4032	malG	4240649	4241539	-	890	36	2	2	2	2	6%	6%	6%	6%	P	P	P	P	
b4033	malF	4241554	4243098	-	1544	62	13	13	13	13	21%	21%	21%	21%	P	P	P	P	
b4034	malE	4243252	4244442	-	1190	48	46	46	46	46	96%	96%	96%	96%	P	P	P	P	
b4041	plsB	4252066	4254489	-	2423	96	96	96	96	96	100%	100%	100%	100%	P	P	P	P	
b4046	zur	4257511	4258026	-	515	21	18	18	18	18	86%	86%	86%	86%	P	P	P	P	
b4051	qor	4261271	4262254	-	983	39	38	38	38	39	97%	97%	97%	100%	P	P	P	P	
b4621	yjbS	4266832	4267035	-	203	8	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U

b4058	uvrA	4269072	4271894	-	2822	113	104	104	104	104	92%	92%	92%	92%	P	P	P	P	
b4060	yjcB	4272783	4273064	-	281	11	6	8	8	8	55%	73%	73%	73%	P	P	P	P	U
b4062	soxS	4275083	4275406	-	323	13	12	12	12	12	92%	92%	92%	92%	P	P	P	P	
b4459	ryjA	4275950	4276089	-	139	5	4	4	4	4	80%	80%	80%	80%	P	P	P	P	U
b4066	yjcF	4279806	4281098	-	1292	52	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b4067	actP	4281276	4282925	-	1649	66	31	31	33	33	47%	47%	50%	50%	P	P	P	P	
b4068	yjcH	4282922	4283236	-	314	12	6	6	6	6	50%	50%	50%	50%	P	P	P	P	U
b4069	acs	4283436	4285394	-	1958	79	78	78	78	78	99%	99%	99%	99%	P	P	P	P	
b4078	yjcO	4294459	4295148	-	689	28	28	28	28	28	100%	100%	100%	100%	P	P	P	P	U
b4079	fdhF	4295242	4297389	-	2147	86	30	54	55	61	35%	63%	64%	71%	P	P	P	P	
b4080	mdtP	4297587	4299053	-	1466	59	0	0	2	2	0%	0%	3%	3%	A	A	P	P	U
b4081	mdtO	4299050	4301101	-	2051	82	0	0	7	7	0%	0%	9%	9%	A	A	P	P	U
b4082	mdtN	4301101	4302132	-	1031	41	0	0	1	1	0%	0%	2%	2%	A	A	P	P	U
b4622	yticA	4302151	4302426	-	275	11	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b4083	yjcS	4302635	4304620	-	1985	80	0	0	5	5	0%	0%	6%	6%	A	A	P	P	U
b4084	alsK	4304893	4305822	-	929	38	0	0	5	5	0%	0%	13%	13%	A	A	P	P	
b4085	alsE	4305806	4306501	-	695	28	0	0	5	5	0%	0%	18%	18%	A	A	P	P	
b4086	alsC	4306512	4307492	-	980	39	0	0	0	0	0%	0%	0%	0%	A	A	A	A	
b4087	alsA	4307471	4309003	-	1532	61	0	0	0	0	0%	0%	0%	0%	A	A	A	A	
b4088	alsB	4309130	4310065	-	935	37	4	4	4	4	11%	11%	11%	11%	P	P	P	P	
b4089	rpiR	4310124	4311014	-	890	35	31	31	31	31	89%	89%	89%	89%	P	P	P	P	
b4092	phnP	4312367	4313125	-	758	31	13	13	13	13	42%	42%	42%	42%	P	P	P	P	
b4093	phnO	4313127	4313561	-	434	17	13	13	13	13	76%	76%	76%	76%	P	P	P	P	U
b4094	phnN	4313548	4314105	-	557	22	3	3	7	7	14%	14%	32%	32%	P	P	P	P	
b4095	phnM	4314105	4315241	-	1136	45	0	0	2	2	0%	0%	4%	4%	A	A	P	P	
b4096	phnL	4315238	4315918	-	680	27	0	0	0	0	0%	0%	0%	0%	A	A	A	A	
b4097	phnK	4316029	4316787	-	758	30	0	0	1	1	0%	0%	3%	3%	A	A	P	P	
b4098	phnJ	4316784	4317629	-	845	34	0	0	2	2	0%	0%	6%	6%	A	A	P	P	
b4099	phnI	4317622	4318686	-	1064	42	0	0	3	3	0%	0%	7%	7%	A	A	P	P	
b4100	phnH	4318686	4319270	-	584	24	0	0	0	0	0%	0%	0%	0%	A	A	A	A	
b4101	phnG	4319267	4319719	-	452	19	0	0	1	1	0%	0%	5%	5%	A	A	P	P	
b4102	phnF	4319720	4320445	-	725	29	0	0	2	2	0%	0%	7%	7%	A	A	P	P	U
b4104	phnE	4320466	4321253	-	787	32	0	0	1	3	0%	0%	3%	9%	A	A	P	P	U
b4105	phnD	4321359	4322375	-	1016	41	0	0	2	2	0%	0%	5%	5%	A	A	P	P	
b4106	phnC	4322400	4323188	-	788	31	0	0	1	1	0%	0%	3%	3%	A	A	P	P	
b4107	yjdN	4323321	4323764	-	443	17	12	13	17	17	71%	76%	100%	100%	P	P	P	P	U
b4108	yjdM	4324422	4324757	-	335	13	13	13	13	13	100%	100%	100%	100%	P	P	P	P	U
b4112	basS	4330204	4331295	-	1091	44	23	23	25	25	52%	52%	57%	57%	P	P	P	P	
b4113	basR	4331305	4331973	-	668	27	22	22	23	24	81%	81%	85%	89%	P	P	P	P	
b4114	eptA	4331970	4333613	-	1643	65	10	11	15	15	15%	17%	23%	23%	P	P	P	P	U
b4115	adiC	4333717	4335054	-	1337	54	0	0	3	3	0%	0%	6%	6%	A	A	P	P	
b4116	adiY	4335191	4335952	-	761	31	0	0	0	0	0%	0%	0%	0%	A	A	A	A	
b4117	adiA	4336277	4338547	-	2270	91	0	0	2	2	0%	0%	2%	2%	A	A	P	P	
b4118	melR	4338743	4339651	-	908	37	11	11	34	34	30%	30%	92%	92%	P	P	P	P	
b4121	yjdF	4342952	4343581	-	629	25	9	9	11	11	36%	36%	44%	44%	P	P	P	P	U
b4122	fumB	4343703	4345349	-	1646	66	8	8	11	14	12%	12%	17%	21%	P	P	P	P	

b4123	dcuB	4345427	4346767	-	1340	53	0	4	9	22	0%	8%	17%	42%	A	P	P	P	
b4124	dcuR	4347338	4348057	-	719	29	24	24	24	24	83%	83%	83%	83%	P	P	P	P	
b4125	dcuS	4348054	4349685	-	1631	65	43	44	44	44	66%	68%	68%	68%	P	P	P	P	
b4129	lysU	4351223	4352740	-	1517	61	54	54	54	56	89%	89%	89%	92%	P	P	P	P	
b4130	yjdL	4352977	4354434	-	1457	58	7	12	12	15	12%	21%	21%	26%	P	P	P	P	U
b4131	cadA	4354493	4356640	-	2147	86	0	0	0	0	0%	0%	0%	0%	A	A	A	A	
b4132	cadB	4356720	4358054	-	1334	54	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b4133	cadC	4358419	4359957	-	1538	62	0	0	0	0	0%	0%	0%	0%	A	A	A	A	
b4654	yjdQ	4360214	4360376	-	162	7	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b4134	pheU	4360574	4360649	-	75	4	3	3	4	4	75%	75%	100%	100%	P	P	P	P	
b4135	yjdC	4360756	4361331	-	575	23	23	23	23	23	100%	100%	100%	100%	P	P	P	P	U
b4136	dipZ	4361368	4363065	-	1697	68	67	67	67	67	99%	99%	99%	99%	P	P	P	P	U
b4137	cutA	4363041	4363379	-	338	14	14	14	14	14	100%	100%	100%	100%	P	P	P	P	
b4138	dcuA	4363495	4364796	-	1301	52	50	50	50	50	96%	96%	96%	96%	P	P	P	P	
b4139	aspA	4364914	4366350	-	1436	58	42	46	56	56	72%	79%	97%	97%	P	P	P	P	
b4141	yjeH	4367179	4368435	-	1256	50	45	45	45	45	90%	90%	90%	90%	P	P	P	P	U
b4145	yjeJ	4371388	4372257	-	869	35	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b4146	yjeK	4372652	4373680	-	1028	41	40	40	40	40	98%	98%	98%	98%	P	P	P	P	U
b4149	blc	4375212	4375745	-	533	21	20	21	21	21	95%	100%	100%	100%	P	P	P	P	
b4150	ampC	4375834	4376967	-	1133	45	35	35	35	35	78%	78%	78%	78%	P	P	P	P	
b4151	frdD	4377030	4377389	-	359	14	0	13	13	13	0%	93%	93%	93%	A	P	P	P	
b4152	frdC	4377400	4377795	-	395	15	6	8	9	9	40%	53%	60%	60%	P	P	P	P	
b4153	frdB	4377806	4378540	-	734	29	23	25	28	28	79%	86%	97%	97%	P	P	P	P	
b4154	frdA	4378533	4380341	-	1808	72	69	69	70	72	96%	96%	97%	100%	P	P	P	P	
b4159	yjeP	4384070	4387393	-	3323	133	83	83	83	83	62%	62%	62%	62%	P	P	P	P	U
b4160	psd	4387415	4388383	-	968	39	39	39	39	39	100%	100%	100%	100%	P	P	P	P	
b4161	rsgA	4388480	4389532	-	1052	42	42	42	42	42	100%	100%	100%	100%	P	P	P	P	
b4166	yjeS	4390951	4392090	-	1139	46	26	26	26	32	57%	57%	57%	70%	P	P	P	P	U
b4188	yjfN	4414040	4414315	-	275	11	3	8	11	11	27%	73%	100%	100%	P	P	P	P	U
b4189	yjfO	4414464	4414793	-	329	13	11	12	13	13	85%	92%	100%	100%	P	P	P	P	U
b4191	ulaR	4415721	4416476	-	755	30	25	25	25	25	83%	83%	83%	83%	P	P	P	P	
b4192	ulaG	4416584	4417648	-	1064	43	0	8	12	12	0%	19%	28%	28%	A	P	P	P	U
b4199	yjfY	4422539	4422814	-	275	11	0	10	11	11	0%	91%	100%	100%	A	P	P	P	U
b4204	yjfZ	4424651	4425445	-	794	32	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b4206	ytfB	4426102	4426740	-	638	25	24	24	24	24	96%	96%	96%	96%	P	P	P	P	U
b4209	ytfE	4429344	4430006	-	662	27	0	0	17	17	0%	0%	63%	63%	A	A	P	P	U
b4210	ytfF	4430114	4431088	-	974	39	3	3	3	3	8%	8%	8%	8%	P	P	P	P	U
b4211	ytfG	4431187	4432047	-	860	35	19	21	21	21	54%	60%	60%	60%	P	P	P	P	
b4213	cpdB	4432645	4434588	-	1943	78	65	65	65	65	83%	83%	83%	83%	P	P	P	P	
b4216	ytfJ	4436731	4437285	-	554	22	2	15	17	17	9%	68%	77%	77%	P	P	P	P	U
b4218	ytfL	4437895	4439238	-	1343	54	41	41	43	43	76%	76%	80%	80%	P	P	P	P	U
b4219	msrA	4439561	4440199	-	638	26	26	26	26	26	100%	100%	100%	100%	P	P	P	P	
b4226	ppa	4447145	4447675	-	530	22	22	22	22	22	100%	100%	100%	100%	P	P	P	P	
b4232	fbp	4452634	4453632	-	998	40	40	40	40	40	100%	100%	100%	100%	P	P	P	P	
b4234	yjgA	4455337	4455888	-	551	22	22	22	22	22	100%	100%	100%	100%	P	P	P	P	U
b4237	nrdG	4457923	4458387	-	464	18	0	1	4	4	0%	6%	22%	22%	A	P	P	P	



b4238	nrdD	4458545	4460683	-	2138	86	49	72	84	84	57%	84%	98%	98%	P	P	P	P	
b4239	treC	4461077	4462732	-	1655	67	0	0	0	0	0%	0%	0%	0%	A	A	A	A	
b4240	treB	4462782	4464203	-	1421	56	0	9	9	9	0%	16%	16%	16%	A	P	P	P	
b4241	treR	4464322	4465269	-	947	38	26	26	26	26	68%	68%	68%	68%	P	P	P	P	
b4243	yjgF	4468550	4468936	-	386	16	16	16	16	16	100%	100%	100%	100%	P	P	P	P	
b4244	pyrI	4469009	4469470	-	461	19	19	19	19	19	100%	100%	100%	100%	P	P	P	P	
b4245	pyrB	4469483	4470418	-	935	38	38	38	38	38	100%	100%	100%	100%	P	P	P	P	
b4246	pyrL	4470422	4470556	-	134	5	5	5	5	5	100%	100%	100%	100%	P	P	P	P	
b4248	yjgH	4470837	4471232	-	395	15	15	15	15	15	100%	100%	100%	100%	P	P	P	P	U
b4249	yjgI	4471363	4472076	-	713	28	0	15	15	15	0%	54%	54%	54%	A	P	P	P	U
b4254	argI	4475330	4476334	-	1004	40	40	40	40	40	100%	100%	100%	100%	P	P	P	P	
b4256	yjgM	4477057	4477560	-	503	21	18	19	19	19	86%	90%	90%	90%	P	P	P	P	U
b4258	valS	4479005	4481860	-	2855	114	114	114	114	114	100%	100%	100%	100%	P	P	P	P	
b4259	holC	4481860	4482303	-	443	18	18	18	18	18	100%	100%	100%	100%	P	P	P	P	
b4260	pepA	4482463	4483974	-	1511	61	61	61	61	61	100%	100%	100%	100%	P	P	P	P	
b4263	yjgR	4486584	4488086	-	1502	60	58	58	60	60	97%	97%	100%	100%	P	P	P	P	U
b4264	idnR	4488164	4489162	-	998	39	31	32	32	34	79%	82%	82%	87%	P	P	P	P	
b4265	idnT	4489229	4490548	-	1319	53	14	14	14	15	26%	26%	26%	28%	P	P	P	P	
b4266	idnO	4490610	4491374	-	764	31	0	4	4	4	0%	13%	13%	13%	A	P	P	P	
b4267	idnD	4491398	4492429	-	1031	41	0	0	0	0	0%	0%	0%	0%	A	A	A	A	
b4269	yjgB	4493213	4494232	-	1019	41	31	31	35	35	76%	76%	85%	85%	P	P	P	P	U
b4575	yjgX	4497616	4498814	-	1198	48	9	10	14	14	19%	21%	29%	29%	P	P	P	P	U
b4278	insG	4500126	4501454	-	1328	53	34	34	36	36	64%	64%	68%	68%	P	P	P	P	U
b4281	yjhD	4504649	4504879	-	230	9	0	4	4	4	0%	44%	44%	44%	A	P	P	P	U
b4284	insI	4505489	4506640	-	1151	46	44	44	44	45	96%	96%	96%	98%	P	P	P	P	
b4561	insM	4506699	4506965	-	266	11	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b4287	fecE	4508713	4509480	-	767	31	6	6	6	8	19%	19%	19%	26%	P	P	P	P	
b4288	fecD	4509481	4510437	-	956	38	3	3	3	3	8%	8%	8%	8%	P	P	P	P	
b4289	fecC	4510434	4511432	-	998	40	0	0	0	0	0%	0%	0%	0%	A	A	A	A	
b4290	fecB	4511429	4512331	-	902	36	7	7	7	10	19%	19%	19%	28%	P	P	P	P	
b4291	fecA	4512376	4514700	-	2324	93	13	13	15	26	14%	14%	16%	28%	P	P	P	P	
b4292	fecR	4514787	4515740	-	953	38	20	20	20	29	53%	53%	53%	76%	P	P	P	P	
b4293	fecI	4515737	4516258	-	521	21	20	20	20	21	95%	95%	95%	100%	P	P	P	P	
b4295	yjhU	4517361	4518347	-	986	40	40	40	40	40	100%	100%	100%	100%	P	P	P	P	U
b4296	yjhF	4518694	4520043	-	1349	54	0	1	2	2	0%	2%	4%	4%	A	P	P	P	U
b4297	yjhG	4520150	4522117	-	1967	78	0	3	9	9	0%	4%	12%	12%	A	P	P	P	U
b4298	yjhH	4522128	4523033	-	905	36	0	0	1	1	0%	0%	3%	3%	A	A	P	P	U
b4299	yjhI	4523038	4523826	-	788	32	0	1	2	2	0%	3%	6%	6%	A	P	P	P	U
b4300	sgcR	4524129	4524911	-	782	31	1	1	5	5	3%	3%	16%	16%	P	P	P	P	U
b4301	sgcE	4524928	4525560	-	632	25	1	2	17	17	4%	8%	68%	68%	P	P	P	P	U
b4302	sgcA	4525572	4526003	-	431	17	3	4	15	15	18%	24%	88%	88%	P	P	P	P	U
b4303	sgcQ	4526134	4526940	-	806	32	0	0	31	31	0%	0%	97%	97%	A	A	P	P	U
b4304	sgcC	4526953	4528266	-	1313	52	2	2	52	52	4%	4%	100%	100%	P	P	P	P	U
b4565	sgcB	4528278	4528556	-	278	11	0	0	11	11	0%	0%	100%	100%	A	A	P	P	U
b4305	sgcX	4528553	4529674	-	1121	45	3	3	44	44	7%	7%	98%	98%	P	P	P	P	U
b4656	yjhY	4530073	4530333	-	260	10	10	10	10	10	100%	100%	100%	100%	P	P	P	P	U

b4306	yjhP	4530460	4531206	-	746	30	0	0	1	2	0%	0%	3%	7%	A	A	P	P	U
b4307	yjhQ	4531262	4531807	-	545	22	0	8	8	8	0%	36%	36%	36%	A	P	P	P	U
b4566	yjhX	4531819	4532076	-	257	11	0	2	2	2	0%	18%	18%	18%	A	P	P	P	U
b4657	yjhZ	4532453	4532698	-	245	10	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b4309	yjhS	4534637	4535617	-	980	39	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b4310	nanM	4535682	4536788	-	1106	44	15	23	23	34	34%	52%	52%	77%	P	P	P	P	U
b4311	nanC	4536808	4537524	-	716	29	1	1	2	5	3%	3%	7%	17%	P	P	P	P	
b4321	gntP	4547976	4549319	-	1343	53	0	38	38	38	0%	72%	72%	72%	A	P	P	P	
b4325	yjiC	4553513	4554343	-	830	33	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b4327	yjiE	4555401	4556312	-	911	36	23	24	24	24	64%	67%	67%	67%	P	P	P	P	U
b4328	iadA	4556377	4557549	-	1172	47	45	45	47	47	96%	96%	100%	100%	P	P	P	P	
b4329	yjiG	4557562	4558023	-	461	19	4	4	4	4	21%	21%	21%	21%	P	P	P	P	U
b4330	yjiH	4558020	4558703	-	683	28	0	0	1	5	0%	0%	4%	18%	A	A	P	P	U
b4332	yjiJ	4559520	4560698	-	1178	48	0	1	8	8	0%	2%	17%	17%	A	P	P	P	U
b4333	yjiK	4560766	4561626	-	860	35	0	1	2	2	0%	3%	6%	6%	A	P	P	P	U
b4334	yjiL	4561945	4562712	-	767	31	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b4335	yjiM	4562722	4563873	-	1151	47	0	0	1	6	0%	0%	2%	13%	A	A	P	P	U
b4336	yjiN	4563989	4565269	-	1280	51	5	10	14	28	10%	20%	27%	55%	P	P	P	P	U
b4337	mdtM	4565310	4566542	-	1232	49	3	18	18	18	6%	37%	37%	37%	P	P	P	P	
b4340	yjiR	4568185	4569597	-	1412	56	42	42	42	42	75%	75%	75%	75%	P	P	P	P	U
b4345	mcrC	4574935	4575981	-	1046	42	0	0	0	0	0%	0%	0%	0%	A	A	A	A	
b4346	mcrB	4575981	4577360	-	1379	55	43	43	43	43	78%	78%	78%	78%	P	P	P	P	
b4347	symE	4577522	4577863	-	341	13	3	4	4	4	23%	31%	31%	31%	P	P	P	P	U
b4348	hsdS	4578091	4579485	-	1394	56	51	51	51	51	91%	91%	91%	91%	P	P	P	P	
b4349	hsdM	4579482	4581071	-	1589	64	64	64	64	64	100%	100%	100%	100%	P	P	P	P	
b4350	hsdR	4581272	4584838	-	3566	142	141	141	141	141	99%	99%	99%	99%	P	P	P	P	
b4352	yjiA	4585932	4586888	-	956	38	36	36	36	36	95%	95%	95%	95%	P	P	P	P	U
b4353	yjiX	4586899	4587102	-	203	9	7	7	7	7	78%	78%	78%	78%	P	P	P	P	U
b4354	yjiY	4587152	4589302	-	2150	86	0	0	6	78	0%	0%	7%	91%	A	A	P	P	U
b4356	yjjL	4591384	4592745	-	1361	54	5	5	5	5	9%	9%	9%	9%	P	P	P	P	U
b4357	yjjM	4592960	4593874	-	914	37	0	0	16	16	0%	0%	43%	43%	A	A	P	P	U
b4359	mdoB	4595173	4597464	-	2291	92	86	86	86	87	93%	93%	93%	95%	P	P	P	P	
b4360	yjjA	4597718	4598212	-	494	20	19	19	19	19	95%	95%	95%	95%	P	P	P	P	U
b4361	dnaC	4598261	4598998	-	737	29	28	28	28	28	97%	97%	97%	97%	P	P	P	P	
b4362	dnaT	4599001	4599540	-	539	21	21	21	21	21	100%	100%	100%	100%	P	P	P	P	
b4363	yjjB	4599647	4600120	-	473	19	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b4364	yjjP	4600111	4600881	-	770	31	0	2	2	11	0%	6%	6%	35%	A	P	P	P	U
b4367	fhuF	4602898	4603686	-	788	32	32	32	32	32	100%	100%	100%	100%	P	P	P	P	
b4368	leuV	4604102	4604188	-	86	3	3	3	3	3	100%	100%	100%	100%	P	P	P	P	
b4369	leuP	4604223	4604309	-	86	4	4	4	4	4	100%	100%	100%	100%	P	P	P	P	
b4370	leuQ	4604338	4604424	-	86	4	4	4	4	4	100%	100%	100%	100%	P	P	P	P	
b4371	rsmC	4604692	4605723	-	1031	41	40	40	40	40	98%	98%	98%	98%	P	P	P	P	
b4379	yjjW	4612703	4613566	-	863	34	0	0	0	0	0%	0%	0%	0%	A	A	A	A	U
b4380	yjjI	4613538	4615088	-	1550	62	0	8	8	27	0%	13%	13%	44%	A	P	P	P	U
b4386	lplA	4621124	4622140	-	1016	41	33	33	33	33	80%	80%	80%	80%	P	P	P	P	
b4387	ytjB	4622168	4622812	-	644	26	26	26	26	26	100%	100%	100%	100%	P	P	P	P	U

b4391	yjjK	4626878	4628545	-	1667	66	66	66	66	66	100%	100%	100%	100%	P	P	P	P	U
b4394	yjjX	4631256	4631768	-	512	20	18	18	18	18	90%	90%	90%	90%	P	P	P	P	
b4396	rob	4632464	4633333	-	869	35	35	35	35	35	100%	100%	100%	100%	P	P	P	P	
b4401	arcA	4637613	4638329	-	716	29	29	29	29	29	100%	100%	100%	100%	P	P	P	P	