

Table S-1. Twenty genomic regions unique to the classic *Brucella* genomes

Region	PATRIC locus tag	RefSeq locus tag	Protein Name	Size (aa)
1	<i>Brucella abortus</i> 2308 chromosome 1 (NC_007618) 256325..277581			
	VBIBruMel86222_0263		hypothetical protein	21256
	VBIBruMel86222_0264	BAB1_0250	Integrase	
	VBIBruMel86222_0265	BAB1_0252	hypothetical protein	
	VBIBruMel86222_0266	BAB1_0253	hypothetical protein	
	VBIBruMel86222_0267	BAB1_0254	hypothetical protein	
	VBIBruMel86222_0268	BAB1_0255	virulence-associated protein E	
	VBIBruMel86222_0269		Hyphothetical protein	
	VBIBruMel86222_0270		Hyphothetical protein	
	VBIBruMel86222_0271		hypothetical protein	
	VBIBruMel86222_0272		hypothetical protein	
	VBIBruMel86222_0273	BAB1_0258	hypothetical protein	
	VBIBruMel86222_0274	BAB1_0259	hypothetical protein	
	VBIBruMel86222_0275	BAB1_0260	Flagellar protein FlgJ [peptidoglycan hydrolase]	
	VBIBruMel86222_0276		Hypothetical Membrane Spanning Protein	
	VBIBruMel86222_0277		Hypothetical Membrane Spanning Protein	
	VBIBruMel86222_0278		hypothetical protein	
	VBIBruMel86222_0279	BAB1_0263	hypothetical protein	
	VBIBruMel86222_0280	BAB1_0265	hypothetical protein	
	VBIBruMel86222_0281	BAB1_0266	hypothetical protein	
	VBIBruMel86222_0282		hypothetical protein	
	VBIBruMel86222_0283	BAB1_0268	hypothetical protein	
	VBIBruMel86222_0284	BAB1_0270	Zinc-dependent metalloproteinase	
	VBIBruMel86222_0285	BAB1_0273	hypothetical protein	
	VBIBruMel86222_0286	BAB1_0274	hypothetical protein	
	VBIBruMel86222_0287	BAB1_0275	hypothetical protein	
	VBIBruMel86222_0288	BAB1_0276	hypothetical protein	
	VBIBruMel86222_0289		hypothetical protein	
	VBIBruMel86222_0290	BAB1_0277	hypothetical protein	
	VBIBruMel86222_0291	BAB1_0279	hypothetical protein	
	VBIBruMel86222_r003		tRNA-Phe-GAA	
2	<i>Brucella suis</i> 1330 chromosome I (NC_004310.3) 513096..517366			
	VBIBruSui107850_r006		tRNA-Gln-TTG	4270
	VBIBruSui107850_0529	BR0513	TRANSPOSASE	
	VBIBruSui107850_0530	BR0514	TRANSPOSASE	
	VBIBruSui107850_0531		Transposase	
	VBIBruSui107850_0532		hypothetical protein	
	VBIBruSui107850_0533		TRANSPOSASE	
	VBIBruSui107850_0534		hypothetical protein	
	VBIBruSui107850_0535	BR0517	formyltransferase, putative	
3	<i>Brucella suis</i> 1330 chromosome I (NC_004310.3) 527133..527839			
	VBIBruSui107850_0549		hypothetical protein	706
	VBIBruSui107850_0550		TRANSPOSASE	
	VBIBruSui107850_0551		hypothetical protein	
4	<i>Brucella suis</i> 1330 chromosome I (NC_004310.3) 706238..722020			
	VBIBruSui107850_r009		tRNA-Arg-TCT	
	VBIBruSui107850_0734	BR0722	hypothetical protein	
	VBIBruSui107850_0735	BR0723	exonuclease, putative	

VIBBruSui107850_0736	BR0724	Adenylate kinase, archaeal type	16174
VIBBruSui107850_0737	BR0725	acetyltransferase, GNAT family	
VIBBruSui107850_0738	BR0726	TRANSCRIPTIONAL REGULATOR	
VIBBruSui107850_0739	BR0727	hypothetical protein	
VIBBruSui107850_0740		hypothetical protein	
VIBBruSui107850_0741		hypothetical protein	
VIBBruSui107850_0742	BR0729	TRANSPOSASE	
VIBBruSui107850_0743	BR0730	transposition protein, putative	
VIBBruSui107850_0744	BR0731	hypothetical protein	
VIBBruSui107850_0745		hypothetical protein	
VIBBruSui107850_0746	BR0732	hypothetical protein	
VIBBruSui107850_0747	BR0733	hypothetical protein	
VIBBruSui107850_0748	BR0734	exclusion of bacteriophage Ap1	
VIBBruSui107850_0749	BR0735	hypothetical protein	

5	<i>Brucella suis</i> 1330 chromosome I (NC_004310.3) 776058..777806			
	VIBBruSui107850_0806	BR0796	hypothetical protein	2012
	VIBBruSui107850_0807	BR0797	hypothetical protein	
	VIBBruSui107850_0808	BR0798	hypothetical protein	
	VIBBruSui107850_0809	BR0799	hypothetical protein	
	VIBBruSui107850_r011		tRNA-Val-TAC	

6	<i>Brucella suis</i> 1330 chromosome I (NC_004310.3) 938812-946054			
	VIBBruSui107850_0978		hypothetical protein	7242
	VIBBruSui107850_0979	BR0967	hypothetical protein	
	VIBBruSui107850_0980	BR0968	hypothetical protein	
	VIBBruSui107850_0981	BR0969	hypothetical protein	
	VIBBruSui107850_0982		hypothetical protein	
	VIBBruSui107850_0983	BR0970	hypothetical protein	
	VIBBruSui107850_0984	BR0971	25 KDA OUTER-MEMBRANE IMMUNOGENIC PROTEIN PRECURSOR	
	VIBBruSui107850_0985		hypothetical protein	
	VIBBruSui107850_0986	BR0972	hypothetical protein	
	VIBBruSui107850_0987	BR0974	hypothetical protein	
	VIBBruSui107850_0988	BR0975	hypothetical protein	
	VIBBruSui107850_0989		tRNA-guanine transglycosylase	
	VIBBruSui107850_0990		ISBm1, transposase orfA	
	VIBBruSui107850_0991		IS711, transposase orfB	
	VIBBruSui107850_0992		IS711, transposase orfB	
	VIBBruSui107850_0993	BR0979	hypothetical protein	

7	<i>Brucella suis</i> 1330 chromosome I (NC_004310.3) 951301..952185			
	VIBBruSui107850_0998	BR0984	SECRETION ACTIVATOR PROTEIN	1378
	VIBBruSui107850_0999		hypothetical protein	
	VIBBruSui107850_1000	BR0986	hypothetical protein	

8	<i>Brucella suis</i> 1330 chromosome I (NC_004310.3) 1049738..1054365			
	VIBBruSui107850_r019		tRNA-Leu-GAG	6489
	VIBBruSui107850_1094	BR1079	hypothetical protein	
	VIBBruSui107850_1095		hypothetical protein	
	VIBBruSui107850_1096		hypothetical protein	
	VIBBruSui107850_1097	BR1080	hypothetical protein	
	VIBBruSui107850_1098		hypothetical protein	
	VIBBruSui107850_1099	BR1081	hypothetical protein	

	VBIBruSui107850_1100		RECOMBINASE	
	VBIBruSui107850_1101	BR1082	site-specific recombinase, resolvase family	
	VBIBruSui107850_1102		hypothetical protein	

9	<i>Brucella suis</i> 1330 chromosome I (NC_004310.3) 1426639..1429237			
	VBIBruSui107850_1496		hypothetical protein	2800
	VBIBruSui107850_1497	BR1470	hypothetical protein	
	VBIBruSui107850_1498	BR1471	hypothetical protein	
	VBIBruSui107850_1499	BR1472	hypothetical protein	
	VBIBruSui107850_1500	BR1473	hypothetical protein	
	VBIBruSui107850_1501	BR1474	site-specific recombinase, phage integrase family	

10	<i>Brucella suis</i> 1330 chromosome I (NC_004310.3) 1781604-1786564			
	VBIBruSui107850_r039		tRNA-Ser-CGA	5140
	VBIBruSui107850_1884		hypothetical protein	
	VBIBruSui107850_1885	BR1851	TRANSPOSASE	
	VBIBruSui107850_1886	BR1852	Transcriptional regulator, Cro/Ci family	
	VBIBruSui107850_1887	BR1853	hypothetical protein	
	VBIBruSui107850_1888	BR1854	hypothetical protein	
	VBIBruSui107850_1889	BR1855	TRANSPOSASE	

11	<i>Brucella suis</i> 1330 chromosome I (NC_004310.3) 1844477..1846546			
	VBIBruSui107850_1944	BR1910	membrane protein, putative	2069
	VBIBruSui107850_1945	BR1911	hypothetical protein	
	VBIBruSui107850_1946	BR1912	Antibiotic biosynthesis monooxygenase	
	VBIBruSui107850_1947	BR1913	(AF179595) Vco33	
	VBIBruSui107850_1948		Transcriptional regulator, ArsR family	

12	<i>Brucella suis</i> 1330 chromosome I (NC_004310.3) 1881867..1891020			
	VBIBruSui107850_r047		tRNA-Leu-CAA	9203
	VBIBruSui107850_1984	BR1950	hypothetical protein	
	VBIBruSui107850_1985	BR1951	Transcriptional regulator, LysR family	
	VBIBruSui107850_1986	BR1952	hypothetical protein	
	VBIBruSui107850_1987	BR1953	amino acid ABC transporter, periplasmic amino acid-binding protein	
	VBIBruSui107850_1988		ASPARAGINE TRANSPORT SYSTEM PERMEASE PROTEIN	
	VBIBruSui107850_1989		Amino acid ABC transporter, permease protein	
	VBIBruSui107850_1990	BR1955	Glutamine transport system permease protein glnP (TC 3.A.1.3.2)	
	VBIBruSui107850_1991	BR1956	ASPARAGINE TRANSPORT ATP-BINDING PROTEIN	
	VBIBruSui107850_1992	BR1957	arginase family protein	
	VBIBruSui107850_1993	BR1958	Aspartate ammonia-lyase	
	VBIBruSui107850_1994	BR1959	ASPARAGINE TRANSPORT ATP-BINDING PROTEIN	
	VBIBruSui107850_1995	BR1960	L-asparaginase	

13	<i>Brucella suis</i> 1330 chromosome II (NC_004311.2) 43204..44397			
	VBIBruSui107850_2269	BRA0047	hypothetical protein	1193
	VBIBruSui107850_2270	BRA0048	hypothetical protein	
	VBIBruSui107850_2271	BRA0050	hypothetical protein	

14	<i>Brucella suis</i> 1330 chromosome II (NC_004311.2) 245420..250301			
	VBIBruSui107850_2478	BRA0263	sugar-binding transcriptional regulator, LacI family	5923
	VBIBruSui107850_2479	BRA0264	hypothetical protein	
	VBIBruSui107850_2480	BRA0265	L-arabinose-binding periplasmic protein precursor araF (TC 3.A.1.2.2)	
	VBIBruSui107850_2481	BRA0266	ATP-binding protein of sugar ABC transporter	

VIBBruSui107850_2482	BRA0267	putative ABC transporter permease protein
VIBBruSui107850_2483		hypothetical protein
VIBBruSui107850_2484	BRA0268	Ribitol 2-dehydrogenase

15	<i>Brucella suis</i> 1330 chromosome II (NC_004311.2) 343695..361343		
VIBBruSui107850_2576	BRA0362	Integrase	17696
VIBBruSui107850_2577	BRA0364	COG5534: Plasmid replication initiator protein	
VIBBruSui107850_2578	BRA0365	hypothetical protein	
VIBBruSui107850_2579	BRA0366	Conjugative transfer protein TrbL	
VIBBruSui107850_2580	BRA0367	hypothetical protein	
VIBBruSui107850_2581	BRA0368	Conjugative transfer protein TrbJ	
VIBBruSui107850_2582	BRA0369	hypothetical protein	
VIBBruSui107850_2583	BRA0370	hypothetical protein	
VIBBruSui107850_2584		hypothetical protein	
VIBBruSui107850_2585	BRA0372	traJ protein	
VIBBruSui107850_2586	BRA0373	Protein tral	
VIBBruSui107850_2587	BRA0374	hypothetical protein	
VIBBruSui107850_2588	BRA0375	hypothetical protein	
VIBBruSui107850_2589	BRA0376	hypothetical protein	
VIBBruSui107850_2590	BRA0377	hypothetical protein	
VIBBruSui107850_2591	BRA0378	hypothetical protein	
VIBBruSui107850_2592	BRA0379	DNA-damage-inducible protein J	

16	<i>Brucella suis</i> 1330 chromosome II (NC_004311.2) 371453..382271		
VIBBruSui107850_2602	BRA0390	hypothetical protein	10704
VIBBruSui107850_2603	BRA0391	QUINONE OXIDOREDUCTASE	
VIBBruSui107850_2604	BRA0392	(TC 3.A.1.4.1)	
VIBBruSui107850_2605	BRA0393	PERMEASE PROTEIN LIVH / HIGH-AFFINITY BRANCHED-CHAIN AMINO ACID TRANSPORT ATP-BINDING PROTEIN LIVG	
VIBBruSui107850_2606		branched-chain amino acid ABC transporter, permease/ATP-binding protein	
VIBBruSui107850_2607		PERMEASE PROTEIN LIVH / HIGH-AFFINITY BRANCHED-CHAIN AMINO ACID TRANSPORT ATP-BINDING PROTEIN LIVG	
VIBBruSui107850_2608	BRA0395	Branched-chain amino acid transport ATP-binding protein livF (TC 3.A.1.4.1)	
VIBBruSui107850_2609	BRA0396	SHORT CHAIN DEHYDROGENASE	
VIBBruSui107850_2610	BRA0397	Shikimate 5-dehydrogenase I alpha # AroDI alpha	
VIBBruSui107850_2611	BRA0398	Glucose-methanol-choline oxidoreductase	
VIBBruSui107850_2612	BRA0399	aldehyde dehydrogenase family protein	

17	<i>Brucella suis</i> 1330 chromosome II (NC_004311.2) 523396..539420		
VIBBruSui107850_2758	BRA0543	UDP-glucose 4-epimerase	16645
VIBBruSui107850_2759	BRA0544	Cellulose synthase catalytic subunit [UDP- forming]	
VIBBruSui107850_2760	BRA0545	UDP-glucose dehydrogenase	
VIBBruSui107850_2761	BRA0546	hypothetical protein	
VIBBruSui107850_2762	BRA0547	Endoglucanase H	
VIBBruSui107850_2763	BRA0548	hypothetical protein	
VIBBruSui107850_2764	BRA0549	conserved domain protein	
VIBBruSui107850_2765	BRA0550	transcriptional regulator, AraC family	
VIBBruSui107850_2766		IS711, transposase orfB	
VIBBruSui107850_2767		IS711, transposase orfB	
VIBBruSui107850_2768		IS5 family element, transposase orfA	
VIBBruSui107850_2769	BRA0553	cell wall surface protein, putative	
VIBBruSui107850_2770		TRANSPOSASE	
VIBBruSui107850_2771	BRA0555	Preprotein translocase subunit-like protein	
VIBBruSui107850_2772	BRA0556	TRANSPOSASE	

VIBBruSui107850_2773	BRA0557	Integration/Recombination
VIBBruSui107850_2774	BRA0558	IS66 family element, orf1, transposase, putative
VIBBruSui107850_2775		TRANSPOSASE
VIBBruSui107850_2776	BRA0560	hypothetical protein
VIBBruSui107850_r052		tRNA-Ser-TGA

18	<i>Brucella suis</i> 1330 chromosome II (NC_004311.2) 791495..798941		
	VIBBruSui107850_3024		ABC TRANSPORTER INTEGRAL MEMBRANE PROTEIN
	VIBBruSui107850_3025		ABC transporter, permease protein
	VIBBruSui107850_3026	BRA0809	ABC transporter, ATP-binding protein
	VIBBruSui107850_3027	BRA0810	ABC transporter, periplasmic substrate-binding protein
	VIBBruSui107850_3028		D-mannonate oxidoreductase
	VIBBruSui107850_3029		D-mannonate oxidoreductase
	VIBBruSui107850_3030	BRA0812	Uronate isomerase
	VIBBruSui107850_3031	BRA0813	Transcriptional regulator, GntR family
			7384

19	<i>Brucella suis</i> 1330 chromosome II (NC_004311.2) 818887..822164		
	VIBBruSui107850_r056		tRNA-Thr-CGT
	VIBBruSui107850_3049	BRA0833	hypothetical protein
	VIBBruSui107850_3050	BRA0834	hypothetical protein
	VIBBruSui107850_3051	BRA0835	hypothetical protein
	VIBBruSui107850_3052	BRA0836	hypothetical protein
	VIBBruSui107850_3053	BRA0837	hypothetical protein
	VIBBruSui107850_3054	BRA0838	hypothetical protein
			3764

20	<i>Brucella suis</i> 1330 chromosome II (NC_004311.2) 1056740..1102269		
	VIBBruSui107850_r060		tRNA-Ser-GGA
	VIBBruSui107850_3296	BRA1072	IS3 family element, transposase orfB
	VIBBruSui107850_3297	BRA1073	IS3 family transposase orfA
	VIBBruSui107850_3298	BRA1074	Transcriptional regulator, GntR family
	VIBBruSui107850_3299	BRA1075	hypothetical protein
	VIBBruSui107850_3300	BRA1076	2-ketoglutaric semialdehyde dehydrogenase
	VIBBruSui107850_3301	BRA1077	CAIB/BAIF family protein
	VIBBruSui107850_3302	BRA1078	OLIGOPEPTIDE TRANSPORT ATP-BINDING PROTEIN OPPF
	VIBBruSui107850_3303	BRA1079	Oligopeptide transport ATP-binding protein oppD (TC 3.A.1.5.1)
	VIBBruSui107850_3304	BRA1080	DIPEPTIDE TRANSPORT SYSTEM PERMEASE PROTEIN DPPC
	VIBBruSui107850_3305	BRA1081	OLIGOPEPTIDE TRANSPORT SYSTEM PERMEASE PROTEIN OPPB
	VIBBruSui107850_3306	BRA1082	TRANSCRIPTIONAL REGULATOR
	VIBBruSui107850_3307		acid dehydrogenase complex
	VIBBruSui107850_3308	BRA1084	PERIPLASMIC DIPEPTIDE TRANSPORT PROTEIN PRECURSOR
	VIBBruSui107850_3309		Branched-chain alpha-keto acid dehydrogenase, E1 component, alpha subunit / Branched-chain alpha-keto acid dehydrogenase, E1 component, beta subunit
	VIBBruSui107850_3310		Branched-chain alpha-keto acid dehydrogenase, E1 component, alpha subunit / Branched-chain alpha-keto acid dehydrogenase, E1 component, beta subunit
	VIBBruSui107850_3311	BRA1086	3-hydroxybutyryl-CoA dehydrogenase ; 3- hydroxyacyl-CoA dehydrogenase
	VIBBruSui107850_3312	BRA1087	Enoyl-CoA hydratase [branched-chain amino acid degradation]
	VIBBruSui107850_3313	BRA1088	Butyryl-CoA dehydrogenase
	VIBBruSui107850_3314	BRA1089	penicillin amidase family protein
	VIBBruSui107850_3315	BRA1090	PERIPLASMIC DIPEPTIDE TRANSPORT PROTEIN PRECURSOR
	VIBBruSui107850_3316	BRA1092	peptide ABC transporter, permease protein, putative
	VIBBruSui107850_3317	BRA1093	Dipeptide transport system permease protein DppC (TC 3.A.1.5.2)
	VIBBruSui107850_3318	BRA1094	Oligopeptide transport ATP-binding protein oppD (TC 3.A.1.5.1)
			47259

VBIBruSui107850_3319		Dipeptide transport ATP-binding protein DppF (TC 3.A.1.5.2)
VBIBruSui107850_3320	BRA1096	Transcriptional regulator, GntR family
VBIBruSui107850_3321	BRA1097	putative
VBIBruSui107850_3322	BRA1098	Oligopeptide transport system permease protein oppB (TC 3.A.1.5.1)
VBIBruSui107850_3323	BRA1099	Oligopeptide transport system permease protein oppC (TC 3.A.1.5.1)
VBIBruSui107850_3324		Oligopeptide transport ATP-binding protein oppD (TC 3.A.1.5.1)
VBIBruSui107850_3325		hypothetical protein
VBIBruSui107850_3326	BRA1101	Oligopeptide transport ATP-binding protein oppF (TC 3.A.1.5.1)
VBIBruSui107850_3327	BRA1102	gluconolactonase, putative
VBIBruSui107850_3328	BRA1103	amidase family protein
VBIBruSui107850_3329		(TC_3.A.1.11.1)
VBIBruSui107850_3330		(TC_3.A.1.11.1)
VBIBruSui107850_3331	BRA1105	(TC_3.A.1.11.1)
VBIBruSui107850_3332	BRA1106	polyamine ABC transporter, permease protein, putative
VBIBruSui107850_3333		Spermidine Putrescine transport ATP-binding protein potA (TC_3.A.1.11.1)
VBIBruSui107850_3334		SPERMIDINE/PUTRESCINE TRANSPORT ATP-BINDING PROTEIN POTA
VBIBruSui107850_3335	BRA1108	Glutamate-1-semialdehyde aminotransferase
VBIBruSui107850_3336	BRA1109	Blr3550 protein
VBIBruSui107850_3337	BRA1110	Ribulose-5-phosphate 4-epimerase and related epimerases and aldolases
VBIBruSui107850_3338	BRA1111	Candidate type III effector Hop protein
VBIBruSui107850_3339	BRA1112	hypothetical protein
VBIBruSui107850_3340	BRA1113	transcriptional modulator of MazE/toxin, MazF
VBIBruSui107850_3341		D-LACTATE DEHYDROGENASE