

Supplementary Table S1. Bacterial strains and plasmids used

Strains	Characteristics	Reference
<i>Brucella</i> spp.		
Bs2WT	<i>B. suis</i> biovar 2 CITA 198; wild-type strain, smooth LPS	CITA collection
Bs2 Δpcs	Bs2WT carrying an internal deletion in <i>pcs</i> (Δ_{16-250})	This work
Bs2 $\Delta pmtA$	Bs2WT carrying an internal deletion in <i>pmtA</i> (Δ_{35-168})	This work
Bs2 $\Delta pcs\Delta pmtA$	Bs2WT carrying an internal deletion in <i>pcs</i> (Δ_{16-250}) and in <i>pmtA</i> (Δ_{35-168})	This work
Bs2 $\Delta pcs\Delta pmtA_pcs$	Bs2 $\Delta pcs\Delta pmtA$ carrying pRCI-40	This work
Bs2 $\Delta pcs\Delta pmtA_pmtA$	Bs2 $\Delta pcs\Delta pmtA$ carrying pBA-8	This work
Bs2 $\Delta choX1$	Bs2WT carrying an internal deletion in <i>choX1</i> (Δ_{55-253})	This work
Bs2 $\Delta choX1_choX1$	Bs2 $\Delta choX1$ carrying pBA-13	This work
Bs2 $\Delta choX1\Delta choX2$	Bs2WT carrying an internal deletion in <i>choX1</i> (Δ_{55-253}) and in <i>choX2</i> (Δ_{3-268})	This work
Bs2 $\Delta pmtA\Delta choX1\Delta choX2$	Bs2WT carrying an internal deletion in <i>pmtA</i> (Δ_{35-168}), <i>choX1</i> (Δ_{55-253}) and in <i>choX2</i> (Δ_{3-268})	This work
<i>B. canis</i>		
<i>B. canis</i>	<i>B. canis</i> RM6/66 (ATCC23365); wild-type strain	Unav collection
Bc $\Delta pmtA$	<i>B. canis</i> carrying an internal deletion in <i>pmtA</i> (Δ_{35-168})	This work
<i>Escherichia coli</i>		
TOP10F'	F-,lac/q Tn10 (Tetr) <i>mcrA</i> $\Delta(mrr-hsdRMS-mcrBC)$ 80lacZ Δ M15 $\Delta lacX74$ <i>recA1alaD139</i> $\Delta(ara-leu)$ 7697 <i>galU galK rspL endA1 nupG</i>	Invitrogen
SM10 λ pir	th-1 thr leu tonA lacY supE, recA::RP4-2-Tc::Mu KmR (λ pir).	(Miller and Mekalanos, 1988)
β 2150	F' lacZ Δ M15 <i>lacIq proA+B+ thrB1004 pro thi strA hsdS</i> $\Delta adapA::erm$ (<i>Ermr</i>) <i>pir</i> . <i>E. coli</i> deficient in the diaminopimelic acid (DAP) synthesis	(Dehio and Meyer, 1997)
S17 λ pir	Mating strain with plasmid RP4 inserted into the chromosome	(Simon et al., 1983)
PIR1	F- $\Delta lac169$ rpoS(Am) robA1 creC510 hsdR514 endA recA1 uidA(Δ MluI)::pir-116	Invitrogen

SM10 λ pir	<i>th-1 thr leu tonA lacY supE, recA::RP4-2-Tc::Mu KmR</i> (λ pir)	(Miller and Mekalanos 1988)
HB101	F - <i>hsdS20 recA13 ara-14 proA2 lacY1 galK2 rpsL20 xyl-5 mtl-1 supE44</i>	(Sambrook, Fritsch, and Maniatis 1989)
Plasmids		
pRK2013	Helper vector containing <i>tra</i> and <i>mob</i> genes	(Figurski and Helinski, 1979)
pCR2.1	Cloning vector, Km ^R	Invitrogen
pJQK	Derivative plasmid of pJQ200KS+; Km ^R ; Gm ^S	(Scupham and Triplett, 1997)
pTNS2	Plasmid expressing <i>tnsABCD</i> from Plac. ApR	(Choi et al. 2005)
pUC18R6KTminiTn7Tkm	pUC18R6KTminiTn7T with Km cassette	(Llobet et al. 2009)
pRCI-22	<i>Bam</i> HI- <i>Xba</i> I fragment from pRCI-21 cloned into the corresponding site of pJQK	(Conde-Álvarez et al., 2006)
pRCI-10	<i>Bam</i> HI- <i>Xba</i> I fragment from pRCI-1 cloned into the corresponding site of pJQK	(Conde-Álvarez et al., 2006)
pLPI-1	1263 bp of <i>B. abortus</i> chromosomal DNA containing the <i>choX1</i> deletion allele, generated by PCR and cloned into pCR2.1	This work
pLPI-2	<i>Bam</i> HI- <i>Xba</i> I fragment from pLPI-1 cloned into the corresponding site of pJQK	This work
pLPI-8	940 bp of <i>B. abortus</i> chromosomal DNA containing the <i>choX1</i> deletion allele, generated by PCR and cloned into pCR2.1	This work
pLPI-9	<i>Bam</i> HI- <i>Xba</i> I fragment from pLPI-8 cloned into pJQK	This work
pRCI-40	<i>attL1-attL2</i> fragment of pDONOR-BMEII0695 cloned into the <i>attR1-attR2</i> sites of pRH001	(Conde-Álvarez et al., 2006)
pRCI-41	<i>attL1-attL2</i> fragment of pDONOR-BMEI2000 cloned into the <i>attR1-attR2</i> sites of pRH001	(Conde-Álvarez et al., 2006)

pBA-8	G62D <i>pmtA</i> version generated from pRCI-41 by PCR site-directed- mutagenesis	This work
pBA-13	<i>EcoRI</i> fragment of 1268 bp from Bs2WT chromosomal DNA containing the BSUIS_A1635 complete allele and its own promoter, cloned into the corresponding sites of pUC18 R6KT miniTn7T KmR.	This work

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Supplementary Table S2. Primers and PCR products expected in mutant construction and complementation

Region amplified	Primers (sequence 5'-3')	Amplified fragment (bp)		Used for	Reference
		In the mutant	In the sibling revertant strain		
<i>pcs</i>	<i>pcs</i> -F1 (GAGCAGCACGGTATGGTAGC) <i>pcs</i> -R4 (GCCGCATGAAATAAAATGGT)	981	1686	Verifying the <i>pcs</i> deletion	(Conde-Álvarez et al., 2006)
<i>pcs</i>	<i>pcs</i> -F1 <i>pcs</i> -R5 (CGGAAATGAAGGACAGGTTC)	---	795	Verifying the <i>pcs</i> deletion	(Conde-Álvarez et al., 2006)
<i>pmtA</i>	<i>pmtA</i> -F1 (GGCTTCTTCTCCCGGATGAAGG) <i>pmtA</i> -R4 (GCACGTCAAGGCCACGATCAG)	633	1035	Verifying the <i>pmtA</i> deletion	(Conde-Álvarez et al., 2006)
<i>pmtA</i>	<i>pmtA</i> -F10 (CCGCTGTGCCCATGCTGAAT) <i>pmtA</i> -R4	---	488	Verifying the <i>pmtA</i> deletion	This work
<i>choX1</i>	<i>choX1</i> -F1 (CGCTAAAAGCCTCGTCCA) <i>choX1</i> -R2 (CCGTTGTCGAGGTGATGTC)	493	493	Overlapping PCR	This work
<i>choX1</i>	<i>choX1</i> -F3 (GACATCACCTCGACAACGGCCAATGTTGGCAAGTTCCTC) <i>choX1</i> -R4 (ACCATGCCGATACCAAAGAA)	770	770	Overlapping PCR	This work
<i>choX1</i>	<i>choX1</i> -F1	1263	1854	Verifying the	This work

	<i>choX1</i> -R4				<i>choX1</i> deletion	
<i>choX1</i>	<i>choX1</i> -F1 <i>choX1</i> -R5 (CAGCGTCTCAACGGTCTTG)	---	673	Verifying the <i>choX1</i> deletion	This work	
<i>choX1</i>	<i>choX1</i> _Fw_Tn7 (5`- CCGGGCTGCAGGAATTTTCATTTTCAACGGACGGGGT-3`) <i>choX1</i> _Rv_Tn7 (5`- AGCTTCTCGAGGAATTTTCAGAGGCCGAGGGCCG-3`)	677	1268	Complementation	This work	
<i>choX2</i>	<i>choX2</i> -F1 (CAGGTTTCATGCGGAATTTGT) <i>choX2</i> -R2 (GCCCAACATACCTGCTCCT)	446	446	Overlapping PCR	This work	
<i>choX2</i>	<i>choX2</i> -F3 (GGAGCAGGTATGTTGGGCAAAGGCCGTCGACAAATA) <i>choX2</i> -R4 (TTTTCTACGCGGGCTACATC)	494	494	Overlapping PCR	This work	
<i>choX2</i>	<i>choX2</i> -F1 <i>choX2</i> -R4	940	1732	Verifying the <i>choX2</i> deletion	This work	
<i>choX2</i>	<i>choX2</i> -F1 <i>choX2</i> -R5 (GGTAGCCACGCCATCATC)	---	700	Verifying the <i>choX2</i> deletion	This work	

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Supplementary Table S3. Comparison of amino acid sequences of PmtA of *Brucella* spp.

Code	Strain	ORF	Identity (%)	Length (aa)	Amino acid changes: outside the C.S. ¹ in the C.S. ¹	
bmt	<i>Brucella suis</i> ATCC 23445	BSUIS_A1967				
bsui	<i>Brucella suis</i> bv. 2 Bs143CITA	BSSP1_I1926	100	199	---	---
bsuc	<i>Brucella suis</i> bv. 2 Bs364CITA	BSSP2_I1931	100	199	---	---
bsup	<i>Brucella suis</i> bv. 2 PT09143	BSPT1_I1942	100	199	---	---
bsuv	<i>Brucella suis</i> bv. 2 PT09172	BSPT2_I1928	100	199	---	---
bsz	<i>Brucella suis</i> bv. 3	DK67_243	100	199	---	---
bmr	<i>Brucella microti</i>	BMI_I2149	100	199	---	---
bcar	<i>Brucella canis</i> RM6/66	DK60_58	100	199	---	---
bcas	<i>Brucella canis</i> SVA13	DA85_10235	100	199	---	---
bcs	<i>Brucella canis</i> ATCC 23365	BCAN_A2172	100	199	---	---
bol	<i>Brucella canis</i> Oliveri	BCOUA_I2127	100	199	---	---
bsk	<i>Brucella canis</i> HSK A52141	BCA52141_I1794	100	199	---	---
bvl	<i>Brucella vulpis</i>	BF3285c1_0816	100	199	---	---
bov	<i>Brucella ovis</i>	BOV_2043	99	199	K95E	---
bsf	<i>Brucella suis</i> bv. 1	BSS2_I2061	99	199	L164S	---
bsi	<i>Brucella suis</i> 1330	BS1330_I2121	99	199	L164S	---
bms	<i>Brucella suis</i> 1330	BR2127	99	199	L164S	L59-DI ³ G60R
	<i>B. innopinata</i> BO1 ²		100	199		
	<i>Brucella</i> sp. NF 2653 (Austr.) ²		99	199	V50A	
bcet	<i>Brucella ceti</i> TE10759-12	V910_102017	99	199	H92Q	---
bpp	<i>Brucella pinnipedialis</i> B2/94	BPI_I2185	99	199	G54D	---
bme	<i>Brucella melitensis</i> bv. 1 16M	BMEI2000	99	199	---	L59F
bmee	<i>Brucella melitensis</i> bv. 3 Ether	DK62_1457	99	199	---	L59F
bmj	<i>Brucella melitensis</i> M5-90	BM590_A2117	99	199	---	L59F
bmi	<i>Brucella melitensis</i> ATCC 23457	BMEA_A2189	99	199	---	L59F
bmw	<i>Brucella melitensis</i> NI	BMNI_I2028	99	199	---	L59F
bmz	<i>Brucella melitensis</i> M28	BM28_A2116	99	199	---	L59F
baa	<i>Brucella abortus</i> A13334	BAA13334_I00574	99	199	---	L59F; G62D
bab	<i>Brucella abortus</i> NCTC 10505	DO78_1964	99	199	---	L59F; G62D
bmc	<i>Brucella abortus</i> S19	BAbS19_I19930	99	199	---	L59F; G62D
bmf	<i>Brucella abortus</i> 2308	BAB1_2131	99	199	---	L59F; G62D

¹C.S: Consensus sequence; PmtA SAM binding site [VL(E/D)XGXGXG]; ²ORF non available; ³DI: deletion

Supplementary Table S4. Comparison of amino acid sequences of Pcs of *Brucella* spp.

Code	Strain	ORF	Identity (%)	Length (aa)	Amino acid changes: outside the C.S. ¹ in the C.S. ¹	
bmt	<i>Brucella suis</i> ATCC 23445	BSUIS_B0568				
bsui	<i>Brucella suis</i> bv. 2 Bs143CITA	BSSP1_II0527	100	266	---	---
bsuc	<i>Brucella suis</i> bv. 2 Bs364CITA	BSSP2_II0534	100	276	---	---
bsup	<i>Brucella suis</i> bv. 2 PT09143	BSPT1_II0525	100	276	---	---
bsuv	<i>Brucella suis</i> bv. 2 PT09172	BSPT2_II0528	100	276	---	---
bsz	<i>Brucella suis</i> bv. 3	DK67_2566	100	266	---	---
bcar	<i>Brucella canis</i> RM6/66	DK60_2283	100	266	---	---
bcas	<i>Brucella canis</i> SVA13	DA85_13225	100	276	---	---
bcs	<i>Brucella suis</i> bv. 3	BCAN_B0572	100	266	---	---
bol	<i>Brucella canis</i> Oliveri	BCOUA_II0572	100	276	---	---
bsk	<i>Brucella canis</i> HSK A52141	BCA52141_II0369	100	276	---	---
bsi	<i>Brucella suis</i> 1330	BS1330_II0567	100	266	---	---
bms	<i>Brucella suis</i> 1330	BRA0572	100	266	---	---
	<i>B. innopinata</i> BO1 ²		100	266		---
	<i>Brucella</i> sp. NF 2653 (Austr.) ²		99	266	M153T	---
bvl	<i>Brucella vulpis</i>	BF3285c2_0104	99	270	M163T	---
bov	<i>Brucella ovis</i>	BOV_A0538	99	270	M153T	---
bsf	<i>Brucella suis</i> bv. 1	BSS2_II0544	99	266	M163T	---
bmr	<i>Brucella microti</i>	BMI_II566	99	266	M163T	---
bcet	<i>Brucella ceti</i> TE10759-12	V910_200681	99	270	M163T	---
bpp	<i>Brucella pinnipedialis</i> B2/94	BPI_II624	99	266	M163T	---
bme	<i>Brucella melitensis</i> bv. 1 16M	BMEII0695	99	266	M163T	---
bmee	<i>Brucella melitensis</i> bv. 3 Ether	DK62_2861	99	266	M163T	---
bmi	<i>Brucella melitensis</i> ATCC 23457	BMEA_B0545	99	266	M163T	---
bmw	<i>Brucella melitensis</i> NI	BMNI_II0538	99	270	M163T	---
babc	<i>Brucella abortus</i> NCTC 10505	DO78_2416	99	266	M163T	---
bmc	<i>Brucella abortus</i> S19	BAbS19_II06250	99	266	M163T	---
bmf	<i>Brucella abortus</i> 2308	BAB2_0668	99	266	M163T	---
bmj	<i>Brucella melitensis</i> M5-90	BM590_B0544	99	276	R7M; M163T	---
bmz	<i>Brucella melitensis</i> M28	BM28_B0544	99	276	R7M; M163T	---
baa	<i>Brucella abortus</i> A13334	BAA13334_II01275	98	276	G3V;R7M; M163T	---

¹C.S.: Consensus sequence of Pcs is [DG(X)2AR(X)8P(X)3G(X)3D(X)3D] [1]; ²ORF non available

Supplementary Table S5. Comparison of amino acid sequences of ChoX1 of *Brucella* spp.

Code	Strain	ORF	Identity (%)	Length (aa)	Amino acid change
bmt	<i>Brucella suis</i> ATCC 23445	BSUIS_A1635			
bsui	<i>Brucella suis</i> bv. 2 Bs134CITA	BSSP1_I1597	100	322	---
bsuc	<i>Brucella suis</i> bv. 2 Bs364CITA	BSSP2_I1600	100	322	---
bsup	<i>Brucella suis</i> bv. 2 PT09143	BSPT1_I1613	100	322	---
bsuv	<i>Brucella suis</i> bv. 2 PT09172	BSPT2_I1595	100	322	---
bsz	<i>Brucella suis</i> bv. 3	DK67_747	98	322	V4I; D14G; M267I; A278D
bmr	<i>Brucella microti</i>	BMI_I1592	99	322	D14G; A278D
bcar	<i>Brucella canis</i> RM6/66	DK60_1590	98	248	Frameshift (67 nt) M267I; A278D
bcas	<i>Brucella canis</i> SVA13	DA85_07575 Pseudogene	98	248	Frameshift (67 nt) M267I; A278D
bcs	<i>Brucella canis</i> ATCC 23365	BCAN_A1614	98	248	Frameshift (67 nt) M267I; A278D
bol	<i>Brucella canis</i> Oliveri	No found			
bsk	<i>Brucella canis</i> HSK A52141	BCA52141_I2660	98	248	Frameshift (67 nt) M267I; A278D
bvl	<i>Brucella vulpis</i>	BF3285c1_1383	98	322	D14G; D88N; A278D; R217K
bov	<i>Brucella ovis</i>	BOV_1524	99	322	D14G; A278D
bsf	<i>Brucella suis</i> bv. 1	BSS2_I1532	99	322	D14G; M267I; A278D
bsi	<i>Brucella suis</i> 1330	BS1330_I1573	99	322	D14G; M267I; A278D
bms	<i>Brucella suis</i> 1330	BR1579	99	322	D14G; M267I; A278D
	<i>B. innopinata</i> BO1 ¹		98	248	Frameshift (67 nt) M267I; A278D
	<i>Brucella</i> sp. NF 2653 (Austr.) ¹		99	322	D15G; A278D
bcet	<i>Brucella ceti</i> TE10759-12	V910_100437	99	322	D14G; A278D
bpp	<i>Brucella pinnipedialis</i> B2/94	BPI_I1632	99	322	D14G; A278D
bme	<i>Brucella melitensis</i> bv. 1 16M	BMEI0441	99	326	D14G; A278D
bmee	<i>Brucella melitensis</i> bv. 3 Ether	DK62_1964	99	322	D14G A278D
bmj	<i>Brucella melitensis</i> M5-90	BM590_A1571	98	322	D14G; L82V; E202D; A278D
bmi	<i>Brucella melitensis</i> ATCC 23457	BMEA_A1632	98	322	D14G; L82V; E202D; A278D
bmw	<i>Brucella melitensis</i> NI	BMNI_I1520	98	322	D14G; L82V; E202D; A278D
bmz	<i>Brucella melitensis</i> M28	BM28_A1585	98	322	D14G; L82V; E202D; A278D
baa	<i>Brucella abortus</i> A13334	BAA13334_I0144 8	99	322	D14G; A278D; S318L
bab	<i>Brucella abortus</i> NCTC 10505	DO78_1451	99	322	D14G; A278D; S318L
bmc	<i>Brucella abortus</i> S19	BAbS19_I14910	99	322	D14G; A278D; S318L
bmf	<i>Brucella abortus</i> 2308	BAB1_1593	99	322	D14G; A278D; S318L

¹ORF non available

Supplementary Table S6. Comparison of amino acid sequences of ChoX2 of *Brucella* spp.

Code	Strain	ORF	Identity (%)	Length (aa)	Amino acid change
bmt	<i>Brucella suis</i> ATCC 23445	BSUIS_B0730			
bsui	<i>Brucella suis</i> bv. 2 Bs134CITA	BSSP1_II0678	100	288	---
bsuc	<i>Brucella suis</i> bv. 2 Bs364CITA	BSSP2_II0689	100	288	---
bsup	<i>Brucella suis</i> bv. 2 PT09143	BSPT1_II0676	100	288	---
bsuv	<i>Brucella suis</i> bv. 2 PT09172	BSPT2_II0678	100	288	---
bsz	<i>Brucella suis</i> bv. 3	DK67_2700	100	288	---
bmr	<i>Brucella microti</i>	BMI_II731	100	288	---
bcar	<i>Brucella canis</i> RM6/66	DK60_2435	100	288	---
bcas	<i>Brucella canis</i> SVA13	DA85_13995	100	288	---
bcs	<i>Brucella canis</i> ATCC 23365	BCAN_B0746	100	288	---
bol	<i>Brucella canis</i> Oliveri	BCOUA_II0738	100	288	---
bsk	<i>Brucella canis</i> HSK A52141	BCA52141_II0166	100	288	---
bvl	<i>Brucella vulpis</i>	BF3285c2_0271	100	288	---
bov	<i>Brucella ovis</i>	Not found			
bsf	<i>Brucella suis</i> bv. 1	BSS2_II0701	100	288	---
bsi	<i>Brucella suis</i> 1330	BS1330_II0731	100	288	---
bms	<i>Brucella suis</i> 1330	BRA0738	100	288	
	<i>B. innopinata</i> BO1 ¹				Frameshift (222 nt)
	<i>Brucella</i> sp. NF 2653 (Austr.) ¹		100	288	
bcet	<i>Brucella ceti</i> TE10759-12	Not found			
bpp	<i>Brucella pinnipedialis</i> B2/94	BPI_II791	100	288	---
bme	<i>Brucella melitensis</i> bv. 1 16M	BMEII0550	99.7	288	I127V
bmee	<i>Brucella melitensis</i> bv. 3 Ether	DK62_2706	99.3	288	M84I; I127V
bmj	<i>Brucella melitensis</i> M5-90	BM590_B0703	99.7	288	I127V
bmi	<i>Brucella melitensis</i> ATCC 23457	BMEA_B0716	99.7	288	I127V
bmw	<i>Brucella melitensis</i> NI	BMNI_II0686	99.7	288	I127V
bmz	<i>Brucella melitensis</i> M28	BM28_B0705	99.7	288	I127V
baa	<i>Brucella abortus</i> A13334	BAA13334_II01017	99.3	288	I127V; N238D
bab	<i>Brucella abortus</i> NCTC 10505	DO78_2571	99	288	G34D; I127V; N238D
bmc	<i>Brucella abortus</i> S19	BAbS19_II04730	99.3	288	I127V; N238D
bmf	<i>Brucella abortus</i> 2308	BAB2_0502	99.3	288	I127V; N238D

¹ORF non available

Supplementary Table S7. Comparison of amino acid sequences of ChoW1 of *Brucella* spp.

Code	Strain	ORF	Identity (%)	Length (aa)	Amino acid changes
bmt	<i>Brucella suis</i> ATCC 23445	BSUIS_A1636			
bsui	<i>Brucella suis</i> bv. 2 Bs143CITA	BSSP1_I1598	100	278	---
bsuc	<i>Brucella suis</i> bv. 2 Bs364CITA	BSSP2_I1601	100	278	---
bsup	<i>Brucella suis</i> bv. 2 PT09143	BSPT1_I1614	100	278	---
bsuv	<i>Brucella suis</i> bv. 2 PT09172	BST2_I1596	100	278	---
bsz	<i>Brucella suis</i> bv. 3	DK67_746	99	278	L17S; G43D
bmr	<i>Brucella microti</i>	BMI_I1593	99	278	L17S
bcar	<i>Brucella canis</i> RM6/66	DK60_1591	99	278	L17S; G43D
bcas	<i>Brucella canis</i> SVA13	DA85_07580	99	278	L17S; G43D
bcs	<i>Brucella canis</i> ATCC 23365	BCAN_A1615	99	278	L17S; G43D
bol	<i>Brucella canis</i> Oliveri	BCOUA_I1580	99	278	L17S; G43D
bsk	<i>Brucella canis</i> HSK A52141	BCA52141_I2658	99	278	L17S; G43D
bvl	<i>Brucella vulpis</i>	BF3285c1_1382	99	278	L17S; I57N; G88S
bov	<i>Brucella ovis</i>	BOV_1525	99	278	L17S
bsf	<i>Brucella suis</i> bv. 1	BSS2I1533	99	278	L17S; G43D
bsi	<i>Brucella suis</i> 1330	BS1330_I1574	99	278	L17S; G43D
bms	<i>Brucella suis</i> 1330	BR1580	99	278	L17S; G43D
	<i>B. innopinata</i> BO1 ¹		99	278	L17S;G43D
	<i>Brucella</i> sp. NF 2653 (Austr.) ¹		99	278	L54F;A118V
bcet	<i>Brucella ceti</i> TE10759-12	V910_100436	99	278	L17S
bpp	<i>Brucella pinnipedialis</i> B2/94	BPI_I1633	99	278	L17S
bme	<i>Brucella melitensis</i> bv. 1 16M	BMEI0440	99	278	L17S; G177S
bmee	<i>Brucella melitensis</i> bv. 3 Ether	DK62_1963	99	278	L17S; G177S
bmj	<i>Brucella melitensis</i> M5-90	BM590_A1572	99	278	L17S; G177S
bmi	<i>Brucella melitensis</i> ATCC 23457	BMEA_A1633	99	278	L17S; G177S
bmw	<i>Brucella melitensis</i> NI	BMNI_I1521	99	278	L17S; G177S
bmz	<i>Brucella melitensis</i> M28	BM28_A1586	99	278	L17S; G177S
baa	<i>Brucella abortus</i> A13334	BAA13334_I01447	99	278	L17S: G177S; A194T
bab	<i>Brucella abortus</i> NCTC 10505	DO78_1452	99	278	L17S; P157L; G177S
bmc	<i>Brucella abortus</i> S19	BAbS19_I14920	99	278	L17S: G177S; A194T
bmf	<i>Brucella abortus</i> 2308	BAB1_1594	99	278	L17S: G177S; A194T

¹ORF non available

Supplementary Table S8. Comparison of amino acid sequences of ChoV1 of *Brucella* spp.

Code	Strain	ORF	Identity (%)	Length (aa)	Amino acid changes
bmt	<i>Brucella suis</i> ATCC 23445	BSUIS_A1637			
bsui	<i>Brucella suis</i> bv. 2 Bs143CITA	BSSP1_I1599	99	348	Q273P
bsuc	<i>Brucella suis</i> bv. 2 Bs364CITA	BSSP2_I1602	99	348	Q273P
bsup	<i>Brucella suis</i> bv. 2 PT09143	BSPT1_I1615	99	348	Q273P
bsuv	<i>Brucella suis</i> bv. 2 PT09172	BSPT2_I1597	100	348	---
bsz	<i>Brucella suis</i> bv. 3	DK67_745	99	348	G138D; Q273P
bmr	<i>Brucella microti</i>	BMI_I1594	99	348	D42G; Q273P
bcar	<i>Brucella canis</i> RM6/66	DK60_1592	99	348	G138D; Q273P
bcas	<i>Brucella canis</i> SVA13	DA85_07585	99	348	G138D; Q273P
bcs	<i>Brucella canis</i> ATCC 23365	BCAN_A1616	99	348	G138D; Q273P
bol	<i>Brucella canis</i> Oliveri	BCOUA_I1581	99	348	G138D; Q273P
bsk	<i>Brucella canis</i> HSK A52141	BCA52141_I2656	99	348	G138D; Q273P
bvl	<i>Brucella vulpis</i>	BF3285c1_1381	99	348	D42G; Q273P
bov	<i>Brucella ovis</i>	BOV_1526	99	348	D42G; Q273P
bsf	<i>Brucella suis</i> bv. 1	BSS2_I1534	99	348	Q273P
bsi	<i>Brucella suis</i> 1330	BS1330_I1575	99	348	Q273P
bms	<i>Brucella suis</i> 1330	BR1581	99	348	Q273P
	<i>B. innopinata</i> BO1 ¹				G138D; Q273P
	<i>Brucella</i> sp. NF 2653 (Austr.) ¹				5 changes
bcet	<i>Brucella ceti</i> TE10759-12	V910_100435	99	348	D42G; Q273P
bpp	<i>Brucella pinnipedialis</i> B2/94	BPI_I1634	99	348	D42G; Q273P
bme	<i>Brucella melitensis</i> bv. 1 16M	BMEI0439	99	348	D42G; Q273P
bmee	<i>Brucella melitensis</i> bv. 3 Ether	DK62_1962	99	348	D42G; Q273P
bmj	<i>Brucella melitensis</i> M5-90	BM590_A1573	99	348	D42G; Q273P
bmi	<i>Brucella melitensis</i> ATCC 23457	BMEA_A1634	99	348	D42G; Q273P
bmw	<i>Brucella melitensis</i> NI	BMNI_I1522	99	348	D42G; Q273P
bmz	<i>Brucella melitensis</i> M28	BM28_A1587	99	348	D42G; Q273P
baa	<i>Brucella abortus</i> A13334	BAA13334_I01445	99	348	D42G; Q273P
bab	<i>Brucella abortus</i> NCTC 10505	DO78_1453	99	348	D42G; Q273P
bmc	<i>Brucella abortus</i> S19	BAbS19_I14930	99	348	D42G; Q273P
bmf	<i>Brucella abortus</i> 2308	BAB1_1595	99	348	D42G; Q273P

¹ORF non available