

Table S3. Primer characteristics for the genes used in multilocus sequence typing, pertactin sequencing and in the detection of the insertion sequence elements

Gene name and product ^a	BB ORF ^b	BPP ORF ^b	BP ORF ^b	Primer Name	Sequence (5'→3')	Product length (bp)	Purpose	T _{ANN} (°C)
<i>adk</i> ; adenylate kinase	BB2005	BPP2560	BP2769	Adk-F Adk-R	AGCCGCCTTTCTCACCCAACACT TGGGCCAGGACGAGTAGT	513	A,S ^d A,S	54
<i>fumC</i> ; fumarate hydratase class II	BB4054	BPP3619	BP0248	FumC-F FumC-R	CGTGAACCGGGGCCAGTCGTC GGCCAGCCAGCGCACATCGTT	499	A,S A,S	54
<i>icd</i> ; isocitrate dehydrogenase	BB3924	BPP3475	BP2488	Icd-F Icd-R	CTGGTCCACAAGGGCAACAT ACACCTGGGTGGCGCCTTC	531	A,S A,S	54
<i>glyA</i> ; serine hydroxymethyltransferase	BB4348	BPP3875	BP2952	GlyA-F GlyA-R	CAACCAGGGCGTGTACATGGC CGCGATGACGTGCATCAG	500	A,S A,S	54
<i>tyrB</i> ; aromatic amino-acid aminotransferase	BB2272	BPP2024	BP1795	TyrB-F TyrB-R	CGAGACCTACGCTTATTACGAT TGCCGGCCAGTTTCATTTT	509	A,S A,S	54
<i>pepA</i> ; cytosol aminopeptidase	BB3736	BPP3285	BP2421	PepA-F PepA-R	CGCCCAGGTTGAAGAAAATCGTC ATCAGGCCACCACATCCAG	509	A,S A,S	54
<i>pgm</i> ; phosphoglucomutase	BB0885	BPP0800	BP3141	Pgm-F Pgm-R	CGCCCATGTCACCAGCACCGA CGCCGTCTATCGTAACCAG	545	A,S A,S	54
IS481; transposase	-	-	multiple	IS481-F IS481-R	GGGGTCACCGCGCGACTGT GGGCCTGATGCTCGTAGCGC	289	A A	60
IS1001; transposase	-	multiple	-	IS1001-F IS1001-R	CGCCGCTTGATGACCTTGATA CACCGCTACGAGTTGGAGAT	498	A A	60
IS1002; transposase	-	multiple	multiple	IS1002-F IS1002-R	TCCCAGCTCCACGCACACCG AACAACCATAAGCATGCGCG	705	A A	54
IS1663; transposase	-	-	multiple	IS1663-F IS1663-R	GGGTCTGTATCACGAGCAAGCGG CTTTGCGATTGAGCTCACGCAAC	265	A A	60
<i>prn</i> ; pertactin	BB1366	BPP1150	BP1054	Pm-SPF1 Pm-SPR3 Pm-SPF2 Pm-SPR1 Pm-SPF3 Pm-SPF4 Pm-SPR2 Pm-SPR4 Pm-SPR5	TCCCTGTTCCATCGCGGTG GTTGGCGGCCAATCGATAGC ATCGCGCTCTATGTGGCCG CCTGAGCCTGGAGACTGGCAC CACCGCACGGCAATGTCATC GGCGACCTTTACCCTTGCCAA CAGCGTCGCGTCCAGGTAGA GCAAGGTGATCGACAGGGGC TGGACCGTGACATTGGCGC	1729, 1720, 1732 ^c 2399, 2426, 2389 ^c	A,S A,S A,S A,S S S S S S	60 60

^a Gene name and product as annotated by the Sanger Centre sequencing team

^b ORF numbers as annotated by the Sanger Centre sequencing team

^c PCR fragment sizes in *B. bronchiseptica*, *B. parapertussis*, *B. pertussis*, respectively

^d Abbreviations: A=amplification; S=sequencing