Table 8 Isolates of *Phytophthora infestans* used in this study

Geographical Origin/Isolate Code	Host	Year Collected	Mating Type	mtDNA Haplotype	Allozyme Genotype *Gpi*	Allozyme Genotype *Pep*	RG-57 Lineage	
Bolivia								
BOL 3	Potato	__	A2	IIa	100/100	__	BR-1	PROINPA
BOL 9	Potato	__	A2	IIa	100/100	__	BR-1	PROINPA
BOL12	Potato	__	A2	IIa	100/100	__	BR-1	PROINPA
BOL13	Potato	__	A2	IIa	100/100	__	BR-1	PROINPA
BOL14	Potato	__	A2	IIa	100/100	__	BR-1	PROINPA
BOL15	Potato	__	A2	IIa	100/100	__	BR-1	PROINPA
BOL16	Potato	__	A2	IIa	100/100	__	BR-1	PROINPA
Brazil								
B040	Potato	1998	A2	IIa	100/100	__	BR-1	E. Mizubuti
B124	Potato	1998	A2	IIa	100/100	__	BR-1	E. Mizubuti
B189	Potato	1998	A2	IIa	100/100	__	BR-1	E. Mizubuti
B193	Potato	1998	A2	IIa	100/100	__	BR-1	E. Mizubuti
B217	Potato	1998	A2	IIa	100/100	__	BR-1	E. Mizubuti
B219	Potato	1998	A2	IIa	100/100	__	BR-1	E. Mizubuti
Peru								
PER800	Potato	1985	A1	Ib	86/100	92/100	US-1	P. Tooley
PER802	Potato	1985	A1	Ib	86/100	92/100	US-1	P. Tooley
PER804	Potato	1984	A1	Ib	86/100	92/100	US-1	P. Tooley
PER808	Potato	1985	A1	Ib	86/100	92/100	US-1	P. Tooley
PER812	Potato	1985	A1	Ib	86/100	92/100	US-1	P. Tooley
PER832	Potato	1986	A1	Ib	86/100	92/100	US-1	P. Tooley
PCZ007	Potato	1997	A1	Ia	100/100	100/100	PE-3	G. Forbes
PCZ050	Potato	1997	A1	Ia	100/100	100/100	PE-3	G. Forbes
PCZ026	Potato	1997	A1	IIa	90/100	96/100	PE-6	G. Forbes
PCZ033	Potato	1997	A1	IIa	90/100	96/100	EC1.1	G. Forbes
PCZ098	Potato	1997	A1	IIa	90/100	96/100	EC1.2	G. Forbes
PCZ118	Potato	1997	A1	IIa	90/100	96/100	EC1.2	G. Forbes
PHU006	Potato	1996	A1	IIa	90/100	96/100	EC-1	G. Forbes
POX004	Potato	1997	A1	IIa	90/100	96/100	EC-1	G. Forbes
PCO038	Potato	1997	A1	IIa	90/100	96/100	EC-1	G. Forbes
PPA008	Potato	1998	A1	IIa	ND	ND	ND	G. Forbes
PPU003	Potato	1997	A1	IIa	ND	ND	ND	G. Forbes
PPU100	Potato	1997	A1	Ib	ND	ND	ND	G. Forbes
Ecuador								
3090	*Solanum phureja*	__	A1	IIa	90/100	96/100	EC-1	G. Forbes
3092	*S. phureja*	__	A1	IIa	90/100	96/100	EC-1	G. Forbes
3094	*S. phureja*	__	A1	IIa	90/100	96/100	EC-1	G. Forbes
3152	*S. andreanum*	__	A1	IIa	90/100	96/100	EC-1	G. Forbes
3153	*S. andreanum*	__	A1	Ib	86/100	92/100	US-1	G. Forbes
3154	*S. andreanum*	__	A1	IIa	90/100	96/100	EC-1	G. Forbes
3163	*S. tetrapetalum*		A2	Ic	100/100	76/100	EC-2	G. Forbes
		__						

Geographical Origin/Isolate Code	Host	Year Collected	Mating Type	mtDNA Haplotype	Allozyme		RG-57 Lineage	Source
3165	*S. tetrapetalum*	__			100/100	76/100	EC-2	G. Forbes
3166	*S. tetrapetalum*	__	A2	Ic	100/100	76/100	EC-2	G. Forbes
3167	*S. tetrapetalum*	__	A2	Ic	100/100	76/100	EC-2	G. Forbes
3198	*S. tuquerense*	__	A1	IIa	90/100	96/100	EC-1	G. Forbes
3199	*S. tuquerense*	__	A1	IIa	90/100	96/100	EC-1	G. Forbes
3253	*S. columbianum*	__	A1	IIa	90/100	96/100	EC-1	G. Forbes
3298	*S. paucijugum*	__	A1	IIa	90/100	96/100	EC-1	G. Forbes
3300	*S. paucijugum*	__	A1	IIa	90/100	96/100	EC-1	G. Forbes
Costa Rica								
CI	Potato	2000	A1	Ia	100/100	94/100	CR-1	A. Brenes
DR4	Potato	2001	A1	Ia	100/100	94/100	CR-1	A. Brenes
F7	Potato	2001	A1	Ia	100/100	94/100	CR-1	A. Brenes
GB-2	*S. longiconicum*	2001	A1	Ia	100/100	94/100	CR-1	A. Brenes
ZB	Potato	2000	A1	Ia	100/100	94/100	CR-1	A. Brenes
ZE	Potato	2001	A1	Ia	100/100	94/100	CR-1	A. Brenes
51	*S. longiconicum*	2003	A1	Ia	100/100	ND	CR-1	A. Brenes
52	*S. longiconicum*	2003	A1	Ia	100/100	ND	CR-1	A. Brenes
61	Potato	2003	A1	Ia	100/100	ND	CR-1	A. Brenes
141	Potato	2003	A1	Ia	100/100	ND	CR-1	A. Brenes
151	Potato	2003	A1	Ia	100/100	ND	CR-1	A. Brenes
152	Potato	2003	A1	Ia	100/100	ND	CR-1	A. Brenes
Mexico								
PIC97180	Potato	1997	A1	Ia	86/122	92/100	ND	N. Grundwald
PIC97207	Potato	1997	A1	Ia	100/122	100/100	ND	N. Grundwald
PIC97224	Potato	1997	A2	Ia	100/122	100/100	ND	N. Grundwald
PIC97322	Potato	1997	A1	Ia	100/122	78/100	ND	N. Grundwald
PIC97370	Potato	1997	A2	Ia	86/100	100/100	ND	N. Grundwald
PIC97388	Potato	1997	A2	Ia	100/122	92/100	ND	N. Grundwald
PIC97605	Potato	1997	A1	Ia	86/100	96/100	ND	N. Grundwald
PIC97620	Potato	1997	A1	Ia	100/122	96/100	ND	N. Grundwald
PIC97630	Potato	1997	A2	Ia	86/122	92/92	ND	N. Grundwald
PIC97652	Potato	1997	A2	Ia	100/122	100/100	ND	N. Grundwald
PIC98301	Potato	1998	A2	Ia	100/100	100/100	ND	N. Grundwald
PIC98305	Potato	1998	A1	Ia	100/100	92/100	ND	N. Grundwald
PIC98366	*S. demissum*	1998	A1	Ia	86/100	100/100	ND	N. Grundwald
PIC98369	*S. demissum*	1998	A1	Ia	100/122	100/100	ND	N. Grundwald
PIC98372	*S. demissum*	1998	A2	Ia	86/122	100/100	ND	N. Grundwald
PIC98388	*S. demissum*	1998	A1	Ia	100/100	100/100	ND	N. Grundwald
PIC98392	*S. demissum*	1998	A2	Ia	86/122	100/100	ND	
US								
94-1	Potato	1994	A1	Ib	86/100	92/100	US-1	J. Ristaino
94-52	Potato	1994	A1	IIb	100/100	92/100	US-6	W. Fry
94-53	Potato	1994	A2	Ia	100/111	100/100	US-7	W. Fry
94-8-4	Potato	1994	A2	Ia	100/111/122	100/100	US-8	J. Ristaino
980059	Potato	1998	A1	IIb	100/111	100/100	US-11	W. Fry
940494	Tomato	1994	A1	IIb	100/111	92/100	US-12	W. Fry
940504	Potato	1994	A2	IIb	100/100	100/100	US-13	W. Fry

Table 9 Primers, target sequences and positions for amplification for nuclear and mitochondrial genes in *Phytophthora infestans*

Target DNA	Primer	Primer Sequence	Primer Length (bp)	Primer Position	Source
Mitochondrial					
P3	F3	5` ATGGTAGAGCGTGGGAATCAT 3`	21	2893 - 2913	Griffith and Shaw (1998)
	R3	5` AATACCGCCTTTGGGTCCATT 3`	21	4178 - 4198	Griffith and Shaw (1998)
P4	F4	5` TGGTCATCCAGAGGTTTATGTT 3`	22	9379 - 9400	Griffith and Shaw (1998)
	R4	5` CCGATACCGATACCAGCACCAA 3`	22	10321 -10342	Griffith and Shaw (1998)
Nuclear					
Intron Ras	IRF	5` TTGCAGCACAACCCAAGACG 3`	20	442 - 461	Gomez et al (2003)
	IRR	5` TGCACGTACTATTCGGGGTTC 3`	21	768 - 789	Gomez et al (2003)
Ras	RASF	5` CGTGTCTGCTTCTCCGTTTCG 3`	21	916 - 936	Gomez et al (2003)
	RASR	5` CCAGGCTTTCGGCAAATTCC 3`	20	1496 - 1515	Gomez et al (2003)
β-Tubulin	TUB901	5` TACGACATTTGCTTCCG 3`	17	901-918	A. Levesque(per. com)
	TUB1401	5` CGCTTGAACATCTCCTGG3`	18	1383-1401	A. Levesque(per. com)

Location of the primer within the original DNA sequence, GenBank accession U17009 for the mitochondrial genes and U30474 for the RAS genes. PCR conditions were according to Griffith and Shaw (33).
For the mitochondrial regions, the reaction conditions were: first, 1.5 min at 94C, followed by 40 cycles of denaturation at 94C