

Supplemental Information

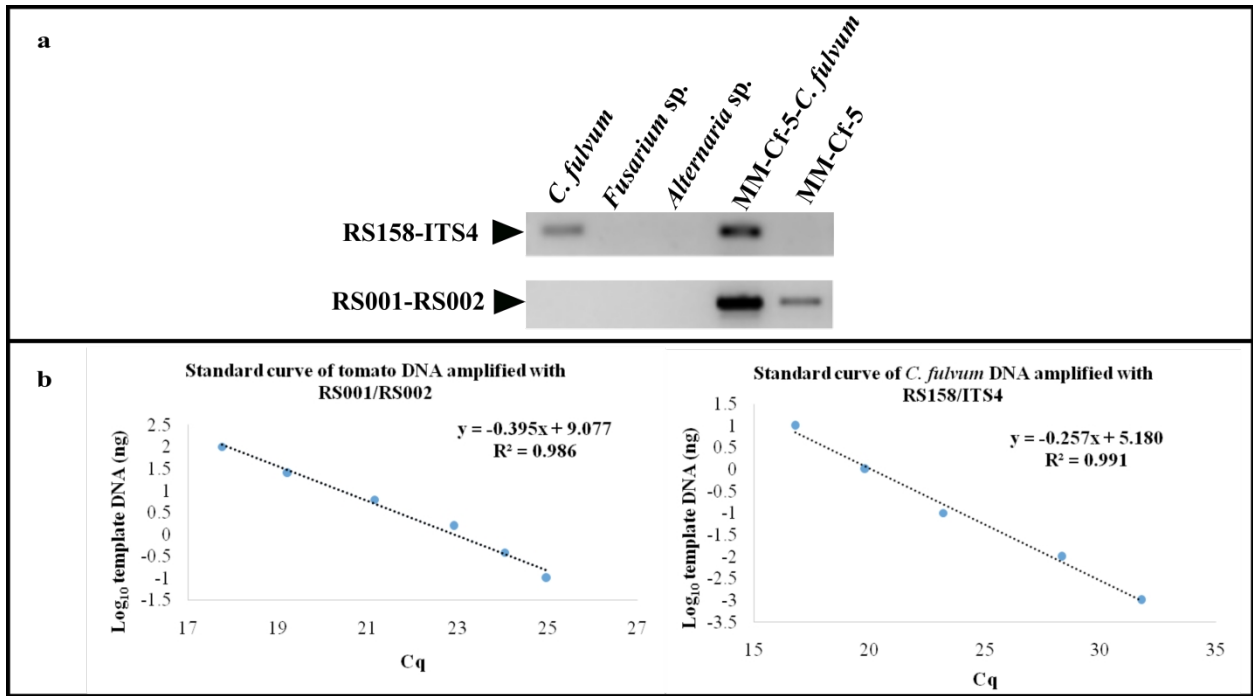


Figure S1: a) Primer pair specificity of RS158-ITS4 used to amplify the *C. fulvum* ITS region and specificity of primer pair RS001-RS002 used to amplify the alpha-tubulin fragment, b) regression line obtained upon plotting of the log₁₀ values against the ITS and alpha-tubulin Cq values of serial-diluted *C. fulvum* (right) and tomato (left) DNA. The plotted Cq value represents the average of two technical replicates.

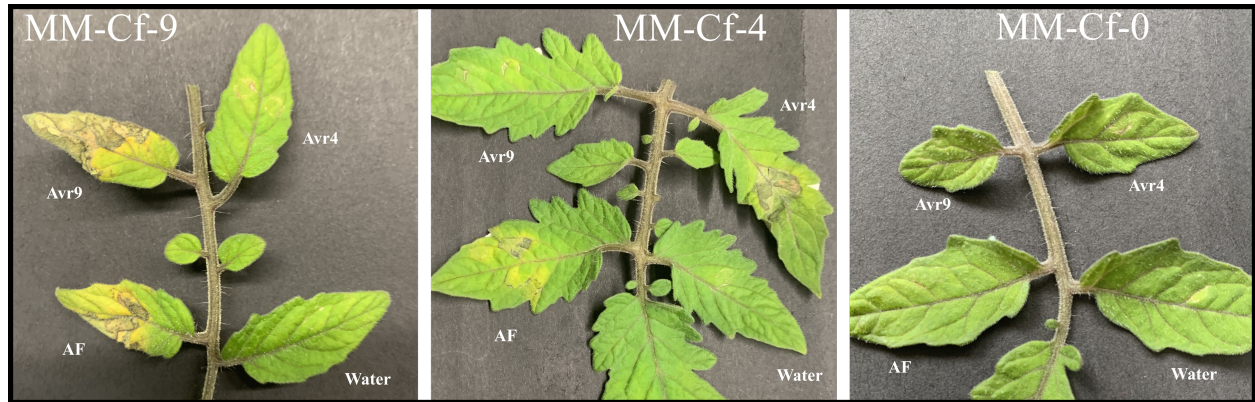


Figure S2: MM-Cf-9, MM-Cf-4 and MM-Cf-0 response 7 days post infiltration with Avr9, Avr4, apoplastic washing fluid contains multiple Avrs secreted by *C. fulvum* race 5 (AF) and water.

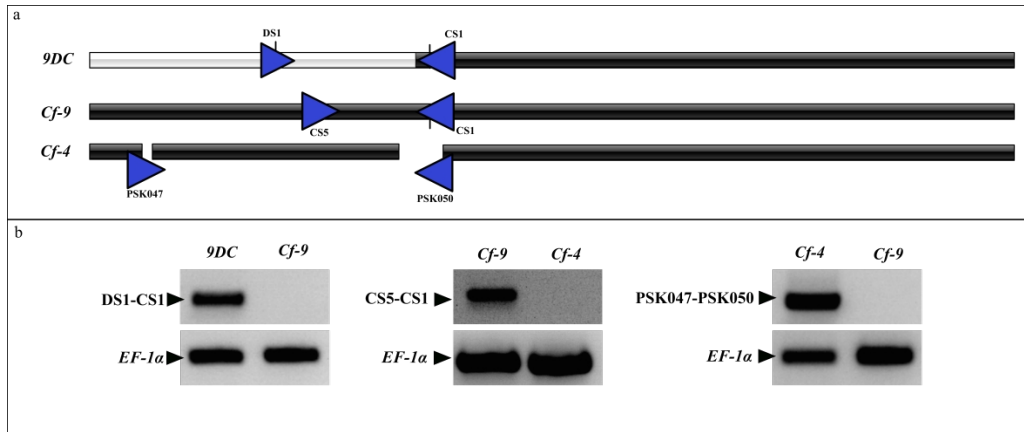


Figure S3: a) *9DC*, *Cf-9* and *Cf-4* alignments and primer annealing sites (blue triangles) (adapted from van der Hoorn *et al.*, 2001), b) PCR amplification products run on agarose gel, obtained by PCR with the different primer pairs indicated in (a), on genomic DNA obtained from LP12 (carrying *9DC*) and the introgression lines *Cf-9* and *Cf-4* used to evaluate the specificity of the primer pairs. The lower panel shows the PCR controls amplifying *elongation factor 1 alpha* (*EF-1α*) (RS003/RS004).

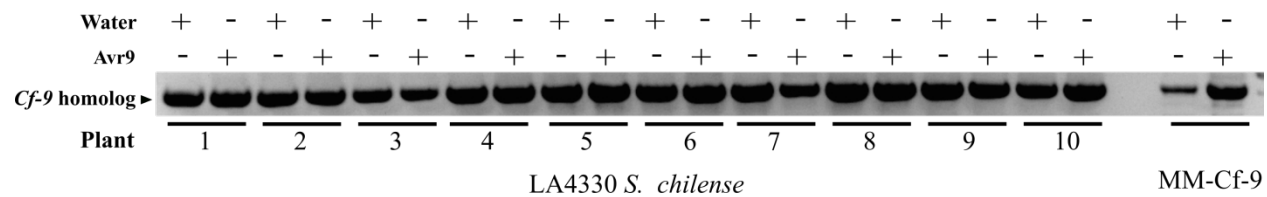


Figure S4: Semi quantitative RT-PCR of cDNA originating from a *Cf-9* homolog, amplified with primer pair PSK009-PSK010 (Table S5) of 10 individuals from population LA4330 and the *Cf-9* introgression line as a positive control, eight hours post infiltration with water or Avr9.

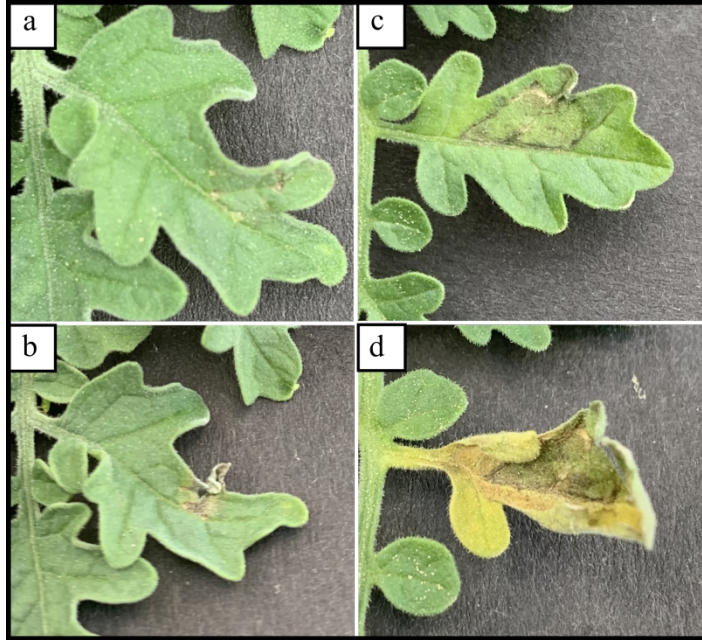


Figure S5: The response to Avr9 is dependent on the age of leaf that is infiltrated. a) and b); young, first fully developed leaf infiltrated with Avr9, showing no HR at four days post infiltration (a) and HR appears when observed at day 7 (b); c) and d); an older leaf of the same plant shows HR within four days post infiltration with Avr9, in the same experiment.

Table S1: AF recognition in different populations of *S. chilense*.

Population	Region	plants upon infiltration of AF		Total plants tested
		HR observed	No HR observed	
LA3784	North	6	2	8
LA3786	North	8	2	10
LA1958	Center	4	5	9
LA1963	Center	5	4	9
LA2746	Center	10	4	14
LA2747	Center	10	0	10
LA2759	Center	1	9	10
LA2931	Center	6	4	10
LA3111	Center	15	2	17
LA2750	S. coast	0	9	9
LA2932	S. coast	0	10	10
LA4107	S. coast	0	10	10
LA4117A	S. mountains	0	9	9
LA4118	S. mountains	0	12	12
LA4330	S. mountains	0	8	8

Table S2: Avr4 and Avr9 recognition in different populations of *S. chilense*

Population	Region	Number of plants showing HR upon infiltration of			Total plants tested
		Avr9 only	Avr4 only	Both Avr9 and Avr4	
LA3784	North	2	0	1	8
LA3786	North	1	2	1	10
LA1958	Center	1	1	2	9
LA1963	Center	3	1	1	9
LA2746	Center	10	0	0	14
LA2747	Center	7	0	1	10
LA2759	Center	0	0	1	10
LA2931	Center	2	2	1	10
LA3111	Center	9	1	2	17

Table S3: Presence of canonical region of *Cf-9* and *Cf-4* in different populations of *S. chilense*

Population	Region	canonical region present of		Plants with Avr4 and Avr9 response and presence of <i>Cf-9</i> and <i>Cf-4</i> canonical region	Total plants tested
		<i>Cf-9</i>	<i>Cf-4</i>		
LA1958	Center	9	2	1	9
LA1963	Center	9	6	1	9
LA2747	Center	9	3		9
LA2931	Center	9	3	1	9
LA3111	Center	9	0		9
LA2932	S. coast	9	0		9
LA4107	S. coast	9	0		9
LA4117A	S. mountains	9	0		9
LA4330	S. mountains	9	0		9

Table S4: Known co-receptors and adaptors of Cf proteins and their annotation in *S. lycopersicum* and *S. chilense*.

Gene Name	<i>S. lycopersicum</i>	<i>S. chilense</i>
<i>SOBIR1</i>	<i>Solyc06g071810</i>	<i>SOLCI002627000</i>
<i>SERK3a</i>	<i>Solyc10g047140</i>	<i>SOLCI001000400</i>
<i>ACIK1</i>	<i>Solyc07g041940</i>	<i>SOLCI000527600</i>
<i>BIR2</i>	<i>Solyc02g087460</i>	<i>SOLCI003763100</i>
<i>BIR2b</i>	<i>Solyc02g067560</i>	<i>SOLCI005193700</i>

Table S5: Sequences of the primers used for qPCR and PCR in this study.

Sr.No	Name	Sequences ('5-NNNN-3')
qPCR		
1.	RS001_Tubulin_Forward	GCCTACCATGAGCAGCTTTC
2.	RS002_Tubulin_Reverse	CAATGCGTGAGAAGACCTCA
3.	RS158-ITS-Forward	GTCTCCGGCTGAGCAGTT
4.	ITS4-ITS-Reverse	TCCTCCGCTTATTGATATGC
PCR		
5.	RS003-EF1A_-Forward	GTCCCCATCTCTGGTTTTGA
6.	RS004-EF1A-Reverse	GGGTCATCTTTGGAGTTGGA
7.	DS1-9DC-Forward	GAGAGCTCAACCTTTACGAA
8.	CS5-Cf-9-Forward	TTTCCAACCTTACAATCCCTTC
9.	CS1-Cf-9-9DC-Reverse	GCCGTTCAAGTTGGGTGTT
10.	PSK009-Cf-Forward	ATGGATTGTGTAAAACCTTGTATTCCT
11.	PSK010-Cf-Reverse	CTAATATCTTTTCTTGTGCTTTTTCA
12.	PSK047-Cf-4-Forward	ACGACAGAAGAAGCTC
13.	PSK050-Cf-4-Reverse	GATGGAATTGGTCCTT