

Table S4 Phenotype comparisons of pTiC58 and pTiA6 VirB2 variants

Amino acid residue	Substitution	Ti-plasmid	Extracellular VirB2 ^a	Virulence ^b
G51	A	C58	+++	+++
	C	A6	-	-
C64	A	C58	+++	+++
	C	A6	+++	+++
I67	A	C58	+++	+++
	C	A6	+++	+++
F71	A	C58	-	-
	C	A6	+	-
I85	A	C58	-	+++
	C	A6	+++	+++
M88	A	C58	-	-
	C	A6	++	++
L94	A	C58	-	+++
	C	A6	+++	++
I104	A	C58	+++	+++
	C	A6	+++	+++
M107	A	C58	-	+++
	C	A6	+++	+++
G119	A	C58	+	+++
	C	C58	+	+
	C	A6	+++	-

The levels of extracellular VirB2 production^a and occurrence or size of tumor formation on tomato stems^b were based on results from Figure 2, 4, and S5A in this study and previous study by Kerr and Christie (2010) [1]. The levels of extracellular VirB2 and virulence strength are indicated with wild type (+++), modest reduction (++), highly attenuation (+), or loss (-).

Reference

1. Kerr JE, Christie PJ (2010) Evidence for VirB4-Mediated Dislocation of Membrane-Integrated VirB2 Pilin During Biogenesis of the *Agrobacterium* VirB/VirD4 Type IV Secretion System. *J Bacteriol.* 192: 4923-34.