

Table S1. Number of genes within each functional category (N = 91) from Psa3 transposon disruption screening.

Classification	Number
T3SS /T3SEs	11
Nucleotide metabolism and transport	10
DNA processing and modification	9
Hypothetical protein	8
Transporters	8
Cell motility/Chemotaxis/Adhesion	7
Signal transduction/Transcriptional regulator	7
Amino acid metabolism and transport	5
Carbohydrate transport and metabolism	5
Others	4
Lipid metabolism and transport	4
Membrane	3
Peptidase	3
Glycosyl transferase	2
Type IV secretion system	2
Xenobiotics biodegradation and metabolism	2
Sulfur metabolism	1

Functional category annotations for Psa3 genes are primarily based on COG [72] and KEGG [73] annotations, with manual additions.

Table S2. Characteristics of Psa3 type III secretion system and effector mutants.

Classification	Mutant	Gene locus	Gene	Function	Virulence Score
T3SS	TD35	IYO_RS06775	<i>hrpR</i>	Regulator	0
T3SS	TJ40	IYO_RS06855	<i>hrcR</i>	Secretion	0
T3SS	TAd35	IYO_RS06770	<i>hrpH</i>	Translocator	2.67
T3SS	TAh32	IYO_RS06840	<i>hrcU</i>	Secretion	0
T3SS	TAI39	IYO_RS06775	<i>hrpR</i>	Regulator	0
T3SS	TAw18	IYO_RS06905	<i>hrpK1</i>	Translocator	0.67
T3SE	TBi11	IYO_RS06800	<i>hrcJ</i>	Secretion	0
T3SE	TM33	IYO_RS28930	<i>hopZ3</i>	Effector	3.67
T3SE	TR23	IYO_RS24135	<i>hopR1</i>	Effector	0.67
T3SE	TBr13	IYO_RS25475	<i>hopAC1</i>	Effector	3

Table S3. Primer sets used in this study

Gene	Description	Forward primer	Reverse primer	Reference
<i>hopR1</i>	Psa3 Type III effector protein HopR1	TGAGCCAGAGAGGGATGAA	TGATGCGGTGTGCTGATAC	[44]
<i>fbp</i>	Psa3 Fructose-bisphosphate aldolase	TTCTTGCGCCACCTGATTCT	GGATCGAACGCTGGCAGATA	[68]
<i>parA</i>	Psa3 Chromosome partitioning protein ParA	CAACCTGCACGAAGTATGTC	GTCCTGCTCATGAGTCGCTT	[68]
<i>tetR</i>	Psa3 TetR family transcriptional regulator	TGACCCATGGCGGTTTCTAC	GCGTGACTCAATGCCTGTTC	[68]
<i>PR1</i> (Ach26g253311)	Kiwifruit defense marker	ATAGGGACGTTGTCCAATGACG	CAAGTGGTTTGGAGCAGATCG	[69]
<i>PR1</i> (Ach07g240741.2)	Kiwifruit defense marker	ATCGTAATTGCAAGTGACAAACCAC	GGGAGAATGCTTGCACTATACACAA	This study
<i>ACT</i>	Kiwifruit actin	GTCTGCGATACCAGGGAACAT	GCAGGAATCCATGAGACTACC	[69]
<i>UBQ</i>	Kiwifruit ubiquitin Z	TGCAGATCTTCGTGAAAACC	CCACCACGGAGACGGAGCAC	[70]