Supplementary Materials:

Table S1. Origins of the *B. tabaci* strains used in this study.

Strains name	Sampling location	Sampling location longitude and latitude	Sampling date	Host plant	B.tabaci species	Strains type
S#1	Hangzhou, Zhejiang	(30°20′N, 120°38′E)	2011.08	Tomato	MED/Q	Laboratory
S#2	Jingzhou, Hubei	(30°35′N, 112°15′E)	2020.09	Sweet potato	MED/Q	Field
R#1	Hangzhou, Zhejiang	(30°20′N, 120°38′E)	2011.08	Tomato	MED/Q	Laboratory
R#2	Hangzhou, Zhejiang	(30°20′N, 120°38′E)	2011.08	Tomato	MED/Q	Laboratory
R#3	Shiyan, Hubei	(32°61′N, 110°74′E)	2019.12	Eggplant	MED/Q	Field
R#4	Zhangzhou, Fujian	(24°51′N, 117°59′E)	2019.09	Eggplant	MED/Q	Field
R#5	Shouguang, Shandong	(37°01′N, 118°51′E)	2020.06	Pepper	MED/Q	Field
R#6	Yanqing, Beijing	(40°38′N, 116°33′E)	2020.07	Tomato	MED/Q	Field
R#7	Sanya, Hainan	(18°09′N, 108°56′E)	2021.04	Eggplant	MED/Q	Field
R#8	Sansha, Hainan	(16°34′N, 112°44′E)	2019.03	Eggplant	MED/Q	Field

Table S2. Primers used in this study.

Primer name	Primer sequence (5′-3′)	Product	Purpose
CYP4G68-ORF-F[a]	ATGCTCGAGTTCCTAATTTGC	1764 bp	Gene clone
CYP4G68-ORF-R[b]	CTAATTCGCTGTAGCCACCGTT		
q*CYP4G68*-F	GGTGTATCATGGAGACTCT	75 bp	qRT-PCR[c]
q*CYP4G68*-R	GCTGGACTTCTTGTTGTAG		
EF-1α-F	TAGCCTTGTGCCAATTTCCG	110 bp	qRT-PCR
EF-1α-R	CCTTCAGCATTACCGTCC		
RPL29-F	TCGGAAAATTACCGTGAG	144 bp	qRT-PCR
RPL29-R	GAACTTGTGATCTACTCCTCTCGTG		
ds*CYP4G68*-F	TAATACGACTCACTATAGGGAGACGTCGAGATCATTTTGAGCA	405 bp	RNAi
ds*CYP4G68*-R	TAATACGACTCACTATAGGGAGAAAATCTGGTCGCATCCAAAC		
ds*EGFP*-F	TAATACGACTCACTATAGGGAGACAGTGCTTCAGCCGCTAC	288 bp	RNAi
ds*EGFP*-R	TAATACGACTCACTATAGGGAGAGTTCACCTTGATGCCGTTC		

[a]F = Forward primer; [b]R = Reverse primer; [c]qRT–PCR = The primers refer to Wang *et al* [48], and amplification efficiency of the primers is 98.60%.