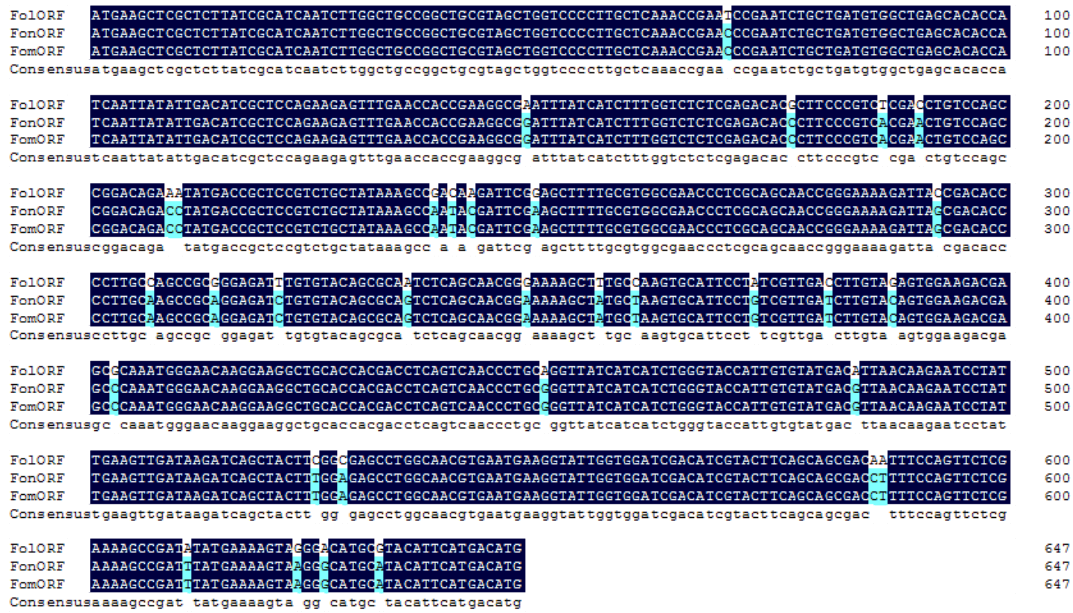


The *FonSIX6* gene acts as an avirulence effector in the *Fusarium oxysporum* f. sp.

niveum - watermelon pathosystem

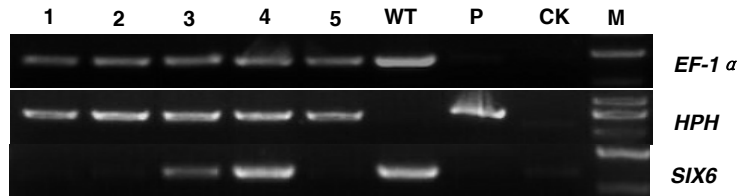
Xiaowei Niu¹, Xiaoqiang Zhao¹, Kai-Shu Ling², Amnon Levi², Yuyan Sun¹, Min Fan*¹



Supplementary Fig. S1 Nucleotide sequence alignment of *SIX6* ORF

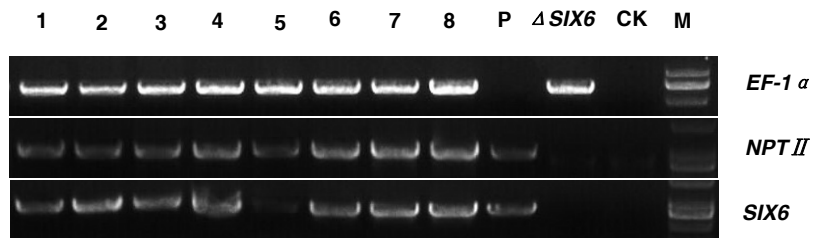
FonORF, The sequence of *FonSIX6* was cloned from *Fusarium oxysporum* f. sp. *niveum* race1; The ORF sequences of *FolSIX6* and *FomSIX6* are derived from the genome sequences of *F. oxysporum* f. sp. *lycopersici* and *F. oxysporum* f. sp. *melonis* (<http://www.broad.mit.edu>).

Fon, *F. oxysporum* f. sp. *niveum*; Fom, *F. oxysporum* f. sp. *melonis*; Fol: *F. oxysporum* f. sp. *lycopersici*. The sequence of *FonSIX6* was cloned by Chromosome walking in this study. The sequences of *FolSIX6* and *FomSIX6* are derived from the genome sequences of Fol and Fom (<http://www.broad.mit.edu>). The arrow points to the start codon and stop codon; the black triangle is -434 position (directly adjacent to the start codon) and +157 position.



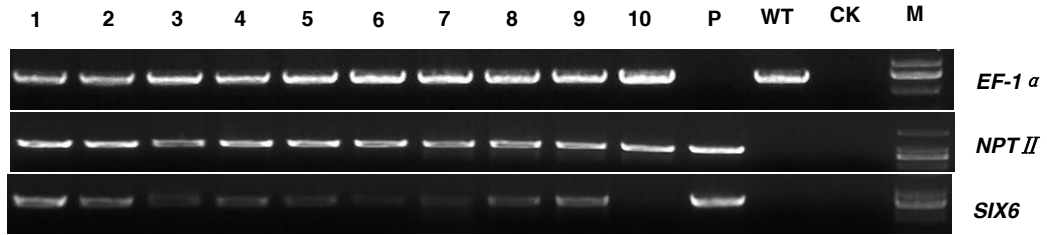
Supplementary Fig. S3 Confirmation of race1 knockout mutants

The transformants 1, 2, 5 were true mutants with *FonSIX6* gene deletions. lanes 1-5, transformants; WT, wild type race 1; P, *FonSIX6* knockout constructs; CK, ddH₂O as a negative control; M, DNA maker; *EF-1 α* , elongation factor 1 α as positive controls; *HPH*, hygromycin resistance gene; *SIX6*, *FonSIX6* gene.



Supplementary Fig. S4 Confirmation of Δ *FonSIX6* complementation mutants

The transformants were true mutants with *FonSIX6* gene except 5. lanes 1-8, transformants; P, *FonSIX6* complementation constructs; Δ *SIX6*, race 1 *FonSIX6* gene knockout mutants; CK, ddH₂O as a negative control; M, DNA maker; *EF-1 α* , elongation factor 1 α as positive controls; *NPT II*, neomycin phosphotransferase II gene; *SIX6*, *FonSIX6* gene.



Supplementary Fig. S5 Confirmation of race 2 complementation mutants

The transformants were true mutants with *FonSIX6* gene except 10. lanes 1-10, transformants; P, *FonSIX6* complementation constructs; WT, race 2; CK, ddH₂O as a negative control; M, DNA maker; *EF-1α*, elongation factor 1α as positive control; *NPT II*, neomycin phosphotransferase II gene; *SIX6*, *FonSIX6* gene.