Supplementary Material

Two phosphatidylinositol 3-kinase components are involved in interactions between Nicotiana benthamiana and Phytophthora by regulating pathogen effectors and host cell death

Shan Lu\textsuperscript{a,b,c}, Jia Yu\textsuperscript{d}, Lina Ma\textsuperscript{d} and Daolong Dou\textsuperscript{d}

\textsuperscript{a}Department of Plant Pathology, Nanjing Agricultural University, Nanjing 210095, China.

\textsuperscript{b}State Key Laboratory of Crop Genetics and Germplasm Enhancement, Nanjing Agricultural University, Nanjing 210095, China.

\textsuperscript{c}Corresponding author. Email: lushan@njau.edu.cn.

Fig. S1. Plant and detached leaf phenotypes of silenced N. benthamiana.

Fig. S2. Cell death induced by P. sojae in N. benthamiana leaves silencing the VPS genes.

Fig. S3. Full-length blots of effectors stability in silenced VPS N. benthamiana leaves.

Table S1. Oligonucleotides used for PCR and plasmid constructions.

Table S2. Expression of the three N. benthamiana VPS genes in response to P. parasitica infection.
Fig. S1. Plant and detached leaf phenotypes of silenced *N. benthamiana*. Whole plants and detached leaves from the same position were shown at 14 days after inoculated. Bars = 2 cm.

Fig. S2. Cell death induced by *P. sojae* in *N. benthamiana* leaves silencing the *VPS* genes. *N. benthamiana* leaves were inoculated with *P. sojae* hyphae. Cell death of VIGS plants silencing the *VPS* genes or control (TRV) was viewed under UV illumination at 48 hpi. Bar = 2 cm.

Fig. S3. Full-length blots of effectors stability in silenced *VPS N. benthamiana* leaves.
Table S1. Oligonucleotides used for PCR and plasmid constructions.

<table>
<thead>
<tr>
<th>No</th>
<th>Name</th>
<th>Applications</th>
<th>Sequence (from 5’ to 3’)</th>
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</thead>
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<td>1</td>
<td>NbVPS15-F/xbaI</td>
<td>Construct the fragment of <em>NbVPS15</em> into TRV2 vector</td>
<td>gcTCTAGACATCTTTTGCTGTGGGGT G</td>
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<td></td>
<td>Primer Name</td>
<td>Description</td>
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Table S2. Expression of the three *N. benthamiana* VPS genes in response to *P. parasitica* infection. Based on the RNA-Seq data (Shen et al., 2016) which is composed of two samples, 6 h inoculated and non-inoculated *N. benthamiana*, the expression value was showed in each sample for the three genes.

<table>
<thead>
<tr>
<th>Name</th>
<th>Gene ID</th>
<th>Non-infection</th>
<th>Infection</th>
<th>Fold change</th>
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<tbody>
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<td>NbS00025777g0007</td>
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<td><em>NbVPS34</em></td>
<td>NbS00054532g0002</td>
<td>11.81</td>
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<td>1.38</td>
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