Supplementary Table S4  
Cross-protection effectiveness of the attenuated mutants against the severe isolate

<table>
<thead>
<tr>
<th>1st inoculation</th>
<th>2nd inoculation</th>
<th>Number of test plants(^a)</th>
<th>Number of tobacco plants showing(^b)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Severe symptom</td>
</tr>
<tr>
<td>N-NA10</td>
<td>Mock(^c)</td>
<td>10</td>
<td>0</td>
</tr>
<tr>
<td>Mock</td>
<td>NTND6(^d)</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>N-NA10</td>
<td>NTND6</td>
<td>20</td>
<td>0</td>
</tr>
<tr>
<td>M-MY10</td>
<td>Mock</td>
<td>10</td>
<td>0</td>
</tr>
<tr>
<td>Mock</td>
<td>NTND6</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>M-MY10</td>
<td>NTND6</td>
<td>20</td>
<td>0</td>
</tr>
</tbody>
</table>

\(^a\)Total number of test plants of the two experiments.

\(^b\)Severe symptom, vein necrosis; Faint symptom, very weak vein clearing or mottling. Virus infections were also checked by DAS-ELISA, restriction fragment length polymorphism (RT-PCR-RFLP) and sequencing RT-PCR products from a part of the viral genomes.

\(^c\)Inoculated with 0.01M potassium phosphate buffer (pH7.0).

\(^d\)The tobacco plants inoculated with isolate NTND6 showed vein necrosis 14 dpi.

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