Supplementary Figure 1 Symptoms of *N. benthamiana* infected by PVX-C4-myc, PVX-mC4-myc, and PVX at different times.
### Supplementary Figure 2 Amino acids alignment of AC4/C4 of ToLCGdV, TYLCV, and MYMV

|        | ToLCGdV C4          | TYLCV C4       | MYMV AC4       |
|--------|---------------------|----------------|----------------|
|        | MGTlistclonskanttaritettesstwpp | MGNHismclonskantntvntngstwmp | MKMENLisMFCENSkgsskrRRTQGSSSTWFP |
|        | OPDOHiSRTFREIINPApssptSIRMETS | QTGOHISRTFQRLRDOsptwrKTETS | QPDHHITFIERTFQOLKARQMLSHTTWKTETS |
|        | LNGVNSRSTDDEVLGEEAARMILTHVQRL... | LILEFPKSMADEEIEEVSNLPQTHMPKHSIQ | LTMEVSKSMADEEVNSLPTLMPHRHISIV |
|        | ............ | AVNPRTSIY | DPSYRPTSIY |

The GenBank accession numbers are AAU00332 (ToLCGdV C4), CAA33691 (TYLCV C4), and QDN53931 (MYMV AC4)