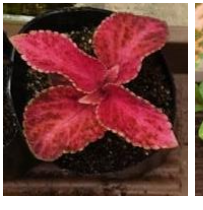
Supplementary Fig. 1 Vegetatively and seed-propagated coleus plants used in this work.

Vegetatively propagated coleus



Seed-propagated coleus (wizard mix)



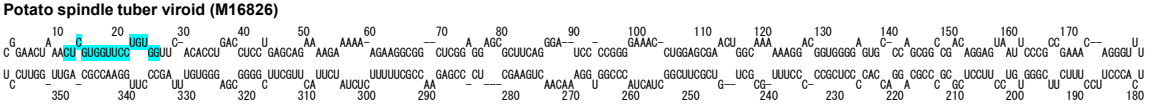




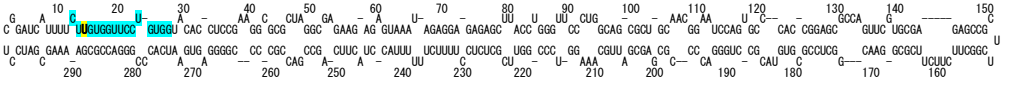
phenotype 1 phenotype 2 phenotype 3

Supplementary Fig. 2 Predicted secondary structures of relatively long coleviroids. The secondary structures of relatively long coleviroids and potato spindle tuber viroid (PSTVd) were predicted using mfold (ver. 2.3) under " 25℃" and "circular" conditions. The blue- and yellow-highlighted regions in the left terminal domain of the secondary structure indicate the terminal conserved region (TCR). The bases highlighted in yellow represent those that differ in coleviroids compared to the TCR sequence of PSTVd.

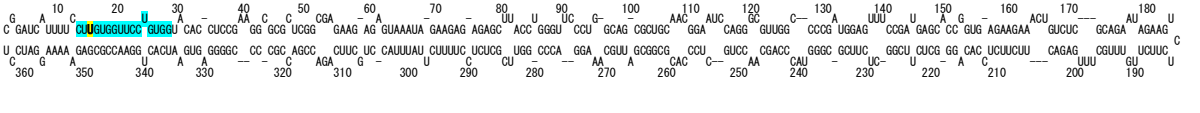
Potato spindle tuber viroid (M16826)



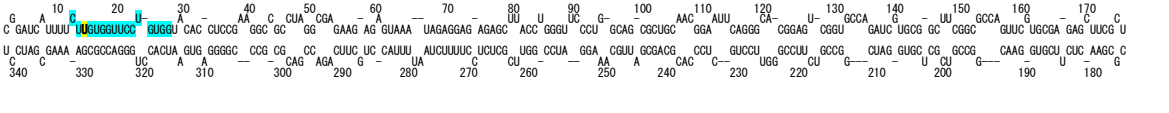
Coleus blumei viroid 2 (X95365)



Coleus blumei viroid 3 (X95290)

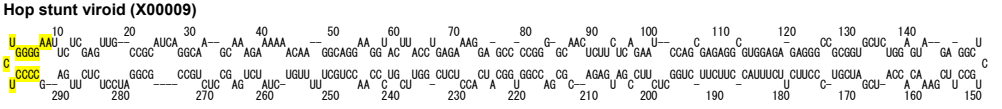


Coleus blumei viroid 6 (FJ615419)

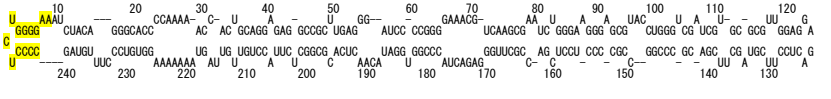


Supplementary Fig. 3 Predicted secondary structures of hostuviroids and cocadviroids. The secondary structures of hostuviroids and cocadviroids were predicted using mfold (ver. 2.3) under " 25°C" and "circular" conditions. The yellow-highlighted regions in the left terminal domain of the secondary structure indicate the terminal conserved hairpin (TCH).

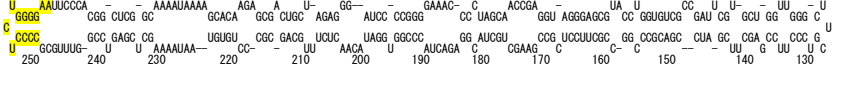
Hop stunt viroid (X00009)



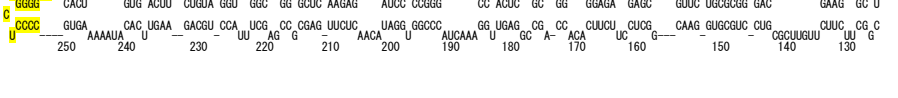
Coconut cadang-cadang viroid (NC_001462)



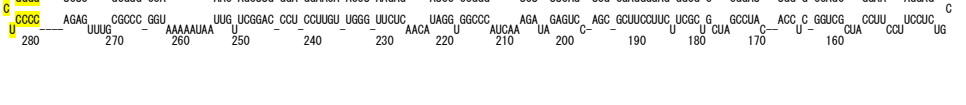
Coconut tinanangaja viroid RNA (M20731)



Hop latent viroid (NC_003611)

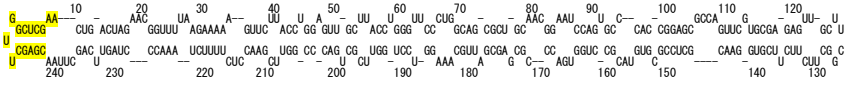


Citrus bark cracking viroid (X14638)

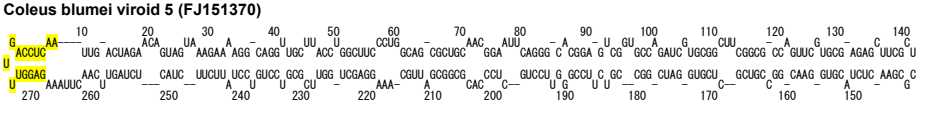


Supplementary Fig. 4 Predicted secondary structures of relatively short coleviroids. The secondary structures of relatively short were predicted using mfold (ver. 2.3) under " 25℃" and "circular" conditions. The yellow-highlighted regions in the left terminal domain of the secondary structure indicate the terminal conserved hairpin (TCH).

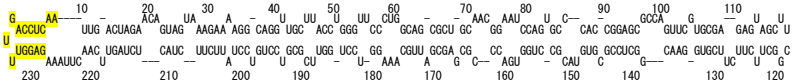
Coleus blumei viroid 1 (X52960)



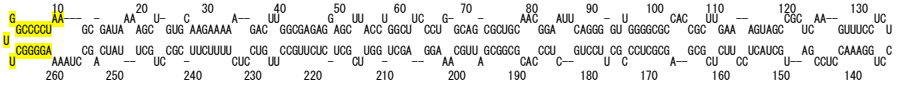
Coleus blumei viroid 5 (FJ151370)



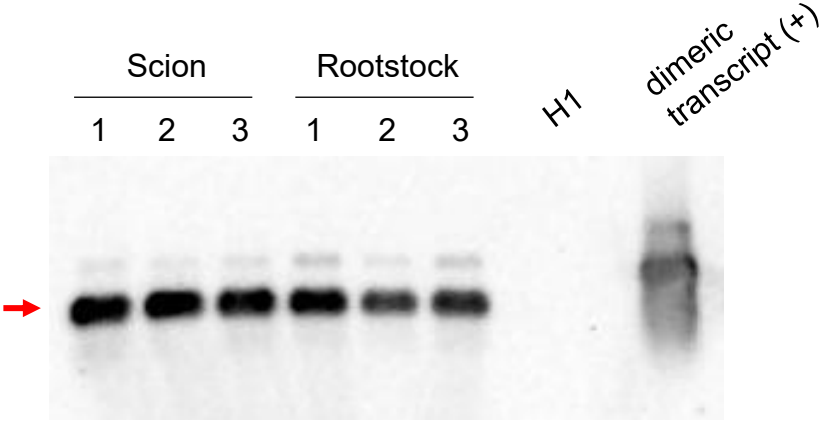
Coleus blumei viroid 7 (MW883069)



Coleus blumei viroid 8 (consensus sequence in this work)



Supplementary Fig. 5 Detection of Coleus blumei viroid 8 (CbVd-8) in graft-inoculated coleus seedlings. Vegetatively propagated coleus plants co-infected with CbVd-1 and CbVd-8 were grafted as scions onto rootstock clones generated via cuttings from a CbVd-free, seed-propagated coleus plant (phenotype 1; see Supplementary Fig. S1). One month after grafting, total RNA was extracted from newly developed leaves of both the rootstocks and scions, and subjected to Northern blot hybridization. Monomeric and dimeric forms indicative of CbVd-8 infection were detected in both scions and rootstocks. In vitro-transcribed dimeric CbVd-8 RNA was used as a positive control. An RNA sample from the healthy (CbVd-free), seed-propagated coleus plant (phenotype 1) served as the negative control (H1).


Scion
Rootstock
1
2
3
1
2
3
H1
dimeric transcript (+)