

Table S1 Oligonucleotide primers used in this study.

Primer	Sequence (5' – 3')
Ca1F	GGAACTTGACGGCGTTGCCTAGCGCCTCC
Ca1R	ACCAATAGCATGTGTGGCGTTGGTAGTCC
Ca2-2F	GCTCACCCATTGATAGGCGATCCACT
Ca2-2R	TCCTCCATTGTTTGGGCCCTTGTCATC
Ca2-3F	ACAGCAATAATCCTGGCGATAGTGATG
Ca2-3R	AAGTCTCAAAAATTCAACACAAAATTCCC
Ca3F	AGAGTTTGTCTCAACAGAGATCACCC
Ca3R	TCTTAGGTTTGCACCTCAGCCCCGGTA
At-IRS-FW	CCGTAGGTGAACCTCGGAGGG
At-IRS-RV	GGTGATCCCGCCTGACCTGG
Rp2-1F	CGGAAATTTGAGTGACGTCCCGG
Rp2-1R	CGAATCTTATGATACGACCTTG
Rp3-2F	CATCTGGGTGTAGGCGTATTTCG
Rp3-1/2R	ATCTTACGCATTGATCTAATACA
Rp3-2F	GTAAGGTGTTAGGACCCTCACGAG
5.8T Rp-ITS2F	CTAAGCGGTGGATCACTCGG
28T Rp-ITS2R	GCACTATCAAGCAACACGACTC

Table S2

GenBank/Refseq accession numbers of sequences compared in Figures 3, 4 and 7.

Virus names (abbreviation), GenBank/Refseq accession no.

The sequence data of other viruses used for analysis are as follows.

Replicase :

Virgaviridae, *Furovirus*, soil-borne wheat mosaic virus (SBWMV): AAA48492, soil-borne cereal mosaic virus (SBCMV): CAB56599, Chinese wheat mosaic virus (CWMV): CAB41769, oat golden stripe virus (OGSV): CAB57882, sorghum chlorotic spot virus (SrCMV): NP_659020, *Pomovirus*, potato mop-top virus (PMTV): CAB58364, beet virus Q (BVQ): CAA11457, beet soil-borne virus (BSBV): CAB10764, broad bean necrosis virus (BBNV): BAA34692, *Peculvirus*, peanut clump virus (PCV): NP_620047, Indian peanut clump virus (IPCV): NP_835282, *Hordevirus*, barley stripe mosaic virus (BSMV): AAA46336, AAA66600, *Tobravirus*, tobacco rattle virus (TRV): AAC02066, pea early browning virus (PEBV): CAB37343, *Tobamovirus*, tomato mosaic virus (TMV): NC_001367, cucumber green mottle mosaic virus (CGMMV): NC_001801, *Hepeviridae*, *Hepevirus*, hepatitis E virus (HEV sar-55, Subgroup 1): AAL50058, (HEV mexico, Subgroup 2): AAA45730, (HEV T1, Subgroup 4): CAB83209, swine hepatitis E virus (sHEV, Subgroup 3): ABB88699, avian hepatitis E virus (aHEV): AAS45830; *Togaviridae*, *Rubivirus*, rubella virus (RubV):NP_062883; *Tetraviridae*, *Betatetravirus*, Nudaurelia capensis beta virus (NbetaV):NP_048059, *Omegatetravirus*, Dendrolimus punctatus virus (DpTV): AAT27317, *Helicoverpa armigera* stunt virus (HasV): AAC98529; unassigned virus, *Sclerotinia sclerotiorum* RNA virus L (SsRVL) : ACE88957.

AkIB like domain:

Alphaflexiviridae, *Potexvirus*, alternanthera mosaic virus (AltMV): ACS28233, asparagus virus 3(ASV3): BAG12158, alstroemeria virus X (AlsVX): YP_319827, *Mandarivirus*, Indian citrus ringspot virus (ICRV): NP_203553; *Betaflexiviridae*, *Carlavirus*, hippeastrum latent virus (HipLV): AAZ15106, hop latent virus (HpLV): NP_066258, lily symptomless virus (LSV): CAM12349, narcissus common latent virus (NCLV): CAJ43605, poplar mosaic virus (PopMV): AAR89414, potato virus M (PVN): AAP76201, potato virus S (PVS): YP_277428, red clover vein mosaic virus (RCVMV): ACN58188, *Citivirus*, citrus leaf blotch virus (CLBV): NP_624333, *Foveavirus*, apple stem pitting virus (ASPV): BAA04853, ABV56203, rupestris stem pitting-associated virus (RSPaV): ABX55879, *Vitivirus*, grapevine virus A (GBA):ABH06983, grapevine virus B (GVB): CAA53196. *Trichovirus*, cherry mottle leaf virus (ChMLV), NP_062428; *Closteroviridae*, *Ampelovirus*, grapevine leafroll-associated virus 3 (GLRaV-3): NP_813795, unassigned genus, little cherry virus 2 (LCHV2): AAM96220; *Potyviridae*; unassigned genus, blackberry virus Y (BVY): AY994084; *Secoviridae*, *Sadwavirus*, black raspberry necrosis virus (BRNV): YP_654555; Bacteria, *Escherichia coli* K-12: P05050; *Caulobacter vibrioides*: O05725.

CP and TGB:

Virgaviridae, *Furovirus*, SBWMV: NC_002042, SBCMV: NC_002330, CWMV: NC_002356, OGSV: NC_002357, SrCMV: NC_004015, *Pomovirus*, PMTV: NC_003724, NC_003725, BVQ: NC_003511, NC_003512, BSBV: NC_003518, NC_003519, BBNV: NC_004424 NC_004425, *Peculvirus*, PCV: NC_003668, IPCV: NC_004730, *Hordevirus*, BSMV: NC_003481, *Poa semilatifolia* virus (PSLV): M81486, *Lychnis ringspot virus* (LRSV): Z46351, *Tobravirus*, TRV: NC_003811, PEBV: NC_001368, *Tobamovirus*, TMV: NC_001367, CGMMV: NC_001801, *Tymovirales*, *Betaflexiviridae*, *Carlavirus*, potato virus M (PVM): NC_001361, red clover vein mosaic virus (RCVMV): NC_012210.
