

Table 1 Primers used in this study

Primer	Sequences (5' →3')	Gene	Size (bp)	References
F1	GGTTGGGTAAGCCGTTGAGAGCTCT	GLRaV-1 <i>HSP70</i>	637	[22]
R1	TAAGTTCCTCAGCACCTTCTACGA			
F2	TTTGCGAAGAAAGAAATCGTTAAGATGAGG	GLRaV-2 <i>p24</i>	711	[29]
R2	TACGTCAGGTAGATACACCCACGTTTCGA			
F3	GCCCGCATCGATATGGACCTATCGTTTATT	GLRaV-3 <i>p19.7</i>	540	[29]
R3	GCCGTCGACTTATAGTGCTCCGCAACAAA			
F4	ACATTCTCCACCTTGTGCTTTT	GLRaV-4 <i>HSP70</i>	319	[33]
R4	CATACAAGCGAGTGCAATTACA			
F5	AACACTCTGCTTTTCTGCTGGCA	GLRaV-5 <i>p70</i>	272	[33]
R5	TCTCCAGAAGACGGACCAATGTAA			
F6	GTTCTCCACGTTGTGCTTCTCC	GLRaV-6 <i>HSP70</i>	480	Designed in this study
R6	GGTTCATTCACTGCTTGAACC			
F7	CGAAGGTTTGCTATACGTCAACCC	GLRaV-7 <i>p61</i>	518	[32]
R7	TGAACAAGTGACGCCGACGA			
F8	CGGCATAAGAAAAGATGGCAC	GLRaV-9 <i>HSP70</i>	393	[33]
R8	TCATTCACTGCTTGAAC			
F9	ATCAGGTCGTGAACCAAGCAGG	GLRaV-13 <i>HSP70h</i>	253	[31]
R9	TAAGACCAGGTTGACCGTTGG			
F10	AAAGAYACCCCSGTTAGGGGWTTTC	GLRaV-De <i>CP</i>	1306	[25]
R10	CCRTTATTWGTAGCTACWACATTRCCYA			
F11	AAAGAYACCCCSGTTAGGGGWTTTC	GLRaV-Pr <i>CP</i>	1267	[25]
R11	CCRTTATTWGTAGCTACWACATTRCCYA			
F12	CCWGACYTMTCYTRCCAAG	GFLV <i>CP</i>	450	[23]
R12	GGYTTRCACAARACDCGAG			
F13	ATTGCCCCGAACCTCGTGTAAGC	GFkV <i>CP</i>	366	[22]
R13	CGGAGTCCTTGATGGTGGGGTTGA			
F14	GACAAATGGCACACTACG	GVA <i>CP</i>	429	[22]
R14	AAGCCTGACCTAGTCATCTTGG			
F15	GTGTACGAGACAATAAGCAAGCA	GVB partial ORF3, ORF4, IR and ORF5	722	[24]
R15	GTAGCCCTTCGTTTAGCCGCACT			
F16	AGGCGAATCAAGTACTTCATG	GPGV <i>CP</i>	340	[22]
R16	GGTGCTTCTTGATATATATTAGTATGC			
F17	ATGTCGATMAGRCAGGAATTG	GINV <i>CP</i>	585	[21]
R17	CATAGTAAAAGCACCTCGCT			
F18	CGTCACTGCTCTGATGTTGGTAG	GRSPaV <i>CP</i>	327	[22]
R18	AGGCGATATTAGCAACCATCTCAG			
F19	GGAAATAACATTCCCAGGAAG	GFabV <i>polyprotein</i>	313	Designed in this study
R19	TCCTGCTGTCAAATTTTCATTC			
F20	ATGGACTTCAATCCGAGAAAGAGG	GGVA <i>VI</i>	685	Designed in this study
R20	GGCCTCCATACTTAATATCAGAGTAGG			

F21	AGCGGAAGCATGATTGAGACATTGACG	GRBV CP	231	[30]
R21	AACGTATGTCCACTTGCAGAAGCCGC			
F22	CACCCCTTCTCCCATGTGAC	GRGV	441	[26]
R22	ACAGCTGGGGCTTCAGGGTT			
F23	CAAGCCATCCGTGCATCTGG	GSyV-1	297	[27]
R23	GCCGATTTGGAACCCGATGG	<i>methyltransferase</i>		
F24	GTGGGTGAACCACTCAAGGT	GVE CP	478	[28]
R24	AGACCACTTGCGGCTCTTTA			
F25	GTTTAAACTGAAGGCGGGAAACGACAAT CTAGACTCTTTGGATATATGGCACTGAGG	GGVA Fragment 1	1886	Designed in this study
R25	GAAGGATCAATTGCCAGTGCAATTG			
F26	GATACAATTGCACTGGCAATTGATCC TAACACATTGCGGACGTTTTTAATGTAC	GGVA Fragment 2	1934	Designed in this study
R26	TGCGTCATCATGGTATCCCTTGTCAGG			
F27	CAGTACATTAAAAACGTCCGCAATGTG	linearized pXT1	3466	Designed in this study
R27	AGATTGTCGTTTCCCGCCTTCAG			

Supplementary Figure 1

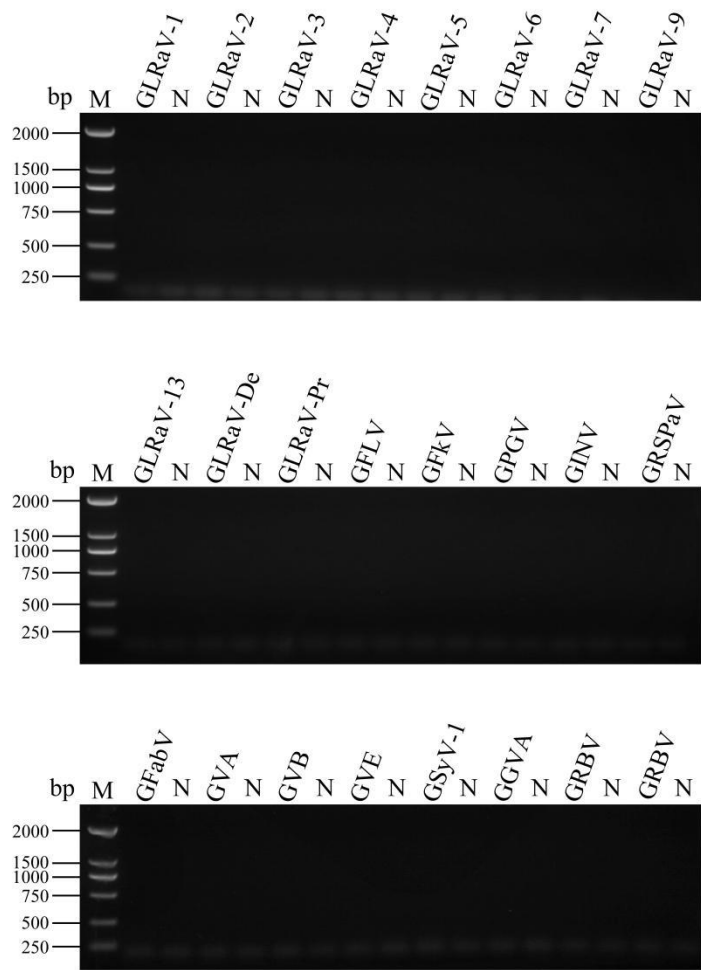


Figure 1

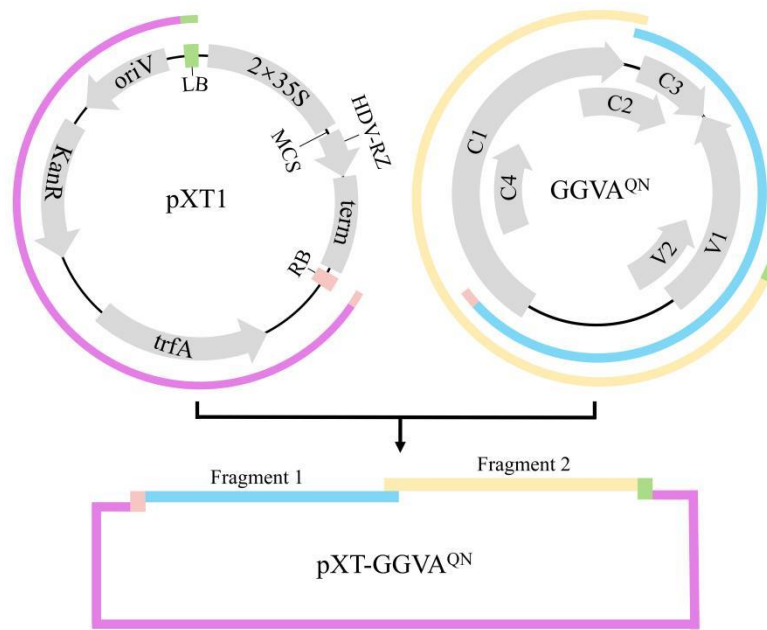


Figure 2

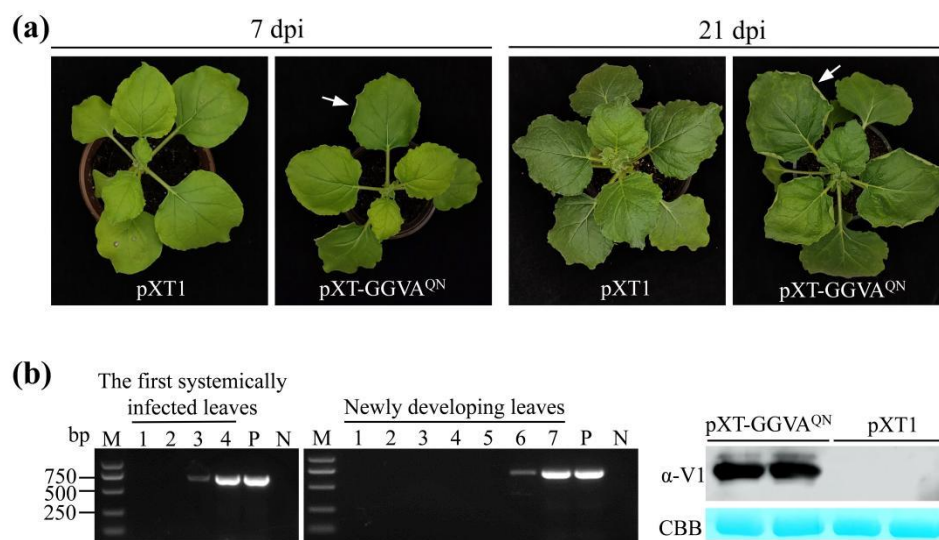


Figure 3

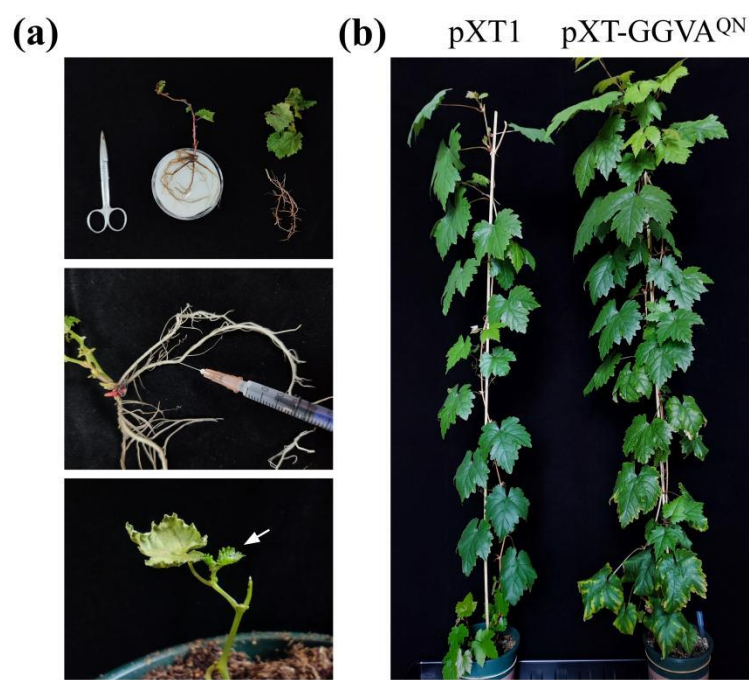


Figure 4

