Table 1 Suppl. Primers used to amplify the *coat protein* (*CP*)-sense and *CP*-antisense regions from *Sri Lankan cassava mosaic virus* (SLCMV) DNA-A, and for quantitative (q) PCR analyses (* from Liu *et al*. 2012).

	Primer name	Sequence (5´ to 3´)	Target gene	Amplicon size [bp]
PCR	SLCMV_CPs_pBI121_InFusion-F	GGACTCTAGAGGATCCATGTCGAAGCGACC AGCAGA	SLCMV CP (sense)	807
	SLCMV_CPs_pBI121_InFusion-R	GATCGGGGAAATTCGAGCTCTTAATTGCTGA CCGAATCGTA		
	SLCMV_CPas_*Sac*I-F	CTATGAGCTCATGTCGAAGCGACCAGCAGA	SLCMV CP	791
	SLCMV_CPas_*Bam*H1-R	CCAGGGATCCTTAATTGCTGACCGAATCGTA	(antisense)	
	SLCMV_AC1-F	GCATGAGAAACCCACGATTCAGA	SLCMV AC1 (rep)	775
	SLCMV_AC1-R	CAGTTGTACCATGCATCATTGCTG		
qPCR	SLCMV_AC1_RT-F	CCTAGCCCACATTGTTTTGC	SLCMV AC1 (rep)	102
	SLCMV_AC1_RT-R	TGGGTGTCAGAGAACGTCAT		
	EF1a_Nb-F	AGCTTTACCTCCCAAGTCATC	Elongation factor	116
	EF1a_Nb-R*	AGAACGCCTGTCAATCTTGG	1-α	

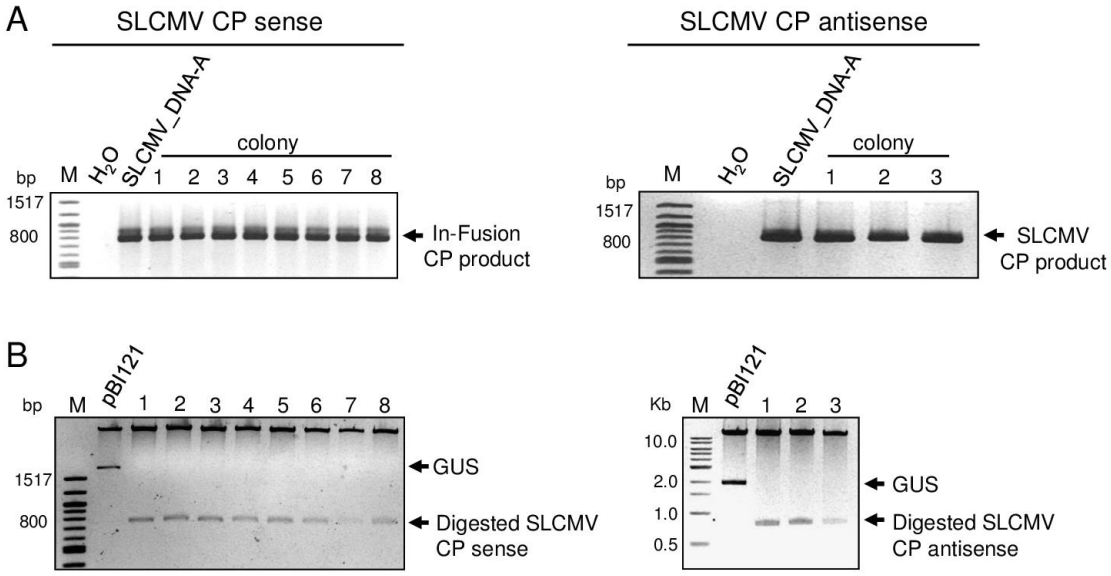

Fig. 1 Suppl. Cloning and *Escherichia coli* transformation. *A* - Colony PCR of *Sri Lankan cassava mosaic virus* (SLCMV) *coat protein* (*CP*)-sense (the *left panel*) and *CP*-antisense (the *right panel*) constructs using gene specific primers (see Table 1 Suppl.). The SLCMV DNA-A cloned in a TOPO plasmid vector was used as a positive control. H_2O indicates template-free PCR reactions and was used as a technical negative control. *B* - Restriction digestion of plasmid constructs from the transformed colonies harboring the *CP*-sense gene (the *left panel*) and the *CP*-antisense gene (the *right panel*) digested with *Bam*HI and *Sac*I restriction enzymes. Digested pBI121 with *Bam*HI and *Sac*I releasing the *GUS* gene was used as a negative control.

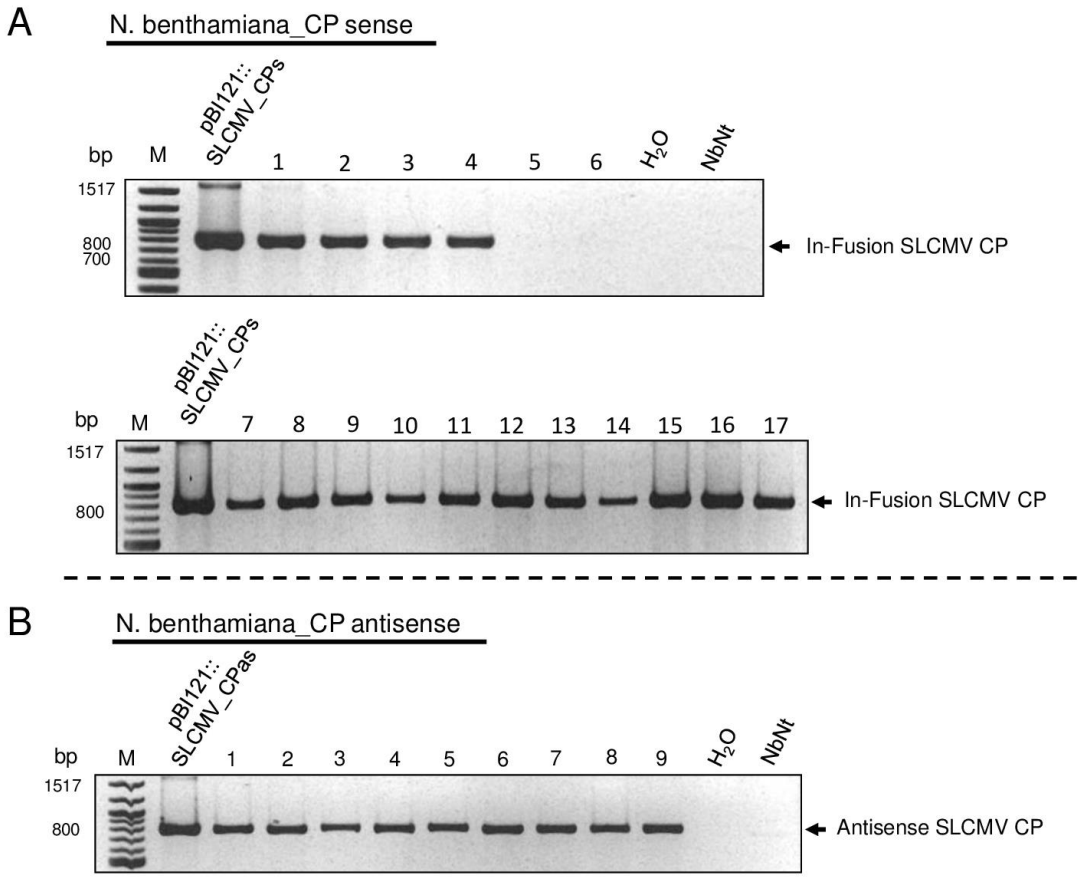

Fig. 2 Suppl. Screening T0 transgenic *Nicotiana benthamiana* plants for the *Sri Lankan cassava mosaic virus* (SLCMV) *coat protein* (*CP*) transgenes by PCR; *A* - sense and *B* -antisense. Genomic DNA was used as a PCR template. The SLCMV *CP* transgene specific primers were used for PCR amplification (see Table 1 Suppl.). The SLCMV *CP*-sense gene and *CP*-antisense gene cloned in pBI121 were used as positive controls. The non-transgenic *N. benthamiana* (NbNt) was used as a negative control. H_2O indicates template-free PCR reactions and was used as a technical negative control.

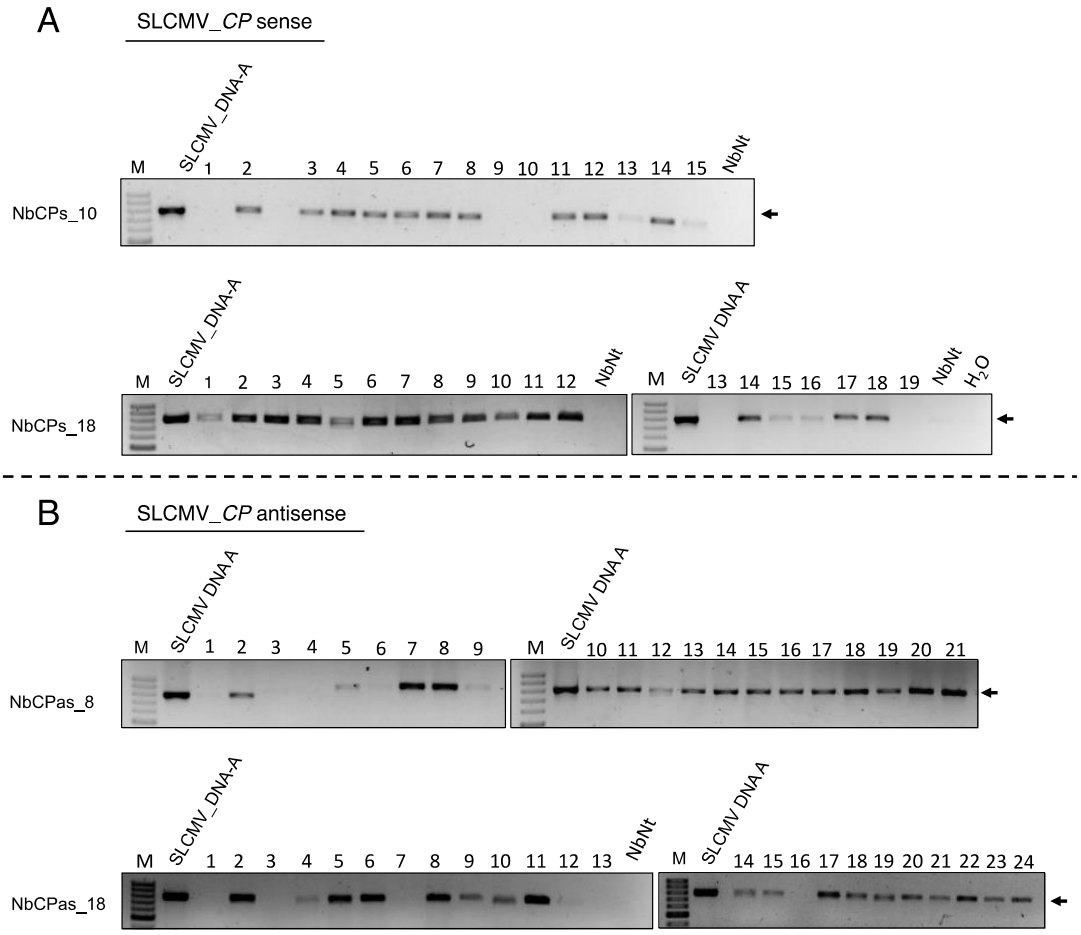

Fig. 3 Suppl. Screening T1 transgenic *Nicotiana benthamiana* lines for the *Sri Lankan cassava mosaic virus* (SLCMV) *coat protein* (*CP*)-sense and *CP*-antisense transgenes by PCR. Genomic DNA was used as a PCR template. Four transgenic *CP*-sense lines and four *CP*-antisense lines were screened for the transgene. Two screened *CP*-sense lines (NbCPs_10 and NbCPs_18) and two *CP*-antisense lines (NbCPas_16 and NbCPas_18) are shown in panels (*A*) and (*B*), respectively. The SLCMV DNA-A cloned in a TOPO plasmid vector was used as a positive control. The non-transgenic *N. benthamiana* (NbNt) was used as a negative control. H_2O indicates template-free PCR reactions and was used as a technical negative control. The *black arrow* denotes the presence of the SLCMV *CP* transgene in *N. benthamiana* lines.

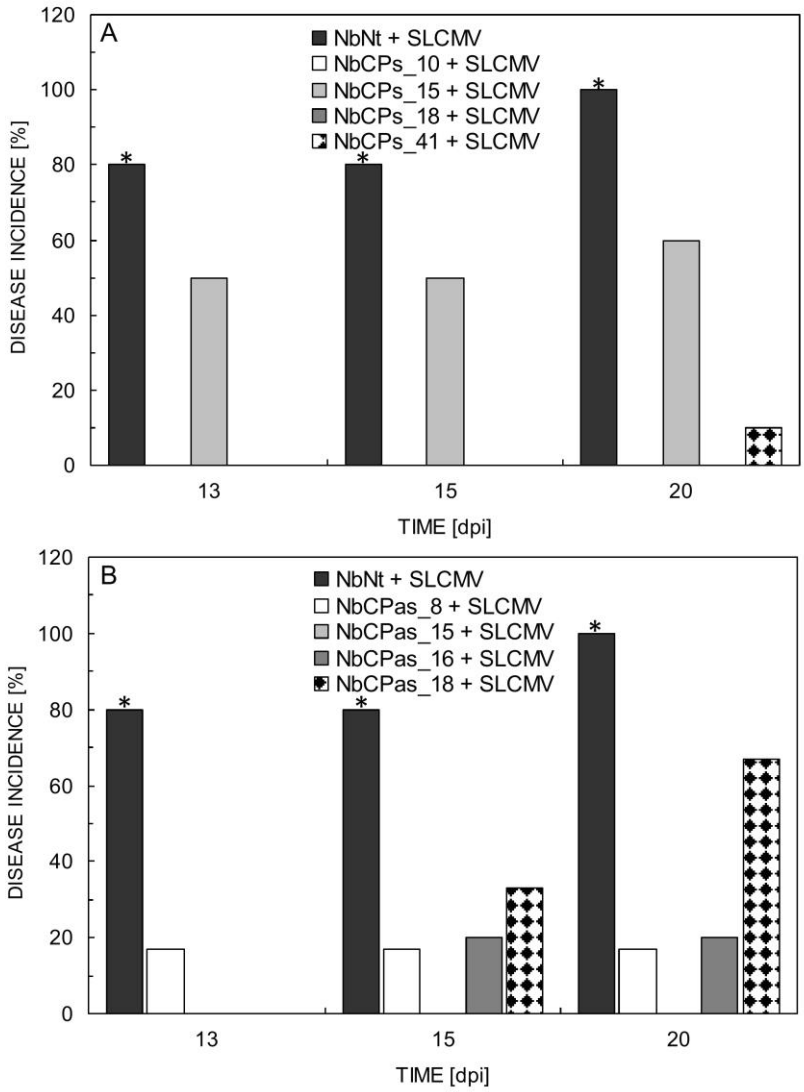

Fig. 4 Suppl. Disease incidence in non-transgenic (NbNt) and transgenic *Nicotiana benthamiana* plants challenged with *Sri Lankan cassava mosaic virus* (SLCMV) at 13 - 20 days post inoculation (dpi). *A* - The percentage of symptomatic plants of non-transgenic (NbNt) and transgenic sense-*CP* lines agro-inoculated with SLCMV DNA-A and DNA-B. *B* - The percentage of symptomatic plants of non-transgenic (NbNt) and transgenic antisense-*CP* lines agro-inoculated with SLCMV DNA-A and DNA-B. * - indicate significant differences in disease incidence between NbNt plants and *CP*-sense and *CP*-antisense lines ($P < 0.05$, the Student *t*-test). All agro-inoculations were performed at 1:1000 agro-dilution from an absorbance of 1. The letters *s* and *as* in the name of the transgenic line denote sense and antisense *CP* transgenic *N. benthamiana* lines, respectively.

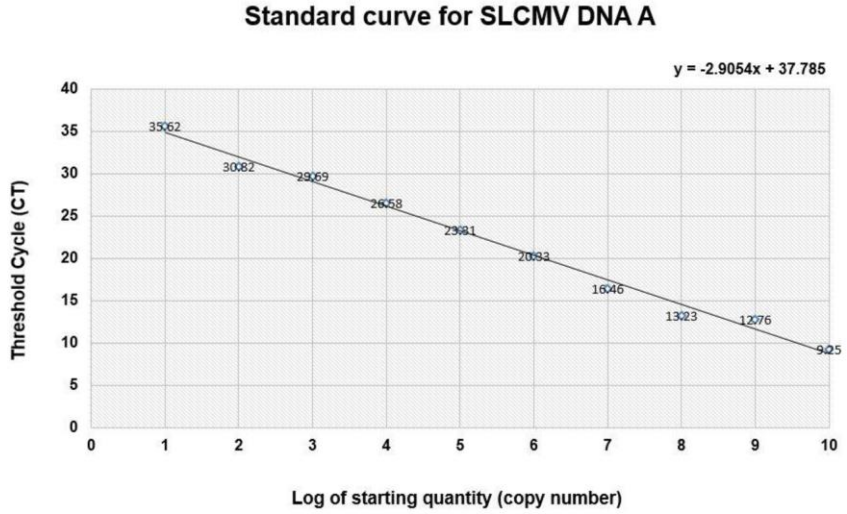

Fig. 5 Suppl. A standard curve of quantitative (q) PCR for *Sri Lankan cassava mosaic virus* (SLCMV) DNA-A. The SCLMV DNA-A cloned in pCambia 2300 was used as a template for the qPCR reactions with a serial dilution points (10^1 - 10^{10}). The values in the plot represent individual cycle threshold (CT) values at each dilution point. Three technical replicates from each dilution were used in the qPCR reaction.

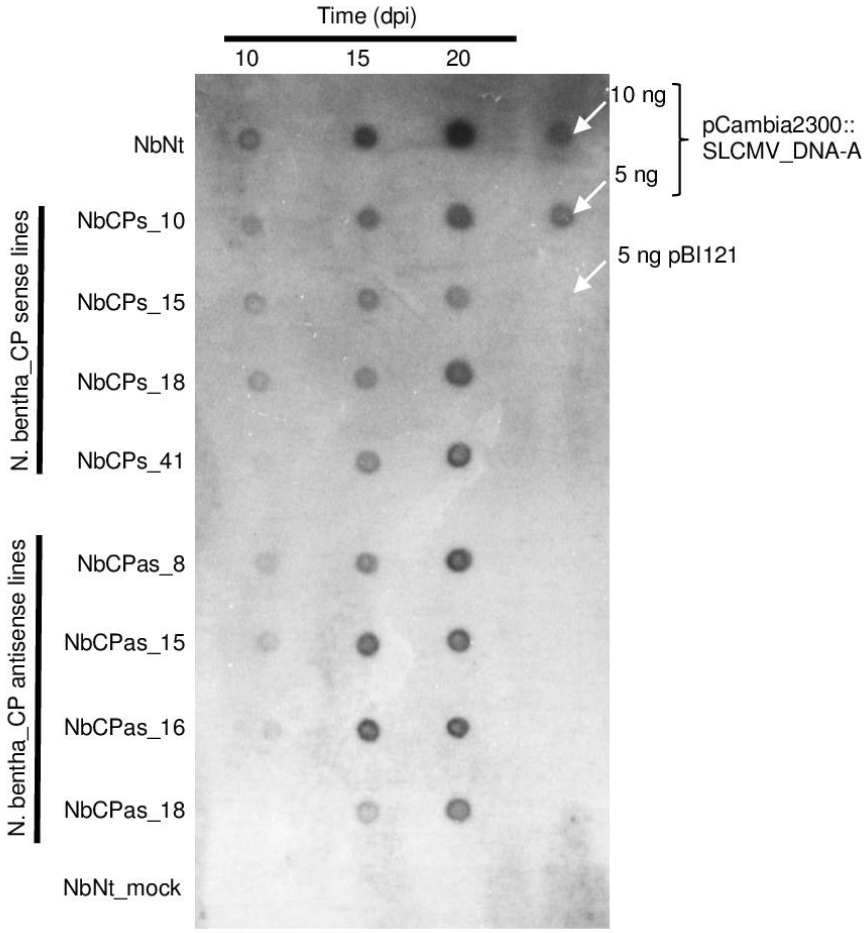

Fig. 6 Suppl. Accumulation of viral titer in inoculated non-transgenic (NbNt), transgenic *Nicotiana benthamiana coat protein* (*CP*)-sense (s) and *CP*-antisense (as) lines at different time points [10 - 20 days post inoculation (dpi)]. A digoxigenin-labelled *Sri Lankan cassava mosaic virus* (SLCMV) AC1 (Rep) probe was used for dot blot analysis (1 µg of genomic DNA was spotted on a positive charge Nylon membrane as a template DNA). The SLCMV DNA-A cloned in pCambia2300 was used as a positive and pBI121 as a negative control. Infiltrated *Escherichia coli* cells harboring SLCMV DNA-A and DNA-B in non-transgenic (NbNt) plants were used as mock-treated plants.