

Identity= 119/121 (98.35%) , Positive= 119/121 (98.35%) Query Matches 1 to 121 Hit Matches = 13302179 to 13302059

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Query:          1 ATGCTTACTTGCCAGAGAAAATTAATTTGCAATTGGGCTCCTGCCGGAATGCTTGGT 60
                  ||||||||||||||||||||||||||||||||||||||||||||
Sbjct:    13302179 ATGCTTACTTGCCAGAGAAAATTAATTTGCAATTGGGCTCCTGCCGGAATGCTTGGT 13302120

Query:          61 GGGCAATCTTATGTTGAGGCTCAAGATAATTTAACTGTGCAAGAGTGGATGAGAAGTCGG 120
                  |||||||||||||||| ||||||||||||||||||||||||||||
Sbjct:    13302119 GGGCAATCTTATGTAGAGGCTCAAGATAATTTAACTGTGCAAGAGTGGATGAGAAGTCGG 13302060

Query:          121 G 121
                  |
Sbjct:    13302059 G 13302059
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Supplementary Figure 1: Nucleotide sequence alignment of cucumber and sponge gourd *PDS* fragments. Alignment of the cucumber-derived *PDS* fragment used in the ASGV-VIGS construct with the corresponding sponge gourd *PDS* sequence showing 98.35% nucleotide identity (119/121 bp).

S. No.	Primer Name	Primer Sequence (5'-3')	Target sequence	Reference
1	5641F	ATGAGTTTGGAAGACGTGCTTC	ASGV CP	Negi et al. 2010
2	6396R	CTGCAAGACCGCGACCAAGTTT		
3	CsPDSBam (F)	AATGGATCCATGCTTACTTGCCAGA	Cucumber PDS 212bp	Devi et al. 2025
4	CsPDSBam (R)	AATATTTAAATAATGCATTGCATAGAAATAG		
5	asPDSBam (F)	AATGGATCCATGCATTGCATAGAAAG	Cucumber PDS antisense	This study
6	asPDSSmi (R)	AATATTTAAATATGCTTACTTGCCAGAG		
7	QPDS2 (F)	CGGAGTGACTCGGACATTATT	PDS quantification	Devi et al. 2025
8	QPDS2 (R)	ACGTGGTACTTCACGATCTTAG		
9	Actin (F)	TCGTGCTGGATTCTGGTG	Internal Reference	Devi et al. 2025
10	Actin (R)	GGCAGTGGTGGTGAACAT		

Supplementary Table 1 List of Primers used in this study

S. No.	Sample Name	Sample ID	ELISA (α -CP)
1	Luffa (ASGV infected)- 1	L1	+++
2	Luffa (ASGV infected)- 2	L2	+++
3	Luffa (ASGV infected)- 3	L3	+++
4	Luffa (mock)-1	M1	-
5	Luffa (mock)-2	M2	-
6	M. domestica (ASGV infected)	P	++
7	Negative control	N	-

Supplementary Table 2 Detection of ASGV in sponge gourd plants by Indirect ELISA:

Sponge gourd plants agroinoculated with the ASGV infectious clone (samples L1–L3) and mock-inoculated controls (M1–M2) were tested for ASGV accumulation by DAS-ELISA. Leaves from *Malus domestica* naturally infected with ASGV served as the positive control (P). Signs indicate- Strong positive reactions (+++), moderate positive reaction (++), no reaction (-).