

A.

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DWV-L-GFP          MAFSCGTLSSAVAQAPSVAHAPRTWEVDEARRRRVIKRLALEQERIRNVLDAGVYDQAT 60
DWV-S-GFP          MAFSCGTLSSAVAQAPSVAHAPRTWEVDEARRRRVIKRLALEQERIRNVLDAGVYDQAT 60
DWV-304-MG831200 MAFSCGTLSSAVAQAPSVAHAPRTWEVDEARRRRVIKRLALEQERIRNVLDAGVYDQAT 60
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DWV-L-GFP          WEQEDARDNEFLTEQLNNLYTIYSIAERCTRRPIKEHSPISVSNRFAPLES LKVEVGQEA 120
DWV-S-GFP          WEQEDARDNEFLTEQLNNLYTIYSIAERCTRRPIKEHSPISVSNRFAPLES LKVEVGQEA 120
DWV-304-MG831200 WEQEDARDNEFLTEQLNNLYTIYSIAERCTRRPIKEHSPISVSNRFAPLES LKVEVGQEA 120
*****

DWV-L-GFP          GECIFKKPKYTRVCKKVRVATRFVREKVVVRPMSRSPMLLFKLLKIIYDLHL YRLRKQI 180
DWV-S-GFP          GECIFKKPKYTRVCKKVRVATRFVREKVVVRPMSRSPMLLFKLLKIIYDLHL YRLRKQI 180
DWV-304-MG831200 GECIFKKPKYTRVCKKVRVATRFVREKVVVRPMSRSPMLLFKLLKIIYDLHL YRLRKQI 180
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DWV-L-GFP          RILRRQKQREYELECVTNLLQLSNPVQAKPEMDNPNPGCAPMVSKGEEFLTGVV P ILVEL 240
DWV-S-GFP          RILRRQKQREYELECVTNLLQLSNPVQAKPE-----GAPMVSKGEEFLTGVV P ILVEL 233
DWV-304-MG831200 RILRRQKQREYELECVTNLLQLSNPVQAKPE-----GAPMVSKGEEFLTGVV P ILVEL 233
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DWV-L-GFP          DGDVNGHKFSVSGEGEDATYGLTLKFICTTGKLPVPWPTLVTTLYGVQCFSRYPDHM 300
DWV-S-GFP          DGDVNGHKFSVSGEGEDATYGLTLKFICTTGKLPVPWPTLVTTLYGVQCFSRYPDHM 293
DWV-304-MG831200 DGDVNGHKFSVSGEGEDATYGLTLKFICTTGKLPVPWPTLVTTLYGVQCFSRYPDHM 293
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DWV-L-GFP          KQHDFPKSAMPEGYVQERTIFFKDDGNYKTRAEVKFEGD TLVNRIELKGI DFKEDGNILG 360
DWV-S-GFP          KQHDFPKSAMPEGYVQERTIFFKDDGNYKTRAEVKFEGD TLVNRIELKGI DFKEDGNILG 353
DWV-304-MG831200 KQHDFPKSAMPEGYVQERTIFFKDDGNYKTRAEVKFEGD TLVNRIELKGI DFKEDGNILG 353
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DWV-L-GFP          HKLEYNYSNHNVIYIMADKQKNGIKVNFKIRHNIEDG SVQLADHYQQNTPIG DGPVLLPDN 420
DWV-S-GFP          HKLEYNYSNHNVIYIMADKQKNGIKVNFKIRHNIEDG SVQLADHYQQNTPIG DGPVLLPDN 413
DWV-304-MG831200 HKLEYNYSNHNVIYIMADKQKNGIKVNFKIRHNIEDG SVQLADHYQQNTPIG DGPVLLPDN 413
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DWV-L-GFP          HYLSTQSALS KDPNEKRDHMLLEFVTAAGITLGMDELYKGSVQAKPEMDNPNPG PDGEG 480
DWV-S-GFP          HYLSTQSALS KDPNEKRDHMLLEFVTAAGITLGMDELYKGSVQAKPEMDNPNPG PDGEG 473
DWV-304-MG831200 HYLSTQSALS KDPNEKRDHMLLEFVTAAGITLGMDELYKGSVQAKPEMDNPNPG PDGEG 473
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B.

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DWV-S-GFP          CAPMVSKGEEFLTGVV P ILVELDGDVNGHKFSVSGEGEDATYGLTLKFICT 53
DWV-L-GFP          MDNPNPGCAPMVSKGEEFLTGVV P ILVELDGDVNGHKFSVSGEGEDATYGLTLKFICT 60
Plant-GFP          MASKGEEFLTGVV P ILVELDGDVNGHKFSVSGEGEDATYGLTLKFICT 50
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DWV-S-GFP          TGKLPVPWPTLVTTLYGVQCFSRYPDHMKQHDFFK SAMPEGYVQERTIFFKDDGNYKTR 113
DWV-L-GFP          TGKLPVPWPTLVTTLYGVQCFSRYPDHMKQHDFFK SAMPEGYVQERTIFFKDDGNYKTR 120
Plant-GFP          TGKLPVPWPTLVTTFSYGVQCFSRYPDHMKRHDFK SAMPEGYVQERTIFFKDDGNYKTR 110
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DWV-S-GFP          AEVKFEGD TLVNRIELKGI DFKEDGNILGHKLEYNYSNHNVIYIMADKQKNGIKVNFKIRH 173
DWV-L-GFP          AEVKFEGD TLVNRIELKGI DFKEDGNILGHKLEYNYSNHNVIYIMADKQKNGIKVNFKIRH 180
Plant-GFP          AEVKFEGD TLVNRIELKGI DFKEDGNILGHKLEYNYSNHNVIYITADKQKNGIKANFKIRH 170
***** .*****

DWV-S-GFP          NIEDG SVQLADHYQQNTPIG DGPVLLPDNHYLSTQSALS KDPNEKRDHMLLEFVTAAGI 233
DWV-L-GFP          NIEDG SVQLADHYQQNTPIG DGPVLLPDNHYLSTQSALS KDPNEKRDHMLLEFVTAAGI 240
Plant-GFP          NIEDG SVQLADHYQQNTPIG DGPVLLPDNHYLSTQSALS KDPNEKRDHMLLEFVTAAGI 230
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DWV-S-GFP          TLGMDELYKGSVQAKPE 250
DWV-L-GFP          TLGMDELYKGSVQAKPE 257
Plant-GFP          THGMDELYK 239
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Figure S1. The eGFP-coding sequences inserts in DWV vector. (A) Alignment of the N-terminal sections of the polyproteins encoded by infectious cDNA constructs DWV-L-GFP, DWV-S-GFP, and DWV-304 (GenBank accession number MG831200). **(B)** Alignment of the eGFP peptides generated in the honey bee pupae by the DWV 3C proteolytic cleavage of the polyproteins of DWV-S-GFP (27.97 kDa) and DWV-L-GFP (28.69 kDa), and free GFP control expressed in plants (26.93 kDa). Peptide recognized by polyclonal anti-GFP antibodies is underscored. Yellow highlight – parts the DWV LP-VP1 proteolytic cleavage peptide. Blue highlight – amino acid residues introduced by insertion of *Ascl* and *Bam*HI restriction sites.