

Supplementary Materials: Fine Mapping of Virescent Leaf Gene *v-1* in Cucumber (*Cucumis sativus* L.)

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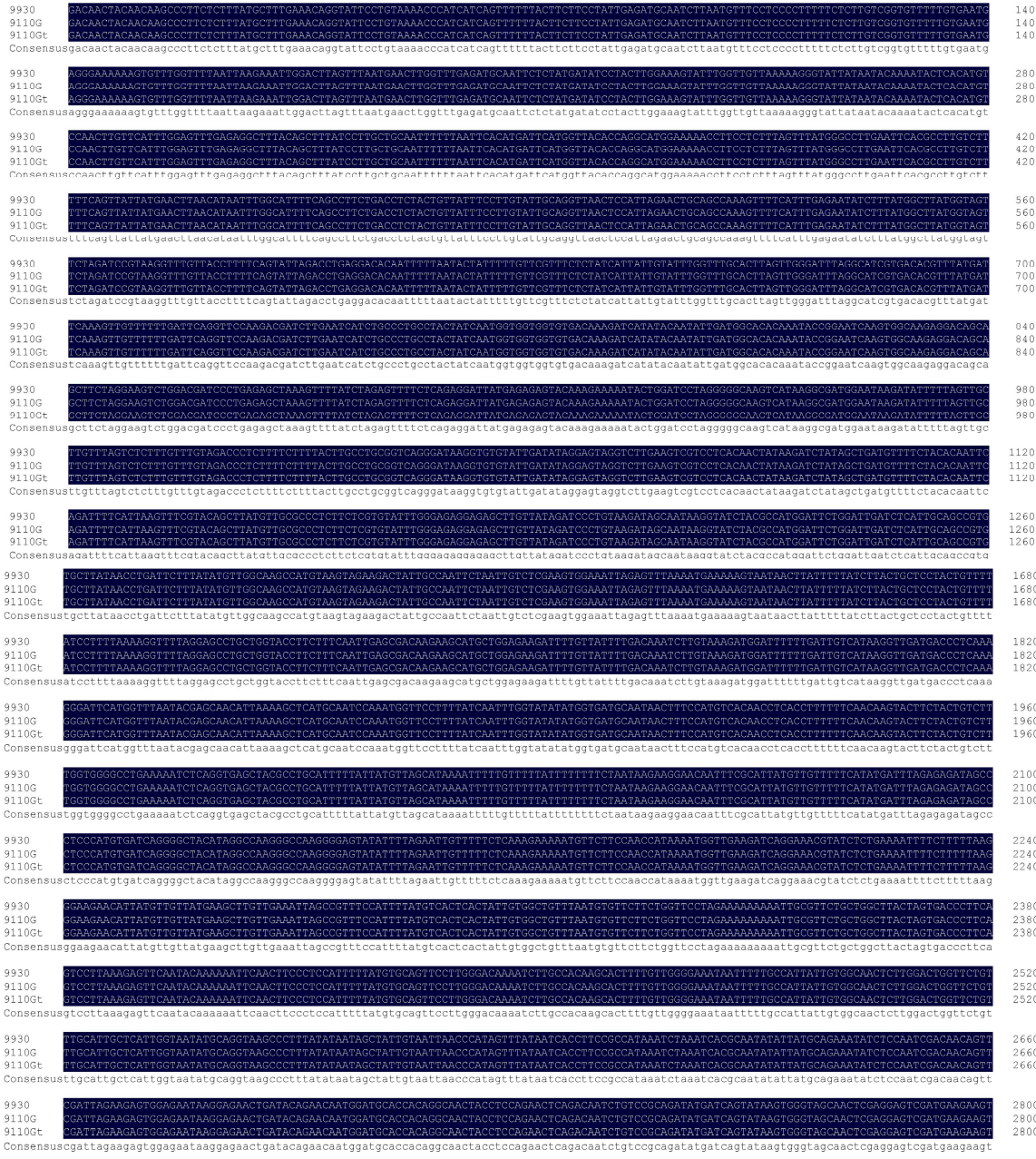


Figure S1. Cont.

9930 **CGTCTGAGAGGCTCCCTTGGATCTCGGAGAGATATAAAGCTCACCCTTGCCCTTGACCTCGTTCGAAGGTAATTTACATATAAATTCATGACATATGGTACGGAGGAGCAGTCTTGGAAATGACTGCTCA** 2940
9110G **CGTCTGAGAGGCTCCCTTGGATCTCGGAGAGATATAAAGCTCACCCTTGCCCTTGACCTCGTTCGAAGGTAATTTACATATAAATTCATGACATATGGTACGGAGGAGCAGTCTTGGAAATGACTGCTCA** 2940
9110Gt **CGTCTGAGAGGCTCCCTTGGATCTCGGAGAGATATAAAGCTCACCCTTGCCCTTGACCTCGTTCGAAGGTAATTTACATATAAATTCATGACATATGGTACGGAGGAGCAGTCTTGGAAATGACTGCTCA** 2940
Consensus **cgctgtgagaagctcccttggatctcggagagatataaagctcaccttggccttgacctgttogaaggtaaatttcacatataaatttgcatgacatatggatcgggagcaggtgttggaaatgactgctca**

9930 **CGAATTACAATTTGCGCAAATTAACCGGATTCATCTCTGTGCACCCCTCTTGATCTTTGACGGTCCATTTGATCAAAATGGATGAAGAATGCTAGATGCAATATGTGAGAGACTTAACCCCGTTTGAGCACA** 3080
9110G **CGAATTACAATTTGCGCAAATTAACCGGATTCATCTCTGTGCACCCCTCTTGATCTTTGACGGTCCATTTGATCAAAATGGATGAAGAATGCTAGATGCAATATGTGAGAGACTTAACCCCGTTTGAGCACA** 3080
9110Gt **CGAATTACAATTTGCGCAAATTAACCGGATTCATCTCTGTGCACCCCTCTTGATCTTTGACGGTCCATTTGATCAAAATGGATGAAGAATGCTAGATGCAATATGTGAGAGACTTAACCCCGTTTGAGCACA** 3080
Consensus **cgcaattacaatttgcgcaaattaaccggatctcatctctgtgacccctcttgatctttgacggttccattgttgatcaaatggatgaaagaatgctagatgcaaatgtgagagacttaaccctgttgagcaca**

9930 **TAAGGACATTTTCTTCGAGAAAGGTCACCTCTCAGCAAAATGATTATCAAAATGAGGTCATTTCACTCAATCAACCACTAAGCAACCACTAAGCGGTCGAGATGGGTTTTTCAATCTCCCTGATTCGCGGCTATTTC** 3270
9110G **TAAGGACATTTTCTTCGAGAAAGGTCACCTCTCAGCAAAATGATTATCAAAATGAGGTCATTTCACTCAATCAACCACTAAGCAACCACTAAGCGGTCGAGATGGGTTTTTCAATCTCCCTGATTCGCGGCTATTTC** 3270
9110Gt **TAAGGACATTTTCTTCGAGAAAGGTCACCTCTCAGCAAAATGATTATCAAAATGAGGTCATTTCACTCAATCAACCACTAAGCAACCACTAAGCGGTCGAGATGGGTTTTTCAATCTCCCTGATTCGCGGCTATTTC** 3270
Consensus **taaggacatTTTCTTCGAGAAAGGTCACCTCTCAGCAAAATGATTATCAAAATGAGGTCATTTCACTCAATCAACCACTAAGCAACCACTAAGCGGTCGAGATGGGTTTTTCAATCTCCCTGATTCGCGGCTATTTC**

9930 **TGGTGAGGAGCTGCTGACTTGGGCTCTTGACCCCTGTCGCAAGCGTTTGGCTTCGGCTCTTCAACTCGCACGGTCAAAGCCATCTCCGAGGTAGAAGCATTTCCTCATAGCCGAGGACTTGAAGTTTGTATCCCTCCAGT** 3360
9110G **TGGTGAGGAGCTGCTGACTTGGGCTCTTGACCCCTGTCGCAAGCGTTTGGCTTCGGCTCTTCAACTCGCACGGTCAAAGCCATCTCCGAGGTAGAAGCATTTCCTCATAGCCGAGGACTTGAAGTTTGTATCCCTCCAGT** 3360
9110Gt **TGGTGAGGAGCTGCTGACTTGGGCTCTTGACCCCTGTCGCAAGCGTTTGGCTTCGGCTCTTCAACTCGCACGGTCAAAGCCATCTCCGAGGTAGAAGCATTTCCTCATAGCCGAGGACTTGAAGTTTGTATCCCTCCAGT** 3360
Consensus **tggtagagctgctgacttgggctcttgaccctctgccaagcgttggcttccgctcttcaactcgcacggtcAAAGCCATCTCCGAGGTAGAAGCATTTCCTCATAGCCGAGGACTTGAAGTTTGTATCCCTCCAGT**

9930 **TACAGAGCTCCACAGAAACAAC TAAGACACAAGTTTCGATTCTACTCGCATCAATGGCGAACATGGGCTGCATGCTTTGTTCAAGCAGCATGGCGAAGATATAAGAGACGGAAGAGCGAGCTGAATCAGGGCTAAA** 3500
9110G **TACAGAGCTCCACAGAAACAAC TAAGACACAAGTTTCGATTCTACTCGCATCAATGGCGAACATGGGCTGCATGCTTTGTTCAAGCAGCATGGCGAAGATATAAGAGACGGAAGAGCGAGCTGAATCAGGGCTAAA** 3500
9110Gt **TACAGAGCTCCACAGAAACAAC TAAGACACAAGTTTCGATTCTACTCGCATCAATGGCGAACATGGGCTGCATGCTTTGTTCAAGCAGCATGGCGAAGATATAAGAGACGGAAGAGCGAGCTGAATCAGGGCTAAA** 3500
Consensus **tcaagagctccacagaaacaactaagacacaagtttcgattctactcgcataatggcgaacatgggctgcattgcttttcaagcagcatggcgaagatataagagacggaagagcgaactgaatcagggctaaa**

9930 **SAGAGTTATCCAACTACCAAACTCGAGTCCCCGCTTTACCCACCAACGACATCAAATTTGGATTACAGTACAGGAATGCTAGAAGGGCATTGAATAAGCGTTGTGTTTCAGATGCTGGGGTCTTAAGCTCATTGCAGAA** 3640
9110G **SAGAGTTATCCAACTACCAAACTCGAGTCCCCGCTTTACCCACCAACGACATCAAATTTGGATTACAGTACAGGAATGCTAGAAGGGCATTGAATAAGCGTTGTGTTTCAGATGCTGGGGTCTTAAGCTCATTGCAGAA** 3640
9110Gt **SAGAGTTATCCAACTACCAAACTCGAGTCCCCGCTTTACCCACCAACGACATCAAATTTGGATTACAGTACAGGAATGCTAGAAGGGCATTGAATAAGCGTTGTGTTTCAGATGCTGGGGTCTTAAGCTCATTGCAGAA** 3640
Consensus **agagattatccaaactaccaaaactcgagtccccgctttaccaccaacgacatcaaatTTGGATTACAGTACAGGAATGCTAGAAGGGCATTGAATAAGCGTTGTGTTTCAGATGCTGGGGTCTTAAGCTCATTGCAGAA**

9930 **CCCAGAGAAGCTGACTTCCCAATTTGAGGAGTAAGTGACGATGGAGCTCGGCTGAAAAACGCAACTGAGTCTGTACAGGTGGGTTGAAACGGTGAAGCTATACCTACTACTGGTTGTTTGTGTAATAAGAAA** 3700
9110G **CCCAGAGAAGCTGACTTCCCAATTTGAGGAGTAAGTGACGATGGAGCTCGGCTGAAAAACGCAACTGAGTCTGTACAGGTGGGTTGAAACGGTGAAGCTATACCTACTACTGGTTGTTTGTGTAATAAGAAA** 3700
9110Gt **CCCAGAGAAGCTGACTTCCCAATTTGAGGAGTAAGTGACGATGGAGCTCGGCTGAAAAACGCAACTGAGTCTGTACAGGTGGGTTGAAACGGTGAAGCTATACCTACTACTGGTTGTTTGTGTAATAAGAAA** 3700
Consensus **cccagagaagctgacttcccaatTTGAGGAGTAAGTGACGATGGAGCTCGGCTGAAAAACGCAACTGAGTCTGTACAGGTGGGTTGAAACGGTGAAGCTATACCTACTACTGGTTGTTTGTGTAATAAGAAA**

9930 **TTTTGGTTAAGAAAATTTACGTGGGATTTTC** 3813
9110G **TTTTGGTTAAGAAAATTTACGTGGGATTTTC** 3813
9110Gt **TTTTGGTTAAGAAAATTTACGTGGGATTTTC** 3813
Consensus **tttggTTAAGAAAATTTacgtgggatTTTC**

Figure S1. *CsaCNGs* DNA sequence from 3 cucumbers as follow. 9930, 9110G and 9110Gt.

Table S1. Information of molecular makers used in fine mapping of *v-1* in this study.

#	Marker	Marker Types	9930 Scaffold	Position	Chr.	Forward Primer (5'-3')	Reverse Primer (5'-3')	Enzyme
1	UW081313	SSR	scaffold000066	166409	6	CACGTGTGTTTCACAACCTTCTT	TTATCGACCAATTGCCAACA	
2	UW081309	SSR	scaffold000066	170584	6	TTTGAAATAGCAACCTATGAGC	GAACCCAATAATGCCAAAGA	
3	v1dCAPs1	dCAPs	scaffold000066	194393	6	TGCAAAGTTTGTTCATTTGA	GGGGCATTAAAGTTTGCTTGA	HaeIII
4	SSR18405	SSR	scaffold000066	206319	6	CGCAGGTGCATCTCATGTAA	GACAAACAAGGGGACGAAAA	
5	v1SSR8	SSR	scaffold000066	249054	6	GGCAATGGTAAAGGTTGGAA	AAGGGATGTGTGGTGTGGTT	
6	v1CAPs15	CAPS	scaffold000066	299463	6	ATCTCACTTTCATCTATTTATTGAC	TTGGCCAGAACTTTGTAGCA	MaeII
7	v1InDel1	InDel	scaffold000066	330800	6	GAGATACATGAAAATTAGCAA	TGTGATGTCCATGATGAGATTG	
8	v1CAPs20	CAPS	scaffold000066	340002	6	GTATAATGAGAAAATAAATATGA	CCAATTCAAACATGCTCATTG	SspI
9	v1CAPs23	CAPS	scaffold000066	374798	6	AGTTCGCCTTAATCAACTCACTAAA	GGCCTCTACTCACCTGAAA	HindIII
10	UW085174	SSR	scaffold000066	377830	6	TCCAAAACAAGAGACGACCA	AAGGGTGGGAGAAAAATGAA	
11	SSR06500	SSR	scaffold000066	414339	6	TGACAAAACACTACCCACCG	AGCAAATTCAACCGTTCATGT	
12	SSR01331	SSR	scaffold000066	699190	6	CGGGATTTACCCCTCACATT	GTGGGACCGAGAAGTTTGAT	