Supplementary Materials

Characterization of a Proposed *Dichorhavirus* Associated with the Citrus Leprosis Disease and Analysis of the Host Response

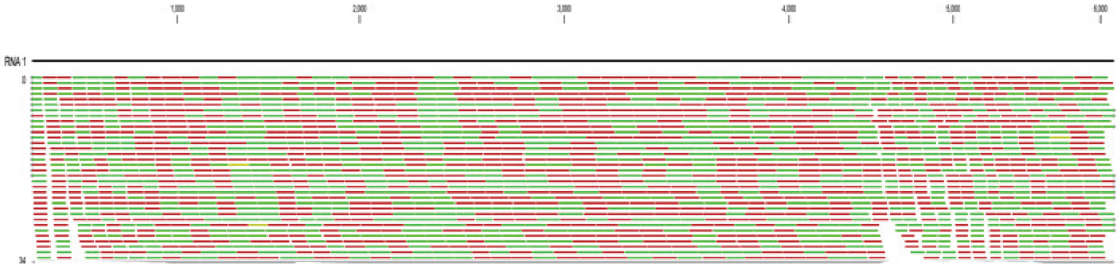
Figure S1. CiLV-C and HGSV are not present in citrus samples displaying leprosis symptoms. (**A**) Agarose gel showing no amplified cDNA when total RNA was used as a template sour orange tissue when primers directed against the CP of CiLV-C (**upper panel**) and HGSV (**middle panel**). (**Lower panel**) Amplification of the internal control, COX, from the *Citrus* species. (**B**) Primers employed in the detection of infected tissue.

B

CILV-C MP 5'	TCGTTTGGTTGGGTTCATAAACCGTA
CILV-C MP 3'	TATACCAAGCCGCCTGTGAACTTCAG
HGSV 5'	GCGACGGGAAAAATACTGAAGCATAG
HGSV 3'	GTGCAGCATCCAAAATCTCCACCTTC
CITRUS COX 5'	GAGGCATTTTTGGATCACTTTT
CITRUS COX 3'	GTTCTGTTAGGTTCTTAGTAGC

Figure S2. Deep-sequence read coverage of the RNA 1 and RNA2 of the CNSV genome. These are represented as green and red lines under the assembled viral genome. Green lines correspond to sense reads relative to the OFV genome and red lines to antisense reads.

RNA1



RNA2

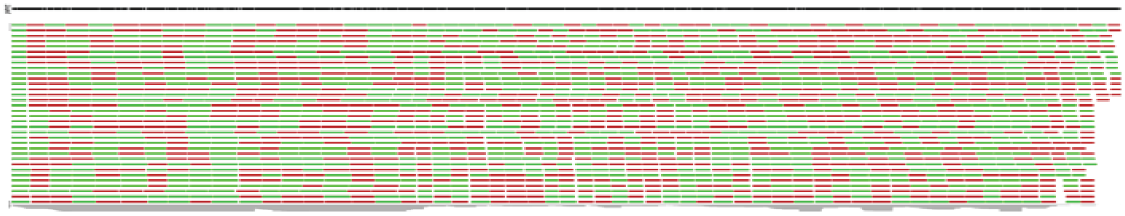
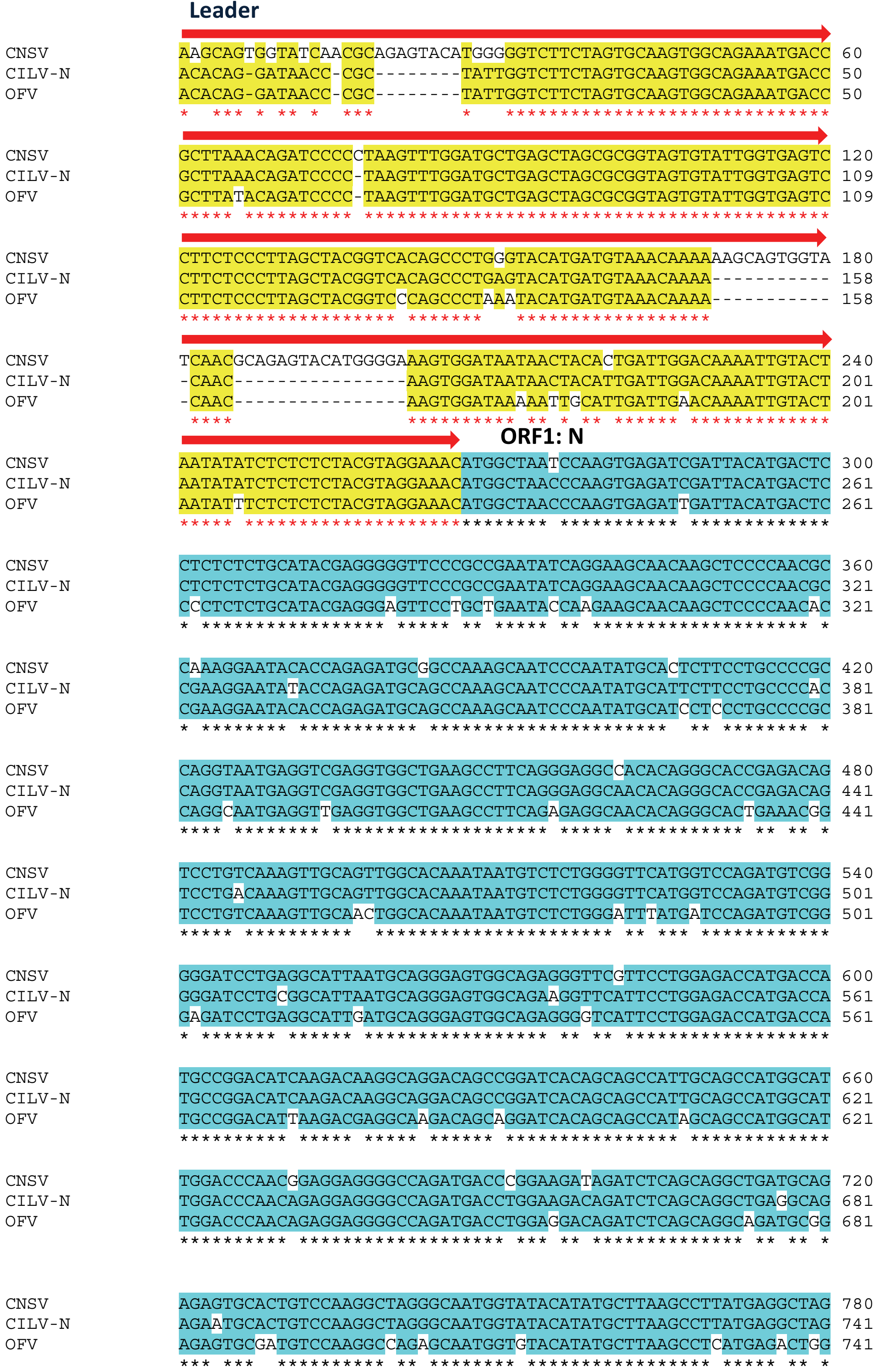


Figure S3.

Comparison of RNA1 .



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CNSV        AAGCAGTGGTATCAACGCAGAGTACATGGGGGTCTTCTAGTGCAAGTGGCAGAAATGACC 60
CILV-N      ACACAG-GATAACC-CGC--------TATTGGTCTTCTAGTGCAAGTGGCAGAAATGACC 50
OFV         ACACAG-GATAACC-CGC--------TATTGGTCTTCTAGTGCAAGTGGCAGAAATGACC 50
            *  *** * ** *  ***        *   ******************************

CNSV        GCTTAAACAGATCCCCCTAAGTTTGGATGCTGAGCTAGCGCGGTAGTGTATTGGTGAGTC 120
CILV-N      GCTTAAACAGATCCCC-TAAGTTTGGATGCTGAGCTAGCGCGGTAGTGTATTGGTGAGTC 109
OFV         GCTTATACAGATCCCC-TAAGTTTGGATGCTGAGCTAGCGCGGTAGTGTATTGGTGAGTC 109
            ***** ********** *******************************************

CNSV        CTTCTCCCTTAGCTACGGTCACAGCCCTGGGTACATGATGTAAACAAAAAAGCAGTGGTA 180
CILV-N      CTTCTCCCTTAGCTACGGTCACAGCCCTGAGTACATGATGTAAACAAAA----------- 158
OFV         CTTCTCCCTTAGCTACGGTCCCAGCCCTAAATACATGATGTAAACAAAA----------- 158
            ******************** *******   ******************

CNSV        TCAACGCAGAGTACATGGGGAAAGTGGATAATAACTACACTGATTGGACAAAATTGTACT 240
CILV-N      -CAAC----------------AAGTGGATAATAACTACATTGATTGGACAAAATTGTACT 201
OFV         -CAAC----------------AAGTGGATAAAAATTGCATTGATTGAACAAAATTGTACT 201
             ****                ********** ** * ** ****** *************

CNSV        AATATATCTCTCTCTACGTAGGAAACATGGCTAATCCAAGTGAGATCGATTACATGACTC 300
CILV-N      AATATATCTCTCTCTACGTAGGAAACATGGCTAACCCAAGTGAGATCGATTACATGACTC 261
OFV         AATATTTCTCTCTCTACGTAGGAAACATGGCTAACCCAAGTGAGATTGATTACATGACTC 261
            ***** **************************** *********** *************

CNSV        CTCTCTCTGCATACGAGGGGGTTCCCGCCGAATATCAGGAAGCAACAAGCTCCCCAACGC 360
CILV-N      CTCTCTCTGCATACGAGGGGGTTCCCGCCGAATATCAGGAAGCAACAAGCTCCCCAACGC 321
OFV         CCCTCTCTGCATACGAGGGAGTTCCTGCTGAATACCAAGAAGCAACAAGCTCCCCAACAC 321
            * ***************** ***** ** ***** ** ******************** *

CNSV        CAAAGGAATACACCAGAGATGCGGCCAAAGCAATCCCAATATGCACTCTTCCTGCCCCGC 420
CILV-N      CGAAGGAATATACCAGAGATGCAGCCAAAGCAATCCCAATATGCATTCTTCCTGCCCCAC 381
OFV         CGAAGGAATACACCAGAGATGCAGCCAAAGCAATCCCAATATGCATCCTCCCTGCCCCGC 381
            * ******** *********** **********************  ** ******** *

CNSV        CAGGTAATGAGGTCGAGGTGGCTGAAGCCTTCAGGGAGGCCACACAGGGCACCGAGACAG 480
CILV-N      CAGGTAATGAGGTCGAGGTGGCTGAAGCCTTCAGGGAGGCAACACAGGGCACCGAGACAG 441
OFV         CAGGCAATGAGGTTGAGGTGGCTGAAGCCTTCAGAGAGGCAACACAGGGCACTGAAACGG 441
            **** ******** ******************** ***** *********** ** ** *

CNSV        TCCTGTCAAAGTTGCAGTTGGCACAAATAATGTCTCTGGGGTTCATGGTCCAGATGTCGG 540
CILV-N      TCCTGACAAAGTTGCAGTTGGCACAAATAATGTCTCTGGGGTTCATGGTCCAGATGTCGG 501
OFV         TCCTGTCAAAGTTGCAACTGGCACAAATAATGTCTCTGGGATTTATGATCCAGATGTCGG 501
            ***** **********  ********************** ** *** ************

CNSV        GGGATCCTGAGGCATTAATGCAGGGAGTGGCAGAGGGTTCGTTCCTGGAGACCATGACCA 600
CILV-N      GGGATCCTGCGGCATTAATGCAGGGAGTGGCAGAAGGTTCATTCCTGGAGACCATGACCA 561
OFV         GAGATCCTGAGGCATTGATGCAGGGAGTGGCAGAGGGGTCATTCCTGGAGACCATGACCA 561
            * ******* ****** ***************** ** ** *******************

CNSV        TGCCGGACATCAAGACAAGGCAGGACAGCCGGATCACAGCAGCCATTGCAGCCATGGCAT 660
CILV-N      TGCCGGACATCAAGACAAGGCAGGACAGCCGGATCACAGCAGCCATTGCAGCCATGGCAT 621
OFV         TGCCGGACATTAAGACGAGGCAAGACAGCAGGATCACAGCAGCCATAGCAGCCATGGCAT 621
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CNSV        TGGACCCAACGGAGGAGGGGCCAGATGACCCGGAAGATAGATCTCAGCAGGCTGATGCAG 720
CILV-N      TGGACCCAACAGAGGAGGGGCCAGATGACCTGGAAGACAGATCTCAGCAGGCTGAGGCAG 681
OFV         TGGACCCAACAGAGGAGGGGCCAGATGACCTGGAGGACAGATCTCAGCAGGCAGATGCGG 681
            ********** ******************* *** ** ************** ** ** *


CNSV        AGAGTGCACTGTCCAAGGCTAGGGCAATGGTATACATATGCTTAAGCCTTATGAGGCTAG 780
CILV-N      AGAATGCACTGTCCAAGGCTAGGGCAATGGTATACATATGCTTAAGCCTTATGAGGCTAG 741
OFV         AGAGTGCGATGTCCAAGGCCAGAGCAATGGTGTACATATGCTTAAGCCTCATGAGACTGG 741
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CNSV            CTGTGAAGCCTGCTGAGTCATTCATGAAGGGTGTTCATCAGATTAAACAGGCATATTCAG 840
CILV-N          CTGTGAAGCCTGCTGAGTCATTCATGAAGGGTGTTCATCAGATCAAACAGGCATATTCGG 801
OFV             CTGTGAAGCCGGCTGAGTCATTTATGAAGGGTGTTCATCAGATCAAACAGGCATATTCAG 801
                ********** *********** ******************** ************** *

CNSV            TCCTGGTGGGAGAGCACTCTGAGTTCCTGTTCAATTATTCATACTCAGAAGGAATGTGCA 900
CILV-N          TCCTGGTGGGAGAGCACTCTGAGTTCCTGTTCAATTATTCATACTCAGAAGGAATGTGCA 861
OFV             TCCTGGTAGGAGAGCATTCTGAATTCCTGTTCAATTACTCCTATTCAGAAGGAATGTGCA 861
                ******* ******** ***** ************** ** ** ****************

CNSV            GAAACATAGCCGACATGTTCAACCAATGCGATGATCTCAAGGCAACTCTTTGTCATCATT 960
CILV-N          GAAACATAGCCGACATGTTCAACCAATGTGATGATCTCAAGGCAACTCTTTGTCATCATT 921
OFV             GGAATATAGCCGACATGTTCAACCAATGTGATGATCTCAAAGCAACTCTTTGCCATCACT 921
                * ** *********************** *********** *********** ***** *

CNSV            GTGCCATAGCAGATGAAACGCACCACACCAATAGGAAGAGGCACGGGCTTCTCAGATTCC 1020
CILV-N          GTGCCATAGCAGATGAAACGCACCACACCAATAGGAAGAGGCACGGGCTTCTCAGATTCC 981
OFV             GCGCCATAGCAGATGAGACGCACCACACCAATAGGAAGAGGCACGGACTTCTCAGATTCC 981
                * ************** ***************************** *************

CNSV            TGATCCTTCAGCATGTAGATCTCACAGGGATGATCCCATATGGGATGTACATTGACATGA 1080
CILV-N          TGATCCTTCAGCATGTAGATCTCACAGGGATGATCCCATATGGGATGTACATTGACATGC 1041
OFV             TAATCCTTCAACATGTGGATCTTACGGGGATGATCCCATATGGAATGTACATTGACATGC 1041
                * ******** ***** ***** ** ***************** *************** 

CNSV            GAAGGCACTTCACCCTCCTGACACCCGGCCAGTTGCTGACATGGCTCCATGACAACCAGG 1140
CILV-N          GAAGGCACTTCACCCTCCTAACACCCGGCCAGTTGCTGACATGGCTCCATGACAACCAGG 1101
OFV             GAAGGTACTTCACCCTCTTAACACCCGGCCAGTTGCTAACATGGCTTCATGACAACCAGG 1101
                ***** *********** * ***************** ******** *************

CNSV            TATCCAGGCCTCTCAGTGTCATTGCGGACATAAACACCAGGTATGATGTTTCAAACGGAT 1200
CILV-N          TATCCAGGCCTCTCAGTGTCATTGCGGACATCAACACCAGGTATGATGTTTCAAACGGAT 1161
OFV             TATCTAGGCCTCTCAGTGTGATTGCGGACATAAACACCAGGTATGATGTTTCTAACGGGT 1161
                **** ************** *********** ******************** ***** *

CNSV            CAGACCGGTTCTGGAGGTACTCAAGGGGGCTTGATCCAGGATTCTTCATAGCATTACAAC 1260
CILV-N          CAGACCGGTTCTGGAGATACTCAAGGGGGCTTGATCCAGGATTCTTCATAGCCTTACAAC 1221
OFV             CAGATCGGTTCTGGAGGTACTCAAGGGGTCTAGACCCAGGATTCTTTATAGCTTTACAAC 1221
                **** *********** *********** ** ** *********** ***** *******

CNSV            AATCAAAATGTGTCACCTTGATAGCCAGAATGGCACACATACTGGTGAAGGGAGGAGCCG 1320
CILV-N          AATCAAAATGTGTCACCCTGATAGCCAGAATGGCACATATACTGGTGAAGGGAGGAGCCG 1281
OFV             AGTCAAAATGTGTCACTCTGATAGCCAGGATGGCACATATACTGGTGAAGGGAGGAGCCG 1281
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CNSV            TTGCTGTCAATGAATACTCCGACCCCCGAAAGGCAAAGTCACTGGAGAACAAGCCTGGGC 1380
CILV-N          TTGCTGTCAATGAGTACTCCGACCCCCGAAAAGCAAAGTCACTGGAGAACAAGCCTGGGC 1341
OFV             TCGCTGTCAATGAATACTCCGATCCTCGAAAGGCAAAGTCATTGGAGAACAAGCCTGGGC 1341
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CNSV            TGGCAGCGGAGGCTGACAAGTTTGCCACAGAGTTTGTGGAAGCATACAACGGCCTATCAG 1440
CILV-N          TGGCAGCAGAGGCTGACAAGTTTGCCACAGAGTTTGTGGAAGCATACAACGGCCTATCAG 1401
OFV             TGGCAGCGGAGGCAGACAAGTTCGCCACTGAGTTCGTGGAGGCATACAACGGCCTATCAG 1401
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CNSV            GGTCAAGTGCTAATGCCGGCCCTGTATCCCGTAAACTCTACAACCAAGGCAGAGGTATTC 1500
CILV-N          GGTCAAGTGCTAATGCCGGCCCTGTGTCCCGCAAACTCTACAACCAAGGCAGAGGTATTC 1461
OFV             GATCAAGTGCAAACGCCGGCCCTGTGTCCCGCAAACTCTACAACCAGGGCAGAGGCATCC 1461
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CNSV            CTACCCGCAGAGGCCTATTCACACCTCCCTCCGCCAGACCCGCACCTGTTGTGAATGTGC 1560
CILV-N          CTACCCGCAGAGGCCTATTCACACCTCCCTCCGCCAGACCCGCACCTGTTGTGAATGTGC 1521
OFV             CGACCCGCAGGGGCCTGTTCACACCCCCTTCCGCCAGACCTGCGCCCGTTGTGAATGTAC 1521
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CNSV            ATATCCCCGCCGCCTCGTCCTCTTTAGCAGGAGCCCTGGATGCTATGAACAGTGAATGAC 1620
CILV-N          ACGTCCCAGCCGCCTCGTCCTCTTTGGCAGGAGCCCTAGATGCTATGAACAGCGAATGAC 1581
OFV             ACGTCCCTGCCGCCTCGTCCTCTCTGACAGGGGCCCTGGATGCCATGAACAGTGACTGAC 1581
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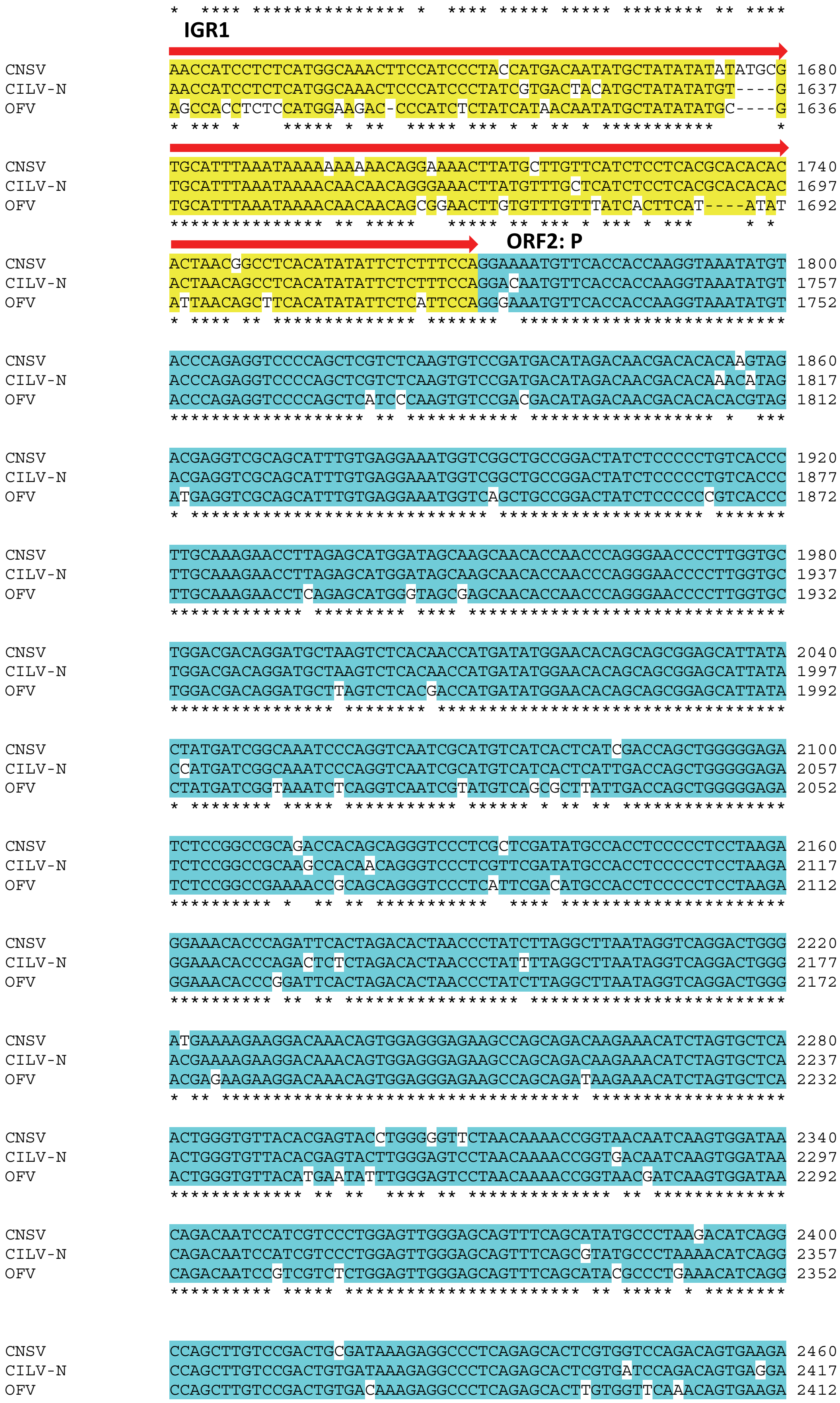

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CILV-N              AACCATCCTCTCATGGCAAACTCCCATCCCTATCGTGACTACATGCTATATATGT----G 1637
OFV                 AGCCACCTCTCCATGGAAGAC-CCCATCTCTATCATAACAATATGCTATATATGC----G 1636
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CNSV                TGCATTTAAATAAAAAAAAAACAGGAAAACTTATGCTTGTTCATCTCCTCACGCACACAC 1740
CILV-N              TGCATTTAAATAAAACAACAACAGGGAAACTTATGTTTGCTCATCTCCTCACGCACACAC 1697
OFV                 TGCATTTAAATAAAACAACAACAGCGGAACTTGTGTTTGTTTATCACTTCAT----ATAT 1692
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CNSV                ACTAACGGCCTCACATATATTCTCTTTCCAGGAAAATGTTCACCACCAAGGTAAATATGT 1800
CILV-N              ACTAACAGCCTCACATATATTCTCTTTCCAGGACAATGTTCACCACCAAGGTAAATATGT 1757
OFV                 ATTAACAGCTTCACATATATTCTCATTCCAGGGAAATGTTCACCACCAAGGTAAATATGT 1752
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CNSV                ACCCAGAGGTCCCCAGCTCGTCTCAAGTGTCCGATGACATAGACAACGACACACAAGTAG 1860
CILV-N              ACCCAGAGGTCCCCAGCTCGTCTCAAGTGTCCGATGACATAGACAACGACACAAACATAG 1817
OFV                 ACCCAGAGGTCCCCAGCTCATCCCAAGTGTCCGACGACATAGACAACGACACACACGTAG 1812
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CNSV                ACGAGGTCGCAGCATTTGTGAGGAAATGGTCGGCTGCCGGACTATCTCCCCCTGTCACCC 1920
CILV-N              ACGAGGTCGCAGCATTTGTGAGGAAATGGTCGGCTGCCGGACTATCTCCCCCTGTCACCC 1877
OFV                 ATGAGGTCGCAGCATTTGTGAGGAAATGGTCAGCTGCCGGACTATCTCCCCCCGTCACCC 1872
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CNSV                TTGCAAAGAACCTTAGAGCATGGATAGCAAGCAACACCAACCCAGGGAACCCCTTGGTGC 1980
CILV-N              TTGCAAAGAACCTTAGAGCATGGATAGCAAGCAACACCAACCCAGGGAACCCCTTGGTGC 1937
OFV                 TTGCAAAGAACCTCAGAGCATGGGTAGCGAGCAACACCAACCCAGGGAACCCCTTGGTGC 1932
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CNSV                TGGACGACAGGATGCTAAGTCTCACAACCATGATATGGAACACAGCAGCGGAGCATTATA 2040
CILV-N              TGGACGACAGGATGCTAAGTCTCACAACCATGATATGGAACACAGCAGCGGAGCATTATA 1997
OFV                 TGGACGACAGGATGCTTAGTCTCACGACCATGATATGGAACACAGCAGCGGAGCATTATA 1992
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CNSV                CTATGATCGGCAAATCCCAGGTCAATCGCATGTCATCACTCATCGACCAGCTGGGGGAGA 2100
CILV-N              CCATGATCGGCAAATCCCAGGTCAATCGCATGTCATCACTCATTGACCAGCTGGGGGAGA 2057
OFV                 CTATGATCGGTAAATCTCAGGTCAATCGTATGTCAGCGCTTATTGACCAGCTGGGGGAGA 2052
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CNSV                TCTCCGGCCGCAGACCACAGCAGGGTCCCTCGCTCGATATGCCACCTCCCCCTCCTAAGA 2160
CILV-N              TCTCCGGCCGCAAGCCACAACAGGGTCCCTCGTTCGATATGCCACCTCCCCCTCCTAAGA 2117
OFV                 TCTCCGGCCGAAAACCGCAGCAGGGTCCCTCATTCGACATGCCACCTCCCCCTCCTAAGA 2112
                    ********** *  ** ** ***********  **** **********************

CNSV                GGAAACACCCAGATTCACTAGACACTAACCCTATCTTAGGCTTAATAGGTCAGGACTGGG 2220
CILV-N              GGAAACACCCAGACTCTCTAGACACTAACCCTATTTTAGGCTTAATAGGTCAGGACTGGG 2177
OFV                 GGAAACACCCGGATTCACTAGACACTAACCCTATCTTAGGCTTAATAGGTCAGGACTGGG 2172
                    ********** ** ** ***************** *************************

CNSV                ATGAAAAGAAGGACAAACAGTGGAGGGAGAAGCCAGCAGACAAGAAACATCTAGTGCTCA 2280
CILV-N              ACGAAAAGAAGGACAAACAGTGGAGGGAGAAGCCAGCAGACAAGAAACATCTAGTGCTCA 2237
OFV                 ACGAGAAGAAGGACAAACAGTGGAGGGAGAAGCCAGCAGATAAGAAACATCTAGTGCTCA 2232
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CNSV                ACTGGGTGTTACACGAGTACCTGGGGGTTCTAACAAAACCGGTAACAATCAAGTGGATAA 2340
CILV-N              ACTGGGTGTTACACGAGTACTTGGGAGTCCTAACAAAACCGGTGACAATCAAGTGGATAA 2297
OFV                 ACTGGGTGTTACATGAATATTTGGGAGTCCTAACAAAACCGGTAACGATCAAGTGGATAA 2292
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CNSV                CAGACAATCCATCGTCCCTGGAGTTGGGAGCAGTTTCAGCATATGCCCTAAGACATCAGG 2400
CILV-N              CAGACAATCCATCGTCCCTGGAGTTGGGAGCAGTTTCAGCGTATGCCCTAAAACATCAGG 2357
OFV                 CAGACAATCCGTCGTCTCTGGAGTTGGGAGCAGTTTCAGCATACGCCCTGAAACATCAGG 2352
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CNSV                CCAGCTTGTCCGACTGCGATAAAGAGGCCCTCAGAGCACTCGTGGTCCAGACAGTGAAGA 2460
CILV-N              CCAGCTTGTCCGACTGTGATAAAGAGGCCCTCAGAGCACTCGTGATCCAGACAGTGAGGA 2417
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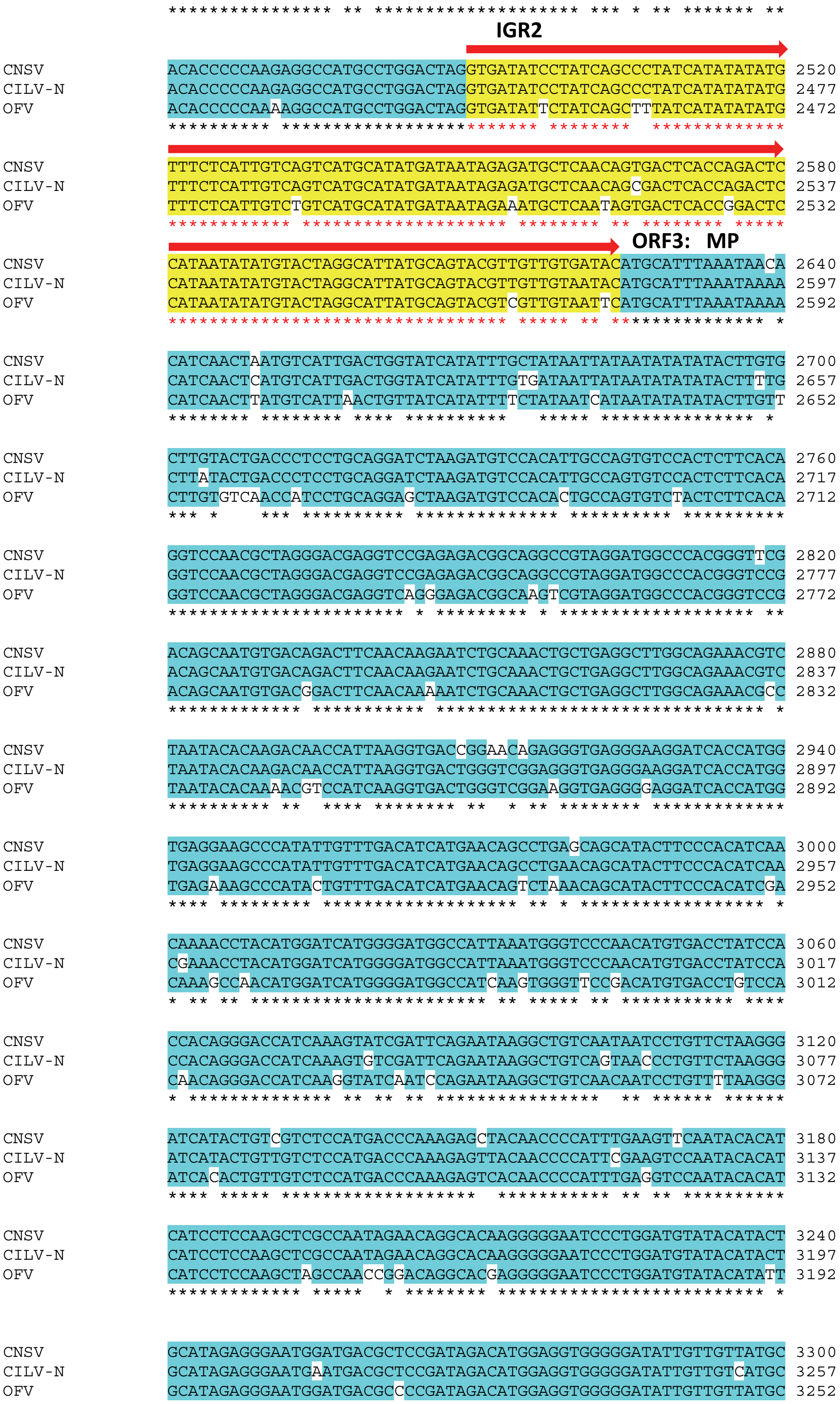

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CNSV              ACACCCCCAAGAGGCCATGCCTGGACTAGGTGATATCCTATCAGCCCTATCATATATATG 2520
CILV-N            ACACCCCCAAGAGGCCATGCCTGGACTAGGTGATATCCTATCAGCCCTATCATATATATG 2477
OFV               ACACCCCCAAAAGGCCATGCCTGGACTAGGTGATATTCTATCAGCTTTATCATATATATG 2472
                  ********** ************************* ********  *************

CNSV              TTTCTCATTGTCAGTCATGCATATGATAATAGAGATGCTCAACAGTGACTCACCAGACTC 2580
CILV-N            TTTCTCATTGTCAGTCATGCATATGATAATAGAGATGCTCAACAGCGACTCACCAGACTC 2537
OFV               TTTCTCATTGTCTGTCATGCATATGATAATAGAAATGCTCAATAGTGACTCACCGGACTC 2532
                  ************ ******************** ******** ** ******** *****

CNSV              CATAATATATGTACTAGGCATTATGCAGTACGTTGTTGTGATACATGCATTTAAATAACA 2640
CILV-N            CATAATATATGTACTAGGCATTATGCAGTACGTTGTTGTAATACATGCATTTAAATAAAA 2597
OFV               CATAATATATGTACTAGGCATTATGCAGTACGTCGTTGTAATTCATGCATTTAAATAAAA 2592
                  ********************************* ***** ** *************** *

CNSV              CATCAACTAATGTCATTGACTGGTATCATATTTGCTATAATTATAATATATATACTTGTG 2700
CILV-N            CATCAACTCATGTCATTGACTGGTATCATATTTGTGATAATTATAATATATATACTTTTG 2657
OFV               CATCAACTTATGTCATTAACTGTTATCATATTTTCTATAATCATAATATATATACTTGTT 2652
                  ******** ******** **** **********   ***** *************** *

CNSV              CTTGTACTGACCCTCCTGCAGGATCTAAGATGTCCACATTGCCAGTGTCCACTCTTCACA 2760
CILV-N            CTTATACTGACCCTCCTGCAGGATCTAAGATGTCCACATTGCCAGTGTCCACTCTTCACA 2717
OFV               CTTGTGTCAACCATCCTGCAGGAGCTAAGATGTCCACACTGCCAGTGTCTACTCTTCACA 2712
                  *** *    *** ********** ************** ********** **********

CNSV              GGTCCAACGCTAGGGACGAGGTCCGAGAGACGGCAGGCCGTAGGATGGCCCACGGGTTCG 2820
CILV-N            GGTCCAACGCTAGGGACGAGGTCCGAGAGACGGCAGGCCGTAGGATGGCCCACGGGTCCG 2777
OFV               GGTCCAACGCTAGGGACGAGGTCAGGGAGACGGCAAGTCGTAGGATGGCCCACGGGTCCG 2772
                  *********************** * ********* * ******************* **

CNSV              ACAGCAATGTGACAGACTTCAACAAGAATCTGCAAACTGCTGAGGCTTGGCAGAAACGTC 2880
CILV-N            ACAGCAATGTGACAGACTTCAACAAGAATCTGCAAACTGCTGAGGCTTGGCAGAAACGTC 2837
OFV               ACAGCAATGTGACGGACTTCAACAAAAATCTGCAAACTGCTGAGGCTTGGCAGAAACGCC 2832
                  ************* *********** ******************************** *

CNSV              TAATACACAAGACAACCATTAAGGTGACCGGAACAGAGGGTGAGGGAAGGATCACCATGG 2940
CILV-N            TAATACACAAGACAACCATTAAGGTGACTGGGTCGGAGGGTGAGGGAAGGATCACCATGG 2897
OFV               TAATACACAAAACGTCCATCAAGGTGACTGGGTCGGAAGGTGAGGGGAGGATCACCATGG 2892
                  ********** **  **** ******** **  * ** ******** *************

CNSV              TGAGGAAGCCCATATTGTTTGACATCATGAACAGCCTGAGCAGCATACTTCCCACATCAA 3000
CILV-N            TGAGGAAGCCCATATTGTTTGACATCATGAACAGCCTGAACAGCATACTTCCCACATCAA 2957
OFV               TGAGAAAGCCCATACTGTTTGACATCATGAACAGTCTAAACAGCATACTTCCCACATCGA 2952
                  **** ********* ******************* ** * ****************** *

CNSV              CAAAACCTACATGGATCATGGGGATGGCCATTAAATGGGTCCCAACATGTGACCTATCCA 3060
CILV-N            CGAAACCTACATGGATCATGGGGATGGCCATTAAATGGGTCCCAACATGTGACCTATCCA 3017
OFV               CAAAGCCAACATGGATCATGGGGATGGCCATCAAGTGGGTTCCGACATGTGACCTGTCCA 3012
                  * ** ** *********************** ** ***** ** *********** ****

CNSV              CCACAGGGACCATCAAAGTATCGATTCAGAATAAGGCTGTCAATAATCCTGTTCTAAGGG 3120
CILV-N            CCACAGGGACCATCAAAGTGTCGATTCAGAATAAGGCTGTCAGTAACCCTGTTCTAAGGG 3077
OFV               CAACAGGGACCATCAAGGTATCAATCCAGAATAAGGCTGTCAACAATCCTGTTTTAAGGG 3072
                  * ************** ** ** ** ****************  ** ****** ******

CNSV              ATCATACTGTCGTCTCCATGACCCAAAGAGCTACAACCCCATTTGAAGTTCAATACACAT 3180
CILV-N            ATCATACTGTTGTCTCCATGACCCAAAGAGTTACAACCCCATTCGAAGTCCAATACACAT 3137
OFV               ATCACACTGTTGTCTCCATGACCCAAAGAGTCACAACCCCATTTGAGGTCCAATACACAT 3132
                  **** ***** *******************  *********** ** ** **********

CNSV              CATCCTCCAAGCTCGCCAATAGAACAGGCACAAGGGGGAATCCCTGGATGTATACATACT 3240
CILV-N            CATCCTCCAAGCTCGCCAATAGAACAGGCACAAGGGGGAATCCCTGGATGTATACATACT 3197
OFV               CATCCTCCAAGCTAGCCAACCGGACAGGCACGAGGGGGAATCCCTGGATGTATACATATT 3192
                  ************* *****  * ******** ************************** *


CNSV              GCATAGAGGGAATGGATGACGCTCCGATAGACATGGAGGTGGGGGATATTGTTGTTATGC 3300
CILV-N            GCATAGAGGGAATGAATGACGCTCCGATAGACATGGAGGTGGGGGATATTGTTGTCATGC 3257
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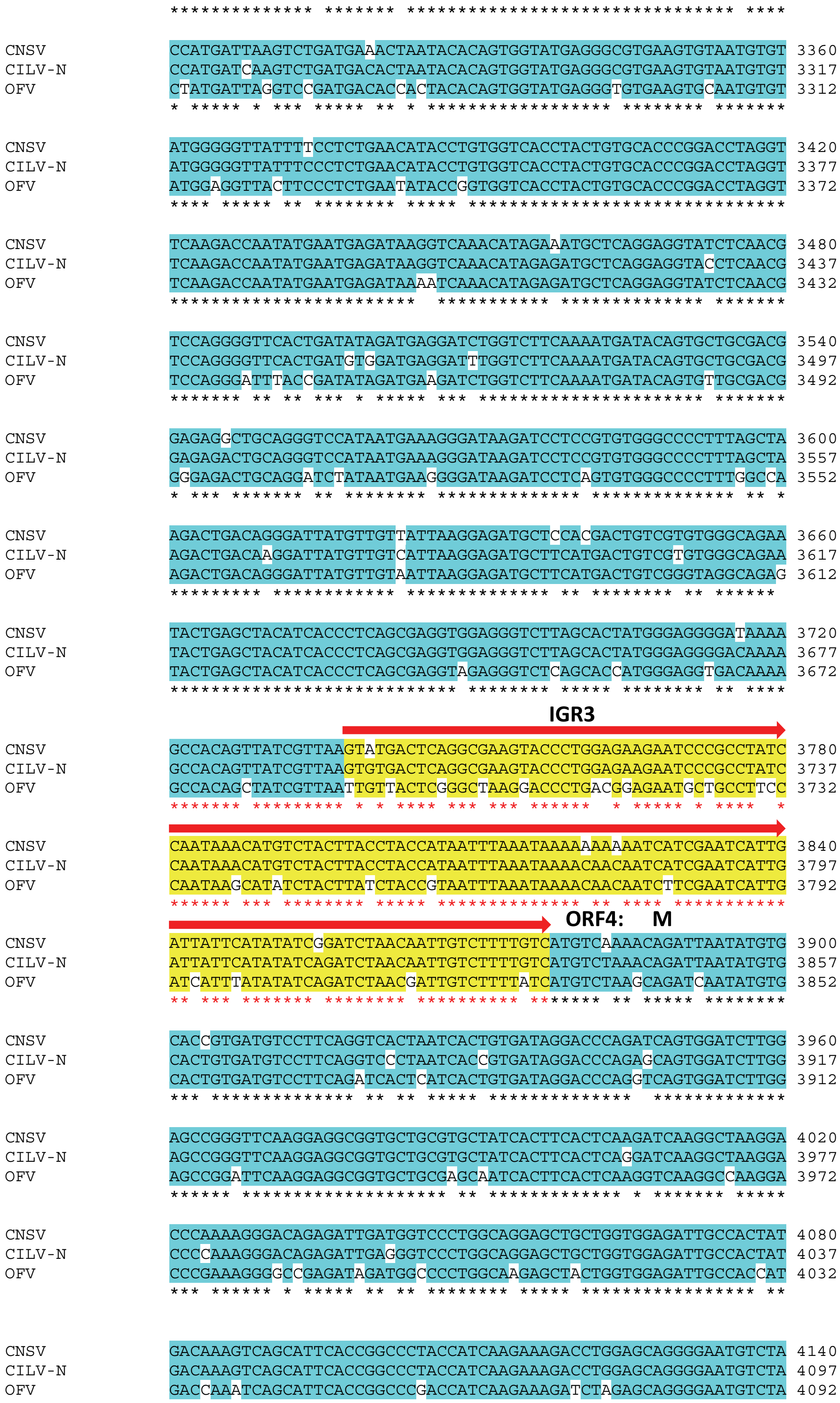

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OFV            CTATGATTAGGTCCGATGACACCACTACACAGTGGTATGAGGGTGTGAAGTGCAATGTGT 3312
               * ***** * *** ***** ** * ****************** ******** *******

CNSV           ATGGGGGTTATTTTCCTCTGAACATACCTGTGGTCACCTACTGTGCACCCGGACCTAGGT 3420
CILV-N         ATGGGGGTTATTTCCCTCTGAACATACCTGTGGTCACCTACTGTGCACCCGGACCTAGGT 3377
OFV            ATGGAGGTTACTTCCCTCTGAATATACCGGTGGTCACCTACTGTGCACCCGGACCTAGGT 3372
               **** ***** ** ******** ***** *******************************

CNSV           TCAAGACCAATATGAATGAGATAAGGTCAAACATAGAAATGCTCAGGAGGTATCTCAACG 3480
CILV-N         TCAAGACCAATATGAATGAGATAAGGTCAAACATAGAGATGCTCAGGAGGTACCTCAACG 3437
OFV            TCAAGACCAATATGAATGAGATAAAATCAAACATAGAGATGCTCAGGAGGTATCTCAACG 3432
               ************************  *********** ************** *******

CNSV           TCCAGGGGTTCACTGATATAGATGAGGATCTGGTCTTCAAAATGATACAGTGCTGCGACG 3540
CILV-N         TCCAGGGGTTCACTGATGTGGATGAGGATTTGGTCTTCAAAATGATACAGTGCTGCGACG 3497
OFV            TCCAGGGATTTACCGATATAGATGAAGATCTGGTCTTCAAAATGATACAGTGTTGCGACG 3492
               ******* ** ** *** * ***** *** ********************** *******

CNSV           GAGAGGCTGCAGGGTCCATAATGAAAGGGATAAGATCCTCCGTGTGGGCCCCTTTAGCTA 3600
CILV-N         GAGAGACTGCAGGGTCCATAATGAAAGGGATAAGATCCTCCGTGTGGGCCCCTTTAGCTA 3557
OFV            GGGAGACTGCAGGATCTATAATGAAGGGGATAAGATCCTCAGTGTGGGCCCCTTTGGCCA 3552
               * *** ******* ** ******** ************** ************** ** *

CNSV           AGACTGACAGGGATTATGTTGTTATTAAGGAGATGCTCCACGACTGTCGTGTGGGCAGAA 3660
CILV-N         AGACTGACAAGGATTATGTTGTCATTAAGGAGATGCTTCATGACTGTCGTGTGGGCAGAA 3617
OFV            AGACTGACAGGGATTATGTTGTAATTAAGGAGATGCTTCATGACTGTCGGGTAGGCAGAG 3612
               ********* ************ ************** ** ******** ** ******

CNSV           TACTGAGCTACATCACCCTCAGCGAGGTGGAGGGTCTTAGCACTATGGGAGGGGATAAAA 3720
CILV-N         TACTGAGCTACATCACCCTCAGCGAGGTGGAGGGTCTTAGCACTATGGGAGGGGACAAAA 3677
OFV            TACTGAGCTACATCACCCTCAGCGAGGTAGAGGGTCTCAGCACCATGGGAGGTGACAAAA 3672
               **************************** ******** ***** ******** ** ****

                                                     IGR3
CNSV           GCCACAGTTATCGTTAAGTATGACTCAGGCGAAGTACCCTGGAGAAGAATCCCGCCTATC 3780
CILV-N         GCCACAGTTATCGTTAAGTGTGACTCAGGCGAAGTACCCTGGAGAAGAATCCCGCCTATC 3737
OFV            GCCACAGCTATCGTTAATTGTTACTCGGGCTAAGGACCCTGACGGAGAATGCTGCCTTCC 3732
               ******* ********* * * **** *** *** ******  * ***** * ****  *

CNSV           CAATAAACATGTCTACTTACCTACCATAATTTAAATAAAAAAAAAATCATCGAATCATTG 3840
CILV-N         CAATAAACATGTCTACTTACCTACCATAATTTAAATAAAACAACAATCATCGAATCATTG 3797
OFV            CAATAAGCATATCTACTTATCTACCGTAATTTAAATAAAACAACAATCTTCGAATCATTG 3792
               ****** *** ******** ***** ************** ** **** ***********
                                                         ORF4:    M
CNSV           ATTATTCATATATCGGATCTAACAATTGTCTTTTGTCATGTCAAAACAGATTAATATGTG 3900
CILV-N         ATTATTCATATATCAGATCTAACAATTGTCTTTTGTCATGTCTAAACAGATTAATATGTG 3857
OFV            ATCATTTATATATCAGATCTAACGATTGTCTTTTATCATGTCTAAGCAGATCAATATGTG 3852
               ** *** ******* ******** ********** ******* ** ***** ********

CNSV           CACCGTGATGTCCTTCAGGTCACTAATCACTGTGATAGGACCCAGATCAGTGGATCTTGG 3960
CILV-N         CACTGTGATGTCCTTCAGGTCCCTAATCACCGTGATAGGACCCAGAGCAGTGGATCTTGG 3917
OFV            CACTGTGATGTCCTTCAGATCACTCATCACTGTGATAGGACCCAGGTCAGTGGATCTTGG 3912
               *** ************** ** ** ***** **************  *************

CNSV           AGCCGGGTTCAAGGAGGCGGTGCTGCGTGCTATCACTTCACTCAAGATCAAGGCTAAGGA 4020
CILV-N         AGCCGGGTTCAAGGAGGCGGTGCTGCGTGCTATCACTTCACTCAGGATCAAGGCTAAGGA 3977
OFV            AGCCGGATTCAAGGAGGCGGTGCTGCGAGCAATCACTTCACTCAAGGTCAAGGCCAAGGA 3972
               ****** ******************** ** ************* * ******* *****

CNSV           CCCAAAAGGGACAGAGATTGATGGTCCCTGGCAGGAGCTGCTGGTGGAGATTGCCACTAT 4080
CILV-N         CCCCAAAGGGACAGAGATTGAGGGTCCCTGGCAGGAGCTGCTGGTGGAGATTGCCACTAT 4037
OFV            CCCGAAAGGGGCCGAGATAGATGGCCCCTGGCAAGAGCTACTGGTGGAGATTGCCACCAT 4032
               *** ****** * ***** ** ** ******** ***** ***************** **


CNSV           GACAAAGTCAGCATTCACCGGCCCTACCATCAAGAAAGACCTGGAGCAGGGGAATGTCTA 4140
CILV-N         GACAAAGTCAGCATTCACCGGCCCTACCATCAAGAAAGACCTGGAGCAGGGGAATGTCTA 4097
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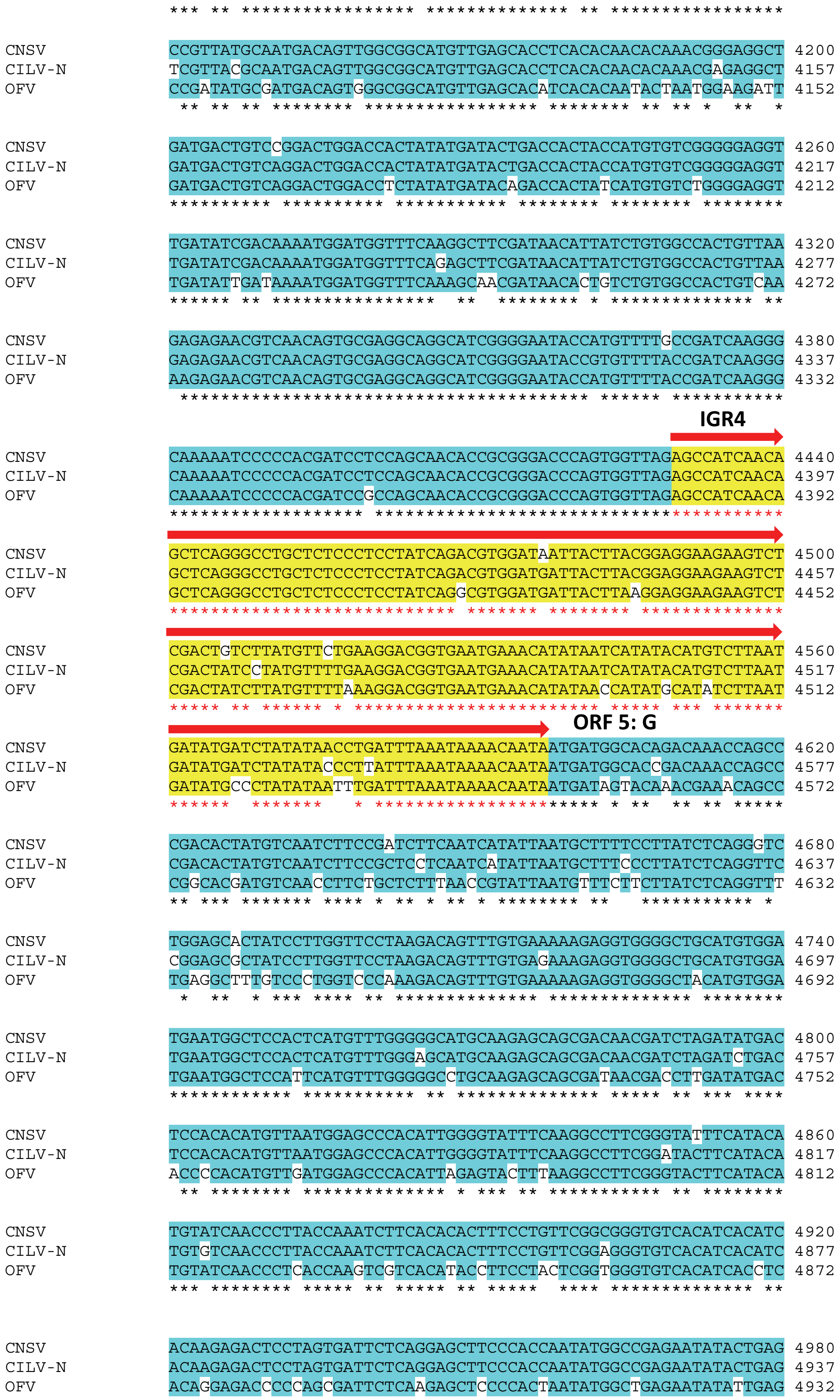

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CNSV             CCGTTATGCAATGACAGTTGGCGGCATGTTGAGCACCTCACACAACACAAACGGGAGGCT 4200
CILV-N           TCGTTACGCAATGACAGTTGGCGGCATGTTGAGCACCTCACACAACACAAACGAGAGGCT 4157
OFV              CCGATATGCGATGACAGTGGGCGGCATGTTGAGCACATCACACAATACTAATGGAAGATT 4152
                  ** ** ** ******** ***************** ******** ** ** *  **  *

CNSV             GATGACTGTCCGGACTGGACCACTATATGATACTGACCACTACCATGTGTCGGGGGAGGT 4260
CILV-N           GATGACTGTCAGGACTGGACCACTATATGATACTGACCACTACCATGTGTCGGGGGAGGT 4217
OFV              GATGACTGTCAGGACTGGACCTCTATATGATACAGACCACTATCATGTGTCTGGGGAGGT 4212
                 ********** ********** *********** ******** ******** ********

CNSV             TGATATCGACAAAATGGATGGTTTCAAGGCTTCGATAACATTATCTGTGGCCACTGTTAA 4320
CILV-N           TGATATCGACAAAATGGATGGTTTCAGAGCTTCGATAACATTATCTGTGGCCACTGTTAA 4277
OFV              TGATATTGATAAAATGGATGGTTTCAAAGCAACGATAACACTGTCTGTGGCCACTGTCAA 4272
                 ****** ** ****************  **  ******** * ************** **

CNSV             GAGAGAACGTCAACAGTGCGAGGCAGGCATCGGGGAATACCATGTTTTGCCGATCAAGGG 4380
CILV-N           GAGAGAACGTCAACAGTGCGAGGCAGGCATCGGGGAATACCGTGTTTTACCGATCAAGGG 4337
OFV              AAGAGAACGTCAACAGTGCGAGGCAGGCATCGGGGAATACCATGTTTTACCGATCAAGGG 4332
                  **************************************** ****** ***********
                                                                    IGR4
CNSV             CAAAAATCCCCCACGATCCTCCAGCAACACCGCGGGACCCAGTGGTTAGAGCCATCAACA 4440
CILV-N           CAAAAATCCCCCACGATCCTCCAGCAACACCGCGGGACCCAGTGGTTAGAGCCATCAACA 4397
OFV              CAAAAATCCCCCACGATCCGCCAGCAACACCGCGGGACCCAGTGGTTAGAGCCATCAACA 4392
                 ******************* ****************************************

CNSV             GCTCAGGGCCTGCTCTCCCTCCTATCAGACGTGGATAATTACTTACGGAGGAAGAAGTCT 4500
CILV-N           GCTCAGGGCCTGCTCTCCCTCCTATCAGACGTGGATGATTACTTACGGAGGAAGAAGTCT 4457
OFV              GCTCAGGGCCTGCTCTCCCTCCTATCAGGCGTGGATGATTACTTAAGGAGGAAGAAGTCT 4452
                 **************************** ******* ******** **************

CNSV             CGACTGTCTTATGTTCTGAAGGACGGTGAATGAAACATATAATCATATACATGTCTTAAT 4560
CILV-N           CGACTATCCTATGTTTTGAAGGACGGTGAATGAAACATATAATCATATACATGTCTTAAT 4517
OFV              CGACTATCTTATGTTTTAAAGGACGGTGAATGAAACATATAACCATATGCATATCTTAAT 4512
                 ***** ** ****** * ************************ ***** *** *******
                                                          ORF 5: G
CNSV             GATATGATCTATATAACCTGATTTAAATAAAACAATAATGATGGCACAGACAAACCAGCC 4620
CILV-N           GATATGATCTATATACCCTTATTTAAATAAAACAATAATGATGGCACCGACAAACCAGCC 4577
OFV              GATATGCCCTATATAATTTGATTTAAATAAAACAATAATGATAGTACAAACGAAACAGCC 4572
                 ******  *******   * ********************** * **  ** ** *****

CNSV             CGACACTATGTCAATCTTCCGATCTTCAATCATATTAATGCTTTTCCTTATCTCAGGGTC 4680
CILV-N           CGACACTATGTCAATCTTCCGCTCCTCAATCATATTAATGCTTTCCCTTATCTCAGGTTC 4637
OFV              CGGCACGATGTCAACCTTCTGCTCTTTAACCGTATTAATGTTTCTTCTTATCTCAGGTTT 4632
                 ** *** ******* **** * ** * ** * ******** **   *********** *

CNSV             TGGAGCACTATCCTTGGTTCCTAAGACAGTTTGTGAAAAAGAGGTGGGGCTGCATGTGGA 4740
CILV-N           CGGAGCGCTATCCTTGGTTCCTAAGACAGTTTGTGAGAAAGAGGTGGGGCTGCATGTGGA 4697
OFV              TGAGGCTTTGTCCCTGGTCCCAAAGACAGTTTGTGAAAAAGAGGTGGGGCTACATGTGGA 4692
                  *  **  * *** **** ** ************** ************** ********

CNSV             TGAATGGCTCCACTCATGTTTGGGGGCATGCAAGAGCAGCGACAACGATCTAGATATGAC 4800
CILV-N           TGAATGGCTCCACTCATGTTTGGGAGCATGCAAGAGCAGCGACAACGATCTAGATCTGAC 4757
OFV              TGAATGGCTCCATTCATGTTTGGGGGCCTGCAAGAGCAGCGATAACGACCTTGATATGAC 4752
                 ************ *********** ** ************** ***** ** *** ****

CNSV             TCCACACATGTTAATGGAGCCCACATTGGGGTATTTCAAGGCCTTCGGGTATTTCATACA 4860
CILV-N           TCCACACATGTTAATGGAGCCCACATTGGGGTATTTCAAGGCCTTCGGATACTTCATACA 4817
OFV              ACCCCACATGTTGATGGAGCCCACATTAGAGTACTTTAAGGCCTTCGGGTACTTCATACA 4812
                  ** ******** ************** * *** ** *********** ** ********

CNSV             TGTATCAACCCTTACCAAATCTTCACACACTTTCCTGTTCGGCGGGTGTCACATCACATC 4920
CILV-N           TGTGTCAACCCTTACCAAATCTTCACACACTTTCCTGTTCGGAGGGTGTCACATCACATC 4877
OFV              TGTATCAACCCTCACCAAGTCGTCACATACCTTCCTACTCGGTGGGTGTCACATCACCTC 4872
                 *** ******** ***** ** ***** ** *****  **** ************** **


CNSV             ACAAGAGACTCCTAGTGATTCTCAGGAGCTTCCCACCAATATGGCCGAGAATATACTGAG 4980
CILV-N           ACAAGAGACTCCTAGTGATTCTCAGGAGCTTCCCACCAATATGGCCGAGAATATACTGAG 4937
OFV              ACAGGAGACCCCCAGCGATTCTCAAGAGCTCCCCACTAATATGGCTGAGAATATATTGAG 4932
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                    *** ***** ** ** ******** ***** ***** ******** ********* ****

CNSV                ACATGGCGGTCCTGAGGGAGAGGTTTTTATGACGAAAGAGCCCCAATGCAGCCTCTGGAG 5040
CILV-N              ACATGGCGGCCCTGAGGGAGAGGTATTTATGACAAAAGAGCCCCAATGCAGCCTCTGGAG 4997
OFV                 GCATGGCGGCCCTGAGGGAGAGATATTTATGACAAAAGAGCCCCAATGCAGCCTCTGGAG 4992
                     ******** ************ * ******** **************************

CNSV                TGACAATTATGTGAAAGGCATGCTTGTGAAGTATCACAGGGTGATTTTGACTGTCTCGCA 5100
CILV-N              CGACAATTATGTGAAAGGCATGCTTGTGAAGTATCACAGGGTGATTTTGACTGTCTCGCA 5057
OFV                 TGACAATTATGTGAAAGGCATGCTTGTGAAGTATCACAGGGTGATTTTGACTGTCTCACA 5052
                     ******************************************************** **

CNSV                CACCGAAAGAGGGATAACGGTTCTTTACGAGCAGGAGGGAGTGACGGGCCATGGCAAGGT 5160
CILV-N              CACCGAAAGAGGGATAACGGTTCTTTACGAGCAGGAGGGAGTGATAGGCCACGGCAAGGT 5117
OFV                 CACCAAGAGCGGGATAACGGTTCTTTACGAGCAGGAGGGAGTGATAGGCCATGGCAAGGT 5112
                    **** * ** **********************************  ***** ********

CNSV                CGGTAAAACCGTGTCATCATCCGGTACTCTCGTGTGGGACATACGGGCACAATACCCAAA 5220
CILV-N              CGGTAAAGCCATGTCATCATCGGGTACTCTCGTGTGGGACATACGGGCACAATACCCAAA 5177
OFV                 CGGCAAAACCACTTCATCATCAGGAACCCTTGTGTGGGACGTGAGAGCACAATACCCGAA 5172
                    *** *** **  ********* ** ** ** ********* *  * *********** **

CNSV                GTGCAGCTATAGACCTACGGGGGTTCTTAGCTGTAAACGAGAGGGATCCTACATACGTTG 5280
CILV-N              GTGCAACTATCGACCTACGGGGGTTCTTAGCTGTAAACGAGAGGGATCCTACATACGTTG 5237
OFV                 GTGCAACTATCGCCCTACAGGGGTTCTTAGCTGTAAGAGAGAAGAATCATACATACGTTG 5232
                    ***** **** * ***** *****************  **** * *** ***********

CNSV                CAGAGGTATGTCGGAGGAGAGAATCTCATCCACCAAGGAGGACTGCGGGGTCACCGTATT 5340
CILV-N              CAGAGGTATGTCAGAGGAGAGAATCTCATCCACCAAGGAGGACTGCGGGGTCATTATATT 5297
OFV                 CAGAGGTATGTCAGAGGAGAAAATTTCATCCATCACGGAGGACTGTGGAGTCATCATATT 5292
                    ************ ******* *** ******* ** ********* ** ****   ****

CNSV                AACGACGGACACAAGGAATATATATGGGTACCATAAACATGATGGTGCACTGGCCACCAC 5400
CILV-N              AACGACGGACACAAGGAATATATACGGGTACCATAAACATGATGGTGCATTGGCCACAAC 5357
OFV                 AACGACAGACACAAGGAACATATATGGATACCATAAACATGATGGAGCATTGACTACCAC 5352
                    ****** *********** ***** ** ***************** *** ** * ** **

CNSV                TCAGACGGATGACAATCAGATAGGCATGGTGAAGAAGATCATAGAGATAGAGAATCTCAT 5460
CILV-N              TCAGACGGATGACAATCAGATAGGTATGGTGAAGAAGATCATAGAGATAGAGAATCTTAT 5417
OFV                 TCAGACGGATGACAATCAGATAGGTATGGTGAAGAAGATCATCGAGATAGAGAATCTCAT 5412
                    ************************ ***************** ************** **

CNSV                GTGTCATCATCTATGTGAGTCCTCATCCGAGGAGGGGGGAGTTACACACCATGAATATTT 5520
CILV-N              GTGTCATCATCTATGTGAGTCCTCATCTGAGGAGGGGGGAGTGACACACCATGAATATTT 5477
OFV                 GTGTCATCATCTATGTGAGTCCTCATCTGAGGAAGGGGGAGTGACACACCATGAATATTT 5472
                    *************************** ***** ******** *****************

CNSV                GGTTTCCACTCCAATAGGACCATGGCTATCCGTATCCACAGAGTCCCATCGCACCATGTT 5580
CILV-N              GGTCTCCACTCCTATAGGACCATGGCTATCTGTATCCACAGAGTCCCATCGCACCATGTT 5537
OFV                 GGTCTCCACACCGATAGGGCCGTGGCTAGCCGTCTCTACGGAGTCCCATCGCACCATGTT 5532
                    *** ***** ** ***** ** ****** * ** ** ** ********************

CNSV                CATGTGTACAGATGAAAGCACAGTGTCATTGGTGATTCCTGTGGTACTATGTGGCAATGG 5640
CILV-N              CATGTGTACAGATGAAAGCATAGTGTCACTGGTGGTTCCTGTGGTACTATGTGGCAATGG 5597
OFV                 TATGTGTACGGATGAGAGTGCAGTGTCATTGGTGGTTCCAGTGGTATTGTGTGGCAATGG 5592
                     ******** ***** **   ******* ***** **** ****** * ***********

CNSV                ACCCTTGGTGAAAGTAAGGGTCAATGAGAAGGAACAATGGTGGAATATCTCCTCTCCGTA 5700
CILV-N              ACCCTTGGTGAAGGTAAGGGTCAATGAGAAGGAACAATGGTGGAATATCTCCTCTCCGTA 5657
OFV                 GCCCTTGGTGAAAGTAAGGGTTAATGAGAGGGAGCAATGGTGGAACATATCCTCTCCATA 5652
                     *********** ******** ******* *** *********** ** ******** **

CNSV                TGTTGGCATGGGGACTCATTGTGTCCCAGGATTGTCTACAGGATTATCTACTGCTGATGG 5760
CILV-N              TGTTGGCATGGGGACTCATTGTGTCCCAGGCTTGTCTACAGGCTTATCTACTGCTGACGG 5717
OFV                 TGTTGGTATGGGGACTCATTGTGTCCCGGGCCTGTCTACTGGATTATCCACTGTTGATGG 5712
                    ****** ******************** **  ******* ** ***** **** *** **

CNSV                TGTGATAAACACATGGTTAGGACAAGTCACCATAGTGAATGGATCCTTCACTTTCAAGCG 5820
CILV-N              TGTGATAAACACATGGTTAGGACAAGTCACCATAGTGAATGGATCCTTCACTTTCAAGCG 5777
OFV                 TGTGATAAACACATGGTTGGGACAAGTCACCATAGTGAACGGATCTTTCACTTTCAAGCG 5772
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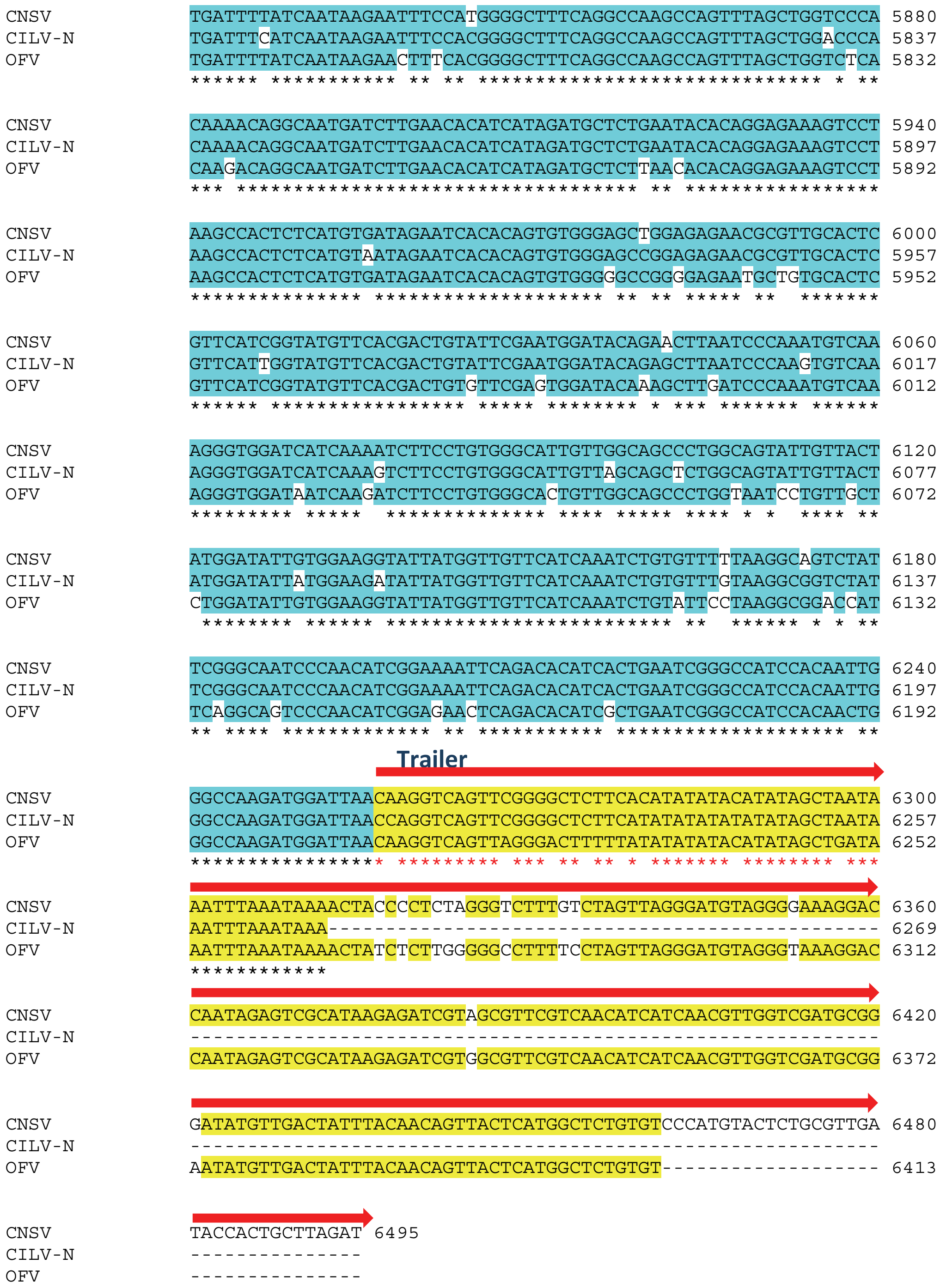

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CNSV          TGATTTTATCAATAAGAATTTCCATGGGGCTTTCAGGCCAAGCCAGTTTAGCTGGTCCCA 5880
CILV-N        TGATTTCATCAATAAGAATTTCCACGGGGCTTTCAGGCCAAGCCAGTTTAGCTGGACCCA 5837
OFV           TGATTTTATCAATAAGAACTTTCACGGGGCTTTCAGGCCAAGCCAGTTTAGCTGGTCTCA 5832
              ****** *********** ** ** ****************************** * **

CNSV          CAAAACAGGCAATGATCTTGAACACATCATAGATGCTCTGAATACACAGGAGAAAGTCCT 5940
CILV-N        CAAAACAGGCAATGATCTTGAACACATCATAGATGCTCTGAATACACAGGAGAAAGTCCT 5897
OFV           CAAGACAGGCAATGATCTTGAACACATCATAGATGCTCTTAACACACAGGAGAAAGTCCT 5892
              *** *********************************** ** *****************

CNSV          AAGCCACTCTCATGTGATAGAATCACACAGTGTGGGAGCTGGAGAGAACGCGTTGCACTC 6000
CILV-N        AAGCCACTCTCATGTAATAGAATCACACAGTGTGGGAGCCGGAGAGAACGCGTTGCACTC 5957
OFV           AAGCCACTCTCATGTGATAGAATCACACAGTGTGGGGGCCGGGAGAATGCTGTGCACTC 5952
              *************** ******************** ** ** ***** **  *******

CNSV          GTTCATCGGTATGTTCACGACTGTATTCGAATGGATACAGAACTTAATCCCAAATGTCAA 6060
CILV-N        GTTCATTGGTATGTTCACGACTGTATTCGAATGGATACAGAGCTTAATCCCAAGTGTCAA 6017
OFV           GTTCATCGGTATGTTCACGACTGTGTTCGAGTGGATACAAAGCTTGATCCCAAATGTCAA 6012
              ****** ***************** ***** ******** * *** ******* ******

CNSV          AGGGTGGATCATCAAAATCTTCCTGTGGGCATTGTTGGCAGCCCTGGCAGTATTGTTACT 6120
CILV-N        AGGGTGGATCATCAAAGTCTTCCTGTGGGCATTGTTAGCAGCTCTGGCAGTATTGTTACT 6077
OFV           AGGGTGGATAATCAAGATCTTCCTGTGGGCACTGTTGGCAGCCCTGGTAATCCTGTTGCT 6072
              ********* *****  ************** **** ***** **** * *  **** **

CNSV          ATGGATATTGTGGAAGGTATTATGGTTGTTCATCAAATCTGTGTTTTTAAGGCAGTCTAT 6180
CILV-N        ATGGATATTATGGAAGATATTATGGTTGTTCATCAAATCTGTGTTTGTAAGGCGGTCTAT 6137
OFV           CTGGATATTGTGGAAGGTATTATGGTTGTTCATCAAATCTGTATTCCTAAGGCGGACCAT 6132
               ******** ****** ************************* **  ****** * * **

CNSV          TCGGGCAATCCCAACATCGGAAAATTCAGACACATCACTGAATCGGGCCATCCACAATTG 6240
CILV-N        TCGGGCAATCCCAACATCGGAAAATTCAGACACATCACTGAATCGGGCCATCCACAATTG 6197
OFV           TCAGGCAGTCCCAACATCGGAGAACTCAGACACATCGCTGAATCGGGCCATCCACAACTG 6192
              ** **** ************* ** *********** ******************** **

CNSV          GGCCAAGATGGATTAACAAGGTCAGTTCGGGGCTCTTCACATATATACATATAGCTAATA 6300
CILV-N        GGCCAAGATGGATTAACCAGGTCAGTTCGGGGCTCTTCATATATATATATATAGCTAATA 6257
OFV           GGCCAAGATGGATTAACAAGGTCAGTTAGGGACTTTTTATATATATACATATAGCTGATA 6252
              ***************** ********* *** ** ** * ******* ******** ***

CNSV          AATTTAAATAAAACTACCCCTCTAGGGTCTTTGTCTAGTTAGGGATGTAGGGGAAAGGAC 6360
CILV-N        AATTTAAATAAA------------------------------------------------ 6269
OFV           AATTTAAATAAAACTATCTCTTGGGGGCCTTTTCCTAGTTAGGGATGTAGGGTAAAGGAC 6312
              ************

CNSV          CAATAGAGTCGCATAAGAGATCGTAGCGTTCGTCAACATCATCAACGTTGGTCGATGCGG 6420
CILV-N        ------------------------------------------------------------
OFV           CAATAGAGTCGCATAAGAGATCGTGGCGTTCGTCAACATCATCAACGTTGGTCGATGCGG 6372

CNSV          GATATGTTGACTATTTACAACAGTTACTCATGGCTCTGTGTCCCATGTACTCTGCGTTGA 6480
CILV-N        ------------------------------------------------------------
OFV           AATATGTTGACTATTTACAACAGTTACTCATGGCTCTGTGT------------------- 6413

CNSV          TACCACTGCTTAGAT 6495
CILV-N        ---------------
OFV           ---------------
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Comparison of RNA2.

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                 Leader
CNSV            GAGGAGTCATGGGGACACAGGACAACCAACTGTCTCATTGCGAAGTCAAATTCCGTGATG 60
CILV-N          --------------ACACAGGACAACCAACTGTCTCATTGCGAAGTCAAATTCCGTGATG 46
OFVRNA2         --------------ACACAGGACAACCAACTGTCTCATTGCGAAGTCAAATTCCGTGATG 46
                              **********************************************

CNSV            GGTCCGTCTTTCCTAGAATAAGGGAAGGATACTATAGGATTGATCCTAGTTCTTCTCTAC 120
CILV-N          GGTCCGTCTTTCCTAGAATAAGGGAAGGATACTATAGGATTGATCCTAGTTCTTCTCTAC 106
OFVRNA2         GGTCCGTCTTTCCTAGAATAAGGGAAGGATACTATAGGATTGATCCTAGTTCTTCTCTAC 106
                ************************************************************

CNSV            GCTGGGTGCTACACGGATCATGCAAAACAACCAAATATCATATATTATTGCACATACACT 180
CILV-N          GCTGGGTGCTACACGGATCATGCAAAACAACCAAATATCATATATTATTGCGCATACACT 166
OFVRNA2         GCTGGGTGCTTCACGGATCATAAAAAACAACCAACCATCATATATTATTACGCATACACT 166
                ********** **********  ***********  ************* * ********
                                   ORF 6: L
CNSV            TTTGAACTAATCAGATATGAATTCACTATTTAAGCAGTGGTATCAACGCAGAGTACT-AA 239
CILV-N          TTTGAACTAATCAGATATGAATTCACTGTTTCAGGAATGTTA----CACAGAGTCCTTAA 222
OFVRNA2         TTTGAACTAATCAGATATGAATTCACTATTTCAGGAATGTTA----CACCGAGTCCCTGA 222
                *************************** *** ** * ** **    * * **** *   *

CNSV            TGGGCGATAACACGGACACCGTCATCACCGGTAAGGGGAGATCCGCCCATAACGAGGGAG 299
CILV-N          TGGACGATAACACGGACACCATCATCACCGGTAAGGGGAGATCTGCCCATAATGAGGGAG 282
OFVRNA2         TGGACGATAATACGGACACCATCATCACCGGTAAGGGGAGGTCTGCCCACAATGAGGGAG 282
                *** ****** ********* ******************* ** ***** ** *******

CNSV            AATACCATCTAAAGTCTGCCTTGAGAAGCCACAGTGATTATGTGAAGAACAAGCATCAAG 359
CILV-N          AATACCATCTAAAGTCTGCCCTGAGGAGCCACAGTGATTATGTGAAGAACAAGCATCAAG 342
OFVRNA2         AATACCACCTAAAGTCTGCCCTGAGAAGCCACAGTGATTATGTGAAAAACAAGCATCAAG 342
                ******* ************ **** ******************** *************

CNSV            CCAAGGATCTGCTGAAGCTCAGTGAGCATACATCCGTATATGCATCAAAGAATCCATGCA 419
CILV-N          CCAAGGATCTGCTAAAGCTCAGTGAGCATACATCCGTACATGCATCGAAGAATCCATGCA 402
OFVRNA2         CCAAGGATCTGCTAAAGCTCAGTGAACATACATCTGTATATGCACCGAAAAACCCATGCA 402
                ************* *********** ******** *** ***** * ** ** *******

CNSV            AATTGCTACCCACTCTATGGAAGGGAGTGATCGAGGGGGAGGAGTGGGTTGAAGATGAGG 479
CILV-N          AACTGCTACCCACTCTATGGAAGGGAGTGGTCGAAGGGGAGGAGTGGGTCGAGGATGAGG 462
OFVRNA2         AGTTACTGCCCACTCTATGGAGAGGGGTGATTGAAGGGGAGGAGTGGGTTGAAGATGAGG 462
                *  * ** *************  ** *** * ** ************** ** *******

CNSV            TTGTAATATATCTAAAAGAGCTCTATCATGATGACGAGACTGATGATTGTGCTCTTGAGC 539
CILV-N          TTGCAATATATCTAAAGGAGCTCTATCATGATGACGAGACTGATGATTGTGCTCTTGAGC 522
OFVRNA2         TTATAATATACTTGAGAGAGCTCTATCATGACGACGAAACAGACGACTGTGCTCTTGAGC 522
                **  ******  * *  ************** ***** ** ** ** *************

CNSV            TCCTCGATGCAGAGCTGGAGCATGTGTGCCACGATGATGACAAAACAGGGATAATGCAGG 599
CILV-N          TCCTCGATGCAGAGCTGGAGCATGTGTGCCACGACGATGACAAAACAGGGATAATGCAGG 582
OFVRNA2         TCCTTGATGCAGAGCTGGAACATGTGTGTCATGACGATGACAAAACAGGGATAATGCAGG 582
                **** ************** ******** ** ** *************************

CNSV            GGGTCGTACAGTGTCAGGAGGATGCATGGAACAAACACACCATCTACGGTAGAGCTAATA 659
CILV-N          GGGTCGTACAGTGTCAGGAGGATGCATGGAACAAACACACCATCTACGGTAGAGCTAACA 642
OFVRNA2         GAGTCGTACAGTGTCAGGAGGATGCATGGAACAAACATACCATCTACGGTAGGGCCAATA 642
                * *********************************** ************** ** ** *

CNSV            TCCTCCGGTGGGCCCTGACAAGGATAGTGATAGATCATAATAAAGCAGTGGTATCAACGC 719
CILV-N          TCCTTCGGTGGGCCCTGACAAGGATAGTGATAGATCATAATAAAGAGGAGCCAACAGAGC 702
OFVRNA2         TCCTTCGATGGGCCTTGACAAGGATAGTGATCGATCACAATAAAGAGGAGCCTACAGAAC 702
                **** ** ****** **************** ***** *******  * *    **   *

CNSV            AGAGTACCATGGGGAGAAAGTTGGATGATAAGGTGGTTGCTTATTCATTGAGCAGCTCAT 779
CILV-N          TTAGTCCCATGGGGAGGAAGTTGGATGGCGGGGTGTTTGCTTATTCATTGAGCAGCTCAT 762
OFVRNA2         TCAGCCCCATGGGGAGGAAATTGGCCGATAAGGTGTTTGCTTATTCACTGAGCAGCTCAT 762
                  **  ********** ** ****  *    **** *********** ************
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CNSV            TATCTATGATGATAAGCAGAAGTTGGTGTCATCTGATGATCAATGACAGCCCCGGAACCA 839
CILV-N          TATCTATGATGATAAGCAGAAGTTGGTGTCATCTGATGATCAATGACAGCCCCGGAACCA 822
OFVRNA2         TATCTATGATGATAAGCAGAAGTTGGTGTCATCTGATGATTAATGACAGCCCAGGCACCA 822
                **************************************** *********** ** ****

CNSV            TCAACATTCAGCACCTGATCAACACCCTGGATAAACTGACAGAACGAGTGAACATAATGA 899
CILV-N          TCAACATTCAGCATCTGATCAACACCCTGGATAAACTGACAGAACGAGTGAACATAATGA 882
OFVRNA2         TCAACATCCAGCACTTGATCAACACCCTGGATAAACTGACGGAACGAGTGAACATAATGA 882
                ******* *****  ************************* *******************

CNSV            CTTATCTAACCCTCTGCAACAAGACTGGGCTCTCAAGCATTTATCCGTCAGTTGACATCA 959
CILV-N          CTTATCTAACCCTCTGCAACAAGACTGGGCTCTCAAGCATTTATCCGTCAGTTGACATCA 942
OFVRNA2         CCTACCTAACTCTCTGCAATAAGACTGGACTTTCAAGCATTTATCCATCAGTAGACATCA 942
                * ** ***** ******** ******** ** ************** ***** *******

CNSV            CTCTGAGAATCATTCAGCTAGGTGACCAATTGATACTGAATGAGGGCAATAATGCCTTTC 1019
CILV-N          CTCTGAGAATCATTCAGCTAGGTGACCAATTGATACTGAATGAGGGCAATAATGCCTTTC 1002
OFVRNA2         CTTTGAAAATAATTCAGCTGGGTGACAATTTAATATTAAATGAAGGCAATGATGCTTTCC 1002
                ** *** *** ******** ****** * ** *** * ***** ****** **** ** *

CNSV            GCGGGCTGGCCAGTTATGAAGCTATCTGTGTCGGTGAGATAATCAATAGGGGGGACTCAT 1079
CILV-N          GCGGGCTGGCCAGTTATGAAGCTATCTGTGTAGGTGAGATAATCAACAGGGGGGACTCAT 1062
OFVRNA2         GCGGGTTGGCCAGTTACGAAGCCATCTGTGTCGGTGCGATAATCAACAGGGGCGATTCGT 1062
                ***** ********** ***** ******** **** ********* ***** ** ** *

CNSV            CAGTGTGGGATGTCGGGAGATTTCTCAACACCATGCTACAGGAGGTTGGTGCATTGGGAG 1139
CILV-N          CAGTGTGGGATGTCGGGAGATTTCTCAACACCATGCTACAGGAGGTTGGTGCATTGGGGG 1122
OFVRNA2         CTGTGTGGGATGTTGGTAGATTCCTCAACACTATGGTACAAGAGGTTGGATCATTGGGAG 1122
                * *********** ** ***** ******** *** **** ********  ******* *

CNSV            AGAACTACAAGACATGGTCATCAGATGTTCTGGTAATACTTCAAGGGCTAAGGATACAAC 1199
CILV-N          AGAACTACAAGACATGGTCATCAGATGTTCTAGTAATACTTCAAGGTCTAAGGATACAAC 1182
OFVRNA2         AGAACTACAAGACATGGTCATCTGATGTCCTGGTGATACTGCAAGGTTTGAAGATCCAGC 1182
                ********************** ***** ** ** ***** *****  * * *** ** *

CNSV            AAGTGTCATGCCTGCATGGCATATATCGCATCTGGGGACACCCGGTTGTTGATCTTGAGA 1259
CILV-N          AAGTGTCATGCCTGCATGGCATGTATCGCATCTGGGGACATCCGGTTGTTGATCTTGAGA 1242
OFVRNA2         AAGTGTCATGCCTGCATGGCATGTATCGTATCTGGGGACATCCAGTTGTTGATCTTGAGA 1242
                ********************** ***** *********** ** ****************

CNSV            AAGGCCTCATGAAGCTCCGCTCGGTGGCTTTGATGGAGAAAGAGATTCCGCCTGAATGTG 1319
CILV-N          AAGGCCTCATGAAGCTCCGCTCGGTGGCTCTGATGGAGAAAGAGATTCCGCCTGAATGTG 1302
OFVRNA2         AGGGCCTCATGAAGCTTCGTTCAGTAGCTCTAATGGAGAAGGAGATCCCACCAGAATGTG 1302
                * ************** ** ** ** *** * ******** ***** ** ** *******

CNSV            CCAGAAATACCTCCAATATGTTCAAGGAGATATTCTTCACACAGTATTTCAGGCGCCACA 1379
CILV-N          CCAGGAATACCTCCAACATGTTCAAGGAGATATTCTTCACACAGTATTTCAGGCGACACA 1362
OFVRNA2         CCAGGAATACCTCCAATATGTTCAAGGAGATATTCTTCACGCAATACTTCAGACGCCACA 1362
                **** *********** *********************** ** ** ***** ** ****

CNSV            AGTTTTACCCTCCACATACCTGGACCGGTCCTGAAGGAGGCAATTACATCAAGCAGGTCC 1439
CILV-N          AGTTTTACCCTCCACATACCTGGACTGGTCCTGAAGGAAGCAATTACATCAAGCAGGTCC 1422
OFVRNA2         AGTTTTACCCCCCACACACCTGGACCGGTCCGGAAGGAAGCAATTACATCAAGCAGGTCC 1422
                ********** ***** ******** ***** ****** *********************

CNSV            TATCACTTGAGAAAGAGTTGGATATACACAACATAAGATATCACTTGGAGGACTGGGGGA 1499
CILV-N          TATCACTTGAGAAAGAGTTAGATATACACAACATAAGATATCACTTGGAGGACTGGGAGA 1482
OFVRNA2         TATCACTTGAGAAAGAGTTGGATATACACAACATAAGATACCACTTGGAGGATTGGGAGA 1482
                ******************* ******************** *********** **** **

CNSV            ATATCAGATGTGAGAAGACATTCGAGATCCCGGCCACATACAGCCTTGCATCATGTATCA 1559
CILV-N          ATATCAGATGTGAGAAGACATTCGAGATCCCGGCCACATACAGCCTTGCATCATGTATCA 1542
OFVRNA2         ACATCAGATGTGAGAAGACCTTCGAGATTCCGGCCACATACAGTCTTGCATCATGTATCA 1542
                * ***************** ******** ************** ****************

CNSV            AAGACAGAGCAATATCCCCAAAACGATCAGAGTTGGTATCCATGATCATCAGAGGAGGAT 1619
CILV-N          AAGATAGAGCAATATCCCCAAAACGATCAGAGTTGGTATCCATGATCATTAGAGGAGGAT 1602
OFVRNA2         AAGACAGAGCTATATCCCCGAAACGGTCAGAGTTGGTATCCATGATAATCAGAGGGGGAT 1602
                **** ***** ******** ***** ******************** ** ***** ****
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CNSV            CTGTGATGAGTCAAAGCTCCAGAAGGGGGGTGTTAAAATGGCTAGACAGCACCATGATCC 1679
CILV-N          CTGTAATGAGTCAGAGCTCCAGAAGGGGGGTGTTAAAATGGCTGGACAGTACCATGATCC 1662
OFVRNA2         CTGTGATGAGTCAAAGCTCAAGGAGGGGGGTTCTGAAATGGCTGGATAGTACCATGATTC 1662
                **** ******** ***** ** ********  * ******** ** ** ******** *

CNSV            CTGTGAGAGAATTCCTGGATGGTATAAATGAGTCGGGTATGTCAAAGGACAACTCAATTA 1739
CILV-N          CCGTGAGAGAATTCCTGGATGGTATAAATGAGTCGGGATTGTCAAAGGACAACTCAATTA 1722
OFVRNA2         CTGTGAGAGAATTCTTGGATGGCATAGATAAATCAGGATTGTCAAAAGACAACTCAATTA 1722
                * ************ ******* *** ** * ** **  ******* *************

CNSV            TTGGCCTATATCCCAAAGAACGAGAGTTGAAGATGGAGGCCAGGTTCTTTGCTCTGATGT 1799
CILV-N          TTGGCCTATATCCTAAAGAACGAGAGTTGAAGATGGAGGCCAGGTTCTTTGCTCTGATGT 1782
OFVRNA2         TCGGCCTGTACCCAAAGGAAAGAGAGTTGAAGATGGAGGCCAGGTTCTTTGCTCTAATGT 1782
                * ***** ** ** ** *** ********************************** ****

CNSV            CTTTCCAAATGAGGTTATACTTCACAACGACAGAGTACATGGCGAATGACAACCTCCTGG 1859
CILV-N          CCTTTCAAATGAGGTTGTACTTCACAATTACAGAGCATATGGCGAATGACAACCTCCTGG 1842
OFVRNA2         CCTTTCAAATGAGGTTATACTTTACAATCACAGAGCATATGGCAAATGACAACCTCTTGG 1842
                * ** *********** ***** ****  ****** * ***** ************ ***

CNSV            ACTACTTTCCCATGGTCACAATGTCCGACAGCATGCTGGAGCTGAACAAAAAGCTGGACA 1919
CILV-N          ACTACTTTCCCATGGTCACAATGTCCGACAGCATGCTGGAGCTGAACAAAAAGCTGGACA 1902
OFVRNA2         ACTACTTCCCCATGGTCACAATGTCTGACAGCATGCTGGAGCTAAACAAGAAGCTGGACA 1902
                ******* ***************** ***************** ***** **********

CNSV            CTCTAAGTAGAAAGCAGGTCACAAAGAAGGAGGGTGTGGTACATTATGTGGTCAATATAG 1979
CILV-N          CTCTAAGTAGAAAGCAAATCACAAAGAAGGAGGGTGTGGTACATTATGTGGTCAATATAG 1962
OFVRNA2         CTCTGAGCCGAAAGCAGGTTACAAAAAAGGAGGGTGTGGTGCATTATGTGGTCAACATCG 1962
                **** **  *******  * ***** ************** ************** ** *

CNSV            ATTTCAGAAAATGGAACCAACAGATGAGGGAAGAGATGACTGTCCCTATGTTTCTTGATG 2039
CILV-N          ATTTCAGAAAATGGAACCAACAGATGAGGGAAGAGATGACTGTCCCTATGTTTCTTGATG 2022
OFVRNA2         ATTTCAGAAAATGGAACCAACAGATGAGAGAGGAGATGACTGTCCCCATGTTCCTTGATG 2022
                **************************** ** ************** ***** *******

CNSV            CTGACAGACTGTTCGGTTACACCAATCTGGTGGGGCGGACGCATGAGATCTTCAAGTCCT 2099
CILV-N          CTGATAGACTGTTCGGTTACACCAATCTGGTGGGGCGGACGCATGAGATCTTTAAGTCCT 2082
OFVRNA2         CTGATAGACTGTTTGGCTACACCAATCTGGTGGGGAGGACACATGAGATTTTCAAGTCCT 2082
                **** ******** ** ****************** **** ******** ** *******

CNSV            CATATATATATCTATCCTCAGGGGAATACGTACCGCAAGTCTCACTCAGAGGAAGGTTGG 2159
CILV-N          CATATATATACTTATCCTCAGGGGAATACGTACCACAAGTCTCACTCAGAGGAAGGTTGG 2142
OFVRNA2         CATATATATACTTATCCTCAGGGGAATATGTACCACAAGTCTCACTCAGAGGAAGGTTGG 2142
                **********  ***************** ***** ************************

CNSV            TGCATGAGGAGCCCTACAGTTGGACCAACGACCCCTCGGGGAAAGAAGGTCTGAGGCAAA 2219
CILV-N          TGCATGAGGAGCCCTACAGTTGGACCAATGACCCCTCTGGGAAGGAAGGTCTGAGGCAAA 2202
OFVRNA2         TGCAAGAGGAGCCCTACAGTTGGACCAATGACCCTTCTGGGAAAGAGGGCCTGCGGCAGA 2202
                **** *********************** ***** ** ***** ** ** *** **** *

CNSV            AATACTGGACCATCATGACTGCATGTGATCTGATGTATGTAGCCAGACAACACGGACTGA 2279
CILV-N          AATATTGGACCATCATGACTGCATGTGATTTGATGTATGTGGCTAGACAACATGGGCTGA 2262
OFVRNA2         AATATTGGACCATCATGACTGCGTGTGACTTAATGTATGTAGCTAGACAACATGGGTTGA 2262
                **** ***************** *****  * ******** ** ******** **  ***

CNSV            AGATTGATCTGGTAGGCGGGGGTGACAATCAGGTCCTGATTGTGGAAGTGACCACAGACA 2339
CILV-N          AGATTGATCTGGTAGGCGGGGGTGACAATCAGGTCCTGATTGTGGAAGTGACCACAGACA 2322
OFVRNA2         AGATTGATCTGGTGGGCGGGGGAGACAATCAGGTGCTGATTGTGGAGGTGACCACCGACA 2322
                ************* ******** *********** *********** ******** ****

CNSV            AAGTCGGGGATGGAGGTGAATTGACCACGGAAGGGAAGTCTGAGTGCAAATTCAAGATGG 2399
CILV-N          AAGTCGGGGATGGAGGTGAATTGACCACGGAGGGGAAGTCTGAGTGCAAATACAAGATGG 2382
OFVRNA2         AGGTTGGAGATGGAGGTGAATTAACAACGGAGGGGAAATCCGAGTGCAAATTCAAGATGG 2382
                * ** ** ************** ** ***** ***** ** ********** ********

CNSV            GGACATTCATGAGCCATCTGTCCAATTACATGGAGAAGAAAGGCCTGCCGTTAAAAACAG 2459
CILV-N          GGACATTCATGAGCCATCTGTCCAATTACATGGAGAAGAAAGGCCTGCCGCTGAAAACAG 2442
OFVRNA2         AAACATTCATGCGCCATCTGTCCAATTACATGGAGAAGAAAGGCCTGCCGCTAAAGACAG 2442
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CNSV            AGGAAACCTGGATTTCACCCAACCTACTCATGTTCTTCAAGATGATGTATTATGATCATA 2519
CILV-N          AGGAGACCTGGATTTCACCCAACCTACTCATGTTCTTCAAGATGATGTATTATGATCATA 2502
OFVRNA2         AGGAAACCTGGATCTCCCCCAACCTGCTCATGTTCTTCAAGATGATGTATTATGACCATA 2502
                **** ******** ** ******** ***************************** ****

CNSV            CTACTCTGGTGTCACCTCTCAAGCAAGCCTCGAGAGTGTTTCCGCTGTCAAATGATCAAG 2579
CILV-N          CTACTCTGGTGTCACCTCTCAAGCAAGCCTCGAGAGTGTTTCCGCTGTCAAATGATCAAG 2562
OFVRNA2         CCACTCTGGTGTCACCTCTCAAACAGGCCTCGAGGGTGTTTCCGTTATCTAATGATCAAG 2562
                * ******************** ** ******** ********* * ** **********

CNSV            TCATGACTATTGGCAACATGGCAGCCACTGTCTCTTCAGGGGTTACAGTACTATCCTCCA 2639
CILV-N          TCATGACTATTGGCAACATGGCAGCCACTGTATCTTCGGGGGTTACAGTACTATCCTCCA 2622
OFVRNA2         TCATGACTATTGGCAACATGGCAGCCACTGTGTCCTCAGGAGTCACAGTACTATCCTCCA 2622
                ******************************* ** ** ** ** ****************

CNSV            AGGACATGCAGATTGGCCCAGCAGCCGCATTCGGAAGACTCATATGTGCTGATTTAGCAT 2699
CILV-N          AAGACATGCAGATTGGCCCAGCAGCTGCTTTTGGAAGACTCATATGTGCTGATTTAGCAT 2682
OFVRNA2         AGGACATGCAGATTGGCCCAGCAGCTGCATTCGGAAGGCTAATATGTGCCGACTTAGCAT 2682
                * *********************** ** ** ***** ** ******** ** *******

CNSV            CGTTGGTCACCAAGGATCATCCCTTGTCTGATGGAGGAGAGATGTGGTCAGACAGCATAA 2759
CILV-N          CGCTGGTCACCAAGGATCATCCCTTGTCTGATGGAGGAGAGATGTGGTCAGACAGCATAA 2742
OFVRNA2         CATTGGTCACCAAGGATCATCCCCTGTCTGATGGAGGAGAGATGTGGTCGGACAGCATAA 2742
                *  ******************** ************************* **********

CNSV            ATATTTGCAGAGGTGGCTCTAGGAGGAAGGTCAACGTTAGGCCGGACCTCAAAACTCCGA 2819
CILV-N          ATATTTGCAGAGGTGGCTCTAGGAGGAAGGTCAACGTTAGGCCGGACCTCAAAACTCCGA 2802
OFVRNA2         GCATTTGCAGGGGAGGCTCAAGGAGGAAGGTCAACGTTAAGCCGAACCTCAAAACCCCAA 2802
                  ******** ** ***** ******************* **** ********** ** *

CNSV            TGAGAATTTTCCTGTCATTAACACTCCTGCACAAGGTCATGGGAGGCCCAGCCATAGTCT 2879
CILV-N          TGAGGATTTTCCTGTCATTAACACTCCTGCACAAGGTCATGGGAGGTCCAGCCATAGTAT 2862
OFVRNA2         TGAGAATCTTCCTGTCATTAACACTCCTACACAAAGTCATGGGAGGTCCAGCCATAGTAT 2862
                **** ** ******************** ***** *********** *********** *

CNSV            CACCCCTGGGTATGATGATGAGGGGATTTCCTGATCCGCTTTGTGAACACTTGACTTGGA 2939
CILV-N          CACCCCTGGGTATGATGATGAGGGGATTTCCTGATCCGCTTTGTGAACACTTGACTTGGA 2922
OFVRNA2         CACCCCTGGGTATGATGATGAGGGGATTTCCTGATCCACTCTGTGAGCATTTGACCTGGG 2922
                ************************************* ** ***** ** ***** ***

CNSV            TCAGTATGATAAAGACAAAATTCTCACAAGCCACTAACTTTGCTTGTATGTCCATCAATA 2999
CILV-N          TCAGTATGATAAAGACAAAATTCCCCCAAGCCACTAACTTTGCTTGTATGTCCATCAACA 2982
OFVRNA2         TCAGTATGATTAAGTCAAAATTCTCACAGGCCGCTAACTTCGCTTGTATGTCTATCAACA 2982
                ********** *** ******** * ** *** ******* *********** ***** *

CNSV            CCAAGGTCCCTTGGGCTCACCTACTAGAAGACCCGGTCAGTGTCAACCATGATGCTCCCA 3059
CILV-N          CCAAGGTTCCTTGGGCTCACCTACTTGAAGACCCGGTCAGTGTCAACCATGATGCTCCCA 3042
OFVRNA2         CCAAGGTCCCTTGGGCCCATCTGCTTGAAGACCCGGTCAGTGTCAACCATGACGCTCCCA 3042
                ******* ******** ** ** ** ************************** *******

CNSV            TGCATGGGCTGGCTGTGCTTAGAAGAGAGGCAGAGCAAGCCCTTGCTAAAGCCTCTGGTT 3119
CILV-N          TGCATGGGCTGGCTGTGCTTAGAAGAGAGGCAGAGCAAGCCCTCGCTAAAGCCTCTGGTT 3102
OFVRNA2         TGCATGGATTGGCTGTACTTAGAAGAGAAGCAGAGCAAGCTCTCGCTAAAGCCTCTGGCT 3102
                *******  ******* *********** *********** ** ************** *

CNSV            ATAAGAATCGAGACTTTATGGATCTGGCCCGCTGTTGTAACAAGAGTCAGATGGAGGGAC 3179
CILV-N          ATAAGAATCGAGACTTTATGGATCTGGCCCGCTGTTGTAACAAGAGTCAGATGGAGGGAC 3162
OFVRNA2         ATAAGAATCGAGATTTTATGGACCTGGCTCGCTGTTGCAACAAGAGTCAAATGGAGGGAT 3162
                ************* ******** ***** ******** *********** *********

CNSV            TGGCTGAGGCACTATGCTCTGGCAAGAATGTGGATATAAGGGTGTTGCATGATGTCATGG 3239
CILV-N          TGGCTGAGGCACTATGCTCTGGCAAGAATGTGGATATAAGGGTGTTGCATGATGTCATGG 3222
OFVRNA2         TGGCTGAGGCACTATGCTCCGGCAAGAATGTAGATATAAGGGTGTTACATGATGTTATGG 3222
                ******************* *********** ************** ******** ****

CNSV            GGGCAAGCTTAGGAGGATATTTCAACTCCATAGCCTCCAAGGTTAACAAGACTGCCACTG 3299
CILV-N          GTGCAAGCTTAGGAGGATATTTCAACTCCATAGCCTCCAAGGTTAACAAGACTGCCACTG 3282
OFVRNA2         GTGCAAGCTTAGGAGGGTATTTCAACTCCATAGCCTCTAAGGTAAACAAGACTGCCACCG 3282
                * ************** ******************** ***** ************** *
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CNSV            TACTGAGAATGAACAAGAGCTCCTCAGTCATCGCGACCATTGCGGGGCAGGAACGACACT 3359
CILV-N          TCCTGAGAATGAACAAAAGCTCCTCAGTCATCGCGACCATTGCGGGACAGGAACGACACT 3342
OFVRNA2         TCCTAAGGATGAACAAGAGCTCCTCCGTCATTGCCACCATTGCAGGACAGGAAAGACATT 3342
                * ** ** ******** ******** ***** ** ******** ** ****** **** *

CNSV            GCATGAGTTATTTTGCCGCATCATCATCAGTGCCTCATGACCTTACTCCCCTGAAATGTC 3419
CILV-N          GCATGAGTTATTTTGCCGCATCATCATCAGTGCCTCACGACCTTACTCCCCTGAAATGTC 3402
OFVRNA2         GCATGAGTTATTTTGCTGCCTCATCATCAGTGCCTCACGATCTCACTCCCCTGAGATGTC 3402
                **************** ** ***************** ** ** ********** *****

CNSV            CTACAGCCACAGCTAGGAGGTACAGAAGATTGAGCTGGGGCAAGGAAATCCTGTCCATAA 3479
CILV-N          CGACAGCCACAGCTAGGAGGTACAGAAGATTGAGCTGGGGCAAGGAAATCCTGTCCATAA 3462
OFVRNA2         CAACAGCCACAGCTAGACGATACAGAAGACTGAGCTGGGGCAAGGAAATCCTGTCCATCA 3462
                * **************  * ********* **************************** *

CNSV            CTACCCCGCACCCTGCAGCCTTCCTGAAACCAGTGATTGGAGACCATCAATGTGACCACA 3539
CILV-N          CTACCCCGCATCCTGCAGCCTTCCTGACACCGGTGATTGGAGACCATCAATGTGACCACA 3522
OFVRNA2         CCACCCCGCATCCTGCAGCCTTCTTGAAACCAGTGATAGGAGACCATCAGTGTGACCACA 3522
                * ******** ************ *** *** ***** *********** **********

CNSV            ACTATGTGCAGACCAAGACATCAGGAGGGAACCTGATCAACCCACACTCTAGAGGACCAT 3599
CILV-N          ACTATGTGCAGACCAAAACATCGGGAGGGAACCTGATCAACCCACACTCTAGAGGGCCAT 3582
OFVRNA2         ACTATGTGCAGACCAAGACATCAGGAGGGAACCTGATCAATCCCCACTCTAGAGGGCCGT 3582
                **************** ***** ***************** ** *********** ** *

CNSV            ACCCGGTTTATATGGGCTCATATACCAAGGAGAAGTTCAAGCCCACTGAGATGGCAGCGG 3659
CILV-N          ACCCGGTTTACATGGGCTCGTATACCAAGGAGAAGTTCAAGCCCACTGAGATGGCGGCGG 3642
OFVRNA2         ATCCGGTTTATATGGGCTCATACACGAGGGAGAAGTTCAAGCCTACTGAGATGGCGGCGG 3642
                * ******** ******** ** ** * *************** *********** ****

CNSV            CTTACGGAGAGGAGGACCTGCTGTCCAGACCCATCCACCTGATGAAGCTGATCAATTGGA 3719
CILV-N          CTTACGGAGAGGAGGACCTACTGTCCAGACCCATCCACCTGATGAAGCTGATCAATTGGA 3702
OFVRNA2         CTTACGGAGAAGAGGACCTACTGTCCAGACCCATTCATCTGATGAAGCTAATCAATTGGA 3702
                ********** ******** ************** ** *********** **********

CNSV            GATATTCATCATCATCCAACATGGCCAGGATCCTCAAATGCCTGTTGAGCTCCCTGACTG 3779
CILV-N          GATACTCATCATCATCCAACATGGCCCGTACCCTCAAATGCCTGTTGAGCTCTCTGACTG 3762
OFVRNA2         GATATTCATCATCATCCAACATGGCCAGGATCCTGAAATGCCTGCTGAGCTCTCTTACTG 3762
                **** ********************* * * *** ********* ******* ** ****

CNSV            ATGCTGATGCTACACTTTTCTATGGGATGATGGAGTGGATTGCAGGGGATGCAGAGCATC 3839
CILV-N          ATGCTGATGCTACACTTTTCTATGGGATGATGGAGTGGATTGCAGGAGACGCAGAGCATA 3822
OFVRNA2         ATGCTGATGCCACTCTTTTCTACGGAATGATGGAGTGGATTGCAGGAGATGCAGAGCATA 3822
                ********** ** ********* ** ******************* ** *********

CNSV            GGTACCAGGATATGGCTACCAAACACGGGGGGGTCCCCAATGTTGCCCACTCTATACTGT 3899
CILV-N          GGTACCAGGACATGGCTACCAAACACGGGGGGGTTCCCAATGTCGCCCACTCTATACTGT 3882
OFVRNA2         GATATCAAGACATGGCGACCAAACATGGGGGAGTTCCCAATGTCGCTCACTCCATACTGT 3882
                * ** ** ** ***** ******** ***** ** ******** ** ***** *******

CNSV            CTTATGTCCGAGCTCACACCACCACATTCAGGAAGCATTCCCGAGGAGGGAAGAATGAGA 3959
CILV-N          CTTATGTCCGAGCTCACACCACCACATTCAGGAAGCATTCTCGAGGAGGGAAGAATGAGA 3942
OFVRNA2         CTTATGTCCGAGCTCACACCACCACATTTAGGAAACACTCCCGCGGAGGGAAAAATGAGA 3942
                **************************** ***** ** ** ** ******** *******

CNSV            CACTTCACTTCCAGGCTGTCATGATATACACATCAATGATAGCCCTGTTCAAGAAATACG 4019
CILV-N          CACTTCACTTCCAGGCCGTCATGATATACACATCAATGATAGCCCTGTTCAAGAAATACG 4002
OFVRNA2         CTCTCCACTTCCAGGCTGTCATGATATATACATCAATGATAGCCCTGTTCAAGAAATATG 4002
                * ** *********** *********** ***************************** *

CNSV            GGGGAATCATCCATTGGCATGAGAGCTGTGGAGAGTGCATCCAACAGACTGCTGGCAATG 4079
CILV-N          GGGGAATTATCCATTGGCATGAGAGCTGTGGAGAGTGCATCCAACAGACTGTCGGCAATG 4062
OFVRNA2         GGGGAATCATCCATTGGCATGAGAGCTGTGGCGAATGCATCCAGCAAACTGTGGGCAACG 4062
                ******* *********************** ** ******** ** ****  ***** *

CNSV            TGGATGTGGTCCTGACAAAGAGGGTGGAATTCCCAATATTGAAAGGAAATCTCTTTGCAT 4139
CILV-N          TGGATGTGGTCCTGACGAAGAGGGTGGAATTCCCAATATTGAAAGGAAATCTCTTTGCAT 4122
OFVRNA2         TTGATGTGGTACTGACAAAGAGGGTGGAGTTCCCGATCCTGAAAGGAAATCTCTTTGCAT 4122
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CNSV            ATGTCCCGGCAGAAAGTATCAAATTCCATTATCATGACATGAAGAGGATACGGTCTGTGG 4199
CILV-N          ATGTCCCGGCAGAAAGTATCAAATTCCATTATCATGACATGAAGAGGATCCGGTCTGTGG 4182
OFVRNA2         ATGTCCCGGCGGAAAGTATAAAGTTTCACTACCATGACATGAAGAGGATTCGGTCTGTGG 4182
                ********** ******** ** ** ** ** ***************** **********

CNSV            AGGATATAGGATTCCGTACTGTGTCGTATGAATCTATGAGCTCCTTAGACAGAAGAACCG 4259
CILV-N          AGGATCTAGGATTCCGTACTGTGTCATATGAATCCATGAGCTCCTTAGACAGAAGAACCG 4242
OFVRNA2         AGGATCTGGGATTCCGTACTGTGTCATACGAATCCATGAGCCCCTTGGATAGAAGAACTG 4242
                ***** * ***************** ** ***** ****** **** ** ******** *

CNSV            CCAGCATCAGCATGCTGTCCGCAGTGGTATCAACGCAG--AGTACATGGGACAAGTCATC 4317
CILV-N          CCAGCATCAGCATGCTGTCCGCAGTGATATCATC-CAGTGAGTCCA-GGGACAAATCATC 4300
OFVRNA2         CCAGCATCAGCATGCTGTCCGCAGTGATATCGTC-CAGTGAGTCTA-GGGATAAATCATC 4300
                ************************** ****  * ***  ***  * **** ** *****

CNSV            AGTCACCATGAGTAGCATAGAAATGTGGGCCGGGACTGTCAATCTCACAGAGATCATCCC 4377
CILV-N          GGTTACCATGAGTAGCATAGAAATGTGGGCCGGGACTGTCAATCTCACAGAGATCATCCC 4360
OFVRNA2         TGTTACCATGAGTAGCATAGAGATGTGGGCCGGGACTGTCAATCTCACAGAGATCATCCC 4360
                 ** ***************** **************************************

CNSV            AGCAGTGTGCCTGAGGGTGTCAGTGGCAGAGCTCATGAGAACAGGCGAATGGTCATGGCC 4437
CILV-N          CGCAGTGTGCCTGAGGGTGTCAGTGGCAGAGCTCATGAGAACAGGCGAATGGTCATGGCC 4420
OFVRNA2         TGCAGTATGCCTGAGGGTGTCGGTGGCCGAACTCATGAGGACGGGCGAATGGTCATGGCC 4420
                 ***** ************** ***** ** ******** ** *****************

CNSV            TAAGCCTCACCTTAAGAAGCGAATAATCATGTTGTTAGAACCATTCATAAGGTCAAAGCT 4497
CILV-N          TAAGCCTCACCTTAAGAGGCGAATAATCATGTTATTAGAACCATTCATAAGGTCAAAGCT 4480
OFVRNA2         CAAGCCCCACCTCAAGAAAAGAATAATCATGCTACTAGAGCCATTCATAAGGTCAAAACT 4480
                 ***** ***** ****   *********** *  **** ***************** **

CNSV            GGGGAGGTATCAGTTGTTGGAAATGGGTGTGACTCTGGATGAATTGCGATCCAACAATCC 4557
CILV-N          GGGGAGGTATCAGTTGTTGGAAATGGGTGTGACTCTGGATGAATTACGATCCAACAATCC 4540
OFVRNA2         TGGGAGGTACCAGCTGTTGGAAATGGGTGTGACCCTGGATGAACTACGATCCAACAACCC 4540
                 ******** *** ******************* ********* * *********** **

CNSV            TGGAGTACTCCTGGACATCGTTCAGGTGGTCATGGACAACAGCAGGATGACACCGAAGAT 4617
CILV-N          TGGAGTGCTCCTGGATATCATTCAGGTAGTCATGGACAACAGCAGGATGACACCGAAGAT 4600
OFVRNA2         GGGGGTGCTCCTAGACATTGTTCAGGTGGTTATGGATAACAGCAGAATGACACCGAAAAT 4600
                 ** ** ***** ** **  ******* ** ***** ******** *********** **

CNSV            CATCCCCAACAGAGTTTCCCCCAGCTGGGCTAACGATGTTATATGTGCTAAAATATATGA 4677
CILV-N          CATCCCCAATAGAGTTTCCCCCAGTTGGGCCAACGATGTTATATGTGCTAAGATATATGA 4660
OFVRNA2         TATCCCGAATAGAGTCTCTCCCAGTTGGGTCAATGACGTCATATGTGCTAAGATTTATGA 4660
                 ***** ** ***** ** ***** ****  ** ** ** *********** ** *****

CNSV            GAATGAGCATATCATCTTCTGTTCCGGATGTTTGGCGAAAGGTCCATGTGTGGATAAAGT 4737
CILV-N          GAATGAGCATATCATCTTCTGTTCCGGATGTTTGGCGAAAGGTCCATGTGTGGATAAAGT 4720
OFVRNA2         GAATGAGCATATAATCTTCTGTTCCGGATGTCTGACAAAAGGCCCATGTGTGGATAAAGT 4720
                ************ ****************** ** * ***** *****************

CNSV            GGAGATATGCAATGATATCCTTATGGAATATACCTTCAAGGTGTGCTCAGCCACATTGCC 4797
CILV-N          GGAGATATGCAATGATATCCTTATGGAATACACCTTCAAGGTATGCTCAGCCACATTGCC 4780
OFVRNA2         GGAGATATGCAATGACATCCTCATGGAATACACCTTCAAGGTGTGTTCGGCTACATTGCC 4780
                *************** ***** ******** *********** ** ** ** ********

CNSV            GGTTCTCAAAGGGGACATGTCTCAGATCATATGTGATAGAGACTTCTCAAATGACCCGGA 4857
CILV-N          GGTCCTCAAAGGAGACATGTCTCAGATCATATGTGATAGAGACTTCTCAAATGACCCGGA 4840
OFVRNA2         AGTCCTCAAAGGAGACATGTCTCAGATTATATGTGATAGGGACTTCTCGAATGACCCAGA 4840
                 ** ******** ************** *********** ******** ******** **

CNSV            TTGGACTTCATCGCCTGTCCAGTTGTTTGAAATGATGGACAATCCAGCTGCTCAGTTCAC 4917
CILV-N          TTGGACTTCATCGCCTGTCCAGTTGTTCGAAATGATGGACAATCCAGCTGCTCAGTTCAC 4900
OFVRNA2         TTGGACTTCATCGCCTGTCCAGTTGTTTGAAATGATGGACAATCCGGCTGCTCAATTCAC 4900
                *************************** ***************** ******** *****

CNSV            TCCATTCCCAAGGGACGGGCCCATAGCTGTGTCAAGGCCACTGGGCAGTGCCGGATTATC 4977
CILV-N          TCCATTCCCAAGGGACGGGCCCATAGCTGTGTCAAGGCCACTGGGCAGTGCCGGATTATC 4960
OFVRNA2         TCCATTCCCAAGGGACGGGCCCATAGCAGTGTCAAGACCATTGGGCAGTGCCGGATTGTC 4960
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CNSV            AAGCAGT---GGTATCAACGCAGAGTACAATGGGATTATCATGGTCGGGGATGACAGTGT 5034
CILV-N          AAGCATTCTGGATATACTGGCAGAGACCAATGGAATTATCATGGTCGGGGATGACAGTGT 5020
OFVRNA2         AAGCATCCTGGATATACTGGCAGAGACCAATGGAATCATCATGGTCGGGGATGACAGTGT 5020
                *****     * ***    ******  ****** ** ***********************

CNSV            CAGTATCACTATATGGAGACAGTTTAGAGCAACCAGGAGGGTTATGATCTTCAAGACAGG 5094
CILV-N          CAGTATCACTATATGGAGACAGTTCAGAGCAACCAGGAGGGTTATGATCTTCAAGACAGG 5080
OFVRNA2         CAGCATCACTATATGGAGACAGTTTAGAGCAACCAGGAAGGTGATGATTTTCAAGACAGG 5080
                *** ******************** ************* *** ***** ***********

CNSV            GGATAATCACCTTGAAGCTGCCTGTGACTTCATATGTATGGCCCCGGATGAAGCAGACCT 5154
CILV-N          GGATAATCACCTTGAAGCTGCCTGTGACTTCATATGTATGGCCCCTGATGAAGCAGACCT 5140
OFVRNA2         TGATAACCACCTTGAAGCTGCCTGTGACTTTATATGTATGGCCCCAGATGAAGCGGACCT 5140
                 ***** *********************** ************** ******** *****

CNSV            ACTTATGGACAGTGAAAGTCCGGACGGGAAGGCTGATGTATATTACGGGGATAACATCCC 5214
CILV-N          ACTTATGGACAGTGAAAGTCCGGACGGGAAGGCTGATGTATATTATGGGGATAACATCCC 5200
OFVRNA2         GCTCATGGATAGTGAAAGCCCGGATGGGAAGGCTGACGTATATTATGGGGATAACATTCC 5200
                 ** ***** ******** ***** *********** ******** *********** **

CNSV            TGTAGCTCCCGGTTGGTGGATAGTGACCAGCAGAAAGGATGTCAACAGATTGTACAAGTA 5274
CILV-N          TGTAGCTCCCGGTTGGTGGATAGTGACCAGTCGAAAAGATGTCAACAGATTGTACAAGTA 5260
OFVRNA2         TATAGCGCCCGGTTGGTGGATTATAACTAGCAGGAAAGATGTCAACAGATTGTACAAATA 5260
                * **** **************  * ** **  * ** ******************** **

CNSV            TGGTAAAGACATGAGCCCCACCAGGGTATTAATCTCCAAGGACAGAGGTCAAACCAGGGC 5334
CILV-N          TGGCAAAGACATGAGCCCCACCAGGGTATTAATCTCCAAGGACAGAGGTCAAACCAGGGC 5320
OFVRNA2         TGGGAAGGACATGAGCCCCACCAGGGTACTAATCTCCAAGGATAGAGGTCAAACCAGAGC 5320
                *** ** ********************* ************* ************** **

CNSV            AATCTGTGCTGTCAAGATGGAGCAATCCCCAGGCCAAAAGTGGGGAGACTTCCAAGCCAC 5394
CILV-N          AATCTGTGCTGTCAAGATGGAGCAATCCCCAGGACAAAAGTGGGGAGACTTCCAAGCCAC 5380
OFVRNA2         AATCTGTGCTGTCAAGATGGAGCAGACCCCGGGCCAGAAGTGGGGAGATTTTCAGGCCAC 5380
                ************************  **** ** ** *********** ** ** *****

CNSV            CTACAAAAAGATTGAGATGAGATGCAGGAACTACAGTGGGATGGTAAGAAATCCCACCAG 5454
CILV-N          CTACAAAAAGATTGAGATGAGATGCGGAAACTACAGTGGGATGGTAAGAAATCCCACCAG 5440
OFVRNA2         ATACAAGAAGATTGAAATGAGATGCGGAAACTACAGTGGGATGGTAAGAAATCCCACAAG 5440
                 ***** ******** ********* * ***************************** **

CNSV            CAAGAACAAGTTAATATCATGCGCGATGTCATTATTCCACAGGGTCAATGGAGATATAGA 5514
CILV-N          CAAGAACAAGTTAGTATCATGCGCGGTGTCATTATTTCACAGGGTCAATGGAGATATAGA 5500
OFVRNA2         CAAGAACAAGTTAATATCATGTGCGGTGTCATTATTCCACAGGGTCAATGGAGATATAGA 5500
                ************* ******* *** ********** ***********************

CNSV            AGAGGCGGTCAAATGCTGTGTGACGGAGATGAGGACTATTTTCTGGAGGAACGAATTATA 5574
CILV-N          AGAGGCAGTCAAATGCTGTGTGACGGAGATGAGGACGATTTTCTGGAGGAACGAATTATA 5560
OFVRNA2         AGAGGCAGTCAAATGCTGTGTGACGGAGATGAGGACGATTTTCTGGAGGAACGAATTATA 5560
                ****** ***************************** ***********************

CNSV            TACTAAGAAGGCAAAGGAGCTGATGTATCTGATGTCGACACTGCACATGGCCGGCATGGA 5634
CILV-N          TACTAAGAAGGCAAAGGAGCTGATGTATCTGATGTCAACACTGCACATGGCCGGCATGGA 5620
OFVRNA2         TACTAAGAAAGCAAAGGATCTCATGTACCTGATGTCAACATTGCACATGGCAGGCATGGA 5620
                ********* ******** ** ***** ******** *** ********** ********

CNSV            GGGCGGAATAGAGTTTGCAAGACGATCTATCAAGCCTAGGGCAGTGAGGCGACCTTACAG 5694
CILV-N          GGGCGGAATAGAGTTTGCAAGACGATCTATCAAGCCTAGGGCAGTGAGGCGACCTTACAG 5680
OFVRNA2         GGGAGGGATAGAGTTTGCAAGACGATCTATCAAGCCTAGAGCAGTGAGACGACCTTACAG 5680
                *** ** ******************************** ******** ***********

CNSV            GATTCTCATCAAGACAACCGCTAGAAACAACTACAAGGCAGCTAATGATGTCACAGACGT 5754
CILV-N          GATTCTCATCAAGACAACCGCTAGAAACAACTACAAGGCAGCTAATGATGTCACAGACGT 5740
OFVRNA2         AATCCTCATCAAGACTACCGCCAGAAACAATTATAAGGCTGCCAATGATGTCACAGACGT 5740
                 ** *********** ***** ******** ** ***** ** *****************

CNSV            GAGAGAGCTATTCAGAGTAACTCCCAAGCCTACCGGAGCACCCGGAGGAGATATTATCAT 5814
CILV-N          GAGAGAGCTATTCAGAGTAACTCCCAAGCCTACCGGAGCACCCGGAGGAGATATCATCAT 5800
OFVRNA2         GAGAGAGCTATTCAGGGTAACTCCCAAGCCTATCGGAGCACCCGGGGGAGATATCATCAT 5800
                *************** **************** ************ ******** *****
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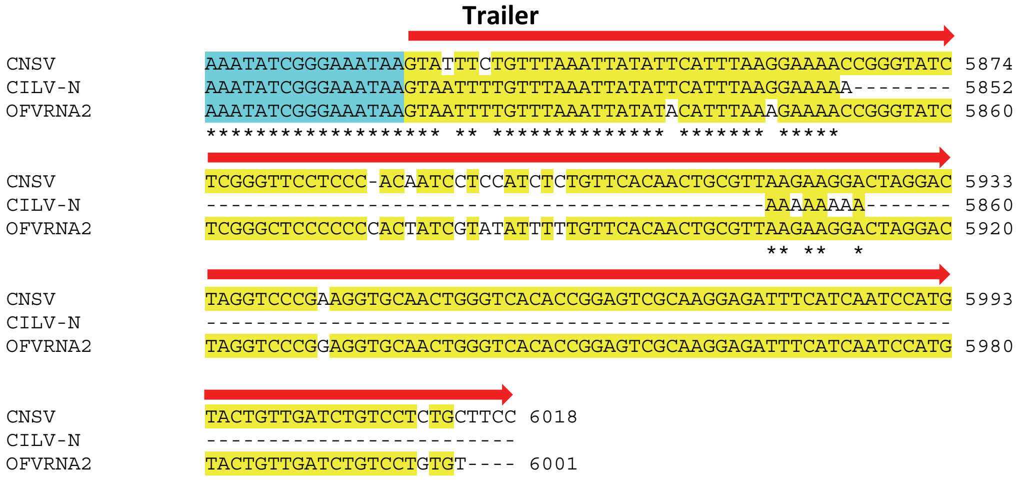

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CNSV             AAATATCGGGAAATAAGTATTTCTGTTTAAATTATATTCATTTAAGGAAAACCGGGTATC 5874
CILV-N           AAATATCGGGAAATAAGTAATTTTGTTTAAATTATATTCATTTAAGGAAAAA-------- 5852
OFVRNA2          AAATATCGGGAAATAAGTAATTTTGTTTAAATTATATACATTTAAAGAAAACCGGGTATC 5860
                 ******************* ** ************** ******* *****

CNSV             TCGGGTTCCTCCC-ACAATCCTCCATCTCTGTTCACAACTGCGTTAAGAAGGACTAGGAC 5933
CILV-N           ---------------------------------------------AAAAAAAA------- 5860
OFVRNA2          TCGGGCTCCCCCCCACTATCGTATATTTTTGTTCACAACTGCGTTAAGAAGGACTAGGAC 5920
                                                              ** **  *

CNSV             TAGGTCCCGAAGGTGCAACTGGGTCACACCGGAGTCGCAAGGAGATTTCATCAATCCATG 5993
CILV-N           ------------------------------------------------------------
OFVRNA2          TAGGTCCCGGAGGTGCAACTGGGTCACACCGGAGTCGCAAGGAGATTTCATCAATCCATG 5980

CNSV             TACTGTTGATCTGTCCTCTGCTTCC 6018
CILV-N           -------------------------
OFVRNA2          TACTGTTGATCTGTCCTGTGT---- 6001
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Figure S4. Gene Ontology terms of upregulated and downregulated genes in CNSV-infected plants, according to RNA expression analyses. A graphic demonstration of genes with altered expression, classified in cell function, metabolism, secondary metabolites and biotic stress. Red, downregulated genes; blue, upregulated genes.

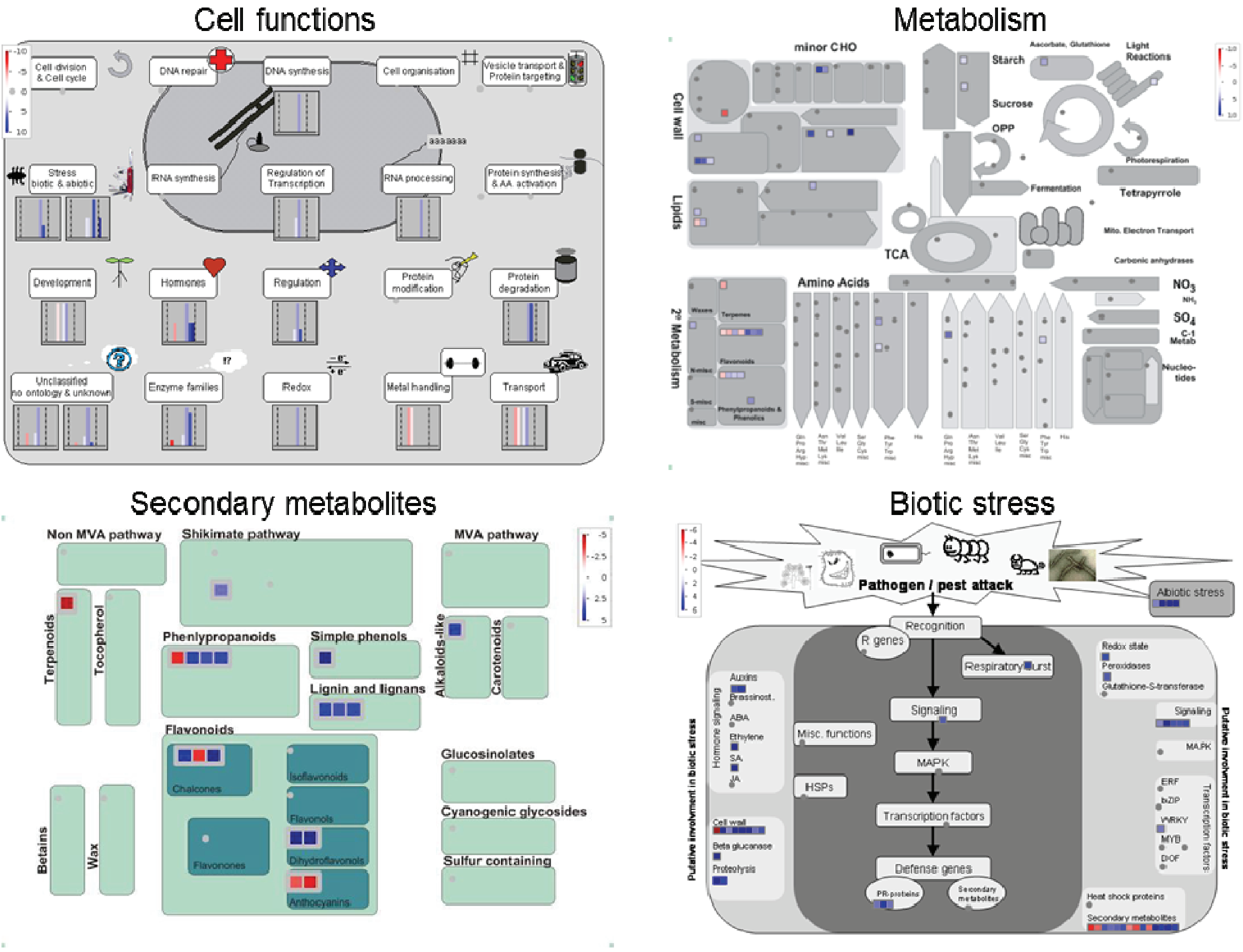

Table S1. Viral Operational Taxonomic Units (OTUs) used for phylogenetic reconstruction.

Abbreviation	**Name**	**Description**	**Accession No.**
LNYV	Lettuce Necrotic Yellows Virus	Cytorhabdovirus	Q86134.1 (N) Q4W382.1 (L)
LYMV	Lettuce Yellow Mottle Virus	Cytorhabdovirus	NC_011532.1
NCMV	Northern Cereal Mosaic Virus	Cytorhabdovirus	NC_002251.1
CNSV	Citrus Necrotic Spot Virus	Dichorhavirus **This work*	KF198064.2 (N) KF198065.1 (L)
CiLV-N	Citrus Leprosis Virus Nuclear Type	Dichorhavirus	KF209275.2 (N) KF209276.1 (L)
OFV	Orchid Fleck Virus	Dichorhavirus	NC_009608.1 (N) AB244418.1 (L)
EMDV	Eggplant Mottled Dwarf Virus	Nucleorhabdovirus	KJ082087.1
MFSV	Maize Fine Streak Virus	Nucleorhabdovirus	NC_005974.1
MIMV	Maize Iranian Mosaic Virus	Nucleorhabdovirus	DQ186554.1
MMV	Maize Mosaic Virus	Nucleorhabdovirus	AY618418.1
PYDV	Potato Yellow Dwarf Virus	Nucleorhabdovirus	NC_016136.1
RYSV	Rice Yellow Stunt Virus	Nucleorhabdovirus	NC_003746.1
SYNV	Sonchus Yellow Net Virus	Nucleorhabdovirus	NC_001615.2
TVCV	Taro Vein Chlorosis Virus	Nucleorhabdovirus	NC_006942.1
CRV	Coffee Ringspot Virus	*Unclassified* Rhabdovirus	KF812525.1 (N) KF812526.1 (L)
LBVAV	Lettuce Big Vein Associated Virus	Varicosavirus (External Group)	Q91QN9.1 (N) Q8B0U2.1 (L)

Table S2. Oligonucleotides used for validation through qPCR of up- and down-regulated Citrus genes.

Oligonucleotide name	Sequence
Germin-like protein 5’	ATGGGAAGTTCTGCAAGGACCCCAAGCT
Germin-like protein 3’	CAACAGGATTTCACTGGCACGGGGGTGAAT
Thaumatin-like protein 5’	ATGAGGGAAGAGTACGCAAAACTGGACAA
Thaumatin-like protein 3’	ACAACAGCCCATTGAGGAAGCCCTCCAAAT
PR-3 class IV chitinase 5’	AGCCGAGCCAGGCACAACTAGAGCCCGCAT
PR-3 class IV chitinase 3’	ATCCGTCAATGTTGGACATGTCAATGAAAT
Proline-rich protein 4-like 5’	AGCAGATGCAGCACTTGATCCATCAGGGCT
Proline-rich protein 4-like 3’	TCCAGTGACAACTTTGAGGAGGAAGCTGGC
Aquaporin tip-2 like 5’	ATGGTTAGCCATGATTCCAGATTCGGAGCA
Aquaporin tip-2 like 3’	TGTATTTGATGAGGGTTTCCAGAATTCCAG
Cytochrome c oxidase 5’	GAGGCATTTTTGGATCACTTTT
Cytochrome c oxidase 3’	GTTCTGTTAGGTTCTTAGTAGC

Table S3. Upregulated genes in CNSV-infected Citrus.

	Length (bp)	**Log2 fold-change**
Stress response and defense		
Germin-like protein subfamily 1 member 14	898	11.3
1-aminocyclopropane-1-carboxylate synthase	1,534	9.8
Thaumatin-like protein	681	7.7
Blight-associated protein p12	483	7.2
PR-3 class IV chitinase	864	6.9
Stress-induced protein	213	6.9
Chalcone synthase	1,462	6.7
Beta- glucanase	1,190	7.2
Wound-induced protein win1	716	6.1
Cysteine-rich receptor-like protein kinase	1,869	6.0
Proline dehydrogenase mitochondrial-like	1,812	5.9
Blight-associated protein p12 precursor	632	5.8
Anthocyanidin 3-o-glucosyltransferase 5-like	1,434	5.8
Beta-glucosidase 41-like	1,894	5.8
Xylosyltransferase 1-like	1,293	5.8
Non-specific lipid-transfer protein at2g13820-like	958	5.7
Reticuline oxidase-like	1,617	5.6
Pathogenesis-related protein 1	480	5.5
Bifunctional nuclease I	941	5.5
Flavanone 3-beta-hydroxylase	1,403	5.4
GH3 family protein	2,138	5.4
Respiratory burst oxidase homolog protein b-like	2,855	5.3
Ribonuclease 3-like	925	5.3
Stress-response protein	694	5.3
Laccase 110	1,999	5.2
Methyl esterase	870	5.1
Auxin-induced protein	524	4.9
Serine protease inhibitor	285	4.8
2-oxoglutarate-dependent dioxygenase	1452	4.6
Beta –glucanase	1,404	4.5

Wound-induced protein WIN2	761	4.2
Quinone reductase family protein	853	4.2
Proteinase inhibitor	674	4.2

	Length (bp)	**Log2 fold-change**
Stress response and defense *(continued)*		
Phenylalanine ammonia-lyase	2,559	4.1
Stress-induced nucleic acid binding protein	696	4.1
Peroxidase 55-like	1,126	4.0
MLO-like protein 12	1,665	4.0
Monogalactosyldiacylglycerol synthase chloroplastic-like	1,890	3.9
Cinnamoyl- reductase	1,344	3.8
Zinc finger protein zat11-like	834	3.8
Protein TIFY 5a-like	882	3.8
Proline-rich protein	702	3.8
Thaumatin-like protein	928	3.8
Stress-induced homologue At5g58960	2,040	3.8
Cysteine proteinase	1,452	3.7
15-hydroxyprostaglandin dehydrogenase	857	3.7
Probable ribose-5-phosphate isomerase-like	2,316	3.7
Avr9 cf-9 rapidly elicited protein	1,646	3.6
TMV resistance protein n-like	3,014	3.5
Miraculin-like protein 2	1,099	3.5
Pathogenesis-related protein 4	771	3.5
Probable WRKY transcription factor 28-like	1,472	3.4
Protein TIFY 10[a]	1,081	3.4
Spx domain-containing protein 3-like	1,179	3.3
Cytochrome P450	1,493	3.2
Protein plant cadmium resistance 2-like	802	3.2
Primary metabolism		
Probable rhamnogalacturonate lyase b-like	2,303	10.5
Inositol oxygenase	1,246	8.8
Nucleotide binding protein	2,173	6.9

Udp-glycosyltransferase 74f2-like	1,401	6.5
Protein LURP-one-related 6-like	814	6.0
BAHD acyltransferase at5g47980-like	1,623	5.3
Inositol oxygenase 1	1,291	5.2
Sarcoplasmic reticulum His-rich calcium-binding	1,027	5.2
Polygalacturonase qrt3-like	1,545	5.0
	Length (bp)	**Log2 fold-change**
Primary metabolism *(continued)*		
Cysteine proteinase	1,326	4.9
Protein Ciclev10006313m	7,51	5.6
UDP-glycosyltransferase 74f2-like	1,401	4.7
Aminotransferase ALD1-like	1,386	4.7
NADPH-dependent codeinone reductase 2	1,307	4.6
Nucleotide-diphospho-sugar transferase family	1,080	4.6
Indole-3-acetic acid-amido synthetase	2,304	4.4
Tryptophan decarboxylase	1,592	4.3
Pectinesterase 2-like	1,722	4.3
Probable acyl-activating enzyme peroxisomal-like	1,689	4.2
Type I inositol- -trisphosphate 5-phosphatase 11	966	4.2
Bahd acyltransferase At5g47980-like	1,314	4.1
Potassium transporter 5-like	2,521	4.0
Alpha beta-hydrolases superfamily	1,628	3.6
Plant cell wall protein 88	681	3.6
4-coumarate: ligase	1,922	3.6
Xyloglucan endotransglucosylase hydrolase	762	3.5
Purple acid phosphatase 3 isoform 1	1,586	3.5
Beta- soluble isoenzyme i-like	2,310	3.4
Aminotransferase family protein	1,816	3.4
Kiwellin	753	3.3
Probable beta-d-xylosidase 2-like	2,604	3.3
Cdp-diacylglycerol--glycerol-3-phosphate 3-	573	3.3
Sulfate transporter -like	2,435	3.0

Alpha-amylase	1,481	3.0
Arogenate dehydratase prephenate dehydratase	1,756	2.9
Chlorophyll a/b binding protein	1,037	2.9
Hypothetical protein PRUPE_ppa013271mg	764	2.8
Plant development		
Zinc finger protein constans-like 16-like	1,976	3.2
Homeodomain-like superfamily isoform 1	2,662	2.8
Signal transduction		
Wall-associated receptor kinase-like protein	1,845	4.2
Probable LRR receptor-like protein kinase	2,351	4.2
Alpha beta-hydrolases superfamily protein	2,030	3.9
Probable LRR receptor-like Ser-Thr-protein kinase	3,195	3.2
Receptor like protein 1	2,210	4.5
Proteins of unknown function		
Uncharacterized protein TCM_007254	605	5.4
Hypothetical 21 kDa protein Ciclev10022285m	1,377	4.0
Uncharacterized protein LOC100782360 precursor	810	3.3
Uncharacterized protein TCM_034658	844	3.3

Table S4. Downregulated genes in CNSV infected Citrus.

	Length (bp)	**Log$_2$ Fold Change**
Stress response and defense		
Heavy metal transport detox. superfamily protein	1,136	-3.4
Protein aluminum sensitive 3-like	1,208	-3.0
Anthocyanin 5-aromatic	1,638	-4.2
Gibberellin 2-oxidase	1,253	-4.4
S-linalool synthase	2,763	-4.6
Aquaporin TIP2-1-like	1,117	-5.1
Proline-rich protein 4-like	1,384	-6.6
Primary metabolism		
BADH acyltransferase dcr-like	1,810	-3.8
NADH-dependent 6-deoxychalcone synthase-like	1,842	-3.3
Non-functional NADPH-dependent codeinone reduct.	922	-3.6
Respiratory burst oxidase homolog protein b-like	2,855	-3.7
Alpha beta fold family protein	1,119	-3.7
Plant-specific domain tigr01589 family protein	1,530	-5.4
Proteins of unknown function		
21 kDa protein Ciclev10005968m	1,105	-6.4

Table S5. Quantitative RT-PCR of five genes in virus-infected Citrus.

	Gene ID	Mass Fraction Symptomatic	Mass Fraction Asymptomatic	Fold Change	Standard Deviation	*p*-value	Statistical Significance
Upregulated*	Germin-like protein	17.0810	3.9332	4.34	0.3113	0.0112	yes
	Thaumatin-like protein	0.5848	0.3143	1.86	0.2071	0.0260	yes
	PR-3 class IV chitinase	7.7401	2.6710	2.90	0.1853	0.0441	yes
Downregulated*	Proline-rich protein 4-like	0.1783	0.2848	0.63	0.0384	0.0078	yes
	Aquaporin tip-2 like	0.0335	0.0700	0.48	0.0131	0.0011	yes