

Supplementary Figure S3. Contexts of long deletions in the bin #5 of ORF7a.
The 1st number is the position and the 5th number is the number of instances
followed by gene names.

27570 13 4 2 54 ORF7a-FSTQF59fs
AATTCACCATTTTCATCCTCTAGCTGATAACAAATTTGCACTGACTTGCTT
tag cac tca a
GCTTTTGCTTGTCTGACGGCGTAAACACGTCTATCAGTTACGTGCCAGA

27569 55 2 1 90 ORF7a-FSTQFAFACPDGVKHVYQL59fs
CAATTCACCATTTTCATCCTCTAGCTGATAACAAATTTGCACTGACTTGCT
tta gca ctc aat ttg ctt ttg ctt gtc ctg acg gcg taa aac
ACGTGCCAGATCAGTTTCACCTAAACTGTTTCATCAGACAAGAGGAAGTTCA

GGAACATACGAGGGCAATTCACCATTTTCATCCTCTAGCTGATAACAAATT
tgc act gac ttg ctt tag cac tca att tgc ttt tgc ttg tcc tga cgg cgt a
ACGTGCCAGATCAGTTTCACCTAAACTGTTTCATCAGACAAGAGGAAGTTCA

27555 92 13 0 200 ORF7a-FALTCFSTQFAFACPDGVKHVYQLRARSVSP54fs
GGAACATACGAGGGCAATTCACCATTTTCATCCTCTAGCTGATAACAAATT
tgc act gac ttg ctt tag cac tca att tgc ttt tgc ttg tcc tga cgg cgt aaa aca cgt cta tca gtt
AACTGTTTCATCAGACAAGAGGAAGTTCAAGAAGTTTACTCTCCAATTTTTC

27571 16 5 0 97 ORF7a-STQFAF60fs
ATTCACCATTTTCATCCTCTAGCTGATAACAAATTTGCACTGACTTGCTTT
agc act caa ttt
TTGCTTGTCTGACGGCGTAAACACGTCTATCAGTTACGTGCCAGATCAG

27575 23 1 0 59 ORF7a-TQFAFACP61fs
ACCATTTTCATCCTCTAGCTGATAACAAATTTGCACTGACTTGCTTTAGCA
ctc aat ttg ctt ttg ctt
GACGGCGTAAACACGTCTATCAGTTACGTGCCAGATCAGTTTCACCTAAA

27555 52 3 0 54 ORF7a-FALTCFSTQFAFACPDGV54fs
GGAACATACGAGGGCAATTCACCATTTTCATCCTCTAGCTGATAACAAATT
tgc act gac ttg ctt tag cac tca att tgc ttt tgc ttg
AAACACGTCTATCAGTTACGTGCCAGATCAGTTTCACCTAAACTGTTTCATC

ATTCACCATTTTCATCCTCTAGCTGATAACAAATTTGCACTGACTTGCTTT
agc act caa ttt gc
GCTTGTCTGACGGCGTAAACACGTCTATCAGTTACGTGCCAGATCAGTT

27574 17 2 0 46 ORF7a-TQFAFA61fs
CACCATTTTCATCCTCTAGCTGATAACAAATTTGCACTGACTTGCTTTAGC
act caa ttt gct t
TTGTCCTGACGGCGTAAACACGTCTATCAGTTACGTGCCAGATCAGTTTC

27561 16 2 0 42 ORF7a-LTCFST56fs
TACGAGGGCAATTCACCATTTTCATCCTCTAGCTGATAACAAATTTGCACT
gac ttg ctt tag
CAATTTGCTTTTGCTTGTCTGACGGCGTAAACACGTCTATCAGTTACGT

27566 28 4 0 41 ORF7a-CFSTQFAFAC58fs
GGGCAATTCACCATTTTCATCCTCTAGCTGATAACAAATTTGCACTGACTT
gct tta gca ctc aat ttg ctt
TCCTGACGGCGTAAAACACGTCTATCAGTTACGTGCCAGATCAGTTTCACC

27554 92 2 0 41 ORF7a-FALTCFSTQFAFACPDGVKHVYQLRARSVSP54fs
TGGAACATACGAGGGCAATTCACCATTTTCATCCTCTAGCTGATAACAAAT
ttg cac tga ctt gct tta gca ctc aat ttg ctt ttg ctt gtc ctg acg gcg taa aac acg tct atc agt
AAACTGTTTCATCAGACAAGAGGAAGTTCAAGAACTTTACTCTCCAATTTTT

GGAACATACGAGGGCAATTCACCATTTTCATCCTCTAGCTGATAACAAATT
tgc act gac ttg ctt tag cac tca att tgc ttt tgc ttg
AAAACACGTCTATCAGTTACGTGCCAGATCAGTTTCACCTAAACTGTTTCAT

GGAACATACGAGGGCAATTCACCATTTTCATCCTCTAGCTGATAACAAATT
tgc act gac ttg ctt tag
ATTTGCTTTTGCTTGTCCTGACGGCGTAAAACACGTCTATCAGTTACGTGC

27570 19 1 0 36 ORF7a-FSTQFAF59fs
AATTCACCATTTTCATCCTCTAGCTGATAACAAATTTGCACTGACTTGCTT
tag cac tca att tgc
GCTTGTCCTGACGGCGTAAAACACGTCTATCAGTTACGTGCCAGATCAGTT

27556 67 2 0 23 ORF7a-ALTCFSTQFAFACPDGVKHVYQL55fs
GAACATACGAGGGCAATTCACCATTTTCATCCTCTAGCTGATAACAAATTT
gca ctg act tgc ttt agc act caa ttt gct ttt gct tgt cct gac ggc gta
TACGTGCCAGATCAGTTTCACCTAAACTGTTTCATCAGACAAGAGGAAGTTC

27571 17 13 0 22 ORF7a-STQFAF60fs
ATTCACCATTTTCATCCTCTAGCTGATAACAAATTTGCACTGACTTGCTTT
agc act caa ttt g
TGCTTGTCCTGACGGCGTAAAACACGTCTATCAGTTACGTGCCAGATCAGT

27555 44 3 0 22 ORF7a-FALTCFSTQFAFACP54fs
GGAACATACGAGGGCAATTCACCATTTTCATCCTCTAGCTGATAACAAATT
tgc act gac ttg ctt tag cac tca att tgc ttt
ACGGCGTAAAACACGTCTATCAGTTACGTGCCAGATCAGTTTCACCTAAAC

27556 85 9 0 20 ORF7a-ALTCFSTQFAFACPDGVKHVYQLRARSVS55fs
GAACATACGAGGGCAATTCACCATTTTCATCCTCTAGCTGATAACAAATTT
gca ctg act tgc ttt agc act caa ttt gct ttt gct tgt cct gac ggc gta aaa cac gtc tat c
CACCTAAACTGTTTCATCAGACAAGAGGAAGTTCAAGAACTTTACTCTCCAA

27572 53 5 0 19 ORF7a-STQFAFACPDGVKHVYQL60fs
TTCACCATTTTCATCCTCTAGCTGATAACAAATTTGCACTGACTTGCTTTA
gca ctc aat ttg ctt ttg ctt gtc ctg acg gcg taa aac a
CGTGCCAGATCAGTTTCACCTAAACTGTTTCATCAGACAAGAGGAAGTTCAA

27555 82 4 0 14 ORF7a-FALTCFSTQFAFACPDGVKHVYQLRARS54fs
GGAACATACGAGGGCAATTCACCATTTTCATCCTCTAGCTGATAACAAATT
tgc act gac ttg ctt tag cac tca att tgc ttt tgc ttg tcc tga cgg cgt aaa aca cgt ct
GTTTCACCTAAACTGTTTCATCAGACAAGAGGAAGTTCAAGAACTTTACTCT

27572 71 3 0 14 ORF7a-STQFAFACPDGVKHVYQLRARSVS60fs

TTCACCATTTCATCCTCTAGCTGATAACAAATTTGCACTGACTTGCTTTA
gca ctc aat ttg ctt ttg ctt gtc ctg acg gcg taa aac acg tct atc agt tac
CCTAAACTGTTTCATCAGACAAGAGGAAGTTCAAGAACTTTACTCTCCAATT

27572 7 4 0 11 ORF7a-STQ60fs
TTCACCATTTCATCCTCTAGCTGATAACAAATTTGCACTGACTTGCTTTA
gca ctc
ATTTGCTTTTGCTTGCTGACGGCGTAAACACGTCTATCAGTTACGTGC

27570 55 2 0 11 ORF7a-FSTQFAFACPDGVKHVYQL59fs
AATTCACCATTTCATCCTCTAGCTGATAACAAATTTGCACTGACTTGCTT
tag cac tca att tgc ttt tgc ttg tcc tga cgg cgt aaa aca
CGTGCCAGATCAGTTTCACCTAAACTGTTTCATCAGACAAGAGGAAGTTCAA

27548 7 3 0 10 ORF7a-NKF52fs
CTCTTCTGGAACATACGAGGGCAATTCACCATTTCATCCTCTAGCTGATA
aca aat
TGCACTGACTTGCTTTAGCACTCAATTTGCTTTTGCTTGCTGACGGCGT

27562 79 3 0 10 ORF7a-TCFSTQFAFACPDGVKHVYQLRARSVS57fs
ACGAGGGCAATTCACCATTTCATCCTCTAGCTGATAACAAATTTGCACTG
act tgc ttt agc act caa ttt gct ttt gct tgt cct gac ggc gta aaa cac gtc tat cag
CACCTAAACTGTTTCATCAGACAAGAGGAAGTTCAAGAACTTTACTCTCCAA

GAACATACGAGGGCAATTCACCATTTCATCCTCTAGCTGATAACAAATTT
gca ctg act tgc ttt agc act caa ttt gct ttt gct tgt cct gac ggc
CAGTTACGTGCCAGATCAGTTTCACCTAAACTGTTTCATCAGACAAGAGGAA

27566 13 1 0 10 ORF7a-CFSTQ58fs
GGGCAATTCACCATTTCATCCTCTAGCTGATAACAAATTTGCACTGACTT
gct tta gca c
ATTTGCTTTTGCTTGCTGACGGCGTAAACACGTCTATCAGTTACGTGC

27572 8 4 0 9 ORF7a-STQ60fs
TTCACCATTTCATCCTCTAGCTGATAACAAATTTGCACTGACTTGCTTTA
gca ctc
TTTGCTTTTGCTTGCTGACGGCGTAAACACGTCTATCAGTTACGTGCC

27566 65 2 0 9 ORF7a-CFSTQFAFACPDGVKHVYQLRA58fs
GGGCAATTCACCATTTCATCCTCTAGCTGATAACAAATTTGCACTGACTT
gct tta gca ctc aat ttg ctt ttg ctt gtc ctg acg gcg taa aac acg t
AGATCAGTTTCACCTAAACTGTTTCATCAGACAAGAGGAAGTTCAAGAACTT

27566 76 1 0 9 ORF7a-CFSTQFAFACPDGVKHVYQLRARSVS58fs
GGGCAATTCACCATTTCATCCTCTAGCTGATAACAAATTTGCACTGACTT
gct tta gca ctc aat ttg ctt ttg ctt gtc ctg acg gcg taa aac acg tct atc agt
ACCTAAACTGTTTCATCAGACAAGAGGAAGTTCAAGAACTTTACTCTCCAAT

27555 91 1 0 9 ORF7a-FALTCFSTQFAFACPDGVKHVYQLRARSVSP54fs
GGAACATACGAGGGCAATTCACCATTTCATCCTCTAGCTGATAACAAATT
tgc act gac ttg ctt tag cac tca att tgc ttt tgc ttg tcc tga cgg cgt aaa aca cgt cta tca gtt
AAACTGTTTCATCAGACAAGAGGAAGTTCAAGAACTTTACTCTCCAATTTT

27571 11 5 0 8 ORF7a-STQF60fs

ATTCACCATTTTCATCCTCTAGCTGATAACAAATTTGCACTGACTTGCTTT
agc act caa
TGCTTTTGCTTGTCCTGACGGCGTAAAACACGTCTATCAGTTACGTGCCAG

27549 115 1 0 8 ORF7a-NKFALTCFSTQFAFACPDGVKHHVYQLRARSVSPKLFIRQ52fs
TCTTCTGGAACATACGAGGGCAATTCACCATTTTCATCCTCTAGCTGATAA
caa att tgc act gac ttg ctt tag cac tca att tgc ttt tgc ttg tcc tga cgg cgt aaa aca cgt cta tca gtt acg tgc cag atc
GAGGAAGTTCAAGAACTTTACTCTCCAATTTTCTTATTGTTGCGGCAATA

GGCAATTCACCATTTTCATCCTCTAGCTGATAACAAATTTGCACTGACTTG
ctt tag cac tca att tgc ttt
TCCTGACGGCGTAAAACACGTCTATCAGTTACGTGCCAGATCAGTTTCACC

CACCATTTTCATCCTCTAGCTGATAACAAATTTGCACTGACTTGCTTTAGC
act caa ttt gct ttt gct tgt cc
GTAAAACACGTCTATCAGTTACGTGCCAGATCAGTTTCACCTAAACTGTTC

27573 49 2 0 6 ORF7a-STQFAFACPDGVKHHVYQ60fs
TCACCATTTTCATCCTCTAGCTGATAACAAATTTGCACTGACTTGCTTTAG
cac tca att tgc ttt tgc ttg tcc tga cgg cgt aaa a
TTACGTGCCAGATCAGTTTCACCTAAACTGTTCATCAGACAAGAGGAAGTT

GAACATACGAGGGCAATTCACCATTTTCATCCTCTAGCTGATAACAAATTT
gca ctg act tgc ttt agc act caa ttt gct ttt gct tgt cct gac ggc gta aaa cac gtc tat
TCACCTAAACTGTTCATCAGACAAGAGGAAGTTCAAGAACTTTACTCTCCA

27570 71 2 0 6 ORF7a-FSTQFAFACPDGVKHHVYQLRARSV59fs
AATTCACCATTTTCATCCTCTAGCTGATAACAAATTTGCACTGACTTGCTT
tag cac tca att tgc ttt tgc ttg tcc tga cgg cgt aaa aca cgt cta tca gtt
CACCTAAACTGTTCATCAGACAAGAGGAAGTTCAAGAACTTTACTCTCCAA

27572 10 3 0 5 ORF7a-STQF60fs
TTCACCATTTTCATCCTCTAGCTGATAACAAATTTGCACTGACTTGCTTTA
gca ctc aa
TGCTTTTGCTTGTCCTGACGGCGTAAAACACGTCTATCAGTTACGTGCCAG

27549 31 2 0 5 ORF7a-NKFALTCFSTQ52fs
TCTTCTGGAACATACGAGGGCAATTCACCATTTTCATCCTCTAGCTGATAA
caa att tgc act gac ttg ctt tag
TTTGCTTTTGCTTGTCCTGACGGCGTAAAACACGTCTATCAGTTACGTGCC

27556 64 1 0 5 ORF7a-ALTCFSTQFAFACPDGVKHHVYQ55fs
GAACATACGAGGGCAATTCACCATTTTCATCCTCTAGCTGATAACAAATTT
gca ctg act tgc ttt agc act caa ttt gct ttt gct tgt cct gac ggc
AGTTACGTGCCAGATCAGTTTCACCTAAACTGTTCATCAGACAAGAGGAAG

27566 64 1 0 5 ORF7a-CFSTQFAFACPDGVKHHVYQLRA58fs
GGGCAATTCACCATTTTCATCCTCTAGCTGATAACAAATTTGCACTGACTT
gct tta gca ctc aat ttg ctt ttg ctt gtc ctg acg gcg taa aac acg
CAGATCAGTTTCACCTAAACTGTTCATCAGACAAGAGGAAGTTCAAGAACT

27571 10 3 0 4 ORF7a-STQF60fs
ATTCACCATTTTCATCCTCTAGCTGATAACAAATTTGCACTGACTTGCTTT
agc act ca

TTGCTTTTGCTTGTCTGACGGCGTAAAACACGTCTATCAGTTACGTGCCA

27566 58 3 0 4 ORF7a-CFSTQFAFACPDGVKHVYQL58fs
GGGCAATTCACCATTTTCATCCTCTAGCTGATAACAAATTTGCACTGACTT
gct tta gca ctc aat ttg ctt ttg ctt gtc ctg acg gcg taa aa
ACGTGCCAGATCAGTTTCACCTAAACTGTTTCATCAGACAAGAGGAAGTTCA

27556 23 2 0 4 ORF7a-ALTCFSTQ55fs
GAACATACGAGGGCAATTCACCATTTTCATCCTCTAGCTGATAACAAATTT
gca ctg act tgc ttt agc
ATTTGCTTTTGCTTGTCTGACGGCGTAAAACACGTCTATCAGTTACGTGC

27556 32 2 0 4 ORF7a-ALTCFSTQFAF55fs
GAACATACGAGGGCAATTCACCATTTTCATCCTCTAGCTGATAACAAATTT
gca ctg act tgc ttt agc act caa
TGCTTGTCTGACGGCGTAAAACACGTCTATCAGTTACGTGCCAGATCAGT

27555 70 2 0 4 ORF7a-FALTCFSTQFAFACPDGVKHVYQL54fs
GGAACATACGAGGGCAATTCACCATTTTCATCCTCTAGCTGATAACAAATT
tgc act gac ttg ctt tag cac tca att tgc ttt tgc ttg tcc tga cgg cgt aa
CGTGCCAGATCAGTTTCACCTAAACTGTTTCATCAGACAAGAGGAAGTTCAA

27559 88 1 0 4 ORF7a-LTCFSTQFAFACPDGVKHVYQLRARSVSPK56fs
CATACGAGGGCAATTCACCATTTTCATCCTCTAGCTGATAACAAATTTGCA
ctg act tgc ttt agc act caa ttt gct ttt gct tgt cct gac ggc gta aaa cac gtc tat cag tta
AACTGTTTCATCAGACAAGAGGAAGTTCAAGAAGTTTACTCTCCAATTTTTC

27566 16 1 0 4 ORF7a-CFSTQF58fs
GGGCAATTCACCATTTTCATCCTCTAGCTGATAACAAATTTGCACTGACTT
gct tta gca ctc
TGCTTTTGCTTGTCTGACGGCGTAAAACACGTCTATCAGTTACGTGCCAG

27553 56 1 0 4 ORF7a-FALTCFSTQFAFACPDGVK54fs
CTGGAACATACGAGGGCAATTCACCATTTTCATCCTCTAGCTGATAACAAA
ttt gca ctg act tgc ttt agc act caa ttt gct ttt gct tgt
ACACGTCTATCAGTTACGTGCCAGATCAGTTTCACCTAAACTGTTTCATCAG

TTCACCATTTTCATCCTCTAGCTGATAACAAATTTGCACTGACTTGCTTTA
gca ctc aat ttg
TTGCTTGTCTGACGGCGTAAAACACGTCTATCAGTTACGTGCCAGATCAG

27548 8 2 0 3 ORF7a-NKF52fs
CTCTTCTGGAACATACGAGGGCAATTCACCATTTTCATCCTCTAGCTGATA
aca aat
GCACTGACTTGCTTTAGCACTCAATTTGCTTTTGCTTGTCTGACGGCGTA

27574 11 2 0 3 ORF7a-TQFA61fs
CACCATTTTCATCCTCTAGCTGATAACAAATTTGCACTGACTTGCTTTAGC
act caa ttt
TTTTGCTTGTCTGACGGCGTAAAACACGTCTATCAGTTACGTGCCAGATC

27575 43 2 0 3 ORF7a-TQFAFACPDGVKHVY61fs
ACCATTTTCATCCTCTAGCTGATAACAAATTTGCACTGACTTGCTTTAGCA
ctc aat ttg ctt ttg ctt gtc ctg acg gcg taa

TCAGTTACGTGCCAGATCAGTTTCACCTAAACTGTTTCATCAGACAAGAGGA

27566 8 2 0 3 ORF7a-CFS58fs
GGGCAATTCACCATTTTCATCCTCTAGCTGATAACAAATTTGCACTGACTT
gct tta
ACTCAATTTGCTTTTGCTTGTCTGACGGCGTAAACACGTCTATCAGTTA

GGGCAATTCACCATTTTCATCCTCTAGCTGATAACAAATTTGCACTGACTT
gct tta gca ctc aat ttg ctt ttg ctt gtc ctg acg gcg
ATCAGTTACGTGCCAGATCAGTTTCACCTAAACTGTTTCATCAGACAAGAGG

27576 7 2 0 3 ORF7a-TQF61fs
CCATTTTCATCCTCTAGCTGATAACAAATTTGCACTGACTTGCTTTAGCAC
tca att
GCTTTTGCTTGTCTGACGGCGTAAACACGTCTATCAGTTACGTGCCAGA

27576 50 2 0 3 ORF7a-TQFAFACPDGVKHHVYQL61fs
CCATTTTCATCCTCTAGCTGATAACAAATTTGCACTGACTTGCTTTAGCAC
tca att tgc ttt tgc ttg tcc tga cgg cgt aaa aca cg
GTGCCAGATCAGTTTCACCTAAACTGTTTCATCAGACAAGAGGAAGTTCAAG

27555 86 2 0 3 ORF7a-FALTCTFSTQFAFACPDGVKHHVYQLRARSV54fs
GGAACATACGAGGGCAATTCACCATTTTCATCCTCTAGCTGATAACAAATT
tgc act gac ttg ctt tag cac tca att tgc ttt tgc ttg tcc tga cgg cgt aaa aca cgt cta tc
CACCTAAACTGTTTCATCAGACAAGAGGAAGTTCAAGAACTTTACTCTCCAA

GGAACATACGAGGGCAATTCACCATTTTCATCCTCTAGCTGATAACAAATT
tgc act gac ttg ctt tag cac tca att tgc ttt tgc ttg tcc tga cgg cgt aaa aca cgt cta tca
ACCTAAACTGTTTCATCAGACAAGAGGAAGTTCAAGAACTTTACTCTCCAAT

27551 70 1 0 3 ORF7a-KFALTCTFSTQFAFACPDGVKHHVYQ53fs
TTCTGGAACATACGAGGGCAATTCACCATTTTCATCCTCTAGCTGATAACA
aat ttg cac tga ctt gct tta gca ctc aat ttg ctt ttg ctt gtc ctg acg gc
GTTACGTGCCAGATCAGTTTCACCTAAACTGTTTCATCAGACAAGAGGAAGT

CTCTTCTGGAACATACGAGGGCAATTCACCATTTTCATCCTCTAGCTGATA
aca aat ttg cac tga ctt gct tta gca ctc aat ttg ctt ttg ctt gtc ctg acg gcg taa aac acg tct atc agt tac gtg
TCAGACAAGAGGAAGTTCAAGAACTTTACTCTCCAATTTTCTTATTGTTG

27558 92 1 0 3 ORF7a-ALTCTFSTQFAFACPDGVKHHVYQLRARSVSPK55fs
ACATACGAGGGCAATTCACCATTTTCATCCTCTAGCTGATAACAAATTTGC
act gac ttg ctt tag cac tca att tgc ttt tgc ttg tcc tga cgg cgt aaa aca cgt cta tca gtt acg
TGTTTCATCAGACAAGAGGAAGTTCAAGAACTTTACTCTCCAATTTTCTTA

TTCACCATTTTCATCCTCTAGCTGATAACAAATTTGCACTGACTTGCTTTA
gca ctc aat ttg ctt ttg ctt gtc ctg acg gcg taa
AGTTACGTGCCAGATCAGTTTCACCTAAACTGTTTCATCAGACAAGAGGAAG

27556 43 1 0 3 ORF7a-ALTCTFSTQFAFACPD55fs
GAACATACGAGGGCAATTCACCATTTTCATCCTCTAGCTGATAACAAATTT
gca ctg act tgc ttt agc act caa ttt gct ttt
ACGGCGTAAACACGTCTATCAGTTACGTGCCAGATCAGTTTCACCTAAAC

27566 59 1 0 3 ORF7a-CFSTQFAFACPDGVKHHVYQL58fs

GGGCAATTCACCATTTTCATCCTCTAGCTGATAACAAATTTGCACTGACTT
gct tta gca ctc aat ttg ctt ttg ctt gtc ctg acg gcg taa aac
CGTGCCAGATCAGTTTCACCTAAACTGTTTCATCAGACAAGAGGAAGTTCAA

27568 52 1 0 3 ORF7a-FSTQFAFACPDGVKHHVYQ59fs
GCAATTCACCATTTTCATCCTCTAGCTGATAACAAATTTGCACTGACTTGC
ttt agc act caa ttt gct ttt gct tgt cct gac ggc gta
AGTTACGTGCCAGATCAGTTTCACCTAAACTGTTTCATCAGACAAGAGGAAG

27571 12 30 10 556 ORF7a-STQF60del
ATTCACCATTTTCATCCTCTAGCTGATAACAAATTTGCACTGACTTGCTTT
agc act caa
GCTTTTGCTTGTCCTGACGGCGTAAAACACGTCTATCAGTTACGTGCCAGA

27555 69 14 1 61 ORF7a-FALTQFSTQFAFACPDGVKHHVYQ54del
GGAACATACGAGGGGCAATTCACCATTTTCATCCTCTAGCTGATAACAAATT
tgc act gac ttg ctt tag cac tca att tgc ttt tgc ttg tcc tga cgg cgt a
ACGTGCCAGATCAGTTTCACCTAAACTGTTTCATCAGACAAGAGGAAGTTCA

GGAACATACGAGGGGCAATTCACCATTTTCATCCTCTAGCTGATAACAAATT
tgc act gac ttg ctt tag cac tca att tgc ttt tgc ttg tcc tga cgg cgt aaa aca cgt cta tca gtt
AACTGTTTCATCAGACAAGAGGAAGTTCAAGAAGTTTACTCTCCAATTTTTC

ATTCACCATTTTCATCCTCTAGCTGATAACAAATTTGCACTGACTTGCTTT
agc act caa ttt
TTGCTTGTCCTGACGGCGTAAAACACGTCTATCAGTTACGTGCCAGATCAG

ACCATTTTCATCCTCTAGCTGATAACAAATTTGCACTGACTTGCTTTAGCA
ctc aat ttg ctt ttg ctt
GACGGCGTAAAACACGTCTATCAGTTACGTGCCAGATCAGTTTCACCTAAA

GGAACATACGAGGGGCAATTCACCATTTTCATCCTCTAGCTGATAACAAATT
tgc act gac ttg ctt tag cac tca att tgc ttt tgc ttg
AAACACGTCTATCAGTTACGTGCCAGATCAGTTTCACCTAAACTGTTTCATC

27571 18 25 0 50 ORF7a-STQFAF60del
ATTCACCATTTTCATCCTCTAGCTGATAACAAATTTGCACTGACTTGCTTT
agc act caa ttt gc
GCTTGTCCTGACGGCGTAAAACACGTCTATCAGTTACGTGCCAGATCAGTT

CACCATTTTCATCCTCTAGCTGATAACAAATTTGCACTGACTTGCTTTAGC
act caa ttt gct t
TTGTCCTGACGGCGTAAAACACGTCTATCAGTTACGTGCCAGATCAGTTTC

TACGAGGGGCAATTCACCATTTTCATCCTCTAGCTGATAACAAATTTGCACT
gac ttg ctt tag
CAATTTGCTTTTGCTTGTCCTGACGGCGTAAAACACGTCTATCAGTTACGT

GGGCAATTCACCATTTTCATCCTCTAGCTGATAACAAATTTGCACTGACTT
gct tta gca ctc aat ttg ctt
TCCTGACGGCGTAAAACACGTCTATCAGTTACGTGCCAGATCAGTTTCACC

TGGAACATACGAGGGGCAATTCACCATTTTCATCCTCTAGCTGATAACAAAT
ttg cac tga ctt gct tta gca ctc aat ttg ctt ttg ctt gtc ctg acg gcg taa aac acg tct atc agt

AAACTGTTTCATCAGACAAGAGGAAGTTCAAGAACTTTACTCTCCAATTTTT

27555 51 1 0 39 ORF7a-FALTCFSTQFAFACPDGV54L
GGAACATACGAGGGCAATTCACCATTTCATCCTCTAGCTGATAACAAATT
tgc act gac ttg ctt tag cac tca att tgc ttt tgc ttg
AAAACACGTCTATCAGTTACGTGCCAGATCAGTTTCACCTAAACTGTTTCAT

27555 24 21 0 36 ORF7a-FALTCFSTQ54L
GGAACATACGAGGGCAATTCACCATTTCATCCTCTAGCTGATAACAAATT
tgc act gac ttg ctt tag
ATTTGCTTTTGCTTGTCCTGACGGCGTAAAACACGTCTATCAGTTACGTGC

AATTCACCATTTCATCCTCTAGCTGATAACAAATTTGCACTGACTTGCTT
tag cac tca att tgc
GCTTGTCCTGACGGCGTAAAACACGTCTATCAGTTACGTGCCAGATCAGTT

27556 51 1 0 32 ORF7a-ALTCFSTQFAFACPDGV55del
GAACATACGAGGGCAATTCACCATTTCATCCTCTAGCTGATAACAAATTT
gca ctg act tgc ttt agc act caa ttt gct ttt gct tgc
AAACACGTCTATCAGTTACGTGCCAGATCAGTTTCACCTAAACTGTTTCATC

27570 9 6 0 24 ORF7a-FSTQ59L
AATTCACCATTTCATCCTCTAGCTGATAACAAATTTGCACTGACTTGCTT
tag cac t
ATTTGCTTTTGCTTGTCCTGACGGCGTAAAACACGTCTATCAGTTACGTGC

GAACATACGAGGGCAATTCACCATTTCATCCTCTAGCTGATAACAAATTT
gca ctg act tgc ttt agc act caa ttt gct ttt gct tgc cct gac ggc gta aaa cac gtc tat c
CACCTAAACTGTTTCATCAGACAAGAGGAAGTTCAAGAACTTTACTCTCCA

TTCACCATTTCATCCTCTAGCTGATAACAAATTTGCACTGACTTGCTTTA
gca ctc aat ttg ctt ttg ctt gtc ctg acg gcg taa aac a
CGTGCCAGATCAGTTTCACCTAAACTGTTTCATCAGACAAGAGGAAGTTCAA

GGAACATACGAGGGCAATTCACCATTTCATCCTCTAGCTGATAACAAATT
tgc act gac ttg ctt tag cac tca att tgc ttt tgc ttg tcc tga cgg cgt aaa aca cgt ct
GTTTCACCTAAACTGTTTCATCAGACAAGAGGAAGTTCAAGAACTTTACTCT

TTCACCATTTCATCCTCTAGCTGATAACAAATTTGCACTGACTTGCTTTA
gca ctc aat ttg ctt ttg ctt gtc ctg acg gcg taa aac acg tct atc agt tac
CCTAAACTGTTTCATCAGACAAGAGGAAGTTCAAGAACTTTACTCTCCAATT

27558 27 6 0 11 ORF7a-LTCFSTQFA56del
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act gac ttg ctt tag cac tca
TTTTGCTTGTCCTGACGGCGTAAAACACGTCTATCAGTTACGTGCCAGATC

TTCACCATTTCATCCTCTAGCTGATAACAAATTTGCACTGACTTGCTTTA
gca ctc
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tag cac tca att tgc ttt tgc ttg tcc tga cgg cgt aaa aca
CGTGCCAGATCAGTTTCACCTAAACTGTTTCATCAGACAAGAGGAAGTTCAA

27556 63 2 0 10 ORF7a-ALTCFSTQFAFACPDGVKHHVY55del
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gca ctg act tgc ttt agc act caa ttt gct ttt gct tgt cct gac ggc
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GGGCAATTCACCATTTTCATCCTCTAGCTGATAACAAATTTGCACTGACTT
gct tta gca c
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27560 84 5 0 9 ORF7a-LTCFSTQFAFACPDGVKHHVYQLRARSVS56del
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CTAAACTGTTTCATCAGACAAGAGGAAGTTCAAGAACTTTACTCTCCAATTT

TTCACCATTTTCATCCTCTAGCTGATAACAAATTTGCACTGACTTGCTTTA
gca ctc
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GGGCAATTCACCATTTTCATCCTCTAGCTGATAACAAATTTGCACTGACTT
gct tta gca ctc aat ttg ctt ttg ctt gtc ctg acg gcg taa aac acg t
AGATCAGTTTCACCTAAACTGTTTCATCAGACAAGAGGAAGTTCAAGAACTT

ATTCACCATTTTCATCCTCTAGCTGATAACAAATTTGCACTGACTTGCTTT
agc act caa
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27567 27 6 0 7 ORF7a-FSTQFAFAC59del
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ctt tag cac tca att tgc ttt
TCCTGACGGCGTAAAACACGTCTATCAGTTACGTGCCAGATCAGTTTCACC

27573 60 4 0 7 ORF7a-STQFAFACPDGVKHHVYQLRA60del
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cac tca att tgc ttt tgc ttg tcc tga cgg cgt aaa aca cgt cta
ATCAGTTTCACCTAAACTGTTTCATCAGACAAGAGGAAGTTCAAGAACTTTA

27574 30 1 0 7 ORF7a-TQFAFACPDG61del
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act caa ttt gct ttt gct tgt cc
GTAAAACACGTCTATCAGTTACGTGCCAGATCAGTTTCACCTAAACTGTTC

TCACCATTTTCATCCTCTAGCTGATAACAAATTTGCACTGACTTGCTTTAG
cac tca att tgc ttt tgc ttg tcc tga cgg cgt aaa a
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27556 84 2 0 6 ORF7a-ALTCFSTQFAFACPDGVKHHVYQLRARSV55del
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gca ctc aa
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TCTTCTGGAACATACGAGGGCAATTCACCATTTTCATCCTCTAGCTGATAA
caa att tgc act gac ttg ctt tag
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agc act ca
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gca ctg act tgc ttt agc
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gca ctg act tgc ttt agc act caa
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tgc act gac ttg ctt tag cac tca att tgc ttt tgc ttg tcc tga cgg cgt aa
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27574 9 1 0 4 ORF7a-TQF61del
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27572 15 3 0 3 ORF7a-STQFAF60I
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27565 66 3 0 3 ORF7a-CFSTQFAFACPDGVKHVYQLRA58del
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27553 96 3 0 3 ORF7a-FALTQFAFACPDGVKHVYQLRARSVSPK54del
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gct tta
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27566 51 2 0 3 ORF7a-CFSTQFAFACPDGVKHV58del
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27555 87 2 0 3 ORF7a-FALTQFAFACPDGVKHVYQLRARSVS54L
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27548 108 1 0 3 ORF7a-NKFALTQFAFACPDGVKHVYQLRARSVSPKLF52del
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TCAGACAAGAGGAAGTTCAAGAACTTTACTCTCCAATTTTCTTATTGTTG

27542 75 1 0 3 ORF7a-ADNKFALTQFAFACPDGVKHVY50D
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ctg ata aca aat ttg cac tga ctt gct tta gca ctc aat ttg ctt ttg ctt gtc ctg
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27572 48 1 0 3 ORF7a-STQFAFACPDGVKHVYQ60K
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gca ctg act tgc ttt agc act caa ttt gct ttt
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