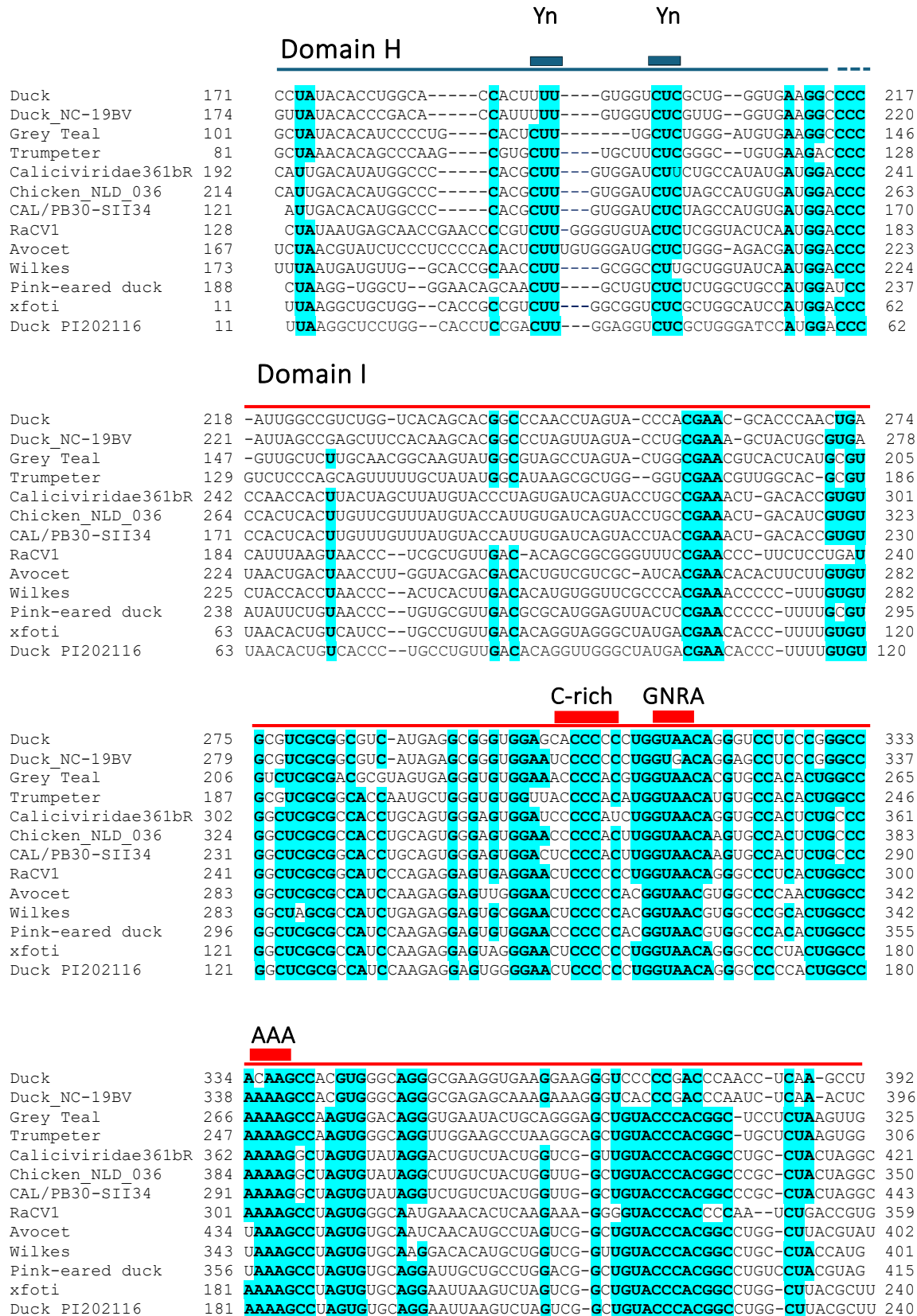


Supplementary Figure S1. Sequence alignment of the conserved core of calicivirus type 2 IRESs



C-rich

Duck	393	GAACCCG-CGUU CACCC UCAUGAUCAGG CAACCC AGCCUGGCGGUUGUUGU UAGUA UUG	453
Duck_NC-19BV	397	GAACCCG-CGUU CACCC UCUAUGAUCAGG CAACCC AGCCUGGCACUCUUAGU UAGUA ACA	456
Grey Teal	326	AAGCCCG- AGUU CACCC CACUACGUUGUGCU ACCC GCACAGCGCCUGU UAGUA UCC	385
Trumpeter	307	AAAACUG-CGU CACCC ACAUGGUGUGUA ACCC AACACUGCGUGUG UAGUA CAC	366
Caliciviridae361bR	422	AUUCU- GCAGUA CACCC UGCAGG-CGU- CAACCC AGACAACACGUUGU UAGUA CGU	479
Chicken_NLD_036	444	AUGCU- GCAGUA CACCC UGCAGG-CGU- CAACCC AGACAACACGUUGU UAGUA CGU	501
CAL/PB30-SII34	351	AUGCU- GCAGUA CACCC UGCAGG-CGU- CAACCC AGACAACACGUUGCUC UAGUA CGU	408
RaCV1	360	CGUAGUG AAGCU CACCC GC-UGGGACUCAUG AUCCC -GAUGAAUCAGGU UAGUA CGA	418
Avocet	403	GUUGGUG AAGCU CACCC GC-UUGGGACUC- CGACCC GGGAACACAAA--AGUGCU UAGUA CUG	459
Wilkes	402	UGUCCUG AAGCU CACCC GC-UCAGCCU- CGAUCCC GGAGACACACU--GGGGCU UAGUA CUG	458
Pink-eared Duck	417	UUGUCC AAGCU CACCC GC-UUGGGACUC- CGACCC GGGAACGCAAC--UGGGCU UAGUA CGA	472
xfoti	241	AAGACCG AAGCU CACCC GC-UUGGGACUC- CGACCC GGGAACACAAC--UGGGCU UAGUA AUC	297
Duck PI202116	241	AAGACCG AAGCU CACCC GC-UUGGGACUC- CGACCC GGGAACACAAC--UGGGCU UAGUA AUC	297

Domain J- K

Duck	453	GCGAAAAGCUGGCAC CGA CUGUUC CCAA AGACCAC CCAA UGGCAAGGGGGCUGG UAGUA G	512
Duck_NC-19BV	457	GCGAAAAGCAAGGCAC CGA CUUGCGUUAAGU UCCAA UGGCAAGGGGGUAGG UAGUA G	516
Grey Teal	386	ACGAAACGCUACCC CCAG CUUGCCCGCGUGACUGACA ACGG CACUGGGUUUGCG UAGUA G	445
Trumpeter	367	CCCAAACCUUUUCC CCAG UAGCAUCUUCUGCUUCUGGACGGCACUGGGUUUGCG UAGUA G	426
Caliciviridae361bR	480	UGGGG-AACGCUCUAGG AU -CAUCUGCUAAGUAUUUGUUUGGGUCUCC CCCG CU UAGUA G	537
Chicken_NLD_036	502	GUGGG-AACGCUCUAGG AU -CAUCUACUGAACA UUUG CGUGGGUCUCC CCCG CU UAGUA G	559
CAL/PB30-SII34	409	GUGGG-AACGCUCUAGG AU -CAUCUACUGAACA UUUG CGUGGGUCC CCCG CU UAGUA G	466
RaCV1	419	ACCC CCAA AGCUGGAC CC -CAACAGCCUGGGCC-UUAA UUG UCGGGCU UAGUA G	475
Avocet	460	CUGUGGCUUCAGGAC CC -GUGUCC CAAG GCUGACAGU UAG CCCCC CCGG CU UAGUA G	518
Wilkes	459	UGCGCGCCGCCUGGAC CC -CAAGUCCUUGGGCAGUGCGUAGGACUGCCAGCC UAGUA G	517
Pink-eared duck	473	CUAGCUCUUGUGA ACCA -CAACCCACAGGAAC-AGCAU UAG CUUGCCUGU UAGUA G	530
xfoti	298	CUAGCUCUCCCGGAC CC -CAACUUGCAGGAC-AGCGU UAG CUUGGUCU UAGUA G	355
Duck PI202116	298	CUAGCCUACCCUGGAC CC -CAACUUGCAGGAC-AGCGU UAG CUUGGUCU UAGUA G	355

Bipartite motif

Duck	513	AUGCC UG CAGGU ACCCUUU--- CGAUCUGA CCAGGG CCCU UGACUAU ACCG UUCCG	568
Duck_NC-19BV	517	AUGCC AG CAGGU ACCUCUAU--UG AUCUGA CCUGGG CCCU UGACUAU ACCG UUCCG	574
Grey Teal	446	AUGCC UG CAGGU UACCCACU---CU GGAUCUGA CCAGGG CCCU UGACUAU ACCG UUCCG	502
Trumpeter	427	AUGCC UG CAGGU ACCCUCU---- GAUCUGA CCAGGG CCCU UGACUAU ACCG UUCCG	480
Caliciviridae361bR	538	ACCC CG AAGGU ACCCUUAAUUG GGAUCUGA CCAGGG CCUG UGACUAU ACCG UUCCG	597
Chicken_NLD_036	560	ACCC CG CAGGU ACCCCUAAACUG GGAUCUGA CCAGGG CCUG UGACUAU ACCG UUCCG	619
CAL/PB30-SII34	467	ACCC CU AGGU UACCCUUAAUUG GGAUCUGA CUAGGG CCUG UGACUAU ACCG UUCCG	526
RaCV1	476	ACCC CG CAGGU UACCCAACU--U GGAUCUGA CCAGGG CCUG UGACUAU ACCG UUCCG	532
Avocet	519	ACCC CG CAGGU UACCCUAA--CG GGAUCUGA CCAGGG CCCU UGACUAU ACCG UUCCG	576
Wilkes	518	ACCC CG CAGGU UACCCCUU--- GGAUCUGA CCUGGG CCCU UGACUAU ACCG UUCCG	573
Pink-eared duck	531	ACCC CG CAGGU UACCCUUA--CA GGAUCUGA CCAGGG CCUG UGACUAU ACCG UUCCG	588
xfoti	356	ACCC CG CAGGU UACCCGAA--AG GGAUCUGA CCAGGG CCUG UGACUAU ACCG UUCCG	413
Duck PI202116	356	ACCC CG CAGGU UACCCGAA--AG GGAUCUGA CCAGGG CCUG UGACUAU ACCG UUCCG	413

ASL

Duck	569	GUA AUCAGG GGUA GA CCAUGAA AGCGCAGCCCC	605
Duck_NC-19BV	575	GUA AUCAGG GGUA GA CCAUGAA AGCGCUACCCCC	611
Grey Teal	503	GUA A ACCGG UA UAAAA CCAUGAA AGUGCAAACCCA	539
Trumpeter	481	GUA A ACCGG UG UAAAA CCAUGAA AGUGCAAACCCA	517
Caliciviridae361bR	598	GUA AUCC AGGU UAAAA - CCAUGAA CGCGGGGGGGG-	633
Chicken_NLD_036	620	GUA AUCC AGGU UAAAA - CCAUGAA CGCGGGGGG---	655
CAL/PB30-SII34	527	GUA AUCC AGGU UAAAA - CCAUGAA CGCGGGGGGGG-	562
RaCV1	533	GUA AUCC AGGU UAAAA - CCAUGAA CGUUGGCC---	536
Avocet	577	GUA AUGAGU GGU UAAAA - UAAUGAA CGCGUGGGGG---	610
Wilkes	574	GUA AUG CAGGU UAGAA - AAUAGAA CGGCUUGGCA---	607
Pink-eared duck	589	GUA AUCC AGGU UAAAA - CCAUGAA CGAAUAGGAC---	622
Goose_NC-19BV	1	CC AGGU UAAAA - CCAUGAA CGAAUGGGCCCCA	31
xfoti	414	GUA AUCC AGGU UAAAA - CCAUGAA CGGAUAGGCC---	448
Duck PI202116	414	GUA AUCC AGGU UAAAA - CCAUGAA CGGAUAGGCC---	448

Supplementary Figure S1. Sequence alignment of the conserved core of calicivirus type 2 IRESs. Sequence alignment of elements corresponding to IRES domains H, I and J-K in the 5'UTRs of duck calicivirus MW20 ('Duck'), Duck calicivirus isolate NC-19BV-45-k77-747816 ('Duck_NC-19BV'), grey teal calicivirus isolate MW09 ('Grey Teal'), Trumpeter swan calicivirus ('Trumpeter'), MAG: Caliciviridae sp. isolate 361bR-k141_109560 ('Caliciviridae361bR'), Chicken calicivirus isolate Chicken/NLD/2019/V_M_036_calici_2 ('Chicken_NLD_036'), MAG: Caliciviridae sp. isolate CAL/PB30-SII34/Switzerland/2019 ('CAL/PB30-SII34'), Caliciviridae sp. isolate yc-13/Red-crowned crane calicivirus 1 ('RaCV1'), avocet calicivirus isolate MW21 ('Avocet'), Wilkes calicivirus isolate Antarctic11 ('Wilkes'), Pink-eared duck calicivirus I isolate MW23 ('Pink-eared duck'), Goose calicivirus isolate NC-19BV-37-k77-711556 ('Goose_NC-19BV'), Caliciviridae sp. isolate xftoti59cal1 ('xftoti') and MAG: Duck calicivirus isolate PI202116/k141_160805 ('Duck PI202116'). MAG: Caliciviridae sp. isolate CAL/PB27-SI31/Switzerland/2019 (GenBank: OM469262.1) and MAG: Caliciviridae sp. isolate CAL/PB10-HII34X/Switzerland/2019 (GenBank: OM469260.1) IRESs were excluded from analysis because they are 99% and 100% identical to MAG: Caliciviridae sp. isolate CAL/PB30-SII34/Switzerland/2019 ('CAL/PB30-SII34'). Nucleotides that are identical in nine or more of the thirteen complete sequences are indicated in bold, and motifs containing these conserved nucleotides are shaded blue. Sequences were annotated after alignment to show boundaries of predicted domains and sequence motifs that are characteristic of type 2 IRESs.

Supplementary Figure S2. Aligned sequences of ORF1* sequences from *Caliciviridae* sp. isolate yc-13 (Red-crowned crane calicivirus 1) and related caliciviruses.

Species	Sequence	Position
Avocet	-----MQPTISDLRPIAQSGCILCVLDLQITLLATIKLQRWRLCQNHPP-----	36
Turkey	-----	0
RaCV1	-----MSMRP-----	5
Wilkes	-----MPLPRQA--RHRSATTHNLS-----	19
Pink-eared	-----MSMNAPPKSLPHVATPHPLADPNVGLTISESLTARMLKRA--AR-DPTFSASTLT-----	55
Duck_PI2	-----MSTTTKRKSLPNPSQLQSPQNNQMSSHSLIALPLPRSQGG---SEQQCLIP-----	48
xfoti59Ca11	-----MSSHSLIAHPLPRFQGG---SGQQCLIPP-----	26
DuCV2_B6	-----MSTKTQRKSSPNPSQSRMLQNNLTSLHLLTALHSGASRADSEQQCLNRP-----	49
Goose19BV	MTPTLKSTNNSSMPVSTSPRRNSQPAAFQLPSLSDLEKRPGLSLARLLKRRRDGRF--ATPSSNHH-----	65
GooseN	-----	0
Duck2	-----	0
Avocet	-THLPLKHSAAALRVLKLTLHTELPNVTTAGSAVLSSMAHASLKRTTNEPASHTHFLVQTPYRVCP-----	100
Turkey	-----MSSITRDVLGTERGGASTPSTVLQNAPIVQSVRPRTRKDLTPSTTSQ-----	48
RaCV1	PTPLPFRHSIVVNVPTPTLPTIGIVSNTDGDFTDTPYPVVQLRLITPDSAEPFPRMGVTHLMTCP-----	70
Wilkes	LLCVRSTPSTALTVPSTSTRSTISAATSTGSISLPIPTQHALQQETMSRP--PTPYPMVTPSSSLR-----	82
Pink-eared	SICRLSKPSDATPALQSTPKQANTAKNTPNGTSPTSMPLASRRGITIEPVKLG---PRTPSQTS-----	117
Duck_PI2	YTPPPSRRSAATRAQQPMQTITGSADNTNGEDNLTFSPADSPNKITTESAHSPTDLTPSNLCP-----	114
xfoti59Ca11	STPSPSRRSAATRVQRHQTITSSANNTTGEDNPTFSPADSLNKITLESARPSPSMDLTHSNSCP-----	90
DuCV2_B6	PTSTLSRPSAVTHVQQPMQTITPSVGSTSGVLNPTYSPDPSPSKPTRQSVKQEPMAQTPWSTSL-----	114
Goose19BV	PTCLPSTLSAVTHAQPHSTTCCSAEDTSAEHSPISSPPALRRPTTLRLAAPS RPMDLTLWNQSP-----	130
GooseN	-----MNLIPWRKSP-----	10
Duck2	-----	0
Avocet	LMISGARFAPLRLLTPTVTSQRSTLPPTIERALAMRNGAIQDPL-LRSAGTHQTVPSLATTSNCA-----	166
Turkey	LQSSGKPSQHLRRISHIATSAPSSTQVHTSGLASPGRNGLTSSRRSVSRSENTHPPASLIPRVDLSY-----	94
RaCV1	PRPSGTPSDKWRKNTPNATSAQFFTQQLSTVLESPTLPKGTACLWRTNIESTPKS--ARLSKAVLRL-----	116
Wilkes	MQISGTRFAQSPKTTQSAALFAPLTPAPTTGVEPLSRSGSVTSLMSTSSVNTLKP-A-PSSHLS-----	128
Pink-eared	TPSSGPPSSTSSNTLIASPLVPPTPQPTSEKAPLLKNGNTSPVFNFAGMPRR--VRSARTTLN-----	182
Duck_PI2	HKNSGTRLSQSRKTLPSVASVRPPTPHFSTVLVDASMSGKPLSLNPTHADTRRR--VRSARVNLNY-----	179
xfoti59Ca11	HKNSGTQSSQSRKTLPSVASVRPPTPHSSTVLVDVSTSGKPLSLNPTRSADTRRR--VRSARANLNY-----	137
DuCV2_B6	QGSSGTPSKPSRKTPPSATSVPSTQPSSTEQEAASTSGKQHSNPNSHADTRRR--VRSARANLNY-----	160
Goose19BV	HQSSGNLSEILKKSTPGATFVRRPTPPTSSEHPEDSTSGNEHSPARIASAATHPR--VRSARVNLNY-----	176
GooseN	RLNSGSLSEASKSTPSATFVRRPTPPTSSEPLANLMTGKEPSVPVPTYAGTRRR--AR-AKVNLY-----	65
Duck2	-----	0
Avocet	RAEDPHAWLDHQPRASTSAQ--PTPPLLADRQMRACSRQSPMP-----LAMRTSPPMGSRFRFR-----	213
Turkey	RAPETLRWLEPHLELECDQDQ-----DSLQNSSVDHSCVPTLTSGRYSPSLMEE--VMQ-PTLSP-----	145
RaCV1	REPDSPTR-EPPRVLEPPVKVTSSPPSVDLSLPLTVTSPHGSPDLLHLETTQ-----VTSSA-----	174
Wilkes	RALGIPLQ-EPFPELVPAAGM-----LGVPAQLQDPKLRITTSLSRSPQQLLTT-PPQP-HKSWM-----	176
Pink-eared	RAPETLPP-EPFPLVPAAT-----LGLPASCDQDPTKNRTLTLHKSCQSSPPP-TPPL-LRYSS-----	239
Duck_PI2	RAPETLPP-APFPELERPTS-----LGLPMSCDQDPTNVRTMISRQTSWDSLQTT-NPPLP-RRSSL-----	236
xfoti59Ca11	RAPETLPP-VPFPELEHPTS-----LGLPMSCDQDPTSVRTMISRQTSWDSLQTT-NPPLP-RRSSL-----	186
DuCV2_B6	RAPETLPP-VPFPELEHPTS-----LGLPMSCDQDPTSVRTMISRQTSWDSLQTT-NPPLP-RRSSL-----	209
Goose19BV	RAPETLPP-EPFPELARLGS-----LGLPMSCLDPTKGRTRTSPPGSWASSPTT-PPQP-PKSSR-----	225
GooseN	RAPETLPP-EPFPELAHLGS-----LGLPMNCRDPINDPTLISLRASWGSSPTT-PQPQ-PKLSR-----	105
Duck2	-----MISQQASWDSLQTT-NPPLP-RRSSL-----	23
Avocet	KWLK--SKTQR---QHSRHHDGSLERIPLLTAP*------	239
Turkey	LLTPPLSRQRSHLERLSVRSGDNY---TVTTAPIALQHYSLSPLSGTQTRMPWIRRIWRQFKQCVVK-----	236
RaCV1	RSTRRSTPTQTSLRVRPSLRSGATY---LPTTPTTELRPYLLSQCGTETSTRSTDM-KLRCPGCVII-----	255
Wilkes	RSDPPLLLAPAPLARPSHKYGAIS---ITTTTQTEQLRCSQQSPYGLQMOTRLTARNSRHCAPCTIL-----	268
Pink-eared	LWRTQSRAPKRLPARPSRRFGETS---ATRMRTQTEQLQYSLQSPSGSRTTTRSTVQSSACAPCVL-----	304
Duck_PI2	LSRLLSAQGPGLPARPSRRFGAIS---TTTTTQTERLQSSLQSHSGLLTTTSTQONSKTCDPCVIL-----	301
xfoti59Ca11	LSRLLFAQGPGLPARPSRRFGAIS---TTTTTQTERLQSSLQSHSGLLTTTISTQONSKTCDPCVIL-----	278
DuCV2_B6	LSRLLSAQGPGLPARPSRRFGAIS---TTTTTQTERLQSSLQSHSGLLTTTSTQONSKTCDPCVIL-----	301
Goose19BV	LWRTLSEVRPARLARPSRRFGAIS---TMKTHQTEQLQFLLRSPSGSRTTTRSTQONSKTCDPCVIL-----	317
GooseN	LWRIPSSVRPARLARPSRRFGAIS---TTRMHQTEQLQYSLQSPSGSRTTTRSTQONSKTCDPCVIL-----	197
Duck2	LSRLLSAQGPGLPARPSRRFGAIS---TTTTTQTERLQSSLQSHSGLLTTTSTQONSKTCDPCVIL-----	88

Supplementary Figure S2. Aligned sequences of ORF1* sequences from avocet calicivirus isolate MW21 ('Avocet'), Turkey calicivirus isolate L11043 ('Turkey'), Caliciviridae sp. isolate yc-13/Red-crowned crane calicivirus 1 ('RaCV1'), Wilkes calicivirus isolate Antarctic11 ('Wilkes'), Pink-eared duck calicivirus I isolate MW23 ('Pink-eared'), MAG: Duck calicivirus isolate PI202116/k141_160805 ('Duck_PI2'), Caliciviridae sp. isolate xftoti59cal1 ('xftoti59Cal1'), Duck calicivirus 2 strain DuCV-2_B6, Goose isolate NC-19BV-37-k77-711556 ('Goose19BV'), Goose calicivirus strain N ('GooseN') and Duck calicivirus 2 strain DuCV-2_B76 ('Duck2'). Amino acid residues conserved in 70% or more of sequences are in bold font and highlighted blue.

Supplementary Figure S3. Aligned sequences of ORF1* sequences from Caliciviridae sp. isolate CAL/PB27-SI31/Switzerland/2019 and related caliciviruses.

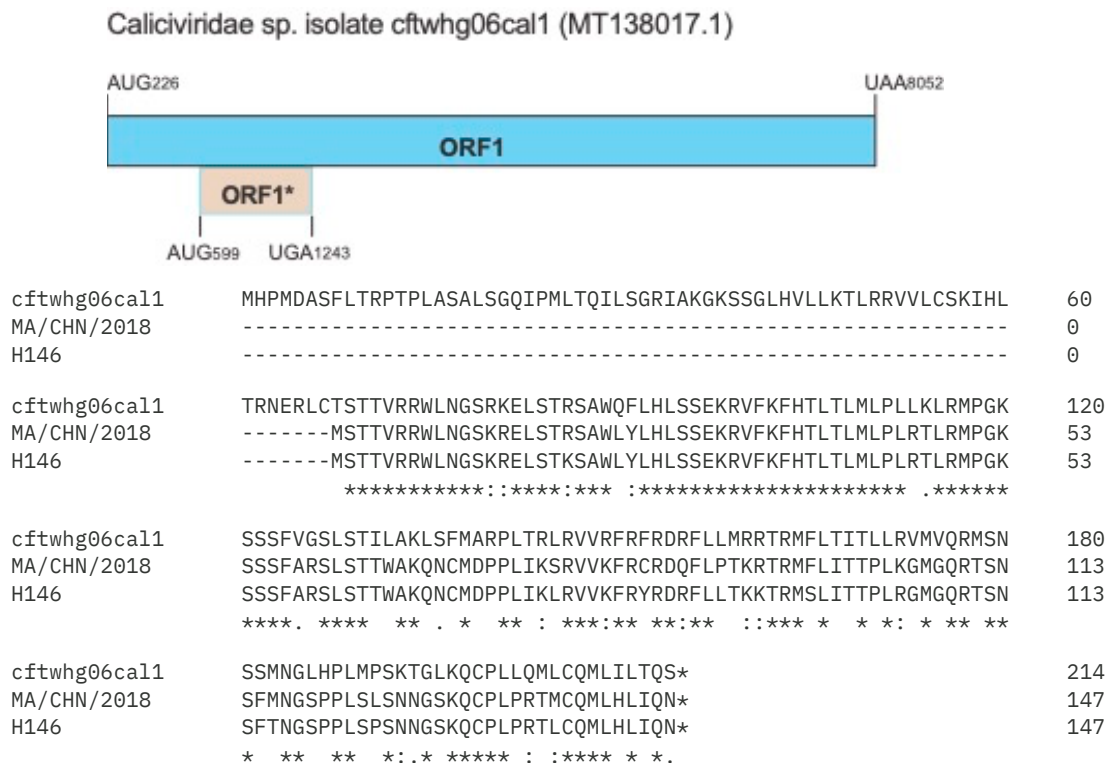
MZ679042.1	MEIWTLVQKTTISISLLPLPFKAKHSYRTLSASVRPSTNLPASSVPKTFARLQSTAGHINEAFQDQDTMPD	70
CAL/PB27-SI31	METWTLVQKTTISISLLPLPFKAKHSYRTLSASVRPSTNLPVSSVPKTFARLQSTAGHINEAFQDQDTMPD	70
CAL/PB30-SII34	METWTLVQKTTISISLLPLPFKAKHSYRTLSASVRPSTNLPASSVPKTFARLQSTAGHINEAFQDQDTMPD	70
CAL/PB10-HII34X	METWTLVQKTTISISLLPLPFKAKHSYRTLSASVRPSTNLPASSVPKTFARLQSTAGHINEAFQDQDTMPD	70
MW684834.1	MESWTLVQKTTISISLLPLPFKAKHSYRTLSASVRPSTNSPASSVPKTFARLQSTVGHINEAFQDQDTMPD	70
MW684835.1	MESWTLVQKTTISISLLPLPFKAKHSYRTLSASVRPSTNSPASSVPKTFARLQSTVGHINEAFQDQDTMPD	70
MW684841.1	MESWTLVQKTTISISLLPLPFKAKHSYRTLSASVRPSTNSPASSVPKTFARLQSTVGHINEAFQDQDTMPD	70
MW684842.1	MESWTLVQKTTISISLLPLPFKAKHSYRTLSASVRPSTNSPASSVPKTFARLQSTVGHINEAFQDQDTMPD	70
MW684843.1	MESWTLVQKTTISISLLPLPFKAKHSYRTLSASVRPSTNSPASSVPKTFARLQSTVGHINEAFQDQDTMPD	70
MW684844.1	MESWTLVQKTTISISLLPLPFKAKHSYRTLSASVRPSTNSPASSVPKTFARLQSTVGHINEAFQDQDTMPD	70
MW684840.1	MESWTLVQKTTISISLLPLPFKAKHSYRTLSASVRPSTSLPASSVPKTFARLQSTVGHINEAFQDQDTMPD	70
MW684838.1	MESWTLVQKTTISISLLPLPFKAKHSYRTLSASVRPSTNSPASSVPKTFARLQSTVGHIN-AFQDQDTMPD	69
MW684845.1	MESWTLVQKTTISISLLPLPFKAKHSYRTLSASVRPSTNSPASSVPKTFARLQSTAGHINEAFQDQDTMPD	70
MW684846.1	-----	0
MW684847.1	MESWTLVQKTTISISLLPLPFKAKHSYRTLSASVRPSTNSPASSVPKTFARLQSTAGHINEAFQDQDTMPD	70
MZ679042.1	SPDCPTACNAVAMEPSLNSSTSLASNMKSTESRNTPTASSVPFSSQLLSLSEEYLSQLGNAPCPSASAT	140
CAL/PB27-SI31	SPDCPTACNAVAMEPSLNSSTSLASNMKSTESRNTPTASSVPFSSQLLSLSEEYLSQLGSAAPCPSASAT	140
CAL/PB30-SII34	SPDCPTACNAVAMEPSLNSSTSLASNMKSTESRNTPTASSVPFSSQLLSLSEEYLSQLGSAAPCPSASAT	140
CAL/PB10-HII34X	SPDCPTACNAVAMEPSLNSSTSLASNMKSTESRNTPTASSVPFSSQLLSLSEEYLSQLGSAAPCPSASAT	140
MW684834.1	SPDCPTACNAAAMVPSQNSSTSQSASNTKLIVSRNTPTASSVPFSSQLLSLSEEYLSQLGNAPCPSASAT	140
MW684835.1	SPDCPTACNAAAMVPSQNSSTSQSASNTKLIVSRNTPTASSVPFSSQLLSLSEEYLSQLGNAPCPSASAT	140
MW684841.1	SPDCPTACNAAAMVPSQNSSTSQSASNTKLIVSRNTPTASSVPFSSQLLSLSEEYLSQLGNAPCPSASAT	140
MW684842.1	SPDCPTACNAAAMVPSQNSSTSQSASNTKLIVSRNTPTASSVPFSSQLLSLSEEYLSQLGNAPCPSASAT	140
MW684843.1	SPDCPTACNAAAMVPSQNSSTSQSASNTKLIVSRNTPTASSVPFSSQLLSLSEEYLSQLGNAPCPSASAT	140
MW684844.1	SPDCPTACNAAAMVPSQNSSTSQSASNTKLIVSRNTPTASSVPFSSQLLSLSEEYLSQLGNAPCPSASAT	140
MW684840.1	SPDCPTACNAAAMVPSQSLSTSQSASSTKLTVSRSTPTASSVPFSSQLLSLSEEYLSQLGNAPCPSASAT	140
MW684838.1	SPDCPTACNAVAMVPSQNSSTSQSASSTKLTVSRSTPTASSVPFSSQLLSLSEEYLSQLGNAPCPSASAT	139
MW684845.1	SPDCPTACNAAAMVPSQNSSTSQSASSTKLTVSGNTPTASSVPFSSQLLSLSEEYLSQLGNAPCPSASAT	140
MW684846.1	-----	0
MW684847.1	SPDCPTACNAAAMVPSQNSSTSQSASSTKLTVSGNTPTASSVPFSSQLLSLSEEYLSQLGNAPCPSASAT	140
MZ679042.1	IADTPKSAALSQPSLPPIRRWKLRRHNLWRRSSRPVQTPPLSTPPATTQLDGPETRL*	198
CAL/PB27-SI31	IADTPKSAALSQPSLPPIRRWKLRRHNLWRRSSRPVQTPPLSTPPATTQLDGPETRL*	198
CAL/PB30-SII34	IADTPKSAALSQPSLPPIRRWKLRRHNLWRRSSRPVQTPPLSTPPATTQLDGPETRL*	198
CAL/PB10-HII34X	IADTPKSAALSQPSLPPIRRWKLRRHNLWRRSSRPVQTPPLSTPPATTQLDGPETRL*	198
MW684834.1	IADTPKSAALSQPSLPPIRRWKLRRHNLWRRSSRPVQTPPLSTPPAITQLDGLETRL*	198
MW684835.1	IADTPKSAALSQPSLPPIRRWKLRRHNLWRRSSRPVQTPPLSTPPAITQLDGLETRL*	198
MW684841.1	IADTPKSAALSQPSLPPIRRWKLRRHNLWRRSSRPVQTPPLSTPPAITQLDGLETRL*	198
MW684842.1	IADTPKSAALSQPSLPPIRRWKLRRHNLWRRSSRPVQTPPLSTPPAITQLDGLETRL*	198
MW684843.1	IADTPKSAALSQPSLPPIRRWKLRRHNLWRRSSRPVQTPPLSTPPAITQLDGLETRL*	198
MW684844.1	IADTPKSAALSQPSLPPIRRWKLRRHNLWRRSSRPVQTPPLSTPPAITQLDGLETRL*	198
MW684840.1	IADTPKSAALSQPSLPPIRRWKLRRHNLWRRSSRPVQTPPLSTPPATTQLDGLETKL*	198
MW684838.1	IADTPKSAALSQPSLPPIRRWKLRRHNLWRRSSRPVQTPPLSTPPATTQLDGLETKL*	197
MW684845.1	IADTPKSAALSQPSLPPIRRWKLRRHNLWRRSSRPVQTPPLSTPPATTQLDGPETKL*	198
MW684846.1	-ADTPKSAALSQPSLPPIRRWKLRRHNLWRRSSRPVQTPPLSTPPATTQLDGPETKL*	57
MW684847.1	IADTPKSAALSQPSLPPIRRWKLRRHNLWRRSSRPVQTPPLSTPPATTQLDGPETKL*	198

Supplementary Figure S3. Aligned sequences of ORF1* sequences from MAG: Caliciviridae sp. isolate e_361bR-k141_109560 (GenBank: MZ679042.1), MAG: Caliciviridae sp. isolate CAL/PB27-SI31/Switzerland/2019 (GenBank: OM469262.1), MAG: Caliciviridae sp. isolate CAL/PB30-SII34/Switzerland/2019 (GenBank: OM469263.1) MAG: Caliciviridae sp. isolate CAL/PB10-HII34X/Switzerland/2019 (GenBank: OM469260.1), MAG: Chicken calicivirus isolate Environment/NLD/2019/VE_8_calici_66 (GenBank: MW684834.1), MAG: Chicken calicivirus isolate

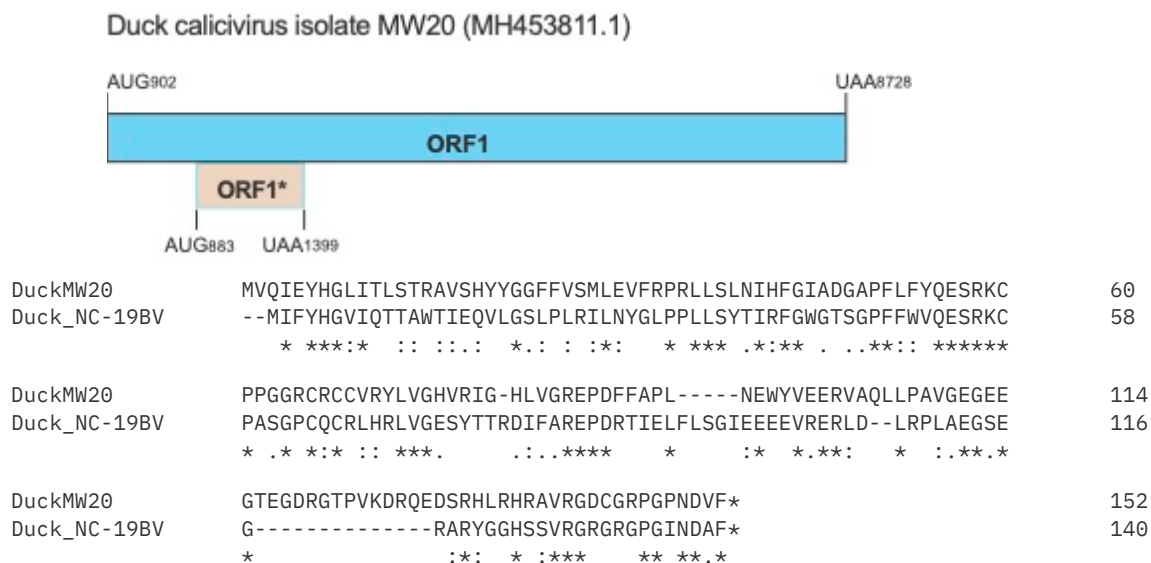
Chicken/NLD/2019/V_M_019_calici_3 (GenBank: MW684835.1), MAG: Chicken calicivirus isolate
Chicken/NLD/2019/V_M_041_calici_11 (GenBank: MW684841.1), MAG: Chicken calicivirus isolate
Chicken/NLD/2019/V_M_050_calici_2 (GenBank: MW684842.1), MAG: Chicken calicivirus isolate
Chicken/NLD/2019/V_M_051_calici_5 (GenBank: MW684843.1), MAG: Chicken calicivirus isolate
Chicken/NLD/2019/V_M_052_calici_7 (GenBank: MW684844.1), MAG: Chicken calicivirus isolate
Chicken/NLD/2019/V_M_036_calici_2 (GenBank: MW684840.1), MAG: Chicken calicivirus isolate
Chicken/NLD/2019/V_M_030_calici_8 (GenBank: MW684838.1), MAG: Chicken calicivirus isolate
Chicken/NLD/2019/V_M_053_calici_1 (GenBank: MW684845.1), MAG: Chicken calicivirus isolate
Chicken/NLD/2019/V_M_054_calici_1 (GenBank: MW684846.1) and MAG: Chicken calicivirus isolate
Chicken/NLD/2019/V_M_056_calici_1 (GenBank: MW684847.1). Amino acid residues that differ from the
consensus are in bold font and highlighted blue.

Supplementary Figure S4.

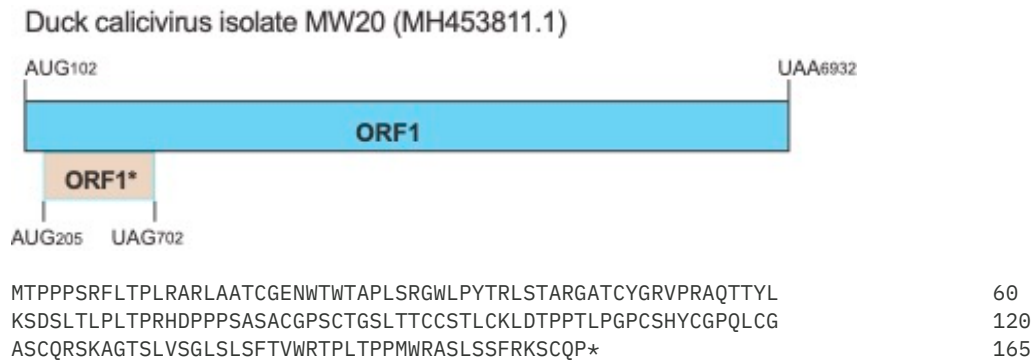
A) Aligned ORF1* sequences from *Caliciviridae* sp. isolate cftwhg06cal1 (nt. 599-1243) and Goose calicivirus isolates MA/CHN/2018 (nt. 77-517) and H146 (nt. 80-520). The symbols “*”, “:” and “.” indicate identical amino acid residues, conservative substitutions and semi-conservative substitutions, respectively. Numbering refers to amino acid residues.



B) Aligned ORF1* sequences from Duck calicivirus isolate sMW20 (nt. 883-1339) and NC-19BV-45-k77-747816 (nt. 895-1317). The symbols “*”, “:” and “.” indicate identical amino acid residues, conservative substitutions and semi-conservative substitutions, respectively. Numbering refers to amino acid residues.

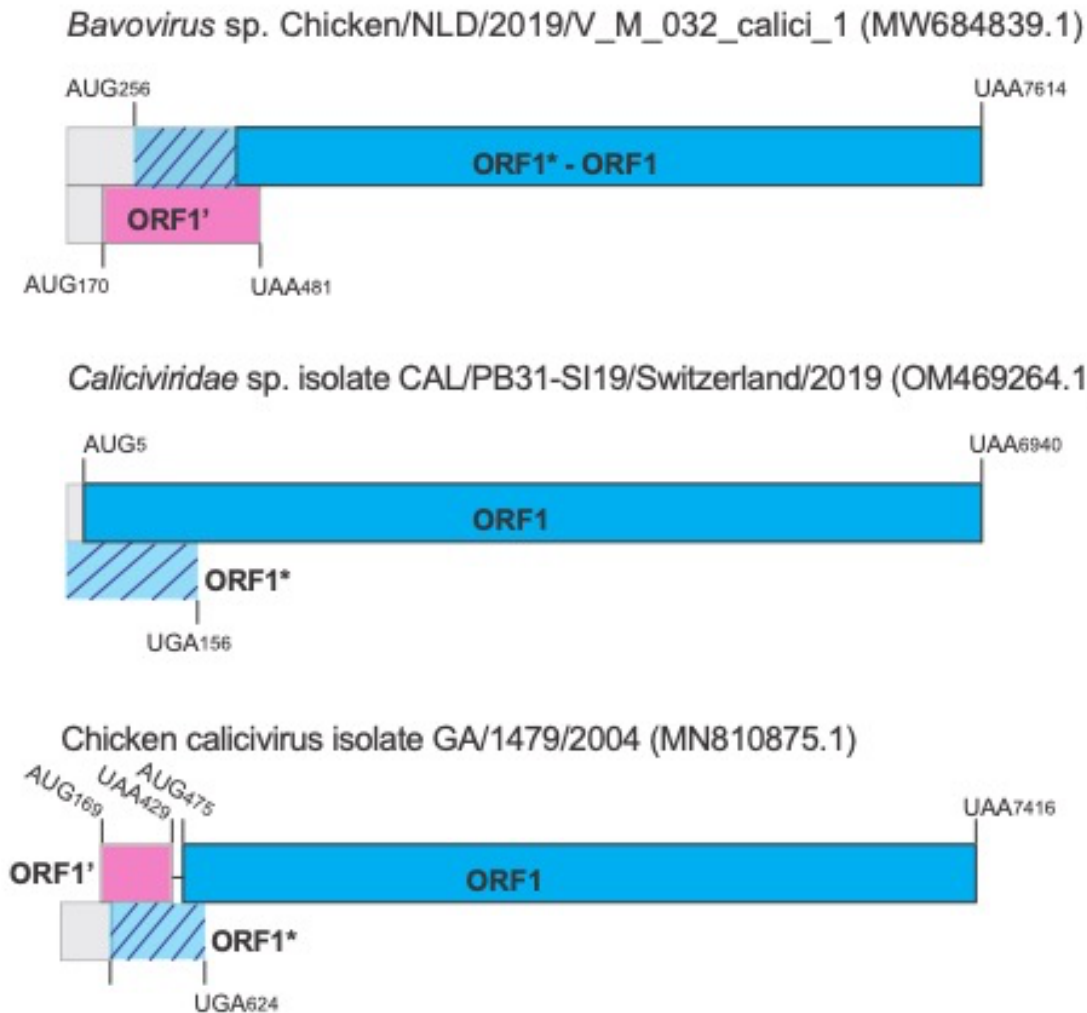


- C) ORF1* sequence from MAG: Caliciviridae sp. isolate ybb044cal01nc (nt. 205-702). Numbering refers to amino acid residues.



Supplementary Figure S5

Open reading frames (ORFs) upstream of, overlapping or fused to ORF1 in chicken calicivirus genomes



- A) Schematic representations of the 5'-termini and ORF1 of *Bavovirus* sp. Chicken/NLD/2019/V_M_032_calici_1, *Caliciviridae* sp. isolate CAL/PB31-SI19/Switzerland/2019 (OM469264.1) and Chicken calicivirus isolate GA/1479/2004, showing ORF1 (cyan) and its annotated initiation and termination codons, ORF1* (striped), ORF1' (magenta) and unannotated potential N-terminal extensions of ORF1, ORF1* and ORF1' (light grey). ORF1* and ORF1 are fused in *Bavovirus* sp. Chicken/NLD/2019/V_M_032_calici_1.

B) Alignment of calicivirus ORF1' sequences

Chicken/NLD/2019/V_M_032_calici_1	2		RKGFTKLTPVGAAVGKEARASI	67
Chicken calicivirus GA/1479/2004	7	TLSSNFGHGPLSVFP	SLKRASAGASQLGPKSPGWNSTVTGVTLTVIQPPSLLVMGASSQ	186
Chicken calicivirus GA/1478/2003	7	TLSSNFGHGLLSVFP	SSKRASAGVSQLRPQKSPGWN	SMVTGVTLTVIQPPSLLVMGASSQ 186
Chicken/NLD/2019/V_M_032_calici_1	68	TNVGHGLPSVLPSL	KRASAGVSQLGPKSPGWN	SMVIGVTSTVTQPPSLPVMGASSL 238
Chicken calicivirus [ChCV-052]	1	VGTLSSNSGHGLLSVFP	SSKRASAGASRLGPQESPGWIS	MATGVALTVIPPHSLLVKGASSL 186
Chicken calicivirus RS/BR/15/1R-1	5	SGHGPLSVFPSSK	RASAGVSRLGPQESPGWN	SMATGVALTVIPPHSLLVKGASSL 166
Chicken calicivirus RS/BR/15/4R-1	3		VTLTVIPPHSLLVMGASSL	59
Chicken calicivirus RS/BR/15/4R-1	8		AIGVALTVIPPHSLLVKGASSL	67
Chicken calicivirus RS/BR/15/3S-1	1		LVKGASSL	24
Chicken calicivirus RS/BR/15/6R	2		LVMGASSL	25
Chicken calicivirus RS/BR/2015	1		GASSL	15
Chicken calicivirus GA/1479/2004	187	NTLEPRCRVGS	HSCPLATCRFLTPSSAPTSSPGWCNTPRL	MNRLGGTSGQPGPSRTSGEF 366
Chicken calicivirus GA/1478/2003	187	NTPDLRCRVGS	HSCPLATCRYPTPSSAPTFS	PGWYSTPRLMNRPGRTSGQPGPSRISGES 366
Chicken/NLD/2019/V_M_032_calici_1	239	NTLGLRCRVGS	RSCPLATCRCLTPNSALTS	FPGWYNTPRLMNNKPGGISGQPGPSRISAGS 418
Chicken calicivirus [ChCV-052]	187	NTLGQRCKGGS	RSCPLATCRCP	IPSSALTSSPGWCNTPRLMNNKPGGTSRQPGLSRISGAS 366
Chicken calicivirus RS/BR/15/1R-1	167	NTLGQRCKGG	SHSCPLATCRCP	IPSLVLTSPFGWCNTPRLMNNKPGGTSGQPGLSRISGAS 346
Chicken calicivirus RS/BR/15/4R-1	60	NTLGQRCKGG	NHSCPLATCRYPTPS	LALTSSPGWCNTPRLMNNKPGGTSGQPGLSRISGAF 239
Chicken calicivirus RS/BR/15/4S-1	68	NTLGQRCKGG	SHSCPLATCRCP	IPSLALTSPFGWCNTPRLMNNKPGGTSGQPGLSRISGAS 247
Chicken calicivirus RS/BR/15/3S-1	25	NTLGQRCKGG	SHSCPLATCRPTPS	LVLTSPFGWCNTPRLMNNKPGGTSGQPGLSRISGAS 204
Chicken calicivirus RS/BR/15/6R	26	NTLGQRCKGG	NHSCPLATCRYPTPS	LALTSSPGWYNTPRLMNNKPGGTSGQPGLLRISGAS 205
Chicken calicivirus RS/BR/2015	16	NTLGQRCKGG	SHSCPLATCRCP	IPSLVLTSSPGWCNTPRLMNNKPGGTSGQPGLSRISGAS 195
Bavaria virus A5_2S5_SA_2022	2	RSRVGSR	SCLLATCRCLTPSSAPTSSPG*CNTPRL	MNRPGGTSGQPGPLRIFGES 166
Chicken/NLD/2019/V_M_021_calici_5.	1			SRISAGS 21
Chicken calicivirus GA/1479/2004	367	LLTTSCSQNL	RKTLMP	MMAG* 426
Chicken calicivirus GA/1478/2003	367	LPTTSCSQNL	RRLTMP	MMAG* 426
Chicken/NLD/2019/V_M_032_calici_1	419	PLTTSCSQNL	RKTLMP	MMAG* 478
Chicken calicivirus [ChCV-052]	367	PQTTSCSRNL	RRLTMP	MMAG* 426
Chicken calicivirus RS/BR/15/1R-1	347	PQTTSCSRNL	RRLTMP	MMAG* 406
Chicken calicivirus RS/BR/15/4R-1	240	LQTTSCSRNL	KRILMP	MMAG* 299
Chicken calicivirus RS/BR/15/4S-1	248	PQTTSCSRNL	RRLTMP	MMAG* 307
Chicken calicivirus RS/BR/15/3S-1	205	PQTTSCSRNL	RRLTMP	MMAG* 264
Chicken calicivirus RS/BR/15/6R	206	LQTTSCSRNL	RRLTMP	MMAG 265
Chicken calicivirus RS/BR/2015	196	PQTTSCSRNL	RRLTMP	MMAG* 255
Bavaria virus A5_2S5_SA_2022	167	LPTTSCSQNL	KRILMP	MMVG* 226
Chicken/NLD/2019/V_M_021_calici_5	22	PLTTSCSQNL	RKTLMP	MMAG* 85

Sequence alignment of ORF1' sequences from Chicken calicivirus isolate GA/1479/2004 (MN810875.1), Chicken calicivirus isolate GA/1478/2003 (MN810874.1), *Bavovirus* sp. Chicken/NLD/2019/V_M_032_calici_1 (MW684839.1), Chicken calicivirus [ChCV-052] (MH992118.1), Chicken calicivirus strain RS/BR/15/1R-1 (MG846434.1), Chicken calicivirus strain RS/BR/15/4R-1 (MG846428.1), Chicken calicivirus strain RS/BR/15/4S-1 (MG846430.1), Chicken calicivirus strain RS/BR/15/3S-1 (MG846429.1), Chicken calicivirus strain RS/BR/15/6R (MG846433.1), Chicken calicivirus strain RS/BR/2015 (NC_033081.1), Bavaria virus isolate A5_2S5_SA_2022 (PP228889.1) and *Bavovirus* sp. isolate Chicken/NLD/2019/V_M_021_calici_5 (MW684836.1). Numbering refers to nucleotides in genomic sequences.

ORF1' is located upstream of ORF1 and does not overlap it, except in Bavaria virus isolate A5_2S5_SA_2022 and *Bavovirus* sp. Chicken/NLD/2019/V_M_032_calici_1, in which the ORF1' sequence overlaps ORF1 entirely, and in the former, is interrupted by a stop codon. Potential AUG initiation codons within ORF1' are in bold and highlighted blue.

C) Alignment of calicivirus ORF1* sequences

Chicken/NLD/2019/V_M_032_calici_1	1	EERVHKADPRRGSSGKGKSLHN	69
Chicken calicivirus ChCV-052	3	GNPFLKLRTTRTLRVSLIKEGLSWRKSAGAPRITWVDLYGDWGRFDCDPTPLFAREGCIL	182
Chicken calicivirus RS/BR/15/1R-1	1	LRTRTTLRVSLIKEGLSWRKSAGAPRITWVELYGDWGRFDCDPTPLFAREGCII	162
Chicken calicivirus GA/1479/2004	3	VNPFLKLRTTRTLRVSLIKEGLSWRKSAGAPKISWVELYGDWGHFDCDPTPLFARDGCII	182
Chicken calicivirus GA/1478/2003	3	VNPFLKLRTTRTLRVSLIKEGLSWRKSAGAPKISWVELYGDWGHFDCDPTPLFARDGCII	182
Chicken/NLD/2019/V_M_032_calici_1	70	KCRTRTTLRASLIKEGLSWRKPTGAPKISWVELYGDWGHFDCDPTPLFARDGCIV	234
Chicken calicivirus RS/BR/15/4S-1	1	GDWGRFDCDPTPLFAREGCII	63
Chicken calicivirus RS/BR/15/4R-1	2	GHFDCDPTPLFARDGCII	55
Chicken calicivirus RS/BR/15/3S-1	3	REGCII	20
Chicken calicivirus RS/BR/15/6R	1	ARDGCII	21
Chicken calicivirus RS/BR/2015	3	CII	11
#			
Chicken calicivirus ChCV-052	183	TEHPRAEMQGWSKLLPPGNMQVPDPKLSSDFLSWVQHSKVDEQTRDLKATWSLEDLRR	362
Chicken calicivirus RS/BR/15/1R-1	163	TEHPRAEMQGWSKLLPPGNMQVPDPKLSSDFLSWVQHSKVDEQTRDLWATWSLEDLRR	342
Chicken calicivirus GA/1479/2004	183	TEHPRAEMQGWSKLLPPGNMQVPDPKLSSDFLSWVQHSKVDEQTRDLWATWSLEDLRR	362
Chicken calicivirus GA/1478/2003	183	TEHPREMQGWSKLLPPGNMQVPDPKLSSDFLSWVQHSKVDEQTKDLWATWSLEDLRR	362
Chicken/NLD/2019/V_M_032_calici_1	235	TEHPRAEMQGWSKLLPPGNMQVPDPKLSSDFLSWVQHSKVDEQTRDLWATWSLEDLRR	414
Chicken calicivirus RS/BR/15/4S-1	64	TEHPRAEMQGWSKLLPPGNMQVPDPKLSSDFLSWVQHSKVDEQTRDLWATWSLEDLRR	243
Chicken calicivirus RS/BR/15/4R-1	56	TEHPRAEMQGWSKLLPPGNMQVPDPKLSSDFLSWVQHSKVDEQTRDLWATWSLEDLRR	235
Chicken calicivirus RS/BR/15/3S-1	21	TEHPRAEMQGWSKLLPPGNMQVPDPKLSSNFLSWVQHSKVDEQTRDLWATWSLEDLRR	200
Chicken calicivirus RS/BR/15/6R	22	TEHPRAEMQGWSKLLPPGNMQVPDPKLSSDFLSWVQHSKVDEQTRDLWATWSLEDLRR	201
Chicken calicivirus RS/BR/2015	12	TEHPRAEMQGWSKLLPPGNMQVPDPKLSSDFLSWVQHSKVDEQTRDLWATWSLEDLRR	191
Bavaria virus A5_2S5_SA_20221	3	EIQGWKSLPPGNMQVPDPKLSSDFLSWVQHSKVDEQTRDLWATWSLEDLRR	162
Chicken calicivirus CaliciD62/2013	1	LEDLRR	18
Chicken/NLD/2019/V_M_021_calici_5	3	EDLRR	17
Chicken calicivirus [ChCV-052]	363	ISTDYLMLEPEKNTDAYDGWLMVGEMLTFAGLIGWEDDDGDL SFGSNHTYWGLFGDPATVRK	551
Chicken calicivirus RS/BR/15/1R-1	343	ISTDYLMLEPEKNTDAYDGWLMVGEMLTFAGLIGWEDDDGDL SFGSNHTYWGLFGDPATVRK	531
Chicken calicivirus GA/1479/2004	363	ISTDYLMLEPEKNTDAYDGWLMVGEMLTFAGLIGWEDDDGDL SFGSNHTYWGLFGDPATVRK	551
Chicken calicivirus GA/1478/2003	363	ISTDYLMLEPEKNTDAYDGWLMVGEMLTFAGLIGWEDDDGDL SFGSNHTYWGLFGDPATVRK	551
Chicken/NLD/2019/V_M_032_calici_1	415	ISTDYLMLEPEKNTDAYDGWLMVGEMLTFAGLIGWEDDDGDL SFGSNHTYWGLFGDPATVRK	603
Chicken calicivirus RS/BR/15/4S-1	244	ISTDYLMLEPEKNTDAYDGWLMVGEMLTFAGLIGWEDDDGDL SFGSNHTYWGLFGDPATVRK	432
Chicken calicivirus RS/BR/15/4R-1	236	ISTDYLMLEPEKNTDAYDGWLMVGEMLTFAGLIGWEDDDGDL SFGSNHTYWGLFGDPATVRK	424
Chicken calicivirus RS/BR/15/3S-1	201	ISTDYLMLEPEKNTDAYDGWLMVGEMLTFAGLIGWEDDDGDL SFGSNHTYWGLFGDPATVRK	389
Chicken calicivirus RS/BR/15/6R	202	ISTDYLMLEPEKNTDAYDGWLMVGEMLTFAGLIGWEDDDGDL SFGSNHTYWGLFGDPATVRK	390
Chicken calicivirus RS/BR/2015	192	ISTDYLMLEPEKNTDAYDGWLMVGEMLTFAGLIGWEDDDGDL SFGSNHTYWGLFGDPATVRK	380
Bavaria virus A5_2S5_SA_2022	163	ISTDYLMLEPEKNTDAYDGWLMVGEMLTFAGLIGWEDDDGDL SFGSNHTYWGLFGDPATVRK	351
Chicken calicivirus CaliciD62/2013	19	ISTDYLMLEPEKNTDAYDGWLMVGEMLTFAGLIGWEDDDGDL SFGSNHTYWGLFGDPATVRK	207
Chicken/NLD/2019/V_M_021_calici_5	18	ISTDYLMLEPEKNTDAYDGWLMVGEMLTFAGLIGWEDDDGDL SFGSNHTYWGLFGDPATVRK	206
Chicken/NLD/2019/V_M_029_calici_1	3	EPEKNTDAYDGWLMVGEMLTFAGLIGWEDDDGDL SFGSNHTYWGLFGDPATVRK	164
CAL/PB31-SI19/Switzerland/2019	1	EDDDGDL SFGSNHTYWGLFGDPATVRK	81
Calici chicken/V0021/Bayern/2004	4	DEDDGDL SFGSNHTYWGLFGDPATVRK	81

Chicken calicivirus [ChCV-052]	552	KVDGLFHDIRTGGSRHPSNHHL*	620
Chicken calicivirus RS/BR/15/1R-1	532	KVDGLFHDIRTGGSRHPSNHHL*	600
Chicken calicivirus GA/1479/2004	522	KVDGLFHDIRTGDSRPPGNHHAHT*	626
Chicken calicivirus GA/1478/2003	552	KVDGLFHDIRTGDSRPPGNHHAHT*	626
Chicken/NLD/2019/V_M_032_calici_1	604	KVDGLFHDIRTGGSC PQATTSP TPEPNPTPEQVI PNPPEPSFWRR LIDGVT PPQEPPL SAITS ...	
Chicken calicivirus RS/BR/15/4S-1	433	KVDGLFHDIRTGGSRHPSNHHHA*	501
Chicken calicivirus RS/BR/15/4R-1	425	KVDGLFHDIRTGGSRHPSNHHHS*	493
Chicken calicivirus RS/BR/15/3S-1	390	KVDGLFHDIRTGGSRHPSNHHL*	458
Chicken calicivirus RS/BR/15/6R	391	KVDGLFHDIRTGGSRHPSNHHHS*	459
Chicken calicivirus RS/BR/2015	381	KVDGLFHDIRTGGSRHPSNHHL*	449
Bavaria virus A5_2S5_SA_2022	352	KVDGLFHDIRTGGST QA PTAP TPEPT STSEQVL PNPPEPSFWRR LIDGVT PPQEPPL SAITS ...	
Chicken calicivirus CaliciD62/2013	208	KVDGLFHDIRTGGSRPPSNHHAHT*	282
Chicken/NLD/2019/V_M_021_calici_5	207	KVDGLFHDIRTGGSC PQATTSP TPEPNPTPEQVI PNPPEPSFWRR LIDGVT PPQEPPL SAITS ...	
Chicken/NLD/2019/V_M_029_calici_1	165	KVDGLFHDIRTGGSC PQATTSP TPEPNPTPEQVI PNPPEPSFWRR LIDGVT PPQEPPL SAITS ...	
CAL/PB31-SI19/Switzerland/2019	82	KVDGLFHDIRTGSSRAPSLCTARL*	156
Calici chicken/V0021/Bayern/2004	82	KVDGLFHDIRTGSSRPPSNYNARS*	156

ORF1 sequences

Chicken calicivirus [ChCV-052]	598	TQATT TSSPE VNTN SEQVL PNPPEPSFW HRLIDGVT PPPEP PHLSAITS	744
Calici chicken/V0021/Bayern/2004	128	PQATT TPAPET NPTSEQVL PNPPEPSFW HRLIDGVA PPQEP PPLSAITS	274
CAL/PB31-SI19/Switzerland/2019	128	PQASAPP ASE TNSTSEQVL PNPPEPSFW HRLIDGVA PPQEP PPLSAITS	274
Chicken_calicivirus_CaliciD62/2013	255	PQATT TPTEAT SSSEQVL PNPPEPSFW HRLIDGVA PPQEP PPLSAITS	400
Chicken_calicivirus_GA/1478/2003	597	PQATT MPTPEAN TASEQVL PNPPEPSFW RR LIDGVT PPQEP PPLSAITS	744
Chicken_calicivirus_GA/1479/2004	597	PQATT MPTPEAN TNSEQVL PNPPEPSFW RR LIDGVT PPQEP PPLSAITS	744
Chicken_calicivirus_RS/BR/15/3S-1	460	----- PEANT NSEQVL PNPPEPSFW HRLIDGVT PPQEP PPLSAITS	582
Chicken-calicivirus_RS/BR/15/4S-1	503	----- PEAST NTEQVL PNPPEPSFW HRLIDGVT PPQEP PPLSAITS	625
Chicken-calicivirus_RS/BR/15/4R-1	494	----- PEAST NTEQVL PTPEPSFW LR LIDGVT PPQEP PPLSAITS	616
Chicken_calicivirus_RS/BR/15/6R	461	----- PEAST NTEQVL PNPPEPSFW HRLIDGVT PPQEP PPLSAITS	583
Chicken_calicivirus_RS/BR/15/1R-1	602	----- PEANT NSEQVL PNPPEPSFW HRLIDGVT PPQEP PPLSAITS	724
Chicken_calicivirus_RS/BR/2015	451	----- PEANT NSEQVL PNPPEPSFW HRLIDGVT PPQEP PPLSAITS	573

Sequence alignment of ORF1* and ORF1 sequences from Chicken calicivirus strain ChCV-052 (MH992118.1), Chicken calicivirus strain RS/BR/15/1R-1 (MG846434.1), Chicken calicivirus isolate GA/1479/2004 (MN810875.1), Chicken calicivirus isolate GA/1478/2003 (MN810874.1), *Bavovirus* sp. Chicken/NLD/2019/V_M_032_calici_1 (MW684839.1), Chicken calicivirus strain RS/BR/15/4S-1 (MG846430.1), Chicken calicivirus strain RS/BR/15/4R-1 (MG846428.1), Chicken calicivirus strain RS/BR/15/3S-1 (MG846429.1), Chicken calicivirus strain RS/BR/15/6R (MG846433.1), Chicken calicivirus strain RS/BR/2015 (NC_033081.1), Bavaria virus isolate A5_2S5_SA_2022 (PP228889.1), Chicken calicivirus isolate CaliciD62/2013 (KM254170.1), *Bavovirus* sp. isolate Chicken/NLD/2019/V_M_021_calici_5 (MW684836.1), *Bavovirus* sp. isolate Chicken/NLD/2019/V_M_029_calici_1 (MW684837.1), *MAG: Caliciviridae* sp. isolate CAL/PB31-SI19/Switzerland/2019 (OM469264.1) and Calicivirus chicken/V0021/Bayern/2004 (NC_075411.1). Numbering refers to nucleotides in the indicated genomic sequences.

ORF1* initiates upstream of ORF1 and overlaps it, except in Chicken calicivirus isolate CaliciD62/2013 and *Bavovirus* sp. isolates Chicken/NLD/2019/V_M_021_calici_5, Chicken/NLD/2019/V_M_029_calici_1 and Chicken/NLD/2019/V_M_032_calici_1, in which the ORF1* sequence forms an N-terminal extension of the ORF1 reading frame (continuation indicated by dots). Potential AUG initiation codons within ORF1* are in bold and highlighted blue.

To illustrate sequence similarity, calicivirus ORF1 sequences are aligned below sequences of ORF1* and ORF1*-ORF1 fusion polypeptides, with amino acid residues in these sequences that are identical to the consensus residues in the ORF1*-ORF1 fusions highlighted in yellow.