

LOCUS 1 2341 bp mRNA linear 10-FEB-2015
DEFINITION Influenza A virus (A/Goose/Taiwan/01042/2015(H5N3)) polymerase PB2 (PB2) gene, complete cds.

ACCESSION
VERSION
KEYWORDS
SOURCE Viruses; ssRNA negative-strand viruses; Orthomyxoviridae; Influenzavirus A.

ORGANISM Viruses; ssRNA negative-strand viruses; Orthomyxoviridae; Influenzavirus A. Unclassified.

REFERENCE 1 (bases 1 to 2341)
AUTHORS Lee,M.S., Chen,L.H., Liu,Y.P., Chen,Y.P., Li,W.C., Lee,F., Ting,L.J. and Lin,Y.L.
TITLE Avian influenza subtype H5 in geese in Taiwan, 2015
JOURNAL Unpublished

REFERENCE 2 (bases 1 to 2341)
AUTHORS Lee,M.S., Chen,L.H., Liu,Y.P., Chen,Y.P., Li,W.C., Lee,F., Ting,L.J. and Lin,Y.L.
TITLE Direct Submission
JOURNAL Submitted (10-FEB-2015) Epidemiology Research Department, National Institute for Animal Health, Chung-Cheng Rd, Tansui, Taiwan 251, Taiwan

COMMENT ##Assembly-Data-START##
Sequencing Technology :: Sanger dideoxy sequencing
##Assembly-Data-END##

FEATURES
Location/Qualifiers
source 1..2341
/organism="Viruses; ssRNA negative-strand viruses; Orthomyxoviridae; Influenzavirus A."
/mol_type="mRNA"
/strain="A/Goose/Taiwan/01042/2015(H5N3)"
/host="Goose"
/segment="1"
/country="Taiwan"
/collection_date="2015-01-12"
/identified_by="RT-PCR"
/subtype="H5N3"
gene 1..2341
/gene="PB2"
CDS 28..2307
/gene="PB2"
/codon_start=1
/product="polymerase PB2"
/translation="MERIKELRDLMSQSRTREILTCTTVDHMAIIKKYTSGRQEKNPALRMKWMAMKYPITADKRIMEMIPERNEQGQTLWSKTNDAGSDRVMVSPLAVTWWNRNGPTTSTVHYPKVYKTYFEKVERLKHGTFGPVHFRNQVKIRRRVDINPGHADLSAKEAQDVIMEVVPFNEVGARILTSQSQTITKEKKEELQDCKIAPLMVAYMLERELVRKTRFLPVAGGTSSVYIEVLHLTQGTCEQMYTPGGEVRNDDVDQSLIIAARNIVRRATVSADPLASLLEMCHSTQIGGTRMVDILRQNPTEEQAVDICKAAMGLRISSSFSGGFTFKRTSGSSVKREEEVLTGNLQTLKIRVHEGYEEFTMVGRRATAILRKATRRLIQLIVSGRDEQSIAEAIIVAMVFSQEDCMIKAVRGDLNFNVRANQRLNPMHQLLRHFQKDAKVLQFQNWGIEPIDNVGMIGILPDMTPSTEMSLRGVRVSKMGVDEYSSTERVVVSIDRFLVRDQRGNVLLSPPEEVSETQGTETLTITYSSSMWEINGPESVLVNTYQWIIIRNWETVKIQWSQDPTMQLYNKMEFEPFQSLVPKAAARGQYSGFVRTLFQQMRDVLGTFDTVQIKLLSFDAAPPEQSRMQFSSLTVNVRGSGMRILVRGNSPVFNYNKATKRLTVLGKDAGALTEDPDEGTAGVESAVLRGLLILGKEDKRYGPALSINELSNLAKGEKANVLIGQGDVVLVMMKRKRDSSILTDSQTATKRIRMAIN"

BASE COUNT 762 a 434 c 625 g 520 t
ORIGIN
1 agcgaaagca ggtcaattat attcaatatg gagagaataa aagaactaag agattttgatg
61 tcgcagtcctc gcaactcgca gatactgaca aagaccactg tggaccatat ggccataatc
121 aagaaatata cgtcaggaag acaggagaag aatcctgcac ttaggatgaa atgggatgatg
181 gcgatgaaat atccgattac agcagacaaa aggataatgg aaatgattcc cgaaagaaac
241 gagcaaggctc agactctttg gagcaaaaaca aatgatgctg gatcagacag agtgatggtg
301 tcacctctgg ctgtgacatg gtggaataga aatggaccga caacaagtac agtccattat
361 ccaaaggctct ataaaaccta ctttgaaaaa gttgaaagggt taaagcatgg aaccttcggc
421 cctgtccatt ttcgaaatca ggttaagata cgccgcagggt ttgacataaa cccaggccat
481 gcagatctca gtgctaaaga agcacaaagac gtcacatgag aggtcggttt cccaaacgaa
541 gtcggagcca ggatattgac atcggagtca cagttaacta taacaaaaga aaagaaggaa
601 gagcttcagg actgtaagat tgccccttta atggtggcat acatgttggg aagagaactg
661 gttcgcaaaa ccagattcct gccagtagct ggcgggacaa gcagcgtgta tatcgagggtg
721 ttgcacttga cccaagggac ctgctgggaa caaatgtaca cgccaggagg agaagtgaga
781 aatgatgacg tttgacagag tttgattatt gctgctagga atatcgtag gagagaacaa
841 gtatcagcag atccattggc ttcgctctct gagatgtgcc atagtacaca aattggcggg
901 acaagaatgg tagacatcct tagacaaaac ccaacagaag agcaagccgt ggatatatgt

```

961 aaagcagcaa tgggtctaag aatcagttca tccttcagct ttggagggttt cactttcaaa
1021 aggacaagtg ggtcatctgt caaaagagaa gaggaagtg cttaccggcaa cctccaaaca
1081 ttgaaaataa ggggtcatga aggggtatgag gaattcaca tgggttggcg aagagcaaca
1141 gccattctaa ggaaagcaac cagaagattg atccaattga tagtgagtgg aagagacgag
1201 cagtcaatcg ccgaagcgat catagtggca atgggtgttct cccaagagga ttgcatgata
1261 aaagcagtac ggggtgattt gaatttcgtc aatagagcga atcagcggct caatcctatg
1321 catcaactct tgaggcattt ccagaaggat gcaaagggtac tgttccaaaa ctgggggaatt
1381 gaacccattg acaatgtcat ggggatgata ggaatattgc ctgacatgac acccagcaca
1441 gagatgtcac taagaggagt gagagtcagt aaaatgggag tggatgaata ttccagtact
1501 gagagggtgg tcgtgagcat tgatcgtttc ttgagggtcc gagaccagag agggaaacgtg
1561 ctctgtctc ctgaagaggt tagtgaaaca cagggaacag agaagctgac gataacatat
1621 tcatcatcta tgatgtggga aattaatggc ccggaatcag tgttagttaa cacataccaa
1681 tggatcatta gaaactggga aactgtgaag attcagtggt cccaagatcc tacaatgcta
1741 tacaacaaga tggagtttga gccctttcag tccttggtgc ctaaggctgc cagaggccag
1801 tatagtggat ttgtgaggac actatttcag cagatgcgtg atgtgctggg gacctttgac
1861 acagtccaga taataaagct attgtcattt gcagcagccc caccggagca aagtaggatg
1921 cagttctctt ctctaactgt gaacgtaaga ggttcaggaa tgagaatact tgtgagaggc
1981 aattcccctg tgttcaacta taacaaggca accaagaggc ttacagtcct tggaaaggat
2041 gcaggtgcat tgacagaaga cccagatgag gggacggcag gagtggagtc tgcggtatta
2101 agagggctcc taattctggg caaagaagac aaaagatatg ggccagcatt gagcatcaat
2161 gaattgagca atcttgcgaa gggggagaag gctaattgtg tgatagggca aggagacgtg
2221 gtgttggtga tgaaacggaa acgggactct agcatactta ctgacagcca gacagcgacc
2281 aaaagaattc ggatggccat caattagtgt cgaattgttt aaaaacgacc ttgtttctac
2341 t

```

```

//
LOCUS      2                               2340 bp      mRNA      linear      10-FEB-2015
DEFINITION Influenza A virus (A/Goose/Taiwan/01042/2015(H5N3)) polymerase PB1
            (PB1) gene, complete cds.

ACCESSION
VERSION
KEYWORDS
SOURCE     Viruses; ssRNA negative-strand viruses; Orthomyxoviridae;
            Influenzavirus A.
ORGANISM   Viruses; ssRNA negative-strand viruses; Orthomyxoviridae;
            Influenzavirus A.
            Unclassified.
REFERENCE  1 (bases 1 to 2340)
AUTHORS    Lee,M.S., Chen,L.H., Liu,Y.P., Chen,Y.P., Li,W.C., Lee,F.,
            Ting,L.J. and Lin,Y.L.
TITLE      Avian influenza subtype H5 in geese in Taiwan, 2015
JOURNAL    Unpublished
REFERENCE  2 (bases 1 to 2340)
AUTHORS    Lee,M.S., Chen,L.H., Liu,Y.P., Chen,Y.P., Li,W.C., Lee,F.,
            Ting,L.J. and Lin,Y.L.
TITLE      Direct Submission
JOURNAL    Submitted (10-FEB-2015) Epidemiology Research Department, National
            Institute for Animal Health, Chung-Cheng Rd, Tansui, Taiwan 251,
            Taiwan
COMMENT    ##Assembly-Data-START##
            Sequencing Technology :: Sanger dideoxy sequencing
            ##Assembly-Data-END##

FEATURES   Location/Qualifiers
            source          1..2340
                                /organism="Viruses; ssRNA negative-strand viruses;
                                Orthomyxoviridae; Influenzavirus A."
                                /mol_type="mRNA"
                                /strain="A/Goose/Taiwan/01042/2015(H5N3)"
                                /host="Goose"
                                /segment="2"
                                /country="Taiwan"
                                /collection_date="2015-01-12"
                                /identified_by="RT-PCR"
                                /subtype="H5N3"
            gene            1..2340
                                /gene="PB1"
            CDS              24..2297
                                /gene="PB1"
                                /codon_start=1
                                /product="polymerase PB1"
                                /translation="MDVNPTLLFLKVPQAQNAISTTFPYTGDPYPYSHGTGTGYTMDTVN
                                RTHQYSEKKGWTTNTTETGAPQLNPIDGPLPEDNEPSGYAQTDCVLEAMAFLEESHPI
                                FENSCLTMEIVQQTRVDKLTQGRQTYDWTLLNRNQPAATALANTIEVFRSNGLTANES
                                GRLIDFLKDVMSMDKEEMEITTHFQRRRVRDNMTKKMVTQRTIGKKKQRLNKRSL
                                IRALTLNMTKDAERGKLRRAIATPGMQIRGFVYFVETLARSICEKLEQSGLPVGGN
                                EKKAKLANVVRKMNTNSQDTELSFTITGDNTKWNENQNPRMFLAMITYITRNQPEWFR
                                NVLSIAPIMFSNKMARLGKGYMFESKMKLRTQIPAEMLVNIDLKYFNESTRKKIEKI

```



```

RPLLDIGTASLSPGMMGMFNLSTVLGVSILNLGQKRYTKTTYWWDGLQSSDDFALI
VNAPNHEGIQAGVDRFYRTCKLVGINMSKKKSYINQGTGTFEFTSFFYRYGFVANFSME
LPSFGVSGINESADMSIGVTVIKNNMINNDLGPATAQMALQLFIKDYYTYRCHRGDT
QIQTRRSFELKKLWEQTRSKAGLLVSDGGPNLYNIRNLHIPEVCLKWELMDEDYQGRL
CNPLNPFVSHKEIESVNNAVVMPAHGPAKSMEYDAVATTHSWIPKRNRSILNTSQRGI
LEDEQMYQKCCSLFEKFFPSSSYRRPVGISSMVEAMVSRARIDARIDFESGRIKKEEF
AEIMKICSTIEELRRQK"
gene      118..390
          /gene="PB1-F2"
CDS       118..390
          /gene="PB1-F2"
          /codon_start=1
          /product="PB1-F2 protein"
          /translation="MEQEQDTPWTRSTEHINTQRKESGQQTQRPGHPNSTQLMDHYQR
          TTSQADMHKRIACWKQWLSLKNPTQGSCLKTLVLKRWKSFQEWNT"
BASE COUNT      802 a      458 c      556 g      524 t
ORIGIN

```

```

1 agcaaaagca ggcaaccatt tgaatggatg tcaatccgac tttacttttc ttaaaagtgc
61 cagcgcaaaa tgctataagt actacattcc cttacactgg agatcctcca tacagccatg
121 gaacaggaac aggatacacc atggacacgg tcaacagAAC acatcaatac tcagagaaag
181 gaaagtggac aacaacacac gagaccgggg caccCCAact caaccCAatt gatggaccat
241 taccagagga caacgagcca agcggatatg cACAAacgga ttgcgtgttg gaagcaatgg
301 ctttccttga agaatcccac ccagggatct ttgaaaactc ttgtcttgaa acgatggaaa
361 tcgttcagca aacaagagtG gacaaattaa cccaaggtcg ccagacttat gattggacat
421 tgaatagaaa ccaaccagct gcgactgctt tggccaatac tatagaggtc ttcagatcga
481 acggtctaac agccaatgaa tcggggagac taatagattt cctcaaggat gtgatggaat
541 caatggataa agaagaaatg gaaataacaa cacattttca gagaaagaga agagtaaggg
601 acaatatgac caagaagatg gtcacacaaa gaacaatagg aaagaagaag caaaggctga
661 acaaaaggag ctacttgata agagcactga cattgaacac gatgacaaa gatgcagaaa
721 gaggcaagtt gaaaaggcgg gcaattgcaa caccCGgat gcagattaga ggattcgtgt
781 actttgtcga aacactagcg aggagcatct gtgagaaact tgagcaatct ggactccccg
841 ttggagggaa tgagaagaag gctaaattgg caaatgttgt gagaaaaatg atgactaact
901 cacaagatac agagctctcc tttacaatta ctggagacaa caccaaattg aatgaaaatc
961 aaaatcctcg gatgtttttg gcaatgataa catacatcac aagaaaccaa ccagaatggt
1021 ttagaaatgt cttgagcatt gcccctataa tgttctcaaa taaaatggcg agattgggga
1081 aaggatacat gtttgaaagt aagagcatga agctaaggac acaaataccg gcagaaatgc
1141 ttgtaaacat tgatttgaaa tacttcaacg aatcaacgag aaagaaaatc gagaaaataa
1201 gacctctgct gattgacggc acagcctcat tgagtctctg aatgatgatg ggcattgttca
1261 atatgctgag cacagtatta ggggtctcaa tcctgaatct tggacaaaag aggtacacta
1321 aaaccacata ctggtgggat ggactccaat cctctgatga tttcgctctc atagtgaatg
1381 caccgaatca cgaggggata caagcagggg tggatagggt ctataggacc tgcaaattgg
1441 ttgggatcaa catgagcaaa aagaagtctt acataaacca aacaggaaca tttgaattca
1501 caagcttttt ctaccgctat ggatttgtat cgaactttag tatggagtta cccagctttg
1561 gagtgtctgg aatcaatgaa tcggctgaca tgagtattgg agttacagtG ataaagaaca
1621 atatgataaa caatgatctt ggaccagcaa cagctcaaat ggctcttcag ctattcatca
1681 aggactatag gtacacgtac cgatgccaca ggggtgacac acaaattcaa acgaggagat
1741 catttgagct gaagaagctg tgggagcaga cccgttcaaa ggcagggctg ttggtatcag
1801 atggaggacc gaatctatac aacattcgga atctccacat cccagagggtc tgcttgaagt
1861 gggaaactaat ggatgaagac taccagggga ggctgtgtaa tcctctaAAC ccgtttgtca
1921 gtcataagga aattgagtcg gtaaacaaatg ctgtggtaat gccagctcat ggcccagcca
1981 agagcatgga atatgatgct gttgcgacta cacactcatg gattcctaag aggaaccgtt
2041 ctattctcaa taccagccaa aggggaattc ttgaggatga gcagatgtac cagaagtgtc
2101 gtagtctatt cgagaaattc ttccccagta gttcatacag gaggccagtt ggaatctcca
2161 gcatggtgga ggccatggtg tctagggccc gaattgatgc acgcattgat ttcgaatctg
2221 gaaggattaa gaaagaggag tttgctgaga tcatgaagat ctgttccacc attgaagagc
2281 tcagacggca aaaatagtga atttagcttg tccttcatga gaaaatgcct tgtttctact

```

```

//
LOCUS      3                      2233 bp      mRNA      linear      10-FEB-2015
DEFINITION Influenza A virus (A/Goose/Taiwan/01042/2015(H5N3)) polymerase PA
            (PA) gene, complete cds.
ACCESSION
VERSION
KEYWORDS
SOURCE     Viruses; ssRNA negative-strand viruses; Orthomyxoviridae;
            Influenzavirus A.
ORGANISM   Viruses; ssRNA negative-strand viruses; Orthomyxoviridae;
            Influenzavirus A.
            Unclassified.
REFERENCE  1 (bases 1 to 2233)
AUTHORS   Lee,M.S., Chen,L.H., Liu,Y.P., Chen,Y.P., Li,W.C., Lee,F.,
            Ting,L.J. and Lin,Y.L.
TITLE     Avian influenza subtype H5 in geese in Taiwan, 2015
JOURNAL   Unpublished
REFERENCE  2 (bases 1 to 2233)
AUTHORS   Lee,M.S., Chen,L.H., Liu,Y.P., Chen,Y.P., Li,W.C., Lee,F.,
            Ting,L.J. and Lin,Y.L.

```

TITLE Direct Submission
 JOURNAL Submitted (10-FEB-2015) Epidemiology Research Department, National
 Institute for Animal Health, Chung-Cheng Rd, Tansui, Taiwan 251,
 Taiwan
 COMMENT ##Assembly-Data-START##
 Sequencing Technology :: Sanger dideoxy sequencing
 ##Assembly-Data-END##
 FEATURES
 Location/Qualifiers
 source 1..2233
 /organism="Viruses; ssRNA negative-strand viruses;
 Orthomyxoviridae; Influenzavirus A."
 /mol_type="mRNA"
 /strain="A/Goose/Taiwan/01042/2015 (H5N3) "
 /host="Goose"
 /segment="3"
 /country="Taiwan"
 /collection_date="2015-01-12"
 /identified_by="RT-PCR"
 /subtype="H5N3"
 gene 1..2233
 /gene="PA"
 CDS 25..2175
 /gene="PA"
 /codon_start=1
 /product="polymerase PA"
 /translation="MEDFVRQCFNPMIVELAECTMKEYGENPKIETNKFAAICTHLEV
 CFMYSDFHFIDERGKSIIVESGDPNALLKHRFEIIEGRDRTMAWTVVNSICNTTGVDK
 PKFLPDLYDYKENRFIEIGVTRREVHTYYLEKANKIKSEKTHIHIFSFTGEEMATKAD
 YTLDEESRARIKTRLFTIRQEMANRGLWDSFRQSERGEETIEERFEITGTMRRLADQS
 LPPNFSSLENFRAYVDGFKPNGCLEGKLSQMSKEVNARIEPFMKTTTPRPLRLPDGPPC
 SQRSKFLLMDSLKLSIEDPSHEGEGIPLYDAIKCMKTTFFGWKEPNIVKPHVKGINPNY
 LLAWKQVLAELQDIENEETIPKTKNMKTSQKWKALGENMAPEKVDVFEDCRDVIDLRQ
 YDSDEPEPRSLSSWIIQSEFNKACELTDSSWIELDEIGEDVAPIEHIASMRNRYFTA
 SHCRATEYIMKGVYINTALLNSSCAAMDDFQLIPMISKCRTKEGRRKTNLYGFIKGR
 SHLRNDTDVVNFVSMFSLTDPRLPHKWEKYCVLEIGDMLLRTAIGQVSRSMFLYVR
 TNGTSKIKMKWGMEMRRCLLQSLQQIESMIEAESSVKEKDMTKEFFENKSETWPIGES
 PKGVEESSIGKVCRTLLAKSVFNSLYASPOLEGFSAERKLLLIQAFRDNLEPGTFD
 LGGLYEAIIECLINDPWVLLNASWFNSFLTHALK"
 gene 25..784
 /gene="PA-X"
 CDS join(25..594,596..784)
 /gene="PA-X"
 /codon_start=1
 /product="PA-X protein"
 /translation="MEDFVRQCFNPMIVELAECTMKEYGENPKIETNKFAAICTHLEV
 CFMYSDFHFIDERGKSIIVESGDPNALLKHRFEIIEGRDRTMAWTVVNSICNTTGVDK
 PKFLPDLYDYKENRFIEIGVTRREVHTYYLEKANKIKSEKTHIHIFSFTGEEMATKAD
 YTLDEESRARIKTRLFTIRQEMANRGLWDSFVNLRKAKRQLKKGLKSQEPACGLPTKA
 SHRISPALKILEPMWMDSNRTAALRASFLKCQKK"

BASE COUNT 745 a 434 c 519 g 535 t
 ORIGIN
 1 agcgaaagca ggtactgata caaaatggaa gactttgtgc ggcaatgctt caatccaatg
 61 atcgtcgagc ttgcggaaaa gacaatgaaa gaatatgggg aaaatccaaa aatcgaaacg
 121 aacaaattcg ctgcaatatg cactcactta gaggtctgtt tcatgtattc ggatttccac
 181 ttattgatg atcagaggca atcaataatg gtagaatctg gcgatccgaa tgcattattg
 241 aaaccaccga aacagataat tgaaggagat gaccgaacga tggcttggac atgtgtaaat
 301 agtatctgca acaccacagg agtcgataag cctaaattcc tcccagattt gtatgattac
 361 aaggagaacc gattcattga aattggagtg acaaggaggg aagttcacac atactaccta
 421 gaaaaggcaa ataagataaa atcagagaag acacacattc acatattctc attcactggg
 481 gaggagatgg ccaccaaagc tgactatacc cttgatgaag agagcagagc aaggatcaaa
 541 accaggttgt tcaactatcag gcaagaaatg gccaataggg gtctgtggga ttcccttcgt
 601 caatctgaga gaggcgaaga gacaattgaa gaaagggttg aaatcacagg aaccatgcgc
 661 aggcttgccg accaaagcct cccaccgaat ttctccagcc ttgaaaattt tagagcctat
 721 gtggatggat tcaaaccgaa cggctgcctt gagggcaagc tttctcaaat gtcaaaagaa
 781 gtgaacgcca gaattgagcc attcatgaag acaacaccac gccctctcag attacctgat
 841 ggtctcctt gctctcagcg gtcgaaattc ttactgatgg attcccttaa attgagcatc
 901 gaagacccaa gccatgaggg agaaggatata ccgctatatg atgcaatcaa atgcatgaag
 961 acgttttttg ttgtgaaaga acccaacatt gtaaaaccac atgtaaaagg cataaatccc
 1021 aactatctct tggcttgaaa gcaggtgcgt gcgaactcc aagacattga gaattcaagag
 1081 acaatcccaa aaacaaaaaa catgaagaaa acaagccaac taaagtgggc actcgttgag
 1141 aatatggcac ctgaaaaagt ggactttgag gactgcagag atgttatcga tctaagacag
 1201 tatgacagtg atgaaccaga gccagatca ttatcaagct ggatccagag cgaattcaac
 1261 aaagcatgcg aattgacaga ttcgagttgg attgaacttg atgaaatagg agaagatgtt
 1321 gtcceaattg agcacaattgc gagtatgaga agaaactact tcacagcggg agtgctctcat
 1381 tgcagggcaa ctgaatatat aatgaaatga gtttatataa atacagccct gttgaattca
 1441 tctgtgagc ccatggatga cttccaattg attccaatga taagcaagtg cagaacccaaa


```

1501 gaaggaagac ggaagacaaa tttatatggg ttcattataa aaggaagatc ccatttgagg
1561 aatgataccg atgtggtaaa ttttgtgagc atggagttct cctcactga cccgaggctg
1621 gaaccacaca agtgggaaaa gtactgtgtt ctcgaaatag gagacatgct cctacgaact
1681 gcaataggcc aagtatcaag atccatgttt ctttatgtaa gaaccaatgg gacttccaag
1741 atcaagatga aatggggcat ggagatgagg cgatgccttc ttcaatccct ccaacaaatt
1801 gagagcatga ttgaggcaga gtcttctgtc aaagagaaag acatgaccaa ggaattcttt
1861 gaaaataaat cagaaacgtg gccaatggg gaatcaccta aggggggtga ggaagctct
1921 attgggaagg tgtgtagaac attattagca aaatctgtat tcaacagcct atatgcatt
1981 ccacaacttg aggggttttc agctgagtcg agaaagttac ttctcattgt tcaggcattt
2041 agggacaacc tggaaacctg gaccttcgat cttggggggc tatatgaagc aattgaggag
2101 tgcttgatta atgatccctg ggttttgctt aatgcattctt ggttcaactc cttccttaca
2161 catgcactga aatagttgtg gcaatgctac tatttgctat ccatactgtc caaaaaagta
2221 ccttgtttct act

```

```

//
LOCUS      5                               1565 bp      mRNA      linear      10-FEB-2015
DEFINITION Influenza A virus (A/Goose/Taiwan/01042/2015(H5N3)) nucleocapsid
            protein (NP) gene, complete cds.
ACCESSION
VERSION
KEYWORDS
SOURCE     Viruses; ssRNA negative-strand viruses; Orthomyxoviridae;
            Influenzavirus A.
ORGANISM   Viruses; ssRNA negative-strand viruses; Orthomyxoviridae;
            Influenzavirus A.
            Unclassified.
REFERENCE  1 (bases 1 to 1565)
AUTHORS    Lee,M.S., Chen,L.H., Liu,Y.P., Chen,Y.P., Li,W.C., Lee,F.,
            Ting,L.J. and Lin,Y.L.
TITLE      Avian influenza subtype H5 in geese in Taiwan, 2015
JOURNAL     Unpublished
REFERENCE  2 (bases 1 to 1565)
AUTHORS    Lee,M.S., Chen,L.H., Liu,Y.P., Chen,Y.P., Li,W.C., Lee,F.,
            Ting,L.J. and Lin,Y.L.
TITLE      Direct Submission
JOURNAL     Submitted (10-FEB-2015) Epidemiology Research Department, National
            Institute for Animal Health, Chung-Cheng Rd, Tansui, Taiwan 251,
            Taiwan
COMMENT     ##Assembly-Data-START##
            Sequencing Technology :: Sanger dideoxy sequencing
            ##Assembly-Data-END##
FEATURES             Location/Qualifiers
     source            1..1565
                        /organism="Viruses; ssRNA negative-strand viruses;
                        Orthomyxoviridae; Influenzavirus A."
                        /mol_type="mRNA"
                        /strain="A/Goose/Taiwan/01042/2015(H5N3)"
                        /host="Goose"
                        /segment="5"
                        /country="Taiwan"
                        /collection_date="2015-01-12"
                        /identified_by="RT-PCR"
                        /subtype="H5N3"
     gene              1..1565
                        /gene="NP"
     CDS               46..1542
                        /gene="NP"
                        /codon_start=1
                        /product="nucleocapsid protein"
                        /translation="MASQGTKRSYEQMETGGERQNATEIRASVGRMVGGIGRFYIQMC
                        TELKLSDYEGRLIQNSITIERMVLSAFDERRNKYLEEHPSAGKDPKKTGGPIYRRRDG
                        KWMRELILYDKEEIRRIWRQANNGEDATAGLTHLMIWHSNLNDATYQRTALVRTGMD
                        PRMCSLMQGSTLPRRSGAAGA AVKGVGTVMELIRMIKRGINDRNFWRGENGRRRIA
                        YERMCSNILKGKFQTAAQRAMMDQVRESRNPNGAEIEDLIFLARSALILRGSVAHKSL
                        PACVYGLAVASGYDFEREGYSLVGIDPFRLQLNSQVFSLIRPNENPAHKSQLVWMACH
                        SAAFEDLRVSSFIRGTRVVRGQLSTRGVQIASNENMETMDSSTLELRSRYWAIRTRS
                        GGNNTNQQRASAGQISVQPTFSVQSRSLPFERATIMAAFTGNTTEGRTSDMRTEIIRMES
                        ARPEDVSFQGRGVFELSDEKATNPVPSFMSNEGSYFFGDNAEEYDN"
BASE COUNT      498 a       314 c       420 g       333 t
ORIGIN
     1 agcaaaagca gggtagataa tcaactcactg agtgacatca acatcatggc gtctcaaggc
    61 accaaacgat  cttatgaaca gatggaaact ggtggagAAC gccagaatgc cactgaaatc
   121 agagcatctg  ttggaaggat ggttgggtgga attgggaggt ttacatatac gatgtgcact
   181 gaactcaaac  tcagcgacta tgaagggagg ctgatccaga acagcataac aatagagaga
   241 atgggttcttt ctgcatttga tgaaaggagg aacaaatacc tggaaagaca tccagtgct
   301 ggaaaggatc  cgaagaaaac tggaggtcca atttatcgaa gaagggacgg tccaatggatg
   361 agagagctga  ttctgtatga caaagaggag atcaggagaa tctggcgtca agcgaataat

```

```

421 ggagaagacg caactgctgg tctcactcac ctgatgatct ggcatgccaa cctaaatgat
481 gccacatacc agagaaccag agctcttgtg cgcactggga tggaccccag aatgtgctct
541 ctgatgcaag ggtcaactct cccgaggaga tctggagctg ctggagcagc agtaaaggga
601 gtcgggacga tggtagtgga actaatcga atgataaaac gaggaattaa tgatcggaat
661 ttctggagag gcgaaaatgg acgaagaaca aggattgcat atgagaggat gtgcaacatc
721 ctcaaaggga aattccaaac agcagcaca agagcaatga tggatcaagt gcgagaaagc
781 agaaatcctg ggaatgctga aattgaagat ctcatcttcc tggcacggtc tgcgctcatc
841 ctgagaggat cagtggccca taagtcttgc cttcttgcct gtgtgtacgg ccttgcctgtg
901 gccagtgggt atgattttga gagagaaggg tactctctag ttggaataga tcctttccgt
961 ctgcttcaaa acagccagggt cttcagtctc attagaccaa atgagaacct agcacacaag
1021 agtcaattgg tgtggatggc atgccattct gcagcatttg aggacctgag agtctcaagt
1081 ttcattcagag ggacaagagt ggtcccaaga gggcaactat ccactagagg agttcaaatt
1141 gcttcaaatg agaacatgga aacaatggac tccagcactc ttgaactaag gacgagatat
1201 tgggctataa ggaccaggag tggaggaaac accaaccaac agagagcatc tgcaggacag
1261 atcagtgtac agcctacttt ctcagtacag agaagtcttc ccttcgaaag ggcaaccatt
1321 atggcgcatc tcacaggaaa tactgaaggc agaacatctg acatgaggac tgaaatcata
1381 agaattgatg aaagtgccag accagaagat gtgtccttcc agggggcggg agtcttcgag
1441 ctctcggacg aaaaggcaac gaacccgac gtgccttctt ttgacatgag taatgaagga
1501 tcttatttct tcggagacaa tgcagaggag tatgacaatt aaagaaaaat acccttgttt
1561 ctact

```

```

//
LOCUS      6                               1454 bp    mRNA      linear      10-FEB-2015
DEFINITION Influenza A virus (A/Goose/Taiwan/01042/2015(H5N3)) neuraminidase
            (NA) gene, complete cds.
ACCESSION
VERSION
KEYWORDS
SOURCE     Viruses; ssRNA negative-strand viruses; Orthomyxoviridae;
            Influenzavirus A.
ORGANISM   Viruses; ssRNA negative-strand viruses; Orthomyxoviridae;
            Influenzavirus A.
            Unclassified.
REFERENCE  1 (bases 1 to 1454)
AUTHORS    Lee,M.S., Chen,L.H., Liu,Y.P., Chen,Y.P., Li,W.C., Lee,F.,
            Ting,L.J. and Lin,Y.L.
TITLE      Avian influenza subtype H5 in geese in Taiwan, 2015
JOURNAL     Unpublished
REFERENCE  2 (bases 1 to 1454)
AUTHORS    Lee,M.S., Chen,L.H., Liu,Y.P., Chen,Y.P., Li,W.C., Lee,F.,
            Ting,L.J. and Lin,Y.L.
TITLE      Direct Submission
JOURNAL     Submitted (10-FEB-2015) Epidemiology Research Department, National
            Institute for Animal Health, Chung-Cheng Rd, Tansui, Taiwan 251,
            Taiwan
COMMENT     ##Assembly-Data-START##
            Sequencing Technology :: Sanger dideoxy sequencing
            ##Assembly-Data-END##
FEATURES
            Location/Qualifiers
            source          1..1454
                             /organism="Viruses; ssRNA negative-strand viruses;
                             Orthomyxoviridae; Influenzavirus A."
                             /mol_type="mRNA"
                             /strain="A/Goose/Taiwan/01042/2015(H5N3)"
                             /host="Goose"
                             /segment="6"
                             /country="Taiwan"
                             /collection_date="2015-01-12"
                             /identified_by="RT-PCR"
                             /subtype="H5N3"
            gene            1..1454
                             /gene="NA"
            CDS              21..1430
                             /gene="NA"
                             /codon_start=1
                             /product="neuraminidase"
                             /translation="MNPNQKIITIGVVNTTLSTIALLIGIGNLIFNTVIHEKIGDHQT
                             VVYPTITAPVVPNCSDTTITYNNTVVHNITTTIITEAEKHFKSSLPLCPFRGFFPFHK
                             DNAIRLGENKDVIVTREPYVSCDNDNCWSFALAQQALLGTHSNGTIKDRTPYRSLIR
                             FPIGTAPVLGNYKEICVAWSSSSCFDGKEWMHVCMTGNDNDASGQIIYAGKMTDSIKS
                             WRKDILRTQESECQXIDGTCVAVTDGPAANSADHRIYWIREGKVMKYENIPKTKIQH
                             LEECSYVDIDVYICRDNWKGSNRPWMRINNETILETGYVCSKFHSDTPRPADPSTV
                             SCDSPSNVNGGPGVKGFKGFTGDDVWLGRVSTGGRSGFEI IKVTEGWINSNPNAKSV
                             TQTLVSNNDWSGYSGSFIVENNGCFQPCFYIELIRGRPNKNDDVSWTSNSIVTFCGLD
                             NEPGSGNWPDGSGNIGFMPK"
BASE COUNT  475 a      293 c      336 g      349 t      1 others
ORIGIN

```



```

1 agcaaaagca ggagttttaa atgaatccaa atcagaagat aataacaatt ggtgtagtga
61 atactactct atcaacaata gcccttctta ttggaattgg gaatctgata ttcaacactg
121 tcatacatga gaaaataggg gaccaccaa ctgtggtata tccaacaata acagccccag
181 tggtagcaaaa ctgcagtgac accacaatca catacaacaa cactgtggta cataacataa
241 caacgacaat aataaccgaa gcggaaaagc atttcaaata ctcactgccg ctatgccctt
301 tccgaggttt ctcccccttt cacaaggaca atgcaatacg attgggtgag aacaaagacg
361 taatagtccac aaggagagccc tatgtcagtt gtgacaatga taattgctgg tcttttggcc
421 tcgctcaagg ggctctactg gggactaaac acagcaatgg aaccatcaag gacaggacgc
481 catatagatc gctgatccgg ttcccaatag gaacagctcc agtactgggc aattacaaag
541 agatatgtgt tgcctgggtc agtagcagtt gcttcgatgg aaaggaatgg atgcatgttt
601 gcatgactgg gaacgacaat gatgcgagtg gccaaataat atatgcaggg aaaatgacag
661 actccattaa atcatggaga aaggatatac taagaactca agagtctgaa tgtcaaygca
721 ttgacgggac ctgtgttgta gctgtaacag atggtcctgc ggctaatagt gcagaccacc
781 ggatttactg gatacgagaa ggtaaggtaa tgaagtatga aaacattcct aaaacaaaga
841 tacagcattt agaagaatgt tcttgttatg tggacatcga tgtgtactgc atatgtaggg
901 acaattggaa aggttctaata aggccttggg tgaggatcaa caatgagacc atactagaaa
961 cagggtagct atgtagcaaa ttccactcag atacccccag gccagccgat ccttcgacag
1021 tatcgtgtga ttcccccaagt aatgttaatg gaggacctgg agtcaaaggg tttggcttca
1081 aaactgggtg tgatgtatgg ctgggaagga ctgtatcaac cgggtggaagg tcaggttttg
1141 aaatcatcaa agtcacagag ggggtggatca attcccccaa tcatgccaaa tcagttacac
1201 aacattagat gtcaaacaaat gattgggtcag gttactcagg gagcttcatt gttgagaaca
1261 atggctgctt tcagccctgc ttctatattg aacttatacg gggaaggccc aataagaacg
1321 atgacgtttc ttggacaagc aacagtatag ttactttctg tggactagac aatgaacctg
1381 gatcgggaaa ttggcctgat ggttccaaca ttgggtttat gcccaagtaa cagaaaaaaa
1441 cccttgatc tact

```

```

//
LOCUS       7                               1027 bp    mRNA    linear    10-FEB-2015
DEFINITION  Influenza A virus (A/Goose/Taiwan/01042/2015(H5N3)) matrix protein
            2 (M2) and matrix protein 1 (M1) genes, complete cds.
ACCESSION
VERSION
KEYWORDS
SOURCE      Viruses; ssRNA negative-strand viruses; Orthomyxoviridae;
            Influenzavirus A.
ORGANISM    Viruses; ssRNA negative-strand viruses; Orthomyxoviridae;
            Influenzavirus A.
            Unclassified.
REFERENCE   1 (bases 1 to 1027)
AUTHORS     Lee,M.S., Chen,L.H., Liu,Y.P., Chen,Y.P., Li,W.C., Lee,F.,
            Ting,L.J. and Lin,Y.L.
TITLE       Avian influenza subtype H5 in geese in Taiwan, 2015
JOURNAL     Unpublished
REFERENCE   2 (bases 1 to 1027)
AUTHORS     Lee,M.S., Chen,L.H., Liu,Y.P., Chen,Y.P., Li,W.C., Lee,F.,
            Ting,L.J. and Lin,Y.L.
TITLE       Direct Submission
JOURNAL     Submitted (10-FEB-2015) Epidemiology Research Department, National
            Institute for Animal Health, Chung-Cheng Rd, Tansui, Taiwan 251,
            Taiwan
COMMENT     ##Assembly-Data-START##
            Sequencing Technology :: Sanger dideoxy sequencing
            ##Assembly-Data-END##
FEATURES             Location/Qualifiers
     source           1..1027
                     /organism="Viruses; ssRNA negative-strand viruses;
                     Orthomyxoviridae; Influenzavirus A."
                     /mol_type="mRNA"
                     /strain="A/Goose/Taiwan/01042/2015(H5N3)"
                     /host="Goose"
                     /segment="7"
                     /country="Taiwan"
                     /collection_date="2015-01-12"
                     /identified_by="RT-PCR"
                     /subtype="H5N3"
     gene             26..1007
                     /gene="M2"
     CDS              join(26..51,740..1007)
                     /gene="M2"
                     /codon_start=1
                     /product="matrix protein 2"
                     /translation="MSLLTEVETPTRTEWECRCSDDSLVVAANIIGILHLILWILD
                     RLFFKCIYRRLKYGLKIGPSTEGVPESMREEYRQEQQSAVDVDDGHFVNIELE"
     gene             26..784
                     /gene="M1"
     CDS              26..784
                     /gene="M1"

```

```

/codon_start=1
/product="matrix protein 1"
/translation="MSLLTEVETYVLSIIPSGPLKAEIAQRLEDVFAGKNTDLEALME
WLKTRPILSPLTKGILGFVFTLTVPSEGLQRRRFVQNALNGNGDPNNMDKAVKLYKK
LKREITFHGAKEVALSYSTGALASCMGLIYNRMGTVTTEVAFGLVCATCEQIADSQHR
SHRQMATITNPLIRHENRMVLASTTAKAMEQMAGSSEQASEAMEVANQARQMVQAMRT
IGTHPNSSAGLRDNLLENLQAYQNRMGVQMQRFK"
BASE COUNT      292 a      221 c      271 g      243 t
ORIGIN
    1 agcaaaagca ggtagatggt gaaagatgag tcttctaacc gaggtcgaaa cgtacgttct
   61 ctctatcatc ccgtcaggcc ccctcaaagc cgagatcgcg cagagacttg aagatgtctt
  121 tgcaggga aaacaccgatc tcgaggtctc catggagtgg ctaaagacaa gaccaatcct
  181 gtcacctctg actaaaggga ttttgggatt tgtgttcacg ctcaccgtgc ccagtgcgcg
  241 aggactgcag cgtagacgct tcgtccagaa tgccttaa atggaaatgggg atccaaataa
  301 tatggataag gcagttaagc tatataagaa gctgaaaaga gagataacgt tccatggggc
  361 taaggaggtc gcacttagct actcaaccgg tgcacttgcc agctgcatgg gtctcatata
  421 caacaggatg ggaacgggtga ctacagaagt ggcttttggc ctagtgtgtg ccacttgtga
  481 gcagattgca gattcacagc atcgggtccca cagacagatg gcaaccatca ccaaccattt
  541 aatcagacat gagaacagaa tgggtgctggc cagcactaca gctaaggcca tggagcagat
  601 ggcaggatca agcgcagcagg catcagaagc catggagggt gctaatacagg ccaggcagat
  661 ggtacaggca atgaggacaa ttgggactca tcctaattct agtgcgtggc tgagagataa
  721 tcttcttgaa aatttgcagg cctaccagaa ccgaatggga gtgcagatgc agcgattcaa
  781 gtgatcctct tgttgttgcc gcaaatatca ttgggacctt gcacttgata ttgtggatcc
  841 ttgatcgtct ttcttcaaa tgcatttacc gtcgccttaa atacggtttg aaaatagggc
  901 cttctacgga atgggtacct gagtctatga gggaagagta ccggcaggaa cagcagagtg
  961 ctgtggatgt tgacgatggc cattttgtca acatagaatt ggagtaaaaa actaccttgt
 1021 ttctact

//
LOCUS      8                               890 bp      mRNA      linear      10-FEB-2015
DEFINITION Influenza A virus (A/Goose/Taiwan/01042/2015(H5N3)) nuclear export
            protein (NEP) and nonstructural protein 1 (NS1) gene, complete cds.
ACCESSION
VERSION
KEYWORDS
SOURCE     Viruses; ssRNA negative-strand viruses; Orthomyxoviridae;
            Influenzavirus A.
ORGANISM   Viruses; ssRNA negative-strand viruses; Orthomyxoviridae;
            Influenzavirus A.
            Unclassified.
REFERENCE  1 (bases 1 to 890)
AUTHORS   Lee,M.S., Chen,L.H., Liu,Y.P., Chen,Y.P., Li,W.C., Lee,F.,
            Ting,L.J. and Lin,Y.L.
TITLE     Avian influenza subtype H5 in geese in Taiwan, 2015
JOURNAL   Unpublished
REFERENCE  2 (bases 1 to 890)
AUTHORS   Lee,M.S., Chen,L.H., Liu,Y.P., Chen,Y.P., Li,W.C., Lee,F.,
            Ting,L.J. and Lin,Y.L.
TITLE     Direct Submission
JOURNAL   Submitted (10-FEB-2015) Epidemiology Research Department, National
            Institute for Animal Health, Chung-Cheng Rd, Tansui, Taiwan 251,
            Taiwan
COMMENT   ##Assembly-Data-START##
            Sequencing Technology :: Sanger dideoxy sequencing
            ##Assembly-Data-END##
FEATURES
    source              Location/Qualifiers
                        1..890
                        /organism="Viruses; ssRNA negative-strand viruses;
                        Orthomyxoviridae; Influenzavirus A."
                        /mol_type="mRNA"
                        /strain="A/Goose/Taiwan/01042/2015(H5N3)"
                        /host="Goose"
                        /segment="8"
                        /country="Taiwan"
                        /collection_date="2015-01-12"
                        /identified_by="RT-PCR"
                        /subtype="H5N3"
    gene                27..864
                        /gene="NEP"
    CDS                 join(27..56,529..864)
                        /gene="NEP"
                        /codon_start=1
                        /product="nuclear export protein"
                        /translation="MDSNTVSSFQDILMRMSKLQLGSSSEGLNGMITQFESLKLYRDS
                        LGEAVMRMGDLHSLQNRNGKWREQLSQKFEEIRWLI EEMRHR LKTTENSFEQITFMQA
                        LQLLLEVEQEIRTF SFQLI"
    gene                27..740

```


CDS

```
/gene="NS1"  
27..740  
/gene="NS1"  
/codon_start=1  
/product="nonstructural protein 1"  
/translation="MDSNTVSSFQVDCFLWHVRKRFADQELGDAPFLDRLRRDQKSLR  
GRGSTLGDIETATRAGKQIVERILGEKSDEALKMNIASVPTSRYLTDMTLEMSRDW  
FMLMPKQKVAGSLCIKMDQAIMDKTIILKANFSVIFDRLETILLRAFTEEGAIVGEI  
SPLPSLPGHTDEDVKIAIGVLIGGLEWNDNTVRVSETLQRFTWRSSNEDGRPSLPSKQ  
KRKMARTIESEVRGNKMAD"
```

BASE COUNT 291 a 180 c 206 g 213 t
ORIGIN

```
1 agcaaaagca gggtgacaaa aacataatgg actccaacac tgtgtcaagc tttcaggtag  
61 actgctttct ttggcatgtc cgcaaacgat ttgcagacca agaactgggt gatgccccat  
121 tccttgaccg gcttcgccga gaccagaagt ccctaagagg aagaggcagc actccttggtc  
181 tggacatcga gacagctact cgtgcgggaa agcaaatagt ggagcggatt ctgggggaaa  
241 aatctgatga agcacttaaa atgaatattg cttctgtacc gacttcacgc tacctaactg  
301 acatgactct tgaagaaatg tcaagagact ggttcatgct catgcccag cagaaagtag  
361 caggttctct ctgcatcaaa atggaccagg caataatgga taaaaccatc atactgaaag  
421 caaatttcag tgtgattttt gatcggctgg aaaccctaatt attacttaga gctttcacag  
481 aagaaggagc aattgtggga gaaatctcac cattaccttc tcttcagga catactgatg  
541 aggatgtcaa aattgcaatt ggggtcctca tcggaggggct tgaatggaat gataacacag  
601 ttcgagtctc tgaaactcta cagagattca cttggagaag cagtaatgag gatgggagac  
661 cttcactccc ttcaaaacag aaacggaaaa tggcgagAAC aattgagtca gaagttcgag  
721 gaaataagat ggctgattga ggaaatgcga catagattga agaccacaga gaacagcttc  
781 gaacaaataa cgtttatgca agctttacaa ctattgcttg aagtggagca agagataaga  
841 accttctcgt ttcagcttat ttaatgataa aaaacaccct tgtttctact
```

//