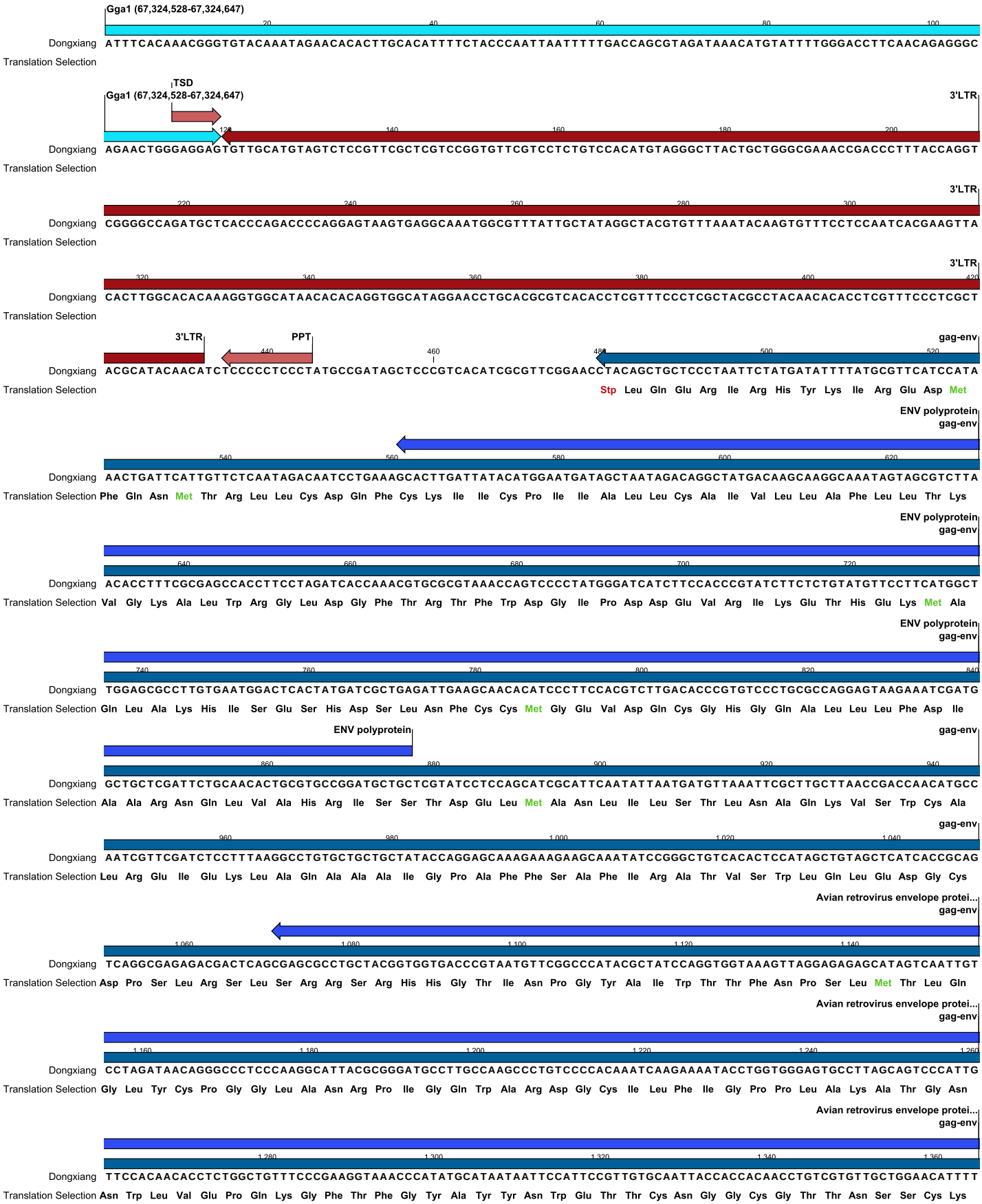
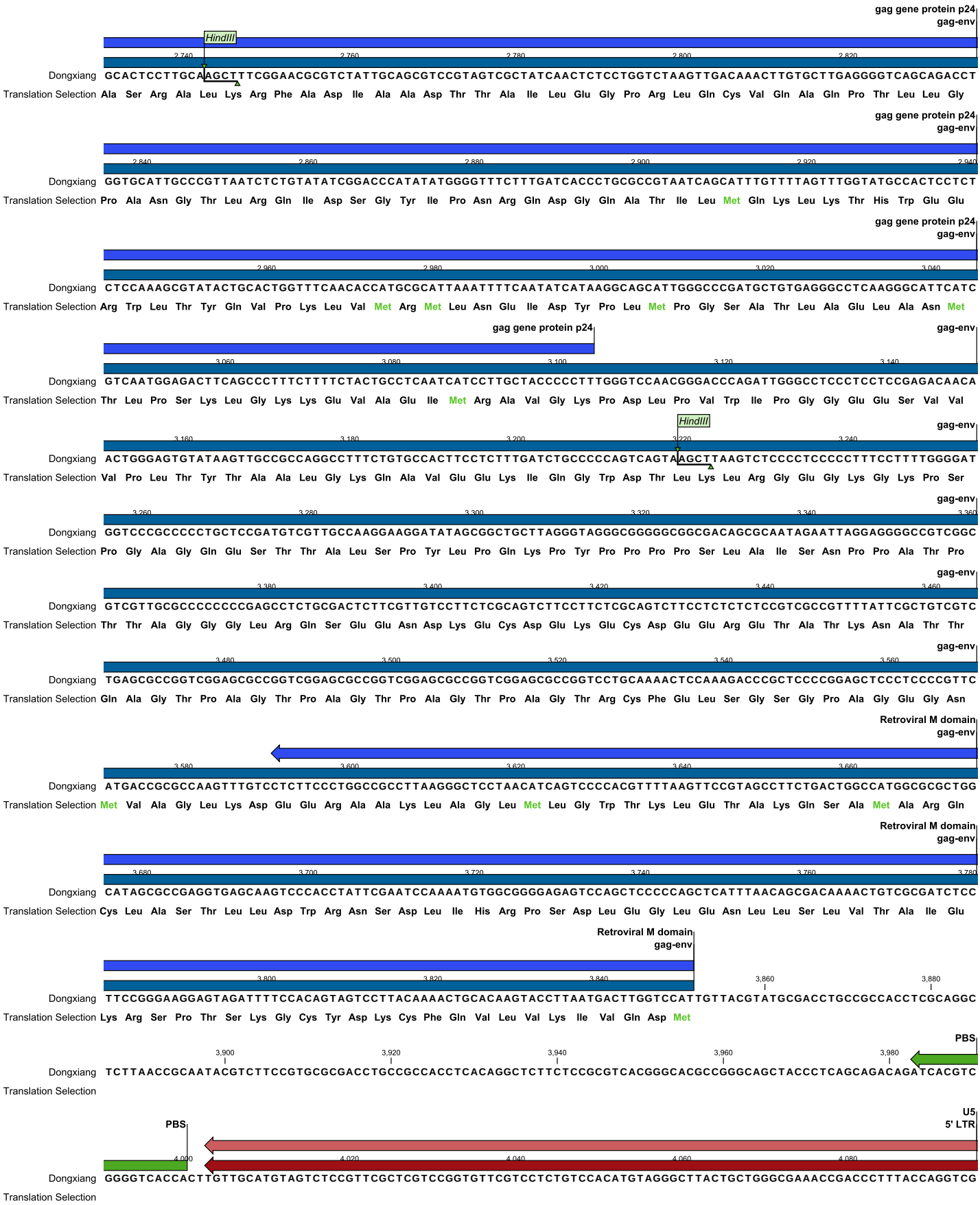
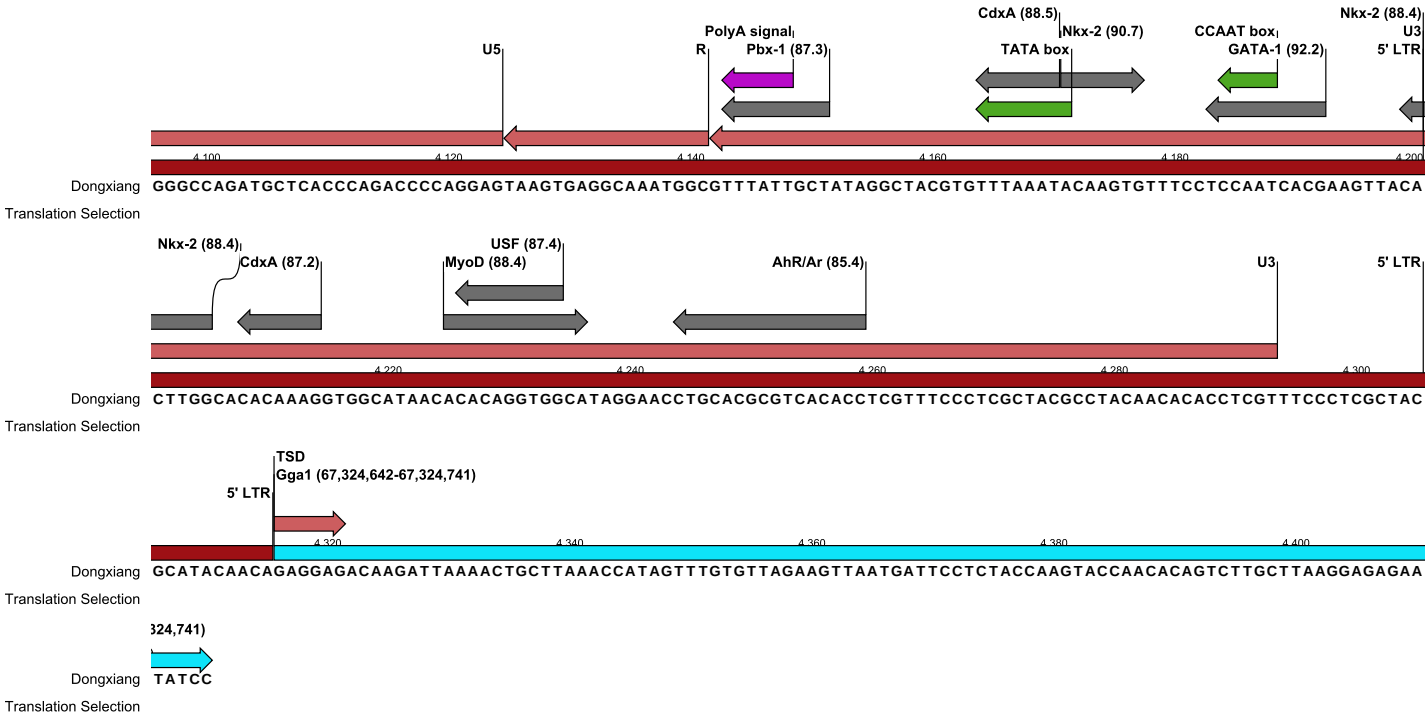

Gga1 (67,324,528-67,324,647)
Dongxiang ATTTCACAAACGGGTGTACAAATAGAACACACTTGCACATTTTCTACCCAATTAATTTTTGACCAGCGTAGATAAACATGTATTTTGGGACCTTCAACAGAGGGC
Translation Selection
TSD
Gga1 (67,324,528-67,324,647)
3'LTR
Dongxiang AGAACTGGGAGGAGTGTTGCATGTAGTCTCCGTTCGCTCGTCCGGTGTTCGTCCTCTGTCCACATGTAGGGCTTACTGCTGGGCGAAACCGACCCTTTACCAGGT
Translation Selection
3'LTR
Dongxiang CGGGGCCAGATGCTCACCCAGACCCCAGGAGTAAGTGAGGCAAATGGCGTTTATTGCTATAGGCTACGTGTTTAAATACAAGTGTTTCCTCCAATCACGAAGTTA
Translation Selection
3'LTR
Dongxiang CACTTGGCACACAAAGGTGGCATAACACACAGGTGGCATAGGAACCTGCACGCGTCACACCTCGTTTCCCTCGCTACGCCTACAACACACCTCGTTTCCCTCGCT
Translation Selection
3'LTR
PPT
gag-env
Dongxiang ACGCATACAACATCTCCCCCTCCCTATGCCGATAGCTCCCGTCACATCGCGTTCGGAACCTACAGCTGCTCCCTAATTCTATGATATTTTATGCGTTCATCCATA
Translation Selection Stp Leu Gln Glu Arg Ile Arg His Tyr Lys Ile Arg Glu Asp Met
ENV polyprotein
gag-env
Dongxiang AACTGATTCATTGTTCTCAATAGACAATCCTGAAAGCACTTGATTATACATGGAATGATAGCTAATAGACAGGCTATGACAAGCAAGGCAAATAGTAGCGTCTTA
Translation Selection Phe Gln Asn Met Thr Arg Leu Leu Cys Asp Gln Phe Cys Lys Ile Ile Cys Pro Ile Ile Ala Leu Leu Cys Ala Ile Val Leu Leu Ala Phe Leu Leu Thr Lys
ENV polyprotein
gag-env
Dongxiang ACACCTTTCGCGAGCCACCTTCCTAGATCACCAAACGTGCGCGTAAACCAGTCCCCTATGGGATCATCTTCCACCCGTATCTTCTCTGTATGTTCCTTCATGGCT
Translation Selection Val Gly Lys Ala Leu Trp Arg Gly Leu Asp Gly Phe Thr Arg Thr Phe Trp Asp Gly Ile Pro Asp Asp Glu Val Arg Ile Lys Glu Thr His Glu Lys Met Ala
ENV polyprotein
gag-env
Dongxiang TGGAGCGCCTTGTGAATGGACTCACTATGATCGCTGAGATTGAAGCAACACATCCCTTCCACGTCTTGACACCCGTGTCCCTGCGCCAGGAGTAAGAAATCGATG
Translation Selection Gln Leu Ala Lys His Ile Ser Glu Ser His Asp Ser Leu Asn Phe Cys Cys Met Gly Glu Val Asp Gln Cys Gly His Gly Gln Ala Leu Leu Leu Phe Asp Ile
ENV polyprotein
gag-env
Dongxiang GCTGCTCGATTCTGCAACACTGCGTGCCGGATGCTGCTCGTATCCTCCAGCATCGCATTCAATATTAATGATGTTAAATTCGCTTGCTTAACCGACCAACATGCC
Translation Selection Ala Ala Arg Asn Gln Leu Val Ala His Arg Ile Ser Ser Thr Asp Glu Leu Met Ala Asn Leu Ile Leu Ser Thr Leu Asn Ala Gln Lys Val Ser Trp Cys Ala
gag-env
Dongxiang AATCGTTCGATCTCCTTTAAGGCCTGTGCTGCTGCTATACCAGGAGCAAAGAAAGAAGCAAATATCCGGGCTGTCACACTCCATAGCTGTAGCTCATCACCGCAG
Translation Selection Leu Arg Glu Ile Glu Lys Leu Ala Gln Ala Ala Ala Ile Gly Pro Ala Phe Phe Ser Ala Phe Ile Arg Ala Thr Val Ser Trp Leu Gln Leu Glu Asp Gly Cys
Avian retrovirus envelope protei...
gag-env
Dongxiang TCAGGCGAGAGACGACTCAGCGAGCGCCTGCTACGGTGGTGACCCGTAATGTTCGGCCCATACGCTATCCAGGTGGTAAAGTTAGGAGAGAGCATAGTCAATTGT
Translation Selection Asp Pro Ser Leu Arg Ser Leu Ser Arg Arg Ser Arg His His Gly Thr Ile Asn Pro Gly Tyr Ala Ile Trp Thr Thr Phe Asn Pro Ser Leu Met Thr Leu Gln
Avian retrovirus envelope protei...
gag-env
Dongxiang CCTAGATAACAGGGCCCTCCCAAGGCATTACGCGGGATGCCTTGCCAAGCCCTGTCCCCACAAATCAAGAAAATACCTGGTGGGAGTGCCTTAGCAGTCCCATTG
Translation Selection Gly Leu Tyr Cys Pro Gly Gly Leu Ala Asn Arg Pro Ile Gly Gln Trp Ala Arg Asp Gly Cys Ile Leu Phe Ile Gly Pro Pro Leu Ala Lys Ala Thr Gly Asn
Avian retrovirus envelope protei...
gag-env
Dongxiang TTCCACAACACCTCTGGCTGTTTCCCGAAGGTAAACCCATATGCATAATAATTCCATTCCGTTGTGCAATTACCACCACAACCTGTCGTGTTGCTGGAACATTTT
Translation Selection Asn Trp Leu Val Glu Pro Gln Lys Gly Phe Thr Phe Gly Tyr Ala Tyr Tyr Asn Trp Glu Thr Thr Cys Asn Gly Gly Cys Gly Thr Thr Asn Ser Ser Cys Lys

Avian retrovirus envelope protei...
gag-env
1,380 1,400 1,420 1,440 1,460
Dongxiang GTCCCGTTGCTGTACCCCGCTGACCATTTTCCCCTTTTTGAACCACACCAATTAGAAAGGTCCCCTCTATAGTAACGAGTCTCGTTACTGGTGAATCCACAATAT
Translation Selection Thr Gly Asn Ser Tyr Gly Ala Ser Trp Lys Gly Arg Lys Ser Gly Cys Trp Asn Ser Leu Asp Gly Arg Tyr Tyr Arg Thr Glu Asn Ser Thr Phe Gly Cys Tyr
Avian retrovirus envelope protei...
gag-env
1,480 1,500 1,520 1,540 1,560
Dongxiang CTACGACTTATTGAAAAACTCTCTACGTTTATTGGACTTACCATCGTCCATGATTGGTTGACATAGGGCCTTATAAGAAGGTCATCACTTTTCCATTTTGCTATG
Translation Selection Arg Arg Ser Ile Ser Phe Ser Glu Val Asn Ile Pro Ser Val Met Thr Trp Ser Gln Asn Val Tyr Pro Arg Ile Leu Leu Asp Asp Ser Lys Trp Lys Ala Ile
Avian retrovirus envelope protei...
gag-env
1,580 1,600 1,620 1,640 1,660 1,680
Dongxiang AAGTCACGCAATTCTGCTTCCGCCCCACCAGTCCCATTAAAATTCCCATCAAAATTGTGACAGACTCTACTGCGATTGTTCTCTTTATAGCACACCGAACCAAAG
Translation Selection Phe Asp Arg Leu Glu Ala Glu Ala Gly Gly Thr Gly Asn Phe Asn Gly Asp Phe Asn His Cys Val Arg Ser Arg Asn Asn Glu Lys Tyr Cys Val Ser Gly Phe
Avian retrovirus envelope protei...
gag-env
1,700 1,720 1,740 1,760 1,780
Dongxiang GTAACACACGTACGTGTTGTTCCGTTCTTGATCATCTGGGACCCTAAAATATCCAATTCTTGGGGGTCCCAAGGGAGGGTTGTATTTAGAGCCTGTATCAAGCAT
Translation Selection Thr Val Cys Thr Arg Thr Thr Gly Asn Lys Ile Met Gln Ser Gly Leu Ile Asp Leu Glu Gln Pro Asp Trp Pro Leu Thr Thr Asn Leu Ala Gln Ile Leu Cys
Retroviral aspartyl protease
gag-env
1,800 1,820 1,840 1,860 1,880
Dongxiang GCTGTTTGGCTGGCTGTATTTGTAATGCGAGTGCCTATCTGTCGCAAGAAATCCCGCCCCAGAAGAGTTCCGGGGACACGCGCCACCAATGGTGTAAGCAACGCC
Translation Selection Ala Thr Gln Ser Ala Thr Asn Thr Ile Arg Thr Gly Ile Gln Arg Leu Phe Asp Arg Gly Leu Leu Thr Gly Pro Val Arg Ala Val Leu Pro Thr Leu Leu Ala
Retroviral aspartyl protease
gag-env
1,900 1,920 1,940 1,960 1,980
Dongxiang GGTTTCTCTAAGGAGCCATCCCTGTTAATCACAACCGCTTGTACCTCATTGGTAGACCGGCGTGAGGGGGTCACCCCTCCAACCCCCATAATAGACTGCGAGGCC
Translation Selection Pro Lys Glu Leu Ser Gly Asp Arg Asn Ile Val Val Ala Gln Val Glu Asn Thr Ser Arg Arg Ser Pro Thr Val Gly Gly Val Gly Met Ile Ser Gln Ser Ala
Retroviral aspartyl protease
gag-env
2,000 2,020 2,040 2,060 2,080 2,100
Dongxiang TCCGCGGGCCACGGGGATGGCCATTCTGTTTCCGTGATCACAGTAACGTCGGCGCCGGAATCTATGAGGGCAGTGACAAAGATAGATAGAGGGCCTTGAAAATCC
Translation Selection Glu Ala Pro Trp Pro Ser Pro Trp Glu Thr Glu Thr Ile Val Thr Val Asp Ala Gly Ser Asp Ile Leu Ala Thr Val Phe Ile Ser Leu Pro Gly Gln Phe Asp
Retroviral aspartyl protease
gag-env
2,120 2,140 2,160 2,180 2,200
Dongxiang GGCGGGAGGTTGGTGCAAGAAATAGTGGCTTTCACCAGAGGGCGCTCATGGGTACTTAGAGACAGCGCCGCCATGGGTAAACTTAGGTGAGGGGCCCGCACCGAT
Translation Selection Pro Pro Leu Asn Thr Cys Ser Ile Thr Ala Lys Val Leu Pro Arg Glu His Thr Ser Leu Ser Leu Ala Ala Met Pro Leu Ser Leu His Pro Ala Arg Val Ser
gag-env
2,220 2,240 2,260 2,280 2,300
Dongxiang CGAGAAATGAAGTTGCCGTGCGTGGACGGTCTCCCATTGTTATTTCCCTGGCGTGGAGGCCTACGGGCCCTGCATTGTGGTGCTGTATGACCCCTCCGCCCGCAC
Translation Selection Arg Ser Ile Phe Asn Gly His Thr Ser Pro Arg Gly Asn Asn Asn Gly Gln Arg Pro Pro Arg Arg Ala Arg Cys Gln Pro Ala Thr His Gly Arg Arg Gly Cys
Zinc knuckle
gag-env
2,320 2,340 2,360 2,380 2,400
Dongxiang TGCTGACATGTTACACCTCCACCCGTGCCCATTCTGCATTGGGCCCTAATATGGCCCAACTGGCCACATTTAAAGCAAGGTCCTAACTGTCGGTCCGCACTACGA
Translation Selection Gln Gln Cys Thr Val Gly Gly Gly Thr Gly Met Arg Cys Gln Ala Arg Ile His Gly Leu Gln Gly Cys Lys Phe Cys Pro Gly Leu Gln Arg Asp Ala Ser Arg
gag-env
2,420 2,440 2,460 2,480 2,500 2,520
Dongxiang TGGTCCGCCTCCCTACAGGCCATCATCACTCCTGCTACCGCCGCAGCTACCTCCCCTGCCACAGACGGACAGGCCTTTTGCTTATCTAGGACATACTTGATGGCC
Translation Selection His Asp Ala Glu Arg Cys Ala Met Met Val Gly Ala Val Ala Ala Ala Val Glu Gly Ala Val Ser Pro Cys Ala Lys Gln Lys Asp Leu Val Tyr Lys Ile Ala
gag gene protein p24
gag-env
2,540 2,560 2,580 2,600 2,620
Dongxiang TCACCAGGGGTTTGGAGCCTCCCCGGCGCCGCTCGCAAAATCCCCTGCACCCCTTCACTGGACTTCTGATACAAGCAATCCAGGATGACGGGACCGTGAACTGCT
Translation Selection Glu Gly Pro Thr Gln Leu Arg Gly Pro Ala Ala Arg Leu Ile Gly Gln Val Gly Glu Ser Ser Lys Gln Tyr Leu Cys Asp Leu Ile Val Pro Gly His Val Ala
gag gene protein p24
gag-env
BglII
2,640 2,660 2,680 2,700 2,720
Dongxiang CTGGGCAGATCTGAGCCTTCCACTGCCTTAATTAGTCTGTCTGCAAACTCCTGAAACGGCTCTGTGGGGCCTTGCGCGATCTCTGTCCACGGAGTAGTGGGCTCA
Translation Selection Arg Pro Leu Asp Ser Gly Glu Val Ala Lys Ile Leu Arg Asp Ala Phe Glu Gln Phe Pro Glu Thr Pro Gly Gln Ala Ile Glu Thr Trp Pro Thr Thr Pro Glu


gag gene protein p24
gag-env
HindIII
2,740 2,760 2,780 2,800 2,820
Dongxiang GCACTCCTTGCAAGCTTTCGGAACGCGTCTATTGCAGCGTCCGTAGTCGCTATCAACTCTCCTGGTCTAAGTTGACAAACTTGTGCTTGAGGGGTCAGCAGACCT
Translation Selection Ala Ser Arg Ala Leu Lys Arg Phe Ala Asp Ile Ala Ala Asp Thr Thr Ala Ile Leu Glu Gly Pro Arg Leu Gln Cys Val Gln Ala Gln Pro Thr Leu Leu Gly
gag gene protein p24
gag-env
2,840 2,860 2,880 2,900 2,920 2,940
Dongxiang GGTGCATTGCCCGTTAATCTCTGTATATCGGACCCATATATGGGGTTTCTTTGATCACCCTGCGCCGTAATCAGCATTTGTTTTAGTTTGGTATGCCACTCCTCT
Translation Selection Pro Ala Asn Gly Thr Leu Arg Gln Ile Asp Ser Gly Tyr Ile Pro Asn Arg Gln Asp Gly Gln Ala Thr Ile Leu Met Gln Lys Leu Lys Thr His Trp Glu Glu
gag gene protein p24
gag-env
2,960 2,980 3,000 3,020 3,040
Dongxiang CTCCAAAGCGTATACTGCACTGGTTTCAACACCATGCGCATTAAATTTTCAATATCATAAGGCAGCATTGGGCCCGATGCTGTGAGGGCCTCAAGGGCATTCATC
Translation Selection Arg Trp Leu Thr Tyr Gln Val Pro Lys Leu Val Met Arg Met Leu Asn Glu Ile Asp Tyr Pro Leu Met Pro Gly Ser Ala Thr Leu Ala Glu Leu Ala Asn Met
gag gene protein p24
gag-env
3,060 3,080 3,100 3,120 3,140
Dongxiang GTCAATGGAGACTTCAGCCCTTTCTTTTCTACTGCCTCAATCATCCTTGCTACCCCCTTTGGGTCCAACGGGACCCAGATTGGGCCTCCCTCCTCCGAGACAACA
Translation Selection Thr Leu Pro Ser Lys Leu Gly Lys Lys Glu Val Ala Glu Ile Met Arg Ala Val Gly Lys Pro Asp Leu Pro Val Trp Ile Pro Gly Gly Glu Glu Ser Val Val
HindIII
gag-env
3,160 3,180 3,200 3,220 3,240
Dongxiang ACTGGGAGTGTATAAGTTGCCGCCAGGCCTTTCTGTGCCACTTCCTCTTTGATCTGCCCCCAGTCAGTAAGCTTAAGTCTCCCCTCCCCCTTTCCTTTTGGGGAT
Translation Selection Val Pro Leu Thr Tyr Thr Ala Ala Leu Gly Lys Gln Ala Val Glu Glu Lys Ile Gln Gly Trp Asp Thr Leu Lys Leu Arg Gly Glu Gly Lys Gly Lys Pro Ser
gag-env
3,260 3,280 3,300 3,320 3,340 3,360
Dongxiang GGTCCCGCCCCCTGCTCCGATGTCGTTGCCAAGGAAGGATATAGCGGCTGCTTAGGGTAGGGCGGGGGCGGCGACAGCGCAATAGAATTAGGAGGGGCCGTCGGC
Translation Selection Pro Gly Ala Gly Gln Glu Ser Thr Thr Ala Leu Ser Pro Tyr Leu Pro Gln Lys Pro Tyr Pro Pro Pro Pro Ser Leu Ala Ile Ser Asn Pro Pro Ala Thr Pro
gag-env
3,380 3,400 3,420 3,440 3,460
Dongxiang GTCGTTGCGCCCCCCCCGAGCCTCTGCGACTCTTCGTTGTCCTTCTCGCAGTCTTCCTTCTCGCAGTCTTCCTCTCTCTCCGTCGCCGTTTTATTCGCTGTCGTC
Translation Selection Thr Thr Ala Gly Gly Gly Leu Arg Gln Ser Glu Glu Asn Asp Lys Glu Cys Asp Glu Lys Glu Cys Asp Glu Glu Arg Glu Thr Ala Thr Lys Asn Ala Thr Thr
gag-env
3,480 3,500 3,520 3,540 3,560
Dongxiang TGAGCGCCGGTCGGAGCGCCGGTCGGAGCGCCGGTCGGAGCGCCGGTCGGAGCGCCGGTCCTGCAAAACTCCAAAGACCCGCTCCCCGGAGCTCCCTCCCCGTTC
Translation Selection Gln Ala Gly Thr Pro Ala Gly Thr Pro Ala Gly Thr Pro Ala Gly Thr Pro Ala Gly Thr Arg Cys Phe Glu Leu Ser Gly Ser Gly Pro Ala Gly Glu Gly Asn
Retroviral M domain
gag-env
3,580 3,600 3,620 3,640 3,660
Dongxiang ATGACCGCGCCAAGTTTGTCCTCTTCCCTGGCCGCCTTAAGGGCTCCTAACATCAGTCCCCACGTTTTAAGTTCCGTAGCCTTCTGACTGGCCATGGCGCGCTGG
Translation Selection Met Val Ala Gly Leu Lys Asp Glu Glu Arg Ala Ala Lys Leu Ala Gly Leu Met Leu Gly Trp Thr Lys Leu Glu Thr Ala Lys Gln Ser Ala Met Ala Arg Gln
Retroviral M domain
gag-env
3,680 3,700 3,720 3,740 3,760 3,780
Dongxiang CATAGCGCCGAGGTGAGCAAGTCCCACCTATTCGAATCCAAAATGTGGCGGGGAGAGTCCAGCTCCCCCAGCTCATTTAACAGCGACAAAACTGTCGCGATCTCC
Translation Selection Cys Leu Ala Ser Thr Leu Leu Asp Trp Arg Asn Ser Asp Leu Ile His Arg Pro Ser Asp Leu Glu Gly Leu Glu Asn Leu Leu Ser Leu Val Thr Ala Ile Glu
Retroviral M domain
gag-env
3,800 3,820 3,840 3,860 3,880
Dongxiang TTCCGGGAAGGAGTAGATTTTCCACAGTAGTCCTTACAAAACTGCACAAGTACCTTAATGACTTGGTCCATTGTTACGTATGCGACCTGCCGCCACCTCGCAGGC
Translation Selection Lys Arg Ser Pro Thr Ser Lys Gly Cys Tyr Asp Lys Cys Phe Gln Val Leu Val Lys Ile Val Gln Asp Met
PBS
3,900 3,920 3,940 3,960 3,980
Dongxiang TCTTAACCGCAATACGTCTTCCGTGCGCGACCTGCCGCCACCTCACAGGCTCTTCTCCGCGTCACGGGCACGCCGGGCAGCTACCCTCAGCAGACAGATCACGTC
Translation Selection
U5
5' LTR
PBS
4,000 4,020 4,040 4,060 4,080
Dongxiang GGGGTCACCACTTGTTGCATGTAGTCTCCGTTCGCTCGTCCGGTGTTCGTCCTCTGTCCACATGTAGGGCTTACTGCTGGGCGAAACCGACCCTTTACCAGGTCG
Translation Selection


CdxA (88.5)
Nkx-2 (88.4)
PolyA signal
Nkx-2 (90.7)
CCAAT box
U3
U5
R
Pbx-1 (87.3)
TATA box
GATA-1 (92.2)
5' LTR
4,100
4,120
4,140
4,160
4,180
4,200
Dongxiang
GGGCCAGATGCTCACCCAGACCCCAGGAGTAAGTGAGGCAAATGGCGTTTATTGCTATAGGCTACGTGTTTAAATACAAGTGTTTCCTCCAATCACGAAGTTACA
Translation Selection
Nkx-2 (88.4)
USF (87.4)
CdxA (87.2)
MyoD (88.4)
AhR/Ar (85.4)
U3
5' LTR
4,220
4,240
4,260
4,280
4,300
Dongxiang
CTTGGCACACAAAGGTGGCATAACACACAGGTGGCATAGGAACCTGCACGCGTCACACCTCGTTTCCCTCGCTACGCCTACAACACACCTCGTTTCCCTCGCTAC
Translation Selection
TSD
Gga1 (67,324,642-67,324,741)
5' LTR
4,320
4,340
4,360
4,380
4,400
Dongxiang
GCATACAACAGAGGAGACAAGATTAAAACTGCTTAAACCATAGTTTGTGTTAGAAGTTAATGATTCCTCTACCAAGTACCAACACAGTCTTGCTTAAGGAGAGAA
Translation Selection
324,741)
Dongxiang
TATCC
Translation Selection