NP (1565 bp)

Nature: cRNA

Source: DQ487330.1 Influenza A virus (A/Moscow/10/99(H3N2)) segment 5

AGCAAAAGCAGGGTTAATAATCACTCACTGAGTGACATCAAAATCATGGCGTCCCAAGGCACCAAACGGT
CTTATGAACAGATGGAAACTGATGGGGATCGCCAGAATGCAACTGAGATTAGGGCATCCGTCGGGAAGAT
GATTGATGGAATTGGGAGATTCTACATCCAAATGTGCACTGAACTTAAACTCAATGATTATGAAGGGCGG
TTGATCCAGAACAGCTTGACAATAGAGAAAATGGTGCTCTCTGCTTTTGATGAGAGAAGGAATAAATATC
TGGAAGAACACCCCAGCGCGGGGAAAGATCCTAAGAAAACTGGAGGGCCCATATACAGGAGAGTAGATGG
AAAATGGATGAGGGAACTCGTCCTTTATGACAAAGAAGAAATAAGGCGAATCTGGCGCCAAGCCAACAAT
GGTGAGGATGCGACAGCTGGTCTAACTCACATGATGATCTGGCATTCCAATTTGAATGATGCAACATACC
AGAGGACAAGAGCTCTTGTTCGAACCGGAATGGATCCCAGAATGTGCTCTCTGATGCAGGGCTCGACTCT
CCCTAGAAGGTCCGGAGCTGCAGGTGCTGCAGTCAAAGGAATCGGGACAATGGTGATGGAGCTGATCAGA
ATGGTCAAACGGGGGATCAACGATCGAAATTTCTGGAGAGGTGAGAATGGGCGGAAAACAAGAAGTGCTT
ATGAGAGAATGTGCAACATTCTTAAAGGAAAATTTCAAACAGCTGCACAAAGAGCAATGGTGGATCAAGT
GAGAGAAAGTCGGAACCCAGGAAATGCTGAGATCGAAGATCTCATATTTTTGGCAAGATCTGCATTGATA
TTGAGAGGGTCAGTTGCTCACAAATCTTGCCTACCTGCCTGTGTGTATGGACCTGCAGTATCCAGTGGGT
ACGACTTCGAAAAAGAGGGATATTCCTTGGTGGGAATAGACCCTTTCAAACTACTTCAAAATAGCCAAGT
ATACAGCCTAATCAGACCTAACGAGAATCCAGCACACAAGAGTCAGCTGGTGTGGATGGCATGCCATTCT
GCTGCATTTGAAGATTTAAGATTGTTAAGCTTCATCAGAGGGACCAAAGTATCTCCGCGGGGGAAACTTT
CAACTAGAGGAGTACAAATTGCTTCAAATGAGAACATGGATAATATGGGATCGAGTACTCTTGAACTGAG
AAGCGGGTACTGGGCCATAAGGACCAGGAGTGGAGGAAACACTAATCAACAGAGGGCCTCCGCAGGCCAA
ATCAGTGTGCAACCTACGTTTTCTGTACAAAGAAACCTCCCATTTGAAAAGTCAACCGTCATGGCAGCAT
TCACTGGAAATACGGAGGGAAGAACCTCAGACATGAGGGCAGAAATCATAAGAATGATGGAAGGTGCAAA
ACCAGAAGAAGTGTCGTTCCGGGGGAGGGGAGTTTTCGAGCTCTCAGACGAGAAGGCGACGAACCCGATC
GTGCCCTCTTTTGACATGAGTAATGAAGGATCTTATTTCTTCGGAGACAATGCAGAAGAGTACGACAATT
AAGGAAAAATACCCTTGTTTCTACT

NP protein

Source: ABE73100.1 (498 aa) polymerase PB2

Sequence: 1- 498

MASQGTKRSYEQMETDGDRQNATEIRASVGKMIDGIGRFYIQMCTELKLNDYEGRLIQNSLTIEKMVLSA
FDERRNKYLEEHPSAGKDPKKTGGPIYRRVDGKWMRELVLYDKEEIRRIWRQANNGEDATAGLTHMMIWH
SNLNDATYQRTRALVRTGMDPRMCSLMQGSTLPRRSGAAGAAVKGIGTMVMELIRMVKRGINDRNFWRGE
NGRKTRSAYERMCNILKGKFQTAAQRAMVDQVRESRNPGNAEIEDLIFLARSALILRGSVAHKSCLPACV
YGPAVSSGYDFEKEGYSLVGIDPFKLLQNSQVYSLIRPNENPAHKSQLVWMACHSAAFEDLRLLSFIRGT
KVSPRGKLSTRGVQIASNENMDNMGSSTLELRSGYWAIRTRSGGNTNQQRASAGQISVQPTFSVQRNLPF
EKSTVMAAFTGNTEGRTSDMRAEIIRMMEGAKPEEVSFRGRGVFELSDEKATNPIVPSFDMSNEGSYFFG
DNAEEYDN

NP (1566 bp)

Nature: vRNA

Source: Illumina sequences from virus stocks_RPS2022

NNNNNNAGCAGGGTTAATAATCACTCACTGAGTGACATCAAAATCATGGCGTCCCAAGGCAC
CAAACGGTCTTATGAACAGATGGAAACTGATGGGGATCGCCAGAATGCAACTGAGATTAGGG
CATCCGTCGGGAAGATGATTGATGGAATTGGGAGATTCTACATCCAAATGTGCACTGAACTT
AAACTCAGTGATTATGAAGGGCGGTTGATCCAGAACAGCTTGACAATAGAGAAAATGGTGCT
CTCTGCTTTTGATGAGAGAAGGAATAAATATCTGGAAGAACACCCCAGCGCGGGGAAAGATC
CTAAGAAAACTGGAGGGCCCATATACAGGAGAGTAGATGGAAAATGGATGAGGGAACTCGTC
CTTTATGACAAAGGAGAAATAAGGCGAATCTGGCGCCAAGCCAACAATGGTGAGGATGCGAC
AGCTGGTCTAACTCACATGATGATCTGGCATTCCAATTTGAATGATGCAACATACCAGAGGA
CAAGAGCTCTTGTTCGAACCGGAATGGATCCCAGAATGTGCTCTCTGATGCAGGGCTCGACT
CTCCCTAGAAGGTCCGGAGCTGCAGGTGCTGCAGTCAAAGGAATCGGGACAATGGTGATGGA
GCTGATCAGAATGGTCAAACGGGGGATCAACGATCGAAATTTCTGGAGAGGTGAGAATGGGC
GGAAAACAAGAAGTGCTTATGAGAGAATGTGCAACATTCTTAAAGGAAAATTTCAAACAGCT
GCACAAAGAGCAATGGTGGATCAAGTGAGAGAAAGTCGGAACCCAGGAAATGCTGAGATCGA
AGATCTCATATTTTTGGCAAGATCTGCATTGATATTGAGAGGGTCAGTTGCTCACAAATCTT
GCCTACCTGCCTGTGTGTATGGACCTGCAGTATCCAGTGGGTACGACTTCGAAAAAGAGGGA
TATTCCTTGGTGGGAATAGACCCTTTCAAACTACTTCAAAATAGCCAAGTATACAGCCTAAT
CAGACCTAACGAGAATCCAGCACACAAGAGTCAGCTGGTGTGGATGGCATGCCATTCTGCTG
CATTTGAAGATTTAAGATTGTTAAGCTTCATCAGAGGGACCAAAGTATCTCCGCGGGGGAAA
CTTTCAACTAGAGGAGTACAAATTGCTTCAAATGAGAACATGGATAATATGGGATCGAGTAC
TCTTGAACTGAGAAGCGGGTACTGGGCCATAAGGACCAGGAGTGGAGGAAACACTAATCAAC
AGAGGGCCTCCGCAGGCCAAATCAGTGTGCAACCTACGTTTTCTGTACAAAGAAACCTCCCA
TTTGAAAAGTCAACCGTCATGGCAGCATTCACTGGAAATACGGAGGGAAGAACCTCAGACAT
GAGGGCAGAAATCATAAGAATGATGGAAGGTGCAAAACCAGAAGAAGTGTCGTTCCGAGGGA
GGGGAGTTTTCGAGCTCTCAGACGAGAAGGCGACGAACCCGATCGTGCCCTCTTTTGACATG
AGTAATGAAGGATCTTATTTCTTCGGAGACAATGCAGAAGAGTACGACAATTAAGGAAAAAA
TACCCTTGNNNNNNNN

NP (1566 bp)

Nature: cDNA_pHW2000

Source: GATC sequences from Maxiprep_RPS_2023

AGCAAAAGCAGGGTTAATAATCACTCACTGAGTGACATCAAAATC**ATG**GCGTCCCAAGGCAC
CAAACGGTCTTATGAACAGATGGAAACTGATGGGGATCGCCAGAATGCAACTGAGATTAGGG
CATCCGTCGGGAAGATGATTGATGGAATTGGGAGATTCTACATCCAAATGTGCACTGAACTT
AAACTCAGTGATTATGAAGGGCGGTTGATCCAGAACAGCTTGACAATAGAGAAAATGGTGCT
CTCTGCTTTTGATGAGAGAAGGAATAAATATCTGGAAGAACACCCCAGCGCGGGGAAAGATC
CTAAGAAAACTGGAGGGCCCATATACAGGAGAGTAGATGGAAAATGGATGAGGGAACTCGTC
CTTTATGACAAAGGAGAAATAAGGCGAATCTGGCGCCAAGCCAACAATGGTGAGGATGCGAC
AGCTGGTCTAACTCACATGATGATCTGGCATTCCAATTTGAATGATACAACATACCAGAGGA
CAAGAGCTCTTGTTCGAACCGGAATGGATCCCAGAATGTGCTCTCTGATGCAGGGCTCGACT
CTCCCTAGAAGGTCCGGAGCTGCAGGTGCTGCAGTCAAAGGAATCGGGACAATGGTGATGGA
GCTGATCAGAATGGTCAAACGGGGGATCAACGATCGAAATTTCTGGAGAGGTGAGAATGGGC
GGAAAACAAGAAGTGCTTATGAGAGAATGTGCAACATTCTTAAAGGAAAATTTCAAACAGCT
GCACAAAGAGCAATGGTGGATCAAGTGAGAGAAAGTCGGAACCCAGGAAATGCTGAGATCGA
AGATCTCATATTTTTGGCAAGATCTGCATTGATATTGAGAGGGTCAGTTGCTCACAAATCTT
GCCTACCTGCCTGTGTGTATGGACCTGCAGTATCCAGTGGGTACGACTTCGAAAAAGAGGGA
TATTCCTTGGTGGGAATAGACCCTTTCAAACTACTTCAAAATAGCCAAGTATACAGCCTAAT
CAGACCTAACGAGAATCCAGCACACAAGAGTCAGCTGGTGTGGATGGCATGCCATTCTGCTG
CATTTGAAGATTTAAGATTGTTAAGCTTCATCAGAGGGACCAAAGTATCTCCGCGGGGGAAA
CTTTCAACTAGAGGAGTACAAATTGCTTCAAATGAGAACATGGATAATATGGGATCGAGTAC
TCTTGAACTGAGAAGCGGGTACTGGGCCATAAGGACCAGGAGTGGAGGAAACACTAATCAAC
AGAGGGCCTCCGCAGGCCAAATCAGTGTGCAACCTACGTTTTCTGTACAAAGAAACCTCCCA
TTTGAAAAGTCAACCGTCATGGCAGCATTCACTGGAAATACGGAGGGAAGAACCTCAGACAT
GAGGGCAGAAATCATAAGAATGATGGAAGGTGCAAAACCAGAAGAAGTGTCGTTCCGAGGGA
GGGGAGTTTTCGAGCTCTCAGACGAGAAGGCGACGAACCCGATCGTGCCCTCTTTTGACATG
AGTAATGAAGGATCTTATTTCTTCGGAGACAATGCAGAAGAGTACGACAAT**TAA**GGAAAAAA
TACCCTTGTTTCTACT

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CLUSTAL O(1.2.4) multiple sequence alignment


MO_NP_Virus         NNNNNNAGCAGGGTTAATAATCACTCACTGAGTGACATCAAAATCATGGCGTCCCAAGGC 60
MO_NP_NCBI          AGCAAAAGCAGGGTTAATAATCACTCACTGAGTGACATCAAAATCATGGCGTCCCAAGGC 60
MO_NP_pHW2000       AGCAAAAGCAGGGTTAATAATCACTCACTGAGTGACATCAAAATCATGGCGTCCCAAGGC 60
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MO_NP_Virus         ACCAAACGGTCTTATGAACAGATGGAAACTGATGGGGATCGCCAGAATGCAACTGAGATT 120
MO_NP_NCBI          ACCAAACGGTCTTATGAACAGATGGAAACTGATGGGGATCGCCAGAATGCAACTGAGATT 120
MO_NP_pHW2000       ACCAAACGGTCTTATGAACAGATGGAAACTGATGGGGATCGCCAGAATGCAACTGAGATT 120
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MO_NP_Virus         AGGGCATCCGTCGGGAAGATGATTGATGGAATTGGGAGATTCTACATCCAAATGTGCACT 180
MO_NP_NCBI          AGGGCATCCGTCGGGAAGATGATTGATGGAATTGGGAGATTCTACATCCAAATGTGCACT 180
MO_NP_pHW2000       AGGGCATCCGTCGGGAAGATGATTGATGGAATTGGGAGATTCTACATCCAAATGTGCACT 180
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MO_NP_Virus         GAACTTAAACTCAGGTGATTATGAAGGGCGGTTGATCCAGAACAGCTTGACAATAGAGAAA 240
MO_NP_NCBI          GAACTTAAACTCAATGATTATGAAGGGCGGTTGATCCAGAACAGCTTGACAATAGAGAAA 240
MO_NP_pHW2000       GAACTTAAACTCAGGTGATTATGAAGGGCGGTTGATCCAGAACAGCTTGACAATAGAGAAA 240
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MO_NP_Virus         ATGGTGCTCTCTGCTTTTGATGAGAGAAGGAATAAATATCTGGAAGAACACCCCAGCGCG 300
MO_NP_NCBI          ATGGTGCTCTCTGCTTTTGATGAGAGAAGGAATAAATATCTGGAAGAACACCCCAGCGCG 300
MO_NP_pHW2000       ATGGTGCTCTCTGCTTTTGATGAGAGAAGGAATAAATATCTGGAAGAACACCCCAGCGCG 300
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MO_NP_Virus         GGGAAAGATCCTAAGAAAACTGGAGGGCCCATATACAGGAGAGTAGATGGAAAATGGATG 360
MO_NP_NCBI          GGGAAAGATCCTAAGAAAACTGGAGGGCCCATATACAGGAGAGTAGATGGAAAATGGATG 360
MO_NP_pHW2000       GGGAAAGATCCTAAGAAAACTGGAGGGCCCATATACAGGAGAGTAGATGGAAAATGGATG 360
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MO_NP_Virus         AGGGAACTCGTCCTTTATGACAAAGGAGAAATAAGGCGAATCTGGCGCCAAGCCAACAAT 420
MO_NP_NCBI          AGGGAACTCGTCCTTTATGACAAAGAAGAAATAAGGCGAATCTGGCGCCAAGCCAACAAT 420
MO_NP_pHW2000       AGGGAACTCGTCCTTTATGACAAAGGAGAAATAAGGCGAATCTGGCGCCAAGCCAACAAT 420
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MO_NP_Virus         GGTGAGGATGCGACAGCTGGTCTAACTCACATGATGATCTGGCATTCCAATTTGAATGAT 480
MO_NP_NCBI          GGTGAGGATGCGACAGCTGGTCTAACTCACATGATGATCTGGCATTCCAATTTGAATGAT 480
MO_NP_pHW2000       GGTGAGGATGCGACAGCTGGTCTAACTCACATGATGATCTGGCATTCCAATTTGAATGAT 480
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MO_NP_Virus         GCAACATACCAGAGGACAAGAGCTCTTGTTCGAACCGGAATGGATCCCAGAATGTGCTCT 540
MO_NP_NCBI          GCAACATACCAGAGGACAAGAGCTCTTGTTCGAACCGGAATGGATCCCAGAATGTGCTCT 540
MO_NP_pHW2000       ACAACATACCAGAGGACAAGAGCTCTTGTTCGAACCGGAATGGATCCCAGAATGTGCTCT 540
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MO_NP_Virus         CTGATGCAGGGCTCGACTCTCCCTAGAAGGTCCGGAGCTGCAGGTGCTGCAGTCAAAGGA 600
MO_NP_NCBI          CTGATGCAGGGCTCGACTCTCCCTAGAAGGTCCGGAGCTGCAGGTGCTGCAGTCAAAGGA 600
MO_NP_pHW2000       CTGATGCAGGGCTCGACTCTCCCTAGAAGGTCCGGAGCTGCAGGTGCTGCAGTCAAAGGA 600
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MO_NP_Virus         ATCGGGACAATGGTGATGGAGCTGATCAGAATGGTCAAACGGGGGATCAACGATCGAAAT 660
MO_NP_NCBI          ATCGGGACAATGGTGATGGAGCTGATCAGAATGGTCAAACGGGGGATCAACGATCGAAAT 660
MO_NP_pHW2000       ATCGGGACAATGGTGATGGAGCTGATCAGAATGGTCAAACGGGGGATCAACGATCGAAAT 660
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MO_NP_Virus         TTCTGGAGAGGTGAGAATGGGCGGAAAACAAGAAGTGCTTATGAGAGAATGTGCAACATT 720
MO_NP_NCBI          TTCTGGAGAGGTGAGAATGGGCGGAAAACAAGAAGTGCTTATGAGAGAATGTGCAACATT 720
MO_NP_pHW2000       TTCTGGAGAGGTGAGAATGGGCGGAAAACAAGAAGTGCTTATGAGAGAATGTGCAACATT 720
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MO_NP_Virus         CTTAAAGGAAAATTTCAAACAGCTGCACAAAGAGCAATGGTGGATCAAGTGAGAGAAAGT 780
MO_NP_NCBI          CTTAAAGGAAAATTTCAAACAGCTGCACAAAGAGCAATGGTGGATCAAGTGAGAGAAAGT 780
MO_NP_pHW2000       CTTAAAGGAAAATTTCAAACAGCTGCACAAAGAGCAATGGTGGATCAAGTGAGAGAAAGT 780
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MO_NP_Virus         CGGAACCCAGGAAATGCTGAGATCGAAGATCTCATATTTTTGGCAAGATCTGCATTGATA 840
MO_NP_NCBI          CGGAACCCAGGAAATGCTGAGATCGAAGATCTCATATTTTTGGCAAGATCTGCATTGATA 840
MO_NP_pHW2000       CGGAACCCAGGAAATGCTGAGATCGAAGATCTCATATTTTTGGCAAGATCTGCATTGATA 840
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MO_NP_Virus         TTGAGAGGGTCAGTTGCTCACAAATCTTGCCTACCTGCCTGTGTGTATGGACCTGCAGTA 900
MO_NP_NCBI          TTGAGAGGGTCAGTTGCTCACAAATCTTGCCTACCTGCCTGTGTGTATGGACCTGCAGTA 900
MO_NP_pHW2000       TTGAGAGGGTCAGTTGCTCACAAATCTTGCCTACCTGCCTGTGTGTATGGACCTGCAGTA 900
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MO_NP_Virus         TCCAGTGGGTACGACTTCGAAAAAGAGGGATATTCCTTGGTGGGAATAGACCCTTTCAAA 960
MO_NP_NCBI          TCCAGTGGGTACGACTTCGAAAAAGAGGGATATTCCTTGGTGGGAATAGACCCTTTCAAA 960
MO_NP_pHW2000       TCCAGTGGGTACGACTTCGAAAAAGAGGGATATTCCTTGGTGGGAATAGACCCTTTCAAA 960
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MO_NP_Virus         CTACTTCAAAATAGCCAAGTATACAGCCTAATCAGACCTAACGAGAATCCAGCACACAAG 1020
MO_NP_NCBI          CTACTTCAAAATAGCCAAGTATACAGCCTAATCAGACCTAACGAGAATCCAGCACACAAG 1020
MO_NP_pHW2000       CTACTTCAAAATAGCCAAGTATACAGCCTAATCAGACCTAACGAGAATCCAGCACACAAG 1020
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MO_NP_Virus         AGTCAGCTGGTGTGGATGGCATGCCATTCTGCTGCATTTGAAGATTTAAGATTGTTAAGC 1080
MO_NP_NCBI          AGTCAGCTGGTGTGGATGGCATGCCATTCTGCTGCATTTGAAGATTTAAGATTGTTAAGC 1080
MO_NP_pHW2000       AGTCAGCTGGTGTGGATGGCATGCCATTCTGCTGCATTTGAAGATTTAAGATTGTTAAGC 1080
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MO_NP_Virus         TTCATCAGAGGGACCAAAGTATCTCCGCGGGGGAAACTTTCAACTAGAGGAGTACAAATT 1140
MO_NP_NCBI          TTCATCAGAGGGACCAAAGTATCTCCGCGGGGGAAACTTTCAACTAGAGGAGTACAAATT 1140
MO_NP_pHW2000       TTCATCAGAGGGACCAAAGTATCTCCGCGGGGGAAACTTTCAACTAGAGGAGTACAAATT 1140
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MO_NP_Virus         GCTTCAAATGAGAACATGGATAATATGGGATCGAGTACTCTTGAACTGAGAAGCGGGTAC 1200
MO_NP_NCBI          GCTTCAAATGAGAACATGGATAATATGGGATCGAGTACTCTTGAACTGAGAAGCGGGTAC 1200
MO_NP_pHW2000       GCTTCAAATGAGAACATGGATAATATGGGATCGAGTACTCTTGAACTGAGAAGCGGGTAC 1200
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MO_NP_Virus         TGGGCCATAAGGACCAGGAGTGGAGGAAACACTAATCAACAGAGGGCCTCCGCAGGCCAA 1260
MO_NP_NCBI          TGGGCCATAAGGACCAGGAGTGGAGGAAACACTAATCAACAGAGGGCCTCCGCAGGCCAA 1260
MO_NP_pHW2000       TGGGCCATAAGGACCAGGAGTGGAGGAAACACTAATCAACAGAGGGCCTCCGCAGGCCAA 1260
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MO_NP_Virus         ATCAGTGTGCAACCTACGTTTTCTGTACAAAGAAACCTCCCATTTGAAAAGTCAACCGTC 1320
MO_NP_NCBI          ATCAGTGTGCAACCTACGTTTTCTGTACAAAGAAACCTCCCATTTGAAAAGTCAACCGTC 1320
MO_NP_pHW2000       ATCAGTGTGCAACCTACGTTTTCTGTACAAAGAAACCTCCCATTTGAAAAGTCAACCGTC 1320
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MO_NP_Virus         ATGGCAGCATTCACTGGAAATACGGAGGGAAGAACCTCAGACATGAGGGCAGAAATCATA 1380
MO_NP_NCBI          ATGGCAGCATTCACTGGAAATACGGAGGGAAGAACCTCAGACATGAGGGCAGAAATCATA 1380
MO_NP_pHW2000       ATGGCAGCATTCACTGGAAATACGGAGGGAAGAACCTCAGACATGAGGGCAGAAATCATA 1380
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MO_NP_Virus         AGAATGATGGAAGGTGCAAAACCAGAAGAAGTGTCGTTCCGAGGGAGGGGAGTTTTCGAG 1440
MO_NP_NCBI          AGAATGATGGAAGGTGCAAAACCAGAAGAAGTGTCGTTCCGGGGGAGGGGAGTTTTCGAG 1440
MO_NP_pHW2000       AGAATGATGGAAGGTGCAAAACCAGAAGAAGTGTCGTTCCGAGGGAGGGGAGTTTTCGAG 1440
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MO_NP_Virus         CTCTCAGACGAGAAGGCGACGAACCCGATCGTGCCCTCTTTTGACATGAGTAATGAAGGA 1500
MO_NP_NCBI          CTCTCAGACGAGAAGGCGACGAACCCGATCGTGCCCTCTTTTGACATGAGTAATGAAGGA 1500
MO_NP_pHW2000       CTCTCAGACGAGAAGGCGACGAACCCGATCGTGCCCTCTTTTGACATGAGTAATGAAGGA 1500
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MO_NP_Virus         TCTTATTTCTTCGGAGACAATGCAGAAGAGTACGACAATTAAGGAAAAAATACCCTTGNN 1560
MO_NP_NCBI          TCTTATTTCTTCGGAGACAATGCAGAAGAGTACGACAATTAAGGAAAAATACCCTTG-TT 1559
MO_NP_pHW2000       TCTTATTTCTTCGGAGACAATGCAGAAGAGTACGACAATTAAGGAAAAAATACCCTTGTT 1560
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MO_NP_Virus         NNNNNN       1566
MO_NP_NCBI          TCTACT       1565
MO_NP_pHW2000       TCTACT       1566
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CLUSTAL O(1.2.4) multiple sequence alignment


NP_NCBI         ---------------MASQGTKRSYEQMETDGDRQNATEIRASVGKMIDGIGRFYIQMCT    45
NP_pHW2000      SKSRVNNHSLSDIKIMASQGTKRSYEQMETDGDRQNATEIRASVGKMIDGIGRFYIQMCT    60
                              **********************************************

NP_NCBI         ELKLNDYEGRLIQNSLTIEKMVLSAFDERRNKYLEEHPSAGKDPKKTGGPIYRRVDGKWM    105
NP_pHW2000      ELKLSDYEGRLIQNSLTIEKMVLSAFDERRNKYLEEHPSAGKDPKKTGGPIYRRVDGKWM    120
                ****.**********************************************************

NP_NCBI         RELVLYDKEEIRRIWRQANNGEDATAGLTHMMIWHSNLNDATYQRTRALVRTGMDPRMCS    165
NP_pHW2000      RELVLYDKGEIRRIWRQANNGEDATAGLTHMMIWHSNLNDTTYQRTRALVRTGMDPRMCS    180
                ******** ******************************:*******************

NP_NCBI         LMQGSTLPRRSGAAGAAVKGIGTMVMELIRMVKRGINDRNFWRGENGRKTRSAYERMCNI    225
NP_pHW2000      LMQGSTLPRRSGAAGAAVKGIGTMVMELIRMVKRGINDRNFWRGENGRKTRSAYERMCNI    240
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NP_NCBI         LKGKFQTAAQRAMVDQVRESRNPGNAEIEDLIFLARSALILRGSVAHKSCLPACVYGPAV    285
NP_pHW2000      LKGKFQTAAQRAMVDQVRESRNPGNAEIEDLIFLARSALILRGSVAHKSCLPACVYGPAV    300
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NP_NCBI         SSGYDFEKEGYSLVGIDPFKLLQNSQVYSLIRPNENPAHKSQLVWMACHSAAFEDLRLLS    345
NP_pHW2000      SSGYDFEKEGYSLVGIDPFKLLQNSQVYSLIRPNENPAHKSQLVWMACHSAAFEDLRLLS    360
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NP_NCBI         FIRGTKVSPRGKLSTRGVQIASNENMDNMGSSTLELRSGYWAIRTRSGGNTNQQRASAGQ    405
NP_pHW2000      FIRGTKVSPRGKLSTRGVQIASNENMDNMGSSTLELRSGYWAIRTRSGGNTNQQRASAGQ    420
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NP_NCBI         ISVQPTFSVQRNLPFEKSTVMAAFTGNTEGRTSDMRAEIIRMMEGAKPEEVSFRGRGVFE    465
NP_pHW2000      ISVQPTFSVQRNLPFEKSTVMAAFTGNTEGRTSDMRAEIIRMMEGAKPEEVSFRGRGVFE    480
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NP_NCBI         LSDEKATNPIVPSFDMSNEGSYFFGDNAEEYDN---------      498
NP_pHW2000      LSDEKATNPIVPSFDMSNEGSYFFGDNAEEYDN*GKNTLVST      521
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