

NA (1466 bp)

Nature: cRNA

Source: DQ487331.1 Influenza A virus (A/Moscow/10/99(H3N2)) segment 6

AGCAAAAGCAGGAGTAAAGATGAATCCAAATCAAAAAGATAATAACGATTGGCTCTGTTTCTCTCACCATT
GCCACAATATGCTTCCTTATGCAAATTGCCATCCTGGTAACACTACTGTAACATTGCATTTCAAGCAATATG
AATGCAACTCCCCCCCCAAACAACCAAGTGATGCTGTGTGAACCAACAATAATAGAAAAGAAACATAACAGA
GATAGTGTATCTGACCAACACCACCATAGAGAAGGAAATATGCCCCAACTAGCAAAAATACAGAAATTGG
TCAAAGCCGCAATGTAACATTACAGGATTTGCACCTTTTTCTAAGGACAATTCGATTCCGGCTTTCCGCTR
GTGGGGACATCTGGGTGACAAGAGAACCTTATGTGTCATGCGATCCTGACAAGTGTTATCAATTTGCCCT
TGGACAGGGAACAACACTAAACAACGGGCATTCAAATGACACAGTACATGATAGGACCCCTTATCGGACC
CTATTGATGAATGAGTTGGGTGTTCCATTTTCAATTTGGGAACCAACAAGTGTGCATAGCATGGTCCAGCT
CAAGTTGTCACGATGGAAAAGCATGGCTGCATGTTTGTGTAACGGGGGATGATGAAAATGCAACTGCTAG
CTTCATTTACAATGGGAGGCTTGTAGATAGTATTGGTTCATGGTCCAAAAAAATCCTCAGGACCCAGGAG
TCGGAATGCGTTTGTATCAATGGAACCTGTACAGTAGTAATGACTGATGGGAGTGCTTCAGGAAAAGCTG
ATACTAAAATACTATTCAATTGAGGAGGGGAAAAATCGTTCATACTAGCCCATTTGTCAGGAAGTGCTCAGCA
TGTCGAGGARTGCTCCTGTTATCCTCGATATCCTGGTGTGATGTGTCTGCAGAGACAACTGGAAAGGC
TCCAATAGGCCCATCGTAGATATAAATGTAAAGGATTATAGCATTGTTTCCAGTTATGTGTGCTCAGGAC
TTGTTGGAGACACACCCAGAAAAAACGACAGCTCCAGCAGTAGCCATTGCTTGGATCCTAACAATGAGGA
AGGTGGTCATGGAGTGAAAGGCTGGGCCTTTGATGATGGAATGACGTGTGGATGGGAAGAACGATCAGC
GAGAAGTTACGCTCAGGATATGAAACCTTCAAAGTCATTGAAGGCTGGTCCAAACCYAACTCCAAATTGC
AGATAAATAGGCAAGTCATAGTTGACAGAGGTAATAGGTCCGGTTATTCTGGTATTTTCTCTGTTGAAGG
CAAAAGCTGCATCAATCGGTGCTTTTATGTGGAGTTGATAAGGGGAAGGAAACAGGAAACTGAAGTCTTG
TGGACCTCAAACAGTATTGTTGTGTTTTGTGGCACCTCAGGTACATATGGAACAGGCTCATGGCCTGATG
GGGCGGACATCAATCTCATGCCTATATAAGCTTTCGCAATTTTAGAAAAAAAMTCCTTGTTTCTACT

NA protein

Source: ABE73101.1 (469 aa) polymerase PB2

Sequence: 84- 466

MNPNQKIITIGSVSLTIATICFLMQIAILVTTVTLHFKQYECNSPPNNQVMLCEPTIIERNITEIVYLTN
TTIEKEICPKLAKYRNWSKPQCNITGFAPFSKDNSIRLSAXGDIWVTREPYVSCDPDKCYQFALGQGTTL
NNGHSNDTVHVRTPYRTLLMNELGVFPFHLGTKQVCIWSSSSSCHDGKAWLHVCVTGDDENATASFIYNGR
LVDSIGSWSKKILRTQESECVCINGTCTVVMTDGSASGKADTKILFIEEGKIVHTSPLSGSAQHVEECSC
YPRYPGVRCVCRDNWKGSNRPIVDINVKDYSIVSSYVCSGLVGDTPRKNDSSSSSHCLDPNNEEGGHGVK
GWAFFDDGNDVWVGRTISEKLRSGYETFKVIEGWSKPNSKLQINRQVIVDRGNRSGYSGIFSVEGKSCINR
CFYVELIRGRKQETEVLTWTSNSIVVFCGTSGTYGTGSWPDGADINLMPI

NA (1466 bp)

Nature: vRNA

Source: Illumina sequences from virus stocks_RPS2022

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TATGCCCCAAACTAGCAGAATACAGAAATTGGTCAAAGCCGCAATGTAACATTACAGGATTT
GCACCTTTTTTCTAAGGACAATTTCGATTCGGCTTTCCGCTGGTGGGGACATCTGGGTGACAAG
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CACTAAACAACGGGCATTCAAATGACACAGTACATGATAGGACCCCTTATCGGACCCTATTG
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CTCAAGTTGTCACGATGGAAAAGCATGGCTGCATGTTTGTGTAACGGGGGATGATGAAAATG
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TATCCTGGTGTGATGTGTCTGCAGAGACAACCTGGAAAGGCTCCAATAGGCCCATCGTAGA
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CACCCAGAAAAAACGACAGCTCCAGCAGTAGCCATTGCTTGGATCCTAACAATGAGGAAGGT
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CAGCGAGAAGTTACGCTCAGGATATGAAACCTTCAAAGTCATTGAAGGCTGGTCCAAACCCA
ACTCCAAATTGCAGATAAATAGGCAAGTCATAGTTGACAGAGGTAATAGGTCCGGTTATTCT
GGTATTTTCTCTGTTGAAGGCAAAAGCTGCATCAATCGGTGCTTTTATGTGGAGTTGATAAG
GGGAAGGAAACAGGAACTGAAGTCTTGTGGACCTCAAACAGTATTGTTGTGTTTTGTGGCA
CCTCAGGTACATATGGAACAGGCTCATGGCCTGATGGGGCGGACATCAATCTCATGCCTATA
TAAGCTTTCGCAATTTTAGAAAAAACTNNNNNNNNNNNNNN
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NA (1466 bp)

Nature: cDNA_pHW2000

Source: GATC sequences from Maxiprep_RPS_2023

AGCAAAAGCAGGAGTAAAG**ATGA**ATCCAAATCAAAAGATAATAACGATTGGCTCTGTTTCTC
TCACCATTGCCACAATATGCTTCCTTATGCAAATTGCCATCCTGGTAACTACTGTAACATTG
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AATAATAGAAAGAAACATAACAGAGATAGTGTATCTGACCAACACCACCATAGAGAAGGAAA
TATGCCCCAACTAGCAGAATACAGAAATTGGTCAAAGCCGCAATGTAACATTACAGGATTT
GCACCTTTTTTCTAAGGACAATTCGATTCGGCTTTCCGCTGGTGGGGACATCTGGGTGACAAG
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CACTAAACAACGGGCATTCAAATGACACAGTACATGATAGGACCCCTTATCGGACCCTATTG
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CTCAAGTTGTCACGATGGAAAAGCATGGCTGCATGTTTGTGTAACGGGGGATGATGAAAATG
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TATCCTGGTGTGATGTGTCTGCAGAGACAACCTGGAAAGGCTCCAATAGGCCCATCGTAGA
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CACCCAGAAAAAACGACAGCTCCAGCAGTAGCCATTGCTTGGATCCTAACAATGAGGAAGGT
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GGGAAGGAAACAGGAACTGAAGTCTTGTGGACCTCAAACAGTATTGTTGTGTTTTGTGGCA
CCTCAGGTACATATGGAACAGGCTCATGGCCTGATGGGGCGGACATCAATCTCATGCCTATA
TAAGCTTTCGCAATTTTAGAAAAAACTCCTTGTCTTCTACT

CLUSTAL O(1.2.4) multiple sequence alignment

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MO_NA_NCBI AGCAAAAGCAGGAGTAAAGATGAATCCAAATCAAAGATAATAACGATTGGCTCTGTTTC 60
MO_NA_pHW2000 AGCAAAAGCAGGAGTAAAGATGAATCCAAATCAAAGATAATAACGATTGGCTCTGTTTC 60

MO_NA_Virus TCTCACCATTTGCCACAATATGCTTCCTTATGCAAATTGCCATCCTGGTAACACTACTGTAAC 120
MO_NA_NCBI TCTCACCATTTGCCACAATATGCTTCCTTATGCAAATTGCCATCCTGGTAACACTACTGTAAC 120
MO_NA_pHW2000 TCTCACCATTTGCCACAATATGCTTCCTTATGCAAATTGCCATCCTGGTAACACTACTGTAAC 120

MO_NA_Virus ATTGCAATTTCAAGCAATATGAATGCAACTCCCCCCAAACAACCAAGTGATGCTGTGTGA 180
MO_NA_NCBI ATTGCAATTTCAAGCAATATGAATGCAACTCCCCCCAAACAACCAAGTGATGCTGTGTGA 180
MO_NA_pHW2000 ATTGCAATTTCAAGCAATATGAATGCAACTCCCCCCAAACAACCAAGTGATGCTGTGTGA 180

MO_NA_Virus ACCAACATAATAGAAAGAAACATAACAGAGATAGTGTATCTGACCAACACCACCATAGA 240
MO_NA_NCBI ACCAACATAATAGAAAGAAACATAACAGAGATAGTGTATCTGACCAACACCACCATAGA 240
MO_NA_pHW2000 ACCAACATAATAGAAAGAAACATAACAGAGATAGTGTATCTGACCAACACCACCATAGA 240

MO_NA_Virus GAAGGAAATATGCCCCAAACTAGCA^GAATACAGAAATTGGTCAAAGCCGCAATGTAACAT 300
MO_NA_NCBI GAAGGAAATATGCCCCAAACTAGCA^AAATACAGAAATTGGTCAAAGCCGCAATGTAACAT 300
MO_NA_pHW2000 GAAGGAAATATGCCCCAAACTAGCA^GAATACAGAAATTGGTCAAAGCCGCAATGTAACAT 300

MO_NA_Virus TACAGGATTTGCACCTTTTCTAAGGACAATTCGATTTCGGCTTTCCGCT^GTGGGGACAT 360
MO_NA_NCBI TACAGGATTTGCACCTTTTCTAAGGACAATTCGATTTCGGCTTTCCGCT^RTGGGGACAT 360
MO_NA_pHW2000 TACAGGATTTGCACCTTTTCTAAGGACAATTCGATTTCGGCTTTCCGCT^GTGGGGACAT 360

MO_NA_Virus CTGGGTGACAAGAGAACCTTATGTGTCATGCGATCCTGACAAGTGTTATCAATTTGCCCT 420
MO_NA_NCBI CTGGGTGACAAGAGAACCTTATGTGTCATGCGATCCTGACAAGTGTTATCAATTTGCCCT 420
MO_NA_pHW2000 CTGGGTGACAAGAGAACCTTATGTGTCATGCGATCCTGACAAGTGTTATCAATTTGCCCT 420

MO_NA_Virus TGGACAGGGAACAACACTAAACAACGGGCATTCAAATGACACAGTACATGATAGGACCCC 480
MO_NA_NCBI TGGACAGGGAACAACACTAAACAACGGGCATTCAAATGACACAGTACATGATAGGACCCC 480
MO_NA_pHW2000 TGGACAGGGAACAACACTAAACAACGGGCATTCAAATGACACAGTACATGATAGGACCCC 480

MO_NA_Virus TTATCGGACCCATTGATGAATGAGTTGGGTGTTCCATTTTCATTTGGGAACCA^GCAAGT 540
MO_NA_NCBI TTATCGGACCCATTGATGAATGAGTTGGGTGTTCCATTTTCATTTGGGAACCA^ACAAGT 540
MO_NA_pHW2000 TTATCGGACCCATTGATGAATGAGTTGGGTGTTCCATTTTCATTTGGGAACCA^GCAAGT 540

MO_NA_Virus GTGCATAGCATGGTCCAGCTCAAGTTGTACGATGGAAAAGCATGGCTGCATGTTTGTGT 600
MO_NA_NCBI GTGCATAGCATGGTCCAGCTCAAGTTGTACGATGGAAAAGCATGGCTGCATGTTTGTGT 600
MO_NA_pHW2000 GTGCATAGCATGGTCCAGCTCAAGTTGTACGATGGAAAAGCATGGCTGCATGTTTGTGT 600

MO_NA_Virus AACGGGGGATGATGAAAATGCAACTGCTAGCTTCATTTACAATGGGAGGCTTGATAGATAG 660
MO_NA_NCBI AACGGGGGATGATGAAAATGCAACTGCTAGCTTCATTTACAATGGGAGGCTTGATAGATAG 660
MO_NA_pHW2000 AACGGGGGATGATGAAAATGCAACTGCTAGCTTCATTTACAATGGGAGGCTTGATAGATAG 660

MO_NA_Virus TATTGGTTTCATGGTCCAAAAAATCCTCAGGACCCAGGAGTCGGAATGCGTTTGTATCAA 720
MO_NA_NCBI TATTGGTTTCATGGTCCAAAAAATCCTCAGGACCCAGGAGTCGGAATGCGTTTGTATCAA 720
MO_NA_pHW2000 TATTGGTTTCATGGTCCAAAAAATCCTCAGGACCCAGGAGTCGGAATGCGTTTGTATCAA 720

MO_NA_Virus TGGAACCTTGTCAGTAGTAATGACTGATGGGAGTGCTTCAGGAAAAGCTGATACTAAAAAT 780
MO_NA_NCBI TGGAACCTTGTCAGTAGTAATGACTGATGGGAGTGCTTCAGGAAAAGCTGATACTAAAAAT 780
MO_NA_pHW2000 TGGAACCTTGTCAGTAGTAATGACTGATGGGAGTGCTTCAGGAAAAGCTGATACTAAAAAT 780

MO_NA_Virus ACTATTTCATTGAGGAGGGGAAAAATCGTTTCATACTAGCCCATTGTGTCAGGAAGTGCTCAGCA 840
MO_NA_NCBI ACTATTTCATTGAGGAGGGGAAAAATCGTTTCATACTAGCCCATTGTGTCAGGAAGTGCTCAGCA 840
MO_NA_pHW2000 ACTATTTCATTGAGGAGGGGAAAAATCGTTTCATACTAGCCCATTGTGTCAGGAAGTGCTCAGCA 840

MO_NA_Virus TGTTCGAGGA^ATGCTCCTGTTATCCTCGATATCCTGGTGTGAGATGTGCTGCAGAGACAA 900
MO_NA_NCBI TGTTCGAGGA^RTGCTCCTGTTATCCTCGATATCCTGGTGTGAGATGTGCTGCAGAGACAA 900
MO_NA_pHW2000 TGTTCGAGGA^ATGCTCCTGTTATCCTCGATATCCTGGTGTGAGATGTGCTGCAGAGACAA 900

MO_NA_Virus CTGGAAAGGCTCCAATAGGCCCATCGTAGATATAAATGTAAGGATTATAGCATTTGTTTC 960
MO_NA_NCBI CTGGAAAGGCTCCAATAGGCCCATCGTAGATATAAATGTAAGGATTATAGCATTTGTTTC 960
MO_NA_pHW2000 CTGGAAAGGCTCCAATAGGCCCATCGTAGATATAAATGTAAGGATTATAGCATTTGTTTC 960

MO_NA_Virus CAGTTATGTGTGCTCAGGACTTGTTGGAGACACACCCAGAAAAACGACAGCTCCAGCAG 1020
MO_NA_NCBI CAGTTATGTGTGCTCAGGACTTGTTGGAGACACACCCAGAAAAACGACAGCTCCAGCAG 1020
MO_NA_pHW2000 CAGTTATGTGTGCTCAGGACTTGTTGGAGACACACCCAGAAAAACGACAGCTCCAGCAG 1020

MO_NA_Virus TAGCCATTGCTTGGATCCTAACAAATGAGGAAGGTGGTCATGGAGTGAAAGGCTGGGCCTT 1080
MO_NA_NCBI TAGCCATTGCTTGGATCCTAACAAATGAGGAAGGTGGTCATGGAGTGAAAGGCTGGGCCTT 1080
MO_NA_pHW2000 TAGCCATTGCTTGGATCCTAACAAATGAGGAAGGTGGTCATGGAGTGAAAGGCTGGGCCTT 1080

MO_NA_Virus TGATGATGGAAATGACGTGTGGATGGGAAGAACGATCAGCGAGAAGTTACGCTCAGGATA 1140
MO_NA_NCBI TGATGATGGAAATGACGTGTGGATGGGAAGAACGATCAGCGAGAAGTTACGCTCAGGATA 1140
MO_NA_pHW2000 TGATGATGGAAATGACGTGTGGATGGGAAGAACGATCAGCGAGAAGTTACGCTCAGGATA 1140

MO_NA_Virus TGAAACCTTCAAAGTCATTGAAGGCTGGTCCAAACC^GAACTCCAAATTGCAGATAAATAG 1200
MO_NA_NCBI TGAAACCTTCAAAGTCATTGAAGGCTGGTCCAAACC^YAACTCCAAATTGCAGATAAATAG 1200
MO_NA_pHW2000 TGAAACCTTCAAAGTCATTGAAGGCTGGTCCAAACC^GAACTCCAAATTGCAGATAAATAG 1200

MO_NA_Virus GCAAGTCATAGTTGACAGAGGTAATAGGTCCGGTTATTCTGGTATTTTCTCTGTTGAAGG 1260
MO_NA_NCBI GCAAGTCATAGTTGACAGAGGTAATAGGTCCGGTTATTCTGGTATTTTCTCTGTTGAAGG 1260
MO_NA_pHW2000 GCAAGTCATAGTTGACAGAGGTAATAGGTCCGGTTATTCTGGTATTTTCTCTGTTGAAGG 1260

MO_NA_Virus CAAAAGCTGCATCAATCGGTGCTTTTATGTGGAGTTGATAAGGGGAAGGAAACAGGAAAC 1320
MO_NA_NCBI CAAAAGCTGCATCAATCGGTGCTTTTATGTGGAGTTGATAAGGGGAAGGAAACAGGAAAC 1320
MO_NA_pHW2000 CAAAAGCTGCATCAATCGGTGCTTTTATGTGGAGTTGATAAGGGGAAGGAAACAGGAAAC 1320

MO_NA_Virus TGAAGTCTTGTGGACCTCAAACAGTATTGTTGTGTTTGTGGCACCTCAGGTACATATGG 1380
MO_NA_NCBI TGAAGTCTTGTGGACCTCAAACAGTATTGTTGTGTTTGTGGCACCTCAGGTACATATGG 1380
MO_NA_pHW2000 TGAAGTCTTGTGGACCTCAAACAGTATTGTTGTGTTTGTGGCACCTCAGGTACATATGG 1380

MO_NA_Virus AACAGGCTCATGGCCTGATGGGCGGACATCAATCTCATGCCATATATAAGCTTTCGCAAT 1440
MO_NA_NCBI AACAGGCTCATGGCCTGATGGGCGGACATCAATCTCATGCCATATATAAGCTTTCGCAAT 1440
MO_NA_pHW2000 AACAGGCTCATGGCCTGATGGGCGGACATCAATCTCATGCCATATATAAGCTTTCGCAAT 1440

MO_NA_Virus TTTAGAAAAACTNNNNNNNNNNNNNN 1466
MO_NA_NCBI TTTAGAAAAAMTCCTTGTTCTACT 1466
MO_NA_pHW2000 TTTAGAAAAA^CTCCTTGTTCTACT 1466
***** *

NA_NCB1	MNPNQKIITIGSVSLTIATICFLMQIAILVTTVTLHFKQYECNSPPNNQVMLCEPTIER	60
NA_pHW2000	-----	0
NA_NCB1	NITEIVYLTNTTIEKEICPKLAKYRNWSKPCQCNITGFAPFSKDNSIRLSAXGDIW-----	115
NA_pHW2000	-----SK-----SRSKD--ESKSKDNNDWLCFSH ** *** * .: *	22
NA_NCB1	--VTREPYVSCDPDKCYQFALGQGT-TL-----NNGHSNDTVHDRTPYRTL	158
NA_pHW2000	HCHNMLPYANCHPGNYCNIAFQAI*MQLPKQPSDAV*TNNNRKKHNRDSVSDQHHHREG . **..*.*.: ::*: * .: *..*:* *: :*	80
NA_NCB1	LMNELG-----VPFHLGTKQVCIAWSSSSCHDGKAWLHVCVTGDDENATASFIYNGRLVD	213
NA_pHW2000	NMPQTSRIQKLVKAAM*HYRICTFF*QQFDSAFRWWGHL---GDKR---TLCVMRS*QVL * : . * : ::* : .. : * *: **.. : : .. *	131
NA_NCB1	SIGSWSKILRTQESECVCINGTCTVVMTDGSASGKADTKILFIEEGKIVHTSPL-SGSA	272
NA_pHW2000	SICPWTGNNTKQRAFK*--HST**DPLSDP-IDE*VGCSISFGNQASVHSMVQLKLSRW ** *: : : : : : :.* ::** * :::.. * .	183
NA_NCB1	QHVEECSCYPRYPGVRCVCRDNWKGSNRPIVIDINVKDYSIVSSYVCSGLVGDTPRKNDSS	332
NA_pHW2000	KSMAACLCNGG**KCNC*LHLQWEACR*YWFM----- : : * * .* : : *:... .	211
NA_NCB1	SSSHCLDPNNEEGGHGVKGWAFDDGNDVWMGRITISEK---LRSGYET--FK-----	378
NA_pHW2000	---VQKNPQDPGVGMRLYQWNLYSSND*WECFRKS*Y*NTIH*GGENRSY*PIVRKCSAC ::: * : * : ..** * * :: * *.. :	263
NA_NCB1	-----VIEGWSKPNSKLQINRQVIVDRGNRSGYSGIFSVEGKSCINRCFYVELIRGRKQ	432
NA_pHW2000	RGMLLLSSISWCQMCLQRQLERLQ*AH--RRYKCKG-----L*HCFQLCVLRTCWR .*.: : *::* .. .* .* : :* : ::* :	310
NA_NCB1	ETEVLTWTSNSIVVFCGTSGTYGTGSWPDGADINLMPI-----	469
NA_pHW2000	HTQKK----RQLQQ*PLLGS*Q*GRWSWSERLGL**WK*RVDGKNDQREVTLRI*NLQSH .*: : *: * * . :.*	359
NA_NCB1	-----	469
NA_pHW2000	*RLVQTQLQIADK*ASHS*QR**VRLFWYFLC*RQKLHQSVLLCGVDKGKETGN*SLVDL	412
NA_NCB1	-----	469
NA_pHW2000	KQYCCVLWHLRYIWNRLMA*WGGHQSHAYISFRNFRKNSLFL	453