Virus Report

01-02-2015 14:55:19

Secondary structure results

Virus name: Banana Virus

Sequence:

TGGTATCAGAGCAAGGTTTTCTGTAAGTAATTTATGGCTTTCATGGGGTAAAACCCTTAGA TAGGAGCCTGAGGGCTCTGCTATGTTCTATTTTGAGAAAATAACTGTGTAAGTAGTAATGC ATGATAAATCGAATAAGTTCTTTACGGATGGTCCTAAATTTATGAAATCATTCTTTTACTAT CTGAGTGAGACCCTTGTGTTTCCAAGTTCTACTGAGAAATCATGAGTAAATGGACGTTGA CACACTGACTTAAGGAAAAGAAGATGTGCCTAGGATGAAGTCGAGCACTGTTCTAGGCT GAAGGGTGAAAAGAAAATGAGTTGAGTTGGGAGTAAGACTCTGAGAGGCTTGAGGCAA CCGGTGTGAGTTTCTTTACCTAGCAGAAGATATACTCTAGTATCCTCAAAACACCGTGAAG TATTTACAACCCTTTATGAACAAGTATTTTCTGGAGTTAGATGTCAGCCACCAAAGATCAT GATCTATCACAAACAAACTTGAGTCATACAGAGAAGAACTCAGATGTAACTGAATGACTAA TGGTTATAATCTTGAAATGAGCATATGTATCCCAAAGGTTACTCCTATCTGTCCGTGACCA TAAGAAACCTTCTTTAAAGAAAACTCTGGATTCCTACTGGGATCTTGAATTTGAAAAGTA CAAAAACTCTCATTCCAAATCTGTTTCAGATCTTTCTTATTTAGACTTAGCATCTGCTGATA AGGTCTCTAATAAAGACCTTGCATTTAATTTACATATAAACACTTATCGTAGTGATCTTGGT TTTAAAGTCGCAATTCACTCTTTATCAAAAAATCGTGAGCTGCTAATACAGAACAGGAAGC TTTTGGAAGAACAAAAGCAGCAGCTGTCTGAAATTAACAACCTATCTAAGGTTGTGCGTCT CCAACGAGCTGATTTAAAGGAGACCTTGAGAAGACAGGACGTCCTTGCGAAGGAGCTTC AGGCTCTTCGTAAAGACTATCTGGAAAGGCGCCCTCTTAGCAAGGAGGACGTGGAAGAA TTGGTTGTCCGCATCTCTGAACAACCAAAAATTTATTGAAAAAACAGACGGAAGCTCTTAC TGAGGAGCTTACAAAGGAGGTTCAGGCACTGAAGCTAATCATCCATAACTTCGAACAGAA GTTACTGGGATGAGCCTGGCCGGAAGCAAGGCCACAGCAATCTATCAAGAAGCCTTGCA ATCTACTGCTGCTGGTTGGGAAGACACCGGCATCGGATTTACTGATAAAGGAGTTATCAG CAGATCACCACCATCTCGGAAGAACTAACCCAACTTCACAACCGGGTTAAAAACCTTGAA GGAAGGACAGGGTATCTGCAAGCCCCCTGTATAAATCGGAGATTGAATCCATCAACGC CAAGCTCAAAAGTATTCAAGATATACAAGGGAGTCACCCTCCAAAAGAGACCCCCTCCGG AGTTATCAAAGTTTTTGAGGATCCCTACAGCATCCTCCGCAGACTATAAATGGCGTCAAGA CCTAGAGTTTCTGGGAGCACTACCAGAACCATGATAGCAGAACCAGGGGTTCCCCTGGT GGATGATCAGATCCGGGAATACCGGAGTGCGGCCCGAGTCGCATACGAAGCACAAAGG ATTGCCAGACGCACTGGCAATATTCTTGGAAGAATTGTTGGACGACAACCAAGGGAGCAT ACCCTTGCGATGGTCGTGGACCCCAACAGTGAGCTGGAACGCTCACTGGCTCACCGGGC ACGAACAATACCTGCTGAAGTCCTTTACATGACCCAGCGCGGTGAGCCTACAAATCGGGT CTATCGGAACAGAACTGAAGAAAGGATGCTAGTGACTCATGGTCAGCAAGATAGGACTTT GGTACTCCAGGTGCGCATCCAAATTATGCACCGAACATATGATGGTACAATGGCATTAGT GGTCTTCCGTGACACCAGATGGACACAGGAGAACCACCAAGACAGATCCATTATAGCAAC CATGGAGGCTGATCTCCCCAAGGGCATCAGCTAATTTACGTCATCCCAGATATAATGAT GACTATTCGGGATTTCTACCAGCACATTCAGATAAGCATCCTTACCAAAGGATATGAAGG CTTTCAAGGAGAAGCAAATCTCCTTATTACAAGAAGCTGCCGGTGCAGATTAAGCAACGT TCCTAACGTTGGCTTCCAATACAACATCCAGAACGTCGTGGAATTCTTAAAATCTAGGGGA GTAAAAGCCCTAAATGCGACGAAATTAAGCACCAGGAGGTTCCAAGGAGGAGAATGGAA CATCCGACCATCAGAAGTGGTGGTCCCTATGCAGCCAACAACTATGATAGTACGAGTTAA TTATGACTCGTCACGAAGCATCAGATTCGGGGGATTATGAAGCTAGCACATCATCAGC CCCGAGATATGAGCAAGACGGTGATGAAGATGAAGCACTTGGTGATATCCATCAAGTAAA TATGATCACCATCATAGAAGATGATGCAGAAGATGACTACCCACGGTTATCAGCTTTAGA GCGAATAATCGCTCCAGAAAGCATGGTGGGAGAGGAGGACACAATTGCTGAATTTTTAAG CAATCTGTCCTTAGATTCCTCCACTGATGAGGAATTCTACGACGCCGACAACTCATTATTC GAAGAAGAAGAATATGATGGGGATTCCGAAGTTAGCACCCCAAGGAGCAAATACAATATA TTTGCGCTAGAAGATGAGTACCCAAAACTTCAACAGCTGGAAAGCCTGGTACTCTCCACA ACAGAGTCTGCTATCAGTCGCTTTAGACCAGCAGACACAGATATGACTGGCGTAGGCCCT GGCTACGCACCAGCAACTGGAACAGCTGGCTATACTGGAGCCAGTTCATCTGATTTCCCT TACCCTAGAAGACCAAGAAAGTGGGACAACAACTCGGAGTGGTTCAACCTACCCACCGC TAACGCGAGGCAAGCATCAATATTCGTTATGCCTCAGGATTTTGACACAAAGGTCTTTGAA

AGATGGGAAAGTTCTGTTCTCCTTCACATGTCTGACAAGGTTTTTGATGATCCACAAGACA AGTTAACTTATGTGGAAAACCTACTAGGAGAATCAGAAAAGAAGATGTTTATCACTTGGAG GATGATGTTCACAGCTGAGTACGAAGAAATGAAGAACAACGCTCTCGGCTCAAATGGAAC TCAAAATATCCTGAACCAGATCAGGATGATATTCTTTCTGGAAAATCCCCAAGTTGGAACC ACCAACACTCAAGACGCAGCATACAAGACACTCAAACAACTAGTCTGCACAGAGATGTCT GGACCTGCGATCTACAGGTACCTAAATGATTACTTCCATTTAGCGGCAAAATCTGGAAGA GCGTGGGCATCTGATGAGCTGTCCAAGGAATTCTTTACAAAACTGCCAAGGGGATTAGG GGACAGAGTTGAAAAGAAATTCAAAGAAAAGTACCCCAACAACACTATTGGAGTAGCCCC CAGAATCACCTTCACAAGAAATTATATAAAGGAAATATGCCAAGAGGCTGTATTCCAAAGC CAACTGAAAAGGCTAGATTTTTGCAAAGGGACACCCGTCCACGGCTTATATGGTAAAGAG AAGGCATATGGGAGGAAATACGGAGTCAGGAAAAGCACTTCGTACAAAGGAAAGCCTCA CAAGTCACATGTGAGGATAGATAAAAAGAAGCACCTCCTGATGAAACGAAAAGACTGCAA GTGTTTTGCTTGCGGAGATATCGGTCACTTCGCATCAGAGTGTCCGAATCCCAAGAAGCT GATGCACCGAGTTCAAATTCTACAATCCTTAGAGCTTGATGACGGAATCGACGTAATCTC CGTAGGATTTGATGAGTCAGATGTCTCAGACATCTATTCGGTATCTGAAGGCGAGGACAG CTACCAGTTCAATAATGAGGATTTTGACGTTATAGGACATGACGTGTTCATGTTCACCATT GAAGAACAAAGAAACTGCCTGGTAGAAACCACGTCAGCCTGGAGAAGTGCAATGAAAGTT ACTCCAGAAGAAAAGAATTGCTTACACACATGGAGCTTTGAGGAAAAGACAACAGACCAC TGCAGAGCCTGCAAAAATCTGGCCCTACGAGGGAGCAGAGCTGACTGCACTCAGTGTAA GATAATCATTTGCTCTTTATGCAAACCATACTATTTCCAGGATGGTTCACCTATCCCAGCA CAAAGTTCAACCCCATCAGGATACTCCTACGATGATTGGATGGGATCAGCAAATAGGTGG AAGGCACACTATGAGTTCTCTCAGGCAAGAAGGAAGAGCCTGAAGGCAGACCTTGAAAG AGCGGAAGAAGAACTAAAATTTTATAAGCAAAAGGAAAAGGAAAAGGCCAAATTAAAGGA TCAAATTCCAGAAGCAGTACAAGCAAAACTGGATGATCTGGAAAAAAGAAAAAGAGCTCAA TAACATCCTAAGAATAGAGGCTGAGACAGAGCTAAAAGCATTAAAGGAAAGCTTCAAAGA AAAGGAAGAAGCCCTGAAGGAAGAAATCACAGCTCTAGAAGAAGAAGTGAGGATACACA AAGAGGAGGCTGAAGAACTTCAGGAAGAAAATCAAAAACTCAAAGAGAAGATCATAGCCT TCGAAAAAGACGTAACACAAGGACCAGAAGAAGTGATCGAATTGGTCAATAACGTGGAGG AGCACCTGGTACTAACAGGACAACAGAAGAACAATCTCCTCAACATCAAGATAACTCTGG AAGTTAAGGAAAAAGGATTACCATGAACGCGATACTAGACACTGGAGCCGCAATCTGTG TCTGTGATGGGCAAATGGTAAACGAATATTTCAGGAGACCATCAATGATGAATGCGTTCAT TGGTAATCAATGGTTCAGAATCCCAAGGACATACATCATGCCCCAGCTATCAGAAGGCCT TCATTTCATCATCGGAATGAACTTTATCAGGGCAATGGAAGGAGGGATTCGAATTGAGCA AGGAACGGTAACCTTCTACAAAATGGTTACACAAGCACAGGCACCCCCTATGGTACACGA TATTTCTTACCTTGAAGAATTAGAATTAGAACTGCCGATTTACTATGATATCTGTGCAACTA ACCCCTCAGGAGGAGAATCAATAGTGACCTAATATCCCCCTCGGAGATCCGGAAACTAA AGGACTTAGGCTACATTGGGGAAGAGCCCTTGAAACATTGGGCTAAGAATCAAGTCAAGT GCCGAATTGAAATCAAGAACCCTGACTTAATCATTGAAGATAGGCCCTTGAAGCACGTCA CCCCAGCAATGAAAGAATCCATGAAGAAACATGTGGACAAGCTGCTGGAACTTAAGGTAA TCAGGCCATCCACAAGCAAACACCGGACGACTGCGATAATTGTTCAATCCGGTACAGAAA TTGACCCCCTCACTGGAAAAGAGAAAAGAGGGGAAAGAGAGGCTTGTATTCAACTACAAAC GCCTCAACGACAATACCGAAAAAGACCAGTATTCACTACCTGGCATCAATACAATTATCAG CAGGATCGGCAAGTCAAAAATTTACAGCAAATTTGACTTAAAATCCGGATTCCACCAGGTA GCCATGGATCCAGAAAGCATCCCATGGACGGCCTTTTGGGCCATAGATGGACTTTATGAA TGGCTAGTTATGCCATTTGGTCTGAAGAATGCGCCCGCTATATTTCAGAGAAAGATGGAC AACTGCTTCCGAGGAACGGAGGAATTCATAGCGGTATATATTGATGATATTTTAATATTCT CTGACAATATCTCTGATCACAGGAAACATCTGTCAAAATTCCTGGAGATCTGCAAGGCGA ATGGGCTGGTATTAAGCCCAACAAAAATGAAGATAGGCGCAAAGGAAATTGATTTCCTAG GAGCAACTATTGGAAACTCCAAGATCAAGCTTCAACCTCATATAATCAAGAAGATCATCGA GACAAAGGACGAGGAGCTAAAGGAAACAAAGGGGCTCAGAAAATGGTTGGGAGTCCTTA ACTATGCACGGGCATACATTCCAAATTTAGGAAAAACATTAGGCCCGCTCTACTCCAAGA CGTCAATTAATGGAGAGAAGAAGATGAACAGCCAAGATTGGAAGGTTGTTCAACTGATCA AAAATCAGGTACAAAATTTACCTGACCTTGACATACCCCCTGCAGAGGCAACTATGGTCTT AGAGACTGACGGGTGTATGGAAGGATGGGAGGAGTATGCAAATGGAAGCTCCATCCCT CTGACACAAGACTGGCAGAAAAGGTCTGTGCGTACGCAAGTGGAAGGTATCACCCCATC AAGAGCACAATTGATGCAGAGGTACACGCAGTGATCAACAGCTTAGAAAAATTCAAAATTT TAAGAAGCAAGCTGATCATAAGCCCTCAAGAACAAGGTGGCTTATGCTAATTGACTACATT GATACTCTATCAAGGCTGGTCCAAGTGCTGATCACCAAGGTTCATCATCCAGCAGAAACC CAGCTAGTCGAAGCCGTCATGGAAGTTATAAGCAATCCAAAGAAGAAGCCTTGGACAAG GTAAACCATTTTATCTTCCTAACCCAACAGTGGATTGCAGAACGCAAGGAGGAGCACACG GTGAACACGCTACTCCAGTTGGAAGAACCACAGCTGCATTGTGGTTGTAGAAACTATGAA

ACAGGGGAAAGAAGGAACGCGATTCTCCTACAAAGTCACACTTCAGCCAACCCGAACAG
ATGGTTCTATAAGTGTGCAGAAAACAAGTGCCACATTTGGATCTGGAAAGACATCCTGGA
CCAATATGCTGAAGATTATGCTACCTACACCAGGATAGGACTTGAAGCACTTAACCTTGAA
GATTGGTTCGAAGAACCAGAACCCGATCCACCTAACCCTGTGGACCGCCAGAGGATAGA
GGACATCCTGGACCTACTGAACGTCAGCAATGACGACTGAAAGATTCCCAGGACACCGG
CGGAAGTGGTGGACCCAGTCTAGGTGCGATGCTTAGTCGCACCGATGACTATGTCGGA
AGGCATCTTTGCTTTCGGCAAACTTTAGTAATACTTTAAGGAAAGTATTGTACAAGTTAGG
TGCAGAGACAATAATGCACCCAGCTTTAGCTTTGTTTATGGAATTATTGTGTCGGTTGCAT
TATTGGATGCCTGCGTGCACCCTAAGCAATCCCCGGCCCTCTTCTCTATAAGAGGAGCCC
TTGCAATCAGTTGCAAGCATGCAAGTTTCCCACTGCAAGCTTACTTCTGAGTTTCAGTTCA
AGTTCAATAAAATTCAAGCTTTCCTCTTACATTCTGTTCTTGAAAAGGTTCGATCTAATCGAG
CGAGTAGAGAACAAGATCTTTTGGGATTTCCGCCGTTCCA

Structure in dot-bracket format: $(1,\dots,(1)))))(1,\dots,(1))(1,\dots,(1)))(1,\dots,(1)))(1,\dots,(1)))(1,\dots,(1)))(1,\dots,(1)))(1,\dots,(1)))(1,\dots,(1))($

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Energy: -2272.4

RNA-Structure:



Virus Domain(s)

Number of proteins: 3

Protein 1

Number of domains:

Aminoacidsequence:

LDSYWDLEFEKYKNSHSKSVSDLSYLDLASADKVSNKDLAFNLHINTYRSDLGFKVAIHSLSK NRELLIQNRKLLEEQKQQLSEINNLSKVVRLQRADLKETLRRQDVLAKELQALRKDYLERRPL SKEDVEELVVRISEQPKIY

Starting nucleotide position: 753

Ending nucleotide position: 1191



Domain 1

Starting aminoacid position:

Ending aminoacid position:

145

Domain description:

Protein of unknown function (DUF1319)

Identifier: DUF1319

Protein 2

Number of domains:

0

Aminoacidsequence:

MSLAGSKATAIYQEALQSTAAGWEDTGIGFTDKGVISTTTLSRQLNSLLFLVIKQNQQITTISEE LTQLHNRVKNLEGRTGVSASPLYKSEIESINAKLKSIQDIQGSHPPKETPSGVIKVFEDPYSILR RL

Starting nucleotide position:

1282

Ending nucleotide position:

1681

Protein 3

Number of domains:

4

Aminoacidsequence:

MASRPRVSGSTTRTMIAEPGVPLVDDQIREYRSAARVAYEAQRIARRTGNILGRIVGRQPREH TLAMVVDPNSELERSLAHRARTIPAEVLYMTQRGEPTNRVYRNRTEERMLVTHGQQDRTFIL PESYEELREAGFEYIHLGVLQVRIQIMHRTYDGTMALVVFRDTRWTQENHQDRSIIATMEADL SQGHQLIYVIPDIMMTIRDFYQHIQISILTKGYEGFQGEANLLITRSCRCRLSNVPNVGFQYNIQ NVVEFLKSRGVKALNATKLSTRRFQGGEWNIRPSEVVVPMQPTTMIVRVNYDSSRSIRFGDY EASTSSSAPRYEQDGDEDEALGDIHQVNMITIIEDDAEDDYPRLSALERIIAPESMVGEEDTIAE FLSNLSLDSSTDEEFYDADNSLFEEEEYDGDSEVSTPRSKYNIFALEDEYPKLQQLESLVLSTT ESAISRFRPADTDMTGVGPGYAPATGTAGYTGASSSDFPYPRRPRKWDNNSEWFNLPTANA RQASIFVMPQDFDTKVFERWESSVLLHMSDKVFDDPQDKLTYVENLLGESEKKMFITWRMM FTAEYEEMKNNALGSNGTQNILNQIRMIFFLENPQVGTTNTQDAAYKTLKQLVCTEMSGPAIY RYLNDYFHLAAKSGRAWASDELSKEFFTKLPRGLGDRVEKKFKEKYPNNTIGVAPRITFTRNY IKEICQEAVFQSQLKRLDFCKGTPVHGLYGKEKAYGRKYGVRKSTSYKGKPHKSHVRIDKKK HLLMKRKDCKCFACGDIGHFASECPNPKKLMHRVQILQSLELDDGIDVISVGFDESDVSDIYSV SEGEDSYQFNNEDFDVIGHDVFMFTIEEQRNCLVETTSAWRSAMKVTPEEKNCLHTWSFEEK TTDHCRACKNLALRGSRADCTQCKIIICSLCKPYYFQDGSPIPAQSSTPSGYSYDDWMGSAN RWKAHYEFSQARRKSLKADLERAEEELKFYKQKEKEKAKLKDQIPEAVQAKLDDLEKEKELN NILRIEAETELKALKESFKEKEEALKEEITALEEEVRIHKEEAEELQEENQKLKEKIIAFEKDVTQ GPEEVIELVNNVEEHLVLTGQQKNNLLNIKITLEVKEKRITMNAILDTGAAICVCDGQMVNEYFR RPSMMNAFIKGVNGITNVKEILEEGKIWIGNQWFRIPRTYIMPQLSEGLHFIIGMNFIRAMEGGI RIEQGTVTFYKMVTQAQAPPMVHDISYLEELELELPIYYDICATNPSGGEINSDLISPSEIRKLKD LGYIGEEPLKHWAKNQVKCRIEIKNPDLIIEDRPLKHVTPAMKESMKKHVDKLLELKVIRPSTSK HRTTAIIVQSGTEIDPLTGKEKRGKERLVFNYKRLNDNTEKDQYSLPGINTIISRIGKSKIYSKFD LKSGFHQVAMDPESIPWTAFWAIDGLYEWLVMPFGLKNAPAIFQRKMDNCFRGTEEFIAVYID DILIFSDNISDHRKHLSKFLEICKANGLVLSPTKMKIGAKEIDFLGATIGNSKIKLQPHIIKKIIETKD EELKETKGLRKWLGVLNYARAYIPNLGKTLGPLYSKTSINGEKKMNSQDWKVVQLIKNQVQNL PDLDIPPAEATMVLETDGCMEGWGGVCKWKLHPSDTRLAEKVCAYASGRYHPIKSTIDAEVH AVINSLEKFKIYYLDKKELIIRTDSQAIVAFYKKQADHKPSRTRWLMLIDYITGLGINVKFEHIDGK

ENVLADTLSRLVQVLITKVHHPAETQLVEAVMEVISNPKKEALDKVNHFIFLTQQWIAERKEEH TVNTLLQLEEPQLHCGCRNYETGERRNAILLQSHTSANPNRWFYKCAENKCHIWIWKDILDQ YAEDYATYTRIGLEALNLEDWFEEPEPDPPNPVDRQRIEDILDLLNVSNDD

Starting nucleotide position: 1681

Ending nucleotide position: 7378



Domain 1

Starting aminoacid position: 1349

Ending aminoacid position: 1509

Domain description:

Reverse transcriptase (RNA-dependent DNA polymerase)

Identifier: RVT_1

Domain 2

Starting aminoacid position: 125

Ending aminoacid position: 246

Domain description:

Viral movement protein (MP)

Identifier: MP

Domain 3

Starting aminoacid position: 1090

Ending aminoacid position: 1201

Domain description: Retroviral aspartyl protease

Identifier: RVP

Domain 4

Starting aminoacid position: 763

Ending aminoacid position: 780

Domain description: Zinc knuckle

Identifier: zf-CCHC