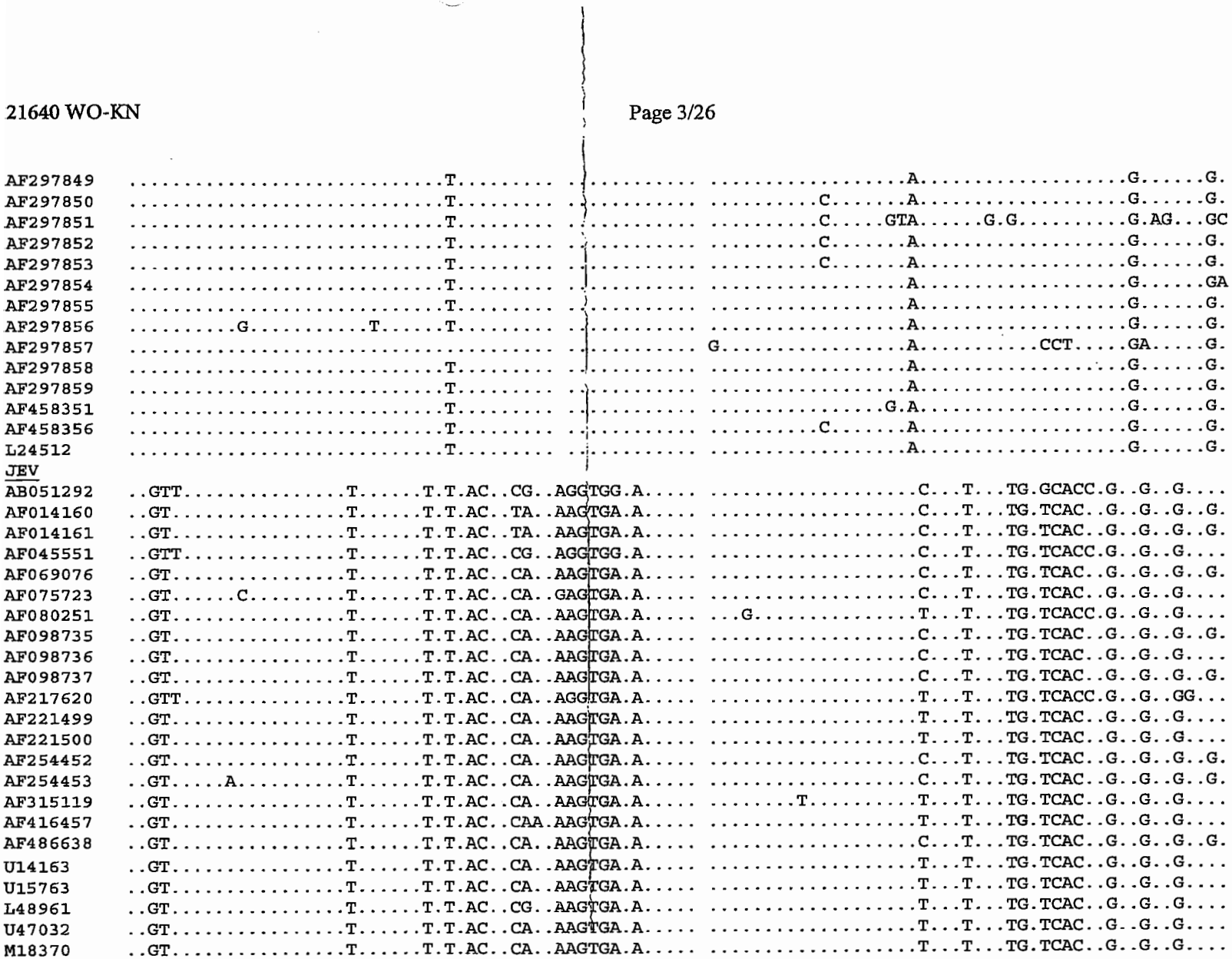
WO 2004/092412 PCT/EP2004/003356



## FIGURE 1

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SEQ ID 8                                                  GTAAGCC CTCAGAACCGTCTCGGAA (→)
AF196835  CAACCCCAGGAGGACTGGGTGAACAAAGCCGCGAAGTGA TCCATGTAAGCC CTCAGAACCGTCTCGGAAGGAGGACCCCACATGTTGTAACTTCAAAG
AF260968  ..............................T..... ..... ..................................................
AF260969  ..................................... ..... ..................................................
AF481864  ..................................... ..... ..................................................
M12294    ......................C......T....G.... ..C.. ..............................G..C.T..G.C......
AF206518  ..................................... ..... ..................................................
AF317203  ..................................... ..... ..................................................
AF202541  ..................................... ..... ..................................................
AF404757  ..............................T...... ..... ..................................................
AF404753  ..................................... ..... ..................................................
AF404754  ..................................... ..... ..................................................
AF404755  ..................................... ..... ..................................................
AF404756  ..................................... ..... ..................................................
AF017254  ..............................T..... ..... ..................................................
L48977    ......................C......T....G.... ..C.. ..................C..........G..C.T..G.C......
AF196536  ..................................... ..... ..................................................
AF196537  ..............................T...G..C.. ..... ..................T..................G..C.....
AF196538  ..............................T...G..C.. ..... ..................T..................GT.C.....
AF196540  ..............................T...G..C.. ..... ..................T..................GT.C.....
AF196541  ..................................... ..... ..................................................
AF196542  ..................................... ..... ..................................................
AF196543  ....................T.C...........G.... ..C.. ..................A...........G....T..G.C....G.
AF297840  ..............................T..... ..... ..........C.......A..................G......G.
AF458343  ..................................... ..... .C................................................G.
AF458344  ..............................T..... ..... ..................................................
AF458347  ..............................T..... ..... ..................................................
AF458348  ..................................... ..... ..................................................
AF458350  ..................................... ..... ..................................................
AF458352  ..............................T...G..C.. ..... ..........C........T..................GT.Y.....
AF458353  ..............................T...G..C.. ..... ..................T..................GT.C.....
AF458355  ..............................T..... ..... ..................................................
AF458358  ....................T.C...........G.... ..C.. ..................A...........G....T..G.C....G.
AF458360  ..................................... ..... ..................................................
AF458361  ..................................... ..... ..................................................
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AF208017 .....C.....T....G.... ..|..C..... .....G..C.T..G.C.....
AF196539 .....C.....T....G.... ..|..C..... .....G..C.T..G.C.....
AF196535 .....C.....G.... ..|..C..... .....G..C.T..G.C....G.
AF458359 .....C.....T....G.... ..|..C..... .....G..C.T..G.C.....
AF458357 .....C.....G.... ..|..C..... .....G..C.T..G.C.....
AF458354 .....C.....T....G.... ..|..C..... .....G..C.T..G.C.....
AF458349 .....C....C.T....G.... ..|..C..... .....G..C.T..G.C.....
AF458345 .....C.....T....G.... ..|..C..... .....G..C.T..G.C.....
AF458346 .....C.....T....G.... ..|..C.....T..........T.....G..C.T..G.CC.....
AF533540 ..... ..|..... .....
AY187012 ..... ..|..... .....
AY187013 .....G.... ..|..... .....
AY187014 ..... ..|..... .....
AY187015 ..... ..|..... .....
AY262283 ..... ..|..... .....
AY277251 .....AT.T.....AT.G..C.. ..|..C..... ....AT.....T.....C.....G.....G..
AY277252 ..... ..|..... .....
AY278441 ..... ..|..... .....
AY278442 ..... ..|..... .....
AY268132 ..... ..|..... ....A.....
AY268133 ..... ..|..... .....
AY490240 .....T..... ..|..... .....
Kunjin
D00246 .....T..... ..|..... .....A.....G.....G.
AY274504 .....T..... ..|..... .....A.....G.....G.
AY274505 .....T..... ..|..... .....A.....G.....G.
L49311 .....T....G.... ..|.C..... .....A.....G....T..G.C....G.
L48978 .....T..... ..|..... .....A.....G.....G.
L48979 .....T..... ..|..... .....A.....G.....G.
AF297840 .....T..... ..|..... .....C.....A.....G.....G.
AF297841 .....T..... ..|..... .....A.....G.....G.
AF297842 .....T..... ..|..... .....A.....G.....G.
AF297843 .....T..... ..|..... .....A.....G.....G.
AF297844 .....T..... ..|..... .....A.....G.....G.
AF297845 .....T..... ..|..... .....A.....G.....G.
AF297846 .....T..... ..|..... .....C.....A.....T.....G.....G.
AF297847 ..........T.....T..... ..|..... .....C.....A.....G.....G.
AF297848 .....T..... ..... .....A.....G.....G.
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AF297849 ..T.. A.. G.. G.
AF297850 ..T.. C.. A.. G.. G.
AF297851 ..T.. C.. GTA.. G.G.. G.AG.. GC
AF297852 ..T.. C.. A.. G.. G.
AF297853 ..T.. C.. A.. G.. G.
AF297854 ..T.. A.. G.. GA
AF297855 ..T.. A.. G.. G.
AF297856 ..G.. T.. T.. A.. G.. G.
AF297857 G.. A.. CCT.. GA.. G.
AF297858 ..T.. A.. G.. G.
AF297859 ..T.. A.. G.. G.
AF458351 ..T.. G.A.. G.. G.
AF458356 ..T.. C.. A.. G.. G.
L24512 ..T.. A.. G.. G.
JEV
AB051292 ..GTT..T..T.T.AC..CG..AGGTGG.A.. C..T..TG.GCACC.G..G..G....
AF014160 ..GT..T..T.T.AC..TA..AAGTGA.A.. C..T..TG.TCAC..G..G..G..G.
AF014161 ..GT..T..T.T.AC..TA..AAGTGA.A.. C..T..TG.TCAC..G..G..G..G.
AF045551 ..GTT..T..T.T.AC..CG..AGGTGG.A.. C..T..TG.TCACC.G..G..G....
AF069076 ..GT..T..T.T.AC..CA..AAGTGA.A.. C..T..TG.TCAC..G..G..G..G.
AF075723 ..GT..C..T..T.T.AC..CA..GAGTGA.A.. C..T..TG.TCAC..G..G..G....
AF080251 ..GT..T..T.T.AC..CA..AAGTGA.A.. ..G..T..T..TG.TCACC.G..G..G....
AF098735 ..GT..T..T.T.AC..CA..AAGTGA.A.. C..T..TG.TCAC..G..G..G..G.
AF098736 ..GT..T..T.T.AC..CA..AAGTGA.A.. C..T..TG.TCAC..G..G..G....
AF098737 ..GT..T..T.T.AC..CA..AAGTGA.A.. C..T..TG.TCAC..G..G..G..G.
AF217620 ..GTT..T..T.T.AC..CA..AGGTGA.A.. T..T..TG.TCACC.G..G..GG...
AF221499 ..GT..T..T.T.AC..CA..AAGTGA.A.. T..T..TG.TCAC..G..G..G....
AF221500 ..GT..T..T.T.AC..CA..AAGTGA.A.. T..T..TG.TCAC..G..G..G....
AF254452 ..GT..T..T.T.AC..CA..AAGTGA.A.. C..T..TG.TCAC..G..G..G..G.
AF254453 ..GT..A..T..T.T.AC..CA..AAGTGA.A.. C..T..TG.TCAC..G..G..G..G.
AF315119 ..GT..T..T.T.AC..CA..AAGTGA.A.. T..T..T..TG.TCAC..G..G..G....
AF416457 ..GT..T..T.T.AC..CAA.AAGTGA.A.. T..T..TG.TCAC..G..G..G....
AF486638 ..GT..T..T.T.AC..CA..AAGTGA.A.. C..T..TG.TCAC..G..G..G..G.
U14163 ..GT..T..T.T.AC..CA..AAGTGA.A.. T..T..TG.TCAC..G..G..G....
U15763 ..GT..T..T.T.AC..CA..AAGTGA.A.. T..T..TG.TCAC..G..G..G....
L48961 ..GT..T..T.T.AC..CG..AAGTGA.A.. T..T..TG.TCAC..G..G..G....
U47032 ..GT..T..T.T.AC..CA..AAGTGA.A.. T..T..TG.TCAC..G..G..G....
M18370 ..GT..T..T.T.AC..CA..AAGTGA.A.. T..T..TG.TCAC..G..G..G....

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M55506      ..GT..............T......T.T.AC..CA..AAGTGA.A.....  ...................T...T...TG.TCAC..G..G..G....
D90195      ..GT..............T......T.T.AC..CA..AAGTGA.A.....  ...................T...T...TG.TCAC..G..G..G....
D90194      ..GT..............T......T.T.AC..CA..AAGTGA.A.....  ...................T...T...TG.TCAC..G..G..G....
AF311748    ..GT..............T......T.T.AC..CA..AAGTGA.A.....  ...................T...T...TG.TCAC..G..G..G....
AF092550    ..GTT.............T......T.T.AC..CA..AGGTGA.A.....  ...................T...T...TG.TCACC.G..G..GG...
AF092552    ..GTT.............T......T.T.AC..CA..AGGTGA.A.....  ...................T...T...TG.TCACC.G..G..GG...
AF092553    ..GTT.............T......T.T.AC..CA..AGGTGA.A.....  ...................T...T...TG.TCACC.G..G..GG...
AF139531    ..GTT.............T......T.T.AC..CA..AGGTGA.A.....  ...................T...T...TG.TCACC.G..G..GG...
AF148900    ..GTT.............T......T.T.AC..CA..AGGTGA.A.....  ...................T...T...TG.TCACC.G..G..GG...
AF148901    ..GTT.............T......T.T.AC..CA..AGGTGA.A.....
AF148902    ..GTT.............T......T.T.AC..CA..AGGTGA.A.....  ...................T...T...TG.TCACC.G..G..GG...
AF218068    ..GTT.............T......T.T.AC..CA..AGGTGA.A.....  ...................T...T...TG.TCACC.G..G..GG...
AF289816    ..GT..............T......T.T.AC..CG..AGGTGG.A.....  ...................T...T...TG.TCACC.G..G..G....
AF318291    ..GT..............T......T.T.AC..CG..AGGTGG.A.....  ...................T...T...TG.TCACC.G..G..G....
L48967      ..GTT.............T......T.T.AC..CA..AGGTGA.A.....  ...................T...T...TG.TCACC.G..G..GG...
L48968      ..GTT.............T......T.T.AC..CA..AGGTGA.A..C..  ...................T...T...TG.TCACC.G..G..GG...
AY184212    ..GT..............C......T.T.AC..CG..GAGTGA.A.....  ...................A...T...TG.TCAC..G.TG..GG...
AY251616    ..GT..............T......T.T.AC..CG..AGGTGG.A.....  ...................T...T...TG.TCACC.G..G..G....
AY278556    ..GTT.............T......T.T.AC..CG..AGGTGG.A.....  ...................C...T...TG.TCACC.G..G..G....
AY316157    ..GTT.............T......T.T.AC..CG..AGGTGG.A.....  ....A..............C...T...TG.TCACC.G..G..G....
L54067      ..GTT.............T......T.T.AC..CA..AGGTGA.A.....  ...................T...T...TG.TCACC.G..G..GG...
L54068      ..GTT.............T......T.T.AC..CA..AGGTGA.A.....  ...................T...T...TG.TCACC.G..G..GG...
L54069      ..GTT.............T......T.T.AC..CA..AGGTGA.A.....  ...................T...T...TG.TCACC.G..G..GG...
L54070      ..GTT.............T......T.T.AC..CA..AGGTGA.A.....  ...................T...T...TG.TCACC.G..G..GG...
L54071      ..GTT.............T......T.T.AC..CA..AGGTGA.A.....  ...................T...T...TG.TCACC.G..G..GG...
L54072      ..GTT.............T......T.T.AC..CA..AGGTGA.A.....  ...................T...T...TG.TCACC.G..G..GG...
L54122      ..GTT.............T......T.T.AC..CA..AGGTGA.A.....  ...................T...T...TG.TCACC.G..G..GG...
L54123      ..GTT.............T......T.T.AC..CA..AGGTGA.A.....  ...................T...T...TG.TCACC.G..G..GG...
AF306514    ..GTT.............T......TTT.AC..CG..AGGTGG.A.....  ...................CTCCT...TT.TCACC.G..G..G....
AF306515    ..GT.........G.....C......TTT.AC..CA..AAGTGA.A.....  ...........T.......T...T...TT.TCAC..G..G..G....
AF306516    ..TT..............T......TTT.AC..CA..AAGTGA.A.....  ...........T.......T...T...TT.TCAC..G..G..G....
AF306517    ..GT..............T......T.T.AC..CA..AGGTGA.A.....  ....A......T.......T...T...TT.TCAC..G..G..G....
SLEV
BFS1750-C   TGG.......T. .......T.T.......AATCT.GCCGAGT GCA.....C.... TT...A.....G...GTCC.TAGCACGTAG.CTGGAGAGG.C
1750-Std    TGG.......T. .......T.T.......AATCT.GCCGAGT GCA.....C.... TT...A.....G...GTCC.TAGCACGTAG.CTGGAGAGG.C
TD6-4G-C    TGG.......T. .......T.T.......AATCT.GCCGAGT GCA.....C.... TT...A.....G...GTCC.TGGCACGTAG.CTGGAGAGG.C
TD6-4G-20   TGG.......T. .......T.T.......AATCT.GCCGAGT GCA.....C.... TT...A.....G...GTCC.TGGCACGTAG.CTGGAGAGG.C
CoaV750     TGG.......T. .......T.C.......AATCT.GCTGAGT GCA.....C...G TT...AT....G...GTCC.TGGCACGTAG.CTGGAGAGG.C
```

```
L695121.05 TGG.......T. .......T.T.......AATCC.GCTGGGT GCA.....C.... TT...A.....G...GTCC.TGGCATGTAG.CTGGAGAGG.C
TNM771K-C  TGG.......T. .......C.T.......AATCT.GCTGGGT GCA.....C.... TT...A.....G...GTCC.TGGCACGTAG.CTGGAGAGG.C
MSI-7-C    TGG.......C. .......T.T.......AATCC.GCTGGGT GCA.....C.... TT...A.....G...GTCC.TGGCACGTAG.CTGGAGAGG.C
Kern217    TGG.......C. .......T.T.......AACCC.GCTGGGT GCA.....C.... TT...A.....G...GTCC.TGGCACGTAG.CTGGAGAGG.C
CoaV608        ......C. .......T.T.......AATCC.GCTGGGT GCA.....C.... TT...A.....G...GTCC.TGGCACGTAG.CTGGAGAGG.C
TBH-28     TGG.......T. .......T.T.......AACCC.GCTGGGT GCA.....C.... TT...A.....G...GTCC.TGGCACGTAG.CCGGAGAGG.C
VR1265     TGG.......T. .......T.T.......AATCT.GCTGGGT GCA.....C.... TT...A.....G...GTCC.TGGCACGTAG.CTGGAG.GG.C
CoaV353        ......T. .......T.T.......AATCTAGCTGAGT GCA.....C.... TT...A.....G...GTCC.TGGCACGTAG.CTGGAGAGG.C
MVEV
VR77       ....................T.C......T.ATTCTCC.CGGTTG.A.....T.C.................AG.AGT...TGCCAACAATGGAGATG.A
AF161266   ....................T.C......T.ATTCTCC.CGGTTG.A.....T.C.................AG.AGT...TGCCAACAATGGAGATG.A
M35172     ....................T.C......T.ATTCTCC.CGGTTG.A.....T.C.................AG.AGT...TGCCAACAATGGAGATG.A
L48972     ....................T.C......T.ATTCTCC.CGGTTG.A.....T.C.................AG.AGT...T.CCAACAATGGAGATG.A
L48973     ....................T.C......T.ATTTTCC.CGGTTG.A.....T.C.................AG.AGT...TGCCAACAATGGAGATG.A
L48974     ....................T.C......T.ACTCTCT.CGGTTG.A.....T.C....C............AG.AG....TGCCAACAATGGAGATG.A
L48975     ....................T.C....A.T.ACTCTCT.CGGTTG.A.....T.C.................AG.AGT...TTCCAACAATGGAGATG.A
L48976     ....................T.C......T.ATTCTCC.CGGTTG.A.....T.C.........T.......AG.AGT...TGC.AACAATGGAGATG.A
Koutango virus
L48980     ....................C......T.T....G.A.. ..|.C....T.. ..............................G....T..TTC......
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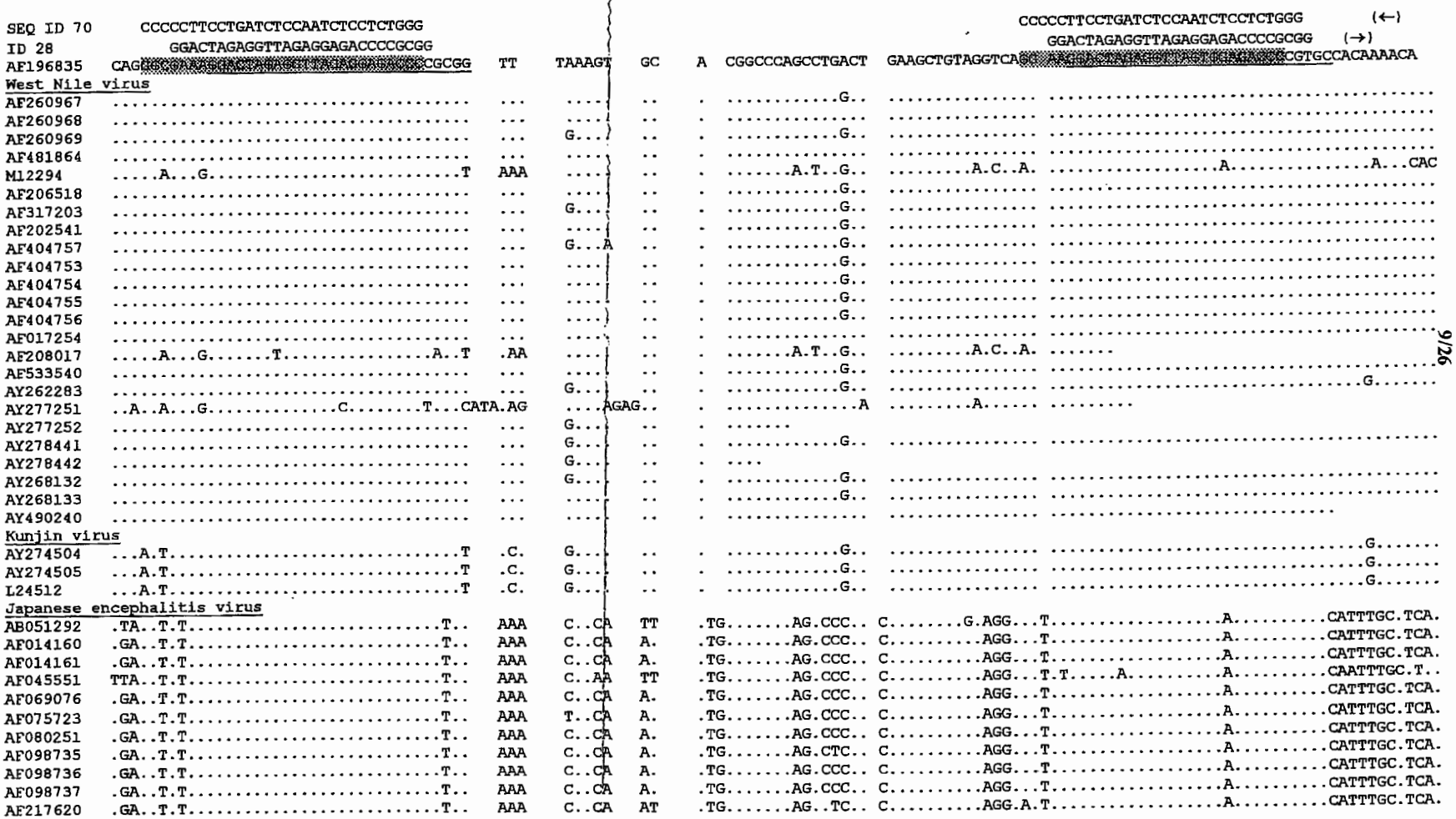
**FIGURE 2**

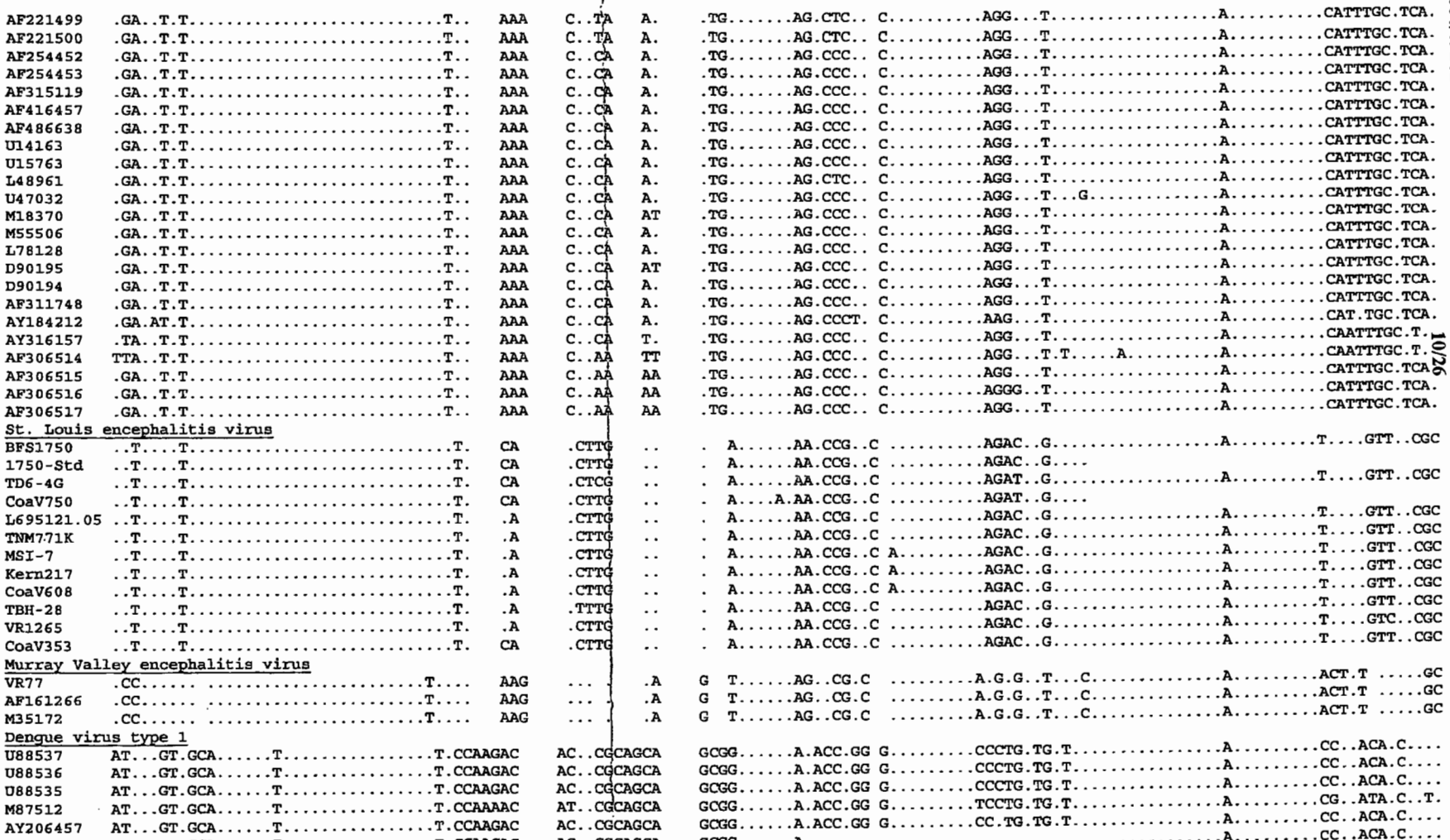
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SEQ ID 74                                                
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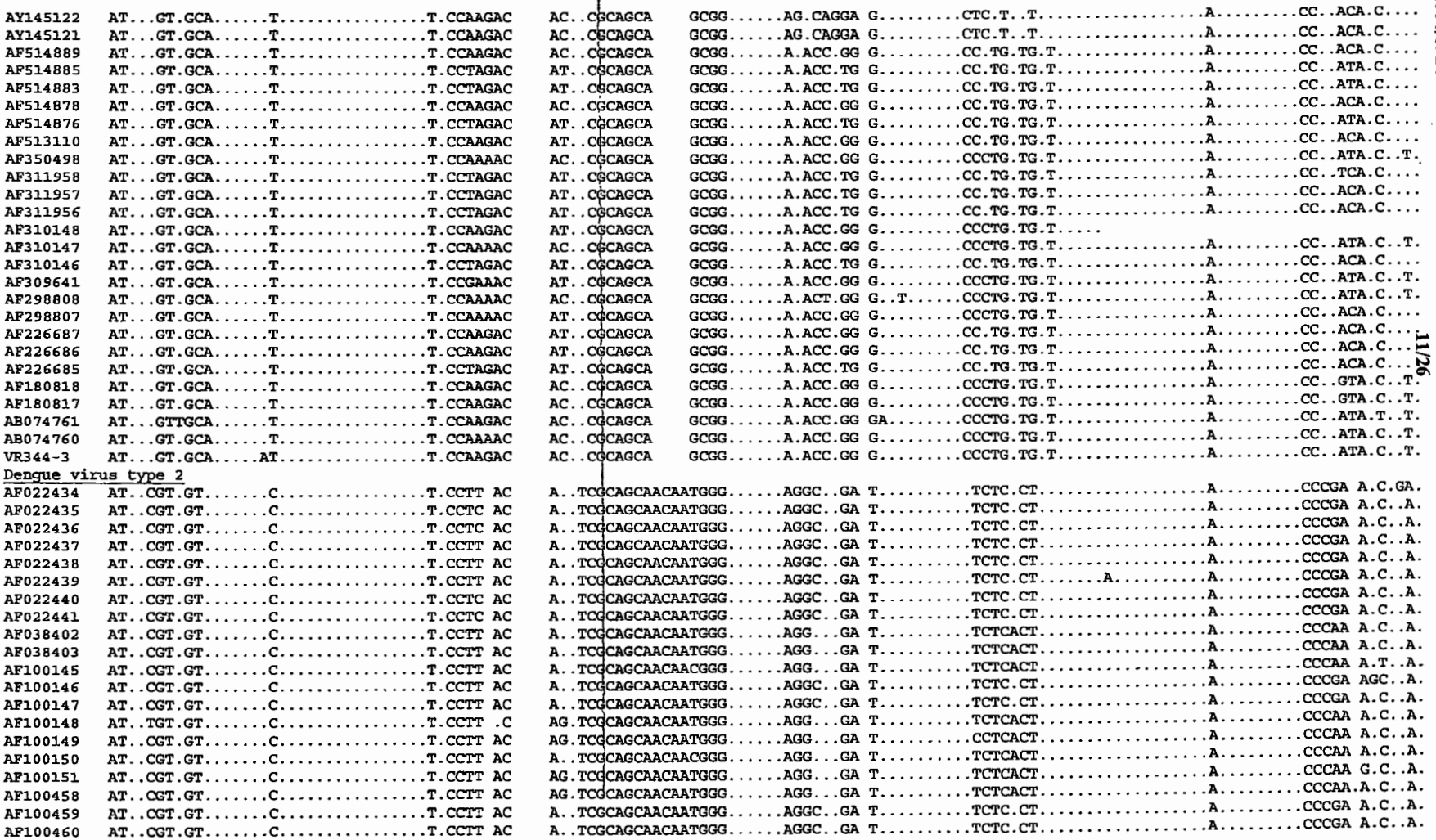
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AF217620    .TC..C.........AGG.A.T..................A|.........CAT          TTG..T. .......................A......G.....
AF221499    CTC..C.........AGG...T..................A|.........CAT          TTG..T. .......................A......G.....
AF221500    CTC..C.........AGG...T..................A|.........CAT          TTG..T. .......................A......G.....
AF254452    CCC..C.........AGG...T..................A|.........CAT          TTG..T. .......................A......G.....
AF254453    CCC..C.........AGG...T..................A|.........CAT          TTG..T. .......................A......G.....
AF315119    CCC..C.........AGG...T..................A|.........CAT          TTG..T. .......................A......G.....
AF416457    CCC..C.........AGG...T..................A|.........CAT          TTG..T. .......................A......G.....
AF486638    CCC..C.........AGG...T..................A|.........CAT          TTG..T. .......................A..T...G.....
U14163      CCC..C.........AGG...T..................A|.........CAT          TTG..T. .......................A......G.....
U15763      CCC..C.........AGG...T..................A|.........CAT          TTG..T. .......................A......G.....
L48961      CTC..C.........AGG...T..................A|.........CAT          TTG..T. .......................A......G.....
U47032      CCC..C.........AGG...T...G..............A|.........CAT          TTG..T. .......................A............
M18370      CCC..C.........AGG...T..................A|.........CAT          TTG..T. .......................A......G.....
M55506      CCC..C.........AGG...T..................A|.........CAT          TTG..T. .......................A......G.....
L78128      CCC..C.........AGG...T..................A|.........CAT          TTG..T. .......................A......G.....
D90195      CCC..C.........AGG...T..................A|.........CAT          TTG..T. .......................A......G.....
D90194      CCC..C.........AGG...T..................A|.........CAT          TTG..T. .......................A......G.....
AF311748    CCC..C.........AGG...T..................A|.........CAT          TTG..T. .......................A......G.....
AY184212    CCCT.C.........AAG...T..................A|.........CAT           .TG..T. .......................A............
AY316157    CCC..C.........AGG...T..................A|.........CAA         TTTG..T. .......................A......G.....
AF306514    CCC..C.........AGG...T.T.....A..........A|.........CAA         TTTG..T. .......................A....G.G.....
AF306515    CCC..C.........AGG...T..................A|.........CAT          TTG..T. .......................A......G.....
AF306516    CCC..C.........AGGG..T..................A|.........CAT          TTG..T. .......................A......G.....
AF306517    CCC..C.........AGG...T..................A|.........CAT          TTG..T. .......................A....G.G.....
D00037      CCT..T.T....T.T.AGGT..TT.....T..T......T.A|...T......CT          TTG..T. .......................A......G.....
M14933      CCT..T.T....T.T.AGGT..TT.....T..T......T.A|...T......CT          TTG..T. .......................A......G.....
SLEV
BFS1750-C   CCG..C.........AGAC..G..................A|.........T....G TT...G.  A.....  ..................A.  .... ......
1750-Std    CCG..C.........AGAC..G..................A|.........C.GA
TD6-4G-C    CCG..C.........AGAT..G..................A|.........T....G TT...G.  A.....  ..................A.  .... ......
TD6-4G-20   CCG..C.........AGAT..G..................A|.........T....G TT...G.  A.....  ..................A.  .... ......
CoaV750     CCG..C.........AGAT..G..................A|.........C.G
L695121.05  CCG..C.........AGAC..G..................A|.........T....G TT...G.  A.....  ..................A.  .... ......
TNM771K-C   CCG..C.........AGAC..G..................A|.........T....G TT...G.  A..N..  ..................A.  .... ......
MSI-7-C     CCG..CA........AGAC..G..................A|.........T....G TT...G.  A.....  ..................A.  .... ......
Kern217     CCG..CA........AGAC..G..................A|.........T....G TT...G.  A.....  ..................A.  .... .
CoaV608     CCG..CA........AGAC..G..................A|.........T....G TT...G.  A.....  ..................A.  .... ......
TBH-28      CCG..C.........AGAC..G..................A|.........T....G TT...G.  A.....  ..................A.  .... .
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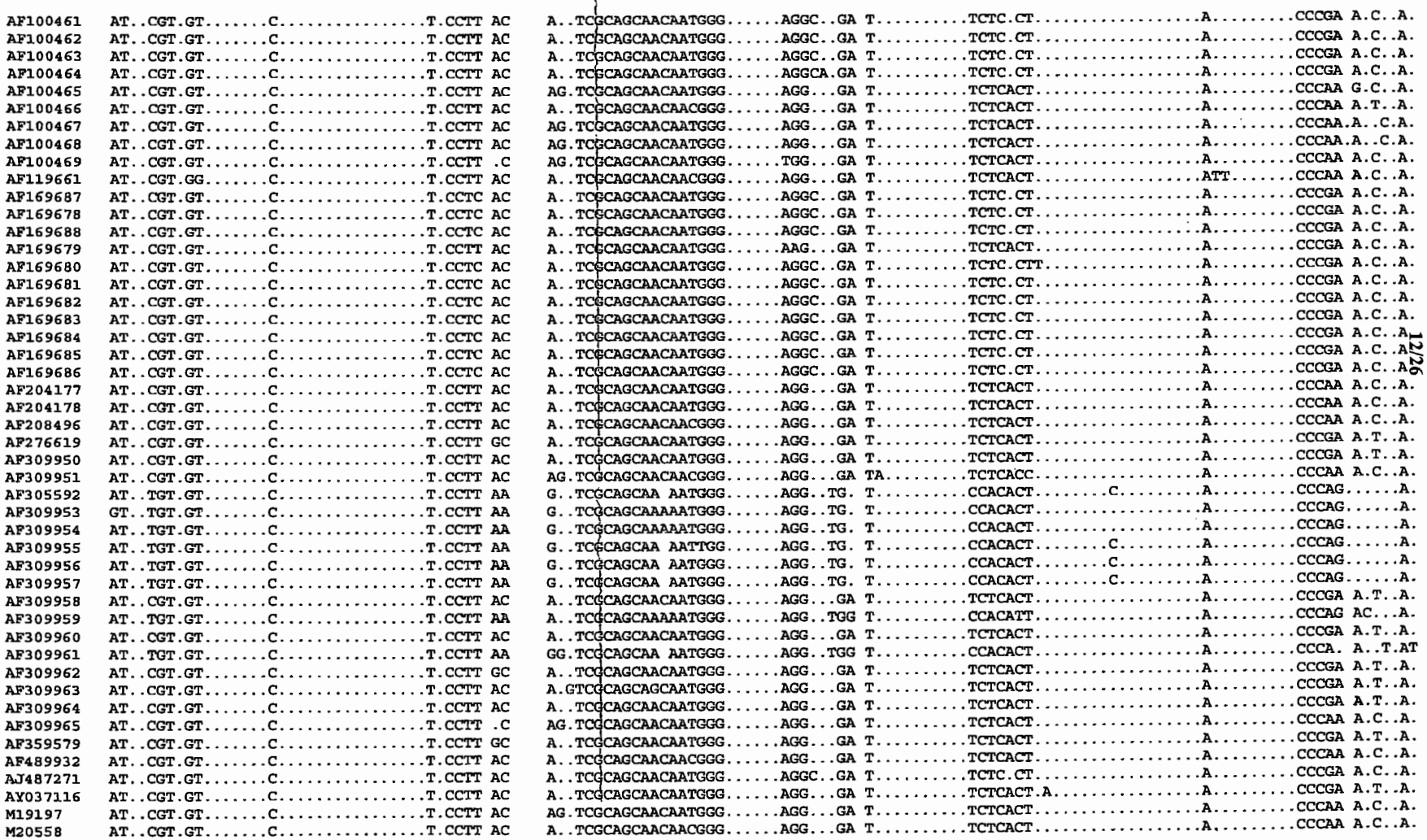
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VR1265      CCG..C.........AGAC..G.................A.........T....G TC...G.  A.....  ..................A.  ..
CoaV353     CCG..C.........AGAC..G.................A.........T....G TT...G.  A.....  ..................A.  .... ......
MVEV
VR77        .CG.C .........A.G.G..T...C.............A.........ACT.T .....G .AT... .C.....................AA..........
AF161266    .CG.C .........A.G.G..T...C.............A.........ACT.T .....G .AT... .C.....................AA..........
M35172      .CG.C .........A.G.G..T...C.............A.........ACT.T .....G .AT... .C.....................AA.......
```

## FIGURE 3*


SEQ ID 70 CCCCCTTCCTGATCTCCAATCTCCTCTGGG
ID 28 GGACTAGAGGTTAGAGGAGACCCCGCGG
AF196835 CAG CGCGG TT TAAAGT GC A CGGCCCAGCCTGACT GAAGCTGTAGGTCA CCCCCTTCCTGATCTCCAATCTCCTCTGGG (←)
GGACTAGAGGTTAGAGGAGACCCCGCGG (→)
CGTGCCACAAAACA
West Nile virus
AF260967
AF260968
AF260969
AF481864
M12294 .....A...G.....T AAA
AF206518
AF317203
AF202541
AF404757
AF404753
AF404754
AF404755
AF404756
AF017254
AF208017 .....A...G.....T.....A..T .AA
AF533540
AY262283
AY277251 ..A..A...G.....C.....T...CATA.AG
AY277252
AY278441
AY278442
AY268132
AY268133
AY490240
Kunjin virus
AY274504 ...A.T.....T .C.
AY274505 ...A.T.....T .C.
L24512 ...A.T.....T .C.
Japanese encephalitis virus
AB051292 .TA..T.T.....T.. AAA C..CA TT .TG.....AG.CCC.. C.....G.AGG...T.....A.....CATTTGC.TCA.
AF014160 .GA..T.T.....T.. AAA C..CA A. .TG.....AG.CCC.. C.....AGG...T.....A.....CATTTGC.TCA.
AF014161 .GA..T.T.....T.. AAA C..CA A. .TG.....AG.CCC.. C.....AGG...T.....A.....CATTTGC.TCA.
AF045551 TTA..T.T.....T.. AAA C..AA TT .TG.....AG.CCC.. C.....AGG...T.T.....A.....CAATTTGC.T..
AF069076 .GA..T.T.....T.. AAA C..CA A. .TG.....AG.CCC.. C.....AGG...T.....A.....CATTTGC.TCA.
AF075723 .GA..T.T.....T.. AAA T..CA A. .TG.....AG.CCC.. C.....AGG...T.....A.....CATTTGC.TCA.
AF080251 .GA..T.T.....T.. AAA C..CA A. .TG.....AG.CCC.. C.....AGG...T.....A.....CATTTGC.TCA.
AF098735 .GA..T.T.....T.. AAA C..CA A. .TG.....AG.CTC.. C.....AGG...T.....A.....CATTTGC.TCA.
AF098736 .GA..T.T.....T.. AAA C..CA A. .TG.....AG.CCC.. C.....AGG...T.....A.....CATTTGC.TCA.
AF098737 .GA..T.T.....T.. AAA C..CA A. .TG.....AG.CCC.. C.....AGG...T.....A.....CATTTGC.TCA.
AF217620 .GA..T.T.....T.. AAA C..CA AT .TG.....AG..TC.. C.....AGG.A.T.....A.....CATTTGC.TCA.


AF221499 .GA..T.T.....T.. AAA C..TA A. .TG.....AG.CTC.. C.....AGG...T.....A.....CATTTGC.TCA.
AF221500 .GA..T.T.....T.. AAA C..TA A. .TG.....AG.CTC.. C.....AGG...T.....A.....CATTTGC.TCA.
AF254452 .GA..T.T.....T.. AAA C..CA A. .TG.....AG.CCC.. C.....AGG...T.....A.....CATTTGC.TCA.
AF254453 .GA..T.T.....T.. AAA C..CA A. .TG.....AG.CCC.. C.....AGG...T.....A.....CATTTGC.TCA.
AF315119 .GA..T.T.....T.. AAA C..CA A. .TG.....AG.CCC.. C.....AGG...T.....A.....CATTTGC.TCA.
AF416457 .GA..T.T.....T.. AAA C..CA A. .TG.....AG.CCC.. C.....AGG...T.....A.....CATTTGC.TCA.
AF486638 .GA..T.T.....T.. AAA C..CA A. .TG.....AG.CCC.. C.....AGG...T.....A.....CATTTGC.TCA.
U14163 .GA..T.T.....T.. AAA C..CA A. .TG.....AG.CCC.. C.....AGG...T.....A.....CATTTGC.TCA.
U15763 .GA..T.T.....T.. AAA C..CA A. .TG.....AG.CCC.. C.....AGG...T.....A.....CATTTGC.TCA.
L48961 .GA..T.T.....T.. AAA C..CA A. .TG.....AG.CTC.. C.....AGG...T.....A.....CATTTGC.TCA.
U47032 .GA..T.T.....T.. AAA C..CA A. .TG.....AG.CCC.. C.....AGG...T...G.....A.....CATTTGC.TCA.
M18370 .GA..T.T.....T.. AAA C..CA AT .TG.....AG.CCC.. C.....AGG...T.....A.....CATTTGC.TCA.
M55506 .GA..T.T.....T.. AAA C..CA A. .TG.....AG.CCC.. C.....AGG...T.....A.....CATTTGC.TCA.
L78128 .GA..T.T.....T.. AAA C..CA A. .TG.....AG.CCC.. C.....AGG...T.....A.....CATTTGC.TCA.
D90195 .GA..T.T.....T.. AAA C..CA AT .TG.....AG.CCC.. C.....AGG...T.....A.....CATTTGC.TCA.
D90194 .GA..T.T.....T.. AAA C..CA A. .TG.....AG.CCC.. C.....AGG...T.....A.....CATTTGC.TCA.
AF311748 .GA..T.T.....T.. AAA C..CA A. .TG.....AG.CCC.. C.....AGG...T.....A.....CATTTGC.TCA.
AY184212 .GA.AT.T.....T.. AAA C..CA A. .TG.....AG.CCCT. C.....AAG...T.....A.....CAT.TGC.TCA.
AY316157 .TA..T.T.....T.. AAA C..CA T. .TG.....AG.CCC.. C.....AGG...T.....A.....CAATTTGC.T.
AF306514 TTA..T.T.....T.. AAA C..AA TT .TG.....AG.CCC.. C.....AGG...T.T.....A.....A.....CAATTTGC.T.
AF306515 .GA..T.T.....T.. AAA C..AA AA .TG.....AG.CCC.. C.....AGG...T.....A.....CATTTGC.TCA
AF306516 .GA..T.T.....T.. AAA C..AA AA .TG.....AG.CCC.. C.....AGGG..T.....A.....CATTTGC.TCA.
AF306517 .GA..T.T.....T.. AAA C..AA AA .TG.....AG.CCC.. C.....AGG...T.....A.....CATTTGC.TCA.
St. Louis encephalitis virus
BFS1750 ..T....T.....T. CA .CTTG .. . A.....AA.CCG..C .....AGAC..G.....A.....T....GTT..CGC
1750-Std ..T....T.....T. CA .CTTG .. . A.....AA.CCG..C .....AGAC..G....
TD6-4G ..T....T.....T. CA .CTCG .. . A.....AA.CCG..C .....AGAT..G.....A.....T....GTT..CGC
CoaV750 ..T....T.....T. CA .CTTG .. . A....A.AA.CCG..C .....AGAT..G....
L695121.05 ..T....T.....T. .A .CTTG .. . A.....AA.CCG..C .....AGAC..G.....A.....T....GTT..CGC
TNM771K ..T....T.....T. .A .CTTG .. . A.....AA.CCG..C .....AGAC..G.....A.....T....GTT..CGC
MSI-7 ..T....T.....T. .A .CTTG .. . A.....AA.CCG..C A.....AGAC..G.....A.....T....GTT..CGC
Kern217 ..T....T.....T. .A .CTTG .. . A.....AA.CCG..C A.....AGAC..G.....A.....T....GTT..CGC
CoaV608 ..T....T.....T. .A .CTTG .. . A.....AA.CCG..C A.....AGAC..G.....A.....T....GTT..CGC
TBH-28 ..T....T.....T. .A .TTTG .. . A.....AA.CCG..C .....AGAC..G.....A.....T....GTT..CGC
VR1265 ..T....T.....T. .A .CTTG .. . A.....AA.CCG..C .....AGAC..G.....A.....T....GTC..CGC
CoaV353 ..T....T.....T. CA .CTTG .. . A.....AA.CCG..C .....AGAC..G.....A.....T....GTT..CGC
Murray Valley encephalitis virus
VR77 .CC..... .....T.... AAG ... . .A G T.....AG..CG.C .....A.G.G..T...C.....A.....ACT.T .....GC
AF161266 .CC..... .....T.... AAG ... . .A G T.....AG..CG.C .....A.G.G..T...C.....A.....ACT.T .....GC
M35172 .CC..... .....T.... AAG ... . .A G T.....AG..CG.C .....A.G.G..T...C.....A.....ACT.T .....GC
Dengue virus type 1
U88537 AT...GT.GCA.....T.....T.CCAAGAC AC..CGCAGCA GCGG.....A.ACC.GG G.....CCCTG.TG.T.....A.....CC..ACA.C....
U88536 AT...GT.GCA.....T.....T.CCAAGAC AC..CGCAGCA GCGG.....A.ACC.GG G.....CCCTG.TG.T.....A.....CC..ACA.C....
U88535 AT...GT.GCA.....T.....T.CCAAGAC AC..CGCAGCA GCGG.....A.ACC.GG G.....CCCTG.TG.T.....A.....CC..ACA.C....
M87512 AT...GT.GCA.....T.....T.CCAAAAC AT..CGCAGCA GCGG.....A.ACC.GG G.....TCCTG.TG.T.....A.....CG..ATA.C..T.
AY206457 AT...GT.GCA.....T.....T.CCAAGAC AC..CGCAGCA GCGG.....A.ACC.GG G.....CC.TG.TG.T.....A.....CC..ACA.C....
AY145123 AT...GT.GCA.....T.....T.CCAAGAC AC..CGCAGCA GCGG.....A.....A.....CC..ACA.C....


AY145122 AT...GT.GCA.....T.....T.CCAAGAC AC..CGCAGCA GCGG.....AG.CAGGA G.....CTC.T..T.....A.....CC..ACA.C....
AY145121 AT...GT.GCA.....T.....T.CCAAGAC AC..CGCAGCA GCGG.....AG.CAGGA G.....CTC.T..T.....A.....CC..ACA.C....
AF514889 AT...GT.GCA.....T.....T.CCAAGAC AC..CGCAGCA GCGG.....A.ACC.GG G.....CC.TG.TG.T.....A.....CC..ACA.C....
AF514885 AT...GT.GCA.....T.....T.CCTAGAC AT..CGCAGCA GCGG.....A.ACC.TG G.....CC.TG.TG.T.....A.....CC..ATA.C....
AF514883 AT...GT.GCA.....T.....T.CCTAGAC AT..CGCAGCA GCGG.....A.ACC.TG G.....CC.TG.TG.T.....A.....CC..ATA.C....
AF514878 AT...GT.GCA.....T.....T.CCAAGAC AC..CGCAGCA GCGG.....A.ACC.GG G.....CC.TG.TG.T.....A.....CC..ACA.C....
AF514876 AT...GT.GCA.....T.....T.CCTAGAC AT..CGCAGCA GCGG.....A.ACC.TG G.....CC.TG.TG.T.....A.....CC..ATA.C....
AF513110 AT...GT.GCA.....T.....T.CCAAGAC AT..CGCAGCA GCGG.....A.ACC.GG G.....CC.TG.TG.T.....A.....CC..ACA.C....
AF350498 AT...GT.GCA.....T.....T.CCAAAAC AC..CGCAGCA GCGG.....A.ACC.GG G.....CCCTG.TG.T.....A.....CC..ATA.C..T.
AF311958 AT...GT.GCA.....T.....T.CCTAGAC AT..CGCAGCA GCGG.....A.ACC.TG G.....CC.TG.TG.T.....A.....CC..TCA.C....
AF311957 AT...GT.GCA.....T.....T.CCTAGAC AT..CGCAGCA GCGG.....A.ACC.TG G.....CC.TG.TG.T.....A.....CC..ACA.C....
AF311956 AT...GT.GCA.....T.....T.CCTAGAC AT..CGCAGCA GCGG.....A.ACC.TG G.....CC.TG.TG.T.....A.....CC..ACA.C....
AF310148 AT...GT.GCA.....T.....T.CCAAGAC AT..CGCAGCA GCGG.....A.ACC.GG G.....CCCTG.TG.T.....
AF310147 AT...GT.GCA.....T.....T.CCAAAAC AC..CGCAGCA GCGG.....A.ACC.GG G.....CCCTG.TG.T.....A.....CC..ATA.C..T.
AF310146 AT...GT.GCA.....T.....T.CCTAGAC AT..CGCAGCA GCGG.....A.ACC.TG G.....CC.TG.TG.T.....A.....CC..ACA.C....
AF309641 AT...GT.GCA.....T.....T.CCGAAAC AT..CGCAGCA GCGG.....A.ACC.GG G.....CCCTG.TG.T.....A.....CC..ATA.C..T.
AF298808 AT...GT.GCA.....T.....T.CCAAAAC AC..CGCAGCA GCGG.....A.ACT.GG G..T.....CCCTG.TG.T.....A.....CC..ATA.C..T.
AF298807 AT...GT.GCA.....T.....T.CCAAAAC AT..CGCAGCA GCGG.....A.ACC.GG G.....CCCTG.TG.T.....A.....CC..ACA.C....
AF226687 AT...GT.GCA.....T.....T.CCAAGAC AT..CGCAGCA GCGG.....A.ACC.GG G.....CC.TG.TG.T.....A.....CC..ACA.C....
AF226686 AT...GT.GCA.....T.....T.CCAAGAC AT..CGCAGCA GCGG.....A.ACC.GG G.....CC.TG.TG.T.....A.....CC..ACA.C....
AF226685 AT...GT.GCA.....T.....T.CCTAGAC AT..CGCAGCA GCGG.....A.ACC.TG G.....CC.TG.TG.T.....A.....CC..ACA.C....
AF180818 AT...GT.GCA.....T.....T.CCAAGAC AC..CGCAGCA GCGG.....A.ACC.GG G.....CCCTG.TG.T.....A.....CC..GTA.C..T.
AF180817 AT...GT.GCA.....T.....T.CCAAGAC AC..CGCAGCA GCGG.....A.ACC.GG G.....CCCTG.TG.T.....A.....CC..GTA.C..T.
AB074761 AT...GTTGCA.....T.....T.CCAAGAC AC..CGCAGCA GCGG.....A.ACC.GG GA.....CCCTG.TG.T.....A.....CC..ATA.T..T.
AB074760 AT...GT.GCA.....T.....T.CCAAAAC AC..CGCAGCA GCGG.....A.ACC.GG G.....CCCTG.TG.T.....A.....CC..ATA.C..T.
VR344-3 AT...GT.GCA.....AT.....T.CCAAGAC AC..CGCAGCA GCGG.....A.ACC.GG G.....CCCTG.TG.T.....A.....CC..ATA.C..T.
Dengue virus type 2
AF022434 AT..CGT.GT.....C.....T.CCTT AC A..TCGCAGCAACAATGGG.....AGGC..GA T.....TCTC.CT.....A.....CCCGA A.C.GA.
AF022435 AT..CGT.GT.....C.....T.CCTC AC A..TCGCAGCAACAATGGG.....AGGC..GA T.....TCTC.CT.....A.....CCCGA A.C..A.
AF022436 AT..CGT.GT.....C.....T.CCTC AC A..TCGCAGCAACAATGGG.....AGGC..GA T.....TCTC.CT.....A.....CCCGA A.C..A.
AF022437 AT..CGT.GT.....C.....T.CCTT AC A..TCGCAGCAACAATGGG.....AGGC..GA T.....TCTC.CT.....A.....CCCGA A.C..A.
AF022438 AT..CGT.GT.....C.....T.CCTT AC A..TCGCAGCAACAATGGG.....AGGC..GA T.....TCTC.CT.....A.....CCCGA A.C..A.
AF022439 AT..CGT.GT.....C.....T.CCTT AC A..TCGCAGCAACAATGGG.....AGGC..GA T.....TCTC.CT.....A.....A.....CCCGA A.C..A.
AF022440 AT..CGT.GT.....C.....T.CCTC AC A..TCGCAGCAACAATGGG.....AGGC..GA T.....TCTC.CT.....A.....CCCGA A.C..A.
AF022441 AT..CGT.GT.....C.....T.CCTC AC A..TCGCAGCAACAATGGG.....AGGC..GA T.....TCTC.CT.....A.....CCCGA A.C..A.
AF038402 AT..CGT.GT.....C.....T.CCTT AC A..TCGCAGCAACAATGGG.....AGG...GA T.....TCTCACT.....A.....CCCAA A.C..A.
AF038403 AT..CGT.GT.....C.....T.CCTT AC A..TCGCAGCAACAATGGG.....AGG...GA T.....TCTCACT.....A.....CCCAA A.C..A.
AF100145 AT..CGT.GT.....C.....T.CCTT AC A..TCGCAGCAACAACGGG.....AGG...GA T.....TCTCACT.....A.....CCCAA A.T..A.
AF100146 AT..CGT.GT.....C.....T.CCTT AC A..TCGCAGCAACAATGGG.....AGGC..GA T.....TCTC.CT.....A.....CCCGA AGC..A.
AF100147 AT..CGT.GT.....C.....T.CCTT AC A..TCGCAGCAACAATGGG.....AGGC..GA T.....TCTC.CT.....A.....CCCGA A.C..A.
AF100148 AT..TGT.GT.....C.....T.CCTT .C AG.TCGCAGCAACAATGGG.....AGG...GA T.....TCTCACT.....A.....CCCAA A.C..A.
AF100149 AT..CGT.GT.....C.....T.CCTT AC AG.TCGCAGCAACAATGGG.....AGG...GA T.....CCTCACT.....A.....CCCAA A.C..A.
AF100150 AT..CGT.GT.....C.....T.CCTT AC A..TCGCAGCAACAACGGG.....AGG...GA T.....TCTCACT.....A.....CCCAA A.C..A.
AF100151 AT..CGT.GT.....C.....T.CCTT AC AG.TCGCAGCAACAATGGG.....AGG...GA T.....TCTCACT.....A.....CCCAA G.C..A.
AF100458 AT..CGT.GT.....C.....T.CCTT AC AG.TCGCAGCAACAATGGG.....AGG...GA T.....TCTCACT.....A.....CCCAA.A.C..A.
AF100459 AT..CGT.GT.....C.....T.CCTT AC A..TCGCAGCAACAATGGG.....AGGC..GA T.....TCTC.CT.....A.....CCCGA A.C..A.
AF100460 AT..CGT.GT.....C.....T.CCTT AC A..TCGCAGCAACAATGGG.....AGGC..GA T.....TCTC.CT.....A.....CCCGA A.C..A.


AF100461 AT..CGT.GT.....C.....T.CCTT AC A..TCGCAGCAACAATGGG.....AGGC..GA T.....TCTC.CT.....A.....CCCGA A.C..A.
AF100462 AT..CGT.GT.....C.....T.CCTT AC A..TCGCAGCAACAATGGG.....AGGC..GA T.....TCTC.CT.....A.....CCCGA A.C..A.
AF100463 AT..CGT.GT.....C.....T.CCTT AC A..TCGCAGCAACAATGGG.....AGGC..GA T.....TCTC.CT.....A.....CCCGA A.C..A.
AF100464 AT..CGT.GT.....C.....T.CCTT AC A..TCGCAGCAACAATGGG.....AGGCA.GA T.....TCTC.CT.....A.....CCCGA A.C..A.
AF100465 AT..CGT.GT.....C.....T.CCTT AC AG.TCGCAGCAACAATGGG.....AGG...GA T.....TCTCACT.....A.....CCCAA G.C..A.
AF100466 AT..CGT.GT.....C.....T.CCTT AC A..TCGCAGCAACAACGGG.....AGG...GA T.....TCTCACT.....A.....CCCAA A.T..A.
AF100467 AT..CGT.GT.....C.....T.CCTT AC AG.TCGCAGCAACAATGGG.....AGG...GA T.....TCTCACT.....A.....CCCAA.A..C.A.
AF100468 AT..CGT.GT.....C.....T.CCTT AC AG.TCGCAGCAACAATGGG.....AGG...GA T.....TCTCACT.....A.....CCCAA.A..C.A.
AF100469 AT..CGT.GT.....C.....T.CCTT .C AG.TCGCAGCAACAATGGG.....TGG...GA T.....TCTCACT.....A.....CCCAA A.C..A.
AF119661 AT..CGT.GG.....C.....T.CCTT AC A..TCGCAGCAACAACGGG.....AGG...GA T.....TCTCACT.....ATT.....CCCAA A.C..A.
AF169687 AT..CGT.GT.....C.....T.CCTC AC A..TCGCAGCAACAATGGG.....AGGC..GA T.....TCTC.CT.....A.....CCCGA A.C..A.
AF169678 AT..CGT.GT.....C.....T.CCTC AC A..TCGCAGCAACAATGGG.....AGGC..GA T.....TCTC.CT.....A.....CCCGA A.C..A.
AF169688 AT..CGT.GT.....C.....T.CCTC AC A..TCGCAGCAACAATGGG.....AGGC..GA T.....TCTC.CT.....A.....CCCGA A.C..A.
AF169679 AT..CGT.GT.....C.....T.CCTT AC A..TCGCAGCAACAATGGG.....AAG...GA T.....TCTCACT.....A.....CCCGA A.C..A.
AF169680 AT..CGT.GT.....C.....T.CCTC AC A..TCGCAGCAACAATGGG.....AGGC..GA T.....TCTC.CTT.....A.....CCCGA A.C..A.
AF169681 AT..CGT.GT.....C.....T.CCTC AC A..TCGCAGCAACAATGGG.....AGGC..GA T.....TCTC.CT.....A.....CCCGA A.C..A.
AF169682 AT..CGT.GT.....C.....T.CCTC AC A..TCGCAGCAACAATGGG.....AGGC..GA T.....TCTC.CT.....A.....CCCGA A.C..A.
AF169683 AT..CGT.GT.....C.....T.CCTC AC A..TCGCAGCAACAATGGG.....AGGC..GA T.....TCTC.CT.....A.....CCCGA A.C..A.
AF169684 AT..CGT.GT.....C.....T.CCTC AC A..TCGCAGCAACAATGGG.....AGGC..GA T.....TCTC.CT.....A.....CCCGA A.C..A.
AF169685 AT..CGT.GT.....C.....T.CCTC AC A..TCGCAGCAACAATGGG.....AGGC..GA T.....TCTC.CT.....A.....CCCGA A.C..A.
AF169686 AT..CGT.GT.....C.....T.CCTC AC A..TCGCAGCAACAATGGG.....AGGC..GA T.....TCTC.CT.....A.....CCCGA A.C..A.
AF204177 AT..CGT.GT.....C.....T.CCTT AC A..TCGCAGCAACAATGGG.....AGG...GA T.....TCTCACT.....A.....CCCAA A.C..A.
AF204178 AT..CGT.GT.....C.....T.CCTT AC A..TCGCAGCAACAATGGG.....AGG...GA T.....TCTCACT.....A.....CCCAA A.C..A.
AF208496 AT..CGT.GT.....C.....T.CCTT AC A..TCGCAGCAACAACGGG.....AGG...GA T.....TCTCACT.....A.....CCCAA A.C..A.
AF276619 AT..CGT.GT.....C.....T.CCTT GC A..TCGCAGCAACAATGGG.....AGG...GA T.....TCTCACT.....A.....CCCGA A.T..A.
AF309950 AT..CGT.GT.....C.....T.CCTT AC A..TCGCAGCAACAATGGG.....AGG...GA T.....TCTCACT.....A.....CCCGA A.T..A.
AF309951 AT..CGT.GT.....C.....T.CCTT AC AG.TCGCAGCAACAACGGG.....AGG...GA TA.....TCTCACC.....A.....CCCAA A.C..A.
AF305592 AT..TGT.GT.....C.....T.CCTT AA G..TCGCAGCAA AATGGG.....AGG..TG. T.....CCACACT.....C.....A.....CCCAG.....A.
AF309953 GT..TGT.GT.....C.....T.CCTT AA G..TCGCAGCAAAAATGGG.....AGG..TG. T.....CCACACT.....A.....CCCAG.....A.
AF309954 AT..TGT.GT.....C.....T.CCTT AA G..TCGCAGCAAAAATGGG.....AGG..TG. T.....CCACACT.....A.....CCCAG.....A.
AF309955 AT..TGT.GT.....C.....T.CCTT AA G..TCGCAGCAA AATTGG.....AGG..TG. T.....CCACACT.....C.....A.....CCCAG.....A.
AF309956 AT..TGT.GT.....C.....T.CCTT AA G..TCGCAGCAA AATGGG.....AGG..TG. T.....CCACACT.....C.....A.....CCCAG.....A.
AF309957 AT..TGT.GT.....C.....T.CCTT AA G..TCGCAGCAA AATGGG.....AGG..TG. T.....CCACACT.....C.....A.....CCCAG.....A.
AF309958 AT..CGT.GT.....C.....T.CCTT AC A..TCGCAGCAACAATGGG.....AGG...GA T.....TCTCACT.....A.....CCCGA A.T..A.
AF309959 AT..TGT.GT.....C.....T.CCTT AA A..TCGCAGCAAAAATGGG.....AGG..TGG T.....CCACATT.....A.....CCCAG AC...A.
AF309960 AT..CGT.GT.....C.....T.CCTT AC A..TCGCAGCAACAATGGG.....AGG...GA T.....TCTCACT.....A.....CCCGA A.T..A.
AF309961 AT..TGT.GT.....C.....T.CCTT AA GG.TCGCAGCAA AATGGG.....AGG..TGG T.....CCACACT.....A.....CCCA. A..T.AT
AF309962 AT..CGT.GT.....C.....T.CCTT GC A..TCGCAGCAACAATGGG.....AGG...GA T.....TCTCACT.....A.....CCCGA A.T..A.
AF309963 AT..CGT.GT.....C.....T.CCTT AC A.GTCGCAGCAGCAATGGG.....AGG...GA T.....TCTCACT.....A.....CCCGA A.T..A.
AF309964 AT..CGT.GT.....C.....T.CCTT AC A..TCGCAGCAACAATGGG.....AGG...GA T.....TCTCACT.....A.....CCCGA A.T..A.
AF309965 AT..CGT.GT.....C.....T.CCTT .C AG.TCGCAGCAACAATGGG.....AGG...GA T.....TCTCACT.....A.....CCCAA A.C..A.
AF359579 AT..CGT.GT.....C.....T.CCTT GC A..TCGCAGCAACAATGGG.....AGG...GA T.....TCTCACT.....A.....CCCGA A.T..A.
AF489932 AT..CGT.GT.....C.....T.CCTT AC A..TCGCAGCAACAACGGG.....AGG...GA T.....TCTCACT.....A.....CCCAA A.C..A.
AJ487271 AT..CGT.GT.....C.....T.CCTT AC A..TCGCAGCAACAATGGG.....AGGC..GA T.....TCTC.CT.....A.....CCCGA A.C..A.
AY037116 AT..CGT.GT.....C.....T.CCTT AC A..TCGCAGCAACAATGGG.....AGG...GA T.....TCTCACT.A.....A.....CCCGA A.T..A.
M19197 AT..CGT.GT.....C.....T.CCTT AC AG.TCGCAGCAACAATGGG.....AGG...GA T.....TCTCACT.....A.....CCCAA A.C..A.
M20558 AT..CGT.GT.....C.....T.CCTT AC A..TCGCAGCAACAACGGG.....AGG...GA T.....TCTCACT.....A.....CCCAA A.C..A.

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M29095      AT..CGT.GT.......C.................T.CCTT AC    A..TCGCAGCAACAATGGG......AGG...GA T..........TCTCACT.....................A.........CCCAA A.C..A.
M84727      AT..CGT.GT.......C.................T.CCTT AC    A..TCGCAGCAACAATGGG......AGGC..GA T..........TCTC.CT.....................A.........CCCGA A.C..A.
M84728      AT..CGT.GT.......C.................T.CCTT AC    A..TCGCAGCAACAATGGG......AGGC..GA T..........TCTC.CT.....................A.........CCCGA A.C..A.
U61245      AT..CGT.GT.......C.................T.CCTT AC    A..TCGCAGCAACAATGGG......AGGC..GA T..........TCTC.CT.....................A.........CCCGA A.C.GA.
U61246      AT..CGT.GT.......C.................T.CCTC AC    A..TCGCAGCAACAATGGG......AGGC..GA T..........TCTC.CT.....................A.........CCCGA A.C..A.
U61247      AT..CGT.GT.......C.................T.CCTC AC    A..TCGCAGCAACAATGGG......AGGC..GA T..........TCTC.CT.....................A.........CCCGA A.C..A.
U61248      AT..CGT.GT.......C.................T.CCTT AC    A..TCGCAGCAACAATGGG......AGGC..GA T..........TCTC.CT.....................A.........CCCGA A.C..A.
U87411      AT..CGT.GT.......C.................T.CCTT AC    A..TCGCAGCAACAATGGG......AGGC..GA T..........TCTC.CT.....................A.........CCCGA A.C..A.
U87412      AT..CGT.GT.......C.................T.CCTT AC    A..TCGCAGCAACAATGGG......AGGC..GA T..........TCTC.CT.....................A.........CCCGA A.C..A.
VR345-2     AT..CGT.GT.......C.................T.CCTT AC    A..TCGCAGCAACAATGGG......AGGC..GA T..........TC.C.CT.....................A.........CCCGA A.C..A.
Dengue virus type 3
AF310149    AC..TGT.GCA......C.................T.CCATGAC    AC..CGCAGCA    GCGG.....GAG.ACTGAGG.........CC..CTTGCA.....................A.........CC..A A.T.. .
M93130      AC..TGT.GCA......T.................T.CCATGAC    AC..CGCAGCA    GCGG.....GAG.ACTGAGG.........CC..CTTGCA.....................TA........CC..A A.C.. .
AF317645    AC..TGT.GCA......T.................T.CCATGAC    AC..CGCAGCA    GCGG.....GAG.ACTGAGG.........CC..CTTGCA.....................TA........CC..A A.C.. .
AY099336    AC..TGT.GCA......C.................T.CCATGAC    AC..CGCAGCA    GCGG.....GAG.ACTGAGG.........CC..CTTGCA.....................A.........CC..A A.T.. .
AY099337    AC..TGT.GCA......C.................T.CCATGAC    AC..CGCAGCA    GCGG.....GAG.ACTGAGG.........CC..CTTGCA.....................A.........CC..A A.T.. .
AY099343    AC..TGT.GCA......C.................T.CCATGAC    AC..CGCAGCA    GCGG.....GAG.ACTGAGG.........CC..CTTGCA.....................A.........CC..A A.T.. .
AY099344    AC..TGT.GCA......C.................T.CCATGAC    AC..CGCAGCA    GCGG.....GAG.ACTGAGG.........CC..CTTGCA.....................A.........CC..A A.T.. .
AY099345    AC..TGT.GCA......C.................T.CCATGAC    AC..CGCAGCA    GCGG.....GAG.ACTGAGG.........CC..CTTGCA.....................A.........CC..A A.T.. .
AY099346    AC..TGT.GCA......C.................T.CCATGAC    AC..CGCAGCA    GCGG.....GAG.ACTGAGG.........CC..CTTGCA.....................A.........CC..A A.T.. .
AY099347    AC..TGT.GCA......C.................T.CCATGAC    AC..CGCAGCA    GCGG.....GAG.ACTGAGG.........CC..CTTGCA.....................A.........CC..A A.T.. .
VR1256-3    AC..TGT.GCA......T.................T.CCATGAC    AC..CGCAGCA    GCGG.....GAG.ACTGAGG.........CC..CTTGCA.....................TA........CC..A A.C.. .
VR1256-5    AC..TGT.GCA......T.................T.CCATGAC    AC..CGCAGCA    GCGG.....GAG.ACTGAGG.........CC..CTTGCA.....................TA........CC..A A.C.. .
Dengue virus type 4
M14931      GT..CAT.TT.......C.................T.CCATCACTGACA...CGCAGCA  AA.GGG.....GAAGCC.GGAG.........CTC.T..T.....................A.........CCCAACA C..
AF289029    GT..CAT.TT.......C.................T.CCATCACCAACA...CGCAGCAAAAA.GGG.....GAAGCC.GGAG.........CTC.T..T.....................A.........CCCAACA C.. .
AF310150    GT..CAT.TT.......T.................T.CCATTA.CAACA.. CGCAGCAC AA.GGG.....GAAG.C.GGAT.........CTC.T.AT.......
AF310152    GT..CAT.TT.......T.................T.CCATTA.CAACA.. CGCAGCAC AA.GGG.....GAAG.C.GGAT.........CTC.T.AT.......
AF310153    GT..CAT.TT.......C.................T.CCATCACTGACA...CGCAGCA  AA.GGG.....GAAGCC.GGAG.........CTC.T..T.....................A.........CCCAACA C.. .
AF326573    GT..CAT.TT.......C.................T.CCATCACTGACA...CGCAGCA  AA.GGG.....GAAGCC.GGAG.........CTC.T..T.....................A.........CCCAACA C.. .
AF326825    GT..CAT.TT.......C.................T.CCATCACTGATA...CGCAGCA  AA.GGG.....GAAGCC.GGAG.........CTC.T..T.....................A.........CCCAACA C.. .
AF326826    GT..CAT.TT.......C.................T.CCATCACTGACA...CGCAGCA  AA.GGG......A                                  .............A.........CCCAACA C.. .
AF326827    GT..CAT.TT.......C.................T.CCATCACTGACA...CGCAGCA  AA.GGG......A                                  .............A.........CCCAACA C.. .
AF375822    GT..CAT.TT.......C.................T.CCATCACTGACA...CGCAGCA  AA.GGG.....GAAGCC.GGAG.........CTC.T..T.....................A.........CCCAACA C.. .
AY152039    GT..CAT.TT.......C.................T.CCATCACTGACA...CGCAGCA  AA.GGG.....GAAGCC.GGAG.........CTC.T..T.....................A.........CCCAACA C.. .
AY152043    GT..CAT.TT.......C.................T.CCATCACTGACA...CGCAGCA  AA.GGG.....GAAGCC.GGAG.........CTC.T..T.....................A.........CCCAACA C.. .
AY152047    GT..CAT.TT.......C.................T.CCATCACTGACA...CGCAGCA  AA.GGG.....GAAGCC.GGAG.........CTC.T..T.....................A.........CCCAACA C.. .
AY152051    GT..CAT.TT.......C.................T.CCATCACTGACA...CGCAGCA  AA.GGG.....GAAGCC.GGAG.........CTC.T..T.....................A.........CCCAACA C.. .
AY152055    GT..CAT.TT.......C.................T.CCATCACTGACA...CGCAGCA  AA.GGG.....GAAGCC.GGAG.........CTC.T..T.....................A.........CCCAACA C.. .
AY152059    GT..CAT.TT.......C.................T.CCATCACTGACA...CGCAGCA  AA.GGG.....GAAGCC.GGAG.........CTC.T..T.....................A.........CCCAACA C.. .
AY152063    GT..CAT.TT.......C.................T.CCATCACTGACA...CGCAGCA  AA.GGG.....GAAGCC.GGAG.........CTC.T..T.....................A.........CCCAACA C.. .
AY152067    GT..CAT.TT.......C.................T.CCATCACTGACA...CGCAGCA  AA.GGG.....GAAGCC.GGAG.........CTC.T..T.....................A.........CCCAACA C.. .
AY152071    GT..CAT.TT.......C.................T.CCATCACTGACA...CGCAGCA  AA.GGG.....GAAGCC.GGAG.........CTC.T..T.....................A.........CCCAACA C.. .
AY152075    GT..CAT.TT.......C.................T.CCATCACTGACA...CGCAGCA  AA.GGG.....GAAGCC.GGAG.........CTC.T..T.....................A.........CCCAACA C.. .
AY152079    GT..CAT.TT.......C.................T.CCATCACTGACA...CGCAGCA  AA.GGG.....GAAGCC.GGAG.........CTC.T..T.....................A.........CCCAACA C.. .
AY152083    GT..CAT.TT.......C.................T.CCACCACTGACA...CGCAGCA  AA.GGG.....GAAGCC.GGAG.........CTC.T..T.....................A.........CCCAACA C.. .
AY152087    GT..CAT.TT.......C.................T.CCATCACTGACA...CGCAGCA  AA.GGG.....GAAGCC.GGAG.........CTC.T..T.....................A.........CCCAACA C.. .
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AY152091  GT..CAT.TT.......C.................T.CCATCACTGACA...CGCAGCA  AA.GGG.....GAAGCC.GGAG.........CTC.T..T.................A.........CCCAACA C.. .
AY152095  GT..CAT.TT.......C.................T.CCATCACTGACA...CGCAGCA  AA.GGG.....GAAGCC.GGAG.........CTC.T..T.................A.........CCCAACA C.. .
AY152099  GT..CAT.TT.......C.................T.CCATCACTAACA...CGCAGCA  AA.GGG.....GAAGCC.GGAG.........CTC.T..T.................A.........CCCAACA C.. .
AY152103  GT..CAT.TT.......C.................T.CCATCACTGACA...CGCAGCA AAA.GGG.....GAAGCC.GGAG.........CTC.T..T.................A.........CCCAACA C.. .
AY152107  GT..TAT.TT.......C.................T.CCATCACTGACA...CGCAGCA  AA.GGG.....GAAGCC.GGAG.........CTC.T..T.................A.........CCCAACA C.. .
AY152111  GT..CAT.TT.......C.................T.CCATCACTGACA...CGCAGCA  AA.GGG.....GAAGCC.GGAG.........CTC.T..T.................A.........CCCAACA C.. .
AY152115  GT..CAT.TT.......C.................T.CCATCACTGACA...CGCAGCA  AA.GGG.....GAAGCC.GGAG.........CTC.T..T.................A.........CCCAACA C.. .
AY152119  GT..CAT.TT.......C.................T.CCATCACTGACA...CGCAGCA  AA.GGG.....GAAGCC.GGAG.........CTC.T..T.................A.........CCCAACA C.. .
AY152123  GT..CAT.TT.......C.................T.CCATCACTGACA...CGCAGCA  AA.GGG.....GAAGCC.GGAG.........CTC.T..T.................A.........CCCAACA C.. .
AY152127  GT..CAT.TT.......C.................T.CCATCACTGACA...CGCAGCA  AA.GGG.....GAAGCC.GGAG.........CTC.T..T.................A.........CCCAACA C.. .
AY152131  GT..CAT.TT.......C.................T.CCATCACTGACA...CGCAGCA  AA.GGG.....GAAGCC.GGAG.........CTC.T..T.................A.........CCCAACA C.. .
AY152135  GT..CAT.TT.......C.................T.CCATCACTGACA...CGCAGCA  AA.GGG.....GAAGCC.GGAG.........CTC.T..T.................A.........CCCAACA C.. .
AY152139  GT..CAT.TT.......C.................T.CCATCACTGACA...CGCAGCA  AA.GGG.....GAAGCC.GGAG.........CTC.T..T.................A.........CCCAACA C.. .
AY152143  GT..CAT.TT.......C.................T.CCATCACTGACA...CGCAGCA  AA.GGG.....GAAGCC.GGAG.........CTC.T..T.................A.........CCCAACA C..
AY152147  GT..CAT.TT.......C.................T.CCATCACTGACA...CGCAGCA  AA.GGG.....GAAGCC.GGAG.........CTC.T..T.................A.........CCCAACA C.. .
AY152151  GT..CAT.TT.......C.................T.CCATCACTGACA...CGCAGCA  AA.GGG.....GAAGCC.GGAG.........CTC.T..T.................A.........CCCAACA C.. .
AY152155  GT..CAT.TT.......C.................T.CCATCACTGACA...CGCAGCA AAA.GGG.....GAAGCC.GGAG.........CTC.T..T.................A.........CCCAACA C.. .
AY152159  GT..CAT.TT.......C.................T.CCATCACTGACA...CGCAGCA  AA.GGG.....GAAGCC.GGAG.........CTC.T..T.................A.........CCCAACA C.. .
AY152163  GT..CAT.TT.......C.................T.CCATCACTGACA...CGCAGCA  AA.GGG.....GAAGCC.GGAG.........CTC.T..T.................A.........CCCAACA C.. .
AY152167  GT..CAT.TT.......C.................T.CCATCACTGACA...CGCAGCA  AA.GGG.....GAAGCC.GGAG.........CTC.T..T.................A.........CCCAACA C.. .
AY152175  GT..CAT.TT.......C.................T.CCATCACTGACA...CGCAGCA  AA.GGG.....GAAGCC.GGAG.........CTC.T..T.................A.........CCCAACA C.. .
AY152179  GT..CAT.TT.......C.................T.CCATCACTGACA...CGCAGCA  AA.GGG.....GAAGCC.GGAG.........CTC.T..T.................A.........CCCAACA C.. .
AY152183  GT..CAT.TT.......C.................T.CCATCACTGACA...CGCAGCA  AA.GGG.....GAAGCC.GGAG.........CTC.T..T.................A.........CCCAACA C.. .
AY152187  GT..CAT.TT.......C.................T.CCATCACTGACA...CGCAGCA  AA.GGG.....GAAGCC.GGAG.........CTC.T..T.................A.........CCCAACA C.. .
AY152191  GT..CAT.TT.......C.................T.CCATCACTGACA...CGCAGCA  AA.GGG.....GAAGCC.GGAG.........CTC.T..T.................A.........CCCAACA C.. .
AY152195  GT..CAT.TT.......C.................T.CCATCACTGACA...CGCAGCA  AA.GGG.....GAAGCC.GGAG.........CTC.T..T.................A.........CCCAACA C.. .
AY152199  GT..CAT.TT.......C.................T.CCATCACTGACA...CGCAGCA  AA.GGG.....GAAGCC.GGAG.........CTC.T..T................TA.........CCCAACA C.. .
AY152203  GT..CAT.TT.......C.................T.CCATCACTGACA...CGCAGCA  AA.GGG.....GAAGCC.GGAG.........CTC.T..T.................A.........CCCAACA C.. .
AY152207  GT..CAT.TT.......C.................T.CCATCACTGACA...CGCAGCA  AA.GGG.....GAAGCC.GGAG.........CTC.T..T.................A.........CCCAACA C.. .
AY152211  GT..CAT.TT.......C.................T.CCATCACTGACA...CGCAGCA  AA.GGG.....GAAGCC.GGAG.........CTC.T..T.................A.........CCCAACA C.. .
AY152215  GT..CAT.TT.......C.................T.CCATCACTGACA...CGCAGCA  AA.GGG.....GAAGCC.GGAG.........CTC.T..T.................A.........CCCAACA C.. .
AY152219  GT..CAT.TT.......C.................T.CCATCACTGACA...CGCAGCA  AA.GGG.....GAAGCC.GGAG.........CTC.T..T.................A.........CCCAACA C.. .
AY152223  GT..CAT.TT.......C.................T.CCATCACTGACA...CGCAGCA  AA.GGG.....GAAGCC.GGAG.........CTC.T..T.................A.........CCCAACA C.. .
AY152227  GT..CAT.TT.......C.................T.CCATCACTGACA...CGCAGCA  AA.GGG.....GAAGCC.GGAG.........CTC.T..T.................A.........CCCAACA C.. .
AY152231  GT..CAT.TT.......C.................T.CCATCACTGACA...CGCAGCA  AA.GGG.....GAAGCC.GGAG.........CTC.T..T.................A.........CCCAACA C.. .
AY152235  GT..CAT.TT.......C.................T.CCATCACTGACA...CGCAGCA  AA.GGG.....GAAGCC.GGAG.........CTC.T..T.................A.........CCCAACA C.. .
AY152239  GT..CAT.TT.......C.................T.CCATCACTGACA...CGCAGCA  AA.GGG.....GAAGCC.GGAG.........CTC.T..T.................A.........CCCAACA C.. .
AY152243  GT..CAT.TT.......C.................T.CCATCACTGACA...CGCAGCA  AA.GGG.....GAAGCC.GGAG.........CTC.T..T.................A.........CCCAACA C.. .
AY152247  GT..CAT.TT.......T.................T.CCATCACTGACA...CGCAGCA  AA.GGG.....GAAGCC.GGAG.........CTC.T..T.................A.........CCCAACA C.. .
AY152251  GT..CAT.TT.......C.................T.CCATCACTGACA...CGCAGCA  AA.GGG.....GAAGCC.GGAG.........CTC.T..T.................A.........CCCAACA C.. .
AY152255  GT..CAT.TT.......C.................T.CCATCACTGACA...CGCAGCA  AA.GGG.....GAAGCC.GGAG.........CTC.T..T.................A.........CCCAACA C.. .
AY152259  GT..CAT.TT.......C.................T.CCATCACTGACA...CGCAGCA  AA.GGG.....GAAGCC.GGAG.........CTC.T..T.................A.........CCCAACA C.. .
AY152263  GT..CAT.TT.......C.................T.CCATCACTGACA...CGCAGCA  AA.GGG.....GAAGCC.GGAG.........CTC.T..T.................A.........CCCAACA C.. .
AY152267  GT..CAT.TT.......C.................T.CCATCACTGACA...CGCAGCA  AA.GGG.....GAAGCC.GGAG.........CTC.T..T.................A.........CCCAACA C.. .
AY152271  GT..CAT.TT.......C.................T.CCATCACTGACA...CGCAGCA  AA.GGG.....GAAGCC.GGAG.........CTC.T..T.................A.........CCCAACA C.. .
AY152275  GT..CAT.TT.......C.................T.CCATCACTGACA...CGCAGCA  AA.GGG.....GAAGCC.GGAG.........CTC.T..T.................A.........CCCAACA C.. .
AY152279  GT..CAT.TT.......C.................T.CCATCACTGACA...CGCAGCA AAA.GGG.....GAAGCC.GGAG.........CTC.T..T.................A.........CCCAACA C.. .
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AY152283   GT..CAT.TT.......C.................T.CCATCACTGACA...CGCAGCA  AA.GGG.....GAAGCC.GGAG.........CTC.T..T.....................A.........CCCAACA C.. .
AY152287   GT..CAT.TT.......C.................T.CCATGACTGACA...CGCAGCA  AA.GGG.....GAAGCC.GGAG.........CTC.T..T.....................A.........CCCAACA C.. .
AY152291   GT..CAT.TT.......C.................T.CCATCACTGACA...CGCAGCA  AA.GGG.....GAAGCC.GGAG.........CTC.T..T.....................A.........CCCAACA C.. .
AY152295   GT..CAT.TT.......C.................T.CCATCACTGACA...ACGCA..  AGA.GGG.....GAAGCC.GGAG.........CTC.T..T.....................A.........CCCAACA C..
AY152299   GT..CAT.TT.......C.................T.CCATCACTGACA...CGCAGCA  AA.GGG.....GAAGCC.GGAG.........CTC.T..T.....................A.........CCCAACA C.. .
AY152303   GT..CAT.TT.......C.................T.CCATCACTGACA...CGCAGCA  AA.GGG.....GAAGCC.GGAG.........CTC.T..T.....................A.........CCCAACA C.. .
AY152307   GT..CAT.TT.......C.................T.CCATCACTGACA...CGCAGCA  AA.GGG.....GAAGCC.GGAG.........CTC.T..T.....................A.........CCCAACA C.. .
AY152311   GT..CAT.TT.......C.................T.CCATCACTGACA...CGCAGCA  AA.GGG.....GAAGCC.GGAG.........CTC.T..T.....................A.........CCCAACA C.. .
AY152315   GT..CAT.TT.......C.................T.CCATCACTGACA...CGCAGCA  AA.GGG.....GAAGCC.GGAG.........CTC.T..T.....................A.........CCCAACA C.. .
AY152319   GT..CAT.TT.......C.................T.CCATCACTGACA...CGCAGCA  AA.GGG.....GAAGCC.GGAG.........CTC.T..T.....................A.........CCCAACA C.. .
AY152323   GT..CAT.TT.......C.................T.CCATCACTGACA...CGCAGCA  AA.GGG.....GAAGCC.GGAG.........CTC.T..T.....................A.........CCCAACA C..
AY152327   GT..CAT.TT.......C.................T.CCATCACTGACA...CGCAGCA  AA.GGG.....GAAGCC.GGAG.........CTC.T..T.....................A.........CCCAACA C..
AY152331   GT..CAT.TT.......C.................T.CCATCACTGACA...CGCAGCA  AA.GGG.....GAAGCC.GGAG.........CTC.T..T.....................A.........CCCAACA C.. .
AY152335   GT..CAT.TT.......C.................T.CCATCACTGACA...CGCAGCA  AA.GGG.....GAAGCC.GGAG.........CTC.T..T.....................A.........CCCAACA C.. .
AY152339   GT..CAT.TT.......C.................T.CCATCACTGACA...CGCAGCA  AA.GGG.....GAAGCC.GGAG.........CTC.T..T.....................A.........CCCAACA C.. .
AY152343   GT..CAT.TT.......C.................T.CCATCACTGACA...CGCAGCA  AA.GGG.....GAAGCC.GGAG.........CTC.T..T.....................A.........CCCAACA C.. .
AY152347   GT..CAT.TT.......C.................T.CCATCACTGACA...CGCAGCA  AA.GGG.....GAAGCC.GGAG.........CTC.T..T.....................A.........CCCAACA C.. .
AY152351   GT..CAT.TT.......C.................T.CCATCACTGACA...CGCAGCA  AA.GGG.....GAAGCC.GGAG.........CTC.T..T.....................A.........CCCAACA C.. .
AY152355   GT..TAT.TT.......C.................T.CCATCACTGACA...CGCAGCA  AA.GGG.....GAAGCC.GGAG.........CTC.T..T.....................A.........CCCAACA C.. .
AY152359   GT..CAT.TT.......C.................T.CCATCACTGACA...CGCAGCA  AA.GGG.....GAAGCC.GGAG.........CTC.T..T.....................A.........CCCAACA C.. .
AY152363   GT..CAT.TT.......C.................T.CCATCACTGACA...CGCAGCA  AA.GGG.....GAAGCC.GGAG.........CTC.T..T.....................A.........CCCAACA C.. .
AY152171   GT..CAT.TT.......C.................T.CCATCACTGACA...CGCAGCA  AA.GGG.....GAAGCC.GGAG.........CTC.T..T.....................A.........CCCAACA C.. .
VR217-1    GT..CAT.TT.......C.................T.CCATCACTAACA...CGCAGCA AAAGGGG.....GAAGCC.GGAG.........CTC.T..T.....................A.........CCCAACA C.. .
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*Two potential binding sites for SEQ ID NOS.: 28 & 70 can be found in this region. These are denoted by single underline for SEQ ID NO.: 28, and shading for SEQ ID NO.: 70.

## FIGURE 4

KY1129 5'-GTAAGCC CTCAGAACCGTCTCGGAA-3'

WNV

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AF317203      ....... ..................
AF196835      ....... ..................
AF260967      ....... ..................
AF260968      ....... ..................
AF260969      ....... ..................
AF481864      ....... ..................
M12294        ....... ..................
AF206518      ....... ..................
AF317203      ....... ..................
AF202541      ....... ..................
AF404757      ....... ..................
AF404753      ....... ..................
AF404754      ....... ..................
AF404755      ....... ..................
AF404756      ....... ..................
AF017254      ....... ..................
L48977        ....... ..................
AF196536      ....... ..................
AF196537      ....... ..................
AF196538      ....... ..................
AF196540      ....... ..................
AF196541      ....... ..................
AF196542      ....... ..................
AF196543      ....... ..................
AF458343      ....... .C................
AF458344      ....... ..................
AF458347      ....... ..................
AF458348      ....... ..................
AF458350      ....... ..................
AF458352      ....... ..........C.......
AF458353      ....... ..................
AF458355      ....... ..................
AF458358      ....... ..................
AF458360      ....... ..................
AF458361      ....... ..................
AF208017      ....... ..................
AF196539      ....... ..................
AF196535      ....... ..................
AF458359      ....... ..................
AF458357      ....... ..................
AF458354      ....... ..................
AF458349      ....... ..................
AF458345      ....... ..................
AF458346      .......T...........T......
AF533540      ....... ..................
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JEV

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AB051292        .A..... ..................
AF014160        .A..... ..................
AF014161        .A..... ..................
AF045551        .A..... ..................
AF069076        .A..... ..................
AF075723        .A..... ..................
AF080251        .A..... ...G..............
AF098735        .A..... ..................
AF098736        .A..... ..................
AF098737        .A..... ..................
AF217620        .A..... ..................
AF221499        .A..... ..................
AF221500        .A..... ..................
AF254452        .A..... ..................
AF254453        .A..... ..................
AF315119        .A..... ........T.........
AF416457        .A..... ..................
AF486638        .A..... ..................
U14163          .A..... ..................
U15763          .A..... ..................

KY1129      5'-GTAAGCC CTCAGAACCGTCTCGGAA-3'
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JEV cont.

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L48961          .A..... ..................
U47032          .A..... ..................
M18370          .A..... ..................
M55506          .A..... ..................
L78128          .A..... ..................
D90195          .A..... ..................
D90194          .A..... ..................
AF311748        .A..... ..................
AF092550        .A..... ..................
AF092552        .A..... ..................
AF092553        .A..... ..................
AF139531        .A..... ..................
AF148900        .A..... ..................
AF148902        .A..... ..................
AF218068        .A..... ..................
AF289816        .A..... ..................
AF318291        .A..... ..................
L48967          .A..... ..................
L48968          .A..C.. ..................
L54067          .A..... ..................
L54068          .A..... ..................
L54069          .A..... ..................
L54070          .A..... ..................
L54071          .A..... ..................
L54072          .A..... ..................
L54122          .A..... ..................
L54123          .A..... ..................
AF306514        .A..... ..................
AF306515        .A..... ..........T......
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AF306516        .A..... ..........T......
AF306517        .A..... ....A.....T......
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**MVEV**

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AF161266        .A.....T.C..............
M35172          .A.....T.C..............
L48972          .A.....T.C..............
L48973          .A.....T.C..............
L48974          .A.....T.C....C.........
L48975          .A.....T.C..............
L48976          .A.....T.C.........T.....
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**KUNJIN**

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AF458351        ....... ..............G.
AF458356        ....... ...............
AF297840        ....... ..........C.....
AF297841        ....... ...............
AF297842        ....... ...............
AF297843        ....... ...............
AF297844        ....... ...............
AF297845        ....... ...............
AF297846        ....... ..........C.....
AF297847        ....... ..........C.....
AF297848        ....... ...............
AF297849        ....... ...............
AF297850        ....... ..........C.....
AF297851        ....... ..........C.....GT
AF297852        ....... ..........C.....
AF297853        ....... ..........C.....
AF297854        ....... ...............
AF297855        ....... ...............
AF297856        ....... ...............
AF297857        ....... G..............
AF297858        ....... ...............
AF297859        ....... ...............
L48978          ....... ...............
L49311          ....... ...............
D00246          ....... ...............
L48979          ....... ...............
L24512          ....... ...............
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**KOUTANGO**

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L48980          ....... ...............
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KY1130      5'-TCCTAGTCTA TCCCAGGTGTCAA-3'
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**WNV**

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AF196835        .......... ............
AF260967        .......... ............
AF260968        .......... ............
AF260969        .......... ............
```

```
AF481864        .......... ..........
M12294          C......... ..........
AF206518        .......... ..........
AF317203        .......... ..........
AF202541        .......... ..........
AF404757        .......... ..........
AF404753        .......... ..........
AF404754        .......... ..........
AF404755        .......... ..........
AF404756        .......... ..........
AF017254        .......... .........A....
L24512          .......... ..........
```

JEV

```
AB051292        ...C......T..........
AF014160        ...C......T..........
AF014161        ...C......T..........
AF045551        ...C.C....T..........
AF069076        ...C......T..........
AF075723        ...C......T..........
AF080251        ...C......T..........
AF098735        ...C......T..........
AF098736        ...C......T..........
AF098737        ...G......TCT........
AF217620        ...C......T..........
AF221499        ...C......T..........
AF221500        ...C......T..........
AF254452        ...C......T..........
AF254453        ...C......T..........
AF315119        ...C......T..........
AF416457        ...C......T..........
AF486638        ...C...A..T..........
U14163          ...C......T..........
U15763          ...C......T..........
L48961          ...C......T..........
U47032          ..........T..........
M18370          ...C......T..........
M55506          ...C......T..........
L78128          ...C......T..........
D90195          ...C......T..........
D90194          ...C......T..........
AF311748        ...C......T..........
AF306514        ...C.C....T..........
AF306515        ...C......T..........
AF306516        ...C......T..........
AF306517        ...C.C....T..........
D00037          ...C......T..........
M14933          ...C......T..........
```

MVEV

```
AF161266        .........TT..........
M35172          .........TT..........
```

21640 WO-KN

```
KY1131      5'-GGACTAGAGGTTAGAGGAGACCCCGCGG-3'

WNV
AF196835    ............................
AF260967    ............................
AF260968    ............................
AF260969    ............................
AF481864    ............................
M12294      ............................T
AF206518    ............................
AF317203    ............................
AF202541    ............................
AF404757    ............................
AF404753    ............................
AF404754    ............................
AF404755    ............................
AF404756    ............................
AF017254    ............................
AF208017    .......T.................A..T
L24512      ............................T

JEV
AB051292    ........................T..
AF014160    ........................T..
AF014161    ........................T..
AF045551    ........................T..
AF069076    ........................T..
AF075723    ........................T..
AF080251    ........................T..
AF098735    ........................T..
AF098736    ........................T..
AF098737    ........................T..
AF217620    ........................T..
AF221499    ........................T..
AF221500    ........................T..
AF254452    ........................T..
AF254453    ........................T..
AF315119    ........................T..
AF416457    ........................T..
AF486638    ........................T..
U14163      ........................T..
U15763      ........................T..
L48961      ........................T..
L24512       ............................
U47032      ........................T..
M18370      ........................T..
M55506      ........................T..
L78128      ........................T..
D90195      ........................T..
D90194      ........................T..
AF311748    ........................T..
AF306514    ........................T..
AF306515    ........................T..
```

```
AF306516        ........................T..
AF306517        ........................T..
```

MVEV

```
AF161266        .......................A.TC
M35172          .......................A.TC
```

FIGURE 5

KY1131 5'-GGACTAGAGGTTAGAGGAGACCCCGCGG-3'

DENGUE

| | |
|---|---|
| AF226685 | .....C..C |
| AF311956 | .....C..C |
| AF311957 | .....C..C |
| AF311958 | .....C..C |
| AY145121 | .....C..C |
| AY145122 | .....C..C |
| AF514878 | .....C..C |
| AF514885 | .....C..C |
| AF514889 | .....C..C |
| AF489932 | .....C.CA |
| AF226687 | .....C..C |
| AX224213 | .....C.C. |
| AX224215 | .....C.C. |
| AX224217 | .....C.C. |
| AX224219 | .....C.C. |
| AX224225 | .....C.C. |
| AX224227 | .....C..C |
| AX224233 | .....C..C |
| AB074760 | .....C..C |
| AB074761 | .....C..C |
| A75711 | .....CG.C |
| AX224221 | .....C.C. |
| AX224223 | .....C.C. |
| U87412 | .....C.C. |
| U61246 | .....C.C. |
| U61247 | .....C.C. |
| AF100465 | .....C.CA |
| AF100466 | .....C.CA |
| AX224209 | .....C..C |
| AF180818 | .....C..C |
| AF326573 | .....C.CA |
| AF350498 | .....C..C |
| AF359579 | .....C.C. |
| AY037116 | .....C.C. |
| AF309950 | .....C.C. |
| AF309953 | .....C.CA |
| AF309954 | .....C.CA |
| AF309959 | .....C.CA |
| AF309962 | .....C.C. |
| AF309963 | .....C.C. |
| AF309964 | .....C.C. |
| AF309965 | .....C.CA |
| AF289029 | .....C.CA |
| AF208496 | .....C.CA |
| AF310146 | .....C..C |
| AF310149 | .....C..C |
| AF310153 | .....C.CA |
| AF226686 | .....C..C |
| AF276619 | .....C.C. |

```
AF169678        .......................C.C.
AF169679        .......................C.C.
AF169680        .......................C.C.
AF169681        .......................C.C.
AF169682        .......................C.C.
AF169683        .......................C.C.
AF169684        .......................C.C.
AF169685        .......................C.C.
AF169686        .......................C.C.
AF169687        .......................C.C.
AF169688        .......................C.C.
AF100145        .......................C.CA
AF100467        .......................T.CC
AF100468        .......................T.CC
AF100149        .......................T.CC
M20558          .......................C.CA
M29095          .......................C.CA
M19197          .......................C.CA
M14931          .......................C.CA
U87411          .......................C.C.
U88536          .......................C..C

KY1131      5'-GGACTAGAGGTTAGAGGAGACCCCGCGG-3'

DENGUE,cont.
U88537          .......................C..C
AF038403        .......................C.CA
AF326826        .......................C.CA
AF326827        .......................C.CA

MONTANA MYOTIS LEUKOENCEPHALITIS VIRUS
NC_004119       .......................TTCC

MODOC VIRUS
NC_003635       .......................CG.C

YELLOW FEVER VIRUS
X03700          ..T....................TC.A.
U52393          ..T....................TC.A.
U52407          ..T....................TC.A.
AF052448        ..T....................TC.A.
```

**FIGURE 6**

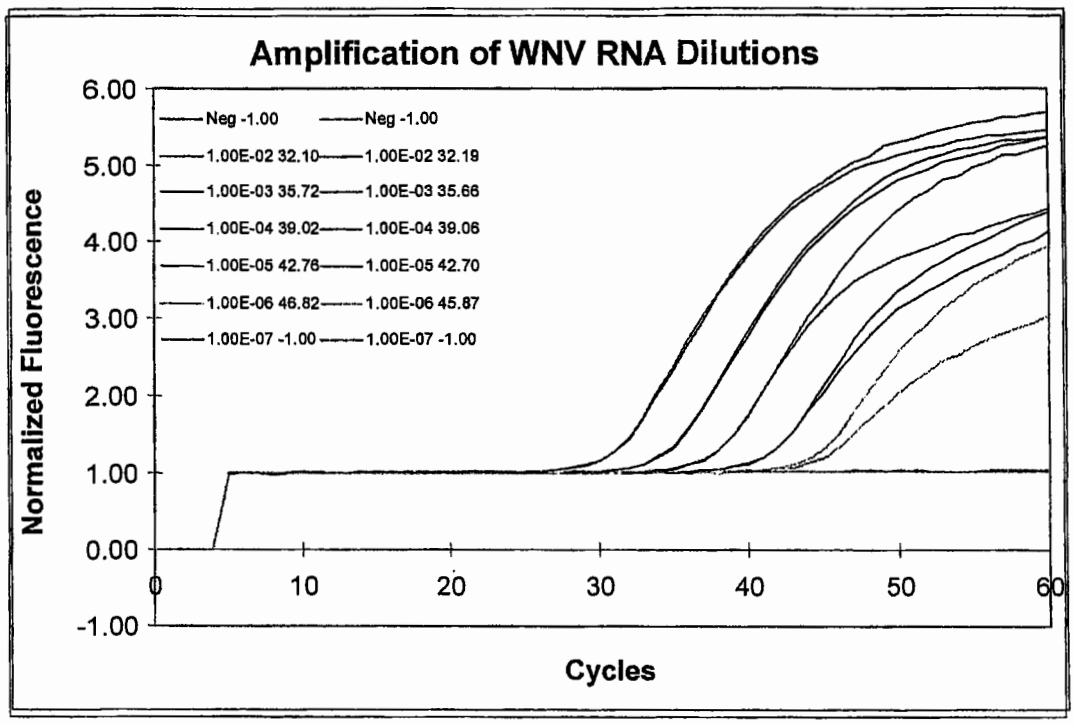
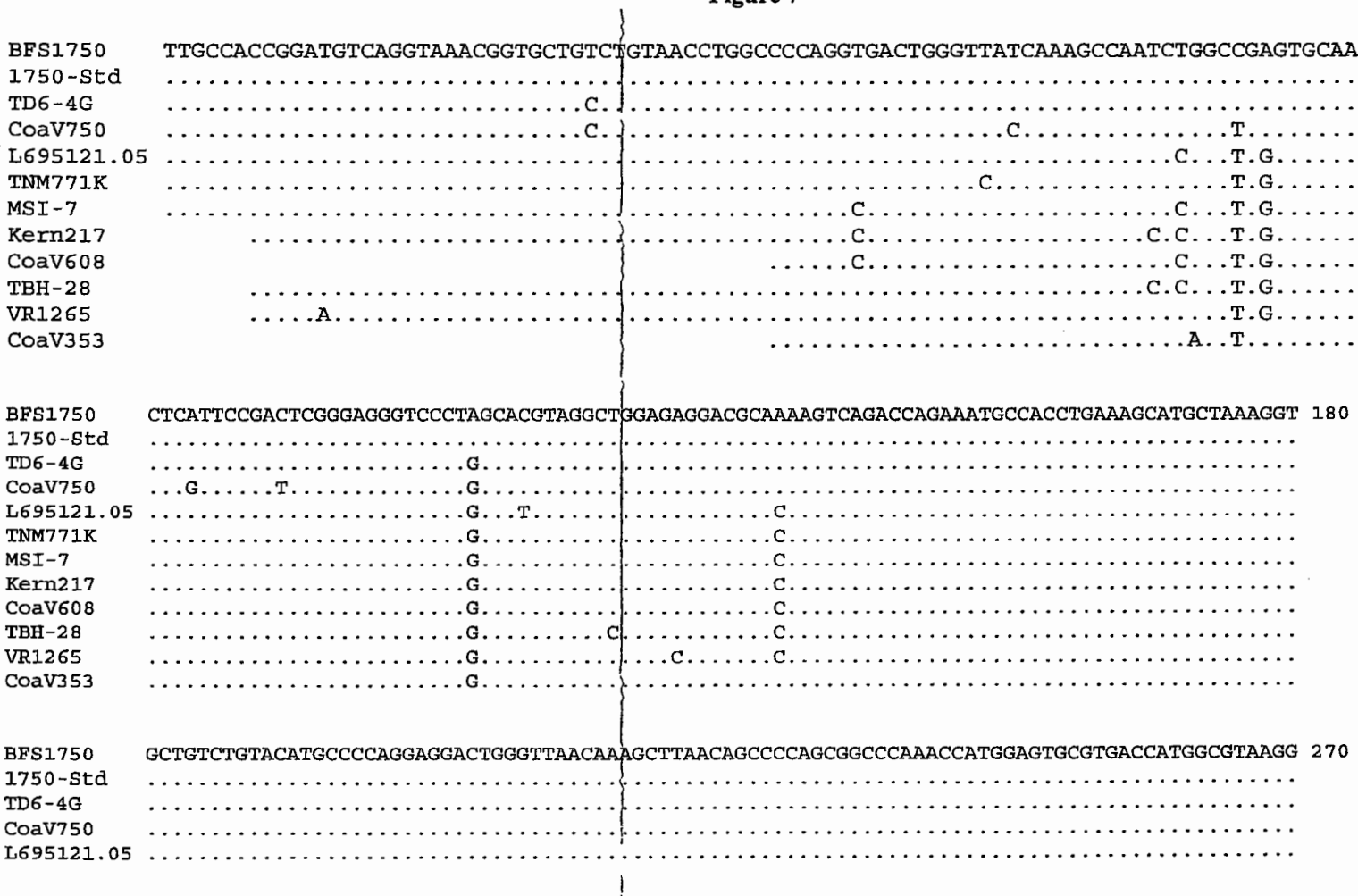

Amplification of WNV RNA Dilutions
Normalized Fluorescence
6.00
5.00
4.00
3.00
2.00
1.00
0.00
-1.00
0
10
20
30
40
50
60
Cycles
Neg -1.00
Neg -1.00
1.00E-02 32.10
1.00E-02 32.19
1.00E-03 35.72
1.00E-03 35.66
1.00E-04 39.02
1.00E-04 39.06
1.00E-05 42.76
1.00E-05 42.70
1.00E-06 46.82
1.00E-06 45.87
1.00E-07 -1.00
1.00E-07 -1.00

**Figure 7**


BFS1750 TTGCCACCGGATGTCAGGTAAACGGTGCTGTCTGTAACCTGGCCCCAGGTGACTGGGTTATCAAAGCCAATCTGGCCGAGTGCAAAGCCC 90
1750-Std
TD6-4G
CoaV750
L695121.05
TNM771K
MSI-7
Kern217
CoaV608
TBH-28
VR1265
CoaV353
BFS1750 CTCATTCCGACTCGGGAGGGTCCCTAGCACGTAGGCTGGAGAGGACGCAAAAGTCAGACCAGAAATGCCACCTGAAAGCATGCTAAAGGT 180
1750-Std
TD6-4G
CoaV750
L695121.05
TNM771K
MSI-7
Kern217
CoaV608
TBH-28
VR1265
CoaV353
BFS1750 GCTGTCTGTACATGCCCCAGGAGGACTGGGTTAACAAAGCTTAACAGCCCCAGCGGCCCAAACCATGGAGTGCGTGACCATGGCGTAAGG 270
1750-Std
TD6-4G
CoaV750
L695121.05

```
TNM771K     ..........|..........|..........|..........|..........|..........|..........|..........|..........|..........A.....
MSI-7       ..........|..........|..........|..........|..........|..........|..........|..........|..........|..........
Kern217     ..........|..........|..........|..........|..........|..........|..........|..........|..........|..........
CoaV608     ..........|..........|..........|..........|..........|..........|..........|..........|..........|..........
TBH-28      ..........|..........|..........|..........|..........|..........|..........|..........|..........|..........
VR1265      ..........|..........|..........|..........|..........|..........|..........|..........|..........|..........
CoaV353     ..........|..........|..........|..........|..........|..........|..........|..........|..........|..........

BFS1750     ACTAGAGGTTAGAGGAGACCCCGCTGCAACTTGGCAAGGCCCAAACCCGCTCGAAGCTGTAGAGACGGGGGAAGGACTAGAGGTTAGAGG 360
1750-Std    .......................... ..........|..........|..........|..........|..........|..........
TD6-4G      ..........|..........|.....C....|..........|..........|..........|..........|..........T.....
CoaV750     .......................... ..........|..........|...A......|..........|..........T.....
L695121.05  ..........|..........|..........|..T.......|..........|..........|..........|..........
TNM771K     ..........|..........|..........|..T.......|..........|..........|..........|..........
MSI-7       ..........|..........|..........|..T.......|..........|..........|.....A....|..........
Kern217     ..........|..........|..........|..T.......|..........|..........|.....A....|..........
CoaV608     ..........|..........|..........|..T.......|..........|..........|.....A....|..........
TBH-28      ..........|..........|..........|..T..T....|..........|..........|..........|..........
VR1265      ..........|..........|..........|..T.......|..........|..........|..........|..........
CoaV353     ..........|..........|..........|..........|..........|..........|..........|..........

BFS1750     AGACCCCTTGCCGTTAACGCAAACAACAGCATATTGACACCTGGAAAGACAGGAGATC                              418
1750-Std
TD6-4G      ..........|..........|..........|..........|..........|..........|..........|..........
CoaV750
L695121.05  ..........|..........|..........|..........|..........|..........|..........|..........
TNM771K     ..........|..........|..........|..........|..........|..........|..........|..........
MSI-7       ..........|..........|..........|..........|..........|..........|..........|..........
Kern217     ..........|..........|..........|..........|..........|..........|..........|..........
CoaV608     ..........|..........|..........|..........|..........|..........|..........|..........
TBH-28      ..........|..........|..........|..........|..........|..........|..........|..........
VR1265      ..........|..........|..........|..........|..........|..........|..........|..........
CoaV353     ..........|..........|..........|..........|..........|..........|..........|..........
```