

SUPPLEMENTARY MATERIAL

Figure legends

Figure 1S The synthesis of *vip3al* gene by successive PCR. Oligonucleotides of ~90 bp were assembled by two-step PCR using 1.5 picomoles of inner primers and 30 picomoles of external primers, which contained suitable restriction cleavage sites for cloning.

Figure 2S The synthesis of *vip3al* gene by successive PCR. Oligonucleotides of ~90 bp were assembled by single-step PCR using 1.5 picomoles of inner primers and 30 picomoles of external primers, which contained suitable restriction cleavage sites for cloning.

Figure 3S The synthesis of *vip3al* gene by overlap extension PCR. Oligonucleotides of ~90 bp were assembled by two-step PCR using 1.5 picomoles of inner primers and 30 picomoles of external primers, which contained suitable restriction cleavage sites for cloning.

Figure 4S The synthesis of *vip3al* gene by overlap extension PCR. Oligonucleotides of ~90 bp were assembled by a single-step PCR.

Figure 5S Comparison of nucleotide sequences of the synthetic *vip3al* gene and the wild type *vip3a*. The entire open reading-frame sequence encoding for the toxic protein fragment is 2,370 bp. The two genes have 70.5 % homology. All codons were changed according to the preferential codon usage of *Pichia pastoris*.

Figure 6S 60 nt oligonucleotide primers designed for the two-step successive PCR (according to Fig.1).

Figure 7S 90 nt oligonucleotide primers designed for the two-step successive PCR (according to Fig.1S).

Figure 8S 60 nt oligonucleotide primers designed for the two-step successive PCR (according to Fig.2).

Figure 9S 90 nt oligonucleotide primers designed for the two-step successive PCR (according to Fig.2S).

Figure 10S 60 nt oligonucleotide primers designed for the two-step verlap extension PCR (according to Fig.3).

Figure 11S 90 nt oligonucleotide primers designed for the two-step verlap extension PCR (according to Fig.3S).

Figure 1S

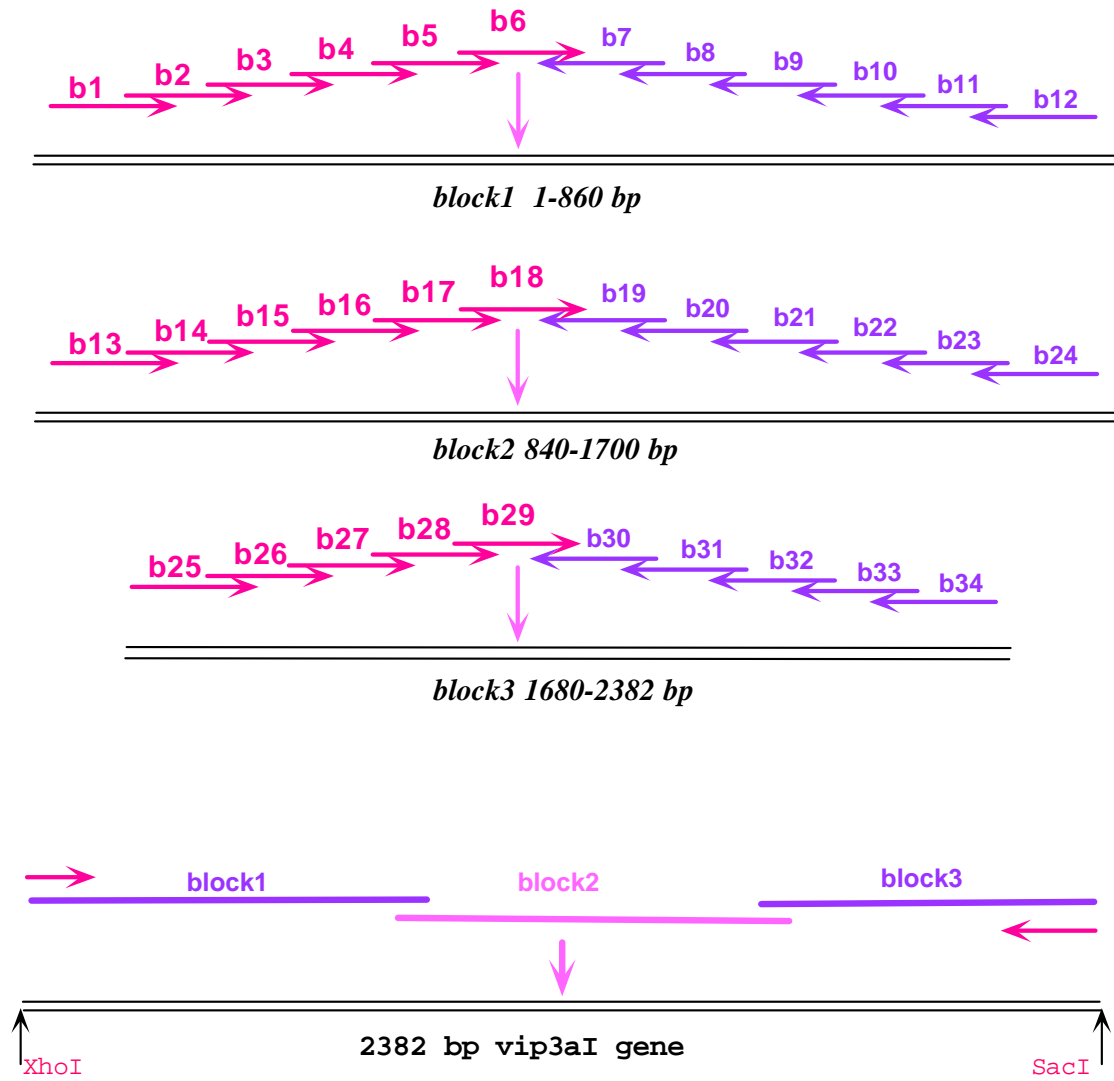


Figure 2S

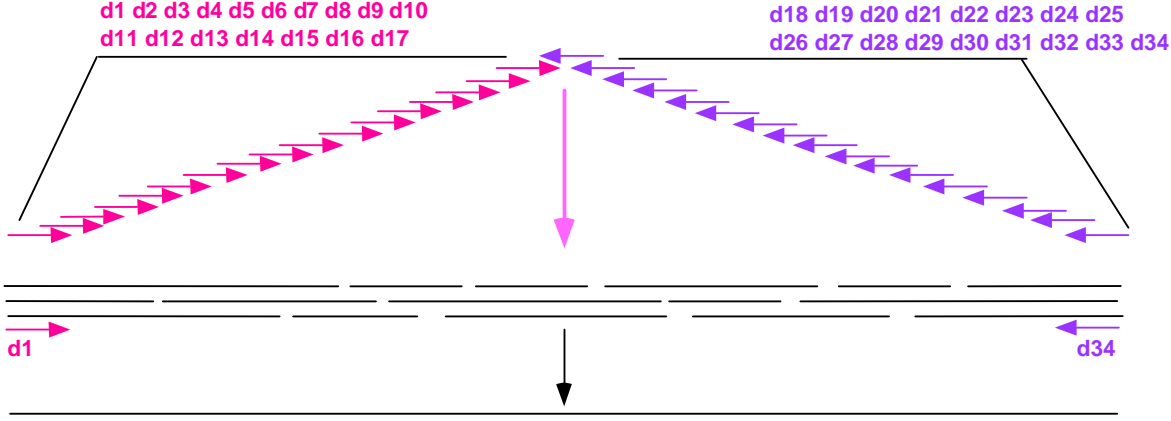


Figure 3S

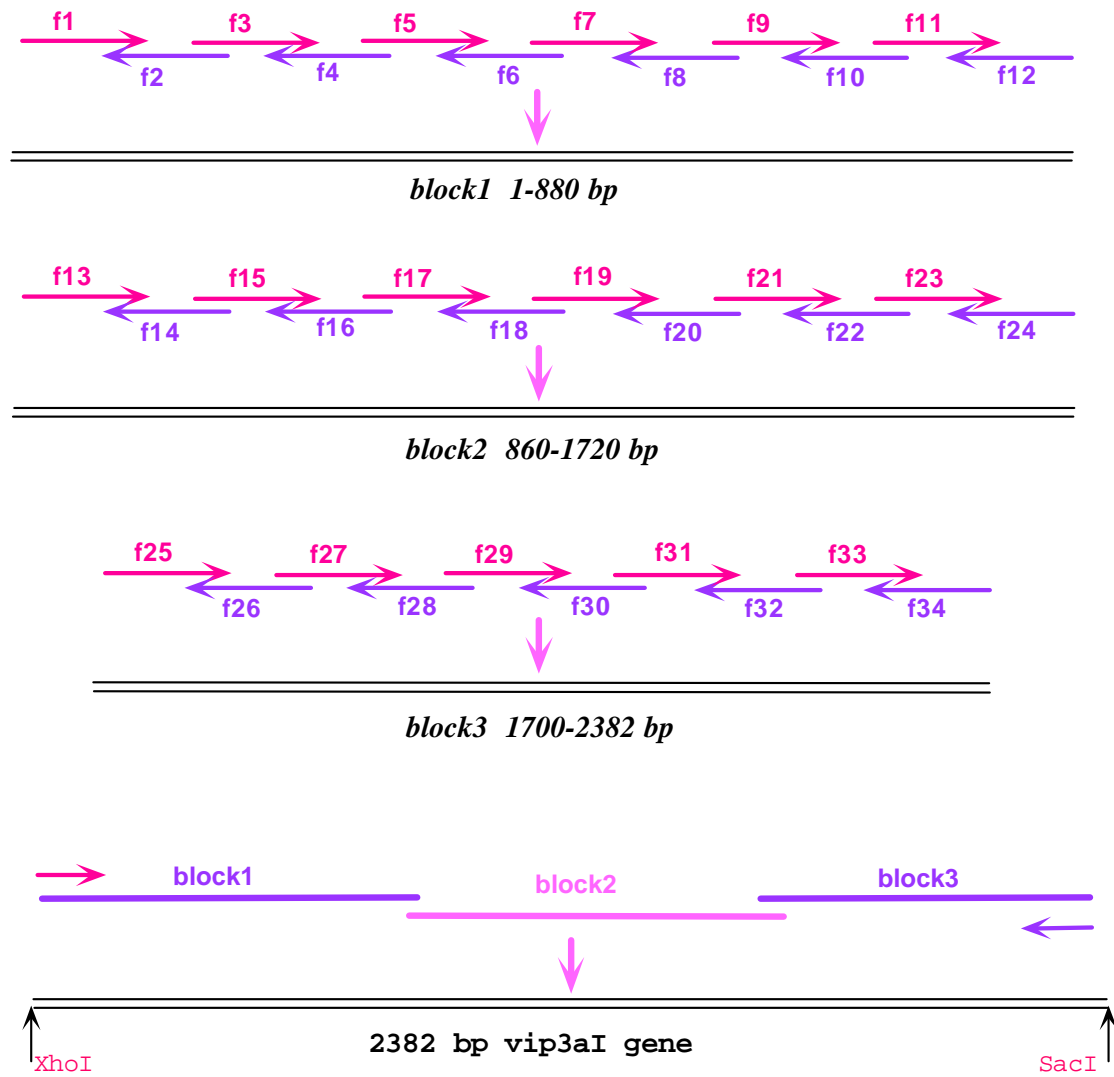


Figure 4S

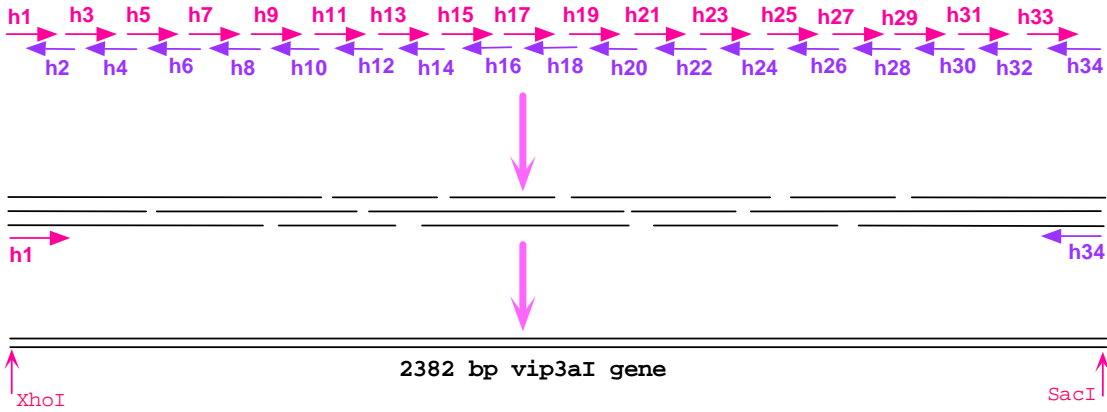


Figure 5S

vip3a - ATGAACAAGAAATAATACAAAATTAAAGCACAAAGAGCCTTACCAGTTTTATGATTATTTT -60
vip3aI - ATGAACAAGAAACAACACCAAGTTGTCACCAGAGCCTTGCCTTCCCTTTCATCGACTACTTC -60
M N K N N T K L S T R A L P S F I D Y F
vip3a - AATGGCATTATGGATTGCGACTGGTATCAAAGACATATGAACATGATTTTAAACG -120
vip3aI - AATGGTATCTACGGATTGCTACTGGTATCAAAGACATCATGAACATGATCTTCAAGACT -120
N G I Y G F A T G I K D I M N M I F K T
vip3a - GATACAGGTGGTGATCTAACCTAGACGAAATTTAAAGAAACAGCAGTTACTAAATGAT -180
vip3aI - GACACTGGTGGTGATCTGACCCTGACGAGATCTTGAAGAACCAACAACCTTCTGAACGAC -180
D T G G D L T L D E I L K N Q Q L L N D
vip3a - ATTTCTGGTAAATGGATGGCGTGAATGGAAGCTTAAATGATCTTATCGCACAGGGAAC -240
vip3aI - ATCTCTGGTAAACTTGATGGTGTCAATGGTTCCTTGAACGACCTGATCGCACAGGGTAAC -240
I S G K L D G V N G S L N D L I A Q G N
vip3a - TTAATACAGAATTATCTAAGGAAATATTAAAATTGCAATGAACAAAATCAAGTTTTA -300
vip3aI - CTTAACACAGAACTTTCCAAGGAGATCTTGAAGATCGCTAACGAACGAACCAAGCTTG -300
L N T E L S K E I L K I A N E Q N Q V L
vip3a - AATGATGTTAATAACAACTCGATGCGATAAATACGATGCTCGGGTATATCTACCTAAA -360
vip3aI - AACGACGTCAACAACAACTCGATGCTATCAACACCATGTTGAGAGTCTACTTCCTAAG -360
N D V N N K L D A I N T M L R V Y L P K
vip3a - ATTACCTCTATGTTGAGTGATGTAATGAAACAATAATATGCGCTAAGTCTGCAAAATAGAA -420
vip3aI - ATCACCTCCATGCTTTCCGACGTCATGAAGCAGAACTATGCTTTGTCTCTGCAAAATCGAA -420
I T S M L S D V M K Q N Y A L S L Q I E
vip3a - TACTTAAGTAAACAATTGCAAGAGATTTCTGATAAGTTGGATATATTAAATGTAATGTA -480
vip3aI - TACTTTCCCAAGCAACTTCAAGAGATCTCCGACAAGCTTGACATCATCAACGTCAACGTC -480
Y L S K Q L Q E I S D K L D I I N V N V
vip3a - CTTATTAACCTTACACTTACTGAAATTACACCTGCGTATCAAAGGATTAAATATGTGAAC -540
vip3aI - TTGATCAACTCCACTTTGACCGAGATCACCTCTGCTTACCAGAGAATCAAGTACGTC AAC -540
L I N S T L T E I T P A Y Q R I K Y V N
vip3a - GAAAAATTGAGGAATTACTTTTGCTACAGAACTAGTTCAAAAGTAAAAGGATGGC -600
vip3aI - GAGAAGTTGAGGAGCTTACCTTCGCTACCAGAACCTCCTCCAGGTCAAGAAGGACGGT -600
E K F E E L T F A T E T S S K V K K D G
vip3a - TCTCCTGCAGATATCTTGTGAGTTAACTGAGTTAACTGAACTAGCGAAAGTGTAAACA -660
vip3aI - TCTCCTGCTGACATCCTCGACGAGTTGACCGAGTTGACCGAATTGGCTAAGTCCGTCACC -660
S P A D I L D E L T E L T E L A K S V T
vip3a - AAAAATGATGTGGATGGTTTGAATTTTACCTTAATACATTCCAGATGTAATGGTAGGA -720
vip3aI - AAGAACGACGTCGATGGTTTGAATTTTACTTGAACACCTTTCATGACGTCATGGTTGGT -720
K N D V D G F E F Y L N T F H D V M V G
vip3a - AATAATTTATTCGGGCGTTCAGCTTTAAAACACTGCATCGAATTAATTACTAAAGAAAAT -780
vip3aI - AACCAACCTTTTCGGTAGATCTGCACTTAAGACTGCTTCTGAACTTATCACCAAGGAGAAC -780
N N L F G R S A L K T A S E L I T K E N
vip3a - GTGAAAACAAAGTGGCAGTGAGGTGGGAAATGTTTATAACTTCTTAATGTAATTACAGCT -840
vip3aI - GTGAAAACCTCTGGTTCCGAGGTGGTAAACGTCACCAACTTCTTATGATCGTCTTGACAGCC -840
V K T S G S E V G N V Y N F L I V L T A

vip3a - CTGCAAGCCCAAGCTTTCTTACTTTAACACATGCCGAAAATATTAGGCTTAGCAGAT -900
 vip3aI - TTGCAAGCTCAAGCTTTCTTGACCTTGACCACCTGTAGAAAAGCTTCTTGGTCTTGGCTGAC -900
 L Q A Q A F L T L T T C R K L L G L A D
 vip3a - ATTGATTACTTCTATATGAATGAACATTTAATAAGGAAAAGAGGAATTAGAGTA -960
 vip3aI - ATCGACTACACCTCCATCATGAACGAACA CCTTAA CAAGGA GAAGGAGGAGTT CAGAGTC -960
 I D Y T S I M N E H L N K E K E E F R V
 vip3a - AACATCCTCCCTACACTTCTAATACTTTTCTAATCCTAATTATGCAAAAAGTTAAAGGA -1020
 vip3aI - AACATCTTGCCTACTTTGTCCAAACACCTTCTCCAAACCTAACTACGCTAAGGTC AAAGGA -1020
 N I L P T L S N T F S N P N Y A K V K G
 vip3a - AGTGATGAAGATGCAAGATGATGTGGAAGCTAAACAGGACATGCATTGATGGGTTT -1080
 vip3aI - TCCGACGAAGACGCTAAGATGATCGTGAAGCTAAACCTGGTCACGCACTTATCGGTTTC -1080
 S D E D A K M I V E A K P G H A L I G F
 vip3a - GAAATTAGTAAATGATTCAATACAGTATTAAGTATATGAGGCTAAGCTAAACAAAAT -1140
 vip3aI - GAAATCTCCAACGACTCCATCACCGTCTTAAGGCTACGAGGCTAAGTTGAAGCAAAC -1140
 E I S N D S I T V L K V Y E A K L K Q N
 vip3a - TATCAAGTCGATAAGGATTCCTTATCGGAA TTATTTATGGTGATATGGATAAATATTG -1200
 vip3aI - TACCAGGTCGACAAGGACTCCCTTCTGAG TCATCTACGGTGACATGGACAAACTCTCT -1200
 Y Q V D K D S L S E V I Y G D M D K L L
 vip3a - TGCCAGATCAATCTGAACAAATCTATTACAAATAACATAGTATTTCCAAATGAATAT -1260
 vip3aI - TGTCCAGACCAATCCGAACAAATCTACTACCCAAACAAATCGTCTTCCCTAACGAGTAC -1260
 C P D Q S E Q I Y Y T N N I V F P N E Y
 vip3a - GTAATTACTAAATGATTTTCACTAAAAAATGAAACCTTAAAGATATGAGGTAAACAGCG -1320
 vip3aI - GTCATCACCAAGATCGACTTCCACCAAGAAGATGAAGACCTTAGATACGAGGTCAGTGT -1320
 V I T K I D F T K K M K T L R Y E V T A
 vip3a - AATTTTATGATTTCTTACAGGAGAATGACTTAAATAAGAAAAGTGAATCAAGT -1380
 vip3aI - AACTTCTACGACTCTCCACTGGTGGATCGATCTTAAACAAGAAAGGTCGAGTCTCC -1380
 N F Y D S S T G E I D L N K K K V E S S
 vip3a - GAAGCGGAGTATAGAACGTTAAGTGCTAATGATGATGGGGTCTATATGCCGTAGGTGTC -1440
 vip3aI - GAAGCTGAGTACAGAACCCTTCTGCTAACGACGATGGTGTCTACATGCCCTTGGTGTCT -1440
 E A E Y R T L S A N D D G V Y M P L G V
 vip3a - ATCAGTGAACATTTTACTCCGATTAATGGGTTTGGCCTCCAAGCTGATGAAATTC -1500
 vip3aI - ATCTCCGAGACCTTCTTACTCTTATCAATGGCTTCGGTTTGCAGGCTGACGAGAACTCC -1500
 I S E T F L T P I N G F G L Q A D E N S
 vip3a - AGATTAAATACTTTAACATGTAAATCATAATTAAGAGAACTACTGCTAGCAACAGACTTA -1560
 vip3aI - AGACTTATCACCTTACCTGCAAGTCTACCTTAGAGAATTGCTCTTGGCTACCAGCCTC -1560
 R L I T L T C K S Y L R E L L L A T D L
 vip3a - AGCAATAAGAACTAAATGATCGTCCCCTCAAGTGGTTTATAGCAATATGTAGAG -1620
 vip3aI - TCTAACAAGGAGACCAAACCTCATCGTCCCCTCTCTGGTTTCTCTAACATCGTCCGAG -1620
 S N K E T K L I V P P S G F I S N I V E
 vip3a - AACGGTCCCATGAAGAGGACAAATTTAGAGCCGTGGAAAGCAATAATAAGAAATGCGTAT -1680
 vip3aI - AACGGTCCCATGAAGAGGACAAACCTTGGAGCCTTGGAAAGCTAACCAACAAGAACGCTTAC -1680
 N G S I E E D N L E P W K A N N K N A Y

vip3a - GTAGATCATACAGGCGGAGTCAATGGAACAAAGCTTTATATGTTCATAAGGACGGAGGA -1740
 vip3aI - GTCGACCACACTGGTGGTGTCAACGGTACCAGGCTCTTACGTCACAAGGACGGTGGT -1740
 V D H T G G V N G T K A L Y V H K D G G
 vip3a - ATTTCACAATTATGGAGATAAGTTAAACCGAAAACGAGTATGTAATCCAATATACT -1800
 vip3aI - ATCTCCAATTATCGGAGACAAACTTAAACCTAAAACCGAGTACGTCATCCAATACACC -1800
 I S Q F I G D K L K P K T E Y V I Q Y T
 vip3a - GTTAAAGGAAAACCTTCATTCATTTAAAAGATGAAAACTACTGGAATATATCATATGAA -1860
 vip3aI - GTC AAGGGTAAACCTTCATCCACCTTAAAGACGAAAACACTGGTTACATCCACTACGAA -1860
 V K G K P S I H L K D E N T G Y I H Y E
 vip3a - GATACAAATAATAATTTAGAAGATTATCAAACCTATTAATAAACGTTTACTACAGGAAC -1920
 vip3aI - GACACCAACAACAACCTGAAGACTACCAAACCATCAACAAAAGATTCAACACAGGAACC -1920
 D T N N N L E D Y Q T I N K R F T T G T
 vip3a - GATTTAAGGGAGTGATTTAATTTTAAAAGTCAAAATGGAAGATGAAGCTTGGGGAGAT -1980
 vip3aI - GACCTTAAGGGTGTCTACCTTATCCTTAAGTCCAGAACGGTGACGAGGCTTGGGGTGAC -1980
 D L K G V Y L I L K S Q N G D E A W G D
 vip3a - AACTTTATATTTGGAAATAGTCCTTCGAAAGTTATTAAGTCCAGAAATAATTAAT -2040
 vip3aI - AACTTCATCATCCTTGAGATCTCCCATCCGAGGAGCTTCTTTCCCTGAACCTATCAAC -2040
 N F I I L E I S P S E K L L S P E L I N
 vip3a - ACAATAATGAGACGAGTACGGATCAACTAATATTAGCGGTAATACACTCCTTTAT -2100
 vip3aI - ACCAACCACTGGACTCCACTGGTTCACCAACATCTCTGGTAAACACTTGACTTGACT -2100
 T N N W T S T G S T N I S G N T L T L Y
 vip3a - CAGGGAGGACGAGGATCTTAAAACAAAACCTCAATTAGATAGTTTTCACTATAGATA -2160
 vip3aI - CAGGGTGGTAGAGGTATCTTGAAGCAAACCTGCAACTTGACTCCTTCTCCACCTACAGA -2160
 Q G G R G I L K Q N L Q L D S F S T Y R
 vip3a - GTGTATTTTCTGTGTCGGAGATGCTAATGTAAGGATTAGAAAATCTAGGGAAGTGTTA -2220
 vip3aI - GTCTACTTCTCTGTGTCGGTGGTACGCTAACGTGAGAAATCAGAAAATCCAGAGAAGTCTC -2220
 V Y F S V S G D A N V R I R N S R E V L
 vip3a - TTTGAAAAAGATAATAGAGCGGTGCTAAAGATGTTTCTGAAATGTTTACACAAAATTT -2280
 vip3aI - TTCGAGAAGAGATACATGCTGGTGC CAAGGACGTCTCCGAGATGTTTACACCAAGTTC -2280
 F E K R Y M S G A K D V S E M F T T K F
 vip3a - GAGAAAGATAACTTTTATATAGAGCTTTC CAAGGGAATAATTTATATGGTGGTCTTAT -2340
 vip3aI - GAGAAAGACAACCTTCTACATCGAGTTGTC CCAAGGTAAACAACCTTACGGTGGTCTTATC -2340
 E K D N F Y I E L S Q G N N L Y G G P I
 vip3a - GTACATTTTACGATGTCTCTATTAAGTAA -2370
 vip3aI - GTCCACTTCTATGACGTCTCCATCAATAA -2370
 V H F Y D V S I K -


Identity : 1672 (70.5%)

Figure 6S



841 ACAGCCTTGC AAGCTCAAGC TTTCTTGACC TTGACCACCT GTAGAAAGCT TCTTGGTCTT
 TGTTCGGAACG TTCGAGTTCG AAAGAACTGG AACTGGTGGG CATCTTTCGA AGAACCAGAA a22a23


901 GCTGACATCG ACTACACCTC CATCATGAAC GAACACCTTA ACAAGGAGAA GGAGGAGTTC
 CGACTGTAGC TGATGTGGAG  GTAGTACTTG CTTGTGGAAT TGTTCCTCTT CCTCCTCAAG a24

961  AGAGTCAACA TCTTGCCTAC TTTGTCCAAC ACCTTCTCCA ACCCTAACTA CGCTAAGGTC a245
 TCTCAGTTGT AGAACGGATG AACAGGTTG TGGAAGAGGT TGGGATTGAT GCGATTCCAG

block2 

1021 AAAGGATCCG ACGAAGACGC  TAAGATGATC GTTGAAGCTA AACCTGGTCA CGCACTTATC a26
 TTTCCTAGGC TGCTTCTGCG ATTCTACTAG CAACTTCGAT TTGGACCAGT GCGTGAATAG

1081  GGTTCGAAA TCTCCAACGA CTCCATCACC GTCCTTAAGG TCTACGAGGC TAAGTTGAAG a27a28
 CCAAAGCTTT AGAGGTTGCT GAGGTAGTGG CAGGAATTCC AGATGCTCCG ATTCAACTTC

1141 CAAAAC TACC AGTCGACAA  GGACTCCCTT TCTGAGGTCA TCTACGGTGA CATGGACAAA a29
 GTTTTGATGG TCCAGCTGTT CCTGAGGGAA AGACTCCAGT AGATGCCACT GTACCTGTTT

1201  CTTCTTTGTC CAGACCAATC CGAACAAATC TACTACACCA ACAACATCGT CTCCCTAAC a30
 GAAGAAACAG GTCTGGTTAG GCTTGTTTAG ATGATGTGGT  TGTGTAGCA GAAGGATTG a31a32

1261 GAGTACGTC A TCACCAAGAT CGACTTCACC AAGAAGATGA AGACCCTTAG ATACGAGGTC
 CTCATGCAGT AGTGGTTCTA  GCTGAAGTGG TTCTTCTACT TCTGGGAATC TATGCTCCAG a33

1321 ACTGCTAACT TCTACGACTC CTCCACTGGT GAGATCGATC TTAACAAGAA GAAGGTCGAG
 TGACGATTGA AGATGCTGAG GAGGTGACCA CTCTAGCTAG  AATTGTTCTT CTCCAGCTC a34a35

1381 TCCTCCGAAG CTGAGTACAG AACCTTTTCT GCTAACGACG ATGGTGTCTA CATGCCTCTT
 AGGAGGCTTC GACTCATGTC  TTGGGAAAGA CGATTGCTGC TACCACAGAT GTACGGAGAA a36

1441  GGTGTCATCT CCGAGACCTT CCTTACTCCT ATCAATGGCT TCGGTTTGCA GGCTGACGAG a37
 CCACAGTAGA GGCTCTGGAA GGAATGAGGA TAGTTACCGA AGCCAAACGT CCGACTGCTC

block3 

1501  AACTCCAGAC TTATCACCCCT  TACCTGCAAG TCCTACCTTA GAGAATTGCT CTTGGCTACC a38
 TTGAGGTCTG AATAGTGGGA ATGGACGTTT AGGATGGAAT CTCTTAACGA GAACCGATGG

1561  GACCTCTCTA ACAAGGAGAC CAAACTCATC GTCCCTCCTT CTGGTTTCAT CTCTAACATC a39a40
 CTGGAGAGAT TGTTCCTCTG GTTTGAGTAG CAGGGAGGAA GACCAAAGTA GAGATTGTAG

1621  GTCGAGAACG GTTCCATCGA  AGAGGACAAC CTTGAGCCTT GGAAAGCTAA CAACAAGAAC a41
 CAGCTCTTGC CAAGGTAGCT TCTCCTGTTG GAACTCGGAA CCTTTCGATT GTTGTCTTGG

1681 **GCTTACGT**CG **ACCACACTGG** TGGTGTCAAC GGTACCAAGG CTCTTTACGT CCACAAGGAC a42
CGAATGCAGC **TGGTGTGACC** ACCACAGTTG CCATGGTTCC **GAGAAATGCA** **GGTGTTCCTG** a43a44
 1741 GGTGGTATCT CCCAATTCAT CGGAGACAAA CTTAAACCTA AAACCGAGTA CGTCATCCAA
CCACCATAGA **GGGTTAAGTA** **GCCTCTGTTT** **GAATTTGGAT** TTTGGCTCAT GCAGTAGGTT a45
 1801 TACACCGTCA AGGGTAAACC TTCCATCCAC CTTAAAGACG AAAAACAATGG TTACATCCAC
ATGTGGCAGT **TCCCATTTGG** AAGGTAGGTG GAATTTCTGC **TTTTGTGACC** **AATGTAGGTG** a46a47
 1861 TACGAAGACA CCAACAACAA CCTTGAAGAC TACCAAACCA TCAACAAAAG ATTCACCACA
ATGCTTCTGT **GGTTGTTGTT** **GGAACCTCTG** **ATGGTTTGGT** AGTTGTTTTTC TAAGTGGTGT a48
 1921 **GGAACCGACC** **TTAAGGGTGT** CTACCTTATC CTTAAGTCCC **AGAACGGTGA** **CGAGGCTTGG** a49
CCTTGGCTGG **AATTCACACA** GATGGAATAG GAATTCAGGG TCTTGCCACT GCTCCGAACC
 Block4 **→**
 1981 **GGTGACA**ACT **TCATCAT**CCT **TGAGATCTCC** **CCATCCGAGA** **AGCTTCTTTT** **CCCTGAACTT** a50
 CCACTGTTGA AGTAGTAGGA ACTCTAGAGG GGTAGGCTCT TCGAAGAAAG GGGACTTGAA
 2041 **ATCAACACCA** **ACA**ACTGGAC **CTCCACTGGT** **TCCACCAACA** **TCTCTGGTAA** **CACCTTGACC** a51a52
 TAGTTGTGGT TGTGACCTG GAGGTGACCA AGGTGGTTGT AGAGACCATT GTGGAAGTGG
 2101 **TTGTACC**AGG **GTGGTAG**AGG **TATCTTGAAG** **CAAACTTGC** **AACTTGACTC** **CTTCTCCACC** a53
 AACATGGTCC CACCATCTCC ATAGAACTTC GTTTTGAACG TTGAACTGAG GAAGAGGTGG
 2161 **TACAGAGTCT** **ACTTCTCTGT** GTCTGGTGAC GCTAACGTCA GAATCAGAAA CTCCAGAGAA a54
ATGTCTCAGA **TGAAGAGACA** CAGACCACTG CGATTGCAGT **CTTAGTCTTT** **GAGGTCTCTT** a55a56
 2221 GTCCTCTTCG AGAAGAGATA CATGTCTGGT GCCAAGGACG TCTCCGAGAT GTTCACCACC
CAGGAGAAGC **TCTTCTCTAT** **GTACAGACCA** **CGTTTCTTGC** AGAGGCTCTA CAAGTGGTGG a57
 2281 AAGTTCGAGA AGGACAACCT CTACATCGAG TTGTCCCAAG GTAACAACCT TTACGGTGGT
TTCAAGCTCT **TCCTGTTGAA** GATGTAGCTC AACAGGGTTC **CATTGTTGGA** **AATGCCACCA** a58a59
 2341 CCTATCGTCC ACTTCTATGA CGTCTCCATC AAATAAGAGC TC a60
GGATAGCAGG **TGAAGATACT** **GCAGAGGTAG** **TTTATTCTCG** **AG**


Total number of bases is: 2382.

DNA sequence composition: 685 A; 665 C; 455 G; 577 T; 0 OTHER;

Figure 7S



841 ACAGCCTTGC AAGCTCAAGC TTTCTTGACC TTGACCACCT GTAGAAAGCT TCTTGGTCTT
 TGTTCGGAACG TTCGAGTTCG AAAGAACTGG AACTGGTGGA CATCTTTCGA AGAACCAGAA

block1 

901 GCTGACATCG ACTACACCTC CATCATGAAC GAACACCTTA ACAAGGAGAA GGAGGAGTTC b13
 CGACTGTAGC TGATGTGGAG GTAGTACTTG CTTGTGGAAT TGTTCCTCTT CCTCTCAAG

961 AGAGTCAACA TCTTGCCTAC TTTGTCCAAC ACCTTCTCCA ACCCTAACTA CGCTAAGGTC b14
 TCTCAGTTGT AGAACGGATG AACAGGTTG TGGAAGAGGT TGGGATTGAT GCGATTCCAG

1021 AAAGGATCCG ACGAAGACGC TAAGATGATC GTTGAAGCTA AACCTGGTCA CGCACTTATC b15
 TTTCTAGGC TGCTTCTGCG ATTCTACTAG CAACTTCGAT TTGGACCAGT GCGTGAATAG

1081 GGTTCGAAA TCTCCAACGA CTCCATCACC GTCCTTAAGG TCTACGAGGC TAAGTTGAAG b16
 CCAAAGCTTT AGAGGTGCT GAGGTAGTGG CAGGAATTCC AGATGCTCCG ATTCAACTTC

1141 CAAAAC TACC AGGTCGACAA GGACTCCCTT TCTGAGGTCA TCTACGGTGA CATGGACAAA
 GTTTTGATGG TCCAGCTGTT CCTGAGGGAA AGACTCCAGT AGATGCCACT GTACCTGTTT

1201 CTTCTTTGTC CAGACCAATC CGAACAAATC TACTACACCA ACAACATCGT CTCCCTAAC b17
 GAAGAAACAG GTCTGGTTAG GCTTGTTTAG ATGATGTGGT TGTGTAGCA GAAGGGATTG

1261 GAGTACGTCA TCACCAAGAT CGACTTCACC AAGAAGATGA AGACCCTTAG ATACGAGGTC b18
 CTCATGCAGT AGTGGTTCTA GCTGAAGTGG TTCTTCTACT TCTGGGAATC TATGCTCCAG b19

1321 ACTGCTAACT TCTACGACTC CTCCACTGGT GAGATCGATC TTAACAAGAA GAAGGTCGAG
 TGACGATTGA AGATGCTGAG GAGGTGACCA CTCTAGCTAG AATGTTCTT CTCCAGCTC b20

1381 TCCTCCGAAG CTGAGTACAG AACCTTTTCT GCTAACGACG ATGGTGTCTA CATGCCTCTT
 AGGAGGCTTC GACTCATGTC TTGGGAAAGA CGATTGCTGC TACCACAGAT GTACGGAGAA b21

1441 GGTGTCATCT CCGAGACCTT CCTTACTCCT ATCAATGGCT TCGGTTTGCA GGCTGACGAG
 CCACAGTAGA GGCTCTGGAA GGAATGAGGA TAGTTACCGA AGCCAAACGT CCGACTGCTC b22

1501 AACTCCAGAC TTATCACCC TACCTGCAAG TCCTACCTTA GAGAATTGCT CTTGGCTACC
 TTGAGGTCTG AATAGTGGGA ATGGACGTTT AGGATGGAAT CTCTTAACGA GAACCGATGG b23

1561 GACCTCTCTA ACAAGGAGAC CAAACTCATC GTCCTCCTT CTGGTTTCAT CTCTAACATC
 CTGGAGAGAT TGTTCCTCTG GTTTGAGTAG CAGGGAGGAA GACCAAAGTA GAGATTGTAG b24

1621 GTCGAGAACG GTTCCATCGA AGAGGACAAC CTTGAGCCTT GGAAAGCTAA CAACAAGAAC
 CAGCTCTTGC CAAGGTAGCT TCTCCTGTTG GAACTCGGAA CCTTTCGATT GTTGTCTTGG

1681 GCTTACGTCG ACCCACTGG TGGTGTCAAC GGTACCAAGG CTCTTTACGT CCACAAGGAC
CGAATGCAGC TGGTGTGACC ACCACAGTTG CCATGGTTCC GAGAAATGCA GGTGTTCTGT

Block2 

1741 GGTGGTATCT CCAATTCAT CGGAGACAAA CTTAAACCTA AAACCGAGTA CGTCATCCAA b25
CCACCATAGA GGGTTAAGTA GCCTCTGTTT GAATTTGGAT TTTGGCTCAT GCAGTAGGTT

1801 TACACCGTCA AGGGTAAACC TTCATCCAC CTTAAAGACG AAAACACTGG TTACATCCAC b26
ATGTGGCAGT TCCCATTTGG AAGGTAGGTG GAATTTCTGC TTTTGTGACC AATGTAGGTG

1861 TACGAAGACA CCAACAACAA CCTTGAAGAC TACCAAACCA TCAACAAAAG ATTCACCACA b27
ATGCTTCTGT GGTGTTGTT GGAACTTCTG ATGGTTTGGT AGTTGTTTTT TAAGTGGTGT

1921 GGAACCGACC TTAAGGGTGT CTACCTTATC CTTAAGTCCC AGAACGGTGA CGAGGCTTGG b28
CCTTGGCTGG AATTCCACA GATGGAATAG GAATTCAGGG TCTTGCCACT GCTCCGAACC

1981 GGTGACAAC TCAATCATCT TGAGATCTCC CCATCCGAGA AGCTTCTTTC CCCTGAACTT
CCACTGTTGA AGTAGTAGGA ACTCTAGAGG GGTAGGCTCT TCGAAGAAAG GGGACTTGAA b30

2041 ATCAACACCA ACAACTGGAC CTCCACTGGT TCCACCAACA TCTCTGGTAA CACCTTGACC b29
TAGTTGTGGT TGTGACCTG GAGGTGACCA AGTTGGTTGT AGAGACCATT GTGGAAGTGG

2101 TTGTACCAGG GTGGTAGAGG TATCTTGAAG CAAAACCTGC AACTTGACTC CTCTCCACC
AACATGGTCC CACCATCTCC ATAGAAGTTC GTTTTGAACG TTGAACTGAG GAAGAGGTGG b31

2161 TACAGAGTCT ACTTCTCTGT GTCTGGTGAC GCTAACGTCA GAATCAGAAA CTCCAGAGAA
ATGTCTCAGA TGAAGAGACA CAGACCACTG CGATTGCAGT CTTAGTCTTT GAGGTCTCTT b32

2221 GTCCTCTTCG AGAAGAGATA CATGTCTGGT GCCAAGGACG TCTCCGAGAT GTTCACCACC
CAGGAGAAGC TCTTCTCTAT GTACAGACCA CGGTTCTCTGC AGAGGCTCTA CAAGTGGTGG b33

2281 AAGTTCGAGA AGGACAACCT CTACATCGAG TTGTCCCAAG GTAACAACCT TTACGGTGGT
TTCAAGCTCT TCCTGTTGAA GATGTAGCTC AACAGGGTTC CATTGTTGGA AATGCCACCA b34

2341 CCTATCGTCC ACTTCTATGA CGTCTCCATC AAATAAGAGC TC
GGATAGCAGG TGAAGATACT GCAGAGGTAG TTTATTCTCG AG

Block3 

Total number of bases is: 2382.

DNA sequence composition: 685 A; 665 C; 455 G; 577 T; 0 OTHER;

Figure 8S



841 ACAGCCTTGC AAGCTCAAGC TTCCTTGACC TTGACCACCT GTAGAAAGCT TCTTGGTCTT c21c22
 TGTCGGAACG TTCGAGTTCG AAAGAACTGG AACTGGTGGG CATCTTTCGA AGAACCAGAA

901 GCTGACATCG ACTACACCTC CATCATGAAC GAACACCTTA ACAAGGAGAA GGAGGAGTTC c23
 CGACTGTAGC TGATGTGGAG GTAGTACTTG CTTGTGGAAT TGTTCTCTCTT CCTCCTCAAG

961 AGAGTCAACA TCTTGCCTAC TTTGTCCAAC ACCTTCTCCA ACCCTAACTA CGTAAGGTC c24c25
 TCTCAGTTGT AGAACGGATG AAACAGGTTG TGGAAGAGGT TGGGATTGAT GCGATTCCAG

1021 AAAGGATCCG ACGAAGACGC TAAGATGATC GTTGAAGCTA AACCTGGTCA CGCACTTATC c26
 TTTCTTAGGC TGCTTCTGCG ATTCTACTAG CAACTTCGAT TTGGACCAGT GCGTGAATAG

1081 GGTTTCGAAA TCTCCAACGA CTCCATCACC GTCCTTAAGG TCTACGAGGC TAAGTTGAAG c27c28
 CCAAAGCTTT AGAGGTTGCT GAGGTAGTGG CAGGAATTCC AGATGCTCCG ATTCAACTTC

1141 CAAACTACC AGGTCGACAA GGACTCCCTT TCTGAGGTCA TCTACGGTGA CATGGACAAA c29
 GTTTTGATGG TCCAGCTGTT CCTGAGGGAA AGACTCCAGT AGATGCCACT GTACCTGTTT

1201 CTTCTTTGTC CAGACCAATC CGAACAAATC TACTACACCA ACAACATCGT CTTCCCTAAC c30
GAAGAAACAG GTCTGGTTAG GCTTGTTTAG ATGATGTGGT TGTTGTAGCA GAAGGGATTG c31c32

1261 GAGTACGTCA TCACCAAGAT CGACTTCACC AAGAAGATGA AGACCCTTAG ATACGAGGTC
CTCATGCAGT AGTGGTTCTA GCTGAAGTGG TTCTTCTACT TCTGGGAATC TATGCTCCAG c33

1321 ACTGCTAACT TCTACGACTC CTCCACTGGT GAGATCGATC TTAACAAGAA GAAGGTGCGAG
TGACGATTGA AGATGCTGAG GAGGTGACCA CTCTAGCTAG AATTGTTCTT CTCCAGCTC c34c35

1381 TCCTCCGAAG CTGAGTACAG AACCTTTTCT GCTAACGACG ATGGTGTCTA CATGCCTCTT
AGGAGGCTTC GACTCATGTC TTGGGAAAGA CGATTGCTGC TACCACAGAT GTACGGAGAA c36

1441 GGTGTCATCT CCGAGACCTT CCTTACTCCT ATCAATGGCT TCGGTTTGCA GGCTGACGAG
CCACAGTAGA GGCTCTGGAA GGAATGAGGA TAGTTACCGA AGCCAAACGT CCGACTGCTC c37c38

1501 AACTCCAGAC TTATCACCTT TACCTGCAAG TCCTACCTTA GAGAATTGCT CTGGCTACC
TTGAGGCTCG AATAGTGGA ATGGACGTTT AGGATGGAAT CTCTTAACGA GAACCGATGG c39

1561 GACCTCTCTA ACAAGGAGAC CAAACTCATC GTCCTCCTT CTGGTTTCAT CTCTAACATC
CTGGAGAGAT GTTCTCTCTG GTTTGAGTAG CAGGGAGGAA GACCAAAGTA GAGATTGTAG c40c41

1621 GTCGAGAACG GTTCCATCGA AGAGGACAAC CTTGAGCCTT GGAAAGCTAA CAACAAGAAC
CAGCTCTTGC CAAGGTAGCT TCTCCTGTTG GAACTCGGAA CCTTTCGATT GTTGTCTCTG c42

1681 GCTTACGTCG ACCACACTGG TGGTGTCAAC GGTACCAAGG CTCTTTACGT CCACAAGGAC
CGAATGCAGC TGGTGTGACC ACCACAGTTG CCATGGTTCC GAGAAATGCA GGTGTTCTCTG c43c44

1741 GGTGGTATCT CCCAATTCAT CGGAGACAAA CTTAAACCTA AAACCGAGTA CGTCATCCAA
CCACCATAGA GGGTTAAGTA GCCTCTGTTT GAATTTGGAT TTTGGCTCAT GCAGTAGGTT c45
←

1801 TACACCGTCA AGGGTAAACC TTCCATCCAC CTTAAAGACG AAAACACTGG TTACATCCAC
ATGTGGCAGT TCCCATTTGG AAGGTAGGTG GAATTTCTGC TTTTGTGACC AATGTAGGTG c46c47
←

1861 TACGAAGACA CCAACAACAA CCTTGAAGAC TACCAAACCA TCAACAAAAG ATTCACCACA
ATGCTTCTGT GGTGTGTTGT GGAAGTTCTG ATGGTTTGGT AGTTGTTTTT TAAGTGGTGT c47
←

1921 GGAACCGACC TTAAGGGTGT CTACCTTATC CTTAAGTCCC AGAACGGTGA CGAGGCTTGG
CCTTGGCTGG AATTCACACA GATGGAATAG GAATTCAGGG TCTTGCCACT GCTCCGAACC c48c50
←

1981 GGTGACAACT TCATCATCCT TGAGATCTCC CCATCCGAGA AGCTTCTTTT CCCTGAACTT
CCACTGTTGA AGTAGTAGGA ACTCTAGAGG GGTAGGCTCT TCGAAGAAAG GGGACTTGAA c51
←

2041 ATCAACACCA ACAACTGGAC CTCCTACTGGT TCCACCAACA TCTCTGGTAA CACCTTGACC
TAGTTGTGGT TGTTGACCTG GAGGTGACCA AGGTGGTTGT AGAGACCATT GTGGAAGCTG c52c53
←

2101 TTGTACCAGG GTGGTAGAGG TATCTTGAAG CAAAAGTTGC AACTTGACTC CTCTCCACC
AACATGGTCC CACCATCTCC ATAGAACTTC GTTTTGAACG TTGAACTGAG GAAGAGGTGG c54
←

2161 TACAGAGTCT ACTTCTCTGT GTCTGGTGAC GCTAACGTCA GAATCAGAAA CTCCAGAGAA
ATGTCTCAGA TGAAGAGACA CAGACCACTG CGATTGCAGT CTTAGTCTTT GAGGTCTCTT c55c56
←

2221 GTCCTCTTCG AGAAGAGATA CATGTCTGGT GCCAAGGACG TCTCCGAGAT GTTCACCACC
CAGGAGAAGC TCTTCTCTAT GTACAGACCA CGGTTCTCTG AGAGGCTCTA CAAGTGGTGG c57
←

2281 AAGTTCGAGA AGGACAACCT CTACATCGAG TTGTCCCAAG GTAACAACCT TTACGGTGGT
TTCAAGCTCT TCCTGTTGAA GATGTAGCTC AACAGGGTTC CATTGTTGGA AATGCCACCA c58c59
←

2341 CCTATCGTCC ACTTCTATGA CGTCTCCATC AAATAAGAGC TC
GGATAGCAGG TGAAGATACT GCAGAGGTAG TTTATTCTCG AG

Total number of bases is: 2382.

DNA sequence composition: 685 A; 665 C; 455 G; 577 T; 0 OTHER;

Figure 9S

10 20 30 40 50 60

1 CTCTGAGATGA ACAAGAACAA CACCAAGTTG TCCACCAGAG CCTTGCCTTC CTTTCATCGAC
GAGCTCTACT TGTCTTGTGTT GTGGTTCAAC AGGTGGTCTC GGAACGGAAG GAAGTAGCTG

61 TACTTCAATG GTATCTACGG ATTCGCTACT GGTATCAAGG ACATCATGAA CATGATCTTC d1
ATGAAGTTAC CATAGATGCC TAAGCGATGA CCATAGTTCC TGTAGTACTT GTAGTGAAG

121 AAGACTGACA CTGGTGGTGA TCTGACCCTT GACGAGATCT TGAAGAACCA ACAACTTCTG d2
TTCTGACTGT GACCACCACT AGACTGGGAA CTGCTCTAGA ACTTCTTGGT TGTGGAAGAC

181 AACGACATCT CTGGTAAACT TGATGGTGTG AATGGTTCCT TGAACGACCT GATCGCACAG d3
TTGCTGTAGA GACCATTGGA ACTACCACAG TTACCAAGGA ACTTGCTGGA CTAGCGTGTG

241 GGTAACCTTA ACACAGAACT TTCCAAGGAG ATCTTGAAGA TCGCTAACGA ACAGAACCAA d4
CCATTGGAAT TGTGTCTTGA AAGGTTCTCT TAGAACTTCT AGCGATTGCT TGTCTTGGTT

301 GTCTTGAACG ACGTCAACAA CAAACTCGAT GCTATCAACA CCATGTTGAG AGTCTACTTG
CAGAACTTGC TGCAGTTGTT GTTTGAGCTA CGATAGTTGT GGTACAACCTC TCAGATGAAC

361 CCTAAGATCA CCTCCATGCT TTCCGACGTC ATGAAGCAGA ACTATGCTTT GTCTCTGCAA d5
GGATTCTAGT GGAGGTACGA AAGGCTGCAG TACTTCGTCT TGATACGAAA CAGAGACGTT

421 ATCGAATACC TTTCCAAGCA ACTTCAAGAG ATCTCCGACA AGCTTGACAT CATCAACGTC d6
TAGCTTATGG AAAGTTTCGT TGAAGTTCTC TAGAGGCTGT TCGAACTGTA GTAGTTGCAG

481 AACGTCTTGA TCAACTCCAC TTTGACCGAG ATCACTCCTG CTTACCAGAG AATCAAGTAC d7
TTGCAGAACT AGTTGAGGTG AACTGGGCTC TAGTGAGGAC GAATGGTCTC TTAGTTCATG

541 GTCAACGAGA AGTTCGAGGA GCTTACCTTC GCTACCGAAA CCTCCTCCAA GGTCAAGAAG d8
CAGTTGCTCT TCAAGTCCT CGAATGGAAG CGATGGCTTT GGAGGAGGTT CCAGTTCCTC

601 GACGGTCTC CTGCTGACAT CCTCGACGAG TTGACCGAGT TGACCGAATT GGCTAAGTCC d9
CTGCCAAGAG GACGACTGTA GGAGCTGCTC AACTGGCTCA ACTGGCTTAA CCGATTCAGG

661 GTCACCAAGA ACGACGTCGA TGGTTTCGAA TTCTACTTGA ACACCTTTCA TGACGTCATG d10
CAGTGGTTCT TGCTGCAGCT ACCAAAGCTT AAGATGAACT TGTGGAAAGT ACTGCAGTAC

721 GTTGGTAACA ACCTTTTCGG TAGATCTGCA CTTAAGACTG CTTCTGAACT TATCACCAG
CAACCATTGT TGGAAAAGCC ATCTAGACGT GAATTCTGAC GAAGACTTGA ATAGTGGTTC

781 GAGAACGTGA AAACCTCTGG TTCCGAGGTT GGTAACGTCT ACAACTTCTT GATCGTCTTG d11
CTCTTGCACT TTTGGAGACC AAGGCTCCAA CCATTGCAGA TGTGGAAGAA CTAGCAGAAC

841 ACAGCCTTGC AAGCTCAAGC TTTCTTGACC TTGACCACCT GTAGAAAGCT TCTTGGTCTT d12
 TGTCCGAACG TTCGAGTTCG AAAGAAGTGG AACTGGTGGA CATCTTTCGA AGAACCAGAA

901 GCTGACATCG ACTACACCTC CATCATGAAC GAACACCTTA ACAAGGAGAA GGAGGAGTTC d13
 CGACTGTAGC TGATGTGGAG GTAGTACTTG CTTGTGGAAT TGTTCCTCTT CCTCCTCAAG

961 AGAGTCAACA TCTTGCCTAC TTTGTCCAAC ACCTTCTCCA ACCCTAACTA CGTAAGGTC d14
 TCTCAGTTGT AGAACGGATG AACAGGTTG TGGAAGAGGT TGGGATTGAT GCGATTCCAG

1021 AAAGGATCCG ACGAAGACGC TAAGATGATC GTTGAAGCTA AACCTGGTCA CGCACTTATC d15
 TTTCTAGGC TGCTTCTGCG ATTCTACTAG CAACTTCGAT TTGGACCAGT GCGTGAATAG

1081 GGTTCGAAA TCTCCAACGA CTCCATCACC GTCCTTAAGG TCTACGAGGC TAAGTTGAAG d16
 CCAAAGCTTT AGAGGTGCT GAGGTAGTGG CAGGAATTCC AGATGCTCCG ATTCAACTTC

1141 CAAAAC TACC AGTCGACAA GGACTCCCTT TCTGAGGTCA TCTACGGTGA CATGGACAAA
 GTTTTGATGG TCCAGCTGTT CCTGAGGGAA AGACTCCAGT AGATGCCACT GTACCTGTTT d18

1201 CTTCTTTGTC CAGACCAATC CGAACAAATC TACTACACCA ACAACATCGT CTTCCTAAC d17
GAAGAAACAG GTCTGGTTAG GCTTGTTTAA ATGATGTGGT TGTTGTAGCA GAAGGGATTG d19

1261 GAGTACGTC TACCAAGAT CGACTTCACC AAGAAGATGA AGACCCTTAG ATACGAGGTC
CTCATGCAGT AGTGGTTCTA GCTGAAGTGG TTCTTCTACT TCTGGGAATC TATGCTCCAG d20

1321 ACTGCTAACT TCTACGACTC CTCCACTGGT GAGATCGATC TTAACAAGAA GAAGGTCGAG
TGACGATTGA AGATGCTGAG GAGGTGACCA CTCTAGCTAG AATGTTCTT CTTCCAGCTC

1381 TCCTCCGAAG CTGAGTACAG AACCTTTCT GCTAACGACG ATGGTGTCTA CATGCCTCTT
AGGAGGCTTC GACTCATGTC TTGGGAAAGA CGATTGCTGC TACCACAGAT GTACGGAGAA d21

1441 GGTGTCATCT CCGAGACCTT CCTTACTCCT ATCAATGGCT TCGGTTTGCA GGCTGACGAG
CCACAGTAGA GGCTCTGGAA GGAATGAGGA TAGTTACCGA AGCCAAACGT CCGACTGCTC d22

1501 AACTCCAGAC TTATCACCTT TACCTGCAAG TCCTACCTTA GAGAATTGCT CTTGGCTACC
TTGAGGTCTG AATAGTGGGA ATGGACGTTT AGGATGGAAT CTCTTAACGA GAACCGATGG d23

1561 GACCTCTCTA ACAAGGAGAC CAAACTCATC GTCCTCCTT CTGGTTTCAT CTCTAACATC
CTGGAGAGAT TGTTCTCTG GTTTGAGTAG CAGGGAGGAA GACCAAAGTA GAGATTGTAG d24

1621 GTCGAGAACG GTTCCATCGA AGAGGACAAC CTTGAGCCTT GGAAAGCTAA CAACAAGAAC
CAGCTCTTGC CAAGGTAGCT TCTCCTGTTG GAAGTCCGAA CCTTTCGATT GTTGTTCTTG d25

1681 GCTTACGTCG ACCACACTGG TGGTGTCAAC GGTACCAAGG CTCTTTACGT CCACAAGGAC
CGAATGCAGC TGGTGTGACC ACCACAGTTG CCATGGTTCC GAGAAATGCA GGTGTTCCTG d26
←

1741 GGTGGTATCT CCCAATTCAT CGGAGACAAA CTTAAACCTA AAACCGAGTA CGTCATCCAA
CCACCATAGA GGGTTAAGTA GCCTCTGTTT GAATTTGGAT TTTGGCTCAT GCAGTAGGTT

1801 TACACCGTCA AGGGTAAACC TTCCATCCAC CTTAAAGACG AAAAACAATGG TTACATCCAC
ATGTGGCAGT TCCCATTTGG AAGGTAGGTG GAATTTCTGC TTTTGTGACC AATGTAGGTG d27
←

1861 TACGAAGACA CCAACAACAA CCTTGAAGAC TACCAAACCA TCAACAAAAG ATTCACCACA
ATGCTTCTGT GGTTGTTGTT GGAACCTCTG ATGGTTTGGT AGTTGTTTTTC TAAGTGGTGT d28
←

1921 GGAACCGACC TTAAGGGTGT CTACCTTATC CTTAAGTCCC AGAACGGTGA CGAGGCTTGG
CCTTGCTGCG AATTCACACA GATGGAATAG GAATTCAGGG TCTTGCCACT GCTCCGAACC d29
←

1981 GGTGACAACT TCATCATCCT TGAGATCTCC CCATCCGAGA AGCTTCTTTC CCCTGAACTT
CCACTGTTGA AGTAGTAGGA ACTCTAGAGG GGTAGGCTCT TCGAAGAAA GGGACTTGAA d30
←

2041 ATCAACACCA ACAACTGGAC CTCCACTGGT TCCACCAACA TCTCTGGTAA CACCTTGACC
TAGTTGTGGT TGTGACCTG GAGGTGACCA AGTGGGTTGT AGAGACCATT GTGGAAGCTG d31
←

2101 TTGTACCAGG GTGGTAGAGG TATCTTGAAG CAAAACCTGC AACTTGACTC CTTCTCCACC
AACATGGTCC CACCATCTCC ATAGAACTTC GTTTTGAACG TTGAACTGAG GAAGAGGTGG

2161 TACAGAGTCT ACTTCTCTGT GTCTGGTGAC GCTAACGTCA GAATCAGAAA CTCCAGAGAA
ATGTCTCAGA TGAAGAGACA CAGACCACTG CGATTGCAGT CTTAGTCTTT GAGGTCTCTT d32
←

2221 GTCCTCTTCG AGAAGAGATA CATGTCTGGT GCCAAGGACG TCTCCGAGAT GTTCACCACC
CAGGAGAAGC TCTTCTCTAT GTACAGACCA CGGTTCTGCG AGAGGCTCTA CAAGTGGTGG d33
←

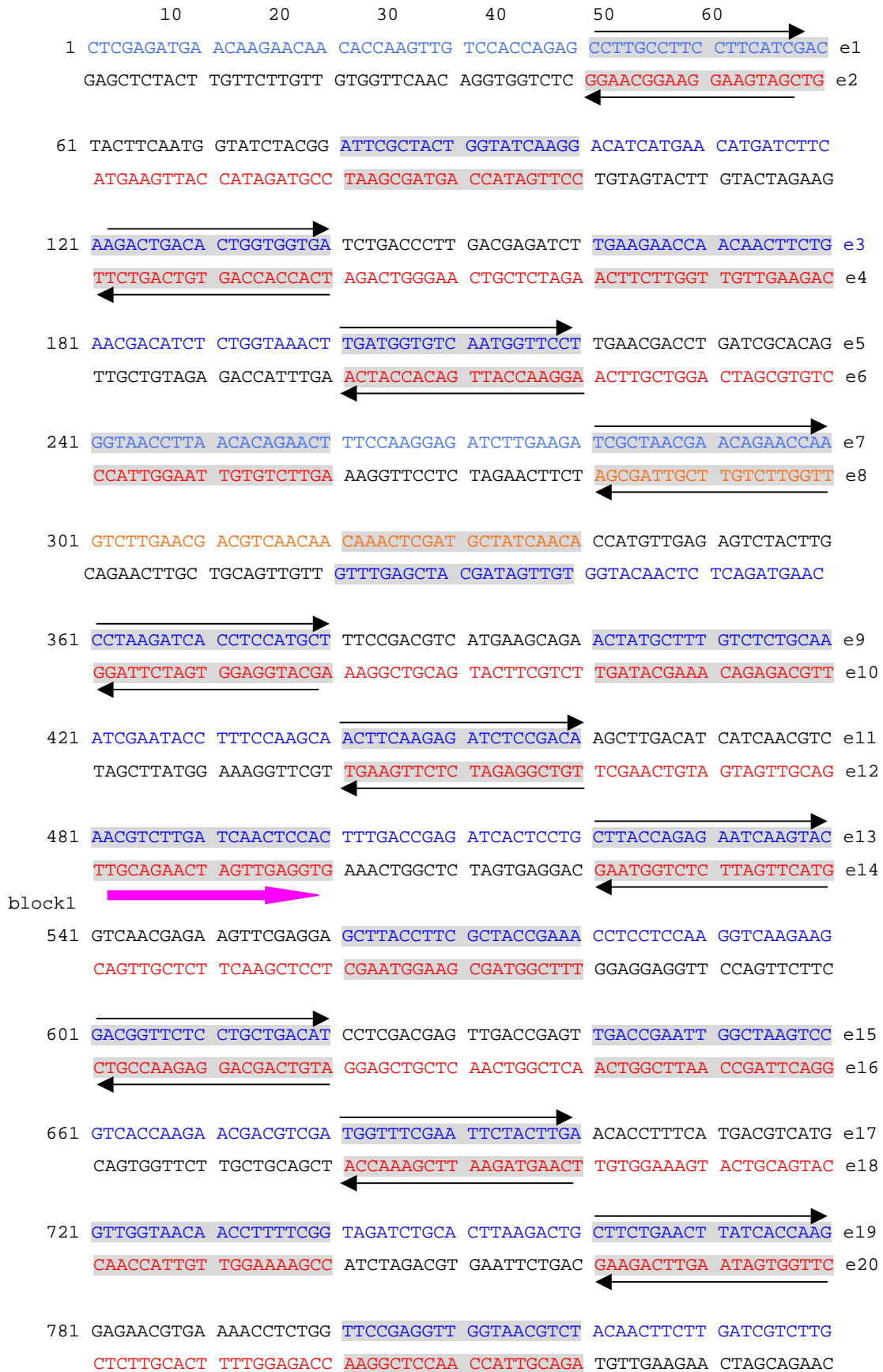
2281 AAGTTCGAGA AGGACAACCT CTACATCGAG TTGTCCCAAG GTAACAACCT TTACGGTGGT
TTCAAGCTCT TCCTGTTGAA GATGTAGCTC AACAGGGTTC CATGTGTTGA AATGCCACCA d34
←

2341 CCTATCGTCC ACTTCTATGA CGTCTCCATC AAATAAGAGC TC
GGATAGCAGG TGAAGATACT GCAGAGGTAG TTTATTCTCG AG

Total number of bases is: 2382.

DNA sequence composition: 685 A; 665 C; 455 G; 577 T; 0 OTHER;

Figure 10S



841  ACAGCCTTGC AAGCTCAAGC TTTCTTGACC TTGACCACCT GTAGAAAGCT TCTTGGTCTT e21
 TGTTCGGAACG TTCGAGTTTCG AAAGAAGTGG AACTGGTGGG CATCTTTCGA AGAACCAGAA e22

901 GCTGACATCG ACTACACCTC  CATCATGAAC GAACACCTTA ACAAGGAGAA GGAGGAGTTC e23
CGACTGTAGC TGATGTGGAG  GTAGTACTTG CTTGTGGAAT TGTTCCTCTT CCTCCTCAAG e24

961 AGAGTCAACA TCTTGCCTAC TTTGTCCAAC ACCTTCTCCA  ACCCTAACTA CGCTAAGGTC e25
 TCTCAGTTGT AGAACGGATG AAACAGGTTG TGGAAGAGGT TGGGATTGAT GCGATTCCAG e26

block2 

1021 AAAGGATCCG ACGAAGACGC TAAGATGATC GTTGAAGCTA AACCTGGTCA CGCACTTATC
TTTCCTAGGC TGCTTCTGCG ATTCTACTAG CAACTTCGAT TTGGACCAGT GCGTGAATAG

1081  GGTTCGAAA TCTCCAACGA CTCCATCACC GTCCTTAAGG TCTACGAGGC TAAGTTGAAG e27
 CCAAAGCTTT AGAGGTTGCT GAGGTAGTGG CAGGAATTCC AGATGCTCCG ATTCAACTTC e28

1141 CAAAAC TACC AGTCGACAA  GGACTCCCTT TCTGAGGTCA TCTACGGTGA CATGGACAAA e29
GTTTTGATGG TCCAGCTGTT  CCTGAGGGAA AGACTCCAGT AGATGCCACT GTACCTGTTT e30

1201 CTTCTTTGTC CAGACCAATC CGAACAAATC TACTACACCA  ACAACATCGT CTCCCTAAC e31
 GAAGAAACAG GTCTGGTTAG GCTTGTTTAG ATGATGTGGT TGTGTAGCA GAAGGGATTG e32

1261 GAGTACGTC TACCAAGAT CCACTTCACC AAGAAGATGA AGACCCTTAG ATACGAGGTC
CTCATGCAGT AGTGGTTCTA GCTGAAGTGG TTCTTCTACT TCTGGGAATC TATGCTCCAG

1321  ACTGCTAACT TCTACGACTC CTCCACTGGT GAGATCGATC TTAACAAGAA GAAGGTGCGAG e33
 TGACGATTGA AGATGCTGAG GAGGTGACCA CTCTAGCTAG AATTGTTCTT CTCCAGCTC e34


1381 TCCTCCGAAG CTGAGTACAG  AACCTTTCT GCTAACGACG ATGGTGTCTA CATGCCTCTT e35
AGGAGGCTTC GACTCATGTC  TTGGGAAAGA CGATTGCTGC TACCACAGAT GTACGGAGAA e36

1441 GGTGTCATCT CCGAGACCTT  CCTTACTCCT ATCAATGGCT TCGGTTTGCA GGCTGACGAG e37
 CCACAGTAGA GGCTCTGGAA GGAATGAGGA TAGTTACCGA AGCCAAACGT CCGACTGCTC e38

block3 

1501 AACTCCAGAC TTATCACCCCT TACCTGCAAG TCCTACCTTA GAGAATTGCT CTTGGCTACC
TTGAGGTCTG AATAGTGGGA ATGGACGTTT AGGATGGAAT CTCTTAACGA GAACCGATGG

1561 GACCTCTCTA ACAAGGAGAC CAAACTCATC GTCCTCCTT CTGGTTTCAT CTCTAACATC e39
 CTGGAGAGAT TGTTCCTCTG GTTTGAGTAG CAGGGAGGAA GACCAAAGTA GAGATTGTAG e40

1621 GTCGAGAACG GTTCCATCGA  AGAGGACAAC CTTGAGCCTT GGAAAGCTAA CAACAAGAAC e41
CAGCTCTTGC CAAGGTAGCT  TCTCCTGTTG GAACTCGGAA CCTTTCGATT GTTGTCTTG e42

1681 GCTTACGTCG ACCCACTGG TGGTGTCAAC GGTACCAAGG CTCTTTACGT CCACAAGGAC e43
 CGAATGCAGC TGGTGTGACC ACCACAGTTG CCATGGTTCC GAGAAATGCA GGTGTTCTCG e44

1741 GGTGGTATCT CCCAATTCAT CGGAGACAAA CTTAAACCTA AAACCGAGTA CGTCATCCAA
 CCACCATAGA GGGTTAAGTA GCCTCTGTTT GAATTTGGAT TTTGGCTCAT GCAGTAGGTT

1801 TACACCGTCA AGGGTAAACC TTCATCCAC CTAAAGACG AAAAAGCTGG TTACATCCAC e45
 ATGTGGCAGT TCCCATTTGG AAGGTAGGTG GAATTTCTGC TTTTGTGACC AATGTAGGTG e46

1861 TACGAAGACA CCAACAACAA CCTTGAAGAC TACCAAACCA TCAACAAAAG ATTCACCACA e47
 ATGCTTCTGT GTTGTTGTT GGAAGTTCTG ATGGTTTGGT AGTTGTTTTT TAAGTGGTGT e48

1921 GGAACCGACC TTAAGGGTGT CTACCTTATC CTTAAGTCCC AGAACGGTGA CGAGGCTTGG e49
 CCTTGGCTGG AATTCCACA GATGGAATAG GAATTCAGGG TCTTGCCACT GCTCCGAACC e50

Block4

1981 GGTGACAACCT TCATCATCCT TGAGATCTCC CCATCCGAGA AGCTTCTTTC CCCTGAACTT
 CCACTGTTGA AGTAGTAGGA ACTCTAGAGG GGTAGGCTCT TCGAAGAAAG GGGACTTGAA

2041 ATCAACACCA ACAACTGGAC CTCCTACTGGT TCCACCAACA TCTCTGGTAA CACCTTGACC e51
 TAGTTGTGGT TGTGACCTG GAGGTGACCA AGGTGGTTGT AGAGACCATT GTGGAAGTGG e52

2101 TTGTACCAGG GTGGTAGAGG TATCTTGAAG CAAAAGTTGC AACTTGACTC CTCTCCACC e53
 AACATGGTCC CACCATCTCC ATAGAAGTTC GTTTTGAACG TTGAACTGAG GAAGAGGTGG e54

2161 TACAGAGTCT ACTTCTCTGT GTCTGGTGAC GCTAACGTCA GAATCAGAAA CTCCAGAGAA e55
 ATGTCTCAGA TGAAGAGACA CAGACCACTG CGATTGCAGT CTTAGTCTTT GAGGTCTCTT e56

2221 GTCCTCTTCG AGAAGAGATA CATGTCTGGT GCCAAGGACG TCTCCGAGAT GTTCACCACC
 CAGGAGAAGC TCTTCTCTAT GTACAGACCA CGGTTCTTGC AGAGGCTCTA CAAGTGGTGG

2281 AAGTTGAGA AGGACAACCT CTACATCGAG TTGTCCCAAG GTAACAACCT TTACGGTGGT e57
 TTCAAGCTCT TCCTGTTGAA GATGTAGCTC AACAGGGTTC CATTGTGGA AATGCCACCA e58

2341 CCTATCGTCC ACTTCTATGA CGTCTCCATC AAATAAGAGC TC e59
 GGATAGCAGG TGAAGATACT GCAGAGGTAG TTTATTCTCG AG e60

Block5

Total number of bases is: 2382.

DNA sequence composition: 685 A; 665 C; 455 G; 577 T; 0 OTHER;

Figure 11S

10 20 30 40 50 60

1 CTCGAGATGA ACAAGAACAA CACCAAGTTG TCCACCAGAG CCTTGCCTTC CTTCATCGAC
GAGCTCTACT TGTTCCTGTT GTGGTTCAAC AGGTGGTCTC GGAACGGAAG GAAGTAGCTG

61 TACTTCAATG GTATCTACGG ATTGCTACT GGTATCAAGG ACATCATGAA CATGATCTTC e1
ATGAAGTTAC CATAGATGCC TAAGCGATGA CCATAGTTCC TGTAGTACTT GTECTAGAAG e2

121 AAGACTGACA CTGGTGGTGA TCTGACCCTT GACGAGATCT TGAAGAACCA ACAACTTCTG
TTCTGACTGT GACCACCACT AGACTGGGAA CTGCTCTAGA ACTTCTTGGT TGTTGAAGAC

181 AACGACATCT CTGGTAAACT TGATGGTGTG AATGGTTCCT TGAACGACCT GATCGCACAG e3
TTGCTGTAGA GACCATTTGA ACTACCACAG TTACCAAGGA ACTTGCTGGA CTAGCGTGTCT e4

241 GGTAACCTTA ACACAGAACT TTCCAAGGAG ATCTTGAAGA TCGCTAACGA ACAGAACCAA
CCATTGGAAT TGTGTCTTGA AAGGTTCTCT TAGAACTTCT AGCGATTGCT TGTCTTGTTT

301 GTCTTGAACG ACGTCAACAA CAAACTCGAT GCTATCAACA CCATGTTGAG AGTCTACTTG
CAGAACTTGC TGCAGTTGTT GTTTGAGCTA CGATAGTTGT GTTACAACCTC TCAGATGAAC e6

361 CCTAAGATCA CCTCCATGCT TTCCGACGTC ATGAAGCAGA ACTATGCTTT GTCTCTGCAA e5
GGATTCTAGT GGAGGTACGA AAGGCTGCAG TACTTCGTCT TGATACGAAA CAGAGACGTT

421 ATCGAATACC TTTCCAAGCA ACTTCAAGAG ATCTCCGACA AGCTTGACAT CATCAACGTC
TAGCTTATGG AAAGGTTCTG TGAAGTTCTC TAGAGGCTGT TCGAACTGTA GTAGTTGCAG

481 AACGTCTTGA TCAACTCCAC TTTGACCAG ATCACTCCTG CTTACCAGAG AATCAAGTAC e7
TTGCAGAACT AGTTGAGGTG AAACTGGCTC TAGTGAGGAC GAATGGTCTC TTAGTTCATG e8

541 GTCAACGAGA AGTTCGAGGA GCTTACCTTC GCTACCGAAA CCTCCTCCAA GGTCAAGAAG
CAGTTGCTCT TCAAGCTCCT CGAATGGAAG CGATGGCTTT GGAGGAGGTT CCAGTCTCTC

601 GACGGTTCTC CTGCTGACAT CCTCGACGAG TTGACCGAGT TGACCGAATT GGCTAAGTCC e9
CTGCCAAGAG GACGACTGTA GGAGCTGCTC AACTGGCTCA ACTGGCTTAA CCGATTCAGG e10

661 GTCACCAAGA ACGACGTCGA TGGTTTCGAA TTCTACTTGA ACACCTTTCA TGACGTCATG
CAGTGGTTCT TGCTGCAGCT ACCAAAGCTT AAGATGAACT TGTGGAAAAGT ACTGCAGTAC

721 GTTGGTAAACA ACCTTTTCGG TAGATCTGCA CTTAAGACTG CTTCTGAACT TATCACCAG
CAACCATTGT TGGAAAAGCC ATCTAGACGT GAATTCTGAC GAAGACTTGA ATAGTGGTTC

781 GAGAACGTGA AAACCTCTGG TTCCGAGGTT GGTAACGTCT ACAACTTCTT GATCGTCTTG e11
CTCTTGCACT TTTGGAGACC AAGGCTCCAA CCATTGCAGA TGTTGAAGAA CTAGCAGAAC e12

841 ACAGCCTTGC AAGCTCAAGC **TTTCTTGACC** **TTGACCACCT** GTAGAAAGCT TCTTGGTCTT
TGTCGGAACG **TTCGAGTTCG** **AAAGAACTGG** **AACTGGTGGA** CATCTTTCGA AGAACCAGAA

block 1 

901 GCTGACATCG ACTACACCTC CATCATGAAC **GAACACCTTA** **ACAAGGAGAA** GGAGGAGTTC e13
CGACTGTAGC TGATGTGGAG GTAGTACTTG **CTTGTGGAAT** **TGTTCTCTTT** **CCTCTCAAG** e14

961 AGAGTCAACA TCTGCCTAC TTTGTCCAAC ACCTTCTCCA **ACCCTAACTA** **CGTAAGGTC**
TCTCAGTTGT **AGAACGGATG** **AAACAGGTTG** **TGGAAGAGGT** **TGGGATTGAT** **GCGATTCCAG**

1021 **AAAGGATCCG** **ACGAAGACGC** **TAAGATGATC** **GTTGAAGCTA** **AACCTGGTCA** **CGCACTTATC**
TTTCCTAGGC TGCTTCTGCG ATTCTACTAG CAACTTCGAT TTGGACCAGT **GCGTGAATAG** e16

1081 **GGTTTCGAAA** TCTCCAACGA CTCATCACC GTCCTTAAGG TCTACGAGGC TAAGTTGAAG e15
CCAAAGCTTT **AGAGGTTGCT** **GAGGTAGTGG** **CAGGAATTCC** **AGATGCTCCG** **ATCAACTTC**

1141 **CAAACTACC** **AGTTCGACAA** **GGACTCCCTT** **TCTGAGGTCA** **TCTACGGTGA** **CATGGACAAA**
GTTTGTGATG **TCCAGCTGTT** CCTGAGGGAA AGACTCCAGT AGATGCCACT GTACCTGTTT

1201 **CTTCTTTGTC** **CAGACCAATC** **CGAACAAATC** TACTACACCA ACAACATCGT CTTCCTAAC e17
GAAGAAACAG **GCTCTGGTTAG** **GCTTGTTTAG** **ATGATGTGGT** **TGTTGTAGCA** **GAAGGGATTG** e18

1261 GAGTACGTCA TCACCAAGAT **CGACTTCACC** **AAGAAGATGA** **AGACCCTTAG** **ATACGAGGTC**
CTCATGCAGT **AGTGGTTCTA** **GCTGAAGTGG** **TTCTTCTACT** TCTGGAATC TATGCTCCAG

1321 **ACTGCTAACT** **TCTACGACTC** **CTCCACTGGT** **GAGATCGATC** **TTAACAAGAA** GAAGGTCGAG e19
TGACGATTGA AGATGCTGAG GAGGTGACCA **CTCTAGCTAG** **AATTGTTCTT** **CTTCCAGCTC** e20

1381 TCCTCCGAAG CTGAGTACAG AACCTTTTCT GCTAACGACG **ATGGTGTCTA** **CATGCCTCTT**
AGGAGGCTTC **GACTCATGTC** **TTGGGAAAGA** **CGATTGCTGC** **TACCACAGAT** **GTACGGAGAA**

1441 GGTGTCATCT CCGAGACCTT CCTTACTCCT ATCAATGGCT TCGGTTTGCA **GGCTGACGAG**
CCACAGTAGA GGCTCTGGAA GGAATGAGGA TAGTTACCGA AGCCAAACGT **CCGACTGCTC** e22

1501 **AACTCCAGAC** TTATCACCC TACCTGCAAG TCCTACCTTA GAGAATTGCT CTTGCTTACC e21
TTGAGGTCTG **AATAGTGGGA** **ATGGACGTTT** **AGGATGGAAT** **CTCTTAACGA** **GAACCGATGG**

1561 **GACCTCTCTA** **ACAAGGAGAC** **CAAATCATC** **GTCCTCCTT** **CTGGTTTCAT** **CTCTAACATC**
CTGGAGAGAT **TGTTCTCTCTG** GTTTGAGTAG CAGGGAGGAA GACCAAAGTA GAGATTGTAG

1621 **GTCGAGAACG** **GTTCCATCGA** **AGAGGACAAC** CTTGAGCCTT GGAAAGCTAA CAACAAGAAC e23
CAGCTCTTGC **CAAGGTAGCT** **TCTCTGTTG** **GAACTCGGAA** **CCTTTCGATT** **GTTGTTCTTG** e24

1681 GCTTACGTCG ACCCACTGG TGGTGTCAAC GGTACCAAGG CTCTTTACGT CCACAAGGAC
CGAATGCAGC TGGTGTGACC ACCACAGTTG CCATGGTTCC GAGAAATGCA GGTGTTCTCG

block 2

1741 GGTGGTATCT CCCAATTCAT CGGAGACAAA CTTAAACCTA AAACCGAGTA CGTCATCCAA e25
CCACCATAGA GGGTTAAGTA GCCTCTGTTT GAATTTGGAT TTTGGCTCAT GCAGTAGGTT e26

1801 TACACCGTCA AGGGTAAACC TTCCATCCAC CTTAAAGACG AAAAACACTGG TTACATCCAC
ATGTGGCAGT TCCCATTTGG AAGGTAGGTG GAATTTCTGC TTTTGTGACC AATGTAGGTG

1861 TACGAAGACA CCAACAACAA CCTTGAAGAC TACCAAACCA TCAACAAAAG ATTCACCACA
ATGCTTCTGT GGTGTGTTGTT GGAACCTTCTG ATGGTTTGGT AGTTGTTTTT TAAGTGGTGT e28

1921 GGAACCGACC TTAAGGGTGT CTACCTTATC CTTAAGTCCC AGAACGGTGA CGAGGCTTGG e27
CCTTGGCTGG AATTCCCACA GATGGAATAG GAATTCAGGG TCTTGCCACT GCTCCGAACC

1981 GGTGACAAC TCAATCATCT TGAGATCTCC CCATCCGAGA AGCTTCTTTC CCCTGAACTT
CCTGTTGA AGTAGTAGGA ACTCTAGAGG GGTAGGCTCT TCGAAGAAAG GGGACTTGAA

2041 ATCAACACCA ACAACTGGAC CTCCACTGGT TCCACCAACA TCTCTGGTAA CACCTTGACC e29
TAGTTGTGGT TGTGACCTG GAGGTGACCA AGGTGGTTGT AGAGACCATT GTGGAAGTGG e30

2101 TTGTACCAGG GTGGTAGAGG TATCTTGAAG CAAAACCTGC AACTTGACTC CTTCTCCACC
AACATGGTCC CACCATCTCC ATAGAACTTC GTTTTGAACG TTGAACTGAG GAAGAGGTGG

2161 TACAGAGTCT ACTTCTCTGT GTCTGGTGAC GCTAACGTCA GAATCAGAAA CTCCAGAGAA e31
ATGTCTCAGA TGAAGAGACA CAGACCACTG CGATTGCAGT CTTAGTCTTT GAGGTCTCTT e32

2221 GTCCTCTTCG AGAAGAGATA CATGTCTGGT GCCAAGGACG TCTCCGAGAT GTTCACCACC
CAGGAGAAGC TCTTCTCTAT GTACAGACCA CGGTTCTGTC AGAGGCTCTA CAAGTGGTGG

2281 AAGTTCGAGA AGGACAACCT CTACATCGAG TTGTCCCAAG GTAACAACCT TTACGGTGGT
TTCAAGCTCT TCCTGTTGAA GATGTAGCTC AACAGGGTTC CATGTTGGA AATGCCACCA e34

2341 CCTATCGTCC ACTTCTATGA CGTCTCCATC AAATAAGAGC TC e33
GGATAGCAGG TGAAGATACT GCAGAGGTAG TTTATTCTCG AG

block3

Total number of bases is: 2382.

DNA sequence composition: 685 A; 665 C; 455 G; 577 T; 0 OTHER;