

**Figure 1A**, SEQ ID NO: 1: Consensus nucleic acid sequence of HIV ConS ΔCFI (Native signal peptide in bold, native transmembrane and cytosolic domains are underlined)

**ATGCGCGTGCGCGGCATCCAGCGCAACTGCCAGCACCTGTGGCGCTGGGGCACCTGATCCTGGGCATGCTG**  
**ATGATCTGCTCCGCCGCCGAGAACCTGTGGGTGACCGTGTA**CTACGGCGTGCCCGTGTGGAAGGAGGCCAAC  
 ACCACCCTGTTCTGCGCCTCCGACGCCAAGGCCTACGACACCGAGGTGCACAACGTGTGGGCCACCCACGCCT  
 GCGTGCCACCGACCCCAACCCCAAGGAGATCGTGCTGGAGAACGTGACCGAGAACTTCAACATGTGGAAGA  
 ACAACATGGTGGAGCAGATGCACGAGGACATCATCTCCCTGTGGGACCAAGTCCCTGAAGCCCTGCGTGAAGCT  
 GACCCCTGTGCGTGACCTGAACTGCACCAACGTGAACGTGACCAACACCACCAACAACACCGAGGAGAAG  
 GGCGAGATCAAGAACTGCTCCTTCAACATCACCACCGAGATCCGCGACAAGAAGCAGAAGGTGTACGCCCTGT  
 TCTACCGCTGGACGTGGTGGCCATCGACGACAACAACAACAACCTCTCCAACCTACCGCTGATCAACTGCAAC  
 ACCTCCGCCATCACCAGGCCTGCCCAAGGTGTCTTCGAGCCCATCCCATCACTACTGCGCCCCCGCCGG  
 CTTCCGATCCTGAAGTGAACGACAAGAAGTTCAACGGCACCGGCCCTGCAAGAACGTGTCCACCGTGCAG  
 TGCACCCACGGCATCAAGCCCGTGGTGTCCACCCAGCTGCTGCTGAACGGCTCCCTGGCCGAGGAGGAGATCA  
 TCATCCGCTCCGAGAATCACCACAACGCCAAGACCATCATCGTGACGTGAACGAGTCCGTGGAGATCAA  
 CTGCACCCGCCCAACAACAACACCCGCAAGTCCATCCGCATCGCCCCGGCCAGGCCTTCTACGCCACCGGC  
 GACATCATCGGCGACATCCGCCAGGCCACTGCAACATCTCCGGCACCAAGTGGAACAAGACCCTGCAGCAGG  
 TGGCAAGAAGCTGCGCGAGCACTTCAACAACAAGACCATCATCTTCAAGCCCTCTCCGGCGCGACCTGGA  
 GATCACCACCCACTCTTCAACTGCCGCGGAGTTCTTCTACTGCAACACCTCCGGCCTGTTCAACTCCACCTG  
 GATCGGCAACGGCACCAAGAACAACAACAACACCAACGACACCATCACCTGCCCTGCCGCATCAAGCAGATC  
 ATCAACATGTGGCAGGGCGTGGGCCAGGCCATGTACGCCCCCCCCATCGAGGGCAAGATCACCTGCAAGTCC  
 AACATCACCGGCCTGCTGCTGACCCGCGACGCGGCAACAACAACACCAACGAGACCGAGATCTTCCGCCCCG  
 GCGCGCGCGACATGCGCGAACAAGTGGCGCTCCGAGCTGTACAAGTACAAGGTGGTGAAGATCGAGCCCTGG  
 GCGTGGCCCCACCAAGGCCAAGCTGACCGTGCAGGCCCGCCAGCTGCTGTCCGGCATCGTGACGACGAGT  
 CCAACCTGCTGCGGCCATCGAGGCCAGCAGACCTGCTGCAGCTGACCGTGTGGGGCATCAAGCAGCTGC  
 AGGCCCGCGTGTGGCGTGGAGCGCTACCTGAAGGACCAGCAGCTGCTGGAGATCTGGGACAACATGACCT  
 GGATGGAGTGGGAGCGCGAGATCAACAACTACACCGACATCATCTACTCCCTGATCGAGGAGTCCAGAAC  
 AGCAGGAGAAGAAGCAGCAGGAGCTGCTGGCCCTGGACAAGTGGCCCTCCCTGTGGAAGTGGTTCGACATCA  
 CCAACTGGCTGTGGTACATCAAGATCTTCATCATGATCGTGGGCGGCTGATCGGCCCTGCGCATCGTGTTCGCC  
GTGCTGTCCATCGTGAACCGCGTGGCGCAGGGCTACTCCCCCTGTCTTCCAGACCTGATCCCCAACCCCG  
CGGCCCCGACCGCCCCGAGGGCATCGAGGAGGAGGGCGGCGAGCAGGACCGCGACCGCTCCATCCGCTGG  
TGAACGGCTTCCTGGCCCTGGCCTGGGACGACCTGCGCTCCCTGTGCTGTCTCTACCACCGCCTGCGCGAC  
TTCATCTGATCGCCGCCCGCACCGTGGAGCTGCTGGGCGCAAGGGCCTGCGCCGCGGCTGGGAGGCCCTG  
AAGTACCTGTGGAACCTGCTGCAGTACTGGGCGCAGGAGCTGAAGAACTCCGCCATCTCCCTGCTGGACACCA  
CCGCCATCGCGTGGCCGAGGGCACCGACCGGTGATCGAGGTGGTGCAGCGCGCTGCCGCGCATCTCTGA  
ACATCCCCCGCGCATCCGCCAGGGCCTGGAGCGCGCCCTGCTGTAA

**Figure 1B**, SEQ ID NO: 2

IF-ApaI-SpPDI.c  
 TGCCCAAATTTGTCGGGCCATGGCGAAAAACGTTGCGATTTTCGGCTTA

**Figure 1C**, SEQ ID NO: 3

SpPDI-HIV gp145.r  
 CACAGGTTCTCGGCGGCGAAGATCTGAGAAGGAACCAACAAGAAGAG

**Figure 1D**, SEQ ID NO: 4

IF-SpPDI-gp145.c  
 TCTCAGATCTTCGCCGCCGAGAACCTGTGGGTGACCGTGTAAC

Figure 1E, SEQ ID NO: 5

WtdTm-gp145.r

CCTTTACAGCAGGGCGCGCTCCAGGCCCTGGCGGATGC

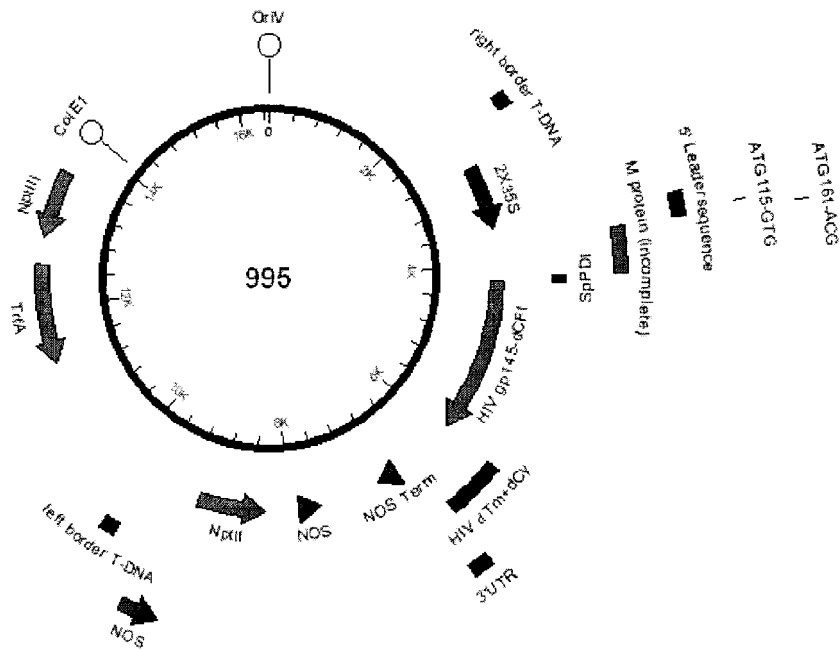
Figure 1F, SEQ ID NO: 6: Expression cassette number 995, from PacI (upstream of the promoter) to AscI (immediately downstream of the NOS terminator). Eliminated SbfI restriction site is bolded. PDISP-HIV ConS ΔCFI is underlined.

TTAATTAAGTCGACAAGCTTGCATG**CCGGT**CAACATGGTGGAGCACGACACACTTGTCTACTCCAAAAATATCA  
AAGATACAGTCTCAGAAGACCAAGGGCAATTGAGACTTTTCAACAAAGGTAATATCCGGAAACCTCCTCGG  
ATTCCATTGCCAGCTATCTGTCACTTTATTGTGAAGATAGTGGAAGGAAGGTGGCTCCTACAAATGCCATC  
ATTGCGATAAAGGAAAGGCCATCGTTGAAGATGCCCTGCCGACAGTGGTCCAAAGATGGACCCCAACCCAC  
GAGGAGCATCGTGAAAAAGAAGACGTTCCAACACGCTCTTCAAAGCAAGTGGATTGATGTGATAACATGGT  
GGAGCACGACACACTTGTCTACTCCAAAAATATCAAAGATACAGTCTCAGAAGACCAAGGGCAATTGAGACT  
TTTCAACAAAGGGTAATATCCGGAAACCTCCTCGGATTCATTGCCAGCTATCTGTCACTTTATTGTGAAGATA  
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GCCGACAGTGGTCCAAAGATGGACCCCAACCCACGAGGAGCATCGTGAAAAAGAAGACGTTCCAACCCACG  
TCTTCAAAGCAAGTGGATTGATGTGATATCTCCACTGACGTAAGGGATGACGCACAATCCCACTATCCTTCGCA  
AGACCTTCTCTATATAAGGAAGTTCATTTCAATTTGGAGAGGTATTAATCTTAATAGGTTTTGATAAAGC  
GAACGTGGGGAACCCGAACCAACCTTCTTCTAACTCTCTCTCATCTCTTAAAGCAAACCTCTCTCTGTGTC  
TTTCTTGGTGAGCGATCTTCAACGTTGTGAGATCGTGCTTCGGCACCAGTACAACGTTTTCTTCACTGAAGCG  
AAATCAAAGATCTTTTGTGGACAGTAGTGCGGCCATTAAATAACGTGTACTTGTCTATTCTTGTGGTG  
TGGTCTTGGGAAAAGAAAGCTTGTGGAGGCTGCTGTTGAGCCCATACATTACTTGTACGATTCTGCTGACT  
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GTGGGCCACCCACGCTGCGTGCCACCGACCCCAACCCCAAGGAGATCGTGCTGGAGAACGTGACCGAGAA  
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ACAACACCGAGGAGAAGGGCGAGATCAAGAACTGCTCCTTCAACATCACCACCGAGATCCGGACAAGAAGC  
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CGCTGATCAACTGCAACACCTCCGCCATCACCCAGGCCTGCCCAAGGTGTCTTTCGAGCCCATCCCCATCCA  
CTACTGCGCCCCCGCGGCTTCCGCATCTGAAGTGAACGACAAGAAGTTCAACGGCACCGGCCCTGCAAG  
AACGTGTCCACCGTGACGTGACCCACGGCATCAAGCCCGTGGTGTCCACCCAGCTGCTGCTGAACGGCTCCC  
TGGCCGAGGAGGAGATCATCTCGCTCCGAGAACATCACCAACAACGCCAAGACCATCATCGTGACGTGAA  
CGAGTCCGTGGAGATCAACTGACCCGCCCAACAACAACCCGCAAGTCCATCCGCATCGGCCCGGCCGAG  
GCCTTCTACGCCACCGGCGACATCATCGGCGACATCCGCCAGGCCACTGCAACATCTCCGGCACCAAGTGA  
ACAAGACCTGCAGCAGGTGGCCAAGAAGCTGCGCGAGCACTTCAACAACAAGACCATCATCTTCAAGCCCTC  
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GCCTGTTCAACTCCACCTGGATCGGCAACGGCACCAAGAACAACAACAACCAACGACACCATCACCTGCC  
CTGCCGATCAAGCAGATCATCAACATGTGGCAGGGCGTGGGCCAGGCCATGTACGCCCCCCCCATCGAGGG  
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CCTGCGCATCGTGTTCGCCGTGCTGTCCATCGTGAACCGCGTGCGCCAGGGCTACTCCCCCTGTCTTCCAGA  
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GACCGCTCCATCCGCTGGTGAACGGCTTCCTGGCCCTGGCCTGGGACGACCTGCGCTCCCTGTGCTGTTCTC  
CTACCACCGCTGCGCGACTTCATCTGATCGCCGCCCGCACCGTGGAGCTGCTGGGCCGCAAGGGCCTGCGC  
CGCGGCTGGGAGGCCCTGAAGTACCTGTGGAACCTGCTGCAGTACTGGGGCCAGGAGCTGAAGAACTCCGCC  
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TCCCGCAATTATACATTTAATACGCGATAGAAAAACAAATATAGCGCGCAAACTAGGATAAATTATCGCGCGC  
GGTGTCTATCTGTTACTAGATCTCTAGAGTCTCAAGCTTGGCGCGCC

**Figure 1G**, SED ID NO: 7: Amino acid sequence of PDISP-HIV ConS ΔCFI

MAKNVAIFGLLFSLLVLVPSQIFAENLWVTVYGVVPVWKEANTTLCASDAKAYDTEVHNVWATHACVPTDNP  
 QEIVLENTENFNMWKNMVEQMHEDIISLWDQSLKPCVKLTPLCVTLNCTNVNVTNTTNTEEKGEIKNCSFNI  
 TTEIRDKKQKVYALFYRLDVVPIDNNNNSSNYRLINCNTSAITQACPKVSFEPIPIHYCAPAGFAILKCNDDKKFNGTG  
 PCKNVSTVQCTHGKIPVSTQLLNGSLAEIIIIRSENITNNAKTIIVQLNESVEINCTRPNNNTRKSIRIGPGQAFYAT  
 GDIIGDIRQAHCNISGKWNKTLQQVAKKLREHFNNKTIIFKPSSGGDLEITTHSFNCRGEFFYCNTSGLFNSTWIGN  
 GTKNNNNNTNDTITLPCRIKQIINMWQGVGQAMYAPPIEGKITCKSNITGLLLTRDGGNNNTNETEIFRPGGGDMR  
 DNWRSELYKYKVVKIEPLGVAPTAKLTVQARQLLSGIVQQQSNLLRAIEAQHLLQLTVWGIKQLQARVLAVERYL  
 KDQQLLEIWDNMTWMEWEREINNYTDIISLIEESQNNQKEKNEQELLALDKWASLWNWFDITNWLWYIKIFIMIV  
 GGLIGLRIVFAVLSIVNRVRQGYSPLSFQTLIPNPRGPDRPEGIEEGGEQDRDRSIRLVNGFLALAWDDLRLSLCLFSY  
 HRLRDFILIAARTVELLGRKGLRRGWEALKYLWNLLQYWGQELKNSAISLLDTTAIAVAEGTDRVIEVVQRACRAILN  
 IPRRIRQGLERALL

**Figure 1H:** Schematic representation of construct number 995**Figure 2A,** SEQ ID NO: 8:

IF-H3dTm+gp145.r  
 CCATAGTATCCAATCGATGTACCACAGCCAGTTGGTGATGTCGAAC

**Figure 2B,** SEQ ID NO: 9:

Gp145+H3dTm.c  
 TGGCTGTGGTACATCGATTGGATACTATGGATTTCCTTGCCATATCAT

**Figure 2C,** SEQ ID NO: 10:

H3dTm.r  
 CCTTCAAATGCAAATGTTGCACCTAATGTTGCCTT

**Figure 2D**, SEQ ID NO: 11: Expression cassette number 997, from PacI (upstream of the promoter) to AclI (immediately downstream of the NOS terminator). Eliminated SbfI restriction site is bolded. PDISP-HIV Con 5 ΔCFI-A/Brisbane/10/2007 H3 TM+CT is underlined.

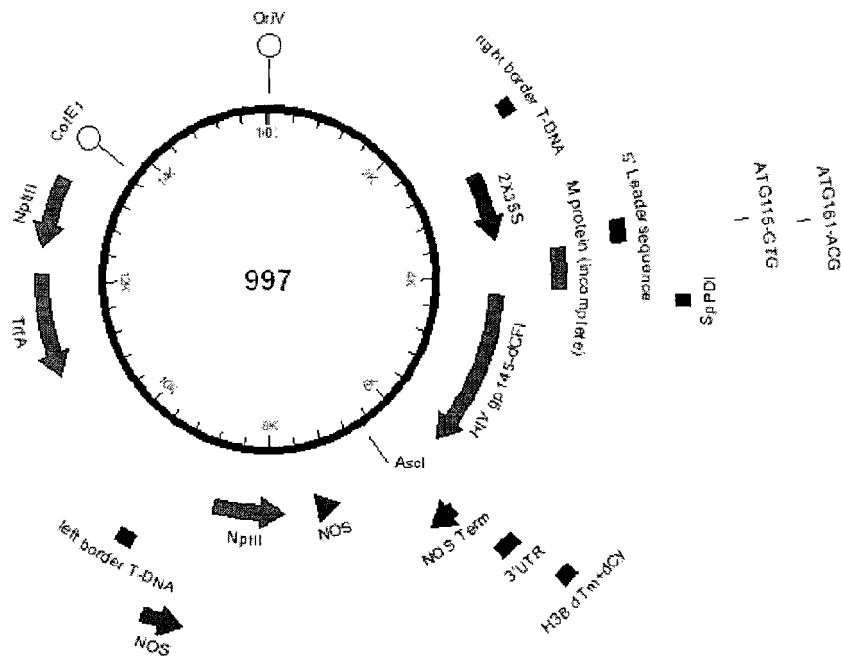
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ATTCCATTGCCAGCTATCTGTCACTTTATTGTGAAGATAGTGGAAAAGGAAGGTGGCTCTACAAATGCCATC  
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GTGGAAAAGGAAGGTGGCTCTACAAATGCCATATTGCGATAAAGGAAAGGCCATCGTTGAAGATGCCTCT  
GCCGACAGTGGTCCCAAGATGGACCCCAACCCACGAGGAGCATCGTGGAAAAAGAACGTTCCAACCACG  
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TGGTCTTGGGAAAAGAAAGCTTGTGGAGGCTGCTGTTACGCCCATACATTACTTGTACGATTCTGCTGACT  
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TAAGCTTCTGTATATTCTGCCCAAATTTGTGGGGCCCATGGCGAAAAACGTTGCGATTTCGCGCTTATTGTTTTCT  
TCTTCTTGTGTTGGTTCCTTCTCAGATCTTCGCCGCCGAGAACCTGTGGGTGACCGTGTACTACGGCGTGCCCG  
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GTGGGCCACCCACGCTGCGTGCCACCGACCCCAACCCCAAGGATCGTGCTGGAGAAGCTGACCGAGAA  
CTTCAACATGTGGAAGAACCAACATGGTGGAGCAGATGCACGAGGACATCATCTCCCTGTGGGACCACTCCCTG  
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ACAACACCGAGGAGAAGGGCGAGATCAAGAAGTCTCTTCAACATCACCAACGAGATCCGCGACAAGAAGC  
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ACAAGACCTGCAGCAGGTGGCAAGAAGTGCAGGACACTTCAACAACAAGACCATCATCTTCAAGCCCTC  
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GGAAGTGGTTCGACATCACTCACTGGCTGTGGTACATCGATTGGATACTATGGATTTCCTTTGCCATATCATGT  
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ATATAATTTCTGTTGAATTACGTTAAGCATGTAATAATTAACATGTAATGCATGACGTTATTTATGAGATGGGT  
 TTTATGATTAGAGTCCCGCAATTATACATTTAATACGCGATAGAAAACAAATATAGCGCGAACTAGGATAA  
 ATTATCGCGCGCGGTGTCATCTATGTTACTAGATCTCTAGAGTCTCAAGCTTGCGCGCC

**Figure 2E**, SEQ ID NO: 12: Amino acid sequence of PDISP-HIV ConS ΔCFI-A/Brisbane/10/2007 H3 TM+CT

MAKNVAIFGLLSLLVLVPSQIFAAENLWVTYYYGVPVWKEANTTLFCASDAKAYDTEVHNWVATHACVPTDPNP  
 QEIVLENTENFNMWKNMVEQMHEIISLWDQSLKPCVKLTPLCVTLNCTNVNVTNTTNNTEEKGEIKNCSFNI  
 TTEIRDKKQKVYALFYRLDVVPIDNNNNSSNYRLINCNTSAITQACPKVSFEPIPIHYCAPAGFAILKCNDDKKFNGTG  
 PCKNVSTVQCTHGIKPVVSTQLLLNGSLAEEEEIIIRSENITNNAKTIIVQLNESVEINCTRPNNNTRKSIRIGPGQAFYAT  
 GDIIGDIRQAHCNISGKWNKTLQQVAKKLREHFNNKTIIFKPSSGGGLEITTHSFNCRGEFFYCNTSGLFNSTWIGN  
 GTKNNNNNTNDITLPCRKQIINMWQGVGQAMYAPPIEGKITCKSNITGLLLTRDGGNNNTNETEIFRPGGGDMR  
 DNWRSELYKYKVVKIEPLGVAPTAKLTVQARQLLSGIVQQSNLLRAIEAQHLLQLTVWGIKQLQARVLAVERYL  
 KDQQLLEIWDNMTWMEWEREINNYTDIHSYLSIESQNQQEKNEQELLALDKWASLWNNWFDITNWLWYIDWILW  
 ISFAISCFLLCVALLGFIMWACQKGNIRCNICI

**Figure 2F**: Schematic representation of construct number 997



**Figure 3A**, SEQ ID NO: 13:

IF-H5dTm+gp145.r  
AATTGACAGTATTTGGATGTACCACAGCCAGTTGGTGATGTCGAAC

**Figure 3B**, SEQ ID NO: 14:

Gp145+H5dTm.c  
CTGGCTGTGGTACATCCAAATACTGTCAATTTATTCAACAGTGGC

**Figure 3C**, SEQ ID NO: 15:

IF-H5dTm.r  
CCTTTAAATGCAAATTCGCAATTGTAACGATCCAT

**Figure 3D**, SEQ ID NO: 16: Expression cassette number 999, from PacI (upstream of the promoter) to AscI (immediately downstream of the NOS terminator). Eliminated SbfI restriction site is bolded. PDISP-HIV ConS ΔCFI-A/Indonesia/5/2005 H5 TM+CT is underlined.

TTAATTAAGTCGACAAGCTTGCATGCCGGTCAACATGGTGGAGCAGCACACACTGTCTACTCCAAAAATATCA  
AAGATACAGTCTCAGAAGACCAAAGGGCAATTGAGACTTTTCAACAAAGGGTAATATCCGGAAACCTCCTCGG  
ATTCCATTGCCAGCTATCTGTCACTTTATTGTGAAGATAGTGGAAAAGGAAGGTGGCTCCTACAAATGCCATC  
ATTGCGATAAAGGAAAGGCCATCGTTGAAGATGCCTCTGCCGACAGTGGTCCAAAGATGGACCCCAACCCAC  
GAGGAGCATCGTGAAAAAGAACGTTCCAACCACGTCCTCAAAGCAAGTGGATTGATGTGATAACATGGT  
GGAGCAGCAGACACTTGTCTACTCCAAAAATATCAAAGATACAGTCTCAGAAGACCAAAGGGCAATTGAGACT  
TTTCAACAAAGGGTAATATCCGGAAACCTCCTCGGATTCCATTGCCAGCTATCTGTCACTTTATTGTGAAGATA  
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TCTTCAAAGCAAGTGGATTGATGTGATATCTCCACTGACGTAAGGGATGACGCACAATCCCACTATCCTTCGCA  
AGACCTTCTCTATATAAGGAAGTTCAATTCATTTGGAGAGGTATTAATAATCTTAATAGGTTTTGATAAAAGC  
GAACGTGGGGAACCCGAACCAACCTTCTTCTAAACTCTCTCTCATCTCTCTTAAAGCAAACCTCTCTCTGTC  
TTTCTTGCCTGAGCGATCTTCAACGTTGTCAGATCGTGCTTCGGCACCAGTACAACGTTTTCTTCACTGAAGCG  
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TCCTCTGTGTGTTGTTCTTCTCAGATCTTCGCCGCCGAGAACCTGTGGGTGACCGTGTACTACGGCGTGCCCG  
TGTGGAAGGAGGCCAACACCACTGTTCTGCGCTCCGACGCCAAGGCTACGACACCGAGGTGCACAACGT  
GTGGGCCACCCACGCTGCGTGCCACCGACCCCAACCCAGGAGATCGTGCTGGAGAACGTGACCGAGAA  
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CGCCTGATCAACTGCAACACCTCCGCCATCACCAAGGCTGCCCAAGGTGTCCTTCGAGCCCATCCCATCCA  
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CTCCGGCGGCGACCTGGAGATCACCACCACTCTTCAACTGCCGCGGCGAGTTCTTCTACTGCAACACCTCCG

GCCTGTTCAACTCCACCTGGATCGGCAACGGCACCAAGAACAACAACAACCAACGACACCATCACCTGCC  
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 ACCGAGATCTTCCGCCCCGGCGGCGGCGACATGCGCGACAACCTGGCGCTCCGAGCTGTACAAGTACAAGGTG  
 GTGAAGATCGAGCCCCCTGGGCGTGGCCCCACCAAGGCCAAGCTGACCGTGACAGCCCCGCGAGCTGCTGTCC  
 GGCATCGTGACGAGCAGTCCAACCTGCTGCGCGCCATCGAGGCCAGCAGCACCTGCTGCAGCTGACCGTGT  
 GGGGCATCAAGCAGCTGCAGGCCCGCTGCTGGCCGTGGAGCGCTACCTGAAGGACCAGCAGCTGCTGGAG  
 ATCTGGGACAACATGACCTGGATGGAGTGGGAGCGCGAGATCAACAACCTACCCGACATCATCTACTCCCTGA  
 TCGAGGAGTCCCAGAACCAGCAGGAGAAGAACGAGCAGGAGCTGCTGGCCCTGGACAAGTGGGCTCCTGT  
 GGAACCTGGTTCGACATCACCAACTGGCTGTGGTACATCCAAATACTGTCAATTTATTCAACAGTGGCGAGTTCC  
 CTAGCACTGGCAATCATGATGGCTGGTCTATCTTTATGGATGTGCTCCAATGGATCGTTACAATGCAGAAATTG  
 CATTTAAAGGCCTATTTTCTTTAGTTTGAATTTACTGTTATTCGGTGTGATTTCTATGTTTGGTGAGCGGTTTTTC  
 TGTGCTCAGAGTGTGTTTATTTATGTAATTTAATTTCTTTGTGAGCTCCTGTTTAGCAGGTGTCCTTCAGCAA  
 GGACACAAAAAGATTTTAATTTTATTAATAAAAAAAAAAAAAAAAAAGACCGGAATTCGATATCAAGCTTATCGA  
 CCTGCAGATCGTTCAAACATTTGGCAATAAAGTTTCTTAAGATTGAATCCTGTTGCCGGTCTTGCGATGATTATC  
 ATATAATTTCTGTTGAATTACGTTAAGCATGTAATAATTAACATGTAATGCATGACGTTATTTATGAGATGGGTT  
 TTTATGATTAGAGTCCCGCAATTATACATTTAATACGCGATAGAAAACAAATATAGCGCGCAAACTAGGATAA  
 ATTATCGCGCGCGGTGTCATCTATGTTACTAGATCTTAGAGTCTCAAGCTTGCGCGGCC

**Figure 3E**, SEQ ID NO: 17: Amino acid sequence of PDISP-HIV ConS ΔCFI-A/Indonesia/5/2005 H5 TM+CT

MAKNVAIIFGLLFSLLVLP SQIFAAENLWVTVYYGVPVWKEANTTLFCASDAKAYDTEVHNWVATHACVPTDPNP  
 QEIVLENV TENFNMWKNMVEQMHEDIISLWDQSLKPCVKLTPLCVTLNCTNVNVTNTTNNTEEKGEIKNCSFNI  
 TTEIRDKKQKVYALFYRLDVVPIDNNNNSSNYRLINCNTSAITQACPKVSFEPIPIHYCAPAGFAILKCNDDKKFNGTG  
 PCKNVSTVQCTHGIKPVVSTQLLNGSLAEEEEIIRSENITNNAKTIIVQLNESVEINCTRPNNNTRKSIRIGPGQAFYAT  
 GDIIGDIRQAHCNISGKWNKTLQQVAKKLEHFNNKTIIFKPSSGGDLEITTHSFNCRGEFFYCNTSGLFNSTWIGN  
 GTKNNNNNTNDITLPCRIKQIINMWQGVGQAMYAPPIEGKITCKSNITGLLLTRDGGNNNTNETEIFRPGGDMR  
 DNWRSELYKYKVVKIEPLGVAPTKAKLTVQARQLLSGIVQQSNLLRAIEAQHLLQLTVWGKQLQARVLAVERYL  
 KDQQLLEIWDNMTWMEWEREINNYTDIIYSLIEESQNOQEKNEQELLALDKWASLWNWFDITNWLWYIQLSIYS  
 TVASSLALAIMMAGLSLWMCSNGSLQCRICI

Figure 3F: Schematic representation of construct number 999

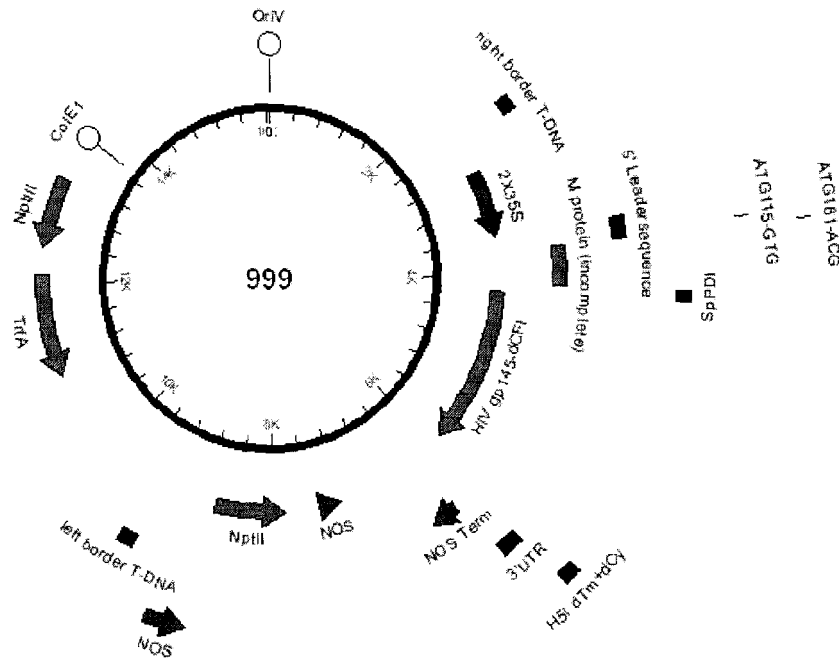


Figure 4A, SEQ ID NO: 18: Expression cassette number 172, from XmaI (upstream of the plastocyanin promoter) to EcoRI (immediately downstream of the plastocyanin terminator). TBSV P19 nucleic acid sequence is underlined.

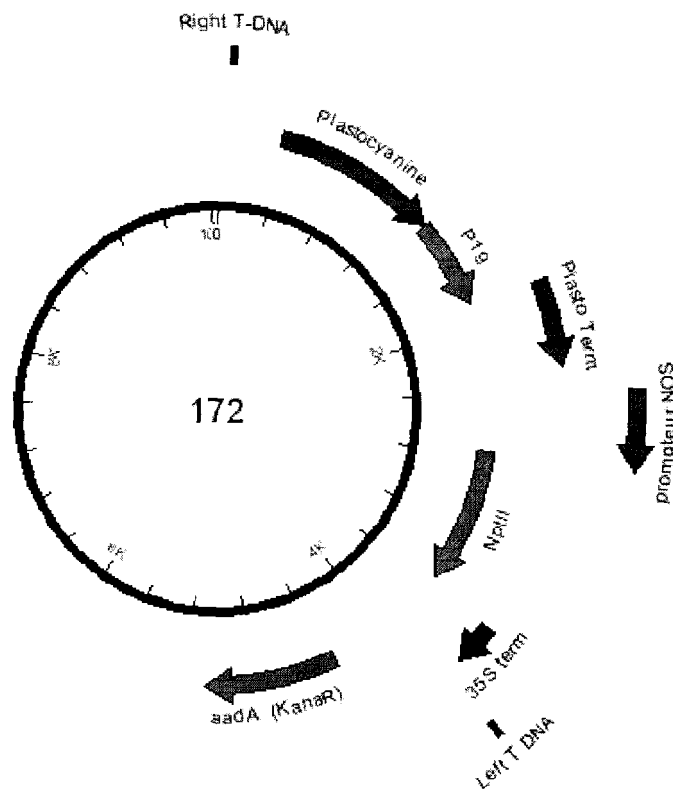
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 TAAGAACAGAGTAGTGATATTTTGACAACAATTTTGTGCAACATTTGAGAAAATTTTGTGTTCTCTCTTTTC  
 ATTGGTCAAAAACAATAGAGAGAGAAAAAGGAAGAGGGAGAATAAAAAACATAATGTGAGTATGAGAGAGAA  
 AGTTGTACAAAAGTTGTACCAAAATAGTTGTACAAATATCATTGAGGAATTTGACAAAAGCTACACAAATAAG  
 GGTTAATTGCTGTAAATAAATAAGGATGACGCATTAGAGAGATGTACCATTAGAGAATTTTGGCAAGTCATT  
 AAAAAGAAAGAATAAATTATTTTAAAAATAAAAGTTGAGTCATTTGATTAAACATGTGATTATTTAATGAATT  
 GATGAAAGAGTTGGATTAAAGTTGTATTAGTAATTAGAATTTGGTGTCAAATTTAATTTGACATTTGATCTTTTC  
 CTATATATTGCCCATAGAGTCAGTTAACTCATTTTATATTTTATAGATCAAATAAGAGAAATAACGGTATATT  
 AATCCCTCCAAAAAATAAAGGATATTTTACTAAAAATCTAAGCCACGTAGGAGGATAACAGGATCCCCG  
 TAGGAGGATAACATCCAATCCAACCAATCACACAATCCTGATGAGATAACCCACTTTAAGCCCACGCATCTGT  
 GGCACATCTACATTATCTAAATCACACATTCTCCACACATCTGAGCCACACAAAAACCAATCCACATCTTTATC  
 ACCCATTTCTATAAAAAATCACACTTTGTGAGTCTACACTTTGATTCCCTTCAAACACATACAAAAGAGAAGAGACT  
 AATTAATTAATTAATCATCTTGAGAGAAAAATGGAACGAGCTATACAAGGAAACGACGCTAGGGAACAAGCTAA  
ACTGATGTGGCGGCTACATAACGATGAGACGAATTGCAATCAAGATAATCCCTTGGTTTCAAGGAAAGCTGGG  
GTTTCGGGAAAGTTGTATTTAAGAGATATCTCAGATACGACAGGACGGAAGCTTCACTGCACAGAGTCTTGG  
ATCTTGGACGGGAGATTCGGTTAACTATGCAGCATCTCGATTTTCGGTTTCGACCAGATCGGATGTACCTATA  
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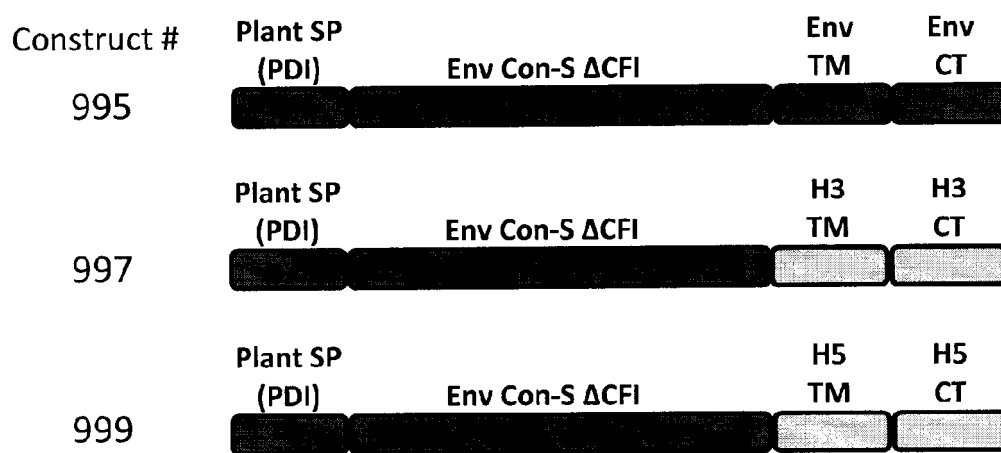
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 AAGGTACTCAAACCTTCGAAAAAGAAAGCGAGTAAGTCGAGGGCGAGCTCTAAGTTAAAATGCTTCTTCGTCT  
 CCTATTATAATATGGTTTGTTATTGTTAATTTGTTCTTGTAAGAGCTTAATTAATCGTTGTTGTTATGAAAT  
 ACTATTTGTATGAGATGAAGCTGGTGAATGTAATTCATTTACATAAGTGGAGTCAGAATCAGAATGTTTCCTCC  
 ATAACAACTAGACATGAAGACCTGCCGCGTACAATTGTCTTATATTTGAACAATAAAATTGAACATCTTTTGC  
 CACAACTTTATAAGTGGTTAATATAGCTCAAATATATGGTCAAGTTCAATAGATTAATAATGGAAATATCAGTT  
 ATCGAAATTCATTAACAATCAACTTAACGTTATTAACCTACTAATTTTATATCATCCCCTTGATAAATGATAGTAC  
 ACCAATTAGGAAGGAGCATGCTCGAGGCCTGGCTGGCCGAATTC

**Figure 4B**, SED ID NO: 19: Amino acid sequence of TBSV P19 suppressor of silencing

MERAIQGNDAREQANSERWDGGSGGTTSPFKLPDESPSWTEWRLHNDETNSNQDNPLGFKESWGFVKVFKRY  
 LRYDRTEASLHRVLGSGWTDVSNYAASRFFGFDQIGCTYSIRFRGVSVITVSGGSRTLQHLCEMAIRSKQELLQLAPIEV  
 ESNVSRGCEPQTQTFEKESE

**Figure 4C**: Representation of construct number 172



**Figure 5.**

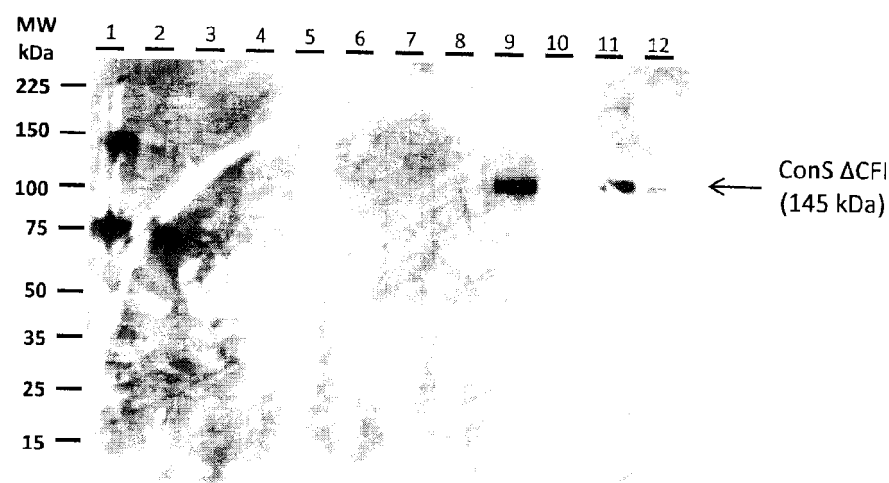
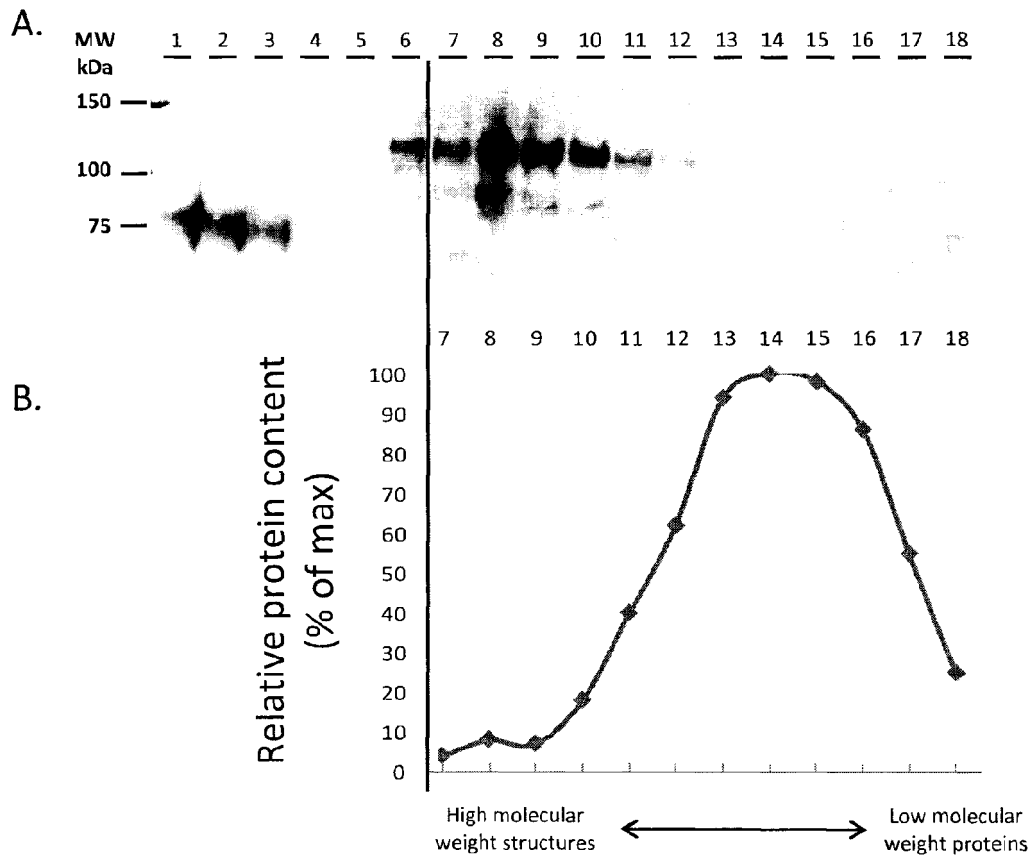


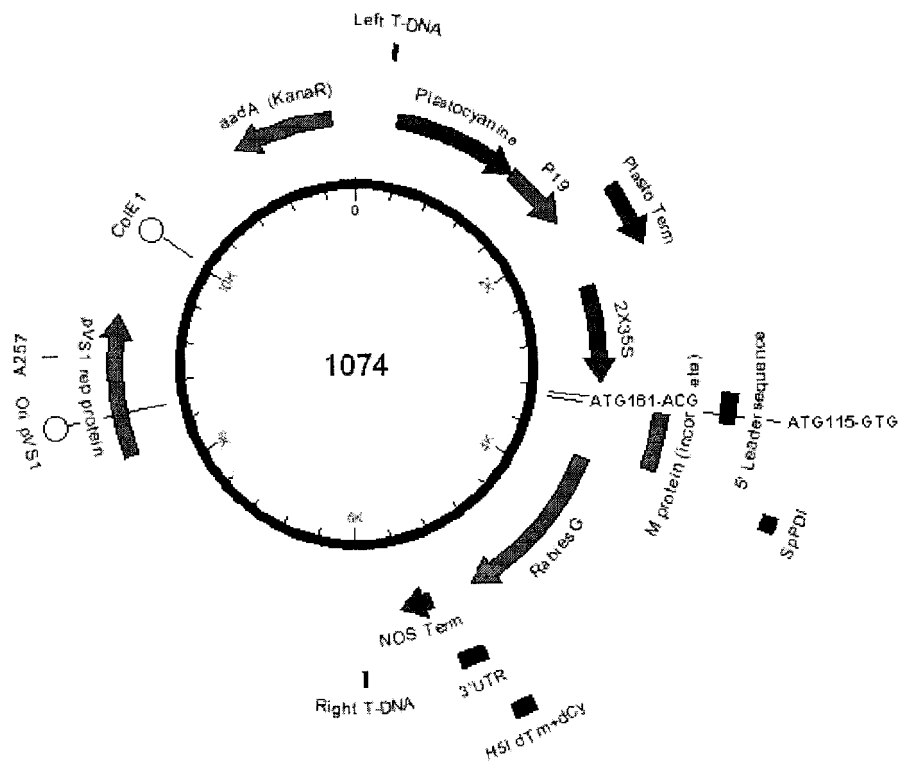
Figure 6.



**Figure 7.**

**Figure 8A**

Schematic representation of construct number 1074

**Figure 8B, SEQ ID NO:32**

IF-RabG-S2+4.c

TCTCAGATCTTCGCCAAATTCCCTATTTACACGATACCAGAC

**Figure 8C, SEQ ID NO:33**

RabG+H5dTm.r

CTGTTGAATAAATTGACAGTATTTGATACTTCCCCCAGTTCGGGAGAC

**Figure 8D**, SEQ ID NO:34

Synthesized Rab G gene (corresponding to nt 3317-4891 from Genbank accession number EF206707) (Native signal peptide in bold, native transmembrane and cytosolic domains are underlined)

**ATGGTTCCTCAGGCTCTCCTGTTTGTACCCCTTCTGGTTTTTCCATTGTGTTTTGGGAAATTC**  
**CCTATTACACGATACCAGACAAGCTTGGTCCCTGGAGCCCGATTGACATACATCACCTCAG**  
**CTGCCCCAAACAATTTGGTAGTGGAGGACGAAGGATGCACCAACCTGTCAGGGTTCTCCTAC**  
**ATGGAACCTTAAAGTTGGATACATCTTAGCCATAAAAAATGAACGGGTTCACCTGCACAGGCGT**  
**TGTGACGGAGGCTGAAACCTACACTAACTTCGTTGGTTATGTCACAACCACGTTCAAAAGAA**  
**AGCATTTCGCCCCAACACCAGATGCATGTAGAGCCGCGTACAACCTGGAAGATGGCCGGTGA**  
**CCCCAGATATGAAGAGTCTCTACACAATCCGTACCCTGACTACCGCTGGCTTCGAAGTGTAA**  
**AAACCACCAAGGAGTCTCTCGTTATCATATCTCCAAGTGTGGCAGATTTGGACCCATATGAC**  
**AGATCCCTTCACTCGAGGGTCTTCCCTAGCGGGAAGTGCTCAGGAGTAGCGGTGTCTTCTA**  
**CCTACTGCTCCACTAACCACGATTACACCATTTGGATGCCCGAGAATCCGAGACTAGGGATG**  
**TCTTGTGACATTTTTACCAATAGTAGAGGGAAGAGAGCATCCAAAGGGAGTGAGACTTGCGG**  
**CTTTGTAGATGAAAGAGGCCTATATAAGTCTTTAAAGGAGCATGCAAACCTCAAGTTATGTGG**  
**AGTTCTAGGACTTAGACTTATGGATGGAACATGGGTGCGGATGCAAACATCAAATGAAACCA**  
**AATGGTGCCCTCCCGATCAGTTGGTGAACCTGCACGACTTTCGCTCAGACGAAATTGAGCA**  
**CCTTGTGTAGAGGAGTTGGTCAGGAAGAGAGAGGAGTGTCTGGATGCACTAGAGTCCATC**  
**ATGACAACCAAGTCAGTGAGTTTCAGACGTCTCAGTCATTTAAGAAAACCTGTCCCTGGGTTT**  
**GGAAAAGCATATACCATTCAACAAGACCTTGATGGAAGCCGATGCTCACTACAAGTCAGT**  
**CAGAACCTGGAATGAGATCCTCCCTTCAAAAGGGTGTTTAAGAGTTGGGGGGAGGTGTCAT**  
**CCTCATGTGAACGGGGTGTTTTCAATGGTATAATATTAGGACCTGACGGCAATGTCTTAATC**  
**CCAGAGATGCAATCATCCCTCCTCCAGCAACATATGGAGTTGTTGGAATCCTCGGTTATCCC**  
**CCTTGTGCACCCCTGGCAGACCCGTCTACCGTTTTCAAGGACGGTGACGAGGCTGAGGAT**  
**TTTGTGGAAGTTCACCTTCCCGATGTGCACAATCAGGTCTCAGGAGTTGACTTGGGTCTCCC**  
**GAACTGGGGGAAGTATGTATTACTGAGTGCAGGGGCCCTGACTGCCTTGATGTTGATAATTT**  
**TCCTGATGACATGTTGTAGAAGAGTCAATCGATCAGAACCTACGCAACACAATCTCAGAGGG**  
**ACAGGGAGGGAGGTGTCAGTCACTCCCCAAAGCGGGAAGATCATATCTTCATGGGAATCAC**  
**ACAAGAGTGGGGGTGAGACCAGACTGTGA**

**Figure 8E**, SEQ ID NO:35

IF-H5dTm.c

CAAATACTGTCAATTTATTCAACAGTGGC

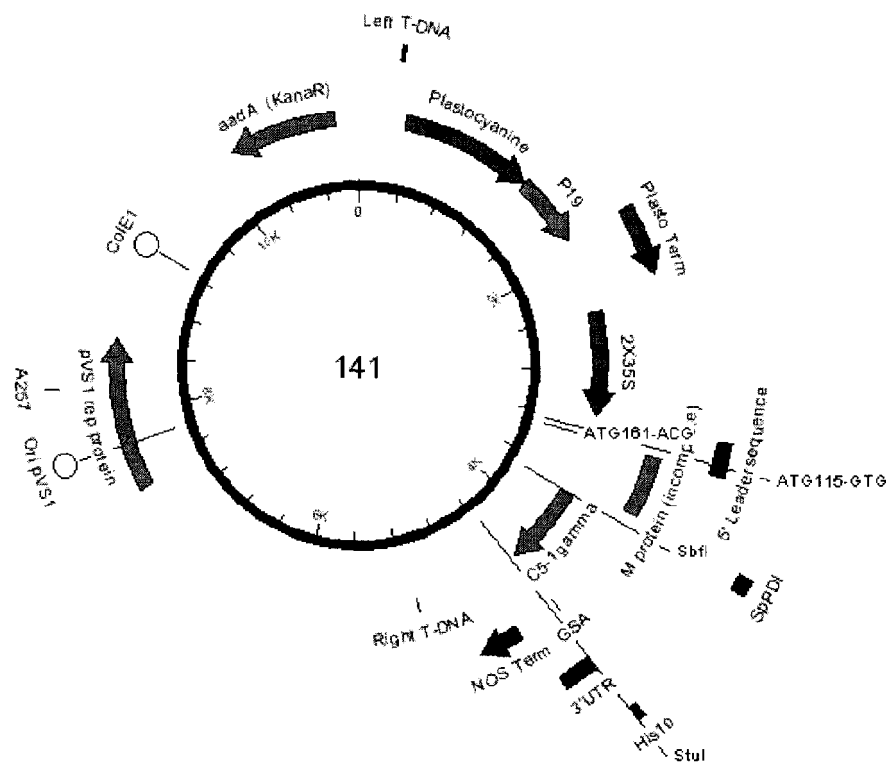
**Figure 8F**, SEQ ID NO:36

Construct 141 from left to right t-DNA (underlined).2X35S-CPMV-HT-PDISP-NOS expression system with Plastocyanine-P19-Plastocyanine silencing inhibitor expression cassette

TGGCAGGATATATTGTGGTGTAAACAAATTGACGCTTAGACAACCTTAATAACACATTGCGGACGTTTTTA  
ATGTACTGAATTAACGCCGAATCCCGGGCTGGTATATTTATATGTTGTCAAATAACTCAAAAACCATAAA  
AGTTTAAGTTAGCAAGTGTGTACATTTTTACTTGAACAAAAATATTCACCTACTACTGTTATAAAATCATTAT  
TAAACATTAGAGTAAAGAAATATGGATGATAAGAACAAGAGTAGTGATATTTTGACAACAATTTTGTTC  
AACATTTGAGAAAATTTTGTGTTCTCTCTTTTCATTGGTCAAAAACAATAGAGAGAGAAAAAGGAAGAG  
GGAGAATAAAAAACATAATGTGAGTATGAGAGAGAAAGTTGTACAAAAGTTGTACCAAATAGTTGTACAA  
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AAAAGTTGAGTCATTTGATTAAACATGTGATTATTTAATGAATTGATGAAAGAGTTGGATTAAAGTTGTAT  
TAGTAATTAGAATTTGTTGTCAAATTTAATTTGACATTTGATCTTTTCTATATATTGCCCATAGAGTCA  
GTTAACTCATTTTTATATTCATAGATCAAATAAGAGAAATAACGGTATATTAATCCCTCCAAAAA  
AACGGTATATTTACTAAAAATCTAAGCCACGTAGGAGGATAACAGGATCCCGTAGGAGGATAACATC  
CAATCCAACCAACACAAACATCTGATGAGATAACCCACTTTAAGCCCACGCATCTGGGCACATCTA  
CATTATCTAAATCACACATCTTCCACACATCTGAGCCACACAAAAACCAATCCACATCTTTATCACCAT  
TCTATAAAAAATCACACTTTGTGAGTCTACACTTTGATTCCCTTCAAACACATACAAAGAGAAGAGACTA  
ATTAATTAATTAATCATCTTGAGAGAAAATGGAACGAGCTATACAAGGAAACGACGCTAGGGAACAAGC  
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GAGTTGGACTGAGTGGCGGCTACATAACGATGAGACGAATTCGAATCAAGATAATCCCTTGGTTTCAA  
GGAAAGCTGGGGTTTCGGGAAAGTTGATTTAAGAGATATCTCAGATACGACAGGACGGAAAGCTTCACT  
GCACAGAGTCCCTGGATCTTGGACGGGAGATTCCGTTAACTATGCAGCATCTCGATTTTTCGGTTTCGA  
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GGAAAGTAATGTATCAAGAGGATGCCCTGAAGGTACTCAAACCTTCGAAAAAGAAAGCGAGTAAGTTAA  
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TCAGATCAGAAATGTTTCTCCATAACTAAGTACATGAGACCTGCCGCTACAATTGTCTTATATTT  
GAACAAGTAAATGAACATCTTTGCCACAACCTTTATAAGTGGTTAATATAGCTCAAAATATATGGTCAAG  
TTCAATAGATTAATAATGAAATATCAGTTATCGAAATTCATTAACAATCAACTTAACGTTATTAACTACTA  
ATTTTATATCATCCCTTTGATAAATGATAGTACCAATAGGAAGGAGCATGCTCGCCTAGGAGATTG  
TCGTTTCCCGCCTTCAGTTTGCAAGCTGCTCTAGCCGTGTAGCCAATACGAAACCGCCTCTCCCGC  
GCGTTGGGAATTAAGTACGCGGTGTCGACAAGCTTGCATGCCGGTCAACATGTTGGAGCACGACACACT  
TGCTACTCCAAAAATATCAAAGATACAGTCTCAGAAGACCAAGGGCAATTGAGACTTTTCAACAAAGG  
GTAATATCCGGAACCTCCTCGGATTCATTGCCGATGATGCAATAAGGAAAGGCCATCGTTGAAGATGCTGAAA  
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GACAGTGGTCCCAAGATGGACCCCCACCCAGGAGCATCGTGGAAAAAGAACGTTTCAACCA  
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AGCGAAATCAAAGATCTCTTTGTGGACACGATGTGCGGCGCCATTAATAACGTGTACTTGTCTATTCT  
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CGATTCTGCTGACTTTCCGGCGGGTGAATATCTCTACTTCTGCTTGACGAGGTATTGTTGCTGTACTT  
CTTTCTTCTTCTTCTGCTGATTGGTTCTATAAGAAATCTAGTATTTCTTTGAAACAGAGTTTTCCCGTG  
GTTTTGAACTTGGAGAAAGATTGTTAAGCTTCTGTATATTCTGCCAAATTTGTGCGGGCCCATGGCGAA  
AAACGTTGCGATTTTTCGGCTTATTGTTTTCTTCTTGTGTTGTTTCTTCTCAGATCTTGCCTGCAGG  
CTCCTCAGCCAAAACGACACCCCATCTGTCTATCCACTGGCCCCCTGGATCTGCTGCCCAAACTAACTC  
CATGGTGACCTGGGATGCCTGGTCAAGGGCTATTTCCCTGAGCCAGTGACAGTGACCTGGAACCTCTG  
GATCCCTGTCCAGCGGTGTGCACACCTTCCAGCTGTCTGACGTCTGACCTCTACACTCTGAGCAGC  
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 GATGTGGAGGTGCACACAGCTCAGACGCAACCCCGGGAGGAGCAGTTCAACAGCACTTTCGGCTCAG  
 TCAGTGAACCTCCCATCATGCACCAGGACTGGCTCAATGGCAAGGAGCGATCGCTCACCATCACCATC  
 ACCATCACCATCACCATTAAAGGCCTATTTTCTTTAGTTTGAATTTACTGTTATTCGGTGTGCATTTCTAT  
 GTTTGGTGAGCGTTTTCTGTGCTCAGAGTGTGTTATTTTATGTAATTTAATTTCTTTGTGAGCTCCTGT  
 TTAGCAGGTCGTCCTTCAGCAAGGACACAAAAGATTTTAAATTTTATTAATAAAAAAAAAAAAAAAAAAGAC  
 CGGGAATTCGATATCAAGCTTATCGACCTGCAGATCGTTCAAACATTTGGCAATAAAGTTTCTTAAGATT  
 GAATCCTGTTGCCGGTCTTGCGATGATTATCATATAATTTCTGTTGAATTACGTTAAGCATGTAATAATTA  
 ACATGTAATGCATGACGTTATTTATGAGATGGGTTTTATGATTAGAGTCCCGCAATTATACATTTAATAC  
 GCGATAGAAAACAAAATATAGCGCGCAAACTAGGATAAATTATCGCGCGCGGTGTCATCTATGTTACTA  
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 GTAATAGCGAAGAGGCCCGCACCGATCGCCCTTCCAACAGTTGCGCAGCCTGAATGGCGAATGCTA  
 GAGCAGCTTGAGCTTGATCAGATTGTCGTTTCCCGCCTTCAGTTAAACTATCAGTGTGTTGACAGGAT  
 ATATTGGCGGGTAAACCTAAGAGAAAAGAGCGTTTA

Figure 8G



Expression cassette number 1074 from 2X35S promoter to NOS terminator.PDISP-Rab G -A/Indonesia/5/2005 H5 TM+CT is underlined.

18/44

**Figure 8I, SEQ ID NO:38**

Amino acid sequence of PDISP-Rab G- A/Indonesia/5/2005 H5 TM+CT

MAKNVAIFGLLFSLLVLVPSQIFAKFPIYTIPDKLGPWSPIDIHHLSCPNNLVVEDEGCTNL  
SGFSYMEKLVGYILAIKMNGFTCTGVVTEAETYTNFVGYYVTTTFKRKHFRPTPDACRAA  
YNWKMGADPRYEESLHNPYPDYRWLRTVKTTKESLVIISPSVADLDPYDRSLHSRVFP  
SGKCSGVAVSSTYCYSTNHDIWMPENPRLGMSCDIFTNSRGKRASKGSETCGFVDE  
RGLYKSLKGACKLKLGVGLRLMDGTWVAMQTSNETKWCPPDQLVNLHDFRSDEIE  
HLVVEELVRKREECLDALESIMTTKSVSFRRLSHLRKLVPFGFKAYTIFNKTLMEDAHY  
KSVRTWNEILPSKGCLRVGGRCRHPVNGVFFNGIILGPDGNVLIPEMQSSLLQQHMELL  
ESSVIPLVHPLADPSTVFKDGDGAEDFVEVHLPDVHNQVSGVDLGLPNWGKYQILSIYS  
TVASSLALAIMMAGLSLWMCSNGSLQCRICI\*

**Figure 8J, SEQ ID NO: 39**

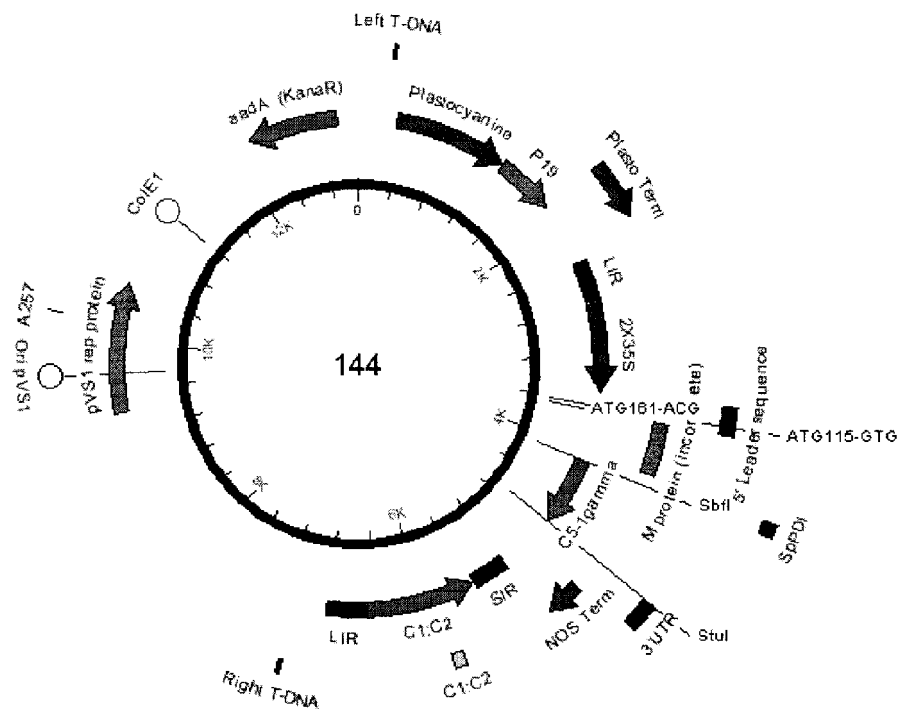
Construct 144 from left to right t-DNA (underlined).2X35S-CPMV-HT-PDISP-NOS into  
BeYDV + replicase expression system with Plastocyanine-P19-Plastocyanine silencing  
inhibitor expression cassette

TGGCAGGATATATTGTGGTGTAAACAAATTGACGCTTAGACAACCTTAATAACACATTGCGGACGTTTTTA  
ATGTACTGAATTAACGCCGAATCCCGGGCTGGTATATTATATGTTGTCAAATAACTCAAAAACATAAA  
AGTTTAAGTTAGCAAGTGTGTACATTTTTACTTGAACAAAAATATTACCTACTACTGTTATAAATCAITAT  
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GGAGAATAAAAAACATAATGTGAGTATGAGAGAGAAAAGTTGTACAAAAGTTGTACAAAATAGTTGTACAA  
ATATCATTGAGGAATTTGACAAAAGCTACACAAATAAGGGTTAATTGCTGTAAATAAATAAGGATGACGC  
ATTAGAGAGATGTACCATTAGAGAATTTTGGCAAGTCATTAAGAAAGAAAGAAATAAATTATTTTAAAT  
AAAAGTTGAGTCATTTGATTAACATGTGATTATTTAATGAATTGATGAAAGAGTTGGATTAAAGTTGTAT  
TAGTAATTAGAATTTGGTGTCAAATTTAATTTGACATTTGATCTTTTCTATATATTGCCCATAGAGTCA  
GTTAACTCATTTTTATATTTATAGATCAAATAAGAGAAATAACGGTATATTAATCCCTCCAAAAA  
AACGGTATATTTACTAAAAAATCTAAGCCACGTAGGAGGATAACAGGATCCCGTAGGAGGATAACATC  
CAATCCAACCAATCACAACATCCTGATGAGATAACCCACTTTAAGCCACGCATCTGTGGCACATCTA  
CATTATCTAAATCACACATTCTCCACACATCTGAGCCACACAAAAACCAATCCACATCTTTATCCCCAT  
TCTATAAAAAATCACACTTTGTGAGTCTACACTTTGATTCCTTCAAACACATACAAAGAGAAGAGACTA  
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TAACAGTGAACGTTGGGATGGAGGATCAGGAGGTACCACTTCTCCCTTCAAACCTTCTGACGAAAGTCC  
GAGTTGGACTGAGTGGCGGCTACATAACGATGAGACGAATTCGAATCAAGATAATCCCTTGGTTTCAA  
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TCTTCAGCATCTCTGTGAGATGGCAATTCGGTCTAAGCAAGAACTGCTACAGCTTGCCCCAATCGAAGT  
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AATGCTTCTTCGCTCCTATTTATAATATGGTTTGTATTGTAAATTTTGTCTTGTAGAAGAGCTTAATTA  
ATCGTTGTTGTTATGAAATACTATTTGATGAGATGAAGTGGTGAATGTAATTCATTACATAAGTGGAG  
TCAGAATCAGAATGTTTCTCCATAACTAAGTACATGAAGACCTGCCGCGTACAATTTGCTTTATTTT  
GAACAACATAAAATGAACATCTTTGCCACAACCTTTAAGTGGTTAATATAGCTCAAATATATGGTCAAG  
TTCAATAGATTAATAATGGAAATATCAGTTATCGAAATTCATTAACAATCAACTTAACGTTATTAACACTA  
ATTTTATATCATCCCTTTGATAAATGATAGTACCAATAGGAAGGAGCATGCTCGCCTAGGAGATTG

TCGTTTCCCGCCTTCAGTTTGCAAGCTGCTCTAGCCGTGTAGCCAATACGCAAACCGCCTCTCCCCGC  
GCGTTGGGAATTACTAGCGCGTGTGACACGCGTGGCGCGCCCTAGCAGAAGGCATGTTGTTGTGACT  
CCGAGGGGTTGCCTCAAACCTCTATCTTATAACCGGCGTGGAGGCATGGAGGCAAGGGCATTGTTGTTAA  
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GTCAACATGGTGGAGCACGACACACTTGTCTACTCCAAAATATCAAAGATACAGTCTCAGAAGACCAA  
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Figure 8K



**Figure 8L, SEQ ID NO:40**

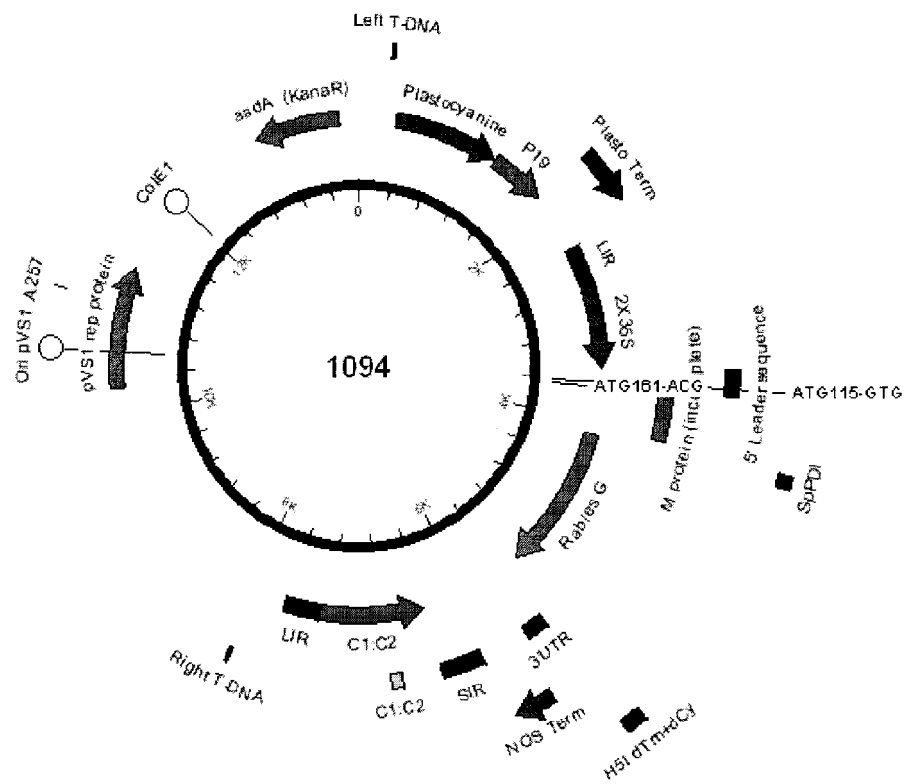
Expression cassette number 1094 from right to left BeYDV LIR.PDISP-Rab G -  
A/Indonesia/5/2005 H5 TM+CT is underlined.

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**Figure 8M**

Schematic representation of construct number 1094



Rabies G

Western blot on biomasses

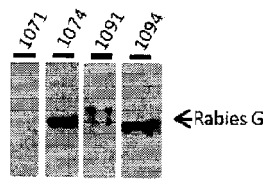


Figure 8N

Size exclusion chromatography on concentrated and clarified extracts

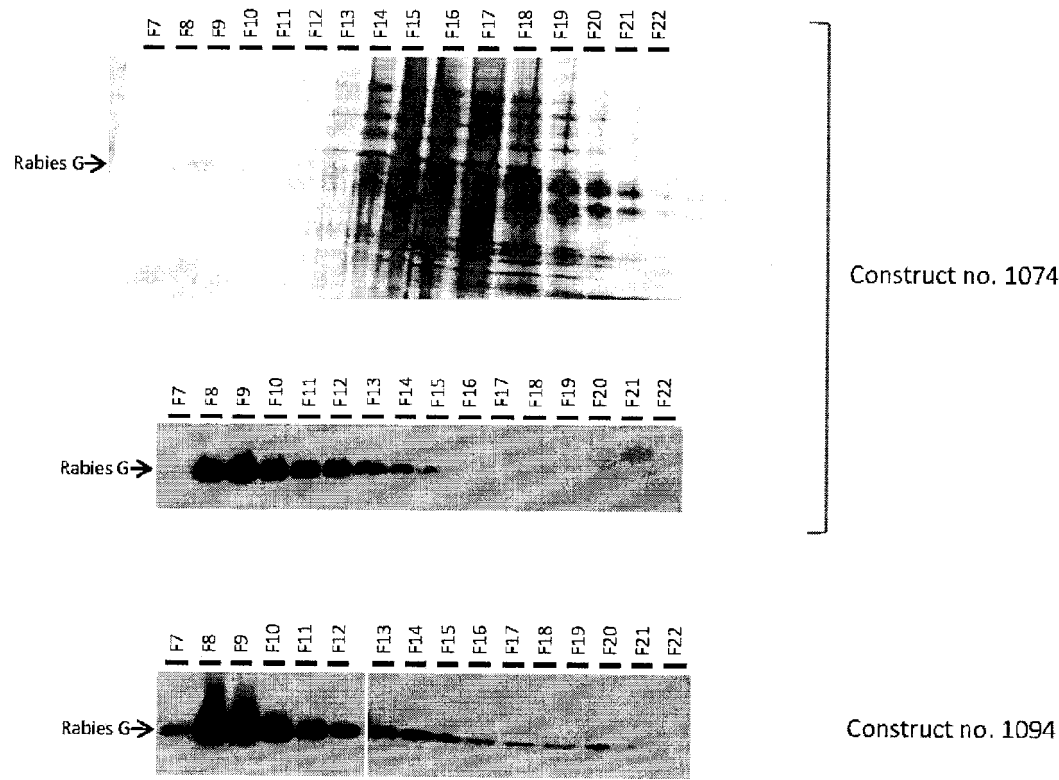


Figure 8O

Primary antibody: Santa Cruz SE-57995 0.25µg/µL  
Secondary antibody: Goat anti Mouse, JIR, 115-035-146 (1/10000)

Rabies G

Purification (1074)

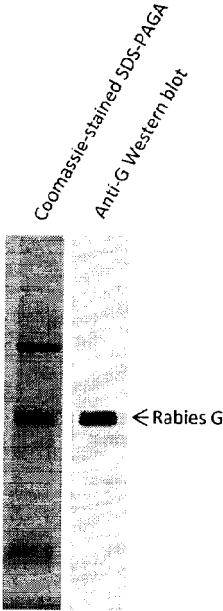


Figure 9A

Transmission electron microscopy on purified VLP (1074) (the bar is 100 nm)

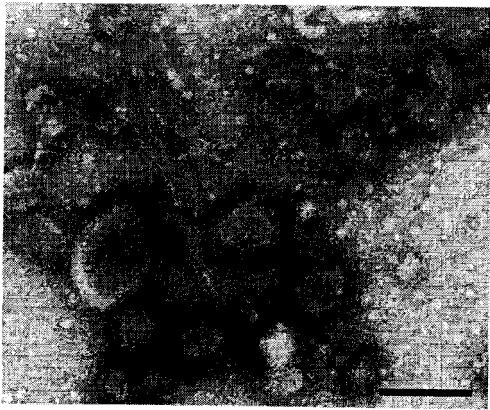


Figure 9B

Figure 10A, SEQ ID NO: 20

IF-wtSp-VZVgE.c

TGCCCAAATTTGTCGGGCCCATGGGGACAGTTAATAAACCTGTGGTG

Figure 10B, SEQ ID NO: 21

IF-H5dTm+VZVgE.r

AATTGACAGTATTTGTCGTAGAAAGTGGTGACGTTCCGGGGTTTACG

Figure 10C, SEQ ID NO: 22

synthesized VZV gE gene (corresponding to nt 3477-5348 from Genebank accession number AY013752.1) (Native signal peptide in bold, native transmembrane and cytosolic domains are underlined)

**ATGGGGACAGTTAATAAACCTGTGGTGGGGTATTGATGGGGTTCGGAATTATCACGGGAACGTTGC**  
**GTATAACGAATCCGGTCAGAGCATCCGTCCTGCGATACGATGATTTTCACACCGATGAAGACAACTG**  
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AGATAAGACCCGGTGA

**Figure 10D, SEQ ID NO: 23**

VZVgE+H5dTm.c

GCCACTGTTGAATAAAATTGACAGTATTTGTCGTAGAAGTGGTGACG

**Figure 10E, SEQ ID NO: 24**

Expression cassette number 946, from PacI (upstream of the promoter) to AscI (immediately downstream of the NOS terminator). VZV gE-A/Indonesia/5/2005 H5 TM+CT is underlined.

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 ATTATACATTTAATACGCGATAGAAAACAAAATATAGCGCGCAAACCTAGGATAAATTATCGCGCGCGGTGT  
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**Figure 10F, SEQ ID NO:25**

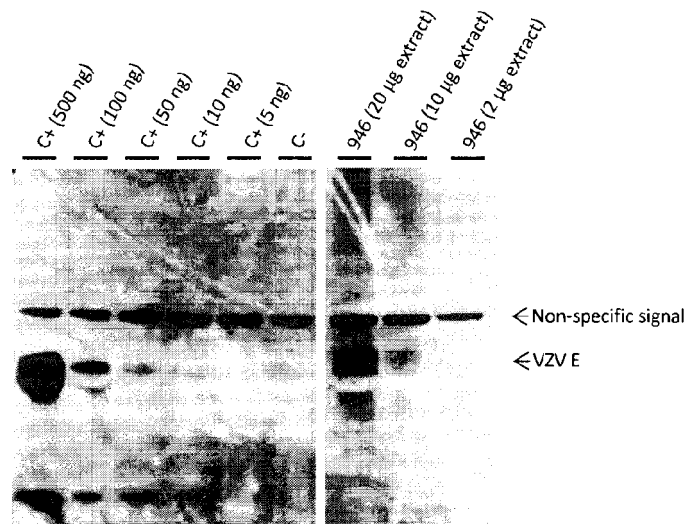
Amino acid sequence of VZV gE- A/Indonesia/5/2005 H5 TM+CT

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 RKAYDHNSPYIWPRNDYDGFLNAHEHHGVYNQGRGIDSGERLMQPTQMSAQEDLGDDTGIHVIPTLNGDD  
 RHKIVNVDQRQYGDVFKGDLNPKPQGQRLIEVSVEENHFPTLRAPIQRIYGVRYTETWSFLPSLTCTGDAA  
 PAIQHICLKHTTCFQDVVVDVDAENTKEDQLAEISYRFQGKKEADQPWIVVNTSTLFDELELDPPEIEFG  
 VLKVLRTKQYLGVIWNMRGSDGTSTYATFLVTWKGDEKTRNPTPAVTPQPRGAEFHMWNYHSHVFSVGD  
 TFSLAMHLQYKIHAEFDDLLEWLYVPIDPTCQPMRLYSTCLYHPNAPQCLSHMNSGCTFTSPHLAQRVAS  
 TVYQNCEHADNYTAYCLGISHMEPSFGLILHDGGTTLKFVDTPESLSGLYVFVVYFNHVEAVAYTVVSTV  
 DHFVNAIEERGFPPTAGQPPATTKPKEITPVNPGTSPLLRQILSIYSTVASSLALAIMMAGLSLWMCNNGS  
 LQCRICI\*



## Varicella Zoster virus (VZV)

Figure 11A



Positive control (C+): VZV gE, Abcam, ab43050

Negative control (C-): Extract from mock-infiltrated leaves

Primary antibody: Mouse mAb anti-VZVgE protein, abcam, ab52549 (1 µg/ml)

Secondary antibody: Goat anti-mouse, JIR, 115-035-146 (1/10000)

Figure 11B

Size exclusion chromatography on crude extracts (946)

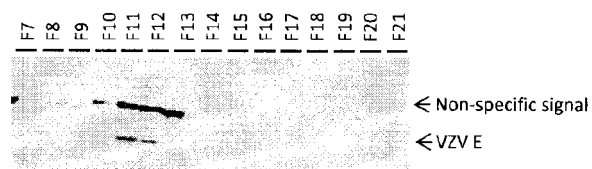


Figure 12A

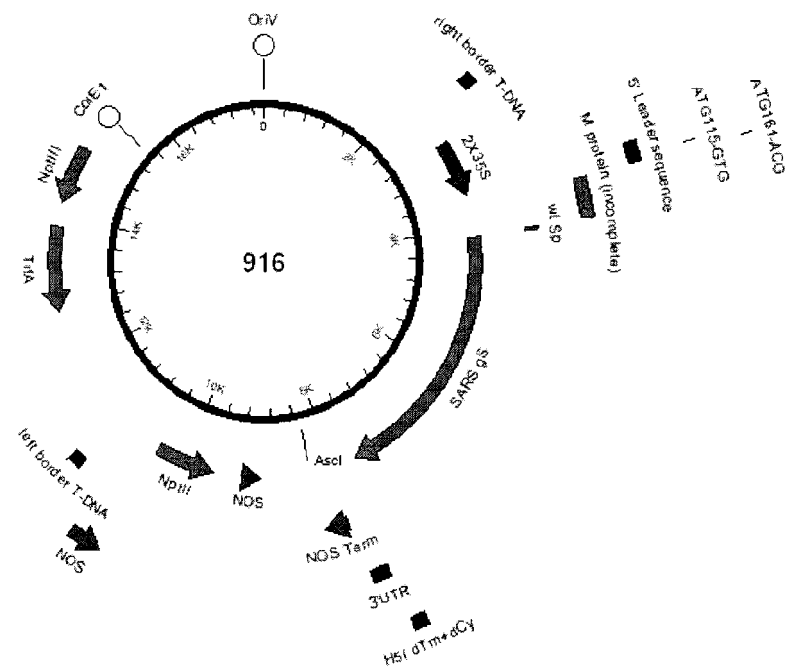


Figure 12B, SEQ ID NO:26

IF-wtSp-SARSgS.c

TGCCCAAATTTGTCGGGCCCATGTTTATTTTCTTATTATTTCTTACTCTC

Figure 12C, SEQ ID NO:27

IF-H5dTm+SARSgS.r

AATTGACAGTATTTGAGGCCATTTAATATATTGCTCATATTTTCC

**Figure 12D**, SEQ ID NO:28

synthesized SARS gS gene (corresponding to nt 21492-25259 from Genbank accession number AY278741.1) (Native signal peptide in bold, native transmembrane and cytosolic domains are underlined)

**ATGTTTATTTCTTATTATTTCTTACTCTCACTAGTGGT**AGTGACCTTGACCGGTGCACCACCTTTTGATG  
 ATGTTCAAGCTCCTAATTACACTCAACATACTTCATCTATGAGGGGGTTTACTATCCTGATGAAATTTT  
 AGATCAGACACTCTTTATTTAACTCAGGATTTATTTCTTCCATTTTATTCTAATGTTACAGGGTTTCATACT  
 ATTAATCATACGTTTGGCAACCCTGTCATACCTTTTAAAGGATGGTATTTATTTTGTGCCACAGAGAAAT  
 CAAATGTTGTCCGTGGTTGGGTTTTGGTTCTACCATGAACAACAAGTCACAGTCGGTGATTATTATTA  
 CAATTCTACTAATGTTGTTATACGAGCATGTAACCTTTGAATTGTGTGACAACCCTTTCTTTGCTGTTCTA  
 AACCCATGGGTACACAGACACATACTATGATATTCGATAATGCATTTAATTGCACCTTCGAGTACATATC  
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 CTTGCTGAACCTCAAAATGCTCTGTTAAGAGCTTTGAGATTGACAAAGGAATTTACCAGACCTCTAATTTCA  
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 TAATGCTACTAAATCCCTTCTGCTATGCATGGGAGAGAAAAAATTTCTAATTGTGTTGCTGATTACT  
 CTGTCCTCTACAACCTCAACATTTTTTCAACCTTTAAGTGCTATGGCGTTTCTGCCACTAAGTTGAATGAT  
 CTTTGCTTCTCAATGTCTATGCAGATTCCTTTGTAGTCAAGGGAGATGATGTAAGACAAATAGCGCCAG  
 GACAACTGGTGTTATTGCTGATTATAATTATAAATGCCAGATGATTTTCATGGGTTGTGTCCTTGCTTG  
 GAATACTAGGAACATTGATGCTACTTCACTGGTAATTATAATTATAAATATAGGTATCTTAGACATGGCA  
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 ATCCTAAAACATCTGAAATATTAGACATTTCACTTGTCTTTTGGGGGTGTAAGTGTAATTACACCTGG  
 AACAAATGCTTCATCTGAAGTTGCTGTTCTATATCAAGATGTTAACTGCACTGATGTTTCTACAGCAATTC  
 ATGCAGATCAACTCACACCAGCTTGGCGCATATATTCTACTGGAACAATGTATTCCAGACTCAAGCAG  
 GCTGTCTTATAGGAGCTGAGCATGTGACACTTCTTATGAGTGCGACATTCCTATTGGAGCTGGCATT  
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 CTTCAAAGCCTTCAAACCTATGTAACACAACAATAATCAGGGCTGCTGAAATCAGGGCTTCTGCTAAT  
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GTTTGATGAGGATGACTCTGAGCCAGTTCTCAAGGGTGTCAAATTACATTACACATAA

**Figure 12E**, SEQ ID NO:29

SARSgS+H5dTm.c

ATATATTAAATGGCCTCAAATACTGTCAATTTATTCAACAGTG

**Figure 12F**, SEQ ID NO:30

Expression cassette number 916, from PacI (upstream of the promoter) to AscI  
(immediately downstream of the NOS terminator). SARS gS-A/Indonesia/5/2005 H5  
TM+CT underlined.

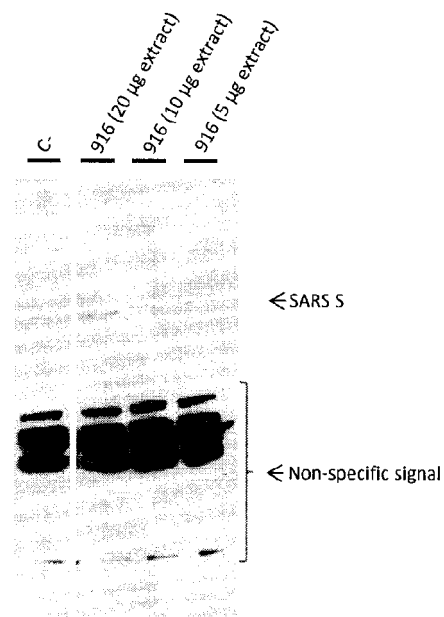
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TTCAACCTTTAAGTGCTATGGCGTTTCTGCCACTAAGTTGAATGATCTTTGCTTCTCCAATGCTATGCA  
GATTCTTTTGTAGTCAAGGGAGATGATGTAAGACAAATAGCGCCAGGACAAACTGGTGTTATTGCTGAT  
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TGAACCTTTAAATGCACCGGCCACGGTTTGTGGACCAAAATATCCACTGACCTTATTAAGAACCAGTGT  
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CAGCGCCAGCAATTTGTCATGAAGGCAAAGCATACTCCCTCGTGAAGGTGTTTTTGTGTTAATGGCA  
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CATTCAAAGAAGAGCTGGACAAGTACTTCAAAAATCATACATCACAGATGTTGATCTTGGCGACATTTT  
AGGCATTAACGCTTCTGTCGTCACATTCAAAAAGAAATTGACCGCCTCAATGAGGTGCTGCTAAAATTTA  
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CAATTTATTCAACAGTGGCGAGTTCCCTAGCACTGGCAATCATGATGGCTGGTCTATCTTTATGGATGT  
GCTCCAATGGATCGTTACAATGCAGAAATTTGCAATTTAAAGGCCATTTTCTTTAGTTTGAATTTACTGTTA  
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TAAAGTTTCTTAAGATTGAATCCTGTTGCCGCTTTCGATGATTATCATATAATTTCTGTTGAATTACGT  
TAAGCATGTAATAATTAACATGTAATGCATGACGTTATTTATGAGATGGGTTTTATGATTAGAGTCCCG  
CAATTATACATTTAATACCGATAGAAAACAAATATAGCGCGCAAACTAGGATAAATTATCGCGCGCG  
GTGTCATCTATGTTACTAGATCTCTAGAGTCTCAAGCTTGGCGCGCC

**Figure 12G**, SEQ ID NO:31

Amino acid sequence of SARS gS- A/Indonesia/5/2005 H5 TM+CT

MFIFLLFLTLTSGSDLDRCTTFDDVQAPNYTQHTSSMRGVYYPDEIFRSDTLYLTQDLFL  
PFYSNVTGFHTINHTFGNPVIPFKDGIYFAATEKSNVVRGWVFGSTMNNKSQSVIIINNS  
TNVVIRACNFELCDNPFFAVSKPMGTQHTMIFDNAFNCTFEYISDAFSLDVSEKSGNF  
KHLREFVFKNKDGLYVYKGYQPIDVVRDLPSGFNTLKPIFKLPLGINITNFRAILTAFSPA  
QDIWGTSAAYFVGYLKPTTFMLKYDENGITITDAVDCSQNPLAELKCSVKSFEIDKGIY  
QTSNFRVPSGDVVRFPNITNLCPFGEVFNATKFPSVYAWERKKISNCVADYSVLNST  
FFSTFKCYGVSATKLNDLCFSNVYADSFVVKGDDVRQIAPGQTGVIADYNYKLPDDFM  
GCVLAWNTRNIDATSTGNVYKYRYLRHGKLRPFERDISNVPFSPDGKPCPTPALNCY  
WPLNDYGFYTTTGIGYQPYRVVLSFELLNAPATVCGPKLSTDLIKNQCVNFNFNGLTG  
TGVLTSSSRFQPFQFGRDVSDFDSDVRDPKTSEILDSPCSFGGVSVITPGTNASSE  
VAVLYQDVNCTDVSTAIHADQLTPAWRIYSTGNNVFQTQAGCLIGAEHVDTSYECDIPI  
GAGICASYHTVSLLRSTSQKSIVAYTMSLGADSSIAYSNNTIAIPTNFSISITTEVMPVSMA  
KTSVDCNMYICGDSTECANLLLQYGSFCTQLNRALSGIAAEQDRNTREVFAQVKQMYK  
TPTLKYFGGFNFSQILPDPLKPTKRSFIEDLLFNKVTLADAGFMKQYGECLGDINARDLI  
CAQKFNGLTVLPPLLTDDMIAAYTAALVSGTATAGWTFGAGAALQIPFAMQMAYRFNGI  
GVTQNVLYENQKQIANQFNKAISQIQESLTTTSTALGKLQDVVNQNAQALNTLVKQLSS  
NFGAIVSLNDILSRDKVEAEVQIDRLITGRLQSLQTYVTQQLIRAAEIRASANLAATKM  
SECVLGQSKRVDFCGKGYHLMSFPQAAPHGVVFLHVTYVPSQERNFTTAPAICHEGKA  
YFPREGVFVFNGTSWFITQRNFFSPQIITDNTFVSGNCDVIGIINNTVYDPLQPELDSF  
KEELDKYFKNHTSPDVDLGDISGINASVVNIQKEIDRLNEVAKNLNESLIDLQELGKYEQ  
YIKWPQILSIYSTVASSLALAIMMAGLSLWMCNGLSLQCRICI\*



Negative control (C-): Extract from mock-infiltrated leaves  
Primary antibody: Rabbit IgG1 polyclonal, Imgenex, IMG-690 (2 µg/ml)  
Secondary antibody: Mouse Anti-Rabbit IgG, JIR, 111-035-144 (1/10000)

Figure 12H

**Figure 13A** (SEQ ID NO: 43)

IF-Opt\_EboGP.s2+4c

TCTCAGATCTTCGCCATCCCTCTGGGAGTGATCCACAATTCGACT

**Figure 13B** (SEQ ID NO: 44)

H5iTMCT+Opt\_EboGP.r

TTGAATAAATTGACAGTATCTGGCGCCATCCGGTCCACCAGTTATCGT

**Figure 13C** (SEQ ID NO: 45)

Optimized synthesized GPgene (corresponding to nt 6039-8069 from Genbank accession number AY354458 for wild-type gene sequence. Gene was optimized for codon usage and GC content, deletion of cryptic splice sites, Shine-Delgarno sequences, RNA destabilizing sequence and prokaryotic ribosome entry sites)(Native signal peptide in bold, native transmembrane and cytosolic domains are underlined)

**ATGGGGGTGACCGGAATCCTTCAGCTCCCTCGCGATAGGTTCAAACGGACGTCCTTCTTTCTCTGG**  
**GTGATCATCCTGTTTCAGCGCACCTTCTCAATCCCTCTGGGAGTGATCCACAATTCGACTCTCCAGGTG**  
 AGCGAGGTCGACAACTCGTGTGCCGCGATAAGTTGTCCAGCACCAATCAGCTCAGAAGTGTGGCCTCA  
 ACCTGGAGGGGAATGGGGTCGCCACAGACGTGCCATCCGCGACCAAGCGCTGGGGCTTTCGGTCGGGTG  
 TTCCCCCTAAAGTCGTGAATTACGAGGCCGGGGAGTGGGCTGAAAACCTGCTACAACCTGGAAATCAAGA  
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 GTACCTGTTTCGAGGTGGACAACCTAACATACGTGCAGCTCGAATCGCGGTTTACCCCGCAGTTCTTTTGC  
 AACTTAACGAGACGATCTATACAGTGGTAAACGGAGCAACACGACCGGGAAGCTCATCTGGAAGTAA  
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 AGCTCAGGACGTTTCAGCATTCTGAATCGGAAGGCAATCGATTTCCTACTCCAGCGGTGGGGCGGGACATG  
 CCACATCTGGGACCCGATTGTTGCATCGAGCCCCACGACTGGACCAAGAACATTACAGATAAAATCGA  
 CCAGATCATTCATGATTTCGTGGACAAGACACTGCCCGACCAAGGGGACAACGATAACTGGTGGACCGG

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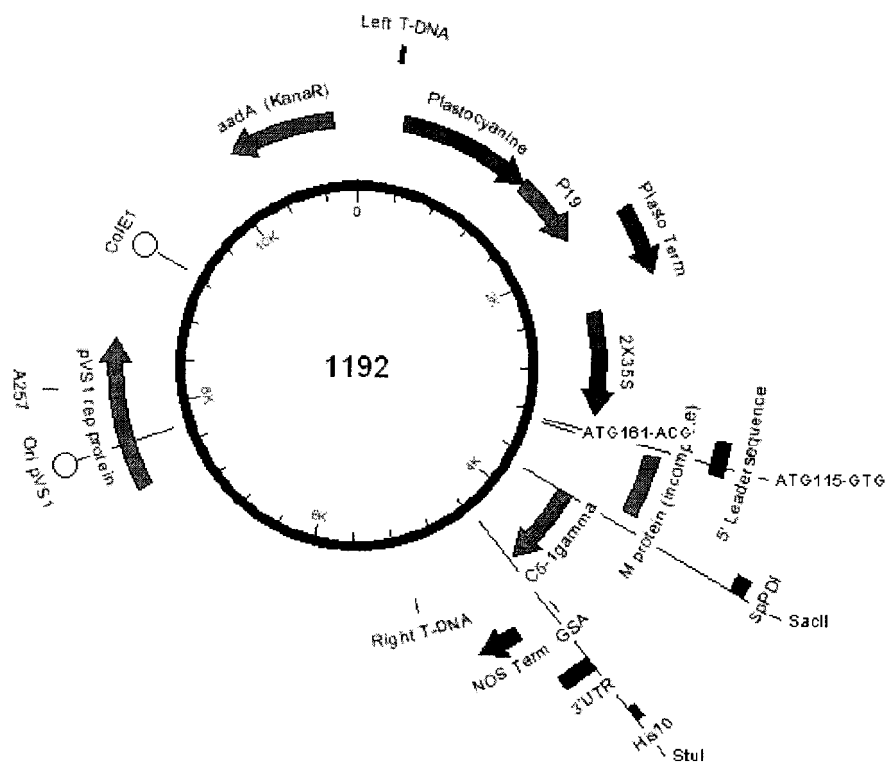
**Figure 13D** (SEQ ID NO: 46)

Opt\_EboGP+H5iTMCT.c

GGATGGCGCCAGATACTGTCAATTTATTCAACAGTGGCGAGTTCC

**Figure 13E**

Schematic representation of construct 1192. SacII and StuI restriction enzyme sites used for plasmid linearization are annotated on the representation.



**Figure 13F**, SEQ ID NO: 47

Construct 1192 from left to right t-DNA borders (underlined).2X35S/CPMV-HT/PDISP/NOS  
with Plastocyanine-P19-Plastocyanine silencing inhibitor expression cassette

TGGCAGGATATATTTGGTGTAAACAAATTGACGCTTAGACAACCTAATAACACATTGCGGACGTTTTTA  
ATGTACTGAATTAACGCCGAATCCCGGGCTGGTATATTTATATGTTGTCAAATAACTCAAAAACCATAAA  
AGTTTAAGTTAGCAAGTGTGTACATTTTACTTGAACAAAAATATTCACCTACTACTGTTATAAATCATTA  
TTAAACATTAGAGTAAAGAAATATGGATGATAAGAACAAGAGTAGTGATATTTTGACAACAATTTGTG  
CAACATTTGAGAAAAATTTGTGTTCTCTCTTTTCATTGGTCAAAAACAATAGAGAGAGAAAAAGGAAGA  
GGGAGAATAAAAAACATAATGTGAGTATGAGAGAGAAAAGTTGTACAAAAGTTGTACCAAAATAGTTGTAC  
AAATATCATTGAGGAATTTGACAAAAGCTACACAAATAAGGGTTAATTGCTGTAAATAAATAAGGATGA  
CGCATTAGAGAGATGTACCATTAGAGAATTTTGGCAAGTCATTAAAAAGAAAGAAATAAATTATTTTAA  
AATTAAGTTGAGTCAATTTGATTAAACATGTGATTATTAATGAATTGATGAAAGAGTTGGATTAAAGT  
TGTATTAGTAATTAGAATTTGGTGTCAAATTTAATTTGACATTGATCTTTCCCTATATATTGCCCCATAGA  
GTCAGTTAACTCATTTTATATTTTCATAGATCAAATAAGAGAAATAACGGTATATTAATCCCTCCAAAAA  
AAAAAACGGTATATTTACTAAAAAATCTAAGCCACGTAGGAGGATAACAGGATCCCGTAGGAGGATA  
ACATCCAATCCAACCAATCACAACAATCCTGATGAGATAACCCACTTTAAGCCCACGCATCTGTGGCACA  
TCTACATTATCTAAATCACACATTCTTCCACACATCTGAGCCACACAAAAACCAATCCACATCTTTATCAC  
CCATTCTATAAAAAATCACACTTTGTGAGTCTACACTTTGATTCCCTTCAAACACATACAAAGAGAAGAG  
ACTAATTAATTAATCATCTTGAGAGAAAAATGGAACGAGCTATACAAGGAAACGACGCTAGGGAAC  
AAGCTAACAGTGAACGTTGGGATGGAGGATCAGGAGGTACCACTTCTCCCTTCAAACCTCTGACGAAAG  
TCCGAGTTGGACTGAGTGGCGGTACATAACGATGAGACGAATTCGAATCAAGATAATCCCTTGGTTTC  
AAGGAAAGCTGGGGTTTCGGGAAAGTTGTATTTAAGAGATATCTCAGATACGACAGGACGGAAGCTTCA  
CTGCACAGAGTCTTGGATCTTGGACGGGAGATTGCGTTAACTATGCAGCATCTCGATTTTTCGGTTTCGA  
CCAGATCGGATGTACCTATAGTATTCGGTTTCGAGGAGTTAGTATCACCGTTTCTGGAGGGTCCGCAACT  
CTTCAGCATCTCTGTGAGATGGCAATTCGGTCTAAGCAAGAACTGCTACAGCTTGCCCCAATCGAAGTGG  
AAAGTAATGTATCAAGAGGATGCCCTGAAGGTACTCAAACCTTCGAAAAAGAAAGCGAGTAAGTTAAAA  
TGCTTCTCGTCTCCTATTTATAATATGGTTTGTATTGTGTTAAJTTTGTCTTGTGAGAGAGCTTAATTAAT  
CGTTGTGTTATGAAATACTATTTGTATGAGATGAACCTGGTGAATGTAATTCATTTACATAAGTGGAGTC  
AGAATCAGAATGTTTCTCCATAACTAAGTACATGAAGACCTGCCGCGTACAATTGTCTTATATTTGA  
ACAATAAAATGAACATCTTTTGCCACAACCTTATAAGTGGTTAATATAGCTCAAATATATGGTCAAGTT  
CAATAGATTAATAATGGAATATCAGTTATCGAAATTCATTAACAATCAACTTAACGTTATTAATACTACTA  
ATTTTATATCATCCCTTTGATAAATGATAGTACCAATTAGGAAGGAGCATGCTCGCCTAGGAGATTG  
TCGTTTCCCGCCTTCAGTTTGCAAGCTGCTTAGCCGTGTAGCCAATACGCAAAACCGCCTCTCCCGCGCG  
TTGGGAATTACTAGCGCGTGTGACAAAGCTTGCATGCCGGTCAACATGGTGGAGCACGACACACTTGTCT  
ACTCCAAAAATATCAAAGATACAGTCTCAGAAGACCAAGGGCAATTGAGACTTTTCAACAAAGGGTAA  
TATCCGGAACCTCTCGGATTCCATTGCCAGCTATCTGTCACTTTATTGTGAAGATAGTGGAAAAGGA  
AGGTGGCTCCTACAAATGCCATCAATTGCGATAAAGGAAAGGCCATCGTTGAAGATGCCTTGCCGACAGT  
GGTCCCAAGATGGACCCCCACCCAGGAGCATCGTGGAAAAAGAAGACGTTCCAACACGCTTCA  
AAGCAAGTGGATTGATGTGATAACATGGTGGAGCACGACACACTTGTCTACTCCAAAAATATCAAAGAT  
ACAGTCTCAGAAGACCAAAAGGCAATTGAGACTTTTCAACAAAGGTAATATCCGGAAACCTCCTCGGA  
TTCCATTGCCAGCTATCTGTCACTTTATTGTGAAGATAGTGGAAAAGGAAGGTGGCTCCTACAAATGCC  
ATCATTGCGATAAAGGAAAGGCCATCGTTGAAGATGCCTTGCCGACAGTGGTCCCAAGATGGACCCC  
CACCCACGAGGAGCATCGTGGAAAAAGAAGACGTTCCAACACGCTTCAAAGCAAGTGGATTGATGTG  
ATATCTCCACTGACGTAAGGGATGACGCACAATCCCACTATCCTTCGCAAGACCTTCTCTATATAAGG  
AAGTTCAATTCATTGGAGAGGTATTAATCTTAATAGGTTTTGATAAAGCGAACGTGGGGAAACCCG  
AACCAAACTTCTCTAACTCTCTCATCTCTCTTAAAGCAAACCTTCTCTTGTCTTCTTGTGCTGAGC  
GATCTTCAACGTTGTGATCGATCGTGTCTCGGCACCAAGTACAAACGTTTTCTTCACTGAAGCGAAATCAAAG  
ATCTCTTTGTGGACACGTAGTGGCGGCCATTAAATAACGTGTACTTGTCTATICTTGTGCGGTGTGGTCT  
TGGGAAAAGAAAGCTTGTGAGGCTGCTGTTACGCCCCATACATTACTTGTACGATTCTGCTGACTTTC  
GGCGGTGCAATATCTCTACTTCTGCTTGACGAGGTATTGTTGCCTGTACTCTTCTTCTTCTTCTGCTG  
ATTGGTTCTATAAGAAATCTAGTATTTCTTTGAAACAGAGTTTCCCGTGGTTTTCGAACTTGAGAGAAAG  
ATTGTTAAGCTTCTGTATATCTGCCCAAAATTTGICGGGCCCATGGCGAAAAACGTTGCGATTTTCGGCTT

ATTGTTTTCTTCTTGTGTTGGTTCCTTCTCAGATCTTCGCCGCGGCTCCTCAGCCAAAACGACACCCCCA  
 TCTGTCTATCCACTGGCCCTGGATCTGCTGCCCAAACCTAATCCATGGTGACCTGGGATGCTGGTCAA  
 GGGCTATTTCCCTGAGCCAGTGACAGTGACCTGGAACTCTGGATCCCTGTCCAGCGGTGTGCACACCTTC  
 CCAGCTGTCTGCAGTCTGACCTCTACACTCTGAGCAGCTCAGTGACTGTCCCTCCAGCACCTGGCCCA  
 GCGAGACCGTCACCTGCAACGTTGCCACCCGGCCAGCAGCACCAGGTGGACAAGAAAATTGTGCCCA  
 GGGATTGTGGTTGTAAGCCTTGCATATGTACAGTCCAGAAAGTATCATCTGTCTTCATCTTCCCCCAAAG  
 CCAAGGATGTGCTACCATTACTCTGACTCCTAAGGTCACGTGTGTGTGGTAGACATCAGCAAGGATG  
 ATCCGAGGTCCAGTTCAGCTGGTTTGTAGATGATGTGGAGGTGCACACAGCTCAGACGCAACCCCGGA  
 GGAGCAGTTCAACAGCACTTCCGCTCAGTCAGTGAACCTCCCATCATGCACCAGGACTGGCTCAATGGC  
 AAGGAGCGATCGCTACCATCACCATCACCATCACCATCACCATTAAAGGCCTATTTCTTTAGTTTGAAT  
 TTAAGTTATTCGGTGTGCACTTCTATGTTTGGTGAGCGGTTTCTGTGCTCAGAGTGTGTTTATTTATGT  
 AATTTAATTTCTTGTGAGCTCCTGTTTAGCAGGTCGTCCCTCAGCAAGGACACAAAAGATTTTAATTT  
 TATTAATAAAGAAAAAAGACCGGAATTCGATATCAAGCTTATCGACCTGCAGATTCCTCAAAAC  
 ATTTGGCAATAAAGTTTCTTAAGATTGAATCCTGTTGCCGGTCTTGCGATGATTATCATATAATTTCTGTT  
 GAATTACGTTAAGCATGTAATAATTAACATGTAATGCATGACGTTATTTATGAGATGGGTTTTATGATTA  
 GAGTCCCGCAATTATACATTTAATACGCGATAGAAAACAAAATATAGCGCGAACTAGGATAAATTAT  
 CGCGCGCGGTGTCATCTATGTTACTAGATCTCTAGAGTCTCAAGCTTGGCGCGCCACGTGACTAGTGGC  
 ACTGGCCGTCGTTTTACAACGTCGTGACTGGGAAAACCTTGGCGTTACCCAACCTTAATCGCCTTGCAGCA  
 CATCCCCCTTCGCCAGCTGGCGTAATAGCGAAGAGGCGCCGACCGATCGCCCTTCCCAACAGTTGGCGCA  
 GCCTGAATGGCGAATGCTAGAGCAGCTTGAAGCTTGGATCAGATTGTCTGTTTCCCGCCTTCAGTTAAACT  
 ATCAGTGTGTTGACAGGATATATTGGCGGGTAAACCTAAGAGAAAAGAGCGTTTA

**Figure 13G**, SEQ ID NO: 48

Expression cassette number 1366 from 2X35S promoter to NOS terminator. PDISP-GP from Zaire 95 Ebolavirus-H5 TM+CT from A/Indonesia/5/2005 sequence is underlined.

GTCAACATGGTGGAGCAGCACACTTGTCTACTCCAAAAATATCAAAGATACAGTCTCAGAAGACCAA  
 AGGGCAATTGAGACTTTTCAACAAAGGTAATATCCGGAACCTCCTCGGATTCCATTGCCCAGCTATCT  
 GTCACTTTATTGTGAAGATAGTGGAAAAGGAAGGTGGCTCCTACAAATGCCATCATTGCGATAAAGGAA  
 AGGCCATCGTTGAAGATGCCTCTGCCGACAGTGGTCCCAAAGATGGACCCCCACCCACGAGGAGCATCG  
 TGGAAAAAGAAGACGTTCCAACACGTCCTCAAAGCAAGTGGATTGATGTGATAACATGGTGGAGCAGC  
 ACACACTTGTCTACTCCAAAAATATCAAAGATACAGTCTCAGAAGACCAAAGGCAATTGAGACTTTTCA  
 ACAAAGGGTAATATCCGGAACCTCCTCGGATTCCATTGCCAGCTATCTGTCACTTTATTGTGAAGATA  
 GTGAAAAAGGAAGGTGGCTCCTACAAATGCCATCATTGCGATAAAGGAAAGGCCATCGTTGAAGATGCC  
 TCTGCCGACAGTGGTCCCAAAGATGGACCCCCACCCACGAGGAGCATCGTGGAAAAAGAAGACGTTCCA  
 ACCACGTCCTCAAAGCAAGTGGATTGATGTGATATCTCCACTGACGTAAGGGATGACGCACAATCCCACT  
 ATCCTTCGCAAGACCCCTTCTCTATATAAGGAAGTTCATTTCATTGGAGAGGTATTAATAATCTTAATAGG  
 TTTTGATAAAAGCGAACGTGGGGAAACCCGAACCAACCTTCTCTAAACTCTCTCTCATCTCTCTTAAAG  
 CAAACTTCTCTTTGTCTTTCTTGGGTGAGCGATCTTCAACGTTGTGATCAGTGTCTCGGCACCGATACA  
 ACGTTTTCTTTCACTGAAGCGAAATCAAAGATCTCTTTGTGGACACGTAGTGGCGGCCATTAAATAACG  
 TGTACTTGTCTATTCTTGTGGGTGTGGTCTTGGGAAAAGAAAGCTTGTGGAGGCTGCTGTTTACGCCCCA  
 TACATTACTTGTACGATTCTGCTGACTTTCGGCGGGTGCAATATCTCTACTTCTGCTTGACGAGGTATTG  
 TTGCCTGTACTTCTTCTTCTTCTTCTTGTGATTGGTTCTATAAGAAATCTAGTATTTTCTTTGAAACAGA  
 GTTTTCCCGTGGTTTTCGAACTTGGAGAAAGATTGTTAAGCTTCTGTATATTCTGCCCAAATTGTGGGGC  
 CCATGGCGAAAAACGTTGCGATTTCGGCTTATTGTTTCTCTTCTTGTGTTGGTTCCTTCTCAGATCTTCG  
CCATCCCTCTGGGAGTGATCCACAATTCGACTCTCCAGGTGAGCGAGGTGACAAAACCTGTTGCGCGCA  
TAAGTTGTCCAGCACCAATCAGCTCAGAAGTGTGGCCTCAACCTGGAGGGGAATGGGGTCCACAGA  
CGTGCCATCCCGACCAAGCGCTGGGGCTTTCGGTGGGTTTCCCTTAAAGTCGTGAATTACGAGGCC  
GGGGAGTGGGCTGAAAACTGCTACAACCTGGAAATCAAGAAACCCGACGCGCAGCGAGTGTCTGCCCGC  
GCCCCAGACGGGATCAGCGGTTTCCCGAGGTGCCGGTACGTGCACAAGGTCTCGGGAACCGGCCGTCG  
CGCGCGGATTTGCTTCCATAAGGAGGGCGCATTTCTTCTCTACGATAGACTGGCCTCCACGGTCACTA

TCGCGGCACCACCTTCGCGGAGGGGGTGGTGGCATTCTCATCTGCCGCAGGCTAAGAAAGATTCTTC  
 AGCTCCACCTCTCAGGGAACAGTCAACGCCACAGAGGATCCCTCCTCGGGATATTACAGCACCACAA  
 TTCGGTACCAGGCCACAGGCTTCGGGACCAATGAGACTGAGTACCTGTTGAGGTGGACAACTAACATA  
 CGTGCAGCTCGAATCGCGGTTTACCCCGCAGTTCCTTTTGCAACTTAACGAGACGATCTATACCAGTGGT  
 AAACGGAGCAACACGACCGGGAAGCTCATCTGGAAGTAAACCCGAGATCGACACCACGATTGGAGA  
 GTGGGCTTTCTGGGAAACCAAGAAAAACCTGACCCGGAAGATCAGGTCGGAGGAGTTGAGCTTCACTGC  
 CGTCTCCAATAGAGCAAAAAACATCAGCGGCCAGAGCCCTGCCCGGACTTCCAGCGACCCAGGTACCAA  
 CACCACGACAGAGGACCACAAGATTATGGCTCGGAGAATTCTCTGCAATGGTCCAGGTGCATAGCCA  
 GGGGCGCGAAGCTGCCGTCTCGCACCTGACAACCTTGGAACGATTTCACCAGCCACAAACCACCCACG  
 ACAAGCCCGGGCCGACAACTCCACCCATAATACCCGGTCTATAAGCTGGACATTTCGGAAGCTACGC  
 AGGTGGAGCAGCACCACCGGAGGACCGACAACGACTCAACAGCTAGCGATACCCCTCCCGCCACCACGG  
 CAGCGGGCCACCCAAAGGCTGAGAACACCAATACGAGCAAGGGCACCGACCTCTGGACCCCGGACTA  
 CCACGAGCCCCAGAAATCACAGCGAAACGGCGGGCAACAACAACACACCATCAGGATACTGGGGAG  
 GAGTCGGCTCCAGCGGAAACTGGGCCGTGATCACAACACCATAGCCGGGGTCGCCGGGCTGATCACT  
 GGAGGCCGGAGGGCACGCAGAGAGGCCATTGTGAACGCCAGCCCAAATGCAACCCAAACCTCCACTAC  
 TGGACCACGCAGGACGAGGGGGCGCTATCGGCCTGGCTGGATCCCATACTTTGGGCCCGCGCTGAG  
 GGCATATACCGGAGGGCCCTCATGCACATCAGGACGGACTGATCTGCGGACTCCGCCAGCTTGCCAAC  
 GAGACCACTCAGGCGTTGCAGCTGTTTCTGCGGGCCACTACCGAGCTCAGGACGTTTCAAGTCTGAATC  
 GGAAGGCAATCGATTTCCTACTCCAGCGGTGGGGCGGGACATGCCACATCCTGGGACCCGATTGTGCA  
 CGAGCCCCACGACTGGACCAAGAACAATTACAGATAAAATCGACCAGATCATTATGATTTCGTGGACAA  
 GACACTGCCGGACCGGGGACAACGATAACTGGTGGACCGGATGGCGCCAGATACTGTCAATTTATTC  
 AACAGTGGCGAGTTCCCTAGCACTGGCAATCATGATGGCTGGTCTATCTTTATGGATGTGCTCAATGGA  
 TCGTTACAATGCAGAATTGCAATTAAAGGCCTATTTCTTTAGTTTGAATTTACTGTTATTCGGTGTGCAT  
 TTCTATGTTTGGTGAGCGGTTTCTGTGCTCAGAGTGTGTTATTTATGTAATTAATTTCTTGTGAGCT  
 CCTGTTTAGCAGGTCGTCCCTCAGCAAGGACACAAAAAGATTTTAAATTTTATTAATAAAAAAAAAAAAAA  
 AAGACCGGGAATTCGATATCAAGCTTATCGACCTGCAGATCGTTCAACATTTGGCAATAAAGTTTCTTA  
 AGATTGAATCCTGTTGCCGGTCTTGCATGATATATCATATAATTCTGTTGAATTACGTTAAGCATGTAAT  
 AATTAACATGTAATGCATGACGTTATTTATGAGATGGGTTTTATGATTAGAGTCCCGCAATTATACATTT  
 AATACGCGATAGAAAACAAATATAGCGCGCAAACTAGGATAAATTATCGCGCGGGTGTCTATGT  
 TACTAGAT

**Figure 13 H**, SEQ ID NO: 49

Amino acid sequence of PDISP-GP from Zaire 95 Ebolavirus-H5 TM+CT from  
 A/Indonesia/5/2005

MAKNVAIFGLLFSLLVLVPSQIFAIPLGVIHNSTLQVSEVDKLVCRDKLSSTNQLRSVGLN  
 LEGNGVATDVPSATKRWGFSGVPPKVVNVEAGEWAENCYNLEIKKPDGSECLPAAPD  
 GIRGFPRCRYVHKVSGTGPCAGDFAFHKEGAFFLYDRLASTVIYRGTTFAEGVVAFLILP  
 QAKKDFSSHPLREPVNATEDPSSGYYSTTIRYQATGFGTNETEYLFVDNLTYVQLESR  
 FTPQFLLQLNETIYTSGKRSNTTGKLIWKVNPEIDTTIGEWAFWETKKNLTRKIRSEELSFT  
 AVSNRAKNISGQSPARTSSDPGTNTTTHDKIMASENSSAMVQVHSQGREAAVSHLTTL  
 ATISTSPQPPTTKPGPDNSTHNTVPYKLDISEATQVEQHHRRTDNDSTASDTPPATTAAGP  
 PKAENTNTSKGTDLLDPATTTSPQNHSETAGNNNTHHQDTGEESASSGKLGLITNTIAGV  
 AGLITGRRARREAIVNAQPKCNPNLHYWTTQDEGAJGLAWIPYFGPAAEIYTEGLM  
 HNQDGLICGLRQLANETTQALQLFLRATTELRTFSILNRKAIDFLLQRWGGTCHILGPD  
 CIEPHDWTKNITDKIDQIIHDFVDKTLDPQGDNDNWWTGWRQILSIYSTVASSLALAIMM  
 AGLSLWMCSNGSLQCRICI\*

**Figure 13I**

Schematic representation of construct number 1366

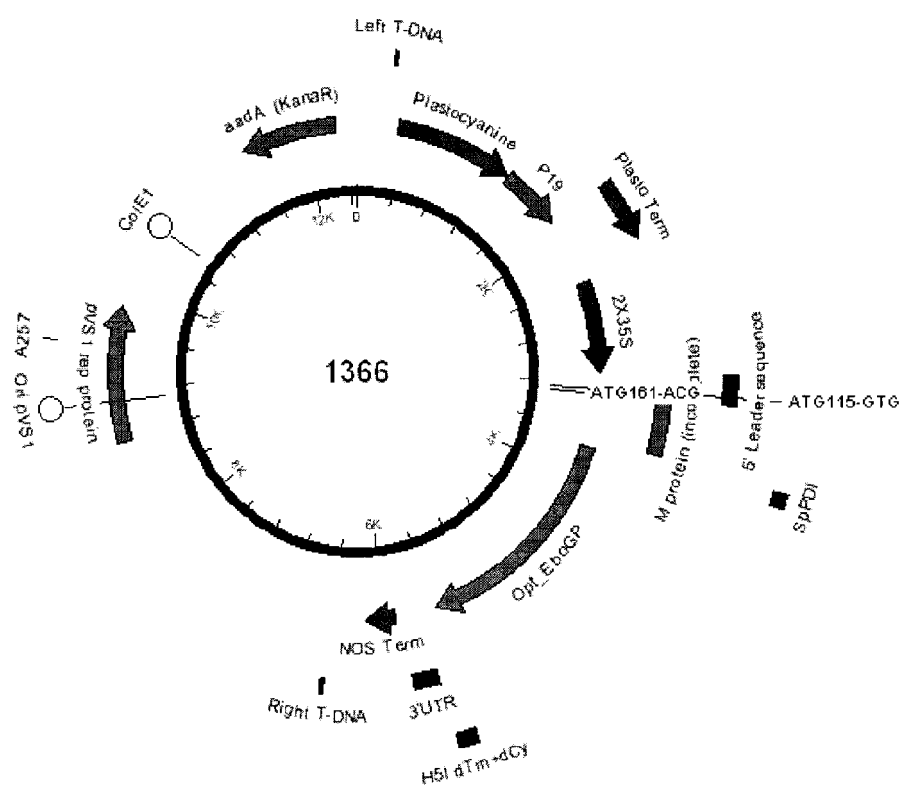




Figure 13J