SEQUENCE LISTING

<110> ABU BAKAR, Ag. Muhammad Sagaf
UNG, Eng Huan

<120> ANTIMICROBIAL FUSION COMPOUNDS AND USES THEREOF

<130> FP5730

<150> PI 2011000092
<151> 2011-01-07

<160> 34

<170> PatentIn version 3.5

<210> 1
<211> 379
<212> PRT
<213> Artificial Sequence

<220>
<223> Fusion Peptide

<220>
<221> misc_feature
<223> Amino acid sequence of fusion protein

<400> 1

Met Lys Tyr Leu Leu Pro Thr Ala Ala Ala Gly Leu Leu Leu Leu Ala
1 5 10 15

Ala Gln Pro Ala Met Ala Met Gly Arg Ile Cys Arg Cys Ile Cys Gly
20 25 30

Arg Gly Ile Cys Arg Cys Ile Cys Gly Val Pro Gly Val Gly Val Pro
35 40 45

Gly Val Gly Gly Ala Thr Gly Ser Asp Val Asn Phe Asp Leu Ser Thr
50 55 60

Ala Thr Ala Lys Thr Tyr Thr Lys Phe Ile Glu Asp Phe Arg Ala Thr
65 70 75 80

Leu Pro Phe Ser His Lys Val Tyr Asp Ile Pro Leu Leu Tyr Ser Thr
85 90 95

Ile Ser Asp Ser Arg Arg Phe Ile Leu Leu Asp Leu Thr Ser Tyr Ala
100 105 110

Tyr Glu Thr Ile Ser Val Ala Ile Asp Val Thr Asn Val Tyr Val Val
115 120 125

Ala Tyr Arg Thr Arg Asp Val Ser Tyr Phe Phe Lys Glu Ser Pro Pro
130 135 140

Glu Ala Tyr Asn Ile Leu Phe Lys Gly Thr Arg Lys Ile Thr Leu Pro

145 150 155 160

Tyr Thr Gly Asn Tyr Glu Asn Leu Gln Thr Ala Ala His Lys Ile Arg
165 170 175

Glu Asn Ile Asp Leu Gly Leu Pro Ala Leu Ser Ser Ala Ile Thr Thr
180 185 190

Leu Phe Tyr Tyr Asn Ala Gln Ser Ala Pro Ser Ala Leu Leu Val Leu
195 200 205

Ile Gln Thr Thr Ala Glu Ala Ala Arg Phe Lys Tyr Ile Glu Arg His
210 215 220

Val Ala Lys Tyr Val Ala Thr Asn Phe Lys Pro Asn Leu Ala Ile Ile
225 230 235 240

Ser Leu Glu Asn Gln Trp Ser Ala Leu Ser Lys Gln Ile Phe Leu Ala
245 250 255

Gln Asn Gln Gly Gly Lys Phe Arg Asn Pro Val Asp Leu Ile Lys Pro
260 265 270

Thr Gly Glu Arg Phe Gln Val Thr Asn Val Asp Ser Asp Val Val Lys
275 280 285

Gly Asn Ile Lys Leu Leu Leu Asn Ser Arg Ala Ser Thr Ala Asp Glu
290 295 300

Asn Phe Ile Thr Thr Met Thr Leu Leu Gly Glu Ser Val Val Glu Phe
305 310 315 320

Pro Trp Ala Leu Trp Lys Thr Met Leu Lys Glu Leu Gly Thr Met Ala
325 330 335

Leu His Ala Gly Lys Ala Ala Leu Gly Ala Ala Ala Asp Thr Ile Ser
340 345 350

Gln Gly Thr Gln Val Pro Gly Val Gly Val Pro Gly Val Gly Lys Leu
355 360 365

Ala Ala Ala Leu Glu His His His His His His
370 375

<210> 2
<211> 1140
<212> DNA
<213> Artificial Sequence

<220>
<223> Fusion peptide

<220>
<221> misc_feature
<223> Polynucleotide sequence encoding fusion protein of SEQ ID No:1

<400> 2
atgaaatacc tgctgccgac cgctgctgct ggtctgctgc tcctcgctgc ccagccggcg 60

atggccatgg ggcgtatttg ccgttgcatt tgcggccgtg gcatttgccg ctgcatctgt 120

ggcgtgccgg gtgttggtgt tccgggtgtg ggtggtgcga ccggatccga tgtgaacttt 180

gatctgagca ccgcgaccgc gaaaacctat accaaattca tcgaagattt tcgtgcgacc 240

ctgccgttta gccataaagt gtatgatatc ccgctgctgt atagcaccat tagcgatagc 300

cgtcgtttta ttctgctgga tctgaccagc tatgcgtatg aaaccattag cgtggcgatt 360

gatgtgacca acgtgtatgt ggtggcgtat cgtacccgtg atgtgagcta ctttttcaaa 420

gaaagcccgc cggaagcgta caacattctg tttaaaggca cccgtaaaat taccctgccg 480

tataccggca actatgaaaa cctgcagacc gcggcgcata aaattcgtga aaacatcgat 540

ctgggcctgc cggccctgag cagcgcgatt accaccctgt tttattataa cgcgcagagc 600

gcgccgagcg cgctgctggt gctgattcag accaccgcgg aagcggcgcg ttttaaatat 660

attgaacgcc acgtggcgaa atatgtggcg accaacttta aaccgaacct ggccattatt 720

agcctggaaa accagtggag cgccctgagc aaacaaattt ttctggccca gaaccagggc 780

ggcaaatttc gtaatccggt ggatctgatt aaaccgaccg gcgaacgttt tcaggtgacc 840

aatgtggata gcgatgtggt gaaaggcaac attaaactgc tgctgaacag ccgtgcgagc 900

accgcggatg aaaactttat taccaccatg accctgctgg gcgaaagcgt ggtggaattc 960

ccgtgggcgc tgtggaaaac catgctgaaa gaactgggca cgatggcgct gcatgcgggt 1020

aaagcggcgc tgggtgcggc agcggatacc attagccagg gcacccaggt tccgggcgtg 1080

ggcgttccgg gcgttggtaa gcttgcggcc gcactcgagc accaccacca ccaccactga 1140

<210> 3
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Primer sequence

<220>
<221> misc_feature
<223> Forward primer for HSV-1

<400> 3
tgggacacat gccttcttgg 20

<210> 4
<211> 17
<212> DNA
<213> Artificial Sequence

<220>
<223> primer sequence

<220>
<221> misc_feature
<223> Forward primer for HSV-2

<400> 4
gtacagacct tcggagg 17

<210> 5
<211> 28
<212> DNA
<213> Artificial Sequence

<220>
<223> Primer sequence

<220>
<221> misc_feature
<223> Reverse primer for HSV-1

<400> 5
acccttagtc agactctgtt acttaccc 28

<210> 6
<211> 15
<212> DNA
<213> Artificial Sequence

<220>
<223> Primer Sequence

<220>
<221> misc_feature
<223> Reverse primer for HSV-2

<400> 6
cgcttcatca tgggc 15

<210> 7
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Primer Sequence

<220>
<221> misc_feature
<223> Forward primer for DENV1, DENV2, DENV3 and DENV4

<400> 7
ggaaggagaa ggactgcaca 20

<210> 8
<211> 21
<212> DNA
<213> Artificial Sequence

<220>

<223> Primer Sequence

<220>
<221> misc_feature
<223> Reverse primer for DENV1, DENV2, DENV3 and DENV4

<400> 8
attcttgtgt cccatcctgc t 21

<210> 9
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Primer Sequence

<220>
<221> misc_feature
<223> Forward primer for HPV

<400> 9
acactcagcc tctaccttgt 20

<210> 10
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Primer Sequence

<220>
<221> misc_feature
<223> Reverse primer for HPV

<400> 10
gcattacaag agccaagcag 20

<210> 11
<211> 5
<212> PRT
<213> Artificial Sequence

<220>
<223> Linker peptide

<220>
<221> misc_feature
<223> N is 0, 1, 2, 3, 4 or 5

<220>
<221> misc_feature
<223> Linker Peptide

<220>
<221> misc_feature
<222> (3)..(3)
<223> Xaa can be any naturally occurring amino acid

<400> 11

Val Pro Xaa Val Gly
1 5

<210> 12
<211> 18
<212> PRT
<213> Artificial Sequence

<220>
<223> Polypeptide A

<220>
<221> misc_feature
<223> Amino acid Sequence of Polypeptide A

<400> 12

Gly Arg Ile Cys Arg Cys Ile Cys Gly Arg Gly Ile Cys Arg Cys Ile
1 5 10 15

Cys Gly

<210> 13
<211> 268
<212> PRT
<213> Artificial Sequence

<220>
<223> Polypeptide B

<220>
<221> misc_feature
<223> Amino acid Sequence of Polypeptide B

<400> 13

Gly Ser Asp Val Asn Phe Asp Leu Ser Thr Ala Thr Ala Lys Thr Tyr
1 5 10 15

Thr Lys Phe Ile Glu Asp Phe Arg Ala Thr Leu Pro Phe Ser His Lys
20 25 30

Val Tyr Asp Ile Pro Leu Leu Tyr Ser Thr Ile Ser Asp Ser Arg Arg
35 40 45

Phe Ile Leu Leu Asp Leu Thr Ser Tyr Ala Tyr Glu Thr Ile Ser Val
50 55 60

Ala Ile Asp Val Thr Asn Val Tyr Val Val Ala Tyr Arg Thr Arg Asp
65 70 75 80

Val Ser Tyr Phe Phe Lys Glu Ser Pro Pro Glu Ala Tyr Asn Ile Leu
85 90 95

Phe Lys Gly Thr Arg Lys Ile Thr Leu Pro Tyr Thr Gly Asn Tyr Glu

100 105 110

Asn Leu Gln Thr Ala Ala His Lys Ile Arg Glu Asn Ile Asp Leu Gly
115 120 125

Leu Pro Ala Leu Ser Ser Ala Ile Thr Thr Leu Phe Tyr Tyr Asn Ala
130 135 140

Gln Ser Ala Pro Ser Ala Leu Leu Val Leu Ile Gln Thr Thr Ala Glu
145 150 155 160

Ala Ala Arg Phe Lys Tyr Ile Glu Arg His Val Ala Lys Tyr Val Ala
165 170 175

Thr Asn Phe Lys Pro Asn Leu Ala Ile Ile Ser Leu Glu Asn Gln Trp
180 185 190

Ser Ala Leu Ser Lys Gln Ile Phe Leu Ala Gln Asn Gln Gly Gly Lys
195 200 205

Phe Arg Asn Pro Val Asp Leu Ile Lys Pro Thr Gly Glu Arg Phe Gln
210 215 220

Val Thr Asn Val Asp Ser Asp Val Val Lys Gly Asn Ile Lys Leu Leu
225 230 235 240

Leu Asn Ser Arg Ala Ser Thr Ala Asp Glu Asn Phe Ile Thr Thr Met
245 250 255

Thr Leu Leu Gly Glu Ser Val Val Glu Phe Pro Trp
260 265

<210> 14
<211> 34
<212> PRT
<213> Artificial Sequence

<220>
<223> Polypeptide C

<220>
<221> misc_feature
<223> Amino acid Sequence of Polypeptide C

<400> 14

Ala Leu Trp Lys Thr Met Leu Lys Glu Leu Gly Thr Met Ala Leu His
1 5 10 15

Ala Gly Lys Ala Ala Leu Gly Ala Ala Ala Asp Thr Ile Ser Gln Gly
20 25 30

Thr Gln

<210> 15
<211> 18
<212> PRT
<213> artificial sequence

<220>
<223> theta Defensin

<220>
<221> misc_feature
<223> Rhesus minidefensin (RTD-1)

<400> 15

Gly Phe Cys Arg Cys Leu Cys Arg Arg Gly Val Cys Arg Cys Ile Cys
1 5 10 15

Thr Arg

<210> 16
<211> 18
<212> PRT
<213> artificial sequence

<220>
<223> theta Defensin

<220>
<221> misc_feature
<223> RTD-2

<400> 16

Arg Cys Leu Cys Arg Arg Gly Val Cys Arg Cys Leu Cys Arg Arg Gly
1 5 10 15

Val Cys

<210> 17
<211> 18
<212> PRT
<213> artificial sequence

<220>
<223> theta Defensin

<220>
<221> misc_feature
<223> RTD-3

<400> 17

Arg Cys Ile Cys Thr Arg Gly Phe Cys Arg Cys Ile Cys Thr Arg Gly
1 5 10 15

Phe Cys

<210> 18
<211> 18
<212> PRT
<213> artificial sequence

<220>
<223> theta Defensin

<220>
<221> misc_feature
<223> Retrocyclin-1

<400> 18

Gly Ile Cys Arg Cys Ile Cys Gly Arg Gly Ile Cys Arg Cys Ile Cys
1 5 10 15

Gly Arg

<210> 19
<211> 18
<212> PRT
<213> artificial sequence

<220>
<223> theta Defensin

<220>
<221> misc_feature
<223> Retrocyclin-2

<400> 19

Gly Ile Cys Arg Cys Ile Cys Gly Arg Gly Ile Cys Arg Cys Ile Cys
1 5 10 15

Gly Arg

<210> 20
<211> 18
<212> PRT
<213> artificial sequence

<220>
<223> theta Defensin

<220>
<221> misc_feature
<223> Retrocyclin-3

<400> 20

Arg Ile Cys Arg Cys Ile Cys Gly Arg Arg Ile Cys Arg Cys Ile Cys
1 5 10 15

Gly Arg

<210> 21
<211> 18
<212> PRT
<213> artificial sequence

<220>
<223> synthetic theta Defensin

<220>
<221> misc_feature
<223> RC100

<400> 21

Gly Ile Cys Arg Cys Ile Cys Gly Arg Gly Ile Cys Arg Cys Ile Cys
1 5 10 15

Gly Arg

<210> 22
<211> 18
<212> PRT
<213> artificial sequence

<220>
<223> synthetic theta Defensin

<220>
<221> misc_feature
<223> RC101

<400> 22

Gly Ile Cys Arg Cys Ile Cys Gly Lys Gly Ile Cys Arg Cys Ile Cys
1 5 10 15

Gly Arg

<210> 23
<211> 18
<212> PRT
<213> artificial sequence

<220>
<223> synthetic theta Defensin

<220>
<221> misc_feature
<223> RC102

<400> 23

Gly Ile Cys Arg Cys Tyr Cys Gly Arg Gly Ile Cys Arg Cys Ile Cys
1 5 10 15

Gly Arg

<210> 24
<211> 18
<212> PRT
<213> artificial sequence

<220>
<223> synthetic theta Defensin

<220>
<221> misc_feature
<223> RC103

<400> 24

Gly Ile Cys Arg Cys Ile Cys Gly Arg Gly Ile Cys Arg Cys Tyr Cys
1 5 10 15

Gly Arg

<210> 25
<211> 18
<212> PRT
<213> artificial sequence

<220>
<223> synthetic theta Defensin

<220>
<221> misc_feature
<223> RC104

<400> 25

Gly Tyr Cys Arg Cys Ile Cys Gly Arg Gly Ile Cys Arg Cys Ile Cys
1 5 10 15

Gly Arg

<210> 26
<211> 18
<212> PRT
<213> artificial sequence

<220>
<223> synthetic theta Defensin

<220>
<221> misc_feature
<223> RC105

<400> 26

Gly Ile Cys Arg Cys Ile Cys Gly Arg Gly Tyr Cys Arg Cys Ile Cys
1 5 10 15

Gly Arg

<210> 27
<211> 18
<212> PRT
<213> artificial sequence

<220>
<223> synthetic theta Defensin

<220>
<221> misc_feature
<223> RC106

<400> 27

Gly Ile Cys Tyr Cys Ile Cys Gly Arg Gly Ile Cys Arg Cys Ile Cys
1 5 10 15

Gly Arg

<210> 28
<211> 18
<212> PRT
<213> artificial sequence

<220>
<223> synthetic theta Defensin

<220>
<221> misc_feature
<223> RC107

<400> 28

Gly Ile Cys Ile Cys Ile Cys Gly Tyr Gly Ile Cys Arg Cys Ile Cys
1 5 10 15

Gly Arg

<210> 29
<211> 18
<212> PRT
<213> artificial sequence

<220>
<223> synthetic theta Defensin

<220>
<221> misc_feature
<223> RC108

<400> 29

Gly Ile Cys Ile Cys Ile Cys Gly Arg Gly Ile Cys Tyr Cys Ile Cys

1 5 10 15

Gly Arg

<210> 30
<211> 18
<212> PRT
<213> artificial sequence

<220>
<223> synthetic theta Defensin

<220>
<221> misc_feature
<223> RC110

<400> 30

Gly Ile Cys Ile Cys Ile Cys Gly Arg Gly Ile Cys Tyr Cys Ile Cys
1 5 10 15

Gly Arg

<210> 31
<211> 18
<212> PRT
<213> artificial sequence

<220>
<223> synthetic theta Defensin

<220>
<221> misc_feature
<223> RC111

<400> 31

Arg Gly Cys Ile Cys Arg Cys Ile Gly Arg Gly Cys Ile Cys Arg Cys
1 5 10 15

Ile Gly

<210> 32
<211> 18
<212> PRT
<213> artificial sequence

<220>
<223> synthetic theta Defensin

<220>
<221> misc_feature
<223> RC112

<400> 32

Arg Gly Cys Ile Cys Arg Cys Ile Gly Arg Gly Cys Ile Cys Arg Cys
1 5 10 15

Ile Gly

<210> 33
<211> 18
<212> PRT
<213> artificial sequence

<220>
<223> synthetic theta Defensin

<220>
<221> misc_feature
<223> RC113

<400> 33

Gly Ile Cys Arg Cys Ile Cys Gly Arg Gly Ile Cys Arg Cys Ile Cys
1 5 10 15

Gly Arg

<210> 34
<211> 18
<212> PRT
<213> artificial sequence

<220>
<223> synthetic theta Defensin

<220>
<221> misc_feature
<223> RC114

<400> 34

Gly Ile Cys Arg Cys Ile Cys Gly Lys Gly Ile Cys Arg Cys Tyr Cys
1 5 10 15

Gly Arg

SEQUENCE LISTING

<110> ABU BAKAR, Ag. Muhammad Sagaf
UNG, Eng Huan

<120> ANTIMICROBIAL FUSION COMPOUNDS AND USES THEREOF

<130> FP5730

<150> PI 2011000092
<151> 2011-01-07

<160> 34

<170> PatentIn version 3.5

<210> 1
<211> 379
<212> PRT
<213> Artificial Sequence

<220>
<223> Fusion Peptide

<220>
<221> misc_feature
<223> Amino acid sequence of fusion protein

<400> 1

Met Lys Tyr Leu Leu Pro Thr Ala Ala Ala Gly Leu Leu Leu Leu Ala
1 5 10 15

Ala Gln Pro Ala Met Ala Met Gly Arg Ile Cys Arg Cys Ile Cys Gly
20 25 30

Arg Gly Ile Cys Arg Cys Ile Cys Gly Val Pro Gly Val Gly Val Pro
35 40 45

Gly Val Gly Gly Ala Thr Gly Ser Asp Val Asn Phe Asp Leu Ser Thr
50 55 60

Ala Thr Ala Lys Thr Tyr Thr Lys Phe Ile Glu Asp Phe Arg Ala Thr
65 70 75 80

Leu Pro Phe Ser His Lys Val Tyr Asp Ile Pro Leu Leu Tyr Ser Thr
85 90 95

Ile Ser Asp Ser Arg Arg Phe Ile Leu Leu Asp Leu Thr Ser Tyr Ala
100 105 110

Tyr Glu Thr Ile Ser Val Ala Ile Asp Val Thr Asn Val Tyr Val Val
115 120 125

Ala Tyr Arg Thr Arg Asp Val Ser Tyr Phe Phe Lys Glu Ser Pro Pro
130 135 140

Glu Ala Tyr Asn Ile Leu Phe Lys Gly Thr Arg Lys Ile Thr Leu Pro
145 150 155 160

Tyr Thr Gly Asn Tyr Glu Asn Leu Gln Thr Ala Ala His Lys Ile Arg
165 170 175

Glu Asn Ile Asp Leu Gly Leu Pro Ala Leu Ser Ser Ala Ile Thr Thr
180 185 190

Leu Phe Tyr Tyr Asn Ala Gln Ser Ala Pro Ser Ala Leu Leu Val Leu
195 200 205

Ile Gln Thr Thr Ala Glu Ala Ala Arg Phe Lys Tyr Ile Glu Arg His
210 215 220

Val Ala Lys Tyr Val Ala Thr Asn Phe Lys Pro Asn Leu Ala Ile Ile
225 230 235 240

Ser Leu Glu Asn Gln Trp Ser Ala Leu Ser Lys Gln Ile Phe Leu Ala
245 250 255

Gln Asn Gln Gly Gly Lys Phe Arg Asn Pro Val Asp Leu Ile Lys Pro
260 265 270

Thr Gly Glu Arg Phe Gln Val Thr Asn Val Asp Ser Asp Val Val Lys
275 280 285

Gly Asn Ile Lys Leu Leu Leu Asn Ser Arg Ala Ser Thr Ala Asp Glu
290 295 300

Asn Phe Ile Thr Thr Met Thr Leu Leu Gly Glu Ser Val Val Glu Phe
305 310 315 320

Pro Trp Ala Leu Trp Lys Thr Met Leu Lys Glu Leu Gly Thr Met Ala
325 330 335

Leu His Ala Gly Lys Ala Ala Leu Gly Ala Ala Ala Asp Thr Ile Ser
340 345 350

Gln Gly Thr Gln Val Pro Gly Val Gly Val Pro Gly Val Gly Lys Leu
355 360 365

Ala Ala Ala Leu Glu His His His His His His
370 375

<210> 2
<211> 1140
<212> DNA
<213> Artificial Sequence

<220>
<223> Fusion peptide

<220>
<221> misc_feature
<223> Polynucleotide sequence encoding fusion protein of SEQ ID No:1

<400> 2
atgaaatacc tgctgccgac cgctgctgct ggtctgctgc tcctcgctgc ccagccggcg 60

atggccatgg ggcgtatttg ccgttgcatt tgcggccgtg gcatttgccg ctgcatctgt 120
ggcgtgccgg gtgttggtgt tccgggtgtg ggtggtgcga ccggatccga tgtgaacttt 180
gatctgagca ccgcgaccgc gaaaacctat accaaattca tcgaagattt tcgtgcgacc 240
ctgccgttta gccataaagt gtatgatatc ccgctgctgt atagcaccat tagcgatagc 300
cgtcgtttta ttctgctgga tctgaccagc tatgcgtatg aaaccattag cgtggcgatt 360
gatgtgacca acgtgtatgt ggtggcgtat cgtacccgtg atgtgagcta ctttttcaaa 420
gaaagcccgc cggaagcgta caacattctg tttaaaggca cccgtaaaat taccctgccg 480
tataccggca actatgaaaa cctgcagacc gcggcgcata aaattcgtga aaacatcgat 540
ctgggcctgc cggccctgag cagcgcgatt accaccctgt tttattataa cgcgcagagc 600
gcgccgagcg cgctgctggt gctgattcag accaccgcgg aagcggcgcg ttttaaatat 660
attgaacgcc acgtggcgaa atatgtggcg accaacttta aaccgaacct ggccattatt 720
agcctggaaa accagtggag cgccctgagc aaacaaattt ttctggccca gaaccagggc 780
ggcaaatttc gtaatccggt ggatctgatt aaaccgaccg gcgaacgttt tcaggtgacc 840
aatgtggata gcgatgtggt gaaaggcaac attaaactgc tgctgaacag ccgtgcgagc 900
accgcggatg aaaactttat taccaccatg accctgctgg gcgaaagcgt ggtggaattc 960
ccgtgggcgc tgtggaaaac catgctgaaa gaactgggca cgatggcgct gcatgcgggt 1020
aaagcggcgc tgggtgcggc agcggatacc attagccagg gcacccaggt tccgggcgtg 1080
ggcgttccgg gcgttggtaa gcttgcggcc gcactcgagc accaccacca ccaccactga 1140

<210> 3
<211> 20
<212> PRT
<213> Artificial Sequence

<220>
<223> Primer sequence

<220>
<221> misc_feature
<223> Forward primer for HSV-1

<400> 3

Thr Gly Gly Gly Ala Cys Ala Cys Ala Thr Gly Cys Cys Thr Thr Cys
1 5 10 15

Thr Thr Gly Gly
20

<210> 4
<211> 17
<212> DNA
<213> Artificial Sequence

<220>
<223> primer sequence

<220>

<221> misc_feature
<223> Forward primer for HSV-2

<400> 4
gtacagacct tcggagg 17

<210> 5
<211> 28
<212> DNA
<213> Artificial Sequence

<220>
<223> Primer sequence

<220>
<221> misc_feature
<223> Reverse primer of HSV-2

<220>
<221> misc_feature
<223> Reverse primer of HSV-1

<220>
<221> misc_feature
<223> Reverse primer for HSV-2

<400> 5
acccttagtc agactctgtt acttaccc 28

<210> 6
<211> 15
<212> DNA
<213> Artificial Sequence

<220>
<223> Primer Sequence

<220>
<221> misc_feature
<223> Reverse primer for HSV-2

<400> 6
cgcttcatca tgggc 15

<210> 7
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Primer Sequence

<220>
<221> misc_feature
<223> Forward primer for DENV1, DENV2, DENV3 and DENV4

<400> 7
ggaaggagaa ggactgcaca 20

<210> 8
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Primer Sequence

<220>
<221> misc_feature
<223> Reverse primer for DENV1, DENV2, DENV3 and DENV4

<400> 8
attcttgtgt cccatcctgc t 21

<210> 9
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Primer Sequence

<220>
<221> misc_feature
<223> Forward primer for HPV

<400> 9
acactcagcc tctaccttgt 20

<210> 10
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Primer Sequence

<220>
<221> misc_feature
<223> Reverse primer for HPV

<400> 10
gcattacaag agccaagcag 20

<210> 11
<211> 5
<212> PRT
<213> Artificial Sequence

<220>
<223> Linker peptide

<220>
<221> misc_feature
<223> N is 0, 1, 2, 3, 4 or 5

<220>
<221> misc_feature
<223> Linker Peptide

<220>
<221> misc_feature
<222> (3)..(3)
<223> Xaa can be any naturally occurring amino acid

<400> 11
Val Pro Xaa Val Gly

1 5

<210> 12
<211> 18
<212> PRT
<213> Artificial Sequence

<220>
<223> Polypeptide A

<220>
<221> misc_feature
<223> Amino acid Sequence of Polypeptide A

<400> 12

Gly Arg Ile Cys Arg Cys Ile Cys Gly Arg Gly Ile Cys Arg Cys Ile
1 5 10 15

Cys Gly

<210> 13
<211> 268
<212> PRT
<213> Artificial Sequence

<220>
<223> Polypeptide B

<220>
<221> misc_feature
<223> Amino acid Sequence of Polypeptide B

<400> 13

Gly Ser Asp Val Asn Phe Asp Leu Ser Thr Ala Thr Ala Lys Thr Tyr
1 5 10 15

Thr Lys Phe Ile Glu Asp Phe Arg Ala Thr Leu Pro Phe Ser His Lys
20 25 30

Val Tyr Asp Ile Pro Leu Leu Tyr Ser Thr Ile Ser Asp Ser Arg Arg
35 40 45

Phe Ile Leu Leu Asp Leu Thr Ser Tyr Ala Tyr Glu Thr Ile Ser Val
50 55 60

Ala Ile Asp Val Thr Asn Val Tyr Val Val Ala Tyr Arg Thr Arg Asp
65 70 75 80

Val Ser Tyr Phe Phe Lys Glu Ser Pro Pro Glu Ala Tyr Asn Ile Leu
85 90 95

Phe Lys Gly Thr Arg Lys Ile Thr Leu Pro Tyr Thr Gly Asn Tyr Glu
100 105 110

Asn Leu Gln Thr Ala Ala His Lys Ile Arg Glu Asn Ile Asp Leu Gly
115 120 125

Leu Pro Ala Leu Ser Ser Ala Ile Thr Thr Leu Phe Tyr Tyr Asn Ala
130 135 140

Gln Ser Ala Pro Ser Ala Leu Leu Val Leu Ile Gln Thr Thr Ala Glu
145 150 155 160

Ala Ala Arg Phe Lys Tyr Ile Glu Arg His Val Ala Lys Tyr Val Ala
165 170 175

Thr Asn Phe Lys Pro Asn Leu Ala Ile Ile Ser Leu Glu Asn Gln Trp
180 185 190

Ser Ala Leu Ser Lys Gln Ile Phe Leu Ala Gln Asn Gln Gly Gly Lys
195 200 205

Phe Arg Asn Pro Val Asp Leu Ile Lys Pro Thr Gly Glu Arg Phe Gln
210 215 220

Val Thr Asn Val Asp Ser Asp Val Val Lys Gly Asn Ile Lys Leu Leu
225 230 235 240

Leu Asn Ser Arg Ala Ser Thr Ala Asp Glu Asn Phe Ile Thr Thr Met
245 250 255

Thr Leu Leu Gly Glu Ser Val Val Glu Phe Pro Trp
260 265

<210> 14
<211> 34
<212> PRT
<213> Artificial Sequence

<220>
<223> Polypeptide C

<220>
<221> misc_feature
<223> Amino acid sequence of Polypeptide C

<400> 14

Ala Leu Trp Lys Thr Met Leu Lys Glu Leu Gly Thr Met Ala Leu His
1 5 10 15

Ala Gly Lys Ala Ala Leu Gly Ala Ala Ala Asp Thr Ile Ser Gln Gly
20 25 30

Thr Gln

<210> 15
<211> 18
<212> PRT
<213> artificial sequence

<220>

<223> theta Defensin

<220>
<221> misc_feature
<223> Rhesus minidefensin (RTD-1)

<400> 15

Gly Phe Cys Arg Cys Leu Cys Arg Arg Gly Val Cys Arg Cys Ile Cys
1 5 10 15

Thr Arg

<210> 16
<211> 18
<212> PRT
<213> artificial sequence

<220>
<223> theta Defensin

<220>
<221> misc_feature
<223> RTD-2

<400> 16

Arg Cys Leu Cys Arg Arg Gly Val Cys Arg Cys Leu Cys Arg Arg Gly
1 5 10 15

Val Cys

<210> 17
<211> 18
<212> PRT
<213> artificial sequence

<220>
<223> theta Defensin

<220>
<221> misc_feature
<223> RTD-3

<400> 17

Arg Cys Ile Cys Thr Arg Gly Phe Cys Arg Cys Ile Cys Thr Arg Gly
1 5 10 15

Phe Cys

<210> 18
<211> 18
<212> PRT
<213> artificial sequence

<220>
<223> theta Defensin

<220>
<221> misc_feature
<223> Retrocyclin-1

<400> 18

Gly Ile Cys Arg Cys Ile Cys Gly Arg Gly Ile Cys Arg Cys Ile Cys
1 5 10 15

Gly Arg

<210> 19
<211> 18
<212> PRT
<213> artificial sequence

<220>
<223> theta Defensin

<220>
<221> misc_feature
<223> Retrocyclin-2

<400> 19

Gly Ile Cys Arg Cys Ile Cys Gly Arg Gly Ile Cys Arg Cys Ile Cys
1 5 10 15

Gly Arg

<210> 20
<211> 18
<212> PRT
<213> artificial sequence

<220>
<223> theta Defensin

<220>
<221> misc_feature
<223> Retrocyclin-3

<400> 20

Arg Ile Cys Arg Cys Ile Cys Gly Arg Arg Ile Cys Arg Cys Ile Cys
1 5 10 15

Gly Arg

<210> 21
<211> 18
<212> PRT
<213> artificial sequence

<220>
<223> synthetic theta Defensin

<220>

<221> misc_feature
<223> RC100

<400> 21

Gly Ile Cys Arg Cys Ile Cys Gly Arg Gly Ile Cys Arg Cys Ile Cys
1 5 10 15

Gly Arg

<210> 22
<211> 18
<212> PRT
<213> artificial sequence

<220>
<223> synthetic theta Defensin

<220>
<221> misc_feature
<223> RC101

<400> 22

Gly Ile Cys Arg Cys Ile Cys Gly Lys Gly Ile Cys Arg Cys Ile Cys
1 5 10 15

Gly Arg

<210> 23
<211> 18
<212> PRT
<213> artificial sequence

<220>
<223> synthetic theta Defensin

<220>
<221> misc_feature
<223> RC102

<400> 23

Gly Ile Cys Arg Cys Tyr Cys Gly Arg Gly Ile Cys Arg Cys Ile Cys
1 5 10 15

Gly Arg

<210> 24
<211> 18
<212> PRT
<213> artificial sequence

<220>
<223> synthetic theta Defensin

<220>
<221> misc_feature
<223> RC103

<400> 24

Gly Ile Cys Arg Cys Ile Cys Gly Arg Gly Ile Cys Arg Cys Tyr Cys
1 5 10 15

Gly Arg

<210> 25
<211> 18
<212> PRT
<213> artificial sequence

<220>
<223> synthetic theta Defensin

<220>
<221> misc_feature
<223> RC104

<400> 25

Gly Tyr Cys Arg Cys Ile Cys Gly Arg Gly Ile Cys Arg Cys Ile Cys
1 5 10 15

Gly Arg

<210> 26
<211> 18
<212> PRT
<213> artificial sequence

<220>
<223> synthetic theta Defensin

<220>
<221> misc_feature
<223> RC105

<400> 26

Gly Ile Cys Arg Cys Ile Cys Gly Arg Gly Tyr Cys Arg Cys Ile Cys
1 5 10 15

Gly Arg

<210> 27
<211> 18
<212> PRT
<213> artificial sequence

<220>
<223> synthetic theta Defensin

<220>
<221> misc_feature
<223> RC106

<400> 27

Gly Ile Cys Tyr Cys Ile Cys Gly Arg Gly Ile Cys Arg Cys Ile Cys
1 5 10 15

Gly Arg

<210> 28
<211> 18
<212> PRT
<213> artificial sequence

<220>
<223> synthetic theta Defensin

<220>
<221> misc_feature
<223> RC107

<400> 28

Gly Ile Cys Ile Cys Ile Cys Gly Tyr Gly Ile Cys Arg Cys Ile Cys
1 5 10 15

Gly Arg

<210> 29
<211> 18
<212> PRT
<213> artificial sequence

<220>
<223> synthetic theta Defensin

<220>
<221> misc_feature
<223> RC108

<400> 29

Gly Ile Cys Ile Cys Ile Cys Gly Arg Gly Ile Cys Tyr Cys Ile Cys
1 5 10 15

Gly Arg

<210> 30
<211> 18
<212> PRT
<213> artificial sequence

<220>
<223> synthetic theta Defensin

<220>
<221> misc_feature
<223> RC110

<400> 30

Gly Ile Cys Ile Cys Ile Cys Gly Arg Gly Ile Cys Tyr Cys Ile Cys

1 5 10 15

Gly Arg

<210> 31
<211> 18
<212> PRT
<213> artificial sequence

<220>
<223> synthetic theta Defensin

<220>
<221> misc_feature
<223> RC111

<400> 31

Arg Gly Cys Ile Cys Arg Cys Ile Gly Arg Gly Cys Ile Cys Arg Cys
1 5 10 15

Ile Gly

<210> 32
<211> 18
<212> PRT
<213> artificial sequence

<220>
<223> synthetic theta Defensin

<220>
<221> misc_feature
<223> RC112

<400> 32

Arg Gly Cys Ile Cys Arg Cys Ile Gly Arg Gly Cys Ile Cys Arg Cys
1 5 10 15

Ile Gly

<210> 33
<211> 18
<212> PRT
<213> artificial sequence

<220>
<223> synthetic theta Defensin

<220>
<221> misc_feature
<223> RC113

<400> 33

Gly Ile Cys Arg Cys Ile Cys Gly Arg Gly Ile Cys Arg Cys Ile Cys
1 5 10 15

Gly Arg

<210> 34
<211> 18
<212> PRT
<213> artificial sequence

<220>
<223> synthetic theta Defensin

<220>
<221> misc_feature
<223> RC114

<400> 34

Gly Ile Cys Arg Cys Ile Cys Gly Lys Gly Ile Cys Arg Cys Tyr Cys
1 5 10 15

Gly Arg