

LISTADO DE SECUENCIAS

<110> BOSCH, IRENE
 HAMAD-SCHIFFERLI, KIMBERLY
 GEHRKE, LEE
 GOMEZ-MARQUEZ, JOSE
 DE PUIG, HELENE

<120> ANTICUERPOS MONOCLONALES DE PROTEINA NS1 ANTI-VIRUS DEL DENGUE

<130> 4041.3027 W0

<140> PCT/US17/017385

<141> 2017-02-10

<150> 62/293,990

<151> 2016-02-11

<160> 37

<170> PatentIn version 3.5

<210> 1

<211> 17

<212> PRT

<213> Dengue virus 4

<400> 1

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

Ile

<210> 2

<211> 17

<212> PRT

<213> Dengue virus 3

<400> 2

Met	Glu	Leu	Lys	Tyr	Ser	Trp	Lys	Thr	Trp	Gly	Leu	Ala	Lys	Ile	Val
1			5				10							15	

Thr

<210> 3
<211> 17
<212> PRT
<213> Dengue virus 3

<400> 3
Gly Val Phe Thr Thr Asn Ile Trp Leu Lys Leu Arg Glu Val Tyr Thr
1 5 10 15

Gln

<210> 4
<211> 17
<212> PRT
<213> Dengue virus 3

<400> 4
Val Glu Asp Tyr Gly Phe Gly Val Phe Thr Thr Asn Ile Trp Leu Lys
1 5 10 15

Leu

<210> 5
<211> 16
<212> PRT
<213> Dengue virus 4

<400> 5
Gly Phe Gly Met Phe Thr Thr Asn Ile Trp Met Lys Phe Arg Glu Gly
1 5 10 15

<210> 6
<211> 16
<212> PRT
<213> Dengue virus 4

<400> 6
Cys Arg Ser Cys Thr Met Pro Pro Leu Arg Phe Leu Gly Glu Asp Gly
1 5 10 15

<210> 7
<211> 17

<212> PRT
<213> Dengue virus 4

<400> 7
Met Pro Pro Leu Arg Phe Leu Gly Glu Asp Gly Cys Trp Tyr Gly Met
1 5 10 15

Glu

<210> 8
<211> 411
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
polynucleotide

<400> 8
atgaaatgca gctgggttat cttcttcctg atggcagtgg ttacaggggt caattcagag 60
gttcagctgc atcagtctgg ggcagagctt gtgaagccag gggcctcagt caagttgtcc 120
tgcacagttt ctggcttcaa cattaaagac acctatattc actgggtgaa acagaggcct 180
gaacagggcc tggagtggat tggaaggatt gatcctgcaa atggtaatac tgaatatgac 240
ccgaagtcc agggcaaggc cactataaaa gccgacactt cctccaacac agcctacctg 300
caactcatca gtctgacatc tgaggacact gccgtctatt actgtgcttt ttattactac 360
ggtcgtagcc ttgcttactg gggccaaggg actctgggtca ctgtctctgc a 411

<210> 9
<211> 137
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
polypeptide

<400> 9
Met Lys Cys Ser Trp Val Ile Phe Phe Leu Met Ala Val Val Thr Gly
1 5 10 15

Val Asn Ser Glu Val Gln Leu His Gln Ser Gly Ala Glu Leu Val Lys
20 25 30

Pro Gly Ala Ser Val Lys Leu Ser Cys Thr Val Ser Gly Phe Asn Ile
35 40 45

Lys Asp Thr Tyr Ile His Trp Val Lys Gln Arg Pro Glu Gln Gly Leu
50 55 60

Glu Trp Ile Gly Arg Ile Asp Pro Ala Asn Gly Asn Thr Glu Tyr Asp
65 70 75 80

Pro Lys Phe Gln Gly Lys Ala Thr Ile Lys Ala Asp Thr Ser Ser Asn
85 90 95

Thr Ala Tyr Leu Gln Leu Ile Ser Leu Thr Ser Glu Asp Thr Ala Val
100 105 110

Tyr Tyr Cys Ala Phe Tyr Tyr Tyr Gly Arg Ser Leu Ala Tyr Trp Gly
115 120 125

Gln Gly Thr Leu Val Thr Val Ser Ala
130 135

<210> 10

<211> 381

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
polynucleotide

<400> 10

atgagtgtgc ccactcaggt cctgggggttg ctgctgctgt ggcttacaga tgccagatgt 60

gacatccaga tgactcagtc tccagcctcc ctatctgtgt ctgtgggaga aactgtcacc 120

atcacatgtc gaacaagtga gaatatttac agtagtttag catggtatca gcagaaacag 180

ggaaaatctc ctcagctcct ggtctatgct gcagctaact tagcggatgg tgtgccatca 240

aggttcagtgcgcagtggatcaggcacacagatttccctcaagatcaacagcctgcagtct300
 gaagattttggaacttatta ctgtcaacat ttttggggta ctccgtggacgttcgggtgga360
 ggcaccaagc tggaaatcaa a381

<210> 11
 <211> 127
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic polypeptide

<400> 11
 Met Ser Val Pro Thr Gln Val Leu Gly Leu Leu Leu Leu Trp Leu Thr
 1 5 10 15
 Asp Ala Arg Cys Asp Ile Gln Met Thr Gln Ser Pro Ala Ser Leu Ser
 20 25 30
 Val Ser Val Gly Glu Thr Val Thr Ile Thr Cys Arg Thr Ser Glu Asn
 35 40 45
 Ile Tyr Ser Ser Leu Ala Trp Tyr Gln Gln Lys Gln Gly Lys Ser Pro
 50 55 60
 Gln Leu Leu Val Tyr Ala Ala Ala Asn Leu Ala Asp Gly Val Pro Ser
 65 70 75 80
 Arg Phe Ser Gly Ser Gly Ser Gly Thr Gln Tyr Ser Leu Lys Ile Asn
 85 90 95
 Ser Leu Gln Ser Glu Asp Phe Gly Thr Tyr Tyr Cys Gln His Phe Trp
 100 105 110
 Gly Thr Pro Trp Thr Phe Gly Gly Gly Thr Lys Leu Glu Ile Lys
 115 120 125

<210> 12
<211> 408
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 12
atgaaatgca gctgggtcat cttcttcctg atggcagtgg ttacaggggt caattcagag 60
gttcagctgc agcagtctgg ggctgagctt gtgaggccag gggccttagt caagttgtcc 120
tgcagagctt ctggcttcag aattagagac tactatatac actgggtgaa gcagaggcct 180
gaacagggcc tggagtggat tggatggatt gatcctgagt atggtaatac tatttatgac 240
ccgaacttcc ggggcaaggc cagtataaca tcagacacat cctccaacac agcctacctg 300
cagctcagca gcctgtcttc tgaggacaca gccgtctatt actgtgcctc gtattattac 360
ggtggtgtga actactgggg ccaaggcacc actctcacag tctcctca 408

<210> 13
<211> 136
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 13
Met Lys Cys Ser Trp Val Ile Phe Phe Leu Met Ala Val Val Thr Gly
1 5 10 15

Val Asn Ser Glu Val Gln Leu Gln Gln Ser Gly Ala Glu Leu Val Arg
20 25 30

Pro Gly Ala Leu Val Lys Leu Ser Cys Arg Ala Ser Gly Phe Arg Ile
35 40 45

Arg Asp Tyr Tyr Ile His Trp Val Lys Gln Arg Pro Glu Gln Gly Leu
50 55 60

Glu Trp Ile Gly Trp Ile Asp Pro Glu Tyr Gly Asn Thr Ile Tyr Asp
65 70 75 80

Pro Asn Phe Arg Gly Lys Ala Ser Ile Thr Ser Asp Thr Ser Ser Asn
85 90 95

Thr Ala Tyr Leu Gln Leu Ser Ser Leu Ser Ser Glu Asp Thr Ala Val
100 105 110

Tyr Tyr Cys Ala Ser Tyr Tyr Tyr Gly Gly Val Asn Tyr Trp Gly Gln
115 120 125

Gly Thr Thr Leu Thr Val Ser Ser
130 135

<210> 14
<211> 384
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
polynucleotide

<400> 14
atggattttc aagtgcagat tttcagcttc ctgctaata gtcctcagt catactgtcc 60
agaggacaaa ttgttctcac ccagtctcca gcaatcatgt ctgcatctcc aggggagaag 120
gtcaccatga cctgcagtgc cagttcaagt gtaagtcgca tttactggta ccaggagaag 180
ccaggatcct cccccagact cctgatttat gacacatcca acctggcttc tggagtcctt 240
gttcgcttca gtggcagtgg gtctgggacc tcttactctc tcacaatcag ccgaatggag 300
gctgaagatg ctgccactta ttactgccag cagtggagta gttaccacg gacgttcggt 360
ggaggcacca agctggaaat caaa 384

<210> 15
<211> 128
<212> PRT
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 15

Met Asp Phe Gln Val Gln Ile Phe Ser Phe Leu Leu Ile Ser Ala Ser
1 5 10 15

Val Ile Leu Ser Arg Gly Gln Ile Val Leu Thr Gln Ser Pro Ala Ile
20 25 30

Met Ser Ala Ser Pro Gly Glu Lys Val Thr Met Thr Cys Ser Ala Ser
35 40 45

Ser Ser Val Ser Arg Ile Tyr Trp Tyr Gln Glu Lys Pro Gly Ser Ser
50 55 60

Pro Arg Leu Leu Ile Tyr Asp Thr Ser Asn Leu Ala Ser Gly Val Pro
65 70 75 80

Val Arg Phe Ser Gly Ser Gly Ser Gly Thr Ser Tyr Ser Leu Thr Ile
85 90 95

Ser Arg Met Glu Ala Glu Asp Ala Ala Thr Tyr Tyr Cys Gln Gln Trp
100 105 110

Ser Ser Tyr Pro Arg Thr Phe Gly Gly Gly Thr Lys Leu Glu Ile Lys
115 120 125

<210> 16

<211> 390

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 16

atggaatgta actggatact tccttttatt ctgtcagtaa cttcaggtgt ctactcacag

60

gtgcagctcc agcagtctgg gactgagctg gcaagacctg gggcttcagt gaaattgtcc	120
tgtaaggctt ctggctacac ctttactaat tactggatac agtgggtaaa acagaggcct	180
ggacaggggtc tggaatggat tggggatatt tatcctggag atggtgatac taggtacact	240
cagaagttca ggggcaaggc catattgact gcagataaat cctccagcac agcctatatg	300
gaactcagca gtttggcatc tgaggactct gcggtctatt actgtgcctc actaacctgg	360
ggccaaggca ccactctcac agtctccaca	390

<210> 17

<211> 130

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 17

Met	Glu	Cys	Asn	Trp	Ile	Leu	Pro	Phe	Ile	Leu	Ser	Val	Thr	Ser	Gly
1				5					10					15	

Val	Tyr	Ser	Gln	Val	Gln	Leu	Gln	Gln	Ser	Gly	Thr	Glu	Leu	Ala	Arg
			20					25						30	

Pro	Gly	Ala	Ser	Val	Lys	Leu	Ser	Cys	Lys	Ala	Ser	Gly	Tyr	Thr	Phe
		35						40					45		

Thr	Asn	Tyr	Trp	Ile	Gln	Trp	Val	Lys	Gln	Arg	Pro	Gly	Gln	Gly	Leu
	50					55					60				

Glu	Trp	Ile	Gly	Asp	Ile	Tyr	Pro	Gly	Asp	Gly	Asp	Thr	Arg	Tyr	Thr
65					70					75					80

Gln	Lys	Phe	Arg	Gly	Lys	Ala	Ile	Leu	Thr	Ala	Asp	Lys	Ser	Ser	Ser
				85						90				95	

Thr	Ala	Tyr	Met	Glu	Leu	Ser	Ser	Leu	Ala	Ser	Glu	Asp	Ser	Ala	Val
			100						105					110	

Tyr Tyr Cys Ala Ser Leu Thr Trp Gly Gln Gly Thr Thr Leu Thr Val
115 120 125

Ser Thr
130

<210> 18
<211> 399
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
polynucleotide

<400> 18
atggaatcac agactcaggt cctcatgtcc ctgctgttct gggatatctgg tacctgtggg 60
gacattgtga tgacacagtc tccatcctcc ctgactgtga cagcaggaga gaaggtcact 120
atgagctgca ggtccagtca gagtctgtta aacagtggaa atcaaaaagaa ctacttgacc 180
tggtaccagc agagaccagg gcagcctcct aaactgctga tctactgggc atccactagg 240
gaatctgggg tccctgatcg cttcacaggc agtggatctg gaacagattt cattctcacc 300
atcagcagtg tgcaggctga agacctggca gtttattact gtcagaatga gtatagttat 360
ccgctcacgt tcggtgctgg gaccaagctg gagctgaaa 399

<210> 19
<211> 133
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
polypeptide

<400> 19
Met Glu Ser Gln Thr Gln Val Leu Met Ser Leu Leu Phe Trp Val Ser
1 5 10 15

Gly Thr Cys Gly Asp Ile Val Met Thr Gln Ser Pro Ser Ser Leu Thr
20 25 30

Val Thr Ala Gly Glu Lys Val Thr Met Ser Cys Arg Ser Ser Gln Ser
35 40 45

Leu Leu Asn Ser Gly Asn Gln Lys Asn Tyr Leu Thr Trp Tyr Gln Gln
50 55 60

Arg Pro Gly Gln Pro Pro Lys Leu Leu Ile Tyr Trp Ala Ser Thr Arg
65 70 75 80

Glu Ser Gly Val Pro Asp Arg Phe Thr Gly Ser Gly Ser Gly Thr Asp
85 90 95

Phe Ile Leu Thr Ile Ser Ser Val Gln Ala Glu Asp Leu Ala Val Tyr
100 105 110

Tyr Cys Gln Asn Glu Tyr Ser Tyr Pro Leu Thr Phe Gly Ala Gly Thr
115 120 125

Lys Leu Glu Leu Lys
130

<210> 20

<211> 408

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
polynucleotide

<400> 20

atgaaatgca gctgggtcat cttcttcctg atggcagtgg ttacaggggt caactcagag 60

gttcagctgc agcagtctgg ggctgagttt atgaggccag gggccttagt caagttgtcc 120

tgcaaagctt ctggcttcaa cattaaagac tactatatgc attgggtgaa acagaggcct 180

gaacagggcc tggagtggat tggatggatt gaccctgaga atggtaatac tatatatgac 240

ccgaagttcc agggcaaggc cagtataaca gcagacacat cctccaacac agcctacctg 300

cagctcagca gcctgacttc tgaggacact gccgtctatt actgtgcctc gtattactac 360

ggtaggtgtga actactgggg ccaaggcacc actctcacag tctcctca 408

<210> 21

<211> 136

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
polypeptide

<400> 21

Met Lys Cys Ser Trp Val Ile Phe Phe Leu Met Ala Val Val Thr Gly
1 5 10 15

Val Asn Ser Glu Val Gln Leu Gln Gln Ser Gly Ala Glu Phe Met Arg
20 25 30

Pro Gly Ala Leu Val Lys Leu Ser Cys Lys Ala Ser Gly Phe Asn Ile
35 40 45

Lys Asp Tyr Tyr Met His Trp Val Lys Gln Arg Pro Glu Gln Gly Leu
50 55 60

Glu Trp Ile Gly Trp Ile Asp Pro Glu Asn Gly Asn Thr Ile Tyr Asp
65 70 75 80

Pro Lys Phe Gln Gly Lys Ala Ser Ile Thr Ala Asp Thr Ser Ser Asn
85 90 95

Thr Ala Tyr Leu Gln Leu Ser Ser Leu Thr Ser Glu Asp Thr Ala Val
100 105 110

Tyr Tyr Cys Ala Ser Tyr Tyr Tyr Gly Gly Val Asn Tyr Trp Gly Gln
115 120 125

Gly Thr Thr Leu Thr Val Ser Ser
130 135

<210> 22
<211> 384
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 22
atggattttc aagtgcagat tttcagcttc ctgctaata gtcctcagt cattctgtcc 60
agaggacaaa ttgttctcac ccagtctcca gcaatcatgt ctgcatctcc aggggagaag 120
gtcaccatga cctgcagtgc cagctcaact gtaagttcca tttactgggt ccagcagagg 180
ccaggatcct cccccagact cctgatttat gacacatcca aactggcttc tggagtcctt 240
attcgcttca ctggcagtgg gtctgggacc tcttactctc tcacaatcag ccgaatgggg 300
gctgaagatg ctgccactta ttactgccag cagtggagta gttaccacg gacgttcggt 360
ggaggcacca agctggaaat caaa 384

<210> 23
<211> 128
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 23
Met Asp Phe Gln Val Gln Ile Phe Ser Phe Leu Leu Ile Ser Ala Ser
1 5 10 15

Val Ile Leu Ser Arg Gly Gln Ile Val Leu Thr Gln Ser Pro Ala Ile
20 25 30

Met Ser Ala Ser Pro Gly Glu Lys Val Thr Met Thr Cys Ser Ala Ser
35 40 45

Ser Thr Val Ser Ser Ile Tyr Trp Phe Gln Gln Arg Pro Gly Ser Ser
50 55 60

Pro Arg Leu Leu Ile Tyr Asp Thr Ser Lys Leu Ala Ser Gly Val Pro
65 70 75 80

Ile Arg Phe Thr Gly Ser Gly Ser Gly Thr Ser Tyr Ser Leu Thr Ile
85 90 95

Ser Arg Met Gly Ala Glu Asp Ala Ala Thr Tyr Tyr Cys Gln Gln Trp
100 105 110

Ser Ser Tyr Pro Arg Thr Phe Gly Gly Gly Thr Lys Leu Glu Ile Lys
115 120 125

<210> 24

<211> 414

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
polynucleotide

<400> 24

atggctgtcc tgggtgctgtt cctctgcctg gttgcatttc caagctgtgt cctgtcccag	60
gtgcagctga aggagtcagg acctggcctg gtggcgccct cacagagcct gtccatcact	120
tgcactgtct ctgggttttc attaaccagc tatggtgtac actgggttcg ccagcctcca	180
ggaaagggtc tggagtggct gggagtaata tggcctgggtg gaagcacaaa ttataattcg	240
gctctcatgt ccagactgag catcagcaaa gacagttcca agagccaagt tttcttaaaa	300
atgaacagtc tgcaacctga tgacacagcc atatactact gtgccagaga gccgatctac	360
ggtagtaggt acttcgatgt ctggggcgca gggaccacgg tcaccgtctc ctca	414

<210> 25

<211> 138

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic

polypeptide

<400> 25

Met Ala Val Leu Val Leu Phe Leu Cys Leu Val Ala Phe Pro Ser Cys
1 5 10 15

Val Leu Ser Gln Val Gln Leu Lys Glu Ser Gly Pro Gly Leu Val Ala
20 25 30

Pro Ser Gln Ser Leu Ser Ile Thr Cys Thr Val Ser Gly Phe Ser Leu
35 40 45

Thr Ser Tyr Gly Val His Trp Val Arg Gln Pro Pro Gly Lys Gly Leu
50 55 60

Glu Trp Leu Gly Val Ile Trp Pro Gly Gly Ser Thr Asn Tyr Asn Ser
65 70 75 80

Ala Leu Met Ser Arg Leu Ser Ile Ser Lys Asp Ser Ser Lys Ser Gln
85 90 95

Val Phe Leu Lys Met Asn Ser Leu Gln Pro Asp Asp Thr Ala Ile Tyr
100 105 110

Tyr Cys Ala Arg Glu Pro Ile Tyr Gly Ser Arg Tyr Phe Asp Val Trp
115 120 125

Gly Ala Gly Thr Thr Val Thr Val Ser Ser
130 135

<210> 26

<211> 381

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
polynucleotide

<400> 26

atggtatcca cacctcagtt ccttgtatatt ttgcttttct ggattccagc ctccagaggt

gacatcctgc tgactcagtc tccagccatc ctgtctgtga gtccaggaga aagagtcact	120
ctctcctgca gggccagtca gagcattggc acaagaatac actgggtatca gcaaagaaca	180
aatggttctc caaggcttct cataaagttt gcttttgagt ctatctctgg gatcccttcc	240
aggttttagtg gcagtggatc agggacagat tttactctta gcatcaacag tgtggagtct	300
gaagatattg cagagtatta ctgtcaacag agtattaact ggccgctcac gttcggtgct	360
gggaccaagc tggaactgaa a	381

<210> 27

<211> 127

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 27

Met	Val	Ser	Thr	Pro	Gln	Phe	Leu	Val	Phe	Leu	Leu	Phe	Trp	Ile	Pro
1				5				10					15		

Ala	Ser	Arg	Gly	Asp	Ile	Leu	Leu	Thr	Gln	Ser	Pro	Ala	Ile	Leu	Ser
			20					25					30		

Val	Ser	Pro	Gly	Glu	Arg	Val	Thr	Leu	Ser	Cys	Arg	Ala	Ser	Gln	Ser
		35					40					45			

Ile	Gly	Thr	Arg	Ile	His	Trp	Tyr	Gln	Gln	Arg	Thr	Asn	Gly	Ser	Pro
	50					55					60				

Arg	Leu	Leu	Ile	Lys	Phe	Ala	Phe	Glu	Ser	Ile	Ser	Gly	Ile	Pro	Ser
65				70					75					80	

Arg	Phe	Ser	Gly	Ser	Gly	Ser	Gly	Thr	Asp	Phe	Thr	Leu	Ser	Ile	Asn
			85					90						95	

Ser	Val	Glu	Ser	Glu	Asp	Ile	Ala	Glu	Tyr	Tyr	Cys	Gln	Gln	Ser	Ile
		100						105					110		

Asn Trp Pro Leu Thr Phe Gly Ala Gly Thr Lys Leu Glu Leu Lys
115 120 125

<210> 28
<211> 16
<212> PRT
<213> Dengue virus 2

<400> 28
Thr Glu Leu Lys Tyr Ser Trp Lys Thr Trp Gly Lys Ala Lys Met Leu
1 5 10 15

<210> 29
<211> 353
<212> PRT
<213> Dengue virus 1

<400> 29
Asp Ser Gly Cys Val Ile Asn Trp Lys Gly Arg Glu Leu Lys Cys Gly
1 5 10 15

Ser Gly Ile Phe Val Thr Asn Glu Val His Thr Trp Thr Glu Gln Tyr
20 25 30

Lys Phe Gln Ala Asp Ser Pro Lys Arg Leu Ser Ala Ala Ile Gly Lys
35 40 45

Ala Trp Glu Glu Gly Val Cys Gly Ile Arg Ser Ala Thr Arg Leu Glu
50 55 60

Asn Ile Met Trp Lys Gln Ile Ser Asn Glu Leu Asn His Ile Leu Leu
65 70 75 80

Glu Asn Asp Met Lys Phe Thr Val Val Val Gly Asp Val Val Gly Ile
85 90 95

Leu Ala Gln Gly Lys Lys Met Ile Arg Pro Gln Pro Met Glu His Lys
100 105 110

Tyr Ser Trp Lys Ser Trp Gly Lys Ala Lys Ile Ile Gly Ala Asp Ile
115 120 125

Gln Asn Thr Thr Phe Ile Ile Asp Gly Pro Asp Thr Pro Glu Cys Pro
130 135 140

Asp Asp Gln Arg Ala Trp Asn Ile Trp Glu Val Glu Asp Tyr Gly Phe
145 150 155 160

Gly Ile Phe Thr Thr Asn Ile Trp Leu Lys Leu Arg Asp Ser Tyr Thr
165 170 175

Gln Met Cys Asp His Arg Leu Met Ser Ala Ala Ile Lys Asp Ser Lys
180 185 190

Ala Val His Ala Asp Met Gly Tyr Trp Ile Glu Ser Glu Lys Asn Glu
195 200 205

Thr Trp Lys Leu Ala Arg Ala Ser Phe Ile Glu Val Lys Thr Cys Val
210 215 220

Trp Pro Lys Ser His Thr Leu Trp Ser Asn Gly Val Leu Glu Ser Glu
225 230 235 240

Met Ile Ile Pro Lys Ile Tyr Gly Gly Pro Ile Ser Gln His Asn Tyr
245 250 255

Arg Pro Gly Tyr Phe Thr Gln Thr Ala Gly Pro Trp His Leu Gly Lys
260 265 270

Leu Glu Leu Asp Phe Asp Leu Cys Glu Gly Thr Thr Val Val Val Asp
275 280 285

Glu His Cys Gly Asn Arg Gly Pro Ser Leu Arg Thr Thr Thr Val Thr
290 295 300

Gly Lys Ile Ile His Glu Trp Cys Cys Arg Ser Cys Thr Leu Pro Pro
305 310 315 320

Leu Arg Phe Lys Gly Glu Asp Gly Cys Trp Tyr Gly Met Glu Ile Arg
325 330 335

Pro Val Lys Glu Lys Glu Glu Asn Leu Val Lys Ser Met Val Ser Ala
340 345 350

Gly

<210> 30

<211> 357

<212> PRT

<213> Dengue virus 2

<400> 30

Val Met Val Gln Ala Asp Ser Gly Cys Val Val Ser Trp Lys Asn Lys
1 5 10 15

Glu Leu Lys Cys Gly Ser Gly Ile Phe Ile Thr Asp Asn Val His Thr
20 25 30

Trp Thr Glu Gln Tyr Lys Phe Gln Pro Glu Ser Pro Ser Lys Leu Ala
35 40 45

Ser Ala Ile Gln Lys Ala His Glu Glu Gly Ile Cys Gly Ile Arg Ser
50 55 60

Val Thr Arg Leu Glu Asn Leu Met Trp Lys Gln Ile Thr Pro Glu Leu
65 70 75 80

Asn His Ile Leu Ser Glu Asn Glu Val Lys Leu Thr Ile Met Thr Gly
85 90 95

Asp Ile Lys Gly Ile Met Gln Ala Gly Lys Arg Ser Leu Gln Pro Gln
100 105 110

Pro Thr Glu Leu Lys Tyr Ser Trp Lys Thr Trp Gly Lys Ala Lys Met
115 120 125

Leu Ser Thr Glu Ser His Asn Gln Thr Phe Leu Ile Asp Gly Pro Glu
130 135 140

Thr Ala Glu Cys Pro Asn Thr Asn Arg Ala Trp Asn Ser Leu Glu Val
145 150 155 160

Glu Asp Tyr Gly Phe Gly Val Phe Thr Thr Asn Ile Trp Leu Lys Leu
165 170 175

Arg Glu Lys Gln Asp Val Phe Cys Asp Ser Lys Leu Met Ser Ala Ala
180 185 190

Ile Lys Asp Asn Arg Ala Val His Ala Asp Met Gly Tyr Trp Ile Glu
195 200 205

Ser Ala Leu Asn Asp Thr Trp Lys Ile Glu Lys Ala Ser Phe Ile Glu
210 215 220

Val Lys Ser Cys His Trp Pro Lys Ser His Thr Leu Trp Ser Asn Gly
225 230 235 240

Val Leu Glu Ser Glu Met Ile Ile Pro Lys Asn Phe Ala Gly Pro Val
245 250 255

Ser Gln His Asn Tyr Arg Pro Gly Tyr His Thr Gln Thr Ala Gly Pro
260 265 270

Trp His Leu Gly Lys Leu Glu Met Asp Phe Asp Phe Cys Glu Gly Thr
275 280 285

Thr Val Val Val Thr Glu Asp Cys Gly Asn Arg Gly Pro Ser Leu Arg
290 295 300

Thr Thr Thr Ala Ser Gly Lys Leu Ile Thr Glu Trp Cys Cys Arg Ser
305 310 315 320

Cys Thr Leu Pro Pro Leu Arg Tyr Arg Gly Glu Asp Gly Cys Trp Tyr
325 330 335

Gly Met Glu Ile Arg Pro Leu Lys Glu Lys Glu Glu Asn Leu Val Asn
340 345 350

Ser Leu Val Thr Ala
355

<210> 31
<211> 353
<212> PRT
<213> Dengue virus 3

<400> 31
Asp Met Gly Cys Val Ile Asn Trp Lys Gly Lys Glu Leu Lys Cys Gly
1 5 10 15

Ser Gly Ile Phe Val Thr Asn Glu Val His Thr Trp Thr Glu Gln Tyr
20 25 30

Lys Phe Gln Ala Asp Ser Pro Lys Arg Val Ala Thr Ala Ile Ala Gly
35 40 45

Ala Trp Glu Asn Gly Val Cys Gly Ile Arg Ser Thr Thr Arg Met Glu
50 55 60

Asn Leu Leu Trp Lys Gln Ile Ala Asn Glu Leu Asn Tyr Ile Leu Trp
65 70 75 80

Glu Asn Asp Ile Lys Leu Thr Val Val Val Gly Asp Ile Thr Gly Val
85 90 95

Leu Glu Gln Gly Lys Arg Thr Leu Thr Pro Gln Pro Met Glu Leu Lys
100 105 110

Tyr Ser Trp Lys Thr Trp Gly Leu Ala Lys Ile Val Thr Ala Glu Thr
115 120 125

Gln Asn Ser Ser Phe Ile Ile Asp Gly Pro Ser Thr Pro Glu Cys Pro
130 135 140

Ser Ala Ser Arg Ala Trp Asn Val Trp Glu Val Glu Asp Tyr Gly Phe
145 150 155 160

Gly Val Phe Thr Thr Asn Ile Trp Leu Lys Leu Arg Glu Val Tyr Thr
165 170 175

Gln Leu Cys Asp His Arg Leu Met Ser Ala Ala Val Lys Asp Glu Arg
180 185 190

Ala Val His Ala Asp Met Gly Tyr Trp Ile Glu Ser Gln Lys Asn Gly
195 200 205

Ser Trp Lys Leu Glu Lys Ala Ser Leu Ile Glu Val Lys Thr Cys Thr
210 215 220

Trp Pro Lys Ser His Thr Leu Trp Ser Asn Gly Val Leu Glu Ser Asp
225 230 235 240

Met Ile Ile Pro Lys Ser Leu Ala Gly Pro Ile Ser Gln His Asn His
245 250 255

Arg Pro Gly Tyr His Thr Gln Thr Ala Gly Pro Trp His Leu Gly Lys
260 265 270

Leu Glu Leu Asp Phe Asn Tyr Cys Glu Gly Thr Thr Val Val Ile Ser
275 280 285

Glu Asn Cys Gly Thr Arg Gly Pro Ser Leu Arg Thr Thr Thr Val Ser
290 295 300

Gly Lys Leu Ile His Glu Trp Cys Cys Arg Ser Cys Thr Leu Pro Pro
305 310 315 320

Leu Arg Tyr Met Gly Glu Asp Gly Cys Trp Tyr Gly Met Glu Ile Arg
325 330 335

Pro Ile Asn Glu Lys Glu Glu Asn Met Val Lys Ser Leu Ala Ser Ala
340 345 350

Gly

<210> 32
<211> 353
<212> PRT
<213> Dengue virus 4

<400> 32
Asp Met Gly Cys Val Val Ser Trp Ser Gly Lys Glu Leu Lys Cys Gly
1 5 10 15

Ser Gly Ile Phe Val Ala Asp Asn Val His Thr Trp Thr Glu Gln Tyr
20 25 30

Lys Phe Gln Pro Glu Ser Pro Ala Arg Leu Ala Ser Ala Ile Leu Asn
35 40 45

Ala His Lys Asp Gly Val Cys Gly Ile Arg Ser Thr Thr Arg Leu Glu
50 55 60

Asn Val Met Trp Lys Gln Ile Thr Asn Glu Leu Asn Tyr Val Leu Trp
65 70 75 80

Glu Gly Gly His Asp Leu Thr Val Val Ala Gly Asp Val Lys Gly Val
85 90 95

Leu Thr Lys Gly Lys Arg Ala Leu Thr Pro Pro Val Asn Asp Leu Lys
100 105 110

Tyr Ser Trp Lys Thr Trp Gly Lys Ala Lys Ile Phe Thr Pro Glu Ala
115 120 125

Arg Asn Ser Thr Phe Leu Ile Asp Gly Pro Asp Thr Ser Glu Cys Pro
130 135 140

Asn Glu Arg Arg Ala Trp Asn Phe Leu Glu Val Glu Asp Tyr Gly Phe
145 150 155 160

Gly Met Phe Thr Thr Asn Ile Trp Met Lys Phe Arg Glu Gly Ser Ser
165 170 175

Glu Val Cys Asp His Arg Leu Met Ser Ala Ala Ile Lys Asp Gln Lys
180 185 190

Ala Val His Ala Asp Met Gly Tyr Trp Ile Glu Ser Ser Lys Asn Gln
195 200 205

Thr Trp Gln Ile Glu Lys Ala Ser Leu Ile Glu Val Lys Thr Cys Leu
210 215 220

Trp Pro Lys Thr His Thr Leu Trp Ser Asn Gly Val Leu Glu Ser Gln
225 230 235 240

Met Leu Ile Pro Lys Ser Tyr Ala Gly Pro Phe Ser Gln His Asn Tyr
245 250 255

Arg Gln Gly Tyr Ala Thr Gln Thr Val Gly Pro Trp His Leu Gly Lys
260 265 270

Leu Glu Ile Asp Phe Gly Glu Cys Pro Gly Thr Thr Val Thr Ile Gln
275 280 285

Glu Asp Cys Asp His Arg Gly Pro Ser Leu Arg Thr Thr Thr Ala Ser
290 295 300

Gly Lys Leu Val Thr Gln Trp Cys Cys Arg Ser Cys Thr Met Pro Pro
305 310 315 320

Leu Arg Phe Leu Gly Glu Asp Gly Cys Trp Tyr Gly Met Glu Ile Arg
325 330 335

Pro Leu Ser Glu Lys Glu Glu Asn Met Val Lys Ser Gln Val Thr Ala
340 345 350

Gly

<210> 33
<211> 11
<212> PRT
<213> Dengue virus 1

<400> 33
Tyr Gly Gly Pro Ile Ser Gln His Asn Tyr Arg
1 5 10

<210> 34
<211> 15
<212> PRT
<213> Dengue virus 1

<400> 34
Met Ile Arg Pro Gln Pro Met Glu His Lys Tyr Ser Trp Lys Ser
1 5 10 15

<210> 35
<211> 15
<212> PRT
<213> Dengue virus 1

<400> 35
His Lys Tyr Ser Trp Lys Ser Trp Gly Lys Ala Lys Ile Ile Gly
1 5 10 15

<210> 36
<211> 10
<212> PRT
<213> Dengue virus 2

<400> 36
Gly Gly Pro Val Ser Gln His Asn Tyr Arg
1 5 10

<210> 37
<211> 15

<212> PRT

<213> Dengue virus 1

<400> 37

Ile	Trp	Leu	Lys	Leu	Arg	Asp	Ser	Tyr	Thr	Gln	Met	Cys	Asp	His
1				5					10					15