SEQUENCE LISTING

<110> PepTcell Limited

<120> Peptide Sequences and Compositions

<130> 310723WO/CMH

<140> PCT/EP 08/061824

<141> 2008-09-05

<150> GB 0717864.3

<151> 2007-09-13

<160> 134

<170> PatentIn version 3.1

<210> 1

<211> 32

<212> PRT

<213> Artificial sequence

<220>

<223> Immunogenic polypeptide

<400> 1

His Leu Thr Leu Phe Thr Val Ala Val Leu Leu Leu Ala Ala Ala Ala
1 5 10 15

Leu Leu Leu Leu Leu Pro Pro Ala Tyr Ser Thr Thr Leu Thr Pro Pro
20 25 30

<210> 2

<211> 25

<212> PRT

<213> Artificial sequence

<220>

<223> Immunogenic polypeptide

<400> 2

Pro Leu Ser Tyr Cys His Leu Phe Leu Thr His Thr Leu Ala Arg Ala
1 5 10 15

Leu Ser Phe Ser Arg Ser Asp Cys Leu
20 25

<210> 3

<211> 24

<212> PRT

<213> Artificial sequence

<220>

<223> Immunogenic polypeptide

<400> 3

Lys Asn Val Phe Phe Ala Leu Leu Leu Val Val Leu Val Cys Cys Leu
1 5 10 15

Val Ser Val Gln Gly Asn Glu Ile
20

<210> 4

<211> 27

<212> PRT

<213> Artificial sequence

<220>

<223> Immunogenic polypeptide

<400> 4

Lys Leu Leu Val Leu Leu Ile Cys Leu Phe Phe Tyr His Thr His Cys
1 5 10 15

Thr Thr Ala Tyr Leu Trp Leu Ala Met Gly Val
20 25

<210> 5

<211> 25

<212> PRT

<213> Artificial sequence

<220>

<223> Immunogenic polypeptide

<400> 5

Phe Leu Lys Gly Ser Phe Pro Arg Phe Gln Met Cys Val Met Leu Ile
1 5 10 15

Gly Phe Phe Ser Ser Ala Lys Cys Leu
20 25

<210> 6

<211> 29

<212> PRT

<213> Artificial sequence

<220>

<223> Immunogenic polypeptide

<400> 6

Asn Asp Tyr Gln Ala Leu Leu Gly Leu Cys Cys Pro Trp Ile Asp Leu
1 5 10 15

Ala Ala Ala Asp Leu Pro Met Arg Arg His Ala Lys Ala
20 25

<210> 7

<211> 31

<212> PRT

<213> Artificial sequence

<220>

<223> Immunogenic polypeptide

<400> 7

Phe Tyr Ser Val Gly Lys Leu Val Lys Val Leu Leu Val Met Ala Val
1 5 10 15

Cys Cys Leu Leu Leu Cys Thr Ala Pro Thr Gly Ala Asp Pro Leu
20 25 30

<210> 8

<211> 30

<212> PRT

<213> Artificial sequence

<220>

<223> Immunogenic polypeptide

<400> 8

Met Lys Phe Ala Phe Ala Phe Val Leu Ile Ala Leu Phe Ala Val Phe
1 5 10 15

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

<210> 9

<211> 21

<212> PRT

<213> Artificial sequence

<220>

<223> Immunogenic polypeptide

<400> 9

Asp Gly Ala Ser Ala Ile Thr Lys Ile Val Leu Glu Leu Thr Pro Glu
1 5 10 15

Gln Ala Ala Ala Val
20

<210> 10

<211> 33

<212> PRT

<213> Artificial sequence

<220>

<223> Immunogenic polypeptide

<400> 10

Thr Leu Phe Ile Phe Leu Val Cys Cys Gln Ile Pro Leu Phe Gly Ile
1 5 10 15

Met Ser Ser Asp Ser Ala Asp Pro Phe Tyr Trp Ile Arg Val Ile Leu
20 25 30

Ala

<210> 11

<211> 22

<212> PRT

<213> Artificial sequence

<220>

<223> Immunogenic polypeptide

<400> 11

Gly Arg Val Met Cys Leu Leu Arg Leu Met Ser Thr Leu Leu Val Val
1 5 10 15

Leu Ser Ile Val Gly Lys
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<210> 12

<211> 38

<212> PRT

<213> Artificial sequence

<220>

<223> Immunogenic polypeptide

<400> 12

Leu Tyr Ser Gly Tyr Arg Leu Leu Val Leu Leu Val Met Thr Val Cys
1 5 10 15

Cys Leu Leu Leu Phe Ile Ala Pro Thr Gly Ala Asp Pro Leu Pro Gly
20 25 30

Gln Thr Gln Arg Thr Leu
35

<210> 13

<211> 37

<212> PRT

<213> Artificial sequence

<220>

<223> Immunogenic polypeptide

<400> 13

Met Tyr Cys Val Ile Lys Gly Lys Thr Gly Gly Tyr Cys Asn Ser Glu
1 5 10 15

Gly Leu Cys Thr Cys Arg Ala Glu Asp Leu His Phe Leu Leu Lys Pro
20 25 30

Ile Ile Asn Lys Asp
35

<210> 14

<211> 36

<212> PRT

<213> Artificial sequence

<220>

<223> Immunogenic polypeptide

<400> 14

Asn Ala Glu Asp Pro Arg Thr Glu Leu Ile Gly Cys Gly Ser Val Leu
1 5 10 15

Phe His Leu Ala Ala Asn Arg Leu Ser Leu Gln Leu Glu Glu Phe Ala
20 25 30

Val Cys Lys Arg
35

<210> 15

<211> 37

<212> PRT

<213> Artificial sequence

<220>

<223> Immunogenic polypeptide

<400> 15

Ala Leu Ile Gly Leu Leu Leu Cys Ser Val Gln Ser Val Thr Ala Asn
1 5 10 15

Asp Pro Val Asp Ala Leu Gly Ala Cys Ser Gly Asn Leu Phe Gly Leu
20 25 30

Leu Met Thr Arg Leu
35

<210> 16

<211> 30

<212> PRT

<213> Artificial sequence

<220>

<223> Immunogenic polypeptide

<400> 16

Ser Lys Leu Phe Val Leu Ala Phe Leu Cys Leu Ala Leu Val Val Val
1 5 10 15

Val Gln Ser Ala Pro Gln Tyr Ala Arg Gly Asp Val Pro Thr
20 25 30

<210> 17

<211> 38

<212> PRT

<213> Artificial sequence

<220>

<223> Immunogenic polypeptide

<400> 17

Ser Met Leu Val Ala Phe Ala Thr Leu Ser Val Ala Leu Val Val Val
1 5 10 15

Val Ala Ile Pro Ala Asn Phe Asn Tyr Gly Gly Gly Gly Gly Tyr Phe
20 25 30

Ile Asn Gly Thr Gly Gln
35

<210> 18

<211> 31

<212> PRT

<213> Artificial sequence

<220>

<223> Immunogenic polypeptide

<400> 18

Ile Tyr Glu Lys Leu Pro Ala Tyr Leu Ser Glu Val Ser Ala Arg Val
1 5 10 15

Asn Val Leu Gln Val Ser Leu Gln His Asp Leu Pro Asn Leu Gln
20 25 30

<210> 19

<211> 30

<212> PRT

<213> Artificial sequence

<220>

<223> Immunogenic polypeptide

<400> 19

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

Met Ala Trp Thr Pro Tyr Leu Val Ile Asn Phe Thr Gly Ile
20 25 30

<210> 20

<211> 31

<212> PRT

<213> Artificial sequence

<220>

<223> Immunogenic polypeptide

<400> 20

Leu Leu Pro Ala Lys Val Ile Pro Asp Lys Thr Ala Ala Tyr Val Ala
1 5 10 15

Tyr Gly Gly Gln Glu Thr Leu Val Glu His Val Glu Val Leu Val
20 25 30

<210> 21

<211> 27

<212> PRT

<213> Artificial sequence

<220>

<223> Immunogenic polypeptide

<400> 21

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

Ala Val Asp Tyr Asp Glu Leu Leu Lys Ala Gly
20 25

<210> 22

<211> 31

<212> PRT

<213> Artificial sequence

<220>

<223> Immunogenic polypeptide

<400> 22

Val Leu Glu Val Leu Gly Phe Val Glu Asp Asn Gly Glu Leu Val Phe
1 5 10 15

Gln Glu Leu Leu Gly Val Leu Lys Met Val Asp Pro Asp Gly Asp
20 25 30

<210> 23

<211> 45

<212> PRT

<213> Artificial sequence

<220>

<223> Immunogenic polypeptide

<400> 23

Lys Leu Thr Pro Thr Val Val Val Val Leu Leu Cys Leu Thr Phe Val
1 5 10 15

Ala Asp Ala Leu Thr Ile Gln Glu Leu Arg Ala Gln Ile Ala Gln Gln
20 25 30

Arg Ile Gln Gln Arg Tyr Gly Val Thr Val Ala Thr Thr
35 40 45

<210> 24

<211> 38

<212> PRT

<213> Artificial sequence

<220>

<223> Immunogenic polypeptide

<400> 24

Ser Leu Ser Asp Tyr Gly Leu Ile Glu Leu Lys Glu His Cys Leu Glu
1 5 10 15

Cys Cys Gln Lys Asp Thr Glu Ala Asp Ser Lys Leu Lys Val Tyr Pro
20 25 30

Ala Ala Val Leu Glu Val
35

<210> 25

<211> 37

<212> PRT

<213> Artificial sequence

<220>

<223> Immunogenic polypeptide

<400> 25

Thr Tyr Ile Cys Phe Ile Leu His Gly Val Ser Glu Ile Ile Pro Gln
1 5 10 15

Gln Gln Lys Lys Thr Met Lys Phe Leu Leu Val Ala Ser Val Leu
20 25 30

Cys Leu Val Leu Ile
35

<210> 26

<211> 20

<212> PRT

<213> Artificial sequence

<220>

<223> Immunogenic polypeptide

<400> 26

Arg Tyr Phe Val Val Ile Ala Leu Ile Cys Pro Leu Ile Ile Val Glu
1 5 10 15

Thr Leu Ala Val
20

<210> 27

<211> 36

<212> PRT

<213> Artificial sequence

<220>

<223> Immunogenic polypeptide

<400> 27

Leu Leu Leu Tyr Leu Asp Ala Ala Asp Leu Arg Arg Ala Leu His Gln
1 5 10 15

Tyr Gln Leu Leu Ala Ala Gln Gly Asp Arg His Leu Pro Gln Gln Ile
20 25 30

Val Lys Phe Val
35

<210> 28

<211> 37

<212> PRT

<213> Artificial sequence

<220>

<223> Immunogenic polypeptide

<400> 28

Val Leu Leu Thr Pro Ala Leu Gln Ala Tyr Ile Met Asp Glu His Asn
1 5 10 15

Leu Asn Arg Ser Asn Ile Ala Leu Gly Arg Ile Arg Pro Tyr Pro Ser
20 25 30

Ala Val Lys Met Pro
35

<210> 29

<211> 27

<212> PRT

<213> Artificial sequence

<220>

<223> Immunogenic polypeptide

<400> 29

Val Leu Lys Gly Glu Thr His Lys Ala Leu Lys Leu Lys Asp Gly Gly
1 5 10 15

His Tyr Leu Val Glu Phe Lys Ser Ile Tyr Met
20 25

<210> 30

<211> 40

<212> PRT

<213> Artificial sequence

<220>

<223> Immunogenic polypeptide

<400> 30

Val Leu His Ser Met Leu Val Asn Ala Ser Leu Ala Glu Met Val Lys
1 5 10 15

Glu Ser Tyr Gln Thr His Gly Ala Asp Gly Arg Met Val Val Arg Met
20 25 30

Leu Lys Phe Val Arg Leu Leu Pro
35 40

<210> 31

<211> 32

<212> PRT

<213> Artificial sequence

<220>

<223> Immunogenic polypeptide

<400> 31

Arg Val Arg Ala Leu Arg Ala Leu Leu Glu Thr Leu Leu Gln His Gln
1 5 10 15

Gly Glu Gln Asn Asn Asp Val Tyr Leu Ile Arg Leu Ala His Glu Thr
20 25 30

<210> 32

<211> 37

<212> PRT

<213> Artificial sequence

<220>

<223> Immunogenic polypeptide

<400> 32

Glu Leu Gln Gln Ala Leu Ser Ser Leu Asn Ala Gly Ser Gly Ser Cys
1 5 10 15

Ala Glu Val Phe Asn Ala Tyr Leu Pro Val His Asn Lys Tyr Ile Gly
20 25 30

Val Ser Arg Lys Ile
35

<210> 33

<211> 33

<212> PRT

<213> Artificial sequence

<220>

<223> Immunogenic polypeptide

<400> 33

Lys Phe Tyr Arg Leu Ile Ser Thr Leu Leu Val Val Val Val Ile Ala
1 5 10 15

Pro Arg His Gln Cys Ser Pro Phe Phe Phe Gln Tyr Asn Arg Pro Tyr
20 25 30

Leu

<210> 34

<211> 36

<212> PRT

<213> Artificial sequence

<220>

<223> Immunogenic polypeptide

<400> 34

Asn Tyr Val Pro Asp Val Ser Ala Leu Glu Gln Asp Ile Ile Glu Val
1 5 10 15

Asp Pro Glu Thr Lys Glu Met Leu Lys His Leu Asp Phe Asn Asn Ile
20 25 30

Val Val Gln Leu
35

<210> 35

<211> 28

<212> PRT

<213> Artificial sequence

<220>

<223> Immunogenic polypeptide

<400> 35

Gln Tyr Ser Met Glu Cys Leu Glu Ala Ala Glu Pro Lys Tyr Leu Asp
1 5 10 15

Gly Leu Lys Thr Leu Ala Asp Glu Thr Ala Gln Cys
20 25

<210> 36

<211> 32

<212> PRT

<213> Artificial sequence

<220>

<223> Immunogenic polypeptide

<400> 36

Glu Tyr Ala Gln Val Thr Lys Met Leu Gly Asn Gly Arg Leu Glu Ala
1 5 10 15

Met Cys Phe Asp Gly Val Lys Arg Leu Cys His Ile Arg Gly Lys Leu
20 25 30

<210> 37

<211> 26

<212> PRT

<213> Artificial sequence

<220>

<223> Immunogenic polypeptide

<400> 37

Lys Leu Phe Leu Thr Leu Leu Ser Thr Leu Ser Val Ala Met Val Phe
1 5 10 15

Ala Leu Pro Ala His His His Ser Arg Gly
20 25

<210> 38

<211> 33

<212> PRT

<213> Artificial sequence

<220>

<223> Immunogenic polypeptide

<400> 38

Glu Leu Glu Glu Ala Arg Leu Val Ala Glu Glu Leu Glu Glu Arg Gln
1 5 10 15

Gln Glu Leu Asp Tyr Leu Lys Arg Tyr Leu Val Gly Arg Leu Gln Ala
20 25 30

Val

<210> 39

<211> 19

<212> PRT

<213> Artificial sequence

<220>

<223> Immunogenic polypeptide

<400> 39

Ser Tyr Phe Leu Thr Val Cys Leu Leu Ala Leu Val Gln Ser Glu Thr
1 5 10 15

Val Gln Asp

<210> 40

<211> 31

<212> PRT

<213> Artificial sequence

<220>

<223> Immunogenic polypeptide

<400> 40

Ala Met Thr Asn Ala Asn Leu Val Gly Leu Thr Ile Ser Leu Ala Tyr
1 5 10 15

Ala Ile Phe Phe Leu Leu Tyr Thr Pro Pro Thr Gly Arg Ser Ser
20 25 30

<210> 41

<211> 36

<212> PRT

<213> Artificial sequence

<220>

<223> Immunogenic polypeptide

<400> 41

Ser Phe Ala Trp Leu Leu Tyr Gly Ile Ile Leu Arg Ser Asn Phe Leu
1 5 10 15

Val Val Gln Asn Leu Met Ala Leu Ala Leu Ser Ala Val Gln Leu Ser
20 25 30

Leu Phe Ile Ile
35

<210> 42

<211> 36

<212> PRT

<213> Artificial sequence

<220>

<223> Immunogenic polypeptide

<400> 42

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

Tyr Gly Val Leu Thr Glu Glu Ser Thr Leu Ile Leu Val Asn Phe Ile
20 25 30

Gly Ser Ala Leu
35

<210> 43

<211> 24

<212> PRT

<213> Artificial sequence

<220>

<223> Immunogenic polypeptide

<400> 43

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

Thr Met Leu Ala His Val Ile Arg
20

<210> 44

<211> 26

<212> PRT

<213> Artificial sequence

<220>

<223> Immunogenic polypeptide

<400> 44

Leu Leu Leu Ala Met Val Leu Leu Pro Leu Leu Leu Leu Glu Ser Val
1 5 10 15

Val Pro Tyr Ala Ala Ala Glu Lys Val Trp
20 25

<210> 45

<211> 48

<212> PRT

<213> Anopheles gambiae

<400> 45

Met His Leu Thr Leu Phe Thr Val Ala Val Leu Leu Leu Ala Ala Ala
1 5 10 15

Ala Leu Leu Leu Leu Leu Pro Pro Ala Tyr Ser Thr Thr Leu Thr Pro
20 25 30

Pro Ala Pro Pro Arg Leu Ser His Leu Gly Ile Thr Ile Gly Arg Ile
35 40 45

<210> 46

<211> 46

<212> PRT

<213> Anopheles gambiae

<400> 46

Met Pro Leu Ser Tyr Cys His Leu Phe Leu Thr His Thr Leu Ala Arg
1 5 10 15

Ala Leu Ser Phe Ser Arg Ser Asp Cys Leu Lys Phe Ser Glu Lys Arg
20 25 30

Leu Leu Phe Ser Gly Ser Lys Thr Phe Pro Thr Thr Leu Leu
35 40 45

<210> 47

<211> 56

<212> PRT

<213> Anopheles gambiae

<400> 47

Met Lys Asn Val Phe Phe Ala Leu Leu Leu Val Val Leu Val Cys Cys
1 5 10 15

Leu Val Ser Val Gln Gly Asn Glu Ile Ile Gln Asn Val Val Lys Arg
20 25 30

Ser Ile Pro Leu Arg Gln Leu Ile Leu Gln His Asn Ala Leu Asp Asp
35 40 45

Ser Asn Ser Asp Ser Gly Ser Gln
50 55

<210> 48

<211> 56

<212> PRT

<213> Anopheles gambiae

<400> 48

Met Cys Ile Phe Phe Gln Ala Gly Ile Lys Leu Leu Val Leu Leu Ile
1 5 10 15

Cys Leu Phe Phe Tyr His Thr His Cys Thr Thr Ala Tyr Leu Trp Leu
20 25 30

Ala Met Gly Val Glu Ala Lys Ser Ile Lys Ala Arg Gly Thr Ala His
35 40 45

Ser Lys Ser Arg Thr Ser Thr Asn
50 55

<210> 49

<211> 57

<212> PRT

<213> Anopheles gambiae

<400> 49

Met Phe Leu Lys Gly Ser Phe Pro Arg Phe Gln Met Cys Val Met Leu
1 5 10 15

Ile Gly Phe Phe Ser Ser Ala Lys Cys Leu Met Cys Phe Ala Asp Trp
20 25 30

Glu Gly Met Leu Leu Met Thr Met Glu Val Phe Asp Phe Gln Leu Ile
35 40 45

Val Phe Thr Pro Val Leu Lys Arg Ser
50 55

<210> 50

<211> 65

<212> PRT

<213> Anopheles gambiae

<400> 50

Met Ala Gly Glu Ser Gln Lys Asn Ala Arg Ser Lys Gln Asn Asp Tyr
1 5 10 15

Gln Ala Leu Leu Gly Leu Cys Cys Pro Trp Ile Asp Leu Ala Ala Ala
20 25 30

Asp Leu Pro Met Arg Arg His Ala Lys Ala Arg Glu Ala Ile Asn Phe
35 40 45

Leu Leu Gln Ala His Glu Ala Gly Pro Asn Glu Glu Pro Ser Leu Pro
50 55 60

Ala
65

<210> 51

<211> 78

<212> PRT

<213> Anopheles gambiae

<400> 51

Met Lys Phe Tyr Ser Val Gly Lys Leu Val Lys Val Leu Leu Val Met
1 5 10 15

Ala Val Cys Cys Leu Leu Leu Cys Thr Ala Pro Thr Gly Ala Asp Pro
20 25 30

Leu Pro Gly Arg Asp Arg Asn Thr Ile Ala Asn Lys Ser Lys Asp Lys
35 40 45

Lys Ala Ser Ala Pro Lys His Ser Leu Gly Thr Gly Ala Arg Met Ala
50 55 60

Leu Thr Gly Gly Gly Val Leu Gly Gly Val Leu Thr Asn Met
65 70 75

<210> 52

<211> 83

<212> PRT

<213> Anopheles gambiae

<400> 52

Met Lys Phe Ala Phe Ala Phe Val Leu Ile Ala Leu Phe Ala Val Phe
1 5 10 15

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

Asn Asp Gly Ala Ser Ala Ile Thr Lys Ile Val Leu Glu Leu Thr Pro
35 40 45

Glu Gln Ala Ala Ala Val Gln Lys Met Gly Gly Arg Gly Phe Trp Pro
50 55 60

Ile Met Met Lys Ser Val Lys Lys Ile Met Ala Ile Gly Cys Asp Leu
65 70 75 80

Ile Asp Cys

<210> 53

<211> 77

<212> PRT

<213> Anopheles gambiae

<400> 53

Met Gly Ile Lys Phe Leu Glu Ile Ile Lys Pro Phe Cys Gly Ile Leu
1 5 10 15

Pro Glu Ile Ala Lys Pro Glu Arg Lys Ile Gln Phe Arg Glu Lys Val
20 25 30

Leu Trp Thr Ala Ile Thr Leu Phe Ile Phe Leu Val Cys Cys Gln Ile
35 40 45

Pro Leu Phe Gly Ile Met Ser Ser Asp Ser Ala Asp Pro Phe Tyr Trp
50 55 60

Ile Arg Val Ile Leu Ala Ser Asn Arg Gly Thr Leu Met
65 70 75

<210> 54

<211> 85

<212> PRT

<213> Anopheles gambiae

<400> 54

Met Gly Arg Val Met Cys Leu Leu Arg Leu Met Ser Thr Leu Leu Val
1 5 10 15

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

Glu Ala Pro Gly Asn Val Gly Ser Thr Tyr Ser Pro Met Ala Asp Ile
35 40 45

Gly Arg Leu Ala Thr Gly Ala Thr Lys Leu Phe Gly Gln Phe Trp Asn
50 55 60

Thr Gly Thr Arg Phe Gly Thr Glu Leu Ser Arg Arg Thr Phe Asp Phe
65 70 75 80

Leu Arg Val Lys Lys
85

<210> 55

<211> 91

<212> PRT

<213> Anopheles gambiae

<400> 55

Met Ala Gly Asp Ile Gln Leu Phe Ser Thr Arg Glu Thr Thr Met Lys
1 5 10 15

Leu Tyr Ser Gly Tyr Arg Leu Leu Val Leu Leu Val Met Thr Val Cys
20 25 30

Cys Leu Leu Leu Phe Ile Ala Pro Thr Gly Ala Asp Pro Leu Pro Gly
35 40 45

Gln Thr Gln Arg Thr Leu Gly Tyr Arg Gly Asn Asp Lys Arg Ala Thr
50 55 60

Pro Pro Met His Ser Leu Gly Ser Gly Ala Arg Met Ala Met Thr Gly
65 70 75 80

Gly Gly Ile Leu Gly Gly Ile Phe Ser Ala Leu
85 90

<210> 56

<211> 93

<212> PRT

<213> Anopheles gambiae

<400> 56

Met Asp Gln Cys Ser Val Pro Arg Leu Cys Ile Ile Ile Met Lys Ser
1 5 10 15

Phe Ile Ala Ala Ala Val Ile Ala Leu Ile Cys Ala Ile Ala Val Ser
20 25 30

Gly Thr Thr Val Thr Leu Gln Ser Thr Cys Lys Leu Phe Thr Ala Asp
35 40 45

Val Val Ser Ser Ile Thr Cys Lys Met Tyr Cys Val Ile Lys Gly Lys
50 55 60

Thr Gly Gly Tyr Cys Asn Ser Glu Gly Leu Cys Thr Cys Arg Ala Glu
65 70 75 80

Asp Leu His Phe Leu Leu Lys Pro Ile Ile Asn Lys Asp
85 90

<210> 57

<211> 90

<212> PRT

<213> Anopheles gambiae

<400> 57

Met Arg Phe Leu Ser Val Leu Thr Val Gly Leu Leu Val Trp Val Gly
1 5 10 15

Val Phe Ala Thr Val Asn Ala Glu Asp Pro Arg Thr Glu Leu Ile Gly
20 25 30

Cys Gly Ser Val Leu Phe His Leu Ala Ala Asn Arg Leu Ser Leu Gln
35 40 45

Leu Glu Glu Phe Ala Val Cys Lys Arg Ser Asn Pro Gly Tyr Asp Cys
50 55 60

Ser Asp Ser Ile His Arg Ala Ile Ser Asp Leu Gln Gln Gly Leu Phe
65 70 75 80

Asp Leu Asn His Cys Thr Lys Asp Ile Arg
85 90

<210> 58

<211> 92

<212> PRT

<213> Anopheles gambiae

<400> 58

Met Arg Phe Cys Cys Val Ala Leu Ile Gly Leu Leu Leu Cys Ser Val
1 5 10 15

Gln Ser Val Thr Ala Asn Asp Pro Val Asp Ala Leu Gly Ala Cys Ser
20 25 30

Gly Asn Leu Phe Gly Leu Leu Met Thr Arg Leu Gln Gln Met Val Glu
35 40 45

Asp Phe Thr Ala Cys Arg Gln Glu Ala Thr Ala Asn Asp Pro Gln His
50 55 60

Asp Arg Ser Asp Ser Ile Gln Arg Ala Lys Val Asp Leu Gln Gln Gln
65 70 75 80

Leu Val Asn Tyr Ser Tyr Cys Thr Lys Asn Ile Gln
85 90

<210> 59

<211> 101

<212> PRT

<213> Anopheles gambiae

<400> 59

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

Val Val Val Gln Ser Ala Pro Gln Tyr Ala Arg Gly Asp Val Pro Thr
20 25 30

Tyr Asp Glu Glu Asp Phe Asp Glu Glu Ser Leu Lys Pro His Ser Ser
35 40 45

Ser Pro Ser Asp Asp Gly Glu Glu Glu Phe Asp Pro Ser Leu Leu Glu
50 55 60

Glu His Ala Asp Ala Pro Thr Ala Arg Asp Pro Gly Arg Asn Pro Glu
65 70 75 80

Phe Leu Arg Asn Ser Asn Thr Asp Glu Gln Ala Ser Ala Pro Ala Ala
85 90 95

Ser Ser Ser Asp Ser
100

<210> 60

<211> 114

<212> PRT

<213> Anopheles gambiae

<400> 60

Met Lys Ser Met Leu Val Ala Phe Ala Thr Leu Ser Val Ala Leu Val
1 5 10 15

Val Val Val Ala Ile Pro Ala Asn Phe Asn Tyr Gly Gly Gly Gly Gly
20 25 30

Tyr Phe Ile Asn Gly Thr Gly Gln Ser Phe Asn Phe Ser Gly Glu Ser
35 40 45

Asn Gly Thr Ser Ile Pro Gly Leu Pro Asp Phe Gly Ser Phe Leu Pro
50 55 60

Asn Leu Gly Asn Leu Thr Gln Gln Phe Gly Gly Ser Ser Gly Ala Phe
65 70 75 80

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

Ser Ile Leu Pro Phe Phe Gly Asn Gly Gln Gly Gly Gly Phe Pro Phe
100 105 110

Phe Gly

<210> 61

<211> 122

<212> PRT

<213> Anopheles gambiae

<220>

<221> misc_feature

<222> (39)..(39)

<223> Any amino acid

<400> 61

Met Thr Pro Leu Ile Ala Thr Leu Ala Ala Cys Ala Leu Thr Leu Ser
1 5 10 15

Ile Val His Ser Arg Gly Leu Pro Glu Ser Ser Asp Lys Leu Glu Ala
20 25 30

Cys Gly Gln His Tyr Gly Xaa Leu Leu Lys Ala Ser Thr Thr Trp Asn
35 40 45

Glu Lys Glu Cys Asn Gly Ser Thr Lys Leu Ala Ala Cys Val Val Ser
50 55 60

Glu His Glu Gln Ala Tyr Arg Glu Leu Lys Gln Arg Cys Gln Glu Ala
65 70 75 80

His Asp Glu Arg Thr Ala Lys Val Asn Ala Ile Tyr Glu Lys Leu Pro
85 90 95

Ala Tyr Leu Ser Glu Val Ser Ala Arg Val Asn Val Leu Gln Val Ser
100 105 110

Leu Gln His Asp Leu Pro Asn Leu Gln Glu
115 120

<210> 62

<211> 124

<212> PRT

<213> Anopheles gambiae

<400> 62

Pro Asp Val Ala Glu Pro Leu Val His His His Leu Arg His Leu Arg
1 5 10 15

Val Leu Ala Ala Ala Ala Asp His His Leu Leu Val His Leu His Pro
20 25 30

Glu Gly Cys Val Arg Ser Arg Glu Glu His Ala Arg Ala Gly Gln Glu
35 40 45

Gly Asn Val Ala Ser Leu Arg Thr Gln Glu Ala Gln Asn Thr Ser Thr
50 55 60

Glu Met Lys Leu Ala Lys Val Ala Leu Val Thr Ile Ser Leu Trp Phe
65 70 75 80

Met Ala Trp Thr Pro Tyr Leu Val Ile Asn Phe Thr Gly Ile Phe Lys
85 90 95

Ala Ala Pro Ile Ser Pro Leu Ala Thr Ile Arg Gly Ser Leu Phe Ala
100 105 110

Lys Ala Asn Ala Val Tyr Asn Pro Ile Val Tyr Gly
115 120

<210> 63

<211> 144

<212> PRT

<213> Anopheles gambiae

<400> 63

Met Ala Thr Thr Trp Ile Pro Thr Ser Val His Gly Pro Tyr Pro Pro
1 5 10 15

His Met Val Pro Gly Gly Val Asp Ser Asp Gly Ala Gln Ile Phe Val
20 25 30

Gly Arg Ala His His Ala Gly Asp Leu Leu Pro Ala Lys Val Ile Pro
35 40 45

Asp Lys Thr Ala Ala Tyr Val Ala Tyr Gly Gly Gln Glu Thr Leu Val
50 55 60

Glu His Val Glu Val Leu Val His Lys Gln Leu Ile Trp Asp Thr Ala
65 70 75 80

Ser Ala Gly Gln Val Pro Leu Gly Ala Val Val Gly Gly His Thr Ser
85 90 95

Asp Gly Glu Ile Leu Tyr Val Gly Arg Ala Tyr His Glu Gly Ser Gln
100 105 110

Thr Ile Gly Lys Val Gln Cys Ser His Asn Cys Ile Tyr Ile Pro Tyr
115 120 125

Gly Gly Ala Glu Val Ser Val Pro Thr Tyr Glu Val Leu Cys Glu Arg
130 135 140

<210> 64

<211> 150

<212> PRT

<213> Anopheles gambiae

<400> 64

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

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

Asn Ile Gly Asp Ser Leu Lys Asp Arg Val Cys Glu Leu Arg Gln Tyr
35 40 45

Thr Pro Val Ser Ser Asp Asp Met Asp Lys His Met Gln Cys Val Leu
50 55 60

Glu Val Val Gly Phe Val Asp Gly Asn Gly Glu Val Lys Glu Ser Val
65 70 75 80

Leu Leu Glu Leu Leu Gln Arg Val Asp Ser Gly Val Asn His Ala Ala
85 90 95

Asn Met Lys Lys Cys Val Thr Glu Ala Ser Thr Ser Gly Ser Asp Lys
100 105 110

Lys Ala Asn Thr Phe Tyr Thr Cys Phe Leu Gly Thr Ser Ser Leu Ala
115 120 125

Gly Phe Lys Asn Ala Val Asp Tyr Asp Glu Leu Leu Lys Ala Gly Lys
130 135 140

Met Gln Thr Ser Asp Pro
145 150

<210> 65

<211> 156

<212> PRT

<213> Anopheles gambiae

<220>

<221> misc_feature

<222> (138)..(138)

<223> Any amino acid

<220>

<221> misc_feature

<222> (140)..(140)

<223> Any amino acid

<400> 65

Met Phe Gly Lys Leu Leu Pro Cys Ala Ile Leu Leu Trp Cys Leu Phe
1 5 10 15

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

Asn Ile Pro Ala Ser Leu Lys Glu Arg Val Cys Glu Leu Arg Gln Tyr
35 40 45

Thr Pro Val Gln Gly Lys Asp Met Asp Ser His Met Gln Cys Val Leu
50 55 60

Glu Val Leu Gly Phe Val Glu Asp Asn Gly Glu Leu Val Phe Gln Glu
65 70 75 80

Leu Leu Gly Val Leu Lys Met Val Asp Pro Asp Gly Asp His Ala Gly
85 90 95

Ser Met Lys Lys Cys Asn Gly Glu Ala Glu Lys Val Asp Thr Ser Ser
100 105 110

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

Ala Phe Lys Tyr Ala Val Asp Tyr Val Xaa Ala Xaa Arg Ala Gly Lys
130 135 140

Leu Asp Met Gly Thr Thr Phe Asn Ala Gly Gln Val
145 150 155

<210> 66

<211> 178

<212> PRT

<213> Anopheles gambiae

<400> 66

Ala Gly Gly Phe Ser Leu Phe Glu Ala Leu Lys Gln Thr Thr Thr Arg
1 5 10 15

Gly Glu Met Phe Arg Arg Lys Leu Thr Pro Thr Val Val Val Val Leu
20 25 30

Leu Cys Leu Thr Phe Val Ala Asp Ala Leu Thr Ile Gln Glu Leu Arg
35 40 45

Ala Gln Ile Ala Gln Gln Arg Ile Gln Gln Arg Tyr Gly Val Thr Val
50 55 60

Ala Thr Thr Ser Ala Ala Thr Thr Thr Ala Ala Thr Thr Ser Ala Ala
65 70 75 80

Thr Thr Ser Glu Ala Thr Thr Thr Ala Ala Ala Ser Thr Thr Gln Ala
85 90 95

Ser Asp Ser Asp Asn Thr Thr Thr Thr Ala Glu Ala Thr Thr Thr Thr
100 105 110

Glu Ala Gln Thr Thr Ser Ser Ser Asp Asn Ser Thr Thr Thr Glu Ala
115 120 125

Ala Ala Thr Thr Thr Ala Ala Ser Glu Thr Thr Ala Asp Ser Ser Ser
130 135 140

Thr Gly Thr Thr Ser Val Glu Ala Gly Leu Arg Ala Gln Tyr Arg Asp
145 150 155 160

Gln Val Arg Gln Gln Ala Ile Glu Arg Ala Leu Ala Arg Ala Ala Ala
165 170 175

Phe Gly

<210> 67

<211> 163

<212> PRT

<213> Anopheles gambiae

<400> 67

Met Arg Leu Phe Ala Ile Thr Cys Leu Leu Phe Ser Ile Val Thr Val
1 5 10 15

Ile Gly Ala Glu Phe Ser Ala Glu Asp Cys Arg Glu Leu Gly Leu Ile
20 25 30

Lys Ser Gln Leu Phe Cys Ser Ala Cys Ser Ser Leu Ser Asp Tyr Gly
35 40 45

Leu Ile Glu Leu Lys Glu His Cys Leu Glu Cys Cys Gln Lys Asp Thr
50 55 60

Glu Ala Asp Ser Lys Leu Lys Val Tyr Pro Ala Ala Val Leu Glu Val
65 70 75 80

Cys Thr Cys Lys Phe Gly Ala Tyr Pro Gln Ile Gln Ala Phe Ile Lys
85 90 95

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

Gly Leu Asp Pro Ile Val Lys Leu Met Asp Glu Gln Gly Thr Val Lys
115 120 125

Glu Thr Leu Ser Ile Asn Lys Trp Asn Thr Asp Thr Val Gln Glu Phe
130 135 140

Phe Glu Thr Arg Leu Ala Lys Val Glu Asp Asp Asp Tyr Ile Lys Thr
145 150 155 160

Asn Arg Val

<210> 68

<211> 182

<212> PRT

<213> Anopheles gambiae

<400> 68

Met Ala Gly Ala Ile Thr Tyr Ile Cys Phe Ile Leu His Gly Val Ser
1 5 10 15

Glu Ile Ile Pro Gln Gln Gln Lys Lys Thr Met Lys Phe Leu Leu Leu
20 25 30

Val Ala Ser Val Leu Cys Leu Val Leu Ile Val Ser Ala Arg Pro Ala
35 40 45

Asp Asp Thr Ser Asp Gln Glu Ser Ser Thr Glu Leu Ser Asp Asp Ala
50 55 60

Gly Ala Glu Glu Gly Ala Glu Asp Ala Gly Ser Asp Ala Glu Ala Asp
65 70 75 80

Ala Gly Ala Ala Asp Gly Glu Glu Gly Ala Thr Asp Thr Glu Ser Gly
85 90 95

Ala Glu Gly Asp Asp Ser Glu Met Asp Ser Ala Met Lys Glu Gly Glu
100 105 110

Glu Gly Ala Gly Ser Asp Asp Ala Val Ser Gly Ala Asp Asp Glu Thr
115 120 125

Glu Glu Ser Lys Asp Asp Ala Glu Glu Asp Ser Glu Glu Gly Gly Glu
130 135 140

Glu Gly Gly Asp Ser Ala Ser Gly Gly Glu Gly Gly Glu Lys Glu Ser
145 150 155 160

Pro Arg Asn Thr Tyr Arg Gln Val His Lys Leu Leu Lys Lys Ile Met
165 170 175

Lys Val Asp Thr Lys Asp
180

<210> 69

<211> 166

<212> PRT

<213> Anopheles gambiae

<400> 69

Met Glu Trp Arg Tyr Phe Val Val Ile Ala Leu Ile Cys Pro Leu Ile
1 5 10 15

Ile Val Glu Thr Leu Ala Val Ser Asp Cys Val Arg His Val Ser Glu
20 25 30

Ser Ala Arg Asn Thr Val Cys Asp Val Arg Gln Tyr Arg Val Thr Lys
35 40 45

Gly Val Glu Ala Asp Arg Tyr Val Gln Cys Phe Met Thr Ala Leu Gly
50 55 60

Phe Ala Asp Glu Ser Gly Ser Ile Gln Arg Ser Asn Val Leu Thr Ala
65 70 75 80

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

Val Cys Leu Ser Lys Ala Lys Lys Leu Pro Gly Thr Glu Arg Ser Gly
100 105 110

Tyr Phe Phe Ser Cys Met Leu Arg Thr Glu Ser Ala Leu Asn Phe Arg
115 120 125

Asp Ala Val Glu Leu Gln Glu Leu Arg Val Ala Ser Lys Trp Pro Glu
130 135 140

Gly Glu Arg Phe Asp Arg Ser Lys Val Gln Gln Met Met Arg Glu Leu
145 150 155 160

Asn Ser Gln Leu Arg Cys
165

<210> 70

<211> 161

<212> PRT

<213> Anopheles gambiae

<400> 70

Gly Arg Glu Ala Ile Glu Thr Met Arg Thr Glu Gln Arg Asn His Arg
1 5 10 15

Gln Gln Leu Leu Leu Leu Tyr Leu Asp Ala Ala Asp Leu Arg Arg Ala
20 25 30

Leu His Gln Tyr Gln Leu Leu Ala Ala Gln Gly Asp Arg His Leu Pro
35 40 45

Gln Gln Ile Val Lys Phe Val Tyr Ala Ala Pro Arg His Glu Asn Arg
50 55 60

Arg Leu Glu Asn Leu Leu Asp Leu Val Arg Gln Leu Pro Ala Arg Gln
65 70 75 80

Asp Gln Arg Thr Leu Tyr Gln Leu Leu Gln Pro Glu Ile Met Lys Arg
85 90 95

Pro Ala Gln Asn Gln Ser Thr Leu Ala Met Leu Thr Ala Leu Glu Met
100 105 110

Gly Gln Val Val Glu Gly Asn Gly Glu Leu Lys Lys Gln Gln Asp Ala
115 120 125

Met Tyr Gln Leu Val Leu Lys Arg Trp Met Phe Leu Cys Leu Ala Gly
130 135 140

Gln Tyr Arg Glu Ile Val Gln Phe Ala Thr Lys His Pro Arg Leu Phe
145 150 155 160

Glu

<210> 71

<211> 178

<212> PRT

<213> Anopheles gambiae

<400> 71

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

Val Val Ser Val Gly Gly Gln Tyr Cys Ser Ser Asp Leu Cys Pro Arg
20 25 30

Gly Gly Pro His Val Gly Cys Asn Pro Pro Ser Ser Ser Gly Gly Pro
35 40 45

Thr Cys Gln Gly Lys Gln Lys Ala Arg Lys Val Leu Leu Thr Pro Ala
50 55 60

Leu Gln Ala Tyr Ile Met Asp Glu His Asn Leu Asn Arg Ser Asn Ile
65 70 75 80

Ala Leu Gly Arg Ile Arg Pro Tyr Pro Ser Ala Val Lys Met Pro Thr
85 90 95

Leu Thr Trp Asp Pro Glu Leu Ala Ser Leu Ala Asp Ala Asn Ala Arg
100 105 110

Ser Cys Asn Tyr Gly His Asp Arg Cys Arg Ala Thr Lys Lys Phe Pro
115 120 125

Tyr Ala Gly Gln Asn Ile Ala Ile Thr Gln Phe Phe Gly Tyr Arg Phe
130 135 140

Thr Glu Lys Asp Leu Ile His Lys Phe Val Ser Ser Trp Trp Ser Glu
145 150 155 160

Tyr Leu Asp Ala Arg Pro Glu His Val Arg Lys Tyr Pro Ser Ser Tyr
165 170 175

Ser Gly

<210> 72

<211> 238

<212> PRT

<213> Artificial sequence

<220>

<223> Synthetic construct

<400> 72

Met Lys Leu Ala Ser Ser Glu Asn Val Ile Thr Glu Phe Met Arg Phe
1 5 10 15

Lys Val Arg Met Glu Gly Thr Val Asn Gly His Glu Phe Glu Ile Glu
20 25 30

Gly Glu Gly Glu Gly Arg Pro Tyr Glu Gly His Asn Thr Val Lys Leu
35 40 45

Lys Val Thr Lys Gly Gly Pro Leu Pro Phe Ala Trp Asp Ile Leu Ser
50 55 60

Pro Gln Phe Gln Tyr Gly Ser Lys Val Tyr Val Lys His Pro Ala Asp
65 70 75 80

Ile Pro Asp Tyr Lys Lys Leu Ser Phe Pro Glu Gly Phe Lys Trp Glu
85 90 95

Arg Val Met Asn Phe Glu Asp Gly Gly Val Ala Thr Val Thr Gln Asp
100 105 110

Ser Ser Leu Gln Asp Gly Cys Phe Ile Tyr Lys Val Lys Phe Ile Gly
115 120 125

Val Asn Phe Pro Ser Asp Gly Pro Val Met Gln Lys Lys Thr Met Gly
130 135 140

Trp Glu Ala Ser Thr Glu Arg Leu Tyr Pro Arg Asp Gly Val Leu Lys
145 150 155 160

Gly Glu Thr His Lys Ala Leu Lys Leu Lys Asp Gly Gly His Tyr Leu
165 170 175

Val Glu Phe Lys Ser Ile Tyr Met Ala Lys Lys Pro Val Gln Leu Pro
180 185 190

Gly Tyr Tyr Tyr Val Asp Ala Lys Leu Asp Ile Thr Ser His Asn Glu
195 200 205

Asp Tyr Thr Ile Val Glu Gln Tyr Glu Arg Thr Glu Gly Arg His His
210 215 220

Leu Phe Leu Arg Ser Arg Ala Pro Pro Pro Pro Pro Leu Thr
225 230 235

<210> 73

<211> 269

<212> PRT

<213> Anopheles gambiae

<400> 73

Met Ala Gly Gln Arg His Leu Ile Glu Gln Ala Trp Gln Tyr Gly Ala
1 5 10 15

Gln Leu Gln His Glu Leu Met Leu Thr Ser Met Glu Ser Asp Arg Val
20 25 30

Gln Arg Ala Leu Val Leu His Ser Met Leu Val Asn Ala Ser Leu Ala
35 40 45

Glu Met Val Lys Glu Ser Tyr Gln Thr His Gly Ala Asp Gly Arg Met
50 55 60

Val Val Arg Met Leu Lys Phe Val Arg Leu Leu Pro Gly Ala Asp Glu
65 70 75 80

Arg Val Ala Val Tyr Lys Gln Leu Ala Glu Leu Leu Lys Ser Asn Gly
85 90 95

Gln Asp Gly Arg Phe Pro Ala Val Ile Phe Ser Thr Asp Val Arg Gln
100 105 110

Leu Glu Asp Arg Tyr Lys Pro Asp His Ala Gln Tyr Glu Gly Lys Val
115 120 125

Val Glu Arg Trp Leu Ala Glu Leu Gln Ala Gly Thr Phe His Glu Val
130 135 140

Val Glu Phe Ala Arg Asp Tyr Pro Glu Tyr Phe Ala Arg Val Glu Glu
145 150 155 160

Pro Leu Tyr Glu Thr Leu Lys Gln Gln Trp Ser Ala Glu Gly Leu Asp
165 170 175

Arg Met Val Ser Phe Pro Asn Ala Leu Pro Val Gly Val Gln Arg Val
180 185 190

Arg Ala Leu Arg Ala Leu Leu Glu Thr Leu Leu Gln His Gln Gly Glu
195 200 205

Gln Asn Asn Asp Val Tyr Leu Ile Arg Leu Ala His Glu Thr Gly Arg
210 215 220

Val Glu Ala Thr Val Gly Gln Ala Asp Ala Ala Val Arg Gln Ala Leu
225 230 235 240

Asp Asp Val Lys Lys Leu Phe Glu Gln Phe Lys Tyr Gln Arg Gly Phe
245 250 255

Pro Asp Tyr Glu Ala Leu Tyr Lys Leu Phe Lys Gly Leu
260 265

<210> 74

<211> 311

<212> PRT

<213> Anopheles gambiae

<400> 74

Met Ile Val Pro Arg Val Leu Leu Phe Ile Leu Leu Glu Leu Phe Val
1 5 10 15

Gln Ala Thr Gln Ala Phe Lys Ala Leu Asp Pro Glu Glu Ala Trp Tyr
20 25 30

Val Tyr Glu Arg Cys His Glu Asp His Leu Pro Ser Gly Pro Asn Arg
35 40 45

Glu Thr Tyr Leu Lys Thr Trp Lys Phe Trp Lys Leu Glu Pro Asn Asp
50 55 60

Ala Val Thr His Cys Tyr Val Lys Cys Thr Leu Ala Gly Leu Gln Met
65 70 75 80

Tyr Asp Glu Lys Thr Asn Thr Phe Lys Pro Glu Thr Val Pro Val Gln
85 90 95

His Glu Ala Tyr Lys Ser Phe Thr Glu Val Glu Ser Ser Lys Val Asn
100 105 110

Glu Leu Gln Gln Ala Leu Ser Ser Leu Asn Ala Gly Ser Gly Ser Cys
115 120 125

Ala Glu Val Phe Asn Ala Tyr Leu Pro Val His Asn Lys Tyr Ile Gly
130 135 140

Val Ser Arg Lys Ile Tyr His Gly Thr Val Asp Ser Val Ala Lys Ile
145 150 155 160

Tyr Glu Ala Lys Pro Glu Ile Lys Lys Gln Glu Glu Ser Phe Phe Ala
165 170 175

Tyr Cys Ala Lys Lys Ala Leu Gly Ala Asn Gly Lys Glu Gly Tyr Lys
180 185 190

Lys Ile Arg Asp Tyr Glu Leu Ala Asp Ser Ala Glu Phe Arg Asn Ala
195 200 205

Met Asp Cys Val Phe Arg Gly Phe Arg Tyr Met Asp Asp Ser Gly Leu
210 215 220

Lys Val Asp Glu Val Val Arg Asp Phe Asn Leu Ile Asn Lys Ser Asp
225 230 235 240

Leu Glu Pro Glu Val Arg Ser Val Leu Ala Ser Cys Thr Gly Thr His
245 250 255

Ala Tyr Asp Tyr Tyr Ser Cys Leu Leu Asn Ser Ser Val Lys Glu Asp
260 265 270

Phe Arg Asn Ala Phe Tyr Phe His Glu Leu Arg Ser Ala Asn Tyr Gly
275 280 285

Tyr Leu Ala Met Gly Lys Val Tyr Glu Gly Pro Glu Lys Val Lys Glu
290 295 300

Glu Leu Lys Lys Leu Asn Tyr
305 310

<210> 75

<211> 76

<212> PRT

<213> Anopheles gambiae

<400> 75

Met Cys Lys Phe Tyr Arg Leu Ile Ser Thr Leu Leu Val Val Val Val
1 5 10 15

Ile Ala Pro Arg His Gln Cys Ser Pro Phe Phe Phe Gln Tyr Asn Arg
20 25 30

Pro Tyr Leu Ser Gln Pro Ser Ser Gln Leu Ala Ser Thr Ala Ala Asn
35 40 45

Val Val Gln Arg Ser Asn Val Thr Val Ala Leu Gly Asn Arg Ile Asn
50 55 60

Thr Asp Thr Ala Leu Asp Asp Tyr Gly Thr Arg Val
65 70 75

<210> 76

<211> 131

<212> PRT

<213> Anopheles gambiae

<400> 76

Met Gly Arg Val Arg Thr Lys Thr Ile Lys Lys Ala Ser Lys Val Ile
1 5 10 15

Ile Glu Lys Tyr Tyr Thr Arg Leu Thr Met Asp Phe Asp Thr Asn Lys
20 25 30

Arg Ile Val Glu Glu Val Ala Ile Ile Pro Thr Lys Pro Leu Arg Asn
35 40 45

Lys Ile Ala Gly Phe Val Thr His Leu Met Lys Arg Leu Arg His Ser
50 55 60

Gln Val Arg Gly Ile Ser Ile Lys Leu Gln Glu Glu Glu Arg Glu Arg
65 70 75 80

Arg Asp Asn Tyr Val Pro Asp Val Ser Ala Leu Glu Gln Asp Ile Ile
85 90 95

Glu Val Asp Pro Glu Thr Lys Glu Met Leu Lys His Leu Asp Phe Asn
100 105 110

Asn Ile Val Val Gln Leu Thr Asn Pro Thr Ala Pro Gly Tyr Ser Asn
115 120 125

Arg Arg Asn
130

<210> 77

<211> 145

<212> PRT

<213> Anopheles gambiae

<400> 77

Met His Ala Lys Pro Ala Phe Val Leu Ile Ala Leu Gly Val Ile Cys
1 5 10 15

Leu Leu Gln Thr Thr Pro Thr Ser Ala Ser Thr Asn His Val Gln Gln
20 25 30

Leu Met Lys Val Phe Arg Ser Met Thr Gln Asn Phe Asp Tyr Thr Lys
35 40 45

Lys Pro Ser Tyr Leu Gln Arg Ala Lys Tyr Gly Val Gln Asn Gln Leu
50 55 60

Arg Asn Pro Leu Val Gln Lys Ala Gly Asn Leu Pro Lys Ser Ala Lys
65 70 75 80

Leu Ser Asp Gly Cys Leu Lys Gln Met Val Ala Arg Val Thr Asp Leu
85 90 95

Glu Ala Ser Phe Tyr Ala Ser Phe Ser Tyr Asn Cys His Asp His Asp
100 105 110

Gln Tyr Ser Met Glu Cys Leu Glu Ala Ala Glu Pro Lys Tyr Leu Asp
115 120 125

Gly Leu Lys Thr Leu Ala Asp Glu Thr Ala Gln Cys Met Arg Asp Gln
130 135 140

Gln
145

<210> 78

<211> 148

<212> PRT

<213> Anopheles gambiae

<400> 78

Met Pro Lys Asn Lys Gly Lys Gly Gly Lys Asn Arg Arg Arg Gly Lys
1 5 10 15

Asn Glu Asn Glu Ser Glu Lys Arg Glu Leu Ile Phe Lys Glu Asp Glu
20 25 30

Gln Glu Tyr Ala Gln Val Thr Lys Met Leu Gly Asn Gly Arg Leu Glu
35 40 45

Ala Met Cys Phe Asp Gly Val Lys Arg Leu Cys His Ile Arg Gly Lys
50 55 60

Leu Arg Lys Lys Val Trp Ile Asn Gln Gly Asp Ile Ile Leu Ile Gly
65 70 75 80

Leu Arg Asp Tyr Gln Asp Ser Lys Ala Asp Val Ile Leu Lys Tyr Thr
85 90 95

Pro Asp Glu Ala Arg Asn Leu Lys Thr Tyr Gly Glu Phe Pro Glu Ser
100 105 110

Val Arg Ile Asn Glu Thr Val Thr Phe Val Glu Asn Asp Met Asp Asp
115 120 125

Asp Ile Glu Phe Gly Asp Asp Tyr Ser Ser Ser Glu Glu Gly Asp Ala
130 135 140

Ile Asp Ala Ile
145

<210> 79

<211> 168

<212> PRT

<213> Anopheles gambiae

<400> 79

Met Lys Leu Phe Leu Thr Leu Leu Ser Thr Leu Ser Val Ala Met Val
1 5 10 15

Phe Ala Leu Pro Ala His His His Ser Arg Gly Gly Asp Gly Ser Ser
20 25 30

Ala Asn Ser Thr Gly Asn Ser Asp Asn Asn Ser Ala Gly Val Pro Asp
35 40 45

Phe Gly Phe Asn Ser Gln Ser Asn Val Pro Gly Phe Gly Asn Gly Gln
50 55 60

Gln Pro Gly Gln Gln Gln Gln Gly Gln Gln Gly Gln Gly Phe Pro Phe
65 70 75 80

Phe Gly Gln Gly Gln Ser Gly Phe Pro Ser Phe Gly Asn Arg Leu Gln
85 90 95

Pro Phe Phe Gly Gln Asn Gln Gln Gly Gln Asp Gly Asp Ala Gln Gln
100 105 110

Gly Arg Gly Val Pro Phe Phe Gly Gln Gly Gly Gly Gln Gly Gly Ile
115 120 125

Pro Ser Phe Gly Ser Gly Gln Gln Asn Gly Gly Val Pro Phe Leu Gly
130 135 140

Asn Gly Gln Gly Gln Ser Gly Phe Pro Ser Phe Gly Asn Gly Gln Gln
145 150 155 160

Gly Gly Asn Phe Pro Phe Phe Gly
165

<210> 80

<211> 166

<212> PRT

<213> Anopheles gambiae

<400> 80

Met Lys Leu Tyr Ala Phe Ala Leu Val Leu Cys Val Gly Leu Ala Val
1 5 10 15

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

Gln Leu Asp Glu Leu Gln Leu Ala Asp Lys Pro Glu Ala Pro Val Asp
35 40 45

Asp Ala Glu Gln Pro Leu Pro Pro Asn Gly Asp Glu Leu Pro Glu Asp
50 55 60

Ala Pro Glu Pro Val Pro Glu Asp Gly Ser Pro Asp Glu Glu His Leu
65 70 75 80

Glu Glu Glu Gln Glu Glu Glu Ala Glu Ala Asp Glu Glu Glu Ala Asp
85 90 95

Glu Ser Glu Ser Glu Glu Ser Glu Glu Ser Asp Glu Leu Glu Glu Ala
100 105 110

Arg Leu Val Ala Glu Glu Leu Glu Glu Arg Gln Gln Glu Leu Asp Tyr
115 120 125

Leu Lys Arg Tyr Leu Val Gly Arg Leu Gln Ala Val Ala Ile Leu Asp
130 135 140

Arg Arg Val Arg Pro Ala Val Ile Arg Arg Pro Trp Ile Arg Arg Pro
145 150 155 160

Trp Ile Arg Arg Pro Gly
165

<210> 81

<211> 165

<212> PRT

<213> Anopheles gambiae

<400> 81

Met Ile Arg Gln Val Ile Ile Ser Tyr Phe Leu Thr Val Cys Leu Leu
1 5 10 15

Ala Leu Val Gln Ser Glu Thr Val Gln Asp Cys Glu Asn Lys Leu Pro
20 25 30

Pro Ser Leu Lys Ser Arg Leu Cys Glu Ile Arg Arg Tyr Glu Ile Ile
35 40 45

Glu Gly Pro Glu Met Asp Lys His Ile His Cys Val Met Arg Ala Leu
50 55 60

Asp Phe Val Tyr Glu Asp Gly Arg Gly Asp Tyr His Lys Leu Tyr Asp
65 70 75 80

Pro Leu Asn Ile Ile Glu Leu Asp Lys Arg His Asp Val Asn Leu Glu
85 90 95

Lys Cys Ile Gly Glu Cys Val Gln Val Pro Thr Ser Glu Arg Ala His
100 105 110

Val Phe Tyr Lys Cys Leu Leu Lys Ser Thr Thr Gly Arg Thr Phe Lys
115 120 125

Lys Val Phe Asp Leu Met Glu Leu Lys Lys Ala Gly Lys Val Pro Gln
130 135 140

His Gln Arg Tyr Thr Ala Glu Phe Val Gln Ile Met Lys Asp Tyr Asp
145 150 155 160

Lys Ala Leu Asn Cys
165

<210> 82

<211> 224

<212> PRT

<213> Anopheles gambiae

<400> 82

Met Glu Ala Ile Ser Glu Ala Leu Gln Pro Tyr Lys Glu Gln Val Gly
1 5 10 15

Met Ala Ala Gly Ile Leu Thr Val Gly Gln Met Phe Ser Gly Cys Phe
20 25 30

Val Cys Asn Asp Ile Arg Lys Lys Gly Thr Thr Asp Gly Phe Ser Ala
35 40 45

Met Pro Phe Val Gly Gly Cys Gly Leu Thr Val Leu Phe Leu Gln His
50 55 60

Gly Met Leu Met Asn Asp Ser Ala Met Thr Asn Ala Asn Leu Val Gly
65 70 75 80

Leu Thr Ile Ser Leu Ala Tyr Ala Ile Phe Phe Leu Leu Tyr Thr Pro
85 90 95

Pro Thr Gly Arg Ser Ser Tyr Trp Arg Gln Val Gly Gly Thr Ala Leu
100 105 110

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

Val Glu Asp Arg Phe Gly Met Ile Ile Thr Val Leu Met Leu Ala Leu
130 135 140

Ile Gly Gln Pro Leu Phe Gly Leu Pro Asp Ile Ile Arg Arg Lys Ser
145 150 155 160

Thr Glu Gly Leu Pro Phe Ala Met Ile Leu Ser Gly Thr Ile Val Gly
165 170 175

Leu Ser Trp Leu Leu Tyr Gly Val Ile Leu Asn Asn Val Phe Val Val
180 185 190

Cys Gln Asn Leu Ala Ala Val Thr Leu Ser Gly Ile Gln Leu Ala Leu
195 200 205

Phe Ala Ile Tyr Pro Ser Lys Ala Ala Pro Pro Ser Lys Lys Arg Glu
210 215 220

<210> 83

<211> 228

<212> PRT

<213> Anopheles gambiae

<400> 83

Met Glu Ser Ile Ala Val Ala Leu Gln Pro Tyr Lys Asp Thr Val Gly
1 5 10 15

Leu Thr Ala Ala Ile Val Thr Val Val Gln Phe Phe Ser Gly Val Leu
20 25 30

Ala Leu Asn Ala Ile Arg Arg Gln Gly Asn Thr Arg Gly Phe Ser Ala
35 40 45

Leu Pro Phe Leu Gly Gly Thr Val Phe Cys Leu Leu Asn Ile Gln Phe
50 55 60

Gly Gln Met Leu Arg Asp Asp Gly Met Ile Arg Val Asn Phe Ile Gly
65 70 75 80

Leu Ala Leu Asn Leu Leu Tyr Val Cys Gly Phe Tyr Leu Tyr Thr Glu
85 90 95

Gly Pro Ala Lys Thr Ala Val Trp Gly Gln Ile Gly Leu Ala Gly Ala
100 105 110

Leu Thr Ala Gly Val Leu Ser Tyr Val Gln Tyr Glu Asp Pro Gln Leu
115 120 125

Val Glu Phe Arg Phe Gly Leu Ile Leu Thr Gly Leu Leu Trp Thr Leu
130 135 140

Val Gly Met Pro Leu Leu Gly Leu Gly Asp Ile Leu Lys Lys Lys Ser
145 150 155 160

Thr Glu Gly Leu Pro Phe Pro Ile Ile Phe Leu Gly Ala Val Val Ser
165 170 175

Phe Ala Trp Leu Leu Tyr Gly Ile Ile Leu Arg Ser Asn Phe Leu Val
180 185 190

Val Gln Asn Leu Met Ala Leu Ala Leu Ser Ala Val Gln Leu Ser Leu
195 200 205

Phe Ile Ile Phe Pro Ser Gly Ala Ala Lys Pro Pro Pro Thr Pro Ala
210 215 220

Lys Lys Arg Asn
225

<210> 84

<211> 229

<212> PRT

<213> Anopheles gambiae

<400> 84

Met Asp Gly Ile Met Ser Lys Gly Ser Leu Ala Ser Leu Ala Thr Val
1 5 10 15

Ala Thr Val Leu Gln Phe Leu Thr Gly Thr Val Ile Cys Asn Arg Tyr
20 25 30

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

Gly Phe Leu Ser Cys Phe Met Trp Leu Lys Tyr Gly Val Leu Thr Glu
50 55 60

Glu Ser Thr Leu Ile Leu Val Asn Phe Ile Gly Ser Ala Leu Phe Phe
65 70 75 80

Ser Tyr Thr Val Val Phe Phe Ile Phe Cys Val Asn Lys Arg Glu Val
85 90 95

Ile Arg Gln Met Met Val Ile Ser Cys Ile Ile Leu Ser Ala Thr Leu
100 105 110

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

Leu Leu Cys Cys Cys Leu Ala Val Leu Phe Phe Ala Ser Pro Leu Thr
130 135 140

Met Leu Ala His Val Ile Arg Thr Gln Asn Thr Asp Ser Leu Pro Phe
145 150 155 160

Pro Ile Ile Met Ala Ser Phe Phe Val Cys Leu Leu Trp Thr Ala Tyr
165 170 175

Gly Val Leu Ile Gly Asp Arg Phe Ile Gln Ile Pro Asn Leu Leu Gly
180 185 190

Gly Ile Leu Ala Gly Ile Gln Leu Thr Leu Tyr Val Ile Tyr Pro Lys
195 200 205

Lys Lys Ala Ser Phe Ser Gly Gly Pro Arg Tyr Ser Pro Leu Val Ser
210 215 220

Glu Asn Pro Ile Leu
225

<210> 85

<211> 115

<212> PRT

<213> Anopheles gambiae

<400> 85

Met Ala Ile Arg Val Glu Leu Leu Leu Ala Met Val Leu Leu Pro Leu
1 5 10 15

Leu Leu Leu Glu Ser Val Val Pro Tyr Ala Ala Ala Glu Lys Val Trp
20 25 30

Val Asp Arg Asp Lys Val Tyr Cys Gly His Leu Asp Cys Thr Arg Val
35 40 45

Ala Thr Phe Lys Gly Glu Arg Phe Cys Thr Leu Cys Asp Thr Arg His
50 55 60

Phe Cys Glu Cys Lys Glu Thr Arg Glu Pro Leu Pro Tyr Met Tyr Ala
65 70 75 80

Cys Pro Gly Thr Glu Pro Cys Gln Ser Ser Asp Arg Leu Gly Ser Cys
85 90 95

Ser Lys Ser Met His Asp Val Leu Cys Asp Arg Ile Asp Gln Ala Phe
100 105 110

Leu Glu Gln
115

<210> 86

<211> 35

<212> PRT

<213> Artificial sequence

<220>

<223> Immunogenic polypeptide

<400> 86

Met His Leu Thr Leu Phe Thr Val Ala Val Leu Leu Leu Ala Ala Ala
1 5 10 15

Ala Leu Leu Leu Leu Leu Pro Pro Ala Tyr Ser Thr Thr Leu Thr Pro
20 25 30

Pro Ala Pro
35

<210> 87

<211> 28

<212> PRT

<213> Artificial sequence

<220>

<223> Immunogenic polypeptide

<400> 87

Met Pro Leu Ser Tyr Cys His Leu Phe Leu Thr His Thr Leu Ala Arg
1 5 10 15

Ala Leu Ser Phe Ser Arg Ser Asp Cys Leu Lys Phe
20 25

<210> 88

<211> 27

<212> PRT

<213> Artificial sequence

<220>

<223> Immunogenic polypeptide

<400> 88

Met Lys Asn Val Phe Phe Ala Leu Leu Leu Val Val Leu Val Cys Cys
1 5 10 15

Leu Val Ser Val Gln Gly Asn Glu Ile Ile Gln
20 25

<210> 89

<211> 31

<212> PRT

<213> Artificial sequence

<220>

<223> Immunogenic polypeptide

<400> 89

Gly Ile Lys Leu Leu Val Leu Leu Ile Cys Leu Phe Phe Tyr His Thr
1 5 10 15

His Cys Thr Thr Ala Tyr Leu Trp Leu Ala Met Gly Val Glu Ala
20 25 30

<210> 90

<211> 28

<212> PRT

<213> Artificial sequence

<220>

<223> Immunogenic polypeptide

<400> 90

Met Phe Leu Lys Gly Ser Phe Pro Arg Phe Gln Met Cys Val Met Leu
1 5 10 15

Ile Gly Phe Phe Ser Ser Ala Lys Cys Leu Met Cys
20 25

<210> 91

<211> 33

<212> PRT

<213> Artificial sequence

<220>

<223> Immunogenic polypeptide

<400> 91

Lys Gln Asn Asp Tyr Gln Ala Leu Leu Gly Leu Cys Cys Pro Trp Ile
1 5 10 15

Asp Leu Ala Ala Ala Asp Leu Pro Met Arg Arg His Ala Lys Ala Arg
20 25 30

Glu

<210> 92

<211> 35

<212> PRT

<213> Artificial sequence

<220>

<223> Immunogenic polypeptide

<400> 92

Met Lys Phe Tyr Ser Val Gly Lys Leu Val Lys Val Leu Leu Val Met
1 5 10 15

Ala Val Cys Cys Leu Leu Leu Cys Thr Ala Pro Thr Gly Ala Asp Pro
20 25 30

Leu Pro Gly
35

<210> 93

<211> 32

<212> PRT

<213> Artificial sequence

<220>

<223> Immunogenic polypeptide

<400> 93

Met Lys Phe Ala Phe Ala Phe Val Leu Ile Ala Leu Phe Ala Val Phe
1 5 10 15

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

<210> 94

<211> 25

<212> PRT

<213> Artificial sequence

<220>

<223> Immunogenic polypeptide

<400> 94

Ser Asn Asp Gly Ala Ser Ala Ile Thr Lys Ile Val Leu Glu Leu Thr
1 5 10 15

Pro Glu Gln Ala Ala Ala Val Gln Lys
20 25

<210> 95

<211> 37

<212> PRT

<213> Artificial sequence

<220>

<223> Immunogenic polypeptide

<400> 95

Ala Ile Thr Leu Phe Ile Phe Leu Val Cys Cys Gln Ile Pro Leu Phe
1 5 10 15

Gly Ile Met Ser Ser Asp Ser Ala Asp Pro Phe Tyr Trp Ile Arg Val
20 25 30

Ile Leu Ala Ser Asn
35

<210> 96

<211> 25

<212> PRT

<213> Artificial sequence

<220>

<223> Immunogenic polypeptide

<400> 96

Met Gly Arg Val Met Cys Leu Leu Arg Leu Met Ser Thr Leu Leu Val
1 5 10 15

Val Leu Ser Ile Val Gly Lys Lys Thr
20 25

<210> 97

<211> 42

<212> PRT

<213> Artificial sequence

<220>

<223> Immunogenic polypeptide

<400> 97

Met Lys Leu Tyr Ser Gly Tyr Arg Leu Leu Val Leu Leu Val Met Thr
1 5 10 15

Val Cys Cys Leu Leu Leu Phe Ile Ala Pro Thr Gly Ala Asp Pro Leu
20 25 30

Pro Gly Gln Thr Gln Arg Thr Leu Gly Tyr
35 40

<210> 98

<211> 39

<212> PRT

<213> Artificial sequence

<220>

<223> Immunogenic polypeptide

<400> 98

Cys Lys Met Tyr Cys Val Ile Lys Gly Lys Thr Gly Gly Tyr Cys Asn
1 5 10 15

Ser Glu Gly Leu Cys Thr Cys Arg Ala Glu Asp Leu His Phe Leu Leu
20 25 30

Lys Pro Ile Ile Asn Lys Asp
35

<210> 99

<211> 40

<212> PRT

<213> Artificial sequence

<220>

<223> Immunogenic polypeptide

<400> 99

Thr Val Asn Ala Glu Asp Pro Arg Thr Glu Leu Ile Gly Cys Gly Ser
1 5 10 15

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

Phe Ala Val Cys Lys Arg Ser Asn
35 40

<210> 100

<211> 41

<212> PRT

<213> Artificial sequence

<220>

<223> Immunogenic polypeptide

<400> 100

Cys Val Ala Leu Ile Gly Leu Leu Leu Cys Ser Val Gln Ser Val Thr
1 5 10 15

Ala Asn Asp Pro Val Asp Ala Leu Gly Ala Cys Ser Gly Asn Leu Phe
20 25 30

Gly Leu Leu Met Thr Arg Leu Gln Gln
35 40

<210> 101

<211> 34

<212> PRT

<213> Artificial sequence

<220>

<223> Immunogenic polypeptide

<400> 101

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

Val Val Val Gln Ser Ala Pro Gln Tyr Ala Arg Gly Asp Val Pro Thr
20 25 30

Tyr Asp

<210> 102

<211> 42

<212> PRT

<213> Artificial sequence

<220>

<223> Immunogenic polypeptide

<400> 102

Met Lys Ser Met Leu Val Ala Phe Ala Thr Leu Ser Val Ala Leu Val
1 5 10 15

Val Val Val Ala Ile Pro Ala Asn Phe Asn Tyr Gly Gly Gly Gly Gly
20 25 30

Tyr Phe Ile Asn Gly Thr Gly Gln Ser Phe
35 40

<210> 103

<211> 34

<212> PRT

<213> Artificial sequence

<220>

<223> Immunogenic polypeptide

<400> 103

Asn Ala Ile Tyr Glu Lys Leu Pro Ala Tyr Leu Ser Glu Val Ser Ala
1 5 10 15

Arg Val Asn Val Leu Gln Val Ser Leu Gln His Asp Leu Pro Asn Leu
20 25 30

Gln Glu

<210> 104

<211> 34

<212> PRT

<213> Artificial sequence

<220>

<223> Immunogenic polypeptide

<400> 104

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

Trp Phe Met Ala Trp Thr Pro Tyr Leu Val Ile Asn Phe Thr Gly Ile
20 25 30

Phe Lys

<210> 105

<211> 35

<212> PRT

<213> Artificial sequence

<220>

<223> Immunogenic polypeptide

<400> 105

Gly Asp Leu Leu Pro Ala Lys Val Ile Pro Asp Lys Thr Ala Ala Tyr
1 5 10 15

Val Ala Tyr Gly Gly Gln Glu Thr Leu Val Glu His Val Glu Val Leu
20 25 30

Val His Lys
35

<210> 106

<211> 31

<212> PRT

<213> Artificial sequence

<220>

<223> Immunogenic polypeptide

<400> 106

Asn Thr Phe Tyr Thr Cys Phe Leu Gly Thr Ser Ser Leu Ala Gly Phe
1 5 10 15

Lys Asn Ala Val Asp Tyr Asp Glu Leu Leu Lys Ala Gly Lys Met
20 25 30

<210> 107

<211> 35

<212> PRT

<213> Artificial sequence

<220>

<223> Immunogenic polypeptide

<400> 107

Gln Cys Val Leu Glu Val Leu Gly Phe Val Glu Asp Asn Gly Glu Leu
1 5 10 15

Val Phe Gln Glu Leu Leu Gly Val Leu Lys Met Val Asp Pro Asp Gly
20 25 30

Asp His Ala
35

<210> 108

<211> 49

<212> PRT

<213> Artificial sequence

<220>

<223> Immunogenic polypeptide

<400> 108

Arg Arg Lys Leu Thr Pro Thr Val Val Val Leu Leu Cys Leu Thr
1 5 10 15

Phe Val Ala Asp Ala Leu Thr Ile Gln Glu Leu Arg Ala Gln Ile Ala
20 25 30

Gln Gln Arg Ile Gln Gln Arg Tyr Gly Val Thr Val Ala Thr Thr Ser
35 40 45

Ala

<210> 109

<211> 42

<212> PRT

<213> Artificial sequence

<220>

<223> Immunogenic polypeptide

<400> 109

Cys Ser Ser Leu Ser Asp Tyr Gly Leu Ile Glu Leu Lys Glu His Cys
1 5 10 15

Leu Glu Cys Cys Gln Lys Asp Thr Glu Ala Asp Ser Lys Leu Lys Val
20 25 30

Tyr Pro Ala Ala Val Leu Glu Val Cys Thr
35 40

<210> 110

<211> 41

<212> PRT

<213> Artificial sequence

<220>

<223> Immunogenic polypeptide

<400> 110

Ala Ile Thr Tyr Ile Cys Phe Ile Leu His Gly Val Ser Glu Ile Ile
1 5 10 15

Pro Gln Gln Gln Lys Lys Thr Met Lys Phe Leu Leu Leu Val Ala Ser
20 25 30

Val Leu Cys Leu Val Leu Ile Val Ser
35 40

<210> 111

<211> 24

<212> PRT

<213> Artificial sequence

<220>

<223> Immunogenic polypeptide

<400> 111

Glu Trp Arg Tyr Phe Val Val Ile Ala Leu Ile Cys Pro Leu Ile Ile
1 5 10 15

Val Glu Thr Leu Ala Val Ser Asp
20

<210> 112

<211> 40

<212> PRT

<213> Artificial sequence

<220>

<223> Immunogenic polypeptide

<400> 112

Gln Leu Leu Leu Leu Tyr Leu Asp Ala Ala Asp Leu Arg Arg Ala Leu
1 5 10 15

His Gln Tyr Gln Leu Leu Ala Ala Gln Gly Asp Arg His Leu Pro Gln
20 25 30

Gln Ile Val Lys Phe Val Tyr Ala
35 40

<210> 113

<211> 41

<212> PRT

<213> Artificial sequence

<220>

<223> Immunogenic polypeptide

<400> 113

Arg Lys Val Leu Leu Thr Pro Ala Leu Gln Ala Tyr Ile Met Asp Glu
1 5 10 15

His Asn Leu Asn Arg Ser Asn Ile Ala Leu Gly Arg Ile Arg Pro Tyr
20 25 30

Pro Ser Ala Val Lys Met Pro Thr Leu
35 40

<210> 114

<211> 31

<212> PRT

<213> Artificial sequence

<220>

<223> Immunogenic polypeptide

<400> 114

Asp Gly Val Leu Lys Gly Glu Thr His Lys Ala Leu Lys Leu Lys Asp
1 5 10 15

Gly Gly His Tyr Leu Val Glu Phe Lys Ser Ile Tyr Met Ala Lys
20 25 30

<210> 115

<211> 44

<212> PRT

<213> Artificial sequence

<220>

<223> Immunogenic polypeptide

<400> 115

Ala Leu Val Leu His Ser Met Leu Val Asn Ala Ser Leu Ala Glu Met
1 5 10 15

Val Lys Glu Ser Tyr Gln Thr His Gly Ala Asp Gly Arg Met Val Val
20 25 30

Arg Met Leu Lys Phe Val Arg Leu Leu Pro Gly Ala
35 40

<210> 116

<211> 36

<212> PRT

<213> Artificial sequence

<220>

<223> Immunogenic polypeptide

<400> 116

Val Gln Arg Val Arg Ala Leu Arg Ala Leu Leu Glu Thr Leu Leu Gln
1 5 10 15

His Gln Gly Glu Gln Asn Asn Asp Val Tyr Leu Ile Arg Leu Ala His
20 25 30

Glu Thr Gly Arg
35

<210> 117

<211> 41

<212> PRT

<213> Artificial sequence

<220>

<223> Immunogenic polypeptide

<400> 117

Val Asn Glu Leu Gln Gln Ala Leu Ser Ser Leu Asn Ala Gly Ser Gly
1 5 10 15

Ser Cys Ala Glu Val Phe Asn Ala Tyr Leu Pro Val His Asn Lys Tyr
20 25 30

Ile Gly Val Ser Arg Lys Ile Tyr His
35 40

<210> 118

<211> 37

<212> PRT

<213> Artificial sequence

<220>

<223> Immunogenic polypeptide

<400> 118

Met Cys Lys Phe Tyr Arg Leu Ile Ser Thr Leu Leu Val Val Val Val
1 5 10 15

Ile Ala Pro Arg His Gln Cys Ser Pro Phe Phe Phe Gln Tyr Asn Arg
20 25 30

Pro Tyr Leu Ser Gln
35

<210> 119

<211> 40

<212> PRT

<213> Artificial sequence

<220>

<223> Immunogenic polypeptide

<400> 119

Arg Asp Asn Tyr Val Pro Asp Val Ser Ala Leu Glu Gln Asp Ile Ile
1 5 10 15

Glu Val Asp Pro Glu Thr Lys Glu Met Leu Lys His Leu Asp Phe Asn
20 25 30

Asn Ile Val Val Gln Leu Thr Asn
35 40

<210> 120

<211> 32

<212> PRT

<213> Artificial sequence

<220>

<223> Immunogenic polypeptide

<400> 120

His Asp Gln Tyr Ser Met Glu Cys Leu Glu Ala Ala Glu Pro Lys Tyr
1 5 10 15

Leu Asp Gly Leu Lys Thr Leu Ala Asp Glu Thr Ala Gln Cys Met Arg
20 25 30

<210> 121

<211> 36

<212> PRT

<213> Artificial sequence

<220>

<223> Immunogenic polypeptide

<400> 121

Glu Gln Glu Tyr Ala Gln Val Thr Lys Met Leu Gly Asn Gly Arg Leu
1 5 10 15

Glu Ala Met Cys Phe Asp Gly Val Lys Arg Leu Cys His Ile Arg Gly
20 25 30

Lys Leu Arg Lys
35

<210> 122

<211> 29

<212> PRT

<213> Artificial sequence

<220>

<223> Immunogenic polypeptide

<400> 122

Met Lys Leu Phe Leu Thr Leu Leu Ser Thr Leu Ser Val Ala Met Val
1 5 10 15

Phe Ala Leu Pro Ala His His His Ser Arg Gly Gly Asp
20 25

<210> 123

<211> 37

<212> PRT

<213> Artificial sequence

<220>

<223> Immunogenic polypeptide

<400> 123

Ser Asp Glu Leu Glu Glu Ala Arg Leu Val Ala Glu Glu Leu Glu Glu
1 5 10 15

Arg Gln Gln Glu Leu Asp Tyr Leu Lys Arg Tyr Leu Val Gly Arg Leu
20 25 30

Gln Ala Val Ala Ile
35

<210> 124

<211> 23

<212> PRT

<213> Artificial sequence

<220>

<223> Immunogenic polypeptide

<400> 124

Ile Ile Ser Tyr Phe Leu Thr Val Cys Leu Leu Ala Leu Val Gln Ser
1 5 10 15

Glu Thr Val Gln Asp Cys Glu
20

<210> 125

<211> 35

<212> PRT

<213> Artificial sequence

<220>

<223> Immunogenic polypeptide

<400> 125

Asp Ser Ala Met Thr Asn Ala Asn Leu Val Gly Leu Thr Ile Ser Leu
1 5 10 15

Ala Tyr Ala Ile Phe Phe Leu Leu Tyr Thr Pro Pro Thr Gly Arg Ser
20 25 30

Ser Tyr Trp
35

<210> 126

<211> 40

<212> PRT

<213> Artificial sequence

<220>

<223> Immunogenic polypeptide

<400> 126

Val Val Ser Phe Ala Trp Leu Leu Tyr Gly Ile Ile Leu Arg Ser Asn
1 5 10 15

Phe Leu Val Val Gln Asn Leu Met Ala Leu Ala Leu Ser Ala Val Gln
20 25 30

Leu Ser Leu Phe Ile Ile Phe Pro
35 40

<210> 127

<211> 40

<212> PRT

<213> Artificial sequence

<220>

<223> Immunogenic polypeptide

<400> 127

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

Leu Lys Tyr Gly Val Leu Thr Glu Glu Ser Thr Leu Ile Leu Val Asn
20 25 30

Phe Ile Gly Ser Ala Leu Phe Phe
35 40

<210> 128

<211> 28

<212> PRT

<213> Artificial sequence

<220>

<223> Immunogenic polypeptide

<400> 128

Val Ile Gly Leu Leu Cys Cys Cys Leu Ala Val Leu Phe Phe Ala Ser
1 5 10 15

Pro Leu Thr Met Leu Ala His Val Ile Arg Thr Gln
20 25

<210> 129

<211> 30

<212> PRT

<213> Artificial sequence

<220>

<223> Immunogenic polypeptide

<400> 129

Val Glu Leu Leu Leu Ala Met Val Leu Leu Pro Leu Leu Leu Leu Glu
1 5 10 15

Ser Val Val Pro Tyr Ala Ala Ala Glu Lys Val Trp Val Asp
20 25 30

<210> 130

<400> 130

000

<210> 131

<211> 510

<212> PRT

<213> Artificial sequence

<220>

<223> Immunogenic polypeptide

<400> 131

Phe Leu Lys Gly Ser Phe Pro Arg Phe Gln Met Cys Val Met Leu Ile
1 5 10 15

Gly Phe Phe Ser Ser Ala Lys Cys Leu Phe Tyr Ser Val Gly Lys Leu
20 25 30

Val Lys Val Leu Leu Val Met Ala Val Cys Cys Leu Leu Leu Cys Thr
35 40 45

Ala Pro Thr Gly Ala Asp Pro Leu Met Lys Phe Ala Phe Ala Phe Val
50 55 60

Leu Ile Ala Leu Phe Ala Val Phe Ala Val Ser Gln Ala Leu Pro Gln
65 70 75 80

Pro Glu Gln Ala Ala Ala Gly Arg Val Met Cys Leu Leu Arg Leu Met
85 90 95

Ser Thr Leu Leu Val Val Leu Ser Ile Val Gly Lys Leu Tyr Ser Gly
100 105 110

Tyr Arg Leu Leu Val Leu Leu Val Met Thr Val Cys Cys Leu Leu Leu
115 120 125

Phe Ile Ala Pro Thr Gly Ala Asp Pro Leu Pro Gly Gln Thr Gln Arg
130 135 140

Thr Leu Ala Leu Ile Gly Leu Leu Leu Cys Ser Val Gln Ser Val Thr
145 150 155 160

Ala Asn Asp Pro Val Asp Ala Leu Gly Ala Cys Ser Gly Asn Leu Phe
165 170 175

Gly Leu Leu Met Thr Arg Leu Ser Lys Leu Phe Val Leu Ala Phe Leu
180 185 190

Cys Leu Ala Leu Val Val Val Val Gln Ser Ala Pro Gln Tyr Ala Arg
195 200 205

Gly Asp Val Pro Thr Leu Leu Pro Ala Lys Val Ile Pro Asp Lys Thr
210 215 220

Ala Ala Tyr Val Ala Tyr Gly Gly Gln Glu Thr Leu Val Glu His Val
225 230 235 240

Glu Val Leu Val Arg Tyr Phe Val Val Ile Ala Leu Ile Cys Pro Leu
245 250 255

Ile Ile Val Glu Thr Leu Ala Val Val Leu Leu Thr Pro Ala Leu Gln
260 265 270

Ala Tyr Ile Met Asp Glu His Asn Leu Asn Arg Ser Asn Ile Ala Leu
275 280 285

Gly Arg Ile Arg Pro Tyr Pro Ser Ala Val Lys Met Pro Val Leu His
290 295 300

Ser Met Leu Val Asn Ala Ser Leu Ala Glu Met Val Lys Glu Ser Tyr
305 310 315 320

Gln Thr His Gly Ala Asp Gly Arg Met Val Val Arg Met Leu Lys Phe
325 330 335

Val Arg Leu Leu Pro Arg Val Arg Ala Leu Arg Ala Leu Leu Glu Thr
340 345 350

Leu Leu Gln His Gln Gly Glu Gln Asn Asn Asp Val Tyr Leu Ile Arg
355 360 365

Leu Ala His Glu Thr Glu Leu Gln Gln Ala Leu Ser Ser Leu Asn Ala
370 375 380

Gly Ser Gly Ser Cys Ala Glu Val Phe Asn Ala Tyr Leu Pro Val His
385 390 395 400

Asn Lys Tyr Ile Gly Val Ser Arg Lys Ile Gln Tyr Ser Met Glu Cys
405 410 415

Leu Glu Ala Ala Glu Pro Lys Tyr Leu Asp Gly Leu Lys Thr Leu Ala
420 425 430

Asp Glu Thr Ala Gln Cys Ser Phe Ala Trp Leu Leu Tyr Gly Ile Ile
435 440 445

Leu Arg Ser Asn Phe Leu Val Val Gln Asn Leu Met Ala Leu Ala Leu
450 455 460

Ser Ala Val Gln Leu Ser Leu Phe Ile Ile Ala Phe Pro Phe Ile Ser
465 470 475 480

Gly Phe Leu Ser Cys Phe Met Trp Leu Lys Tyr Gly Val Leu Thr Glu
485 490 495

Glu Ser Thr Leu Ile Leu Val Asn Phe Ile Gly Ser Ala Leu
500 505 510

<210> 132

<211> 864

<212> PRT

<213> Artificial sequence

<220>

<223> Immunogenic polypeptide

<400> 132

His Leu Thr Leu Phe Thr Val Ala Val Leu Leu Leu Ala Ala Ala Ala
1 5 10 15

Leu Leu Leu Leu Leu Pro Pro Ala Tyr Ser Thr Thr Leu Thr Pro Pro
20 25 30

Pro Leu Ser Tyr Cys His Leu Phe Leu Thr His Thr Leu Ala Arg Ala
35 40 45

Leu Ser Phe Ser Arg Ser Asp Cys Leu Lys Asn Val Phe Phe Ala Leu
50 55 60

Leu Leu Val Val Leu Val Cys Cys Leu Val Ser Val Gln Gly Asn Glu
65 70 75 80

Ile Lys Leu Leu Val Leu Leu Ile Cys Leu Phe Phe Tyr His Thr His
85 90 95

Cys Thr Thr Ala Tyr Leu Trp Leu Ala Met Gly Val Asn Asp Tyr Gln
100 105 110

Ala Leu Leu Gly Leu Cys Cys Pro Trp Ile Asp Leu Ala Ala Ala Asp
115 120 125

Leu Pro Met Arg Arg His Ala Lys Ala Asp Gly Ala Ser Ala Ile Thr
130 135 140

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

Phe Ile Phe Leu Val Cys Cys Gln Ile Pro Leu Phe Gly Ile Met Ser
165 170 175

Ser Asp Ser Ala Asp Pro Phe Tyr Trp Ile Arg Val Ile Leu Ala Met
180 185 190

Tyr Cys Val Ile Lys Gly Lys Thr Gly Gly Tyr Cys Asn Ser Glu Gly
195 200 205

Leu Cys Thr Cys Arg Ala Glu Asp Leu His Phe Leu Leu Lys Pro Ile
210 215 220

Ile Asn Lys Asp Asn Ala Glu Asp Pro Arg Thr Glu Leu Ile Gly Cys
225 230 235 240

Gly Ser Val Leu Phe His Leu Ala Ala Asn Arg Leu Ser Leu Gln Leu
245 250 255

Glu Glu Phe Ala Val Cys Lys Arg Ser Met Leu Val Ala Phe Ala Thr
260 265 270

Leu Ser Val Ala Leu Val Val Val Val Ala Ile Pro Ala Asn Phe Asn
275 280 285

Tyr Gly Gly Gly Gly Gly Tyr Phe Ile Asn Gly Thr Gly Gln Ile Tyr
290 295 300

Glu Lys Leu Pro Ala Tyr Leu Ser Glu Val Ser Ala Arg Val Asn Val
305 310 315 320

Leu Gln Val Ser Leu Gln His Asp Leu Pro Asn Leu Gln Glu Met Lys
325 330 335

Leu Ala Lys Val Ala Leu Val Thr Ile Ser Leu Trp Phe Met Ala Trp
340 345 350

Thr Pro Tyr Leu Val Ile Asn Phe Thr Gly Ile Phe Tyr Thr Cys Phe
355 360 365

Leu Gly Thr Ser Ser Leu Ala Gly Phe Lys Asn Ala Val Asp Tyr Asp
370 375 380

Glu Leu Leu Lys Ala Gly Val Leu Glu Val Leu Gly Phe Val Glu Asp
385 390 395 400

Asn Gly Glu Leu Val Phe Gln Glu Leu Leu Gly Val Leu Lys Met Val
405 410 415

Asp Pro Asp Gly Asp Lys Leu Thr Pro Thr Val Val Val Val Leu Leu
420 425 430

Cys Leu Thr Phe Val Ala Asp Ala Leu Thr Ile Gln Glu Leu Arg Ala
435 440 445

Gln Ile Ala Gln Gln Arg Ile Gln Gln Arg Tyr Gly Val Thr Val Ala
450 455 460

Thr Thr Ser Leu Ser Asp Tyr Gly Leu Ile Glu Leu Lys Glu His Cys
465 470 475 480

Leu Glu Cys Cys Gln Lys Asp Thr Glu Ala Asp Ser Lys Leu Lys Val
485 490 495

Tyr Pro Ala Ala Val Leu Glu Val Thr Tyr Ile Cys Phe Ile Leu His
500 505 510

Gly Val Ser Glu Ile Ile Pro Gln Gln Gln Lys Lys Thr Met Lys Phe
515 520 525

Leu Leu Leu Val Ala Ser Val Leu Cys Leu Val Leu Ile Leu Leu Leu
530 535 540

Tyr Leu Asp Ala Ala Asp Leu Arg Arg Ala Leu His Gln Tyr Gln Leu
545 550 555 560

Leu Ala Ala Gln Gly Asp Arg His Leu Pro Gln Gln Ile Val Lys Phe
565 570 575

Val Val Leu Lys Gly Glu Thr His Lys Ala Leu Lys Leu Lys Asp Gly
580 585 590

Gly His Tyr Leu Val Glu Phe Lys Ser Ile Tyr Met Lys Phe Tyr Arg
595 600 605

Leu Ile Ser Thr Leu Leu Val Val Val Val Ile Ala Pro Arg His Gln
610 615 620

Cys Ser Pro Phe Phe Phe Gln Tyr Asn Arg Pro Tyr Leu Asn Tyr Val
625 630 635 640

Pro Asp Val Ser Ala Leu Glu Gln Asp Ile Ile Glu Val Asp Pro Glu
645 650 655

Thr Lys Glu Met Leu Lys His Leu Asp Phe Asn Asn Ile Val Val Gln
660 665 670

Leu Glu Tyr Ala Gln Val Thr Lys Met Leu Gly Asn Gly Arg Leu Glu
675 680 685

Ala Met Cys Phe Asp Gly Val Lys Arg Leu Cys His Ile Arg Gly Lys
690 695 700

Leu Lys Leu Phe Leu Thr Leu Leu Ser Thr Leu Ser Val Ala Met Val
705 710 715 720

Phe Ala Leu Pro Ala His His His Ser Arg Gly Glu Leu Glu Glu Ala
725 730 735

Arg Leu Val Ala Glu Glu Leu Glu Glu Arg Gln Gln Glu Leu Asp Tyr
740 745 750

Leu Lys Arg Tyr Leu Val Gly Arg Leu Gln Ala Val Ser Tyr Phe Leu
755 760 765

Thr Val Cys Leu Leu Ala Leu Val Gln Ser Glu Thr Val Gln Asp Ala
770 775 780

Met Thr Asn Ala Asn Leu Val Gly Leu Thr Ile Ser Leu Ala Tyr Ala
785 790 795 800

Ile Phe Phe Leu Leu Tyr Thr Pro Pro Thr Gly Arg Ser Ser Gly Leu
805 810 815

Leu Cys Cys Cys Leu Ala Val Leu Phe Phe Ala Ser Pro Leu Thr Met
820 825 830

Leu Ala His Val Ile Arg Leu Leu Leu Ala Met Val Leu Leu Pro Leu
835 840 845

Leu Leu Leu Glu Ser Val Val Pro Tyr Ala Ala Ala Glu Lys Val Trp
850 855 860

<210> 133

<211> 162

<212> PRT

<213> Artificial sequence

<220>

<223> Immunogenic polypeptide

<400> 133

His Leu Thr Leu Phe Thr Val Ala Val Leu Leu Leu Ala Ala Ala Ala
1 5 10 15

Leu Leu Leu Leu Leu Pro Pro Ala Tyr Ser Thr Thr Leu Thr Pro Pro
20 25 30

Pro Leu Ser Tyr Cys His Leu Phe Leu Thr His Thr Leu Ala Arg Ala
35 40 45

Leu Ser Phe Ser Arg Ser Asp Cys Leu Lys Asn Val Phe Phe Ala Leu
50 55 60

Leu Leu Val Val Leu Val Cys Cys Leu Val Ser Val Gln Gly Asn Glu
65 70 75 80

Ile Lys Leu Leu Val Leu Leu Ile Cys Leu Phe Phe Tyr His Thr His
85 90 95

Cys Thr Thr Ala Tyr Leu Trp Leu Ala Met Gly Val Phe Leu Lys Gly
100 105 110

Ser Phe Pro Arg Phe Gln Met Cys Val Met Leu Ile Gly Phe Phe Ser
115 120 125

Ser Ala Lys Cys Leu Asn Asp Tyr Gln Ala Leu Leu Gly Leu Cys Cys
130 135 140

Pro Trp Ile Asp Leu Ala Ala Ala Asp Leu Pro Met Arg Arg His Ala
145 150 155 160

Lys Ala

<210> 134

<211> 205

<212> PRT

<213> Artificial sequence

<220>

<223> Immunogenic polypeptide

<400> 134

Leu Leu Pro Ala Lys Val Ile Pro Asp Lys Thr Ala Ala Tyr Val Ala
1 5 10 15

Tyr Gly Gly Gln Glu Thr Leu Val Glu His Val Glu Val Leu Val Val
20 25 30

Leu Leu Thr Pro Ala Leu Gln Ala Tyr Ile Met Asp Glu His Asn Leu
35 40 45

Asn Arg Ser Asn Ile Ala Leu Gly Arg Ile Arg Pro Tyr Pro Ser Ala
50 55 60

Val Lys Met Pro Val Leu His Ser Met Leu Val Asn Ala Ser Leu Ala
65 70 75 80

Glu Met Val Lys Glu Ser Tyr Gln Thr His Gly Ala Asp Gly Arg Met
85 90 95

Val Val Arg Met Leu Lys Phe Val Arg Leu Leu Pro Arg Val Arg Ala
100 105 110

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

Asn Asp Val Tyr Leu Ile Arg Leu Ala His Glu Thr Glu Leu Gln Gln
130 135 140

Ala Leu Ser Ser Leu Asn Ala Gly Ser Gly Ser Cys Ala Glu Val Phe
145 150 155 160

Asn Ala Tyr Leu Pro Val His Asn Lys Tyr Ile Gly Val Ser Arg Lys
165 170 175

Ile Gln Tyr Ser Met Glu Cys Leu Glu Ala Ala Glu Pro Lys Tyr Leu
180 185 190

Asp Gly Leu Lys Thr Leu Ala Asp Glu Thr Ala Gln Cys
195 200 205