

SEQUENCE LISTING

<110> CHUGAI SEIYAKU KABUSHIKI KAISHA

<120> IMMUNE ACTIVATING MULTISPECIFIC ANTIGEN-BINDING MOLECULES AND
USES THEREOF

<130> C1-A2005P

<150> JP 2020-062357

<151> 2020-03-31

<160> 323

<170> PatentIn version 3.5

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Gln Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Arg
1 5 10 15

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Asn Ala
20 25 30

Trp Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
35 40 45

Ala Gln Ile Lys Asp Lys Gly Asn Ala Tyr Ala Ala Tyr Tyr Ala Pro
50 55 60

Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asp Ser Lys Asn Ser
65 70 75 80

Ile Tyr Leu Gln Met Asn Ser Leu Lys Thr Glu Asp Thr Ala Val Tyr
85 90 95

Tyr Cys His Tyr Val His Tyr Ala Ser Ala Ser Thr Val Leu Pro Ala
 100 105 110

Phe Gly Val Asp Ala Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser
 115 120 125

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Gln Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Arg
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Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Lys Phe Ser Asn Val
 20 25 30

Trp Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
 35 40 45

Ala Gln Ile Lys Asp Lys Tyr Asn Ala Tyr Ala Ala Tyr Tyr Ala Pro
 50 55 60

Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asp Ser Lys Asn Ser
 65 70 75 80

Ile Tyr Leu Gln Met Asn Ser Leu Lys Thr Glu Asp Thr Ala Val Tyr
 85 90 95

Tyr Cys His Tyr Val His Tyr Ala Ser Ala Ser Thr Leu Leu Pro Ala
 100 105 110

Phe Gly Val Asp Ala Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser
 115 120 125

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Gln Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Arg
 1 5 10 15

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Lys Phe Ser Asn Val
 20 25 30

Trp Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
 35 40 45

Ala Gln Ile Lys Asp Lys Tyr Asn Ala Tyr Ala Ala Tyr Tyr Ala Pro
 50 55 60

Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asp Ser Lys Asn Ser
 65 70 75 80

Ile Tyr Leu Gln Met Asn Ser Leu Lys Thr Glu Asp Thr Ala Val Tyr
 85 90 95

Tyr Cys His Tyr Ile His Tyr Ala Ser Ala Ser Thr Leu Leu Pro Ala
 100 105 110

Phe Gly Val Asp Ala Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser
 115 120 125

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 1 5 10 15

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Lys Phe Ser Asn Val
 20 25 30

Trp Phe His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
 35 40 45

Ala Gln Ile Lys Asp Lys Tyr Asn Ala Tyr Ala Thr Tyr Tyr Ala Pro
 50 55 60

Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asp Ser Lys Asn Ser
 65 70 75 80

Ile Tyr Leu Gln Met Asn Ser Leu Lys Thr Glu Asp Thr Ala Val Tyr
 85 90 95

Tyr Cys His Tyr Val His Tyr Ala Ser Ala Ser Thr Leu Leu Pro Ala
 100 105 110

Phe Gly Val Asp Ala Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser
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Gln Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Arg
 1 5 10 15

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Val Phe Ser Asn Val
 20 25 30

Trp Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
 35 40 45

Ala Gln Ile Lys Asp Lys Trp Asn Ala Tyr Ala Ala Tyr Tyr Ala Pro
 50 55 60

Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asp Ser Lys Asn Ser
 65 70 75 80

Ile Tyr Leu Gln Met Asn Ser Leu Lys Thr Glu Asp Thr Ala Val Tyr
 85 90 95

Tyr Cys His Tyr Ile His Tyr Ala Ser Ala Ser Thr Leu Leu Pro Ala
 100 105 110

Glu Gly Ile Asp Ala Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser
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Gln Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Arg
 1 5 10 15

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Lys Phe Ser Asn Val
 20 25 30

Trp Phe His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
 35 40 45

Ala Gln Ile Lys Asp Tyr Tyr Asn Ala Tyr Ala Ala Tyr Tyr Ala Pro
 50 55 60

Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asp Ser Lys Asn Ser
65 70 75 80

Ile Tyr Leu Gln Met Asn Ser Leu Lys Thr Glu Asp Thr Ala Val Tyr
85 90 95

Tyr Cys His Tyr Val His Tyr Ala Ser Ala Ser Thr Leu Leu Pro Ala
100 105 110

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

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Met Gln Ser Gly Thr His Trp Arg Val Leu Gly Leu Cys Leu Leu Ser
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Val Gly Val Trp Gly Gln Asp Gly Asn Glu Glu Met Gly Gly Ile Thr
20 25 30

Gln Thr Pro Tyr Lys Val Ser Ile Ser Gly Thr Thr Val Ile Leu Thr
35 40 45

Cys Pro Gln Tyr Pro Gly Ser Glu Ile Leu Trp Gln His Asn Asp Lys
50 55 60

Asn Ile Gly Gly Asp Glu Asp Asp Lys Asn Ile Gly Ser Asp Glu Asp
65 70 75 80

His Leu Ser Leu Lys Glu Phe Ser Glu Leu Glu Gln Ser Gly Tyr Tyr
85 90 95

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

Tyr Leu Arg Ala Arg Val Cys Glu Asn Cys Met Glu Met Asp Val Met
 115 120 125

Ser Val Ala Thr Ile Val Ile Val Asp Ile Cys Ile Thr Gly Gly Leu
 130 135 140

Leu Leu Leu Val Tyr Tyr Trp Ser Lys Asn Arg Lys Ala Lys Ala Lys
 145 150 155 160

Pro Val Thr Arg Gly Ala Gly Ala Gly Gly Arg Gln Arg Gly Gln Asn
 165 170 175

Lys Glu Arg Pro Pro Pro Val Pro Asn Pro Asp Tyr Glu Pro Ile Arg
 180 185 190

Lys Gly Gln Arg Asp Leu Tyr Ser Gly Leu Asn Gln Arg Arg Ile
 195 200 205

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Gln Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Arg
 1 5 10 15

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Lys Phe Ser Asn Thr
 20 25 30

Trp Phe His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
 35 40 45

Ala Gln Ile Lys Asp Tyr Tyr Asn Asp Tyr Ala Ala Tyr Tyr Ala Pro
 50 55 60

Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asp Ser Lys Asn Ser
 65 70 75 80

Ile Tyr Leu Gln Met Asn Ser Leu Lys Thr Glu Asp Thr Ala Val Tyr
 85 90 95

Tyr Cys His Tyr Val His Tyr Ala Ser Ala Ser Thr Leu Leu Pro Ala
 100 105 110

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

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Gln Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Arg
 1 5 10 15

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Val Phe Ser Asn Val
 20 25 30

Trp Phe His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
 35 40 45

Ala Gln Ile Lys Asp Lys Tyr Asn Ala Tyr Ala Asp Tyr Tyr Ala Pro
 50 55 60

Ser Val Lys Glu Arg Phe Thr Ile Ser Arg Asp Asp Ser Lys Asn Ser
 65 70 75 80

Ile Tyr Leu Gln Met Asn Ser Leu Lys Thr Glu Asp Thr Ala Val Tyr
 85 90 95

Tyr Cys His Tyr Val His Tyr Ala Ser Ala Ser Thr Leu Leu Pro Ala
 100 105 110

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

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<400> 10

Gln Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Arg
 1 5 10 15

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Val Phe Ser Asn Val
 20 25 30

Trp Phe His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
 35 40 45

Ala Gln Ile Lys Asp Lys Tyr Asn Ala Tyr Ala Asp Tyr Tyr Ala Pro
 50 55 60

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

Ile Tyr Leu Gln Met Asn Ser Leu Lys Thr Glu Asp Thr Ala Val Tyr
 85 90 95

Tyr Cys His Tyr Val His Tyr Ala Ser Ala Ser Thr Leu Leu Pro Ala
 100 105 110

Glu Gly Val Asp Ala Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser
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Gln Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Arg
 1 5 10 15

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Val Phe Ser Asn Val
 20 25 30

Trp Phe His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
 35 40 45

Ala Gln Ile Lys Asp Tyr Tyr Asn Ala Tyr Ala Asp Tyr Tyr Ala Pro
 50 55 60

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

Ile Tyr Leu Gln Met Asn Ser Leu Lys Thr Glu Asp Thr Ala Val Tyr
 85 90 95

Tyr Cys His Tyr Val His Tyr Ala Ser Ala Ser Thr Leu Leu Pro Ala
 100 105 110

Glu Gly Val Asp Ala Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser
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Gln Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Arg
1 5 10 15

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Val Phe Ser Asn Val
20 25 30

Trp Phe His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
35 40 45

Ala Gln Ile Lys Asp Lys Trp Asn Ala Tyr Ala Asp Tyr Tyr Ala Pro
50 55 60

Ser Val Lys Glu Arg Phe Thr Ile Ser Arg Asp Asp Ser Lys Asn Ser
65 70 75 80

Ile Tyr Leu Gln Met Asn Ser Leu Lys Thr Glu Asp Thr Ala Val Tyr
85 90 95

Tyr Cys His Tyr Ile His Tyr Ala Ser Ala Ser Thr Leu Leu Pro Ala
100 105 110

Glu Gly Ile Asp Ala Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser
115 120 125

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12

Gln Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Arg
1 5 10 15

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Lys Phe Ser Asn Val
20 25 30

Trp Phe His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
35 40 45

Ala Gln Ile Lys Asp Tyr Tyr Asn Ala Tyr Ala Gly Tyr Tyr His Pro
50 55 60

Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asp Ser Lys Asn Ser
65 70 75 80

Ile Tyr Leu Gln Met Asn Ser Leu Lys Thr Glu Asp Thr Ala Val Tyr
85 90 95

Tyr Cys His Tyr Val His Tyr Ala Ala Ala Ser Thr Leu Leu Pro Ala
100 105 110

Glu Gly Val Asp Ala Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser
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Gln Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Arg
1 5 10 15

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Lys Phe Ser Asn Val
20 25 30

Trp Phe His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
 35 40 45

Ala Gln Ile Lys Asp Tyr Tyr Asn Ala Tyr Ala Gly Tyr Tyr His Pro
 50 55 60

Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asp Ser Lys Asn Ser
 65 70 75 80

Ile Tyr Leu Gln Met Asn Ser Leu Lys Thr Glu Asp Thr Ala Val Tyr
 85 90 95

Tyr Cys His Tyr Val His Tyr Ala Ala Ala Ser Gln Leu Leu Pro Ala
 100 105 110

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

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Asn Ala Trp Met His
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Asn Val Trp Met His
 1 5

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Asn Val Trp Met His
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Asn Val Trp Phe His
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Asn Val Trp Met His
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Asn Val Trp Phe His
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<400> 21

Ser Pro Cys Pro Pro Asn Ser Phe Ser Ser Ala Gly Gly Gln Arg Thr
1 5 10 15

Cys Asp Ile Cys Arg Gln Cys Lys Gly Val Phe Arg Thr Arg Lys Glu
20 25 30

Cys Ser Ser Thr Ser Asn Ala Glu Cys Asp Cys Thr Pro Gly Phe His
35 40 45

Cys Leu Gly Ala Gly Cys Ser Met Cys Glu Gln Asp Cys Lys Gln Gly
50 55 60

Gln Glu Leu Thr Lys Lys Gly Cys
65 70

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<400> 22

Asn Thr Trp Phe His
1 5

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<400> 23

Asn Val Trp Phe His
1 5

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Asn Val Trp Phe His
1 5

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Asn Val Trp Phe His
1 5

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<400> 26

Asn Val Trp Phe His
1 5

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<400> 27

Asn Val Trp Phe His
1 5

<210> 28

<211> 5

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<400> 28

Asn Val Trp Phe His
1 5

<210> 29

<211> 19

<212> PRT

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<400> 29

Gln Ile Lys Asp Lys Gly Asn Ala Tyr Ala Ala Tyr Tyr Ala Pro Ser
1 5 10 15

Val Lys Gly

<210> 30
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<400> 30

Gln	Ile	Lys	Asp	Lys	Tyr	Asn	Ala	Tyr	Ala	Ala	Tyr	Tyr	Ala	Pro	Ser
1				5				10						15	

Val Lys Gly

<210> 31
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<400> 31

Gln	Ile	Lys	Asp	Lys	Tyr	Asn	Ala	Tyr	Ala	Ala	Tyr	Tyr	Ala	Pro	Ser
1				5				10						15	

Val Lys Gly

<210> 32
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<400> 32

Gln Ile Lys Asp Lys Tyr Asn Ala Tyr Ala Thr Tyr Tyr Ala Pro Ser
 1 5 10 15

Val Lys Gly

<210> 33
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<400> 33

Gln Ile Lys Asp Lys Trp Asn Ala Tyr Ala Ala Tyr Tyr Ala Pro Ser
 1 5 10 15

Val Lys Gly

<210> 34
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<400> 34

Gln Ile Lys Asp Tyr Tyr Asn Ala Tyr Ala Ala Tyr Tyr Ala Pro Ser
 1 5 10 15

Val Lys Gly

<210> 35
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<400> 35

Asp	Cys	Thr	Pro	Gly	Phe	His	Cys	Leu	Gly	Ala	Gly	Cys	Ser	Met	Cys
1				5					10					15	

Glu	Gln	Asp	Cys	Lys	Gln	Gly	Gln	Glu	Leu	Thr	Lys	Lys	Gly	Cys
		20					25						30	

<210> 36

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<400> 36

Gln	Ile	Lys	Asp	Tyr	Tyr	Asn	Asp	Tyr	Ala	Ala	Tyr	Tyr	Ala	Pro	Ser
1			5						10					15	

Val Lys Gly

<210> 37

<211> 19

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<400> 37

Gln	Ile	Lys	Asp	Lys	Tyr	Asn	Ala	Tyr	Ala	Asp	Tyr	Tyr	Ala	Pro	Ser
1			5						10					15	

Val Lys Glu

<210> 38

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<400> 38

Gln	Ile	Lys	Asp	Lys	Tyr	Asn	Ala	Tyr	Ala	Asp	Tyr	Tyr	Ala	Pro	Ser
1				5				10						15	

Val Glu Gly

<210> 39

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<400> 39

Gln	Ile	Lys	Asp	Tyr	Tyr	Asn	Ala	Tyr	Ala	Asp	Tyr	Tyr	Ala	Pro	Ser
1				5				10						15	

Val Glu Gly

<210> 40

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<400> 40

Gln	Ile	Lys	Asp	Lys	Trp	Asn	Ala	Tyr	Ala	Asp	Tyr	Tyr	Ala	Pro	Ser
1				5				10						15	

Val Lys Glu

<210> 41
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<400> 41

Gln	Ile	Lys	Asp	Tyr	Tyr	Asn	Ala	Tyr	Ala	Gly	Tyr	Tyr	His	Pro	Ser
1				5					10					15	

Val Lys Gly

<210> 42
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<400> 42

Gln	Ile	Lys	Asp	Tyr	Tyr	Asn	Ala	Tyr	Ala	Gly	Tyr	Tyr	His	Pro	Ser
1				5					10					15	

Val Lys Gly

<210> 43
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<400> 43

Val	His	Tyr	Ala	Ser	Ala	Ser	Thr	Val	Leu	Pro	Ala	Phe	Gly	Val	Asp
1				5					10					15	

Ala

<210> 44
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<400> 44

Val	His	Tyr	Ala	Ser	Ala	Ser	Thr	Leu	Leu	Pro	Ala	Phe	Gly	Val	Asp
1				5				10						15	

Ala

<210> 45
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<400> 45

Ile	His	Tyr	Ala	Ser	Ala	Ser	Thr	Leu	Leu	Pro	Ala	Phe	Gly	Val	Asp
1				5				10						15	

Ala

<210> 46
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<400> 46

Val His Tyr Ala Ser Ala Ser Thr Leu Leu Pro Ala Phe Gly Val Asp
 1 5 10 15

Ala

<210> 47

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<400> 47

Ile His Tyr Ala Ser Ala Ser Thr Leu Leu Pro Ala Glu Gly Ile Asp
 1 5 10 15

Ala

<210> 48

<211> 17

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<400> 48

Val His Tyr Ala Ser Ala Ser Thr Leu Leu Pro Ala Glu Gly Val Asp
 1 5 10 15

Ala

<210> 49

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<400> 49

Leu Gln Asp Pro Cys Ser Asn Cys Pro Ala Gly Thr Phe Cys Asp Asn
 1 5 10 15

Asn Arg Asn Gln Ile Cys Ser Pro Cys Pro Pro Asn Ser Phe Ser Ser
 20 25 30

Ala Gly Gly Gln Arg Thr Cys Asp Ile Cys Arg Gln Cys Lys Gly Val
 35 40 45

Phe Arg Thr Arg Lys Glu Cys Ser Ser Thr Ser Asn Ala Glu Cys
 50 55 60

<210> 50

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<400> 50

Val His Tyr Ala Ser Ala Ser Thr Leu Leu Pro Ala Glu Gly Val Asp
 1 5 10 15

Ala

<210> 51

<211> 17

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<220>

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<400> 51

Val His Tyr Ala Ser Ala Ser Thr Leu Leu Pro Ala Glu Gly Val Asp
 1 5 10 15

Ala

<210> 52
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<400> 52

Val His Tyr Ala Ser Ala Ser Thr Leu Leu Pro Ala Glu Gly Val Asp
 1 5 10 15

Ala

<210> 53
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<400> 53

Val His Tyr Ala Ser Ala Ser Thr Leu Leu Pro Ala Glu Gly Val Asp
 1 5 10 15

Ala

<210> 54
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<400> 54

Ile	His	Tyr	Ala	Ser	Ala	Ser	Thr	Leu	Leu	Pro	Ala	Glu	Gly	Ile	Asp
1				5				10						15	

Ala

<210> 55

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<400> 55

Val	His	Tyr	Ala	Ala	Ala	Ser	Thr	Leu	Leu	Pro	Ala	Glu	Gly	Val	Asp
1				5				10						15	

Ala

<210> 56

<211> 17

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<400> 56

Val	His	Tyr	Ala	Ala	Ala	Ser	Gln	Leu	Leu	Pro	Ala	Glu	Gly	Val	Asp
1				5				10						15	

Ala

<210> 57

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<400> 57

Asp	Ile	Val	Met	Thr	Gln	Ser	Pro	Leu	Ser	Leu	Pro	Val	Thr	Pro	Gly
1				5				10						15	

Glu	Pro	Ala	Ser	Ile	Ser	Cys	Gln	Ala	Ser	Gln	Glu	Leu	Val	His	Met
			20				25						30		

Asn	Arg	Asn	Thr	Tyr	Leu	His	Trp	Tyr	Gln	Gln	Lys	Pro	Gly	Gln	Ala
		35					40					45			

Pro	Arg	Leu	Leu	Ile	Tyr	Lys	Val	Ser	Asn	Arg	Phe	Pro	Gly	Val	Pro
	50					55					60				

Asp	Arg	Phe	Ser	Gly	Ser	Gly	Ser	Gly	Thr	Asp	Phe	Thr	Leu	Lys	Ile
65					70				75					80	

Ser	Arg	Val	Glu	Ala	Glu	Asp	Val	Gly	Val	Tyr	Tyr	Cys	Ala	Gln	Gly
			85					90						95	

Thr	Ser	Val	Pro	Phe	Thr	Phe	Gly	Gln	Gly	Thr	Lys	Leu	Glu	Ile	Lys
			100					105					110		

<210> 58

<211> 112

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<400> 58

Asp	Ile	Val	Met	Thr	Gln	Ser	Pro	Leu	Ser	Leu	Pro	Val	Thr	Pro	Gly
1				5				10						15	

Glu Pro Ala Ser Ile Ser Cys Gln Pro Ser Gln Glu Val Val His Met
 20 25 30

Asn Arg Asn Thr Tyr Leu His Trp Tyr Gln Gln Lys Pro Gly Gln Ala
 35 40 45

Pro Arg Leu Leu Ile Tyr Lys Val Ser Asn Arg Phe Pro Gly Val Pro
 50 55 60

Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Lys Ile
 65 70 75 80

Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Ala Gln Gly
 85 90 95

Thr Ser His Pro Phe Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
 100 105 110

<210> 59

<211> 112

<212> PRT

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<220>

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<400> 59

Asp Ile Val Met Thr Gln Ser Pro Leu Ser Leu Pro Val Thr Pro Gly
 1 5 10 15

Glu Pro Ala Ser Ile Ser Cys Gln Pro Ser Gln Glu Val Val His Met
 20 25 30

Asn Asn Val Val Tyr Leu His Trp Tyr Gln Gln Lys Pro Gly Gln Ala
 35 40 45

Pro Arg Leu Leu Ile Tyr Lys Val Ser Asn Arg Phe Pro Gly Val Pro
 50 55 60

Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Lys Ile
65 70 75 80

Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Ala Gln Gly
85 90 95

Thr Ser His Pro Phe Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
100 105 110

<210> 60

<211> 112

<212> PRT

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<220>

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<400> 60

Asp Ile Val Met Thr Gln Ser Pro Leu Ser Leu Pro Val Thr Pro Gly
1 5 10 15

Glu Pro Ala Ser Ile Ser Cys Gln Pro Ser Gln Glu Val Val His Met
20 25 30

Asn Arg Asn Thr Tyr Leu His Trp Tyr Gln Gln Lys Pro Gly Gln Ala
35 40 45

Pro Arg Leu Leu Ile Tyr Lys Val Ser Asn Val Phe Pro Gly Val Pro
50 55 60

Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Lys Ile
65 70 75 80

Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Ala Gln Gly
85 90 95

Thr His His Pro Phe Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
100 105 110

<210> 61
 <211> 112
 <212> PRT
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<220>
 <223> an artificially synthesized sequence

<400> 61

Asp Ile Val Met Thr Gln Ser Pro Leu Ser Leu Pro Val Thr Pro Gly
 1 5 10 15

Glu Pro Ala Ser Ile Ser Cys Gln Pro Ser Glu Glu Val Val His Met
 20 25 30

Asn Arg Asn Thr Tyr Leu His Trp Tyr Gln Gln Lys Pro Gly Gln Ala
 35 40 45

Pro Arg Leu Leu Ile Tyr Lys Val Ser Asn Leu Phe Pro Gly Val Pro
 50 55 60

Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Lys Ile
 65 70 75 80

Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Ala Gln Gly
 85 90 95

Thr His His Pro Phe Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
 100 105 110

<210> 62
 <211> 16
 <212> PRT
 <213> Artificial Sequence

<220>
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<400> 62

Gln Ala Ser Gln Glu Leu Val His Met Asn Arg Asn Thr Tyr Leu His
 1 5 10 15

<210> 63
 <211> 16
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> an artificially synthesized sequence

<400> 63

Gln	Pro	Ser	Gln	Glu	Val	Val	His	Met	Asn	Arg	Asn	Thr	Tyr	Leu	His
1				5					10					15	

<210> 64
 <211> 16
 <212> PRT
 <213> Artificial Sequence

<220>
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<400> 64

Gln	Pro	Ser	Gln	Glu	Val	Val	His	Met	Asn	Asn	Val	Val	Tyr	Leu	His
1				5					10					15	

<210> 65
 <211> 16
 <212> PRT
 <213> Artificial Sequence

<220>
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<400> 65

Gln	Pro	Ser	Gln	Glu	Val	Val	His	Met	Asn	Arg	Asn	Thr	Tyr	Leu	His
1				5					10					15	

<210> 66
 <211> 16
 <212> PRT
 <213> Artificial Sequence

<220>

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<400> 66

Gln	Pro	Ser	Glu	Glu	Val	Val	His	Met	Asn	Arg	Asn	Thr	Tyr	Leu	His
1				5					10					15	

<210> 67

<211> 7

<212> PRT

<213> Artificial Sequence

<220>

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<400> 67

Lys	Val	Ser	Asn	Arg	Phe	Pro
1				5		

<210> 68

<211> 7

<212> PRT

<213> Artificial Sequence

<220>

<223> an artificially synthesized sequence

<400> 68

Lys	Val	Ser	Asn	Arg	Phe	Pro
1				5		

<210> 69

<211> 7

<212> PRT

<213> Artificial Sequence

<220>

<223> an artificially synthesized sequence

<400> 69

Lys	Val	Ser	Asn	Arg	Phe	Pro
1				5		

<210> 70
 <211> 7
 <212> PRT
 <213> Artificial Sequence

<220>
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<400> 70

Lys Val Ser Asn Val Phe Pro
 1 5

<210> 71
 <211> 7
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> an artificially synthesized sequence

<400> 71

Lys Val Ser Asn Leu Phe Pro
 1 5

<210> 72
 <211> 9
 <212> PRT
 <213> Artificial Sequence

<220>
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<400> 72

Ala Gln Gly Thr Ser Val Pro Phe Thr
 1 5

<210> 73
 <211> 9
 <212> PRT
 <213> Artificial Sequence

<220>
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<400> 73

Ala Gln Gly Thr Ser His Pro Phe Thr
1 5

<210> 74

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> an artificially synthesized sequence

<400> 74

Ala Gln Gly Thr Ser His Pro Phe Thr
1 5

<210> 75

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

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<400> 75

Ala Gln Gly Thr His His Pro Phe Thr
1 5

<210> 76

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> an artificially synthesized sequence

<400> 76

Ala Gln Gly Thr His His Pro Phe Thr
1 5

<210> 77

<211> 122

<212> PRT

<213> Artificial Sequence

<220>

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<400> 77

Gln Val Gln Leu Val Glu Ser Gly Gly Gly Val Val Gln Pro Gly Gly
1 5 10 15

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Asn Ala
20 25 30

Trp Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
35 40 45

Ala Gln Ile Lys Asp Lys Ser Gln Asn Tyr Ala Thr Tyr Val Ala Glu
50 55 60

Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Ala Asp Ser Lys Asn Ser
65 70 75 80

Ile Tyr Leu Gln Met Asn Ser Leu Lys Thr Glu Asp Thr Ala Val Tyr
85 90 95

Tyr Cys Arg Tyr Val His Tyr Ala Ala Gly Tyr Gly Val Asp Ile Trp
100 105 110

Gly Gln Gly Thr Thr Val Thr Val Ser Ser
115 120

<210> 78

<211> 112

<212> PRT

<213> Artificial Sequence

<220>

<223> an artificially synthesized sequence

<400> 78

Asp Ile Val Met Thr Gln Ser Pro Leu Ser Leu Pro Val Thr Pro Gly
 1 5 10 15

Glu Pro Ala Ser Ile Ser Cys Arg Ser Ser Gln Pro Leu Val His Ser
 20 25 30

Asn Arg Asn Thr Tyr Leu His Trp Tyr Gln Gln Lys Pro Gly Gln Ala
 35 40 45

Pro Arg Leu Leu Ile Tyr Lys Val Ser Asn Arg Phe Ser Gly Val Pro
 50 55 60

Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Lys Ile
 65 70 75 80

Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Gly Gln Gly
 85 90 95

Thr Gln Val Pro Tyr Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
 100 105 110

<210> 79

<211> 121

<212> PRT

<213> Artificial Sequence

<220>

<223> an artificially synthesized sequence

<400> 79

Gln Val Gln Leu Gln Gln Trp Gly Ala Gly Leu Leu Lys Pro Ser Glu
 1 5 10 15

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

Tyr Trp Ser Trp Ile Arg Gln Ser Pro Glu Lys Gly Leu Glu Trp Ile
 35 40 45

Gly Glu Ile Asn His Gly Gly Tyr Val Thr Tyr Asn Pro Ser Leu Glu
 50 55 60

Ser Arg Val Thr Ile Ser Val Asp Thr Ser Lys Asn Gln Phe Ser Leu
 65 70 75 80

Lys Leu Ser Ser Val Thr Ala Ala Asp Thr Ala Val Tyr Tyr Cys Ala
 85 90 95

Arg Asp Tyr Gly Pro Gly Asn Tyr Asp Trp Tyr Phe Asp Leu Trp Gly
 100 105 110

Arg Gly Thr Leu Val Thr Val Ser Ser
 115 120

<210> 80

<211> 109

<212> PRT

<213> Artificial Sequence

<220>

<223> an artificially synthesized sequence

<400> 80

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

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

Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Ile
 35 40 45

Tyr Asp Ala Ser Asn Arg Ala Thr Gly Ile Pro Ala Arg Phe Ser Gly
 50 55 60

Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Glu Pro
 65 70 75 80

Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Arg Ser Asn Trp Pro Pro
 85 90 95

Ala Leu Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys
 100 105

<210> 81

<211> 128

<212> PRT

<213> Artificial Sequence

<220>

<223> an artificially synthesized sequence

<400> 81

Gln Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Arg
 1 5 10 15

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Val Phe Ser Asn Val
 20 25 30

Trp Phe His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
 35 40 45

Ala Gln Ile Lys Asp Tyr Tyr Asn Ala Tyr Ala Ala Tyr Tyr Ala Pro
 50 55 60

Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asp Ser Lys Asn Ser
 65 70 75 80

Ile Tyr Leu Gln Met Asn Ser Leu Lys Thr Glu Asp Thr Ala Val Tyr
 85 90 95

Tyr Cys His Tyr Val His Tyr Ala Ser Ala Ser Thr Leu Leu Pro Ala
 100 105 110

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

<210> 82

<211> 5

<212> PRT

<213> Artificial Sequence

<220>

<223> an artificially synthesized sequence

<400> 82

Asn Val Trp Phe His

1

5

<210> 83

<211> 19

<212> PRT

<213> Artificial Sequence

<220>

<223> an artificially synthesized sequence

<400> 83

Gln Ile Lys Asp Tyr Tyr Asn Ala Tyr Ala Ala Tyr Tyr Ala Pro Ser

1

5

10

15

Val Lys Gly

<210> 84

<211> 17

<212> PRT

<213> Artificial Sequence

<220>

<223> an artificially synthesized sequence

<400> 84

Val His Tyr Ala Ser Ala Ser Thr Leu Leu Pro Ala Glu Gly Val Asp

1

5

10

15

Ala

<210> 85
 <211> 121
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> an artificially synthesized sequence

<400> 85

Gln Val Gln Leu Gln Gln Trp Gly Ala Gly Leu Leu Lys Pro Ser Glu
 1 5 10 15

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

Tyr Trp Ser Trp Ile Arg Gln Ser Pro Glu Lys Gly Leu Glu Trp Ile
 35 40 45

Gly Glu Ile Asn His Gly Gly Tyr Val Thr Tyr Asn Pro Ser Leu Glu
 50 55 60

Ser Arg Val Thr Ile Ser Val Asp Thr Ser Lys Asn Gln Phe Ser Leu
 65 70 75 80

Lys Leu Ser Ser Val Thr Ala Ala Asp Thr Ala Val Tyr Tyr Cys Ala
 85 90 95

Arg Asp Tyr Gly Pro Gly Asn Tyr Asp Trp Tyr Phe Asp Leu Trp Gly
 100 105 110

Arg Gly Thr Leu Val Thr Val Ser Ser
 115 120

<210> 86
 <211> 109
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> an artificially synthesized sequence

42

<400> 86

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

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

Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Ile
35 40 45

Tyr Asp Ala Ser Asn Arg Ala Thr Gly Ile Pro Ala Arg Phe Ser Gly
50 55 60

Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Glu Pro
65 70 75 80

Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Arg Ser Asn Trp Pro Pro
85 90 95

Ala Leu Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys
100 105

<210> 87

<211> 128

<212> PRT

<213> Artificial Sequence

<220>

<223> an artificially synthesized sequence

<400> 87

Gln Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Arg
1 5 10 15

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Asn Ala
20 25 30

Trp Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
35 40 45

Ala Gln Ile Lys Asp Arg Ala Asn Ser Tyr Asn Thr Tyr Tyr Ala Glu
 50 55 60

Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asp Ser Lys Asn Ser
 65 70 75 80

Ile Tyr Leu Gln Met Asn Ser Leu Lys Thr Glu Asp Thr Ala Val Tyr
 85 90 95

Tyr Cys Arg Tyr Val His Tyr Thr Thr Tyr Ala Gly Ser Ser Phe Ser
 100 105 110

Tyr Gly Val Asp Ala Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser
 115 120 125

<210> 88

<211> 112

<212> PRT

<213> Artificial Sequence

<220>

<223> an artificially synthesized sequence

<400> 88

Asp Ile Val Met Thr Gln Ser Pro Leu Ser Leu Pro Val Thr Pro Gly
 1 5 10 15

Glu Pro Ala Ser Ile Ser Cys Arg Ser Ser Gln Pro Leu Val His Ser
 20 25 30

Asn Arg Asn Thr Tyr Leu His Trp Tyr Gln Gln Lys Pro Gly Gln Ala
 35 40 45

Pro Arg Leu Leu Ile Tyr Lys Val Ser Asn Arg Phe Ser Gly Val Pro
 50 55 60

Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Lys Ile
 65 70 75 80

Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Gly Gln Gly
 85 90 95

Thr Gln Val Pro Tyr Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
 100 105 110

<210> 89

<211> 115

<212> PRT

<213> Artificial Sequence

<220>

<223> an artificially synthesized sequence

<400> 89

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

Ser Val Thr Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Asp Tyr
 20 25 30

Glu Met His Trp Ile Arg Gln Pro Pro Gly Glu Gly Leu Glu Trp Ile
 35 40 45

Gly Ala Ile Asp Gly Pro Thr Pro Asp Thr Ala Tyr Ser Glu Lys Phe
 50 55 60

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

Met Glu Leu Ser Ser Leu Thr Ser Glu Asp Thr Ala Val Tyr Tyr Cys
 85 90 95

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

Val Ser Ser
 115

<210> 90
 <211> 112
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> an artificially synthesized sequence

<400> 90

Asp Ile Val Met Thr Gln Ser Pro Leu Ser Leu Pro Val Thr Pro Gly
 1 5 10 15

Glu Pro Ala Ser Ile Ser Cys Arg Ser Ser Gln Pro Leu Val His Ser
 20 25 30

Asn Arg Asn Thr Tyr Leu His Trp Tyr Gln Gln Lys Pro Gly Gln Ala
 35 40 45

Pro Arg Leu Leu Ile Tyr Lys Val Ser Asn Arg Phe Ser Gly Val Pro
 50 55 60

Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Lys Ile
 65 70 75 80

Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Gly Gln Gly
 85 90 95

Thr Gln Val Pro Tyr Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
 100 105 110

<210> 91
 <211> 4
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> an artificially synthesized sequence

<400> 91

Gly Gly Gly Ser
1

<210> 92
<211> 4
<212> PRT
<213> Artificial Sequence

<220>
<223> an artificially synthesized sequence

<400> 92

Ser Gly Gly Gly
1

<210> 93
<211> 5
<212> PRT
<213> Artificial Sequence

<220>
<223> an artificially synthesized sequence

<400> 93

Gly Gly Gly Gly Ser
1 5

<210> 94
<211> 5
<212> PRT
<213> Artificial Sequence

<220>
<223> an artificially synthesized sequence

<400> 94

Ser Gly Gly Gly Gly
1 5

<210> 95
<211> 6
<212> PRT
<213> Artificial Sequence

<220>

<223> an artificially synthesized sequence

<400> 95

Gly Gly Gly Gly Gly Ser
1 5

<210> 96

<211> 6

<212> PRT

<213> Artificial Sequence

<220>

<223> an artificially synthesized sequence

<400> 96

Ser Gly Gly Gly Gly Gly
1 5

<210> 97

<211> 7

<212> PRT

<213> Artificial Sequence

<220>

<223> an artificially synthesized sequence

<400> 97

Gly Gly Gly Gly Gly Gly Ser
1 5

<210> 98

<211> 7

<212> PRT

<213> Artificial Sequence

<220>

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<400> 98

Ser Gly Gly Gly Gly Gly Gly
1 5

<210> 99

<400> 99
000

<210> 100

<400> 100
000

<210> 101

<211> 128

<212> PRT

<213> Artificial Sequence

<220>

<223> an artificially synthesized sequence

<400> 101

Gln Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Arg
1 5 10 15

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Lys Phe Ser Asn Val
20 25 30

Trp Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
35 40 45

Ala Gln Ile Lys Asp Lys Trp Asn Ala Tyr Ala Ala Tyr Tyr Ala Pro
50 55 60

Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asp Ser Lys Asn Ser
65 70 75 80

Ile Tyr Leu Gln Met Asn Ser Leu Lys Thr Glu Asp Thr Ala Val Tyr
85 90 95

Tyr Cys His Tyr Ile His Tyr Ala Ser Ala Ser Thr Leu Leu Pro Ala
100 105 110

Phe Gly Ile Asp Ala Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser
 115 120 125

<210> 102

<211> 212

<212> PRT

<213> Artificial Sequence

<220>

<223> an artificially synthesized sequence

<400> 102

Gln Asp Gly Asn Glu Glu Met Gly Gly Ile Thr Gln Thr Pro Tyr Lys
 1 5 10 15

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

Gly Ser Glu Ile Leu Trp Gln His Asn Asp Lys Asn Ile Gly Gly Asp
 35 40 45

Glu Asp Asp Lys Asn Ile Gly Ser Asp Glu Asp His Leu Ser Leu Lys
 50 55 60

Glu Phe Ser Glu Leu Glu Gln Ser Gly Tyr Tyr Val Cys Tyr Pro Arg
 65 70 75 80

Gly Ser Lys Pro Glu Asp Ala Asn Phe Tyr Leu Tyr Leu Arg Ala Arg
 85 90 95

Val Gly Ser Ala Asp Asp Ala Lys Lys Asp Ala Ala Lys Lys Asp Asp
 100 105 110

Ala Lys Lys Asp Asp Ala Lys Lys Asp Gly Ser Gln Ser Ile Lys Gly
 115 120 125

Asn His Leu Val Lys Val Tyr Asp Tyr Gln Glu Asp Gly Ser Val Leu
 130 135 140

Leu Thr Cys Asp Ala Glu Ala Lys Asn Ile Thr Trp Phe Lys Asp Gly
 145 150 155 160

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

Ser Asn Ala Lys Asp Pro Arg Gly Met Tyr Gln Cys Lys Gly Ser Gln
 180 185 190

Asn Lys Ser Lys Pro Leu Gln Val Tyr Tyr Arg Met Asp Tyr Lys Asp
 195 200 205

Asp Asp Asp Lys
 210

<210> 103

<211> 189

<212> PRT

<213> Artificial Sequence

<220>

<223> an artificially synthesized sequence

<400> 103

Leu Gln Asp Pro Cys Ser Asn Cys Pro Ala Gly Thr Phe Cys Asp Asn
 1 5 10 15

Asn Arg Asn Gln Ile Cys Ser Pro Cys Pro Pro Asn Ser Phe Ser Ser
 20 25 30

Ala Gly Gly Gln Arg Thr Cys Asp Ile Cys Arg Gln Cys Lys Gly Val
 35 40 45

Phe Arg Thr Arg Lys Glu Cys Ser Ser Thr Ser Asn Ala Glu Cys Asp
 50 55 60

Cys Thr Pro Gly Phe His Cys Leu Gly Ala Gly Cys Ser Met Cys Glu
 65 70 75 80

Gln Asp Cys Lys Gln Gly Gln Glu Leu Thr Lys Lys Gly Cys Lys Asp
 85 90 95

Cys Cys Phe Gly Thr Phe Asn Asp Gln Lys Arg Gly Ile Cys Arg Pro
 100 105 110

Trp Thr Asn Cys Ser Leu Asp Gly Lys Ser Val Leu Val Asn Gly Thr
 115 120 125

Lys Glu Arg Asp Val Val Cys Gly Pro Ser Pro Ala Asp Leu Ser Pro
 130 135 140

Gly Ala Ser Ser Val Thr Pro Pro Ala Pro Ala Arg Glu Pro Gly His
 145 150 155 160

Ser Pro Gln His His His His His His Gly Gly Gly Gly Ser Gly Leu
 165 170 175

Asn Asp Ile Phe Glu Ala Gln Lys Ile Glu Trp His Glu
 180 185

<210> 104

<211> 128

<212> PRT

<213> Artificial Sequence

<220>

<223> an artificially synthesized sequence

<400> 104

Gln Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Arg
 1 5 10 15

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Lys Phe Ser Asn Thr
 20 25 30

Trp Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
 35 40 45

Ala Gln Ile Lys Asp Lys Tyr Asn Ala Tyr Ala Ala Tyr Tyr Ala Pro
 50 55 60

Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asp Ser Lys Asn Ser
 65 70 75 80

Ile Tyr Leu Gln Met Asn Ser Leu Lys Thr Glu Asp Thr Ala Val Tyr
 85 90 95

Tyr Cys His Tyr Ile His Tyr Ala Ser Ala Ser Thr Leu Leu Pro Ala
 100 105 110

Phe Gly Val Asp Ala Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser
 115 120 125

<210> 105

<211> 22

<212> PRT

<213> Artificial Sequence

<220>

<223> an artificially synthesized sequence

<400> 105

Leu Gln Asp Pro Cys Ser Asn Cys Pro Ala Gly Thr Phe Cys Asp Asn
 1 5 10 15

Asn Arg Asn Gln Ile Cys
 20

<210> 106

<211> 128

<212> PRT

<213> Artificial Sequence

<220>

<223> an artificially synthesized sequence

<400> 106

Gln Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Arg
 1 5 10 15

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Lys Phe Ser Asn Val
 20 25 30

Trp Phe His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
 35 40 45

Ala Gln Ile Lys Asp Tyr Tyr Asn Ala Tyr Ala Ala Tyr Tyr Ala Pro
 50 55 60

Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asp Ser Lys Asn Ser
 65 70 75 80

Ile Tyr Leu Gln Met Asn Ser Leu Lys Thr Glu Asp Thr Ala Val Tyr
 85 90 95

Tyr Cys His Tyr Val His Tyr Ala Ser Ala Ser Thr Leu Leu Pro Ala
 100 105 110

Phe Gly Val Asp Ala Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser
 115 120 125

<210> 107

<211> 128

<212> PRT

<213> Artificial Sequence

<220>

<223> an artificially synthesized sequence

<400> 107

Gln Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Arg
 1 5 10 15

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Lys Phe Ser His Val
 20 25 30

Ala Gln Ile Lys Asp Lys Tyr Asn Ala Tyr Ala Ala Tyr Tyr Ala Pro
50 55 60

Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asp Ser Lys Asn Ser
65 70 75 80

Ile Tyr Leu Gln Met Asn Ser Leu Lys Thr Glu Asp Thr Ala Val Tyr
85 90 95

Tyr Cys His Tyr Val His Tyr Ala Ser Ala Ser Thr Leu Leu Pro Ala
100 105 110

Phe Gly Val Asp Ala Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser
115 120 125

<210> 108

<400> 108
000

<210> 109

<400> 109
000

$\langle 210 \rangle$ 110

<211> 128

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〈213〉 Artificial Sequence

$\langle 220 \rangle$

<223> an artificially synthesized sequence

$\langle 400 \rangle$ 110

Gln Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Arg
1 5 10 15

55

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Lys Phe Ser Asn Val
20 25 30

Trp Phe His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
35 40 45

Ala Gln Ile Lys Asp Lys Tyr Asn Ala Tyr Ala Ala Tyr Tyr Ala Pro
50 55 60

Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asp Ser Lys Asn Ser
65 70 75 80

Ile Tyr Leu Gln Met Asn Ser Leu Lys Thr Glu Asp Thr Ala Val Tyr
85 90 95

Tyr Cys His Tyr Val His Tyr Ala Ser Ala Ser Thr Leu Leu Pro Ala
100 105 110

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

<210> 111

<400> 111
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<210> 112

<400> 112
000

<210> 113

<211> 128

<212> PRT

<213> Artificial Sequence

<220>

<223> an artificially synthesized sequence

<400> 113

56

Gln Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Arg
1 5 10 15

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Asn Ala
20 25 30

Trp Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
35 40 45

Ala Gln Ile Lys Asp Lys Gly Asn Ala Tyr Ala Ala Tyr Tyr Ala Pro
50 55 60

Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asp Ser Lys Asn Ser
65 70 75 80

Ile Tyr Leu Gln Met Asn Ser Leu Lys Thr Glu Asp Thr Ala Val Tyr
85 90 95

Tyr Cys Arg Tyr Val His Tyr Ala Ser Ala Ser Thr Leu Leu Pro Ala
100 105 110

Phe Gly Val Asp Ala Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser
115 120 125

<210> 114

<211> 5

<212> PRT

<213> Artificial Sequence

<220>

<223> an artificially synthesized sequence

<400> 114

Asn Val Trp Met His
1 5

<210> 115

<400> 115

000

<210> 116

<400> 116
000

<210> 117

<211> 5

<212> PRT

<213> Artificial Sequence

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<400> 117

Asn Thr Trp Met His
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<210> 118

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<211> 5

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<400> 119

Asn Val Trp Phe His
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<210> 120

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His Val Trp Phe His
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Asn Val Trp Phe His
1 5

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Asn Ala Trp Met His
1 5

<210> 127

<211> 19

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<400> 127

Gln Ile Lys Asp Lys Trp Asn Ala Tyr Ala Ala Tyr Tyr Ala Pro Ser
1 5 10 15

Val Lys Gly

<210> 128

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<210> 130

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<400> 130

Gln Ile Lys Asp Lys Tyr Asn Ala Tyr Ala Ala Tyr Tyr Ala Pro Ser
1 5 10 15

Val Lys Gly

<210> 131

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<210> 132

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<400> 132

Gln	Ile	Lys	Asp	Tyr	Tyr	Asn	Ala	Tyr	Ala	Ala	Tyr	Tyr	Ala	Pro	Ser
1			5					10						15	

Val Lys Gly

<210> 133

<211> 19

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<400> 133

Gln	Ile	Lys	Asp	Lys	Tyr	Asn	Ala	Tyr	Ala	Ala	Tyr	Tyr	Ala	Pro	Ser
1			5					10						15	

Val Lys Gly

<210> 134

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<400> 136

Gln	Ile	Lys	Asp	Lys	Tyr	Asn	Ala	Tyr	Ala	Ala	Tyr	Tyr	Ala	Pro	Ser
1				5					10					15	

Val Lys Gly

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<400> 139

Gln Ile Lys Asp Lys Gly Asn Ala Tyr Ala Ala Tyr Tyr Ala Pro Ser
 1 5 10 15

Val Lys Gly

<210> 140
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<400> 140

Ile His Tyr Ala Ser Ala Ser Thr Leu Leu Pro Ala Phe Gly Ile Asp
 1 5 10 15

Ala

<210> 141

<400> 141
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<210> 142

<400> 142
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<210> 143
 <211> 17
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<220>
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<400> 143

Ile His Tyr Ala Ser Ala Ser Thr Leu Leu Pro Ala Phe Gly Val Asp
 1 5 10 15

Ala

<210> 144

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<210> 145

<211> 17

<212> PRT

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<400> 145

Val	His	Tyr	Ala	Ser	Ala	Ser	Thr	Leu	Leu	Pro	Ala	Phe	Gly	Val	Asp
1				5				10						15	

Ala

<210> 146

<211> 17

<212> PRT

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<220>

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<400> 146

Val	His	Tyr	Ala	Ser	Ala	Ser	Thr	Leu	Leu	Pro	Ala	Phe	Gly	Val	Asp
1				5				10						15	

Ala

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<400> 147
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<210> 149
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<400> 149

Val	His	Tyr	Ala	Ser	Ala	Ser	Thr	Leu	Leu	Pro	Ala	Glu	Gly	Val	Asp
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Ala

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<210> 151

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<400> 152

Val	His	Tyr	Ala	Ser	Ala	Ser	Thr	Leu	Leu	Pro	Ala	Phe	Gly	Val	Asp
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1	5	10	15
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Ala

<210> 153

<400> 153
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<210> 154

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<400> 201

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

Ser Val Thr Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Asp Tyr
 20 25 30

Glu Met His Trp Ile Arg Gln Pro Pro Gly Glu Gly Leu Glu Trp Ile
 35 40 45

Gly Ala Ile Asp Gly Pro Thr Pro Asp Thr Ala Tyr Ser Glu Lys Phe
 50 55 60

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

Met Glu Leu Ser Ser Leu Thr Ser Glu Asp Thr Ala Val Tyr Tyr Cys
 85 90 95

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

Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu Ala Pro
 115 120 125

Ser Ser Lys Ser Thr Ser Gly Gly Thr Ala Ala Leu Gly Cys Leu Val
 130 135 140

Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser Trp Asn Ser Gly Ala
 145 150 155 160

Leu Thr Ser Gly Val His Thr Phe Pro Ala Val Leu Lys Ser Ser Gly

71

165

170

175

Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser Leu Gly
180 185 190

Thr Gln Thr Tyr Ile Cys Asn Val Asn His Lys Pro Ser Asn Thr Lys
195 200 205

Val Asp Lys Arg Val Glu Pro Lys Ser Cys Asp Lys Thr His Thr Cys
210 215 220

Pro Pro Cys Pro Ala Pro Glu Ala Ala Gly Gly Pro Ser Val Phe Leu
225 230 235 240

Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu
245 250 255

Val Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys
260 265 270

Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys
275 280 285

Pro Arg Glu Glu Gln Tyr Ala Ser Thr Tyr Arg Val Val Ser Val Leu
290 295 300

Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys
305 310 315 320

Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys
325 330 335

Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Cys
340 345 350

Arg Glu Glu Met Thr Lys Asn Gln Val Ser Leu Trp Cys Leu Val Lys
355 360 365

Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln
 370 375 380

Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly
 385 390 395 400

Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln
 405 410 415

Glu Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn
 420 425 430

His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro
 435 440

<210> 202

<211> 443

<212> PRT

<213> Artificial Sequence

<220>

<223> an artificially synthesized sequence

<400> 202

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

Ser Val Thr Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Asp Tyr
 20 25 30

Glu Met His Trp Ile Arg Lys Pro Pro Gly Glu Gly Leu Glu Trp Ile
 35 40 45

Gly Ala Ile Asp Gly Pro Thr Pro Asp Thr Ala Tyr Ser Glu Lys Phe
 50 55 60

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

Met Glu Leu Ser Ser Leu Thr Ser Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95

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

Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu Ala Pro
115 120 125

Ser Ser Lys Ser Thr Ser Gly Gly Thr Ala Ala Leu Gly Cys Leu Val
130 135 140

Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser Trp Asn Ser Gly Ala
145 150 155 160

Leu Thr Ser Gly Val His Thr Phe Pro Ala Val Leu Lys Ser Ser Gly
165 170 175

Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser Leu Gly
180 185 190

Thr Gln Thr Tyr Ile Cys Asn Val Asn His Lys Pro Ser Asn Thr Lys
195 200 205

Val Asp Lys Arg Val Glu Pro Lys Ser Cys Asp Lys Thr His Thr Cys
210 215 220

Pro Pro Cys Pro Ala Pro Glu Ala Ala Gly Gly Pro Ser Val Phe Leu
225 230 235 240

Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu
245 250 255

Val Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys
260 265 270

Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys

275

280

285

Pro Arg Glu Glu Gln Tyr Ala Ser Thr Tyr Arg Val Val Ser Val Leu
 290 295 300

Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys
 305 310 315 320

Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys
 325 330 335

Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Cys
 340 345 350

Arg Glu Glu Met Thr Lys Asn Gln Val Ser Leu Trp Cys Leu Val Lys
 355 360 365

Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln
 370 375 380

Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly
 385 390 395 400

Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln
 405 410 415

Glu Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn
 420 425 430

His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro
 435 440

<210> 203

<211> 443

<212> PRT

<213> Artificial Sequence

<220>

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<400> 203

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

Ser Val Thr Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Asp Tyr
 20 25 30

Glu Met His Trp Ile Arg Gln Pro Pro Gly Glu Gly Leu Glu Trp Ile
 35 40 45

Gly Ala Ile Asp Gly Pro Thr Pro Asp Thr Ala Tyr Ser Glu Lys Phe
 50 55 60

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

Met Glu Leu Ser Ser Leu Thr Ser Glu Asp Thr Ala Val Tyr Tyr Cys
 85 90 95

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

Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu Ala Pro
 115 120 125

Ser Ser Lys Ser Thr Ser Gly Gly Thr Ala Ala Leu Gly Cys Leu Val
 130 135 140

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

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

Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser Leu Gly
 180 185 190

Thr Gln Thr Tyr Ile Cys Asn Val Asn His Lys Pro Ser Asn Thr Lys
 195 200 205

Val Asp Lys Arg Val Glu Pro Lys Ser Cys Asp Lys Thr His Thr Cys
 210 215 220

Pro Pro Cys Pro Ala Pro Glu Ala Ala Gly Gly Pro Ser Val Phe Leu
 225 230 235 240

Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu
 245 250 255

Val Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys
 260 265 270

Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys
 275 280 285

Pro Arg Glu Glu Gln Tyr Ala Ser Thr Tyr Arg Val Val Ser Val Leu
 290 295 300

Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys
 305 310 315 320

Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys
 325 330 335

Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Cys
 340 345 350

Arg Glu Glu Met Thr Lys Asn Gln Val Ser Leu Trp Cys Leu Val Lys
 355 360 365

Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln
 370 375 380

Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly

385 390 395 400

Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln
 405 410 415

Glu Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn
 420 425 430

His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro
 435 440

<210> 204

<211> 443

<212> PRT

<213> Artificial Sequence

<220>

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<400> 204

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

Ser Val Thr Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Asp Tyr
 20 25 30

Glu Met His Trp Ile Arg Glu Pro Pro Gly Glu Gly Leu Glu Trp Ile
 35 40 45

Gly Ala Ile Asp Gly Pro Thr Pro Asp Thr Ala Tyr Ser Glu Lys Phe
 50 55 60

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

Met Glu Leu Ser Ser Leu Thr Ser Glu Asp Thr Ala Val Tyr Tyr Cys
 85 90 95

Thr Arg Phe Tyr Ser Tyr Thr Tyr Trp Gly Gln Gly Thr Leu Val Thr

100

105

110

Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu Ala Pro
 115 120 125

Ser Ser Lys Ser Thr Ser Gly Gly Thr Ala Ala Leu Gly Cys Leu Val
 130 135 140

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

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

Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser Leu Gly
 180 185 190

Thr Gln Thr Tyr Ile Cys Asn Val Asn His Lys Pro Ser Asn Thr Lys
 195 200 205

Val Asp Glu Arg Val Glu Pro Lys Ser Cys Asp Lys Thr His Thr Cys
 210 215 220

Pro Pro Cys Pro Ala Pro Glu Ala Ala Gly Gly Pro Ser Val Phe Leu
 225 230 235 240

Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu
 245 250 255

Val Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys
 260 265 270

Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys
 275 280 285

Pro Arg Glu Glu Gln Tyr Ala Ser Thr Tyr Arg Val Val Ser Val Leu
 290 295 300

Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys
 305 310 315 320

Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys
 325 330 335

Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Cys
 340 345 350

Arg Glu Glu Met Thr Lys Asn Gln Val Ser Leu Trp Cys Leu Val Lys
 355 360 365

Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln
 370 375 380

Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly
 385 390 395 400

Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln
 405 410 415

Glu Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn
 420 425 430

His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro
 435 440

<210> 205

<211> 442

<212> PRT

<213> Artificial Sequence

<220>

<223> an artificially synthesized sequence

<400> 205

Asp Ile Val Met Thr Gln Ser Pro Leu Ser Leu Pro Val Thr Pro Gly
 1 5 10 15

Glu Pro Ala Ser Ile Ser Cys Arg Ser Ser Gln Pro Leu Val His Ser
 20 25 30

Asn Arg Asn Thr Tyr Leu His Trp Tyr Gln Gln Lys Pro Gly Gln Ala
 35 40 45

Pro Arg Leu Leu Ile Tyr Lys Val Ser Asn Arg Phe Ser Gly Val Pro
 50 55 60

Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Lys Ile
 65 70 75 80

Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Gly Gln Gly
 85 90 95

Thr Gln Val Pro Tyr Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
 100 105 110

Ser Ser Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu Ala Pro Ser
 115 120 125

Ser Lys Ser Thr Ser Gly Gly Thr Ala Ala Leu Gly Cys Leu Val Lys
 130 135 140

Asp Tyr Phe Pro Glu Pro Val Thr Val Ser Trp Asn Ser Gly Ala Leu
 145 150 155 160

Thr Ser Gly Val His Thr Phe Pro Ala Val Leu Gln Ser Ser Gly Leu
 165 170 175

Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser Leu Gly Thr
 180 185 190

Gln Thr Tyr Ile Cys Asn Val Asn His Lys Pro Ser Asn Thr Lys Val
 195 200 205

Asp Lys Arg Val Glu Pro Lys Ser Cys Asp Lys Thr His Thr Cys Pro

210		215		220
Pro Cys Pro Ala Pro Glu Ala Ala Gly Gly Pro Ser Val Phe Leu Phe				
225		230		235
Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val				
	245		250	255
Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe				
	260		265	270
Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro				
	275		280	285
Arg Glu Glu Gln Tyr Ala Ser Thr Tyr Arg Val Val Ser Val Leu Thr				
	290		295	300
Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val				
305		310		315
Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala				
	325		330	335
Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Cys Arg				
	340		345	350
Glu Glu Met Thr Lys Asn Gln Val Ser Leu Trp Cys Leu Val Lys Gly				
	355		360	365
Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro				
	370		375	380
Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser				
385		390		395
Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Glu				
	405		410	415

Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His
 420 425 430

Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro
 435 440

<210> 206

<211> 219

<212> PRT

<213> Artificial Sequence

<220>

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<400> 206

Asp Ile Val Met Thr Gln Ser Pro Leu Ser Leu Pro Val Thr Pro Gly
 1 5 10 15

Glu Pro Ala Ser Ile Ser Cys Arg Ser Ser Gln Pro Leu Val His Ser
 20 25 30

Asn Arg Asn Thr Tyr Leu His Trp Tyr Gln Gln Lys Pro Gly Gln Ala
 35 40 45

Pro Arg Leu Leu Ile Tyr Lys Val Ser Asn Arg Phe Ser Gly Val Pro
 50 55 60

Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Lys Ile
 65 70 75 80

Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Gly Gln Gly
 85 90 95

Thr Gln Val Pro Tyr Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
 100 105 110

Arg Thr Val Ala Ala Pro Ser Val Phe Ile Phe Pro Pro Ser Asp Glu
 115 120 125

Gln Leu Lys Ser Gly Thr Ala Glu Val Val Cys Leu Leu Asn Asn Phe
 130 135 140

Tyr Pro Arg Glu Ala Lys Val Gln Trp Lys Val Asp Asn Ala Leu Gln
 145 150 155 160

Ser Gly Asn Ser Glu Glu Ser Val Thr Glu Gln Asp Ser Lys Asp Ser
 165 170 175

Thr Tyr Ser Leu Ser Ser Thr Leu Thr Leu Ser Lys Ala Asp Tyr Glu
 180 185 190

Lys His Lys Val Tyr Ala Cys Glu Val Thr His Gln Gly Leu Ser Ser
 195 200 205

Pro Val Thr Lys Ser Phe Asn Arg Gly Glu Cys
 210 215

<210> 207

<211> 219

<212> PRT

<213> Artificial Sequence

<220>

<223> an artificially synthesized sequence

<400> 207

Asp Ile Val Met Thr Gln Ser Pro Leu Ser Leu Pro Val Thr Pro Gly
 1 5 10 15

Glu Pro Ala Ser Ile Ser Cys Arg Ser Ser Gln Pro Leu Val His Ser
 20 25 30

Asn Arg Asn Thr Tyr Leu His Trp Tyr Gln Glu Lys Pro Gly Gln Ala
 35 40 45

Pro Arg Leu Leu Ile Tyr Lys Val Ser Asn Arg Phe Ser Gly Val Pro
 50 55 60

Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Lys Ile
65 70 75 80

Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Gly Gln Gly
85 90 95

Thr Gln Val Pro Tyr Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
100 105 110

Arg Thr Val Ala Ala Pro Ser Val Phe Ile Phe Pro Pro Ser Asp Glu
115 120 125

Gln Leu Lys Ser Gly Thr Ala Glu Val Val Cys Leu Leu Asn Asn Phe
130 135 140

Tyr Pro Arg Glu Ala Lys Val Gln Trp Lys Val Asp Asn Ala Leu Gln
145 150 155 160

Ser Gly Asn Ser Glu Glu Ser Val Thr Glu Gln Asp Ser Lys Asp Ser
165 170 175

Thr Tyr Ser Leu Ser Ser Thr Leu Glu Leu Ser Lys Ala Asp Tyr Glu
180 185 190

Lys His Lys Val Tyr Ala Cys Glu Val Thr His Gln Gly Leu Ser Ser
195 200 205

Pro Val Thr Lys Ser Phe Asn Arg Gly Glu Cys
210 215

<210> 208

<211> 219

<212> PRT

<213> Artificial Sequence

<220>

<223> an artificially synthesized sequence

<400> 208

Asp Ile Val Met Thr Gln Ser Pro Leu Ser Leu Pro Val Thr Pro Gly
 1 5 10 15

Glu Pro Ala Ser Ile Ser Cys Arg Ser Ser Gln Pro Leu Val His Ser
 20 25 30

Asn Arg Asn Thr Tyr Leu His Trp Tyr Gln Gln Lys Pro Gly Gln Ala
 35 40 45

Pro Arg Leu Leu Ile Tyr Lys Val Ser Asn Arg Phe Ser Gly Val Pro
 50 55 60

Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Lys Ile
 65 70 75 80

Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Gly Gln Gly
 85 90 95

Thr Gln Val Pro Tyr Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
 100 105 110

Arg Thr Val Ala Ala Pro Ser Val Phe Ile Phe Pro Pro Ser Asp Glu
 115 120 125

Gln Leu Lys Ser Gly Thr Ala Lys Val Val Cys Leu Leu Asn Asn Phe
 130 135 140

Tyr Pro Arg Glu Ala Lys Val Gln Trp Lys Val Asp Asn Ala Leu Gln
 145 150 155 160

Ser Gly Asn Ser Lys Glu Ser Val Thr Glu Gln Asp Ser Lys Asp Ser
 165 170 175

Thr Tyr Ser Leu Ser Ser Thr Leu Thr Leu Ser Lys Ala Asp Tyr Glu
 180 185 190

Lys His Lys Val Tyr Ala Cys Glu Val Thr His Gln Gly Leu Ser Ser

195

200

205

Pro Val Thr Lys Ser Phe Asn Arg Gly Glu Cys
 210 215

<210> 209

<211> 219

<212> PRT

<213> Artificial Sequence

<220>

<223> an artificially synthesized sequence

<400> 209

Asp Ile Val Met Thr Gln Ser Pro Leu Ser Leu Pro Val Thr Pro Gly
 1 5 10 15

Glu Pro Ala Ser Ile Ser Cys Arg Ser Ser Gln Pro Leu Val His Ser
 20 25 30

Asn Arg Asn Thr Tyr Leu His Trp Tyr Gln Lys Lys Pro Gly Gln Ala
 35 40 45

Pro Arg Leu Leu Ile Tyr Lys Val Ser Asn Arg Phe Ser Gly Val Pro
 50 55 60

Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Lys Ile
 65 70 75 80

Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Gly Gln Gly
 85 90 95

Thr Gln Val Pro Tyr Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
 100 105 110

Arg Thr Val Ala Ala Pro Ser Val Phe Ile Phe Pro Pro Ser Asp Lys
 115 120 125

Gln Leu Lys Ser Gly Thr Ala Lys Val Val Cys Leu Leu Asn Asn Phe

130 135 140
 Tyr Pro Arg Glu Ala Lys Val Gln Trp Lys Val Asp Asn Ala Leu Gln
 145 150 155 160
 Ser Gly Asn Ser Lys Glu Ser Val Thr Glu Gln Asp Ser Lys Asp Ser
 165 170 175
 Thr Tyr Ser Leu Ser Ser Thr Leu Thr Leu Ser Lys Ala Asp Tyr Glu
 180 185 190
 Lys His Lys Val Tyr Ala Cys Glu Val Thr His Gln Gly Leu Ser Ser
 195 200 205
 Pro Val Thr Lys Ser Phe Asn Arg Gly Glu Cys
 210 215
 <210> 210
 <211> 222
 <212> PRT
 <213> Artificial Sequence
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 <223> an artificially synthesized sequence
 <400> 210
 Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ala
 1 5 10 15
 Ser Val Thr Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Asp Tyr
 20 25 30
 Glu Met His Trp Ile Arg Gln Pro Pro Gly Glu Gly Leu Glu Trp Ile
 35 40 45
 Gly Ala Ile Asp Gly Pro Thr Pro Asp Thr Ala Tyr Ser Glu Lys Phe
 50 55 60
 Lys Gly Arg Val Thr Leu Thr Ala Asp Lys Ser Thr Ser Thr Ala Tyr

Met	Glu	Leu	Ser	Ser	Leu	Thr	Ser	Glu	Asp	Thr	Ala	Val	Tyr	Tyr	Cys
				85					90					95	
Thr	Arg	Phe	Tyr	Ser	Tyr	Thr	Tyr	Trp	Gly	Gln	Gly	Thr	Leu	Val	Thr
			100					105					110		
Val	Ser	Ser	Ala	Ser	Val	Ala	Ala	Pro	Ser	Val	Phe	Ile	Phe	Pro	Pro
			115				120					125			
Ser	Asp	Glu	Gln	Leu	Lys	Ser	Gly	Thr	Ala	Ser	Val	Val	Cys	Leu	Leu
	130					135						140			
Asn	Asn	Phe	Tyr	Pro	Arg	Glu	Ala	Lys	Val	Gln	Trp	Lys	Val	Asp	Asn
145					150					155					160
Ala	Leu	Gln	Ser	Gly	Asn	Ser	Gln	Glu	Ser	Val	Thr	Glu	Gln	Asp	Ser
				165					170					175	
Lys	Asp	Ser	Thr	Tyr	Ser	Leu	Ser	Ser	Thr	Leu	Thr	Leu	Ser	Lys	Ala
			180					185					190		
Asp	Tyr	Glu	Lys	His	Lys	Val	Tyr	Ala	Cys	Glu	Val	Thr	His	Gln	Gly
		195					200					205			
Leu	Ser	Ser	Pro	Val	Thr	Lys	Ser	Phe	Asn	Arg	Gly	Glu	Cys		
	210					215					220				
<210>	211														
<211>	456														
<212>	PRT														
<213>	Artificial Sequence														
<220>															
<223>	an artificially synthesized sequence														
<400>	211														
Gln	Val	Gln	Leu	Val	Glu	Ser	Gly	Gly	Gly	Leu	Val	Gln	Pro	Gly	Arg

1	5	10	15
Ser	Leu Arg	Leu Ser Cys	Ala Ala Ser Gly Phe Lys Phe Ser Asn Val
	20	25	30
Trp Phe His	Trp Val Arg Gln	Ala Pro Gly Lys Gly	Leu Glu Trp Val
	35	40	45
Ala Gln Ile	Lys Asp Tyr Tyr	Asn Ala Tyr	Ala Ala Tyr Tyr Ala Pro
	50	55	60
Ser Val Lys	Gly Arg Phe Thr	Ile Ser Arg Asp Asp	Ser Lys Asn Ser
65	70	75	80
Ile Tyr Leu	Gln Met Asn Ser	Leu Lys Thr	Glu Asp Thr Ala Val Tyr
	85	90	95
Tyr Cys His	Tyr Val His Tyr	Ala Ser Ala Ser Thr	Leu Leu Pro Ala
	100	105	110
Glu Gly Val	Asp Ala Trp Gly	Gln Gly Thr Thr	Val Thr Val Ser Ser
	115	120	125
Ala Ser Thr	Lys Gly Pro Ser	Val Phe Pro Leu	Ala Pro Ser Ser Lys
	130	135	140
Ser Thr Ser	Gly Gly Thr Ala	Ala Leu Gly Cys	Leu Val Glu Asp Tyr
145	150	155	160
Phe Pro Glu	Pro Val Thr Val	Ser Trp Asn Ser	Gly Ala Leu Thr Ser
	165	170	175
Gly Val His	Thr Phe Pro Ala	Val Leu Glu Ser	Ser Gly Leu Tyr Ser
	180	185	190
Leu Ser Ser	Val Val Thr Val	Pro Ser Ser Ser	Leu Gly Thr Gln Thr
	195	200	205

Tyr Ile Cys Asn Val Asn His Lys Pro Ser Asn Thr Lys Val Asp Lys
 210 215 220

Arg Val Glu Pro Lys Ser Cys Asp Lys Thr His Thr Cys Pro Pro Cys
 225 230 235 240

Pro Ala Pro Glu Ala Ala Gly Gly Pro Ser Val Phe Leu Phe Pro Pro
 245 250 255

Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys
 260 265 270

Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp
 275 280 285

Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu
 290 295 300

Glu Gln Tyr Ala Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu
 305 310 315 320

His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn
 325 330 335

Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly
 340 345 350

Gln Pro Arg Glu Pro Gln Val Cys Thr Leu Pro Pro Ser Arg Glu Glu
 355 360 365

Met Thr Lys Asn Gln Val Ser Leu Ser Cys Ala Val Lys Gly Phe Tyr
 370 375 380

Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn
 385 390 395 400

Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe

91

405

410

415

Leu Val Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn
420 425 430

Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr
435 440 445

Gln Lys Ser Leu Ser Leu Ser Pro
450 455

<210> 212

<211> 456

<212> PRT

<213> Artificial Sequence

<220>

<223> an artificially synthesized sequence

<400> 212

Gln Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Arg
1 5 10 15

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Lys Phe Ser Asn Val
20 25 30

Trp Phe His Trp Val Arg Glu Ala Pro Gly Lys Gly Leu Glu Trp Val
35 40 45

Ala Gln Ile Lys Asp Tyr Tyr Asn Ala Tyr Ala Ala Tyr Tyr Ala Pro
50 55 60

Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asp Ser Lys Asn Ser
65 70 75 80

Ile Tyr Leu Gln Met Asn Ser Leu Lys Thr Glu Asp Thr Ala Val Tyr
85 90 95

Tyr Cys His Tyr Val His Tyr Ala Ser Ala Ser Thr Leu Leu Pro Ala

100

105

110

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

Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu Ala Pro Ser Ser Lys
 130 135 140

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

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

Gly Val His Thr Phe Pro Ala Val Leu Glu Ser Ser Gly Leu Tyr Ser
 180 185 190

Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser Leu Gly Thr Gln Thr
 195 200 205

Tyr Ile Cys Asn Val Asn His Lys Pro Ser Asn Thr Lys Val Asp Glu
 210 215 220

Arg Val Glu Pro Lys Ser Cys Asp Lys Thr His Thr Cys Pro Pro Cys
 225 230 235 240

Pro Ala Pro Glu Ala Ala Gly Gly Pro Ser Val Phe Leu Phe Pro Pro
 245 250 255

Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys
 260 265 270

Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp
 275 280 285

Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu
 290 295 300

Glu Gln Tyr Ala Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu
 305 310 315 320

His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn
 325 330 335

Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly
 340 345 350

Gln Pro Arg Glu Pro Gln Val Cys Thr Leu Pro Pro Ser Arg Glu Glu
 355 360 365

Met Thr Lys Asn Gln Val Ser Leu Ser Cys Ala Val Lys Gly Phe Tyr
 370 375 380

Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn
 385 390 395 400

Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe
 405 410 415

Leu Val Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn
 420 425 430

Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr
 435 440 445

Gln Lys Ser Leu Ser Leu Ser Pro
 450 455

<210> 213

<211> 456

<212> PRT

<213> Artificial Sequence

<220>

<223> an artificially synthesized sequence

<400> 213

Gln Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Arg
 1 5 10 15

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Lys Phe Ser Asn Val
 20 25 30

Trp Phe His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
 35 40 45

Ala Gln Ile Lys Asp Tyr Tyr Asn Ala Tyr Ala Ala Tyr Tyr Ala Pro
 50 55 60

Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asp Ser Lys Asn Ser
 65 70 75 80

Ile Tyr Leu Gln Met Asn Ser Leu Lys Thr Glu Asp Thr Ala Val Tyr
 85 90 95

Tyr Cys His Tyr Val His Tyr Ala Ser Ala Ser Thr Leu Leu Pro Ala
 100 105 110

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

Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu Ala Pro Ser Ser Lys
 130 135 140

Ser Thr Ser Gly Gly Thr Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr
 145 150 155 160

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

Gly Val His Thr Phe Pro Ala Val Leu Lys Ser Ser Gly Leu Tyr Ser
 180 185 190

Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser Leu Gly Thr Gln Thr

195

200

205

Tyr Ile Cys Asn Val Asn His Lys Pro Ser Asn Thr Lys Val Asp Lys
 210 215 220

Arg Val Glu Pro Lys Ser Cys Asp Lys Thr His Thr Cys Pro Pro Cys
 225 230 235 240

Pro Ala Pro Glu Ala Ala Gly Gly Pro Ser Val Phe Leu Phe Pro Pro
 245 250 255

Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys
 260 265 270

Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp
 275 280 285

Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu
 290 295 300

Glu Gln Tyr Ala Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu
 305 310 315 320

His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn
 325 330 335

Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly
 340 345 350

Gln Pro Arg Glu Pro Gln Val Cys Thr Leu Pro Pro Ser Arg Glu Glu
 355 360 365

Met Thr Lys Asn Gln Val Ser Leu Ser Cys Ala Val Lys Gly Phe Tyr
 370 375 380

Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn
 385 390 395 400

Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe
405 410 415

Leu Val Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn
420 425 430

Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr
435 440 445

Gln Lys Ser Leu Ser Leu Ser Pro
450 455

<210> 214

<211> 456

<212> PRT

〈213〉 Artificial Sequence

$\langle 220 \rangle$

⟨223⟩ an artificially synthesized sequence

<400> 214

Gln Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Arg
1 5 10 15

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Lys Phe Ser Asn Val
20 25 30

Trp Phe His Trp Val Arg Lys Ala Pro Gly Lys Gly Leu Glu Trp Val
35 40 45

Ala Gln Ile Lys Asp Tyr Tyr Asn Ala Tyr Ala Ala Tyr Tyr Ala Pro
50 55 60

Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asp Ser Lys Asn Ser
65 70 75 80

Ile Tyr Leu Gln Met Asn Ser Leu Lys Thr Glu Asp Thr Ala Val Tyr
85 90 95

Tyr Cys His Tyr Val His Tyr Ala Ser Ala Ser Thr Leu Leu Pro Ala
 100 105 110

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

Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu Ala Pro Ser Ser Lys
 130 135 140

Ser Thr Ser Gly Gly Thr Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr
 145 150 155 160

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

Gly Val His Thr Phe Pro Ala Val Leu Lys Ser Ser Gly Leu Tyr Ser
 180 185 190

Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser Leu Gly Thr Gln Thr
 195 200 205

Tyr Ile Cys Asn Val Asn His Lys Pro Ser Asn Thr Lys Val Asp Lys
 210 215 220

Arg Val Glu Pro Lys Ser Cys Asp Lys Thr His Thr Cys Pro Pro Cys
 225 230 235 240

Pro Ala Pro Glu Ala Ala Gly Gly Pro Ser Val Phe Leu Phe Pro Pro
 245 250 255

Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys
 260 265 270

Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp
 275 280 285

Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu

290 295 300
 Glu Gln Tyr Ala Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu
 305 310 315 320
 His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn
 325 330 335
 Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly
 340 345 350
 Gln Pro Arg Glu Pro Gln Val Cys Thr Leu Pro Pro Ser Arg Glu Glu
 355 360 365
 Met Thr Lys Asn Gln Val Ser Leu Ser Cys Ala Val Lys Gly Phe Tyr
 370 375 380
 Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn
 385 390 395 400
 Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe
 405 410 415
 Leu Val Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn
 420 425 430
 Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr
 435 440 445
 Gln Lys Ser Leu Ser Leu Ser Pro
 450 455

<210> 215

<211> 456

<212> PRT

<213> Artificial Sequence

<220>

<223> an artificially synthesized sequence

<400> 215

Gln Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Arg
 1 5 10 15

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Lys Phe Ser Asn Val
 20 25 30

Trp Phe His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
 35 40 45

Ala Gln Ile Lys Asp Tyr Tyr Asn Ala Tyr Ala Gly Tyr Tyr His Pro
 50 55 60

Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asp Ser Lys Asn Ser
 65 70 75 80

Ile Tyr Leu Gln Met Asn Ser Leu Lys Thr Glu Asp Thr Ala Val Tyr
 85 90 95

Tyr Cys His Tyr Val His Tyr Ala Ala Ala Ser Gln Leu Leu Pro Ala
 100 105 110

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

Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu Ala Pro Ser Ser Lys
 130 135 140

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

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

Gly Val His Thr Phe Pro Ala Val Leu Glu Ser Ser Gly Leu Tyr Ser
 180 185 190

Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser Leu Gly Thr Gln Thr
 195 200 205

Tyr Ile Cys Asn Val Asn His Lys Pro Ser Asn Thr Lys Val Asp Lys
 210 215 220

Arg Val Glu Pro Lys Ser Cys Asp Lys Thr His Thr Cys Pro Pro Cys
 225 230 235 240

Pro Ala Pro Glu Ala Ala Gly Gly Pro Ser Val Phe Leu Phe Pro Pro
 245 250 255

Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys
 260 265 270

Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp
 275 280 285

Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu
 290 295 300

Glu Gln Tyr Ala Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu
 305 310 315 320

His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn
 325 330 335

Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly
 340 345 350

Gln Pro Arg Glu Pro Gln Val Cys Thr Leu Pro Pro Ser Arg Glu Glu
 355 360 365

Met Thr Lys Asn Gln Val Ser Leu Ser Cys Ala Val Lys Gly Phe Tyr
 370 375 380

Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn

101

385 390 395 400

Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe
 405 410 415

Leu Val Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn
 420 425 430

Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr
 435 440 445

Gln Lys Ser Leu Ser Leu Ser Pro
 450 455

<210> 216

<211> 456

<212> PRT

<213> Artificial Sequence

<220>

<223> an artificially synthesized sequence

<400> 216

Gln Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Arg
1 5 10 15

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Lys Phe Ser Asn Val
 20 25 30

Trp Phe His Trp Val Arg Glu Ala Pro Gly Lys Gly Leu Glu Trp Val
 35 40 45

Ala Gln Ile Lys Asp Tyr Tyr Asn Ala Tyr Ala Gly Tyr Tyr His Pro
 50 55 60

Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asp Ser Lys Asn Ser
65 70 75 80

Ile Tyr Leu Gln Met Asn Ser Leu Lys Thr Glu Asp Thr Ala Val Tyr

95

Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp
275 280 285

Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu
 290 295 300

Glu Gln Tyr Ala Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu
 305 310 315 320

His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn
 325 330 335

Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly
 340 345 350

Gln Pro Arg Glu Pro Gln Val Cys Thr Leu Pro Pro Ser Arg Glu Glu
 355 360 365

Met Thr Lys Asn Gln Val Ser Leu Ser Cys Ala Val Lys Gly Phe Tyr
 370 375 380

Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn
 385 390 395 400

Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe
 405 410 415

Leu Val Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn
 420 425 430

Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr
 435 440 445

Gln Lys Ser Leu Ser Leu Ser Pro
 450 455

<210> 217

<211> 456

<212> PRT

<213> Artificial Sequence

<220>

<223> an artificially synthesized sequence

<400> 217

Gln Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Arg
 1 5 10 15

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Lys Phe Ser Asn Val
 20 25 30

Trp Phe His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
 35 40 45

Ala Gln Ile Lys Asp Tyr Tyr Asn Ala Tyr Ala Gly Tyr Tyr His Pro
 50 55 60

Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asp Ser Lys Asn Ser
 65 70 75 80

Ile Tyr Leu Gln Met Asn Ser Leu Lys Thr Glu Asp Thr Ala Val Tyr
 85 90 95

Tyr Cys His Tyr Val His Tyr Ala Ala Ala Ser Gln Leu Leu Pro Ala
 100 105 110

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

Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu Ala Pro Ser Ser Lys
 130 135 140

Ser Thr Ser Gly Gly Thr Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr
 145 150 155 160

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

Gly Val His Thr Phe Pro Ala Val Leu Lys Ser Ser Gly Leu Tyr Ser

105

180

185

190

Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser Leu Gly Thr Gln Thr
195 200 205

Tyr Ile Cys Asn Val Asn His Lys Pro Ser Asn Thr Lys Val Asp Lys
210 215 220

Arg Val Glu Pro Lys Ser Cys Asp Lys Thr His Thr Cys Pro Pro Cys
225 230 235 240

Pro Ala Pro Glu Ala Ala Gly Gly Pro Ser Val Phe Leu Phe Pro Pro
245 250 255

Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys
260 265 270

Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp
275 280 285

Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu
290 295 300

Glu Gln Tyr Ala Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu
305 310 315 320

His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn
325 330 335

Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly
340 345 350

Gln Pro Arg Glu Pro Gln Val Cys Thr Leu Pro Pro Ser Arg Glu Glu
355 360 365

Met Thr Lys Asn Gln Val Ser Leu Ser Cys Ala Val Lys Gly Phe Tyr
370 375 380

Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn
385 390 395 400

Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe
405 410 415

Leu Val Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn
420 425 430

Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr
435 440 445

Gln Lys Ser Leu Ser Leu Ser Pro
450 455

<210> 218

<211> 456

<212> PRT

<213> Artificial Sequence

<220>

<223> an artificially synthesized sequence

<400> 218

Gln Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Arg
1 5 10 15

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Lys Phe Ser Asn Val
20 25 30

Trp Phe His Trp Val Arg Lys Ala Pro Gly Lys Gly Leu Glu Trp Val
35 40 45

Ala Gln Ile Lys Asp Tyr Tyr Asn Ala Tyr Ala Gly Tyr Tyr His Pro
50 55 60

Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asp Ser Lys Asn Ser
65 70 75 80

Ile Tyr Leu Gln Met Asn Ser Leu Lys Thr Glu Asp Thr Ala Val Tyr
 85 90 95

Tyr Cys His Tyr Val His Tyr Ala Ala Ala Ser Gln Leu Leu Pro Ala
 100 105 110

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

Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu Ala Pro Ser Ser Lys
 130 135 140

Ser Thr Ser Gly Gly Thr Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr
 145 150 155 160

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

Gly Val His Thr Phe Pro Ala Val Leu Lys Ser Ser Gly Leu Tyr Ser
 180 185 190

Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser Leu Gly Thr Gln Thr
 195 200 205

Tyr Ile Cys Asn Val Asn His Lys Pro Ser Asn Thr Lys Val Asp Lys
 210 215 220

Arg Val Glu Pro Lys Ser Cys Asp Lys Thr His Thr Cys Pro Pro Cys
 225 230 235 240

Pro Ala Pro Glu Ala Ala Gly Gly Pro Ser Val Phe Leu Phe Pro Pro
 245 250 255

Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys
 260 265 270

Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp

108

275

280

285

Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu
290 295 300

Glu Gln Tyr Ala Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu
305 310 315 320

His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn
325 330 335

Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly
340 345 350

Gln Pro Arg Glu Pro Gln Val Cys Thr Leu Pro Pro Ser Arg Glu Glu
355 360 365

Met Thr Lys Asn Gln Val Ser Leu Ser Cys Ala Val Lys Gly Phe Tyr
370 375 380

Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn
385 390 395 400

Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe
405 410 415

Leu Val Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn
420 425 430

Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr
435 440 445

Gln Lys Ser Leu Ser Leu Ser Pro
450 455

<210> 219

<211> 456

<212> PRT

<213> Artificial Sequence

<220>

<223> an artificially synthesized sequence

<400> 219

Gln Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Arg
1 5 10 15

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Lys Phe Ser Asn Val
20 25 30

Trp Phe His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
35 40 45

Ala Gln Ile Lys Asp Tyr Tyr Asn Ala Tyr Ala Ala Tyr Tyr Ala Pro
50 55 60

Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asp Ser Lys Asn Ser
65 70 75 80

Ile Tyr Leu Gln Met Asn Ser Leu Lys Thr Glu Asp Thr Ala Val Tyr
85 90 95

Tyr Cys His Tyr Val His Tyr Ala Ser Ala Ser Thr Leu Leu Pro Ala
100 105 110

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

Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu Ala Pro Ser Ser Lys
130 135 140

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

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

Gly Val His Thr Phe Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser
 180 185 190

Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser Leu Gly Thr Gln Thr
 195 200 205

Tyr Ile Cys Asn Val Asn His Lys Pro Ser Asn Thr Lys Val Asp Glu
 210 215 220

Arg Val Glu Pro Lys Ser Cys Asp Lys Thr His Thr Cys Pro Pro Cys
 225 230 235 240

Pro Ala Pro Glu Ala Ala Gly Gly Pro Ser Val Phe Leu Phe Pro Pro
 245 250 255

Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys
 260 265 270

Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp
 275 280 285

Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu
 290 295 300

Glu Gln Tyr Ala Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu
 305 310 315 320

His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn
 325 330 335

Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly
 340 345 350

Gln Pro Arg Glu Pro Gln Val Cys Thr Leu Pro Pro Ser Arg Glu Glu
 355 360 365

Met Thr Lys Asn Gln Val Ser Leu Ser Cys Ala Val Lys Gly Phe Tyr

370 375 380
 Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn
 385 390 395 400
 Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe
 405 410 415
 Leu Val Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn
 420 425 430
 Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr
 435 440 445
 Gln Lys Ser Leu Ser Leu Ser Pro
 450 455
 <210> 220
 <211> 456
 <212> PRT
 <213> Artificial Sequence
 <220>
 <223> an artificially synthesized sequence
 <400> 220
 Gln Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Arg
 1 5 10 15
 Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Lys Phe Ser Asn Val
 20 25 30
 Trp Phe His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
 35 40 45
 Ala Gln Ile Lys Asp Tyr Tyr Asn Ala Tyr Ala Gly Tyr Tyr His Pro
 50 55 60
 Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asp Ser Lys Asn Ser

112

65		70		75		80
Ile	Tyr	Leu	Gln	Met	Asn	Tyr
		85				90
						95
Tyr	Cys	His	Tyr	Val	His	Tyr
		100				105
						110
Glu	Gly	Val	Asp	Ala	Trp	Gly
		115				120
						125
Ala	Ser	Thr	Lys	Gly	Pro	Ser
		130				135
						140
Ser	Thr	Ser	Gly	Gly	Thr	Ala
					150	
						155
						160
Phe	Pro	Glu	Pro	Val	Thr	Val
				165		
						170
						175
Gly	Val	His	Thr	Phe	Pro	Ala
						180
						185
						190
Leu	Ser	Ser	Val	Val	Thr	Val
						195
						200
						205
Tyr	Ile	Cys	Asn	Val	Asn	His
						210
						215
						220
Arg	Val	Glu	Pro	Lys	Ser	Cys
						225
						230
						235
Pro	Ala	Pro	Glu	Ala	Ala	Gly
						245
						250
						255
Lys	Pro	Lys	Asp	Thr	Leu	Met
						260
						265
						270

Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp
 275 280 285

Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu
 290 295 300

Glu Gln Tyr Ala Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu
 305 310 315 320

His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn
 325 330 335

Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly
 340 345 350

Gln Pro Arg Glu Pro Gln Val Cys Thr Leu Pro Pro Ser Arg Glu Glu
 355 360 365

Met Thr Lys Asn Gln Val Ser Leu Ser Cys Ala Val Lys Gly Phe Tyr
 370 375 380

Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn
 385 390 395 400

Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe
 405 410 415

Leu Val Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn
 420 425 430

Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr
 435 440 445

Gln Lys Ser Leu Ser Leu Ser Pro
 450 455

<210> 221

<211> 219

<212> PRT

<213> Artificial Sequence

<220>

<223> an artificially synthesized sequence

<400> 221

Asp	Ile	Val	Met	Thr	Gln	Ser	Pro	Leu	Ser	Leu	Pro	Val	Thr	Pro	Gly
1				5				10						15	

Glu	Pro	Ala	Ser	Ile	Ser	Cys	Gln	Pro	Ser	Gln	Glu	Val	Val	His	Met
			20					25						30	

Asn	Arg	Asn	Thr	Tyr	Leu	His	Trp	Tyr	Gln	Gln	Lys	Pro	Gly	Gln	Ala
		35					40					45			

Pro	Arg	Leu	Leu	Ile	Tyr	Lys	Val	Ser	Asn	Arg	Phe	Pro	Gly	Val	Pro
	50					55					60				

Asp	Arg	Phe	Ser	Gly	Ser	Gly	Ser	Gly	Thr	Asp	Phe	Thr	Leu	Lys	Ile
65					70					75					80

Ser	Arg	Val	Glu	Ala	Glu	Asp	Val	Gly	Val	Tyr	Tyr	Cys	Ala	Gln	Gly
			85						90					95	

Thr	Ser	His	Pro	Phe	Thr	Phe	Gly	Gln	Gly	Thr	Lys	Leu	Glu	Ile	Lys
			100					105					110		

Arg	Thr	Val	Ala	Ala	Pro	Ser	Val	Phe	Ile	Phe	Pro	Pro	Ser	Asp	Glu
		115					120					125			

Gln	Leu	Lys	Ser	Gly	Thr	Ala	Lys	Val	Val	Cys	Leu	Leu	Asn	Asn	Phe
	130					135				140					

Tyr	Pro	Arg	Glu	Ala	Lys	Val	Gln	Trp	Lys	Val	Asp	Asn	Ala	Leu	Gln
145					150					155					160

Ser	Gly	Asn	Ser	Lys	Glu	Ser	Val	Thr	Glu	Gln	Asp	Ser	Lys	Asp	Ser
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

115
 165 170 175
 Thr Tyr Ser Leu Ser Ser Thr Leu Thr Leu Ser Lys Ala Asp Tyr Glu
 180 185 190
 Lys His Lys Val Tyr Ala Cys Glu Val Thr His Gln Gly Leu Ser Ser
 195 200 205
 Pro Val Thr Lys Ser Phe Asn Arg Gly Glu Cys
 210 215
 <210> 222
 <211> 219
 <212> PRT
 <213> Artificial Sequence
 <220>
 <223> an artificially synthesized sequence
 <400> 222
 Asp Ile Val Met Thr Gln Ser Pro Leu Ser Leu Pro Val Thr Pro Gly
 1 5 10 15
 Glu Pro Ala Ser Ile Ser Cys Gln Pro Ser Gln Glu Val Val His Met
 20 25 30
 Asn Arg Asn Thr Tyr Leu His Trp Tyr Gln Lys Lys Pro Gly Gln Ala
 35 40 45
 Pro Arg Leu Leu Ile Tyr Lys Val Ser Asn Arg Phe Pro Gly Val Pro
 50 55 60
 Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Lys Ile
 65 70 75 80
 Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Ala Gln Gly
 85 90 95
 Thr Ser His Pro Phe Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys

116
 100 105 110
 Arg Thr Val Ala Ala Pro Ser Val Phe Ile Phe Pro Pro Ser Asp Lys
 115 120 125
 Gln Leu Lys Ser Gly Thr Ala Lys Val Val Cys Leu Leu Asn Asn Phe
 130 135 140
 Tyr Pro Arg Glu Ala Lys Val Gln Trp Lys Val Asp Asn Ala Leu Gln
 145 150 155 160
 Ser Gly Asn Ser Lys Glu Ser Val Thr Glu Gln Asp Ser Lys Asp Ser
 165 170 175
 Thr Tyr Ser Leu Ser Ser Thr Leu Thr Leu Ser Lys Ala Asp Tyr Glu
 180 185 190
 Lys His Lys Val Tyr Ala Cys Glu Val Thr His Gln Gly Leu Ser Ser
 195 200 205
 Pro Val Thr Lys Ser Phe Asn Arg Gly Glu Cys
 210 215

<210> 223

<211> 219

<212> PRT

<213> Artificial Sequence

<220>

<223> an artificially synthesized sequence

<400> 223

Asp Ile Val Met Thr Gln Ser Pro Leu Ser Leu Pro Val Thr Pro Gly
 1 5 10 15

Glu Pro Ala Ser Ile Ser Cys Gln Pro Ser Gln Glu Val Val His Met
 20 25 30

Asn Arg Asn Thr Tyr Leu His Trp Tyr Gln Gln Lys Pro Gly Gln Ala

117

35

40

45

Pro Arg Leu Leu Ile Tyr Lys Val Ser Asn Arg Phe Pro Gly Val Pro
50 55 60

Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Lys Ile
65 70 75 80

Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Ala Gln Gly
85 90 95

Thr Ser His Pro Phe Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
100 105 110

Arg Thr Val Ala Ala Pro Ser Val Phe Ile Phe Pro Pro Ser Asp Glu
115 120 125

Gln Leu Lys Ser Gly Thr Ala Glu Val Val Cys Leu Leu Asn Asn Phe
130 135 140

Tyr Pro Arg Glu Ala Lys Val Gln Trp Lys Val Asp Asn Ala Leu Gln
145 150 155 160

Ser Gly Asn Ser Glu Glu Ser Val Thr Glu Gln Asp Ser Lys Asp Ser
165 170 175

Thr Tyr Ser Leu Ser Ser Thr Leu Thr Leu Ser Lys Ala Asp Tyr Glu
180 185 190

Lys His Lys Val Tyr Ala Cys Glu Val Thr His Gln Gly Leu Ser Ser
195 200 205

Pro Val Thr Lys Ser Phe Asn Arg Gly Glu Cys
210 215

<210> 224

<211> 219

<212> PRT

<213> Artificial Sequence

<220>

<223> an artificially synthesized sequence

<400> 224

Asp Ile Val Met Thr Gln Ser Pro Leu Ser Leu Pro Val Thr Pro Gly
1 5 10 15

Glu Pro Ala Ser Ile Ser Cys Gln Pro Ser Gln Glu Val Val His Met
20 25 30

Asn Arg Asn Thr Tyr Leu His Trp Tyr Gln Glu Lys Pro Gly Gln Ala
35 40 45

Pro Arg Leu Leu Ile Tyr Lys Val Ser Asn Arg Phe Pro Gly Val Pro
50 55 60

Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Lys Ile
65 70 75 80

Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Ala Gln Gly
85 90 95

Thr Ser His Pro Phe Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
100 105 110

Arg Thr Val Ala Ala Pro Ser Val Phe Ile Phe Pro Pro Ser Asp Glu
115 120 125

Gln Leu Lys Ser Gly Thr Ala Glu Val Val Cys Leu Leu Asn Asn Phe
130 135 140

Tyr Pro Arg Glu Ala Lys Val Gln Trp Lys Val Asp Asn Ala Leu Gln
145 150 155 160

Ser Gly Asn Ser Glu Glu Ser Val Thr Glu Gln Asp Ser Lys Asp Ser
165 170 175

Thr Tyr Ser Leu Ser Ser Thr Leu Glu Leu Ser Lys Ala Asp Tyr Glu
 180 185 190

Lys His Lys Val Tyr Ala Cys Glu Val Thr His Gln Gly Leu Ser Ser
 195 200 205

Pro Val Thr Lys Ser Phe Asn Arg Gly Glu Cys
 210 215

<210> 225

<211> 219

<212> PRT

<213> Artificial Sequence

<220>

<223> an artificially synthesized sequence

<400> 225

Asp Ile Val Met Thr Gln Ser Pro Leu Ser Leu Pro Val Thr Pro Gly
 1 5 10 15

Glu Pro Ala Ser Ile Ser Cys Gln Pro Ser Gln Glu Val Val His Met
 20 25 30

Asn Arg Asn Thr Tyr Leu His Trp Tyr Gln Gln Lys Pro Gly Gln Ala
 35 40 45

Pro Arg Leu Leu Ile Tyr Lys Val Ser Asn Arg Phe Pro Gly Val Pro
 50 55 60

Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Lys Ile
 65 70 75 80

Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Ala Gln Gly
 85 90 95

Thr Ser His Pro Phe Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
 100 105 110

120

Arg Thr Val Ala Ala Pro Ser Val Phe Ile Phe Pro Pro Ser Asp Arg
115 120 125

Lys Leu Lys Ser Gly Thr Ala Ser Val Val Cys Leu Leu Asn Asn Phe
130 135 140

Tyr Pro Arg Glu Ala Lys Val Gln Trp Lys Val Asp Asn Ala Leu Gln
145 150 155 160

Ser Gly Asn Ser Gln Glu Ser Val Thr Glu Gln Asp Ser Lys Asp Ser
165 170 175

Thr Tyr Ser Leu Ser Ser Thr Leu Thr Leu Ser Lys Ala Asp Tyr Glu
180 185 190

Lys His Lys Val Tyr Ala Cys Glu Val Thr His Gln Gly Leu Ser Ser
195 200 205

Pro Val Thr Lys Ser Phe Asn Arg Gly Glu Cys
210 215

<210> 226

<211> 115

<212> PRT

<213> Artificial Sequence

<220>

<223> an artificially synthesized sequence

<400> 226

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

Ser Val Thr Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Asp Tyr
20 25 30

Glu Met His Trp Ile Arg Gln Pro Pro Gly Glu Gly Leu Glu Trp Ile
35 40 45

Gly Ala Ile Asp Gly Pro Thr Pro Asp Thr Ala Tyr Ser Glu Lys Phe
 50 55 60

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

Met Glu Leu Ser Ser Leu Thr Ser Glu Asp Thr Ala Val Tyr Tyr Cys
 85 90 95

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

Val Ser Ser
 115

<210> 227

<211> 115

<212> PRT

<213> Artificial Sequence

<220>

<223> an artificially synthesized sequence

<400> 227

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

Ser Val Thr Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Asp Tyr
 20 25 30

Glu Met His Trp Ile Arg Lys Pro Pro Gly Glu Gly Leu Glu Trp Ile
 35 40 45

Gly Ala Ile Asp Gly Pro Thr Pro Asp Thr Ala Tyr Ser Glu Lys Phe
 50 55 60

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

Met Glu Leu Ser Ser Leu Thr Ser Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95

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

Val Ser Ser
115

<210> 228

<211> 115

<212> PRT

<213> Artificial Sequence

$\langle 220 \rangle$

⟨223⟩ an artificially synthesized sequence

<400> 228

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

Ser Val Thr Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Asp Tyr
20 25 30

Glu Met His Trp Ile Arg Glu Pro Pro Gly Glu Gly Leu Glu Trp Ile
35 40 45

Gly Ala Ile Asp Gly Pro Thr Pro Asp Thr Ala Tyr Ser Glu Lys Phe
50 55 60

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

Met Glu Leu Ser Ser Leu Thr Ser Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95

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

Val Ser Ser
115

<210> 229
<211> 128
<212> PRT
<213> Artificial Sequence

<220>
<223> an artificially synthesized sequence

<400> 229

Gln Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Arg
1 5 10 15

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Lys Phe Ser Asn Val
20 25 30

Trp Phe His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
35 40 45

Ala Gln Ile Lys Asp Tyr Tyr Asn Ala Tyr Ala Ala Tyr Tyr Ala Pro
50 55 60

Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asp Ser Lys Asn Ser
65 70 75 80

Ile Tyr Leu Gln Met Asn Ser Leu Lys Thr Glu Asp Thr Ala Val Tyr
85 90 95

Tyr Cys His Tyr Val His Tyr Ala Ser Ala Ser Thr Leu Leu Pro Ala
100 105 110

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

<210> 230
<211> 128
<212> PRT

<213> Artificial Sequence

<220>

<223> an artificially synthesized sequence

<400> 230

Gln Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Arg
1 5 10 15

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Lys Phe Ser Asn Val
20 25 30

Trp Phe His Trp Val Arg Glu Ala Pro Gly Lys Gly Leu Glu Trp Val
35 40 45

Ala Gln Ile Lys Asp Tyr Tyr Asn Ala Tyr Ala Ala Tyr Tyr Ala Pro
50 55 60

Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asp Ser Lys Asn Ser
65 70 75 80

Ile Tyr Leu Gln Met Asn Ser Leu Lys Thr Glu Asp Thr Ala Val Tyr
85 90 95

Tyr Cys His Tyr Val His Tyr Ala Ser Ala Ser Thr Leu Leu Pro Ala
100 105 110

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

<210> 231

<211> 128

<212> PRT

<213> Artificial Sequence

<220>

<223> an artificially synthesized sequence

<400> 231

Gln Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Arg

125

1 5 10 15

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Lys Phe Ser Asn Val
 20 25 30

Trp Phe His Trp Val Arg Lys Ala Pro Gly Lys Gly Leu Glu Trp Val
 35 40 45

Ala Gln Ile Lys Asp Tyr Tyr Asn Ala Tyr Ala Ala Tyr Tyr Ala Pro
 50 55 60

Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asp Ser Lys Asn Ser
65 70 75 80

Ile Tyr Leu Gln Met Asn Ser Leu Lys Thr Glu Asp Thr Ala Val Tyr
 85 90 95

Tyr Cys His Tyr Val His Tyr Ala Ser Ala Ser Thr Leu Leu Pro Ala
 100 105 110

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

<210> 232

<211> 128

<212> PRT

<213> Artificial Sequence

<220>

<223> an artificially synthesized sequence

<400> 232

Gln Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Arg
1 5 10 15

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Lys Phe Ser Asn Val
 20 25 30

Trp Phe His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val

126

35

40

45

Ala Gln Ile Lys Asp Tyr Tyr Asn Ala Tyr Ala Gly Tyr Tyr His Pro
50 55 60

Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asp Ser Lys Asn Ser
65 70 75 80

Ile Tyr Leu Gln Met Asn Ser Leu Lys Thr Glu Asp Thr Ala Val Tyr
85 90 95

Tyr Cys His Tyr Val His Tyr Ala Ala Ala Ser Gln Leu Leu Pro Ala
100 105 110

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

<210> 233

<211> 128

<212> PRT

<213> Artificial Sequence

<220>

<223> an artificially synthesized sequence

<400> 233

Gln Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Arg
1 5 10 15

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Lys Phe Ser Asn Val
20 25 30

Trp Phe His Trp Val Arg Glu Ala Pro Gly Lys Gly Leu Glu Trp Val
35 40 45

Ala Gln Ile Lys Asp Tyr Tyr Asn Ala Tyr Ala Gly Tyr Tyr His Pro
50 55 60

Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asp Ser Lys Asn Ser

65 70 75 80

Tyr Cys His Tyr Val His Tyr Ala Ala Ala Ser Gln Leu Leu Pro Ala
100 105 110

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

<210>	234
<211>	128
<212>	PRT
<213>	Artificial Sequence

<220>
<223> an artificially synthesized sequence

<400> 234

Gln Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Arg
1 5 10 15

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Lys Phe Ser Asn Val
20 25 30

Trp Phe His Trp Val Arg Lys Ala Pro Gly Lys Gly Leu Glu Trp Val
35 40 45

Ala Gln Ile Lys Asp Tyr Tyr Asn Ala Tyr Ala Gly Tyr Tyr His Pro
50 55 60

Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asp Ser Lys Asn Ser
65 70 75 80

Ile Tyr Leu Gln Met Asn Ser Leu Lys Thr Glu Asp Thr Ala Val Tyr
85 90 95

Tyr Cys His Tyr Val His Tyr Ala Ala Ala Ser Gln Leu Leu Pro Ala

128

100

105

110

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

<210> 235

<211> 5

<212> PRT

<213> Artificial Sequence

<220>

<223> an artificially synthesized sequence

<400> 235

Asp Tyr Glu Met His
1 5

<210> 236

<211> 5

<212> PRT

<213> Artificial Sequence

<220>

<223> an artificially synthesized sequence

<400> 236

Asp Tyr Glu Met His
1 5

<210> 237

<211> 5

<212> PRT

<213> Artificial Sequence

<220>

<223> an artificially synthesized sequence

<400> 237

Asp Tyr Glu Met His
1 5

<210> 238

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

<220>
<223> an artificially synthesized sequence

<400> 238

Asn Val Trp Phe His
1 5

<210> 239
<211> 5
<212> PRT
<213> Artificial Sequence

<220>
<223> an artificially synthesized sequence

<400> 239

Asn Val Trp Phe His
1 5

<210> 240
<211> 5
<212> PRT
<213> Artificial Sequence

<220>
<223> an artificially synthesized sequence

<400> 240

Asn Val Trp Phe His
1 5

<210> 241
<211> 5
<212> PRT
<213> Artificial Sequence

<220>
<223> an artificially synthesized sequence

<400> 241

Asn Val Trp Phe His
1 5

<210> 242
<211> 5
<212> PRT
<213> Artificial Sequence

<220>
<223> an artificially synthesized sequence

<400> 242

Asn Val Trp Phe His
1 5

<210> 243
<211> 5
<212> PRT
<213> Artificial Sequence

<220>
<223> an artificially synthesized sequence

<400> 243

Asn Val Trp Phe His
1 5

<210> 244
<211> 17
<212> PRT
<213> Artificial Sequence

<220>
<223> an artificially synthesized sequence

<400> 244

Ala Ile Asp Gly Pro Thr Pro Asp Thr Ala Tyr Ser Glu Lys Phe Lys
1 5 10 15

Gly

<210> 245
 <211> 17
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> an artificially synthesized sequence

<400> 245

Ala	Ile	Asp	Gly	Pro	Thr	Pro	Asp	Thr	Ala	Tyr	Ser	Glu	Lys	Phe	Lys
1				5					10					15	

Gly

<210> 246
 <211> 17
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> an artificially synthesized sequence

<400> 246

Ala	Ile	Asp	Gly	Pro	Thr	Pro	Asp	Thr	Ala	Tyr	Ser	Glu	Lys	Phe	Lys
1				5					10					15	

Gly

<210> 247
 <211> 19
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> an artificially synthesized sequence

<400> 247

Gln	Ile	Lys	Asp	Tyr	Tyr	Asn	Ala	Tyr	Ala	Ala	Tyr	Tyr	Ala	Pro	Ser
1				5					10					15	

Val Lys Gly

<210> 248
 <211> 19
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> an artificially synthesized sequence

<400> 248

Gln	Ile	Lys	Asp	Tyr	Tyr	Asn	Ala	Tyr	Ala	Ala	Tyr	Tyr	Ala	Pro	Ser
1				5				10						15	

Val Lys Gly

<210> 249
 <211> 19
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> an artificially synthesized sequence

<400> 249

Gln	Ile	Lys	Asp	Tyr	Tyr	Asn	Ala	Tyr	Ala	Ala	Tyr	Tyr	Ala	Pro	Ser
1				5				10						15	

Val Lys Gly

<210> 250
 <211> 19
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> an artificially synthesized sequence

<400> 250

Gln Ile Lys Asp Tyr Tyr Asn Ala Tyr Ala Gly Tyr Tyr His Pro Ser
 1 5 10 15

Val Lys Gly

<210> 251
 <211> 19
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> an artificially synthesized sequence

<400> 251

Gln Ile Lys Asp Tyr Tyr Asn Ala Tyr Ala Gly Tyr Tyr His Pro Ser
 1 5 10 15

Val Lys Gly

<210> 252
 <211> 19
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> an artificially synthesized sequence

<400> 252

Gln Ile Lys Asp Tyr Tyr Asn Ala Tyr Ala Gly Tyr Tyr His Pro Ser
 1 5 10 15

Val Lys Gly

<210> 253
 <211> 6
 <212> PRT
 <213> Artificial Sequence

<220>

<223> an artificially synthesized sequence

<400> 253

Phe	Tyr	Ser	Tyr	Thr	Tyr
1				5	

<210> 254

<211> 6

<212> PRT

<213> Artificial Sequence

<220>

<223> an artificially synthesized sequence

<400> 254

Phe	Tyr	Ser	Tyr	Thr	Tyr
1				5	

<210> 255

<211> 6

<212> PRT

<213> Artificial Sequence

<220>

<223> an artificially synthesized sequence

<400> 255

Phe	Tyr	Ser	Tyr	Thr	Tyr
1				5	

<210> 256

<211> 17

<212> PRT

<213> Artificial Sequence

<220>

<223> an artificially synthesized sequence

<400> 256

Val	His	Tyr	Ala	Ser	Ala	Ser	Thr	Leu	Leu	Pro	Ala	Glu	Gly	Val	Asp
1				5				10						15	

Ala

<210> 257
 <211> 17
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> an artificially synthesized sequence

<400> 257

Val	His	Tyr	Ala	Ser	Ala	Ser	Thr	Leu	Leu	Pro	Ala	Glu	Gly	Val	Asp
1				5				10						15	

Ala

<210> 258
 <211> 17
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> an artificially synthesized sequence

<400> 258

Val	His	Tyr	Ala	Ser	Ala	Ser	Thr	Leu	Leu	Pro	Ala	Glu	Gly	Val	Asp
1				5				10						15	

Ala

<210> 259
 <211> 17
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> an artificially synthesized sequence

<400> 259

Val His Tyr Ala Ala Ala Ser Gln Leu Leu Pro Ala Glu Gly Val Asp
 1 5 10 15

Ala

<210> 260
 <211> 17
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> an artificially synthesized sequence

<400> 260

Val His Tyr Ala Ala Ala Ser Gln Leu Leu Pro Ala Glu Gly Val Asp
 1 5 10 15

Ala

<210> 261
 <211> 17
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> an artificially synthesized sequence

<400> 261

Val His Tyr Ala Ala Ala Ser Gln Leu Leu Pro Ala Glu Gly Val Asp
 1 5 10 15

Ala

<210> 262
 <211> 112
 <212> PRT
 <213> Artificial Sequence

<220>

<223> an artificially synthesized sequence

<400> 262

Asp	Ile	Val	Met	Thr	Gln	Ser	Pro	Leu	Ser	Leu	Pro	Val	Thr	Pro	Gly
1				5				10						15	

Glu	Pro	Ala	Ser	Ile	Ser	Cys	Arg	Ser	Ser	Gln	Pro	Leu	Val	His	Ser
			20					25					30		

Asn	Arg	Asn	Thr	Tyr	Leu	His	Trp	Tyr	Gln	Gln	Lys	Pro	Gly	Gln	Ala
		35					40					45			

Pro	Arg	Leu	Leu	Ile	Tyr	Lys	Val	Ser	Asn	Arg	Phe	Ser	Gly	Val	Pro
	50					55					60				

Asp	Arg	Phe	Ser	Gly	Ser	Gly	Ser	Gly	Thr	Asp	Phe	Thr	Leu	Lys	Ile
65					70					75				80	

Ser	Arg	Val	Glu	Ala	Glu	Asp	Val	Gly	Val	Tyr	Tyr	Cys	Gly	Gln	Gly
			85					90						95	

Thr	Gln	Val	Pro	Tyr	Thr	Phe	Gly	Gln	Gly	Thr	Lys	Leu	Glu	Ile	Lys
			100					105						110	

<210> 263

<211> 112

<212> PRT

<213> Artificial Sequence

<220>

<223> an artificially synthesized sequence

<400> 263

Asp	Ile	Val	Met	Thr	Gln	Ser	Pro	Leu	Ser	Leu	Pro	Val	Thr	Pro	Gly
1				5				10						15	

Glu	Pro	Ala	Ser	Ile	Ser	Cys	Arg	Ser	Ser	Gln	Pro	Leu	Val	His	Ser
			20					25					30		

Asn Arg Asn Thr Tyr Leu His Trp Tyr Gln Glu Lys Pro Gly Gln Ala
 35 40 45

Pro Arg Leu Leu Ile Tyr Lys Val Ser Asn Arg Phe Ser Gly Val Pro
 50 55 60

Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Lys Ile
 65 70 75 80

Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Gly Gln Gly
 85 90 95

Thr Gln Val Pro Tyr Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
 100 105 110

<210> 264

<211> 112

<212> PRT

<213> Artificial Sequence

<220>

<223> an artificially synthesized sequence

<400> 264

Asp Ile Val Met Thr Gln Ser Pro Leu Ser Leu Pro Val Thr Pro Gly
 1 5 10 15

Glu Pro Ala Ser Ile Ser Cys Arg Ser Ser Gln Pro Leu Val His Ser
 20 25 30

Asn Arg Asn Thr Tyr Leu His Trp Tyr Gln Lys Lys Pro Gly Gln Ala
 35 40 45

Pro Arg Leu Leu Ile Tyr Lys Val Ser Asn Arg Phe Ser Gly Val Pro
 50 55 60

Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Lys Ile
 65 70 75 80

Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Gly Gln Gly
85 90 95

Thr Gln Val Pro Tyr Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
100 105 110

<210> 265

<211> 112

<212> PRT

<213> Artificial Sequence

<220>

<223> an artificially synthesized sequence

<400> 265

Asp Ile Val Met Thr Gln Ser Pro Leu Ser Leu Pro Val Thr Pro Gly
1 5 10 15

Glu Pro Ala Ser Ile Ser Cys Gln Pro Ser Gln Glu Val Val His Met
20 25 30

Asn Arg Asn Thr Tyr Leu His Trp Tyr Gln Gln Lys Pro Gly Gln Ala
35 40 45

Pro Arg Leu Leu Ile Tyr Lys Val Ser Asn Arg Phe Pro Gly Val Pro
50 55 60

Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Lys Ile
65 70 75 80

Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Ala Gln Gly
85 90 95

Thr Ser His Pro Phe Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
100 105 110

<210> 266

<211> 112

<212> PRT

<213> Artificial Sequence

<220>

<223> an artificially synthesized sequence

<400> 266

Asp Ile Val Met Thr Gln Ser Pro Leu Ser Leu Pro Val Thr Pro Gly
1 5 10 15

Glu Pro Ala Ser Ile Ser Cys Gln Pro Ser Gln Glu Val Val His Met
20 25 30

Asn Arg Asn Thr Tyr Leu His Trp Tyr Gln Lys Lys Pro Gly Gln Ala
35 40 45

Pro Arg Leu Leu Ile Tyr Lys Val Ser Asn Arg Phe Pro Gly Val Pro
50 55 60

Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Lys Ile
65 70 75 80

Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Ala Gln Gly
85 90 95

Thr Ser His Pro Phe Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
100 105 110

<210> 267

<211> 112

<212> PRT

<213> Artificial Sequence

<220>

<223> an artificially synthesized sequence

<400> 267

Asp Ile Val Met Thr Gln Ser Pro Leu Ser Leu Pro Val Thr Pro Gly
1 5 10 15

Glu Pro Ala Ser Ile Ser Cys Gln Pro Ser Gln Glu Val Val His Met

141

20

25

30

Asn Arg Asn Thr Tyr Leu His Trp Tyr Gln Glu Lys Pro Gly Gln Ala
35 40 45

Pro Arg Leu Leu Ile Tyr Lys Val Ser Asn Arg Phe Pro Gly Val Pro
50 55 60

Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Lys Ile
65 70 75 80

Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Ala Gln Gly
85 90 95

Thr Ser His Pro Phe Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
100 105 110

<210> 268

<211> 16

<212> PRT

<213> Artificial Sequence

<220>

<223> an artificially synthesized sequence

<400> 268

Arg Ser Ser Gln Pro Leu Val His Ser Asn Arg Asn Thr Tyr Leu His
1 5 10 15

<210> 269

<211> 16

<212> PRT

<213> Artificial Sequence

<220>

<223> an artificially synthesized sequence

<400> 269

Arg Ser Ser Gln Pro Leu Val His Ser Asn Arg Asn Thr Tyr Leu His
1 5 10 15

<210> 270
 <211> 16
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> an artificially synthesized sequence

<400> 270

Arg	Ser	Ser	Gln	Pro	Leu	Val	His	Ser	Asn	Arg	Asn	Thr	Tyr	Leu	His
1				5					10					15	

<210> 271
 <211> 16
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> an artificially synthesized sequence

<400> 271

Gln	Pro	Ser	Gln	Glu	Val	Val	His	Met	Asn	Arg	Asn	Thr	Tyr	Leu	His
1				5					10					15	

<210> 272
 <211> 16
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> an artificially synthesized sequence

<400> 272

Gln	Pro	Ser	Gln	Glu	Val	Val	His	Met	Asn	Arg	Asn	Thr	Tyr	Leu	His
1				5					10					15	

<210> 273
 <211> 16
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> an artificially synthesized sequence

<400> 273

Gln	Pro	Ser	Gln	Glu	Val	Val	His	Met	Asn	Arg	Asn	Thr	Tyr	Leu	His
1				5					10					15	

<210> 274

<211> 7

<212> PRT

<213> Artificial Sequence

<220>

<223> an artificially synthesized sequence

<400> 274

Lys	Val	Ser	Asn	Arg	Phe	Ser
1				5		

<210> 275

<211> 7

<212> PRT

<213> Artificial Sequence

<220>

<223> an artificially synthesized sequence

<400> 275

Lys	Val	Ser	Asn	Arg	Phe	Ser
1				5		

<210> 276

<211> 7

<212> PRT

<213> Artificial Sequence

<220>

<223> an artificially synthesized sequence

<400> 276

Lys	Val	Ser	Asn	Arg	Phe	Ser
1				5		

<210> 277

<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> an artificially synthesized sequence

<400> 277

Lys Val Ser Asn Arg Phe Pro
1 5

<210> 278
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> an artificially synthesized sequence

<400> 278

Lys Val Ser Asn Arg Phe Pro
1 5

<210> 279
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> an artificially synthesized sequence

<400> 279

Lys Val Ser Asn Arg Phe Pro
1 5

<210> 280
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> an artificially synthesized sequence

<400> 280

Gly Gln Gly Thr Gln Val Pro Tyr Thr
1 5

<210> 281

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> an artificially synthesized sequence

<400> 281

Gly Gln Gly Thr Gln Val Pro Tyr Thr
1 5

<210> 282

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> an artificially synthesized sequence

<400> 282

Gly Gln Gly Thr Gln Val Pro Tyr Thr
1 5

<210> 283

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> an artificially synthesized sequence

<400> 283

Ala Gln Gly Thr Ser His Pro Phe Thr
1 5

<210> 284

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> an artificially synthesized sequence

<400> 284

Ala Gln Gly Thr Ser His Pro Phe Thr
1 5

<210> 285

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> an artificially synthesized sequence

<400> 285

Ala Gln Gly Thr Ser His Pro Phe Thr
1 5

<210> 286

<211> 442

<212> PRT

<213> Artificial Sequence

<220>

<223> an artificially synthesized sequence

<400> 286

Asp Ile Val Met Thr Gln Ser Pro Leu Ser Leu Pro Val Thr Pro Gly
1 5 10 15

Glu Pro Ala Ser Ile Ser Cys Arg Ser Ser Gln Pro Leu Val His Ser
20 25 30

Asn Arg Asn Thr Tyr Leu His Trp Tyr Gln Gln Lys Pro Gly Gln Ala
35 40 45

Pro Arg Leu Leu Ile Tyr Lys Val Ser Asn Arg Phe Ser Gly Val Pro
50 55 60

Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Lys Ile
65 70 75 80

Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Gly Gln Gly
85 90 95

Thr Gln Val Pro Tyr Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
100 105 110

Ser Ser Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu Ala Pro Ser
115 120 125

Ser Lys Ser Thr Ser Gly Gly Thr Ala Ala Leu Gly Cys Leu Val Lys
130 135 140

Asp Tyr Phe Pro Glu Pro Val Thr Val Ser Trp Asn Ser Gly Ala Leu
145 150 155 160

Thr Ser Gly Val His Thr Phe Pro Ala Val Leu Gln Ser Ser Gly Leu
165 170 175

Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser Leu Gly Thr
180 185 190

Gln Thr Tyr Ile Cys Asn Val Asn His Lys Pro Ser Asn Thr Lys Val
195 200 205

Asp Lys Arg Val Glu Pro Lys Ser Cys Asp Lys Thr His Thr Cys Pro
210 215 220

Pro Cys Pro Ala Pro Glu Ala Ala Gly Gly Pro Ser Val Phe Leu Phe
225 230 235 240

Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val
245 250 255

Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe

148

260

265

270

Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro
275 280 285

Arg Glu Glu Gln Tyr Ala Ser Thr Tyr Arg Val Val Ser Val Leu Thr
290 295 300

Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val
305 310 315 320

Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala
325 330 335

Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Cys Arg
340 345 350

Glu Glu Met Thr Lys Asn Gln Val Ser Leu Trp Cys Leu Val Lys Gly
355 360 365

Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro
370 375 380

Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser
385 390 395 400

Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Glu
405 410 415

Gly Asn Val Phe Ser Cys Ser Val Leu His Glu Ala Leu His Ala His
420 425 430

Tyr Thr Arg Lys Glu Leu Ser Leu Ser Pro
435 440

<210> 287

<211> 442

<212> PRT

<213> Artificial Sequence

<220>

<223> an artificially synthesized sequence

<400> 287

Asp Ile Val Met Thr Gln Ser Pro Leu Ser Leu Pro Val Thr Pro Gly
1 5 10 15

Glu Pro Ala Ser Ile Ser Cys Arg Ser Ser Gln Pro Leu Val His Ser
20 25 30

Asn Arg Asn Thr Tyr Leu His Trp Tyr Gln Gln Lys Pro Gly Gln Ala
35 40 45

Pro Arg Leu Leu Ile Tyr Lys Val Ser Asn Arg Phe Ser Gly Val Pro
50 55 60

Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Lys Ile
65 70 75 80

Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Gly Gln Gly
85 90 95

Thr Gln Val Pro Tyr Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
100 105 110

Ser Ser Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu Ala Pro Ser
115 120 125

Ser Lys Ser Thr Ser Gly Gly Thr Ala Ala Leu Gly Cys Leu Val Lys
130 135 140

Asp Tyr Phe Pro Glu Pro Val Thr Val Ser Trp Asn Ser Gly Ala Leu
145 150 155 160

Thr Ser Gly Val His Thr Phe Pro Ala Val Leu Gln Ser Ser Gly Leu
165 170 175

Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser Leu Gly Thr
 180 185 190

Gln Thr Tyr Ile Cys Asn Val Asn His Lys Pro Ser Asn Thr Lys Val
 195 200 205

Asp Lys Arg Val Glu Pro Lys Ser Cys Asp Lys Thr His Thr Cys Pro
 210 215 220

Pro Cys Pro Ala Pro Glu Ala Ala Gly Gly Pro Ser Val Phe Leu Phe
 225 230 235 240

Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val
 245 250 255

Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe
 260 265 270

Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro
 275 280 285

Arg Glu Glu Gln Tyr Ala Ser Thr Tyr Arg Val Val Ser Val Leu Thr
 290 295 300

Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val
 305 310 315 320

Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala
 325 330 335

Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Cys Arg
 340 345 350

Glu Glu Met Thr Lys Asn Gln Val Ser Leu Trp Cys Leu Val Lys Gly
 355 360 365

Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro

151

370

375

380

Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser
385 390 395 400

Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln
405 410 415

Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His
420 425 430

Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro
435 440

<210> 288

<211> 437

<212> PRT

<213> Artificial Sequence

<220>

<223> an artificially synthesized sequence

<400> 288

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

Asp Arg Val Thr Ile Thr Cys Lys Ala Ser Glu Asp Ile Tyr Asn Arg
20 25 30

Leu Ala Trp Tyr Gln Gln Lys Pro Gly Asn Ala Pro Arg Leu Leu Ile
35 40 45

Ser Gly Ala Thr Ser Leu Glu Thr Gly Val Pro Ser Arg Phe Ser Gly
50 55 60

Ser Gly Ser Gly Lys Asp Tyr Thr Leu Ser Ile Thr Ser Leu Gln Thr
65 70 75 80

Glu Asp Val Ala Thr Tyr Tyr Cys Gln Gln Tyr Trp Ser Thr Pro Tyr

95

Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr
275 280 285

Ala Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp
 290 295 300

Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu
 305 310 315 320

Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg
 325 330 335

Glu Pro Gln Val Tyr Thr Leu Pro Pro Cys Arg Glu Glu Met Thr Lys
 340 345 350

Asn Gln Val Ser Leu Trp Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp
 355 360 365

Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys
 370 375 380

Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser
 385 390 395 400

Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn Val Phe Ser
 405 410 415

Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser
 420 425 430

Leu Ser Leu Ser Pro
 435

<210> 289

<211> 223

<212> PRT

<213> Artificial Sequence

<220>

<223> an artificially synthesized sequence

<400> 289

Gln Val Gln Leu Gln Gln Ser Gly Pro Gln Leu Val Arg Pro Gly Ala
1 5 10 15

Ser Val Lys Ile Ser Cys Lys Ala Ser Gly Tyr Ser Phe Thr Ser Tyr
20 25 30

Trp Met His Trp Val Asn Gln Arg Pro Gly Gln Gly Leu Glu Trp Ile
35 40 45

Gly Met Ile Asp Pro Ser Tyr Ser Glu Thr Arg Leu Asn Gln Lys Phe
50 55 60

Lys Asp Lys Ala Thr Leu Thr Val Asp Lys Ser Ser Ser Thr Ala Tyr
65 70 75 80

Met Gln Leu Ser Ser Pro Thr Ser Glu Asp Ser Ala Val Tyr Tyr Cys
85 90 95

Ala Leu Tyr Gly Asn Tyr Phe Asp Tyr Trp Gly Gln Gly Thr Thr Leu
100 105 110

Thr Val Ser Ser Ala Ser Val Ala Ala Pro Ser Val Phe Ile Phe Pro
115 120 125

Pro Ser Asp Glu Gln Leu Lys Ser Gly Thr Ala Ser Val Val Cys Leu
130 135 140

Leu Asn Asn Phe Tyr Pro Arg Glu Ala Lys Val Gln Trp Lys Val Asp
145 150 155 160

Asn Ala Leu Gln Ser Gly Asn Ser Gln Glu Ser Val Thr Glu Gln Asp
165 170 175

Ser Lys Asp Ser Thr Tyr Ser Leu Ser Ser Thr Leu Thr Leu Ser Lys
180 185 190

Ala Asp Tyr Glu Lys His Lys Val Tyr Ala Cys Glu Val Thr His Gln

155

195

200

205

Gly Leu Ser Ser Pro Val Thr Lys Ser Phe Asn Arg Gly Glu Cys
210 215 220

<210> 290

<211> 456

<212> PRT

<213> Artificial Sequence

<220>

<223> an artificially synthesized sequence

<400> 290

Gln Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Arg
1 5 10 15

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Asn Ala
20 25 30

Trp Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
35 40 45

Ala Gln Ile Lys Asp Lys Gly Asn Ala Tyr Ala Ala Tyr Tyr Ala Pro
50 55 60

Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asp Ser Lys Asn Ser
65 70 75 80

Ile Tyr Leu Gln Met Asn Ser Leu Lys Thr Glu Asp Thr Ala Val Tyr
85 90 95

Tyr Cys His Tyr Val His Tyr Ala Ser Ala Ser Thr Val Leu Pro Ala
100 105 110

Phe Gly Val Asp Ala Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser
115 120 125

Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu Ala Pro Ser Ser Lys

156

130

135

140

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

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

Gly Val His Thr Phe Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser
180 185 190

Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser Leu Gly Thr Gln Thr
195 200 205

Tyr Ile Cys Asn Val Asn His Lys Pro Ser Asn Thr Lys Val Asp Glu
210 215 220

Arg Val Glu Pro Lys Ser Cys Asp Lys Thr His Thr Cys Pro Pro Cys
225 230 235 240

Pro Ala Pro Glu Ala Ala Gly Gly Pro Ser Val Phe Leu Phe Pro Pro
245 250 255

Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys
260 265 270

Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp
275 280 285

Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu
290 295 300

Glu Gln Tyr Ala Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu
305 310 315 320

His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn
325 330 335

Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly
 340 345 350

Gln Pro Arg Glu Pro Gln Val Cys Thr Leu Pro Pro Ser Arg Glu Glu
 355 360 365

Met Thr Lys Asn Gln Val Ser Leu Ser Cys Ala Val Lys Gly Phe Tyr
 370 375 380

Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn
 385 390 395 400

Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe
 405 410 415

Leu Val Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn
 420 425 430

Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr
 435 440 445

Gln Lys Ser Leu Ser Leu Ser Pro
 450 455

<210> 291

<211> 456

<212> PRT

<213> Artificial Sequence

<220>

<223> an artificially synthesized sequence

<400> 291

Gln Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Arg
 1 5 10 15

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Lys Phe Ser Asn Val
 20 25 30

Trp Phe His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
 35 40 45

Ala Gln Ile Lys Asp Tyr Tyr Asn Ala Tyr Ala Gly Tyr Tyr His Pro
 50 55 60

Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asp Ser Lys Asn Ser
 65 70 75 80

Ile Tyr Leu Gln Met Asn Ser Leu Lys Thr Glu Asp Thr Ala Val Tyr
 85 90 95

Tyr Cys His Tyr Val His Tyr Ala Ala Ala Ser Gln Leu Leu Pro Ala
 100 105 110

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

Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu Ala Pro Ser Ser Lys
 130 135 140

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

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

Gly Val His Thr Phe Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser
 180 185 190

Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser Leu Gly Thr Gln Thr
 195 200 205

Tyr Ile Cys Asn Val Asn His Lys Pro Ser Asn Thr Lys Val Asp Glu
 210 215 220

Arg Val Glu Pro Lys Ser Cys Asp Lys Thr His Thr Cys Pro Pro Cys

225		230		235		240									
Pro	Ala	Pro	Glu	Ala	Ala	Gly	Gly	Pro	Ser	Val	Phe	Leu	Phe	Pro	Pro
			245						250					255	
Lys	Pro	Lys	Asp	Thr	Leu	Met	Ile	Ser	Arg	Thr	Pro	Glu	Val	Thr	Cys
			260					265					270		
Val	Val	Val	Asp	Val	Ser	His	Glu	Asp	Pro	Glu	Val	Lys	Phe	Asn	Trp
		275					280					285			
Tyr	Val	Asp	Gly	Val	Glu	Val	His	Asn	Ala	Lys	Thr	Lys	Pro	Arg	Glu
	290					295					300				
Glu	Gln	Tyr	Ala	Ser	Thr	Tyr	Arg	Val	Val	Ser	Val	Leu	Thr	Val	Leu
305					310					315					320
His	Gln	Asp	Trp	Leu	Asn	Gly	Lys	Glu	Tyr	Lys	Cys	Lys	Val	Ser	Asn
			325					330						335	
Lys	Ala	Leu	Pro	Ala	Pro	Ile	Glu	Lys	Thr	Ile	Ser	Lys	Ala	Lys	Gly
		340						345					350		
Gln	Pro	Arg	Glu	Pro	Gln	Val	Cys	Thr	Leu	Pro	Pro	Ser	Arg	Glu	Glu
		355					360					365			
Met	Thr	Lys	Asn	Gln	Val	Ser	Leu	Ser	Cys	Ala	Val	Lys	Gly	Phe	Tyr
	370					375					380				
Pro	Ser	Asp	Ile	Ala	Val	Glu	Trp	Glu	Ser	Asn	Gly	Gln	Pro	Glu	Asn
385					390					395					400
Asn	Tyr	Lys	Thr	Thr	Pro	Pro	Val	Leu	Asp	Ser	Asp	Gly	Ser	Phe	Phe
				405					410					415	
Leu	Val	Ser	Lys	Leu	Thr	Val	Asp	Lys	Ser	Arg	Trp	Gln	Glu	Gly	Asn
			420					425					430		

Val Phe Ser Cys Ser Val Leu His Glu Ala Leu His Ala His Tyr Thr
 435 440 445

Arg Lys Glu Leu Ser Leu Ser Pro
 450 455

<210> 292

<211> 456

<212> PRT

<213> Artificial Sequence

<220>

<223> an artificially synthesized sequence

<400> 292

Gln Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Arg
 1 5 10 15

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Lys Phe Ser Asn Val
 20 25 30

Trp Phe His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
 35 40 45

Ala Gln Ile Lys Asp Tyr Tyr Asn Ala Tyr Ala Ala Tyr Tyr Ala Pro
 50 55 60

Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asp Ser Lys Asn Ser
 65 70 75 80

Ile Tyr Leu Gln Met Asn Ser Leu Lys Thr Glu Asp Thr Ala Val Tyr
 85 90 95

Tyr Cys His Tyr Val His Tyr Ala Ser Ala Ser Thr Leu Leu Pro Ala
 100 105 110

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

Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu Ala Pro Ser Ser Lys
 130 135 140

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

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

Gly Val His Thr Phe Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser
 180 185 190

Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser Leu Gly Thr Gln Thr
 195 200 205

Tyr Ile Cys Asn Val Asn His Lys Pro Ser Asn Thr Lys Val Asp Glu
 210 215 220

Arg Val Glu Pro Lys Ser Cys Asp Lys Thr His Thr Cys Pro Pro Cys
 225 230 235 240

Pro Ala Pro Glu Ala Ala Gly Gly Pro Ser Val Phe Leu Phe Pro Pro
 245 250 255

Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys
 260 265 270

Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp
 275 280 285

Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu
 290 295 300

Glu Gln Tyr Ala Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu
 305 310 315 320

His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn

162

325

330

335

Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly
340 345 350

Gln Pro Arg Glu Pro Gln Val Cys Thr Leu Pro Pro Ser Arg Glu Glu
355 360 365

Met Thr Lys Asn Gln Val Ser Leu Ser Cys Ala Val Lys Gly Phe Tyr
370 375 380

Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn
385 390 395 400

Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe
405 410 415

Leu Val Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn
420 425 430

Val Phe Ser Cys Ser Val Leu His Glu Ala Leu His Ala His Tyr Thr
435 440 445

Arg Lys Glu Leu Ser Leu Ser Pro
450 455

<210> 293

<211> 456

<212> PRT

<213> Artificial Sequence

<220>

<223> an artificially synthesized sequence

<400> 293

Gln Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Arg
1 5 10 15

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Lys Phe Ser Asn Val

163

20

25

30

Trp Phe His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
35 40 45

Ala Gln Ile Lys Asp Tyr Tyr Asn Ala Tyr Ala Ala Tyr Tyr Ala Pro
50 55 60

Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asp Ser Lys Asn Ser
65 70 75 80

Ile Tyr Leu Gln Met Asn Ser Leu Lys Thr Glu Asp Thr Ala Val Tyr
85 90 95

Tyr Cys His Tyr Val His Tyr Ala Ser Ala Ser Thr Leu Leu Pro Ala
100 105 110

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

Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu Ala Pro Ser Ser Lys
130 135 140

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

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

Gly Val His Thr Phe Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser
180 185 190

Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser Leu Gly Thr Gln Thr
195 200 205

Tyr Ile Cys Asn Val Asn His Lys Pro Ser Asn Thr Lys Val Asp Glu
210 215 220

Arg Val Glu Pro Lys Ser Cys Asp Lys Thr His Thr Cys Pro Pro Cys
 225 230 235 240

Pro Ala Pro Glu Ala Ala Gly Gly Pro Ser Val Phe Leu Phe Pro Pro
 245 250 255

Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys
 260 265 270

Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp
 275 280 285

Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu
 290 295 300

Glu Gln Tyr Ala Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu
 305 310 315 320

His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn
 325 330 335

Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly
 340 345 350

Gln Pro Arg Glu Pro Gln Val Cys Thr Leu Pro Pro Ser Arg Glu Glu
 355 360 365

Met Thr Lys Asn Gln Val Ser Leu Ser Cys Ala Val Lys Gly Phe Tyr
 370 375 380

Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn
 385 390 395 400

Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe
 405 410 415

Leu Val Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn

165

420

425

430

Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr
435 440 445

Gln Lys Ser Leu Ser Leu Ser Pro
450 455

<210> 294

<211> 456

<212> PRT

<213> Artificial Sequence

<220>

<223> an artificially synthesized sequence

<400> 294

Gln Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Arg
1 5 10 15

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Lys Phe Ser Asn Val
20 25 30

Trp Phe His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
35 40 45

Ala Gln Ile Lys Asp Tyr Tyr Asn Ala Tyr Ala Gly Tyr Tyr His Pro
50 55 60

Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asp Ser Lys Asn Ser
65 70 75 80

Ile Tyr Leu Gln Met Asn Ser Leu Lys Thr Glu Asp Thr Ala Val Tyr
85 90 95

Tyr Cys His Tyr Val His Tyr Ala Ala Ala Ser Gln Leu Leu Pro Ala
100 105 110

Glu Gly Val Asp Ala Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser

166

115

120

125

Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu Ala Pro Ser Ser Lys
130 135 140

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

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

Gly Val His Thr Phe Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser
180 185 190

Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser Leu Gly Thr Gln Thr
195 200 205

Tyr Ile Cys Asn Val Asn His Lys Pro Ser Asn Thr Lys Val Asp Glu
210 215 220

Arg Val Glu Pro Lys Ser Cys Asp Lys Thr His Thr Cys Pro Pro Cys
225 230 235 240

Pro Ala Pro Glu Ala Ala Gly Gly Pro Ser Val Phe Leu Phe Pro Pro
245 250 255

Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys
260 265 270

Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp
275 280 285

Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu
290 295 300

Glu Gln Tyr Ala Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu
305 310 315 320

His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn
 325 330 335

Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly
 340 345 350

Gln Pro Arg Glu Pro Gln Val Cys Thr Leu Pro Pro Ser Arg Glu Glu
 355 360 365

Met Thr Lys Asn Gln Val Ser Leu Ser Cys Ala Val Lys Gly Phe Tyr
 370 375 380

Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn
 385 390 395 400

Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe
 405 410 415

Leu Val Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn
 420 425 430

Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr
 435 440 445

Gln Lys Ser Leu Ser Leu Ser Pro
 450 455

<210> 295

<211> 219

<212> PRT

<213> Artificial Sequence

<220>

<223> an artificially synthesized sequence

<400> 295

Asp Ile Val Met Thr Gln Ser Pro Leu Ser Leu Pro Val Thr Pro Gly
 1 5 10 15

Glu Pro Ala Ser Ile Ser Cys Gln Ala Ser Gln Glu Leu Val His Met
 20 25 30

Asn Arg Asn Thr Tyr Leu His Trp Tyr Gln Gln Lys Pro Gly Gln Ala
 35 40 45

Pro Arg Leu Leu Ile Tyr Lys Val Ser Asn Arg Phe Pro Gly Val Pro
 50 55 60

Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Lys Ile
 65 70 75 80

Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Ala Gln Gly
 85 90 95

Thr Ser Val Pro Phe Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
 100 105 110

Arg Thr Val Ala Ala Pro Ser Val Phe Ile Phe Pro Pro Ser Asp Arg
 115 120 125

Lys Leu Lys Ser Gly Thr Ala Ser Val Val Cys Leu Leu Asn Asn Phe
 130 135 140

Tyr Pro Arg Glu Ala Lys Val Gln Trp Lys Val Asp Asn Ala Leu Gln
 145 150 155 160

Ser Gly Asn Ser Gln Glu Ser Val Thr Glu Gln Asp Ser Lys Asp Ser
 165 170 175

Thr Tyr Ser Leu Ser Ser Thr Leu Thr Leu Ser Lys Ala Asp Tyr Glu
 180 185 190

Lys His Lys Val Tyr Ala Cys Glu Val Thr His Gln Gly Leu Ser Ser
 195 200 205

Pro Val Thr Lys Ser Phe Asn Arg Gly Glu Cys

210

215

<210> 296

<211> 128

<212> PRT

<213> Artificial Sequence

<220>

<223> an artificially synthesized sequence

<400> 296

Gln Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Arg
 1 5 10 15

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Asn Ala
 20 25 30

Trp Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
 35 40 45

Ala Gln Ile Lys Asp Lys Gly Asn Ala Tyr Ala Ala Tyr Tyr Ala Pro
 50 55 60

Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asp Ser Lys Asn Ser
 65 70 75 80

Ile Tyr Leu Gln Met Asn Ser Leu Lys Thr Glu Asp Thr Ala Val Tyr
 85 90 95

Tyr Cys His Tyr Val His Tyr Ala Ser Ala Ser Thr Val Leu Pro Ala
 100 105 110

Phe Gly Val Asp Ala Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser
 115 120 125

<210> 297

<211> 5

<212> PRT

<213> Artificial Sequence

<220>

<223> an artificially synthesized sequence

<400> 297

Asn Ala Trp Met His

1

5

<210> 298

<211> 19

<212> PRT

<213> Artificial Sequence

<220>

<223> an artificially synthesized sequence

<400> 298

Gln Ile Lys Asp Lys Gly Asn Ala Tyr Ala Ala Tyr Tyr Ala Pro Ser

1

5

10

15

Val Lys Gly

<210> 299

<211> 17

<212> PRT

<213> Artificial Sequence

<220>

<223> an artificially synthesized sequence

<400> 299

Val His Tyr Ala Ser Ala Ser Thr Val Leu Pro Ala Phe Gly Val Asp

1

5

10

15

Ala

<210> 300

<211> 112

<212> PRT

<213> Artificial Sequence

<220>

<223> an artificially synthesized sequence

<400> 300

Asp	Ile	Val	Met	Thr	Gln	Ser	Pro	Leu	Ser	Leu	Pro	Val	Thr	Pro	Gly
1				5				10						15	

Glu	Pro	Ala	Ser	Ile	Ser	Cys	Gln	Ala	Ser	Gln	Glu	Leu	Val	His	Met
			20				25						30		

Asn	Arg	Asn	Thr	Tyr	Leu	His	Trp	Tyr	Gln	Gln	Lys	Pro	Gly	Gln	Ala
		35					40					45			

Pro	Arg	Leu	Leu	Ile	Tyr	Lys	Val	Ser	Asn	Arg	Phe	Pro	Gly	Val	Pro
	50					55					60				

Asp	Arg	Phe	Ser	Gly	Ser	Gly	Ser	Gly	Thr	Asp	Phe	Thr	Leu	Lys	Ile
65					70				75					80	

Ser	Arg	Val	Glu	Ala	Glu	Asp	Val	Gly	Val	Tyr	Tyr	Cys	Ala	Gln	Gly
			85					90						95	

Thr	Ser	Val	Pro	Phe	Thr	Phe	Gly	Gln	Gly	Thr	Lys	Leu	Glu	Ile	Lys
			100					105					110		

<210> 301

<211> 16

<212> PRT

<213> Artificial Sequence

<220>

<223> an artificially synthesized sequence

<400> 301

Gln	Ala	Ser	Gln	Glu	Leu	Val	His	Met	Asn	Arg	Asn	Thr	Tyr	Leu	His
1				5					10					15	

<210> 302

<211> 7

<212> PRT

<213> Artificial Sequence

<220>

<223> an artificially synthesized sequence

<400> 302

Lys Val Ser Asn Arg Phe Pro
1 5

<210> 303

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> an artificially synthesized sequence

<400> 303

Ala Gln Gly Thr Ser Val Pro Phe Thr
1 5

<210> 304

<211> 107

<212> PRT

<213> Artificial Sequence

<220>

<223> an artificially synthesized sequence

<400> 304

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

Asp Arg Val Thr Ile Thr Cys Lys Ala Ser Glu Asp Ile Tyr Asn Arg
20 25 30

Leu Ala Trp Tyr Gln Gln Lys Pro Gly Asn Ala Pro Arg Leu Leu Ile
35 40 45

Ser Gly Ala Thr Ser Leu Glu Thr Gly Val Pro Ser Arg Phe Ser Gly
50 55 60

Ser Gly Ser Gly Lys Asp Tyr Thr Leu Ser Ile Thr Ser Leu Gln Thr
 65 70 75 80

Glu Asp Val Ala Thr Tyr Tyr Cys Gln Gln Tyr Trp Ser Thr Pro Tyr
 85 90 95

Thr Phe Gly Gly Gly Thr Lys Leu Glu Val Lys
 100 105

<210> 305

<211> 11

<212> PRT

<213> Artificial Sequence

<220>

<223> an artificially synthesized sequence

<400> 305

Lys Ala Ser Glu Asp Ile Tyr Asn Arg Leu Ala
 1 5 10

<210> 306

<211> 7

<212> PRT

<213> Artificial Sequence

<220>

<223> an artificially synthesized sequence

<400> 306

Gly Ala Thr Ser Leu Glu Thr
 1 5

<210> 307

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> an artificially synthesized sequence

<400> 307

Gln Gln Tyr Trp Ser Thr Pro Tyr Thr
1 5

<210> 308

<211> 116

<212> PRT

<213> Artificial Sequence

<220>

<223> an artificially synthesized sequence

<400> 308

Gln Val Gln Leu Gln Gln Ser Gly Pro Gln Leu Val Arg Pro Gly Ala
1 5 10 15

Ser Val Lys Ile Ser Cys Lys Ala Ser Gly Tyr Ser Phe Thr Ser Tyr
20 25 30

Trp Met His Trp Val Asn Gln Arg Pro Gly Gln Gly Leu Glu Trp Ile
35 40 45

Gly Met Ile Asp Pro Ser Tyr Ser Glu Thr Arg Leu Asn Gln Lys Phe
50 55 60

Lys Asp Lys Ala Thr Leu Thr Val Asp Lys Ser Ser Ser Thr Ala Tyr
65 70 75 80

Met Gln Leu Ser Ser Pro Thr Ser Glu Asp Ser Ala Val Tyr Tyr Cys
85 90 95

Ala Leu Tyr Gly Asn Tyr Phe Asp Tyr Trp Gly Gln Gly Thr Thr Leu
100 105 110

Thr Val Ser Ser
115

<210> 309

<211> 5

<212> PRT

<213> Artificial Sequence

<220>

<223> an artificially synthesized sequence

<400> 309

Ser Tyr Trp Met His
1 5

<210> 310

<211> 17

<212> PRT

<213> Artificial Sequence

<220>

<223> an artificially synthesized sequence

<400> 310

Met Ile Asp Pro Ser Tyr Ser Glu Thr Arg Leu Asn Gln Lys Phe Lys
1 5 10 15

Asp

<210> 311

<211> 7

<212> PRT

<213> Artificial Sequence

<220>

<223> an artificially synthesized sequence

<400> 311

Tyr Gly Asn Tyr Phe Asp Tyr
1 5

<210> 312

<211> 220

<212> PRT

<213> Artificial Sequence

<220>

<223> an artificially synthesized sequence

<400> 312

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

Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro
 20 25 30

Glu Val Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu Val
 35 40 45

Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr
 50 55 60

Lys Pro Arg Glu Glu Gln Tyr Ala Ser Thr Tyr Arg Val Val Ser Val
 65 70 75 80

Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys
 85 90 95

Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser
 100 105 110

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

Cys Arg Glu Glu Met Thr Lys Asn Gln Val Ser Leu Trp Cys Leu Val
 130 135 140

Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly
 145 150 155 160

Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp
 165 170 175

Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp
 180 185 190

Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His
 195 200 205

Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro
 210 215 220

<210> 313

<211> 220

<212> PRT

<213> Artificial Sequence

<220>

<223> an artificially synthesized sequence

<400> 313

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

Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro
 20 25 30

Glu Val Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu Val
 35 40 45

Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr
 50 55 60

Lys Pro Arg Glu Glu Gln Tyr Ala Ser Thr Tyr Arg Val Val Ser Val
 65 70 75 80

Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys
 85 90 95

Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser
 100 105 110

Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Cys Thr Leu Pro Pro
 115 120 125

Ser Arg Glu Glu Met Thr Lys Asn Gln Val Ser Leu Ser Cys Ala Val
 130 135 140

Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly
 145 150 155 160

Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp
 165 170 175

Gly Ser Phe Phe Leu Val Ser Lys Leu Thr Val Asp Lys Ser Arg Trp
 180 185 190

Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His
 195 200 205

Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro
 210 215 220

<210> 314

<211> 220

<212> PRT

<213> Artificial Sequence

<220>

<223> an artificially synthesized sequence

<400> 314

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

Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro
 20 25 30

Glu Val Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu Val
 35 40 45

Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr
 50 55 60

Lys Pro Arg Glu Glu Gln Tyr Ala Ser Thr Tyr Arg Val Val Ser Val
65 70 75 80

Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys
85 90 95

Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser
100 105 110

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

Cys Arg Glu Glu Met Thr Lys Asn Gln Val Ser Leu Trp Cys Leu Val
130 135 140

Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly
145 150 155 160

Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp
165 170 175

Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp
180 185 190

Gln Glu Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His
195 200 205

Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro
210 215 220

<210> 315

<211> 220

<212> PRT

<213> Artificial Sequence

<220>

<223> an artificially synthesized sequence

<400> 315

180

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

Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro
20 25 30

Glu Val Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu Val
35 40 45

Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr
50 55 60

Lys Pro Arg Glu Glu Gln Tyr Ala Ser Thr Tyr Arg Val Val Ser Val
65 70 75 80

Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys
85 90 95

Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser
100 105 110

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

Cys Arg Glu Glu Met Thr Lys Asn Gln Val Ser Leu Trp Cys Leu Val
130 135 140

Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly
145 150 155 160

Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp
165 170 175

Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp
180 185 190

Gln Glu Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His

181

195

200

205

Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro
210 215 220

<210> 316

<211> 220

<212> PRT

<213> Artificial Sequence

<220>

<223> an artificially synthesized sequence

<400> 316

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

Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro
20 25 30

Glu Val Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu Val
35 40 45

Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr
50 55 60

Lys Pro Arg Glu Glu Gln Tyr Ala Ser Thr Tyr Arg Val Val Ser Val
65 70 75 80

Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys
85 90 95

Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser
100 105 110

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

Cys Arg Glu Glu Met Thr Lys Asn Gln Val Ser Leu Trp Cys Leu Val

182

130

135

140

Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly
145 150 155 160

Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp
165 170 175

Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp
180 185 190

Gln Glu Gly Asn Val Phe Ser Cys Ser Val Leu His Glu Ala Leu His
195 200 205

Ala His Tyr Thr Arg Lys Glu Leu Ser Leu Ser Pro
210 215 220

<210> 317

<211> 220

<212> PRT

<213> Artificial Sequence

<220>

<223> an artificially synthesized sequence

<400> 317

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

Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro
20 25 30

Glu Val Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu Val
35 40 45

Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr
50 55 60

Lys Pro Arg Glu Glu Gln Tyr Ala Ser Thr Tyr Arg Val Val Ser Val

183
 65 70 75 80
 Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys
 85 90 95
 Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser
 100 105 110
 Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro
 115 120 125
 Cys Arg Glu Glu Met Thr Lys Asn Gln Val Ser Leu Trp Cys Leu Val
 130 135 140
 Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly
 145 150 155 160
 Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp
 165 170 175
 Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp
 180 185 190
 Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His
 195 200 205
 Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro
 210 215 220
 <210> 318
 <211> 220
 <212> PRT
 <213> Artificial Sequence
 <220>
 <223> an artificially synthesized sequence
 <400> 318
 Cys Pro Pro Cys Pro Ala Pro Glu Ala Ala Gly Gly Pro Ser Val Phe

184

1

5

10

15

Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro
20 25 30

Glu Val Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu Val
35 40 45

Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr
50 55 60

Lys Pro Arg Glu Glu Gln Tyr Ala Ser Thr Tyr Arg Val Val Ser Val
65 70 75 80

Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys
85 90 95

Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser
100 105 110

Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Cys Thr Leu Pro Pro
115 120 125

Ser Arg Glu Glu Met Thr Lys Asn Gln Val Ser Leu Ser Cys Ala Val
130 135 140

Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly
145 150 155 160

Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp
165 170 175

Gly Ser Phe Phe Leu Val Ser Lys Leu Thr Val Asp Lys Ser Arg Trp
180 185 190

Gln Glu Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His
195 200 205

Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro
 210 215 220

<210> 319

<211> 220

<212> PRT

<213> Artificial Sequence

<220>

<223> an artificially synthesized sequence

<400> 319

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

Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro
 20 25 30

Glu Val Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu Val
 35 40 45

Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr
 50 55 60

Lys Pro Arg Glu Glu Gln Tyr Ala Ser Thr Tyr Arg Val Val Ser Val
 65 70 75 80

Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys
 85 90 95

Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser
 100 105 110

Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Cys Thr Leu Pro Pro
 115 120 125

Ser Arg Glu Glu Met Thr Lys Asn Gln Val Ser Leu Ser Cys Ala Val
 130 135 140

Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly
 145 150 155 160

Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp
 165 170 175

Gly Ser Phe Phe Leu Val Ser Lys Leu Thr Val Asp Lys Ser Arg Trp
 180 185 190

Gln Glu Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His
 195 200 205

Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro
 210 215 220

<210> 320

<211> 220

<212> PRT

<213> Artificial Sequence

<220>

<223> an artificially synthesized sequence

<400> 320

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

Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro
 20 25 30

Glu Val Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu Val
 35 40 45

Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr
 50 55 60

Lys Pro Arg Glu Glu Gln Tyr Ala Ser Thr Tyr Arg Val Val Ser Val
 65 70 75 80

Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys
 85 90 95

Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser
 100 105 110

Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Cys Thr Leu Pro Pro
 115 120 125

Ser Arg Glu Glu Met Thr Lys Asn Gln Val Ser Leu Ser Cys Ala Val
 130 135 140

Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly
 145 150 155 160

Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp
 165 170 175

Gly Ser Phe Phe Leu Val Ser Lys Leu Thr Val Asp Lys Ser Arg Trp
 180 185 190

Gln Glu Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His
 195 200 205

Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro
 210 215 220

<210> 321

<211> 220

<212> PRT

<213> Artificial Sequence

<220>

<223> an artificially synthesized sequence

<400> 321

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

Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro
 20 25 30

Glu Val Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu Val
 35 40 45

Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr
 50 55 60

Lys Pro Arg Glu Glu Gln Tyr Ala Ser Thr Tyr Arg Val Val Ser Val
 65 70 75 80

Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys
 85 90 95

Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser
 100 105 110

Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Cys Thr Leu Pro Pro
 115 120 125

Ser Arg Glu Glu Met Thr Lys Asn Gln Val Ser Leu Ser Cys Ala Val
 130 135 140

Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly
 145 150 155 160

Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp
 165 170 175

Gly Ser Phe Phe Leu Val Ser Lys Leu Thr Val Asp Lys Ser Arg Trp
 180 185 190

Gln Glu Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His
 195 200 205

Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro

210

215

220

<210> 322

<211> 220

<212> PRT

<213> Artificial Sequence

<220>

<223> an artificially synthesized sequence

<400> 322

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

Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro
 20 25 30

Glu Val Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu Val
 35 40 45

Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr
 50 55 60

Lys Pro Arg Glu Glu Gln Tyr Ala Ser Thr Tyr Arg Val Val Ser Val
 65 70 75 80

Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys
 85 90 95

Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser
 100 105 110

Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Cys Thr Leu Pro Pro
 115 120 125

Ser Arg Glu Glu Met Thr Lys Asn Gln Val Ser Leu Ser Cys Ala Val
 130 135 140

Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly

190

145 150 155 160

Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp
 165 170 175

Gly Ser Phe Phe Leu Val Ser Lys Leu Thr Val Asp Lys Ser Arg Trp
 180 185 190

Gln Glu Gly Asn Val Phe Ser Cys Ser Val Leu His Glu Ala Leu His
 195 200 205

Ala His Tyr Thr Arg Lys Glu Leu Ser Leu Ser Pro
 210 215 220

<210> 323
 <211> 220
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> an artificially synthesized sequence

<400> 323

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

Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro
 20 25 30

Glu Val Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu Val
 35 40 45

Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr
 50 55 60

Lys Pro Arg Glu Glu Gln Tyr Ala Ser Thr Tyr Arg Val Val Ser Val
 65 70 75 80

Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys

191

85

90

95

Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser
100 105 110

Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Cys Thr Leu Pro Pro
115 120 125

Ser Arg Glu Glu Met Thr Lys Asn Gln Val Ser Leu Ser Cys Ala Val
130 135 140

Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly
145 150 155 160

Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp
165 170 175

Gly Ser Phe Phe Leu Val Ser Lys Leu Thr Val Asp Lys Ser Arg Trp
180 185 190

Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His
195 200 205

Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro
210 215 220