1979_B06 MGVSDVPRDLEVVAATPTSLLISWSLPHAGHVNYYRITYGETGGNSPVQEFTVPGRGVTATISGLKPGVDYTITVYAVTLTKSQMIHYMPISINYRTEIDKPSQHHHHHH (SEQ ID NO: 80)
2062_G02 MGVSDVPRDLEVVAATPTSLLISWVSPRGRAR-YYRITYGETGGNSPVQEFTVPGRGSTATISGLKPGVDYTITVYAVTIYRDGMSHHDPISINYRTEIDKPSQHHHHHH (SEQ ID NO: 81)
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2523_G06 MGVSDVPRDLEVVAATPTSLLISWWAPLGLAR-YYRITYGETGGNSPVQEFTVPGRGSTATISGLKPGVDYTITVYAVTIFRTGMVQYDPISINYRTEIDKPSQHHHHHH (SEQ ID NO: 83)
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3115_D04 MGVSDVPRDLEVVAATPTSLLISWDAPRGLAR-YYRITYGETGGNSPVQEFTVPGRGTTATISGLKPGVDYTITVYAVTIDRDGTRSFDPISINYRTEIDKPSQHHHHHH (SEQ ID NO: 116)
3115_E06 MGVSDVPRDLEVVAATPTSLLISWDAPAGLAR-YYRITYGETGGNSPVQEFTVVGRGNTATISGLKPGVDYTITVYAVTIFRDGPVTWDPISINYRTEIDKPSQHHHHHH (SEQ ID NO: 117)
3116_A06 MGVSDVPRDLEVVAATPTSLLISWSLPHQGKANYYRITYGETGGNSPVQEFTVPGRGVTATISGLKPGVDYTITVYAVTVTDTGYLKYKPISINYRTEIDKPSQHHHHHH (SEQ ID NO: 118)
3116_A07 MGVSDVPRDLEVVAATPTSLLISWDAPKGLAR-YYRITYGETGGNSPVQEFTVVGRGNTATISGLKPGVDYTITVYAVTIFRDGPVTWDPISINYRTEIDKPSQHHHHHH (SEQ ID NO: 119)
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3116_C06 MGVSDVPRDLEVVAATPTSLLISWSLPRPGNAHYYRITYGETGGNSPVQEFTVPGRGVTATISGLKPGVDYTITVYAVTVTGKDVIKYKPISINYRTEIDKPSQHHHHHH (SEQ ID NO: 121)
3116_H06 MGVSDVPRDLEVVAATPTSLLISWDAPAGLAR-YYRITYGETGGNSPVQEFTVVGRGNTATISGLKPGVDYTITVYAVTIFRDGVVNYGPISINYRTEIDKPSQHHHHHH (SEQ ID NO: 122)
3146_A08 MGVSDVPRDLEVVAATPTSLLISWSLPNPGNAHYYRITYGETGGNSPVQEFTVPGRGVTATISGLKPGVDYTITVYAVTVTDTGFITYKPISINYRTEIDKPSQHHHHHH (SEQ ID NO: 123)

Fig. 1

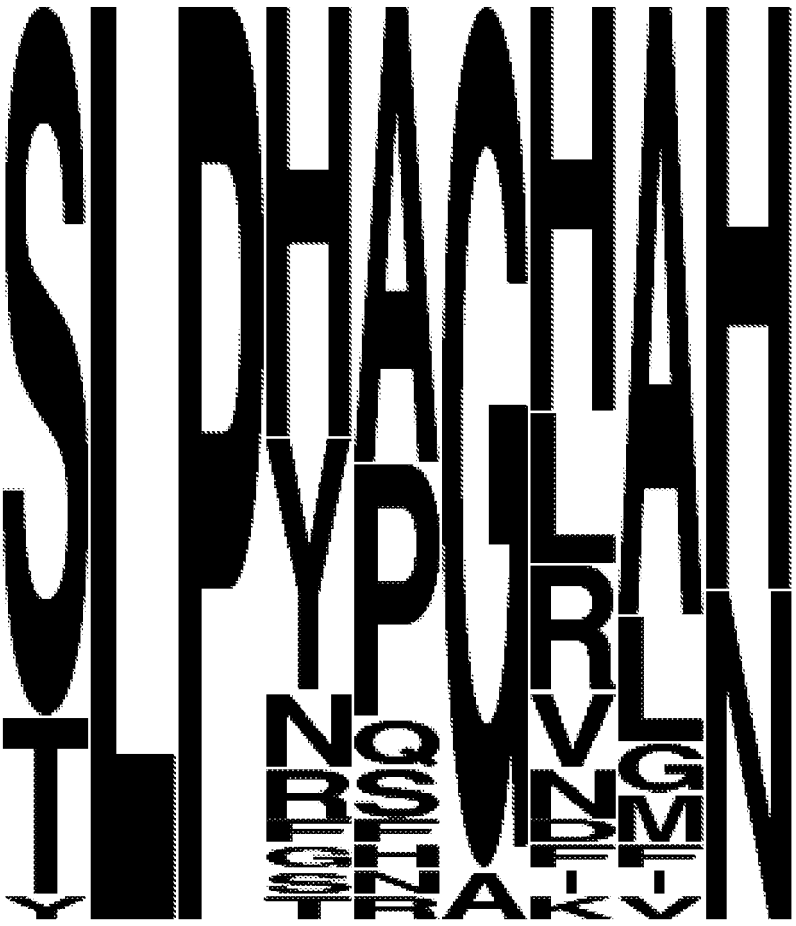


Fig. 2



Fig. 3



Fig. 4



Fig. 5



Fig. 6

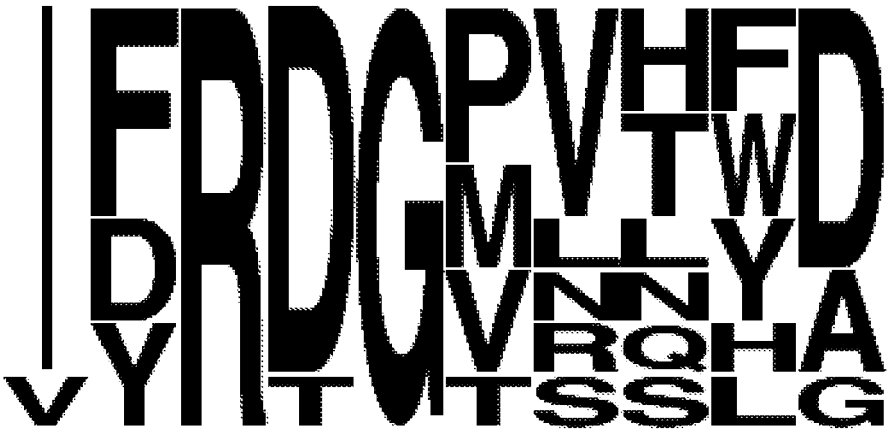


Fig. 7

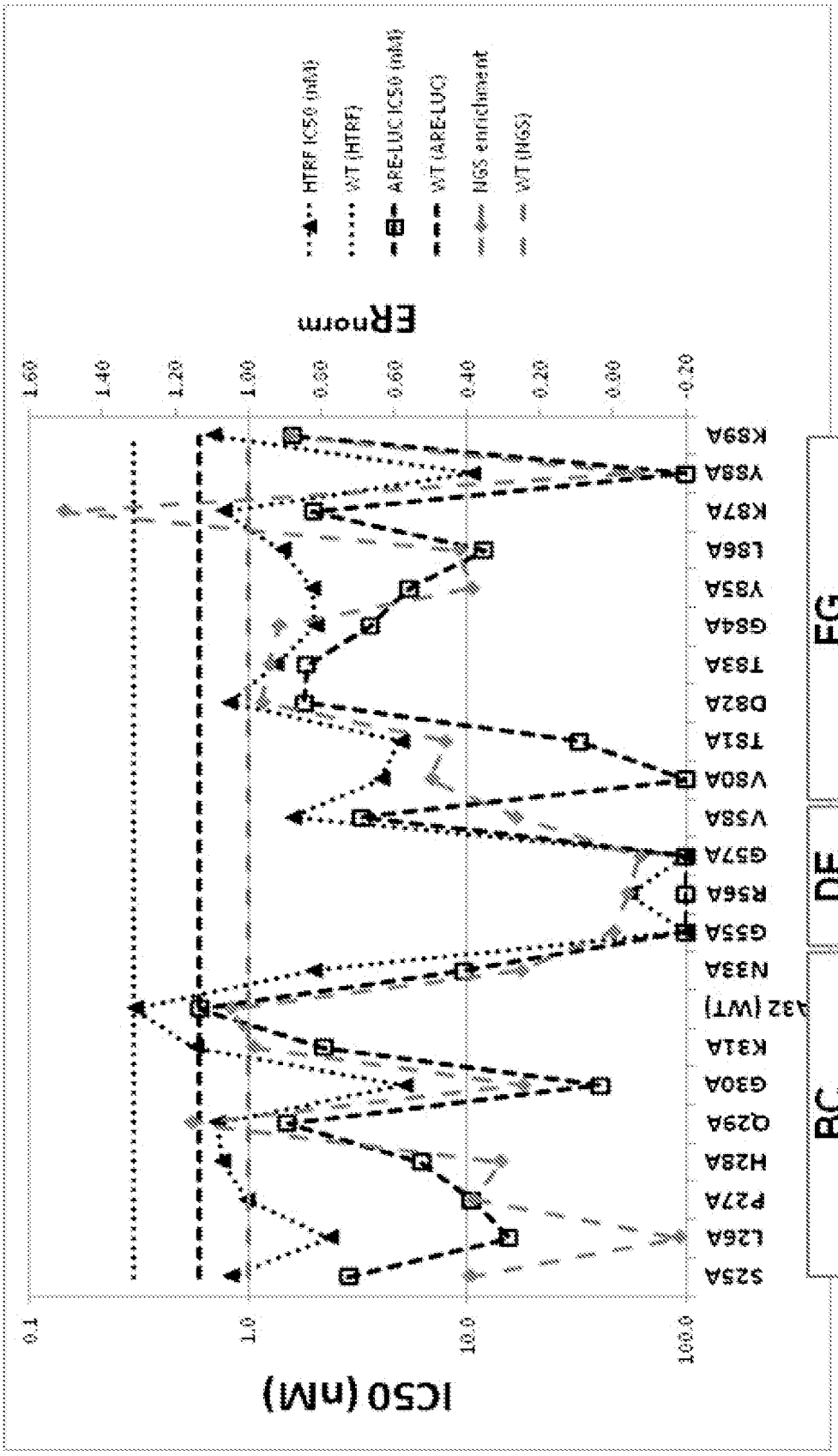

HTRF IC50 (nM)
WT (HTRF)
ARE-LUC IC50 (nM)
WT (ARE-LUC)
NGS enrichment
WT (NGS)
ERnorm
1.60
1.40
1.20
1.00
0.80
0.60
0.40
0.20
0.00
-0.20
IC50 (nM)
0.1
1.0
10.0
100.0
K89A
Y88A
K87A
L86A
Y85A
G84A
T83A
D82A
T81A
V80A
V58A
G57A
R56A
G55A
N33A
A32 (WT)
K31A
G30A
Q29A
H28A
P27A
L26A
S25A
FG
DE
BC

Fig. 8

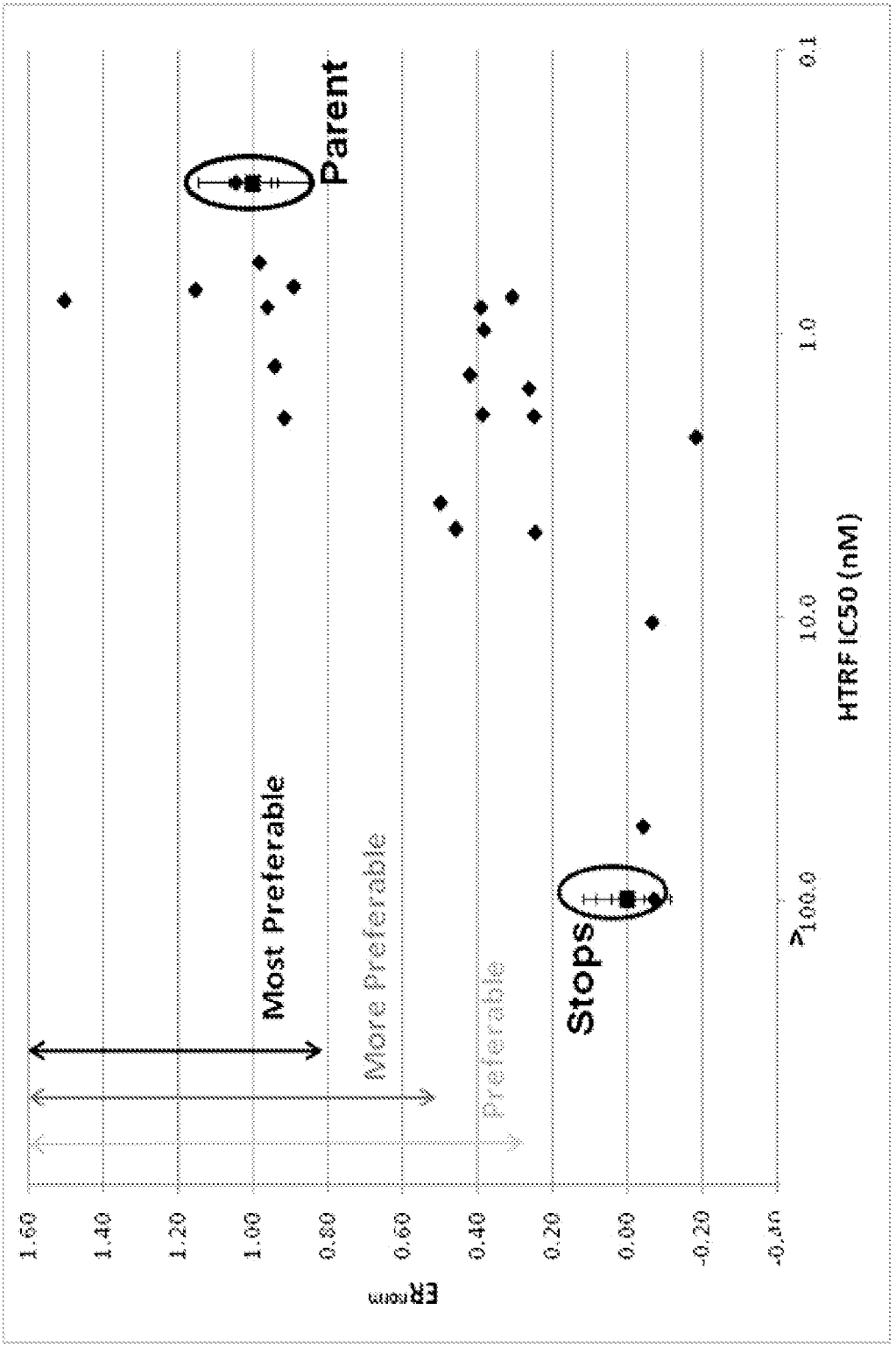

Parent
Most Preferable
More Preferable
Preferable
Stops
HTRF IC50 (nM)
>100.0
10.0
1.0
0.1
1.60
1.40
1.20
1.00
0.80
0.60
0.40
0.20
0.00
-0.20

Fig. 9

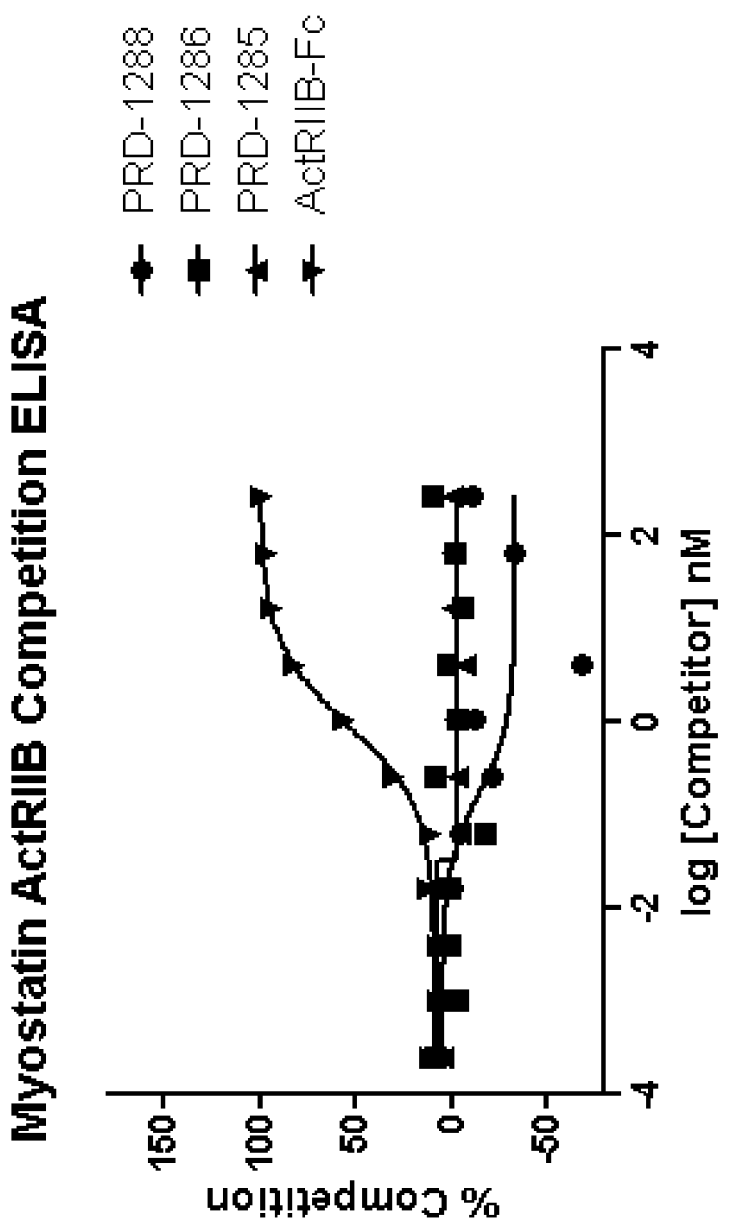

Myostatin ActRIIB Competition ELISA
PRD-1288
PRD-1286
PRD-1285
ActRIIB-Fc
% Competition
150
100
50
0
-50
-4
-2
0
2
4
log [Competitor] nM

Fig. 10

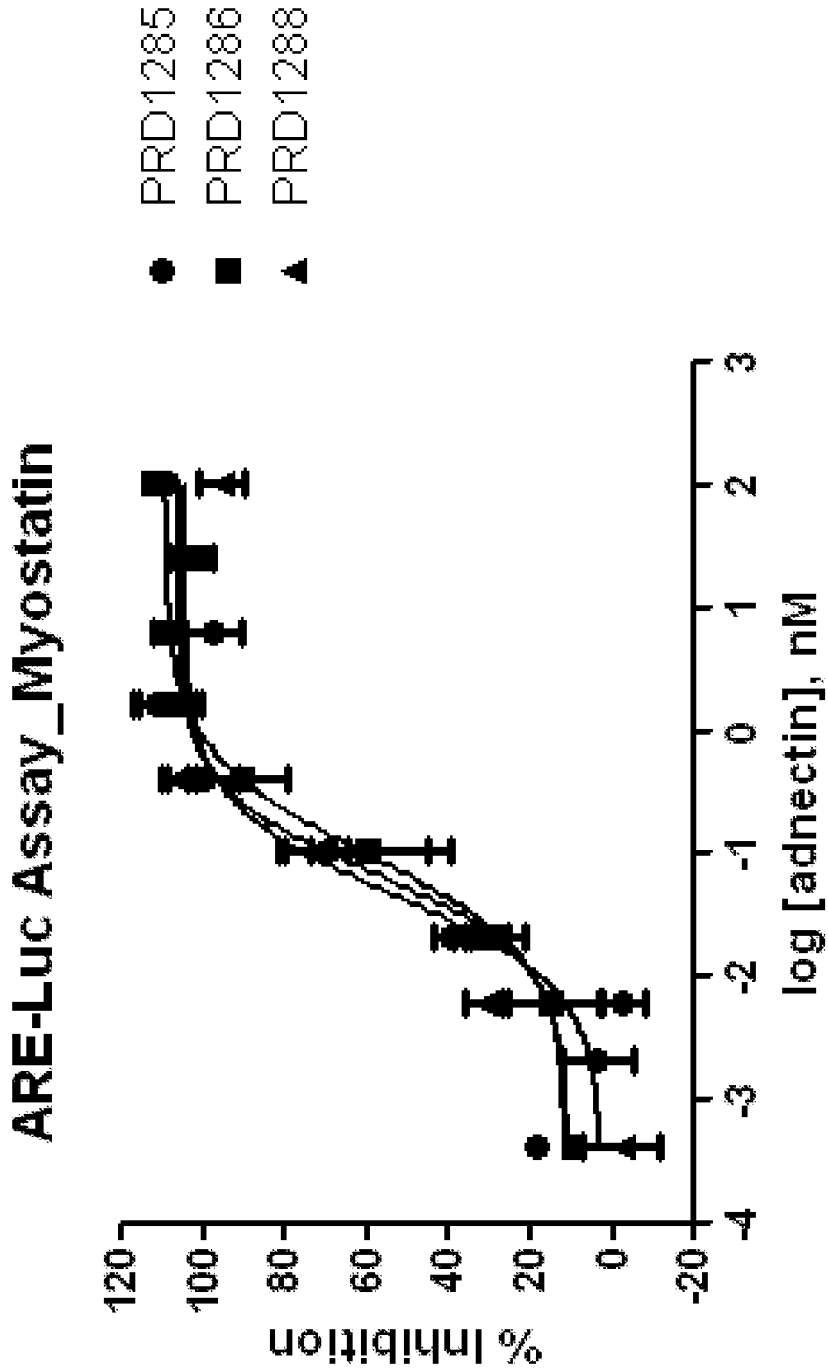
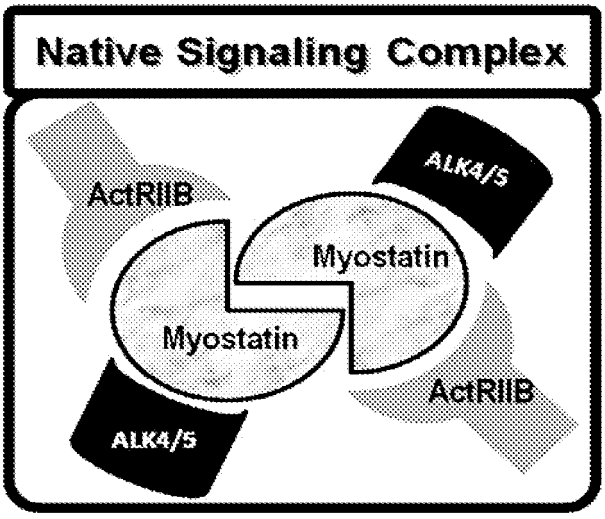

ARE-Luc Assay_Myostatin
PRD1285
PRD1286
PRD1288
% Inhibition
120
100
80
60
40
20
0
-20
-4
-3
-2
-1
0
1
2
3
log [adnectin], nM

Fig. 11

A.


Native Signaling Complex
ActRIIB
ALK4/5
Myostatin
Myostatin
ActRIIB
ALK4/5

B.

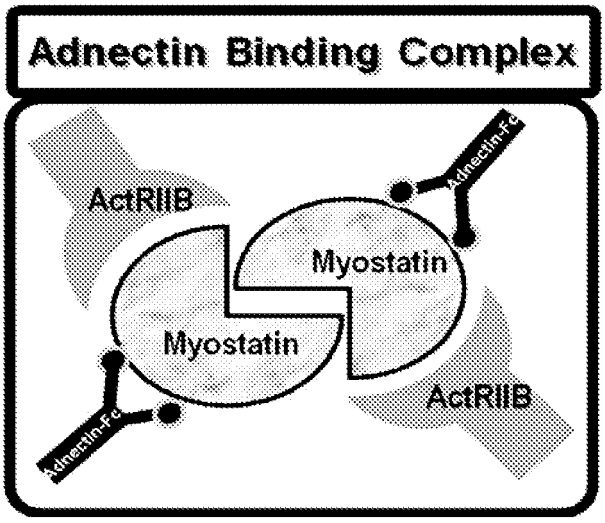

Adnectin Binding Complex
ActRIIB
Adnectin-Fc
Myostatin
Myostatin
ActRIIB
Adnectin-Fc

Fig. 12

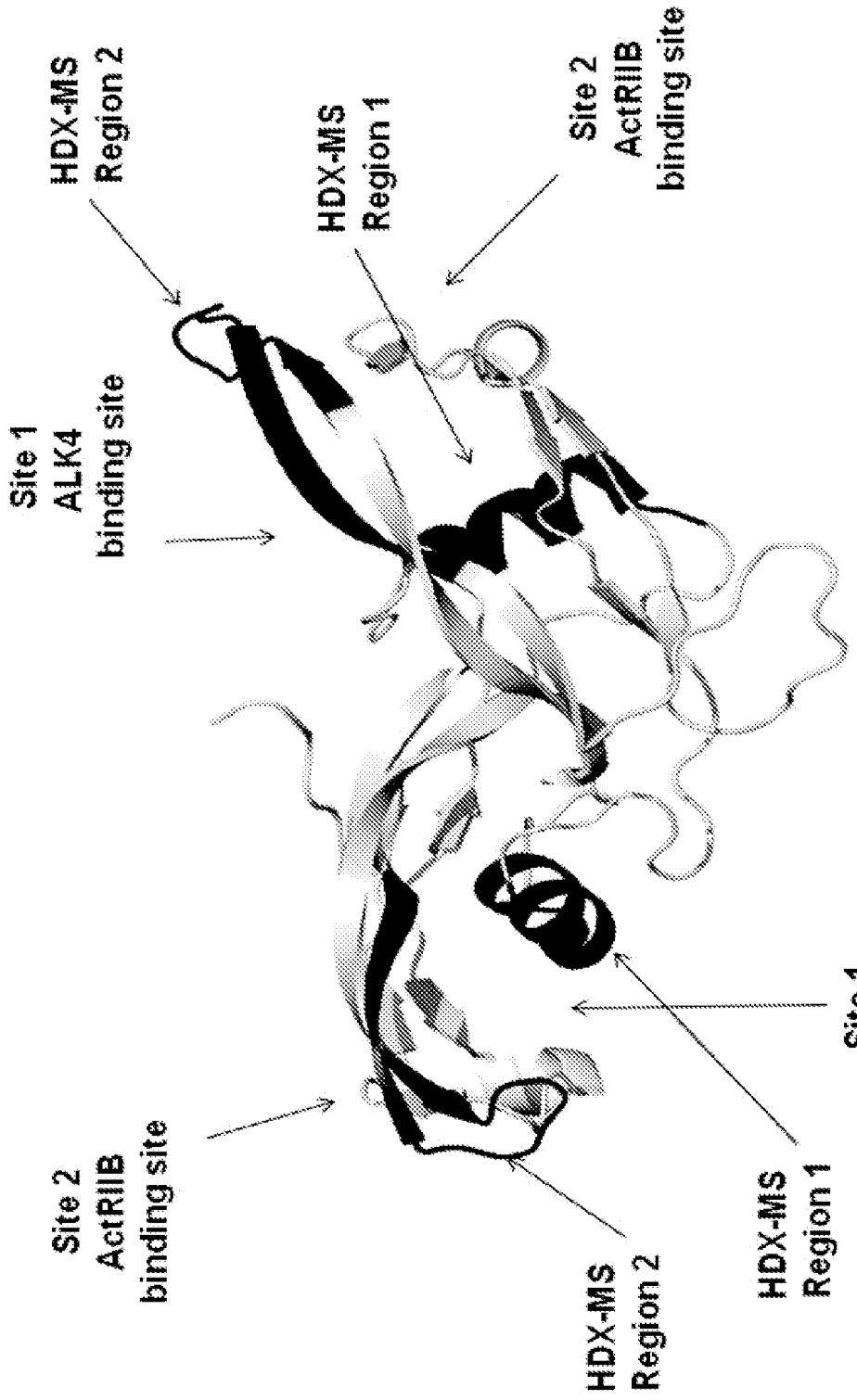

HDX-MS
Region 2
HDX-MS
Region 1
Site 2
ActRIIB
binding site
Site 1
ALK4
binding site
Site 2
ActRIIB
binding site
HDX-MS
Region 2
HDX-MS
Region 1
Site 1
ALK4
binding site

Fig. 13A



Fig. 13B

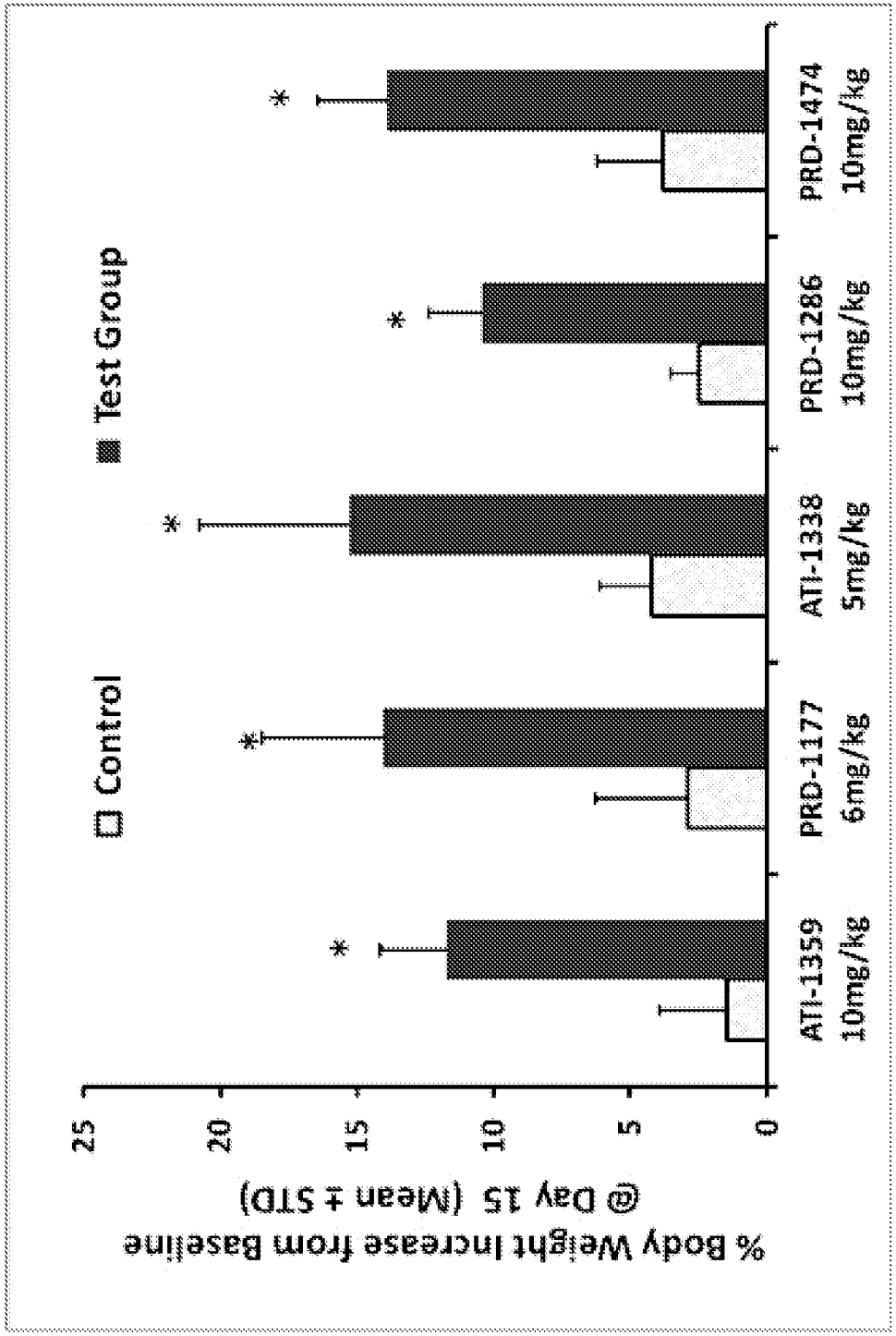

% Body Weight Increase from Baseline
@ Day 15 (Mean ± STD)
25
20
15
10
5
0
Control
Test Group
*
*
*
*
ATI-1359
10mg/kg
PRD-1177
6mg/kg
ATI-1338
5mg/kg
PRD-1286
10mg/kg
PRD-1474
10mg/kg

Fig. 14

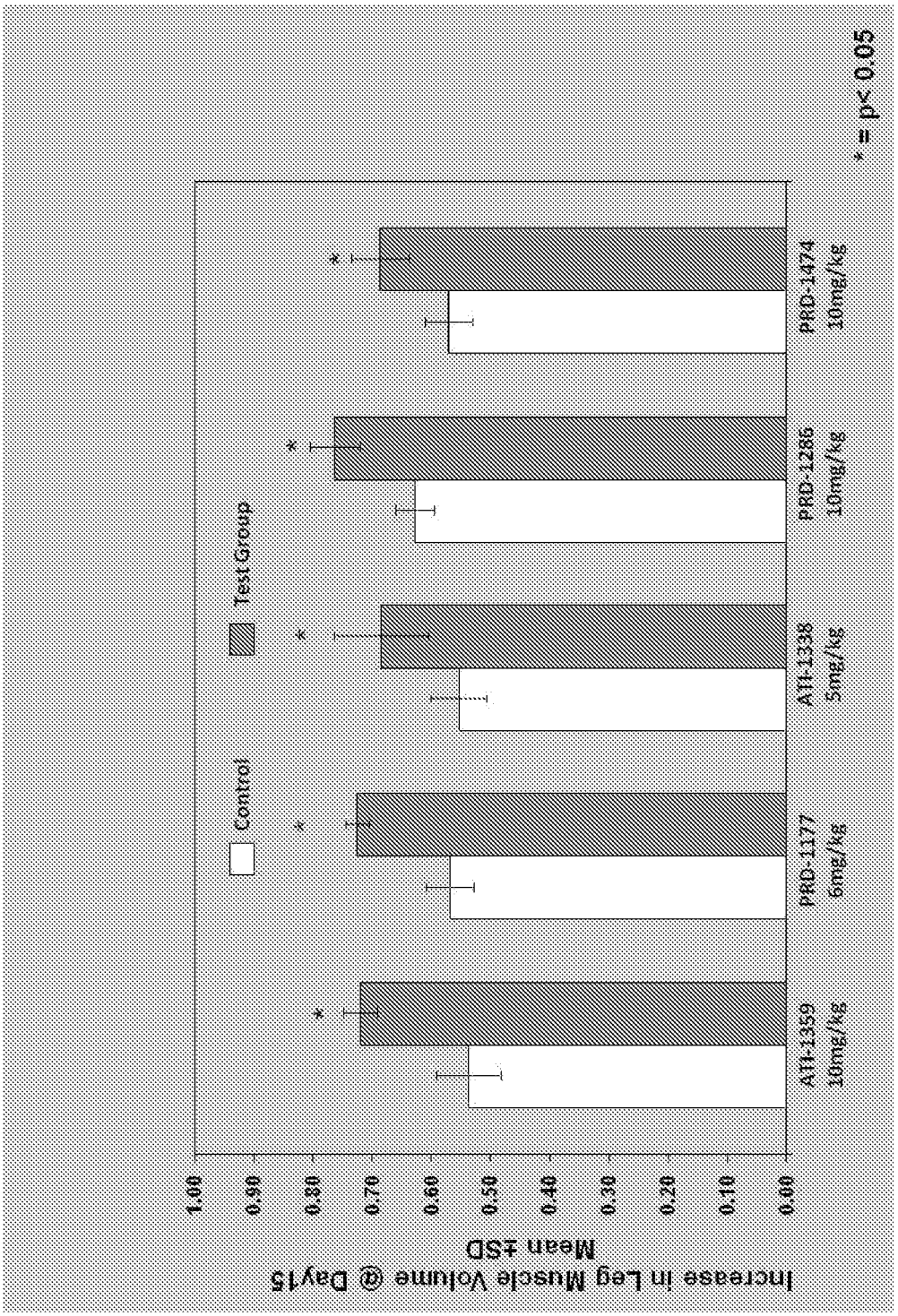

Increase in Leg Muscle Volume @ Day15
Mean ±SD
1.00
0.90
0.80
0.70
0.60
0.50
0.40
0.30
0.20
0.10
0.00
Control
Test Group
*
A11-1359 10mg/kg
PRD-1177 6mg/kg
A11-1338 5mg/kg
PRD-1286 10mg/kg
PRD-1474 10mg/kg
* = p< 0.05

Fig. 15

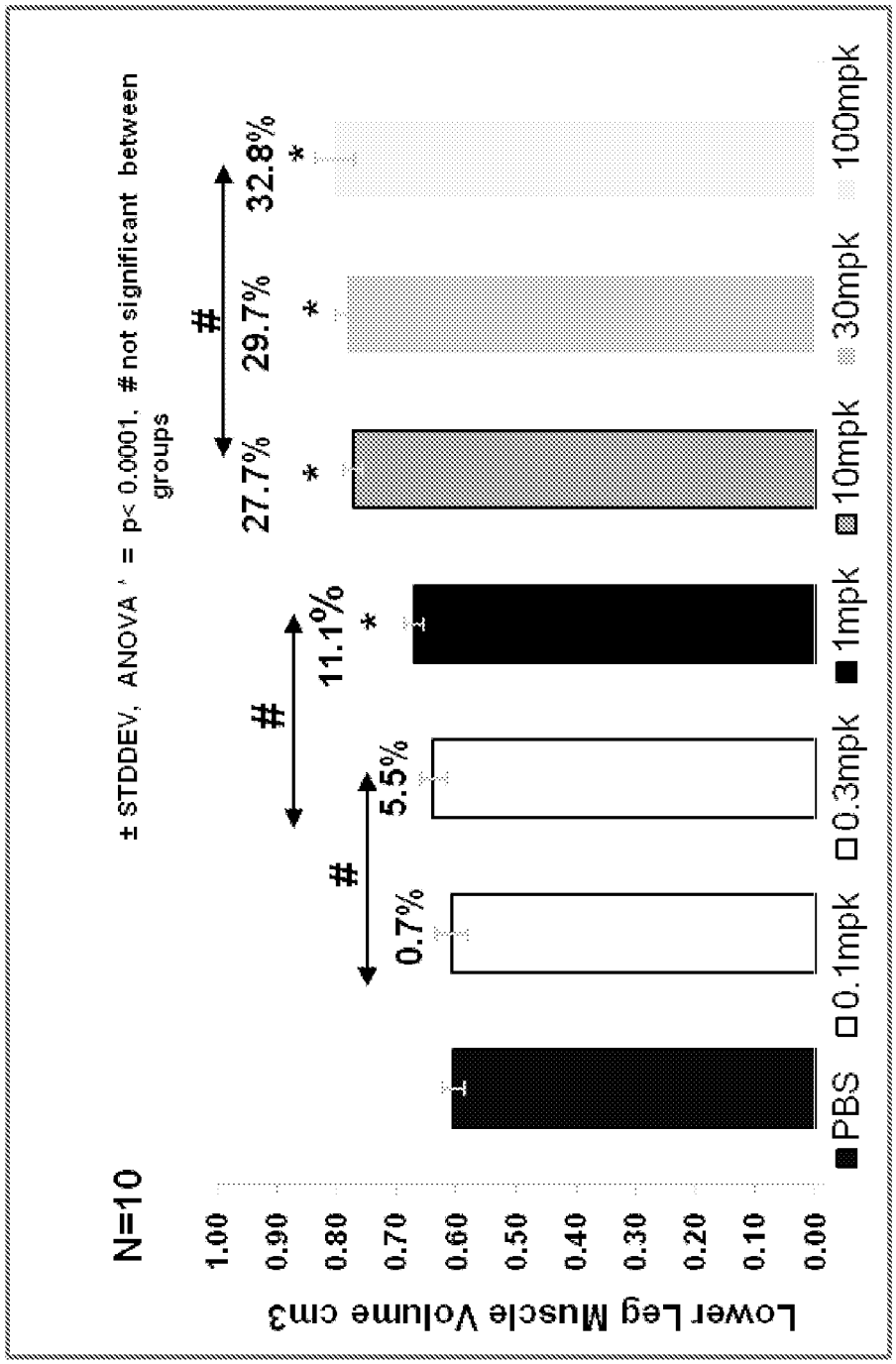

N=10
± STDDEV, ANOVA ' = p< 0.0001, # not significant between groups
Lower Leg Muscle Volume cm3
1.00
0.90
0.80
0.70
0.60
0.50
0.40
0.30
0.20
0.10
0.00
PBS
0.1mpk
0.3mpk
1mpk
10mpk
30mpk
100mpk
#
0.7%
#
5.5%
#
11.1%
*
27.7%
*
#
29.7%
*
32.8%
*

Fig. 16

SEQUENCE LISTING

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<120> FIBRONECTIN BASED SCAFFOLD DOMAIN PROTEINS THAT BIND TO MYOSTATIN

<130> MXI-514PC

<150> US 61/780,005
<151> 2013-03-13

<150> US 61/700,697
<151> 2012-09-13

<160> 331

<170> PatentIn version 3.5

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<213> Homo sapiens

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            20                  25                  30

Val Glu Lys Glu Gly Leu Cys Asn Ala Cys Thr Trp Arg Gln Asn Thr
        35                  40                  45

Lys Ser Ser Arg Ile Glu Ala Ile Lys Ile Gln Ile Leu Ser Lys Leu
    50                  55                  60

Arg Leu Glu Thr Ala Pro Asn Ile Ser Lys Asp Val Ile Arg Gln Leu
65                  70                  75                  80

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

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

Ala Thr Thr Glu Thr Ile Ile Thr Met Pro Thr Glu Ser Asp Phe Leu
        115                 120                 125

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

Lys Ile Gln Tyr Asn Lys Val Val Lys Ala Gln Leu Trp Ile Tyr Leu
145                 150                 155                 160

Arg Pro Val Glu Thr Pro Thr Thr Val Phe Val Gln Ile Leu Arg Leu
                165                 170                 175
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Ile Lys Pro Met Lys Asp Gly Thr Arg Tyr Thr Gly Ile Arg Ser Leu
            180                 185                 190

Lys Leu Asp Met Asn Pro Gly Thr Gly Ile Trp Gln Ser Ile Asp Val
        195                 200                 205

Lys Thr Val Leu Gln Asn Trp Leu Lys Gln Pro Glu Ser Asn Leu Gly
    210                 215                 220

Ile Glu Ile Lys Ala Leu Asp Glu Asn Gly His Asp Leu Ala Val Thr
225                 230                 235                 240

Phe Pro Gly Pro Gly Glu Asp Gly Leu Asn Pro Phe Leu Glu Val Lys
                245                 250                 255

Val Thr Asp Thr Pro Lys Arg Ser Arg Arg Asp Phe Gly Leu Asp Cys
            260                 265                 270

Asp Glu His Ser Thr Glu Ser Arg Cys Cys Arg Tyr Pro Leu Thr Val
        275                 280                 285

Asp Phe Glu Ala Phe Gly Trp Asp Trp Ile Ile Ala Pro Lys Arg Tyr
    290                 295                 300

Lys Ala Asn Tyr Cys Ser Gly Glu Cys Glu Phe Val Phe Leu Gln Lys
305                 310                 315                 320

Tyr Pro His Thr His Leu Val His Gln Ala Asn Pro Arg Gly Ser Ala
                325                 330                 335

Gly Pro Cys Cys Thr Pro Thr Lys Met Ser Pro Ile Asn Met Leu Tyr
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Val Asp Arg Cys Gly Cys Ser
    370                 375


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<213>  Homo sapiens

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            20                  25                  30
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Ile Lys Ile Gln Ile Leu Ser Lys Leu Arg Leu Glu Thr Ala Pro Asn
        35                  40                  45

Ile Ser Lys Asp Val Ile Arg Gln Leu Leu Pro Lys Ala Pro Pro Leu
    50                  55                  60

Arg Glu Leu Ile Asp Gln Tyr Asp Val Gln Arg Asp Asp Ser Ser Asp
65                  70                  75                  80

Gly Ser Leu Glu Asp Asp Asp Tyr His Ala Thr Thr Glu Thr Ile Ile
                85                  90                  95

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

Lys Cys Cys Phe Phe Lys Phe Ser Ser Lys Ile Gln Tyr Asn Lys Val
        115                 120                 125

Val Lys Ala Gln Leu Trp Ile Tyr Leu Arg Pro Val Glu Thr Pro Thr
    130                 135                 140

Thr Val Phe Val Gln Ile Leu Arg Leu Ile Lys Pro Met Lys Asp Gly
145                 150                 155                 160

Thr Arg Tyr Thr Gly Ile Arg Ser Leu Lys Leu Asp Met Asn Pro Gly
                165                 170                 175

Thr Gly Ile Trp Gln Ser Ile Asp Val Lys Thr Val Leu Gln Asn Trp
            180                 185                 190

Leu Lys Gln Pro Glu Ser Asn Leu Gly Ile Glu Ile Lys Ala Leu Asp
        195                 200                 205

Glu Asn Gly His Asp Leu Ala Val Thr Phe Pro Gly Pro Gly Glu Asp
    210                 215                 220

Gly Leu Asn Pro Phe Leu Glu Val Lys Val Thr Asp Thr Pro Lys Arg
225                 230                 235                 240

Ser Arg Arg Asp Phe Gly Leu Asp Cys Asp Glu His Ser Thr Glu Ser
                245                 250                 255

Arg Cys Cys Arg Tyr Pro Leu Thr Val Asp Phe Glu Ala Phe Gly Trp
            260                 265                 270

Asp Trp Ile Ile Ala Pro Lys Arg Tyr Lys Ala Asn Tyr Cys Ser Gly
        275                 280                 285

Glu Cys Glu Phe Val Phe Leu Gln Lys Tyr Pro His Thr His Leu Val
    290                 295                 300
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His Gln Ala Asn Pro Arg Gly Ser Ala Gly Pro Cys Cys Thr Pro Thr
305                 310                 315                 320


Lys Met Ser Pro Ile Asn Met Leu Tyr Phe Asn Gly Lys Glu Gln Ile
                325                 330                 335


Ile Tyr Gly Lys Ile Pro Ala Met Val Val Asp Arg Cys Gly Cys Ser
            340                 345                 350


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


Ile Ala Pro Lys Arg Tyr Lys Ala Asn Tyr Cys Ser Gly Glu Cys Glu
        35                  40                  45


Phe Val Phe Leu Gln Lys Tyr Pro His Thr His Leu Val His Gln Ala
    50                  55                  60


Asn Pro Arg Gly Ser Ala Gly Pro Cys Cys Thr Pro Thr Lys Met Ser
65                  70                  75                  80


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


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


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


Thr Val Pro Gly Ser Lys Ser Thr Ala Thr Ile Ser Gly Leu Lys Pro
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Gly Val Asp Tyr Thr Ile Thr Val Tyr Ala Val Thr Gly Arg Gly Asp
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Ser Pro Ala Ser Ser Lys Pro Ile Ser Ile Asn Tyr Arg Thr
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Xaa Xaa Xaa Xaa Xaa Ser Leu Leu Ile Xaa Xaa Xaa Xaa Xaa Xaa Xaa
20 25 30

Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Tyr Tyr Arg
35 40 45

Ile Thr Tyr Gly Glu Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
50 55 60

Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Gln Glu Phe Thr Val Xaa Xaa

65 70 75 80

Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
85 90 95

Xaa Xaa Ala Thr Ile Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
100 105 110

Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Asp Tyr Thr Ile Thr Val Tyr
115 120 125

Ala Val Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
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Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
20 25 30

Tyr Tyr Arg Ile Thr Tyr Gly Glu Thr Gly Gly Asn Ser Pro Val Gln
35 40 45

Glu Phe Thr Val Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
50 55 60

Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Ala Thr Ile Ser Gly Leu Lys Pro
65 70 75 80

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Gly Val Asp Tyr Thr Ile Thr Val Tyr Ala Val Xaa Xaa Xaa Xaa Xaa
                85                  90                  95


Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Ile
            100                 105                 110


Ser Ile Asn Tyr Arg Thr
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Ser Trp Val Ser Pro Arg Gly Arg Ala Arg
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Ser Trp Trp Ala Pro Leu Gly Leu Ala Arg
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Ser Trp Ser Leu Pro His Ala Gly His Ala His

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Ser Trp Thr Leu Pro His Ala Gly Arg Ala His
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Ser Trp Ser Leu Pro Tyr Ala Gly His Leu Asn
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Ser Trp Ser Leu Pro Tyr Ala Ala His Met Asn
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1 5 10

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<400> 22

Ser Trp Asp Ala Pro Gly Gly Leu Ala Arg
1 5 10

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Ser Trp Ser Leu Pro Thr Pro Gly Leu Ala His
1 5 10

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Ser Trp Ser Leu Pro His Arg Gly Val Ala Asn
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Ser Trp Ser Leu Pro His Ala Gly Asp Ala His
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1 5 10

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Ser Trp Ser Leu Pro Gly Pro Gly His Phe His
1 5 10

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1 5 10

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Ser Trp Asp Ala Pro Arg Gly Leu Ala Arg
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Ser Trp Asp Ala Pro Ala Gly Leu Ala Arg
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Ser Trp Ser Leu Pro His Gln Gly Lys Ala Asn
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Ser Trp Ser Leu Pro Asn Pro Gly Asn Ala His
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Pro Gly Arg Gly Ser Thr
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Leu Gly Arg Gly Ser Thr
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Pro Gly Arg Gly Leu Thr
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Ile Gly Arg Gly Ser Thr
1 5

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Phe Gly Arg Gly Thr Thr
1 5

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Val Gly Arg Gly Asn Thr
1 5

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Thr Leu Thr Lys Ser Gln Met Ile His Tyr Met Pro
1 5 10

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Thr Ile Tyr Arg Asp Gly Met Ser His His Asp Pro
1 5 10

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Thr Val Tyr Arg Asp Gly Pro Leu Leu Leu Ala Pro
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Thr Ile Phe Arg Thr Gly Met Val Gln Tyr Asp Pro

1 5 10

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Thr Leu Thr Asn Ser Glu Ile Ile Leu Tyr Lys Pro
1 5 10

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Thr Leu Thr Lys Ser Gln Ile Leu His His Arg Pro
1 5 10

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Thr Leu Thr Arg Ser Lys Ile Ile His Tyr Met Pro
1 5 10

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Thr Leu Thr His Ser Asn Ile Ile Arg Tyr Val Pro
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Thr Val Ser Ser Thr Lys Val Ile Val Tyr Leu Pro
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Thr Ile Thr Lys Ser Thr Ile Ile Ile Tyr Lys Pro
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Thr Leu Thr Lys Ser Gln Leu Ile His Tyr Met Pro
1 5 10

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Thr Leu Thr Arg Ser Gln Val Ile His Tyr Met Pro
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Thr Leu Thr Lys Ser Lys Ile Ile His Tyr Met Pro
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Thr Leu Thr Lys Ser Lys Val Ile His Tyr Met Pro
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Thr Val Thr Thr Thr Lys Val Ile His Tyr Lys Pro
1 5 10

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Thr Ile Asp Arg Asp Gly Val Asn His Phe Ala Pro
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Thr Val Thr His His Gly Val Ile Gly Tyr Lys Pro
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Thr Leu Thr Gly Ala Asn Val Ile Ile Tyr Lys Pro
1   5   10

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Thr Val Thr Asn Thr Gly Val Ile Ile Tyr Lys Pro
1   5   10

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Thr Val Thr Ala Thr Gly Ile Ile Ile Tyr Lys Pro
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Thr Val Thr Arg Ala Gly Phe Tyr Arg Tyr Lys Pro
1   5   10

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Thr Val Thr Arg Glu Glu Val Ile Ser Tyr Lys Pro
1 5 10

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Thr Val Thr Ala Ala Gly Val Ile Ile Tyr Lys Pro
1 5 10

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Thr Val Thr Ala Asn Gln Pro Ile Ile Tyr Lys Pro
1 5 10

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Thr Ile Thr Pro Glu Thr Ile Ile Val Tyr Lys Pro
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<400> 73

Thr Ile Asp Arg Asp Gly Thr Arg Ser Phe Asp Pro
1 5 10

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<211> 12
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<400> 74

Thr Ile Phe Arg Asp Gly Pro Val Thr Trp Asp Pro
1 5 10

<210> 75
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<400> 75

Thr Val Thr Asp Thr Gly Tyr Leu Lys Tyr Lys Pro
1 5 10

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Thr Leu Thr Gly Ser Asp Thr Ile Phe Tyr Lys Pro
1 5 10

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<400> 77

Thr Val Thr Gly Lys Asp Val Ile Lys Tyr Lys Pro
1 5 10

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Thr Ile Phe Arg Asp Gly Val Val Asn Tyr Gly Pro
1 5 10

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Thr Val Thr Asp Thr Gly Phe Ile Thr Tyr Lys Pro
1 5 10

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<400> 80

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

Pro Thr Ser Leu Leu Ile Ser Trp Ser Leu Pro His Ala Gly His Val
20 25 30

Asn Tyr Tyr Arg Ile Thr Tyr Gly Glu Thr Gly Gly Asn Ser Pro Val
35 40 45

Gln Glu Phe Thr Val Pro Gly Arg Gly Val Thr Ala Thr Ile Ser Gly
50 55 60

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

Thr Lys Ser Gln Met Ile His Tyr Met Pro Ile Ser Ile Asn Tyr Arg
85 90 95

Thr Glu Ile Asp Lys Pro Ser Gln His His His His His His
100 105 110

<210> 81
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Met Gly Val Ser Asp Val Pro Arg Asp Leu Glu Val Val Ala Ala Thr
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Pro Thr Ser Leu Leu Ile Ser Trp Val Ser Pro Arg Gly Arg Ala Arg

20 25 30

Tyr Tyr Arg Ile Thr Tyr Gly Glu Thr Gly Gly Asn Ser Pro Val Gln
35 40 45

Glu Phe Thr Val Pro Gly Arg Gly Ser Thr Ala Thr Ile Ser Gly Leu
50 55 60

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

Arg Asp Gly Met Ser His His Asp Pro Ile Ser Ile Asn Tyr Arg Thr
85 90 95

Glu Ile Asp Lys Pro Ser Gln His His His His His His
100 105

<210> 82
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Met Gly Val Ser Asp Val Pro Arg Asp Leu Glu Val Val Ala Ala Thr
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Pro Thr Ser Leu Leu Ile Ser Trp Glu Val Pro Arg Gly Leu Ala Arg
20 25 30

Tyr Tyr Arg Ile Thr Tyr Gly Glu Thr Gly Gly Asn Ser Pro Val Gln
35 40 45

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

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

Arg Asp Gly Pro Leu Leu Leu Ala Pro Ile Ser Ile Asn Tyr Arg Thr
85 90 95

Glu Ile Asp Lys Pro Ser Gln His His His His His His
100 105

<210> 83
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Pro Thr Ser Leu Leu Ile Ser Trp Trp Ala Pro Leu Gly Leu Ala Arg
            20                  25                  30

Tyr Tyr Arg Ile Thr Tyr Gly Glu Thr Gly Gly Asn Ser Pro Val Gln
        35                  40                  45

Glu Phe Thr Val Pro Gly Arg Gly Ser Thr Ala Thr Ile Ser Gly Leu
    50                  55                  60

Lys Pro Gly Val Asp Tyr Thr Ile Thr Val Tyr Ala Val Thr Ile Phe
65                  70                  75                  80

Arg Thr Gly Met Val Gln Tyr Asp Pro Ile Ser Ile Asn Tyr Arg Thr
                85                  90                  95

Glu Ile Asp Lys Pro Ser Gln His His His His His His
            100                 105
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1               5                  10                  15

Pro Thr Ser Leu Leu Ile Ser Trp Thr Leu Pro His Ala Gly Leu Ala
            20                  25                  30

His Tyr Tyr Arg Ile Thr Tyr Gly Glu Thr Gly Gly Asn Ser Pro Val
        35                  40                  45

Gln Glu Phe Thr Val Pro Gly Arg Gly Val Thr Ala Thr Ile Ser Gly
    50                  55                  60

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

Thr Asn Ser Glu Ile Ile Leu Tyr Lys Pro Ile Ser Ile Asn Tyr Arg
                85                  90                  95

Thr Glu Ile Asp Lys Pro Ser Gln His His His His His His
            100                 105                 110
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Met Gly Val Ser Asp Val Pro Arg Asp Leu Glu Val Val Ala Ala Thr
1 5 10 15

Pro Thr Ser Leu Leu Ile Ser Trp Tyr Leu Pro Tyr Pro Ala His Met
20 25 30

Asn Tyr Tyr Arg Ile Thr Tyr Gly Glu Thr Gly Gly Asn Ser Pro Val
35 40 45

Gln Glu Phe Thr Val Pro Gly Arg Gly Leu Thr Ala Thr Ile Ser Gly
50 55 60

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

Thr Lys Ser Gln Ile Leu His His Arg Pro Ile Ser Ile Asn Tyr Arg
85 90 95

Thr Glu Ile Asp Lys Pro Ser Gln His His His His His His
100 105 110

<210> 86
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<400> 86

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

Pro Thr Ser Leu Leu Ile Ser Trp Ser Leu Pro Phe Ala Gly His Leu
20 25 30

Asn Tyr Tyr Arg Ile Thr Tyr Gly Glu Thr Gly Gly Asn Ser Pro Val
35 40 45

Gln Glu Phe Thr Val Pro Gly Arg Gly Val Thr Ala Thr Ile Ser Gly
50 55 60

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

Thr Arg Ser Lys Ile Ile His Tyr Met Pro Ile Ser Ile Asn Tyr Arg
85 90 95

Thr Glu Ile Asp Lys Pro Ser Gln His His His His His His
100 105 110

<210> 87
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<400> 87

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

Pro Thr Ser Leu Leu Ile Ser Trp Ser Leu Pro Tyr Ser Gly Leu Ala
20 25 30

Asn Tyr Tyr Arg Ile Thr Tyr Gly Glu Thr Gly Gly Asn Ser Pro Val
35 40 45

Gln Glu Phe Thr Val Pro Gly Arg Gly Val Thr Ala Thr Ile Ser Gly
50 55 60

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

Thr His Ser Asn Ile Ile Arg Tyr Val Pro Ile Ser Ile Asn Tyr Arg
85 90 95

Thr Glu Ile Asp Lys Pro Ser Gln His His His His His His
100 105 110

<210> 88
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<400> 88

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

Pro Thr Ser Leu Leu Ile Ser Trp Ser Leu Pro His Ala Gly His Ala
20 25 30

His Tyr Tyr Arg Ile Thr Tyr Gly Glu Thr Gly Gly Asn Ser Pro Val
35 40 45

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Gln Glu Phe Thr Val Pro Gly Arg Gly Val Thr Ala Thr Ile Ser Gly
    50                  55                  60


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


Ser Ser Thr Lys Val Ile Val Tyr Leu Pro Ile Ser Ile Asn Tyr Arg
                85                  90                  95


Thr Glu Ile Asp Lys Pro Ser Gln His His His His His His
            100                 105                 110


<210>  89
<211>  110
<212>  PRT
<213>  Artificial Sequence

<220>
<223>  Synthetic

<400>  89

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


Pro Thr Ser Leu Leu Ile Ser Trp Thr Leu Pro Asn Phe Gly Leu Ile
            20                  25                  30


Asn Tyr Tyr Arg Ile Thr Tyr Gly Glu Thr Gly Gly Asn Ser Pro Val
        35                  40                  45


Gln Glu Phe Thr Val Pro Gly Arg Gly Val Thr Ala Thr Ile Ser Gly
    50                  55                  60


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


Thr Lys Ser Thr Ile Ile Ile Tyr Lys Pro Ile Ser Ile Asn Tyr Arg
                85                  90                  95


Thr Glu Ile Asp Lys Pro Ser Gln His His His His His His
            100                 105                 110


<210>  90
<211>  110
<212>  PRT
<213>  Artificial Sequence

<220>
<223>  Synthetic

<400>  90

Met Gly Val Ser Asp Val Pro Arg Asp Leu Glu Val Val Ala Ala Thr
1               5                   10                  15
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Pro Thr Ser Leu Leu Ile Ser Trp Thr Leu Pro His Ala Gly Arg Ala
            20                  25                  30


His Tyr Tyr Arg Ile Thr Tyr Gly Glu Thr Gly Gly Asn Ser Pro Val
        35                  40                  45


Gln Glu Phe Thr Val Pro Gly Arg Gly Val Thr Ala Thr Ile Ser Gly
    50                  55                  60


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


Thr Thr Thr Ser Val Ile Leu Tyr Lys Pro Ile Ser Ile Asn Tyr Arg
                85                  90                  95


Thr Glu Ile Asp Lys Pro Ser Gln His His His His His His
            100                 105                 110


<210>  91
<211>  110
<212>  PRT
<213>  Artificial Sequence

<220>
<223>  Synthetic

<400>  91

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


Pro Thr Ser Leu Leu Ile Ser Trp Ser Leu Pro Tyr Ala Gly His Leu
            20                  25                  30


Asn Tyr Tyr Arg Ile Thr Tyr Gly Glu Thr Gly Gly Asn Ser Pro Val
        35                  40                  45


Gln Glu Phe Thr Val Pro Gly Arg Gly Val Thr Ala Thr Ile Ser Gly
    50                  55                  60


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


Thr Lys Ser Gln Leu Ile His Tyr Met Pro Ile Ser Ile Asn Tyr Arg
                85                  90                  95


Thr Glu Ile Asp Lys Pro Ser Gln His His His His His His
            100                 105                 110


<210>  92
<211>  110
<212>  PRT
<213>  Artificial Sequence
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<220>
<223> Synthetic

<400> 92

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

Pro Thr Ser Leu Leu Ile Ser Trp Ser Leu Pro Tyr Ala Ala His Met
20 25 30

Asn Tyr Tyr Arg Ile Thr Tyr Gly Glu Thr Gly Gly Asn Ser Pro Val
35 40 45

Gln Glu Phe Thr Val Pro Gly Arg Gly Val Thr Ala Thr Ile Ser Gly
50 55 60

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

Thr Arg Ser Gln Val Ile His Tyr Met Pro Ile Ser Ile Asn Tyr Arg
85 90 95

Thr Glu Ile Asp Lys Pro Ser Gln His His His His His His
100 105 110

<210> 93
<211> 110
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 93

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

Pro Thr Ser Leu Leu Ile Ser Trp Ser Leu Pro His Ala Gly His Ala
20 25 30

His Tyr Tyr Arg Ile Thr Tyr Gly Glu Thr Gly Gly Asn Ser Pro Val
35 40 45

Gln Glu Phe Thr Val Pro Gly Arg Gly Val Thr Ala Thr Ile Ser Gly
50 55 60

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

Thr Lys Ser Lys Ile Ile His Tyr Met Pro Ile Ser Ile Asn Tyr Arg
85 90 95

Thr Glu Ile Asp Lys Pro Ser Gln His His His His His His

100 105 110

<210> 94
<211> 110
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 94

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

Pro Thr Ser Leu Leu Ile Ser Trp Ser Leu Pro Tyr Pro Gly His Leu
20 25 30

Asn Tyr Tyr Arg Ile Thr Tyr Gly Glu Thr Gly Gly Asn Ser Pro Val
35 40 45

Gln Glu Phe Thr Val Pro Gly Arg Gly Val Thr Ala Thr Ile Ser Gly
50 55 60

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

Thr Lys Ser Lys Ile Ile His Tyr Met Pro Ile Ser Ile Asn Tyr Arg
85 90 95

Thr Glu Ile Asp Lys Pro Ser Gln His His His His His His
100 105 110

<210> 95
<211> 110
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 95

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

Pro Thr Ser Leu Leu Ile Ser Trp Thr Leu Pro His Ala Gly Arg Ala
20 25 30

His Tyr Tyr Arg Ile Thr Tyr Gly Glu Thr Gly Gly Asn Ser Pro Val
35 40 45

Gln Glu Phe Thr Val Pro Gly Arg Gly Val Thr Ala Thr Ile Ser Gly
50 55 60

Leu Lys Pro Gly Val Asp Tyr Thr Ile Thr Val Tyr Ala Val Thr Leu

65 70 75 80

Thr Arg Ser Lys Ile Ile His Tyr Met Pro Ile Ser Ile Asn Tyr Arg
85 90 95

Thr Glu Ile Asp Lys Pro Ser Gln His His His His His His
100 105 110

<210> 96
<211> 110
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 96

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

Pro Thr Ser Leu Leu Ile Ser Trp Ser Leu Pro Tyr Ala Gly His Ala
20 25 30

His Tyr Tyr Arg Ile Thr Tyr Gly Glu Thr Gly Gly Asn Ser Pro Val
35 40 45

Gln Glu Phe Thr Val Pro Gly Arg Gly Val Thr Ala Thr Ile Ser Gly
50 55 60

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

Thr Lys Ser Lys Ile Ile His Tyr Met Pro Ile Ser Ile Asn Tyr Arg
85 90 95

Thr Glu Ile Asp Lys Pro Ser Gln His His His His His His
100 105 110

<210> 97
<211> 110
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 97

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

Pro Thr Ser Leu Leu Ile Ser Trp Ser Leu Pro His Ala Gly His Ala
20 25 30

His Tyr Tyr Arg Ile Thr Tyr Gly Glu Thr Gly Gly Asn Ser Pro Val

35 40 45

Gln Glu Phe Thr Val Pro Gly Arg Gly Val Thr Ala Thr Ile Ser Gly
50 55 60

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

Thr Arg Ser Lys Ile Ile His Tyr Met Pro Ile Ser Ile Asn Tyr Arg
85 90 95

Thr Glu Ile Asp Lys Pro Ser Gln His His His His His His
100 105 110

<210> 98
<211> 110
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 98

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

Pro Thr Ser Leu Leu Ile Ser Trp Ser Leu Pro Tyr Pro Gly His Leu
20 25 30

Asn Tyr Tyr Arg Ile Thr Tyr Gly Glu Thr Gly Gly Asn Ser Pro Val
35 40 45

Gln Glu Phe Thr Val Pro Gly Arg Gly Val Thr Ala Thr Ile Ser Gly
50 55 60

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

Thr Arg Ser Lys Ile Ile His Tyr Met Pro Ile Ser Ile Asn Tyr Arg
85 90 95

Thr Glu Ile Asp Lys Pro Ser Gln His His His His His His
100 105 110

<210> 99
<211> 110
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 99

Met Gly Val Ser Asp Val Pro Arg Asp Leu Glu Val Val Ala Ala Thr

1 5 10 15

Pro Thr Ser Leu Leu Ile Ser Trp Thr Leu Pro His Ala Gly Arg Ala
20 25 30

His Tyr Tyr Arg Ile Thr Tyr Gly Glu Thr Gly Gly Asn Ser Pro Val
35 40 45

Gln Glu Phe Thr Val Pro Gly Arg Gly Val Thr Ala Thr Ile Ser Gly
50 55 60

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

Ser Ser Thr Lys Val Ile His Tyr Lys Pro Ile Ser Ile Asn Tyr Arg
85 90 95

Thr Glu Ile Asp Lys Pro Ser Gln His His His His His His
100 105 110

<210> 100
<211> 110
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 100

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

Pro Thr Ser Leu Leu Ile Ser Trp Ser Leu Pro Tyr Ala Gly His Ala
20 25 30

His Tyr Tyr Arg Ile Thr Tyr Gly Glu Thr Gly Gly Asn Ser Pro Val
35 40 45

Gln Glu Phe Thr Val Pro Gly Arg Gly Val Thr Ala Thr Ile Ser Gly
50 55 60

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

Thr Arg Ser Lys Ile Ile His Tyr Met Pro Ile Ser Ile Asn Tyr Arg
85 90 95

Thr Glu Ile Asp Lys Pro Ser Gln His His His His His His
100 105 110

<210> 101
<211> 110
<212> PRT

<213> Artificial Sequence

<220>
<223> Synthetic

<400> 101

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

Pro Thr Ser Leu Leu Ile Ser Trp Ser Leu Pro His Ala Gly His Ala
20 25 30

His Tyr Tyr Arg Ile Thr Tyr Gly Glu Thr Gly Gly Asn Ser Pro Val
35 40 45

Gln Glu Phe Thr Val Pro Gly Arg Gly Val Thr Ala Thr Ile Ser Gly
50 55 60

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

Thr Lys Ser Lys Val Ile His Tyr Met Pro Ile Ser Ile Asn Tyr Arg
85 90 95

Thr Glu Ile Asp Lys Pro Ser Gln His His His His His His
100 105 110

<210> 102
<211> 110
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 102

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

Pro Thr Ser Leu Leu Ile Ser Trp Ser Leu Pro Tyr Pro Gly His Leu
20 25 30

Asn Tyr Tyr Arg Ile Thr Tyr Gly Glu Thr Gly Gly Asn Ser Pro Val
35 40 45

Gln Glu Phe Thr Val Pro Gly Arg Gly Val Thr Ala Thr Ile Ser Gly
50 55 60

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

Thr Lys Ser Lys Val Ile His Tyr Met Pro Ile Ser Ile Asn Tyr Arg
85 90 95

Thr Glu Ile Asp Lys Pro Ser Gln His His His His His His
100 105 110

<210> 103
<211> 110
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 103

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

Pro Thr Ser Leu Leu Ile Ser Trp Thr Leu Pro His Ala Gly Arg Ala
20 25 30

His Tyr Tyr Arg Ile Thr Tyr Gly Glu Thr Gly Gly Asn Ser Pro Val
35 40 45

Gln Glu Phe Thr Val Pro Gly Arg Gly Val Thr Ala Thr Ile Ser Gly
50 55 60

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

Ser Ser Thr Lys Val Ile Val Tyr Leu Pro Ile Ser Ile Asn Tyr Arg
85 90 95

Thr Glu Ile Asp Lys Pro Ser Gln His His His His His His
100 105 110

<210> 104
<211> 110
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 104

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

Pro Thr Ser Leu Leu Ile Ser Trp Ser Leu Pro Tyr Ala Gly His Ala
20 25 30

His Tyr Tyr Arg Ile Thr Tyr Gly Glu Thr Gly Gly Asn Ser Pro Val
35 40 45

Gln Glu Phe Thr Val Pro Gly Arg Gly Val Thr Ala Thr Ile Ser Gly
50 55 60

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


Thr Lys Ser Lys Val Ile His Tyr Met Pro Ile Ser Ile Asn Tyr Arg
                85                  90                  95


Thr Glu Ile Asp Lys Pro Ser Gln His His His His His His
            100                 105                 110


<210>  105
<211>  110
<212>  PRT
<213>  Artificial Sequence

<220>
<223>  Synthetic

<400>  105

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


Pro Thr Ser Leu Leu Ile Ser Trp Thr Leu Pro His Ala Gly Arg Ala
            20                  25                  30


His Tyr Tyr Arg Ile Thr Tyr Gly Glu Thr Gly Gly Asn Ser Pro Val
        35                  40                  45


Gln Glu Phe Thr Val Pro Gly Arg Gly Val Thr Ala Thr Ile Ser Gly
    50                  55                  60


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


Thr Thr Thr Lys Val Ile His Tyr Lys Pro Ile Ser Ile Asn Tyr Arg
                85                  90                  95


Thr Glu Ile Asp Lys Pro Ser Gln His His His His His His
            100                 105                 110


<210>  106
<211>  109
<212>  PRT
<213>  Artificial Sequence

<220>
<223>  Synthetic

<400>  106

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


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

Tyr Tyr Arg Ile Thr Tyr Gly Glu Thr Gly Gly Asn Ser Pro Val Gln
35 40 45

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

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

Arg Asp Gly Val Asn His Phe Ala Pro Ile Ser Ile Asn Tyr Arg Thr
85 90 95

Glu Ile Asp Lys Pro Ser Gln His His His His His His
100 105

<210> 107
<211> 110
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 107

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

Pro Thr Ser Leu Leu Ile Ser Trp Ser Leu Pro Thr Pro Gly Leu Ala
20 25 30

His Tyr Tyr Arg Ile Thr Tyr Gly Glu Thr Gly Gly Asn Ser Pro Val
35 40 45

Gln Glu Phe Thr Val Pro Gly Arg Gly Val Thr Ala Thr Ile Ser Gly
50 55 60

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

Thr His His Gly Val Ile Gly Tyr Lys Pro Ile Ser Ile Asn Tyr Arg
85 90 95

Thr Glu Ile Asp Lys Pro Ser Gln His His His His His His
100 105 110

<210> 108
<211> 110
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 108

```
Met Gly Val Ser Asp Val Pro Arg Asp Leu Glu Val Val Ala Ala Thr
1               5                   10                  15

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

Asn Tyr Tyr Arg Ile Thr Tyr Gly Glu Thr Gly Gly Asn Ser Pro Val
        35                  40                  45

Gln Glu Phe Thr Val Pro Gly Arg Gly Val Thr Ala Thr Ile Ser Gly
    50                  55                  60

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

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

Thr Glu Ile Asp Lys Pro Ser Gln His His His His His His
            100                 105                 110


<210>  109
<211>  110
<212>  PRT
<213>  Artificial Sequence

<220>
<223>  Synthetic

<400>  109

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

Pro Thr Ser Leu Leu Ile Ser Trp Ser Leu Pro Ser Ser Gly Val Ala
            20                  25                  30

His Tyr Tyr Arg Ile Thr Tyr Gly Glu Thr Gly Gly Asn Ser Pro Val
        35                  40                  45

Gln Glu Phe Thr Val Pro Gly Arg Gly Val Thr Ala Thr Ile Ser Gly
    50                  55                  60

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

Thr Asn Thr Gly Val Ile Ile Tyr Lys Pro Ile Ser Ile Asn Tyr Arg
                85                  90                  95

Thr Glu Ile Asp Lys Pro Ser Gln His His His His His His
            100                 105                 110


<210>  110
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<211> 110
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 110

```
Met Gly Val Ser Asp Val Pro Arg Asp Leu Glu Val Val Ala Ala Thr
1               5                  10                  15

Pro Thr Ser Leu Leu Ile Ser Trp Ser Leu Pro His His Gly Phe Gly
            20                  25                  30

His Tyr Tyr Arg Ile Thr Tyr Gly Glu Thr Gly Gly Asn Ser Pro Val
        35                  40                  45

Gln Glu Phe Thr Val Pro Gly Arg Gly Val Thr Ala Thr Ile Ser Gly
    50                  55                  60

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

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

Thr Glu Ile Asp Lys Pro Ser Gln His His His His His His
            100                 105                 110
```

<210> 111
<211> 110
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 111

```
Met Gly Val Ser Asp Val Pro Arg Asp Leu Glu Val Val Ala Ala Thr
1               5                  10                  15

Pro Thr Ser Leu Leu Ile Ser Trp Ser Leu Pro His Ala Gly Asp Ala
            20                  25                  30

His Tyr Tyr Arg Ile Thr Tyr Gly Glu Thr Gly Gly Asn Ser Pro Val
        35                  40                  45

Gln Glu Phe Thr Val Pro Gly Arg Gly Val Thr Ala Thr Ile Ser Gly
    50                  55                  60

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

Thr Arg Ala Gly Phe Tyr Arg Tyr Lys Pro Ile Ser Ile Asn Tyr Arg
```

85 90 95

Thr Glu Ile Asp Lys Pro Ser Gln His His His His His His
100 105 110

<210> 112
<211> 110
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 112

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

Pro Thr Ser Leu Leu Ile Ser Trp Ser Leu Pro His Asn Gly Val Ala
20 25 30

His Tyr Tyr Arg Ile Thr Tyr Gly Glu Thr Gly Gly Asn Ser Pro Val
35 40 45

Gln Glu Phe Thr Val Pro Gly Arg Gly Val Thr Ala Thr Ile Ser Gly
50 55 60

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

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

Thr Glu Ile Asp Lys Pro Ser Gln His His His His His His
100 105 110

<210> 113
<211> 110
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 113

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

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

Asn Tyr Tyr Arg Ile Thr Tyr Gly Glu Thr Gly Gly Asn Ser Pro Val
35 40 45

Gln Glu Phe Thr Val Pro Gly Arg Gly Val Thr Ala Thr Ile Ser Gly

50 55 60

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

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

Thr Glu Ile Asp Lys Pro Ser Gln His His His His His His
100 105 110

<210> 114
<211> 110
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 114

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

Pro Thr Ser Leu Leu Ile Ser Trp Ser Leu Pro Gly Pro Gly His Phe
20 25 30

His Tyr Tyr Arg Ile Thr Tyr Gly Glu Thr Gly Gly Asn Ser Pro Val
35 40 45

Gln Glu Phe Thr Val Pro Gly Arg Gly Val Thr Ala Thr Ile Ser Gly
50 55 60

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

Thr Ala Asn Gln Pro Ile Ile Tyr Lys Pro Ile Ser Ile Asn Tyr Arg
85 90 95

Thr Glu Ile Asp Lys Pro Ser Gln His His His His His His
100 105 110

<210> 115
<211> 110
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 115

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

Pro Thr Ser Leu Leu Ile Ser Trp Ser Leu Pro His Pro Gly Leu Gly

20 25 30

His Tyr Tyr Arg Ile Thr Tyr Gly Glu Thr Gly Gly Asn Ser Pro Val
35 40 45

Gln Glu Phe Thr Val Pro Gly Arg Gly Val Thr Ala Thr Ile Ser Gly
50 55 60

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

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

Thr Glu Ile Asp Lys Pro Ser Gln His His His His His His
100 105 110

<210> 116
<211> 109
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 116

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

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

Tyr Tyr Arg Ile Thr Tyr Gly Glu Thr Gly Gly Asn Ser Pro Val Gln
35 40 45

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

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

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

Glu Ile Asp Lys Pro Ser Gln His His His His His His
100 105

<210> 117
<211> 109
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 117

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

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

Tyr Tyr Arg Ile Thr Tyr Gly Glu Thr Gly Gly Asn Ser Pro Val Gln
35 40 45

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

Lys Pro Gly Val Asp Tyr Thr Ile Thr Val Tyr Ala Val Thr Ile Phe
65 70 75 80

Arg Asp Gly Pro Val Thr Trp Asp Pro Ile Ser Ile Asn Tyr Arg Thr
85 90 95

Glu Ile Asp Lys Pro Ser Gln His His His His His His
100 105

<210> 118
<211> 110
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 118

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

Pro Thr Ser Leu Leu Ile Ser Trp Ser Leu Pro His Gln Gly Lys Ala
20 25 30

Asn Tyr Tyr Arg Ile Thr Tyr Gly Glu Thr Gly Gly Asn Ser Pro Val
35 40 45

Gln Glu Phe Thr Val Pro Gly Arg Gly Val Thr Ala Thr Ile Ser Gly
50 55 60

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

Thr Asp Thr Gly Tyr Leu Lys Tyr Lys Pro Ile Ser Ile Asn Tyr Arg
85 90 95

Thr Glu Ile Asp Lys Pro Ser Gln His His His His His His
100 105 110

<210> 119
<211> 109
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 119

```
Met Gly Val Ser Asp Val Pro Arg Asp Leu Glu Val Val Ala Ala Thr
1               5                   10                  15


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


Tyr Tyr Arg Ile Thr Tyr Gly Glu Thr Gly Gly Asn Ser Pro Val Gln
        35                  40                  45


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


Lys Pro Gly Val Asp Tyr Thr Ile Thr Val Tyr Ala Val Thr Ile Phe
65                  70                  75                  80


Arg Asp Gly Pro Val Thr Trp Asp Pro Ile Ser Ile Asn Tyr Arg Thr
                85                  90                  95


Glu Ile Asp Lys Pro Ser Gln His His His His His His
            100                 105
```

<210> 120
<211> 110
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 120

```
Met Gly Val Ser Asp Val Pro Arg Asp Leu Glu Val Val Ala Ala Thr
1               5                   10                  15


Pro Thr Ser Leu Leu Ile Ser Trp Ser Leu Pro Asn Pro Gly Ile Ala
            20                  25                  30


His Tyr Tyr Arg Ile Thr Tyr Gly Glu Thr Gly Gly Asn Ser Pro Val
        35                  40                  45


Gln Glu Phe Thr Val Pro Gly Arg Gly Val Thr Ala Thr Ile Ser Gly
    50                  55                  60


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

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

Thr Glu Ile Asp Lys Pro Ser Gln His His His His His His
100 105 110

<210> 121
<211> 110
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 121

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

Pro Thr Ser Leu Leu Ile Ser Trp Ser Leu Pro Arg Pro Gly Asn Ala
20 25 30

His Tyr Tyr Arg Ile Thr Tyr Gly Glu Thr Gly Gly Asn Ser Pro Val
35 40 45

Gln Glu Phe Thr Val Pro Gly Arg Gly Val Thr Ala Thr Ile Ser Gly
50 55 60

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

Thr Gly Lys Asp Val Ile Lys Tyr Lys Pro Ile Ser Ile Asn Tyr Arg
85 90 95

Thr Glu Ile Asp Lys Pro Ser Gln His His His His His His
100 105 110

<210> 122
<211> 109
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 122

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

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

Tyr Tyr Arg Ile Thr Tyr Gly Glu Thr Gly Gly Asn Ser Pro Val Gln
35 40 45

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

Lys Pro Gly Val Asp Tyr Thr Ile Thr Val Tyr Ala Val Thr Ile Phe
65 70 75 80

Arg Asp Gly Val Val Asn Tyr Gly Pro Ile Ser Ile Asn Tyr Arg Thr
85 90 95

Glu Ile Asp Lys Pro Ser Gln His His His His His His
100 105

<210> 123
<211> 110
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35 40 45

Gln Glu Phe Thr Val Pro Gly Arg Gly Val Thr Ala Thr Ile Ser Gly
50 55 60

Leu Lys Pro Gly Val Asp Tyr Thr Ile Thr Val Tyr Ala Val Thr Val
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Thr Asp Thr Gly Phe Ile Thr Tyr Lys Pro Ile Ser Ile Asn Tyr Arg
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Thr Glu Ile Asp Lys Pro Ser Gln His His His His His His
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accatcagcg gccttaaacc tggcgttgat tataccatca ctgtgtatgc tgtcactctg 240

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atcagcggcc ttaaacctgg cgttgattat accatcactg tgtatgctgt cactatctac 240

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atcagcggcc ttaaacctgg cgttgattat accatcactg tgtatgctgt cactgtgtac 240

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atcagcggcc ttaaacctgg cgttgattat accatcactg tgtatgctgt cactatcttc 240

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accattagcg gtctgaaacc gggtgttgat tacaccatta ccgtttatgc agttaccctg 240

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accattagcg gtctgaaacc gggtgttgat tacaccatta ccgtttatgc agttaccgtt 240

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aaaccgagcc agcatcatca tcaccatcat 330

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gaaacaggag gcaatagccc tgtccaggag ttcactgtgc ctggtcgtgg tgttacagct 180

accatcagcg gccttaaacc tggcgttgat tataccatca ctgtgtatgc tgtcactgtc 240

actgctaacc agcccatcat ctacaaacca atttccatta attaccgcac agaaattgac 300

aaaccatccc agcaccatca ccaccaccac 330

<210> 159
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<212> DNA
<213> Artificial Sequence

<220>
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<400> 159
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gaaacaggag gcaatagccc tgtccaggag ttcactgtgc ctggtcgtgg tgttacagct 180

accatcagcg gccttaaacc tggcgttgat tataccatca ctgtgtatgc tgtcactatc 240

actccggaaa cgatcatcgt ctacaaacca atttccatta attaccgcac agaaattgac 300

aaaccatccc agcaccatca ccaccaccac 330

<210> 160
<211> 327
<212> DNA
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<220>
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<400> 160
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ctgatcagct gggacgctcc gagaggtctg gctcgatatt accgcatcac ttacggcgaa 120

acaggaggca atagccctgt ccaggagttc actgtgttcg gtcgtggtac cacagctacc 180

atcagcggcc ttaaacctgg cgttgattat accatcactg tgtatgctgt cactatcgac 240

cgtgacggta cccgcagctt cgacccaatt tccattaatt accgcacaga aattgacaaa 300

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<213> Artificial Sequence

<220>
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acaggaggca atagccctgt ccaggagttc actgtggtcg gtcgtggtaa cacagctacc 180

atcagcggcc ttaaacctgg cgttgattat accatcactg tgtatgctgt cactatcttc 240

cgtgacggtc ccgtcacctg ggacccaatt tccattaatt accgcacaga aattgacaaa 300

ccatcccagc accatcacca ccaccac 327

<210> 162
<211> 330
<212> DNA
<213> Artificial Sequence

<220>
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<400> 162
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gaaacaggag gcaatagccc tgtccaggag ttcactgtgc ctggtcgtgg tgttacagct 180

accatcagcg gccttaaacc tggcgttgat ataccatca ctgtgtatgc tgtcactgtt 240

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aaaccatccc agcaccatca ccaccaccac 330

<210> 163
<211> 327
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 163
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ctgatcagct gggacgctcc gaagggtctg gctcgatatt accgcatcac ttacggcgaa 120

acaggaggca atagccctgt ccaggagttc actgtggtcg gtcgtggtaa cacagctacc 180

atcagcggcc ttaaacctgg cgttgattat accatcactg tgtatgctgt cactatcttc 240

cgtgacggtc ccgtcacctg ggacccaatt tccattaatt accgcacaga aattgacaaa 300

ccatcccagc accatcacca ccaccac 327

<210> 164
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<220>
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ctgatcagct ggtctctgcc gaatcccggt atcgcccatt attaccgcat cacttacggc 120

gaaacaggag gcaatagccc tgtccaggag ttcactgtgc ctggtcgtgg tgttacagct 180

accatcagcg gccttaaacc tggcgttgat ataccatca ctgtgtatgc tgtcactctc 240

actggcagtg acaccatctt ctacaaacca atttccatta attaccgcac agaaattgac 300

aaaccatccc agcaccatca ccaccaccac 330

<210> 165
<211> 330
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 165
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ctgatcagct ggtctctgcc gcggccgggt aacgcccatt attaccgcat cacttacggc 120

gaaacaggag gcaatagccc tgtccaggag ttcactgtgc ctggtcgtgg tgttacagct 180

accatcagcg gccttaaacc tggcgttgat tataccatca ctgtgtatgc tgtcactgtt 240

actggcaaag atgtcatcaa gtacaaacca atttccatta attaccgcac agaaattgac 300

aaaccatccc agcaccatca ccaccaccac 330

<210> 166
<211> 327
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 166
atgggagttt ctgatgtgcc gcgcgacctg gaagtggttg ctgccacccc caccagcctg 60

ctgatcagct gggacgctcc ggctggtctg gctcgatatt accgcatcac ttacggcgaa 120

acaggaggca atagccctgt ccaggagttc actgtggtcg gtcgtggtaa cacagctacc 180

atcagcggcc ttaaacctgg cgttgattat accatcactg tgtatgctgt cactatcttc 240

cgtgacggtg tcgtcaacta cggcccaatt tccattaatt accgcacaga aattgacaaa 300

ccatcccagc accatcacca ccaccac 327

<210> 167
<211> 330
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 167
atgggagttt ctgatgtgcc gcgcgacctg gaagtggttg ctgccacccc caccagcctg 60

ctgatcagct ggtctctgcc gaatccgggt aacgcccatt attaccgcat cacttacggc 120

gaaacaggag gcaatagccc tgtccaggag ttcactgtgc ctggtcgtgg tgttacagct 180

accatcagcg gccttaaacc tggcgttgat tataccatca ctgtgtatgc tgtcactgtt 240

actgacacag gtttcatcac gtacaaacca atttccatta attaccgcac agaaattgac 300

aaaccatccc agcaccatca ccaccaccac 330

<210> 168
<211> 5
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 168

Ile Asn Tyr Arg Thr
1 5

<210> 169
<211> 227
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 169

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

Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met
20 25 30

Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His
35 40 45

Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val
50 55 60

His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr
65 70 75 80

Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly
85 90 95

Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile
100 105 110

Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val
115 120 125

Tyr Thr Leu Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln Val Ser
130 135 140

Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu
145 150 155 160

Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro

165 170 175

Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val
180 185 190

Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met
195 200 205

His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser
210 215 220

Pro Gly Lys
225

<210> 170
<211> 16
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 170

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

<210> 171
<211> 24
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 171

Glu Pro Lys Ser Ser Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala
1 5 10 15

Pro Glu Leu Leu Gly Gly Pro Ser
20

<210> 172
<211> 24
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 172

Glu Pro Lys Ser Ser Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala
1 5 10 15

Pro Glu Leu Leu Gly Gly Ser Ser
20

<210> 173
<211> 24
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 173

Glu Pro Lys Ser Ser Gly Ser Thr His Thr Cys Pro Pro Cys Pro Ala
1 5 10 15

Pro Glu Leu Leu Gly Gly Ser Ser
20

<210> 174
<211> 19
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 174

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

Gly Pro Ser

<210> 175
<211> 19
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 175

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

Gly Ser Ser

<210> 176
<211> 330
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 176

Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu Ala Pro Ser Ser Lys
1 5 10 15

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

Phe Pro Glu Pro Val Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser
        35                  40                  45

Gly Val His Thr Phe Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser
    50                  55                  60

Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser Leu Gly Thr Gln Thr
65                  70                  75                  80

Tyr Ile Cys Asn Val Asn His Lys Pro Ser Asn Thr Lys Val Asp Lys
                85                  90                  95

Lys Val Glu Pro Lys Ser Cys Asp Lys Thr His Thr Cys Pro Pro Cys
            100                 105                 110

Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro
        115                 120                 125

Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys
    130                 135                 140

Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp
145                 150                 155                 160

Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu
                165                 170                 175

Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu
            180                 185                 190

His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn
        195                 200                 205

Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly
    210                 215                 220

Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Asp Glu
225                 230                 235                 240

Leu Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr
                245                 250                 255

Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn
            260                 265                 270

Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe
        275                 280                 285
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Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn
    290                 295                 300


Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr
305                 310                 315                 320


Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys
                325                 330


<210>  177
<211>  20
<212>  PRT
<213>  Artificial Sequence

<220>
<223>  Synthetic

<400>  177

Met Glu Thr Asp Thr Leu Leu Leu Trp Val Leu Leu Leu Trp Val Pro
1               5                   10                  15


Gly Ser Thr Gly
            20


<210>  178
<211>  208
<212>  PRT
<213>  Artificial Sequence

<220>
<223>  Synthetic

<400>  178

Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg
1               5                   10                  15


Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro
            20                  25                  30


Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala
        35                  40                  45


Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val
    50                  55                  60


Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr
65                  70                  75                  80


Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr
                85                  90                  95


Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu
            100                 105                 110
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Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln Val Ser Leu Thr Cys
        115                 120                 125


Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser
    130                 135                 140


Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp
145                 150                 155                 160


Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser
                165                 170                 175


Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala
            180                 185                 190


Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys
        195                 200                 205


<210>  179
<211>  206
<212>  PRT
<213>  Artificial Sequence

<220>
<223>  Synthetic

<400>  179

Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg
1               5                   10                  15


Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro
            20                  25                  30


Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala
        35                  40                  45


Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val
    50                  55                  60


Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr
65                  70                  75                  80


Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr
                85                  90                  95


Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu
            100                 105                 110


Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln Val Ser Leu Thr Cys
        115                 120                 125


Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser
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130 135 140

Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp
145 150 155 160

Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser
165 170 175

Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala
180 185 190

Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro
195 200 205

<210> 180
<211> 16
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 180

Gly Ser Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly
1 5 10 15

<210> 181
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 181

Gly Ala Gly Gly Gly Gly Ser Gly
1 5

<210> 182
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 182

Glu Pro Lys Ser Ser Asp
1 5

<210> 183
<211> 21
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 183

Glu Ser Pro Lys Ala Gln Ala Ser Ser Val Pro Thr Ala Gln Pro Gln
1 5 10 15

Ala Glu Gly Leu Ala
20

<210> 184
<211> 17
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 184

Glu Leu Gln Leu Glu Glu Ser Ala Ala Glu Ala Gln Asp Gly Glu Leu
1 5 10 15

Asp

<210> 185
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 185

Gly Gln Pro Asp Glu Pro Gly Gly Ser
1 5

<210> 186
<211> 13
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 186

Gly Gly Ser Gly Ser Gly Ser Gly Ser Gly Ser Gly Ser
1 5 10

<210> 187
<211> 17
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 187

Glu Leu Gln Leu Glu Glu Ser Ala Ala Glu Ala Gln Glu Gly Glu Leu

1 5 10 15

Glu

<210> 188
<211> 5
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 188

Gly Ser Gly Ser Gly
1 5

<210> 189
<211> 4
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 189

Gly Ser Gly Cys
1

<210> 190
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 190

Ala Gly Gly Gly Gly Ser Gly
1 5

<210> 191
<211> 4
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 191

Gly Ser Gly Ser
1

<210> 192
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 192

Gln Pro Asp Glu Pro Gly Gly Ser
1 5

<210> 193
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 193

Gly Ser Gly Ser Gly Ser
1 5

<210> 194
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 194

Thr Val Ala Ala Pro Ser
1 5

<210> 195
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 195

Lys Ala Gly Gly Gly Gly Ser Gly
1 5

<210> 196
<211> 13
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 196

Lys Gly Ser Gly Ser Gly Ser Gly Ser Gly Ser Gly Ser
1 5 10

<210> 197
<211> 9
<212> PRT

<213> Artificial Sequence

<220>
<223> Synthetic

<400> 197

Lys Gln Pro Asp Glu Pro Gly Gly Ser
1 5

<210> 198
<211> 18
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 198

Lys Glu Leu Gln Leu Glu Glu Ser Ala Ala Glu Ala Gln Asp Gly Glu
1 5 10 15

Leu Asp

<210> 199
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 199

Lys Thr Val Ala Ala Pro Ser
1 5

<210> 200
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 200

Lys Ala Gly Gly Gly Gly Ser Gly Gly
1 5

<210> 201
<211> 14
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 201

Lys Gly Ser Gly Ser Gly Ser Gly Ser Gly Ser Gly Ser Gly

1 5 10

<210> 202
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 202

Lys Gln Pro Asp Glu Pro Gly Gly Ser Gly
1 5 10

<210> 203
<211> 19
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 203

Lys Glu Leu Gln Leu Glu Glu Ser Ala Ala Glu Ala Gln Asp Gly Glu
1 5 10 15

Leu Asp Gly

<210> 204
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 204

Lys Thr Val Ala Ala Pro Ser Gly
1 5

<210> 205
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 205

Ala Gly Gly Gly Gly Ser Gly Gly
1 5

<210> 206
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 206

Ala Gly Gly Gly Gly Ser Gly
1   5

<210> 207
<211> 13
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 207

Gly Ser Gly Ser Gly Ser Gly Ser Gly Ser Gly Ser Gly
1   5   10

<210> 208
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 208

Gln Pro Asp Glu Pro Gly Gly Ser Gly
1   5

<210> 209
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 209

Thr Val Ala Ala Pro Ser Gly
1   5

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

<220>
<223> Synthetic

<400> 210

Pro Ser Thr Ser Thr Ser Thr
1   5

<210> 211
<211> 7
<212> PRT

<213> Artificial Sequence

<220>
<223> Synthetic

<400> 211

Glu Ile Asp Lys Pro Ser Gln
1 5

<210> 212
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 212

Gly Ser Gly Ser Gly Ser Gly Ser
1 5

<210> 213
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 213

Gly Ser Gly Ser Gly Ser Gly Ser Gly Ser
1 5 10

<210> 214
<211> 12
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 214

Gly Ser Gly Ser Gly Ser Gly Ser Gly Ser Gly Ser
1 5 10

<210> 215
<211> 14
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 215

Gly Ser Gly Ser Gly Ser Gly Ser Gly Ser Gly Ser Gly Ser
1 5 10

<210> 216

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

<220>
<223> Synthetic

<400> 216

Gly Gly Ser Gly Ser Gly Ser Gly Ser Gly Ser Gly Ser
1 5 10

<210> 217
<211> 16
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 217

Gly Gly Ser Gly Ser Gly Ser Gly Ser Gly Ser Gly Ser Gly Ser Gly
1 5 10 15

<210> 218
<211> 15
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 218

Gly Ser Glu Gly Ser Glu Gly Ser Glu Gly Ser Glu Gly Ser Glu
1 5 10 15

<210> 219
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 219

Gly Gly Ser Glu Gly Gly Ser Glu
1 5

<210> 220
<211> 35
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 220

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly
1 5 10 15

Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly
            20   25   30

Gly Gly Ser
        35

<210> 221
<211> 25
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 221

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly
1   5   10   15

Gly Gly Gly Ser Gly Gly Gly Gly Ser
            20   25

<210> 222
<211> 16
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 222

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly
1   5   10   15

<210> 223
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 223

Gly Pro Gly Pro Gly Pro Gly
1   5

<210> 224
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 224

Gly Pro Gly Pro Gly Pro Gly Pro Gly Pro Gly
1   5   10

<210> 225
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 225

Pro Ala Pro Ala Pro Ala
1 5

<210> 226
<211> 12
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 226

Pro Ala Pro Ala Pro Ala Pro Ala Pro Ala Pro Ala
1 5 10

<210> 227
<211> 18
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 227

Pro Ala Pro Ala Pro Ala Pro Ala Pro Ala Pro Ala Pro Ala Pro Ala
1 5 10 15

Pro Ala

<210> 228
<211> 106
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 228

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

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

Tyr Tyr Arg Ile Thr Tyr Gly Glu Thr Gly Gly Asn Ser Pro Val Gln
35 40 45

```
Glu Phe Thr Val Pro Gly Arg Gly Ser Thr Ala Thr Ile Ser Gly Leu
    50                  55                  60

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

Arg Asp Gly Met Ser His His Asp Pro Ile Ser Ile Asn Tyr Arg Thr
                85                  90                  95

Gly Ser Gly Cys His His His His His His
            100                 105

<210>  229
<211>  107
<212>  PRT
<213>  Artificial Sequence

<220>
<223>  Synthetic

<400>  229

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

Pro Thr Ser Leu Leu Ile Ser Trp Ser Leu Pro His Ala Gly His Val
            20                  25                  30

Asn Tyr Tyr Arg Ile Thr Tyr Gly Glu Thr Gly Gly Asn Ser Pro Val
        35                  40                  45

Gln Glu Phe Thr Val Pro Gly Arg Gly Val Thr Ala Thr Ile Ser Gly
    50                  55                  60

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

Thr Lys Ser Gln Met Ile His Tyr Met Pro Ile Ser Ile Asn Tyr Arg
                85                  90                  95

Thr Gly Ser Gly Cys His His His His His His
            100                 105

<210>  230
<211>  108
<212>  PRT
<213>  Artificial Sequence

<220>
<223>  Synthetic

<400>  230

Met Gly Val Ser Asp Val Pro Arg Asp Leu Glu Val Val Ala Ala Thr
1               5                   10                  15
```

```
Pro Thr Ser Leu Leu Ile Ser Trp Thr Leu Pro His Ala Gly Arg Ala
            20                  25                  30


His Tyr Tyr Arg Ile Thr Tyr Gly Glu Thr Gly Gly Asn Ser Pro Val
        35                  40                  45


Gln Glu Phe Thr Val Pro Gly Arg Gly Val Thr Ala Thr Ile Ser Gly
    50                  55                  60


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


Thr Thr Thr Ser Val Ile Leu Tyr Lys Pro Ile Ser Ile Asn Tyr Arg
                85                  90                  95


Thr Glu Gly Ser Gly Cys His His His His His His
            100                 105


<210>  231
<211>  108
<212>  PRT
<213>  Artificial Sequence

<220>
<223>  Synthetic

<400>  231

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


Pro Thr Ser Leu Leu Ile Ser Trp Tyr Leu Pro Tyr Pro Ala His Met
            20                  25                  30


Asn Tyr Tyr Arg Ile Thr Tyr Gly Glu Thr Gly Gly Asn Ser Pro Val
        35                  40                  45


Gln Glu Phe Thr Val Pro Gly Arg Gly Leu Thr Ala Thr Ile Ser Gly
    50                  55                  60


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


Thr Lys Ser Gln Ile Leu His His Arg Pro Ile Ser Ile Asn Tyr Arg
                85                  90                  95


Thr Glu Gly Ser Gly Cys His His His His His His
            100                 105


<210>  232
<211>  108
<212>  PRT
<213>  Artificial Sequence
```

<220>
<223> Synthetic

<400> 232

```
Met Gly Val Ser Asp Val Pro Arg Asp Leu Glu Val Val Ala Ala Thr
1               5                  10                  15

Pro Thr Ser Leu Leu Ile Ser Trp Ser Leu Pro Tyr Ala Gly His Leu
            20                  25                  30

Asn Tyr Tyr Arg Ile Thr Tyr Gly Glu Thr Gly Gly Asn Ser Pro Val
        35                  40                  45

Gln Glu Phe Thr Val Pro Gly Arg Gly Val Thr Ala Thr Ile Ser Gly
    50                  55                  60

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

Thr Lys Ser Gln Leu Ile His Tyr Met Pro Ile Ser Ile Asn Tyr Arg
                85                  90                  95

Thr Glu Gly Ser Gly Cys His His His His His His
            100                 105
```

<210> 233
<211> 108
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 233

```
Met Gly Val Ser Asp Val Pro Arg Asp Leu Glu Val Val Ala Ala Thr
1               5                  10                  15

Pro Thr Ser Leu Leu Ile Ser Trp Thr Leu Pro His Ala Gly Arg Ala
            20                  25                  30

His Tyr Tyr Arg Ile Thr Tyr Gly Glu Thr Gly Gly Asn Ser Pro Val
        35                  40                  45

Gln Glu Phe Thr Val Pro Gly Arg Gly Val Thr Ala Thr Ile Ser Gly
    50                  55                  60

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

Thr Thr Thr Lys Val Ile His Tyr Lys Pro Ile Ser Ile Asn Tyr Arg
                85                  90                  95

Thr Glu Gly Ser Gly Cys His His His His His His
```

100 105

<210> 234
<211> 108
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 234

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

Pro Thr Ser Leu Leu Ile Ser Trp Thr Leu Pro His Ala Gly Arg Ala
20 25 30

His Tyr Tyr Arg Ile Thr Tyr Gly Glu Thr Gly Gly Asn Ser Pro Val
35 40 45

Gln Glu Phe Thr Val Pro Gly Arg Gly Val Thr Ala Thr Ile Ser Gly
50 55 60

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

Thr Thr Thr Lys Val Ile His Tyr Lys Pro Ile Ser Ile Asn Tyr Arg
85 90 95

Thr Glu Gly Ser Gly Cys His His His His His His
100 105

<210> 235
<211> 107
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 235

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

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

Tyr Tyr Arg Ile Thr Tyr Gly Glu Thr Gly Gly Asn Ser Pro Val Gln
35 40 45

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

Lys Pro Gly Val Asp Tyr Thr Ile Thr Val Tyr Ala Val Thr Ile Asp

65 70 75 80

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

Glu Gly Ser Gly Cys His His His His His His
100 105

<210> 236
<211> 107
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 236

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

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

Tyr Tyr Arg Ile Thr Tyr Gly Glu Thr Gly Gly Asn Ser Pro Val Gln
35 40 45

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

Lys Pro Gly Val Asp Tyr Thr Ile Thr Val Tyr Ala Val Thr Ile Phe
65 70 75 80

Arg Asp Gly Pro Val Thr Trp Asp Pro Ile Ser Ile Asn Tyr Arg Thr
85 90 95

Glu Gly Ser Gly Cys His His His His His His
100 105

<210> 237
<211> 107
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 237

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

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

Tyr Tyr Arg Ile Thr Tyr Gly Glu Thr Gly Gly Asn Ser Pro Val Gln

35 40 45

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

Lys Pro Gly Val Asp Tyr Thr Ile Thr Val Tyr Ala Val Thr Ile Phe
65 70 75 80

Arg Asp Gly Pro Val Thr Trp Asp Pro Ile Ser Ile Asn Tyr Arg Thr
85 90 95

Glu Gly Ser Gly Cys His His His His His His
100 105

<210> 238
<211> 108
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 238

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

Pro Thr Ser Leu Leu Ile Ser Trp Ser Leu Pro Asn Pro Gly Asn Ala
20 25 30

His Tyr Tyr Arg Ile Thr Tyr Gly Glu Thr Gly Gly Asn Ser Pro Val
35 40 45

Gln Glu Phe Thr Val Pro Gly Arg Gly Val Thr Ala Thr Ile Ser Gly
50 55 60

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

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

Thr Glu Gly Ser Gly Cys His His His His His His
100 105

<210> 239
<211> 108
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 239

Met Gly Val Ser Asp Val Pro Arg Asp Leu Glu Val Val Ala Ala Thr

1 5 10 15

Pro Thr Ser Leu Leu Ile Ser Trp Ser Leu Pro His Gln Gly Lys Ala
20 25 30

Asn Tyr Tyr Arg Ile Thr Tyr Gly Glu Thr Gly Gly Asn Ser Pro Val
35 40 45

Gln Glu Phe Thr Val Pro Gly Arg Gly Val Thr Ala Thr Ile Ser Gly
50 55 60

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

Thr Asp Thr Gly Tyr Leu Lys Tyr Lys Pro Ile Ser Ile Asn Tyr Arg
85 90 95

Thr Glu Gly Ser Gly Cys His His His His His His
100 105

<210> 240
<211> 318
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 240
atgggagttt ctgatgtgcc gcgcgacctg gaagtggttg ctgccacccc caccagcctg 60

ctgatcagct gggtttctcc gcgtggtcgt gctcgatatt accgcatcac ttacggcgaa 120

acaggaggca atagccctgt ccaggagttc actgtgcctg gtcgtggttc tacagctacc 180

atcagcggcc ttaaacctgg cgttgattat accatcactg tgtatgctgt cactatctac 240

cgtgacggta tgtctcatca tgacccaatt tccattaatt accgcacagg tagcggttgc 300

caccatcacc accatcac 318

<210> 241
<211> 321
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 241
atgggagttt ctgatgtgcc gcgcgacctg gaagtggttg ctgccacccc caccagcctg 60

ctgatcagct ggtctctgcc gcatgctggt catgtgaact attaccgcat cacttacggc 120

gaaacaggag gcaatagccc tgtccaggag ttcactgtgc ctggtcgtgg tgttacagct 180

accatcagcg gccttaaacc tggcgttgat ataccatca ctgtgtatgc tgtcactctg 240

actaaatctc agatgatcca ttacatgcca atttccatta attaccgcac aggtagcggt 300

tgccaccatc accaccatca c 321

<210> 242
<211> 324
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 242
atgggagttt ctgatgtgcc gcgcgacctg gaagtggttg ctgccacccc caccagcctg 60

ctgatcagct ggactttgcc gcatgctggt cgtgcgcact attaccgcat cacttacggc 120

gaaacaggag gcaatagccc tgtccaggag ttcactgtgc ctgggcgggg tgttacagct 180

accatcagcg gccttaaacc tggcgttgat tataccatca ctgtgtatgc tgtcactgtg 240

acgacaactt cggtgatcct ttacaagcca atttccatta attaccgcac agaaggtagc 300

ggttgccacc atcaccacca tcac 324

<210> 243
<211> 324
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 243
atgggagttt ctgatgtgcc gcgcgacctg gaagtggttg ctgccacccc caccagcctg 60

ctgatcagct ggtacctccc gtatcctgcg catatgaact attaccgcat cacttacggc 120

gaaacaggag gcaatagccc tgtccaggag ttcactgtgc ctgggcgggg tctgacagct 180

accatcagcg gccttaaacc tggcgttgat tataccatca ctgtgtatgc tgtcactctg 240

acaaaatctc agattctcca tcataggcca atttccatta attaccgcac agaaggtagc 300

ggttgccacc atcaccacca tcac 324

<210> 244
<211> 324
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 244
atgggagttt ctgatgtgcc gcgcgacctg gaagtggttg ctgccacccc caccagcctg 60

ctgatcagct ggtctcttcc ttatgctggt catctaaact attaccgcat cacttacggc 120

gaaacaggag gcaatagccc tgtccaggag ttcactgtgc ctggtcgtgg tgtgacagct 180

accatcagcg gccttaaacc tggcgttgat tataccatca ctgtgtatgc tgtcactctg 240

actaagtctc agctgataca ttacatgcca atttccatta attaccgcac agaaggtagc 300

ggttgccacc atcaccacca tcac 324

<210> 245
<211> 324
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 245
atgggtgtta gtgatgttcc gcgtgatctg gaagttgttg cagcaacccc gaccagcctg 60

ctgattagct ggaccctgcc gcatgcaggt cgtgcacatt attatcgtat tacctatggt 120

gaaaccggtg gtaatagtcc ggttcaggaa ttcaccgttc cgggtcgtgg tgttaccgca 180

accattagcg gtctgaaacc gggtgttgat tacaccatta ccgtttatgc agttaccgtt 240

accaccacca aagtgattca ttataaaccg atttccatta attaccgcac agaaggtagc 300

ggttgccacc atcaccacca tcac 324

<210> 246
<211> 306
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 246
atgggtgtta gtgatgttcc gcgtgatctg gaagttgttg cagcaacccc gaccagcctg 60

ctgattagct ggaccctgcc gcatgcaggt cgtgcacatt attatcgtat tacctatggt 120

gaaaccggtg gtaatagtcc ggttcaggaa ttcaccgttc cgggtcgtgg tgttaccgca 180

accattagcg gtctgaaacc gggtgttgat tacaccatta ccgtttatgc agttaccgtt 240

accaccacca aagtgattca ttataaaccg atttccatta attaccgaac agaaggtagc 300

ggttgc 306

<210> 247
<211> 321
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 247
atgggagttt ctgatgtgcc gcgcgacctg gaagtggttg ctgccacccc caccagcctg 60

ctgatcagct gggacgctcc gagaggtctg gctcgatatt accgcatcac ttacggcgaa 120

acaggaggca atagccctgt ccaggagttc actgtgttcg gtcgtggtac cacagctacc 180

atcagcggcc ttaaacctgg cgttgattat accatcactg tgtatgctgt cactatcgac 240

cgtgacggta cccgcagctt cgacccaatt tccattaatt accgcacaga aggtagcggt 300

tgccaccatc accaccatca c 321

<210> 248

<211> 321
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 248
atgggagttt ctgatgtgcc gcgcgacctg gaagtggttg ctgccacccc caccagcctg 60

ctgatcagct gggacgctcc ggctggtctg gctcgatatt accgcatcac ttacggcgaa 120

acaggaggca atagccctgt ccaggagttc actgtggtcg gtcgtggtaa cacagctacc 180

atcagcggcc ttaaacctgg cgttgattat accatcactg tgtatgctgt cactatcttc 240

cgtgacggtc ccgtcacctg ggacccaatt tccattaatt accgcacaga aggtagcggt 300

tgccaccatc accaccatca c 321

<210> 249
<211> 321
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 249
atgggagttt ctgatgtgcc gcgcgacctg gaagtggttg ctgccacccc caccagcctg 60

ctgatcagct gggacgctcc gaagggtctg gctcgatatt accgcatcac ttacggcgaa 120

acaggaggca atagccctgt ccaggagttc actgtggtcg gtcgtggtaa cacagctacc 180

atcagcggcc ttaaacctgg cgttgattat accatcactg tgtatgctgt cactatcttc 240

cgtgacggtc ccgtcacctg ggacccaatt tccattaatt accgcacaga aggtagcggt 300

tgccaccatc accaccatca c 321

<210> 250
<211> 324
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 250
atgggagttt ctgatgtgcc gcgcgacctg gaagtggttg ctgccacccc caccagcctg 60

ctgatcagct ggtctctgcc gaatccgggt aacgcccatt attaccgcat cacttacggc 120

gaaacaggag gcaatagccc tgtccaggag ttcactgtgc ctggtcgtgg tgttacagct 180

accatcagcg gccttaaacc tggcgttgat ataccatca ctgtgtatgc tgtcactgtt 240

actgacacag gtttcatcac gtacaaacca atttccatta attaccgcac agaaggtagc 300

ggttgccacc atcaccacca tcac 324

<210> 251
<211> 324
<212> DNA

<213> Artificial Sequence

<220>
<223> Synthetic

<400> 251
atgggagttt ctgatgtgcc gcgcgacctg gaagtggttg ctgccacccc caccagcctg 60

ctgatcagct ggtctctgcc gcaccaaggt aaagccaatt attaccgcat cacttacggc 120

gaaacaggag gcaatagccc tgtccaggag ttcactgtgc ctggtcgtgg tgttacagct 180

accatcagcg gccttaaacc tggcgttgat tataccatca ctgtgtatgc tgtcactgtt 240

actgatacag ggtacctcaa gtacaaacca atttccatta attaccgcac agaaggtagc 300

ggttgccacc atcaccacca tcac 324

<210> 252
<211> 336
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 252

Glu Pro Lys Ser Ser Gly Ser Thr His Thr Cys Pro Pro Cys Pro Ala
1 5 10 15

Pro Glu Leu Leu Gly Gly Ser Ser Val Phe Leu Phe Pro Pro Lys Pro
20 25 30

Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val
35 40 45

Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val
50 55 60

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

Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln
85 90 95

Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala
100 105 110

Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro
115 120 125

Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Asp Glu Leu Thr
130 135 140

Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser
145 150 155 160

```
Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr
                165                 170                 175


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


Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe
        195                 200                 205


Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys
    210                 215                 220


Ser Leu Ser Leu Ser Pro Gly Ala Gly Gly Gly Gly Ser Gly Gly Val
225                 230                 235                 240


Ser Asp Val Pro Arg Asp Leu Glu Val Val Ala Ala Thr Pro Thr Ser
                245                 250                 255


Leu Leu Ile Ser Trp Ser Leu Pro Tyr Ala Gly His Leu Asn Tyr Tyr
            260                 265                 270


Arg Ile Thr Tyr Gly Glu Thr Gly Gly Asn Ser Pro Val Gln Glu Phe
        275                 280                 285


Thr Val Pro Gly Arg Gly Val Thr Ala Thr Ile Ser Gly Leu Lys Pro
    290                 295                 300


Gly Val Asp Tyr Thr Ile Thr Val Tyr Ala Val Thr Leu Thr Lys Ser
305                 310                 315                 320


Gln Leu Ile His Tyr Met Pro Ile Ser Ile Asn Tyr Arg Thr Glu Ile
                325                 330                 335


<210>  253
<211>  330
<212>  PRT
<213>  Artificial Sequence

<220>
<223>  Synthetic

<400>  253

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


Thr Ser Leu Leu Ile Ser Trp Thr Leu Pro His Ala Gly Arg Ala His
            20                  25                  30


Tyr Tyr Arg Ile Thr Tyr Gly Glu Thr Gly Gly Asn Ser Pro Val Gln
        35                  40                  45


Glu Phe Thr Val Pro Gly Arg Gly Val Thr Ala Thr Ile Ser Gly Leu
```

50 55 60

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

Thr Thr Lys Val Ile His Tyr Lys Pro Ile Ser Ile Asn Tyr Arg Thr
85 90 95

Glu Ile Glu Pro Lys Ser Ser Asp Lys Thr His Thr Cys Pro Pro Cys
100 105 110

Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro
115 120 125

Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys
130 135 140

Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp
145 150 155 160

Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu
165 170 175

Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu
180 185 190

His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn
195 200 205

Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly
210 215 220

Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Asp Glu
225 230 235 240

Leu Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr
245 250 255

Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn
260 265 270

Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe
275 280 285

Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn
290 295 300

Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr
305 310 315 320

Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys

325 330

<210> 254
<211> 325
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 254

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

Thr Ser Leu Leu Ile Ser Trp Thr Leu Pro His Ala Gly Arg Ala His
20 25 30

Tyr Tyr Arg Ile Thr Tyr Gly Glu Thr Gly Gly Asn Ser Pro Val Gln
35 40 45

Glu Phe Thr Val Pro Gly Arg Gly Val Thr Ala Thr Ile Ser Gly Leu
50 55 60

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

Thr Thr Lys Val Ile His Tyr Lys Pro Ile Ser Ile Asn Tyr Arg Thr
85 90 95

Glu Ile Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu
100 105 110

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

Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val
130 135 140

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

Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser
165 170 175

Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu
180 185 190

Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala
195 200 205

Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro
210 215 220

```
Gln Val Tyr Thr Leu Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln
225                 230                 235                 240

Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala
                245                 250                 255

Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr
            260                 265                 270

Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu
        275                 280                 285

Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser
    290                 295                 300

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

Leu Ser Pro Gly Lys
                325


<210>  255
<211>  345
<212>  PRT
<213>  Artificial Sequence

<220>
<223>  Synthetic

<400>  255

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

Thr Ser Leu Leu Ile Ser Trp Thr Leu Pro His Ala Gly Arg Ala His
            20                  25                  30

Tyr Tyr Arg Ile Thr Tyr Gly Glu Thr Gly Gly Asn Ser Pro Val Gln
        35                  40                  45

Glu Phe Thr Val Pro Gly Arg Gly Val Thr Ala Thr Ile Ser Gly Leu
    50                  55                  60

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

Thr Thr Lys Val Ile His Tyr Lys Pro Ile Ser Ile Asn Tyr Arg Thr
                85                  90                  95

Glu Ile Glu Ser Pro Lys Ala Gln Ala Ser Ser Val Pro Thr Ala Gln
            100                 105                 110

Pro Gln Ala Glu Gly Leu Ala Lys Thr His Thr Cys Pro Pro Cys Pro
```

115 120 125

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

Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val
145 150 155 160

Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr
165 170 175

Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu
180 185 190

Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His
195 200 205

Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys
210 215 220

Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln
225 230 235 240

Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Asp Glu Leu
245 250 255

Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro
260 265 270

Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn
275 280 285

Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu
290 295 300

Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val
305 310 315 320

Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln
325 330 335

Lys Ser Leu Ser Leu Ser Pro Gly Lys
340 345

<210> 256
<211> 331
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 256

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

Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met
            20                  25                  30

Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His
        35                  40                  45

Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val
    50                  55                  60

His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr
65                  70                  75                  80

Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly
                85                  90                  95

Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile
            100                 105                 110

Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val
        115                 120                 125

Tyr Thr Leu Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln Val Ser
    130                 135                 140

Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu
145                 150                 155                 160

Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro
                165                 170                 175

Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val
            180                 185                 190

Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met
        195                 200                 205

His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser
    210                 215                 220

Pro Gly Ala Gly Gly Gly Gly Ser Gly Gly Val Ser Asp Val Pro Arg
225                 230                 235                 240

Asp Leu Glu Val Val Ala Ala Thr Pro Thr Ser Leu Leu Ile Ser Trp
                245                 250                 255

Thr Leu Pro His Ala Gly Arg Ala His Tyr Tyr Arg Ile Thr Tyr Gly
            260                 265                 270
```

```
Glu Thr Gly Gly Asn Ser Pro Val Gln Glu Phe Thr Val Pro Gly Arg
        275                 280                 285


Gly Val Thr Ala Thr Ile Ser Gly Leu Lys Pro Gly Val Asp Tyr Thr
    290                 295                 300


Ile Thr Val Tyr Ala Val Thr Val Thr Thr Thr Lys Val Ile His Tyr
305                 310                 315                 320


Lys Pro Ile Ser Ile Asn Tyr Arg Thr Glu Ile
                325                 330


<210>  257
<211>  340
<212>  PRT
<213>  Artificial Sequence

<220>
<223>  Synthetic

<400>  257

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


Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met
            20                  25                  30


Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His
        35                  40                  45


Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val
    50                  55                  60


His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr
65                  70                  75                  80


Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly
                85                  90                  95


Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile
            100                 105                 110


Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val
        115                 120                 125


Tyr Thr Leu Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln Val Ser
    130                 135                 140


Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu
145                 150                 155                 160


Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro
```

165 170 175

Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val
180 185 190

Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met
195 200 205

His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser
210 215 220

Pro Glu Leu Gln Leu Glu Glu Ser Ala Ala Glu Ala Gln Asp Gly Glu
225 230 235 240

Leu Asp Gly Val Ser Asp Val Pro Arg Asp Leu Glu Val Val Ala Ala
245 250 255

Thr Pro Thr Ser Leu Leu Ile Ser Trp Thr Leu Pro His Ala Gly Arg
260 265 270

Ala His Tyr Tyr Arg Ile Thr Tyr Gly Glu Thr Gly Gly Asn Ser Pro
275 280 285

Val Gln Glu Phe Thr Val Pro Gly Arg Gly Val Thr Ala Thr Ile Ser
290 295 300

Gly Leu Lys Pro Gly Val Asp Tyr Thr Ile Thr Val Tyr Ala Val Thr
305 310 315 320

Val Thr Thr Thr Lys Val Ile His Tyr Lys Pro Ile Ser Ile Asn Tyr
325 330 335

Arg Thr Glu Ile
340

<210> 258
<211> 332
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 258

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

Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met
20 25 30

Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His
35 40 45

```
Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val
    50                  55                  60

His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr
65                  70                  75                  80

Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly
                85                  90                  95

Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile
            100                 105                 110

Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val
        115                 120                 125

Tyr Thr Leu Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln Val Ser
    130                 135                 140

Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu
145                 150                 155                 160

Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro
                165                 170                 175

Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val
            180                 185                 190

Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met
        195                 200                 205

His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser
    210                 215                 220

Pro Gly Gln Pro Asp Glu Pro Gly Gly Ser Gly Val Ser Asp Val Pro
225                 230                 235                 240

Arg Asp Leu Glu Val Val Ala Ala Thr Pro Thr Ser Leu Leu Ile Ser
                245                 250                 255

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

Gly Glu Thr Gly Gly Asn Ser Pro Val Gln Glu Phe Thr Val Pro Gly
        275                 280                 285

Arg Gly Val Thr Ala Thr Ile Ser Gly Leu Lys Pro Gly Val Asp Tyr
    290                 295                 300

Thr Ile Thr Val Tyr Ala Val Thr Val Thr Thr Thr Lys Val Ile His
305                 310                 315                 320
```

Tyr Lys Pro Ile Ser Ile Asn Tyr Arg Thr Glu Ile
325 330

<210> 259
<211> 336
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 259

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

Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met
20 25 30

Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His
35 40 45

Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val
50 55 60

His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr
65 70 75 80

Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly
85 90 95

Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile
100 105 110

Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val
115 120 125

Tyr Thr Leu Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln Val Ser
130 135 140

Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu
145 150 155 160

Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro
165 170 175

Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val
180 185 190

Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met
195 200 205

His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser

210 215 220

Pro Gly Gly Ser Gly Ser Gly Ser Gly Ser Gly Ser Gly Ser Gly Val
225 230 235 240

Ser Asp Val Pro Arg Asp Leu Glu Val Val Ala Ala Thr Pro Thr Ser
245 250 255

Leu Leu Ile Ser Trp Thr Leu Pro His Ala Gly Arg Ala His Tyr Tyr
260 265 270

Arg Ile Thr Tyr Gly Glu Thr Gly Gly Asn Ser Pro Val Gln Glu Phe
275 280 285

Thr Val Pro Gly Arg Gly Val Thr Ala Thr Ile Ser Gly Leu Lys Pro
290 295 300

Gly Val Asp Tyr Thr Ile Thr Val Tyr Ala Val Thr Val Thr Thr Thr
305 310 315 320

Lys Val Ile His Tyr Lys Pro Ile Ser Ile Asn Tyr Arg Thr Glu Ile
325 330 335

<210> 260
<211> 339
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 260

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

Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met
20 25 30

Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His
35 40 45

Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val
50 55 60

His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr
65 70 75 80

Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly
85 90 95

Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile
100 105 110

```
Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val
        115                 120                 125

Tyr Thr Leu Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln Val Ser
    130                 135                 140

Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu
145                 150                 155                 160

Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro
                165                 170                 175

Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val
            180                 185                 190

Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met
        195                 200                 205

His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser
    210                 215                 220

Pro Glu Leu Gln Leu Glu Glu Ser Ala Ala Glu Ala Gln Asp Gly Glu
225                 230                 235                 240

Leu Asp Gly Val Ser Asp Val Pro Arg Asp Leu Glu Val Val Ala Ala
                245                 250                 255

Thr Pro Thr Ser Leu Leu Ile Ser Trp Asp Ala Pro Arg Gly Leu Ala
            260                 265                 270

Arg Tyr Tyr Arg Ile Thr Tyr Gly Glu Thr Gly Gly Asn Ser Pro Val
        275                 280                 285

Gln Glu Phe Thr Val Phe Gly Arg Gly Thr Thr Ala Thr Ile Ser Gly
    290                 295                 300

Leu Lys Pro Gly Val Asp Tyr Thr Ile Thr Val Tyr Ala Val Thr Ile
305                 310                 315                 320

Asp Arg Asp Gly Thr Arg Ser Phe Asp Pro Ile Ser Ile Asn Tyr Arg
                325                 330                 335

Thr Glu Ile


<210>  261
<211>  339
<212>  PRT
<213>  Artificial Sequence

<220>
<223>  Synthetic
```

<400> 261

```
Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly
1               5                  10                  15

Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met
            20                  25                  30

Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His
        35                  40                  45

Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val
    50                  55                  60

His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr
65                  70                  75                  80

Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly
                85                  90                  95

Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile
            100                 105                 110

Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val
        115                 120                 125

Tyr Thr Leu Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln Val Ser
    130                 135                 140

Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu
145                 150                 155                 160

Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro
                165                 170                 175

Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val
            180                 185                 190

Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met
        195                 200                 205

His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser
    210                 215                 220

Pro Glu Leu Gln Leu Glu Glu Ser Ala Ala Glu Ala Gln Asp Gly Glu
225                 230                 235                 240

Leu Asp Gly Val Ser Asp Val Pro Arg Asp Leu Glu Val Val Ala Ala
                245                 250                 255

Thr Pro Thr Ser Leu Leu Ile Ser Trp Asp Ala Pro Ala Gly Leu Ala
```

260 265 270

Arg Tyr Tyr Arg Ile Thr Tyr Gly Glu Thr Gly Gly Asn Ser Pro Val
275 280 285

Gln Glu Phe Thr Val Val Gly Arg Gly Asn Thr Ala Thr Ile Ser Gly
290 295 300

Leu Lys Pro Gly Val Asp Tyr Thr Ile Thr Val Tyr Ala Val Thr Ile
305 310 315 320

Phe Arg Asp Gly Pro Val Thr Trp Asp Pro Ile Ser Ile Asn Tyr Arg
325 330 335

Thr Glu Ile

<210> 262
<211> 339
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 262

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

Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met
20 25 30

Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His
35 40 45

Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val
50 55 60

His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr
65 70 75 80

Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly
85 90 95

Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile
100 105 110

Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val
115 120 125

Tyr Thr Leu Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln Val Ser
130 135 140

```
Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu
145                 150                 155                 160

Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro
                165                 170                 175

Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val
            180                 185                 190

Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met
        195                 200                 205

His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser
    210                 215                 220

Pro Glu Leu Gln Leu Glu Glu Ser Ala Ala Glu Ala Gln Asp Gly Glu
225                 230                 235                 240

Leu Asp Gly Val Ser Asp Val Pro Arg Asp Leu Glu Val Val Ala Ala
                245                 250                 255

Thr Pro Thr Ser Leu Leu Ile Ser Trp Asp Ala Pro Lys Gly Leu Ala
            260                 265                 270

Arg Tyr Tyr Arg Ile Thr Tyr Gly Glu Thr Gly Gly Asn Ser Pro Val
        275                 280                 285

Gln Glu Phe Thr Val Val Gly Arg Gly Asn Thr Ala Thr Ile Ser Gly
    290                 295                 300

Leu Lys Pro Gly Val Asp Tyr Thr Ile Thr Val Tyr Ala Val Thr Ile
305                 310                 315                 320

Phe Arg Asp Gly Pro Val Thr Trp Asp Pro Ile Ser Ile Asn Tyr Arg
                325                 330                 335

Thr Glu Ile
```

<210> 263
<211> 340
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 263

```
Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly
1               5                   10                  15

Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met
```

20 25 30

Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His
35 40 45

Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val
50 55 60

His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr
65 70 75 80

Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly
85 90 95

Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile
100 105 110

Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val
115 120 125

Tyr Thr Leu Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln Val Ser
130 135 140

Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu
145 150 155 160

Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro
165 170 175

Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val
180 185 190

Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met
195 200 205

His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser
210 215 220

Pro Glu Leu Gln Leu Glu Glu Ser Ala Ala Glu Ala Gln Asp Gly Glu
225 230 235 240

Leu Asp Gly Val Ser Asp Val Pro Arg Asp Leu Glu Val Val Ala Ala
245 250 255

Thr Pro Thr Ser Leu Leu Ile Ser Trp Ser Leu Pro Asn Pro Gly Asn
260 265 270

Ala His Tyr Tyr Arg Ile Thr Tyr Gly Glu Thr Gly Gly Asn Ser Pro
275 280 285

Val Gln Glu Phe Thr Val Pro Gly Arg Gly Val Thr Ala Thr Ile Ser

290 295 300

Gly Leu Lys Pro Gly Val Asp Tyr Thr Ile Thr Val Tyr Ala Val Thr
305 310 315 320

Val Thr Asp Thr Gly Phe Ile Thr Tyr Lys Pro Ile Ser Ile Asn Tyr
325 330 335

Arg Thr Glu Ile
340

<210> 264
<211> 340
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 264

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

Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met
20 25 30

Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His
35 40 45

Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val
50 55 60

His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr
65 70 75 80

Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly
85 90 95

Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile
100 105 110

Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val
115 120 125

Tyr Thr Leu Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln Val Ser
130 135 140

Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu
145 150 155 160

Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro
165 170 175

```
Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val
            180                 185                 190


Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met
        195                 200                 205


His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser
    210                 215                 220


Pro Glu Leu Gln Leu Glu Glu Ser Ala Ala Glu Ala Gln Asp Gly Glu
225                 230                 235                 240


Leu Asp Gly Val Ser Asp Val Pro Arg Asp Leu Glu Val Val Ala Ala
                245                 250                 255


Thr Pro Thr Ser Leu Leu Ile Ser Trp Ser Leu Pro His Gln Gly Lys
            260                 265                 270


Ala Asn Tyr Tyr Arg Ile Thr Tyr Gly Glu Thr Gly Gly Asn Ser Pro
        275                 280                 285


Val Gln Glu Phe Thr Val Pro Gly Arg Gly Val Thr Ala Thr Ile Ser
    290                 295                 300


Gly Leu Lys Pro Gly Val Asp Tyr Thr Ile Thr Val Tyr Ala Val Thr
305                 310                 315                 320


Val Thr Asp Thr Gly Tyr Leu Lys Tyr Lys Pro Ile Ser Ile Asn Tyr
                325                 330                 335


Arg Thr Glu Ile
            340


<210>  265
<211>  329
<212>  PRT
<213>  Artificial Sequence

<220>
<223>  Synthetic

<400>  265

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


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


Tyr Arg Ile Thr Tyr Gly Glu Thr Gly Gly Asn Ser Pro Val Gln Glu
        35                  40                  45


Phe Thr Val Phe Gly Arg Gly Thr Thr Ala Thr Ile Ser Gly Leu Lys
```

50 55 60

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

Asp Gly Thr Arg Ser Phe Asp Pro Ile Ser Ile Asn Tyr Arg Thr Glu
85 90 95

Ile Glu Pro Lys Ser Ser Asp Lys Thr His Thr Cys Pro Pro Cys Pro
100 105 110

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

Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val
130 135 140

Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr
145 150 155 160

Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu
165 170 175

Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His
180 185 190

Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys
195 200 205

Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln
210 215 220

Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Asp Glu Leu
225 230 235 240

Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro
245 250 255

Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn
260 265 270

Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu
275 280 285

Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val
290 295 300

Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln
305 310 315 320

Lys Ser Leu Ser Leu Ser Pro Gly Lys

325

<210> 266
<211> 329
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 266

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

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

Tyr Arg Ile Thr Tyr Gly Glu Thr Gly Gly Asn Ser Pro Val Gln Glu
35 40 45

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

Pro Gly Val Asp Tyr Thr Ile Thr Val Tyr Ala Val Thr Ile Phe Arg
65 70 75 80

Asp Gly Pro Val Thr Trp Asp Pro Ile Ser Ile Asn Tyr Arg Thr Glu
85 90 95

Ile Glu Pro Lys Ser Ser Asp Lys Thr His Thr Cys Pro Pro Cys Pro
100 105 110

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

Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val
130 135 140

Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr
145 150 155 160

Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu
165 170 175

Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His
180 185 190

Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys
195 200 205

Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln
210 215 220

```
Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Asp Glu Leu
225                 230                 235                 240

Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro
                245                 250                 255

Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn
            260                 265                 270

Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu
        275                 280                 285

Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val
    290                 295                 300

Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln
305                 310                 315                 320

Lys Ser Leu Ser Leu Ser Pro Gly Lys
                325


<210>  267
<211>  329
<212>  PRT
<213>  Artificial Sequence

<220>
<223>  Synthetic

<400>  267

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

Thr Ser Leu Leu Ile Ser Trp Asp Ala Pro Lys Gly Leu Ala Arg Tyr
            20                  25                  30

Tyr Arg Ile Thr Tyr Gly Glu Thr Gly Gly Asn Ser Pro Val Gln Glu
        35                  40                  45

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

Pro Gly Val Asp Tyr Thr Ile Thr Val Tyr Ala Val Thr Ile Phe Arg
65                  70                  75                  80

Asp Gly Pro Val Thr Trp Asp Pro Ile Ser Ile Asn Tyr Arg Thr Glu
                85                  90                  95

Ile Glu Pro Lys Ser Ser Asp Lys Thr His Thr Cys Pro Pro Cys Pro
            100                 105                 110

Ala Pro Glu Leu Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys
```

115 120 125

Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val
130 135 140

Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr
145 150 155 160

Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu
165 170 175

Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His
180 185 190

Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys
195 200 205

Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln
210 215 220

Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Asp Glu Leu
225 230 235 240

Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro
245 250 255

Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn
260 265 270

Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu
275 280 285

Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val
290 295 300

Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln
305 310 315 320

Lys Ser Leu Ser Leu Ser Pro Gly Lys
325

<210> 268
<211> 330
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 268

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

```
Thr Ser Leu Leu Ile Ser Trp Ser Leu Pro Asn Pro Gly Asn Ala His
            20                  25                  30

Tyr Tyr Arg Ile Thr Tyr Gly Glu Thr Gly Gly Asn Ser Pro Val Gln
        35                  40                  45

Glu Phe Thr Val Pro Gly Arg Gly Val Thr Ala Thr Ile Ser Gly Leu
    50                  55                  60

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

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

Glu Ile Glu Pro Lys Ser Ser Asp Lys Thr His Thr Cys Pro Pro Cys
            100                 105                 110

Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro
        115                 120                 125

Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys
    130                 135                 140

Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp
145                 150                 155                 160

Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu
                165                 170                 175

Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu
            180                 185                 190

His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn
        195                 200                 205

Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly
    210                 215                 220

Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Asp Glu
225                 230                 235                 240

Leu Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr
                245                 250                 255

Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn
            260                 265                 270

Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe
        275                 280                 285
```

```
Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn
    290                 295                 300

Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr
305                 310                 315                 320

Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys
                325                 330
```

<210> 269
<211> 330
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 269

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

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

Tyr Tyr Arg Ile Thr Tyr Gly Glu Thr Gly Gly Asn Ser Pro Val Gln
        35                  40                  45

Glu Phe Thr Val Pro Gly Arg Gly Val Thr Ala Thr Ile Ser Gly Leu
    50                  55                  60

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

Asp Thr Gly Tyr Leu Lys Tyr Lys Pro Ile Ser Ile Asn Tyr Arg Thr
                85                  90                  95

Glu Ile Glu Pro Lys Ser Ser Asp Lys Thr His Thr Cys Pro Pro Cys
            100                 105                 110

Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro
        115                 120                 125

Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys
    130                 135                 140

Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp
145                 150                 155                 160

Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu
                165                 170                 175

Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu
```

180 185 190

His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn
195 200 205

Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly
210 215 220

Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Asp Glu
225 230 235 240

Leu Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr
245 250 255

Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn
260 265 270

Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe
275 280 285

Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn
290 295 300

Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr
305 310 315 320

Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys
325 330

<210> 270
<211> 340
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 270

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

Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met
20 25 30

Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His
35 40 45

Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val
50 55 60

His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr
65 70 75 80

```
Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly
                85                  90                  95

Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile
            100                 105                 110

Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val
        115                 120                 125

Tyr Thr Leu Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln Val Ser
    130                 135                 140

Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu
145                 150                 155                 160

Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro
                165                 170                 175

Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val
            180                 185                 190

Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met
        195                 200                 205

His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser
    210                 215                 220

Pro Glu Leu Gln Leu Glu Glu Ser Ala Ala Glu Ala Gln Glu Gly Glu
225                 230                 235                 240

Leu Glu Gly Val Ser Asp Val Pro Arg Asp Leu Glu Val Val Ala Ala
                245                 250                 255

Thr Pro Thr Ser Leu Leu Ile Ser Trp Thr Leu Pro His Ala Gly Arg
            260                 265                 270

Ala His Tyr Tyr Arg Ile Thr Tyr Gly Glu Thr Gly Gly Asn Ser Pro
        275                 280                 285

Val Gln Glu Phe Thr Val Pro Gly Arg Gly Val Thr Ala Thr Ile Ser
    290                 295                 300

Gly Leu Lys Pro Gly Val Asp Tyr Thr Ile Thr Val Tyr Ala Val Thr
305                 310                 315                 320

Val Thr Thr Thr Lys Val Ile His Tyr Lys Pro Ile Ser Ile Asn Tyr
                325                 330                 335

Arg Thr Glu Ile
            340
```

<210> 271
<211> 339
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 271

```
Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly
1               5                  10                  15

Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met
            20                  25                  30

Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His
        35                  40                  45

Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val
    50                  55                  60

His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr
65                  70                  75                  80

Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly
                85                  90                  95

Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile
            100                 105                 110

Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val
        115                 120                 125

Tyr Thr Leu Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln Val Ser
    130                 135                 140

Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu
145                 150                 155                 160

Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro
                165                 170                 175

Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val
            180                 185                 190

Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met
        195                 200                 205

His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser
    210                 215                 220

Pro Glu Leu Gln Leu Glu Glu Ser Ala Ala Glu Ala Gln Glu Gly Glu
```

225 230 235 240

Leu Glu Gly Val Ser Asp Val Pro Arg Asp Leu Glu Val Val Ala Ala
245 250 255

Thr Pro Thr Ser Leu Leu Ile Ser Trp Asp Ala Pro Ala Gly Leu Ala
260 265 270

Arg Tyr Tyr Arg Ile Thr Tyr Gly Glu Thr Gly Gly Asn Ser Pro Val
275 280 285

Gln Glu Phe Thr Val Val Gly Arg Gly Asn Thr Ala Thr Ile Ser Gly
290 295 300

Leu Lys Pro Gly Val Asp Tyr Thr Ile Thr Val Tyr Ala Val Thr Ile
305 310 315 320

Phe Arg Asp Gly Pro Val Thr Trp Asp Pro Ile Ser Ile Asn Tyr Arg
325 330 335

Thr Glu Ile

<210> 272
<211> 339
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 272

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

Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met
20 25 30

Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His
35 40 45

Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val
50 55 60

His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr
65 70 75 80

Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly
85 90 95

Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile
100 105 110

```
Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val
        115                 120                 125

Tyr Thr Leu Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln Val Ser
    130                 135                 140

Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu
145                 150                 155                 160

Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro
                165                 170                 175

Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val
            180                 185                 190

Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met
        195                 200                 205

His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser
    210                 215                 220

Pro Glu Leu Gln Leu Glu Glu Ser Ala Ala Glu Ala Gln Glu Gly Glu
225                 230                 235                 240

Leu Glu Gly Val Ser Asp Val Pro Arg Asp Leu Glu Val Val Ala Ala
                245                 250                 255

Thr Pro Thr Ser Leu Leu Ile Ser Trp Asp Ala Pro Lys Gly Leu Ala
            260                 265                 270

Arg Tyr Tyr Arg Ile Thr Tyr Gly Glu Thr Gly Gly Asn Ser Pro Val
        275                 280                 285

Gln Glu Phe Thr Val Val Gly Arg Gly Asn Thr Ala Thr Ile Ser Gly
    290                 295                 300

Leu Lys Pro Gly Val Asp Tyr Thr Ile Thr Val Tyr Ala Val Thr Ile
305                 310                 315                 320

Phe Arg Asp Gly Pro Val Thr Trp Asp Pro Ile Ser Ile Asn Tyr Arg
                325                 330                 335

Thr Glu Ile
```

<210> 273
<211> 340
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 273

```
Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly
1               5                  10                  15

Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met
            20                  25                  30

Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His
        35                  40                  45

Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val
    50                  55                  60

His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr
65                  70                  75                  80

Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly
                85                  90                  95

Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile
            100                 105                 110

Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val
        115                 120                 125

Tyr Thr Leu Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln Val Ser
    130                 135                 140

Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu
145                 150                 155                 160

Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro
                165                 170                 175

Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val
            180                 185                 190

Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met
        195                 200                 205

His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser
    210                 215                 220

Pro Glu Leu Gln Leu Glu Glu Ser Ala Ala Glu Ala Gln Glu Gly Glu
225                 230                 235                 240

Leu Glu Gly Val Ser Asp Val Pro Arg Asp Leu Glu Val Val Ala Ala
                245                 250                 255

Thr Pro Thr Ser Leu Leu Ile Ser Trp Ser Leu Pro His Gln Gly Lys
```

260 265 270

Ala Asn Tyr Tyr Arg Ile Thr Tyr Gly Glu Thr Gly Gly Asn Ser Pro
275 280 285

Val Gln Glu Phe Thr Val Pro Gly Arg Gly Val Thr Ala Thr Ile Ser
290 295 300

Gly Leu Lys Pro Gly Val Asp Tyr Thr Ile Thr Val Tyr Ala Val Thr
305 310 315 320

Val Thr Asp Thr Gly Tyr Leu Lys Tyr Lys Pro Ile Ser Ile Asn Tyr
325 330 335

Arg Thr Glu Ile
340

<210> 274
<211> 230
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 274

Glu Pro Lys Ser Ser Gly Ser Thr His Thr Cys Pro Pro Cys Pro Ala
1 5 10 15

Pro Glu Leu Leu Gly Gly Ser Ser Val Phe Leu Phe Pro Pro Lys Pro
20 25 30

Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val
35 40 45

Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val
50 55 60

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

Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln
85 90 95

Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala
100 105 110

Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro
115 120 125

Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Asp Glu Leu Thr
130 135 140

Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser
145 150 155 160

Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr
165 170 175

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

Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe
195 200 205

Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys
210 215 220

Ser Leu Ser Leu Ser Pro
225 230

<210> 275
<211> 98
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 275

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

Thr Ser Leu Leu Ile Ser Trp Thr Leu Pro His Ala Gly Arg Ala His
20 25 30

Tyr Tyr Arg Ile Thr Tyr Gly Glu Thr Gly Gly Asn Ser Pro Val Gln
35 40 45

Glu Phe Thr Val Pro Gly Arg Gly Val Thr Ala Thr Ile Ser Gly Leu
50 55 60

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

Thr Thr Lys Val Ile His Tyr Lys Pro Ile Ser Ile Asn Tyr Arg Thr
85 90 95

Glu Ile

<210> 276
<211> 225
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 276

```
Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly
1               5                  10                  15

Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met
            20                  25                  30

Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His
        35                  40                  45

Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val
    50                  55                  60

His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr
65                  70                  75                  80

Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly
                85                  90                  95

Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile
            100                 105                 110

Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val
        115                 120                 125

Tyr Thr Leu Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln Val Ser
    130                 135                 140

Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu
145                 150                 155                 160

Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro
                165                 170                 175

Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val
            180                 185                 190

Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met
        195                 200                 205

His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser
    210                 215                 220

Pro
225
```

<210> 277
<211> 97
<212> PRT

<213> Artificial Sequence

<220>
<223> Synthetic

<400> 277

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

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

Tyr Arg Ile Thr Tyr Gly Glu Thr Gly Gly Asn Ser Pro Val Gln Glu
35 40 45

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

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

Asp Gly Thr Arg Ser Phe Asp Pro Ile Ser Ile Asn Tyr Arg Thr Glu
85 90 95

Ile

<210> 278
<211> 97
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 278

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

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

Tyr Arg Ile Thr Tyr Gly Glu Thr Gly Gly Asn Ser Pro Val Gln Glu
35 40 45

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

Pro Gly Val Asp Tyr Thr Ile Thr Val Tyr Ala Val Thr Ile Phe Arg
65 70 75 80

Asp Gly Pro Val Thr Trp Asp Pro Ile Ser Ile Asn Tyr Arg Thr Glu
85 90 95

Ile

<210> 279
<211> 97
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 279

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

Thr Ser Leu Leu Ile Ser Trp Asp Ala Pro Lys Gly Leu Ala Arg Tyr
20 25 30

Tyr Arg Ile Thr Tyr Gly Glu Thr Gly Gly Asn Ser Pro Val Gln Glu
35 40 45

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

Pro Gly Val Asp Tyr Thr Ile Thr Val Tyr Ala Val Thr Ile Phe Arg
65 70 75 80

Asp Gly Pro Val Thr Trp Asp Pro Ile Ser Ile Asn Tyr Arg Thr Glu
85 90 95

Ile

<210> 280
<211> 98
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 280

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

Thr Ser Leu Leu Ile Ser Trp Ser Leu Pro Asn Pro Gly Asn Ala His
20 25 30

Tyr Tyr Arg Ile Thr Tyr Gly Glu Thr Gly Gly Asn Ser Pro Val Gln
35 40 45

Glu Phe Thr Val Pro Gly Arg Gly Val Thr Ala Thr Ile Ser Gly Leu
50 55 60

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

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

Glu Ile

<210> 281
<211> 98
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 281

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

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

Tyr Tyr Arg Ile Thr Tyr Gly Glu Thr Gly Gly Asn Ser Pro Val Gln
35 40 45

Glu Phe Thr Val Pro Gly Arg Gly Val Thr Ala Thr Ile Ser Gly Leu
50 55 60

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

Asp Thr Gly Tyr Leu Lys Tyr Lys Pro Ile Ser Ile Asn Tyr Arg Thr
85 90 95

Glu Ile

<210> 282
<211> 98
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 282

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

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

Tyr Tyr Arg Ile Thr Tyr Gly Glu Thr Gly Gly Asn Ser Pro Val Gln
35 40 45

Glu Phe Thr Val Pro Gly Arg Gly Val Thr Ala Thr Ile Ser Gly Leu
50 55 60

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

Lys Ser Gln Leu Ile His Tyr Met Pro Ile Ser Ile Asn Tyr Arg Thr
85 90 95

Glu Ile

<210> 283
<211> 226
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 283

Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly Gly
1 5 10 15

Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile
20 25 30

Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu
35 40 45

Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His
50 55 60

Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg
65 70 75 80

Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys
85 90 95

Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu
100 105 110

Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr
115 120 125

Thr Leu Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln Val Ser Leu
130 135 140

Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp

145 150 155 160

Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val
165 170 175

Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp
180 185 190

Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His
195 200 205

Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro
210 215 220

Gly Lys
225

<210> 284
<211> 1008
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 284
gagcccaaat ctagcgggtc gactcacaca tgcccaccgt gcccagcacc tgaactcctg 60

gggggaagct cagtcttcct cttcccccca aaacccaagg acaccctcat gatctcccgg 120

acccctgagg tcacatgcgt ggtggtggac gtgagccacg aagaccctga ggtcaagttc 180

aactggtacg tggacggcgt ggaggtgcat aatgccaaga caaagccgcg ggaggagcag 240

tacaacagca cgtaccgtgt ggtcagcgtc ctcaccgtcc tgcaccagga ctggctgaat 300

ggcaaggagt acaagtgcaa ggtctccaac aaagccctcc cagccccat cgagaaaacc 360

atctccaaag ccaaagggca gccccgagaa ccacaggtgt acaccctgcc cccatcccgg 420

gatgagctga ccaagaacca ggtcagcctg acctgcctgg tcaaaggctt ctatcccagc 480

gacatcgccg tggagtggga gagcaatggg cagccggaga acaactacaa gaccacgcct 540

cccgtgctgg actccgacgg ctccttcttc ctctacagca agctcaccgt ggacaagagc 600

aggtggcagc aggggaacgt cttctcatgc tccgtgatgc atgaggctct gcacaaccac 660

tacacgcaga agagcctctc cctgtctccc ggcgccggag gcggcggatc cggtggagtt 720

tctgatgtgc cgcgcgacct ggaagtggtt gctgccaccc ccaccagcct gctgatcagc 780

tggtctcttc cttatgctgg tcatctaaac tattaccgca tcacttacgg cgaaacagga 840

ggcaatagcc ctgtccagga gttcactgtg cctggtcgtg gtgtgacagc taccatcagc 900

ggccttaaac ctggcgttga ttataccatc actgtgtatg ctgtcactct gactaagtct 960

cagctgatac attacatgcc aatttccatt aattaccgga ccgaaatc 1008

<210> 285

<211> 990
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 285
ggcgtgagcg acgtgccccg ggatctagaa gtggtggctg ctacccccac aagcttgctg 60

atctcctgga cactgcctca cgctggccgg gctcattact atagaattac ctacggggag 120

acaggcggga actctcccgt gcaggaattc accgtgcctg gaaggggcgt gactgccacc 180

atcagtgggc tgaagccagg agtggactac acaattaccg tgtacgctgt gactgtgacc 240

acaactaaag tgatccacta caaacccatc tctattaatt atcggaccga aattgagcct 300

aagagctccg acaaaaccca cacatgccca ccttgtccag cccccgaact gctgggcggc 360

ccttcagtct tcctcttccc cccaaaaccc aaggacaccc tcatgatctc ccggacccct 420

gaggtcacat gcgtggtggt ggacgtgagc cacgaagacc ctgaggtcaa gttcaactgg 480

tacgtggacg gcgtggaggt gcataatgcc aagacaaagc cgcgggagga gcagtacaac 540

agcacgtacc gtgtggtcag cgtcctcacc gtcctgcacc aggactggct gaatggcaag 600

gagtacaagt gcaaggtctc caacaaagcc ctcccagccc ccatcgagaa aaccatctcc 660

aaagccaaag ggcagccccg agaaccacag gtgtacaccc tgcccccatc ccgggatgag 720

ctgaccaaga accaggtcag cctgacctgc ctggtcaaag gcttctatcc cagcgacatc 780

gccgtggagt gggagagcaa tgggcagccg gagaacaact acaagaccac gcctcccgtg 840

ttggactccg acggctcctt cttcctctac agcaagctca ccgtggacaa gagcaggtgg 900

cagcagggga acgtcttctc atgctccgtg atgcatgagg ctctgcacaa ccactacacg 960

cagaagagcc tctccctgtc tcccgggaaa 990

<210> 286
<211> 975
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 286
ggcgtgagcg acgtgccccg ggatctagaa gtggtggctg ctacccccac aagcttgctg 60

atctcctgga cactgcctca cgctggccgg gctcattact atagaattac ctacggggag 120

acaggcggga actctcccgt gcaggaattc accgtgcctg gaaggggcgt gactgccacc 180

atcagtgggc tgaagccagg agtggactac acaattaccg tgtacgctgt gactgtgacc 240

acaactaaag tgatccacta caaacccatc tctattaatt atcggaccga aattgacaag 300

acccacacat gcccaccttg tccagccccc gagctgctgg gcggcccttc agtcttcctc 360

ttcccccaa aacccaagga caccctcatg atctcccgga cccctgaggt cacatgcgtg 420

gtggtggacg tgagccacga agaccctgag gtcaagttca actggtacgt ggacggcgtg 480

gaggtgcata atgccaagac aaagccgcgg gaggagcagt acaacagcac gtaccgtgtg 540

gtcagcgtcc tcaccgtcct gcaccaggac tggctgaatg gcaaggagta caagtgcaag 600

gtctccaaca aagccctccc agcccccatc gagaaaacca tctccaaagc caaagggcag 660

ccccgagaac cacaggtgta caccctgccc ccatcccggg atgagctgac caagaaccag 720

gtcagcctga cctgcctggt caaaggcttc tatcccagcg acatcgccgt ggagtgggag 780

agcaatgggc agccggagaa caactacaag accacgcctc ccgtgttgga ctccgacggc 840

tccttcttcc tctacagcaa gctcaccgtg gacaagagca ggtggcagca ggggaacgtc 900

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<213> Artificial Sequence

<220>
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<400> 287
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acaggcggga actctcccgt gcaggaattc accgtgcctg gaaggggcgt gactgccacc 180

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acaactaaag tgatccacta caaacccatc tctattaatt atcggaccga aattgagtct 300

ccaaaggctc aggccagctc cgtgcctacc gctcagccac aggctgaggg cctggctaag 360

acccacacat gccccccttg tccagctccc gaactgctgg gcgggccttc agtcttcctc 420

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gtggtggacg tgagccacga agaccctgag gtcaagttca actggtacgt ggacggcgtg 540

gaggtgcata atgccaagac aaagccgcgg gaggagcagt acaacagcac gtaccgtgtg 600

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<212> DNA

<213> Artificial Sequence

<220>
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aaccaggtca gcctgacctg cctggtcaaa ggcttctatc ccagcgacat cgccgtggag 480

tgggagagca atgggcagcc ggagaacaac tacaagacca cgcctcccgt gttggactcc 540

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gtggactaca caattaccgt gtacgctgtg actgtgacca caactaaagt gatccactac 960

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<210> 289
<211> 1020
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 289
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cgtgtggtca gcgtcctcac cgtcctgcac caggactggc tgaatggcaa ggagtacaag 300

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tgggagagca atgggcagcc ggagaacaac tacaagacca cgcctcccgt gctggactcc 540

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gccaccatca gtgggctgaa gccaggagtg gactacacaa ttaccgtgta cgctgtgact 960

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<210> 290
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<213> Artificial Sequence

<220>
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<400> 290
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gacggctcct tcttcctcta cagcaagctc accgtggaca agagcaggtg gcagcagggg 600

aacgtcttct catgctccgt gatgcatgag gctctgcaca accactacac gcagaagagc 660

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cgggatctag aagtggtggc tgctaccccc acaagcttgc tgatctcctg gacactgcct 780

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gtgcaggaat tcaccgtgcc tggaaggggc gtgactgcca ccatcagtgg gctgaagcca 900

ggagtggact acacaattac cgtgtacgct gtgactgtga ccacaactaa agtgatccac 960

tacaaaccca tctctattaa ttatcggacc gaaatt 996

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<212> DNA
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<220>
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<400> 291
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tgggagagca atgggcagcc ggagaacaac tacaagacca cgcctcccgt gctggactcc 540

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aaagtgatcc actacaaacc catctctatt aattatcgga ccgaaatt 1008

<210> 292
<211> 917
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 292
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agcagtacaa cagcacgtac cgtgtggtca gcgtcctcac cgtcctgcac caggactggc 180

tgaatggcaa ggagtacaag tgcaaggtct ccaacaaagc cctcccagcc cccatcgaga 240

aaaccatctc caaagccaaa gggcagcccc gagaaccaca ggtgtacacc ctgcccccat 300

cccgggatga gctgaccaag aaccaggtca gcctgacctg cctggtcaaa ggcttctatc 360

ccagcgacat cgccgtggag tgggagagca atgggcagcc ggagaacaac tacaagacca 420

cgcctcccgt gctggactcc gacggctcct tcttcctcta cagcaagctc accgtggaca 480

agagcaggtg gcagcagggg aacgtcttct catgctccgt gatgcatgag gctctgcaca 540

accactacac gcagaagagc ctctccctgt ctcccgagct gcagctggag gaaagcgccg 600

ctgaggctca ggacggagaa ctggatggcg tgagcgacgt gccacgggat ctagaagtgg 660

tggctgctac ccccacaagc ttgctgatca gctgggacgc tccgagaggt ctggctcgat 720

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tcggtcgtgg taccacagct accatcagcg gccttaaacc tggcgttgat tataccatca 840

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<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 293
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ttcctcttcc ccccaaaacc caaggacacc ctcatgatct cccggacccc tgaggtcaca 120

tgcgtggtgg tggacgtgag ccacgaagac cctgaggtca agttcaactg gtacgtggac 180

ggcgtggagg tgcataatgc caagacaaag ccgcgggagg agcagtacaa cagcacgtac 240

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accatcagcg gccttaaacc tggcgttgat tataccatca ctgtgtatgc tgtcactatc 960

ttccgtgacg gtcccgtcac ctgggaccca atttccatta attaccggac cgaaatt 1017

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<212> DNA
<213> Artificial Sequence

<220>
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<400> 294
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<220>
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<211> 987
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 297
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ggaggcaata gccctgtcca ggagttcact gtgttcggtc gtggtaccac agctaccatc 180

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caggggaacg tcttctcatg ctccgtgatg catgaggctc tgcacaacca ctacacgcag 960

aagagcctct ccctgtctcc cgggaaa 987

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<212> DNA
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<220>
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<400> 298
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gacggtcccg tcacctggga cccaatttcc attaattacc ggaccgaaat tgagcctaag 300

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caggggaacg tcttctcatg ctccgtgatg catgaggctc tgcacaacca ctacacgcag 960

aagagcctct ccctgtctcc cgggaaa 987

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agctccgaca aaacccacac atgcccacct tgtccagccc ccgaactgct gggcggccct 360

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tacaagtgca aggtctccaa caaagccctc ccagccccca tcgagaaaac catctccaaa 660

gccaaagggc agccccgaga accacaggtg tacaccctgc ccccatcccg ggatgagctg 720

accaagaacc aggtcagcct gacctgcctg gtcaaaggct tctatcccag cgacatcgcc 780

gtggagtggg agagcaatgg gcagccggag aacaactaca agaccacgcc tcccgtgttg 840

gactccgacg gctccttctt cctctacagc aagctcaccg tggacaagag caggtggcag 900

caggggaacg tcttctcatg ctccgtgatg catgaggctc tgcacaacca ctacacgcag 960

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<220>
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acaggaggca atagccctgt ccaggagttc actgtgcctg gtcgtggtgt tacagctacc 180

atcagcggcc ttaaacctgg cgttgattat accatcactg tgtatgctgt cactgttact 240

gacacaggtt tcatcacgta caaaccaatt tccattaatt accggaccga aattgagcct 300

aagagctccg acaaaaccca cacatgccca ccttgtccag cccccgaact gctgggcggc 360

ccttcagtct tcctcttccc cccaaaaccc aaggacaccc tcatgatctc ccggacccct 420

gaggtcacat gcgtggtggt ggacgtgagc cacgaagacc ctgaggtcaa gttcaactgg 480

tacgtggacg gcgtggaggt gcataatgcc aagacaaagc cgcgggagga gcagtacaac 540

agcacgtacc gtgtggtcag cgtcctcacc gtcctgcacc aggactggct gaatggcaag 600

gagtacaagt gcaaggtctc caacaaagcc ctcccagccc ccatcgagaa aaccatctcc 660

aaagccaaag ggcagccccg agaaccacag gtgtacaccc tgcccccatc ccgggatgag 720

ctgaccaaga accaggtcag cctgacctgc ctggtcaaag gcttctatcc cagcgacatc 780

gccgtggagt gggagagcaa tgggcagccg gagaacaact acaagaccac gcctcccgtg 840

ttggactccg acggctcctt cttcctctac agcaagctca ccgtggacaa gagcaggtgg 900

cagcagggga acgtcttctc atgctccgtg atgcatgagg ctctgcacaa ccactacacg 960

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<210> 301
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acaggaggca atagccctgt ccaggagttc actgtgcctg gtcgtggtgt tacagctacc 180

atcagcggcc ttaaacctgg cgttgattat accatcactg tgtatgctgt cactgttact 240

gatacagggt acctcaagta caaaccaatt tccattaatt accggaccga aattgagcct 300

aagagctccg acaaaaccca cacatgccca ccttgtccag cccccgaact gctgggcggc 360

ccttcagtct tcctcttccc cccaaaaccc aaggacaccc tcatgatctc ccggacccct 420

gaggtcacat gcgtggtggt ggacgtgagc cacgaagacc ctgaggtcaa gttcaactgg 480

tacgtggacg gcgtggaggt gcataatgcc aagacaaagc cgcgggagga gcagtacaac 540

agcacgtacc gtgtggtcag cgtcctcacc gtcctgcacc aggactggct gaatggcaag 600

gagtacaagt gcaaggtctc caacaaagcc ctcccagccc ccatcgagaa aaccatctcc 660

aaagccaaag ggcagccccg agaaccacag gtgtacaccc tgcccccatc ccgggatgag 720

ctgaccaaga accaggtcag cctgacctgc ctggtcaaag gcttctatcc cagcgacatc 780

gccgtggagt gggagagcaa tgggcagccg gagaacaact acaagaccac gcctcccgtg 840

ttggactccg acggctcctt cttcctctac agcaagctca ccgtggacaa gagcaggtgg 900

cagcagggga acgtcttctc atgctccgtg atgcatgagg ctctgcacaa ccactacacg 960

cagaagagcc tctccctgtc tcccgggaaa 990

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tgcgtggtgg tggacgtgag ccacgaagac cctgaggtca agttcaactg gtacgtggac 180

ggcgtggagg tgcataatgc caagacaaag ccgcgggagg agcagtacaa cagcacgtac 240

cgtgtggtca gcgtcctcac cgtcctgcac caggactggc tgaatggcaa ggagtacaag 300

tgcaaggtct ccaacaaagc cctcccagcc cccatcgaga aaaccatctc caaagccaaa 360

gggcagcccc gagaaccaca ggtgtacacc ctgcccccat cccgggatga gctgaccaag 420

aaccaggtca gcctgacctg cctggtcaaa ggcttctatc ccagcgacat cgccgtggag 480

tgggagagca atgggcagcc ggagaacaac tacaagacca cgcctcccgt gctggactcc 540

gacggctcct tcttcctcta cagcaagctc accgtggaca agagcaggtg gcagcagggg 600

aacgtcttct catgctccgt gatgcatgag gctctgcaca accactacac gcagaagagc 660

ctctccctgt ctcccgagct gcagctggag gaaagcgccg ctgaggctca ggaaggagaa 720

ctggaaggcg tgagcgacgt gccacgggat ctagaagtgg tggctgctac ccccacaagc 780

ttgctgatct cctggacact gcctcacgct ggccgggctc attactatag aattacctac 840

ggggagacag gcgggaactc tcccgtgcag gaattcaccg tgcctggaag gggcgtgact 900

gccaccatca gtgggctgaa gccaggagtg gactacacaa ttaccgtgta cgctgtgact 960

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tgcgtggtgg tggacgtgag ccacgaagac cctgaggtca agttcaactg gtacgtggac 180

ggcgtggagg tgcataatgc caagacaaag ccgcgggagg agcagtacaa cagcacgtac 240

cgtgtggtca gcgtcctcac cgtcctgcac caggactggc tgaatggcaa ggagtacaag 300

tgcaaggtct ccaacaaagc cctcccagcc cccatcgaga aaaccatctc caaagccaaa 360

gggcagcccc gagaaccaca ggtgtacacc ctgcccccat cccgggatga gctgaccaag 420

aaccaggtca gcctgacctg cctggtcaaa ggcttctatc ccagcgacat cgccgtggag 480

tgggagagca atgggcagcc ggagaacaac tacaagacca cgcctcccgt gctggactcc 540

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aacgtcttct catgctccgt gatgcatgag gctctgcaca accactacac gcagaagagc 660

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accatcagcg gccttaaacc tggcgttgat tataccatca ctgtgtatgc tgtcactatc 960

ttccgtgacg gtcccgtcac ctgggaccca atttccatta attaccggac cgaaatt 1017

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tgcgtggtgg tggacgtgag ccacgaagac cctgaggtca agttcaactg gtacgtggac 180

ggcgtggagg tgcataatgc caagacaaag ccgcgggagg agcagtacaa cagcacgtac 240

cgtgtggtca gcgtcctcac cgtcctgcac caggactggc tgaatggcaa ggagtacaag 300

tgcaaggtct ccaacaaagc cctcccagcc cccatcgaga aaaccatctc caaagccaaa 360

gggcagcccc gagaaccaca ggtgtacacc ctgcccccat cccgggatga gctgaccaag 420

aaccaggtca gcctgacctg cctggtcaaa ggcttctatc ccagcgacat cgccgtggag 480

tgggagagca atgggcagcc ggagaacaac tacaagacca cgcctcccgt gctggactcc 540

gacggctcct tcttcctcta cagcaagctc accgtggaca agagcaggtg gcagcagggg 600

aacgtcttct catgctccgt gatgcatgag gctctgcaca accactacac gcagaagagc 660

ctctccctgt ctcccgagct gcagctggag gaaagcgccg ctgaggctca ggaaggagaa 720

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ttccgtgacg gtcccgtcac ctgggaccca atttccatta attaccggac cgaaatt 1017

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ttcctcttcc ccccaaaacc caaggacacc ctcatgatct cccggacccc tgaggtcaca 120

tgcgtggtgg tggacgtgag ccacgaagac cctgaggtca agttcaactg gtacgtggac 180

ggcgtggagg tgcataatgc caagacaaag ccgcgggagg agcagtacaa cagcacgtac 240

cgtgtggtca gcgtcctcac cgtcctgcac caggactggc tgaatggcaa ggagtacaag 300

tgcaaggtct ccaacaaagc cctcccagcc cccatcgaga aaaccatctc caaagccaaa 360

gggcagcccc gagaaccaca ggtgtacacc ctgcccccat cccgggatga gctgaccaag 420

aaccaggtca gcctgacctg cctggtcaaa ggcttctatc ccagcgacat cgccgtggag 480

tgggagagca atgggcagcc ggagaacaac tacaagacca cgcctcccgt gctggactcc 540

gacggctcct tcttcctcta cagcaagctc accgtggaca agagcaggtg gcagcagggg 600

aacgtcttct catgctccgt gatgcatgag gctctgcaca accactacac gcagaagagc 660

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ctggaaggcg tgagcgacgt gccacgggat ctagaagtgg tggctgctac ccccacaagc 780

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gctaccatca gcggccttaa acctggcgtt gattatacca tcactgtgta tgctgtcact 960

gttactgata cagggtacct caagtacaaa ccaatttcca ttaattaccg gaccgaaatt 1020

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<220>
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<400> 306

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<210> 307
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<212> PRT
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<220>
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<400> 307

Gly Val Ser Asp Val Pro Arg Asp Leu
1 5

<210> 308

<211> 8
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Val Ser Asp Val Pro Arg Asp Leu
1 5

<210> 309
<211> 7
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<400> 309

Ser Asp Val Pro Arg Asp Leu
1 5

<210> 310
<211> 6
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<220>
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<400> 310

Asp Val Pro Arg Asp Leu
1 5

<210> 311
<211> 5
<212> PRT
<213> Artificial Sequence

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<400> 311

Val Pro Arg Asp Leu
1 5

<210> 312
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<213> Artificial Sequence

<220>
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<400> 312

Pro Arg Asp Leu
1

<210> 313
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<400> 313

Glu Ile Glu Pro Lys Ser Ser
1 5

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<400> 314

Glu Ile Asp Lys Pro Cys
1 5

<210> 315
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Glu Ile Asp Lys Pro
1 5

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Glu Ile Asp Lys
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Glu Ile Asp Lys Pro Ser

1 5

<210> 318
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Glu Ile Glu Lys Pro Ser Gln
1 5

<210> 319
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<400> 319

Glu Ile Asp Lys Pro Ser Gln Leu Glu
1 5

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<400> 320

Glu Ile Glu Asp Glu Asp Glu Asp Glu Asp Glu Asp
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<400> 321

Glu Gly Ser Gly Ser
1 5

<210> 322
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<400> 322

Glu Ile Asp Lys Pro Cys Gln
1   5

<210> 323
<211> 5
<212> PRT
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<400> 323

Glu Gly Ser Gly Cys
1   5

<210> 324
<211> 9
<212> PRT
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<400> 324

Glu Ile Asp Lys Pro Cys Gln Leu Glu
1   5

<210> 325
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<212> PRT
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<400> 325

Glu Ile Asp Lys Pro Ser Gln His His His His His His
1   5   10

<210> 326
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 326

Gly Ser Gly Cys His His His His His His
1   5   10

<210> 327
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
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<400> 327

Glu Gly Ser Gly Cys His His His His His His
1 5 10

<210> 328
<211> 6
<212> PRT
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<220>
<223> Synthetic

<400> 328

His His His His His His
1 5

<210> 329
<211> 17
<212> PRT
<213> Artificial Sequence

<220>
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<400> 329

Leu Tyr Phe Asn Gly Lys Glu Gln Ile Ile Tyr Gly Lys Ile Pro Ala
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Met

<210> 330
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<400> 330

Pro His Thr His Leu Val His Gln Ala Asn Pro
1 5 10

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<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 331

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

Pro His Gln Gly Lys Ala Asn Tyr Tyr Arg Ile Thr Tyr Gly Glu Thr

20 25 30

Gly Gly Asn Ser Pro Val Gln Glu Phe Thr Val Pro Gly Arg Gly Val
35 40 45

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

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

Ile Ser Ile Asn Tyr Arg Thr
85