

# SEQUENCE LISTING

<110> Eli Lilly and Company

<120> TIGIT AND PD-1/TIGIT-BINDING MOLECULES

<130> X21329

<150> 62853816

<151> 2019-05-29

<160> 32

<170> PatentIn version 3.5

<210> 1

<211> 13

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic Sequence

<400> 1

|     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Ala | Ser | Gly | Phe | Asp | Phe | Ser | Ser | Tyr | Gly | Val | Pro |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |

<210> 2

<211> 17

<212> PRT

<213> Artificial Sequence

<220>

<223> synthetic sequence

<400> 2

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Tyr | Ile | Asp | Pro | Ile | Phe | Gly | Pro | Thr | Tyr | Tyr | Ala | Asp | Glu | Val | Lys |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |

Gly

<210> 3

<211> 14

<212> PRT

<213> Artificial Sequence

<220>

<223> synthetic construct

<400> 3

Ala Arg Asp Tyr Ser Tyr Gly Tyr Ala Tyr Ala Leu Asp Ile  
1 5 10

<210> 4

<211> 11

<212> PRT

<213> Artificial Sequence

<220>

<223> synthetic construct

<400> 4

Gln Ala Ser Gln Arg Ile Ser Pro Tyr Leu Ala  
1 5 10

<210> 5

<211> 8

<212> PRT

<213> Artificial Sequence

<220>

<223> synthetic construct

<400> 5

Ser Arg Ala Ser Lys Leu Ala Ser  
1 5

<210> 6

<211> 12

<212> PRT

<213> Artificial Sequence

<220>

<223> synthetic construct

<400> 6

Gln Ser Tyr Tyr Val His Thr Ser Ser Gly Tyr Ala  
1 5 10

<210> 7

<211> 13

<212> PRT

<213> Artificial Sequence

<220>

<223> synthetic construct

<400> 7

Lys Ala Ser Gly Gly Thr Phe Ser Ser Tyr Ala Ile Ser  
1 5 10

<210> 8

<211> 17

<212> PRT

<213> Artificial Sequence

<220>

<223> synthetic construct

<400> 8

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

Gly

<210> 9

<211> 13

<212> PRT

<213> Artificial Sequence

<220>

<223> synthetic construct

<400> 9

Ala Arg Ala Glu His Ser Ser Thr Gly Thr Phe Asp Tyr  
1 5 10

<210> 10

<211> 11

<212> PRT

<213> Artificial Sequence

<220>

<223> synthetic construct

<400> 10

Arg Ala Ser Gln Gly Ile Ser Ser Trp Leu Ala  
1 5 10

<210> 11  
<211> 8  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic construct

<400> 11

Ser Ala Ala Ser Ser Leu Gln Ser  
1 5

<210> 12  
<211> 9  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic construct

<400> 12

Gln Gln Ala Asn His Leu Pro Phe Thr  
1 5

<210> 13  
<211> 121  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic construct

<400> 13

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

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Asp Phe Ser Ser Tyr  
20 25 30

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

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

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

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

Ala Arg Asp Tyr Ser Tyr Gly Tyr Ala Tyr Ala Leu Asp Ile Trp Gly  
100 105 110

Gln Gly Thr Leu Val Thr Val Ser Ser  
115 120

<210> 14  
<211> 110  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic construct

<400> 14

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

Gln Pro Ala Ser Ile Ser Cys Gln Ala Ser Gln Arg Ile Ser Pro Tyr  
20 25 30

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

Ser Arg Ala Ser Lys Leu Ala Ser Gly Val Pro Asp Arg Phe Ser Gly  
50 55 60

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

Glu Asp Val Gly Val Tyr Tyr Cys Gln Ser Tyr Tyr Val His Thr Ser  
85 90 95

Ser Gly Tyr Ala Phe Gly Gly Gly Thr Lys Val Glu Ile Lys  
100 105 110

<210> 15  
<211> 330  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic construct

<400> 15

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

Ser Thr Ser Gly Gly Thr Ala Ala Leu Gly Cys Leu Val Ala 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 Glu  
85 90 95

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

Pro Ala Pro Glu Ala Ala 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 Ala 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 Gly Asp  
225 230 235 240

Met Thr Lys Asn Gln Val Gln 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 Ala 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> 16  
<211> 107  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic construct

<400> 16

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

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

Tyr Pro Arg Glu Ala Lys Val Gln Trp Lys Val Asp Asn Ala Leu Gln  
35 40 45

Ser Gly Asn Ser Gln Glu Ser Val Thr Glu Gln Asp Ser Lys Asp Ser  
50 55 60

Thr Tyr Ser Leu Ser Ser Thr Leu Thr Leu Ser Lys Ala Asp Tyr Glu  
65 70 75 80

Lys His Lys Val Tyr Ala Cys Glu Val Thr His Gln Gly Leu Ser Ser  
85 90 95

Pro Val Thr Lys Ser Phe Asn Arg Gly Glu Cys  
100 105

<210> 17  
<211> 120  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic construct

<400> 17

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

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

Ala Ile Ser Trp Val Arg Tyr Ala Pro Gly Gln Gly Leu Glu Trp Met  
35 40 45

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

Gln Gly Arg Val Ala Ile Thr Val Asp Glu Ser Thr Ser Thr Ala Tyr  
65 70 75 80

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

Ala Arg Ala Glu His Ser Ser Thr Gly Thr Phe Asp Tyr Trp Gly Arg  
100 105 110

Gly Thr Leu Val Thr Val Ser Ser  
115 120

<210> 18  
<211> 107  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic construct

<400> 18

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

Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Gly Ile Ser Ser Trp  
20 25 30

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

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

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

Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Ala Asn His Leu Pro Phe  
85 90 95

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

<210> 19  
<211> 330  
<212> PRT

<213> Artificial Sequence

<220>

<223> synthetic construct

<400> 19

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

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 Ala Thr Gly 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

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

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

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

Met Thr Lys Asn Gln Val Ser Leu Met Cys Leu Val Tyr 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 Val 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> 20  
<211> 105  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic construct

<400> 20

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

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

Phe Tyr Pro Gly Ala Val Thr Val Ala Trp Lys Ala Asp Ser Ser Pro  
35 40 45

Val Lys Ala Gly Val Glu Thr Thr Thr Pro Ser Lys Gln Ser Asn Asn  
50 55 60

Lys Tyr Ala Ala Trp Ser Tyr Leu Ser Leu Thr Pro Glu Gln Trp Lys  
65 70 75 80

Ser His Arg Ser Tyr Ser Cys Gln Val Thr His Glu Gly Ser Thr Val  
85 90 95

Glu Lys Thr Val Ala Pro Thr Glu Cys  
100 105

<210> 21  
<211> 451  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic construct

<400> 21

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

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Asp Phe Ser Ser Tyr  
20 25 30

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

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

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

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

Ala Arg Asp Tyr Ser Tyr Gly Tyr Ala Tyr Ala Leu Asp Ile Trp Gly  
100 105 110

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

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

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

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

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

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

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

Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Ala Ala Gly  
225 230 235 240

Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met  
245 250 255

Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His  
260 265 270

Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val  
275 280 285

His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr  
290 295 300

Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly

305                      310                      315                      320  
 Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Ala Ala Pro Ile  
                                  325                      330                      335  
 Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val  
                                  340                      345                      350  
 Tyr Thr Leu Pro Pro Ser Arg Gly Asp Met Thr Lys Asn Gln Val Gln  
                                  355                      360                      365  
 Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu  
                                  370                      375                      380  
 Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro  
 385                                              390                      395                      400  
 Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Ala Ser Lys Leu Thr Val  
                                                  405                      410                      415  
 Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met  
                                                  420                      425                      430  
 His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser  
                                                  435                      440                      445  
 Pro Gly Lys  
                                  450  
  
 <210> 22  
 <211> 217  
 <212> PRT  
 <213> Artificial Sequence  
  
 <220>  
 <223> synthetic construct  
  
 <400> 22  
  
 Arg Ile Val Met Thr Gln Thr Pro Leu Ser Leu Ser Val Thr Pro Gly  
 1                      5                      10                      15  
  
 Gln Pro Ala Ser Ile Ser Cys Gln Ala Ser Gln Arg Ile Ser Pro Tyr

20

25

30

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

Ser Arg Ala Ser Lys Leu Ala Ser Gly Val Pro Asp Arg Phe Ser Gly  
 50 55 60

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

Glu Asp Val Gly Val Tyr Tyr Cys Gln Ser Tyr Tyr Val His Thr Ser  
 85 90 95

Ser Gly Tyr Ala Phe Gly Gly Gly Thr Lys Val Glu Ile Lys Arg Thr  
 100 105 110

Val Ala Ala Pro Ser Val Phe Ile Phe Pro Pro Ser Asp Lys Gln Leu  
 115 120 125

Lys Ser Gly Thr Ala Arg Val Val Cys Leu Leu Asn Asn Phe Tyr Pro  
 130 135 140

Arg Glu Ala Lys Val Gln Trp Lys Val Asp Asn Ala Leu Gln Ser Gly  
 145 150 155 160

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

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

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

Thr Lys Ser Phe Asn Arg Gly Glu Cys  
 210 215

<210> 23

<211> 450

<212> PRT

<213> Artificial Sequence

<220>

<223> synthetic construct

<400> 23

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

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

Ala Ile Ser Trp Val Arg Tyr Ala Pro Gly Gln Gly Leu Glu Trp Met  
35 40 45

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

Gln Gly Arg Val Ala Ile Thr Val Asp Glu Ser Thr Ser Thr Ala Tyr  
65 70 75 80

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

Ala Arg Ala Glu His Ser Ser Thr Gly Thr Phe Asp Tyr Trp Gly Arg  
100 105 110

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

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

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

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

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

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

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

Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Ala Ala Gly Gly  
225 230 235 240

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

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

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

Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg  
290 295 300

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

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

Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Ser  
340 345 350

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

Met Cys Leu Val Tyr Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp  
370 375 380

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

Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Val Leu Thr Val Asp

405

410

415

Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His  
 420 425 430

Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro  
 435 440 445

Gly Lys  
 450

<210> 24

<211> 212

<212> PRT

<213> Artificial Sequence

<220>

<223> synthetic construct

<400> 24

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

Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Gly Ile Ser Ser Trp  
 20 25 30

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

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

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

Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Ala Asn His Leu Pro Phe  
 85 90 95

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

Ala Pro Ser Val Thr Leu Phe Pro Pro Ser Ser Glu Glu Leu Gln Ala

115

120

125

Asn Lys Ala Thr Leu Val Cys Tyr Ile Ser Asp Phe Tyr Pro Gly Ala  
 130 135 140

Val Thr Val Ala Trp Lys Ala Asp Ser Ser Pro Val Lys Ala Gly Val  
 145 150 155 160

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

Ser Tyr Leu Ser Leu Thr Pro Glu Gln Trp Lys Ser His Arg Ser Tyr  
 180 185 190

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

Pro Thr Glu Cys  
 210

<210> 25

<211> 1413

<212> PRT

<213> Artificial Sequence

<220>

<223> synthetic construct

<400> 25

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

Thr Gly Cys Thr Cys Cys Thr Gly Thr Gly Gly Gly Thr Gly Cys Thr  
 20 25 30

Cys Cys Thr Gly Cys Thr Thr Thr Gly Gly Gly Thr Ala Cys Cys Gly  
 35 40 45

Gly Gly Thr Thr Cys Ala Ala Cys Gly Gly Gly Ala Gly Ala Gly Gly  
 50 55 60

Thr Gly Cys Ala Gly Cys Thr Gly Gly Thr Gly Gly Ala Gly Thr Cys

65

70

75

80

Thr Gly Gly Gly Gly Gly Ala Gly Gly Cys Thr Thr Gly Gly Thr Cys  
85 90 95

Cys Ala Gly Cys Cys Thr Gly Gly Ala Gly Gly Gly Thr Cys Cys Cys  
100 105 110

Thr Gly Ala Gly Ala Cys Thr Cys Thr Cys Cys Thr Gly Thr Gly Cys  
115 120 125

Thr Gly Cys Thr Thr Cys Thr Gly Gly Ala Thr Thr Cys Gly Ala Cys  
130 135 140

Thr Thr Cys Ala Gly Thr Ala Gly Thr Thr Ala Thr Gly Gly Ala Gly  
145 150 155 160

Thr Gly Cys Cys Cys Thr Gly Gly Gly Thr Cys Cys Gly Cys Ala Ala  
165 170 175

Gly Gly Cys Thr Cys Cys Ala Gly Gly Gly Ala Ala Gly Gly Gly Gly  
180 185 190

Cys Thr Gly Gly Ala Gly Thr Gly Gly Gly Thr Thr Gly Gly Cys Thr  
195 200 205

Ala Cys Ala Thr Thr Gly Ala Thr Cys Cys Thr Ala Thr Thr Thr Thr  
210 215 220

Thr Gly Gly Thr Cys Cys Cys Ala Cys Ala Thr Ala Cys Thr Ala Cys  
225 230 235 240

Gly Cys Ala Gly Ala Cys Gly Ala Gly Gly Thr Gly Ala Ala Gly Gly  
245 250 255

Gly Cys Ala Gly Ala Thr Thr Cys Ala Cys Cys Ala Thr Cys Thr Cys  
260 265 270

Ala Gly Cys Thr Gly Ala Thr Gly Ala Thr Thr Cys Ala Ala Ala Gly  
275 280 285

Ala Ala Cys Thr Cys Ala Cys Thr Gly Thr Ala Thr Cys Thr Gly Cys  
290 295 300

Ala Ala Ala Thr Gly Ala Ala Cys Ala Gly Cys Cys Thr Gly Ala Ala  
305 310 315 320

Ala Ala Cys Cys Gly Ala Gly Gly Ala Cys Ala Cys Gly Gly Cys Cys  
325 330 335

Gly Thr Gly Thr Ala Thr Thr Ala Cys Thr Gly Thr Gly Cys Gly Ala  
340 345 350

Gly Ala Gly Ala Cys Thr Ala Thr Ala Gly Thr Thr Ala Thr Gly Gly  
355 360 365

Thr Thr Ala Thr Gly Cys Thr Thr Ala Thr Gly Cys Thr Cys Thr Cys  
370 375 380

Gly Ala Cys Ala Thr Cys Thr Gly Gly Gly Gly Cys Cys Ala Gly Gly  
385 390 395 400

Gly Ala Ala Cys Cys Cys Thr Gly Gly Thr Cys Ala Cys Cys Gly Thr  
405 410 415

Cys Thr Cys Cys Thr Cys Ala Gly Cys Thr Ala Gly Cys Ala Cys Cys  
420 425 430

Ala Ala Gly Gly Gly Cys Cys Cys Ala Thr Cys Gly Gly Thr Cys Thr  
435 440 445

Thr Cys Cys Cys Cys Cys Thr Gly Gly Cys Ala Cys Cys Cys Thr Cys  
450 455 460

Cys Thr Cys Cys Ala Ala Gly Ala Gly Cys Ala Cys Cys Thr Cys Thr  
465 470 475 480

Gly Gly Gly Gly Gly Cys Ala Cys Ala Gly Cys Gly Gly Cys Cys Cys  
485 490 495

Thr Gly Gly Gly Cys Thr Gly Cys Cys Thr Gly Gly Thr Cys Gly Cys

500

505

510

Cys Gly Ala Cys Thr Ala Cys Thr Thr Cys Cys Cys Cys Gly Ala Ala  
 515 520 525

Cys Cys Gly Gly Thr Gly Ala Cys Gly Gly Thr Gly Thr Cys Gly Thr  
 530 535 540

Gly Gly Ala Ala Cys Thr Cys Ala Gly Gly Cys Gly Cys Cys Cys Thr  
 545 550 555 560

Gly Ala Cys Cys Ala Gly Cys Gly Gly Cys Gly Thr Gly Cys Ala Cys  
 565 570 575

Ala Cys Cys Thr Thr Cys Cys Cys Gly Gly Cys Thr Gly Thr Cys Cys  
 580 585 590

Thr Ala Cys Ala Gly Thr Cys Cys Cys Thr Cys Ala Gly Gly Ala Cys Thr  
 595 600 605

Cys Thr Ala Cys Thr Cys Cys Cys Thr Cys Ala Gly Cys Ala Gly Cys  
 610 615 620

Gly Thr Gly Gly Thr Gly Ala Cys Cys Gly Thr Gly Cys Cys Cys Thr  
 625 630 635 640

Cys Cys Ala Gly Cys Ala Gly Cys Thr Thr Gly Gly Gly Cys Ala Cys  
 645 650 655

Cys Cys Ala Gly Ala Cys Cys Thr Ala Cys Ala Thr Cys Thr Gly Cys  
 660 665 670

Ala Ala Cys Gly Thr Gly Ala Ala Thr Cys Ala Cys Ala Ala Gly Cys  
 675 680 685

Cys Cys Ala Gly Cys Ala Ala Cys Ala Cys Cys Ala Ala Gly Gly Thr  
 690 695 700

Gly Gly Ala Cys Gly Ala Gly Ala Gly Thr Thr Gly Ala Gly  
 705 710 715 720

Cys Cys Cys Ala Ala Ala Thr Cys Thr Thr Gly Thr Gly Ala Cys Ala  
725 730 735

Ala Ala Ala Cys Thr Cys Ala Cys Ala Cys Ala Thr Gly Cys Cys Cys  
740 745 750

Ala Cys Cys Gly Thr Gly Cys Cys Cys Ala Gly Cys Ala Cys Cys Thr  
755 760 765

Gly Ala Ala Gly Cys Cys Gly Cys Ala Gly Gly Gly Gly Gly Ala Cys  
770 775 780

Cys Gly Thr Cys Ala Gly Thr Cys Thr Thr Cys Cys Thr Cys Thr Thr  
785 790 795 800

Cys Cys Cys Cys Cys Cys Ala Ala Ala Ala Cys Cys Cys Ala Ala Gly  
805 810 815

Gly Ala Cys Ala Cys Cys Cys Thr Cys Ala Thr Gly Ala Thr Cys Thr  
820 825 830

Cys Cys Cys Gly Gly Ala Cys Cys Cys Cys Thr Gly Ala Gly Gly Thr  
835 840 845

Cys Ala Cys Ala Thr Gly Cys Gly Thr Gly Gly Thr Gly Gly Thr Gly  
850 855 860

Gly Ala Cys Gly Thr Gly Ala Gly Cys Cys Ala Cys Gly Ala Ala Gly  
865 870 875 880

Ala Cys Cys Cys Thr Gly Ala Gly Gly Thr Cys Ala Ala Gly Thr Thr  
885 890 895

Cys Ala Ala Cys Thr Gly Gly Thr Ala Thr Gly Thr Gly Gly Ala Cys  
900 905 910

Gly Gly Cys Gly Thr Gly Gly Ala Gly Gly Thr Gly Cys Ala Thr Ala  
915 920 925

Ala Thr Gly Cys Cys Ala Ala Gly Ala Cys Ala Ala Ala Gly Cys Cys

930

935

940

Gly Cys Gly Gly Gly Ala Gly Gly Ala Gly Cys Ala Gly Thr Ala Cys  
 945 950 955 960

Ala Ala Cys Ala Gly Cys Ala Cys Gly Thr Ala Cys Cys Gly Thr Gly  
 965 970 975

Thr Gly Gly Thr Cys Ala Gly Cys Gly Thr Cys Cys Thr Cys Ala Cys  
 980 985 990

Cys Gly Thr Cys Cys Thr Gly Cys Ala Cys Cys Ala Ala Gly Ala Cys  
 995 1000 1005

Thr Gly Gly Cys Thr Gly Ala Ala Thr Gly Gly Cys Ala Ala Gly  
 1010 1015 1020

Gly Ala Gly Thr Ala Cys Ala Ala Gly Thr Gly Cys Ala Ala Gly  
 1025 1030 1035

Gly Thr Cys Thr Cys Cys Ala Ala Cys Ala Ala Ala Gly Cys Cys  
 1040 1045 1050

Cys Thr Cys Gly Cys Cys Gly Cys Cys Cys Cys Cys Ala Thr Cys  
 1055 1060 1065

Gly Ala Gly Ala Ala Ala Ala Cys Cys Ala Thr Cys Thr Cys Cys  
 1070 1075 1080

Ala Ala Ala Gly Cys Cys Ala Ala Ala Gly Gly Gly Cys Ala Gly  
 1085 1090 1095

Cys Cys Cys Cys Gly Ala Gly Ala Ala Cys Cys Ala Cys Ala Gly  
 1100 1105 1110

Gly Thr Gly Thr Ala Cys Ala Cys Cys Cys Thr Gly Cys Cys Cys  
 1115 1120 1125

Cys Cys Ala Thr Cys Cys Cys Gly Gly Gly Gly Gly Gly Ala Cys  
 1130 1135 1140

Ala Thr Gly Ala Cys Cys Ala Ala Gly Ala Ala Cys Cys Ala Ala  
1145 1150 1155

Gly Thr Cys Cys Ala Gly Cys Thr Gly Ala Cys Cys Thr Gly Cys  
1160 1165 1170

Cys Thr Gly Gly Thr Cys Ala Ala Ala Gly Gly Cys Thr Thr Cys  
1175 1180 1185

Thr Ala Thr Cys Cys Cys Ala Gly Cys Gly Ala Cys Ala Thr Cys  
1190 1195 1200

Gly Cys Cys Gly Thr Gly Gly Ala Gly Thr Gly Gly Gly Ala Gly  
1205 1210 1215

Ala Gly Cys Ala Ala Thr Gly Gly Gly Cys Ala Gly Cys Cys Gly  
1220 1225 1230

Gly Ala Gly Ala Ala Cys Ala Ala Cys Thr Ala Cys Ala Ala Gly  
1235 1240 1245

Ala Cys Cys Ala Cys Gly Cys Cys Thr Cys Cys Cys Gly Thr Gly  
1250 1255 1260

Cys Thr Gly Gly Ala Cys Thr Cys Cys Gly Ala Cys Gly Gly Cys  
1265 1270 1275

Thr Cys Cys Thr Thr Cys Thr Thr Cys Cys Thr Cys Gly Cys Thr  
1280 1285 1290

Thr Cys Cys Ala Ala Gly Cys Thr Cys Ala Cys Cys Gly Thr Gly  
1295 1300 1305

Gly Ala Cys Ala Ala Gly Ala Gly Cys Ala Gly Gly Thr Gly Gly  
1310 1315 1320

Cys Ala Gly Cys Ala Gly Gly Gly Gly Ala Ala Cys Gly Thr Cys  
1325 1330 1335

Thr Thr Cys Thr Cys Ala Thr Gly Cys Thr Cys Cys Gly Thr Gly

1340

1345

1350

Ala Thr Gly Cys Ala Thr Gly Ala Gly Gly Cys Thr Cys Thr Gly  
 1355 1360 1365

Cys Ala Cys Ala Ala Cys Cys Ala Cys Thr Ala Cys Ala Cys Gly  
 1370 1375 1380

Cys Ala Gly Ala Ala Gly Ala Gly Cys Cys Thr Cys Thr Cys Cys  
 1385 1390 1395

Cys Thr Gly Thr Cys Thr Cys Cys Gly Gly Gly Cys Ala Ala Ala  
 1400 1405 1410

&lt;210&gt; 26

&lt;211&gt; 711

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; synthetic construct

&lt;400&gt; 26

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

Thr Gly Cys Thr Gly Cys Thr Cys Thr Gly Gly Gly Thr Ala Cys Thr  
 20 25 30

Gly Cys Thr Cys Cys Thr Thr Thr Gly Gly Gly Thr Thr Cys Cys Thr  
 35 40 45

Gly Gly Gly Ala Gly Cys Ala Cys Ala Gly Gly Cys Cys Gly Gly Ala  
 50 55 60

Thr Thr Gly Thr Gly Ala Thr Gly Ala Cys Cys Cys Ala Gly Ala Cys  
 65 70 75 80

Thr Cys Cys Ala Cys Thr Cys Thr Cys Thr Gly Thr Cys Cys  
 85 90 95

Gly Thr Cys Ala Cys Cys Cys Cys Thr Gly Gly Ala Cys Ala Gly Cys

100

105

110

Cys Gly Gly Cys Cys Thr Cys Cys Ala Thr Cys Thr Cys Cys Thr Gly  
 115 120 125

Cys Cys Ala Gly Gly Cys Cys Ala Gly Thr Cys Ala Gly Ala Gly Ala  
 130 135 140

Ala Thr Thr Ala Gly Thr Cys Cys Cys Thr Ala Cys Thr Thr Ala Gly  
 145 150 155 160

Cys Cys Thr Gly Gly Thr Ala Cys Cys Thr Gly Gly Ala Cys Ala Ala  
 165 170 175

Gly Cys Cys Ala Gly Gly Cys Cys Ala Gly Cys Cys Thr Cys Cys Ala  
 180 185 190

Cys Ala Gly Cys Thr Cys Cys Thr Gly Ala Thr Cys Thr Cys Cys Cys  
 195 200 205

Gly Gly Gly Cys Ala Thr Cys Cys Ala Ala Ala Cys Thr Gly Gly Cys  
 210 215 220

Ala Thr Cys Thr Gly Gly Ala Gly Thr Gly Cys Cys Ala Gly Ala Thr  
 225 230 235 240

Ala Gly Gly Thr Thr Cys Ala Gly Thr Gly Gly Cys Ala Gly Cys Gly  
 245 250 255

Gly Gly Thr Cys Ala Gly Gly Gly Ala Cys Ala Gly Ala Thr Thr Thr  
 260 265 270

Cys Ala Cys Ala Cys Thr Gly Ala Ala Ala Ala Thr Cys Ala Gly Cys  
 275 280 285

Cys Gly Gly Gly Thr Gly Gly Ala Gly Gly Cys Thr Gly Ala Gly Gly  
 290 295 300

Ala Thr Gly Thr Thr Gly Gly Gly Gly Thr Thr Thr Ala Thr Thr Ala  
 305 310 315 320

Cys Thr Gly Cys Cys Ala Ala Ala Gly Thr Thr Ala Thr Thr Ala Thr  
325 330 335

Gly Thr Thr Cys Ala Cys Ala Cys Thr Ala Gly Thr Ala Gly Thr Gly  
340 345 350

Gly Thr Thr Ala Thr Gly Cys Thr Thr Thr Cys Gly Gly Cys Gly Gly  
355 360 365

Ala Gly Gly Gly Ala Cys Cys Ala Ala Gly Gly Thr Gly Gly Ala Gly  
370 375 380

Ala Thr Cys Ala Ala Ala Cys Gly Gly Ala Cys Cys Gly Thr Gly Gly  
385 390 395 400

Cys Thr Gly Cys Ala Cys Cys Ala Thr Cys Thr Gly Thr Cys Thr Thr  
405 410 415

Cys Ala Thr Cys Thr Thr Cys Cys Cys Gly Cys Cys Ala Thr Cys Thr  
420 425 430

Gly Ala Thr Ala Ala Gly Cys Ala Gly Thr Thr Gly Ala Ala Ala Thr  
435 440 445

Cys Thr Gly Gly Ala Ala Cys Thr Gly Cys Cys Ala Gly Ala Gly Thr  
450 455 460

Thr Gly Thr Gly Thr Gly Cys Cys Thr Gly Cys Thr Gly Ala Ala Thr  
465 470 475 480

Ala Ala Cys Thr Thr Cys Thr Ala Thr Cys Cys Cys Ala Gly Ala Gly  
485 490 495

Ala Gly Gly Cys Cys Ala Ala Ala Gly Thr Ala Cys Ala Gly Thr Gly  
500 505 510

Gly Ala Ala Gly Gly Thr Gly Gly Ala Thr Ala Ala Cys Gly Cys Cys  
515 520 525

Cys Thr Cys Cys Ala Ala Thr Cys Gly Gly Gly Thr Ala Ala Cys Thr

530

535

540

Cys Cys Cys Ala Gly Gly Ala Gly Ala Gly Thr Gly Thr Cys Ala Cys  
 545 550 555 560

Ala Gly Ala Gly Cys Ala Gly Gly Ala Cys Ala Gly Cys Ala Ala Gly  
 565 570 575

Gly Ala Cys Ala Gly Cys Ala Cys Cys Thr Ala Cys Ala Gly Cys Cys  
 580 585 590

Thr Cys Ala Gly Cys Ala Gly Cys Ala Cys Cys Cys Thr Gly Ala Cys  
 595 600 605

Gly Cys Thr Gly Ala Gly Cys Ala Ala Ala Gly Cys Ala Gly Ala Cys  
 610 615 620

Thr Ala Cys Gly Ala Gly Ala Ala Ala Cys Ala Cys Ala Ala Ala Gly  
 625 630 635 640

Thr Cys Thr Ala Cys Gly Cys Cys Thr Gly Cys Gly Ala Ala Gly Thr  
 645 650 655

Cys Ala Cys Thr Cys Ala Thr Cys Ala Gly Gly Gly Cys Cys Thr Gly  
 660 665 670

Ala Gly Cys Thr Cys Gly Cys Cys Cys Gly Thr Cys Ala Cys Ala Ala  
 675 680 685

Ala Gly Ala Gly Cys Thr Thr Cys Ala Ala Cys Ala Gly Gly Gly Gly  
 690 695 700

Ala Gly Ala Gly Thr Gly Cys  
 705 710

&lt;210&gt; 27

&lt;211&gt; 1410

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; synthetic construct

<400> 27

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

Thr Cys Cys Thr Gly Cys Thr Gly Thr Gly Gly Gly Thr Thr Cys Thr  
20 25 30

Cys Cys Thr Cys Thr Thr Gly Thr Gly Gly Gly Thr Cys Cys Cys Cys  
35 40 45

Gly Gly Cys Thr Cys Thr Ala Cys Cys Gly Gly Gly Cys Ala Gly Gly  
50 55 60

Thr Cys Cys Ala Gly Cys Thr Cys Gly Thr Gly Cys Ala Gly Ala Gly  
65 70 75 80

Thr Gly Gly Cys Gly Cys Cys Gly Ala Gly Gly Thr Cys Ala Ala Ala  
85 90 95

Ala Ala Ala Cys Cys Cys Gly Gly Thr Thr Cys Ala Ala Gly Cys Gly  
100 105 110

Thr Gly Ala Ala Gly Gly Thr Gly Thr Cys Thr Thr Gly Thr Ala Ala  
115 120 125

Ala Gly Cys Ala Thr Cys Thr Gly Gly Ala Gly Gly Ala Ala Cys Cys  
130 135 140

Thr Thr Thr Ala Gly Thr Thr Cys Cys Thr Ala Cys Gly Cys Cys Ala  
145 150 155 160

Thr Thr Ala Gly Thr Thr Gly Gly Gly Thr Gly Ala Gly Gly Thr Ala  
165 170 175

Cys Gly Cys Thr Cys Cys Cys Gly Gly Cys Cys Ala Gly Gly Gly Cys  
180 185 190

Thr Thr Gly Gly Ala Ala Thr Gly Gly Ala Thr Gly Gly Gly Thr Thr  
195 200 205

Thr Gly Ala Thr Thr Ala Thr Thr Cys Cys Cys Ala Gly Cys Thr Thr  
210 215 220

Thr Gly Ala Thr Ala Cys Ala Gly Cys Thr Gly Gly Ala Thr Ala Cys  
225 230 235 240

Gly Cys Gly Cys Ala Gly Ala Ala Gly Thr Thr Cys Cys Ala Gly Gly  
245 250 255

Gly Ala Cys Gly Cys Gly Thr Gly Gly Cys Cys Ala Thr Cys Ala Cys  
260 265 270

Cys Gly Thr Gly Gly Ala Thr Gly Ala Ala Ala Gly Cys Ala Cys Thr  
275 280 285

Thr Cys Ala Ala Cys Thr Gly Cys Cys Thr Ala Cys Ala Thr Gly Gly  
290 295 300

Ala Ala Cys Thr Gly Thr Cys Ala Thr Cys Cys Thr Thr Gly Ala Gly  
305 310 315 320

Ala Ala Gly Cys Gly Ala Gly Gly Ala Thr Ala Cys Thr Gly Cys Thr  
325 330 335

Gly Thr Thr Thr Ala Cys Thr Ala Cys Thr Gly Cys Gly Cys Thr Ala  
340 345 350

Gly Gly Gly Cys Ala Gly Ala Gly Cys Ala Cys Thr Cys Cys Thr Cys  
355 360 365

Cys Ala Cys Cys Gly Gly Gly Ala Cys Cys Thr Thr Cys Gly Ala Cys  
370 375 380

Thr Ala Thr Thr Gly Gly Gly Gly Thr Cys Gly Ala Gly Gly Thr Ala  
385 390 395 400

Cys Thr Cys Thr Cys Gly Thr Gly Ala Cys Cys Gly Thr Gly Ala Gly  
405 410 415

Cys Ala Gly Cys Gly Cys Thr Ala Gly Cys Ala Cys Cys Ala Ala Gly

420

425

430

Gly Gly Cys Cys Cys Ala Thr Cys Gly Gly Thr Cys Thr Thr Cys Cys  
 435 440 445

Cys Cys Cys Thr Gly Gly Cys Ala Cys Cys Cys Thr Cys Cys Thr Cys  
 450 455 460

Cys Ala Ala Gly Ala Gly Cys Ala Cys Cys Thr Cys Thr Gly Gly Gly  
 465 470 475 480

Gly Gly Cys Ala Cys Ala Gly Cys Gly Gly Cys Cys Cys Thr Gly Gly  
 485 490 495

Gly Cys Thr Gly Cys Cys Thr Gly Gly Thr Cys Ala Ala Gly Gly Ala  
 500 505 510

Cys Thr Ala Cys Thr Thr Cys Cys Cys Gly Ala Ala Cys Cys Gly  
 515 520 525

Gly Thr Gly Ala Cys Gly Gly Thr Gly Thr Cys Gly Thr Gly Gly Ala  
 530 535 540

Ala Cys Thr Cys Ala Gly Gly Cys Gly Cys Cys Cys Thr Gly Ala Cys  
 545 550 555 560

Cys Ala Gly Cys Gly Gly Cys Gly Thr Gly Gly Cys Cys Ala Cys Cys  
 565 570 575

Gly Gly Cys Cys Cys Gly Gly Cys Thr Gly Thr Cys Cys Thr Ala Cys  
 580 585 590

Ala Gly Thr Cys Cys Thr Cys Ala Gly Gly Ala Cys Thr Cys Thr Ala  
 595 600 605

Cys Thr Cys Cys Cys Thr Cys Ala Gly Cys Ala Gly Cys Gly Thr Gly  
 610 615 620

Gly Thr Gly Ala Cys Cys Gly Thr Gly Cys Cys Cys Thr Cys Cys Ala  
 625 630 635 640

Gly Cys Ala Gly Cys Thr Thr Gly Gly Gly Cys Ala Cys Cys Cys Ala  
645 650 655

Gly Ala Cys Cys Thr Ala Cys Ala Thr Cys Thr Gly Cys Ala Ala Cys  
660 665 670

Gly Thr Gly Ala Ala Thr Cys Ala Cys Ala Ala Gly Cys Cys Cys Ala  
675 680 685

Gly Cys Ala Ala Cys Ala Cys Cys Ala Ala Gly Gly Thr Gly Gly Ala  
690 695 700

Cys Ala Ala Gly Ala Gly Ala Gly Thr Thr Gly Ala Gly Cys Cys Cys  
705 710 715 720

Ala Ala Ala Thr Cys Thr Thr Gly Thr Gly Ala Cys Ala Ala Ala Ala  
725 730 735

Cys Thr Cys Ala Cys Ala Cys Ala Thr Gly Cys Cys Cys Ala Cys Cys  
740 745 750

Gly Thr Gly Cys Cys Cys Ala Gly Cys Ala Cys Cys Thr Gly Ala Ala  
755 760 765

Gly Cys Cys Gly Cys Ala Gly Gly Gly Gly Gly Ala Cys Cys Gly Thr  
770 775 780

Cys Ala Gly Thr Cys Thr Thr Cys Cys Thr Cys Thr Thr Cys Cys Cys  
785 790 795 800

Cys Cys Cys Ala Ala Ala Ala Cys Cys Cys Ala Ala Gly Gly Ala Cys  
805 810 815

Ala Cys Cys Cys Thr Cys Ala Thr Gly Ala Thr Cys Thr Cys Cys Cys  
820 825 830

Gly Gly Ala Cys Cys Cys Cys Thr Gly Ala Gly Gly Thr Cys Ala Cys  
835 840 845

Ala Thr Gly Cys Gly Thr Gly Gly Thr Gly Gly Thr Gly Gly Ala Cys

850

855

860

Gly Thr Gly Ala Gly Cys Cys Ala Cys Gly Ala Ala Gly Ala Cys Cys  
 865 870 875 880

Cys Thr Gly Ala Gly Gly Thr Cys Ala Ala Gly Thr Thr Cys Ala Ala  
 885 890 895

Cys Thr Gly Gly Thr Ala Thr Gly Thr Gly Gly Ala Cys Gly Gly Cys  
 900 905 910

Gly Thr Gly Gly Ala Gly Gly Thr Gly Cys Ala Thr Ala Ala Thr Gly  
 915 920 925

Cys Cys Ala Ala Gly Ala Cys Ala Ala Ala Gly Cys Cys Gly Cys Gly  
 930 935 940

Gly Gly Ala Gly Gly Ala Gly Cys Ala Gly Thr Ala Cys Ala Ala Cys  
 945 950 955 960

Ala Gly Cys Ala Cys Gly Thr Ala Cys Cys Gly Thr Gly Thr Gly Gly  
 965 970 975

Thr Cys Ala Gly Cys Gly Thr Cys Cys Thr Cys Ala Cys Cys Gly Thr  
 980 985 990

Cys Cys Thr Gly Cys Ala Cys Cys Ala Ala Gly Ala Cys Thr Gly Gly  
 995 1000 1005

Cys Thr Gly Ala Ala Thr Gly Gly Cys Ala Ala Gly Gly Ala Gly  
 1010 1015 1020

Thr Ala Cys Ala Ala Gly Thr Gly Cys Ala Ala Gly Gly Thr Cys  
 1025 1030 1035

Thr Cys Cys Ala Ala Cys Ala Ala Ala Gly Cys Cys Cys Thr Cys  
 1040 1045 1050

Gly Cys Cys Gly Cys Cys Cys Cys Cys Ala Thr Cys Gly Ala Gly  
 1055 1060 1065

Ala Ala Ala Ala Cys Cys Ala Thr Cys Thr Cys Cys Ala Ala Ala  
1070 1075 1080

Gly Cys Cys Ala Ala Ala Gly Gly Gly Cys Ala Gly Cys Cys Cys  
1085 1090 1095

Cys Gly Ala Gly Ala Ala Cys Cys Ala Cys Ala Gly Gly Thr Gly  
1100 1105 1110

Thr Cys Cys Ala Cys Cys Cys Thr Gly Cys Cys Cys Cys Cys Ala  
1115 1120 1125

Thr Cys Cys Cys Gly Gly Gly Ala Gly Gly Ala Gly Ala Thr Gly  
1130 1135 1140

Ala Cys Cys Ala Ala Gly Ala Ala Cys Cys Ala Ala Gly Thr Cys  
1145 1150 1155

Ala Gly Cys Cys Thr Gly Ala Thr Gly Thr Gly Cys Cys Thr Gly  
1160 1165 1170

Gly Thr Cys Thr Ala Thr Gly Gly Cys Thr Thr Cys Thr Ala Thr  
1175 1180 1185

Cys Cys Cys Ala Gly Cys Gly Ala Cys Ala Thr Cys Gly Cys Cys  
1190 1195 1200

Gly Thr Gly Gly Ala Gly Thr Gly Gly Gly Ala Gly Ala Gly Cys  
1205 1210 1215

Ala Ala Thr Gly Gly Gly Cys Ala Gly Cys Cys Gly Gly Ala Gly  
1220 1225 1230

Ala Ala Cys Ala Ala Cys Thr Ala Cys Ala Ala Gly Ala Cys Cys  
1235 1240 1245

Ala Cys Gly Cys Cys Thr Cys Cys Cys Gly Thr Gly Cys Thr Gly  
1250 1255 1260

Gly Ala Cys Thr Cys Cys Gly Ala Cys Gly Gly Cys Thr Cys Cys

1265

1270

1275

Thr Thr Cys Thr Thr Cys Cys Thr Cys Thr Ala Thr Thr Cys Cys  
 1280 1285 1290

Gly Thr Gly Cys Thr Cys Ala Cys Cys Gly Thr Gly Gly Ala Cys  
 1295 1300 1305

Ala Ala Gly Ala Gly Cys Ala Gly Gly Thr Gly Gly Cys Ala Gly  
 1310 1315 1320

Cys Ala Gly Gly Gly Gly Ala Ala Cys Gly Thr Cys Thr Thr Cys  
 1325 1330 1335

Thr Cys Ala Thr Gly Cys Thr Cys Cys Gly Thr Gly Ala Thr Gly  
 1340 1345 1350

Cys Ala Thr Gly Ala Gly Gly Cys Thr Cys Thr Gly Cys Ala Cys  
 1355 1360 1365

Ala Ala Cys Cys Ala Cys Thr Ala Cys Ala Cys Gly Cys Ala Gly  
 1370 1375 1380

Ala Ala Gly Ala Gly Cys Cys Thr Cys Thr Cys Cys Cys Thr Gly  
 1385 1390 1395

Thr Cys Thr Cys Cys Gly Gly Gly Cys Ala Ala Ala  
 1400 1405 1410

&lt;210&gt; 28

&lt;211&gt; 696

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; synthetic construct

&lt;400&gt; 28

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

Thr Cys Cys Thr Gly Cys Thr Ala Thr Gly Gly Gly Thr Ala Cys Thr

20

25

30

Gly Cys Thr Gly Cys Thr Cys Thr Gly Gly Gly Thr Thr Cys Cys Ala  
 35 40 45

Gly Gly Ala Thr Cys Cys Ala Cys Thr Gly Gly Thr Gly Ala Cys Ala  
 50 55 60

Thr Cys Cys Ala Gly Ala Thr Gly Ala Cys Ala Cys Ala Gly Thr Cys  
 65 70 75 80

Ala Cys Cys Thr Thr Cys Ala Ala Gly Cys Gly Thr Cys Thr Cys Cys  
 85 90 95

Gly Cys Cys Thr Cys Cys Gly Thr Gly Gly Gly Ala Gly Ala Cys Ala  
 100 105 110

Gly Gly Gly Thr Thr Ala Cys Thr Ala Thr Thr Ala Cys Ala Thr Gly  
 115 120 125

Thr Ala Gly Gly Gly Cys Cys Ala Gly Cys Cys Ala Gly Gly Gly Gly  
 130 135 140

Ala Thr Cys Thr Cys Thr Thr Cys Ala Thr Gly Gly Cys Thr Gly Gly  
 145 150 155 160

Cys Gly Thr Gly Gly Thr Ala Cys Cys Ala Ala Cys Gly Gly Ala Ala  
 165 170 175

Gly Cys Cys Ala Gly Gly Cys Gly Ala Cys Gly Cys Cys Cys Cys Cys  
 180 185 190

Ala Ala Gly Cys Thr Cys Cys Thr Thr Ala Thr Cys Thr Cys Cys Gly  
 195 200 205

Cys Thr Gly Cys Cys Thr Cys Cys Thr Cys Thr Cys Thr Gly Cys Ala  
 210 215 220

Gly Thr Cys Cys Gly Gly Ala Gly Thr Thr Cys Cys Cys Thr Cys Cys  
 225 230 235 240

Cys Gly Cys Thr Thr Cys Ala Gly Cys Gly Gly Thr Ala Gly Cys Gly  
245 250 255

Gly Gly Thr Cys Ala Gly Gly Cys Ala Cys Thr Gly Ala Cys Thr Thr  
260 265 270

Cys Ala Cys Cys Cys Thr Thr Ala Cys Ala Ala Thr Cys Thr Cys Thr  
275 280 285

Thr Cys Thr Cys Thr Gly Cys Ala Ala Cys Cys Thr Gly Ala Gly Gly  
290 295 300

Ala Cys Thr Thr Cys Gly Cys Cys Ala Cys Ala Thr Ala Thr Thr Ala  
305 310 315 320

Thr Thr Gly Cys Cys Ala Gly Cys Ala Gly Gly Cys Ala Ala Ala Cys  
325 330 335

Cys Ala Thr Thr Thr Gly Cys Cys Ala Thr Thr Thr Ala Cys Thr Thr  
340 345 350

Thr Thr Gly Gly Cys Gly Gly Ala Gly Gly Thr Ala Cys Thr Ala Ala  
355 360 365

Gly Gly Thr Thr Gly Ala Gly Ala Thr Thr Ala Ala Ala Gly Gly Cys  
370 375 380

Cys Ala Gly Cys Cys Thr Ala Ala Ala Gly Cys Thr Gly Cys Cys Cys  
385 390 395 400

Cys Thr Ala Gly Cys Gly Thr Thr Ala Cys Cys Cys Thr Thr Thr Thr  
405 410 415

Cys Cys Cys Ala Cys Cys Gly Ala Gly Cys Thr Cys Cys Gly Ala Gly  
420 425 430

Gly Ala Gly Cys Thr Gly Cys Ala Gly Gly Cys Cys Ala Ala Thr Ala  
435 440 445

Ala Ala Gly Cys Ala Ala Cys Cys Thr Thr Gly Gly Thr Cys Thr Gly

450

455

460

Cys Thr Ala Cys Ala Thr Ala Thr Cys Ala Gly Ala Thr Thr Thr Thr  
 465 470 475 480

Thr Ala Cys Cys Cys Thr Gly Gly Cys Gly Cys Cys Gly Thr Gly Ala  
 485 490 495

Cys Cys Gly Thr Ala Gly Cys Ala Thr Gly Gly Ala Ala Ala Gly Cys  
 500 505 510

Thr Gly Ala Thr Thr Cys Ala Thr Cys Cys Cys Cys Thr Gly Thr Gly  
 515 520 525

Ala Ala Gly Gly Cys Cys Gly Gly Thr Gly Thr Thr Gly Ala Ala Ala  
 530 535 540

Cys Thr Ala Cys Ala Ala Cys Cys Cys Cys Thr Thr Cys Cys Ala Ala  
 545 550 555 560

Ala Cys Ala Ala Thr Cys Thr Ala Ala Cys Ala Ala Thr Ala Ala Ala  
 565 570 575

Thr Ala Cys Gly Cys Gly Gly Cys Ala Thr Gly Gly Thr Cys Cys Thr  
 580 585 590

Ala Cys Cys Thr Gly Thr Cys Cys Thr Thr Gly Ala Cys Ala Cys Cys  
 595 600 605

Cys Gly Ala Gly Cys Ala Gly Thr Gly Gly Ala Ala Ala Thr Cys Thr  
 610 615 620

Cys Ala Cys Ala Gly Ala Thr Cys Thr Thr Ala Cys Ala Gly Cys Thr  
 625 630 635 640

Gly Cys Cys Ala Gly Gly Thr Cys Ala Cys Cys Cys Ala Cys Gly Ala  
 645 650 655

Gly Gly Gly Gly Ala Gly Cys Ala Cys Thr Gly Thr Gly Gly Ala Gly  
 660 665 670

Ala Ala Gly Ala Cys Cys Gly Thr Cys Gly Cys Gly Cys Cys Cys Ala  
675 680 685

Cys Thr Gly Ala Gly Thr Gly Cys  
690 695

<210> 29  
<211> 288  
<212> PRT  
<213> Homo sapiens

<400> 29

Met Gln Ile Pro Gln Ala Pro Trp Pro Val Val Trp Ala Val Leu Gln  
1 5 10 15

Leu Gly Trp Arg Pro Gly Trp Phe Leu Asp Ser Pro Asp Arg Pro Trp  
20 25 30

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

Asn Ala Thr Phe Thr Cys Ser Phe Ser Asn Thr Ser Glu Ser Phe Val  
50 55 60

Leu Asn Trp Tyr Arg Met Ser Pro Ser Asn Gln Thr Asp Lys Leu Ala  
65 70 75 80

Ala Phe Pro Glu Asp Arg Ser Gln Pro Gly Gln Asp Cys Arg Phe Arg  
85 90 95

Val Thr Gln Leu Pro Asn Gly Arg Asp Phe His Met Ser Val Val Arg  
100 105 110

Ala Arg Arg Asn Asp Ser Gly Thr Tyr Leu Cys Gly Ala Ile Ser Leu  
115 120 125

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

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

Arg Pro Ala Gly Gln Phe Gln Thr Leu Val Val Gly Val Val Gly Gly  
165 170 175

Leu Leu Gly Ser Leu Val Leu Leu Val Trp Val Leu Ala Val Ile Cys  
180 185 190

Ser Arg Ala Ala Arg Gly Thr Ile Gly Ala Arg Arg Thr Gly Gln Pro  
195 200 205

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

Glu Leu Asp Phe Gln Trp Arg Glu Lys Thr Pro Glu Pro Pro Val Pro  
225 230 235 240

Cys Val Pro Glu Gln Thr Glu Tyr Ala Thr Ile Val Phe Pro Ser Gly  
245 250 255

Met Gly Thr Ser Ser Pro Ala Arg Arg Gly Ser Ala Asp Gly Pro Arg  
260 265 270

Ser Ala Gln Pro Leu Arg Pro Glu Asp Gly His Cys Ser Trp Pro Leu  
275 280 285

<210> 30  
<211> 149  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic construct

<400> 30

Leu Asp Ser Pro Asp Arg Pro Trp Asn Pro Pro Thr Phe Ser Pro Ala  
1 5 10 15

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

Ser Asn Thr Ser Glu Ser Phe Val Leu Asn Trp Tyr Arg Met Ser Pro  
35 40 45

Ser Asn Gln Thr Asp Lys Leu Ala Ala Phe Pro Glu Asp Arg Ser Gln  
50 55 60

Pro Gly Gln Asp Cys Arg Phe Arg Val Thr Gln Leu Pro Asn Gly Arg  
65 70 75 80

Asp Phe His Met Ser Val Val Arg Ala Arg Arg Asn Asp Ser Gly Thr  
85 90 95

Tyr Leu Cys Gly Ala Ile Ser Leu Ala Pro Lys Ala Gln Ile Lys Glu  
100 105 110

Ser Leu Arg Ala Glu Leu Arg Val Thr Glu Arg Arg Ala Glu Val Pro  
115 120 125

Thr Ala His Pro Ser Pro Ser Pro Arg Pro Ala Gly Gln Phe Gln His  
130 135 140

His His His His His  
145

<210> 31  
<211> 244  
<212> PRT  
<213> Homo sapiens

<400> 31

Met Arg Trp Cys Leu Leu Leu Ile Trp Ala Gln Gly Leu Arg Gln Ala  
1 5 10 15

Pro Leu Ala Ser Gly Met Met Thr Gly Thr Ile Glu Thr Thr Gly Asn  
20 25 30

Ile Ser Ala Glu Lys Gly Gly Ser Ile Ile Leu Gln Cys His Leu Ser  
35 40 45

Ser Thr Thr Ala Gln Val Thr Gln Val Asn Trp Glu Gln Gln Asp Gln  
50 55 60

Leu Leu Ala Ile Cys Asn Ala Asp Leu Gly Trp His Ile Ser Pro Ser

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 65  |     | 70  |     | 75  |     | 80  |     |     |     |     |     |     |     |     |     |
| Phe | Lys | Asp | Arg | Val | Ala | Pro | Gly | Pro | Gly | Leu | Gly | Leu | Thr | Leu | Gln |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |
| Ser | Leu | Thr | Val | Asn | Asp | Thr | Gly | Glu | Tyr | Phe | Cys | Ile | Tyr | His | Thr |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |
| Tyr | Pro | Asp | Gly | Thr | Tyr | Thr | Gly | Arg | Ile | Phe | Leu | Glu | Val | Leu | Glu |
|     |     | 115 |     |     |     |     | 120 |     |     |     |     | 125 |     |     |     |
| Ser | Ser | Val | Ala | Glu | His | Gly | Ala | Arg | Phe | Gln | Ile | Pro | Leu | Leu | Gly |
|     | 130 |     |     |     |     | 135 |     |     |     |     | 140 |     |     |     |     |
| Ala | Met | Ala | Ala | Thr | Leu | Val | Val | Ile | Cys | Thr | Ala | Val | Ile | Val | Val |
| 145 |     |     |     |     | 150 |     |     |     |     | 155 |     |     |     |     | 160 |
| Val | Ala | Leu | Thr | Arg | Lys | Lys | Lys | Ala | Leu | Arg | Ile | His | Ser | Val | Glu |
|     |     |     |     | 165 |     |     |     |     | 170 |     |     |     |     | 175 |     |
| Gly | Asp | Leu | Arg | Arg | Lys | Ser | Ala | Gly | Gln | Glu | Glu | Trp | Ser | Pro | Ser |
|     |     |     | 180 |     |     |     |     | 185 |     |     |     |     | 190 |     |     |
| Ala | Pro | Ser | Pro | Pro | Gly | Ser | Cys | Val | Gln | Ala | Glu | Ala | Ala | Pro | Ala |
|     |     | 195 |     |     |     |     | 200 |     |     |     |     | 205 |     |     |     |
| Gly | Leu | Cys | Gly | Glu | Gln | Arg | Gly | Glu | Asp | Cys | Ala | Glu | Leu | His | Asp |
|     | 210 |     |     |     |     | 215 |     |     |     |     | 220 |     |     |     |     |
| Tyr | Phe | Asn | Val | Leu | Ser | Tyr | Arg | Ser | Leu | Gly | Asn | Cys | Ser | Phe | Phe |
| 225 |     |     |     |     | 230 |     |     |     |     | 235 |     |     |     |     | 240 |
| Thr | Glu | Thr | Gly |     |     |     |     |     |     |     |     |     |     |     |     |

<210> 32  
 <211> 142  
 <212> PRT  
 <213> Artificial Sequence  
  
 <220>  
 <223> synthetic construct

<400> 32

His His His His His His Gly Gly Gly Gly Ser Met Met Thr Gly Thr  
1 5 10 15

Ile Glu Thr Thr Gly Asn Ile Ser Ala Glu Lys Gly Gly Ser Ile Ile  
20 25 30

Leu Gln Cys His Leu Ser Ser Thr Thr Ala Gln Val Thr Gln Val Asn  
35 40 45

Trp Glu Gln Gln Asp Gln Leu Leu Ala Ile Cys Asn Ala Asp Leu Gly  
50 55 60

Trp His Ile Ser Pro Ser Phe Lys Asp Arg Val Ala Pro Gly Pro Gly  
65 70 75 80

Leu Gly Leu Thr Leu Gln Ser Leu Thr Val Asn Asp Thr Gly Glu Tyr  
85 90 95

Phe Cys Ile Tyr His Thr Tyr Pro Asp Gly Thr Tyr Thr Gly Arg Ile  
100 105 110

Phe Leu Glu Val Leu Glu Ser Ser Val Ala Glu His Gly Ala Arg Phe  
115 120 125

Gln Ile Pro Gly Gly Gly Gly Ser His His His His His His  
130 135 140